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Site: Industriplex
Break: 6.4
Other: 33595

HEC-1

100 Year, 24 Hour Storm

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

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

  1           ID        ISRT, WOBURN, MASSACHUSETTS
  2           ID        ON-SITE SUBWATERSHEDS
  3           ID        DETAILED STORAGE AND STREAM NETWORK
  4           ID        PROPOSED CONDITIONS - 100 YR, 24 HR STORM
              *DIAGRAM
  5           IT      15 28FEB91     100      97
  6           IN      15 28FEB91     100
  7           IO       5

  8           KK      5E
  9           KO       1
 10           KM        DIRECT INPUT HYDROGRAPH FOR FLOW FROM 5E
 11           BA    0.07
 12           QI       0       0       0       0       0       0       0       0       0       0
 13           QI       0       0       0       0       0       0       0       0       0       0
 14           QI       0       0       0       0       0       0       0       0       0       0
 15           QI       0       0       0       0       1       1       1       1       2       2
 16           QI       3       3       4       4       5       7      10      14      25      56
 17           QI      84      71      49      35      25      19      15      13      12      11
 18           QI      10       9       8       8       7       7       7       6       6       6
 19           QI       6       5       5       5       4       4       4       4       4       4
 20           QI       3       3       3       3       3       3       3       3       3       3
 21           QI       3       3       3       3       3       3       3

 22           KK   6CSWP
 23           KO       1
 24           KM        DIRECT INPUT HYDROGRAPH FOR FLOW FROM READING, UNDER RTE 93
 25           BA    0.93
 26           QI       0       0       0       0       0       0       0       0       0       0
 27           QI       0       0       0       0       0       0       0       0       0       0
 28           QI       0       0       0       0       0       0       0       0       0       0
 29           QI       0       0       0       0       0       1       2       4       6       8
 30           QI      11      14      18      23      28      36      51      73     116     137
 31           QI     160     172     177     181     182     183     184     184     184     184
 32           QI     184     183     183     182     181     180     179     178     176     174
 33           QI     172     169     165     161     155     148     137     124      97      54
 34           QI      52      51      49      48      47      46      46      45      44      44
 35           QI      43      42      42      41      41      40      40

 36           KK     12P
 37           KO       1
 38           KM        SCS RUNOFF CALCULATION
 39           BA   0.015
 40           PH               0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
 41           LS              78
 42           UD    0.44
```

```
 43          KK   6C24P
 44          KM        COMBINE HYDROGRAPHS FOR 5E, 6CSWP AND 12P
 45          HC       3
1                                        HEC-1 INPUT                                                    PAGE  2

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


 46          KK  12PCHL
 47          KO       1
 48          KM        STORAGE ROUTING THROUGH NORTH BRANCH CHANNEL
 49          RS       1    STOR       0
 50          RC    0.08    0.03    0.08     400  0.0063    69.5
 51          RX       0       5      10      11      17      18      23      28
 52          RY    70.5      70    69.5    67.5    67.5    69.5      70    70.5

 53          KK     13P
 54          KO       1
 55          KM        SCS RUNOFF CALCULATION
 56          BA   0.009
 57          PH               0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
 58          LS              70
 59          UD    0.49

 60          KK     19P
 61          KO       1
 62          KM        SCS RUNOFF CALCULATION
 63          BA   0.004
 64          PH               0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
 65          LS              70
 66          UD    0.34

 67          KK  19PCHL
 68          KO       1
 69          KM        STORAGE ROUTING THROUGH RTE 93 E/W CHANNEL
 70          RS       1    STOR       0
 71          RC   0.080   0.030   0.080     430   0.007      67
 72          RX       0       5      10      11      14      15      20      25
 73          RY      68    67.5      67      66      66      67    67.5      68

 74          KK  121319
 75          KM        COMBINE HYDROGRAPHS FOR 12PCHL, 13P, & 19PCHL
 76          HC       3

 77          KK     20P
 78          KO       1
 79          KM        SCS RUNOFF CALCULATION
 80          BA   0.017
 81          PH               0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
 82          LS              79
 83          UD    0.32

 84          KK  20PSWP
 85          KO       1
 86          KM        ROUTING THROUGH WETLAND 3B
 87          RS       1    ELEV    66.5
 88          SA   1.084   1.586   3.737
 89          SE    66.5    67.2    68.2
 90          SS    68.1      30     3.0     1.5
1                                        HEC-1 INPUT                                                    PAGE  3

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


 91          KK     14P
 92          KO       1
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```
 93          KM        SCS RUNOFF CALCULATION
 94          BA   0.036
 95          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
 96          LS             78
 97          UD    0.45

 98          KK    NBAR
 99          KM        COMBINE HYDROGRAPHS FOR 121319, 20PSWP & 14P
100          HC       3

101          KK  14PCHL
102          KO       1
103          KM        STORAGE ROUTING THROUGH NORTH BRANCH TO COMMERCE WAY
104          RS       1    ELEV    61.6
105          SA       0   0.514   0.743   0.912   1.300
106          SE    61.6      64    64.5      65      66
107          SL    62.6    3.14     0.6     0.5
108          SS    64.9       0     3.0     1.5

109          KK  6PWBAR
110          KO       1
111          KM        DIRECT INPUT OF HYDROGRAPH FROM WETLAND 1C (6PN) TO WBAR
112          KM        (SEE POND2: APPENDIX 10-G)
113          BA   0.302
114          QI       0       0       0       0       0       0       0       0       0       0
115          QI       0       0       0       0       0    0.01    0.03    0.08    0.12    0.21
116          QI    0.27    0.35    0.45    0.53    0.63    0.73    0.84    0.95    1.01    1.16
117          QI    1.26    1.41    1.48    1.60    1.75    1.85    1.97    2.10    2.27    2.48
118          QI    2.73    2.90    3.14    3.44    3.66    4.16    5.50    7.27    9.89   15.39
119          QI   21.79   25.21   27.10   27.90   28.51   29.15   29.37   29.76   30.03   30.09
120          QI   30.34   30.46   30.45   30.45   30.38   30.13   30.18   29.93   29.99   29.66
121          QI   29.56   29.35   29.16   28.63   28.53   28.34   28.06   27.79   27.54   27.31
122          QI   27.09   26.54   26.25   25.97   25.72   25.48   25.25   25.04   24.81   24.60
123          QI   24.38   23.87   23.66   23.36   23.09   22.82   22.57

124          KK      8P
125          KO       1
126          KM        SCS RUNOFF CALCULATION
127          BA   0.022
128          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
129          LS             81
130          UD    0.25

131          KK     15P
132          KO       1
133          KM        SCS RUNOFF CALCULATION
134          BA   0.015
135          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
136          LS             86
137          UD    0.26
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

138          KK  15PSWP
139          KO       1
140          KM        STORAGE ROUTING THROUGH WETLAND 3C
141          RS       1    ELEV    62.4
142          SA   1.020   2.247   3.131   3.834
143          SE      62      63      64    65.0
144          SL    62.4    1.23     0.6     0.5
145          SS    64.9      30     3.0     1.5

146          KK   6815P
147          KM        COMBINE HYDROGRAPHS FOR 6PN, 8P, 14PCHL, & 15PSWP
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```
148          HC      4

149          KK   8PCHL
150          KO       1
151          KM        STORAGE ROUTING THROUGH 8P CHANNEL
152          RS       1    ELEV      61
153          SA       0   0.014   0.101   0.187   0.241   0.294   0.349
154          SE      61      63      64      65      66      67      68
155          SL    62.6   12.57     0.6     0.5
156          SS    67.9       0     3.0     1.5

157          KK     10P
158          KO       1
159          KM        SCS RUNOFF CALCULATION
160          BA   0.026
161          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
162          LS             92
163          UD    0.22

164          KK    81OP
165          KM        COMBINE HYDROGRAPHS FOR 8PCHL & 10P RUNOFF
166          HC       2

167          KK  10PCHL
168          KO       1
169          KM        STORAGE ROUTING THROUGH 10P CHANNEL
170          RS       1    ELEV    59.9
171          SA       0   0.082   0.129   0.178   0.225   0.241
172          SE    59.9      61      63      65      67    67.7
173          SL    61.8   12.57     0.6     0.5
174          SS    67.5      30     3.0     1.5

175          KK  16&17P
176          KO       1
177          KM        SCS RUNOFF CALCULATION - 16P & 17P
178          BA   0.017
179          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
180          LS             87
181          UD    0.07
```



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


182          KK  1617PD
183          KO       1
184          KM        STORAGE ROUTING THROUGH 16P & 17P
185          RS       1    ELEV    59.1
186          SA   0.228   0.484   1.708
187          SE    63.5    65.7      66
188          SS    65.9      40     3.0     1.5

189          KK  1017PD
190          KM        COMBINE HYDROGRAPHS FOR 10CHL & 1617PD
191          HC       2

192          KK  1617CH
193          KO       1
194          KM        STORAGE ROUTING THROUGH COMMERCE WAY at 16P & 17P
195          RS       1    ELEV    59.1
196          SA       0   0.033   0.064   0.095   0.123
197          SE    59.1      60      62      64      66
198          SL    61.4   12.57     0.6     0.5
199          SS    65.9       0     3.0     1.5

200          KK  11PCHL
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```
201        KO      1
202        KM       STORAGE ROUTING THROUGH COMMERCE WAY AT 11P
203        RS      1    ELEV    57.8
204        SA      0   0.047   0.067   0.088   0.110   0.128
205        SE   57.8      59      61      63      65    66.8
206        SL     59   12.57     0.6     0.5
207        SS   66.7       0     3.0     1.5

208        KK    21P
209        KO      1
210        KM       SCS RUNOFF CALCULATION
211        BA   0.014
212        PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
213        LS             73
214        UD    0.25

215        KK    22P
216        KO      1
217        KM       SCS RUNOFF CALCULATION
218        BA   0.004
219        PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
220        LS             73
221        UD    0.21

222        KK  21&22P
223        KM       COMBINE HYDROGRAPHS FOR 21P & 22P
224        HC      2
```



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

225        KK  21PCHL
226        KO      1
227        KM       STORAGE ROUTING THROUGH 21P CHANNEL
228        RS      1    STOR       0
229        RC   0.08    0.03    0.08     900   0.002      70
230        RX      0       5      10      13      18      21      26      31
231        RY     71    70.5      70      67      67      70    70.5      71

232        KK    23P
233        KO      1
234        KM       SCS RUNOFF CALCULATION
235        BA   0.032
236        PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
237        LS             88
238        UD    0.15

239        KK    18P
240        KO      1
241        KM       SCS RUNOFF CALCULATION
242        BA   0.011
243        PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
244        LS             95
245        UD    0.06

246        KK  PHCOMB
247        KM       COMBINE HYDROGRAPHS FOR 23P, 18P, 21PCHL, & 11PCHL
248        HC      4

249        KK   8CSWP
250        KO      1
251        KM       DIRECT INPUT HYDROGRAPH FROM READING, UNDER RTE 93
252        BA    1.43
253        QI      0       0       0       0       0       0       0       0       1       3
254        QI      4       6       7       8       9      10      10      10      10      10
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```
255        QI     11     11     11     11     11     11     11     11     11     11
256        QI     11     11     12     13     15     17     20     23     27     32
257        QI     38     44     52     61     70     82    102    132    186    300
258        QI    449    549    572    547    502    453    411    379    358    343
259        QI    331    323    316    309    303    298    293    287    282    276
260        QI    269    261    252    243    233    223    213    203    194    184
261        QI    169    148    131    119    110    102     97     92     89     86
262        QI     84     83     81     80     79     78     77

263        KK  CW&PP
264        KM        COMBINE HYDROGRAPHS FOR PHILLIPS POND
265        HC      2

266        KK   PHPND
267        KO      1
268        KM        STORAGE ROUTING THROUGH PHILLIPS POND
269        RS      1    ELEV     57
270        SA  3.914   4.830   5.514   7.530   8.809  11.892
271        SE     57    59.5    60.6      62      64      66
272        SL   57.5   14.14     0.6     0.5
1                                   HEC-1 INPUT                                    PAGE  7

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

273        SS   65.9      40     3.0     1.5

274        KK    11P
275        KO      1
276        KM        SCS RUNOFF CALCULATION
277        BA  0.068
278        PH             0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
279        LS            91
280        UD   0.32

281        KK   MAWL
282        KO      1
283        KM        DIRECT INPUT HYDROGRAPH FROM MITIGATION AREA WETLAND
284        KM        (SEE POND2: APPENDIX 10-G)
285        BA   0.01
286        QI      0       0       0       0       0       0       0       0       0       0
287        QI      0       0       0       0       0       0       0       0       0       0
288        QI      0       0       0    0.01    0.01    0.01    0.01    0.02    0.02    0.03
289        QI   0.03    0.04    0.05    0.06    0.07    0.08    0.09    0.11    0.14    0.16
290        QI   0.19    0.23    0.28    0.34    0.41    0.50    0.66    0.87    1.18    1.86
291        QI   2.46    3.22    3.90    4.35    4.77    5.23    5.80    6.51    7.26    8.14
292        QI   8.98    9.74   10.57   11.38   12.15   12.79   13.14   13.52   14.13   14.71
293        QI  15.36   15.97   16.61   18.25   19.63   20.75   21.66   22.54   23.39   23.97
294        QI  24.35   24.60   24.76   24.81   24.78   24.68   24.52   24.33   24.11   23.87
295        QI  23.62   23.39   23.18   22.95   22.70   22.44   22.17

296        KK     9P
297        KO      1
298        KM        SCS RUNOFF CALCULATION
299        BA  0.011
300        PH             0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
301        LS            82
302        UD   0.19

303        KK    5PM
304        KO      1
305        KM        SCS RUNOFF CALCULATION
306        BA   .008
307        PH             0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
308        LS            78
309        UD    .43
```

```
310          KK   MA5PN
311          KO       1
312          KM        COMBINE HYDROGRAPHS FOR 9P, 5PN & MAWL
313          HC       3

314          KK  AADWEX
315          KO       1
316          KM        STORAGE ROUTING THROUGH ATLANTIC AVENUE DRAINWAY EXTENSION
317          RS       1    ELEV    60.0
318          SA   0.003   0.011   0.028   0.058   0.096   0.136   0.176   0.196
319          SE      60    62.5    63.5    64.5    65.5    66.5    67.5    68.0
320          SL    61.9   37.70     0.6     0.5
321          SS    67.9       0     3.0     1.5
1                                        HEC-1 INPUT                                                    PAGE  8

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


322          KK     5PS
323          KO       1
324          KM        SCS RUNOFF CALCULATION
325          BA   0.051
326          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
327          LS             83
328          UD    0.52

329          KK  RECHRG
330          KO       1
331          KM         DIRECT INPUT OF HYDROGRAPH FROM RECHARGE BASIN
332          BA    .001
333          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
334          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
335          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
336          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
337          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
338          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
339          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
340          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
341          QI      .6      .6      .6      .6      .6      .6      .6      .6      .6      .6
342          QI      .6      .6      .6      .6      .6      .6      .6

343          KK  5PSAAD
344          KM        COMBINE HYDROGRAPHS FOR 5PS, RECHARGE BASIN & AADWEX
345          HC       3

346          KK  SHD10C
347          KO       1
348          KM        STORAGE ROUTING THROUGH ATLANTIC AVENUE CHANNEL at RR TRACKS
349          RS       1    STOR       0
350          RC    0.08    0.03    0.08     800   0.007      63
351          RX       0      10      20      28      42      50      60      70
352          RY      63    62.5      62    54.2    54.2      62    62.5      63

353          KK  4DCHAB
354          KO       1
355          KM        DIRECT INPUT OF HYDROGRAPH FROM NW WOBURN & WILMINGTON
356          BA   0.259
357          QI       0       0       0       0       0       0       0       0       0       0
358          QI       0       0       0       0       0       0       0       0       0       0
359          QI       0       0       0       0       0       0       0       0       0       0
360          QI       0       0       0       1       1       1       1       2       2       3
361          QI       3       4       5       6       7      10      14      21      37      88
362          QI     116      87      61      47      37      32      30      29      28      27
363          QI      27      27      26      26      26      26      26      26      26      26
364          QI      26      26      26      26      25      25      25      25      25      25
365          QI      25      25      24      24      24      24      24      24      24      24
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 366        QI      24      24      23      23      23      23      23
1                                          HEC-1 INPUT                                                          PAGE  9

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


 367        KK     2PN
 368        KO       1
 369        KM        SCS RUNOFF CALCULATION
 370        BA   0.008
 371        PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
 372        LS             85
 373        UD    0.28

 374        KK   4D2PN
 375        KM        COMBINE HYDROGRAPHS FROM 4DCHAB & 2PN
 376        HC       2

 377        KK   PXDPR
 378        KO       1
 379        KM        ROUTING OF NW WOBURN & WILMINGTON THROUGH PX DEPRESSED AREA
 380        RS       1    ELEV    68.9
 381        SA       0    .291    .721    .936
 382        SE    68.0      69      70      71
 383        SL    68.9    7.07     0.6     0.5
 384        SS    70.9      30     3.0     1.5

 385        KK   4ECHL
 386        KO       1
 387        KM        DIRECT INPUT OF HYDROGRAPH FROM NW WOBURN & WILMINGTON
 388        BA    0.30
 389        QI       0       0       0       0       0       0       0       0       0       0
 390        QI       0       0       0       0       0       0       0       0       0       0
 391        QI       0       0       0       0       0       0       0       0       0       0
 392        QI       0       0       1       3       3       5       6       7       9      11
 393        QI      13      16      19      22      26      35      47      59      75      75
 394        QI      75      75      75      75      75      75      75      75      75      75
 395        QI      75      75      75      74      61      48      33      28      27      26
 396        QI      25      24      24      22      20      18      18      17      17      16
 397        QI      16      15      15      15      14      14      14      13      13      13
 398        QI      13      12      12      12      12      12      11

 399        KK      1P
 400        KO       1
 401        KM        SCS RUNOFF CALCULATION
 402        BA   0.021
 403        PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
 404        LS             87
 405        UD    0.31

 406        KK    4E1P
 407        KM        COMBINE HYDROGRAPHS FROM 4ECHL & 1P
 408        HC       2

 409        KK  EWCLPX
 410        KO       1
 411        KM        CHANNEL ROUTING THROUGH E/W CHANNEL AT PX REALTY
 412        RS       1    STOR       0
 413        RC   0.080   0.030   0.080     250  0.0032    70.5
 414        RX       0       5      10      16      22      28      38      48
1                                          HEC-1 INPUT                                                          PAGE 10

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

 415        RY      72      71      70    64.4    64.4      70    70.2    70.5
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```
416        KK     2PS
417        KO       1
418        KM        SCS RUNOFF CALCULATION
419        BA   0.006
420        PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
421        LS             96
422        UD    0.02

423        KK   2PSDB
424        KO       1
425        KM        ROUTING OF 2PS THROUGH DETENTION BASIN
426        RS       1    ELEV    66.0
427        SA   0.069   0.088   0.108   0.130   0.154
428        SE      66      67      68      69      70
429        SL      66    0.79     0.6     0.5
430        SS    69.9       0     3.0     1.5

431        KK    1&2P
432        KM        COMBINE HYDROGRAPHS FROM PX DEPRESSED AREA, 1P & 2P RUNOFF
433        HC       3

434        KK  2PSCHL
435        KO       1
436        KM        STORAGE ROUTING THROUGH N/S CHANNEL AT PX REALTY
437        RS       1    ELEV    66.4
438        SA       0   0.016   0.019   0.033   0.041   0.066   0.074
439        SE    66.4    66.5      67    67.5    68.0      69    69.4
440        SL   59.70    7.07     0.6     0.5
441        SS    69.3       0     3.0     1.5

442        KK  DI2PSC
443        KO       1
444        KM        DIRECT INPUT HYDROGRAPH FOR FLOW FROM 2PSCHL (MODIFIED PEAK)
445        BA     .59
446        QI       0       6       6       6       6       6       6       6       6       6
447        QI       6       6       6       6       6       6       6       6       6       6
448        QI       6       6       6       6       6       6       6       6       6       6
449        QI       6       6       6       6       6       6       8       9      11      14
450        QI      19      24      28      33      38      50      69      90     109     110
451        QI     110     110     110     110     110     110     110     110     110     110
452        QI     110     109     108     106      99      77      66      56      58      54
453        QI      55      53      54      51      48      45      45      44      44      43
454        QI      43      42      41      41      40      40      40      39      39      39
455        QI      39      38      37      37      36      37      36

456        KK     4PS
457        KO       1
458        KM        SCS RUNOFF CALCULATION
459        BA   0.003
460        PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
461        LS             97
462        UD           0.08
```



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

463        KK   4PSDB
464        KO       1
465        KM        STORAGE ROUTING THROUGH DETENSION BASIN AT DAGATA
466        RS       1 ELEV 59
467        SA   0.048   0.063   0.079   0.097
468        SE      59      60      61      62
469        SL      59    0.44     0.6     0.5
470        SS    61.9       0     3.0     1.5
```

```
471          KK     4P
472          KO      1
473          KM        SCS RUNOFF CALCULATION
474          BA   0.017
475          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
476          LS             91
477          UD    0.41

478          KK    124P
479          KM        COMBINE HYDROGRAPHS FROM  2SPCHL, 4P, & 4PSDB
480          HC      3

481          KK   4PSWP
482          KO      1
483          KM        STORAGE ROUTING THROUGH WET AREA IN B.E. ROW
484          RS      1    ELEV    60.6
485          SA   0.801   1.178   1.430   1.939
486          SE    60.6    61.3    62.0    63.3
487          SS    60.6      10     3.0     1.5

488          KK     3PE
489          KO      1
490          KM        SCS RUNOFF CALCULATION
491          BA   0.002
492          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
493          LS             98
494          UD    0.02

495          KK   3PEDB
496          KO      1
497          KM        STORAGE ROUTING DETENTION BASIN AT PEBCO
498          RS      1    ELEV      63
499          SA   0.035   0.046   0.060   0.075
500          SE      63      64      65      66
501          SL    63.5    0.79     0.6     0.5
502          SS    66.9       0     3.0     1.5

503          KK     3PW
504          KO      1
505          KM        SCS RUNOFF CALCULATION
506          BA   0.010
507          PH              0     0.6     1.3     2.5     3.3     3.7     4.6     5.6     6.6
508          LS             78
509          UD    0.24
```



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


510          KK    3PEW
511          KO      1
512          KM        COMBINE HYDROGRAPHS FROM 3PEDB & 3PW
513          HC      2
514          ZZ
```

1

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

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

   8          5E
               .
               .
  22           .       6CSWP
               .           .
```

```
              .           .
 36           .           .         12P
              .           .           .
              .           .           .
 43       6C24P.......................
              V
              V
 46       12PCHL
              .
              .
 53           .         13P
              .           .
              .           .
 60           .           .         19P
              .           .           V
              .           .           V
 67           .           .      19PCHL
              .           .           .
              .           .           .
 74       121319......................
              .
              .
 77           .         20P
              .           V
              .           V
 84           .      20PSWP
              .           .
              .           .
 91           .           .         14P
              .           .           .
              .           .           .
 98        NBAR.......................
              V
              V
101       14PCHL
              .
              .
109           .      6PWBAR
              .           .
              .           .
124           .           .          8P
              .           .           .
              .           .           .
131           .           .           .         15P
              .           .           .           V
              .           .           .           V
138           .           .           .      15PSWP
              .           .           .           .
              .           .           .           .
146       6815P..................................
              V
              V
149       8PCHL
              .
              .
157           .         10P
              .           .
              .           .
164        810P............
              V
              V
  7       10PCHL
              .
              .
175           .      16&17P
              .           V
```

```
                .          V
182             .      1617PD
                .          .
                .          .
189       1017PD............
               V
               V
192       1617CH
               V
               V
200       11PCHL
                .
                .
208             .        21P
                .          .
                .          .
215             .          .        22P
                .          .          .
                .          .          .
222             .     21&22P............
                .          V
                .          V
225             .     21PCHL
                .          .
                .          .
232             .          .        23P
                .          .          .
                .          .          .
239             .          .          .        18P
                .          .          .          .
                .          .          .          .
246       PHCOMB..................................
                .
                .
249             .      8CSWP
                .          .
                .          .
263       CW&PP ............
               V
               V
266        PHPND
                .
                .
274             .        11P
                .          .
                .          .
281             .          .       MAWL
                .          .          .
                .          .          .
296             .          .          .         9P
                .          .          .          .
                .          .          .          .
303             .          .          .          .        5PN
                .          .          .          .          .
                .          .          .          .          .
310             .          .     MA5PN......................
                .          .          V
                .          .          V
314             .          .     AADWEX
                .          .          .
                .          .          .
322             .          .          .        5PS
                .          .          .          .
                .          .          .          .
329             .          .          .          .     RECHRG
                .          .          .          .          .
```

```
                .         .         .         .         .
343             .         .   5PSAAD.......................
                .         .       V
                .         .       V
346             .         .   SHD10C
                .         .       .
                .         .       .
353             .         .       .   4DCHAB
                .         .       .       .
                .         .       .       .
367             .         .       .       .         2PN
                .         .       .       .           .
                .         .       .       .           .
374             .         .       .     4D2PN............
                .         .       .         V
                .         .       .         V
377             .         .       .     PXDPR
                .         .       .       .
                .         .       .       .
385             .         .       .       .       4ECHL
                .         .       .       .           .
                .         .       .       .           .
399             .         .       .       .           .         1P
                .         .       .       .           .          .
                .         .       .       .           .          .
406             .         .       .       .       4E1P............
                .         .       .       .           V
                .         .       .       .           V
409             .         .       .       .      EWCLPX
                .         .       .       .           .
                .         .       .       .           .
416             .         .       .       .           .        2PS
                .         .       .       .           .          V
                .         .       .       .           .          V
423             .         .       .       .           .      2PSDB
                .         .       .       .           .          .
                .         .       .       .           .          .
431             .         .       .     1&2P........................
                .         .       .         V
                .         .       .         V
434             .         .       .     2PSCHL
                .         .       .       .
                .         .       .       .
442             .         .       .       .      DI2PSC
                .         .       .       .           .
                .         .       .       .           .
456             .         .       .       .           .         4PS
                .         .       .       .           .           V
                .         .       .       .           .           V
463             .         .       .       .           .       4PSDB
                .         .       .       .           .           .
                .         .       .       .           .           .
471             .         .       .       .           .           .         4P
                .         .       .       .           .           .           .
                .         .       .       .           .           .           .
478             .         .       .       .       124P........................
                .         .       .       .           V
                .         .       .       .           V
481             .         .       .       .      4PSWP
                .         .       .       .           .
                .         .       .       .           .
 B              .         .       .       .           .         3PE
                .         .       .       .           .           V
                .         .       .       .           .           V
495             .         .       .       .           .       3PEDB
                .         .       .       .           .           .
```

```
                .         .         .         .         .         .
  503           .         .         .         .         .         .        3PW
                .         .         .         .         .         .         .
                .         .         .         .         .         .         .
  510           .         .         .         .         .       3PEW............

(***) 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
                                                           ****



                          ISRT, WOBURN, MASSACHUSETTS
                          ON-SITE SUBWATERSHEDS
                          DETAILED STORAGE AND STREAM NETWORK
                          PROPOSED CONDITIONS - 100 YR, 24 HR STORM

   7 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    28FEB91  STARTING DATE
                      ITIME       0100  STARTING TIME
                         NQ         97  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     1MAR91  ENDING DATE
                     NDTIME       0100  ENDING TIME

                 COMPUTATION INTERVAL     .25 HOURS
                      TOTAL TIME BASE   24.00 HOURS

         ENGLISH UNITS


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


           **************
           *            *
   8 KK    *        5E  *
           *            *
           **************

   9 KO         OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                          DIRECT INPUT HYDROGRAPH FOR FLOW FROM 5E

   6 IN         TIME DATA FOR INPUT TIME SERIES
                      JXMIN         15  TIME INTERVAL IN MINUTES
                     JXDATE    28FEB91  STARTING DATE
                     JXTIME        100  STARTING TIME

             SUBBASIN RUNOFF DATA

  11 BA         SUBBASIN CHARACTERISTICS
                      TAREA        .07  SUBBASIN AREA

                                                           ***
```

HYDROGRAPH AT STATION 5E

| DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | 28 FEB 0715 | 26 | 0. | 28 FEB 1330 | 51 | 84. | 28 FEB 1945 | 76 | 4. |
| 28 FEB 0115 | 2 | 0. | 28 FEB 0730 | 27 | 0. | 28 FEB 1345 | 52 | 71. | 28 FEB 2000 | 77 | 4. |
| 28 FEB 0130 | 3 | 0. | 28 FEB 0745 | 28 | 0. | 28 FEB 1400 | 53 | 49. | 28 FEB 2015 | 78 | 4. |
| 28 FEB 0145 | 4 | 0. | 28 FEB 0800 | 29 | 0. | 28 FEB 1415 | 54 | 35. | 28 FEB 2030 | 79 | 4. |
| 28 FEB 0200 | 5 | 0. | 28 FEB 0815 | 30 | 0. | 28 FEB 1430 | 55 | 25. | 28 FEB 2045 | 80 | 4. |
| 28 FEB 0215 | 6 | 0. | 28 FEB 0830 | 31 | 0. | 28 FEB 1445 | 56 | 19. | 28 FEB 2100 | 81 | 3. |
| 28 FEB 0230 | 7 | 0. | 28 FEB 0845 | 32 | 0. | 28 FEB 1500 | 57 | 15. | 28 FEB 2115 | 82 | 3. |
| 28 FEB 0245 | 8 | 0. | 28 FEB 0900 | 33 | 0. | 28 FEB 1515 | 58 | 13. | 28 FEB 2130 | 83 | 3. |
| 28 FEB 0300 | 9 | 0. | 28 FEB 0915 | 34 | 0. | 28 FEB 1530 | 59 | 12. | 28 FEB 2145 | 84 | 3. |
| 28 FEB 0315 | 10 | 0. | 28 FEB 0930 | 35 | 1. | 28 FEB 1545 | 60 | 11. | 28 FEB 2200 | 85 | 3. |
| 28 FEB 0330 | 11 | 0. | 28 FEB 0945 | 36 | 1. | 28 FEB 1600 | 61 | 10. | 28 FEB 2215 | 86 | 3. |
| 28 FEB 0345 | 12 | 0. | 28 FEB 1000 | 37 | 1. | 28 FEB 1615 | 62 | 9. | 28 FEB 2230 | 87 | 3. |
| 28 FEB 0400 | 13 | 0. | 28 FEB 1015 | 38 | 1. | 28 FEB 1630 | 63 | 8. | 28 FEB 2245 | 88 | 3. |
| 28 FEB 0415 | 14 | 0. | 28 FEB 1030 | 39 | 2. | 28 FEB 1645 | 64 | 8. | 28 FEB 2300 | 89 | 3. |
| 28 FEB 0430 | 15 | 0. | 28 FEB 1045 | 40 | 2. | 28 FEB 1700 | 65 | 7. | 28 FEB 2315 | 90 | 3. |
| 28 FEB 0445 | 16 | 0. | 28 FEB 1100 | 41 | 3. | 28 FEB 1715 | 66 | 7. | 28 FEB 2330 | 91 | 3. |
| 28 FEB 0500 | 17 | 0. | 28 FEB 1115 | 42 | 3. | 28 FEB 1730 | 67 | 7. | 28 FEB 2345 | 92 | 3. |
| 28 FEB 0515 | 18 | 0. | 28 FEB 1130 | 43 | 4. | 28 FEB 1745 | 68 | 6. | 1 MAR 0000 | 93 | 3. |
| 28 FEB 0530 | 19 | 0. | 28 FEB 1145 | 44 | 4. | 28 FEB 1800 | 69 | 6. | 1 MAR 0015 | 94 | 3. |
| 28 FEB 0545 | 20 | 0. | 28 FEB 1200 | 45 | 5. | 28 FEB 1815 | 70 | 6. | 1 MAR 0030 | 95 | 3. |
| 28 FEB 0600 | 21 | 0. | 28 FEB 1215 | 46 | 7. | 28 FEB 1830 | 71 | 6. | 1 MAR 0045 | 96 | 3. |
| 28 FEB 0615 | 22 | 0. | 28 FEB 1230 | 47 | 10. | 28 FEB 1845 | 72 | 5. | 1 MAR 0100 | 97 | 3. |
| 28 FEB 0630 | 23 | 0. | 28 FEB 1245 | 48 | 14. | 28 FEB 1900 | 73 | 5. | | | |
| 28 FEB 0645 | 24 | 0. | 28 FEB 1300 | 49 | 25. | 28 FEB 1915 | 74 | 5. | | | |
| 28 FEB 0700 | 25 | 0. | 28 FEB 1315 | 50 | 56. | 28 FEB 1930 | 75 | 4. | | | |

| PEAK FLOW (CFS) | TIME (HR) | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| | | (CFS) | | | | |
| 84. | 12.50 | | 21. | 7. | 7. | 7. |
| | | (INCHES) | 2.842 | 3.550 | 3.550 | 3.550 |
| | | (AC-FT) | 11. | 13. | 13. | 13. |

CUMULATIVE AREA = .07 SQ MI

```
          **************
          *            *
 22 KK    *     6CSWP  *
          *            *
          **************
```

23 KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

DIRECT INPUT HYDROGRAPH FOR FLOW FROM READING, UNDER RTE 93

6 IN TIME DATA FOR INPUT TIME SERIES

```
                JXMIN          15  TIME INTERVAL IN MINUTES
               JXDATE     28FEB91  STARTING DATE
               JXTIME         100  STARTING TIME

          SUBBASIN RUNOFF DATA

 25 BA        SUBBASIN CHARACTERISTICS
                TAREA         .93  SUBBASIN AREA

                                                    ***
```

HYDROGRAPH AT STATION 6CSWP

| DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | 28 FEB 0715 | 26 | 0. | 28 FEB 1330 | 51 | 160. | 28 FEB 1945 | 76 | 148. |
| 28 FEB 0115 | 2 | 0. | 28 FEB 0730 | 27 | 0. | 28 FEB 1345 | 52 | 172. | 28 FEB 2000 | 77 | 137. |
| 28 FEB 0130 | 3 | 0. | 28 FEB 0745 | 28 | 0. | 28 FEB 1400 | 53 | 177. | 28 FEB 2015 | 78 | 124. |
| 28 FEB 0145 | 4 | 0. | 28 FEB 0800 | 29 | 0. | 28 FEB 1415 | 54 | 181. | 28 FEB 2030 | 79 | 97. |
| 28 FEB 0200 | 5 | 0. | 28 FEB 0815 | 30 | 0. | 28 FEB 1430 | 55 | 182. | 28 FEB 2045 | 80 | 54. |
| 28 FEB 0215 | 6 | 0. | 28 FEB 0830 | 31 | 0. | 28 FEB 1445 | 56 | 183. | 28 FEB 2100 | 81 | 52. |
| 28 FEB 0230 | 7 | 0. | 28 FEB 0845 | 32 | 0. | 28 FEB 1500 | 57 | 184. | 28 FEB 2115 | 82 | 51. |
| 28 FEB 0245 | 8 | 0. | 28 FEB 0900 | 33 | 0. | 28 FEB 1515 | 58 | 184. | 28 FEB 2130 | 83 | 49. |
| 28 FEB 0300 | 9 | 0. | 28 FEB 0915 | 34 | 0. | 28 FEB 1530 | 59 | 184. | 28 FEB 2145 | 84 | 48. |
| 28 FEB 0315 | 10 | 0. | 28 FEB 0930 | 35 | 0. | 28 FEB 1545 | 60 | 184. | 28 FEB 2200 | 85 | 47. |
| 28 FEB 0330 | 11 | 0. | 28 FEB 0945 | 36 | 1. | 28 FEB 1600 | 61 | 184. | 28 FEB 2215 | 86 | 46. |
| 28 FEB 0345 | 12 | 0. | 28 FEB 1000 | 37 | 2. | 28 FEB 1615 | 62 | 183. | 28 FEB 2230 | 87 | 46. |
| 28 FEB 0400 | 13 | 0. | 28 FEB 1015 | 38 | 4. | 28 FEB 1630 | 63 | 183. | 28 FEB 2245 | 88 | 45. |
| 28 FEB 0415 | 14 | 0. | 28 FEB 1030 | 39 | 6. | 28 FEB 1645 | 64 | 182. | 28 FEB 2300 | 89 | 44. |
| 28 FEB 0430 | 15 | 0. | 28 FEB 1045 | 40 | 8. | 28 FEB 1700 | 65 | 181. | 28 FEB 2315 | 90 | 44. |
| 28 FEB 0445 | 16 | 0. | 28 FEB 1100 | 41 | 11. | 28 FEB 1715 | 66 | 180. | 28 FEB 2330 | 91 | 43. |
| 28 FEB 0500 | 17 | 0. | 28 FEB 1115 | 42 | 14. | 28 FEB 1730 | 67 | 179. | 28 FEB 2345 | 92 | 42. |
| 28 FEB 0515 | 18 | 0. | 28 FEB 1130 | 43 | 18. | 28 FEB 1745 | 68 | 178. | 1 MAR 0000 | 93 | 42. |
| 28 FEB 0530 | 19 | 0. | 28 FEB 1145 | 44 | 23. | 28 FEB 1800 | 69 | 176. | 1 MAR 0015 | 94 | 41. |
| 28 FEB 0545 | 20 | 0. | 28 FEB 1200 | 45 | 28. | 28 FEB 1815 | 70 | 174. | 1 MAR 0030 | 95 | 41. |
| 28 FEB 0600 | 21 | 0. | 28 FEB 1215 | 46 | 36. | 28 FEB 1830 | 71 | 172. | 1 MAR 0045 | 96 | 40. |
| 28 FEB 0615 | 22 | 0. | 28 FEB 1230 | 47 | 51. | 28 FEB 1845 | 72 | 169. | 1 MAR 0100 | 97 | 40. |
| 28 FEB 0630 | 23 | 0. | 28 FEB 1245 | 48 | 73. | 28 FEB 1900 | 73 | 165. | | | |
| 28 FEB 0645 | 24 | 0. | 28 FEB 1300 | 49 | 116. | 28 FEB 1915 | 74 | 161. | | | |
| 28 FEB 0700 | 25 | 0. | 28 FEB 1315 | 50 | 137. | 28 FEB 1930 | 75 | 155. | | | |

```
 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR     24.00-HR
+  (CFS)       (HR)
                          (CFS)
+     184.     14.00                  177.        65.         65.         65.
                         (INCHES)   1.773       2.600       2.600       2.600
                          (AC-FT)     88.        129.        129.        129.

                         CUMULATIVE AREA =      .93 SQ MI


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

            **************
            *            *
 36 KK      *      12P   *
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*           *
**************

37 KO          OUTPUT CONTROL VARIABLES
                     IPRNT           1  PRINT CONTROL
                     IPLOT           0  PLOT CONTROL
                     QSCAL          0.  HYDROGRAPH PLOT SCALE
                              SCS RUNOFF CALCULATION

            SUBBASIN RUNOFF DATA

39 BA          SUBBASIN CHARACTERISTICS
                     TAREA         .01  SUBBASIN AREA

               PRECIPITATION DATA

40 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
               ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
               5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                 .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                STORM AREA =     .01

41 LS          SCS LOSS RATE
                     STRTL         .56  INITIAL ABSTRACTION
                    CRVNBR       78.00  CURVE NUMBER
                     RTIMP         .00  PERCENT IMPERVIOUS AREA

42 UD          SCS DIMENSIONLESS UNITGRAPH
                      TLAG         .44  LAG

                                                          ***

 ING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                   UNIT HYDROGRAPH
                                             11 END-OF-PERIOD ORDINATES
               5.      13.      11.       5.       3.       1.       1.       0.       0.       0.
               0.

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

                                             HYDROGRAPH AT STATION      12P

*****************************************************************************************************************
                                                          *
     DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q   *    DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q
                                                          *
     28 FEB 0100    1     .00     .00     .00        0.   *    28 FEB 1315   50    1.30     .31     .99       12.
     28 FEB 0115    2     .02     .02     .00        0.   *    28 FEB 1330   51     .34     .06     .28       19.
     28 FEB 0130    3     .02     .02     .00        0.   *    28 FEB 1345   52     .23     .04     .19       18.
     28 FEB 0145    4     .02     .02     .00        0.   *    28 FEB 1400   53     .19     .03     .16       13.
     28 FEB 0200    5     .02     .02     .00        0.   *    28 FEB 1415   54     .11     .02     .09        9.
     28 FEB 0215    6     .02     .02     .00        0.   *    28 FEB 1430   55     .10     .01     .08        7.
     28 FEB 0230    7     .02     .02     .00        0.   *    28 FEB 1445   56     .09     .01     .08        5.
     28 FEB 0245    8     .02     .02     .00        0.   *    28 FEB 1500   57     .09     .01     .07        4.
     28 FEB 0300    9     .02     .02     .00        0.   *    28 FEB 1515   58     .08     .01     .07        3.
     28 FEB 0315   10     .02     .02     .00        0.   *    28 FEB 1530   59     .07     .01     .06        3.
     28 FEB 0330   11     .02     .02     .00        0.   *    28 FEB 1545   60     .07     .01     .06        3.
     28 FEB 0345   12     .02     .02     .00        0.   *    28 FEB 1600   61     .06     .01     .05        2.
     28 FEB 0400   13     .02     .02     .00        0.   *    28 FEB 1615   62     .05     .01     .05        2.
     28 FEB 0415   14     .02     .02     .00        0.   *    28 FEB 1630   63     .05     .01     .04        2.
     28 FEB 0430   15     .02     .02     .00        0.   *    28 FEB 1645   64     .05     .01     .04        2.
     28 FEB 0445   16     .02     .02     .00        0.   *    28 FEB 1700   65     .05     .01     .04        2.
     28 FEB 0500   17     .02     .02     .00        0.   *    28 FEB 1715   66     .04     .01     .04        2.
     28 FEB 0515   18     .02     .02     .00        0.   *    28 FEB 1730   67     .04     .01     .04        2.
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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 1. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .03 | 1. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .03 | 1. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .02 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .02 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .04 | .00 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .04 | .00 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .04 | .00 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .04 | .00 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .04 | .00 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .04 | .01 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .04 | .01 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .04 | .01 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .04 | .01 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .04 | .01 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .05 | .02 | 0. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .05 | .02 | 1. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .05 | .02 | 1. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .05 | .03 | 1. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .05 | .03 | 1. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .05 | .04 | 1. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .05 | .04 | 1. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .06 | .05 | 1. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .09 | .08 | 2. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .10 | .11 | 2. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 FEB 1245 | 48 | .27 | .11 | .16 | 4. | * | 1 MAR 0100 | 97 | .02 | .00 | .01 | 1. |
| 28 FEB 1300 | 49 | .59 | .20 | .39 | 6. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 2.49, TOTAL EXCESS = 4.11

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 19. | 12.50 | | 5. | 2. | 2. | 2. |
| | | (INCHES) | 3.258 | 4.077 | 4.077 | 4.077 |
| | | (AC-FT) | 3. | 3. | 3. | 3. |

CUMULATIVE AREA = .01 SQ MI

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

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          **************
          *            *
 46 KK    *   12PCHL   *
          *            *
          **************
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47 KO OUTPUT CONTROL VARIABLES

IPRNT 1 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

STORAGE ROUTING THROUGH NORTH BRANCH CHANNEL

HYDROGRAPH ROUTING DATA

```
 49 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

 50 RC          NORMAL DEPTH CHANNEL ROUTING
                       ANL       .080  LEFT OVERBANK N-VALUE
                      ANCH       .030  MAIN CHANNEL N-VALUE
                       ANR       .080  RIGHT OVERBANK N-VALUE
                     RLNTH       400.  REACH LENGTH
                       SEL      .0063  ENERGY SLOPE
                     ELMAX       69.5  MAX. ELEV. FOR STORAGE/OUTFLOW CALCULATION

                                   CROSS-SECTION DATA
                        --- LEFT OVERBANK --- + ------ MAIN CHANNEL ------- + --- RIGHT OVERBANK ---
 52 RY       ELEVATION    70.50    70.00    69.50    67.50    67.50    69.50    70.00    70.50
 51 RX       DISTANCE       .00     5.00    10.00    11.00    17.00    18.00    23.00    28.00

                                                  ***

                                   COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE       .00      .01      .01      .02      .02      .03      .04      .04      .05      .06
          OUTFLOW       .00      .55     1.72     3.36     5.38     7.74    10.40    13.36    16.58    20.05
        ELEVATION     67.50    67.61    67.71    67.82    67.92    68.03    68.13    68.24    68.34    68.45

          STORAGE       .06      .07      .08      .08      .09      .10      .11      .11      .12      .13
          OUTFLOW     23.77    27.72    31.90    36.29    40.89    45.71    50.73    55.95    61.36    66.98
        ELEVATION     68.55    68.66    68.76    68.87    68.97    69.08    69.18    69.29    69.39    69.50

 *** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        1. TO       67.
                 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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                                   HYDROGRAPH AT STATION   12PCHL

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                                                  *                                                 *
 DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE
                                                  *                                                 *
 28 FEB 0100  1       0.       .0    67.5 * 28 FEB 0915  34       0.       .0    67.5 * 28 FEB 1730  67     188.       .3    71.8
 28 FEB 0115  2       0.       .0    67.5 * 28 FEB 0930  35       1.       .0    67.6 * 28 FEB 1745  68     186.       .3    71.7
 28 FEB 0130  3       0.       .0    67.5 * 28 FEB 0945  36       2.       .0    67.7 * 28 FEB 1800  69     184.       .3    71.7
 28 FEB 0145  4       0.       .0    67.5 * 28 FEB 1000  37       3.       .0    67.8 * 28 FEB 1815  70     182.       .3    71.6
 28 FEB 0200  5       0.       .0    67.5 * 28 FEB 1015  38       5.       .0    67.9 * 28 FEB 1830  71     179.       .3    71.6
 28 FEB 0215  6       0.       .0    67.5 * 28 FEB 1030  39       8.       .0    68.0 * 28 FEB 1845  72     176.       .3    71.5
 28 FEB 0230  7       0.       .0    67.5 * 28 FEB 1045  40      10.       .0    68.1 * 28 FEB 1900  73     171.       .3    71.5
 28 FEB 0245  8       0.       .0    67.5 * 28 FEB 1100  41      14.       .0    68.3 * 28 FEB 1915  74     168.       .3    71.4
 28 FEB 0300  9       0.       .0    67.5 * 28 FEB 1115  42      18.       .1    68.4 * 28 FEB 1930  75     161.       .3    71.3
 28 FEB 0315 10       0.       .0    67.5 * 28 FEB 1130  43      22.       .1    68.5 * 28 FEB 1945  76     153.       .2    71.1
 28 FEB 0330 11       0.       .0    67.5 * 28 FEB 1145  44      28.       .1    68.7 * 28 FEB 2000  77     143.       .2    70.9
 28 FEB 0345 12       0.       .0    67.5 * 28 FEB 1200  45      34.       .1    68.8 * 28 FEB 2015  78     130.       .2    70.7
 28 FEB 0400 13       0.       .0    67.5 * 28 FEB 1215  46      44.       .1    69.0 * 28 FEB 2030  79     104.       .2    70.2
 28 FEB 0415 14       0.       .0    67.5 * 28 FEB 1230  47      62.       .1    69.4 * 28 FEB 2045  80      62.       .1    69.4
 28 FEB 0430 15       0.       .0    67.5 * 28 FEB 1245  48      89.       .2    69.9 * 28 FEB 2100  81      54.       .1    69.2
 28 FEB 0445 16       0.       .0    67.5 * 28 FEB 1300  49     142.       .2    70.9 * 28 FEB 2115  82      56.       .1    69.3
 28 FEB 0500 17       0.       .0    67.5 * 28 FEB 1315  50     202.       .3    72.0 * 28 FEB 2130  83      52.       .1    69.2
    FEB 0515 18       0.       .0    67.5 * 28 FEB 1330  51     259.       .4    73.1 * 28 FEB 2145  84      53.       .1    69.2
 28 FEB 0530 19       0.       .0    67.5 * 28 FEB 1345  52     265.       .4    73.2 * 28 FEB 2200  85      50.       .1    69.2
 28 FEB 0545 20       0.       .0    67.5 * 28 FEB 1400  53     238.       .4    72.7 * 28 FEB 2215  86      50.       .1    69.2
 28 FEB 0600 21       0.       .0    67.5 * 28 FEB 1415  54     227.       .3    72.5 * 28 FEB 2230  87      49.       .1    69.2
 28 FEB 0615 22       0.       .0    67.5 * 28 FEB 1430  55     214.       .3    72.2 * 28 FEB 2245  88      49.       .1    69.2
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28 FEB 0630  23      0.      .0    67.5 * 28 FEB 1445  56     208.      .3    72.1 * 28 FEB 2300  89      47.      .1    69.1
28 FEB 0645  24      0.      .0    67.5 * 28 FEB 1500  57     203.      .3    72.0 * 28 FEB 2315  90      48.      .1    69.1
28 FEB 0700  25      0.      .0    67.5 * 28 FEB 1515  58     201.      .3    72.0 * 28 FEB 2330  91      47.      .1    69.1
28 FEB 0715  26      0.      .0    67.5 * 28 FEB 1530  59     199.      .3    72.0 * 28 FEB 2345  92      46.      .1    69.1
28 FEB 0730  27      0.      .0    67.5 * 28 FEB 1545  60     198.      .3    72.0 *  1 MAR 0000  93      46.      .1    69
28 FEB 0745  28      0.      .0    67.5 * 28 FEB 1600  61     196.      .3    71.9 *  1 MAR 0015  94      45.      .1    69
28 FEB 0800  29      0.      .0    67.5 * 28 FEB 1615  62     195.      .3    71.9 *  1 MAR 0030  95      44.      .1    69.1
28 FEB 0815  30      0.      .0    67.5 * 28 FEB 1630  63     193.      .3    71.9 *  1 MAR 0045  96      44.      .1    69.0
28 FEB 0830  31      0.      .0    67.5 * 28 FEB 1645  64     192.      .3    71.8 *  1 MAR 0100  97      43.      .1    69.0
28 FEB 0845  32      0.      .0    67.5 * 28 FEB 1700  65     190.      .3    71.8 *
28 FEB 0900  33      0.      .0    67.5 * 28 FEB 1715  66     189.      .3    71.8 *
                                        *                                        *
*****************************************************************************************************************************

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR     24.00-HR
+   (CFS)      (HR)
                          (CFS)
+     265.     12.75                201.         73.         73.         73.
                        (INCHES)  1.839       2.686       2.686       2.686
                         (AC-FT)  100.        145.        145.        145.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                      6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
       0.      12.75                  0.          0.          0.          0.

 PEAK STAGE     TIME                          MAXIMUM AVERAGE STAGE
                                      6-HR       24-HR       72-HR     24.00-HR
+   (FEET)      (HR)
    73.20      12.75               72.01       69.32       69.32       69.32

                        CUMULATIVE AREA =    1.01 SQ MI


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


          **************
          *            *
  53 KK   *       13P  *
          *            *
          **************

  54 KO         OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

             SUBBASIN RUNOFF DATA

  56 BA         SUBBASIN CHARACTERISTICS
                      TAREA         .01  SUBBASIN AREA

                PRECIPITATION DATA

  57 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .01
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 58 LS          SCS LOSS RATE
                     STRTL          .86  INITIAL ABSTRACTION
                    CRVNBR        70.00  CURVE NUMBER
                     RTIMP          .00  PERCENT IMPERVIOUS AREA

  > UD          SCS DIMENSIONLESS UNITGRAPH
                      TLAG          .49  LAG

                                                          ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                   UNIT HYDROGRAPH
                                              12 END-OF-PERIOD ORDINATES
              2.       7.       7.       4.       2.       1.       1.       0.       0.       0.
              0.       0.
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HYDROGRAPH AT STATION 13P

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| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | * | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | * | | | | | | |
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | * | 28 FEB 1315 | 50 | 1.30 | .50 | .80 | 5. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | * | 28 FEB 1330 | 51 | .34 | .10 | .23 | 8. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | * | 28 FEB 1345 | 52 | .23 | .07 | .17 | 9. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | * | 28 FEB 1400 | 53 | .19 | .05 | .14 | 7. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | * | 28 FEB 1415 | 54 | .11 | .03 | .08 | 5. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | * | 28 FEB 1430 | 55 | .10 | .02 | .07 | 4. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | * | 28 FEB 1445 | 56 | .09 | .02 | .07 | 3. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | * | 28 FEB 1500 | 57 | .09 | .02 | .06 | 2. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | * | 28 FEB 1515 | 58 | .08 | .02 | .06 | 2. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | * | 28 FEB 1530 | 59 | .07 | .02 | .06 | 2. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | * | 28 FEB 1545 | 60 | .07 | .02 | .05 | 1. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | * | 28 FEB 1600 | 61 | .06 | .01 | .05 | 1. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | * | 28 FEB 1615 | 62 | .05 | .01 | .04 | 1. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | * | 28 FEB 1630 | 63 | .05 | .01 | .04 | 1. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | * | 28 FEB 1645 | 64 | .05 | .01 | .04 | 1. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 FEB 1700 | 65 | .05 | .01 | .04 | 1. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 FEB 1715 | 66 | .04 | .01 | .03 | 1. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .01 | .03 | 1. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .01 | .03 | 1. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .01 | .03 | 1. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .01 | .03 | 1. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .01 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .01 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .01 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .01 | .02 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 FEB 1930 | 75 | .03 | .01 | .02 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 FEB 1945 | 76 | .03 | .01 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .04 | .00 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .04 | .00 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 0. |
| 28 FEB 0815 | 30 | .04 | .04 | .00 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 0. |
| 28 FEB 0830 | 31 | .04 | .04 | .00 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 0. |
| 28 FEB 0845 | 32 | .04 | .04 | .00 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 0. |
| 28 FEB 0900 | 33 | .04 | .04 | .00 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 0. |
| 28 FEB 0915 | 34 | .04 | .04 | .00 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 0. |
| 28 FEB 0930 | 35 | .05 | .05 | .00 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .05 | .00 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .05 | .00 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .06 | .00 | 0. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .06 | .01 | 0. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |
| 28 FEB 1045 | 40 | .07 | .06 | .01 | 0. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 0. |
| 28 FEB 1100 | 41 | .07 | .06 | .01 | 0. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 1115 | 42 | .08 | .07 | .01 | 0. | * | 28 FEB 2330 | 91 | .02 | .00 | .01 | 0. |
| 28 FEB 1130 | 43 | .09 | .07 | .02 | 0. | * | 28 FEB 2345 | 92 | .02 | .00 | .01 | 0. |
| 28 FEB 1145 | 44 | .09 | .07 | .02 | 0. | * | 1 MAR 0000 | 93 | .02 | .00 | .01 | 0. |
| 28 FEB 1200 | 45 | .10 | .08 | .03 | 0. | * | 1 MAR 0015 | 94 | .02 | .00 | .01 | 0. |
| 28 FEB 1215 | 46 | .17 | .12 | .05 | 1. | * | 1 MAR 0030 | 95 | .02 | .00 | .01 | 0. |
| 28 FEB 1230 | 47 | .21 | .13 | .07 | 1. | * | 1 MAR 0045 | 96 | .02 | .00 | .01 | 0. |
| 28 FEB 1245 | 48 | .27 | .16 | .11 | 1. | * | 1 MAR 0100 | 97 | .02 | .00 | .01 | 0. |
| 28 FEB 1300 | 49 | .59 | .30 | .29 | 2. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 3.31, TOTAL EXCESS = 3.29

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 9. | 12.75 | | 3. | 1. | 1. | 1. |
| | | (INCHES) | 2.636 | 3.251 | 3.251 | 3.251 |
| | | (AC-FT) | 1. | 2. | 2. | 2. |

CUMULATIVE AREA = .01 SQ MI

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

```
          **************
          *            *
  60 KK   *       19P  *
          *            *
          **************
```

61 KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

SCS RUNOFF CALCULATION

SUBBASIN RUNOFF DATA

63 BA SUBBASIN CHARACTERISTICS

| | | |
|---|---|---|
| TAREA | .00 | SUBBASIN AREA |

PRECIPITATION DATA

64 PH DEPTHS FOR 0-PERCENT HYPOTHETICAL STORM

| ..... HYDRO-35 ..... | | | ..... TP-40 ..... | | | | | ..... TP-49 ..... | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-MIN | 15-MIN | 60-MIN | 2-HR | 3-HR | 6-HR | 12-HR | 24-HR | 2-DAY | 4-DAY | 7-DAY | 10-DAY |
| .60 | 1.30 | 2.50 | 3.30 | 3.70 | 4.60 | 5.60 | 6.60 | .00 | .00 | .00 | .00 |

STORM AREA = .00

65 LS SCS LOSS RATE

| | | |
|---|---|---|
| STRTL | .86 | INITIAL ABSTRACTION |
| CRVNBR | 70.00 | CURVE NUMBER |
| RTIMP | .00 | PERCENT IMPERVIOUS AREA |

66 UD SCS DIMENSIONLESS UNITGRAPH

| | | |
|---|---|---|
| TLAG | .34 | LAG |

***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
9 END-OF-PERIOD ORDINATES

2. 4. 2. 1. 0. 0. 0. 0. 0.

HYDROGRAPH AT STATION 19P

| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | 28 FEB 1315 | 50 | 1.30 | .50 | .80 | 3. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | 28 FEB 1330 | 51 | .34 | .10 | .23 | 5. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | 28 FEB 1345 | 52 | .23 | .07 | .17 | 4. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | 28 FEB 1400 | 53 | .19 | .05 | .14 | 2. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | 28 FEB 1415 | 54 | .11 | .03 | .08 | 2. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | 28 FEB 1430 | 55 | .10 | .02 | .07 | 1. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | 28 FEB 1445 | 56 | .09 | .02 | .07 | 1. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | 28 FEB 1500 | 57 | .09 | .02 | .06 | 1. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | 28 FEB 1515 | 58 | .08 | .02 | .06 | 1. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | 28 FEB 1530 | 59 | .07 | .02 | .06 | 1. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | 28 FEB 1545 | 60 | .07 | .02 | .05 | 1. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | 28 FEB 1600 | 61 | .06 | .01 | .05 | 1. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | 28 FEB 1615 | 62 | .05 | .01 | .04 | 1. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | 28 FEB 1630 | 63 | .05 | .01 | .04 | 0. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | 28 FEB 1645 | 64 | .05 | .01 | .04 | 0. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | 28 FEB 1700 | 65 | .05 | .01 | .04 | 0. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | 28 FEB 1715 | 66 | .04 | .01 | .03 | 0. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | 28 FEB 1730 | 67 | .04 | .01 | .03 | 0. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | 28 FEB 1745 | 68 | .04 | .01 | .03 | 0. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | 28 FEB 1800 | 69 | .04 | .01 | .03 | 0. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | 28 FEB 1815 | 70 | .04 | .01 | .03 | 0. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | 28 FEB 1830 | 71 | .04 | .01 | .03 | 0. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | 28 FEB 1845 | 72 | .03 | .01 | .03 | 0. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | 28 FEB 1900 | 73 | .03 | .01 | .03 | 0. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | 28 FEB 1915 | 74 | .03 | .01 | .02 | 0. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | 28 FEB 1930 | 75 | .03 | .01 | .02 | 0. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | 28 FEB 1945 | 76 | .03 | .01 | .02 | 0. |
| 28 FEB 0745 | 28 | .04 | .04 | .00 | 0. | 28 FEB 2000 | 77 | .03 | .00 | .02 | 0. |
| 28 FEB 0800 | 29 | .04 | .04 | .00 | 0. | 28 FEB 2015 | 78 | .02 | .00 | .02 | 0. |
| 28 FEB 0815 | 30 | .04 | .04 | .00 | 0. | 28 FEB 2030 | 79 | .02 | .00 | .02 | 0. |
| 28 FEB 0830 | 31 | .04 | .04 | .00 | 0. | 28 FEB 2045 | 80 | .02 | .00 | .02 | 0. |
| 28 FEB 0845 | 32 | .04 | .04 | .00 | 0. | 28 FEB 2100 | 81 | .02 | .00 | .02 | 0. |
| 28 FEB 0900 | 33 | .04 | .04 | .00 | 0. | 28 FEB 2115 | 82 | .02 | .00 | .02 | 0. |
| 28 FEB 0915 | 34 | .04 | .04 | .00 | 0. | 28 FEB 2130 | 83 | .02 | .00 | .02 | 0. |
| 28 FEB 0930 | 35 | .05 | .05 | .00 | 0. | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .05 | .00 | 0. | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .05 | .00 | 0. | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .06 | .00 | 0. | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .06 | .01 | 0. | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |
| 28 FEB 1045 | 40 | .07 | .06 | .01 | 0. | 28 FEB 2300 | 89 | .02 | .00 | .02 | 0. |
| 28 FEB 1100 | 41 | .07 | .06 | .01 | 0. | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |
| 28 FEB 1115 | 42 | .08 | .07 | .01 | 0. | 28 FEB 2330 | 91 | .02 | .00 | .01 | 0. |
| 28 FEB 1130 | 43 | .09 | .07 | .02 | 0. | 28 FEB 2345 | 92 | .02 | .00 | .01 | 0. |
| 28 FEB 1145 | 44 | .09 | .07 | .02 | 0. | 1 MAR 0000 | 93 | .02 | .00 | .01 | 0. |
| 28 FEB 1200 | 45 | .10 | .08 | .03 | 0. | 1 MAR 0015 | 94 | .02 | .00 | .01 | 0. |
| 28 FEB 1215 | 46 | .17 | .12 | .05 | 0. | 1 MAR 0030 | 95 | .02 | .00 | .01 | 0. |
| 28 FEB 1230 | 47 | .21 | .13 | .07 | 0. | 1 MAR 0045 | 96 | .02 | .00 | .01 | 0. |
| 28 FEB 1245 | 48 | .27 | .16 | .11 | 1. | 1 MAR 0100 | 97 | .02 | .00 | .01 | 0. |
| 28 FEB 1300 | 49 | .59 | .30 | .29 | 1. | | | | | | |

TOTAL RAINFALL = 6.60, TOTAL LOSS = 3.31, TOTAL EXCESS = 3.29

```
  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                          (CFS)
+       5.     12.50                  1.          0.          0.          0.
                         (INCHES)   2.642       3.262       3.262       3.262
                          (AC-FT)     1.          1.          1.          1.

                         CUMULATIVE AREA =     .00 SQ MI
```

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

```
            **************
            *            *
  67 KK     *    19PCHL  *
            *            *
            **************

  68 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                                STORAGE ROUTING THROUGH RTE 93 E/W CHANNEL

              HYDROGRAPH ROUTING DATA

  70 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

  71 RC          NORMAL DEPTH CHANNEL ROUTING
                         ANL        .080  LEFT OVERBANK N-VALUE
                        ANCH        .030  MAIN CHANNEL N-VALUE
                         ANR        .080  RIGHT OVERBANK N-VALUE
                       RLNTH        430.  REACH LENGTH
                         SEL       .0070  ENERGY SLOPE
                       ELMAX        67.0  MAX. ELEV. FOR STORAGE/OUTFLOW CALCULATION

                                   CROSS-SECTION DATA
                         --- LEFT OVERBANK --- + ------ MAIN CHANNEL ------- + --- RIGHT OVERBANK ---
  73 RY        ELEVATION    68.00     67.50     67.00     66.00     66.00     67.00     67.50     68.00
  72 RX        DISTANCE       .00      5.00     10.00     11.00     14.00     15.00     20.00     25.00

                                                   ***

                                   COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE       .00       .00       .00       .00       .01       .01       .01       .01       .01       .02
          OUTFLOW       .00       .09       .29       .57       .92      1.34      1.81      2.35      2.94      3.58
        ELEVATION     66.00     66.05     66.11     66.16     66.21     66.26     66.32     66.37     66.42     66.47

          STORAGE       .02       .02       .02       .02       .03       .03       .03       .03       .04       .04
          OUTFLOW      4.28      5.03      5.84      6.69      7.60      8.56      9.58     10.64     11.76     12.93
        ELEVATION     66.53     66.58     66.63     66.68     66.74     66.79     66.84     66.89     66.95     67.00

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO       13.
                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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HYDROGRAPH AT STATION 19PCHL

| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 66.0 | 28 | FEB | 0915 | 34 | 0. | .0 | 66.0 | 28 | FEB | 1730 | 67 | 0. | .0 | 66.1 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 66.0 | 28 | FEB | 0930 | 35 | 0. | .0 | 66.0 | 28 | FEB | 1745 | 68 | 0. | .0 | 66.1 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 66.0 | 28 | FEB | 0945 | 36 | 0. | .0 | 66.0 | 28 | FEB | 1800 | 69 | 0. | .0 | 66.1 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 66.0 | 28 | FEB | 1000 | 37 | 0. | .0 | 66.0 | 28 | FEB | 1815 | 70 | 0. | .0 | 66.1 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 66.0 | 28 | FEB | 1015 | 38 | 0. | .0 | 66.0 | 28 | FEB | 1830 | 71 | 0. | .0 | 66.1 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 66.0 | 28 | FEB | 1030 | 39 | 0. | .0 | 66.0 | 28 | FEB | 1845 | 72 | 0. | .0 | 66.1 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 66.0 | 28 | FEB | 1045 | 40 | 0. | .0 | 66.0 | 28 | FEB | 1900 | 73 | 0. | .0 | 66.1 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 66.0 | 28 | FEB | 1100 | 41 | 0. | .0 | 66.0 | 28 | FEB | 1915 | 74 | 0. | .0 | 66.1 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 66.0 | 28 | FEB | 1115 | 42 | 0. | .0 | 66.1 | 28 | FEB | 1930 | 75 | 0. | .0 | 66.1 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 66.0 | 28 | FEB | 1130 | 43 | 0. | .0 | 66.1 | 28 | FEB | 1945 | 76 | 0. | .0 | 66.1 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 66.0 | 28 | FEB | 1145 | 44 | 0. | .0 | 66.1 | 28 | FEB | 2000 | 77 | 0. | .0 | 66.1 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 66.0 | 28 | FEB | 1200 | 45 | 0. | .0 | 66.1 | 28 | FEB | 2015 | 78 | 0. | .0 | 66.1 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 66.0 | 28 | FEB | 1215 | 46 | 0. | .0 | 66.1 | 28 | FEB | 2030 | 79 | 0. | .0 | 66.1 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 66.0 | 28 | FEB | 1230 | 47 | 0. | .0 | 66.1 | 28 | FEB | 2045 | 80 | 0. | .0 | 66.1 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 66.0 | 28 | FEB | 1245 | 48 | 1. | .0 | 66.2 | 28 | FEB | 2100 | 81 | 0. | .0 | 66.1 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 66.0 | 28 | FEB | 1300 | 49 | 1. | .0 | 66.2 | 28 | FEB | 2115 | 82 | 0. | .0 | 66.1 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 66.0 | 28 | FEB | 1315 | 50 | 3. | .0 | 66.4 | 28 | FEB | 2130 | 83 | 0. | .0 | 66.1 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 66.0 | 28 | FEB | 1330 | 51 | 5. | .0 | 66.5 | 28 | FEB | 2145 | 84 | 0. | .0 | 66.1 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 66.0 | 28 | FEB | 1345 | 52 | 4. | .0 | 66.5 | 28 | FEB | 2200 | 85 | 0. | .0 | 66.1 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 66.0 | 28 | FEB | 1400 | 53 | 3. | .0 | 66.4 | 28 | FEB | 2215 | 86 | 0. | .0 | 66.1 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 66.0 | 28 | FEB | 1415 | 54 | 2. | .0 | 66.3 | 28 | FEB | 2230 | 87 | 0. | .0 | 66.1 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 66.0 | 28 | FEB | 1430 | 55 | 1. | .0 | 66.3 | 28 | FEB | 2245 | 88 | 0. | .0 | 66.1 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 66.0 | 28 | FEB | 1445 | 56 | 1. | .0 | 66.2 | 28 | FEB | 2300 | 89 | 0. | .0 | 66.1 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 66.0 | 28 | FEB | 1500 | 57 | 1. | .0 | 66.2 | 28 | FEB | 2315 | 90 | 0. | .0 | 66.1 |
| | FEB | 0700 | 25 | 0. | .0 | 66.0 | 28 | FEB | 1515 | 58 | 1. | .0 | 66.2 | 28 | FEB | 2330 | 91 | 0. | .0 | 66.1 |
| | FEB | 0715 | 26 | 0. | .0 | 66.0 | 28 | FEB | 1530 | 59 | 1. | .0 | 66.2 | 28 | FEB | 2345 | 92 | 0. | .0 | 66.1 |
| 28 | FEB | 0730 | 27 | 0. | .0 | 66.0 | 28 | FEB | 1545 | 60 | 1. | .0 | 66.2 | 1 | MAR | 0000 | 93 | 0. | .0 | 66.1 |
| 28 | FEB | 0745 | 28 | 0. | .0 | 66.0 | 28 | FEB | 1600 | 61 | 1. | .0 | 66.2 | 1 | MAR | 0015 | 94 | 0. | .0 | 66.1 |
| 28 | FEB | 0800 | 29 | 0. | .0 | 66.0 | 28 | FEB | 1615 | 62 | 1. | .0 | 66.1 | 1 | MAR | 0030 | 95 | 0. | .0 | 66.1 |
| 28 | FEB | 0815 | 30 | 0. | .0 | 66.0 | 28 | FEB | 1630 | 63 | 0. | .0 | 66.1 | 1 | MAR | 0045 | 96 | 0. | .0 | 66.1 |
| 28 | FEB | 0830 | 31 | 0. | .0 | 66.0 | 28 | FEB | 1645 | 64 | 0. | .0 | 66.1 | 1 | MAR | 0100 | 97 | 0. | .0 | 66.1 |
| 28 | FEB | 0845 | 32 | 0. | .0 | 66.0 | 28 | FEB | 1700 | 65 | 0. | .0 | 66.1 | | | | | | | |
| 28 | FEB | 0900 | 33 | 0. | .0 | 66.0 | 28 | FEB | 1715 | 66 | 0. | .0 | 66.1 | | | | | | | |

| PEAK FLOW (CFS) | TIME (HR) | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| | | (CFS) | | | | |
| 5. | 12.50 | | 1. | 0. | 0. | 0. |
| | | (INCHES) | 2.640 | 3.253 | 3.253 | 3.253 |
| | | (AC-FT) | 1. | 1. | 1. | 1. |

| PEAK STORAGE (AC-FT) | TIME (HR) | MAXIMUM AVERAGE STORAGE 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| 0. | 12.50 | 0. | 0. | 0. | 0. |

| PEAK STAGE (FEET) | TIME (HR) | MAXIMUM AVERAGE STAGE 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| 66.55 | 12.50 | 66.22 | 66.08 | 66.08 | 66.08 |

CUMULATIVE AREA = .00 SQ MI

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

          **************
          *            *
 77 KK    *      20P   *
          *            *
          **************

 78 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

             SUBBASIN RUNOFF DATA

 80 BA          SUBBASIN CHARACTERISTICS
                      TAREA        .02  SUBBASIN AREA

                PRECIPITATION DATA

 81 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .02

 82 LS          SCS LOSS RATE
                      STRTL        .53  INITIAL ABSTRACTION
                     CRVNBR      79.00  CURVE NUMBER
                      RTIMP        .00  PERCENT IMPERVIOUS AREA

 83 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG        .32  LAG

                                                        ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                   UNIT HYDROGRAPH
                                              8 END-OF-PERIOD ORDINATES
              11.       18.       9.       4.       1.       1.       0.       0.

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

                                          HYDROGRAPH AT STATION      20P

*****************************************************************************************************************************
                                                          *
     DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q   *    DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q
                                                          *
     28 FEB 0100    1     .00     .00     .00        0.   *    28 FEB 1315   50    1.30     .29    1.01       20.
     28 FEB 0115    2     .02     .02     .00        0.   *    28 FEB 1330   51     .34     .06     .28       26.
     28 FEB 0130    3     .02     .02     .00        0.   *    28 FEB 1345   52     .23     .04     .20       18.
     28 FEB 0145    4     .02     .02     .00        0.   *    28 FEB 1400   53     .19     .03     .16       12.
     28 FEB 0200    5     .02     .02     .00        0.   *    28 FEB 1415   54     .11     .02     .10        8.
     28 FEB 0215    6     .02     .02     .00        0.   *    28 FEB 1430   55     .10     .01     .08        6.
     28 FEB 0230    7     .02     .02     .00        0.   *    28 FEB 1445   56     .09     .01     .08        5.
     28 FEB 0245    8     .02     .02     .00        0.   *    28 FEB 1500   57     .09     .01     .07        4.
     28 FEB 0300    9     .02     .02     .00        0.   *    28 FEB 1515   58     .08     .01     .07        3.
     28 FEB 0315   10     .02     .02     .00        0.   *    28 FEB 1530   59     .07     .01     .06        3.
     28 FEB 0330   11     .02     .02     .00        0.   *    28 FEB 1545   60     .07     .01     .06        3.
```

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | * | 28 FEB 1600 | 61 | .06 | .01 | .06 | 3. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | * | 28 FEB 1615 | 62 | .05 | .01 | .05 | 2. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | * | 28 FEB 1630 | 63 | .05 | .01 | .04 | 2. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | * | 28 FEB 1645 | 64 | .05 | .01 | .04 | 2. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 FEB 1700 | 65 | .05 | .01 | .04 | 2. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 FEB 1715 | 66 | .04 | .00 | .04 | 2. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .00 | .04 | 2. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 2. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .03 | 2. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .03 | 2. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .02 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .02 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .03 | .00 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .03 | .00 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .03 | .00 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .04 | .00 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .04 | .01 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .04 | .01 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .04 | .01 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .04 | .01 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .04 | .01 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .04 | .01 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .04 | .02 | 1. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .04 | .02 | 1. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .05 | .02 | 1. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .05 | .03 | 1. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .05 | .03 | 1. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .05 | .04 | 1. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .05 | .04 | 2. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .05 | .05 | 2. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .08 | .09 | 2. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .09 | .12 | 4. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 FEB 1245 | 48 | .28 | .11 | .17 | 5. | * | 1 MAR 0100 | 97 | .02 | .00 | .01 | 1. |
| 28 FEB 1300 | 49 | .59 | .19 | .40 | 9. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 2.38, TOTAL EXCESS = 4.22

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 26. | 12.50 | | 6. | 2. | 2. | 2. |
| | | (INCHES) | 3.337 | 4.192 | 4.192 | 4.192 |
| | | (AC-FT) | 3. | 4. | 4. | 4. |

CUMULATIVE AREA = .02 SQ MI

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

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              **************
              *            *
    KK        *    20PSWP  *
              *            *
              **************
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85 KO OUTPUT CONTROL VARIABLES

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                IPRNT          1  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                        ROUTING THROUGH WETLAND 3B

          HYDROGRAPH ROUTING DATA

 87 RS        STORAGE ROUTING
                NSTPS          1  NUMBER OF SUBREACHES
                 ITYP       ELEV  TYPE OF INITIAL CONDITION
                RSVRIC      66.50  INITIAL CONDITION
                     X        .00 WORKING R AND D COEFFICIENT

 88 SA          AREA        1.1       1.6       3.7

 89 SE       ELEVATION     66.50     67.20     68.20

 90 SS        SPILLWAY
                 CREL      68.10  SPILLWAY CREST ELEVATION
                SPWID      30.00  SPILLWAY WIDTH
                 COQW       3.00  WEIR COEFFICIENT
                 EXPW       1.50  EXPONENT OF HEAD

                                                  ***

                                   COMPUTED STORAGE-ELEVATION DATA

        STORAGE       .00       .93      3.51
      ELEVATION     66.50     67.20     68.20

                                   COMPUTED OUTFLOW-ELEVATION DATA

        OUTFLOW       .00       .00       .00       .00       .01       .03       .06       .11       .17       .25
      ELEVATION     66.50     68.10     68.10     68.10     68.10     68.10     68.11     68.11     68.12     68.12

        OUTFLOW       .36       .49       .65       .84      1.07      1.34      1.65      2.00      2.40      2.85
      ELEVATION     68.13     68.13     68.14     68.14     68.15     68.16     68.17     68.18     68.19     68.20

                                   COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

        STORAGE       .00       .93      3.15      3.19      3.24      3.29      3.34      3.40      3.47      3.51
        OUTFLOW       .00       .00       .00       .11       .36       .65      1.07      1.65      2.40      2.85
      ELEVATION     66.50     67.20     68.10     68.11     68.13     68.14     68.15     68.17     68.19     68.20

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                                   HYDROGRAPH AT STATION   20PSWP

*****************************************************************************************************************
                                     *                                     *
DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE
                                     *                                     *
28 FEB 0100  1       0.       .0    66.5 * 28 FEB 0915  34       0.       .0    66.5 * 28 FEB 1730  67       0.      3.2    68.1
28 FEB 0115  2       0.       .0    66.5 * 28 FEB 0930  35       0.       .0    66.5 * 28 FEB 1745  68       0.      3.2    68.1
28 FEB 0130  3       0.       .0    66.5 * 28 FEB 0945  36       0.       .0    66.5 * 28 FEB 1800  69       0.      3.2    68.1
28 FEB 0145  4       0.       .0    66.5 * 28 FEB 1000  37       0.       .0    66.5 * 28 FEB 1815  70       0.      3.3    68.1
28 FEB 0200  5       0.       .0    66.5 * 28 FEB 1015  38       0.       .1    66.5 * 28 FEB 1830  71       1.      3.3    68.1
28 FEB 0215  6       0.       .0    66.5 * 28 FEB 1030  39       0.       .1    66.6 * 28 FEB 1845  72       1.      3.3    68.1
28 FEB 0230  7       0.       .0    66.5 * 28 FEB 1045  40       0.       .1    66.6 * 28 FEB 1900  73       1.      3.3    68
28 FEB 0245  8       0.       .0    66.5 * 28 FEB 1100  41       0.       .1    66.6 * 28 FEB 1915  74       1.      3.3    68
28 FEB 0300  9       0.       .0    66.5 * 28 FEB 1115  42       0.       .1    66.6 * 28 FEB 1930  75       1.      3.3    68.1
28 FEB 0315 10       0.       .0    66.5 * 28 FEB 1130  43       0.       .2    66.6 * 28 FEB 1945  76       1.      3.3    68.1
28 FEB 0330 11       0.       .0    66.5 * 28 FEB 1145  44       0.       .2    66.6 * 28 FEB 2000  77       1.      3.3    68.1
28 FEB 0345 12       0.       .0    66.5 * 28 FEB 1200  45       0.       .2    66.7 * 28 FEB 2015  78       1.      3.3    68.1
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28 FEB 0400  13      0.       .0     66.5 * 28 FEB 1215  46      0.       .3     66.7 * 28 FEB 2030  79      1.      3.3     68.1
28 FEB 0415  14      0.       .0     66.5 * 28 FEB 1230  47      0.       .3     66.7 * 28 FEB 2045  80      1.      3.3     68.1
28 FEB 0430  15      0.       .0     66.5 * 28 FEB 1245  48      0.       .4     66.8 * 28 FEB 2100  81      1.      3.3     68.1
28 FEB 0445  16      0.       .0     66.5 * 28 FEB 1300  49      0.       .6     66.9 * 28 FEB 2115  82      1.      3.3     68.1
   FEB 0500  17      0.       .0     66.5 * 28 FEB 1315  50      0.       .9     67.1 * 28 FEB 2130  83      1.      3.3     68.1
   FEB 0515  18      0.       .0     66.5 * 28 FEB 1330  51      0.      1.3     67.4 * 28 FEB 2145  84      1.      3.3     68.1
28 FEB 0530  19      0.       .0     66.5 * 28 FEB 1345  52      0.      1.8     67.5 * 28 FEB 2200  85      1.      3.3     68.1
28 FEB 0545  20      0.       .0     66.5 * 28 FEB 1400  53      0.      2.1     67.7 * 28 FEB 2215  86      1.      3.3     68.1
28 FEB 0600  21      0.       .0     66.5 * 28 FEB 1415  54      0.      2.3     67.8 * 28 FEB 2230  87      1.      3.3     68.1
28 FEB 0615  22      0.       .0     66.5 * 28 FEB 1430  55      0.      2.5     67.8 * 28 FEB 2245  88      1.      3.3     68.1
28 FEB 0630  23      0.       .0     66.5 * 28 FEB 1445  56      0.      2.6     67.9 * 28 FEB 2300  89      1.      3.3     68.1
28 FEB 0645  24      0.       .0     66.5 * 28 FEB 1500  57      0.      2.7     67.9 * 28 FEB 2315  90      1.      3.3     68.1
28 FEB 0700  25      0.       .0     66.5 * 28 FEB 1515  58      0.      2.7     67.9 * 28 FEB 2330  91      1.      3.3     68.1
28 FEB 0715  26      0.       .0     66.5 * 28 FEB 1530  59      0.      2.8     68.0 * 28 FEB 2345  92      1.      3.3     68.1
28 FEB 0730  27      0.       .0     66.5 * 28 FEB 1545  60      0.      2.9     68.0 *  1 MAR 0000  93      1.      3.3     68.1
28 FEB 0745  28      0.       .0     66.5 * 28 FEB 1600  61      0.      2.9     68.0 *  1 MAR 0015  94      1.      3.3     68.1
28 FEB 0800  29      0.       .0     66.5 * 28 FEB 1615  62      0.      3.0     68.0 *  1 MAR 0030  95      1.      3.3     68.1
28 FEB 0815  30      0.       .0     66.5 * 28 FEB 1630  63      0.      3.0     68.0 *  1 MAR 0045  96      1.      3.3     68.1
28 FEB 0830  31      0.       .0     66.5 * 28 FEB 1645  64      0.      3.1     68.1 *  1 MAR 0100  97      1.      3.3     68.1
28 FEB 0845  32      0.       .0     66.5 * 28 FEB 1700  65      0.      3.1     68.1 *
28 FEB 0900  33      0.       .0     66.5 * 28 FEB 1715  66      0.      3.1     68.1 *
                                          *                                         *
*************************************************************************************************************************

 PEAK FLOW     TIME                            MAXIMUM AVERAGE FLOW
                                       6-HR        24-HR       72-HR      24.00-HR
+   (CFS)        (HR)
                            (CFS)
+       1.     19.25                     1.          0.          0.          0.
                         (INCHES)      .493        .554        .554        .554
                          (AC-FT)        0.          1.          1.          1.

 PEAK STORAGE  TIME                           MAXIMUM AVERAGE STORAGE
                                       6-HR        24-HR       72-HR      24.00-HR
+  (AC-FT)       (HR)
        3.     19.00                     3.          2.          2.          2.

 PEAK STAGE    TIME                            MAXIMUM AVERAGE STAGE
                                       6-HR        24-HR       72-HR      24.00-HR
+   (FEET)       (HR)
     68.15     19.25                  68.15       67.28       67.28       67.28

                        CUMULATIVE AREA =      .02 SQ MI



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            **************
            *            *
   91 KK    *      14P   *
            *            *
            **************

   92 KO          OUTPUT CONTROL VARIABLES
                        IPRNT          1  PRINT CONTROL
                        IPLOT          0  PLOT CONTROL
                        QSCAL         0.  HYDROGRAPH PLOT SCALE
                                 SCS RUNOFF CALCULATION

                SUBBASIN RUNOFF DATA

   94 BA          SUBBASIN CHARACTERISTICS
                        TAREA        .04  SUBBASIN AREA
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PRECIPITATION DATA

95 PH DEPTHS FOR 0-PERCENT HYPOTHETICAL STORM

| ..... HYDRO-35 ..... | | | ..... TP-40 ..... | | | | | ..... TP-49 ..... | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-MIN | 15-MIN | 60-MIN | 2-HR | 3-HR | 6-HR | 12-HR | 24-HR | 2-DAY | 4-DAY | 7-DAY | 10-DAY |
| .60 | 1.30 | 2.50 | 3.30 | 3.70 | 4.60 | 5.60 | 6.60 | .00 | .00 | .00 | .00 |

STORM AREA = .04

96 LS SCS LOSS RATE

| | | |
|---|---|---|
| STRTL | .56 | INITIAL ABSTRACTION |
| CRVNBR | 78.00 | CURVE NUMBER |
| RTIMP | .00 | PERCENT IMPERVIOUS AREA |

97 UD SCS DIMENSIONLESS UNITGRAPH

| | | |
|---|---|---|
| TLAG | .45 | LAG |

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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
11 END-OF-PERIOD ORDINATES

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11. | 30. | 26. | 13. | 7. | 3. | 2. | 1. | 0. | 0. |
| 0. | | | | | | | | | |

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HYDROGRAPH AT STATION 14P

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| DA | MON | HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | * | DA | MON | HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | .00 | .00 | .00 | 0. | * | 28 | FEB | 1315 | 50 | 1.30 | .31 | .99 | 29. |
| 28 | FEB | 0115 | 2 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1330 | 51 | .34 | .06 | .28 | 46. |
| 28 | FEB | 0130 | 3 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1345 | 52 | .23 | .04 | .19 | 43. |
| 28 | FEB | 0145 | 4 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1400 | 53 | .19 | .03 | .16 | 31. |
| 28 | FEB | 0200 | 5 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1415 | 54 | .11 | .02 | .09 | 23. |
| 28 | FEB | 0215 | 6 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1430 | 55 | .10 | .01 | .08 | 16. |
| 28 | FEB | 0230 | 7 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1445 | 56 | .09 | .01 | .08 | 12. |
| 28 | FEB | 0245 | 8 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1500 | 57 | .09 | .01 | .07 | 10. |
| 28 | FEB | 0300 | 9 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1515 | 58 | .08 | .01 | .07 | 8. |
| 28 | FEB | 0315 | 10 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1530 | 59 | .07 | .01 | .06 | 7. |
| 28 | FEB | 0330 | 11 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1545 | 60 | .07 | .01 | .06 | 6. |
| 28 | FEB | 0345 | 12 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1600 | 61 | .06 | .01 | .05 | 6. |
| 28 | FEB | 0400 | 13 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1615 | 62 | .05 | .01 | .05 | 5. |
| 28 | FEB | 0415 | 14 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1630 | 63 | .05 | .01 | .04 | 5. |
| 28 | FEB | 0430 | 15 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1645 | 64 | .05 | .01 | .04 | 5. |
| 28 | FEB | 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1700 | 65 | .05 | .01 | .04 | 4. |
| 28 | FEB | 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1715 | 66 | .04 | .01 | .04 | 4. |
| 28 | FEB | 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1730 | 67 | .04 | .01 | .04 | 4. |
| 28 | FEB | 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1745 | 68 | .04 | .00 | .04 | 4. |
| 28 | FEB | 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1800 | 69 | .04 | .00 | .03 | 3. |
| 28 | FEB | 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1815 | 70 | .04 | .00 | .03 | 3. |
| 28 | FEB | 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1830 | 71 | .04 | .00 | .03 | 3. |
| 28 | FEB | 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1845 | 72 | .03 | .00 | .03 | 3. |
| 28 | FEB | 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1900 | 73 | .03 | .00 | .03 | 3. |
| 28 | FEB | 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1915 | 74 | .03 | .00 | .02 | 3. |
| 28 | FEB | 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1930 | 75 | .03 | .00 | .02 | 3. |
| 28 | FEB | 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1945 | 76 | .03 | .00 | .02 | 2. |
| 28 | FEB | 0745 | 28 | .04 | .04 | .00 | 0. | * | 28 | FEB | 2000 | 77 | .03 | .00 | .02 | 2. |
| 28 | FEB | 0800 | 29 | .04 | .04 | .00 | 0. | * | 28 | FEB | 2015 | 78 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0815 | 30 | .04 | .04 | .00 | 0. | * | 28 | FEB | 2030 | 79 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0830 | 31 | .04 | .04 | .00 | 0. | * | 28 | FEB | 2045 | 80 | .02 | .00 | .02 | 2. |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0845 | 32 | .04 | .04 | .00 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 2. |
| 28 FEB 0900 | 33 | .04 | .04 | .01 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 2. |
| 28 FEB 0915 | 34 | .04 | .04 | .01 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 2. |
| 28 FEB 0930 | 35 | .05 | .04 | .01 | 1. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 2. |
| 28 FEB 0945 | 36 | .05 | .04 | .01 | 1. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 2. |
| 28 FEB 1000 | 37 | .05 | .04 | .01 | 1. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 2. |
| 28 FEB 1015 | 38 | .06 | .05 | .02 | 1. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 2. |
| 28 FEB 1030 | 39 | .06 | .05 | .02 | 1. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 2. |
| 28 FEB 1045 | 40 | .07 | .05 | .02 | 1. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 2. |
| 28 FEB 1100 | 41 | .07 | .05 | .03 | 2. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 2. |
| 28 FEB 1115 | 42 | .08 | .05 | .03 | 2. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 2. |
| 28 FEB 1130 | 43 | .09 | .05 | .04 | 2. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 2. |
| 28 FEB 1145 | 44 | .09 | .05 | .04 | 3. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 2. |
| 28 FEB 1200 | 45 | .10 | .06 | .05 | 3. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .09 | .08 | 4. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .10 | .11 | 6. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 FEB 1245 | 48 | .28 | .11 | .16 | 8. | * | 1 MAR 0100 | 97 | .02 | .00 | .01 | 1. |
| 28 FEB 1300 | 49 | .59 | .20 | .39 | 14. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 2.49, TOTAL EXCESS = 4.11

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 46. | 12.50 | | 13. | 4. | 4. | 4. |
| | | (INCHES) | 3.257 | 4.076 | 4.076 | 4.076 |
| | | (AC-FT) | 6. | 8. | 8. | 8. |

CUMULATIVE AREA = .04 SQ MI

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

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            **************
            *            *
101 KK      *    14PCHL  *
            *            *
            **************

102 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH NORTH BRANCH TO COMMERCE WAY

               HYDROGRAPH ROUTING DATA

104 RS          STORAGE ROUTING
                      NSTPS          1  NUMBER OF SUBREACHES
                       ITYP       ELEV  TYPE OF INITIAL CONDITION
                      RSVRIC     61.60  INITIAL CONDITION
                          X        .00 WORKING R AND D COEFFICIENT

105 SA              AREA          .0       .5       .7       .9      1.3

    SE          ELEVATION      61.60    64.00    64.50    65.00    66.00

107 SL          LOW-LEVEL OUTLET
                      ELEVL     62.60  ELEVATION AT CENTER OF OUTLET
                      CAREA      3.14  CROSS-SECTIONAL AREA
```

```
                    COQL        .60  COEFFICIENT
                    EXPL        .50  EXPONENT OF HEAD

108 SS        SPILLWAY
                    CREL      64.90  SPILLWAY CREST ELEVATION
                   SPWID        .00  SPILLWAY WIDTH
                    COQW        .00  WEIR COEFFICIENT
                    EXPW       1.50  EXPONENT OF HEAD
```

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COMPUTED STORAGE-ELEVATION DATA

| | | | | | |
|---|---|---|---|---|---|
| STORAGE | .00 | .41 | .72 | 1.14 | 2.24 |
| ELEVATION | 61.60 | 64.00 | 64.50 | 65.00 | 66.00 |

COMPUTED OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| OUTFLOW | .00 | .00 | 14.61 | 15.41 | 16.30 | 17.30 | 18.43 | 19.71 | 21.19 | 22.91 |
| ELEVATION | 61.60 | 62.60 | 63.54 | 63.64 | 63.76 | 63.91 | 64.09 | 64.30 | 64.57 | 64.90 |

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .03 | .22 | .25 | .30 | .37 | .41 | .46 | .59 | .72 |
| OUTFLOW | .00 | .00 | 14.61 | 15.41 | 16.30 | 17.30 | 17.88 | 18.43 | 19.71 | 20.83 |
| ELEVATION | 61.60 | 62.60 | 63.54 | 63.64 | 63.76 | 63.91 | 64.00 | 64.09 | 64.30 | 64.50 |

| | | | | |
|---|---|---|---|---|
| STORAGE | .77 | 1.05 | 1.14 | 2.24 |
| OUTFLOW | 21.19 | 22.91 | 23.41 | 27.86 |
| ELEVATION | 64.57 | 64.90 | 65.00 | 66.00 |

**********

HYDROGRAPH AT STATION 14PCHL

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| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 61.6 | 28 | FEB | 0915 | 34 | 0. | .0 | 62.6 | 28 | FEB | 1730 | 67 | 176. | 38.9 | 99.4 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 61.6 | 28 | FEB | 0930 | 35 | 1. | .0 | 62.7 | 28 | FEB | 1745 | 68 | 178. | 39.2 | 99.6 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 61.6 | 28 | FEB | 0945 | 36 | 2. | .1 | 62.7 | 28 | FEB | 1800 | 69 | 179. | 39.5 | 99.9 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 61.6 | 28 | FEB | 1000 | 37 | 3. | .1 | 62.8 | 28 | FEB | 1815 | 70 | 179. | 39.7 | 100.0 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 61.6 | 28 | FEB | 1015 | 38 | 5. | .1 | 62.9 | 28 | FEB | 1830 | 71 | 180. | 39.8 | 100.1 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 61.6 | 28 | FEB | 1030 | 39 | 7. | .1 | 63.1 | 28 | FEB | 1845 | 72 | 180. | 39.8 | 100.2 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 61.6 | 28 | FEB | 1045 | 40 | 10. | .2 | 63.3 | 28 | FEB | 1900 | 73 | 180. | 39.8 | 100.1 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 61.6 | 28 | FEB | 1100 | 41 | 14. | .2 | 63.5 | 28 | FEB | 1915 | 74 | 179. | 39.7 | 100.0 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 61.6 | 28 | FEB | 1115 | 42 | 16. | .3 | 63.7 | 28 | FEB | 1930 | 75 | 179. | 39.5 | 99.8 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 61.6 | 28 | FEB | 1130 | 43 | 18. | .4 | 64.0 | 28 | FEB | 1945 | 76 | 177. | 39.1 | 99.5 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 61.6 | 28 | FEB | 1145 | 44 | 20. | .6 | 64.3 | 28 | FEB | 2000 | 77 | 175. | 38.6 | 99.1 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 61.6 | 28 | FEB | 1200 | 45 | 22. | .9 | 64.7 | 28 | FEB | 2015 | 78 | 172. | 37.9 | 98.4 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 61.6 | 28 | FEB | 1215 | 46 | 24. | 1.3 | 65.1 | 28 | FEB | 2030 | 79 | 168. | 36.9 | 97.5 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 61.6 | 28 | FEB | 1230 | 47 | 27. | 2.0 | 65.8 | 28 | FEB | 2045 | 80 | 162. | 35.3 | 96.1 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 61.6 | 28 | FEB | 1245 | 48 | 31. | 3.1 | 66.8 | 28 | FEB | 2100 | 81 | 154. | 33.3 | 94.2 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 61.6 | 28 | FEB | 1300 | 49 | 39. | 5.1 | 68.6 | 28 | FEB | 2115 | 82 | 146. | 31.4 | 92.5 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 61.6 | 28 | FEB | 1315 | 50 | 52. | 8.2 | 71.4 | 28 | FEB | 2130 | 83 | 139. | 29.7 | 90.9 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 61.6 | 28 | FEB | 1330 | 51 | 70. | 12.7 | 75.5 | 28 | FEB | 2145 | 84 | 132. | 28.0 | 89.4 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 61.6 | 28 | FEB | 1345 | 52 | 90. | 17.6 | 80.0 | 28 | FEB | 2200 | 85 | 126. | 26.5 | 88.0 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 61.6 | 28 | FEB | 1400 | 53 | 107. | 21.8 | 83.8 | 28 | FEB | 2215 | 86 | 120. | 25.1 | 86.7 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 61.6 | 28 | FEB | 1415 | 54 | 120. | 25.0 | 86.7 | 28 | FEB | 2230 | 87 | 115. | 23.7 | 85 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 61.6 | 28 | FEB | 1430 | 55 | 130. | 27.5 | 88.9 | 28 | FEB | 2245 | 88 | 110. | 22.5 | 84. |
| 28 | FEB | 0630 | 23 | 0. | .0 | 61.6 | 28 | FEB | 1445 | 56 | 138. | 29.4 | 90.7 | 28 | FEB | 2300 | 89 | 105. | 21.3 | 83.3 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 61.6 | 28 | FEB | 1500 | 57 | 144. | 31.0 | 92.2 | 28 | FEB | 2315 | 90 | 101. | 20.2 | 82.4 |
| 28 | FEB | 0700 | 25 | 0. | .0 | 61.6 | 28 | FEB | 1515 | 58 | 150. | 32.4 | 93.4 | 28 | FEB | 2330 | 91 | 97. | 19.2 | 81.5 |
| 28 | FEB | 0715 | 26 | 0. | .0 | 61.6 | 28 | FEB | 1530 | 59 | 155. | 33.6 | 94.5 | 28 | FEB | 2345 | 92 | 93. | 18.3 | 80.6 |

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28 FEB 0730  27      0.      .0    61.6 * 28 FEB 1545  60     159.     34.6     95.5 *  1 MAR 0000  93      89.     17.4     79.8
28 FEB 0745  28      0.      .0    61.6 * 28 FEB 1600  61     163.     35.6     96.3 *  1 MAR 0015  94      86.     16.6     79.1
28 FEB 0800  29      0.      .0    61.6 * 28 FEB 1615  62     166.     36.4     97.0 *  1 MAR 0030  95      83.     15.8     78.4
28 FEB 0815  30      0.      .0    61.7 * 28 FEB 1630  63     169.     37.1     97.6 *  1 MAR 0045  96      80.     15.1     77.7
28 FEB 0830  31      0.      .0    61.8 * 28 FEB 1645  64     171.     37.6     98.2 *  1 MAR 0100  97      77.     14.5     77.1
   FEB 0845  32      0.      .0    61.9 * 28 FEB 1700  65     173.     38.2     98.6 *
   FEB 0900  33      0.      .0    62.2 * 28 FEB 1715  66     175.     38.6     99.0 *
                                        *                                          *
*****************************************************************************************************************************

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR     24.00-HR
+   (CFS)      (HR)
                          (CFS)
+     180.     17.75                  171.         71.         71.         71.
                         (INCHES)    1.468       2.455       2.455       2.455
                          (AC-FT)     85.        142.        142.        142.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                      6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
      40.      17.75                   38.         15.         15.         15.

 PEAK STAGE     TIME                          MAXIMUM AVERAGE STAGE
                                      6-HR       24-HR       72-HR     24.00-HR
+   (FEET)      (HR)
   100.16      17.75                  98.07       76.58       76.58       76.58

                         CUMULATIVE AREA =    1.08 SQ MI


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

            **************
            *            *
 109 KK     *    6PWBAR  *
            *            *
            **************

 110 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                                DIRECT INPUT OF HYDROGRAPH FROM WETLAND 1C (6PN) TO WBAR
                                (SEE POND2: APPENDIX 10-G)

   6 IN          TIME DATA FOR INPUT TIME SERIES
                       JXMIN          15  TIME INTERVAL IN MINUTES
                      JXDATE     28FEB91  STARTING DATE
                      JXTIME         100  STARTING TIME

              SUBBASIN RUNOFF DATA

 113 BA          SUBBASIN CHARACTERISTICS
                       TAREA         .30  SUBBASIN AREA

                                                    ***

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                                          HYDROGRAPH AT STATION   6PWBAR

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| DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | 28 FEB 0715 | 26 | 1. | 28 FEB 1330 | 51 | 22. | 28 FEB 1945 | 76 | 28. |
| 28 FEB 0115 | 2 | 0. | 28 FEB 0730 | 27 | 1. | 28 FEB 1345 | 52 | 25. | 28 FEB 2000 | 77 | 28. |
| 28 FEB 0130 | 3 | 0. | 28 FEB 0745 | 28 | 1. | 28 FEB 1400 | 53 | 27. | 28 FEB 2015 | 78 | 28. |
| 28 FEB 0145 | 4 | 0. | 28 FEB 0800 | 29 | 1. | 28 FEB 1415 | 54 | 28. | 28 FEB 2030 | 79 | 28. |
| 28 FEB 0200 | 5 | 0. | 28 FEB 0815 | 30 | 1. | 28 FEB 1430 | 55 | 29. | 28 FEB 2045 | 80 | 27. |
| 28 FEB 0215 | 6 | 0. | 28 FEB 0830 | 31 | 1. | 28 FEB 1445 | 56 | 29. | 28 FEB 2100 | 81 | 27. |
| 28 FEB 0230 | 7 | 0. | 28 FEB 0845 | 32 | 1. | 28 FEB 1500 | 57 | 29. | 28 FEB 2115 | 82 | 27. |
| 28 FEB 0245 | 8 | 0. | 28 FEB 0900 | 33 | 1. | 28 FEB 1515 | 58 | 30. | 28 FEB 2130 | 83 | 26. |
| 28 FEB 0300 | 9 | 0. | 28 FEB 0915 | 34 | 2. | 28 FEB 1530 | 59 | 30. | 28 FEB 2145 | 84 | 26. |
| 28 FEB 0315 | 10 | 0. | 28 FEB 0930 | 35 | 2. | 28 FEB 1545 | 60 | 30. | 28 FEB 2200 | 85 | 26. |
| 28 FEB 0330 | 11 | 0. | 28 FEB 0945 | 36 | 2. | 28 FEB 1600 | 61 | 30. | 28 FEB 2215 | 86 | 25. |
| 28 FEB 0345 | 12 | 0. | 28 FEB 1000 | 37 | 2. | 28 FEB 1615 | 62 | 30. | 28 FEB 2230 | 87 | 25. |
| 28 FEB 0400 | 13 | 0. | 28 FEB 1015 | 38 | 2. | 28 FEB 1630 | 63 | 30. | 28 FEB 2245 | 88 | 25. |
| 28 FEB 0415 | 14 | 0. | 28 FEB 1030 | 39 | 2. | 28 FEB 1645 | 64 | 30. | 28 FEB 2300 | 89 | 25. |
| 28 FEB 0430 | 15 | 0. | 28 FEB 1045 | 40 | 2. | 28 FEB 1700 | 65 | 30. | 28 FEB 2315 | 90 | 25. |
| 28 FEB 0445 | 16 | 0. | 28 FEB 1100 | 41 | 3. | 28 FEB 1715 | 66 | 30. | 28 FEB 2330 | 91 | 24. |
| 28 FEB 0500 | 17 | 0. | 28 FEB 1115 | 42 | 3. | 28 FEB 1730 | 67 | 30. | 28 FEB 2345 | 92 | 24. |
| 28 FEB 0515 | 18 | 0. | 28 FEB 1130 | 43 | 3. | 28 FEB 1745 | 68 | 30. | 1 MAR 0000 | 93 | 24. |
| 28 FEB 0530 | 19 | 0. | 28 FEB 1145 | 44 | 3. | 28 FEB 1800 | 69 | 30. | 1 MAR 0015 | 94 | 23. |
| 28 FEB 0545 | 20 | 0. | 28 FEB 1200 | 45 | 4. | 28 FEB 1815 | 70 | 30. | 1 MAR 0030 | 95 | 23. |
| 28 FEB 0600 | 21 | 0. | 28 FEB 1215 | 46 | 4. | 28 FEB 1830 | 71 | 30. | 1 MAR 0045 | 96 | 23. |
| 28 FEB 0615 | 22 | 0. | 28 FEB 1230 | 47 | 6. | 28 FEB 1845 | 72 | 29. | 1 MAR 0100 | 97 | 23. |
| 28 FEB 0630 | 23 | 0. | 28 FEB 1245 | 48 | 7. | 28 FEB 1900 | 73 | 29. | | | |
| 28 FEB 0645 | 24 | 1. | 28 FEB 1300 | 49 | 10. | 28 FEB 1915 | 74 | 29. | | | |
| 28 FEB 0700 | 25 | 1. | 28 FEB 1315 | 50 | 15. | 28 FEB 1930 | 75 | 29. | | | |

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| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 30. | 15.25 | | 30. | 14. | 14. | 14. |
| | | (INCHES) | .909 | 1.742 | 1.742 | 1.742 |
| | | (AC-FT) | 15. | 28. | 28. | 28. |

CUMULATIVE AREA = .30 SQ MI

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

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            **************
            *            *
 124 KK     *        BP  *
            *            *
            **************
```

125 KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

SCS RUNOFF CALCULATION

SUBBASIN RUNOFF DATA

127 BA SUBBASIN CHARACTERISTICS

| | | |
|---|---|---|
| TAREA | .02 | SUBBASIN AREA |

PRECIPITATION DATA

128 PH DEPTHS FOR 0-PERCENT HYPOTHETICAL STORM

| ..... HYDRO-35 ..... | | | ..... TP-40 ..... | | | | | ..... TP-49 ..... | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-MIN | 15-MIN | 60-MIN | 2-HR | 3-HR | 6-HR | 12-HR | 24-HR | 2-DAY | 4-DAY | 7-DAY | 10-DAY |
| .60 | 1.30 | 2.50 | 3.30 | 3.70 | 4.60 | 5.60 | 6.60 | .00 | .00 | .00 | .00 |

STORM AREA = .02

129 LS SCS LOSS RATE

| | | |
|---|---|---|
| STRTL | .47 | INITIAL ABSTRACTION |
| CRVNBR | 81.00 | CURVE NUMBER |
| RTIMP | .00 | PERCENT IMPERVIOUS AREA |

130 UD SCS DIMENSIONLESS UNITGRAPH

| | | |
|---|---|---|
| TLAG | .25 | LAG |

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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
7 END-OF-PERIOD ORDINATES

22. 23. 8. 3. 1. 0. 0.

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HYDROGRAPH AT STATION 8P

**********

| DA | MON | HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | * | DA | MON | HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | .00 | .00 | .00 | 0. | * | 28 | FEB | 1315 | 50 | 1.30 | .25 | 1.05 | 34. |
| 28 | FEB | 0115 | 2 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1330 | 51 | .34 | .05 | .29 | 35. |
| 28 | FEB | 0130 | 3 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1345 | 52 | .23 | .03 | .20 | 21. |
| 28 | FEB | 0145 | 4 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1400 | 53 | .19 | .02 | .16 | 14. |
| 28 | FEB | 0200 | 5 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1415 | 54 | .11 | .01 | .10 | 9. |
| 28 | FEB | 0215 | 6 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1430 | 55 | .10 | .01 | .08 | 7. |
| 28 | FEB | 0230 | 7 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1445 | 56 | .09 | .01 | .08 | 5. |
| 28 | FEB | 0245 | 8 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1500 | 57 | .09 | .01 | .08 | 5. |
| 28 | FEB | 0300 | 9 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1515 | 58 | .08 | .01 | .07 | 4. |
| 28 | FEB | 0315 | 10 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1530 | 59 | .07 | .01 | .06 | 4. |
| 28 | FEB | 0330 | 11 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1545 | 60 | .07 | .01 | .06 | 4. |
| 28 | FEB | 0345 | 12 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1600 | 61 | .06 | .01 | .06 | 3. |
| 28 | FEB | 0400 | 13 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1615 | 62 | .05 | .01 | .05 | 3. |
| 28 | FEB | 0415 | 14 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1630 | 63 | .05 | .00 | .05 | 3. |
| 28 | FEB | 0430 | 15 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1645 | 64 | .05 | .00 | .04 | 3. |
| 28 | FEB | 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1700 | 65 | .05 | .00 | .04 | 2. |
| 28 | FEB | 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1715 | 66 | .04 | .00 | .04 | 2. |
| 28 | FEB | 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1730 | 67 | .04 | .00 | .04 | 2. |
| 28 | FEB | 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1745 | 68 | .04 | .00 | .04 | 2. |
| 28 | FEB | 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1800 | 69 | .04 | .00 | .04 | 2. |
| 28 | FEB | 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1815 | 70 | .04 | .00 | .03 | 2. |
| 28 | FEB | 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 | FEB | 1830 | 71 | .04 | .00 | .03 | 2. |
| 28 | FEB | 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1845 | 72 | .03 | .00 | .03 | 2. |
| 28 | FEB | 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1900 | 73 | .03 | .00 | .03 | 2. |
| 28 | FEB | 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1915 | 74 | .03 | .00 | .03 | 2. |
| 28 | FEB | 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1930 | 75 | .03 | .00 | .02 | 1. |
| 28 | FEB | 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 | FEB | 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 | FEB | 0745 | 28 | .04 | .03 | .00 | 0. | * | 28 | FEB | 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 | FEB | 0800 | 29 | .04 | .03 | .00 | 0. | * | 28 | FEB | 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 | FEB | 0815 | 30 | .04 | .03 | .01 | 0. | * | 28 | FEB | 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 | FEB | 0830 | 31 | .04 | .03 | .01 | 0. | * | 28 | FEB | 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 | FEB | 0845 | 32 | .04 | .03 | .01 | 0. | * | 28 | FEB | 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 | FEB | 0900 | 33 | .04 | .03 | .01 | 0. | * | 28 | FEB | 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 | FEB | 0915 | 34 | .04 | .03 | .01 | 1. | * | 28 | FEB | 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 | FEB | 0930 | 35 | .05 | .03 | .01 | 1. | * | 28 | FEB | 2145 | 84 | .02 | .00 | .02 | 1. |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0945 | 36 | .05 | .03 | .01 | 1. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .04 | .02 | 1. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .04 | .02 | 1. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .04 | .02 | 1. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .04 | .03 | 1. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .04 | .03 | 2. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .04 | .04 | 2. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .05 | .04 | 2. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .04 | .05 | 2. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .05 | .06 | 3. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .07 | .10 | 4. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .08 | .13 | 6. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 FEB 1245 | 48 | .28 | .09 | .18 | 8. | * | 1 MAR 0100 | 97 | .02 | .00 | .02 | 1. |
| 28 FEB 1300 | 49 | .59 | .16 | .42 | 15. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 2.17, TOTAL EXCESS = 4.43

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 35. | 12.50 | | 8. | 3. | 3. | 3. |
| | | (INCHES) | 3.490 | 4.412 | 4.412 | 4.412 |
| | | (AC-FT) | 4. | 5. | 5. | 5. |

CUMULATIVE AREA = .02 SQ MI

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

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          **************
          *            *
131 KK    *       15P  *
          *            *
          **************
```

132 KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

SCS RUNOFF CALCULATION

SUBBASIN RUNOFF DATA

134 BA SUBBASIN CHARACTERISTICS

| | | |
|---|---|---|
| TAREA | .01 | SUBBASIN AREA |

PRECIPITATION DATA

135 PH DEPTHS FOR 0-PERCENT HYPOTHETICAL STORM

| ..... HYDRO-35 ..... | | | ..... TP-40 ..... | | | | | ..... TP-49 ..... | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-MIN | 15-MIN | 60-MIN | 2-HR | 3-HR | 6-HR | 12-HR | 24-HR | 2-DAY | 4-DAY | 7-DAY | 10-DAY |
| .60 | 1.30 | 2.50 | 3.30 | 3.70 | 4.60 | 5.60 | 6.60 | .00 | .00 | .00 | .00 |

STORM AREA = .01

136 LS SCS LOSS RATE

| | | |
|---|---|---|
| STRTL | .33 | INITIAL ABSTRACTION |
| CRVNBR | 86.00 | CURVE NUMBER |
| RTIMP | .00 | PERCENT IMPERVIOUS AREA |

137 UD SCS DIMENSIONLESS UNITGRAPH
TLAG .26 LAG

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IING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
7 END-OF-PERIOD ORDINATES
14. 16. 6. 2. 1. 0. 0.

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HYDROGRAPH AT STATION 15P

**********

| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | 28 FEB 1315 | 50 | 1.30 | .15 | 1.15 | 25. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | 28 FEB 1330 | 51 | .34 | .03 | .31 | 26. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | 28 FEB 1345 | 52 | .23 | .02 | .22 | 16. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | 28 FEB 1400 | 53 | .19 | .01 | .17 | 10. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | 28 FEB 1415 | 54 | .11 | .01 | .10 | 7. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | 28 FEB 1430 | 55 | .10 | .01 | .09 | 5. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | 28 FEB 1445 | 56 | .09 | .01 | .09 | 4. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | 28 FEB 1500 | 57 | .09 | .01 | .08 | 3. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | 28 FEB 1515 | 58 | .08 | .00 | .07 | 3. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | 28 FEB 1530 | 59 | .07 | .00 | .07 | 3. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | 28 FEB 1545 | 60 | .07 | .00 | .06 | 3. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | 28 FEB 1600 | 61 | .06 | .00 | .06 | 2. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | 28 FEB 1615 | 62 | .05 | .00 | .05 | 2. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | 28 FEB 1630 | 63 | .05 | .00 | .05 | 2. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | 28 FEB 1645 | 64 | .05 | .00 | .05 | 2. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | 28 FEB 1700 | 65 | .05 | .00 | .04 | 2. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | 28 FEB 1715 | 66 | .04 | .00 | .04 | 2. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | 28 FEB 1730 | 67 | .04 | .00 | .04 | 2. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | 28 FEB 1745 | 68 | .04 | .00 | .04 | 2. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | 28 FEB 1800 | 69 | .04 | .00 | .04 | 1. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | 28 FEB 1815 | 70 | .04 | .00 | .04 | 1. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | 28 FEB 1830 | 71 | .04 | .00 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .02 | .00 | 0. | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .02 | .00 | 0. | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .02 | .00 | 0. | 28 FEB 1915 | 74 | .03 | .00 | .03 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .01 | 0. | 28 FEB 1930 | 75 | .03 | .00 | .03 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .01 | 0. | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .03 | .01 | 0. | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .03 | .01 | 0. | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .03 | .01 | 0. | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .03 | .01 | 0. | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .03 | .01 | 1. | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .03 | .02 | 1. | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .03 | .02 | 1. | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .03 | .02 | 1. | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .03 | .02 | 1. | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .03 | .03 | 1. | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .03 | .03 | 1. | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .03 | .03 | 1. | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .03 | .04 | 1. | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .03 | .04 | 2. | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .03 | .05 | 2. | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .03 | .06 | 2. | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .03 | .06 | 2. | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .03 | .07 | 2. | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .05 | .12 | 3. | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .05 | .15 | 5. | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |

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      28 FEB 1245   48     .27     .06     .21        6.      *       1 MAR 0100   97     .02     .00     .02        1.
      28 FEB 1300   49     .59     .10     .48       11.      *
                                                              *
*****************************************************************************************************************************

   TOTAL RAINFALL =    6.60, TOTAL LOSS =    1.62, TOTAL EXCESS =    4.98

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+  (CFS)       (HR)
                          (CFS)
+     26.     12.50                    6.          2.          2.          2.
                         (INCHES)    3.864       4.958       4.958       4.958
                          (AC-FT)      3.          4.          4.          4.

                         CUMULATIVE AREA =     .01 SQ MI


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


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          *            *
 138 KK   *    15PSWP  *
          *            *
          **************

 139 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                                STORAGE ROUTING THROUGH WETLAND 3C

              HYDROGRAPH ROUTING DATA

 141 RS          STORAGE ROUTING
                       NSTPS           1  NUMBER OF SUBREACHES
                        ITYP        ELEV  TYPE OF INITIAL CONDITION
                       RSVRIC       62.40  INITIAL CONDITION
                            X         .00 WORKING R AND D COEFFICIENT

 142 SA               AREA         1.0       2.2       3.1       3.8

 143 SE          ELEVATION       62.00     63.00     64.00     65.00

 144 SL          LOW-LEVEL OUTLET
                       ELEVL       62.40  ELEVATION AT CENTER OF OUTLET
                       CAREA        1.23  CROSS-SECTIONAL AREA
                        COQL         .60  COEFFICIENT
                        EXPL         .50  EXPONENT OF HEAD

 145 SS          SPILLWAY
                        CREL       64.90  SPILLWAY CREST ELEVATION
                       SPWID       30.00  SPILLWAY WIDTH
                        COQW        3.00  WEIR COEFFICIENT
                        EXPW        1.50  EXPONENT OF HEAD

                                                        ***

                                          COMPUTED STORAGE-ELEVATION DATA

          STORAGE        .00      1.59      4.27      7.75
        ELEVATION      62.00     63.00     64.00     65.00
```

COMPUTED OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| OUTFLOW | .00 | .00 | 4.62 | 4.98 | 5.40 | 5.90 | 6.50 | 7.24 | 8.16 | 9.36 |
| ELEVATION | 62.00 | 62.40 | 63.01 | 63.11 | 63.23 | 63.39 | 63.61 | 63.89 | 64.30 | 64.90 |
| OUTFLOW | 9.37 | 9.41 | 9.48 | 9.61 | 9.81 | 10.10 | 10.49 | 10.99 | 11.62 | 12.39 |
| ELEVATION | 64.90 | 64.91 | 64.91 | 64.92 | 64.93 | 64.94 | 64.95 | 64.97 | 64.98 | 65.00 |

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .49 | 1.59 | 1.84 | 2.14 | 2.54 | 3.11 | 3.94 | 4.27 | 5.24 |
| OUTFLOW | .00 | .00 | 4.58 | 4.98 | 5.40 | 5.90 | 6.50 | 7.24 | 7.49 | 8.16 |
| ELEVATION | 62.00 | 62.40 | 63.00 | 63.11 | 63.23 | 63.39 | 63.61 | 63.89 | 64.00 | 64.30 |
| STORAGE | 7.37 | 7.41 | 7.47 | 7.51 | 7.56 | 7.61 | 7.68 | 7.75 | | |
| OUTFLOW | 9.36 | 9.48 | 9.81 | 10.10 | 10.49 | 10.99 | 11.62 | 12.39 | | |
| ELEVATION | 64.90 | 64.91 | 64.93 | 64.94 | 64.95 | 64.97 | 64.98 | 65.00 | | |

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HYDROGRAPH AT STATION 15PSWP

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| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .5 | 62.4 | 28 | FEB | 0915 | 34 | 0. | .5 | 62.4 | 28 | FEB | 1730 | 67 | 5. | 1.7 | 63.0 |
| 28 | FEB | 0115 | 2 | 0. | .5 | 62.4 | 28 | FEB | 0930 | 35 | 0. | .6 | 62.4 | 28 | FEB | 1745 | 68 | 5. | 1.6 | 63.0 |
| 28 | FEB | 0130 | 3 | 0. | .5 | 62.4 | 28 | FEB | 0945 | 36 | 0. | .6 | 62.4 | 28 | FEB | 1800 | 69 | 4. | 1.6 | 63.0 |
| 28 | FEB | 0145 | 4 | 0. | .5 | 62.4 | 28 | FEB | 1000 | 37 | 0. | .6 | 62.4 | 28 | FEB | 1815 | 70 | 4. | 1.5 | 63.0 |
| 28 | FEB | 0200 | 5 | 0. | .5 | 62.4 | 28 | FEB | 1015 | 38 | 0. | .6 | 62.5 | 28 | FEB | 1830 | 71 | 4. | 1.5 | 62.9 |
| 28 | FEB | 0215 | 6 | 0. | .5 | 62.4 | 28 | FEB | 1030 | 39 | 0. | .6 | 62.5 | 28 | FEB | 1845 | 72 | 4. | 1.4 | 62.9 |
| | FEB | 0230 | 7 | 0. | .5 | 62.4 | 28 | FEB | 1045 | 40 | 1. | .6 | 62.5 | 28 | FEB | 1900 | 73 | 4. | 1.4 | 62.9 |
| 28 | FEB | 0245 | 8 | 0. | .5 | 62.4 | 28 | FEB | 1100 | 41 | 1. | .6 | 62.5 | 28 | FEB | 1915 | 74 | 3. | 1.3 | 62.8 |
| 28 | FEB | 0300 | 9 | 0. | .5 | 62.4 | 28 | FEB | 1115 | 42 | 1. | .7 | 62.5 | 28 | FEB | 1930 | 75 | 3. | 1.3 | 62.8 |
| 28 | FEB | 0315 | 10 | 0. | .5 | 62.4 | 28 | FEB | 1130 | 43 | 1. | .7 | 62.5 | 28 | FEB | 1945 | 76 | 3. | 1.2 | 62.8 |
| 28 | FEB | 0330 | 11 | 0. | .5 | 62.4 | 28 | FEB | 1145 | 44 | 1. | .7 | 62.5 | 28 | FEB | 2000 | 77 | 3. | 1.2 | 62.8 |
| 28 | FEB | 0345 | 12 | 0. | .5 | 62.4 | 28 | FEB | 1200 | 45 | 1. | .7 | 62.5 | 28 | FEB | 2015 | 78 | 3. | 1.1 | 62.8 |
| 28 | FEB | 0400 | 13 | 0. | .5 | 62.4 | 28 | FEB | 1215 | 46 | 1. | .8 | 62.6 | 28 | FEB | 2030 | 79 | 3. | 1.1 | 62.7 |
| 28 | FEB | 0415 | 14 | 0. | .5 | 62.4 | 28 | FEB | 1230 | 47 | 1. | .8 | 62.6 | 28 | FEB | 2045 | 80 | 2. | 1.1 | 62.7 |
| 28 | FEB | 0430 | 15 | 0. | .5 | 62.4 | 28 | FEB | 1245 | 48 | 2. | .9 | 62.6 | 28 | FEB | 2100 | 81 | 2. | 1.0 | 62.7 |
| 28 | FEB | 0445 | 16 | 0. | .5 | 62.4 | 28 | FEB | 1300 | 49 | 2. | 1.0 | 62.7 | 28 | FEB | 2115 | 82 | 2. | 1.0 | 62.7 |
| 28 | FEB | 0500 | 17 | 0. | .5 | 62.4 | 28 | FEB | 1315 | 50 | 4. | 1.4 | 62.9 | 28 | FEB | 2130 | 83 | 2. | 1.0 | 62.7 |
| 28 | FEB | 0515 | 18 | 0. | .5 | 62.4 | 28 | FEB | 1330 | 51 | 5. | 1.8 | 63.1 | 28 | FEB | 2145 | 84 | 2. | 1.0 | 62.7 |
| 28 | FEB | 0530 | 19 | 0. | .5 | 62.4 | 28 | FEB | 1345 | 52 | 5. | 2.1 | 63.2 | 28 | FEB | 2200 | 85 | 2. | .9 | 62.6 |
| 28 | FEB | 0545 | 20 | 0. | .5 | 62.4 | 28 | FEB | 1400 | 53 | 6. | 2.3 | 63.3 | 28 | FEB | 2215 | 86 | 2. | .9 | 62.6 |
| 28 | FEB | 0600 | 21 | 0. | .5 | 62.4 | 28 | FEB | 1415 | 54 | 6. | 2.4 | 63.3 | 28 | FEB | 2230 | 87 | 2. | .9 | 62.6 |
| 28 | FEB | 0615 | 22 | 0. | .5 | 62.4 | 28 | FEB | 1430 | 55 | 6. | 2.4 | 63.3 | 28 | FEB | 2245 | 88 | 2. | .9 | 62.6 |
| 28 | FEB | 0630 | 23 | 0. | .5 | 62.4 | 28 | FEB | 1445 | 56 | 6. | 2.3 | 63.3 | 28 | FEB | 2300 | 89 | 2. | .9 | 62.6 |
| 28 | FEB | 0645 | 24 | 0. | .5 | 62.4 | 28 | FEB | 1500 | 57 | 6. | 2.3 | 63.3 | 28 | FEB | 2315 | 90 | 1. | .8 | 62.6 |
| 28 | FEB | 0700 | 25 | 0. | .5 | 62.4 | 28 | FEB | 1515 | 58 | 6. | 2.2 | 63.3 | 28 | FEB | 2330 | 91 | 1. | .8 | 62.6 |
| 28 | FEB | 0715 | 26 | 0. | .5 | 62.4 | 28 | FEB | 1530 | 59 | 5. | 2.2 | 63.3 | 28 | FEB | 2345 | 92 | 1. | .8 | 62.6 |
| 28 | FEB | 0730 | 27 | 0. | .5 | 62.4 | 28 | FEB | 1545 | 60 | 5. | 2.1 | 63.2 | 1 | MAR | 0000 | 93 | 1. | .8 | 62.6 |
| 28 | FEB | 0745 | 28 | 0. | .5 | 62.4 | 28 | FEB | 1600 | 61 | 5. | 2.1 | 63.2 | 1 | MAR | 0015 | 94 | 1. | .8 | 62.6 |
| 28 | FEB | 0800 | 29 | 0. | .5 | 62.4 | 28 | FEB | 1615 | 62 | 5. | 2.0 | 63.2 | 1 | MAR | 0030 | 95 | 1. | .8 | 62.6 |
| 28 | FEB | 0815 | 30 | 0. | .5 | 62.4 | 28 | FEB | 1630 | 63 | 5. | 2.0 | 63.2 | 1 | MAR | 0045 | 96 | 1. | .8 | 62.5 |
| 28 | FEB | 0830 | 31 | 0. | .5 | 62.4 | 28 | FEB | 1645 | 64 | 5. | 1.9 | 63.1 | 1 | MAR | 0100 | 97 | 1. | .8 | 62.5 |
| 28 | FEB | 0845 | 32 | 0. | .5 | 62.4 | 28 | FEB | 1700 | 65 | 5. | 1.8 | 63.1 | | | | | | | |
| 28 | FEB | 0900 | 33 | 0. | .5 | 62.4 | 28 | FEB | 1715 | 66 | 5. | 1.8 | 63.1 | | | | | | | |

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| PEAK FLOW | TIME | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | |

```
                        (CFS)
+       6.     13.50                  5.         2.         2.         2.
                      (INCHES)     3.058      4.628      4.628      4.628
                       (AC-FT)        2.         4.         4.         4.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                     6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
       2.      13.50                  2.         1.         1.         1.

  PEAK STAGE    TIME                        MAXIMUM AVERAGE STAGE
                                     6-HR       24-HR       72-HR     24.00-HR
+   (FEET)      (HR)
     63.32     13.50                63.13      62.66      62.66      62.66

                       CUMULATIVE AREA =     .01 SQ MI
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          *            *
 149 KK   *     8PCHL  *
          *            *
          **************

 150 KO         OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH 8P CHANNEL

             HYDROGRAPH ROUTING DATA

 152 RS         STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        ELEV  TYPE OF INITIAL CONDITION
                     RSVRIC       61.00  INITIAL CONDITION
                          X         .00 WORKING R AND D COEFFICIENT

 153 SA              AREA          .0        .0        .1        .2        .2        .3        .3

 154 SE         ELEVATION       61.00     63.00     64.00     65.00     66.00     67.00     68.00

 155 SL         LOW-LEVEL OUTLET
                      ELEVL       62.60  ELEVATION AT CENTER OF OUTLET
                      CAREA       12.57  CROSS-SECTIONAL AREA
                       COQL         .60  COEFFICIENT
                       EXPL         .50  EXPONENT OF HEAD

 156 SS         SPILLWAY
                       CREL       67.90  SPILLWAY CREST ELEVATION
                      SPWID         .00  SPILLWAY WIDTH
                       COQW         .00  WEIR COEFFICIENT
                       EXPW        1.50  EXPONENT OF HEAD

                                                   ***

                                          COMPUTED STORAGE-ELEVATION DATA

          STORAGE        .00       .01       .06       .20       .42       .68      1.00
        ELEVATION      61.00     63.00     64.00     65.00     66.00     67.00     68.00
```

COMPUTED OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| OUTFLOW | .00 | .00 | 83.18 | 88.26 | 94.00 | 100.53 | 108.04 | 116.77 | 127.02 | 139.25 |
| ELEVATION | 61.00 | 62.60 | 64.49 | 64.73 | 65.01 | 65.36 | 65.79 | 66.33 | 67.01 | 67.90 |

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .00 | .01 | .06 | .12 | .15 | .20 | .20 | .27 | .37 |
| OUTFLOW | .00 | .00 | 38.26 | 71.57 | 83.18 | 88.26 | 93.71 | 94.00 | 100.53 | 108.04 |
| ELEVATION | 61.00 | 62.60 | 63.00 | 64.00 | 64.49 | 64.73 | 65.00 | 65.01 | 65.36 | 65.79 |
| STORAGE | .42 | .50 | .68 | .97 | 1.00 | | | | | |
| OUTFLOW | 111.53 | 116.77 | 126.88 | 139.25 | 140.56 | | | | | |
| ELEVATION | 66.00 | 66.33 | 67.00 | 67.90 | 68.00 | | | | | |

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 94.
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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HYDROGRAPH AT STATION 8PCHL

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| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 61.0 | 28 | FEB | 0915 | 34 | 2. | .0 | 62.6 | 28 | FEB | 1730 | 67 | 212. | 2.9 | 73.4 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 61.0 | 28 | FEB | 0930 | 35 | 3. | .0 | 62.6 | 28 | FEB | 1745 | 68 | 213. | 2.9 | 73.5 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 61.0 | 28 | FEB | 0945 | 36 | 5. | .0 | 62.7 | 28 | FEB | 1800 | 69 | 214. | 2.9 | 73.6 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 61.0 | 28 | FEB | 1000 | 37 | 6. | .0 | 62.7 | 28 | FEB | 1815 | 70 | 215. | 3.0 | 73.7 |
| [illegible] | FEB | 0200 | 5 | 0. | .0 | 61.0 | 28 | FEB | 1015 | 38 | 8. | .0 | 62.7 | 28 | FEB | 1830 | 71 | 215. | 3.0 | 73.7 |
| [illegible] | EB | 0215 | 6 | 0. | .0 | 61.0 | 28 | FEB | 1030 | 39 | 11. | .0 | 62.7 | 28 | FEB | 1845 | 72 | 215. | 3.0 | 73.7 |
| [illegible] | FEB | 0230 | 7 | 0. | .0 | 61.0 | 28 | FEB | 1045 | 40 | 15. | .0 | 62.8 | 28 | FEB | 1900 | 73 | 215. | 3.0 | 73.7 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 61.0 | 28 | FEB | 1100 | 41 | 19. | .0 | 62.8 | 28 | FEB | 1915 | 74 | 214. | 3.0 | 73.6 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 61.0 | 28 | FEB | 1115 | 42 | 21. | .0 | 62.8 | 28 | FEB | 1930 | 75 | 213. | 2.9 | 73.6 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 61.0 | 28 | FEB | 1130 | 43 | 24. | .0 | 62.8 | 28 | FEB | 1945 | 76 | 212. | 2.9 | 73.5 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 61.0 | 28 | FEB | 1145 | 44 | 27. | .0 | 62.9 | 28 | FEB | 2000 | 77 | 210. | 2.8 | 73.3 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 61.0 | 28 | FEB | 1200 | 45 | 29. | .0 | 62.9 | 28 | FEB | 2015 | 78 | 208. | 2.8 | 73.1 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 61.0 | 28 | FEB | 1215 | 46 | 33. | .0 | 62.9 | 28 | FEB | 2030 | 79 | 204. | 2.7 | 72.9 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 61.0 | 28 | FEB | 1230 | 47 | 39. | .0 | 63.0 | 28 | FEB | 2045 | 80 | 200. | 2.6 | 72.5 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 61.0 | 28 | FEB | 1245 | 48 | 47. | .0 | 63.3 | 28 | FEB | 2100 | 81 | 193. | 2.4 | 72.0 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 61.0 | 28 | FEB | 1300 | 49 | 65. | .0 | 63.8 | 28 | FEB | 2115 | 82 | 186. | 2.2 | 71.5 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 61.2 | 28 | FEB | 1315 | 50 | 93. | .2 | 65.0 | 28 | FEB | 2130 | 83 | 178. | 2.0 | 70.9 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 61.6 | 28 | FEB | 1330 | 51 | 116. | .5 | 66.3 | 28 | FEB | 2145 | 84 | 171. | 1.8 | 70.3 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 62.2 | 28 | FEB | 1345 | 52 | 130. | .8 | 67.3 | 28 | FEB | 2200 | 85 | 164. | 1.6 | 69.8 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 62.6 | 28 | FEB | 1400 | 53 | 141. | 1.0 | 68.0 | 28 | FEB | 2215 | 86 | 157. | 1.4 | 69.2 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 62.6 | 28 | FEB | 1415 | 54 | 151. | 1.3 | 68.8 | 28 | FEB | 2230 | 87 | 151. | 1.3 | 68.8 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 62.6 | 28 | FEB | 1430 | 55 | 160. | 1.5 | 69.5 | 28 | FEB | 2245 | 88 | 145. | 1.1 | 68.3 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 62.6 | 28 | FEB | 1445 | 56 | 168. | 1.7 | 70.1 | 28 | FEB | 2300 | 89 | 139. | 1.0 | 67.9 |
| 28 | FEB | 0645 | 24 | 1. | .0 | 62.6 | 28 | FEB | 1500 | 57 | 175. | 1.9 | 70.7 | 28 | FEB | 2315 | 90 | 134. | .8 | 67.5 |
| 28 | FEB | 0700 | 25 | 1. | .0 | 62.6 | 28 | FEB | 1515 | 58 | 182. | 2.1 | 71.2 | 28 | FEB | 2330 | 91 | 129. | .7 | 67.1 |
| 28 | FEB | 0715 | 26 | 1. | .0 | 62.6 | 28 | FEB | 1530 | 59 | 188. | 2.2 | 71.6 | 28 | FEB | 2345 | 92 | 124. | .6 | 66.8 |
| 28 | FEB | 0730 | 27 | 1. | .0 | 62.6 | 28 | FEB | 1545 | 60 | 192. | 2.4 | 72.0 | 1 | MAR | 0000 | 93 | 119. | .5 | 66.5 |
| 28 | FEB | 0745 | 28 | 1. | .0 | 62.6 | 28 | FEB | 1600 | 61 | 197. | 2.5 | 72.3 | 1 | MAR | 0015 | 94 | 115. | .5 | 66.2 |
| 28 | FEB | 0800 | 29 | 1. | .0 | 62.6 | 28 | FEB | 1615 | 62 | 200. | 2.6 | 72.6 | 1 | MAR | 0030 | 95 | 111. | .4 | 66.0 |
| 28 | FEB | 0815 | 30 | 2. | .0 | 62.6 | 28 | FEB | 1630 | 63 | 204. | 2.7 | 72.8 | 1 | MAR | 0045 | 96 | 107. | .4 | 65.7 |
| 28 | FEB | 0830 | 31 | 2. | .0 | 62.6 | 28 | FEB | 1645 | 64 | 206. | 2.7 | 73.0 | 1 | MAR | 0100 | 97 | 104. | .3 | 65.5 |
| 28 | FEB | 0845 | 32 | 2. | .0 | 62.6 | 28 | FEB | 1700 | 65 | 208. | 2.8 | 73.2 | | | | | | | |
| 28 | FEB | 0900 | 33 | 2. | .0 | 62.6 | 28 | FEB | 1715 | 66 | 210. | 2.8 | 73.3 | | | | | | | |

**********

| PEAK FLOW | TIME | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |

```
+   (CFS)       (HR)
                          (CFS)
+     215.      17.75                206.         90.         90.         90.
                         (INCHES)    1.348       2.352       2.352       2.352
                          (AC-FT)    102.        178.        178.        178.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                     6-HR     24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
       3.      17.75                  3.         1.          1.          1.

  PEAK STAGE    TIME                        MAXIMUM AVERAGE STAGE
                                     6-HR      24-HR       72-HR     24.00-HR
+   (FEET)      (HR)
    73.70      17.75                73.00      66.31       66.31       66.31

                         CUMULATIVE AREA =    1.42 SQ MI


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


            **************
            *            *
 157 KK     *       10P  *
            *            *
            **************

 158 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

               SUBBASIN RUNOFF DATA

 160 BA          SUBBASIN CHARACTERISTICS
                       TAREA         .03  SUBBASIN AREA

                 PRECIPITATION DATA

 161 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                 ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                 5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                   .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .03

 162 LS          SCS LOSS RATE
                       STRTL         .17  INITIAL ABSTRACTION
                      CRVNBR       92.00  CURVE NUMBER
                       RTIMP         .00  PERCENT IMPERVIOUS AREA

 163 UD          SCS DIMENSIONLESS UNITGRAPH
                        TLAG         .22  LAG

                                                        ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                   UNIT HYDROGRAPH
                                              6 END-OF-PERIOD ORDINATES
               30.       26.        8.        2.        1.        0.
```

HYDROGRAPH AT STATION 10P

| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | 28 FEB 1315 | 50 | 1.30 | .06 | 1.24 | 54. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | 28 FEB 1330 | 51 | .34 | .01 | .33 | 47. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | 28 FEB 1345 | 52 | .23 | .01 | .23 | 26. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | 28 FEB 1400 | 53 | .19 | .00 | .18 | 17. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | 28 FEB 1415 | 54 | .11 | .00 | .11 | 12. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | 28 FEB 1430 | 55 | .10 | .00 | .09 | 8. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | 28 FEB 1445 | 56 | .09 | .00 | .09 | 7. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | 28 FEB 1500 | 57 | .09 | .00 | .08 | 6. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | 28 FEB 1515 | 58 | .08 | .00 | .08 | 6. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | 28 FEB 1530 | 59 | .07 | .00 | .07 | 5. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | 28 FEB 1545 | 60 | .07 | .00 | .07 | 5. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | 28 FEB 1600 | 61 | .06 | .00 | .06 | 4. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | 28 FEB 1615 | 62 | .05 | .00 | .05 | 4. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | 28 FEB 1630 | 63 | .05 | .00 | .05 | 4. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | 28 FEB 1645 | 64 | .05 | .00 | .05 | 3. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | 28 FEB 1700 | 65 | .05 | .00 | .04 | 3. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | 28 FEB 1715 | 66 | .04 | .00 | .04 | 3. |
| 28 FEB 0515 | 18 | .02 | .02 | .01 | 0. | 28 FEB 1730 | 67 | .04 | .00 | .04 | 3. |
| 28 FEB 0530 | 19 | .02 | .02 | .01 | 0. | 28 FEB 1745 | 68 | .04 | .00 | .04 | 3. |
| 28 FEB 0545 | 20 | .02 | .02 | .01 | 0. | 28 FEB 1800 | 69 | .04 | .00 | .04 | 3. |
| 28 FEB 0600 | 21 | .02 | .02 | .01 | 1. | 28 FEB 1815 | 70 | .04 | .00 | .04 | 3. |
| 28 FEB 0615 | 22 | .02 | .02 | .01 | 1. | 28 FEB 1830 | 71 | .04 | .00 | .04 | 2. |
| 28 FEB 0630 | 23 | .03 | .02 | .01 | 1. | 28 FEB 1845 | 72 | .03 | .00 | .03 | 2. |
| 28 FEB 0645 | 24 | .03 | .01 | .01 | 1. | 28 FEB 1900 | 73 | .03 | .00 | .03 | 2. |
| 28 FEB 0700 | 25 | .03 | .01 | .01 | 1. | 28 FEB 1915 | 74 | .03 | .00 | .03 | 2. |
| 28 FEB 0715 | 26 | .03 | .02 | .02 | 1. | 28 FEB 1930 | 75 | .03 | .00 | .03 | 2. |
| 28 FEB 0730 | 27 | .03 | .02 | .02 | 1. | 28 FEB 1945 | 76 | .03 | .00 | .03 | 2. |
| 28 FEB 0745 | 28 | .04 | .02 | .02 | 1. | 28 FEB 2000 | 77 | .03 | .00 | .02 | 2. |
| 28 FEB 0800 | 29 | .04 | .02 | .02 | 1. | 28 FEB 2015 | 78 | .02 | .00 | .02 | 2. |
| 28 FEB 0815 | 30 | .04 | .02 | .02 | 1. | 28 FEB 2030 | 79 | .02 | .00 | .02 | 2. |
| 28 FEB 0830 | 31 | .04 | .02 | .02 | 2. | 28 FEB 2045 | 80 | .02 | .00 | .02 | 2. |
| 28 FEB 0845 | 32 | .04 | .02 | .03 | 2. | 28 FEB 2100 | 81 | .02 | .00 | .02 | 2. |
| 28 FEB 0900 | 33 | .04 | .01 | .03 | 2. | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .01 | .03 | 2. | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .01 | .03 | 2. | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .01 | .03 | 2. | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .01 | .04 | 2. | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .02 | .05 | 3. | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .02 | .05 | 3. | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .02 | .05 | 3. | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .02 | .06 | 4. | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .02 | .07 | 4. | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .02 | .07 | 5. | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .01 | .08 | 5. | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .02 | .09 | 5. | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .02 | .15 | 8. | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .02 | .18 | 10. | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 FEB 1245 | 48 | .28 | .03 | .25 | 14. | 1 MAR 0100 | 97 | .02 | .00 | .02 | 1. |
| 28 FEB 1300 | 49 | .59 | .04 | .55 | 25. | | | | | | |

TOTAL RAINFALL = 6.60, TOTAL LOSS = .94, TOTAL EXCESS = 5.66

| PEAK FLOW (CFS) | TIME (HR) | MAXIMUM AVERAGE FLOW 6-HR (CFS) | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| + | | | | | |

```
+     54.     12.25                  12.         4.         4.         4.
                        (INCHES)    4.276      5.639      5.639      5.639
                         (AC-FT)       6.         8.         8.         8.

                         CUMULATIVE AREA =     .03 SQ MI


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


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            *            *
 167 KK     *    10PCHL  *
            *            *
            **************

 168 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH 10P CHANNEL

               HYDROGRAPH ROUTING DATA

 170 RS          STORAGE ROUTING
                       NSTPS           1  NUMBER OF SUBREACHES
                        ITYP        ELEV  TYPE OF INITIAL CONDITION
                      RSVRIC       59.90  INITIAL CONDITION
                           X         .00 WORKING R AND D COEFFICIENT

 171 SA               AREA          .0        .1        .1        .2        .2        .2

 172 SE          ELEVATION       59.90     61.00     63.00     65.00     67.00     67.70

 173 SL          LOW-LEVEL OUTLET
                       ELEVL       61.80  ELEVATION AT CENTER OF OUTLET
                       CAREA       12.57  CROSS-SECTIONAL AREA
                        COQL         .60  COEFFICIENT
                        EXPL         .50  EXPONENT OF HEAD

 174 SS          SPILLWAY
                        CREL       67.50  SPILLWAY CREST ELEVATION
                       SPWID       30.00  SPILLWAY WIDTH
                        COQW        3.00  WEIR COEFFICIENT
                        EXPW        1.50  EXPONENT OF HEAD

                                                   ***

                                          COMPUTED STORAGE-ELEVATION DATA

           STORAGE        .00       .03       .24       .54       .95      1.11
         ELEVATION      59.90     61.00     63.00     65.00     67.00     67.70

                                          COMPUTED OUTFLOW-ELEVATION DATA

           OUTFLOW        .00       .00     83.41     88.76     94.86    101.85    109.95    119.45    130.75    144.41
         ELEVATION      59.90     61.80     63.70     63.95     64.26     64.64     65.10     65.70     66.47     67.50

           OUTFLOW     144.82    145.15    145.63    146.28    147.12    148.17    149.45    151.00    152.83    154.97
         ELEVATION      67.52     67.53     67.54     67.56     67.57     67.59     67.62     67.64     67.67     67.70

                                   COMPUTED STORAGE-OUTFLOW-ELEVATION DATA
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .03 | .10 | .24 | .34 | .37 | .42 | .48 | .54 | .56 |
| OUTFLOW | .00 | .00 | .00 | 66.26 | 83.41 | 88.76 | 94.86 | 101.85 | 108.20 | 109.95 |
| ELEVATION | 59.90 | 61.00 | 61.80 | 63.00 | 63.70 | 63.95 | 64.26 | 64.64 | 65.00 | 65.10 |
| STORAGE | .68 | .83 | .95 | 1.06 | 1.07 | 1.07 | 1.07 | 1.08 | 1.08 | 1.08 |
| OUTFLOW | 119.45 | 130.75 | 137.93 | 144.41 | 144.82 | 145.15 | 145.63 | 146.28 | 147.12 | 148.17 |
| ELEVATION | 65.70 | 66.47 | 67.00 | 67.50 | 67.52 | 67.53 | 67.54 | 67.56 | 67.57 | 67.59 |
| STORAGE | 1.09 | 1.10 | 1.10 | 1.11 | | | | | | |
| OUTFLOW | 149.45 | 151.00 | 152.83 | 154.97 | | | | | | |
| ELEVATION | 67.62 | 67.64 | 67.67 | 67.70 | | | | | | |

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 155.
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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HYDROGRAPH AT STATION 10PCHL

**********

| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 59.9 | 28 | FEB | 0915 | 34 | 4. | .1 | 61.9 | 28 | FEB | 1730 | 67 | 214. | 1.3 | 68.5 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 59.9 | 28 | FEB | 0930 | 35 | 5. | .1 | 61.9 | 28 | FEB | 1745 | 68 | 216. | 1.3 | 68.6 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 59.9 | 28 | FEB | 0945 | 36 | 7. | .1 | 61.9 | 28 | FEB | 1800 | 69 | 217. | 1.3 | 68.6 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 59.9 | 28 | FEB | 1000 | 37 | 9. | .1 | 62.0 | 28 | FEB | 1815 | 70 | 217. | 1.3 | 68.6 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 59.9 | 28 | FEB | 1015 | 38 | 11. | .1 | 62.0 | 28 | FEB | 1830 | 71 | 217. | 1.3 | 68.6 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 59.9 | 28 | FEB | 1030 | 39 | 14. | .1 | 62.1 | 28 | FEB | 1845 | 72 | 217. | 1.3 | 68.6 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 59.9 | 28 | FEB | 1045 | 40 | 18. | .1 | 62.1 | 28 | FEB | 1900 | 73 | 217. | 1.3 | 68.6 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 59.9 | 28 | FEB | 1100 | 41 | 22. | .1 | 62.2 | 28 | FEB | 1915 | 74 | 216. | 1.3 | 68.6 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 59.9 | 28 | FEB | 1115 | 42 | 25. | .2 | 62.3 | 28 | FEB | 1930 | 75 | 215. | 1.3 | 68.6 |
| [illegible] | FEB | 0315 | 10 | 0. | .0 | 59.9 | 28 | FEB | 1130 | 43 | 28. | .2 | 62.3 | 28 | FEB | 1945 | 76 | 214. | 1.3 | 68.5 |
| [illegible] | FEB | 0330 | 11 | 0. | .0 | 59.9 | 28 | FEB | 1145 | 44 | 31. | .2 | 62.4 | 28 | FEB | 2000 | 77 | 212. | 1.3 | 68.5 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 59.9 | 28 | FEB | 1200 | 45 | 34. | .2 | 62.4 | 28 | FEB | 2015 | 78 | 210. | 1.3 | 68.5 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 59.9 | 28 | FEB | 1215 | 46 | 40. | .2 | 62.5 | 28 | FEB | 2030 | 79 | 207. | 1.3 | 68.4 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 60.0 | 28 | FEB | 1230 | 47 | 49. | .2 | 62.7 | 28 | FEB | 2045 | 80 | 202. | 1.3 | 68.4 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 60.1 | 28 | FEB | 1245 | 48 | 60. | .2 | 62.9 | 28 | FEB | 2100 | 81 | 196. | 1.3 | 68.3 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 60.2 | 28 | FEB | 1300 | 49 | 81. | .3 | 63.6 | 28 | FEB | 2115 | 82 | 189. | 1.2 | 68.2 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 60.4 | 28 | FEB | 1315 | 50 | 120. | .7 | 65.7 | 28 | FEB | 2130 | 83 | 181. | 1.2 | 68.1 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 60.7 | 28 | FEB | 1330 | 51 | 150. | 1.1 | 67.6 | 28 | FEB | 2145 | 84 | 173. | 1.2 | 68.0 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 60.9 | 28 | FEB | 1345 | 52 | 165. | 1.1 | 67.8 | 28 | FEB | 2200 | 85 | 166. | 1.1 | 67.9 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 61.1 | 28 | FEB | 1400 | 53 | 154. | 1.1 | 67.7 | 28 | FEB | 2215 | 86 | 159. | 1.1 | 67.8 |
| 28 | FEB | 0600 | 21 | 0. | .1 | 61.3 | 28 | FEB | 1415 | 54 | 163. | 1.1 | 67.8 | 28 | FEB | 2230 | 87 | 153. | 1.1 | 67.7 |
| 28 | FEB | 0615 | 22 | 0. | .1 | 61.5 | 28 | FEB | 1430 | 55 | 166. | 1.1 | 67.9 | 28 | FEB | 2245 | 88 | 147. | 1.1 | 67.6 |
| 28 | FEB | 0630 | 23 | 0. | .1 | 61.7 | 28 | FEB | 1445 | 56 | 174. | 1.2 | 68.0 | 28 | FEB | 2300 | 89 | 143. | 1.0 | 67.4 |
| 28 | FEB | 0645 | 24 | 1. | .1 | 61.8 | 28 | FEB | 1500 | 57 | 180. | 1.2 | 68.1 | 28 | FEB | 2315 | 90 | 139. | 1.0 | 67.1 |
| 28 | FEB | 0700 | 25 | 1. | .1 | 61.8 | 28 | FEB | 1515 | 58 | 187. | 1.2 | 68.1 | 28 | FEB | 2330 | 91 | 134. | .9 | 66.7 |
| 28 | FEB | 0715 | 26 | 2. | .1 | 61.8 | 28 | FEB | 1530 | 59 | 192. | 1.2 | 68.2 | 28 | FEB | 2345 | 92 | 129. | .8 | 66.3 |
| 28 | FEB | 0730 | 27 | 2. | .1 | 61.8 | 28 | FEB | 1545 | 60 | 196. | 1.3 | 68.3 | 1 | MAR | 0000 | 93 | 123. | .7 | 66.0 |
| 28 | FEB | 0745 | 28 | 2. | .1 | 61.8 | 28 | FEB | 1600 | 61 | 200. | 1.3 | 68.3 | 1 | MAR | 0015 | 94 | 119. | .7 | 65.7 |
| 28 | FEB | 0800 | 29 | 3. | .1 | 61.8 | 28 | FEB | 1615 | 62 | 204. | 1.3 | 68.4 | 1 | MAR | 0030 | 95 | 114. | .6 | 65.4 |
| 28 | FEB | 0815 | 30 | 3. | .1 | 61.9 | 28 | FEB | 1630 | 63 | 207. | 1.3 | 68.4 | 1 | MAR | 0045 | 96 | 110. | .6 | 65.1 |
| 28 | FEB | 0830 | 31 | 3. | .1 | 61.9 | 28 | FEB | 1645 | 64 | 209. | 1.3 | 68.5 | 1 | MAR | 0100 | 97 | 107. | .5 | 64.9 |
| 28 | FEB | 0845 | 32 | 4. | .1 | 61.9 | 28 | FEB | 1700 | 65 | 211. | 1.3 | 68.5 | | | | | | | |
| 28 | FEB | 0900 | 33 | 4. | .1 | 61.9 | 28 | FEB | 1715 | 66 | 213. | 1.3 | 68.5 | | | | | | | |

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| PEAK FLOW (CFS) | TIME (HR) | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| + 217. | 17.75 | (CFS) | 209. | 93. | 93. | 93. |
| | | (INCHES) | 1.342 | 2.404 | 2.404 | 2.404 |

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                    (AC-FT)      103.        185.        185.        185.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                     6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
       1.     17.75                    1.          1.          1.          1.

  PEAK STAGE    TIME                        MAXIMUM AVERAGE STAGE
                                     6-HR       24-HR       72-HR     24.00-HR
+   (FEET)      (HR)
     68.59     17.75                  68.46       64.51       64.51       64.51

                    CUMULATIVE AREA =    1.45 SQ MI


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


          **************
          *            *
 175 KK   *    16&17P  *
          *            *
          **************

 176 KO         OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION - 16P & 17P

             SUBBASIN RUNOFF DATA

 178 BA         SUBBASIN CHARACTERISTICS
                      TAREA         .02  SUBBASIN AREA

                PRECIPITATION DATA

 179 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .02

 180 LS         SCS LOSS RATE
                      STRTL         .30  INITIAL ABSTRACTION
                     CRVNBR       87.00  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 181 UD         SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .07  LAG

                                                          ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                     UNIT HYDROGRAPH
                                                 5 END-OF-PERIOD ORDINATES
             33.        9.        2.        0.        0.

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                                          HYDROGRAPH AT STATION   16&17P
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| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | 28 FEB 1315 | 50 | 1.30 | .13 | 1.17 | 43. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | 28 FEB 1330 | 51 | .34 | .02 | .31 | 22. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | 28 FEB 1345 | 52 | .23 | .02 | .22 | 12. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | 28 FEB 1400 | 53 | .19 | .01 | .18 | 9. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | 28 FEB 1415 | 54 | .11 | .01 | .10 | 6. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | 28 FEB 1430 | 55 | .10 | .01 | .09 | 4. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | 28 FEB 1445 | 56 | .09 | .01 | .09 | 4. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | 28 FEB 1500 | 57 | .09 | .00 | .08 | 4. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | 28 FEB 1515 | 58 | .08 | .00 | .07 | 3. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | 28 FEB 1530 | 59 | .07 | .00 | .07 | 3. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | 28 FEB 1545 | 60 | .07 | .00 | .06 | 3. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | 28 FEB 1600 | 61 | .06 | .00 | .06 | 3. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | 28 FEB 1615 | 62 | .05 | .00 | .05 | 2. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | 28 FEB 1630 | 63 | .05 | .00 | .05 | 2. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | 28 FEB 1645 | 64 | .05 | .00 | .05 | 2. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | 28 FEB 1700 | 65 | .05 | .00 | .04 | 2. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | 28 FEB 1715 | 66 | .04 | .00 | .04 | 2. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | 28 FEB 1730 | 67 | .04 | .00 | .04 | 2. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | 28 FEB 1745 | 68 | .04 | .00 | .04 | 2. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | 28 FEB 1800 | 69 | .04 | .00 | .04 | 2. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | 28 FEB 1815 | 70 | .04 | .00 | .04 | 2. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | 28 FEB 1830 | 71 | .04 | .00 | .03 | 2. |
| 28 FEB 0630 | 23 | .03 | .02 | .00 | 0. | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .02 | .00 | 0. | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .02 | .01 | 0. | 28 FEB 1915 | 74 | .03 | .00 | .03 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .01 | 0. | 28 FEB 1930 | 75 | .03 | .00 | .03 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .01 | 0. | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .03 | .01 | 0. | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .02 | .01 | 0. | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .02 | .01 | 1. | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .02 | .01 | 1. | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .02 | .02 | 1. | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .02 | .02 | 1. | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .02 | .02 | 1. | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .02 | .02 | 1. | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .02 | .02 | 1. | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .02 | .03 | 1. | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .03 | .03 | 1. | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .03 | .04 | 2. | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .03 | .04 | 2. | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .03 | .05 | 2. | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .03 | .05 | 2. | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .03 | .06 | 3. | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .03 | .06 | 3. | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .03 | .07 | 3. | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .05 | .13 | 5. | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .05 | .16 | 6. | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 FEB 1245 | 48 | .28 | .06 | .22 | 9. | 1 MAR 0100 | 97 | .02 | .00 | .02 | 1. |
| 28 FEB 1300 | 49 | .59 | .09 | .49 | 18. | | | | | | |

TOTAL RAINFALL = 6.60, TOTAL LOSS = 1.51, TOTAL EXCESS = 5.09

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 43. | 12.25 | | 7. | 2. | 2. | 2. |
| | | (INCHES) | 3.939 | 5.080 | 5.080 | 5.080 |
| | | (AC-FT) | 4. | 5. | 5. | 5. |

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                    CUMULATIVE AREA =     .02 SQ MI

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          *            *
182 KK    *    1617PD  *
          *            *
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183 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH 16P & 17P

             HYDROGRAPH ROUTING DATA

185 RS          STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        ELEV  TYPE OF INITIAL CONDITION
                     RSVRIC       59.10  INITIAL CONDITION
                          X         .00 WORKING R AND D COEFFICIENT

186 SA               AREA          .2        .5       1.7

187 SE          ELEVATION       63.50     65.70     66.00

188 SS          SPILLWAY
                       CREL       65.90  SPILLWAY CREST ELEVATION
                      SPWID       40.00  SPILLWAY WIDTH
                       COQW        3.00  WEIR COEFFICIENT
                       EXPW        1.50  EXPONENT OF HEAD

                                                   ***

                                        COMPUTED STORAGE-ELEVATION DATA

          STORAGE        .00       .77      1.08
        ELEVATION      63.50     65.70     66.00

                                        COMPUTED OUTFLOW-ELEVATION DATA

          OUTFLOW        .00       .00       .00       .01       .02       .04       .08       .14       .22       .33
        ELEVATION      63.50     65.90     65.90     65.90     65.90     65.90     65.91     65.91     65.92     65.92

          OUTFLOW        .47       .65       .87      1.12      1.43      1.79      2.20      2.67      3.20      3.79
        ELEVATION      65.93     65.93     65.94     65.94     65.95     65.96     65.97     65.98     65.99     66.00

                                       COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE        .00       .77       .93       .94       .96       .98      1.00      1.03      1.06      1.08
          OUTFLOW        .00       .00       .00       .14       .47       .87      1.43      2.20      3.20      3.79
        ELEVATION      63.50     65.70     65.90     65.91     65.93     65.94     65.95     65.97     65.99     66.00

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                                        HYDROGRAPH AT STATION   1617PD

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| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 63.5 | 28 | FEB | 0915 | 34 | 0. | .1 | 63.8 | 28 | FEB | 1730 | 67 | 2. | 1.0 | 66.0 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 63.5 | 28 | FEB | 0930 | 35 | 0. | .1 | 63.9 | 28 | FEB | 1745 | 68 | 2. | 1.0 | 66.0 |
| | FEB | 0130 | 3 | 0. | .0 | 63.5 | 28 | FEB | 0945 | 36 | 0. | .2 | 64.0 | 28 | FEB | 1800 | 69 | 2. | 1.0 | 66.0 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 63.5 | 28 | FEB | 1000 | 37 | 0. | .2 | 64.0 | 28 | FEB | 1815 | 70 | 2. | 1.0 | 66.0 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 63.5 | 28 | FEB | 1015 | 38 | 0. | .2 | 64.1 | 28 | FEB | 1830 | 71 | 2. | 1.0 | 66.0 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 63.5 | 28 | FEB | 1030 | 39 | 0. | .2 | 64.2 | 28 | FEB | 1845 | 72 | 2. | 1.0 | 66.0 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 63.5 | 28 | FEB | 1045 | 40 | 0. | .3 | 64.3 | 28 | FEB | 1900 | 73 | 2. | 1.0 | 66.0 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 63.5 | 28 | FEB | 1100 | 41 | 0. | .3 | 64.4 | 28 | FEB | 1915 | 74 | 1. | 1.0 | 66.0 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 63.5 | 28 | FEB | 1115 | 42 | 0. | .4 | 64.5 | 28 | FEB | 1930 | 75 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 63.5 | 28 | FEB | 1130 | 43 | 0. | .4 | 64.7 | 28 | FEB | 1945 | 76 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 63.5 | 28 | FEB | 1145 | 44 | 0. | .5 | 64.8 | 28 | FEB | 2000 | 77 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 63.5 | 28 | FEB | 1200 | 45 | 0. | .5 | 65.0 | 28 | FEB | 2015 | 78 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 63.5 | 28 | FEB | 1215 | 46 | 0. | .6 | 65.2 | 28 | FEB | 2030 | 79 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 63.5 | 28 | FEB | 1230 | 47 | 0. | .7 | 65.6 | 28 | FEB | 2045 | 80 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 63.5 | 28 | FEB | 1245 | 48 | 0. | .9 | 65.8 | 28 | FEB | 2100 | 81 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 63.5 | 28 | FEB | 1300 | 49 | 5. | 1.1 | 66.0 | 28 | FEB | 2115 | 82 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 63.5 | 28 | FEB | 1315 | 50 | 18. | 1.5 | 66.3 | 28 | FEB | 2130 | 83 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 63.5 | 28 | FEB | 1330 | 51 | 25. | 1.7 | 66.4 | 28 | FEB | 2145 | 84 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 63.5 | 28 | FEB | 1345 | 52 | 21. | 1.6 | 66.3 | 28 | FEB | 2200 | 85 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 63.5 | 28 | FEB | 1400 | 53 | 16. | 1.4 | 66.2 | 28 | FEB | 2215 | 86 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 63.5 | 28 | FEB | 1415 | 54 | 11. | 1.3 | 66.1 | 28 | FEB | 2230 | 87 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 63.5 | 28 | FEB | 1430 | 55 | 8. | 1.2 | 66.1 | 28 | FEB | 2245 | 88 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 63.5 | 28 | FEB | 1445 | 56 | 6. | 1.1 | 66.0 | 28 | FEB | 2300 | 89 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 63.5 | 28 | FEB | 1500 | 57 | 5. | 1.1 | 66.0 | 28 | FEB | 2315 | 90 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0700 | 25 | 0. | .0 | 63.5 | 28 | FEB | 1515 | 58 | 4. | 1.1 | 66.0 | 28 | FEB | 2330 | 91 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0715 | 26 | 0. | .0 | 63.6 | 28 | FEB | 1530 | 59 | 4. | 1.1 | 66.0 | 28 | FEB | 2345 | 92 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0730 | 27 | 0. | .0 | 63.6 | 28 | FEB | 1545 | 60 | 3. | 1.1 | 66.0 | 1 | MAR | 0000 | 93 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0745 | 28 | 0. | .0 | 63.6 | 28 | FEB | 1600 | 61 | 3. | 1.1 | 66.0 | 1 | MAR | 0015 | 94 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0800 | 29 | 0. | .0 | 63.6 | 28 | FEB | 1615 | 62 | 3. | 1.0 | 66.0 | 1 | MAR | 0030 | 95 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0815 | 30 | 0. | .1 | 63.7 | 28 | FEB | 1630 | 63 | 3. | 1.0 | 66.0 | 1 | MAR | 0045 | 96 | 1. | 1.0 | 65.9 |
| | FEB | 0830 | 31 | 0. | .1 | 63.7 | 28 | FEB | 1645 | 64 | 2. | 1.0 | 66.0 | 1 | MAR | 0100 | 97 | 1. | 1.0 | 65.9 |
| 28 | FEB | 0845 | 32 | 0. | .1 | 63.7 | 28 | FEB | 1700 | 65 | 2. | 1.0 | 66.0 | | | | | | | |
| 28 | FEB | 0900 | 33 | 0. | .1 | 63.8 | 28 | FEB | 1715 | 66 | 2. | 1.0 | 66.0 | | | | | | | |

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| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 25. | 12.50 | | 6. | 2. | 2. | 2. |
| | | (INCHES) | 3.442 | 4.007 | 4.007 | 4.007 |
| | | (AC-FT) | 3. | 4. | 4. | 4. |

| PEAK STORAGE | TIME | MAXIMUM AVERAGE STORAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (AC-FT) | (HR) | | | | |
| 2. | 12.50 | 1. | 1. | 1. | 1. |

| PEAK STAGE | TIME | MAXIMUM AVERAGE STAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (FEET) | (HR) | | | | |
| 66.39 | 12.50 | 66.04 | 64.94 | 64.94 | 64.94 |

CUMULATIVE AREA = .02 SQ MI

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          *            *
192 KK    *    1617CH  *
          *            *
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193 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH COMMERCE WAY at 16P & 17P

             HYDROGRAPH ROUTING DATA

195 RS          STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        ELEV  TYPE OF INITIAL CONDITION
                     RSVRIC       59.10  INITIAL CONDITION
                          X         .00 WORKING R AND D COEFFICIENT

196 SA               AREA          .0        .0        .1        .1        .1

197 SE          ELEVATION       59.10     60.00     62.00     64.00     66.00

198 SL          LOW-LEVEL OUTLET
                      ELEVL       61.40  ELEVATION AT CENTER OF OUTLET
                      CAREA       12.57  CROSS-SECTIONAL AREA
                       COQL         .60  COEFFICIENT
                       EXPL         .50  EXPONENT OF HEAD

199 SS          SPILLWAY
                       CREL       65.90  SPILLWAY CREST ELEVATION
                      SPWID         .00  SPILLWAY WIDTH
                       COQW         .00  WEIR COEFFICIENT
                       EXPW        1.50  EXPONENT OF HEAD

                                                  ***

                                     COMPUTED STORAGE-ELEVATION DATA

          STORAGE        .00       .01       .11       .26       .48
        ELEVATION      59.10     60.00     62.00     64.00     66.00

                                     COMPUTED OUTFLOW-ELEVATION DATA

          OUTFLOW        .00       .00     82.66     87.08     92.01     97.53    103.75    110.82    118.93    128.31
        ELEVATION      59.10     61.40     63.27     63.47     63.71     64.00     64.34     64.76     65.27     65.90


                                   COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE        .00       .01       .07       .11       .20       .22       .24       .26       .30       .34
          OUTFLOW        .00       .00       .00     46.85     82.66     87.08     92.01     97.53    103.75    110.82
        ELEVATION      59.10     60.00     61.40     62.00     63.27     63.47     63.71     64.00     64.34     64.76

          STORAGE        .39       .47       .48
          OUTFLOW     118.93    128.31    129.73
        ELEVATION      65.27     65.90     66.00

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO      130.
                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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                                     HYDROGRAPH AT STATION   1617CH
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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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | FEB | 0100 | 1 | 0. | .0 | 59.1 | 28 | FEB | 0915 | 34 | 4. | .1 | 61.4 | 28 | FEB | 1730 | 67 | 216. | 1.2 | 72.1 |
| | FEB | 0115 | 2 | 0. | .0 | 59.1 | 28 | FEB | 0930 | 35 | 6. | .1 | 61.5 | 28 | FEB | 1745 | 68 | 217. | 1.2 | 72.2 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 59.1 | 28 | FEB | 0945 | 36 | 7. | .1 | 61.5 | 28 | FEB | 1800 | 69 | 218. | 1.2 | 72.2 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 59.1 | 28 | FEB | 1000 | 37 | 9. | .1 | 61.5 | 28 | FEB | 1815 | 70 | 219. | 1.2 | 72.3 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 59.1 | 28 | FEB | 1015 | 38 | 10. | .1 | 61.5 | 28 | FEB | 1830 | 71 | 219. | 1.3 | 72.3 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 59.1 | 28 | FEB | 1030 | 39 | 14. | .1 | 61.6 | 28 | FEB | 1845 | 72 | 219. | 1.3 | 72.3 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 59.1 | 28 | FEB | 1045 | 40 | 18. | .1 | 61.6 | 28 | FEB | 1900 | 73 | 219. | 1.2 | 72.3 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 59.1 | 28 | FEB | 1100 | 41 | 22. | .1 | 61.7 | 28 | FEB | 1915 | 74 | 218. | 1.2 | 72.2 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 59.1 | 28 | FEB | 1115 | 42 | 25. | .1 | 61.7 | 28 | FEB | 1930 | 75 | 217. | 1.2 | 72.2 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 59.1 | 28 | FEB | 1130 | 43 | 28. | .1 | 61.8 | 28 | FEB | 1945 | 76 | 216. | 1.2 | 72.1 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 59.1 | 28 | FEB | 1145 | 44 | 31. | .1 | 61.8 | 28 | FEB | 2000 | 77 | 214. | 1.2 | 71.9 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 59.1 | 28 | FEB | 1200 | 45 | 34. | .1 | 61.8 | 28 | FEB | 2015 | 78 | 212. | 1.2 | 71.8 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 59.1 | 28 | FEB | 1215 | 46 | 40. | .1 | 61.9 | 28 | FEB | 2030 | 79 | 209. | 1.2 | 71.6 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 59.1 | 28 | FEB | 1230 | 47 | 48. | .1 | 62.0 | 28 | FEB | 2045 | 80 | 205. | 1.1 | 71.3 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 59.1 | 28 | FEB | 1245 | 48 | 58. | .1 | 62.4 | 28 | FEB | 2100 | 81 | 200. | 1.1 | 70.9 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 59.1 | 28 | FEB | 1300 | 49 | 82. | .2 | 63.2 | 28 | FEB | 2115 | 82 | 193. | 1.0 | 70.4 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 59.1 | 28 | FEB | 1315 | 50 | 121. | .4 | 65.4 | 28 | FEB | 2130 | 83 | 185. | 1.0 | 69.9 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 59.1 | 28 | FEB | 1330 | 51 | 160. | .7 | 68.2 | 28 | FEB | 2145 | 84 | 177. | .9 | 69.4 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 59.1 | 28 | FEB | 1345 | 52 | 183. | .9 | 69.7 | 28 | FEB | 2200 | 85 | 170. | .8 | 68.8 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 59.1 | 28 | FEB | 1400 | 53 | 177. | .9 | 69.3 | 28 | FEB | 2215 | 86 | 163. | .8 | 68.3 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 59.1 | 28 | FEB | 1415 | 54 | 172. | .8 | 69.0 | 28 | FEB | 2230 | 87 | 156. | .7 | 67.9 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 59.1 | 28 | FEB | 1430 | 55 | 175. | .9 | 69.2 | 28 | FEB | 2245 | 88 | 150. | .7 | 67.5 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 59.1 | 28 | FEB | 1445 | 56 | 177. | .9 | 69.3 | 28 | FEB | 2300 | 89 | 146. | .6 | 67.1 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 60.1 | 28 | FEB | 1500 | 57 | 183. | .9 | 69.8 | 28 | FEB | 2315 | 90 | 142. | .6 | 66.8 |
| 28 | FEB | 0700 | 25 | 0. | .0 | 60.7 | 28 | FEB | 1515 | 58 | 188. | 1.0 | 70.1 | 28 | FEB | 2330 | 91 | 137. | .5 | 66.5 |
| 28 | FEB | 0715 | 26 | 0. | .1 | 61.4 | 28 | FEB | 1530 | 59 | 193. | 1.0 | 70.5 | 28 | FEB | 2345 | 92 | 132. | .5 | 66.1 |
| 28 | FEB | 0730 | 27 | 3. | .1 | 61.4 | 28 | FEB | 1545 | 60 | 198. | 1.1 | 70.8 | 1 | MAR | 0000 | 93 | 126. | .5 | 65.8 |
| 28 | FEB | 0745 | 28 | 1. | .1 | 61.4 | 28 | FEB | 1600 | 61 | 202. | 1.1 | 71.1 | 1 | MAR | 0015 | 94 | 121. | .4 | 65.4 |
| [illegible] | FEB | 0800 | 29 | 4. | .1 | 61.4 | 28 | FEB | 1615 | 62 | 205. | 1.1 | 71.3 | 1 | MAR | 0030 | 95 | 117. | .4 | 65.1 |
| | FEB | 0815 | 30 | 2. | .1 | 61.4 | 28 | FEB | 1630 | 63 | 208. | 1.2 | 71.5 | 1 | MAR | 0045 | 96 | 112. | .3 | 64.8 |
| 28 | FEB | 0830 | 31 | 4. | .1 | 61.5 | 28 | FEB | 1645 | 64 | 211. | 1.2 | 71.7 | 1 | MAR | 0100 | 97 | 108. | .3 | 64.6 |
| 28 | FEB | 0845 | 32 | 3. | .1 | 61.4 | 28 | FEB | 1700 | 65 | 213. | 1.2 | 71.8 | | | | | | | |
| 28 | FEB | 0900 | 33 | 4. | .1 | 61.5 | 28 | FEB | 1715 | 66 | 214. | 1.2 | 72.0 | | | | | | | |

| PEAK FLOW (CFS) | TIME (HR) | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| | | (CFS) | | | | |
| 219. | 17.75 | | 211. | 95. | 95. | 95. |
| | | (INCHES) | 1.338 | 2.419 | 2.419 | 2.419 |
| | | (AC-FT) | 104. | 189. | 189. | 189. |

| PEAK STORAGE (AC-FT) | TIME (HR) | MAXIMUM AVERAGE STORAGE 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| 1. | 17.50 | 1. | 0. | 0. | 0. |

| PEAK STAGE (FEET) | TIME (HR) | MAXIMUM AVERAGE STAGE 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| 72.30 | 17.75 | 71.70 | 65.04 | 65.04 | 65.04 |

CUMULATIVE AREA = 1.46 SQ MI

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              **************
              *            *
200 KK        *    11PCHL  *
              *            *
              **************

201 KO            OUTPUT CONTROL VARIABLES
                        IPRNT           1  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE
                                 STORAGE ROUTING THROUGH COMMERCE WAY AT 11P

                HYDROGRAPH ROUTING DATA

203 RS            STORAGE ROUTING
                        NSTPS           1  NUMBER OF SUBREACHES
                         ITYP        ELEV  TYPE OF INITIAL CONDITION
                       RSVRIC       57.80  INITIAL CONDITION
                            X         .00 WORKING R AND D COEFFICIENT

204 SA                 AREA          .0        .0        .1        .1        .1        .1

205 SE            ELEVATION       57.80     59.00     61.00     63.00     65.00     66.80

206 SL            LOW-LEVEL OUTLET
                        ELEVL       59.00  ELEVATION AT CENTER OF OUTLET
                        CAREA       12.57  CROSS-SECTIONAL AREA
                         COQL         .60  COEFFICIENT
                         EXPL         .50  EXPONENT OF HEAD

207 SS            SPILLWAY
                         CREL       66.70  SPILLWAY CREST ELEVATION
                        SPWID         .00  SPILLWAY WIDTH
                         COQW         .00  WEIR COEFFICIENT
                         EXPW        1.50  EXPONENT OF HEAD

                                                    ***

                                        COMPUTED STORAGE-ELEVATION DATA

              STORAGE        .00       .02       .13       .29       .48       .70
            ELEVATION      57.80     59.00     61.00     63.00     65.00     66.80

                                        COMPUTED OUTFLOW-ELEVATION DATA

              OUTFLOW        .00       .00     84.26     90.71     98.23    107.12    117.77    130.78    147.01    167.84
            ELEVATION      57.80     59.00     60.94     61.25     61.64     62.14     62.79     63.67     64.91     66.70


                                       COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

              STORAGE        .00       .02       .13       .13       .15       .18       .21       .27       .29       .35
              OUTFLOW        .00       .00     84.26     85.54     90.71     98.23    107.12    117.77    120.97    130.78
            ELEVATION      57.80     59.00     60.94     61.00     61.25     61.64     62.14     62.79     63.00     63.67

              STORAGE        .47       .48       .69       .70
              OUTFLOW     147.01    148.16    167.84    168.93
            ELEVATION      64.91     65.00     66.70     66.80

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO      168.
                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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                                        HYDROGRAPH AT STATION   11PCHL
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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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | FEB | 0100 | 1 | 0. | .0 | 57.8 | 28 | FEB | 0915 | 34 | 5. | .0 | 59.1 | 28 | FEB | 1730 | 67 | 215. | 1.2 | 71.0 |
| | FEB | 0115 | 2 | 0. | .0 | 57.8 | 28 | FEB | 0930 | 35 | 5. | .0 | 59.1 | 28 | FEB | 1745 | 68 | 216. | 1.3 | 71.2 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 57.8 | 28 | FEB | 0945 | 36 | 7. | .0 | 59.2 | 28 | FEB | 1800 | 69 | 217. | 1.3 | 71.3 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 57.8 | 28 | FEB | 1000 | 37 | 8. | .0 | 59.2 | 28 | FEB | 1815 | 70 | 218. | 1.3 | 71.3 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 57.8 | 28 | FEB | 1015 | 38 | 11. | .0 | 59.2 | 28 | FEB | 1830 | 71 | 219. | 1.3 | 71.4 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 57.8 | 28 | FEB | 1030 | 39 | 13. | .0 | 59.3 | 28 | FEB | 1845 | 72 | 219. | 1.3 | 71.4 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 57.8 | 28 | FEB | 1045 | 40 | 18. | .0 | 59.4 | 28 | FEB | 1900 | 73 | 219. | 1.3 | 71.4 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 57.8 | 28 | FEB | 1100 | 41 | 21. | .0 | 59.5 | 28 | FEB | 1915 | 74 | 219. | 1.3 | 71.4 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 57.8 | 28 | FEB | 1115 | 42 | 25. | .1 | 59.6 | 28 | FEB | 1930 | 75 | 218. | 1.3 | 71.3 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 57.8 | 28 | FEB | 1130 | 43 | 27. | .1 | 59.6 | 28 | FEB | 1945 | 76 | 217. | 1.3 | 71.2 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 57.8 | 28 | FEB | 1145 | 44 | 31. | .1 | 59.7 | 28 | FEB | 2000 | 77 | 215. | 1.2 | 71.0 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 57.8 | 28 | FEB | 1200 | 45 | 34. | .1 | 59.8 | 28 | FEB | 2015 | 78 | 213. | 1.2 | 70.9 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 57.8 | 28 | FEB | 1215 | 46 | 39. | .1 | 59.9 | 28 | FEB | 2030 | 79 | 211. | 1.2 | 70.6 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 57.8 | 28 | FEB | 1230 | 47 | 47. | .1 | 60.1 | 28 | FEB | 2045 | 80 | 207. | 1.1 | 70.3 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 57.8 | 28 | FEB | 1245 | 48 | 57. | .1 | 60.3 | 28 | FEB | 2100 | 81 | 203. | 1.1 | 69.9 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 57.8 | 28 | FEB | 1300 | 49 | 80. | .1 | 60.8 | 28 | FEB | 2115 | 82 | 197. | 1.0 | 69.4 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 57.8 | 28 | FEB | 1315 | 50 | 112. | .2 | 62.4 | 28 | FEB | 2130 | 83 | 189. | .9 | 68.7 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 57.8 | 28 | FEB | 1330 | 51 | 147. | .5 | 64.9 | 28 | FEB | 2145 | 84 | 182. | .8 | 68.0 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 57.8 | 28 | FEB | 1345 | 52 | 171. | .7 | 67.0 | 28 | FEB | 2200 | 85 | 174. | .8 | 67.3 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 57.8 | 28 | FEB | 1400 | 53 | 179. | .8 | 67.8 | 28 | FEB | 2215 | 86 | 167. | .7 | 66.6 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 57.8 | 28 | FEB | 1415 | 54 | 175. | .8 | 67.3 | 28 | FEB | 2230 | 87 | 160. | .6 | 66.0 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 57.8 | 28 | FEB | 1430 | 55 | 173. | .7 | 67.2 | 28 | FEB | 2245 | 88 | 153. | .5 | 65.5 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 57.8 | 28 | FEB | 1445 | 56 | 176. | .8 | 67.4 | 28 | FEB | 2300 | 89 | 148. | .5 | 65.0 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 57.8 | 28 | FEB | 1500 | 57 | 180. | .8 | 67.8 | 28 | FEB | 2315 | 90 | 143. | .4 | 64.6 |
| 28 | FEB | 0700 | 25 | 0. | .0 | 57.8 | 28 | FEB | 1515 | 58 | 185. | .9 | 68.3 | 28 | FEB | 2330 | 91 | 139. | .4 | 64.3 |
| 28 | FEB | 0715 | 26 | 0. | .0 | 58.0 | 28 | FEB | 1530 | 59 | 191. | 1.0 | 68.8 | 28 | FEB | 2345 | 92 | 134. | .4 | 63.9 |
| 28 | FEB | 0730 | 27 | 2. | .0 | 59.0 | 28 | FEB | 1545 | 60 | 195. | 1.0 | 69.2 | 1 | MAR | 0000 | 93 | 128. | .3 | 63.5 |
| 28 | FEB | 0745 | 28 | 3. | .0 | 59.1 | 28 | FEB | 1600 | 61 | 200. | 1.1 | 69.6 | 1 | MAR | 0015 | 94 | 123. | .3 | 63.1 |
| | FEB | 0800 | 29 | 2. | .0 | 59.0 | 28 | FEB | 1615 | 62 | 203. | 1.1 | 70.0 | 1 | MAR | 0030 | 95 | 118. | .3 | 62.8 |
| | FEB | 0815 | 30 | 3. | .0 | 59.1 | 28 | FEB | 1630 | 63 | 207. | 1.1 | 70.3 | 1 | MAR | 0045 | 96 | 113. | .2 | 62.5 |
| 28 | FEB | 0830 | 31 | 3. | .0 | 59.1 | 28 | FEB | 1645 | 64 | 209. | 1.2 | 70.5 | 1 | MAR | 0100 | 97 | 109. | .2 | 62.3 |
| 28 | FEB | 0845 | 32 | 4. | .0 | 59.1 | 28 | FEB | 1700 | 65 | 211. | 1.2 | 70.7 | | | | | | | |
| 28 | FEB | 0900 | 33 | 3. | .0 | 59.1 | 28 | FEB | 1715 | 66 | 213. | 1.2 | 70.9 | | | | | | | |

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 219. | 17.75 | | 210. | 95. | 95. | 95. |
| | | (INCHES) | 1.337 | 2.416 | 2.416 | 2.416 |
| | | (AC-FT) | 104. | 189. | 189. | 189. |

| PEAK STORAGE | TIME | MAXIMUM AVERAGE STORAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (AC-FT) | (HR) | | | | |
| 1. | 17.75 | 1. | 0. | 0. | 0. |

| PEAK STAGE | TIME | MAXIMUM AVERAGE STAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (FEET) | (HR) | | | | |
| 71.41 | 17.75 | 70.62 | 63.33 | 63.33 | 63.33 |

CUMULATIVE AREA = 1.46 SQ MI

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          **************
          *            *
208 KK    *      21P   *
          *            *
          **************

209 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

              SUBBASIN RUNOFF DATA

211 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .01  SUBBASIN AREA

                PRECIPITATION DATA

212 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                STORM AREA =     .01

213 LS          SCS LOSS RATE
                      STRTL         .74  INITIAL ABSTRACTION
                     CRVNBR       73.00  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

214 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .25  LAG

                                                        ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                   UNIT HYDROGRAPH
                                              7 END-OF-PERIOD ORDINATES
              14.       15.        5.        2.        1.        0.        0.

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

                                              HYDROGRAPH AT STATION      21P

*****************************************************************************************************************************
                                                          *
     DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q   *    DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q
                                                          *
     28 FEB 0100    1     .00     .00     .00        0.   *    28 FEB 1315   50    1.30     .43     .87       18.
     28 FEB 0115    2     .02     .02     .00        0.   *    28 FEB 1330   51     .34     .09     .25       18.
     28 FEB 0130    3     .02     .02     .00        0.   *    28 FEB 1345   52     .23     .06     .18       11.
     28 FEB 0145    4     .02     .02     .00        0.   *    28 FEB 1400   53     .19     .04     .15        8.
     28 FEB 0200    5     .02     .02     .00        0.   *    28 FEB 1415   54     .11     .02     .09        5.
     28 FEB 0215    6     .02     .02     .00        0.   *    28 FEB 1430   55     .10     .02     .08        4.
     28 FEB 0230    7     .02     .02     .00        0.   *    28 FEB 1445   56     .09     .02     .07        3.
     28 FEB 0245    8     .02     .02     .00        0.   *    28 FEB 1500   57     .09     .02     .07        3.
     28 FEB 0300    9     .02     .02     .00        0.   *    28 FEB 1515   58     .08     .02     .06        2.
     28 FEB 0315   10     .02     .02     .00        0.   *    28 FEB 1530   59     .07     .01     .06        2.
     28 FEB 0330   11     .02     .02     .00        0.   *    28 FEB 1545   60     .07     .01     .05        2.
     28 FEB 0345   12     .02     .02     .00        0.   *    28 FEB 1600   61     .06     .01     .05        2.
     28 FEB 0400   13     .02     .02     .00        0.   *    28 FEB 1615   62     .05     .01     .04        2.
     28 FEB 0415   14     .02     .02     .00        0.   *    28 FEB 1630   63     .05     .01     .04        2.
     28 FEB 0430   15     .02     .02     .00        0.   *    28 FEB 1645   64     .05     .01     .04        2.
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| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 FEB 1700 | 65 | .05 | .01 | .04 | 1. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 FEB 1715 | 66 | .04 | .01 | .04 | 1. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .01 | .03 | 1. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .01 | .03 | 1. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .01 | .03 | 1. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .01 | .03 | 1. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .01 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .01 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .01 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .02 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .02 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .04 | .00 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .04 | .00 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .04 | .00 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .04 | .00 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .04 | .00 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .04 | .00 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .04 | .00 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .04 | .00 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .04 | .00 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .05 | .01 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .05 | .01 | 0. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .05 | .01 | 0. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .06 | .01 | 0. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .06 | .02 | 0. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .06 | .02 | 1. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .06 | .02 | 1. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .06 | .03 | 1. | * | 1 MAR 0000 | 93 | .02 | .00 | .01 | 1. |
| 28 FEB 1200 | 45 | .10 | .07 | .03 | 1. | * | 1 MAR 0015 | 94 | .02 | .00 | .01 | 1. |
| 28 FEB 1215 | 46 | .17 | .11 | .06 | 2. | * | 1 MAR 0030 | 95 | .02 | .00 | .01 | 1. |
| 28 FEB 1230 | 47 | .21 | .12 | .09 | 2. | * | 1 MAR 0045 | 96 | .02 | .00 | .01 | 1. |
| 28 FEB 1245 | 48 | .27 | .14 | .13 | 3. | * | 1 MAR 0100 | 97 | .02 | .00 | .01 | 1. |
| 28 FEB 1300 | 49 | .59 | .26 | .32 | 7. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 3.01, TOTAL EXCESS = 3.59

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 18. | 12.50 | | 4. | 1. | 1. | 1. |
| | | (INCHES) | 2.877 | 3.572 | 3.572 | 3.572 |
| | | (AC-FT) | 2. | 3. | 3. | 3. |

CUMULATIVE AREA = .01 SQ MI

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

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              **************
              *            *
215 KK        *       22P  *
              *            *
              **************
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KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

SCS RUNOFF CALCULATION

SUBBASIN RUNOFF DATA

218 BA SUBBASIN CHARACTERISTICS

TAREA .00 SUBBASIN AREA

PRECIPITATION DATA

219 PH DEPTHS FOR 0-PERCENT HYPOTHETICAL STORM

| ..... HYDRO-35 ..... | | | ..... TP-40 ..... | | | | | ..... TP-49 ..... | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-MIN | 15-MIN | 60-MIN | 2-HR | 3-HR | 6-HR | 12-HR | 24-HR | 2-DAY | 4-DAY | 7-DAY | 10-DAY |
| .60 | 1.30 | 2.50 | 3.30 | 3.70 | 4.60 | 5.60 | 6.60 | .00 | .00 | .00 | .00 |

STORM AREA = .00

220 LS SCS LOSS RATE

STRTL .74 INITIAL ABSTRACTION

CRVNBR 73.00 CURVE NUMBER

RTIMP .00 PERCENT IMPERVIOUS AREA

221 UD SCS DIMENSIONLESS UNITGRAPH

TLAG .21 LAG

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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH

6 END-OF-PERIOD ORDINATES

5. 4. 1. 0. 0. 0.

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HYDROGRAPH AT STATION 22P

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| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | * | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | * | 28 FEB 1315 | 50 | 1.30 | .43 | .87 | 6. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | * | 28 FEB 1330 | 51 | .34 | .09 | .25 | 5. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | * | 28 FEB 1345 | 52 | .23 | .06 | .18 | 3. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | * | 28 FEB 1400 | 53 | .19 | .04 | .15 | 2. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | * | 28 FEB 1415 | 54 | .11 | .02 | .09 | 1. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | * | 28 FEB 1430 | 55 | .10 | .02 | .08 | 1. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | * | 28 FEB 1445 | 56 | .09 | .02 | .07 | 1. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | * | 28 FEB 1500 | 57 | .09 | .02 | .07 | 1. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | * | 28 FEB 1515 | 58 | .08 | .02 | .06 | 1. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | * | 28 FEB 1530 | 59 | .07 | .01 | .06 | 1. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | * | 28 FEB 1545 | 60 | .07 | .01 | .05 | 1. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | * | 28 FEB 1600 | 61 | .06 | .01 | .05 | 1. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | * | 28 FEB 1615 | 62 | .05 | .01 | .04 | 0. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | * | 28 FEB 1630 | 63 | .05 | .01 | .04 | 0. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | * | 28 FEB 1645 | 64 | .05 | .01 | .04 | 0. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 FEB 1700 | 65 | .05 | .01 | .04 | 0. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 FEB 1715 | 66 | .04 | .01 | .04 | 0. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .01 | .03 | 0. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .01 | .03 | 0. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .01 | .03 | 0. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .01 | .03 | 0. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .01 | .03 | 0. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .01 | .03 | 0. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .01 | .03 | 0. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .02 | 0. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .02 | 0. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 0. |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0745 | 28 | .04 | .04 | .00 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 0. |
| 28 FEB 0800 | 29 | .04 | .04 | .00 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 0. |
| 28 FEB 0815 | 30 | .04 | .04 | .00 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 0. |
| 28 FEB 0830 | 31 | .04 | .04 | .00 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 0. |
| 28 FEB 0845 | 32 | .04 | .04 | .00 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 0. |
| 28 FEB 0900 | 33 | .04 | .04 | .00 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 0. |
| 28 FEB 0915 | 34 | .04 | .04 | .00 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 0. |
| 28 FEB 0930 | 35 | .05 | .04 | .00 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .04 | .00 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .05 | .01 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .05 | .01 | 0. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .05 | .01 | 0. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |
| 28 FEB 1045 | 40 | .07 | .06 | .01 | 0. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 0. |
| 28 FEB 1100 | 41 | .07 | .06 | .02 | 0. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |
| 28 FEB 1115 | 42 | .08 | .06 | .02 | 0. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 0. |
| 28 FEB 1130 | 43 | .09 | .06 | .02 | 0. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 0. |
| 28 FEB 1145 | 44 | .09 | .06 | .03 | 0. | * | 1 MAR 0000 | 93 | .02 | .00 | .01 | 0. |
| 28 FEB 1200 | 45 | .10 | .07 | .03 | 0. | * | 1 MAR 0015 | 94 | .02 | .00 | .01 | 0. |
| 28 FEB 1215 | 46 | .17 | .11 | .06 | 0. | * | 1 MAR 0030 | 95 | .02 | .00 | .01 | 0. |
| 28 FEB 1230 | 47 | .21 | .12 | .09 | 1. | * | 1 MAR 0045 | 96 | .02 | .00 | .01 | 0. |
| 28 FEB 1245 | 48 | .27 | .14 | .13 | 1. | * | 1 MAR 0100 | 97 | .02 | .00 | .01 | 0. |
| 28 FEB 1300 | 49 | .59 | .26 | .32 | 2. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 3.01, TOTAL EXCESS = 3.59

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 6. | 12.25 | | 1. | 0. | 0. | 0. |
| | | (INCHES) | 2.878 | 3.575 | 3.575 | 3.575 |
| | | (AC-FT) | 1. | 1. | 1. | 1. |

CUMULATIVE AREA = .00 SQ MI

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            **************
            *            *
225 KK      *    21PCHL  *
            *            *
            **************

226 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH 21P CHANNEL

               HYDROGRAPH ROUTING DATA

228 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

229 RC          NORMAL DEPTH CHANNEL ROUTING
                        ANL       .080  LEFT OVERBANK N-VALUE
                       ANCH       .030  MAIN CHANNEL N-VALUE
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| | | |
|---|---|---|
| ANR | .080 | RIGHT OVERBANK N-VALUE |
| RLNTH | 900. | REACH LENGTH |
| SEL | .0020 | ENERGY SLOPE |
| ELMAX | 70.0 | MAX. ELEV. FOR STORAGE/OUTFLOW CALCULATION |

CROSS-SECTION DATA

| | | --- LEFT OVERBANK --- | | | + ------ MAIN CHANNEL | | | ------- + --- RIGHT OVERBANK --- | |
|---|---|---|---|---|---|---|---|---|---|
| 231 RY | ELEVATION | 71.00 | 70.50 | 70.00 | 67.00 | 67.00 | 70.00 | 70.50 | 71.00 |
| 230 RX | DISTANCE | .00 | 5.00 | 10.00 | 13.00 | 18.00 | 21.00 | 26.00 | 31.00 |

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COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .02 | .03 | .05 | .07 | .09 | .12 | .14 | .16 | .19 |
| OUTFLOW | .00 | .51 | 1.61 | 3.17 | 5.14 | 7.48 | 10.18 | 13.24 | 16.66 | 20.43 |
| ELEVATION | 67.00 | 67.16 | 67.32 | 67.47 | 67.63 | 67.79 | 67.95 | 68.11 | 68.26 | 68.42 |
| STORAGE | .21 | .24 | .27 | .30 | .33 | .36 | .39 | .43 | .46 | .50 |
| OUTFLOW | 24.55 | 29.03 | 33.87 | 39.08 | 44.66 | 50.61 | 56.94 | 63.66 | 70.78 | 78.29 |
| ELEVATION | 68.58 | 68.74 | 68.89 | 69.05 | 69.21 | 69.37 | 69.53 | 69.68 | 69.84 | 70.00 |

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 3. TO 78.
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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HYDROGRAPH AT STATION 21PCHL

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| DA MON HRMN | ORD | OUTFLOW | STORAGE | STAGE | * | DA MON HRMN | ORD | OUTFLOW | STORAGE | STAGE | * | DA MON HRMN | ORD | OUTFLOW | STORAGE | ST. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | .0 | 67.0 | * | 28 FEB 0915 | 34 | 0. | .0 | 67.0 | * | 28 FEB 1730 | 67 | 2. | .0 | 67.3 |
| 28 FEB 0115 | 2 | 0. | .0 | 67.0 | * | 28 FEB 0930 | 35 | 0. | .0 | 67.0 | * | 28 FEB 1745 | 68 | 2. | .0 | 67.3 |
| 28 FEB 0130 | 3 | 0. | .0 | 67.0 | * | 28 FEB 0945 | 36 | 0. | .0 | 67.0 | * | 28 FEB 1800 | 69 | 2. | .0 | 67.3 |
| 28 FEB 0145 | 4 | 0. | .0 | 67.0 | * | 28 FEB 1000 | 37 | 0. | .0 | 67.0 | * | 28 FEB 1815 | 70 | 2. | .0 | 67.3 |
| 28 FEB 0200 | 5 | 0. | .0 | 67.0 | * | 28 FEB 1015 | 38 | 0. | .0 | 67.1 | * | 28 FEB 1830 | 71 | 1. | .0 | 67.3 |
| 28 FEB 0215 | 6 | 0. | .0 | 67.0 | * | 28 FEB 1030 | 39 | 0. | .0 | 67.1 | * | 28 FEB 1845 | 72 | 1. | .0 | 67.3 |
| 28 FEB 0230 | 7 | 0. | .0 | 67.0 | * | 28 FEB 1045 | 40 | 0. | .0 | 67.1 | * | 28 FEB 1900 | 73 | 1. | .0 | 67.3 |
| 28 FEB 0245 | 8 | 0. | .0 | 67.0 | * | 28 FEB 1100 | 41 | 0. | .0 | 67.1 | * | 28 FEB 1915 | 74 | 1. | .0 | 67.3 |
| 28 FEB 0300 | 9 | 0. | .0 | 67.0 | * | 28 FEB 1115 | 42 | 1. | .0 | 67.2 | * | 28 FEB 1930 | 75 | 1. | .0 | 67.3 |
| 28 FEB 0315 | 10 | 0. | .0 | 67.0 | * | 28 FEB 1130 | 43 | 1. | .0 | 67.2 | * | 28 FEB 1945 | 76 | 1. | .0 | 67.2 |
| 28 FEB 0330 | 11 | 0. | .0 | 67.0 | * | 28 FEB 1145 | 44 | 1. | .0 | 67.2 | * | 28 FEB 2000 | 77 | 1. | .0 | 67.2 |
| 28 FEB 0345 | 12 | 0. | .0 | 67.0 | * | 28 FEB 1200 | 45 | 1. | .0 | 67.3 | * | 28 FEB 2015 | 78 | 1. | .0 | 67.2 |
| 28 FEB 0400 | 13 | 0. | .0 | 67.0 | * | 28 FEB 1215 | 46 | 2. | .0 | 67.3 | * | 28 FEB 2030 | 79 | 1. | .0 | 67.2 |
| 28 FEB 0415 | 14 | 0. | .0 | 67.0 | * | 28 FEB 1230 | 47 | 3. | .0 | 67.4 | * | 28 FEB 2045 | 80 | 1. | .0 | 67.2 |
| 28 FEB 0430 | 15 | 0. | .0 | 67.0 | * | 28 FEB 1245 | 48 | 4. | .1 | 67.5 | * | 28 FEB 2100 | 81 | 1. | .0 | 67.2 |
| 28 FEB 0445 | 16 | 0. | .0 | 67.0 | * | 28 FEB 1300 | 49 | 7. | .1 | 67.8 | * | 28 FEB 2115 | 82 | 1. | .0 | 67.2 |
| 28 FEB 0500 | 17 | 0. | .0 | 67.0 | * | 28 FEB 1315 | 50 | 18. | .2 | 68.3 | * | 28 FEB 2130 | 83 | 1. | .0 | 67.2 |
| 28 FEB 0515 | 18 | 0. | .0 | 67.0 | * | 28 FEB 1330 | 51 | 25. | .2 | 68.6 | * | 28 FEB 2145 | 84 | 1. | .0 | 67.2 |
| 28 FEB 0530 | 19 | 0. | .0 | 67.0 | * | 28 FEB 1345 | 52 | 17. | .2 | 68.3 | * | 28 FEB 2200 | 85 | 1. | .0 | 67.2 |
| 28 FEB 0545 | 20 | 0. | .0 | 67.0 | * | 28 FEB 1400 | 53 | 11. | .1 | 68.0 | * | 28 FEB 2215 | 86 | 1. | .0 | 67.2 |
| 28 FEB 0600 | 21 | 0. | .0 | 67.0 | * | 28 FEB 1415 | 54 | 8. | .1 | 67.8 | * | 28 FEB 2230 | 87 | 1. | .0 | 67.2 |
| 28 FEB 0615 | 22 | 0. | .0 | 67.0 | * | 28 FEB 1430 | 55 | 5. | .1 | 67.7 | * | 28 FEB 2245 | 88 | 1. | .0 | 67.2 |
| 28 FEB 0630 | 23 | 0. | .0 | 67.0 | * | 28 FEB 1445 | 56 | 4. | .1 | 67.6 | * | 28 FEB 2300 | 89 | 1. | .0 | 67.2 |
| 28 FEB 0645 | 24 | 0. | .0 | 67.0 | * | 28 FEB 1500 | 57 | 4. | .1 | 67.5 | * | 28 FEB 2315 | 90 | 1. | .0 | 67.2 |
| 28 FEB 0700 | 25 | 0. | .0 | 67.0 | * | 28 FEB 1515 | 58 | 3. | .1 | 67.5 | * | 28 FEB 2330 | 91 | 1. | .0 | 67.2 |
| 28 FEB 0715 | 26 | 0. | .0 | 67.0 | * | 28 FEB 1530 | 59 | 3. | .1 | 67.5 | * | 28 FEB 2345 | 92 | 1. | .0 | 67 |
| 28 FEB 0730 | 27 | 0. | .0 | 67.0 | * | 28 FEB 1545 | 60 | 3. | .0 | 67.4 | * | 1 MAR 0000 | 93 | 1. | .0 | 6 |
| 28 FEB 0745 | 28 | 0. | .0 | 67.0 | * | 28 FEB 1600 | 61 | 3. | .0 | 67.4 | * | 1 MAR 0015 | 94 | 1. | .0 | 67.2 |
| 28 FEB 0800 | 29 | 0. | .0 | 67.0 | * | 28 FEB 1615 | 62 | 2. | .0 | 67.4 | * | 1 MAR 0030 | 95 | 1. | .0 | 67.2 |
| 28 FEB 0815 | 30 | 0. | .0 | 67.0 | * | 28 FEB 1630 | 63 | 2. | .0 | 67.4 | * | 1 MAR 0045 | 96 | 1. | .0 | 67.2 |
| 28 FEB 0830 | 31 | 0. | .0 | 67.0 | * | 28 FEB 1645 | 64 | 2. | .0 | 67.4 | * | 1 MAR 0100 | 97 | 1. | .0 | 67.2 |

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 28 FEB 0845  32       0.       .0    67.0 * 28 FEB 1700  65       2.       .0    67.3 *
 28 FEB 0900  33       0.       .0    67.0 * 28 FEB 1715  66       2.       .0    67.3 *
                                           *                                           *
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    K FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                        6-HR       24-HR       72-HR     24.00-HR
+   (CFS)      (HR)
                            (CFS)
+      25.     12.50                      6.          2.          2.          2.
                         (INCHES)     2.874       3.553       3.553       3.553
                          (AC-FT)        3.          3.          3.          3.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                        6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)     (HR)
       0.     12.50                      0.          0.          0.          0.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                        6-HR       24-HR       72-HR     24.00-HR
+   (FEET)     (HR)
    68.58     12.50                    67.59       67.23       67.23       67.23

                          CUMULATIVE AREA =     .02 SQ MI



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            **************
            *            *
     KK     *       23P  *
            *            *
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 233 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                                SCS RUNOFF CALCULATION

               SUBBASIN RUNOFF DATA

 235 BA          SUBBASIN CHARACTERISTICS
                       TAREA         .03  SUBBASIN AREA

                 PRECIPITATION DATA

 236 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                 ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                 5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                   .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                     STORM AREA =     .03

 237 LS          SCS LOSS RATE
                       STRTL         .27  INITIAL ABSTRACTION
                      CRVNBR       88.00  CURVE NUMBER
                       RTIMP         .00  PERCENT IMPERVIOUS AREA

 238 UD          SCS DIMENSIONLESS UNITGRAPH
                        TLAG         .15  LAG

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WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
5 END-OF-PERIOD ORDINATES

55. 21. 5. 1. 0.

HYDROGRAPH AT STATION 23P

| DA | MON | HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA | MON | HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | .00 | .00 | .00 | 0. | 28 | FEB | 1315 | 50 | 1.30 | .12 | 1.18 | 77. |
| 28 | FEB | 0115 | 2 | .02 | .02 | .00 | 0. | 28 | FEB | 1330 | 51 | .34 | .02 | .32 | 45. |
| 28 | FEB | 0130 | 3 | .02 | .02 | .00 | 0. | 28 | FEB | 1345 | 52 | .23 | .01 | .22 | 25. |
| 28 | FEB | 0145 | 4 | .02 | .02 | .00 | 0. | 28 | FEB | 1400 | 53 | .19 | .01 | .18 | 17. |
| 28 | FEB | 0200 | 5 | .02 | .02 | .00 | 0. | 28 | FEB | 1415 | 54 | .11 | .01 | .11 | 11. |
| 28 | FEB | 0215 | 6 | .02 | .02 | .00 | 0. | 28 | FEB | 1430 | 55 | .10 | .00 | .09 | 8. |
| 28 | FEB | 0230 | 7 | .02 | .02 | .00 | 0. | 28 | FEB | 1445 | 56 | .09 | .00 | .09 | 8. |
| 28 | FEB | 0245 | 8 | .02 | .02 | .00 | 0. | 28 | FEB | 1500 | 57 | .09 | .00 | .08 | 7. |
| 28 | FEB | 0300 | 9 | .02 | .02 | .00 | 0. | 28 | FEB | 1515 | 58 | .08 | .00 | .07 | 6. |
| 28 | FEB | 0315 | 10 | .02 | .02 | .00 | 0. | 28 | FEB | 1530 | 59 | .07 | .00 | .07 | 6. |
| 28 | FEB | 0330 | 11 | .02 | .02 | .00 | 0. | 28 | FEB | 1545 | 60 | .07 | .00 | .06 | 5. |
| 28 | FEB | 0345 | 12 | .02 | .02 | .00 | 0. | 28 | FEB | 1600 | 61 | .06 | .00 | .06 | 5. |
| 28 | FEB | 0400 | 13 | .02 | .02 | .00 | 0. | 28 | FEB | 1615 | 62 | .05 | .00 | .05 | 5. |
| 28 | FEB | 0415 | 14 | .02 | .02 | .00 | 0. | 28 | FEB | 1630 | 63 | .05 | .00 | .05 | 4. |
| 28 | FEB | 0430 | 15 | .02 | .02 | .00 | 0. | 28 | FEB | 1645 | 64 | .05 | .00 | .05 | 4. |
| 28 | FEB | 0445 | 16 | .02 | .02 | .00 | 0. | 28 | FEB | 1700 | 65 | .05 | .00 | .04 | 4. |
| 28 | FEB | 0500 | 17 | .02 | .02 | .00 | 0. | 28 | FEB | 1715 | 66 | .04 | .00 | .04 | 4. |
| 28 | FEB | 0515 | 18 | .02 | .02 | .00 | 0. | 28 | FEB | 1730 | 67 | .04 | .00 | .04 | 3. |
| 28 | FEB | 0530 | 19 | .02 | .02 | .00 | 0. | 28 | FEB | 1745 | 68 | .04 | .00 | .04 | 3. |
| 28 | FEB | 0545 | 20 | .02 | .02 | .00 | 0. | 28 | FEB | 1800 | 69 | .04 | .00 | .04 | 3. |
| 28 | FEB | 0600 | 21 | .02 | .02 | .00 | 0. | 28 | FEB | 1815 | 70 | .04 | .00 | .04 | 3. |
| 28 | FEB | 0615 | 22 | .02 | .02 | .00 | 0. | 28 | FEB | 1830 | 71 | .04 | .00 | .03 | 3. |
| 28 | FEB | 0630 | 23 | .03 | .02 | .01 | 0. | 28 | FEB | 1845 | 72 | .03 | .00 | .03 | 3. |
| 28 | FEB | 0645 | 24 | .03 | .02 | .01 | 0. | 28 | FEB | 1900 | 73 | .03 | .00 | .03 | 3. |
| 28 | FEB | 0700 | 25 | .03 | .02 | .01 | 1. | 28 | FEB | 1915 | 74 | .03 | .00 | .03 | 2. |
| 28 | FEB | 0715 | 26 | .03 | .02 | .01 | 1. | 28 | FEB | 1930 | 75 | .03 | .00 | .03 | 2. |
| 28 | FEB | 0730 | 27 | .03 | .02 | .01 | 1. | 28 | FEB | 1945 | 76 | .03 | .00 | .02 | 2. |
| 28 | FEB | 0745 | 28 | .04 | .02 | .01 | 1. | 28 | FEB | 2000 | 77 | .03 | .00 | .02 | 2. |
| 28 | FEB | 0800 | 29 | .04 | .02 | .01 | 1. | 28 | FEB | 2015 | 78 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0815 | 30 | .04 | .02 | .01 | 1. | 28 | FEB | 2030 | 79 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0830 | 31 | .04 | .02 | .02 | 1. | 28 | FEB | 2045 | 80 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0845 | 32 | .04 | .02 | .02 | 1. | 28 | FEB | 2100 | 81 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0900 | 33 | .04 | .02 | .02 | 2. | 28 | FEB | 2115 | 82 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0915 | 34 | .04 | .02 | .02 | 2. | 28 | FEB | 2130 | 83 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0930 | 35 | .05 | .02 | .02 | 2. | 28 | FEB | 2145 | 84 | .02 | .00 | .02 | 2. |
| 28 | FEB | 0945 | 36 | .05 | .02 | .03 | 2. | 28 | FEB | 2200 | 85 | .02 | .00 | .02 | 2. |
| 28 | FEB | 1000 | 37 | .05 | .02 | .03 | 2. | 28 | FEB | 2215 | 86 | .02 | .00 | .02 | 2. |
| 28 | FEB | 1015 | 38 | .06 | .03 | .04 | 3. | 28 | FEB | 2230 | 87 | .02 | .00 | .02 | 2. |
| 28 | FEB | 1030 | 39 | .06 | .03 | .04 | 3. | 28 | FEB | 2245 | 88 | .02 | .00 | .02 | 2. |
| 28 | FEB | 1045 | 40 | .07 | .03 | .04 | 3. | 28 | FEB | 2300 | 89 | .02 | .00 | .02 | 2. |
| 28 | FEB | 1100 | 41 | .07 | .03 | .05 | 4. | 28 | FEB | 2315 | 90 | .02 | .00 | .02 | 2. |
| 28 | FEB | 1115 | 42 | .08 | .03 | .05 | 4. | 28 | FEB | 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 | FEB | 1130 | 43 | .09 | .03 | .06 | 5. | 28 | FEB | 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 | FEB | 1145 | 44 | .09 | .03 | .06 | 5. | 1 | MAR | 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 | FEB | 1200 | 45 | .10 | .03 | .08 | 6. | 1 | MAR | 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 | FEB | 1215 | 46 | .17 | .04 | .13 | 9. | 1 | MAR | 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 | FEB | 1230 | 47 | .21 | .04 | .16 | 12. | 1 | MAR | 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 | FEB | 1245 | 48 | .28 | .05 | .23 | 17. | 1 | MAR | 0100 | 97 | .02 | .00 | .02 | 1. |
| 28 | FEB | 1300 | 49 | .59 | .08 | .51 | 34. | | | | | | | | |

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   TOTAL RAINFALL =    6.60, TOTAL LOSS =    1.39, TOTAL EXCESS =    5.21

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
   CFS)       (HR)
                          (CFS)
+     77.     12.25                   14.          4.          4.          4.
                        (INCHES)     4.010       5.190       5.190       5.190
                         (AC-FT)       7.          9.          9.          9.

                         CUMULATIVE AREA =     .03 SQ MI


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


            **************
            *            *
 239 KK     *       18P  *
            *            *
            **************

 240 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                                SCS RUNOFF CALCULATION

               SUBBASIN RUNOFF DATA

     BA          SUBBASIN CHARACTERISTICS
                       TAREA         .01  SUBBASIN AREA

                 PRECIPITATION DATA

 243 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                 ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                 5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                   .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                STORM AREA =     .01

 244 LS          SCS LOSS RATE
                       STRTL         .11  INITIAL ABSTRACTION
                      CRVNBR       95.00  CURVE NUMBER
                       RTIMP         .00  PERCENT IMPERVIOUS AREA

 245 UD          SCS DIMENSIONLESS UNITGRAPH
                        TLAG         .06  LAG

                                                          ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                     UNIT HYDROGRAPH
                                                 5 END-OF-PERIOD ORDINATES
               21.        6.        1.        0.        0.

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                                                HYDROGRAPH AT STATION      18P

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| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | 28 FEB 1315 | 50 | 1.30 | .02 | 1.28 | 31. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | 28 FEB 1330 | 51 | .34 | .00 | .33 | 15. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | 28 FEB 1345 | 52 | .23 | .00 | .23 | 8. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | 28 FEB 1400 | 53 | .19 | .00 | .19 | 6. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | 28 FEB 1415 | 54 | .11 | .00 | .11 | 4. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | 28 FEB 1430 | 55 | .10 | .00 | .09 | 3. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | 28 FEB 1445 | 56 | .09 | .00 | .09 | 3. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | 28 FEB 1500 | 57 | .09 | .00 | .08 | 2. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | 28 FEB 1515 | 58 | .08 | .00 | .08 | 2. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | 28 FEB 1530 | 59 | .07 | .00 | .07 | 2. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | 28 FEB 1545 | 60 | .07 | .00 | .07 | 2. |
| 28 FEB 0345 | 12 | .02 | .01 | .00 | 0. | 28 FEB 1600 | 61 | .06 | .00 | .06 | 2. |
| 28 FEB 0400 | 13 | .02 | .01 | .01 | 0. | 28 FEB 1615 | 62 | .05 | .00 | .05 | 2. |
| 28 FEB 0415 | 14 | .02 | .01 | .01 | 0. | 28 FEB 1630 | 63 | .05 | .00 | .05 | 1. |
| 28 FEB 0430 | 15 | .02 | .01 | .01 | 0. | 28 FEB 1645 | 64 | .05 | .00 | .05 | 1. |
| 28 FEB 0445 | 16 | .02 | .01 | .01 | 0. | 28 FEB 1700 | 65 | .05 | .00 | .05 | 1. |
| 28 FEB 0500 | 17 | .02 | .01 | .01 | 0. | 28 FEB 1715 | 66 | .04 | .00 | .04 | 1. |
| 28 FEB 0515 | 18 | .02 | .01 | .01 | 0. | 28 FEB 1730 | 67 | .04 | .00 | .04 | 1. |
| 28 FEB 0530 | 19 | .02 | .01 | .01 | 0. | 28 FEB 1745 | 68 | .04 | .00 | .04 | 1. |
| 28 FEB 0545 | 20 | .02 | .01 | .01 | 0. | 28 FEB 1800 | 69 | .04 | .00 | .04 | 1. |
| 28 FEB 0600 | 21 | .02 | .01 | .01 | 0. | 28 FEB 1815 | 70 | .04 | .00 | .04 | 1. |
| 28 FEB 0615 | 22 | .02 | .01 | .01 | 0. | 28 FEB 1830 | 71 | .04 | .00 | .04 | 1. |
| 28 FEB 0630 | 23 | .03 | .01 | .02 | 0. | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .01 | .02 | 0. | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .01 | .02 | 0. | 28 FEB 1915 | 74 | .03 | .00 | .03 | 1. |
| 28 FEB 0715 | 26 | .03 | .01 | .02 | 1. | 28 FEB 1930 | 75 | .03 | .00 | .03 | 1. |
| 28 FEB 0730 | 27 | .03 | .01 | .02 | 1. | 28 FEB 1945 | 76 | .03 | .00 | .03 | 1. |
| 28 FEB 0745 | 28 | .04 | .01 | .03 | 1. | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .01 | .03 | 1. | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .01 | .03 | 1. | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .01 | .03 | 1. | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .01 | .03 | 1. | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .01 | .03 | 1. | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .01 | .04 | 1. | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .01 | .04 | 1. | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .01 | .04 | 1. | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .01 | .04 | 1. | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .01 | .05 | 1. | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .01 | .06 | 2. | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .01 | .06 | 2. | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .01 | .07 | 2. | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .01 | .07 | 2. | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .01 | .08 | 2. | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .01 | .08 | 2. | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .01 | .10 | 3. | 1 MAR 0015 | 94 | .02 | .00 | .02 | 0. |
| 28 FEB 1215 | 46 | .17 | .01 | .16 | 4. | 1 MAR 0030 | 95 | .02 | .00 | .02 | 0. |
| 28 FEB 1230 | 47 | .21 | .01 | .20 | 5. | 1 MAR 0045 | 96 | .02 | .00 | .02 | 0. |
| 28 FEB 1245 | 48 | .27 | .01 | .26 | 7. | 1 MAR 0100 | 97 | .02 | .00 | .02 | 0. |
| 28 FEB 1300 | 49 | .59 | .02 | .57 | 14. | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = .59, TOTAL EXCESS = 6.01

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 31. | 12.25 | | 5. | 2. | 2. | 2. |
| | | (INCHES) | 4.447 | 5.994 | 5.994 | 5.994 |
| | | (AC-FT) | 3. | 4. | 4. | 4. |

CUMULATIVE AREA = .01 SQ MI

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          *            *
249 KK    *     8CSWP  *
          *            *
          **************

250 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               DIRECT INPUT HYDROGRAPH FROM READING, UNDER RTE 93

  6 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN          15  TIME INTERVAL IN MINUTES
                     JXDATE     28FEB91  STARTING DATE
                     JXTIME         100  STARTING TIME

             SUBBASIN RUNOFF DATA

252 BA          SUBBASIN CHARACTERISTICS
                      TAREA        1.43  SUBBASIN AREA
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HYDROGRAPH AT STATION 8CSWP

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| DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | 28 FEB 0715 | 26 | 11. | 28 FEB 1330 | 51 | 449. | 28 FEB 1945 | 76 | 223. |
| 28 FEB 0115 | 2 | 0. | 28 FEB 0730 | 27 | 11. | 28 FEB 1345 | 52 | 549. | 28 FEB 2000 | 77 | 213. |
| 28 FEB 0130 | 3 | 0. | 28 FEB 0745 | 28 | 11. | 28 FEB 1400 | 53 | 572. | 28 FEB 2015 | 78 | 203. |
| 28 FEB 0145 | 4 | 0. | 28 FEB 0800 | 29 | 11. | 28 FEB 1415 | 54 | 547. | 28 FEB 2030 | 79 | 194. |
| 28 FEB 0200 | 5 | 0. | 28 FEB 0815 | 30 | 11. | 28 FEB 1430 | 55 | 502. | 28 FEB 2045 | 80 | 184. |
| 28 FEB 0215 | 6 | 0. | 28 FEB 0830 | 31 | 11. | 28 FEB 1445 | 56 | 453. | 28 FEB 2100 | 81 | 169. |
| 28 FEB 0230 | 7 | 0. | 28 FEB 0845 | 32 | 11. | 28 FEB 1500 | 57 | 411. | 28 FEB 2115 | 82 | 148. |
| 28 FEB 0245 | 8 | 0. | 28 FEB 0900 | 33 | 12. | 28 FEB 1515 | 58 | 379. | 28 FEB 2130 | 83 | 131. |
| 28 FEB 0300 | 9 | 1. | 28 FEB 0915 | 34 | 13. | 28 FEB 1530 | 59 | 358. | 28 FEB 2145 | 84 | 119. |
| 28 FEB 0315 | 10 | 3. | 28 FEB 0930 | 35 | 15. | 28 FEB 1545 | 60 | 343. | 28 FEB 2200 | 85 | 110. |
| 28 FEB 0330 | 11 | 4. | 28 FEB 0945 | 36 | 17. | 28 FEB 1600 | 61 | 331. | 28 FEB 2215 | 86 | 102. |
| 28 FEB 0345 | 12 | 6. | 28 FEB 1000 | 37 | 20. | 28 FEB 1615 | 62 | 323. | 28 FEB 2230 | 87 | 97. |
| 28 FEB 0400 | 13 | 7. | 28 FEB 1015 | 38 | 23. | 28 FEB 1630 | 63 | 316. | 28 FEB 2245 | 88 | 92. |
| 28 FEB 0415 | 14 | 8. | 28 FEB 1030 | 39 | 27. | 28 FEB 1645 | 64 | 309. | 28 FEB 2300 | 89 | 89. |
| 28 FEB 0430 | 15 | 9. | 28 FEB 1045 | 40 | 32. | 28 FEB 1700 | 65 | 303. | 28 FEB 2315 | 90 | 86. |
| 28 FEB 0445 | 16 | 10. | 28 FEB 1100 | 41 | 38. | 28 FEB 1715 | 66 | 298. | 28 FEB 2330 | 91 | 84. |
| 28 FEB 0500 | 17 | 10. | 28 FEB 1115 | 42 | 44. | 28 FEB 1730 | 67 | 293. | 28 FEB 2345 | 92 | 83. |
| 28 FEB 0515 | 18 | 10. | 28 FEB 1130 | 43 | 52. | 28 FEB 1745 | 68 | 287. | 1 MAR 0000 | 93 | 81. |
| 28 FEB 0530 | 19 | 10. | 28 FEB 1145 | 44 | 61. | 28 FEB 1800 | 69 | 282. | 1 MAR 0015 | 94 | 80. |
| 28 FEB 0545 | 20 | 10. | 28 FEB 1200 | 45 | 70. | 28 FEB 1815 | 70 | 276. | 1 MAR 0030 | 95 | 79. |
| 28 FEB 0600 | 21 | 11. | 28 FEB 1215 | 46 | 82. | 28 FEB 1830 | 71 | 269. | 1 MAR 0045 | 96 | 78. |
| 28 FEB 0615 | 22 | 11. | 28 FEB 1230 | 47 | 102. | 28 FEB 1845 | 72 | 261. | 1 MAR 0100 | 97 | 77. |
| 3 FEB 0630 | 23 | 11. | 28 FEB 1245 | 48 | 132. | 28 FEB 1900 | 73 | 252. | | | |
| 28 FEB 0645 | 24 | 11. | 28 FEB 1300 | 49 | 186. | 28 FEB 1915 | 74 | 243. | | | |
| 28 FEB 0700 | 25 | 11. | 28 FEB 1315 | 50 | 300. | 28 FEB 1930 | 75 | 233. | | | |

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 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR     24.00-HR
+  (CFS)       (HR)
                          (CFS)
+    572.     13.00                360.        135.        135.        135.
                        (INCHES)   2.339       3.513       3.513       3.513
                         (AC-FT)   178.        268.        268.        268.

                        CUMULATIVE AREA =    1.43 SQ MI
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          *            *
266 KK    *     PHPND  *
          *            *
          **************

267 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH PHILLIPS POND

             HYDROGRAPH ROUTING DATA

269 RS          STORAGE ROUTING
                      NSTPS          1  NUMBER OF SUBREACHES
                       ITYP       ELEV  TYPE OF INITIAL CONDITION
                     RSVRIC      57.00  INITIAL CONDITION
                          X        .00 WORKING R AND D COEFFICIENT

270 SA               AREA        3.9      4.8      5.5      7.5      8.8     11.9

271 SE          ELEVATION      57.00    59.50    60.60    62.00    64.00    66.00

272 SL          LOW-LEVEL OUTLET
                      ELEVL      57.50  ELEVATION AT CENTER OF OUTLET
                      CAREA      14.14  CROSS-SECTIONAL AREA
                       COQL        .60  COEFFICIENT
                       EXPL        .50  EXPONENT OF HEAD

273 SS          SPILLWAY
                       CREL      65.90  SPILLWAY CREST ELEVATION
                      SPWID      40.00  SPILLWAY WIDTH
                       COQW       3.00  WEIR COEFFICIENT
                       EXPW       1.50  EXPONENT OF HEAD

                                                  ***

                                        COMPUTED STORAGE-ELEVATION DATA

          STORAGE        .00     10.91     16.59     25.69     42.01     62.64
        ELEVATION      57.00     59.50     60.60     62.00     64.00     66.00

                                        COMPUTED OUTFLOW-ELEVATION DATA

          OUTFLOW        .00       .00     97.70    105.29    114.15    124.65    137.28    152.75    172.15    197.20
        ELEVATION      57.00     57.50     59.56     59.89     60.31     60.86     61.57     62.54     63.90     65.90

          OUTFLOW     197.39    197.54    197.77    198.07    198.46    198.96    199.56    200.29    201.16    202.17
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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ELEVATION | 65.91 | 65.91 | 65.92 | 65.93 | 65.94 | 65.95 | 65.96 | 65.97 | 65.98 | 66.00 |

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | 2.00 | 10.91 | 11.21 | 12.86 | 15.05 | 16.59 | 18.05 | 22.60 | 25.69 |
| OUTFLOW | .00 | .00 | 96.23 | 97.70 | 105.29 | 114.15 | 119.80 | 124.65 | 137.28 | 144.34 |
| ELEVATION | 57.00 | 57.50 | 59.50 | 59.56 | 59.89 | 60.31 | 60.60 | 60.86 | 61.57 | 62.00 |
| STORAGE | 29.84 | 41.15 | 42.01 | 61.45 | 61.61 | 61.78 | 62.00 | 62.14 | 62.29 | 62.45 |
| OUTFLOW | 152.75 | 172.15 | 173.47 | 197.20 | 197.54 | 198.07 | 198.96 | 199.56 | 200.29 | 201.16 |
| ELEVATION | 62.54 | 63.90 | 64.00 | 65.90 | 65.91 | 65.93 | 65.95 | 65.96 | 65.97 | 65.98 |
| STORAGE | 62.64 | | | | | | | | | |
| OUTFLOW | 202.17 | | | | | | | | | |
| ELEVATION | 66.00 | | | | | | | | | |

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HYDROGRAPH AT STATION PHPND

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| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 57.0 | 28 | FEB | 0915 | 34 | 15. | 3.4 | 57.8 | 28 | FEB | 1730 | 67 | 479. | 112.1 | 70.2 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 57.0 | 28 | FEB | 0930 | 35 | 17. | 3.5 | 57.8 | 28 | FEB | 1745 | 68 | 482. | 112.8 | 70.2 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 57.0 | 28 | FEB | 0945 | 36 | 18. | 3.7 | 57.9 | 28 | FEB | 1800 | 69 | 485. | 113.2 | 70.3 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 57.0 | 28 | FEB | 1000 | 37 | 21. | 3.9 | 57.9 | 28 | FEB | 1815 | 70 | 487. | 113.6 | 70.3 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 57.0 | 28 | FEB | 1015 | 38 | 24. | 4.2 | 58.0 | 28 | FEB | 1830 | 71 | 488. | 113.8 | 70.3 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 57.0 | 28 | FEB | 1030 | 39 | 27. | 4.5 | 58.1 | 28 | FEB | 1845 | 72 | 488. | 113.8 | 70.3 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 57.0 | 28 | FEB | 1045 | 40 | 32. | 4.9 | 58.2 | 28 | FEB | 1900 | 73 | 487. | 113.7 | 70.3 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 57.0 | 28 | FEB | 1100 | 41 | 38. | 5.5 | 58.3 | 28 | FEB | 1915 | 74 | 485. | 113.3 | 70.3 |
| | FEB | 0300 | 9 | 0. | .0 | 57.0 | 28 | FEB | 1115 | 42 | 44. | 6.1 | 58.4 | 28 | FEB | 1930 | 75 | 483. | 112.9 | 70.2 |
| | FEB | 0315 | 10 | 0. | .1 | 57.0 | 28 | FEB | 1130 | 43 | 52. | 6.8 | 58.6 | 28 | FEB | 1945 | 76 | 479. | 112.2 | 70.2 |
| 28 | FEB | 0330 | 11 | 0. | .1 | 57.0 | 28 | FEB | 1145 | 44 | 60. | 7.6 | 58.8 | 28 | FEB | 2000 | 77 | 475. | 111.4 | 70.1 |
| 28 | FEB | 0345 | 12 | 0. | .2 | 57.1 | 28 | FEB | 1200 | 45 | 70. | 8.4 | 58.9 | 28 | FEB | 2015 | 78 | 469. | 110.4 | 70.0 |
| 28 | FEB | 0400 | 13 | 0. | .4 | 57.1 | 28 | FEB | 1215 | 46 | 81. | 9.5 | 59.2 | 28 | FEB | 2030 | 79 | 463. | 109.4 | 69.9 |
| 28 | FEB | 0415 | 14 | 0. | .5 | 57.1 | 28 | FEB | 1230 | 47 | 95. | 10.8 | 59.5 | 28 | FEB | 2045 | 80 | 456. | 108.2 | 69.8 |
| 28 | FEB | 0430 | 15 | 0. | .7 | 57.2 | 28 | FEB | 1245 | 48 | 105. | 12.7 | 59.9 | 28 | FEB | 2100 | 81 | 449. | 106.8 | 69.7 |
| 28 | FEB | 0445 | 16 | 0. | .9 | 57.2 | 28 | FEB | 1300 | 49 | 118. | 16.0 | 60.5 | 28 | FEB | 2115 | 82 | 439. | 105.1 | 69.6 |
| 28 | FEB | 0500 | 17 | 0. | 1.1 | 57.3 | 28 | FEB | 1315 | 50 | 136. | 22.2 | 61.5 | 28 | FEB | 2130 | 83 | 428. | 103.0 | 69.4 |
| 28 | FEB | 0515 | 18 | 0. | 1.3 | 57.3 | 28 | FEB | 1330 | 51 | 156. | 31.8 | 62.8 | 28 | FEB | 2145 | 84 | 415. | 100.8 | 69.2 |
| 28 | FEB | 0530 | 19 | 0. | 1.6 | 57.4 | 28 | FEB | 1345 | 52 | 175. | 43.4 | 64.1 | 28 | FEB | 2200 | 85 | 402. | 98.5 | 69.0 |
| 28 | FEB | 0545 | 20 | 0. | 1.8 | 57.4 | 28 | FEB | 1400 | 53 | 190. | 55.7 | 65.3 | 28 | FEB | 2215 | 86 | 389. | 96.1 | 68.8 |
| 28 | FEB | 0600 | 21 | 0. | 2.0 | 57.5 | 28 | FEB | 1415 | 54 | 228. | 67.2 | 66.4 | 28 | FEB | 2230 | 87 | 376. | 93.7 | 68.6 |
| 28 | FEB | 0615 | 22 | 2. | 2.2 | 57.5 | 28 | FEB | 1430 | 55 | 281. | 76.8 | 67.2 | 28 | FEB | 2245 | 88 | 362. | 91.3 | 68.4 |
| 28 | FEB | 0630 | 23 | 4. | 2.4 | 57.6 | 28 | FEB | 1445 | 56 | 323. | 84.3 | 67.8 | 28 | FEB | 2300 | 89 | 349. | 89.0 | 68.2 |
| 28 | FEB | 0645 | 24 | 6. | 2.5 | 57.6 | 28 | FEB | 1500 | 57 | 356. | 90.2 | 68.3 | 28 | FEB | 2315 | 90 | 337. | 86.8 | 68.0 |
| 28 | FEB | 0700 | 25 | 7. | 2.6 | 57.6 | 28 | FEB | 1515 | 58 | 382. | 94.8 | 68.7 | 28 | FEB | 2330 | 91 | 325. | 84.7 | 67.9 |
| 28 | FEB | 0715 | 26 | 8. | 2.7 | 57.7 | 28 | FEB | 1530 | 59 | 402. | 98.4 | 69.0 | 28 | FEB | 2345 | 92 | 314. | 82.6 | 67.7 |
| 28 | FEB | 0730 | 27 | 9. | 2.8 | 57.7 | 28 | FEB | 1545 | 60 | 419. | 101.4 | 69.3 | 1 | MAR | 0000 | 93 | 303. | 80.7 | 67.5 |
| 28 | FEB | 0745 | 28 | 10. | 2.9 | 57.7 | 28 | FEB | 1600 | 61 | 432. | 103.8 | 69.5 | 1 | MAR | 0015 | 94 | 293. | 78.9 | 67.4 |
| 28 | FEB | 0800 | 29 | 11. | 3.0 | 57.7 | 28 | FEB | 1615 | 62 | 444. | 105.9 | 69.6 | 1 | MAR | 0030 | 95 | 283. | 77.1 | 67.2 |
| 28 | FEB | 0815 | 30 | 12. | 3.1 | 57.8 | 28 | FEB | 1630 | 63 | 453. | 107.6 | 69.8 | 1 | MAR | 0045 | 96 | 274. | 75.4 | 67.1 |
| 28 | FEB | 0830 | 31 | 13. | 3.2 | 57.8 | 28 | FEB | 1645 | 64 | 462. | 109.1 | 69.9 | 1 | MAR | 0100 | 97 | 265. | 73.8 | 66.9 |
| 28 | FEB | 0845 | 32 | 14. | 3.3 | 57.8 | 28 | FEB | 1700 | 65 | 468. | 110.3 | 70.0 | | | | | | | |
| 28 | FEB | 0900 | 33 | 14. | 3.3 | 57.8 | 28 | FEB | 1715 | 66 | 474. | 111.3 | 70.1 | | | | | | | |

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| < FLOW (CFS) | TIME (HR) | MAXIMUM AVERAGE FLOW (CFS) 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| 488. | 17.75 | 466. | 201. | 201. | 201. |

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                    (INCHES)     1.465       2.529       2.529       2.529
                     (AC-FT)     231.         398.        398.        398.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                   6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
     114.     17.75                110.         48.         48.         48.

  PEAK STAGE    TIME                         MAXIMUM AVERAGE STAGE
                                   6-HR       24-HR       72-HR     24.00-HR
+   (FEET)      (HR)
    70.31     17.75               69.97       63.13       63.13       63.13

                     CUMULATIVE AREA =    2.95 SQ MI
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          *            *
 274 KK   *       11P  *
          *            *
          **************

 275 KO         OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

             SUBBASIN RUNOFF DATA

 277 BA         SUBBASIN CHARACTERISTICS
                      TAREA         .07  SUBBASIN AREA

                PRECIPITATION DATA

 278 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .07

 279 LS         SCS LOSS RATE
                      STRTL         .20  INITIAL ABSTRACTION
                     CRVNBR       91.00  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 280 UD         SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .32  LAG

                                                        ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                   UNIT HYDROGRAPH
                                              8 END-OF-PERIOD ORDINATES
             44.       73.       35.       14.        6.        2.        1.        0.
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                                          HYDROGRAPH AT STATION      11P
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| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | 28 FEB 1315 | 50 | 1.30 | .07 | 1.23 | 105. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | 28 FEB 1330 | 51 | .34 | .01 | .32 | 128. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | 28 FEB 1345 | 52 | .23 | .01 | .23 | 87. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | 28 FEB 1400 | 53 | .19 | .01 | .18 | 57. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | 28 FEB 1415 | 54 | .11 | .00 | .11 | 39. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | 28 FEB 1430 | 55 | .10 | .00 | .09 | 27. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | 28 FEB 1445 | 56 | .09 | .00 | .09 | 21. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | 28 FEB 1500 | 57 | .09 | .00 | .08 | 17. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | 28 FEB 1515 | 58 | .08 | .00 | .08 | 15. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | 28 FEB 1530 | 59 | .07 | .00 | .07 | 14. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | 28 FEB 1545 | 60 | .07 | .00 | .07 | 13. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | 28 FEB 1600 | 61 | .06 | .00 | .06 | 12. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | 28 FEB 1615 | 62 | .05 | .00 | .05 | 11. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | 28 FEB 1630 | 63 | .05 | .00 | .05 | 10. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | 28 FEB 1645 | 64 | .05 | .00 | .05 | 9. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | 28 FEB 1700 | 65 | .05 | .00 | .04 | 8. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | 28 FEB 1715 | 66 | .04 | .00 | .04 | 8. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 1. | 28 FEB 1730 | 67 | .04 | .00 | .04 | 8. |
| 28 FEB 0530 | 19 | .02 | .02 | .01 | 1. | 28 FEB 1745 | 68 | .04 | .00 | .04 | 7. |
| 28 FEB 0545 | 20 | .02 | .02 | .01 | 1. | 28 FEB 1800 | 69 | .04 | .00 | .04 | 7. |
| 28 FEB 0600 | 21 | .02 | .02 | .01 | 1. | 28 FEB 1815 | 70 | .04 | .00 | .04 | 7. |
| 28 FEB 0615 | 22 | .02 | .02 | .01 | 1. | 28 FEB 1830 | 71 | .04 | .00 | .04 | 7. |
| 28 FEB 0630 | 23 | .03 | .02 | .01 | 1. | 28 FEB 1845 | 72 | .03 | .00 | .03 | 6. |
| 28 FEB 0645 | 24 | .03 | .02 | .01 | 1. | 28 FEB 1900 | 73 | .03 | .00 | .03 | 6. |
| 28 FEB 0700 | 25 | .03 | .02 | .01 | 2. | 28 FEB 1915 | 74 | .03 | .00 | .03 | 6. |
| 28 FEB 0715 | 26 | .03 | .02 | .01 | 2. | 28 FEB 1930 | 75 | .03 | .00 | .03 | 5. |
| 28 FEB 0730 | 27 | .03 | .02 | .02 | 2. | 28 FEB 1945 | 76 | .03 | .00 | .03 | 5. |
| 28 FEB 0745 | 28 | .04 | .02 | .02 | 3. | 28 FEB 2000 | 77 | .03 | .00 | .02 | 5. |
| 28 FEB 0800 | 29 | .04 | .02 | .02 | 3. | 28 FEB 2015 | 78 | .02 | .00 | .02 | 4. |
| 28 FEB 0815 | 30 | .04 | .02 | .02 | 3. | 28 FEB 2030 | 79 | .02 | .00 | .02 | 4. |
| 28 FEB 0830 | 31 | .04 | .02 | .02 | 3. | 28 FEB 2045 | 80 | .02 | .00 | .02 | 4. |
| 28 FEB 0845 | 32 | .04 | .02 | .02 | 4. | 28 FEB 2100 | 81 | .02 | .00 | .02 | 4. |
| 28 FEB 0900 | 33 | .04 | .02 | .03 | 4. | 28 FEB 2115 | 82 | .02 | .00 | .02 | 4. |
| 28 FEB 0915 | 34 | .04 | .02 | .03 | 4. | 28 FEB 2130 | 83 | .02 | .00 | .02 | 4. |
| 28 FEB 0930 | 35 | .05 | .02 | .03 | 5. | 28 FEB 2145 | 84 | .02 | .00 | .02 | 4. |
| 28 FEB 0945 | 36 | .05 | .02 | .03 | 5. | 28 FEB 2200 | 85 | .02 | .00 | .02 | 4. |
| 28 FEB 1000 | 37 | .05 | .02 | .04 | 6. | 28 FEB 2215 | 86 | .02 | .00 | .02 | 4. |
| 28 FEB 1015 | 38 | .06 | .02 | .04 | 6. | 28 FEB 2230 | 87 | .02 | .00 | .02 | 4. |
| 28 FEB 1030 | 39 | .06 | .02 | .05 | 7. | 28 FEB 2245 | 88 | .02 | .00 | .02 | 3. |
| 28 FEB 1045 | 40 | .07 | .02 | .05 | 8. | 28 FEB 2300 | 89 | .02 | .00 | .02 | 3. |
| 28 FEB 1100 | 41 | .07 | .02 | .06 | 9. | 28 FEB 2315 | 90 | .02 | .00 | .02 | 3. |
| 28 FEB 1115 | 42 | .08 | .02 | .06 | 10. | 28 FEB 2330 | 91 | .02 | .00 | .02 | 3. |
| 28 FEB 1130 | 43 | .09 | .02 | .07 | 11. | 28 FEB 2345 | 92 | .02 | .00 | .02 | 3. |
| 28 FEB 1145 | 44 | .09 | .02 | .07 | 12. | 1 MAR 0000 | 93 | .02 | .00 | .02 | 3. |
| 28 FEB 1200 | 45 | .10 | .02 | .08 | 13. | 1 MAR 0015 | 94 | .02 | .00 | .02 | 3. |
| 28 FEB 1215 | 46 | .17 | .03 | .14 | 17. | 1 MAR 0030 | 95 | .02 | .00 | .02 | 3. |
| 28 FEB 1230 | 47 | .21 | .03 | .18 | 23. | 1 MAR 0045 | 96 | .02 | .00 | .02 | 3. |
| 28 FEB 1245 | 48 | .28 | .03 | .24 | 31. | 1 MAR 0100 | 97 | .02 | .00 | .02 | 3. |
| 28 FEB 1300 | 49 | .59 | .05 | .54 | 50. | | | | | | |

TOTAL RAINFALL = 6.60, TOTAL LOSS = 1.05, TOTAL EXCESS = 5.54

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 128. | 12.50 | | 31. | 10. | 10. | 10. |
| | | (INCHES) | 4.209 | 5.515 | 5.515 | 5.515 |
| | | (AC-FT) | 15. | 20. | 20. | 20. |

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                    CUMULATIVE AREA =     .07 SQ MI

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          *            *
281 KK    *      MAWL  *
          *            *
          **************

282 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               DIRECT INPUT HYDROGRAPH FROM MITIGATION AREA WETLAND
                               (SEE POND2: APPENDIX 10-G)

  6 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN          15  TIME INTERVAL IN MINUTES
                     JXDATE     28FEB91  STARTING DATE
                     JXTIME         100  STARTING TIME

             SUBBASIN RUNOFF DATA

285 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .01  SUBBASIN AREA

                                                    ***

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                                                HYDROGRAPH AT STATION     MAWL

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                                 *                                 *                                 *
  DA MON HRMN  ORD      FLOW     *  DA MON HRMN  ORD      FLOW     *  DA MON HRMN  ORD      FLOW     *  DA MON HRMN  ORD      FLOW
                                 *                                 *                                 *
  28 FEB 0100   1        0.      *  28 FEB 0715   26       0.      *  28 FEB 1330   51       2.      *  28 FEB 1945   76       21.
  28 FEB 0115   2        0.      *  28 FEB 0730   27       0.      *  28 FEB 1345   52       3.      *  28 FEB 2000   77       22.
  28 FEB 0130   3        0.      *  28 FEB 0745   28       0.      *  28 FEB 1400   53       4.      *  28 FEB 2015   78       23.
  28 FEB 0145   4        0.      *  28 FEB 0800   29       0.      *  28 FEB 1415   54       4.      *  28 FEB 2030   79       23.
  28 FEB 0200   5        0.      *  28 FEB 0815   30       0.      *  28 FEB 1430   55       5.      *  28 FEB 2045   80       24.
  28 FEB 0215   6        0.      *  28 FEB 0830   31       0.      *  28 FEB 1445   56       5.      *  28 FEB 2100   81       24.
  28 FEB 0230   7        0.      *  28 FEB 0845   32       0.      *  28 FEB 1500   57       6.      *  28 FEB 2115   82       25.
  28 FEB 0245   8        0.      *  28 FEB 0900   33       0.      *  28 FEB 1515   58       7.      *  28 FEB 2130   83       25.
  28 FEB 0300   9        0.      *  28 FEB 0915   34       0.      *  28 FEB 1530   59       7.      *  28 FEB 2145   84       25.
  28 FEB 0315  10        0.      *  28 FEB 0930   35       0.      *  28 FEB 1545   60       8.      *  28 FEB 2200   85       25.
  28 FEB 0330  11        0.      *  28 FEB 0945   36       0.      *  28 FEB 1600   61       9.      *  28 FEB 2215   86       25.
  28 FEB 0345  12        0.      *  28 FEB 1000   37       0.      *  28 FEB 1615   62      10.      *  28 FEB 2230   87       25.
  28 FEB 0400  13        0.      *  28 FEB 1015   38       0.      *  28 FEB 1630   63      11.      *  28 FEB 2245   88       24.
  28 FEB 0415  14        0.      *  28 FEB 1030   39       0.      *  28 FEB 1645   64      11.      *  28 FEB 2300   89       24.
  28 FEB 0430  15        0.      *  28 FEB 1045   40       0.      *  28 FEB 1700   65      12.      *  28 FEB 2315   90       24.
  28 FEB 0445  16        0.      *  28 FEB 1100   41       0.      *  28 FEB 1715   66      13.      *  28 FEB 2330   91       24.
  28 FEB 0500  17        0.      *  28 FEB 1115   42       0.      *  28 FEB 1730   67      13.      *  28 FEB 2345   92       23.
  28 FEB 0515  18        0.      *  28 FEB 1130   43       0.      *  28 FEB 1745   68      14.      *   1 MAR 0000   93       23.
  28 FEB 0530  19        0.      *  28 FEB 1145   44       0.      *  28 FEB 1800   69      14.      *   1 MAR 0015   94       23.
  28 FEB 0545  20        0.      *  28 FEB 1200   45       0.      *  28 FEB 1815   70      15.      *   1 MAR 0030   95       23.
  28 FEB 0600  21        0.      *  28 FEB 1215   46       1.      *  28 FEB 1830   71      15.      *   1 MAR 0045   96       22.
  28 FEB 0615  22        0.      *  28 FEB 1230   47       1.      *  28 FEB 1845   72      16.      *   1 MAR 0100   97       22.
  28 FEB 0630  23        0.      *  28 FEB 1245   48       1.      *  28 FEB 1900   73      17.      *
  28 FEB 0645  24        0.      *  28 FEB 1300   49       1.      *  28 FEB 1915   74      18.      *
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  28 FEB 0700   25        0.   *   28 FEB 1315   50        2.   *   28 FEB 1930   75        20.   *
                                 *                                 *                                 *
*****************************************************************************************************

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR        24-HR        72-HR      24.00-HR
+  (CFS)       (HR)
                         (CFS)
+      25.     20.75                 23.          8.           8.           8.
                       (INCHES)    21.410      29.927       29.927       29.927
                        (AC-FT)      11.         16.          16.          16.

                        CUMULATIVE AREA =     .01 SQ MI


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


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            *            *
 296 KK     *        9P  *
            *            *
            **************

 297 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                                SCS RUNOFF CALCULATION

               SUBBASIN RUNOFF DATA

 299 BA          SUBBASIN CHARACTERISTICS
                       TAREA         .01  SUBBASIN AREA

                 PRECIPITATION DATA

 300 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                 ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                 5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                   .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .01

 301 LS          SCS LOSS RATE
                       STRTL         .44  INITIAL ABSTRACTION
                      CRVNBR       82.00  CURVE NUMBER
                       RTIMP         .00  PERCENT IMPERVIOUS AREA

 302 UD          SCS DIMENSIONLESS UNITGRAPH
                        TLAG         .19  LAG

                                                          ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                     UNIT HYDROGRAPH
                                                 6 END-OF-PERIOD ORDINATES
               15.       10.        3.        1.        0.        0.

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                                          HYDROGRAPH AT STATION       9P
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| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | 28 FEB 1315 | 50 | 1.30 | .23 | 1.07 | 21. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | 28 FEB 1330 | 51 | .34 | .04 | .29 | 16. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | 28 FEB 1345 | 52 | .23 | .03 | .21 | 9. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | 28 FEB 1400 | 53 | .19 | .02 | .17 | 6. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | 28 FEB 1415 | 54 | .11 | .01 | .10 | 4. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | 28 FEB 1430 | 55 | .10 | .01 | .09 | 3. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | 28 FEB 1445 | 56 | .09 | .01 | .08 | 3. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | 28 FEB 1500 | 57 | .09 | .01 | .08 | 2. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | 28 FEB 1515 | 58 | .08 | .01 | .07 | 2. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | 28 FEB 1530 | 59 | .07 | .01 | .07 | 2. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | 28 FEB 1545 | 60 | .07 | .01 | .06 | 2. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | 28 FEB 1600 | 61 | .06 | .01 | .06 | 2. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | 28 FEB 1615 | 62 | .05 | .00 | .05 | 2. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | 28 FEB 1630 | 63 | .05 | .00 | .05 | 1. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | 28 FEB 1645 | 64 | .05 | .00 | .04 | 1. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | 28 FEB 1700 | 65 | .05 | .00 | .04 | 1. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | 28 FEB 1715 | 66 | .04 | .00 | .04 | 1. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | 28 FEB 1730 | 67 | .04 | .00 | .04 | 1. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | 28 FEB 1745 | 68 | .04 | .00 | .04 | 1. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | 28 FEB 1800 | 69 | .04 | .00 | .04 | 1. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | 28 FEB 1815 | 70 | .04 | .00 | .03 | 1. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | 28 FEB 1830 | 71 | .04 | .00 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | 28 FEB 1915 | 74 | .03 | .00 | .03 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | 28 FEB 1930 | 75 | .03 | .00 | .02 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .03 | .00 | 0. | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .03 | .01 | 0. | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .03 | .01 | 0. | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .03 | .01 | 0. | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .03 | .01 | 0. | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .03 | .01 | 0. | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .03 | .01 | 0. | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .03 | .01 | 0. | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .03 | .02 | 0. | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .03 | .02 | 0. | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .04 | .02 | 1. | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .04 | .03 | 1. | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .04 | .03 | 1. | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .04 | .03 | 1. | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |
| 28 FEB 1115 | 42 | .08 | .04 | .04 | 1. | 28 FEB 2330 | 91 | .02 | .00 | .02 | 0. |
| 28 FEB 1130 | 43 | .09 | .04 | .05 | 1. | 28 FEB 2345 | 92 | .02 | .00 | .02 | 0. |
| 28 FEB 1145 | 44 | .09 | .04 | .05 | 1. | 1 MAR 0000 | 93 | .02 | .00 | .02 | 0. |
| 28 FEB 1200 | 45 | .10 | .04 | .06 | 2. | 1 MAR 0015 | 94 | .02 | .00 | .02 | 0. |
| 28 FEB 1215 | 46 | .17 | .07 | .10 | 2. | 1 MAR 0030 | 95 | .02 | .00 | .02 | 0. |
| 28 FEB 1230 | 47 | .21 | .07 | .13 | 3. | 1 MAR 0045 | 96 | .02 | .00 | .02 | 0. |
| 28 FEB 1245 | 48 | .27 | .09 | .19 | 4. | 1 MAR 0100 | 97 | .02 | .00 | .02 | 0. |
| 28 FEB 1300 | 49 | .59 | .15 | .44 | 9. | | | | | | |

TOTAL RAINFALL = 6.60, TOTAL LOSS = 2.06, TOTAL EXCESS = 4.54

| PEAK FLOW (CFS) | TIME (HR) | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| | | (CFS) | | | | |
| + 21. | 12.25 | | 4. | 1. | 1. | 1. |
| | | (INCHES) | 3.567 | 4.525 | 4.525 | 4.525 |
| | | (AC-FT) | 2. | 3. | 3. | 3. |

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                    CUMULATIVE AREA =     .01 SQ MI

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

          **************
          *            *
303 KK    *      5PN   *
          *            *
          **************

304 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

             SUBBASIN RUNOFF DATA

306 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .01  SUBBASIN AREA

                PRECIPITATION DATA

307 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                STORM AREA =     .01

308 LS          SCS LOSS RATE
                      STRTL         .56  INITIAL ABSTRACTION
                     CRVNBR       78.00  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

309 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .43  LAG

                                                        ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                UNIT HYDROGRAPH
                                          11 END-OF-PERIOD ORDINATES
                3.       7.       6.       3.       1.       1.       0.       0.       0.       0.
                0.

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                                          HYDROGRAPH AT STATION      5PN

*****************************************************************************************************************************
                                                          *
     DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q   *    DA MON HRMN  ORD    RAIN    LOSS  EXCESS    COMP Q
                                                          *
     28 FEB 0100    1     .00     .00     .00        0.   *    28 FEB 1315   50    1.30     .31     .99        7.
     28 FEB 0115    2     .02     .02     .00        0.   *    28 FEB 1330   51     .34     .06     .28       10.
     28 FEB 0130    3     .02     .02     .00        0.   *    28 FEB 1345   52     .23     .04     .19        9.
     28 FEB 0145    4     .02     .02     .00        0.   *    28 FEB 1400   53     .19     .03     .16        7.
     28 FEB 0200    5     .02     .02     .00        0.   *    28 FEB 1415   54     .11     .02     .09        5.
     28 FEB 0215    6     .02     .02     .00        0.   *    28 FEB 1430   55     .10     .01     .08        3.
     28 FEB 0230    7     .02     .02     .00        0.   *    28 FEB 1445   56     .09     .01     .08        3.
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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | * | 28 FEB 1500 | 57 | .09 | .01 | .07 | 2. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | * | 28 FEB 1515 | 58 | .08 | .01 | .07 | 2. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | * | 28 FEB 1530 | 59 | .07 | .01 | .06 | 2. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | * | 28 FEB 1545 | 60 | .07 | .01 | .06 | 1. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | * | 28 FEB 1600 | 61 | .06 | .01 | .05 | 1. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | * | 28 FEB 1615 | 62 | .05 | .01 | .05 | 1. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | * | 28 FEB 1630 | 63 | .05 | .01 | .04 | 1. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | * | 28 FEB 1645 | 64 | .05 | .01 | .04 | 1. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 FEB 1700 | 65 | .05 | .01 | .04 | 1. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 FEB 1715 | 66 | .04 | .01 | .04 | 1. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .01 | .04 | 1. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 1. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .03 | 1. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .03 | 1. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .02 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .02 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .04 | .00 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 0. |
| 28 FEB 0800 | 29 | .04 | .04 | .00 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 0. |
| 28 FEB 0815 | 30 | .04 | .04 | .00 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 0. |
| 28 FEB 0830 | 31 | .04 | .04 | .00 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 0. |
| 28 FEB 0845 | 32 | .04 | .04 | .00 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 0. |
| 28 FEB 0900 | 33 | .04 | .04 | .01 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 0. |
| 28 FEB 0915 | 34 | .04 | .04 | .01 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 0. |
| 28 FEB 0930 | 35 | .05 | .04 | .01 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .04 | .01 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .04 | .01 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .05 | .02 | 0. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .05 | .02 | 0. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |
| 28 FEB 1045 | 40 | .07 | .05 | .02 | 0. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 0. |
| 28 FEB 1100 | 41 | .07 | .05 | .03 | 0. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |
| 28 FEB 1115 | 42 | .08 | .05 | .03 | 0. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 0. |
| 28 FEB 1130 | 43 | .09 | .05 | .04 | 1. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 0. |
| 28 FEB 1145 | 44 | .09 | .05 | .04 | 1. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 0. |
| 28 FEB 1200 | 45 | .10 | .06 | .05 | 1. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 0. |
| 28 FEB 1215 | 46 | .17 | .09 | .08 | 1. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 0. |
| 28 FEB 1230 | 47 | .21 | .10 | .11 | 1. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 0. |
| 28 FEB 1245 | 48 | .27 | .11 | .16 | 2. | * | 1 MAR 0100 | 97 | .02 | .00 | .01 | 0. |
| 28 FEB 1300 | 49 | .59 | .20 | .39 | 3. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 2.49, TOTAL EXCESS = 4.11

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 10. | 12.50 | | 3. | 1. | 1. | 1. |
| | | (INCHES) | 3.258 | 4.078 | 4.078 | 4.078 |
| | | (AC-FT) | 1. | 2. | 2. | 2. |

CUMULATIVE AREA = .01 SQ MI

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

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          **************
          *            *
310 KK    *    MA5PN   *
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          *           *
          **************

 311 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                               COMBINE HYDROGRAPHS FOR 9P, 5PN & MAWL

 313 HC          HYDROGRAPH COMBINATION
                       ICOMP           3  NUMBER OF HYDROGRAPHS TO COMBINE

                                                          ***
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HYDROGRAPH AT STATION MA5PN
SUM OF 3 HYDROGRAPHS

**********

| DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | 28 FEB 0715 | 26 | 0. | 28 FEB 1330 | 51 | 29. | 28 FEB 1945 | 76 | 22. |
| 28 FEB 0115 | 2 | 0. | 28 FEB 0730 | 27 | 0. | 28 FEB 1345 | 52 | 22. | 28 FEB 2000 | 77 | 23. |
| 28 FEB 0130 | 3 | 0. | 28 FEB 0745 | 28 | 0. | 28 FEB 1400 | 53 | 17. | 28 FEB 2015 | 78 | 24. |
| 28 FEB 0145 | 4 | 0. | 28 FEB 0800 | 29 | 0. | 28 FEB 1415 | 54 | 13. | 28 FEB 2030 | 79 | 24. |
| 28 FEB 0200 | 5 | 0. | 28 FEB 0815 | 30 | 0. | 28 FEB 1430 | 55 | 11. | 28 FEB 2045 | 80 | 25. |
| 28 FEB 0215 | 6 | 0. | 28 FEB 0830 | 31 | 0. | 28 FEB 1445 | 56 | 10. | 28 FEB 2100 | 81 | 25. |
| 28 FEB 0230 | 7 | 0. | 28 FEB 0845 | 32 | 0. | 28 FEB 1500 | 57 | 10. | 28 FEB 2115 | 82 | 26. |
| 28 FEB 0245 | 8 | 0. | 28 FEB 0900 | 33 | 0. | 28 FEB 1515 | 58 | 10. | 28 FEB 2130 | 83 | 26. |
| 28 FEB 0300 | 9 | 0. | 28 FEB 0915 | 34 | 0. | 28 FEB 1530 | 59 | 11. | 28 FEB 2145 | 84 | 26. |
| 28 FEB 0315 | 10 | 0. | 28 FEB 0930 | 35 | 1. | 28 FEB 1545 | 60 | 11. | 28 FEB 2200 | 85 | 26. |
| 8 FEB 0330 | 11 | 0. | 28 FEB 0945 | 36 | 1. | 28 FEB 1600 | 61 | 12. | 28 FEB 2215 | 86 | 26. |
| 28 FEB 0345 | 12 | 0. | 28 FEB 1000 | 37 | 1. | 28 FEB 1615 | 62 | 12. | 28 FEB 2230 | 87 | 25. |
| 28 FEB 0400 | 13 | 0. | 28 FEB 1015 | 38 | 1. | 28 FEB 1630 | 63 | 13. | 28 FEB 2245 | 88 | 25. |
| 28 FEB 0415 | 14 | 0. | 28 FEB 1030 | 39 | 1. | 28 FEB 1645 | 64 | 14. | 28 FEB 2300 | 89 | 25. |
| 28 FEB 0430 | 15 | 0. | 28 FEB 1045 | 40 | 1. | 28 FEB 1700 | 65 | 14. | 28 FEB 2315 | 90 | 25. |
| 28 FEB 0445 | 16 | 0. | 28 FEB 1100 | 41 | 1. | 28 FEB 1715 | 66 | 15. | 28 FEB 2330 | 91 | 24. |
| 28 FEB 0500 | 17 | 0. | 28 FEB 1115 | 42 | 2. | 28 FEB 1730 | 67 | 15. | 28 FEB 2345 | 92 | 24. |
| 28 FEB 0515 | 18 | 0. | 28 FEB 1130 | 43 | 2. | 28 FEB 1745 | 68 | 15. | 1 MAR 0000 | 93 | 24. |
| 28 FEB 0530 | 19 | 0. | 28 FEB 1145 | 44 | 2. | 28 FEB 1800 | 69 | 16. | 1 MAR 0015 | 94 | 24. |
| 28 FEB 0545 | 20 | 0. | 28 FEB 1200 | 45 | 3. | 28 FEB 1815 | 70 | 16. | 1 MAR 0030 | 95 | 23. |
| 28 FEB 0600 | 21 | 0. | 28 FEB 1215 | 46 | 4. | 28 FEB 1830 | 71 | 17. | 1 MAR 0045 | 96 | 23. |
| 28 FEB 0615 | 22 | 0. | 28 FEB 1230 | 47 | 5. | 28 FEB 1845 | 72 | 18. | 1 MAR 0100 | 97 | 23. |
| 28 FEB 0630 | 23 | 0. | 28 FEB 1245 | 48 | 7. | 28 FEB 1900 | 73 | 18. | | | |
| 28 FEB 0645 | 24 | 0. | 28 FEB 1300 | 49 | 13. | 28 FEB 1915 | 74 | 20. | | | |
| 28 FEB 0700 | 25 | 0. | 28 FEB 1315 | 50 | 30. | 28 FEB 1930 | 75 | 21. | | | |

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| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 30. | 12.25 | | 24. | 10. | 10. | 10. |
| | | (INCHES) | 7.701 | 13.161 | 13.161 | 13.161 |
| | | (AC-FT) | 12. | 20. | 20. | 20. |

CUMULATIVE AREA = .03 SQ MI

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

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              **************
              *            *
314 KK        *   AADWEX   *
              *            *
              **************

315 KO            OUTPUT CONTROL VARIABLES
                        IPRNT          1  PRINT CONTROL
                        IPLOT          0  PLOT CONTROL
                        QSCAL         0.  HYDROGRAPH PLOT SCALE
                                 STORAGE ROUTING THROUGH ATLANTIC AVENUE DRAINWAY EXTENSION

                HYDROGRAPH ROUTING DATA

317 RS            STORAGE ROUTING
                        NSTPS          1  NUMBER OF SUBREACHES
                         ITYP       ELEV  TYPE OF INITIAL CONDITION
                        RSVRIC     60.00  INITIAL CONDITION
                             X       .00 WORKING R AND D COEFFICIENT

318 SA                  AREA        .0       .0       .0       .1       .1       .1       .2       .2

319 SE            ELEVATION      60.00    62.50    63.50    64.50    65.50    66.50    67.50    68.00

320 SL            LOW-LEVEL OUTLET
                        ELEVL     61.90  ELEVATION AT CENTER OF OUTLET
                        CAREA     37.70  CROSS-SECTIONAL AREA
                         COQL       .60  COEFFICIENT
                         EXPL       .50  EXPONENT OF HEAD

321 SS            SPILLWAY
                         CREL     67.90  SPILLWAY CREST ELEVATION
                        SPWID       .00  SPILLWAY WIDTH
                         COQW       .00  WEIR COEFFICIENT
                         EXPW      1.50  EXPONENT OF HEAD

                                                  ***

                                        COMPUTED STORAGE-ELEVATION DATA

          STORAGE       .00      .02      .04      .08      .15      .27      .42      .52
        ELEVATION     60.00    62.50    63.50    64.50    65.50    66.50    67.50    68.00

                                        COMPUTED OUTFLOW-ELEVATION DATA

          OUTFLOW       .00      .00   322.62   335.76   350.02   365.54   382.50   401.12   421.64   444.37
        ELEVATION     60.00    61.90    65.06    65.33    65.62    65.96    66.35    66.79    67.30    67.90


                                       COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE       .00      .01      .02      .04      .08      .12      .14      .15      .17      .20
          OUTFLOW       .00      .00   140.52   229.47   292.52   322.62   335.76   344.21   350.02   365.54
        ELEVATION     60.00    61.90    62.50    63.50    64.50    65.06    65.33    65.50    65.62    65.96

          STORAGE       .25      .27      .31      .39      .42      .50      .52
          OUTFLOW    382.50   389.09   401.12   421.64   429.30   444.37   448.06
        ELEVATION     66.35    66.50    66.79    67.30    67.50    67.90    68.00

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO      448.
                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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HYDROGRAPH AT STATION AADWEX

| MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 60.0 | 28 | FEB | 0915 | 34 | 0. | .0 | 61.9 | 28 | FEB | 1730 | 67 | 15. | .0 | 62.0 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 60.0 | 28 | FEB | 0930 | 35 | 1. | .0 | 61.9 | 28 | FEB | 1745 | 68 | 15. | .0 | 62.0 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 60.0 | 28 | FEB | 0945 | 36 | 1. | .0 | 61.9 | 28 | FEB | 1800 | 69 | 16. | .0 | 62.0 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 60.0 | 28 | FEB | 1000 | 37 | 1. | .0 | 61.9 | 28 | FEB | 1815 | 70 | 16. | .0 | 62.0 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 60.0 | 28 | FEB | 1015 | 38 | 1. | .0 | 61.9 | 28 | FEB | 1830 | 71 | 17. | .0 | 62.0 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 60.0 | 28 | FEB | 1030 | 39 | 1. | .0 | 61.9 | 28 | FEB | 1845 | 72 | 17. | .0 | 62.0 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 60.0 | 28 | FEB | 1045 | 40 | 1. | .0 | 61.9 | 28 | FEB | 1900 | 73 | 18. | .0 | 62.0 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 60.0 | 28 | FEB | 1100 | 41 | 2. | .0 | 61.9 | 28 | FEB | 1915 | 74 | 20. | .0 | 62.0 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 60.0 | 28 | FEB | 1115 | 42 | 2. | .0 | 61.9 | 28 | FEB | 1930 | 75 | 21. | .0 | 62.0 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 60.0 | 28 | FEB | 1130 | 43 | 2. | .0 | 61.9 | 28 | FEB | 1945 | 76 | 22. | .0 | 62.0 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 60.0 | 28 | FEB | 1145 | 44 | 2. | .0 | 61.9 | 28 | FEB | 2000 | 77 | 23. | .0 | 62.0 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 60.0 | 28 | FEB | 1200 | 45 | 3. | .0 | 61.9 | 28 | FEB | 2015 | 78 | 24. | .0 | 62.0 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 60.0 | 28 | FEB | 1215 | 46 | 4. | .0 | 61.9 | 28 | FEB | 2030 | 79 | 25. | .0 | 62.0 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 60.0 | 28 | FEB | 1230 | 47 | 5. | .0 | 61.9 | 28 | FEB | 2045 | 80 | 25. | .0 | 62.0 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 60.0 | 28 | FEB | 1245 | 48 | 7. | .0 | 61.9 | 28 | FEB | 2100 | 81 | 25. | .0 | 62.0 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 60.0 | 28 | FEB | 1300 | 49 | 13. | .0 | 62.0 | 28 | FEB | 2115 | 82 | 26. | .0 | 62.0 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 60.0 | 28 | FEB | 1315 | 50 | 30. | .0 | 62.0 | 28 | FEB | 2130 | 83 | 26. | .0 | 62.0 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 60.0 | 28 | FEB | 1330 | 51 | 29. | .0 | 62.0 | 28 | FEB | 2145 | 84 | 26. | .0 | 62.0 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 60.0 | 28 | FEB | 1345 | 52 | 22. | .0 | 62.0 | 28 | FEB | 2200 | 85 | 26. | .0 | 62.0 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 60.0 | 28 | FEB | 1400 | 53 | 17. | .0 | 62.0 | 28 | FEB | 2215 | 86 | 26. | .0 | 62.0 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 60.0 | 28 | FEB | 1415 | 54 | 13. | .0 | 62.0 | 28 | FEB | 2230 | 87 | 26. | .0 | 62.0 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 60.0 | 28 | FEB | 1430 | 55 | 11. | .0 | 61.9 | 28 | FEB | 2245 | 88 | 25. | .0 | 62.0 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 60.0 | 28 | FEB | 1445 | 56 | 10. | .0 | 61.9 | 28 | FEB | 2300 | 89 | 25. | .0 | 62.0 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 60.0 | 28 | FEB | 1500 | 57 | 10. | .0 | 61.9 | 28 | FEB | 2315 | 90 | 25. | .0 | 62.0 |
| 28 | FEB | 0700 | 25 | 0. | .0 | 60.1 | 28 | FEB | 1515 | 58 | 10. | .0 | 61.9 | 28 | FEB | 2330 | 91 | 25. | .0 | 62.0 |
| 28 | FEB | 0715 | 26 | 0. | .0 | 60.3 | 28 | FEB | 1530 | 59 | 11. | .0 | 61.9 | 28 | FEB | 2345 | 92 | 24. | .0 | 62.0 |
| | FEB | 0730 | 27 | 0. | .0 | 60.5 | 28 | FEB | 1545 | 60 | 11. | .0 | 61.9 | 1 | MAR | 0000 | 93 | 24. | .0 | 62.0 |
| | FEB | 0745 | 28 | 0. | .0 | 60.9 | 28 | FEB | 1600 | 61 | 12. | .0 | 62.0 | 1 | MAR | 0015 | 94 | 24. | .0 | 62.0 |
| 28 | FEB | 0800 | 29 | 0. | .0 | 61.4 | 28 | FEB | 1615 | 62 | 12. | .0 | 62.0 | 1 | MAR | 0030 | 95 | 24. | .0 | 62.0 |
| 28 | FEB | 0815 | 30 | 0. | .0 | 61.9 | 28 | FEB | 1630 | 63 | 13. | .0 | 62.0 | 1 | MAR | 0045 | 96 | 23. | .0 | 62.0 |
| 28 | FEB | 0830 | 31 | 0. | .0 | 61.9 | 28 | FEB | 1645 | 64 | 14. | .0 | 62.0 | 1 | MAR | 0100 | 97 | 23. | .0 | 62.0 |
| 28 | FEB | 0845 | 32 | 0. | .0 | 61.9 | 28 | FEB | 1700 | 65 | 14. | .0 | 62.0 | | | | | | | |
| 28 | FEB | 0900 | 33 | 0. | .0 | 61.9 | 28 | FEB | 1715 | 66 | 15. | .0 | 62.0 | | | | | | | |

| PEAK FLOW (CFS) | TIME (HR) | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| | | (CFS) | | | | |
| 30. | 12.25 | | 24. | 10. | 10. | 10. |
| | | (INCHES) | 7.701 | 13.153 | 13.153 | 13.153 |
| | | (AC-FT) | 12. | 20. | 20. | 20. |

| PEAK STORAGE (AC-FT) | TIME (HR) | MAXIMUM AVERAGE STORAGE 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| 0. | 12.25 | 0. | 0. | 0. | 0. |

| PEAK STAGE (FEET) | TIME (HR) | MAXIMUM AVERAGE STAGE 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| 62.03 | 12.25 | 62.00 | 61.41 | 61.41 | 61.41 |

CUMULATIVE AREA = .03 SQ MI

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          **************
          *            *
322 KK    *      5PS   *
          *            *
          **************

323 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

               SUBBASIN RUNOFF DATA

325 BA          SUBBASIN CHARACTERISTICS
                      TAREA        .05  SUBBASIN AREA

                PRECIPITATION DATA

326 PH                              DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 .....   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                  STORM AREA =     .05

327 LS          SCS LOSS RATE
                      STRTL        .41  INITIAL ABSTRACTION
                     CRVNBR      83.00  CURVE NUMBER
                      RTIMP        .00  PERCENT IMPERVIOUS AREA

328 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG        .52  LAG

                                                  ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                UNIT HYDROGRAPH
                                           12 END-OF-PERIOD ORDINATES
              11.      35.      36.      24.      12.       6.       3.       2.       1.       1.
               0.       0.
```

**********

HYDROGRAPH AT STATION 5PS

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| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | * | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | * | 28 FEB 1315 | 50 | 1.30 | .21 | 1.09 | 40. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | * | 28 FEB 1330 | 51 | .34 | .04 | .30 | 65. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | * | 28 FEB 1345 | 52 | .23 | .03 | .21 | 67. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | * | 28 FEB 1400 | 53 | .19 | .02 | .17 | 53. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | * | 28 FEB 1415 | 54 | .11 | .01 | .10 | 39. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | * | 28 FEB 1430 | 55 | .10 | .01 | .09 | 28. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | * | 28 FEB 1445 | 56 | .09 | .01 | .09 | 21. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | * | 28 FEB 1500 | 57 | .09 | .01 | .08 | 16. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | * | 28 FEB 1515 | 58 | .08 | .01 | .07 | 14. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | * | 28 FEB 1530 | 59 | .07 | .01 | .07 | 12. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | * | 28 FEB 1545 | 60 | .07 | .01 | .06 | 10. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | * | 28 FEB 1600 | 61 | .06 | .01 | .06 | 9. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | * | 28 FEB 1615 | 62 | .05 | .00 | .05 | 8. |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | * | 28 FEB 1630 | 63 | .05 | .00 | .05 | 8. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | * | 28 FEB 1645 | 64 | .05 | .00 | .04 | 7. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 FEB 1700 | 65 | .05 | .00 | .04 | 6. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 FEB 1715 | 66 | .04 | .00 | .04 | 6. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .00 | .04 | 6. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 5. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .04 | 5. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .03 | 5. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .03 | 5. |
| 28 FEB 0630 | 23 | .03 | .02 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 5. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 4. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .03 | 4. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .02 | 4. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 4. |
| 28 FEB 0745 | 28 | .04 | .03 | .01 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 3. |
| 28 FEB 0800 | 29 | .04 | .03 | .01 | 1. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 3. |
| 28 FEB 0815 | 30 | .04 | .03 | .01 | 1. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 3. |
| 28 FEB 0830 | 31 | .04 | .03 | .01 | 1. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 3. |
| 28 FEB 0845 | 32 | .04 | .03 | .01 | 1. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 3. |
| 28 FEB 0900 | 33 | .04 | .03 | .01 | 1. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 3. |
| 28 FEB 0915 | 34 | .04 | .03 | .01 | 1. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 3. |
| 28 FEB 0930 | 35 | .05 | .03 | .02 | 2. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 3. |
| 28 FEB 0945 | 36 | .05 | .03 | .02 | 2. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 3. |
| 28 FEB 1000 | 37 | .05 | .03 | .02 | 2. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 3. |
| 28 FEB 1015 | 38 | .06 | .04 | .02 | 2. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 3. |
| 28 FEB 1030 | 39 | .06 | .04 | .03 | 3. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 3. |
| 28 FEB 1045 | 40 | .07 | .04 | .03 | 3. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 2. |
| 28 FEB 1100 | 41 | .07 | .04 | .04 | 4. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 2. |
| 28 FEB 1115 | 42 | .08 | .04 | .04 | 4. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 2. |
| 28 FEB 1130 | 43 | .09 | .04 | .05 | 5. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 2. |
| 28 FEB 1145 | 44 | .09 | .04 | .05 | 5. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 2. |
| 28 FEB 1200 | 45 | .10 | .04 | .06 | 6. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 2. |
| 28 FEB 1215 | 46 | .17 | .06 | .11 | 7. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 2. |
| 28 FEB 1230 | 47 | .21 | .07 | .14 | 10. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 2. |
| 28 FEB 1245 | 48 | .28 | .08 | .19 | 14. | * | 1 MAR 0100 | 97 | .02 | .00 | .02 | 2. |
| 28 FEB 1300 | 49 | .59 | .14 | .45 | 21. | * | | | | | | |
| | | | | | | * | | | | | | |

**********

TOTAL RAINFALL = 6.60, TOTAL LOSS = 1.95, TOTAL EXCESS = 4.65

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 67. | 12.75 | | 20. | 6. | 6. | 6. |
| | | (INCHES) | 3.635 | 4.606 | 4.606 | 4.606 |
| | | (AC-FT) | 10. | 13. | 13. | 13. |

CUMULATIVE AREA = .05 SQ MI

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

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              **************
              *            *
329 KK        *   RECHRG   *
              *            *
              **************

330 KO            OUTPUT CONTROL VARIABLES
                        IPRNT          1  PRINT CONTROL
                        IPLOT          0  PLOT CONTROL
```

```
                    QSCAL          0.  HYDROGRAPH PLOT SCALE
                              DIRECT INPUT OF HYDROGRAPH FROM RECHARGE BASIN

  6 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN          15  TIME INTERVAL IN MINUTES
                    JXDATE     28FEB91  STARTING DATE
                    JXTIME         100  STARTING TIME

             SUBBASIN RUNOFF DATA

332 BA          SUBBASIN CHARACTERISTICS
                     TAREA        ..00  SUBBASIN AREA

                                                    ***
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HYDROGRAPH AT STATION RECHRG

| DA | MON | HRMN | ORD | FLOW | DA | MON | HRMN | ORD | FLOW | DA | MON | HRMN | ORD | FLOW | DA | MON | HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 1. | 28 | FEB | 0715 | 26 | 1. | 28 | FEB | 1330 | 51 | 1. | 28 | FEB | 1945 | 76 | 1. |
| 28 | FEB | 0115 | 2 | 1. | 28 | FEB | 0730 | 27 | 1. | 28 | FEB | 1345 | 52 | 1. | 28 | FEB | 2000 | 77 | 1. |
| 28 | FEB | 0130 | 3 | 1. | 28 | FEB | 0745 | 28 | 1. | 28 | FEB | 1400 | 53 | 1. | 28 | FEB | 2015 | 78 | 1. |
| 28 | FEB | 0145 | 4 | 1. | 28 | FEB | 0800 | 29 | 1. | 28 | FEB | 1415 | 54 | 1. | 28 | FEB | 2030 | 79 | 1. |
| 28 | FEB | 0200 | 5 | 1. | 28 | FEB | 0815 | 30 | 1. | 28 | FEB | 1430 | 55 | 1. | 28 | FEB | 2045 | 80 | 1. |
| 28 | FEB | 0215 | 6 | 1. | 28 | FEB | 0830 | 31 | 1. | 28 | FEB | 1445 | 56 | 1. | 28 | FEB | 2100 | 81 | 1. |
| 28 | FEB | 0230 | 7 | 1. | 28 | FEB | 0845 | 32 | 1. | 28 | FEB | 1500 | 57 | 1. | 28 | FEB | 2115 | 82 | 1. |
| 28 | FEB | 0245 | 8 | 1. | 28 | FEB | 0900 | 33 | 1. | 28 | FEB | 1515 | 58 | 1. | 28 | FEB | 2130 | 83 | 1. |
| 28 | FEB | 0300 | 9 | 1. | 28 | FEB | 0915 | 34 | 1. | 28 | FEB | 1530 | 59 | 1. | 28 | FEB | 2145 | 84 | 1. |
| 28 | FEB | 0315 | 10 | 1. | 28 | FEB | 0930 | 35 | 1. | 28 | FEB | 1545 | 60 | 1. | 28 | FEB | 2200 | 85 | 1 |
| 28 | FEB | 0330 | 11 | 1. | 28 | FEB | 0945 | 36 | 1. | 28 | FEB | 1600 | 61 | 1. | 28 | FEB | 2215 | 86 | 1. |
| 28 | FEB | 0345 | 12 | 1. | 28 | FEB | 1000 | 37 | 1. | 28 | FEB | 1615 | 62 | 1. | 28 | FEB | 2230 | 87 | 1. |
| 28 | FEB | 0400 | 13 | 1. | 28 | FEB | 1015 | 38 | 1. | 28 | FEB | 1630 | 63 | 1. | 28 | FEB | 2245 | 88 | 1. |
| 28 | FEB | 0415 | 14 | 1. | 28 | FEB | 1030 | 39 | 1. | 28 | FEB | 1645 | 64 | 1. | 28 | FEB | 2300 | 89 | 1. |
| 28 | FEB | 0430 | 15 | 1. | 28 | FEB | 1045 | 40 | 1. | 28 | FEB | 1700 | 65 | 1. | 28 | FEB | 2315 | 90 | 1. |
| 28 | FEB | 0445 | 16 | 1. | 28 | FEB | 1100 | 41 | 1. | 28 | FEB | 1715 | 66 | 1. | 28 | FEB | 2330 | 91 | 1. |
| 28 | FEB | 0500 | 17 | 1. | 28 | FEB | 1115 | 42 | 1. | 28 | FEB | 1730 | 67 | 1. | 28 | FEB | 2345 | 92 | 1. |
| 28 | FEB | 0515 | 18 | 1. | 28 | FEB | 1130 | 43 | 1. | 28 | FEB | 1745 | 68 | 1. | 1 | MAR | 0000 | 93 | 1. |
| 28 | FEB | 0530 | 19 | 1. | 28 | FEB | 1145 | 44 | 1. | 28 | FEB | 1800 | 69 | 1. | 1 | MAR | 0015 | 94 | 1. |
| 28 | FEB | 0545 | 20 | 1. | 28 | FEB | 1200 | 45 | 1. | 28 | FEB | 1815 | 70 | 1. | 1 | MAR | 0030 | 95 | 1. |
| 28 | FEB | 0600 | 21 | 1. | 28 | FEB | 1215 | 46 | 1. | 28 | FEB | 1830 | 71 | 1. | 1 | MAR | 0045 | 96 | 1. |
| 28 | FEB | 0615 | 22 | 1. | 28 | FEB | 1230 | 47 | 1. | 28 | FEB | 1845 | 72 | 1. | 1 | MAR | 0100 | 97 | 1. |
| 28 | FEB | 0630 | 23 | 1. | 28 | FEB | 1245 | 48 | 1. | 28 | FEB | 1900 | 73 | 1. | | | | | |
| 28 | FEB | 0645 | 24 | 1. | 28 | FEB | 1300 | 49 | 1. | 28 | FEB | 1915 | 74 | 1. | | | | | |
| 28 | FEB | 0700 | 25 | 1. | 28 | FEB | 1315 | 50 | 1. | 28 | FEB | 1930 | 75 | 1. | | | | | |

```
 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR        24-HR        72-HR      24.00-HR
+  (CFS)       (HR)
                          (CFS)
+      1.       .25                   1.           1.           1.           1.
                        (INCHES)    5.579       22.314       22.314       22.314
                         (AC-FT)       0.           1.           1.           1.

                        CUMULATIVE AREA =      .00 SQ MI
```

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

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          **************
          *            *
346 KK    *    SHD10C  *
          *            *
          **************

347 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH ATLANTIC AVENUE CHANNEL at RR TRACKS

               HYDROGRAPH ROUTING DATA

349 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

350 RC          NORMAL DEPTH CHANNEL ROUTING
                        ANL        .080  LEFT OVERBANK N-VALUE
                       ANCH        .030  MAIN CHANNEL N-VALUE
                        ANR        .080  RIGHT OVERBANK N-VALUE
                      RLNTH        800.  REACH LENGTH
                        SEL       .0070  ENERGY SLOPE
                      ELMAX        63.0  MAX. ELEV. FOR STORAGE/OUTFLOW CALCULATION

                                          CROSS-SECTION DATA
                          --- LEFT OVERBANK --- + ------ MAIN CHANNEL ------- + --- RIGHT OVERBANK ---
352 RY        ELEVATION    63.00    62.50    62.00    54.20    54.20    62.00    62.50    63.00
351 RX        DISTANCE       .00    10.00    20.00    28.00    42.00    50.00    60.00    70.00

                                                          ***

                                          COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE       .00      .12      .25      .39      .54      .70      .86     1.03     1.21     1.40
          OUTFLOW       .00    16.05    50.89   100.12   162.22   236.42   322.34   419.79   528.71   649.14
        ELEVATION     54.20    54.66    55.13    55.59    56.05    56.52    56.98    57.44    57.91    58.37

          STORAGE      1.59     1.80     2.01     2.23     2.46     2.70     2.94     3.19     3.55     4.07
          OUTFLOW    781.14   924.85  1080.41  1247.98  1427.76  1619.93  1824.69  2050.08  2334.15  2644.58
        ELEVATION     58.83    59.29    59.76    60.22    60.68    61.15    61.61    62.07    62.54    63.00

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO     2645.
                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.)

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

                                                HYDROGRAPH AT STATION   SHD10C

*****************************************************************************************************************************
                                                 *                                        *
 DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE
                                                 *                                        *
 28 FEB 0100   1      0.       .0    54.2 * 28 FEB 0915  34      2.       .0    54.3 * 28 FEB 1730  67      21.       .1    54.7
 28 FEB 0115   2      1.       .0    54.2 * 28 FEB 0930  35      3.       .0    54.3 * 28 FEB 1745  68      21.       .1    54.7
    FEB 0130   3      1.       .0    54.2 * 28 FEB 0945  36      3.       .0    54.3 * 28 FEB 1800  69      22.       .1    54.7
    FEB 0145   4      1.       .0    54.2 * 28 FEB 1000  37      3.       .0    54.3 * 28 FEB 1815  70      22.       .1    54.7
 28 FEB 0200   5      1.       .0    54.2 * 28 FEB 1015  38      4.       .0    54.3 * 28 FEB 1830  71      22.       .1    54.7
 28 FEB 0215   6      1.       .0    54.2 * 28 FEB 1030  39      4.       .0    54.3 * 28 FEB 1845  72      23.       .1    54.8
 28 FEB 0230   7      1.       .0    54.2 * 28 FEB 1045  40      5.       .0    54.3 * 28 FEB 1900  73      23.       .1    54.8
```

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0245 | 8 | 1. | .0 | 54.2 * | 28 FEB 1100 | 41 | 5. | .0 | 54.4 * | 28 FEB 1915 | 74 | 24. | .2 | 54.8 |
| 28 FEB 0300 | 9 | 1. | .0 | 54.2 * | 28 FEB 1115 | 42 | 6. | .0 | 54.4 * | 28 FEB 1930 | 75 | 25. | .2 | 54.8 |
| 28 FEB 0315 | 10 | 1. | .0 | 54.2 * | 28 FEB 1130 | 43 | 7. | .1 | 54.4 * | 28 FEB 1945 | 76 | 26. | .2 | 54.8 |
| 28 FEB 0330 | 11 | 1. | .0 | 54.2 * | 28 FEB 1145 | 44 | 8. | .1 | 54.4 * | 28 FEB 2000 | 77 | 27. | .2 | 54.8 |
| 28 FEB 0345 | 12 | 1. | .0 | 54.2 * | 28 FEB 1200 | 45 | 9. | .1 | 54.5 * | 28 FEB 2015 | 78 | 27. | .2 | 5 |
| 28 FEB 0400 | 13 | 1. | .0 | 54.2 * | 28 FEB 1215 | 46 | 11. | .1 | 54.5 * | 28 FEB 2030 | 79 | 28. | .2 | 5 |
| 28 FEB 0415 | 14 | 1. | .0 | 54.2 * | 28 FEB 1230 | 47 | 14. | .1 | 54.6 * | 28 FEB 2045 | 80 | 29. | .2 | 54.8 |
| 28 FEB 0430 | 15 | 1. | .0 | 54.2 * | 28 FEB 1245 | 48 | 20. | .1 | 54.7 * | 28 FEB 2100 | 81 | 29. | .2 | 54.8 |
| 28 FEB 0445 | 16 | 1. | .0 | 54.2 * | 28 FEB 1300 | 49 | 32. | .2 | 54.9 * | 28 FEB 2115 | 82 | 29. | .2 | 54.8 |
| 28 FEB 0500 | 17 | 1. | .0 | 54.2 * | 28 FEB 1315 | 50 | 63. | .3 | 55.2 * | 28 FEB 2130 | 83 | 29. | .2 | 54.8 |
| 28 FEB 0515 | 18 | 1. | .0 | 54.2 * | 28 FEB 1330 | 51 | 93. | .4 | 55.5 * | 28 FEB 2145 | 84 | 29. | .2 | 54.8 |
| 28 FEB 0530 | 19 | 1. | .0 | 54.2 * | 28 FEB 1345 | 52 | 91. | .4 | 55.5 * | 28 FEB 2200 | 85 | 29. | .2 | 54.8 |
| 28 FEB 0545 | 20 | 1. | .0 | 54.2 * | 28 FEB 1400 | 53 | 74. | .3 | 55.3 * | 28 FEB 2215 | 86 | 29. | .2 | 54.8 |
| 28 FEB 0600 | 21 | 1. | .0 | 54.2 * | 28 FEB 1415 | 54 | 55. | .3 | 55.2 * | 28 FEB 2230 | 87 | 29. | .2 | 54.8 |
| 28 FEB 0615 | 22 | 1. | .0 | 54.2 * | 28 FEB 1430 | 55 | 42. | .2 | 55.0 * | 28 FEB 2245 | 88 | 28. | .2 | 54.8 |
| 28 FEB 0630 | 23 | 1. | .0 | 54.2 * | 28 FEB 1445 | 56 | 33. | .2 | 54.9 * | 28 FEB 2300 | 89 | 28. | .2 | 54.8 |
| 28 FEB 0645 | 24 | 1. | .0 | 54.2 * | 28 FEB 1500 | 57 | 28. | .2 | 54.8 * | 28 FEB 2315 | 90 | 28. | .2 | 54.8 |
| 28 FEB 0700 | 25 | 1. | .0 | 54.2 * | 28 FEB 1515 | 58 | 25. | .2 | 54.8 * | 28 FEB 2330 | 91 | 27. | .2 | 54.8 |
| 28 FEB 0715 | 26 | 1. | .0 | 54.2 * | 28 FEB 1530 | 59 | 23. | .2 | 54.8 * | 28 FEB 2345 | 92 | 27. | .2 | 54.8 |
| 28 FEB 0730 | 27 | 1. | .0 | 54.2 * | 28 FEB 1545 | 60 | 22. | .1 | 54.7 * | 1 MAR 0000 | 93 | 27. | .2 | 54.8 |
| 28 FEB 0745 | 28 | 1. | .0 | 54.2 * | 28 FEB 1600 | 61 | 22. | .1 | 54.7 * | 1 MAR 0015 | 94 | 27. | .2 | 54.8 |
| 28 FEB 0800 | 29 | 1. | .0 | 54.2 * | 28 FEB 1615 | 62 | 22. | .1 | 54.7 * | 1 MAR 0030 | 95 | 26. | .2 | 54.8 |
| 28 FEB 0815 | 30 | 1. | .0 | 54.2 * | 28 FEB 1630 | 63 | 21. | .1 | 54.7 * | 1 MAR 0045 | 96 | 26. | .2 | 54.8 |
| 28 FEB 0830 | 31 | 2. | .0 | 54.2 * | 28 FEB 1645 | 64 | 21. | .1 | 54.7 * | 1 MAR 0100 | 97 | 26. | .2 | 54.8 |
| 28 FEB 0845 | 32 | 2. | .0 | 54.3 * | 28 FEB 1700 | 65 | 21. | .1 | 54.7 * | | | | | |
| 28 FEB 0900 | 33 | 2. | .0 | 54.3 * | 28 FEB 1715 | 66 | 22. | .1 | 54.7 * | | | | | |
| | | | | * | | | | | * | | | | | |

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

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 93. | 12.50 | | 35. | 17. | 17. | 17. |
| | | (INCHES) | 4.020 | 7.848 | 7.848 | 7.848 |
| | | (AC-FT) | 17. | 34. | 34. | 34. |

| PEAK STORAGE | TIME | MAXIMUM AVERAGE STORAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (AC-FT) | (HR) | | | | |
| 0. | 12.50 | 0. | 0. | 0. | 0. |

| PEAK STAGE | TIME | MAXIMUM AVERAGE STAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (FEET) | (HR) | | | | |
| 55.53 | 12.50 | 54.90 | 54.57 | 54.57 | 54.57 |

CUMULATIVE AREA = .08 SQ MI

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

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          **************
          *            *
353 KK    *   4DCHAB   *
          *            *
          **************
```

354 KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

DIRECT INPUT OF HYDROGRAPH FROM NW WOBURN & WILMINGTON

```
  6 IN          TIME DATA FOR INPUT TIME SERIES
                      JXMIN          15  TIME INTERVAL IN MINUTES
                     JXDATE     28FEB91  STARTING DATE
                     JXTIME         100  STARTING TIME

              SUBBASIN RUNOFF DATA

356 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .26  SUBBASIN AREA

                                                    ***
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HYDROGRAPH AT STATION 4DCHAB

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| DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | 28 FEB 0715 | 26 | 0. | 28 FEB 1330 | 51 | 116. | 28 FEB 1945 | 76 | 25. |
| 28 FEB 0115 | 2 | 0. | 28 FEB 0730 | 27 | 0. | 28 FEB 1345 | 52 | 87. | 28 FEB 2000 | 77 | 25. |
| 28 FEB 0130 | 3 | 0. | 28 FEB 0745 | 28 | 0. | 28 FEB 1400 | 53 | 61. | 28 FEB 2015 | 78 | 25. |
| 28 FEB 0145 | 4 | 0. | 28 FEB 0800 | 29 | 0. | 28 FEB 1415 | 54 | 47. | 28 FEB 2030 | 79 | 25. |
| 28 FEB 0200 | 5 | 0. | 28 FEB 0815 | 30 | 0. | 28 FEB 1430 | 55 | 37. | 28 FEB 2045 | 80 | 25. |
| 28 FEB 0215 | 6 | 0. | 28 FEB 0830 | 31 | 0. | 28 FEB 1445 | 56 | 32. | 28 FEB 2100 | 81 | 25. |
| 28 FEB 0230 | 7 | 0. | 28 FEB 0845 | 32 | 0. | 28 FEB 1500 | 57 | 30. | 28 FEB 2115 | 82 | 25. |
| 28 FEB 0245 | 8 | 0. | 28 FEB 0900 | 33 | 0. | 28 FEB 1515 | 58 | 29. | 28 FEB 2130 | 83 | 24. |
| 28 FEB 0300 | 9 | 0. | 28 FEB 0915 | 34 | 1. | 28 FEB 1530 | 59 | 28. | 28 FEB 2145 | 84 | 24. |
| 28 FEB 0315 | 10 | 0. | 28 FEB 0930 | 35 | 1. | 28 FEB 1545 | 60 | 27. | 28 FEB 2200 | 85 | 24. |
| 28 FEB 0330 | 11 | 0. | 28 FEB 0945 | 36 | 1. | 28 FEB 1600 | 61 | 27. | 28 FEB 2215 | 86 | 24. |
| 28 FEB 0345 | 12 | 0. | 28 FEB 1000 | 37 | 1. | 28 FEB 1615 | 62 | 27. | 28 FEB 2230 | 87 | 24. |
| 3 FEB 0400 | 13 | 0. | 28 FEB 1015 | 38 | 2. | 28 FEB 1630 | 63 | 26. | 28 FEB 2245 | 88 | 24. |
| 28 FEB 0415 | 14 | 0. | 28 FEB 1030 | 39 | 2. | 28 FEB 1645 | 64 | 26. | 28 FEB 2300 | 89 | 24. |
| 28 FEB 0430 | 15 | 0. | 28 FEB 1045 | 40 | 3. | 28 FEB 1700 | 65 | 26. | 28 FEB 2315 | 90 | 24. |
| 28 FEB 0445 | 16 | 0. | 28 FEB 1100 | 41 | 3. | 28 FEB 1715 | 66 | 26. | 28 FEB 2330 | 91 | 24. |
| 28 FEB 0500 | 17 | 0. | 28 FEB 1115 | 42 | 4. | 28 FEB 1730 | 67 | 26. | 28 FEB 2345 | 92 | 24. |
| 28 FEB 0515 | 18 | 0. | 28 FEB 1130 | 43 | 5. | 28 FEB 1745 | 68 | 26. | 1 MAR 0000 | 93 | 23. |
| 28 FEB 0530 | 19 | 0. | 28 FEB 1145 | 44 | 6. | 28 FEB 1800 | 69 | 26. | 1 MAR 0015 | 94 | 23. |
| 28 FEB 0545 | 20 | 0. | 28 FEB 1200 | 45 | 7. | 28 FEB 1815 | 70 | 26. | 1 MAR 0030 | 95 | 23. |
| 28 FEB 0600 | 21 | 0. | 28 FEB 1215 | 46 | 10. | 28 FEB 1830 | 71 | 26. | 1 MAR 0045 | 96 | 23. |
| 28 FEB 0615 | 22 | 0. | 28 FEB 1230 | 47 | 14. | 28 FEB 1845 | 72 | 26. | 1 MAR 0100 | 97 | 23. |
| 28 FEB 0630 | 23 | 0. | 28 FEB 1245 | 48 | 21. | 28 FEB 1900 | 73 | 26. | | | |
| 28 FEB 0645 | 24 | 0. | 28 FEB 1300 | 49 | 37. | 28 FEB 1915 | 74 | 26. | | | |
| 28 FEB 0700 | 25 | 0. | 28 FEB 1315 | 50 | 88. | 28 FEB 1930 | 75 | 25. | | | |

**********

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 116. | 12.50 | | 39. | 17. | 17. | 17. |
| | | (INCHES) | 1.392 | 2.407 | 2.407 | 2.407 |
| | | (AC-FT) | 19. | 33. | 33. | 33. |

CUMULATIVE AREA = .26 SQ MI

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

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          *           *
367 KK    *      2PN  *
          *           *
          **************

368 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

             SUBBASIN RUNOFF DATA

370 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .01  SUBBASIN AREA

                PRECIPITATION DATA

371 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .01

372 LS          SCS LOSS RATE
                      STRTL         .35  INITIAL ABSTRACTION
                     CRVNBR       85.00  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

373 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .28  LAG

                                                          ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                     UNIT HYDROGRAPH
                                                 8 END-OF-PERIOD ORDINATES
                7.        9.        3.        1.        0.        0.        0.        0.

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

                                                 HYDROGRAPH AT STATION      2PN

*****************************************************************************************************************************
                                                          *
     DA MON HRMN  ORD    RAIN    LOSS  EXCESS     COMP Q  *     DA MON HRMN  ORD    RAIN    LOSS  EXCESS     COMP Q
                                                          *
     28 FEB 0100    1     .00     .00     .00         0.  *     28 FEB 1315   50    1.30     .17    1.13        12.
     28 FEB 0115    2     .02     .02     .00         0.  *     28 FEB 1330   51     .34     .03     .31        14.
     28 FEB 0130    3     .02     .02     .00         0.  *     28 FEB 1345   52     .23     .02     .21         9.
     28 FEB 0145    4     .02     .02     .00         0.  *     28 FEB 1400   53     .19     .01     .17         6.
     28 FEB 0200    5     .02     .02     .00         0.  *     28 FEB 1415   54     .11     .01     .10         4.
     28 FEB 0215    6     .02     .02     .00         0.  *     28 FEB 1430   55     .10     .01     .09         3.
     28 FEB 0230    7     .02     .02     .00         0.  *     28 FEB 1445   56     .09     .01     .09         2.
     28 FEB 0245    8     .02     .02     .00         0.  *     28 FEB 1500   57     .09     .01     .0.         2.
     28 FEB 0300    9     .02     .02     .00         0.  *     28 FEB 1515   58     .08     .01     .07         2.
     28 FEB 0315   10     .02     .02     .00         0.  *     28 FEB 1530   59     .07     .00     .07         2.
     28 FEB 0330   11     .02     .02     .00         0.  *     28 FEB 1545   60     .07     .00     .06         1.
     28 FEB 0345   12     .02     .02     .00         0.  *     28 FEB 1600   61     .06     .00     .06         1.
     28 FEB 0400   13     .02     .02     .00         0.  *     28 FEB 1615   62     .05     .00     .05         1.
     28 FEB 0415   14     .02     .02     .00         0.  *     28 FEB 1630   63     .05     .00     .05         1.
     28 FEB 0430   15     .02     .02     .00         0.  *     28 FEB 1645   64     .05     .00     .05         1.
     28 FEB 0445   16     .02     .02     .00         0.  *     28 FEB 1700   65     .05     .00     .04         1.
     28 FEB 0500   17     .02     .02     .00         0.  *     28 FEB 1715   66     .04     .00     .04         1.
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| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .00 | .04 | 1. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 1. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .04 | 1. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .04 | 1. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .02 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .02 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .02 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .03 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .01 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .03 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .01 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .03 | .01 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .03 | .01 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 0. |
| 28 FEB 0815 | 30 | .04 | .03 | .01 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 0. |
| 28 FEB 0830 | 31 | .04 | .03 | .01 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 0. |
| 28 FEB 0845 | 32 | .04 | .03 | .01 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 0. |
| 28 FEB 0900 | 33 | .04 | .03 | .01 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 0. |
| 28 FEB 0915 | 34 | .04 | .03 | .02 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 0. |
| 28 FEB 0930 | 35 | .05 | .03 | .02 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .03 | .02 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .03 | .02 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .03 | .03 | 1. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .03 | .03 | 1. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |
| 28 FEB 1045 | 40 | .07 | .03 | .04 | 1. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 0. |
| 28 FEB 1100 | 41 | .07 | .03 | .04 | 1. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |
| 28 FEB 1115 | 42 | .08 | .03 | .05 | 1. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 0. |
| 28 FEB 1130 | 43 | .09 | .04 | .05 | 1. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 0. |
| 28 FEB 1145 | 44 | .09 | .03 | .06 | 1. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 0. |
| 28 FEB 1200 | 45 | .10 | .04 | .07 | 1. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 0. |
| 28 FEB 1215 | 46 | .17 | .05 | .12 | 2. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 0. |
| 28 FEB 1230 | 47 | .21 | .06 | .15 | 2. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 0. |
| 28 FEB 1245 | 48 | .27 | .07 | .21 | 3. | * | 1 MAR 0100 | 97 | .02 | .00 | .02 | 0. |
| 28 FEB 1300 | 49 | .59 | .12 | .47 | 6. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = 1.73, TOTAL EXCESS = 4.87

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 14. | 12.50 | | 3. | 1. | 1. | 1. |
| | | (INCHES) | 3.790 | 4.846 | 4.846 | 4.846 |
| | | (AC-FT) | 2. | 2. | 2. | 2. |

CUMULATIVE AREA = .01 SQ MI

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

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              **************
              *            *
377 KK        *     PXDPR  *
              *            *
              **************
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378 KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

ROUTING OF NW WOBURN & WILMINGTON THROUGH PX DEPRESSED AREA

HYDROGRAPH ROUTING DATA

```
380 RS          STORAGE ROUTING
                     NSTPS          1  NUMBER OF SUBREACHES
                      ITYP       ELEV  TYPE OF INITIAL CONDITION
                    RSVRIC      68.90  INITIAL CONDITION
                         X        .00 WORKING R AND D COEFFICIENT

381 SA              AREA         .0        .3        .7        .9

382 SE          ELEVATION      68.00     69.00     70.00     71.00

383 SL          LOW-LEVEL OUTLET   .
                     ELEVL      68.90  ELEVATION AT CENTER OF OUTLET
                     CAREA       7.07  CROSS-SECTIONAL AREA
                      COQL        .60  COEFFICIENT
                      EXPL        .50  EXPONENT OF HEAD

384 SS          SPILLWAY
                      CREL      70.90  SPILLWAY CREST ELEVATION
                     SPWID      30.00  SPILLWAY WIDTH
                      COQW       3.00  WEIR COEFFICIENT
                      EXPW       1.50  EXPONENT OF HEAD

                                                  ***

                                        COMPUTED STORAGE-ELEVATION DATA

          STORAGE       .00       .10       .59      1.41
        ELEVATION     68.00     69.00     70.00     71.00

                                        COMPUTED OUTFLOW-ELEVATION DATA

          OUTFLOW       .00       .00     39.32     40.37     41.48     42.66     43.90     45.22     46.62     48.11
        ELEVATION     68.00     68.90     70.24     70.31     70.39     70.47     70.57     70.67     70.78     70.90

          OUTFLOW     48.39     48.55     48.76     49.03     49.35     49.75     50.22     50.77     51.41     52.15
        ELEVATION     70.91     70.92     70.92     70.93     70.94     70.95     70.96     70.97     70.99     71.00

                                       COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE       .00       .07       .10       .59       .76       .82       .88       .95      1.03      1.11
          OUTFLOW       .00       .00     10.76     35.68     39.32     40.37     41.48     42.66     43.90     45.22
        ELEVATION     68.00     68.90     69.00     70.00     70.24     70.31     70.39     70.47     70.57     70.67

          STORAGE      1.21      1.32      1.33      1.34      1.36      1.38      1.39      1.40      1.41
          OUTFLOW     46.62     48.11     48.39     48.76     49.35     50.22     50.77     51.41     52.15
        ELEVATION     70.78     70.90     70.91     70.92     70.94     70.96     70.97     70.99     71.00

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO       11.
               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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                                        HYDROGRAPH AT STATION    PXDPR

*****************************************************************************************************************************
                                                 *                                                *
DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE
                                         *                                                *
28 FEB 0100   1      0.       .1    68.9 * 28 FEB 0915  34       1.       .1    68.9 * 28 FEB 1730  67      27.       .4    69
28 FEB 0115   2      0.       .1    68.9 * 28 FEB 0930  35       1.       .1    68.9 * 28 FEB 1745  68      27.       .4    69.6
28 FEB 0130   3      0.       .1    68.9 * 28 FEB 0945  36       1.       .1    68.9 * 28 FEB 1800  69      27.       .4    69.6
28 FEB 0145   4      0.       .1    68.9 * 28 FEB 1000  37       1.       .1    68.9 * 28 FEB 1815  70      27.       .4    69.6
28 FEB 0200   5      0.       .1    68.9 * 28 FEB 1015  38       2.       .1    68.9 * 28 FEB 1830  71      27.       .4    69.6
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28 FEB 0215   6      0.      .1    68.9 * 28 FEB 1030  39      3.      .1    68.9 * 28 FEB 1845  72     27.      .4    69.6
28 FEB 0230   7      0.      .1    68.9 * 28 FEB 1045  40      3.      .1    68.9 * 28 FEB 1900  73     27.      .4    69.6
28 FEB 0245   8      0.      .1    68.9 * 28 FEB 1100  41      4.      .1    68.9 * 28 FEB 1915  74     27.      .4    69.6
28 FEB 0300   9      0.      .1    68.9 * 28 FEB 1115  42      5.      .1    68.9 * 28 FEB 1930  75     26.      .4    69.6
   FEB 0315  10      0.      .1    68.9 * 28 FEB 1130  43      6.      .1    69.0 * 28 FEB 1945  76     26.      .4    69.6
   FEB 0330  11      0.      .1    68.9 * 28 FEB 1145  44      7.      .1    69.0 * 28 FEB 2000  77     26.      .4    69.6
28 FEB 0345  12      0.      .1    68.9 * 28 FEB 1200  45      8.      .1    69.0 * 28 FEB 2015  78     26.      .4    69.6
28 FEB 0400  13      0.      .1    68.9 * 28 FEB 1215  46     11.      .1    69.0 * 28 FEB 2030  79     26.      .4    69.6
28 FEB 0415  14      0.      .1    68.9 * 28 FEB 1230  47     13.      .1    69.1 * 28 FEB 2045  80     25.      .4    69.6
28 FEB 0430  15      0.      .1    68.9 * 28 FEB 1245  48     18.      .2    69.3 * 28 FEB 2100  81     25.      .4    69.6
28 FEB 0445  16      0.      .1    68.9 * 28 FEB 1300  49     29.      .4    69.7 * 28 FEB 2115  82     25.      .4    69.6
28 FEB 0500  17      0.      .1    68.9 * 28 FEB 1315  50     46.     1.2    70.7 * 28 FEB 2130  83     25.      .4    69.6
28 FEB 0515  18      0.      .1    68.9 * 28 FEB 1330  51     92.     2.1    71.7 * 28 FEB 2145  84     25.      .4    69.6
28 FEB 0530  19      0.      .1    68.9 * 28 FEB 1345  52    107.     2.4    72.0 * 28 FEB 2200  85     24.      .4    69.6
28 FEB 0545  20      0.      .1    68.9 * 28 FEB 1400  53     88.     2.0    71.7 * 28 FEB 2215  86     24.      .4    69.5
28 FEB 0600  21      0.      .1    68.9 * 28 FEB 1415  54     66.     1.7    71.3 * 28 FEB 2230  87     24.      .4    69.5
28 FEB 0615  22      0.      .1    68.9 * 28 FEB 1430  55     51.     1.4    71.0 * 28 FEB 2245  88     24.      .4    69.5
28 FEB 0630  23      0.      .1    68.9 * 28 FEB 1445  56     46.     1.2    70.7 * 28 FEB 2300  89     24.      .4    69.5
28 FEB 0645  24      0.      .1    68.9 * 28 FEB 1500  57     42.      .9    70.4 * 28 FEB 2315  90     24.      .4    69.5
28 FEB 0700  25      0.      .1    68.9 * 28 FEB 1515  58     39.      .7    70.2 * 28 FEB 2330  91     24.      .4    69.5
28 FEB 0715  26      0.      .1    68.9 * 28 FEB 1530  59     36.      .6    70.0 * 28 FEB 2345  92     24.      .4    69.5
28 FEB 0730  27      0.      .1    68.9 * 28 FEB 1545  60     31.      .5    69.8 *  1 MAR 0000  93     24.      .4    69.5
28 FEB 0745  28      0.      .1    68.9 * 28 FEB 1600  61     29.      .5    69.7 *  1 MAR 0015  94     24.      .3    69.5
28 FEB 0800  29      0.      .1    68.9 * 28 FEB 1615  62     29.      .4    69.7 *  1 MAR 0030  95     23.      .3    69.5
28 FEB 0815  30      0.      .1    68.9 * 28 FEB 1630  63     28.      .4    69.7 *  1 MAR 0045  96     23.      .3    69.5
28 FEB 0830  31      0.      .1    68.9 * 28 FEB 1645  64     27.      .4    69.7 *  1 MAR 0100  97     23.      .3    69.5
28 FEB 0845  32      0.      .1    68.9 * 28 FEB 1700  65     27.      .4    69.7 *
28 FEB 0900  33      0.      .1    68.9 * 28 FEB 1715  66     27.      .4    69.7 *
                                         *                                        *
*****************************************************************************************************************************

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
    CFS)       (HR)
                          (CFS)
+     107.     12.75                 42.         18.         18.         18.
                         (INCHES)  1.450       2.461       2.461       2.461
                          (AC-FT)   21.         35.         35.         35.

 PEAK STORAGE  TIME                          MAXIMUM AVERAGE STORAGE
                                     6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)     (HR)
       2.     12.75                  1.          0.          0.          0.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                     6-HR       24-HR       72-HR     24.00-HR
+   (FEET)     (HR)
    72.04     12.75                70.22       69.41       69.41       69.41

                         CUMULATIVE AREA =     .27 SQ MI


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


          **************
          *            *
385 KK    *     4ECHL  *
          *            *
          **************

386 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
```

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                    QSCAL          0.  HYDROGRAPH PLOT SCALE
                              DIRECT INPUT OF HYDROGRAPH FROM NW WOBURN & WILMINGTON

  6 IN          TIME DATA FOR INPUT TIME SERIES
                     JXMIN          15  TIME INTERVAL IN MINUTES
                    JXDATE     28FEB91  STARTING DATE
                    JXTIME         100  STARTING TIME

             SUBBASIN RUNOFF DATA

388 BA          SUBBASIN CHARACTERISTICS
                     TAREA         .30  SUBBASIN AREA
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HYDROGRAPH AT STATION 4ECHL

| DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | 28 FEB 0715 | 26 | 0. | 28 FEB 1330 | 51 | 75. | 28 FEB 1945 | 76 | 18. |
| 28 FEB 0115 | 2 | 0. | 28 FEB 0730 | 27 | 0. | 28 FEB 1345 | 52 | 75. | 28 FEB 2000 | 77 | 18. |
| 28 FEB 0130 | 3 | 0. | 28 FEB 0745 | 28 | 0. | 28 FEB 1400 | 53 | 75. | 28 FEB 2015 | 78 | 17. |
| 28 FEB 0145 | 4 | 0. | 28 FEB 0800 | 29 | 0. | 28 FEB 1415 | 54 | 75. | 28 FEB 2030 | 79 | 17. |
| 28 FEB 0200 | 5 | 0. | 28 FEB 0815 | 30 | 0. | 28 FEB 1430 | 55 | 75. | 28 FEB 2045 | 80 | 16. |
| 28 FEB 0215 | 6 | 0. | 28 FEB 0830 | 31 | 0. | 28 FEB 1445 | 56 | 75. | 28 FEB 2100 | 81 | 16. |
| 28 FEB 0230 | 7 | 0. | 28 FEB 0845 | 32 | 0. | 28 FEB 1500 | 57 | 75. | 28 FEB 2115 | 82 | 15. |
| 28 FEB 0245 | 8 | 0. | 28 FEB 0900 | 33 | 1. | 28 FEB 1515 | 58 | 75. | 28 FEB 2130 | 83 | 15. |
| 28 FEB 0300 | 9 | 0. | 28 FEB 0915 | 34 | 3. | 28 FEB 1530 | 59 | 75. | 28 FEB 2145 | 84 | 15. |
| 28 FEB 0315 | 10 | 0. | 28 FEB 0930 | 35 | 3. | 28 FEB 1545 | 60 | 75. | 28 FEB 2200 | 85 | 14. |
| 28 FEB 0330 | 11 | 0. | 28 FEB 0945 | 36 | 5. | 28 FEB 1600 | 61 | 75. | 28 FEB 2215 | 86 | 14 |
| 28 FEB 0345 | 12 | 0. | 28 FEB 1000 | 37 | 6. | 28 FEB 1615 | 62 | 75. | 28 FEB 2230 | 87 | 14. |
| 28 FEB 0400 | 13 | 0. | 28 FEB 1015 | 38 | 7. | 28 FEB 1630 | 63 | 75. | 28 FEB 2245 | 88 | 13. |
| 28 FEB 0415 | 14 | 0. | 28 FEB 1030 | 39 | 9. | 28 FEB 1645 | 64 | 74. | 28 FEB 2300 | 89 | 13. |
| 28 FEB 0430 | 15 | 0. | 28 FEB 1045 | 40 | 11. | 28 FEB 1700 | 65 | 61. | 28 FEB 2315 | 90 | 13. |
| 28 FEB 0445 | 16 | 0. | 28 FEB 1100 | 41 | 13. | 28 FEB 1715 | 66 | 48. | 28 FEB 2330 | 91 | 13. |
| 28 FEB 0500 | 17 | 0. | 28 FEB 1115 | 42 | 16. | 28 FEB 1730 | 67 | 33. | 28 FEB 2345 | 92 | 12. |
| 28 FEB 0515 | 18 | 0. | 28 FEB 1130 | 43 | 19. | 28 FEB 1745 | 68 | 28. | 1 MAR 0000 | 93 | 12. |
| 28 FEB 0530 | 19 | 0. | 28 FEB 1145 | 44 | 22. | 28 FEB 1800 | 69 | 27. | 1 MAR 0015 | 94 | 12. |
| 28 FEB 0545 | 20 | 0. | 28 FEB 1200 | 45 | 26. | 28 FEB 1815 | 70 | 26. | 1 MAR 0030 | 95 | 12. |
| 28 FEB 0600 | 21 | 0. | 28 FEB 1215 | 46 | 35. | 28 FEB 1830 | 71 | 25. | 1 MAR 0045 | 96 | 12. |
| 28 FEB 0615 | 22 | 0. | 28 FEB 1230 | 47 | 47. | 28 FEB 1845 | 72 | 24. | 1 MAR 0100 | 97 | 11. |
| 28 FEB 0630 | 23 | 0. | 28 FEB 1245 | 48 | 59. | 28 FEB 1900 | 73 | 24. | | | |
| 28 FEB 0645 | 24 | 0. | 28 FEB 1300 | 49 | 75. | 28 FEB 1915 | 74 | 22. | | | |
| 28 FEB 0700 | 25 | 0. | 28 FEB 1315 | 50 | 75. | 28 FEB 1930 | 75 | 20. | | | |

```
 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR        24-HR        72-HR      24.00-HR
+  (CFS)       (HR)
                          (CFS)
+     75.     12.00                   64.          22.          22.          22.
                          (INCHES)  1.984        2.745        2.745        2.745
                          (AC-FT)     32.          44.          44.          44.

                          CUMULATIVE AREA =     .30 SQ MI
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

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              **************
              *            *
399 KK        *        1P  *
              *            *
              **************

400 KO            OUTPUT CONTROL VARIABLES
                        IPRNT          1  PRINT CONTROL
                        IPLOT          0  PLOT CONTROL
                        QSCAL         0.  HYDROGRAPH PLOT SCALE
                                 SCS RUNOFF CALCULATION

                SUBBASIN RUNOFF DATA

402 BA            SUBBASIN CHARACTERISTICS
                        TAREA        .02  SUBBASIN AREA

                  PRECIPITATION DATA

403 PH                                 DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                  ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                  5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                    .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .02

404 LS            SCS LOSS RATE
                        STRTL        .30  INITIAL ABSTRACTION
                       CRVNBR      87.00  CURVE NUMBER
                        RTIMP        .00  PERCENT IMPERVIOUS AREA

405 UD            SCS DIMENSIONLESS UNITGRAPH
                         TLAG        .31  LAG

                                                          ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                   UNIT HYDROGRAPH
                                              8 END-OF-PERIOD ORDINATES
                14.       23.       10.        4.        2.        1.        0.        0.

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

                                                HYDROGRAPH AT STATION       1P

*****************************************************************************************************************************
                                                                  *
     DA MON HRMN  ORD    RAIN    LOSS  EXCESS     COMP Q         *      DA MON HRMN  ORD    RAIN    LOSS  EXCESS     COMP Q
                                                                  *
     28 FEB 0100    1     .00     .00     .00         0.         *      28 FEB 1315   50    1.30     .13    1.17        31.
     28 FEB 0115    2     .02     .02     .00         0.         *      28 FEB 1330   51     .34     .02     .31        37.
     28 FEB 0130    3     .02     .02     .00         0.         *      28 FEB 1345   52     .23     .02     .22        25.
     28 FEB 0145    4     .02     .02     .00         0.         *      28 FEB 1400   53     .19     .01     .18        17.
     28 FEB 0200    5     .02     .02     .00         0.         *      28 FEB 1415   54     .11     .01     .10        11.
     28 FEB 0215    6     .02     .02     .00         0.         *      28 FEB 1430   55     .10     .01     .09         8.
     28 FEB 0230    7     .02     .02     .00         0.         *      28 FEB 1445   56     .09     .01     .09         6.
     28 FEB 0245    8     .02     .02     .00         0.         *      28 FEB 1500   57     .09     .00     .08         5.
     28 FEB 0300    9     .02     .02     .00         0.         *      28 FEB 1515   58     .08     .00     .07         5.
     28 FEB 0315   10     .02     .02     .00         0.         *      28 FEB 1530   59     .07     .00     .07         4.
     28 FEB 0330   11     .02     .02     .00         0.         *      28 FEB 1545   60     .07     .00     .06         4.
     28 FEB 0345   12     .02     .02     .00         0.         *      28 FEB 1600   61     .06     .00     .06         4.
     28 FEB 0400   13     .02     .02     .00         0.         *      28 FEB 1615   62     .05     .00     .05         3.
     28 FEB 0415   14     .02     .02     .00         0.         *      28 FEB 1630   63     .05     .00     .05         3.
     28 FEB 0430   15     .02     .02     .00         0.         *      28 FEB 1645   64     .05     .00     .05         3.
```

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 FEB 1700 | 65 | .05 | .00 | .04 | 3. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 FEB 1715 | 66 | .04 | .00 | .04 | 2. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .00 | .04 | 2. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 2. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .04 | 2. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .04 | 2. |
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .03 | 2. |
| 28 FEB 0630 | 23 | .03 | .02 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 2. |
| 28 FEB 0645 | 24 | .03 | .02 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 2. |
| 28 FEB 0700 | 25 | .03 | .02 | .01 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .03 | 2. |
| 28 FEB 0715 | 26 | .03 | .03 | .01 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .03 | 2. |
| 28 FEB 0730 | 27 | .03 | .03 | .01 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .03 | .01 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .02 | .01 | 1. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .02 | .01 | 1. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .02 | .01 | 1. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .02 | .02 | 1. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .02 | .02 | 1. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .02 | .02 | 1. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .02 | .02 | 1. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .02 | .02 | 1. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .02 | .03 | 1. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .03 | .03 | 1. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .03 | .04 | 2. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .03 | .04 | 2. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .03 | .05 | 2. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .03 | .05 | 2. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .03 | .06 | 3. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .03 | .06 | 3. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .03 | .07 | 3. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .05 | .13 | 4. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .05 | .16 | 6. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 FEB 1245 | 48 | .28 | .06 | .22 | 9. | * | 1 MAR 0100 | 97 | .02 | .00 | .02 | 1. |
| 28 FEB 1300 | 49 | .59 | .09 | .49 | 14. | * | | | | | | |
| | | | | | | * | | | | | | |

**********

TOTAL RAINFALL = 6.60, TOTAL LOSS = 1.51, TOTAL EXCESS = 5.09

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 37. | 12.50 | | 9. | 3. | 3. | 3. |
| | | (INCHES) | 3.936 | 5.065 | 5.065 | 5.065 |
| | | (AC-FT) | 4. | 6. | 6. | 6. |

CUMULATIVE AREA = .02 SQ MI

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

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          **************
          *            *
409 KK    *    EWCLPX  *
          *            *
          **************
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410 KO OUTPUT CONTROL VARIABLES

IPRNT 1 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

CHANNEL ROUTING THROUGH E/W CHANNEL AT PX REALTY

HYDROGRAPH ROUTING DATA

```
412 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

413 RC          NORMAL DEPTH CHANNEL ROUTING
                        ANL       .080  LEFT OVERBANK N-VALUE
                       ANCH       .030  MAIN CHANNEL N-VALUE
                        ANR       .080  RIGHT OVERBANK N-VALUE
                      RLNTH       250.  REACH LENGTH
                        SEL      .0032  ENERGY SLOPE
                      ELMAX       70.5  MAX. ELEV. FOR STORAGE/OUTFLOW CALCULATION
```

CROSS-SECTION DATA

| | | --- LEFT OVERBANK --- | + | ------ MAIN CHANNEL | ------- | + | --- RIGHT OVERBANK --- | | |
|---|---|---|---|---|---|---|---|---|---|
| 415 RY | ELEVATION | 72.00 | 71.00 | 70.00 | 64.40 | 64.40 | 70.00 | 70.20 | 70.50 |
| 414 RX | DISTANCE | .00 | 5.00 | 10.00 | 16.00 | 22.00 | 28.00 | 38.00 | 48.00 |

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COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .01 | .02 | .04 | .05 | .07 | .09 | .11 | .13 | .15 |
| OUTFLOW | .00 | 2.53 | 8.05 | 15.95 | 26.08 | 38.39 | 52.88 | 69.60 | 88.60 | 109.93 |
| ELEVATION | 64.40 | 64.72 | 65.04 | 65.36 | 65.68 | 66.01 | 66.33 | 66.65 | 66.97 | 67.29 |
| STORAGE | .17 | .20 | .22 | .25 | .28 | .31 | .34 | .37 | .41 | .47 |
| OUTFLOW | 133.66 | 159.86 | 188.59 | 219.93 | 253.95 | 290.73 | 330.32 | 372.81 | 424.60 | 486.74 |
| ELEVATION | 67.61 | 67.93 | 68.25 | 68.57 | 68.89 | 69.22 | 69.54 | 69.86 | 70.18 | 70.50 |

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 0. TO 487.
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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HYDROGRAPH AT STATION EWCLPX

**********

| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | * | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | * | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 64.4 | * | 28 | FEB | 0915 | 34 | 4. | .0 | 64.8 | * | 28 | FEB | 1730 | 67 | 37. | .1 | 66.0 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 64.4 | * | 28 | FEB | 0930 | 35 | 4. | .0 | 64.8 | * | 28 | FEB | 1745 | 68 | 30. | .1 | 65.8 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 64.4 | * | 28 | FEB | 0945 | 36 | 6. | .0 | 64.9 | * | 28 | FEB | 1800 | 69 | 30. | .1 | 65.8 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 64.4 | * | 28 | FEB | 1000 | 37 | 7. | .0 | 65.0 | * | 28 | FEB | 1815 | 70 | 28. | .1 | 65.7 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 64.4 | * | 28 | FEB | 1015 | 38 | 8. | .0 | 65.0 | * | 28 | FEB | 1830 | 71 | 27. | .1 | 65.7 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 64.4 | * | 28 | FEB | 1030 | 39 | 11. | .0 | 65.1 | * | 28 | FEB | 1845 | 72 | 26. | .1 | 65.7 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 64.4 | * | 28 | FEB | 1045 | 40 | 13. | .0 | 65.2 | * | 28 | FEB | 1900 | 73 | 26. | .1 | 65.7 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 64.4 | * | 28 | FEB | 1100 | 41 | 15. | .0 | 65.3 | * | 28 | FEB | 1915 | 74 | 24. | .1 | 65.6 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 64.4 | * | 28 | FEB | 1115 | 42 | 18. | .0 | 65.4 | * | 28 | FEB | 1930 | 75 | 22. | .0 | 65.5 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 64.4 | * | 28 | FEB | 1130 | 43 | 22. | .0 | 65.5 | * | 28 | FEB | 1945 | 76 | 20. | .0 | 65.5 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 64.4 | * | 28 | FEB | 1145 | 44 | 25. | .1 | 65.6 | * | 28 | FEB | 2000 | 77 | 19. | .0 | 65.5 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 64.4 | * | 28 | FEB | 1200 | 45 | 29. | .1 | 65.8 | * | 28 | FEB | 2015 | 78 | 19. | .0 | 65.4 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 64.4 | * | 28 | FEB | 1215 | 46 | 39. | .1 | 66.0 | * | 28 | FEB | 2030 | 79 | 18. | .0 | 65.4 |
| [illegible] | FEB | 0415 | 14 | 0. | .0 | 64.4 | * | 28 | FEB | 1230 | 47 | 53. | .1 | 66.3 | * | 28 | FEB | 2045 | 80 | 18. | .0 | 65.4 |
| [illegible] | FEB | 0430 | 15 | 0. | .0 | 64.4 | * | 28 | FEB | 1245 | 48 | 67. | .1 | 66.6 | * | 28 | FEB | 2100 | 81 | 17. | .0 | 65.4 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 64.4 | * | 28 | FEB | 1300 | 49 | 88. | .1 | 67.0 | * | 28 | FEB | 2115 | 82 | 16. | .0 | 65.4 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 64.4 | * | 28 | FEB | 1315 | 50 | 106. | .1 | 67.2 | * | 28 | FEB | 2130 | 83 | 16. | .0 | 65.4 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 64.4 | * | 28 | FEB | 1330 | 51 | 112. | .2 | 67.3 | * | 28 | FEB | 2145 | 84 | 16. | .0 | 65.4 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 64.4 | * | 28 | FEB | 1345 | 52 | 101. | .1 | 67.2 | * | 28 | FEB | 2200 | 85 | 15. | .0 | 65.3 |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0545 | 20 | 0. | .0 | 64.4 | * | 28 FEB 1400 | 53 | 91. | .1 | 67.0 | * | 28 FEB 2215 | 86 | 15. | .0 | 65.3 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 64.4 | * | 28 FEB 1415 | 54 | 87. | .1 | 66.9 | * | 28 FEB 2230 | 87 | 15. | .0 | 65.3 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 64.4 | * | 28 FEB 1430 | 55 | 83. | .1 | 66.9 | * | 28 FEB 2245 | 88 | 14. | .0 | 65.3 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 64.4 | * | 28 FEB 1445 | 56 | 81. | .1 | 66.8 | * | 28 FEB 2300 | 89 | 14. | .0 | 65.3 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 64.4 | * | 28 FEB 1500 | 57 | 80. | .1 | 66.8 | * | 28 FEB 2315 | 90 | 14. | .0 | 6[illegible] |
| 28 | FEB | 0700 | 25 | 0. | .0 | 64.4 | * | 28 FEB 1515 | 58 | 80. | .1 | 66.8 | * | 28 FEB 2330 | 91 | 14. | .0 | 6. |
| 28 | FEB | 0715 | 26 | 0. | .0 | 64.4 | * | 28 FEB 1530 | 59 | 79. | .1 | 66.8 | * | 28 FEB 2345 | 92 | 13. | .0 | 65.2 |
| 28 | FEB | 0730 | 27 | 0. | .0 | 64.4 | * | 28 FEB 1545 | 60 | 79. | .1 | 66.8 | * | 1 MAR 0000 | 93 | 13. | .0 | 65.2 |
| 28 | FEB | 0745 | 28 | 0. | .0 | 64.5 | * | 28 FEB 1600 | 61 | 78. | .1 | 66.8 | * | 1 MAR 0015 | 94 | 13. | .0 | 65.2 |
| 28 | FEB | 0800 | 29 | 1. | .0 | 64.5 | * | 28 FEB 1615 | 62 | 78. | .1 | 66.8 | * | 1 MAR 0030 | 95 | 13. | .0 | 65.2 |
| 28 | FEB | 0815 | 30 | 1. | .0 | 64.5 | * | 28 FEB 1630 | 63 | 78. | .1 | 66.8 | * | 1 MAR 0045 | 96 | 13. | .0 | 65.2 |
| 28 | FEB | 0830 | 31 | 1. | .0 | 64.5 | * | 28 FEB 1645 | 64 | 77. | .1 | 66.8 | * | 1 MAR 0100 | 97 | 12. | .0 | 65.2 |
| 28 | FEB | 0845 | 32 | 1. | .0 | 64.5 | * | 28 FEB 1700 | 65 | 65. | .1 | 66.6 | * | | | | | |
| 28 | FEB | 0900 | 33 | 2. | .0 | 64.6 | * | 28 FEB 1715 | 66 | 51. | .1 | 66.3 | * | | | | | |
| | | | | | | | * | | | | | | * | | | | | |

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| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 112. | 12.50 | | 73. | 25. | 25. | 25. |
| | | (INCHES) | 2.109 | 2.895 | 2.895 | 2.895 |
| | | (AC-FT) | 36. | 50. | 50. | 50. |

| PEAK STORAGE | TIME | MAXIMUM AVERAGE STORAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (AC-FT) | (HR) | | | | |
| 0. | 12.50 | 0. | 0. | 0. | 0. |

| PEAK STAGE | TIME | MAXIMUM AVERAGE STAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (FEET) | (HR) | | | | |
| 67.32 | 12.50 | 66.67 | 65.37 | 65.37 | 65.37 |

CUMULATIVE AREA = .32 SQ MI

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

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          **************
          *            *
416 KK    *       2PS  *
          *            *
          **************
```

417 KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

SCS RUNOFF CALCULATION

SUBBASIN RUNOFF DATA

419 BA SUBBASIN CHARACTERISTICS

| | | |
|---|---|---|
| TAREA | .01 | SUBBASIN AREA |

PRECIPITATION DATA

420 PH DEPTHS FOR 0-PERCENT HYPOTHETICAL STORM

| ..... HYDRO-35 ..... | | | ..... TP-40 ..... | | | | | ..... TP-49 ..... | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-MIN | 15-MIN | 60-MIN | 2-HR | 3-HR | 6-HR | 12-HR | 24-HR | 2-DAY | 4-DAY | 7-DAY | 10-DAY |
| .60 | 1.30 | 2.50 | 3.30 | 3.70 | 4.60 | 5.60 | 6.60 | .00 | .00 | .00 | .00 |

STORM AREA = .01

```
421 LS          SCS LOSS RATE
                     STRTL        .08  INITIAL ABSTRACTION
                    CRVNBR      96.00  CURVE NUMBER
                     RTIMP        .00  PERCENT IMPERVIOUS AREA

422 UD          SCS DIMENSIONLESS UNITGRAPH
                      TLAG        .02  LAG
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***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
5 END-OF-PERIOD ORDINATES

12. 3. 1. 0. 0.

**********

HYDROGRAPH AT STATION 2PS

**********

| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | * | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | * | 28 FEB 1315 | 50 | 1.30 | .02 | 1.28 | 17. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | * | 28 FEB 1330 | 51 | .34 | .00 | .33 | 8. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | * | 28 FEB 1345 | 52 | .23 | .00 | .23 | 5. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | * | 28 FEB 1400 | 53 | .19 | .00 | .19 | 3. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | * | 28 FEB 1415 | 54 | .11 | .00 | .11 | 2. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | * | 28 FEB 1430 | 55 | .10 | .00 | .10 | 2. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | * | 28 FEB 1445 | 56 | .09 | .00 | .09 | 1. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | * | 28 FEB 1500 | 57 | .09 | .00 | .08 | 1. |
| 28 FEB 0300 | 9 | .02 | .01 | .00 | 0. | * | 28 FEB 1515 | 58 | .08 | .00 | .08 | 1. |
| 28 FEB 0315 | 10 | .02 | .01 | .00 | 0. | * | 28 FEB 1530 | 59 | .07 | .00 | .07 | 1. |
| 28 FEB 0330 | 11 | .02 | .01 | .01 | 0. | * | 28 FEB 1545 | 60 | .07 | .00 | .07 | 1. |
| 28 FEB 0345 | 12 | .02 | .01 | .01 | 0. | * | 28 FEB 1600 | 61 | .06 | .00 | .06 | 1. |
| 28 FEB 0400 | 13 | .02 | .01 | .01 | 0. | * | 28 FEB 1615 | 62 | .05 | .00 | .05 | 1. |
| 28 FEB 0415 | 14 | .02 | .01 | .01 | 0. | * | 28 FEB 1630 | 63 | .05 | .00 | .05 | 1. |
| 28 FEB 0430 | 15 | .02 | .01 | .01 | 0. | * | 28 FEB 1645 | 64 | .05 | .00 | .05 | 1. |
| 28 FEB 0445 | 16 | .02 | .01 | .01 | 0. | * | 28 FEB 1700 | 65 | .05 | .00 | .05 | 1. |
| 28 FEB 0500 | 17 | .02 | .01 | .01 | 0. | * | 28 FEB 1715 | 66 | .04 | .00 | .04 | 1. |
| 28 FEB 0515 | 18 | .02 | .01 | .01 | 0. | * | 28 FEB 1730 | 67 | .04 | .00 | .04 | 1. |
| 28 FEB 0530 | 19 | .02 | .01 | .01 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 1. |
| 28 FEB 0545 | 20 | .02 | .01 | .01 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .04 | 1. |
| 28 FEB 0600 | 21 | .02 | .01 | .02 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .04 | 1. |
| 28 FEB 0615 | 22 | .02 | .01 | .02 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .04 | 1. |
| 28 FEB 0630 | 23 | .03 | .01 | .02 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .01 | .02 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .01 | .02 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .03 | 0. |
| 28 FEB 0715 | 26 | .03 | .01 | .03 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .03 | 0. |
| 28 FEB 0730 | 27 | .03 | .01 | .03 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .03 | 0. |
| 28 FEB 0745 | 28 | .04 | .01 | .03 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 0. |
| 28 FEB 0800 | 29 | .04 | .01 | .03 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 0. |
| 28 FEB 0815 | 30 | .04 | .01 | .03 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 0. |
| 28 FEB 0830 | 31 | .04 | .01 | .03 | 1. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 0. |
| 28 FEB 0845 | 32 | .04 | .01 | .03 | 1. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 0. |
| 28 FEB 0900 | 33 | .04 | .01 | .04 | 1. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 0. |
| 28 FEB 0915 | 34 | .04 | .01 | .04 | 1. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 0. |
| 28 FEB 0930 | 35 | .05 | .01 | .04 | 1. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .01 | .04 | 1. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .01 | .05 | 1. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .01 | .06 | 1. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .01 | .06 | 1. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |

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28 FEB 1045   40    .07    .01    .06      1.      *     28 FEB 2300   89    .02    .00    .02      0.
28 FEB 1100   41    .07    .01    .07      1.      *     28 FEB 2315   90    .02    .00    .02      0.
28 FEB 1115   42    .08    .01    .08      1.      *     28 FEB 2330   91    .02    .00    .02      0.
28 FEB 1130   43    .09    .01    .08      1.      *     28 FEB 2345   92    .02    .00    .02      0.
28 FEB 1145   44    .09    .00    .08      1.      *      1 MAR 0000   93    .02    .00    .02      0.
28 FEB 1200   45    .10    .00    .10      1.      *      1 MAR 0015   94    .02    .00    .02      0.
28 FEB 1215   46    .17    .01    .16      2.      *      1 MAR 0030   95    .02    .00    .02      0.
28 FEB 1230   47    .21    .01    .20      3.      *      1 MAR 0045   96    .02    .00    .02      0.
28 FEB 1245   48    .27    .01    .27      4.      *      1 MAR 0100   97    .02    .00    .02      0.
28 FEB 1300   49    .59    .01    .58      8.      *
                                                    *
*****************************************************************************************************************

   TOTAL RAINFALL =    6.60, TOTAL LOSS =     .47, TOTAL EXCESS =    6.12

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+  (CFS)       (HR)
                          (CFS)
+     17.      12.25                   3.          1.          1.          1.
                         (INCHES)    4.494       6.112       6.112       6.112
                          (AC-FT)      1.          2.          2.          2.

                         CUMULATIVE AREA =     .01 SQ MI


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


            **************
            *            *
 423 KK     *     2PSDB  *
            *            *
            **************

 424 KO          OUTPUT CONTROL VARIABLES
                       IPRNT          1  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE
                                ROUTING OF 2PS THROUGH DETENTION BASIN

              HYDROGRAPH ROUTING DATA

 426 RS          STORAGE ROUTING
                       NSTPS          1  NUMBER OF SUBREACHES
                        ITYP       ELEV  TYPE OF INITIAL CONDITION
                      RSVRIC      66.00  INITIAL CONDITION
                           X        .00 WORKING R AND D COEFFICIENT

 427 SA               AREA         .1        .1        .1        .1        .2

 428 SE          ELEVATION      66.00     67.00     68.00     69.00     70.00

 429 SL          LOW-LEVEL OUTLET
                       ELEVL      66.00  ELEVATION AT CENTER OF OUTLET
                       CAREA        .79  CROSS-SECTIONAL AREA
                        COQL        .60  COEFFICIENT
                        EXPL        .50  EXPONENT OF HEAD

 430 SS          SPILLWAY
                        CREL      69.90  SPILLWAY CREST ELEVATION
                       SPWID        .00  SPILLWAY WIDTH
                        COQW        .00  WEIR COEFFICIENT
                        EXPW       1.50  EXPONENT OF HEAD
```

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COMPUTED STORAGE-ELEVATION DATA

| | | | | | |
|---|---|---|---|---|---|
| STORAGE | .00 | .08 | .18 | .29 | .44 |
| ELEVATION | 66.00 | 67.00 | 68.00 | 69.00 | 70.00 |

COMPUTED OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| OUTFLOW | .00 | 2.67 | 2.91 | 3.19 | 3.53 | 3.94 | 4.47 | 5.17 | 6.12 | 7.51 |
| ELEVATION | 66.00 | 66.49 | 66.59 | 66.70 | 66.86 | 67.08 | 67.39 | 67.85 | 68.60 | 69.90 |

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .04 | .04 | .05 | .07 | .08 | .09 | .11 | .16 | .18 |
| OUTFLOW | .00 | 2.67 | 2.91 | 3.19 | 3.53 | 3.80 | 3.94 | 4.47 | 5.17 | 5.38 |
| ELEVATION | 66.00 | 66.49 | 66.59 | 66.70 | 66.86 | 67.00 | 67.08 | 67.39 | 67.85 | 68.00 |

| | | | | |
|---|---|---|---|---|
| STORAGE | .24 | .29 | .42 | .44 |
| OUTFLOW | 6.12 | 6.58 | 7.51 | 7.60 |
| ELEVATION | 68.60 | 69.00 | 69.90 | 70.00 |

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HYDROGRAPH AT STATION 2PSDB

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| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 66.0 | 28 | FEB | 0915 | 34 | 1. | .0 | 66.1 | 28 | FEB | 1730 | 67 | 1. | .0 | 66.1 |
| | FEB | 0115 | 2 | 0. | .0 | 66.0 | 28 | FEB | 0930 | 35 | 1. | .0 | 66.1 | 28 | FEB | 1745 | 68 | 1. | .0 | 66.1 |
| | FEB | 0130 | 3 | 0. | .0 | 66.0 | 28 | FEB | 0945 | 36 | 1. | .0 | 66.1 | 28 | FEB | 1800 | 69 | 1. | .0 | 66.1 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 66.0 | 28 | FEB | 1000 | 37 | 1. | .0 | 66.1 | 28 | FEB | 1815 | 70 | 1. | .0 | 66.1 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 66.0 | 28 | FEB | 1015 | 38 | 1. | .0 | 66.1 | 28 | FEB | 1830 | 71 | 1. | .0 | 66.1 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 66.0 | 28 | FEB | 1030 | 39 | 1. | .0 | 66.2 | 28 | FEB | 1845 | 72 | 1. | .0 | 66.1 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 66.0 | 28 | FEB | 1045 | 40 | 1. | .0 | 66.2 | 28 | FEB | 1900 | 73 | 1. | .0 | 66.1 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 66.0 | 28 | FEB | 1100 | 41 | 1. | .0 | 66.2 | 28 | FEB | 1915 | 74 | 0. | .0 | 66.1 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 66.0 | 28 | FEB | 1115 | 42 | 1. | .0 | 66.2 | 28 | FEB | 1930 | 75 | 0. | .0 | 66.1 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 66.0 | 28 | FEB | 1130 | 43 | 1. | .0 | 66.2 | 28 | FEB | 1945 | 76 | 0. | .0 | 66.1 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 66.0 | 28 | FEB | 1145 | 44 | 1. | .0 | 66.2 | 28 | FEB | 2000 | 77 | 0. | .0 | 66.1 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 66.0 | 28 | FEB | 1200 | 45 | 1. | .0 | 66.3 | 28 | FEB | 2015 | 78 | 0. | .0 | 66.1 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 66.0 | 28 | FEB | 1215 | 46 | 2. | .0 | 66.3 | 28 | FEB | 2030 | 79 | 0. | .0 | 66.1 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 66.0 | 28 | FEB | 1230 | 47 | 2. | .0 | 66.5 | 28 | FEB | 2045 | 80 | 0. | .0 | 66.1 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 66.0 | 28 | FEB | 1245 | 48 | 3. | .0 | 66.6 | 28 | FEB | 2100 | 81 | 0. | .0 | 66.1 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 66.0 | 28 | FEB | 1300 | 49 | 4. | .1 | 67.2 | 28 | FEB | 2115 | 82 | 0. | .0 | 66.1 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 66.0 | 28 | FEB | 1315 | 50 | 6. | .2 | 68.6 | 28 | FEB | 2130 | 83 | 0. | .0 | 66.1 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 66.0 | 28 | FEB | 1330 | 51 | 7. | .4 | 69.5 | 28 | FEB | 2145 | 84 | 0. | .0 | 66.1 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 66.0 | 28 | FEB | 1345 | 52 | 7. | .4 | 69.4 | 28 | FEB | 2200 | 85 | 0. | .0 | 66.1 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 66.0 | 28 | FEB | 1400 | 53 | 7. | .3 | 69.0 | 28 | FEB | 2215 | 86 | 0. | .0 | 66.1 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 66.0 | 28 | FEB | 1415 | 54 | 6. | .2 | 68.4 | 28 | FEB | 2230 | 87 | 0. | .0 | 66.1 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 66.0 | 28 | FEB | 1430 | 55 | 5. | .1 | 67.7 | 28 | FEB | 2245 | 88 | 0. | .0 | 66.1 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 66.0 | 28 | FEB | 1445 | 56 | 4. | .1 | 67.1 | 28 | FEB | 2300 | 89 | 0. | .0 | 66.1 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 66.1 | 28 | FEB | 1500 | 57 | 3. | .0 | 66.6 | 28 | FEB | 2315 | 90 | 0. | .0 | 66.1 |
| 28 | FEB | 0700 | 25 | 0. | .0 | 66.1 | 28 | FEB | 1515 | 58 | 2. | .0 | 66.3 | 28 | FEB | 2330 | 91 | 0. | .0 | 66.1 |
| 28 | FEB | 0715 | 26 | 0. | .0 | 66.1 | 28 | FEB | 1530 | 59 | 1. | .0 | 66.2 | 28 | FEB | 2345 | 92 | 0. | .0 | 66.1 |
| 28 | FEB | 0730 | 27 | 0. | .0 | 66.1 | 28 | FEB | 1545 | 60 | 1. | .0 | 66.2 | 1 | MAR | 0000 | 93 | 0. | .0 | 66.1 |
| 28 | FEB | 0745 | 28 | 0. | .0 | 66.1 | 28 | FEB | 1600 | 61 | 1. | .0 | 66.2 | 1 | MAR | 0015 | 94 | 0. | .0 | 66.1 |
| 28 | FEB | 0800 | 29 | 0. | .0 | 66.1 | 28 | FEB | 1615 | 62 | 1. | .0 | 66.2 | 1 | MAR | 0030 | 95 | 0. | .0 | 66.0 |
| | FEB | 0815 | 30 | 0. | .0 | 66.1 | 28 | FEB | 1630 | 63 | 1. | .0 | 66.2 | 1 | MAR | 0045 | 96 | 0. | .0 | 66.0 |
| | FEB | 0830 | 31 | 0. | .0 | 66.1 | 28 | FEB | 1645 | 64 | 1. | .0 | 66.1 | 1 | MAR | 0100 | 97 | 0. | .0 | 66.0 |
| 28 | FEB | 0845 | 32 | 1. | .0 | 66.1 | 28 | FEB | 1700 | 65 | 1. | .0 | 66.1 | | | | | | | |
| 28 | FEB | 0900 | 33 | 1. | .0 | 66.1 | 28 | FEB | 1715 | 66 | 1. | .0 | 66.1 | | | | | | | |

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 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR       24-HR       72-HR     24.00-HR
+   (CFS)      (HR)
                          (CFS)
+       7.     12.50                  3.          1.          1.          1.
                        (INCHES)   4.492       6.101       6.101       6.101
                         (AC-FT)      1.          2.          2.          2.

 PEAK STORAGE   TIME                        MAXIMUM AVERAGE STORAGE
                                    6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
       0.     12.50                  0.          0.          0.          0.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                    6-HR       24-HR       72-HR     24.00-HR
+   (FEET)     (HR)
    69.49     12.50                 66.97       66.29       66.29       66.29

                        CUMULATIVE AREA =     .01 SQ MI


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


           **************
           *            *
 434 KK    *    2PSCHL  *
           *            *
           **************

 435 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                                STORAGE ROUTING THROUGH N/S CHANNEL AT PX REALTY

              HYDROGRAPH ROUTING DATA

 437 RS          STORAGE ROUTING
                       NSTPS           1  NUMBER OF SUBREACHES
                        ITYP        ELEV  TYPE OF INITIAL CONDITION
                      RSVRIC       66.40  INITIAL CONDITION
                           X         .00 WORKING R AND D COEFFICIENT

 438 SA               AREA          .0        .0        .0        .0        .0        .1        .1

 439 SE          ELEVATION       66.40     66.50     67.00     67.50     68.00     69.00     69.40

 440 SL          LOW-LEVEL OUTLET
                       ELEVL       59.70  ELEVATION AT CENTER OF OUTLET
                       CAREA        7.07  CROSS-SECTIONAL AREA
                        COQL         .60  COEFFICIENT
                        EXPL         .50  EXPONENT OF HEAD

 441 SS          SPILLWAY
                        CREL       69.30  SPILLWAY CREST ELEVATION
                       SPWID         .00  SPILLWAY WIDTH
                        COQW         .00  WEIR COEFFICIENT
                        EXPW        1.50  EXPONENT OF HEAD

                                                    ***
```

COMPUTED STORAGE-ELEVATION DATA

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .00 | .01 | .02 | .04 | .09 | .12 |
| ELEVATION | 66.40 | 66.50 | 67.00 | 67.50 | 68.00 | 69.00 | 69.40 |

COMPUTED OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| OUTFLOW | .00 | 89.70 | 91.40 | 93.17 | 95.01 | 96.92 | 98.91 | 100.99 | 103.15 | 105.41 |
| ELEVATION | 66.40 | 66.65 | 66.92 | 67.20 | 67.50 | 67.82 | 68.15 | 68.51 | 68.89 | 69.30 |

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .00 | .00 | .01 | .01 | .01 | .02 | .03 | .04 | .05 |
| OUTFLOW | 88.06 | 88.72 | 89.70 | 91.40 | 91.92 | 93.17 | 95.01 | 96.92 | 98.01 | 98.91 |
| ELEVATION | 66.40 | 66.50 | 66.65 | 66.92 | 67.00 | 67.20 | 67.50 | 67.82 | 68.00 | 68.15 |

| | | | | | |
|---|---|---|---|---|---|
| STORAGE | .06 | .09 | .09 | .11 | .12 |
| OUTFLOW | 100.99 | 103.15 | 103.75 | 105.41 | 105.96 |
| ELEVATION | 68.51 | 68.89 | 69.00 | 69.30 | 69.40 |

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 88. TO 103.
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.)

**********

HYDROGRAPH AT STATION 2PSCHL

**********

| DA MON HRMN | ORD | OUTFLOW | STORAGE | STAGE | * | DA MON HRMN | ORD | OUTFLOW | STORAGE | STAGE | * | DA MON HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEB 0100 | 1 | 88. | .0 | 66.4 | * | 28 FEB 0915 | 34 | 6. | -.1 | 66.4 | * | 28 FEB 1730 | 67 | 66. | .0 | 66.4 |
| 28 FEB 0115 | 2 | 6. | -.1 | 66.4 | * | 28 FEB 0930 | 35 | 6. | -.1 | 66.4 | * | 28 FEB 1745 | 68 | 56. | .0 | 66.4 |
| 28 FEB 0130 | 3 | 6. | -.1 | 66.4 | * | 28 FEB 0945 | 36 | 7. | -.1 | 66.4 | * | 28 FEB 1800 | 69 | 58. | .0 | 66.4 |
| 28 FEB 0145 | 4 | 6. | -.1 | 66.4 | * | 28 FEB 1000 | 37 | 10. | -.1 | 66.4 | * | 28 FEB 1815 | 70 | 55. | .0 | 66.4 |
| 28 FEB 0200 | 5 | 6. | -.1 | 66.4 | * | 28 FEB 1015 | 38 | 11. | -.1 | 66.4 | * | 28 FEB 1830 | 71 | 55. | .0 | 66.4 |
| 28 FEB 0215 | 6 | 6. | -.1 | 66.4 | * | 28 FEB 1030 | 39 | 14. | -.1 | 66.4 | * | 28 FEB 1845 | 72 | 53. | .0 | 66.4 |
| 28 FEB 0230 | 7 | 6. | -.1 | 66.4 | * | 28 FEB 1045 | 40 | 17. | -.1 | 66.4 | * | 28 FEB 1900 | 73 | 54. | .0 | 66.4 |
| 28 FEB 0245 | 8 | 6. | -.1 | 66.4 | * | 28 FEB 1100 | 41 | 20. | -.1 | 66.4 | * | 28 FEB 1915 | 74 | 51. | .0 | 66.4 |
| 28 FEB 0300 | 9 | 6. | -.1 | 66.4 | * | 28 FEB 1115 | 42 | 24. | -.1 | 66.4 | * | 28 FEB 1930 | 75 | 49. | .0 | 66.4 |
| 28 FEB 0315 | 10 | 6. | -.1 | 66.4 | * | 28 FEB 1130 | 43 | 29. | .0 | 66.4 | * | 28 FEB 1945 | 76 | 46. | .0 | 66.4 |
| 28 FEB 0330 | 11 | 6. | -.1 | 66.4 | * | 28 FEB 1145 | 44 | 33. | .0 | 66.4 | * | 28 FEB 2000 | 77 | 45. | .0 | 66.4 |
| 28 FEB 0345 | 12 | 6. | -.1 | 66.4 | * | 28 FEB 1200 | 45 | 38. | .0 | 66.4 | * | 28 FEB 2015 | 78 | 44. | .0 | 66.4 |
| 28 FEB 0400 | 13 | 6. | -.1 | 66.4 | * | 28 FEB 1215 | 46 | 51. | .0 | 66.4 | * | 28 FEB 2030 | 79 | 44. | .0 | 66.4 |
| 28 FEB 0415 | 14 | 6. | -.1 | 66.4 | * | 28 FEB 1230 | 47 | 67. | .0 | 66.4 | * | 28 FEB 2045 | 80 | 43. | .0 | 66.4 |
| 28 FEB 0430 | 15 | 6. | -.1 | 66.4 | * | 28 FEB 1245 | 48 | 87. | .0 | 66.4 | * | 28 FEB 2100 | 81 | 43. | .0 | 66.4 |
| 28 FEB 0445 | 16 | 6. | -.1 | 66.4 | * | 28 FEB 1300 | 49 | 108. | .1 | 69.7 | * | 28 FEB 2115 | 82 | 42. | .0 | 66.4 |
| 28 FEB 0500 | 17 | 6. | -.1 | 66.4 | * | 28 FEB 1315 | 50 | 135. | .5 | 74.7 | * | 28 FEB 2130 | 83 | 41. | .0 | 66.4 |
| 28 FEB 0515 | 18 | 6. | -.1 | 66.4 | * | 28 FEB 1330 | 51 | 178. | 1.1 | 82.6 | * | 28 FEB 2145 | 84 | 41. | .0 | 66.4 |
| 28 FEB 0530 | 19 | 6. | -.1 | 66.4 | * | 28 FEB 1345 | 52 | 209. | 1.5 | 88.2 | * | 28 FEB 2200 | 85 | 40. | .0 | 66.4 |
| 28 FEB 0545 | 20 | 6. | -.1 | 66.4 | * | 28 FEB 1400 | 53 | 202. | 1.4 | 86.9 | * | 28 FEB 2215 | 86 | 40. | .0 | 66.4 |
| 28 FEB 0600 | 21 | 6. | -.1 | 66.4 | * | 28 FEB 1415 | 54 | 176. | 1.1 | 82.2 | * | 28 FEB 2230 | 87 | 40. | .0 | 66.4 |
| 28 FEB 0615 | 22 | 6. | -.1 | 66.4 | * | 28 FEB 1430 | 55 | 152. | .7 | 77.9 | * | 28 FEB 2245 | 88 | 39. | .0 | 66.4 |
| 28 FEB 0630 | 23 | 6. | -.1 | 66.4 | * | 28 FEB 1445 | 56 | 137. | .5 | 75.1 | * | 28 FEB 2300 | 89 | 39. | .0 | 66.4 |
| 28 FEB 0645 | 24 | 6. | -.1 | 66.4 | * | 28 FEB 1500 | 57 | 129. | .4 | 73.7 | * | 28 FEB 2315 | 90 | 39. | .0 | 66.4 |
| 28 FEB 0700 | 25 | 6. | -.1 | 66.4 | * | 28 FEB 1515 | 58 | 124. | .4 | 72.6 | * | 28 FEB 2330 | 91 | 39. | .0 | 66.4 |
| 28 FEB 0715 | 26 | 6. | -.1 | 66.4 | * | 28 FEB 1530 | 59 | 119. | .3 | 71.7 | * | 28 FEB 2345 | 92 | 38. | .0 | 66.4 |
| 28 FEB 0730 | 27 | 6. | -.1 | 66.4 | * | 28 FEB 1545 | 60 | 114. | .2 | 70.9 | * | 1 MAR 0000 | 93 | 37. | .0 | 66.4 |
| 28 FEB 0745 | 28 | 6. | -.1 | 66.4 | * | 28 FEB 1600 | 61 | 110. | .2 | 70.2 | * | 1 MAR 0015 | 94 | 37. | .0 | 66.4 |
| FEB 0800 | 29 | 6. | -.1 | 66.4 | * | 28 FEB 1615 | 62 | 109. | .2 | 69.9 | * | 1 MAR 0030 | 95 | 37. | .0 | 66.4 |
| FEB 0815 | 30 | 6. | -.1 | 66.4 | * | 28 FEB 1630 | 63 | 107. | .1 | 69.7 | * | 1 MAR 0045 | 96 | 37. | .0 | 66.4 |
| 28 FEB 0830 | 31 | 6. | -.1 | 66.4 | * | 28 FEB 1645 | 64 | 106. | .1 | 69.4 | * | 1 MAR 0100 | 97 | 36. | .0 | 66.4 |
| 28 FEB 0845 | 32 | 6. | -.1 | 66.4 | * | 28 FEB 1700 | 65 | 99. | .0 | 68.1 | * | | | | | |
| 28 FEB 0900 | 33 | 6. | -.1 | 66.4 | * | 28 FEB 1715 | 66 | 78. | .0 | 66.4 | * | | | | | |

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*                                                         *
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  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                    6-HR        24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                           (CFS)
+     209.     12.75                116.          46.         46.          46.
                        (INCHES)    1.812       2.886       2.886        2.886
                         (AC-FT)      57.         91.         91.          91.

 PEAK STORAGE   TIME                          MAXIMUM AVERAGE STORAGE
                                    6-HR        24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
        1.     12.75                  0.           0.          0.           0.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                    6-HR        24-HR       72-HR     24.00-HR
+   (FEET)      (HR)
     88.18     12.75               72.43        67.91       67.91        67.91

                         CUMULATIVE AREA =     .59 SQ MI


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


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            *            *
  442 KK    *    DI2PSC  *
            *            *
            **************

  443 KO        OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                             DIRECT INPUT HYDROGRAPH FOR FLOW FROM 2PSCHL (MODIFIED PEAK)

    6 IN        TIME DATA FOR INPUT TIME SERIES
                      JXMIN          15  TIME INTERVAL IN MINUTES
                     JXDATE     28FEB91  STARTING DATE
                     JXTIME         100  STARTING TIME

              SUBBASIN RUNOFF DATA

  445 BA        SUBBASIN CHARACTERISTICS
                      TAREA         .59  SUBBASIN AREA

                                                  ***

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                                        HYDROGRAPH AT STATION   DI2PSC

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| DA MON HRMN | ORD | FLOW | * | DA MON HRMN | ORD | FLOW | * | DA MON HRMN | ORD | FLOW | * | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | * | 28 FEB 0715 | 26 | 6. | * | 28 FEB 1330 | 51 | 110. | * | 28 FEB 1945 | 76 | 45. |
| 28 FEB 0115 | 2 | 6. | * | 28 FEB 0730 | 27 | 6. | * | 28 FEB 1345 | 52 | 110. | * | 28 FEB 2000 | 77 | 45. |
| 28 FEB 0130 | 3 | 6. | * | 28 FEB 0745 | 28 | 6. | * | 28 FEB 1400 | 53 | 110. | * | 28 FEB 2015 | 78 | 44. |
| 28 FEB 0145 | 4 | 6. | * | 28 FEB 0800 | 29 | 6. | * | 28 FEB 1415 | 54 | 110. | * | 28 FEB 2030 | 79 | 44. |
| 28 FEB 0200 | 5 | 6. | * | 28 FEB 0815 | 30 | 6. | * | 28 FEB 1430 | 55 | 110. | * | 28 FEB 2045 | 80 | 43. |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0215 | 6 | 6. | * | 28 FEB 0830 | 31 | 6. | * | 28 FEB 1445 | 56 | 110. | * | 28 FEB 2100 | 81 | 43. |
| 28 FEB 0230 | 7 | 6. | * | 28 FEB 0845 | 32 | 6. | * | 28 FEB 1500 | 57 | 110. | * | 28 FEB 2115 | 82 | 42. |
| 28 FEB 0245 | 8 | 6. | * | 28 FEB 0900 | 33 | 6. | * | 28 FEB 1515 | 58 | 110. | * | 28 FEB 2130 | 83 | 41. |
| 28 FEB 0300 | 9 | 6. | * | 28 FEB 0915 | 34 | 6. | * | 28 FEB 1530 | 59 | 110. | * | 28 FEB 2145 | 84 | 41. |
| 28 FEB 0315 | 10 | 6. | * | 28 FEB 0930 | 35 | 6. | * | 28 FEB 1545 | 60 | 110. | * | 28 FEB 2200 | 85 | 40. |
| 3 FEB 0330 | 11 | 6. | * | 28 FEB 0945 | 36 | 6. | * | 28 FEB 1600 | 61 | 110. | * | 28 FEB 2215 | 86 | 40. |
| 28 FEB 0345 | 12 | 6. | * | 28 FEB 1000 | 37 | 8. | * | 28 FEB 1615 | 62 | 109. | * | 28 FEB 2230 | 87 | 40. |
| 28 FEB 0400 | 13 | 6. | * | 28 FEB 1015 | 38 | 9. | * | 28 FEB 1630 | 63 | 108. | * | 28 FEB 2245 | 88 | 39. |
| 28 FEB 0415 | 14 | 6. | * | 28 FEB 1030 | 39 | 11. | * | 28 FEB 1645 | 64 | 106. | * | 28 FEB 2300 | 89 | 39. |
| 28 FEB 0430 | 15 | 6. | * | 28 FEB 1045 | 40 | 14. | * | 28 FEB 1700 | 65 | 99. | * | 28 FEB 2315 | 90 | 39. |
| 28 FEB 0445 | 16 | 6. | * | 28 FEB 1100 | 41 | 19. | * | 28 FEB 1715 | 66 | 77. | * | 28 FEB 2330 | 91 | 39. |
| 28 FEB 0500 | 17 | 6. | * | 28 FEB 1115 | 42 | 24. | * | 28 FEB 1730 | 67 | 66. | * | 28 FEB 2345 | 92 | 38. |
| 28 FEB 0515 | 18 | 6. | * | 28 FEB 1130 | 43 | 28. | * | 28 FEB 1745 | 68 | 56. | * | 1 MAR 0000 | 93 | 37. |
| 28 FEB 0530 | 19 | 6. | * | 28 FEB 1145 | 44 | 33. | * | 28 FEB 1800 | 69 | 58. | * | 1 MAR 0015 | 94 | 37. |
| 28 FEB 0545 | 20 | 6. | * | 28 FEB 1200 | 45 | 38. | * | 28 FEB 1815 | 70 | 54. | * | 1 MAR 0030 | 95 | 36. |
| 28 FEB 0600 | 21 | 6. | * | 28 FEB 1215 | 46 | 50. | * | 28 FEB 1830 | 71 | 55. | * | 1 MAR 0045 | 96 | 37. |
| 28 FEB 0615 | 22 | 6. | * | 28 FEB 1230 | 47 | 69. | * | 28 FEB 1845 | 72 | 53. | * | 1 MAR 0100 | 97 | 36. |
| 28 FEB 0630 | 23 | 6. | * | 28 FEB 1245 | 48 | 90. | * | 28 FEB 1900 | 73 | 54. | * | | | |
| 28 FEB 0645 | 24 | 6. | * | 28 FEB 1300 | 49 | 109. | * | 28 FEB 1915 | 74 | 51. | * | | | |
| 28 FEB 0700 | 25 | 6. | * | 28 FEB 1315 | 50 | 110. | * | 28 FEB 1930 | 75 | 48. | * | | | |
| | | | * | | | | * | | | | * | | | |

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| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 110. | 12.25 | | 97. | 41. | 41. | 41. |
| | | (INCHES) | 1.523 | 2.556 | 2.556 | 2.556 |
| | | (AC-FT) | 48. | 80. | 80. | 80. |

CUMULATIVE AREA = .59 SQ MI

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

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              **************
              *            *
456 KK        *      4PS   *
              *            *
              **************
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457 KO OUTPUT CONTROL VARIABLES

| | | |
|---|---|---|
| IPRNT | 1 | PRINT CONTROL |
| IPLOT | 0 | PLOT CONTROL |
| QSCAL | 0. | HYDROGRAPH PLOT SCALE |

SCS RUNOFF CALCULATION

SUBBASIN RUNOFF DATA

459 BA SUBBASIN CHARACTERISTICS

TAREA .00 SUBBASIN AREA

PRECIPITATION DATA

460 PH DEPTHS FOR 0-PERCENT HYPOTHETICAL STORM

| ..... HYDRO-35 ..... | | | ..... TP-40 ..... | | | | | ..... TP-49 ..... | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-MIN | 15-MIN | 60-MIN | 2-HR | 3-HR | 6-HR | 12-HR | 24-HR | 2-DAY | 4-DAY | 7-DAY | 10-DAY |
| .60 | 1.30 | 2.50 | 3.30 | 3.70 | 4.60 | 5.60 | 6.60 | .00 | .00 | .00 | .00 |

STORM AREA = .00

461 LS SCS LOSS RATE

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                STRTL        .06  INITIAL ABSTRACTION
                CRVNBR     97.00  CURVE NUMBER
                RTIMP        .00  PERCENT IMPERVIOUS AREA

462 UD        SCS DIMENSIONLESS UNITGRAPH
                TLAG        .00  LAG

                                                  ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                              UNIT HYDROGRAPH
                                          5 END-OF-PERIOD ORDINATES
            6.        2.        0.        0.        0.
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HYDROGRAPH AT STATION 4PS

**********

| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | * | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | * | 28 FEB 1315 | 50 | 1.30 | .01 | 1.29 | 8. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | * | 28 FEB 1330 | 51 | .34 | .00 | .34 | 4. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | * | 28 FEB 1345 | 52 | .23 | .00 | .23 | 2. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | * | 28 FEB 1400 | 53 | .19 | .00 | .19 | 2. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | * | 28 FEB 1415 | 54 | .11 | .00 | .11 | 1. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | * | 28 FEB 1430 | 55 | .10 | .00 | .10 | 1. |
| 28 FEB 0230 | 7 | .02 | .01 | .00 | 0. | * | 28 FEB 1445 | 56 | .09 | .00 | .09 | 1. |
| 28 FEB 0245 | 8 | .02 | .01 | .00 | 0. | * | 28 FEB 1500 | 57 | .09 | .00 | .08 | 1. |
| 28 FEB 0300 | 9 | .02 | .01 | .01 | 0. | * | 28 FEB 1515 | 58 | .08 | .00 | .08 | 1. |
| 28 FEB 0315 | 10 | .02 | .01 | .01 | 0. | * | 28 FEB 1530 | 59 | .07 | .00 | .07 | 1. |
| 28 FEB 0330 | 11 | .02 | .01 | .01 | 0. | * | 28 FEB 1545 | 60 | .07 | .00 | .07 | 1. |
| 28 FEB 0345 | 12 | .02 | .01 | .01 | 0. | * | 28 FEB 1600 | 61 | .06 | .00 | .06 | 0. |
| 28 FEB 0400 | 13 | .02 | .01 | .01 | 0. | * | 28 FEB 1615 | 62 | .05 | .00 | .05 | 0. |
| 28 FEB 0415 | 14 | .02 | .01 | .01 | 0. | * | 28 FEB 1630 | 63 | .05 | .00 | .05 | 0. |
| 28 FEB 0430 | 15 | .02 | .01 | .01 | 0. | * | 28 FEB 1645 | 64 | .05 | .00 | .05 | 0. |
| 28 FEB 0445 | 16 | .02 | .01 | .01 | 0. | * | 28 FEB 1700 | 65 | .05 | .00 | .05 | 0. |
| 28 FEB 0500 | 17 | .02 | .01 | .01 | 0. | * | 28 FEB 1715 | 66 | .04 | .00 | .04 | 0. |
| 28 FEB 0515 | 18 | .02 | .01 | .02 | 0. | * | 28 FEB 1730 | 67 | .04 | .00 | .04 | 0. |
| 28 FEB 0530 | 19 | .02 | .01 | .02 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 0. |
| 28 FEB 0545 | 20 | .02 | .01 | .02 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .04 | 0. |
| 28 FEB 0600 | 21 | .02 | .01 | .02 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .04 | 0. |
| 28 FEB 0615 | 22 | .02 | .01 | .02 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .04 | 0. |
| 28 FEB 0630 | 23 | .03 | .01 | .02 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 0. |
| 28 FEB 0645 | 24 | .03 | .01 | .02 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 0. |
| 28 FEB 0700 | 25 | .03 | .00 | .02 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .03 | 0. |
| 28 FEB 0715 | 26 | .03 | .01 | .03 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .03 | 0. |
| 28 FEB 0730 | 27 | .03 | .01 | .03 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .03 | 0. |
| 28 FEB 0745 | 28 | .04 | .00 | .03 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .03 | 0. |
| 28 FEB 0800 | 29 | .04 | .00 | .03 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 0. |
| 28 FEB 0815 | 30 | .04 | .00 | .03 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 0. |
| 28 FEB 0830 | 31 | .04 | .00 | .04 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 0. |
| 28 FEB 0845 | 32 | .04 | .00 | .04 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 0. |
| 28 FEB 0900 | 33 | .04 | .00 | .04 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 0. |
| 28 FEB 0915 | 34 | .04 | .00 | .04 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 0. |
| 28 FEB 0930 | 35 | .05 | .00 | .04 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .00 | .05 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .00 | .05 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .00 | .06 | 0. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .00 | .06 | 0. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |
| 28 FEB 1045 | 40 | .07 | .00 | .07 | 1. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 0. |
| 28 FEB 1100 | 41 | .07 | .00 | .07 | 1. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |
| 28 FEB 1115 | 42 | .08 | .00 | .08 | 1. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 0. |
| 28 FEB 1130 | 43 | .09 | .00 | .09 | 1. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 0. |

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28 FEB 1145   44    .09    .00    .09       1.      *      1 MAR 0000   93    .02    .00    .02       0.
28 FEB 1200   45    .10    .00    .10       1.      *      1 MAR 0015   94    .02    .00    .02       0.
28 FEB 1215   46    .17    .00    .17       1.      *      1 MAR 0030   95    .02    .00    .02       0.
28 FEB 1230   47    .21    .00    .20       1.      *      1 MAR 0045   96    .02    .00    .02       0.
28 FEB 1245   48    .27    .00    .27       2.      *      1 MAR 0100   97    .02    .00    .02       0.
28 FEB 1300   49    .59    .01    .58       4.      *
                                                     *
*****************************************************************************************************************

   TOTAL RAINFALL =    6.60, TOTAL LOSS =     .36, TOTAL EXCESS =    6.24

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR       24-HR       72-HR     24.00-HR
+   (CFS)       (HR)
                          (CFS)
+       8.     12.25                 1.          1.          1.          1.
                         (INCHES)   4.535       6.229       6.229       6.229
                          (AC-FT)    1.          1.          1.          1.

                         CUMULATIVE AREA =     .00 SQ MI


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


            **************
            *            *
463 KK      *     4PSDB  *
            *            *
            **************

    KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH DETENSION BASIN AT DAGATA

              HYDROGRAPH ROUTING DATA

466 RS          STORAGE ROUTING
                      NSTPS          1  NUMBER OF SUBREACHES
                       ITYP       V 59  TYPE OF INITIAL CONDITION
                     RSVRIC        .00  INITIAL CONDITION
                          X        .00 WORKING R AND D COEFFICIENT

467 SA               AREA         .0        .1        .1        .1

468 SE          ELEVATION      59.00     60.00     61.00     62.00

469 SL          LOW-LEVEL OUTLET
                      ELEVL      59.00  ELEVATION AT CENTER OF OUTLET
                      CAREA        .44  CROSS-SECTIONAL AREA
                       COQL        .60  COEFFICIENT
                       EXPL        .50  EXPONENT OF HEAD

470 SS          SPILLWAY
                       CREL      61.90  SPILLWAY CREST ELEVATION
                      SPWID        .00  SPILLWAY WIDTH
                       COQW        .00  WEIR COEFFICIENT
                       EXPW       1.50  EXPONENT OF HEAD

                                                    ***

                                   COMPUTED STORAGE-ELEVATION DATA
```

| | | | | |
|---|---|---|---|---|
| STORAGE | .00 | .06 | .13 | .21 |
| ELEVATION | 59.00 | 60.00 | 61.00 | 62.00 |

COMPUTED OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| OUTFLOW | .00 | 1.29 | 1.40 | 1.53 | 1.70 | 1.90 | 2.15 | 2.49 | 2.94 | 3.61 |
| ELEVATION | 59.00 | 59.37 | 59.44 | 59.52 | 59.64 | 59.80 | 60.03 | 60.38 | 60.93 | 61.90 |

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STORAGE | .00 | .02 | .02 | .03 | .03 | .04 | .06 | .06 | .08 | .12 |
| OUTFLOW | .00 | 1.29 | 1.40 | 1.53 | 1.70 | 1.90 | 2.12 | 2.15 | 2.49 | 2.94 |
| ELEVATION | 59.00 | 59.37 | 59.44 | 59.52 | 59.64 | 59.80 | 60.00 | 60.03 | 60.38 | 60.93 |

| | | | |
|---|---|---|---|
| STORAGE | .13 | .20 | .21 |
| OUTFLOW | 2.99 | 3.61 | 3.67 |
| ELEVATION | 61.00 | 61.90 | 62.00 |

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HYDROGRAPH AT STATION 4PSDB

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| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 59.0 | 28 | FEB | 0915 | 34 | 0. | .0 | 59.1 | 28 | FEB | 1730 | 67 | 0. | .0 | 59.1 |
| 28 | FEB | 0115 | 2 | 0. | .0 | 59.0 | 28 | FEB | 0930 | 35 | 0. | .0 | 59.1 | 28 | FEB | 1745 | 68 | 0. | .0 | 59.1 |
| 28 | FEB | 0130 | 3 | 0. | .0 | 59.0 | 28 | FEB | 0945 | 36 | 0. | .0 | 59.1 | 28 | FEB | 1800 | 69 | 0. | .0 | 59.1 |
| 28 | FEB | 0145 | 4 | 0. | .0 | 59.0 | 28 | FEB | 1000 | 37 | 0. | .0 | 59.1 | 28 | FEB | 1815 | 70 | 0. | .0 | 59.1 |
| 28 | FEB | 0200 | 5 | 0. | .0 | 59.0 | 28 | FEB | 1015 | 38 | 0. | .0 | 59.1 | 28 | FEB | 1830 | 71 | 0. | .0 | 59.0 |
| 28 | FEB | 0215 | 6 | 0. | .0 | 59.0 | 28 | FEB | 1030 | 39 | 0. | .0 | 59.1 | 28 | FEB | 1845 | 72 | 0. | .0 | 5 |
| 28 | FEB | 0230 | 7 | 0. | .0 | 59.0 | 28 | FEB | 1045 | 40 | 0. | .0 | 59.1 | 28 | FEB | 1900 | 73 | 0. | .0 | 59.1 |
| 28 | FEB | 0245 | 8 | 0. | .0 | 59.0 | 28 | FEB | 1100 | 41 | 1. | .0 | 59.1 | 28 | FEB | 1915 | 74 | 0. | .0 | 59.1 |
| 28 | FEB | 0300 | 9 | 0. | .0 | 59.0 | 28 | FEB | 1115 | 42 | 1. | .0 | 59.2 | 28 | FEB | 1930 | 75 | 0. | .0 | 59.1 |
| 28 | FEB | 0315 | 10 | 0. | .0 | 59.0 | 28 | FEB | 1130 | 43 | 1. | .0 | 59.2 | 28 | FEB | 1945 | 76 | 0. | .0 | 59.1 |
| 28 | FEB | 0330 | 11 | 0. | .0 | 59.0 | 28 | FEB | 1145 | 44 | 1. | .0 | 59.2 | 28 | FEB | 2000 | 77 | 0. | .0 | 59.1 |
| 28 | FEB | 0345 | 12 | 0. | .0 | 59.0 | 28 | FEB | 1200 | 45 | 1. | .0 | 59.2 | 28 | FEB | 2015 | 78 | 0. | .0 | 59.1 |
| 28 | FEB | 0400 | 13 | 0. | .0 | 59.0 | 28 | FEB | 1215 | 46 | 1. | .0 | 59.3 | 28 | FEB | 2030 | 79 | 0. | .0 | 59.1 |
| 28 | FEB | 0415 | 14 | 0. | .0 | 59.0 | 28 | FEB | 1230 | 47 | 1. | .0 | 59.4 | 28 | FEB | 2045 | 80 | 0. | .0 | 59.1 |
| 28 | FEB | 0430 | 15 | 0. | .0 | 59.0 | 28 | FEB | 1245 | 48 | 1. | .0 | 59.5 | 28 | FEB | 2100 | 81 | 0. | .0 | 59.1 |
| 28 | FEB | 0445 | 16 | 0. | .0 | 59.0 | 28 | FEB | 1300 | 49 | 2. | .0 | 59.9 | 28 | FEB | 2115 | 82 | 0. | .0 | 59.1 |
| 28 | FEB | 0500 | 17 | 0. | .0 | 59.0 | 28 | FEB | 1315 | 50 | 3. | .1 | 61.0 | 28 | FEB | 2130 | 83 | 0. | .0 | 59.0 |
| 28 | FEB | 0515 | 18 | 0. | .0 | 59.0 | 28 | FEB | 1330 | 51 | 3. | .2 | 61.7 | 28 | FEB | 2145 | 84 | 0. | .0 | 59.0 |
| 28 | FEB | 0530 | 19 | 0. | .0 | 59.0 | 28 | FEB | 1345 | 52 | 3. | .2 | 61.7 | 28 | FEB | 2200 | 85 | 0. | .0 | 59.0 |
| 28 | FEB | 0545 | 20 | 0. | .0 | 59.0 | 28 | FEB | 1400 | 53 | 3. | .2 | 61.4 | 28 | FEB | 2215 | 86 | 0. | .0 | 59.0 |
| 28 | FEB | 0600 | 21 | 0. | .0 | 59.0 | 28 | FEB | 1415 | 54 | 3. | .1 | 60.9 | 28 | FEB | 2230 | 87 | 0. | .0 | 59.0 |
| 28 | FEB | 0615 | 22 | 0. | .0 | 59.0 | 28 | FEB | 1430 | 55 | 3. | .1 | 60.4 | 28 | FEB | 2245 | 88 | 0. | .0 | 59.0 |
| 28 | FEB | 0630 | 23 | 0. | .0 | 59.0 | 28 | FEB | 1445 | 56 | 2. | .1 | 59.9 | 28 | FEB | 2300 | 89 | 0. | .0 | 59.0 |
| 28 | FEB | 0645 | 24 | 0. | .0 | 59.0 | 28 | FEB | 1500 | 57 | 2. | .0 | 59.6 | 28 | FEB | 2315 | 90 | 0. | .0 | 59.0 |
| 28 | FEB | 0700 | 25 | 0. | .0 | 59.0 | 28 | FEB | 1515 | 58 | 1. | .0 | 59.3 | 28 | FEB | 2330 | 91 | 0. | .0 | 59.0 |
| 28 | FEB | 0715 | 26 | 0. | .0 | 59.1 | 28 | FEB | 1530 | 59 | 1. | .0 | 59.2 | 28 | FEB | 2345 | 92 | 0. | .0 | 59.0 |
| 28 | FEB | 0730 | 27 | 0. | .0 | 59.1 | 28 | FEB | 1545 | 60 | 1. | .0 | 59.2 | 1 | MAR | 0000 | 93 | 0. | .0 | 59.0 |
| 28 | FEB | 0745 | 28 | 0. | .0 | 59.1 | 28 | FEB | 1600 | 61 | 1. | .0 | 59.2 | 1 | MAR | 0015 | 94 | 0. | .0 | 59.0 |
| 28 | FEB | 0800 | 29 | 0. | .0 | 59.1 | 28 | FEB | 1615 | 62 | 0. | .0 | 59.1 | 1 | MAR | 0030 | 95 | 0. | .0 | 59.0 |
| 28 | FEB | 0815 | 30 | 0. | .0 | 59.1 | 28 | FEB | 1630 | 63 | 0. | .0 | 59.1 | 1 | MAR | 0045 | 96 | 0. | .0 | 59.0 |
| 28 | FEB | 0830 | 31 | 0. | .0 | 59.1 | 28 | FEB | 1645 | 64 | 0. | .0 | 59.1 | 1 | MAR | 0100 | 97 | 0. | .0 | 59.0 |
| 28 | FEB | 0845 | 32 | 0. | .0 | 59.1 | 28 | FEB | 1700 | 65 | 0. | .0 | 59.1 | | | | | | | |
| 28 | FEB | 0900 | 33 | 0. | .0 | 59.1 | 28 | FEB | 1715 | 66 | 0. | .0 | 59.1 | | | | | | | |

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| PEAK FLOW | TIME | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |

```
+   (CFS)       (HR)
                          (CFS)
+       3.      12.50                  1.          1.          1.          1.
                        (INCHES)    4.532       6.218       6.218       6.218
                         (AC-FT)      1.          1.          1.          1.

 PEAK STORAGE   TIME                          MAXIMUM AVERAGE STORAGE
                                        6-HR       24-HR       72-HR     24.00-HR
+  (AC-FT)      (HR)
       0.      12.50                  0.          0.          0.          0.

  PEAK STAGE    TIME                           MAXIMUM AVERAGE STAGE
                                        6-HR       24-HR       72-HR     24.00-HR
+   (FEET)      (HR)
     61.72     12.50                 59.78       59.23       59.23       59.23

                        CUMULATIVE AREA =     .00 SQ MI
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

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          **************
          *            *
 471 KK   *       4P   *
          *            *
          **************

 472 KO         OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

              SUBBASIN RUNOFF DATA

 474 BA         SUBBASIN CHARACTERISTICS
                      TAREA         .02  SUBBASIN AREA

                PRECIPITATION DATA

 475 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .02

 476 LS         SCS LOSS RATE
                      STRTL         .20  INITIAL ABSTRACTION
                     CRVNBR       91.00  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

 477 UD         SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .41  LAG

                                                  ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                UNIT HYDROGRAPH
                                           10 END-OF-PERIOD ORDINATES
                6.       15.       12.        5.        3.        1.        1.        0.        0.        0.
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HYDROGRAPH AT STATION 4P

| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | 28 FEB 1315 | 50 | 1.30 | .07 | 1.23 | 21. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | 28 FEB 1330 | 51 | .34 | .01 | .32 | 29. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | 28 FEB 1345 | 52 | .23 | .01 | .23 | 25. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | 28 FEB 1400 | 53 | .19 | .01 | .18 | 17. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | 28 FEB 1415 | 54 | .11 | .00 | .11 | 12. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | 28 FEB 1430 | 55 | .10 | .00 | .09 | 8. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | 28 FEB 1445 | 56 | .09 | .00 | .09 | 6. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | 28 FEB 1500 | 57 | .09 | .00 | .08 | 5. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | 28 FEB 1515 | 58 | .08 | .00 | .08 | 4. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | 28 FEB 1530 | 59 | .07 | .00 | .07 | 4. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | 28 FEB 1545 | 60 | .07 | .00 | .07 | 3. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | 28 FEB 1600 | 61 | .06 | .00 | .06 | 3. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | 28 FEB 1615 | 62 | .05 | .00 | .05 | 3. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | 28 FEB 1630 | 63 | .05 | .00 | .05 | 3. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | 28 FEB 1645 | 64 | .05 | .00 | .05 | 2. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | 28 FEB 1700 | 65 | .05 | .00 | .04 | 2. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | 28 FEB 1715 | 66 | .04 | .00 | .04 | 2. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | 28 FEB 1730 | 67 | .04 | .00 | .04 | 2. |
| 28 FEB 0530 | 19 | .02 | .02 | .01 | 0. | 28 FEB 1745 | 68 | .04 | .00 | .04 | 2. |
| 28 FEB 0545 | 20 | .02 | .02 | .01 | 0. | 28 FEB 1800 | 69 | .04 | .00 | .04 | 2. |
| 28 FEB 0600 | 21 | .02 | .02 | .01 | 0. | 28 FEB 1815 | 70 | .04 | .00 | .04 | 2. |
| 28 FEB 0615 | 22 | .02 | .02 | .01 | 0. | 28 FEB 1830 | 71 | .04 | .00 | .04 | 2. |
| 28 FEB 0630 | 23 | .03 | .02 | .01 | 0. | 28 FEB 1845 | 72 | .03 | .00 | .03 | 2. |
| 28 FEB 0645 | 24 | .03 | .02 | .01 | 0. | 28 FEB 1900 | 73 | .03 | .00 | .03 | 2. |
| 28 FEB 0700 | 25 | .03 | .02 | .01 | 0. | 28 FEB 1915 | 74 | .03 | .00 | .03 | 1. |
| 28 FEB 0715 | 26 | .03 | .02 | .01 | 0. | 28 FEB 1930 | 75 | .03 | .00 | .03 | 1. |
| 28 FEB 0730 | 27 | .03 | .02 | .02 | 1. | 28 FEB 1945 | 76 | .03 | .00 | .03 | 1. |
| 28 FEB 0745 | 28 | .04 | .02 | .02 | 1. | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .02 | .02 | 1. | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .02 | .02 | 1. | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .02 | .02 | 1. | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .02 | .02 | 1. | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .02 | .03 | 1. | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .02 | .03 | 1. | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .02 | .03 | 1. | 28 FEB 2145 | 84 | .02 | .00 | .02 | 1. |
| 28 FEB 0945 | 36 | .05 | .02 | .03 | 1. | 28 FEB 2200 | 85 | .02 | .00 | .02 | 1. |
| 28 FEB 1000 | 37 | .05 | .02 | .04 | 1. | 28 FEB 2215 | 86 | .02 | .00 | .02 | 1. |
| 28 FEB 1015 | 38 | .06 | .02 | .04 | 2. | 28 FEB 2230 | 87 | .02 | .00 | .02 | 1. |
| 28 FEB 1030 | 39 | .06 | .02 | .05 | 2. | 28 FEB 2245 | 88 | .02 | .00 | .02 | 1. |
| 28 FEB 1045 | 40 | .07 | .02 | .05 | 2. | 28 FEB 2300 | 89 | .02 | .00 | .02 | 1. |
| 28 FEB 1100 | 41 | .07 | .02 | .06 | 2. | 28 FEB 2315 | 90 | .02 | .00 | .02 | 1. |
| 28 FEB 1115 | 42 | .08 | .02 | .06 | 2. | 28 FEB 2330 | 91 | .02 | .00 | .02 | 1. |
| 28 FEB 1130 | 43 | .09 | .02 | .07 | 3. | 28 FEB 2345 | 92 | .02 | .00 | .02 | 1. |
| 28 FEB 1145 | 44 | .09 | .02 | .07 | 3. | 1 MAR 0000 | 93 | .02 | .00 | .02 | 1. |
| 28 FEB 1200 | 45 | .10 | .02 | .08 | 3. | 1 MAR 0015 | 94 | .02 | .00 | .02 | 1. |
| 28 FEB 1215 | 46 | .17 | .03 | .14 | 4. | 1 MAR 0030 | 95 | .02 | .00 | .02 | 1. |
| 28 FEB 1230 | 47 | .21 | .03 | .18 | 5. | 1 MAR 0045 | 96 | .02 | .00 | .02 | 1. |
| 28 FEB 1245 | 48 | .28 | .03 | .24 | 7. | 1 MAR 0100 | 97 | .02 | .00 | .02 | 1. |
| 28 FEB 1300 | 49 | .59 | .05 | .54 | 10. | | | | | | |

TOTAL RAINFALL = 6.60, TOTAL LOSS = 1.05, TOTAL EXCESS = 5.55

| PEAK FLOW (CFS) | TIME (HR) | MAXIMUM AVERAGE FLOW 6-HR (CFS) | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| + | | | | | |

```
+     29.     12.50                    8.          3.          3.          3.
                        (INCHES)     4.207       5.508       5.508       5.508
                         (AC-FT)        4.          5.          5.          5.

                         CUMULATIVE AREA =     .02 SQ MI

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

            **************
            *            *
481 KK      *     4PSWP  *
            *            *
            **************

482 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING THROUGH WET AREA IN B.E. ROW

              HYDROGRAPH ROUTING DATA

484 RS          STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        ELEV  TYPE OF INITIAL CONDITION
                     RSVRIC       60.60  INITIAL CONDITION
                          X         .00 WORKING R AND D COEFFICIENT

485 SA               AREA          .8       1.2       1.4       1.9

486 SE          ELEVATION       60.60     61.30     62.00     63.30

487 SS          SPILLWAY
                       CREL       60.60  SPILLWAY CREST ELEVATION
                      SPWID       10.00  SPILLWAY WIDTH
                       COQW        3.00  WEIR COEFFICIENT
                       EXPW        1.50  EXPONENT OF HEAD

                                                          ***

                                          COMPUTED STORAGE-ELEVATION DATA

          STORAGE        .00       .69      1.60      3.78
        ELEVATION      60.60     61.30     62.00     63.30

                                          COMPUTED OUTFLOW-ELEVATION DATA

          OUTFLOW        .00       .00       .02       .18       .62      1.46      2.85      4.93      7.83     11.68
        ELEVATION      60.60     60.60     60.61     60.63     60.67     60.73     60.81     60.90     61.01     61.13

          OUTFLOW      16.64     22.82     30.38     39.44     50.14     62.62     77.02     93.48    112.12    133.10
        ELEVATION      61.27     61.43     61.61     61.80     62.01     62.23     62.47     62.73     63.01     63.30

                                        COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE        .00       .03       .06       .11       .18       .26       .37       .50       .66       .69
          OUTFLOW        .00       .18       .62      1.46      2.85      4.93      7.83     11.68     16.64     17.57
        ELEVATION      60.60     60.63     60.67     60.73     60.81     60.90     61.01     61.13     61.27     61.30

          STORAGE        .85      1.07      1.32      1.60      1.94      2.32      2.75      3.23      3.78
          OUTFLOW      22.82     30.38     39.44     49.70     62.62     77.02     93.48    112.12    133.10
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| ELEVATION | 61.43 | 61.61 | 61.80 | 62.00 | 62.23 | 62.47 | 62.73 | 63.01 | 63.30 |
|---|---|---|---|---|---|---|---|---|---|

HYDROGRAPH AT STATION 4PSWP

| DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE | DA | MON | HRMN | ORD | OUTFLOW | STORAGE | STAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | FEB | 0100 | 1 | 0. | .0 | 60.6 | 28 | FEB | 0915 | 34 | 7. | .3 | 61.0 | 28 | FEB | 1730 | 67 | 84. | 2.5 | 62.6 |
| 28 | FEB | 0115 | 2 | 1. | .1 | 60.7 | 28 | FEB | 0930 | 35 | 7. | .4 | 61.0 | 28 | FEB | 1745 | 68 | 72. | 2.2 | 62.4 |
| 28 | FEB | 0130 | 3 | 2. | .2 | 60.8 | 28 | FEB | 0945 | 36 | 7. | .4 | 61.0 | 28 | FEB | 1800 | 69 | 65. | 2.0 | 62.3 |
| 28 | FEB | 0145 | 4 | 4. | .2 | 60.8 | 28 | FEB | 1000 | 37 | 8. | .4 | 61.0 | 28 | FEB | 1815 | 70 | 61. | 1.9 | 62.2 |
| 28 | FEB | 0200 | 5 | 5. | .3 | 60.9 | 28 | FEB | 1015 | 38 | 9. | .4 | 61.0 | 28 | FEB | 1830 | 71 | 58. | 1.8 | 62.2 |
| 28 | FEB | 0215 | 6 | 5. | .3 | 60.9 | 28 | FEB | 1030 | 39 | 10. | .5 | 61.1 | 28 | FEB | 1845 | 72 | 57. | 1.8 | 62.1 |
| 28 | FEB | 0230 | 7 | 6. | .3 | 60.9 | 28 | FEB | 1045 | 40 | 12. | .5 | 61.2 | 28 | FEB | 1900 | 73 | 56. | 1.8 | 62.1 |
| 28 | FEB | 0245 | 8 | 6. | .3 | 60.9 | 28 | FEB | 1100 | 41 | 16. | .6 | 61.2 | 28 | FEB | 1915 | 74 | 55. | 1.7 | 62.1 |
| 28 | FEB | 0300 | 9 | 6. | .3 | 60.9 | 28 | FEB | 1115 | 42 | 20. | .8 | 61.4 | 28 | FEB | 1930 | 75 | 53. | 1.7 | 62.1 |
| 28 | FEB | 0315 | 10 | 6. | .3 | 60.9 | 28 | FEB | 1130 | 43 | 25. | .9 | 61.5 | 28 | FEB | 1945 | 76 | 50. | 1.6 | 62.0 |
| 28 | FEB | 0330 | 11 | 6. | .3 | 60.9 | 28 | FEB | 1145 | 44 | 29. | 1.0 | 61.6 | 28 | FEB | 2000 | 77 | 48. | 1.6 | 62.0 |
| 28 | FEB | 0345 | 12 | 6. | .3 | 60.9 | 28 | FEB | 1200 | 45 | 35. | 1.2 | 61.7 | 28 | FEB | 2015 | 78 | 47. | 1.5 | 61.9 |
| 28 | FEB | 0400 | 13 | 6. | .3 | 60.9 | 28 | FEB | 1215 | 46 | 42. | 1.4 | 61.9 | 28 | FEB | 2030 | 79 | 46. | 1.5 | 61.9 |
| 28 | FEB | 0415 | 14 | 6. | .3 | 60.9 | 28 | FEB | 1230 | 47 | 55. | 1.7 | 62.1 | 28 | FEB | 2045 | 80 | 45. | 1.5 | 61.9 |
| 28 | FEB | 0430 | 15 | 6. | .3 | 60.9 | 28 | FEB | 1245 | 48 | 73. | 2.2 | 62.4 | 28 | FEB | 2100 | 81 | 45. | 1.5 | 61.9 |
| 28 | FEB | 0445 | 16 | 6. | .3 | 60.9 | 28 | FEB | 1300 | 49 | 94. | 2.8 | 62.7 | 28 | FEB | 2115 | 82 | 44. | 1.4 | 61.9 |
| 28 | FEB | 0500 | 17 | 6. | .3 | 60.9 | 28 | FEB | 1315 | 50 | 113. | 3.3 | 63.0 | 28 | FEB | 2130 | 83 | 43. | 1.4 | 61.9 |
| 28 | FEB | 0515 | 18 | 6. | .3 | 60.9 | 28 | FEB | 1330 | 51 | 127. | 3.6 | 63.2 | 28 | FEB | 2145 | 84 | 43. | 1.4 | 61.9 |
| 28 | FEB | 0530 | 19 | 6. | .3 | 60.9 | 28 | FEB | 1345 | 52 | 135. | 3.8 | 63.3 | 28 | FEB | 2200 | 85 | 42. | 1.4 | 61.9 |
| 28 | FEB | 0545 | 20 | 6. | .3 | 60.9 | 28 | FEB | 1400 | 53 | 135. | 3.8 | 63.3 | 28 | FEB | 2215 | 86 | 42. | 1.4 | 61.8 |
| 28 | FEB | 0600 | 21 | 6. | .3 | 61.0 | 28 | FEB | 1415 | 54 | 131. | 3.7 | 63.3 | 28 | FEB | 2230 | 87 | 41. | 1.4 | 61.8 |
| 28 | FEB | 0615 | 22 | 6. | .3 | 61.0 | 28 | FEB | 1430 | 55 | 126. | 3.6 | 63.2 | 28 | FEB | 2245 | 88 | 41. | 1.4 | 61.8 |
| 28 | FEB | 0630 | 23 | 6. | .3 | 61.0 | 28 | FEB | 1445 | 56 | 122. | 3.5 | 63.2 | 28 | FEB | 2300 | 89 | 40. | 1.3 | 61 |
| 28 | FEB | 0645 | 24 | 6. | .3 | 61.0 | 28 | FEB | 1500 | 57 | 120. | 3.4 | 63.1 | 28 | FEB | 2315 | 90 | 40. | 1.3 | 6 |
| 28 | FEB | 0700 | 25 | 6. | .3 | 61.0 | 28 | FEB | 1515 | 58 | 117. | 3.4 | 63.1 | 28 | FEB | 2330 | 91 | 40. | 1.3 | 61. |
| 28 | FEB | 0715 | 26 | 7. | .3 | 61.0 | 28 | FEB | 1530 | 59 | 116. | 3.3 | 63.1 | 28 | FEB | 2345 | 92 | 40. | 1.3 | 61.8 |
| 28 | FEB | 0730 | 27 | 7. | .3 | 61.0 | 28 | FEB | 1545 | 60 | 115. | 3.3 | 63.0 | 1 | MAR | 0000 | 93 | 39. | 1.3 | 61.8 |
| 28 | FEB | 0745 | 28 | 7. | .3 | 61.0 | 28 | FEB | 1600 | 61 | 114. | 3.3 | 63.0 | 1 | MAR | 0015 | 94 | 38. | 1.3 | 61.8 |
| 28 | FEB | 0800 | 29 | 7. | .3 | 61.0 | 28 | FEB | 1615 | 62 | 114. | 3.3 | 63.0 | 1 | MAR | 0030 | 95 | 38. | 1.3 | 61.8 |
| 28 | FEB | 0815 | 30 | 7. | .3 | 61.0 | 28 | FEB | 1630 | 63 | 112. | 3.2 | 63.0 | 1 | MAR | 0045 | 96 | 38. | 1.3 | 61.8 |
| 28 | FEB | 0830 | 31 | 7. | .3 | 61.0 | 28 | FEB | 1645 | 64 | 111. | 3.2 | 63.0 | 1 | MAR | 0100 | 97 | 37. | 1.3 | 61.8 |
| 28 | FEB | 0845 | 32 | 7. | .3 | 61.0 | 28 | FEB | 1700 | 65 | 108. | 3.1 | 62.9 | | | | | | | |
| 28 | FEB | 0900 | 33 | 7. | .3 | 61.0 | 28 | FEB | 1715 | 66 | 98. | 2.9 | 62.8 | | | | | | | |

| PEAK FLOW (CFS) | TIME (HR) | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| | | (CFS) | | | | |
| + 135. | 12.75 | | 105. | 43. | 43. | 43. |
| | | (INCHES) | 1.600 | 2.617 | 2.617 | 2.617 |
| | | (AC-FT) | 52. | 85. | 85. | 85. |

| PEAK STORAGE (AC-FT) | TIME (HR) | MAXIMUM AVERAGE STORAGE 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| + 4. | 12.75 | 3. | 1. | 1. | 1. |

| PEAK STAGE (FEET) | TIME (HR) | MAXIMUM AVERAGE STAGE 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|
| + 63.32 | 12.75 | 62.89 | 61.73 | 61.73 | 61.73 |

CUMULATIVE AREA = .61 SQ MI

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

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          *            *
488 KK    *      3PE   *
          *            *
          **************

489 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

             SUBBASIN RUNOFF DATA

491 BA          SUBBASIN CHARACTERISTICS
                      TAREA        .00  SUBBASIN AREA

                PRECIPITATION DATA

492 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                   STORM AREA =     .00

493 LS          SCS LOSS RATE
                      STRTL        .04  INITIAL ABSTRACTION
                     CRVNBR      98.00  CURVE NUMBER
                      RTIMP        .00  PERCENT IMPERVIOUS AREA

494 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG        .02  LAG

                                                        ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                   UNIT HYDROGRAPH
                                              5 END-OF-PERIOD ORDINATES
                4.       1.       0.       0.       0.

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

                                          HYDROGRAPH AT STATION      3PE

*****************************************************************************************************************************
                                                                 *
     DA MON HRMN  ORD    RAIN    LOSS  EXCESS     COMP Q        *     DA MON HRMN  ORD    RAIN    LOSS  EXCESS     COMP Q
                                                                 *
     28 FEB 0100    1     .00     .00     .00         0.        *     28 FEB 1315   50    1.30     .00    1.30         6.
     28 FEB 0115    2     .02     .02     .00         0.        *     28 FEB 1330   51     .34     .00     .34         3.
     28 FEB 0130    3     .02     .02     .00         0.        *     28 FEB 1345   52     .23     .00     .23         2.
     28 FEB 0145    4     .02     .02     .00         0.        *     28 FEB 1400   53     .19     .00     .19         1.
     28 FEB 0200    5     .02     .01     .00         0.        *     28 FEB 1415   54     .11     .00     .11         1.
     28 FEB 0215    6     .02     .01     .00         0.        *     28 FEB 1430   55     .10     .00     .10         1.
     28 FEB 0230    7     .02     .01     .01         0.        *     28 FEB 1445   56     .09     .00     .09         0.
     28 FEB 0245    8     .02     .01     .01         0.        *     28 FEB 1500   57     .09     .00     .08         0.
     28 FEB 0300    9     .02     .01     .01         0.        *     28 FEB 1515   58     .08     .00     .08         0.
     28 FEB 0315   10     .02     .01     .01         0.        *     28 FEB 1530   59     .07     .00     .07         0.
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| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0330 | 11 | .02 | .01 | .01 | 0. | * | 28 FEB 1545 | 60 | .07 | .00 | .07 | 0. |
| 28 FEB 0345 | 12 | .02 | .01 | .01 | 0. | * | 28 FEB 1600 | 61 | .06 | .00 | .06 | 0. |
| 28 FEB 0400 | 13 | .02 | .01 | .01 | 0. | * | 28 FEB 1615 | 62 | .05 | .00 | .05 | 0. |
| 28 FEB 0415 | 14 | .02 | .01 | .01 | 0. | * | 28 FEB 1630 | 63 | .05 | .00 | .05 | 0. |
| 28 FEB 0430 | 15 | .02 | .01 | .02 | 0. | * | 28 FEB 1645 | 64 | .05 | .00 | .05 | 0. |
| 28 FEB 0445 | 16 | .02 | .00 | .02 | 0. | * | 28 FEB 1700 | 65 | .05 | .00 | .05 | 0. |
| 28 FEB 0500 | 17 | .02 | .00 | .02 | 0. | * | 28 FEB 1715 | 66 | .04 | .00 | .04 | 0. |
| 28 FEB 0515 | 18 | .02 | .00 | .02 | 0. | * | 28 FEB 1730 | 67 | .04 | .00 | .04 | 0. |
| 28 FEB 0530 | 19 | .02 | .00 | .02 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 0. |
| 28 FEB 0545 | 20 | .02 | .00 | .02 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .04 | 0. |
| 28 FEB 0600 | 21 | .02 | .00 | .02 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .04 | 0. |
| 28 FEB 0615 | 22 | .02 | .00 | .02 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .04 | 0. |
| 28 FEB 0630 | 23 | .03 | .00 | .02 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 0. |
| 28 FEB 0645 | 24 | .03 | .00 | .02 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 0. |
| 28 FEB 0700 | 25 | .03 | .00 | .02 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .03 | 0. |
| 28 FEB 0715 | 26 | .03 | .00 | .03 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .03 | 0. |
| 28 FEB 0730 | 27 | .03 | .00 | .03 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .03 | 0. |
| 28 FEB 0745 | 28 | .04 | .00 | .03 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .03 | 0. |
| 28 FEB 0800 | 29 | .04 | .00 | .03 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 0. |
| 28 FEB 0815 | 30 | .04 | .00 | .04 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 0. |
| 28 FEB 0830 | 31 | .04 | .00 | .04 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 0. |
| 28 FEB 0845 | 32 | .04 | .00 | .04 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 0. |
| 28 FEB 0900 | 33 | .04 | .00 | .04 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 0. |
| 28 FEB 0915 | 34 | .04 | .00 | .04 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 0. |
| 28 FEB 0930 | 35 | .05 | .00 | .05 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .00 | .05 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .00 | .05 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .00 | .06 | 0. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .00 | .06 | 0. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |
| 28 FEB 1045 | 40 | .07 | .00 | .07 | 0. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 0. |
| 28 FEB 1100 | 41 | .07 | .00 | .07 | 0. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |
| 28 FEB 1115 | 42 | .08 | .00 | .08 | 0. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 0. |
| 28 FEB 1130 | 43 | .09 | .00 | .09 | 0. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 0. |
| 28 FEB 1145 | 44 | .09 | .00 | .09 | 0. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 0. |
| 28 FEB 1200 | 45 | .10 | .00 | .10 | 1. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 0. |
| 28 FEB 1215 | 46 | .17 | .00 | .17 | 1. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 0. |
| 28 FEB 1230 | 47 | .21 | .00 | .21 | 1. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 0. |
| 28 FEB 1245 | 48 | .27 | .00 | .27 | 1. | * | 1 MAR 0100 | 97 | .02 | .00 | .02 | 0. |
| 28 FEB 1300 | 49 | .59 | .00 | .58 | 3. | * | | | | | | |
| | | | | | | * | | | | | | |

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TOTAL RAINFALL = 6.60, TOTAL LOSS = .24, TOTAL EXCESS = 6.36

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 6. | 12.25 | | 1. | 0. | 0. | 0. |
| | | (INCHES) | 4.566 | 6.348 | 6.348 | 6.348 |
| | | (AC-FT) | 0. | 1. | 1. | 1. |

CUMULATIVE AREA = .00 SQ MI

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

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              **************
              *            *
495 KK        *     3PEDB  *
              *            *
              **************
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496 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               STORAGE ROUTING DETENTION BASIN AT PEBCO

            HYDROGRAPH ROUTING DATA

498 RS          STORAGE ROUTING
                      NSTPS           1  NUMBER OF SUBREACHES
                       ITYP        ELEV  TYPE OF INITIAL CONDITION
                     RSVRIC       63.00  INITIAL CONDITION
                          X         .00 WORKING R AND D COEFFICIENT

499 SA               AREA          .0        .0        .1        .1

500 SE          ELEVATION       63.00     64.00     65.00     66.00

501 SL          LOW-LEVEL OUTLET
                      ELEVL       63.50  ELEVATION AT CENTER OF OUTLET
                      CAREA         .79  CROSS-SECTIONAL AREA
                       COQL         .60  COEFFICIENT
                       EXPL         .50  EXPONENT OF HEAD

502 SS          SPILLWAY
                       CREL       66.90  SPILLWAY CREST ELEVATION
                      SPWID         .00  SPILLWAY WIDTH
                       COQW         .00  WEIR COEFFICIENT
                       EXPW        1.50  EXPONENT OF HEAD

                                                  ***

                                        COMPUTED STORAGE-ELEVATION DATA

          STORAGE        .00       .04       .09       .16
        ELEVATION      63.00     64.00     65.00     66.00

                                        COMPUTED OUTFLOW-ELEVATION DATA

         OUTFLOW        .00       .00      2.69      2.95      3.27      3.66      4.16      4.81      5.70      7.01
        ELEVATION      63.00     63.50     64.00     64.10     64.24     64.43     64.69     65.10     65.75     66.90

                                       COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

          STORAGE        .00       .02       .04       .05       .05       .06       .08       .09       .10       .14
         OUTFLOW        .00       .00      2.69      2.95      3.27      3.66      4.16      4.66      4.81      5.70
        ELEVATION      63.00     63.50     64.00     64.10     64.24     64.43     64.69     65.00     65.10     65.75

          STORAGE        .16       .23
         OUTFLOW       6.01      7.01
        ELEVATION      66.00     66.90

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN        0. TO        3.
                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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                                        HYDROGRAPH AT STATION    3PEDB

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                                          *                                          *
 DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE   STAGE
                                          *                                          *
 28 FEB 0100   1       0.       .0    63.0 * 28 FEB 0915  34       0.       .0    63.5 * 28 FEB 1730  67       0.       .0    63.5
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| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0115 | 2 | 0. | .0 | 63.0 * | 28 FEB 0930 | 35 | 0. | .0 | 63.5 * | 28 FEB 1745 | 68 | 0. | .0 | 63.5 |
| 28 FEB 0130 | 3 | 0. | .0 | 63.0 * | 28 FEB 0945 | 36 | 0. | .0 | 63.5 * | 28 FEB 1800 | 69 | 0. | .0 | 63.5 |
| 28 FEB 0145 | 4 | 0. | .0 | 63.0 * | 28 FEB 1000 | 37 | 0. | .0 | 63.5 * | 28 FEB 1815 | 70 | 0. | .0 | 63.5 |
| 28 FEB 0200 | 5 | 0. | .0 | 63.0 * | 28 FEB 1015 | 38 | 0. | .0 | 63.6 * | 28 FEB 1830 | 71 | 0. | .0 | 63.5 |
| 28 FEB 0215 | 6 | 0. | .0 | 63.0 * | 28 FEB 1030 | 39 | 0. | .0 | 63.6 * | 28 FEB 1845 | 72 | 0. | .0 | 6[illegible] |
| 28 FEB 0230 | 7 | 0. | .0 | 63.0 * | 28 FEB 1045 | 40 | 0. | .0 | 63.6 * | 28 FEB 1900 | 73 | 0. | .0 | 6[illegible] |
| 28 FEB 0245 | 8 | 0. | .0 | 63.0 * | 28 FEB 1100 | 41 | 0. | .0 | 63.6 * | 28 FEB 1915 | 74 | 0. | .0 | 63.5 |
| 28 FEB 0300 | 9 | 0. | .0 | 63.1 * | 28 FEB 1115 | 42 | 0. | .0 | 63.6 * | 28 FEB 1930 | 75 | 0. | .0 | 63.5 |
| 28 FEB 0315 | 10 | 0. | .0 | 63.1 * | 28 FEB 1130 | 43 | 0. | .0 | 63.6 * | 28 FEB 1945 | 76 | 0. | .0 | 63.5 |
| 28 FEB 0330 | 11 | 0. | .0 | 63.1 * | 28 FEB 1145 | 44 | 0. | .0 | 63.6 * | 28 FEB 2000 | 77 | 0. | .0 | 63.5 |
| 28 FEB 0345 | 12 | 0. | .0 | 63.2 * | 28 FEB 1200 | 45 | 0. | .0 | 63.6 * | 28 FEB 2015 | 78 | 0. | .0 | 63.5 |
| 28 FEB 0400 | 13 | 0. | .0 | 63.2 * | 28 FEB 1215 | 46 | 1. | .0 | 63.6 * | 28 FEB 2030 | 79 | 0. | .0 | 63.5 |
| 28 FEB 0415 | 14 | 0. | .0 | 63.2 * | 28 FEB 1230 | 47 | 1. | .0 | 63.7 * | 28 FEB 2045 | 80 | 0. | .0 | 63.5 |
| 28 FEB 0430 | 15 | 0. | .0 | 63.3 * | 28 FEB 1245 | 48 | 1. | .0 | 63.7 * | 28 FEB 2100 | 81 | 0. | .0 | 63.5 |
| 28 FEB 0445 | 16 | 0. | .0 | 63.3 * | 28 FEB 1300 | 49 | 2. | .0 | 63.9 * | 28 FEB 2115 | 82 | 0. | .0 | 63.5 |
| 28 FEB 0500 | 17 | 0. | .0 | 63.4 * | 28 FEB 1315 | 50 | 4. | .1 | 64.4 * | 28 FEB 2130 | 83 | 0. | .0 | 63.5 |
| 28 FEB 0515 | 18 | 0. | .0 | 63.4 * | 28 FEB 1330 | 51 | 4. | .1 | 64.6 * | 28 FEB 2145 | 84 | 0. | .0 | 63.5 |
| 28 FEB 0530 | 19 | 0. | .0 | 63.5 * | 28 FEB 1345 | 52 | 3. | .0 | 64.1 * | 28 FEB 2200 | 85 | 0. | .0 | 63.5 |
| 28 FEB 0545 | 20 | 0. | .0 | 63.5 * | 28 FEB 1400 | 53 | 1. | .0 | 63.7 * | 28 FEB 2215 | 86 | 0. | .0 | 63.5 |
| 28 FEB 0600 | 21 | 0. | .0 | 63.5 * | 28 FEB 1415 | 54 | 1. | .0 | 63.7 * | 28 FEB 2230 | 87 | 0. | .0 | 63.5 |
| 28 FEB 0615 | 22 | 0. | .0 | 63.5 * | 28 FEB 1430 | 55 | 1. | .0 | 63.6 * | 28 FEB 2245 | 88 | 0. | .0 | 63.5 |
| 28 FEB 0630 | 23 | 0. | .0 | 63.5 * | 28 FEB 1445 | 56 | 1. | .0 | 63.6 * | 28 FEB 2300 | 89 | 0. | .0 | 63.5 |
| 28 FEB 0645 | 24 | 0. | .0 | 63.5 * | 28 FEB 1500 | 57 | 0. | .0 | 63.6 * | 28 FEB 2315 | 90 | 0. | .0 | 63.5 |
| 28 FEB 0700 | 25 | 0. | .0 | 63.5 * | 28 FEB 1515 | 58 | 0. | .0 | 63.6 * | 28 FEB 2330 | 91 | 0. | .0 | 63.5 |
| 28 FEB 0715 | 26 | 0. | .0 | 63.5 * | 28 FEB 1530 | 59 | 0. | .0 | 63.6 * | 28 FEB 2345 | 92 | 0. | .0 | 63.5 |
| 28 FEB 0730 | 27 | 0. | .0 | 63.5 * | 28 FEB 1545 | 60 | 0. | .0 | 63.6 * | 1 MAR 0000 | 93 | 0. | .0 | 63.5 |
| 28 FEB 0745 | 28 | 0. | .0 | 63.5 * | 28 FEB 1600 | 61 | 0. | .0 | 63.6 * | 1 MAR 0015 | 94 | 0. | .0 | 63.5 |
| 28 FEB 0800 | 29 | 0. | .0 | 63.5 * | 28 FEB 1615 | 62 | 0. | .0 | 63.6 * | 1 MAR 0030 | 95 | 0. | .0 | 63.5 |
| 28 FEB 0815 | 30 | 0. | .0 | 63.5 * | 28 FEB 1630 | 63 | 0. | .0 | 63.6 * | 1 MAR 0045 | 96 | 0. | .0 | 63.5 |
| 28 FEB 0830 | 31 | 0. | .0 | 63.5 * | 28 FEB 1645 | 64 | 0. | .0 | 63.5 * | 1 MAR 0100 | 97 | 0. | .0 | 63.5 |
| 28 FEB 0845 | 32 | 0. | .0 | 63.5 * | 28 FEB 1700 | 65 | 0. | .0 | 63.5 * | | | | | |
| 28 FEB 0900 | 33 | 0. | .0 | 63.5 * | 28 FEB 1715 | 66 | 0. | .0 | 63.5 * | | | | | |
| | | | | * | | | | | * | | | | | |

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| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW | | | |
|---|---|---|---|---|---|---|
| | | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 4. | 12.50 | | 1. | 0. | 0. | 0. |
| | | (INCHES) | 4.564 | 6.165 | 6.165 | 6.165 |
| | | (AC-FT) | 0. | 1. | 1. | 1. |

| PEAK STORAGE | TIME | MAXIMUM AVERAGE STORAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (AC-FT) | (HR) | | | | |
| 0. | 12.50 | 0. | 0. | 0. | 0. |

| PEAK STAGE | TIME | MAXIMUM AVERAGE STAGE | | | |
|---|---|---|---|---|---|
| | | 6-HR | 24-HR | 72-HR | 24.00-HR |
| + (FEET) | (HR) | | | | |
| 64.59 | 12.50 | 63.71 | 63.50 | 63.50 | 63.50 |

CUMULATIVE AREA = .00 SQ MI

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

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              **************
              *            *
503 KK        *      3PW   *
              *            *
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504 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           1  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                               SCS RUNOFF CALCULATION

              SUBBASIN RUNOFF DATA

506 BA          SUBBASIN CHARACTERISTICS
                      TAREA         .01  SUBBASIN AREA

                PRECIPITATION DATA

507 PH                                DEPTHS FOR   0-PERCENT HYPOTHETICAL STORM
                ..... HYDRO-35 ......   ............... TP-40 ...............   ........... TP-49 ...........
                5-MIN  15-MIN  60-MIN    2-HR    3-HR    6-HR   12-HR   24-HR   2-DAY   4-DAY   7-DAY  10-DAY
                  .60    1.30    2.50    3.30    3.70    4.60    5.60    6.60     .00     .00     .00     .00

                                                STORM AREA =     .01

508 LS          SCS LOSS RATE
                      STRTL         .56  INITIAL ABSTRACTION
                     CRVNBR       78.00  CURVE NUMBER
                      RTIMP         .00  PERCENT IMPERVIOUS AREA

509 UD          SCS DIMENSIONLESS UNITGRAPH
                       TLAG         .24  LAG

                                                     ***

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

                                                UNIT HYDROGRAPH
                                            7 END-OF-PERIOD ORDINATES
                10.       10.        3.        1.        0.        0.        0.
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HYDROGRAPH AT STATION 3PW

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| DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q | * | DA MON HRMN | ORD | RAIN | LOSS | EXCESS | COMP Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | * | | | | | | |
| 28 FEB 0100 | 1 | .00 | .00 | .00 | 0. | * | 28 FEB 1315 | 50 | 1.30 | .31 | .99 | 15. |
| 28 FEB 0115 | 2 | .02 | .02 | .00 | 0. | * | 28 FEB 1330 | 51 | .34 | .06 | .28 | 15. |
| 28 FEB 0130 | 3 | .02 | .02 | .00 | 0. | * | 28 FEB 1345 | 52 | .23 | .04 | .19 | 9. |
| 28 FEB 0145 | 4 | .02 | .02 | .00 | 0. | * | 28 FEB 1400 | 53 | .19 | .03 | .16 | 6. |
| 28 FEB 0200 | 5 | .02 | .02 | .00 | 0. | * | 28 FEB 1415 | 54 | .11 | .02 | .09 | 4. |
| 28 FEB 0215 | 6 | .02 | .02 | .00 | 0. | * | 28 FEB 1430 | 55 | .10 | .01 | .08 | 3. |
| 28 FEB 0230 | 7 | .02 | .02 | .00 | 0. | * | 28 FEB 1445 | 56 | .09 | .01 | .08 | 2. |
| 28 FEB 0245 | 8 | .02 | .02 | .00 | 0. | * | 28 FEB 1500 | 57 | .09 | .01 | .07 | 2. |
| 28 FEB 0300 | 9 | .02 | .02 | .00 | 0. | * | 28 FEB 1515 | 58 | .08 | .01 | .07 | 2. |
| 28 FEB 0315 | 10 | .02 | .02 | .00 | 0. | * | 28 FEB 1530 | 59 | .07 | .01 | .06 | 2. |
| 28 FEB 0330 | 11 | .02 | .02 | .00 | 0. | * | 28 FEB 1545 | 60 | .07 | .01 | .06 | 2. |
| 28 FEB 0345 | 12 | .02 | .02 | .00 | 0. | * | 28 FEB 1600 | 61 | .06 | .01 | .05 | 1. |
| 28 FEB 0400 | 13 | .02 | .02 | .00 | 0. | * | 28 FEB 1615 | 62 | .05 | .01 | .05 | 1. |
| 28 FEB 0415 | 14 | .02 | .02 | .00 | 0. | * | 28 FEB 1630 | 63 | .05 | .01 | .04 | 1. |
| 28 FEB 0430 | 15 | .02 | .02 | .00 | 0. | * | 28 FEB 1645 | 64 | .05 | .01 | .04 | 1. |
| 28 FEB 0445 | 16 | .02 | .02 | .00 | 0. | * | 28 FEB 1700 | 65 | .05 | .01 | .04 | 1. |
| 28 FEB 0500 | 17 | .02 | .02 | .00 | 0. | * | 28 FEB 1715 | 66 | .04 | .01 | .04 | 1. |
| 28 FEB 0515 | 18 | .02 | .02 | .00 | 0. | * | 28 FEB 1730 | 67 | .04 | .01 | .04 | 1. |
| 28 FEB 0530 | 19 | .02 | .02 | .00 | 0. | * | 28 FEB 1745 | 68 | .04 | .00 | .04 | 1. |
| 28 FEB 0545 | 20 | .02 | .02 | .00 | 0. | * | 28 FEB 1800 | 69 | .04 | .00 | .03 | 1. |
| 28 FEB 0600 | 21 | .02 | .02 | .00 | 0. | * | 28 FEB 1815 | 70 | .04 | .00 | .03 | 1. |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0615 | 22 | .02 | .02 | .00 | 0. | * | 28 FEB 1830 | 71 | .04 | .00 | .03 | 1. |
| 28 FEB 0630 | 23 | .03 | .03 | .00 | 0. | * | 28 FEB 1845 | 72 | .03 | .00 | .03 | 1. |
| 28 FEB 0645 | 24 | .03 | .03 | .00 | 0. | * | 28 FEB 1900 | 73 | .03 | .00 | .03 | 1. |
| 28 FEB 0700 | 25 | .03 | .03 | .00 | 0. | * | 28 FEB 1915 | 74 | .03 | .00 | .02 | 1. |
| 28 FEB 0715 | 26 | .03 | .03 | .00 | 0. | * | 28 FEB 1930 | 75 | .03 | .00 | .02 | 1. |
| 28 FEB 0730 | 27 | .03 | .03 | .00 | 0. | * | 28 FEB 1945 | 76 | .03 | .00 | .02 | 1. |
| 28 FEB 0745 | 28 | .04 | .04 | .00 | 0. | * | 28 FEB 2000 | 77 | .03 | .00 | .02 | 1. |
| 28 FEB 0800 | 29 | .04 | .04 | .00 | 0. | * | 28 FEB 2015 | 78 | .02 | .00 | .02 | 1. |
| 28 FEB 0815 | 30 | .04 | .04 | .00 | 0. | * | 28 FEB 2030 | 79 | .02 | .00 | .02 | 1. |
| 28 FEB 0830 | 31 | .04 | .04 | .00 | 0. | * | 28 FEB 2045 | 80 | .02 | .00 | .02 | 1. |
| 28 FEB 0845 | 32 | .04 | .04 | .00 | 0. | * | 28 FEB 2100 | 81 | .02 | .00 | .02 | 1. |
| 28 FEB 0900 | 33 | .04 | .04 | .01 | 0. | * | 28 FEB 2115 | 82 | .02 | .00 | .02 | 1. |
| 28 FEB 0915 | 34 | .04 | .04 | .01 | 0. | * | 28 FEB 2130 | 83 | .02 | .00 | .02 | 1. |
| 28 FEB 0930 | 35 | .05 | .04 | .01 | 0. | * | 28 FEB 2145 | 84 | .02 | .00 | .02 | 0. |
| 28 FEB 0945 | 36 | .05 | .04 | .01 | 0. | * | 28 FEB 2200 | 85 | .02 | .00 | .02 | 0. |
| 28 FEB 1000 | 37 | .05 | .04 | .01 | 0. | * | 28 FEB 2215 | 86 | .02 | .00 | .02 | 0. |
| 28 FEB 1015 | 38 | .06 | .05 | .02 | 0. | * | 28 FEB 2230 | 87 | .02 | .00 | .02 | 0. |
| 28 FEB 1030 | 39 | .06 | .05 | .02 | 0. | * | 28 FEB 2245 | 88 | .02 | .00 | .02 | 0. |
| 28 FEB 1045 | 40 | .07 | .05 | .02 | 0. | * | 28 FEB 2300 | 89 | .02 | .00 | .02 | 0. |
| 28 FEB 1100 | 41 | .07 | .05 | .03 | 1. | * | 28 FEB 2315 | 90 | .02 | .00 | .02 | 0. |
| 28 FEB 1115 | 42 | .08 | .05 | .03 | 1. | * | 28 FEB 2330 | 91 | .02 | .00 | .02 | 0. |
| 28 FEB 1130 | 43 | .09 | .05 | .04 | 1. | * | 28 FEB 2345 | 92 | .02 | .00 | .02 | 0. |
| 28 FEB 1145 | 44 | .09 | .05 | .04 | 1. | * | 1 MAR 0000 | 93 | .02 | .00 | .02 | 0. |
| 28 FEB 1200 | 45 | .10 | .06 | .05 | 1. | * | 1 MAR 0015 | 94 | .02 | .00 | .02 | 0. |
| 28 FEB 1215 | 46 | .17 | .09 | .08 | 2. | * | 1 MAR 0030 | 95 | .02 | .00 | .02 | 0. |
| 28 FEB 1230 | 47 | .21 | .10 | .11 | 2. | * | 1 MAR 0045 | 96 | .02 | .00 | .02 | 0. |
| 28 FEB 1245 | 48 | .27 | .11 | .16 | 3. | * | 1 MAR 0100 | 97 | .02 | .00 | .01 | 0. |
| 28 FEB 1300 | 49 | .59 | .20 | .39 | 6. | * | | | | | | |
| | | | | | | * | | | | | | |

**********

TOTAL RAINFALL = 6.60, TOTAL LOSS = 2.49, TOTAL EXCESS = 4.11

| PEAK FLOW | TIME | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| + (CFS) | (HR) | | | | | |
| | | (CFS) | | | | |
| + 15. | 12.25 | | 4. | 1. | 1. | 1. |
| | | (INCHES) | 3.262 | 4.093 | 4.093 | 4.093 |
| | | (AC-FT) | 2. | 2. | 2. | 2. |

CUMULATIVE AREA = .01 SQ MI

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

```
            **************
            *            *
510 KK      *      3PEW  *
            *            *
            **************

511 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          1  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                               COMBINE HYDROGRAPHS FROM 3PEDB & 3PW

513 HC          HYDROGRAPH COMBINATION
                      ICOMP          2  NUMBER OF HYDROGRAPHS TO COMBINE
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***

HYDROGRAPH AT STATION 3PEW
SUM OF 2 HYDROGRAPHS

| DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW | DA MON HRMN | ORD | FLOW |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 FEB 0100 | 1 | 0. | 28 FEB 0715 | 26 | 0. | 28 FEB 1330 | 51 | 19. | 28 FEB 1945 | 76 | 1. |
| 28 FEB 0115 | 2 | 0. | 28 FEB 0730 | 27 | 0. | 28 FEB 1345 | 52 | 12. | 28 FEB 2000 | 77 | 1. |
| 28 FEB 0130 | 3 | 0. | 28 FEB 0745 | 28 | 0. | 28 FEB 1400 | 53 | 7. | 28 FEB 2015 | 78 | 1. |
| 28 FEB 0145 | 4 | 0. | 28 FEB 0800 | 29 | 0. | 28 FEB 1415 | 54 | 5. | 28 FEB 2030 | 79 | 1. |
| 28 FEB 0200 | 5 | 0. | 28 FEB 0815 | 30 | 0. | 28 FEB 1430 | 55 | 3. | 28 FEB 2045 | 80 | 1. |
| 28 FEB 0215 | 6 | 0. | 28 FEB 0830 | 31 | 0. | 28 FEB 1445 | 56 | 3. | 28 FEB 2100 | 81 | 1. |
| 28 FEB 0230 | 7 | 0. | 28 FEB 0845 | 32 | 0. | 28 FEB 1500 | 57 | 3. | 28 FEB 2115 | 82 | 1. |
| 28 FEB 0245 | 8 | 0. | 28 FEB 0900 | 33 | 0. | 28 FEB 1515 | 58 | 2. | 28 FEB 2130 | 83 | 1. |
| 28 FEB 0300 | 9 | 0. | 28 FEB 0915 | 34 | 0. | 28 FEB 1530 | 59 | 2. | 28 FEB 2145 | 84 | 1. |
| 28 FEB 0315 | 10 | 0. | 28 FEB 0930 | 35 | 0. | 28 FEB 1545 | 60 | 2. | 28 FEB 2200 | 85 | 1. |
| 28 FEB 0330 | 11 | 0. | 28 FEB 0945 | 36 | 0. | 28 FEB 1600 | 61 | 2. | 28 FEB 2215 | 86 | 1. |
| 28 FEB 0345 | 12 | 0. | 28 FEB 1000 | 37 | 1. | 28 FEB 1615 | 62 | 2. | 28 FEB 2230 | 87 | 1. |
| 28 FEB 0400 | 13 | 0. | 28 FEB 1015 | 38 | 1. | 28 FEB 1630 | 63 | 2. | 28 FEB 2245 | 88 | 1. |
| 28 FEB 0415 | 14 | 0. | 28 FEB 1030 | 39 | 1. | 28 FEB 1645 | 64 | 1. | 28 FEB 2300 | 89 | 1. |
| 28 FEB 0430 | 15 | 0. | 28 FEB 1045 | 40 | 1. | 28 FEB 1700 | 65 | 1. | 28 FEB 2315 | 90 | 1. |
| 28 FEB 0445 | 16 | 0. | 28 FEB 1100 | 41 | 1. | 28 FEB 1715 | 66 | 1. | 28 FEB 2330 | 91 | 1. |
| 28 FEB 0500 | 17 | 0. | 28 FEB 1115 | 42 | 1. | 28 FEB 1730 | 67 | 1. | 28 FEB 2345 | 92 | 1. |
| 28 FEB 0515 | 18 | 0. | 28 FEB 1130 | 43 | 1. | 28 FEB 1745 | 68 | 1. | 1 MAR 0000 | 93 | 1. |
| 28 FEB 0530 | 19 | 0. | 28 FEB 1145 | 44 | 1. | 28 FEB 1800 | 69 | 1. | 1 MAR 0015 | 94 | 0. |
| 28 FEB 0545 | 20 | 0. | 28 FEB 1200 | 45 | 2. | 28 FEB 1815 | 70 | 1. | 1 MAR 0030 | 95 | 0. |
| 28 FEB 0600 | 21 | 0. | 28 FEB 1215 | 46 | 2. | 28 FEB 1830 | 71 | 1. | 1 MAR 0045 | 96 | 0. |
| 28 FEB 0615 | 22 | 0. | 28 FEB 1230 | 47 | 3. | 28 FEB 1845 | 72 | 1. | 1 MAR 0100 | 97 | 0. |
| 28 FEB 0630 | 23 | 0. | 28 FEB 1245 | 48 | 4. | 28 FEB 1900 | 73 | 1. | | | |
| 28 FEB 0645 | 24 | 0. | 28 FEB 1300 | 49 | 8. | 28 FEB 1915 | 74 | 1. | | | |
| 28 FEB 0700 | 25 | 0. | 28 FEB 1315 | 50 | 19. | 28 FEB 1930 | 75 | 1. | | | |

| PEAK FLOW (CFS) | TIME (HR) | | MAXIMUM AVERAGE FLOW 6-HR | 24-HR | 72-HR | 24.00-HR |
|---|---|---|---|---|---|---|
| | | (CFS) | | | | |
| 19. | 12.50 | | 4. | 1. | 1. | 1. |
| | | (INCHES) | 3.460 | 4.438 | 4.438 | 4.438 |
| | | (AC-FT) | 2. | 3. | 3. | 3. |

CUMULATIVE AREA = .01 SQ MI

1

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

| OPERATION | STATION | PEAK FLOW | TIME OF PEAK | AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR | 24-HOUR | 72-HOUR | BASIN AREA | MAXIMUM STAGE | TIME OF MAX STAGE |
|---|---|---|---|---|---|---|---|---|---|
| HYDROGRAPH AT | 5E | 84. | 12.50 | 21. | 7. | 7. | .07 | | |
| HYDROGRAPH AT | 6CSWP | 184. | 14.00 | 177. | 65. | 65. | .93 | | |
| HYDROGRAPH AT | 12P | 19. | 12.50 | 5. | 2. | 2. | .01 | | |
| 3 COMBINED AT | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| + | | 6C24P | 263. | 12.50 | 201. | 73. | 73. | 1.01 | | |
| + | ROUTED TO | 12PCHL | 265. | 12.75 | 201. | 73. | 73. | 1.01 | 73.20 | 12.75 |
| + | HYDROGRAPH AT | 13P | 9. | 12.75 | 3. | 1. | 1. | .01 | | |
| + | HYDROGRAPH AT | 19P | 5. | 12.50 | 1. | 0. | 0. | .00 | | |
| + | ROUTED TO | 19PCHL | 5. | 12.50 | 1. | 0. | 0. | .00 | 66.55 | 12.50 |
| + | 3 COMBINED AT | 121319 | 277. | 12.75 | 204. | 74. | 74. | 1.03 | | |
| + | HYDROGRAPH AT | 20P | 26. | 12.50 | 6. | 2. | 2. | .02 | | |
| + | ROUTED TO | 20PSWP | 1. | 19.25 | 1. | 0. | 0. | .02 | 68.15 | 19.25 |
| + | HYDROGRAPH AT | 14P | 46. | 12.50 | 13. | 4. | 4. | .04 | | |
| + | 3 COMBINED AT | NBAR | 320. | 12.75 | 216. | 79. | 79. | 1.08 | | |
| + | ROUTED TO | 14PCHL | 180. | 17.75 | 171. | 71. | 71. | 1.08 | 100.16 | 17.75 |
| + | HYDROGRAPH AT | 6PWBAR | 30. | 15.25 | 30. | 14. | 14. | .30 | | |
| + | HYDROGRAPH AT | 8P | 35. | 12.50 | 8. | 3. | 3. | .02 | | |
| + | HYDROGRAPH AT | 15P | 26. | 12.50 | 6. | 2. | 2. | .01 | | |
| + | ROUTED TO | 15PSWP | 6. | 13.50 | 5. | 2. | 2. | .01 | 63.32 | 13.50 |
| + | 4 COMBINED AT | 6815P | 215. | 17.50 | 206. | 90. | 90. | 1.42 | | |
| + | ROUTED TO | 8PCHL | 215. | 17.75 | 206. | 90. | 90. | 1.42 | 73.70 | 17.75 |
| + | HYDROGRAPH AT | 10P | 54. | 12.25 | 12. | 4. | 4. | .03 | | |
| + | 2 COMBINED AT | 810P | 217. | 17.75 | 209. | 94. | 94. | 1.45 | | |
| + | ROUTED TO | 10PCHL | 217. | 17.75 | 209. | 93. | 93. | 1.45 | 68.59 | 17.75 |

```
        HYDROGRAPH AT
+                   16&17P      43.  12.25      7.      2.      2.     .02
        ROUTED TO
+                   1617PD      25.  12.50      6.      2.      2.     .02
                                                                          66.39    12.50

        2 COMBINED AT
+                   1017PD     219.  17.50    211.     95.     95.    1.46
        ROUTED TO
+                   1617CH     219.  17.75    211.     95.     95.    1.46
+                                                                          72.30    17.75

        ROUTED TO
+                   11PCHL     219.  17.75    210.     95.     95.    1.46
+                                                                          71.41    17.75

        HYDROGRAPH AT
+                      21P      18.  12.50      4.      1.      1.     .01

        HYDROGRAPH AT
+                      22P       6.  12.25      1.      0.      0.     .00

        2 COMBINED AT
+                   21&22P      23.  12.50      6.      2.      2.     .02

        ROUTED TO
+                   21PCHL      25.  12.50      6.      2.      2.     .02
+                                                                          68.58    12.50

        HYDROGRAPH AT
+                      23P      77.  12.25     14.      4.      4.     .03

        HYDROGRAPH AT
+                      18P      31.  12.25      5.      2.      2.     .01

        4 COMBINED AT
+                   PHCOMB     238.  12.25    216.    103.    103.    1.52

        HYDROGRAPH AT
+                   8CSWP      572.  13.00    360.    135.    135.    1.43

        2 COMBINED AT
+                   CW&PP      786.  13.00    573.    238.    238.    2.95

        ROUTED TO
+                   PHPND      488.  17.75    466.    201.    201.    2.95
+                                                                          70.31    17.75

        HYDROGRAPH AT
+                      11P     128.  12.50     31.     10.     10.     .07

        HYDROGRAPH AT
+                     MAWL      25.  20.75     23.      8.      8.     .01

        HYDROGRAPH AT
+                       9P      21.  12.25      4.      1.      1.     .01

        HYDROGRAPH AT
+                      5PN      10.  12.50      3.      1.      1.     .01

        3 COMBINED AT
+                   MA5PN       30.  12.25     24.     10.     10.     .03

        ROUTED TO
```

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+                    AADWEX      30.   12.25        24.       10.       10.      .03
+                                                                                      62.03     12.25

      HYDROGRAPH AT
+                      5PS      67.   12.75        20.        6.        6.      .05

      HYDROGRAPH AT
+                    RECHRG       1.     .25         1.        1.        1.      .00

      3 COMBINED AT
+                   5PSAAD      94.   12.50        35.       17.       17.      .08

      ROUTED TO
+                    SHD10C      93.   12.50        35.       17.       17.      .08
+                                                                                      55.53     12.50

      HYDROGRAPH AT
+                   4DCHAB     116.   12.50        39.       17.       17.      .26

      HYDROGRAPH AT
+                      2PN      14.   12.50         3.        1.        1.      .01

      2 COMBINED AT
+                    4D2PN     130.   12.50        42.       18.       18.      .27

      ROUTED TO
+                    PXDPR     107.   12.75        42.       18.       18.      .27
+                                                                                      72.04     12.75

      HYDROGRAPH AT
+                    4ECHL      75.   12.00        64.       22.       22.      .30

      HYDROGRAPH AT
+                      1P      37.   12.50         9.        3.        3.      .02

      2 COMBINED AT
+                     4E1P     112.   12.50        73.       25.       25.      .32

      ROUTED TO
+                   EWCLPX     112.   12.50        73.       25.       25.      .32
+                                                                                      67.32     12.50

      HYDROGRAPH AT
+                      2PS      17.   12.25         3.        1.        1.      .01

      ROUTED TO
+                    2PSDB       7.   12.50         3.        1.        1.      .01
+                                                                                      69.49     12.50

      3 COMBINED AT
+                    1&2P     216.   12.75       116.       44.       44.      .59

      ROUTED TO
+                   2PSCHL     209.   12.75       116.       46.       46.      .59
+                                                                                      88.18     12.75

      HYDROGRAPH AT
+                   D12PSC     110.   12.25        97.       41.       41.      .59

      HYDROGRAPH AT
+                      4PS       8.   12.25         1.        1.        1.      .00

      ROUTED TO
+                    4PSDB       3.   12.50         1.        1.        1.      .00
+                                                                                      61.72     12.50
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          HYDROGRAPH AT
+                             4P          29.   12.50          8.          3.          3.        .02

          3 COMBINED AT
+                           124P         143.   12.50        106.         44.         44.        .61

          ROUTED TO
+                          4PSWP         135.   12.75        105.         43.         43.        .61
+                                                                                                          63.32        12.75

          HYDROGRAPH AT
+                            3PE           6.   12.25          1.          0.          0.        .00

          ROUTED TO
+                          3PEDB           4.   12.50          1.          0.          0.        .00
+                                                                                                          64.59        12.50

          HYDROGRAPH AT
+                            3PW          15.   12.25          4.          1.          1.        .01

          2 COMBINED AT
+                           3PEW          19.   12.50          4.          1.          1.        .01
```

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

 LANtastic (tm) Connection Manager V4.00       (C) Copyright 1991 Artisoft Inc.
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¤PRN    \\C52-GEN\@PRINTER                       ¤ýý ¤\\C52-GEN               ¤ýý
¤LPT1   \\C52-GEN\@PRINTER                       ¤ýý ¤\\C66-BAJ               ¤ýý
    2                                            ¤ýý ¤(C30-GEN)               ¤ýý
    3                                            ¤ýý ¤(C22-MJ)                ¤ýý
¤COM1                                            ¤ýý ¤(C43-GEN)               ¤ýý
¤COM2                                            ¤ýý ¤(C65-GEN)               ¤ýý
¤A:     (Physical)                               ¤ýý ¤(C67-FLORIN)            ¤ýý
¤B:     (Physical)                               ¤ýý ¤(C29-GEN)               ¤ýý
¤C:     (Physical)                               ¤ýý ¤                        ¤ýý
¤D:                                              ¤ýý ¤                        ¤ýý
¤E:                                              ¤ýý ¤                        ¤ýý
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Enter-Select Server, Ins-Login, Del-Logout, Space-Refresh, Esc-Exit, F1-Help
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# APPENDIX 10-F

## Detention Basin Design

PEBCO

| Golder Associates | SUBJECT Detention Basin Storage - Rebco | | |
|---|---|---|---|
| | Job No. 903-6400.310 | Made by DP | Date 8/3/91 |
| | Ref. ISRT-100% | Checked VEE 7 | Sheet 1 of 6 |
| | | Reviewed CLM | |

Objective: To determine the detention storage required on Rebco Property (HBZB/3P) where the proposed soil remedy is a parking lot.

Method: Calculate a CN number for existing and proposed conditions. The runoff in inches was derived from the "Rainfall-Runoff Depths for selected Runoff Curve Numbers" from SCS TR-16. The volume was then calculated by multiplying the surface area by the derived runoff for both existing & proposed. The difference between the two values is the amount of storage needed.

Reference: SCS TR-16

**Golder Associates**

SUBJECT Detention Basin Storage

Job No. 903-6400.310 | Made by DP | Date 8/3/91

Ref. ISRT-100% | Checked VEF | Sheet 2 of 6

Reviewed CRM

Subwatershed HB2B/3PE: Pepco (64,945 sf)

| Data | Existing | Proposed |
|---|---|---|
| CN* | 85 | 98 |
| Precip (in) | 6.6 | 6.6 |
| * Runoff (in) (from SCS TR-16) | 4.87 | 6.37 |
| Volume → Runoff (cf) | 26,357 | 34475 |
| (acre-ft) | 0.61 | 0.791 |

change in volume = 8118 cf
0.186 acre-ft

**Golder Associates**

| SUBJECT Detention Basin Storage | | |
|---|---|---|
| Job No. 903-6403.310 | Made by DP | Date 8/3/91 |
| Ref. ISRT - 100% | Checked VEET | Sheet 3 of 6 |
| | Reviewed CRM | |

Subwatershed HB2B - Pebco (64,945sf) Existing

| Soil Type | % Area | Use | CN#/Use | CNc | %A x CNc |
|---|---|---|---|---|---|
| C | 100 | Impervious (39,680) | 98/ 61% | 85 | 8500 |
| | | Brush - good (25,265sf) | 65/ 39% | | |

weighted CN = 85

Subwatershed 3P - Pebco (64,945sf) Proposed

Completely paved CN = 98

**Golder Associates**

SUBJECT Detention Basin Storage

Job No. 903-6400 310 | Made by DP | Date 8/5/91
Ref. ISRT - 100% | Checked JEEF | Sheet 4 of 6
Reviewed CMM

Subwatershed 3PE - Pebco Detention Basin

| Elev | Area (sf) | Avg Area (sf) | Depth (ft) | Volume | Cum Volume |
|---|---|---|---|---|---|
| 63 | (47x32) 1504 (0.035ac) | | | | |
| | | 1759 | 1 | 1759 | 1759 |
| 64 | (53x38) 2014 (0.046ac) | | | | |
| | | 2305 | 1 | 2305 | 4064 |
| 65 | (59x44) 2596 (0.060ac) | | | | |
| | | 2923 | 1 | 2923 | 6987 (0.160 ac-ft) |
| 66 | (65x50) 3250 (0.075ac) | | | | |

Minimum Storage Elevation: 63

Maximum Storage Elevation: 66

Total Storage Volume: 6987 cf (0.160 acre ft)

Note: As determined by hydrologic routing, a detention basin with a storage volume of 6987 cf is capable of detaining the change in runoff volume due to remediation

# RAINFALL-RUNOFF DEPTHS FOR SELECTED RUNOFF CURVE NUMBERS

| Inches \ Tenths | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 0.08 | 0.12 | 0.17 | 0.22 | |
| 1 | 0.28 | 0.35 | 0.41 | 0.48 | 0.55 | 0.63 | 0.71 | 0.78 | 0.86 | 0.94 | |
| 2 | 1.03 | 1.11 | 1.19 | 1.28 | 1.37 | 1.46 | 1.54 | 1.63 | 1.72 | 1.81 | |
| 3 | 1.90 | 1.99 | 2.08 | 2.17 | 2.26 | 2.36 | 2.45 | 2.54 | 2.64 | 2.73 | |
| 4 | 2.82 | 2.92 | 3.01 | 3.11 | 3.20 | 3.30 | 3.39 | 3.49 | 3.58 | 3.68 | |
| 5 | 3.77 | 3.87 | 3.96 | 4.06 | 4.16 | 4.25 | 4.35 | 4.45 | 4.54 | 4.64 | CURVE 89 |
| 6 | 4.74 | 4.83 | 4.93 | 5.02 | 5.12 | 5.22 | 5.32 | 5.42 | 5.51 | 5.61 | |
| 7 | 5.71 | 5.80 | 5.90 | 6.00 | 6.10 | 6.20 | 6.30 | 6.39 | 6.49 | 6.59 | |
| 8 | 6.69 | 6.79 | 6.88 | 6.98 | 7.08 | 7.18 | 7.28 | 7.38 | 7.47 | 7.57 | |
| 9 | 7.67 | 7.77 | 7.87 | 7.97 | 8.06 | 8.16 | 8.26 | 8.36 | 8.46 | 8.56 | |
| 10 | 8.66 | 8.76 | 8.86 | 8.95 | 9.05 | 9.15 | 9.25 | 9.35 | 9.45 | 9.55 | |
| 11 | 9.65 | 9.75 | 9.84 | 9.94 | 10.04 | 10.14 | 10.24 | 10.34 | 10.44 | 10.54 | |
| 12 | 10.64 | 10.73 | 10.83 | 10.93 | 11.03 | 11.13 | 11.23 | 11.33 | 11.43 | 11.53 | |
| 0 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.06 | 0.10 | 0.15 | 0.20 | 0.26 | |
| 1 | 0.32 | 0.39 | 0.46 | 0.53 | 0.61 | 0.69 | 0.77 | 0.85 | 0.93 | 1.01 | |
| 2 | 1.10 | 1.18 | 1.27 | 1.35 | 1.44 | 1.53 | 1.62 | 1.71 | 1.80 | 1.89 | |
| 3 | 1.99 | 2.08 | 2.17 | 2.26 | 2.36 | 2.45 | 2.54 | 2.64 | 2.73 | 2.83 | |
| 4 | 2.92 | 3.02 | 3.11 | 3.20 | 3.30 | 3.40 | 3.49 | 3.59 | 3.69 | 3.78 | |
| 5 | 3.88 | 3.97 | 4.07 | 4.17 | 4.26 | 4.36 | 4.46 | 4.56 | 4.65 | 4.75 | |
| 6 | 4.85 | 4.95 | 5.04 | 5.14 | 5.24 | 5.34 | 5.44 | 5.54 | 5.63 | 5.73 | CURVE 90 |
| 7 | 5.83 | 5.92 | 6.02 | 6.12 | 6.21 | 6.31 | 6.41 | 6.51 | 6.61 | 6.71 | |
| 8 | 6.81 | 6.91 | 7.01 | 7.11 | 7.20 | 7.30 | 7.40 | 7.50 | 7.60 | 7.70 | |
| 9 | 7.79 | 7.89 | 7.99 | 8.09 | 8.19 | 8.29 | 8.39 | 8.49 | 8.58 | 8.68 | |
| 10 | 8.78 | 8.88 | 8.98 | 9.08 | 9.18 | 9.28 | 9.38 | 9.48 | 9.57 | 9.67 | |
| 11 | 9.77 | 9.87 | 9.97 | 10.07 | 10.17 | 10.27 | 10.37 | 10.47 | 10.57 | 10.67 | |
| 12 | 10.77 | 10.86 | 10.96 | 11.06 | 11.16 | 11.26 | 11.36 | 11.46 | 11.56 | 11.66 | |
| 0 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.07 | 0.12 | 0.17 | 0.23 | 0.29 | |
| 1 | 0.36 | 0.43 | 0.50 | 0.58 | 0.66 | 0.74 | 0.82 | 0.91 | 0.99 | 1.08 | |
| 2 | 1.17 | 1.25 | 1.34 | 1.43 | 1.52 | 1.61 | 1.70 | 1.80 | 1.89 | 1.98 | |
| 3 | 2.07 | 2.16 | 2.26 | 2.35 | 2.44 | 2.54 | 2.63 | 2.73 | 2.83 | 2.92 | |
| 4 | 3.02 | 3.11 | 3.21 | 3.30 | 3.40 | 3.50 | 3.59 | 3.69 | 3.79 | 3.89 | |
| 5 | 3.99 | 4.08 | 4.17 | 4.27 | 4.37 | 4.47 | 4.56 | 4.66 | 4.76 | 4.86 | |
| 6 | 4.96 | 5.05 | 5.15 | 5.25 | 5.34 | 5.44 | 5.54 | 5.64 | 5.74 | 5.84 | CURVE 91 |
| 7 | 5.94 | 6.04 | 6.14 | 6.24 | 6.34 | 6.44 | 6.53 | 6.63 | 6.73 | 6.83 | |
| 8 | 6.93 | 7.03 | 7.13 | 7.23 | 7.33 | 7.43 | 7.52 | 7.62 | 7.72 | 7.82 | |
| 9 | 7.92 | 8.02 | 8.12 | 8.22 | 8.31 | 8.41 | 8.51 | 8.61 | 8.71 | 8.81 | |
| 10 | 8.91 | 9.01 | 9.11 | 9.21 | 9.31 | 9.41 | 9.51 | 9.61 | 9.71 | 9.80 | |
| 11 | 9.90 | 10.00 | 10.10 | 10.20 | 10.30 | 10.40 | 10.50 | 10.60 | 10.70 | 10.80 | |
| 12 | 10.89 | 10.99 | 11.09 | 11.19 | 11.29 | 11.39 | 11.49 | 11.59 | 11.69 | 11.79 | |

Exhibit 2-7A

# RAINFALL-RUNOFF DEPTHS FOR SELECTED RUNOFF CURVE NUMBERS

| Inches \ Tenths | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.01 | 0.07 | 0.15 | 0.25 | 0.32 | 0.41 | 0.51 | 0.60 | 0.69 |
| 1 | 0.79 | 0.89 | 0.99 | 1.09 | 1.19 | 1.28 | 1.38 | 1.48 | 1.58 | 1.68 |
| 2 | 1.78 | 1.88 | 1.98 | 2.08 | 2.18 | 2.27 | 2.37 | 2.47 | 2.57 | 2.67 |
| 3 | 2.77 | 2.87 | 2.97 | 3.07 | 3.17 | 3.27 | 3.37 | 3.47 | 3.57 | 3.67 |
| 4 | 3.77 | 3.87 | 3.97 | 4.07 | 4.17 | 4.27 | 4.37 | 4.47 | 4.57 | 4.67 |
| 5 | 4.77 | 4.87 | 4.97 | 5.07 | 5.17 | 5.27 | 5.37 | 5.47 | 5.57 | 5.67 |
| 6 | 5.77 | 5.87 | 5.97 | 6.07 | 6.17 | 6.27 | 6.37 | 6.47 | 6.57 | 6.67 |
| 7 | 6.77 | 6.87 | 6.98 | 7.07 | 7.17 | 7.27 | 7.37 | 7.47 | 7.57 | 7.67 |
| 8 | 7.76 | 7.86 | 7.96 | 8.06 | 8.16 | 8.26 | 8.36 | 8.46 | 8.56 | 8.66 |
| 9 | 8.76 | 8.86 | 8.96 | 9.06 | 9.16 | 9.26 | 9.36 | 9.46 | 9.56 | 9.66 |
| 10 | 9.76 | 9.86 | 9.96 | 10.06 | 10.16 | 10.26 | 10.36 | 10.46 | 10.56 | 10.66 |
| 11 | 10.76 | 10.86 | 10.96 | 11.06 | 11.16 | 11.26 | 11.36 | 11.46 | 11.56 | 11.66 |
| 12 | 11.76 | 11.86 | 11.96 | 12.06 | 12.16 | 12.26 | 12.36 | 12.46 | 12.56 | 12.66 |

CURVE 98

Exhibit 2-7A

| REFERENCE | U. S. DEPARTMENT OF AGRICULTURE | RTSC-NE-ENG. |
|---|---|---|
| SCS TR-16 | SOIL CONSERVATION SERVICE<br>ENGINEERING & WATERSHED PLANNING UNIT<br>UPPER DARBY, PENNSYLVANIA | 220<br>SHEET 14 OF 14 |

DAGATA

| Golder Associates | SUBJECT Dagata - Drainage for Asphalt | | |
|---|---|---|---|
| | Job No. 903-6400.912 | Made by VEEF | Date 10-7-91 |
| | Ref. ISRT | Checked AH | Sheet 1 of 6 |
| | | Reviewed CAN | |

Objective: To determine what storm water management structures are required due to the proposed asphalt cover, if any.

Method: After evaluating the CN #s for the existing and proposed conditions, use these values and SCS TR-16 to determine the increase in runoff due to the asphalt. Then, run HEC-1 to determine the peak discharges for exist and proposed conditions. The storm event being modelled is 100yr, 24hr storm. The outlet being modelled is a 9" orifice.

| Golder Associates | SUBJECT Dagata - Drainage for Asphalt | | |
|---|---|---|---|
| | Job No. 903-6400.912 Ref. ISRT | Made by VEE7 Checked Reviewed CAM | Date 10-7-91 Sheet 2 of 6 |

Summary Sheet:

Existing discharge from wetland 8 134 cfs.
Proposed discharge from wetland 8...
with Dagata Det Basin 135 cfs.
without " " " 136 cfs.

Although there only seems to be an overall increase of 2 cfs which is relatively insignificant, after remediation wetland 8 is scheduled to receive a 16" above grade soil/gravel cover*. By placing an at grade asphalt cover on Dagata, the runoff from the asphalt cannot travel overland into wetland 8; therefore, the Dagata lot would flood. Consequently, the detention basin as designed herein will be proposed in order to provide a means to convey runoff to wetland 8.

* see chapter 13, 95% Design Report, GAI, August, 1991.

| Golder Associates | SUBJECT Data - Drainage for Asphalt | | |
|---|---|---|---|
| | Job No. 903-6400912<br>Ref. ISRT | Made by UEF<br>Checked AH<br>Reviewed CAM | Date 10-7-91<br>Sheet 3 of 6 |

EXISTING CN - 85,600 s.f.

| Soil Type | % Area | Use | CN#/Use% | $CN_f$ | % Area x $CN_f$ |
|---|---|---|---|---|---|
| C | 100 | Impervious (pav, roof.) (23,800 sf) | 98 / 28% | 89 | 8900 |
| | | Dirt Lot (57,900 sf) | 87 / 67% | | |
| | | Open space - good (3900 sf) | 74 / 5% | | |

weighted CN = $\frac{8900}{100} = 89$

| Golder Associates | SUBJECT Dogpta – Drainage for Asphalt | | |
|---|---|---|---|
| | Job No. 903-6400.912<br>Ref. ISRT | Made by JEF<br>Checked AH<br>Reviewed CAM | Date 10-7-91<br>Sheet 4 of 6 |

Proposed CN – 85,600 sf

| Soil Type | % Area | Use | CN#/use% | CNf | % Area x CNf |
|---|---|---|---|---|---|
| C | 100 | Impervious (pav, roof) (81,700 sf) | 98/95% | 97 | 9700 |
| | | Open Space-good (3900 sf) | 74/5% | | |

$$\text{weighted CN} = \frac{9700}{100} = 97$$

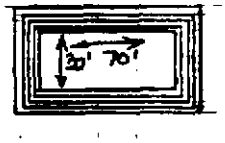
| Golder Associates | SUBJECT Dagata - Drainage for Asphalt | | |
|---|---|---|---|
| | Job No. 903 6400.912 Ref. 1SRT | Made by USET Checked A It Reviewed CRM | Date 10-7-91 Sheet 5 of 6 |

Detention Basin Sizing

| | Existing | Proposed |
|---|---|---|
| CN - number | 89 | 97 |
| precipitation | 6.6 in | 6.6 in |
| runoff | 5.32 in | 6.25 in |
| Area of lot | 85,600 sf | 85,600 sf |
| Volume of runoff | 37,949 cf | 44,583 cf |

Increase in Runoff ≈ 6634 cf

Rough shape




70' x 30' @ Bottom
3:1 SS.
3' deep
(including freeboard)

| Golder Associates | SUBJECT Dagata - Drainage for Asphalt | | |
|---|---|---|---|
| | Job No. 903-6400.912<br>Ref. 1SRT | Made by VEET<br>Checked AH<br>Reviewed CMM | Date 10-7-91<br>Sheet 6 of 6 |

Surface Area vs. Elevation

| Elev (ft) | Area (sf) | Avg. Area (sf) | Depth (ft) | Volume (cf) | Cum. Volume (cf) |
|---|---|---|---|---|---|
| 59 | 30x70 = 2100 (0.0482ac) | 2418 | 1 | 2418 | 2418 |
| 60 | 36x76 = 2736 (0.0628ac) | 3090 | 1 | 3090 | 5508 |
| 61 | 42x82 = 3444 (0.0791 ac) | 3834 | 1 | 3834 | 9342 |
| 62 | 48x88 = 4224 (0.0970 ac) | | | | |

Minimum Storage Elevation: 59

Maximum Storage Elevation: 62

Total Storage Volume: 9342 cf

# RAINFALL-RUNOFF DEPTHS FOR SELECTED RUNOFF CURVE NUMBERS

| Inches \ Tenths | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 0.08 | 0.12 | 0.17 | 0.22 |
| 1 | 0.28 | 0.35 | 0.41 | 0.48 | 0.55 | 0.63 | 0.71 | 0.78 | 0.86 | 0.94 |
| 2 | 1.03 | 1.11 | 1.19 | 1.28 | 1.37 | 1.46 | 1.54 | 1.63 | 1.72 | 1.81 |
| 3 | 1.90 | 1.99 | 2.08 | 2.17 | 2.26 | 2.36 | 2.45 | 2.54 | 2.64 | 2.73 |
| 4 | 2.82 | 2.92 | 3.01 | 3.11 | 3.20 | 3.30 | 3.39 | 3.49 | 3.58 | 3.68 |
| 5 | 3.77 | 3.87 | 3.96 | 4.06 | 4.16 | 4.25 | 4.35 | 4.45 | 4.54 | 4.64 |
| 6 | 4.74 | 4.83 | 4.93 | 5.02 | 5.12 | 5.22 | 5.32 | 5.42 | 5.51 | 5.61 |
| 7 | 5.71 | 5.80 | 5.90 | 6.00 | 6.10 | 6.20 | 6.30 | 6.39 | 6.49 | 6.59 |
| 8 | 6.69 | 6.79 | 6.88 | 6.98 | 7.08 | 7.18 | 7.28 | 7.38 | 7.47 | 7.57 |
| 9 | 7.67 | 7.77 | 7.87 | 7.97 | 8.06 | 8.16 | 8.26 | 8.36 | 8.46 | 8.56 |
| 10 | 8.66 | 8.76 | 8.86 | 8.95 | 9.05 | 9.15 | 9.25 | 9.35 | 9.45 | 9.55 |
| 11 | 9.65 | 9.75 | 9.84 | 9.94 | 10.04 | 10.14 | 10.24 | 10.34 | 10.44 | 10.54 |
| 12 | 10.64 | 10.73 | 10.83 | 10.93 | 11.03 | 11.13 | 11.23 | 11.33 | 11.43 | 11.53 |

CURVE 89

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.06 | 0.10 | 0.15 | 0.20 | 0.26 |
| 1 | 0.32 | 0.39 | 0.46 | 0.53 | 0.61 | 0.69 | 0.77 | 0.85 | 0.93 | 1.01 |
| 2 | 1.10 | 1.18 | 1.27 | 1.35 | 1.44 | 1.53 | 1.62 | 1.71 | 1.80 | 1.89 |
| 3 | 1.99 | 2.08 | 2.17 | 2.26 | 2.36 | 2.45 | 2.54 | 2.64 | 2.73 | 2.83 |
| 4 | 2.92 | 3.02 | 3.11 | 3.20 | 3.30 | 3.40 | 3.49 | 3.59 | 3.69 | 3.78 |
| 5 | 3.88 | 3.97 | 4.07 | 4.17 | 4.26 | 4.36 | 4.46 | 4.56 | 4.65 | 4.75 |
| 6 | 4.85 | 4.95 | 5.04 | 5.14 | 5.24 | 5.34 | 5.44 | 5.54 | 5.63 | 5.73 |
| 7 | 5.83 | 5.92 | 6.02 | 6.12 | 6.21 | 6.31 | 6.41 | 6.51 | 6.61 | 6.71 |
| 8 | 6.81 | 6.91 | 7.01 | 7.11 | 7.20 | 7.30 | 7.40 | 7.50 | 7.60 | 7.70 |
| 9 | 7.79 | 7.89 | 7.99 | 8.09 | 8.19 | 8.29 | 8.39 | 8.49 | 8.58 | 8.68 |
| 10 | 8.78 | 8.88 | 8.98 | 9.08 | 9.18 | 9.28 | 9.38 | 9.48 | 9.57 | 9.67 |
| 11 | 9.77 | 9.87 | 9.97 | 10.07 | 10.17 | 10.27 | 11.37 | 10.47 | 10.57 | 10.67 |
| 12 | 10.77 | 10.86 | 10.96 | 11.06 | 11.16 | 11.26 | 11.36 | 11.46 | 11.56 | 11.66 |

CURVE 90

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.07 | 0.12 | 0.17 | 0.23 | 0.29 |
| 1 | 0.36 | 0.43 | 0.50 | 0.58 | 0.66 | 0.74 | 0.82 | 0.91 | 0.99 | 1.08 |
| 2 | 1.17 | 1.25 | 1.34 | 1.43 | 1.52 | 1.61 | 1.70 | 1.80 | 1.89 | 1.98 |
| 3 | 2.07 | 2.16 | 2.26 | 2.35 | 2.44 | 2.54 | 2.63 | 2.73 | 2.83 | 2.92 |
| 4 | 3.02 | 3.11 | 3.21 | 3.30 | 3.40 | 3.50 | 3.59 | 3.69 | 3.79 | 3.89 |
| 5 | 3.99 | 4.08 | 4.17 | 4.27 | 4.37 | 4.47 | 4.56 | 4.66 | 4.76 | 4.86 |
| 6 | 4.96 | 5.05 | 5.15 | 5.25 | 5.34 | 5.44 | 5.54 | 5.64 | 5.74 | 5.84 |
| 7 | 5.94 | 6.04 | 6.14 | 6.24 | 6.34 | 6.44 | 6.53 | 6.63 | 6.73 | 6.83 |
| 8 | 6.93 | 7.03 | 7.13 | 7.23 | 7.33 | 7.43 | 7.52 | 7.62 | 7.72 | 7.82 |
| 9 | 7.92 | 8.02 | 8.12 | 8.22 | 8.31 | 8.41 | 8.51 | 8.61 | 8.71 | 8.81 |
| 10 | 8.91 | 9.01 | 9.11 | 9.21 | 9.31 | 9.41 | 9.51 | 9.61 | 9.71 | 9.80 |
| 11 | 9.90 | 10.00 | 10.10 | 10.20 | 10.30 | 10.40 | 10.50 | 10.60 | 10.70 | 10.80 |
| 12 | 10.89 | 10.99 | 11.09 | 11.19 | 11.29 | 11.39 | 11.49 | 11.59 | 11.69 | 11.79 |

CURVE 91

Exhibit 2-7A

| REFERENCE | U. S. DEPARTMENT OF AGRICULTURE | RTSC-NE-ENG. |
|---|---|---|
| SCS TR-16 | SOIL CONSERVATION SERVICE<br>ENGINEERING & WATERSHED PLANNING UNIT<br>UPPER DARBY, PENNSYLVANIA | 220<br>SHEET 11 OF 14 |

# RAINFALL-RUNOFF DEPTHS FOR SELECTED RUNOFF CURVE NUMBERS

| Inches \ Tenths | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.01 | 0.05 | 0.11 | 0.17 | 0.24 | 0.32 | 0.40 | 0.48 |
| 1 | 0.56 | 0.65 | 0.74 | 0.83 | 0.92 | 1.01 | 1.11 | 1.20 | 1.30 | 1.39 |
| 2 | 1.48 | 1.58 | 1.68 | 1.78 | 1.87 | 1.97 | 2.07 | 2.16 | 2.26 | 2.36 |
| 3 | 2.44 | 2.54 | 2.64 | 2.74 | 2.84 | 2.93 | 3.05 | 3.13 | 3.23 | 3.32 |
| 4 | 3.42 | 3.52 | 3.62 | 3.72 | 3.82 | 3.92 | 4.02 | 4.12 | 4.21 | 4.31 |
| 5 | 4.41 | 4.51 | 4.61 | 4.71 | 4.31 | 4.91 | 5.01 | 5.11 | 5.21 | 5.30 |
| 6 | 5.40 | 5.50 | 5.60 | 5.70 | 5.50 | 5.90 | 6.00 | 6.10 | 6.20 | 6.30 |
| 7 | 6.40 | 6.50 | 6.60 | 6.70 | 6.80 | 6.90 | 7.00 | 7.10 | 7.19 | 7.29 |
| 8 | 7.39 | 7.49 | 7.59 | 7.69 | 7.79 | 7.89 | 7.99 | 8.09 | 8.19 | 8.29 |
| 9 | 8.39 | 8.49 | 8.59 | 8.69 | 8.79 | 8.89 | 8.99 | 9.09 | 9.19 | 9.29 |
| 10 | 9.39 | 9.49 | 9.59 | 9.69 | 9.79 | 9.89 | 9.99 | 10.09 | 10.19 | 10.29 |
| 11 | 10.39 | 10.49 | 10.59 | 10.69 | 10.79 | 10.89 | 10.99 | 11.09 | 11.19 | 11.29 |
| 12 | 11.39 | 11.49 | 11.59 | 11.69 | 11.79 | 11.89 | 11.99 | 12.09 | 12.19 | 12.29 |

CURVE 95

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.01 | 0.04 | 0.08 | 0.14 | 0.22 | 0.29 | 0.37 | 0.46 | 0.55 |
| 1 | 0.64 | 0.73 | 0.82 | 0.91 | 1.01 | 1.10 | 1.20 | 1.29 | 1.39 | 1.48 |
| 2 | 1.58 | 1.68 | 1.77 | 1.87 | 1.97 | 2.07 | 2.17 | 2.26 | 2.36 | 2.46 |
| 3 | 2.56 | 2.66 | 2.76 | 2.86 | 2.95 | 3.05 | 3.15 | 3.25 | 3.35 | 3.45 |
| 4 | 3.55 | 3.65 | 3.75 | 3.85 | 3.95 | 4.05 | 4.14 | 4.24 | 4.34 | 4.44 |
| 5 | 4.54 | 4.64 | 4.74 | 4.84 | 4.94 | 5.04 | 5.14 | 5.24 | 5.34 | 5.44 |
| 6 | 5.54 | 5.64 | 5.74 | 5.84 | 5.93 | 6.03 | 6.13 | 6.23 | 6.33 | 6.43 |
| 7 | 6.53 | 6.63 | 6.73 | 6.83 | 6.93 | 7.03 | 7.13 | 7.23 | 7.33 | 7.43 |
| 8 | 7.53 | 7.63 | 7.73 | 7.83 | 7.93 | 8.03 | 8.13 | 8.23 | 8.33 | 8.43 |
| 9 | 8.53 | 8.63 | 8.73 | 8.83 | 8.93 | 9.03 | 9.13 | 9.23 | 9.33 | 9.43 |
| 10 | 9.53 | 9.63 | 9.73 | 9.83 | 9.93 | 10.03 | 10.13 | 10.23 | 10.32 | 10.42 |
| 11 | 10.52 | 10.62 | 10.72 | 10.82 | 10.92 | 11.02 | 11.12 | 11.22 | 11.32 | 11.42 |
| 12 | 11.52 | 11.62 | 11.72 | 11.82 | 11.92 | 12.02 | 12.12 | 12.22 | 12.32 | 12.42 |

CURVE 96

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.04 | 0.11 | 0.18 | 0.26 | 0.35 | 0.44 | 0.53 | 0.62 |
| 1 | 0.71 | 0.81 | 0.90 | 1.00 | 1.10 | 1.19 | 1.29 | 1.39 | 1.49 | 1.58 |
| 2 | 1.68 | 1.78 | 1.88 | 1.98 | 2.08 | 2.17 | 2.27 | 2.37 | 2.47 | 2.57 |
| 3 | 2.67 | 2.77 | 2.87 | 2.97 | 3.07 | 3.16 | 3.26 | 3.36 | 3.46 | 3.56 |
| 4 | 3.66 | 3.76 | 3.86 | 3.96 | 4.06 | 4.16 | 4.26 | 4.36 | 4.46 | 4.56 |
| 5 | 4.66 | 4.76 | 4.86 | 4.96 | 5.06 | 5.16 | 5.26 | 5.36 | 5.46 | 5.55 |
| 6 | 5.65 | 5.75 | 5.85 | 5.95 | 6.05 | 6.15 | 6.25 | 6.35 | 6.45 | 6.55 |
| 7 | 6.65 | 6.75 | 6.85 | 6.95 | 7.05 | 7.15 | 7.25 | 7.35 | 7.45 | 7.55 |
| 8 | 7.65 | 7.75 | 7.85 | 7.95 | 8.05 | 8.15 | 8.25 | 8.35 | 8.45 | 8.55 |
| 9 | 8.65 | 8.75 | 8.85 | 8.95 | 9.05 | 9.15 | 9.25 | 9.35 | 9.45 | 9.55 |
| 10 | 9.65 | 9.75 | 9.85 | 9.95 | 10.05 | 10.15 | 10.25 | 10.35 | 10.45 | 10.55 |
| 11 | 10.65 | 10.75 | 10.85 | 10.95 | 11.05 | 11.15 | 11.25 | 11.35 | 11.45 | 11.55 |
| 12 | 11.65 | 11.75 | 11.85 | 11.95 | 12.05 | 12.15 | 12.25 | 12.35 | 12.45 | 12.55 |

CURVE 97

Exhibit 2-7A

| REFERENCE | U. S. DEPARTMENT OF AGRICULTURE | RTSC-NE-ENG. |
|---|---|---|
| SCS TR-16 | SOIL CONSERVATION SERVICE<br>ENGINEERING & WATERSHED PLANNING UNIT<br>UPPER DARBY, PENNSYLVANIA | 220<br>SHEET 13 OF 14 |

P/X Realty Trust

| Golder Associates | SUBJECT Detention Basin Storage – P/X Reality | | |
|---|---|---|---|
| | Job No. 903-1400 Ref. ISRT-100% | Made by AB Checked VEEF Reviewed CRM | Date 12/4/91 Sheet 1 of 5 |

Objective: To determine the detention storage required on the P/X Reality L.t. (HBIA) where the proposed soil remedy is a parking lot.

Method: Obtain a CN number for existing and proposed conditions from Apendices 10-D and 10-E. The runoff was derived from the "Rainfall-Runoff Depths for Selected Run-off Curve Numbers" from SCS TR-16. The volume was then calculated by multiplying the surface area by the derived runoff for both existing and proposed. The difference between the two values is the amount of storage needed. The storm event being modelled is a 100yr, 24 hr storm. The outlet being modelled is a 12" orifice.

References: SCS-TR-16

**Golder Associates**

| | | |
|---|---|---|
| SUBJECT Detention Basin Storage - Pre Reality | | |
| Job No. 903-6400 | Made by AHIDP | Date 12/9/91 |
| Ref. ISRT-100-6 | Checked VEEZ | Sheet 2 of 5 |
| | Reviewed CAM | |

Subwatershed HB1A South (157,000 s.f.)

| DATA | Existing | Proposed |
|---|---|---|
| | HB1AS | 2PS |
| CN# | 90 | 96 |
| Precip (in) | 6.6 | 6.6 |
| Runoff (in) (from SCS-TR-16) | 5.44 | 6.13 |
| Volume Runoff (cf) | 71,173<br>1.63 acre-ft | 80,201<br>1.84 acre-ft |

change in Volume = 0.21 acre-ft

| Golder Associates | SUBJECT Storage vs. Elevation - Prop. Cond. | | |
|---|---|---|---|
| | Job No. 903-6400 | Made by UEE 7 | Date |
| | Ref. ISRT- 100% | Checked DP | Sheet 3 of 5 |
| | | Reviewed CAM | |

Detention Basin (2PS) STORAGE AREA No 2

| Elevation (ft) | Area (sf) | Avg. Area (sf) | Depth (ft) | Volume (cf) | Cum. Volume (cf) |
|---|---|---|---|---|---|
| 66 | (100x30)=3000 (0.069 ac) | | | | |
| | | 3408 | 1 | 3408 | 3408 |
| 67 | (106x36)=3816 (0.088 ac) | | | | |
| | | 4260 | 1 | 4260 | 7668 |
| 68 | (112x42)=4704 (0.108 ac) | | | | |
| | | 5184 | 1 | 5184 | 12,852 |
| 69 | (118x48)=5664 (0.130 ac) | | | | |
| | | 6180 | 1 | 6180 | 19,032 |
| 70 | (124x54)=6696 (0.154 ac) | | | | (0.437 ac ft) |

Minimum Storage Elevation = 66

Maximum Storage Elevation = 70 (with 1' freeboard)

Cumulative Storage = 19,032 sf. (0.437 ac-ft)

# RAINFALL-RUNOFF DEPTHS FOR SELECTED RUNOFF CURVE NUMBERS

| Inches \ Tenths | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.04 | 0.08 | 0.12 | 0.17 | 0.22 | |
| 1 | 0.28 | 0.35 | 0.41 | 0.48 | 0.55 | 0.63 | 0.71 | 0.78 | 0.86 | 0.94 | |
| 2 | 1.03 | 1.11 | 1.19 | 1.28 | 1.37 | 1.46 | 1.54 | 1.63 | 1.72 | 1.81 | |
| 3 | 1.90 | 1.99 | 2.08 | 2.17 | 2.26 | 2.36 | 2.45 | 2.54 | 2.64 | 2.73 | |
| 4 | 2.82 | 2.92 | 3.01 | 3.11 | 3.20 | 3.30 | 3.39 | 3.49 | 3.58 | 3.68 | |
| 5 | 3.77 | 3.87 | 3.96 | 4.06 | 4.16 | 4.25 | 4.35 | 4.45 | 4.54 | 4.64 | CURVE 89 |
| 6 | 4.74 | 4.83 | 4.93 | 5.02 | 5.12 | 5.22 | 5.32 | 5.42 | 5.51 | 5.61 | |
| 7 | 5.71 | 5.80 | 5.90 | 6.00 | 6.10 | 6.20 | 6.30 | 6.39 | 6.49 | 6.59 | |
| 8 | 6.69 | 6.79 | 6.88 | 6.98 | 7.08 | 7.18 | 7.28 | 7.38 | 7.47 | 7.57 | |
| 9 | 7.67 | 7.77 | 7.87 | 7.97 | 8.06 | 8.16 | 8.26 | 8.36 | 8.46 | 8.56 | |
| 10 | 8.66 | 8.76 | 8.86 | 8.95 | 9.05 | 9.15 | 9.25 | 9.35 | 9.45 | 9.55 | |
| 11 | 9.65 | 9.75 | 9.84 | 9.94 | 10.04 | 10.14 | 10.24 | 10.34 | 10.44 | 10.54 | |
| 12 | 10.64 | 10.73 | 10.83 | 10.93 | 11.03 | 11.13 | 11.23 | 11.33 | 11.43 | 11.53 | |
| 0 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.06 | 0.10 | 0.15 | 0.20 | 0.26 | |
| 1 | 0.32 | 0.39 | 0.46 | 0.53 | 0.61 | 0.69 | 0.77 | 0.85 | 0.93 | 1.01 | |
| 2 | 1.10 | 1.18 | 1.27 | 1.35 | 1.44 | 1.53 | 1.62 | 1.71 | 1.80 | 1.89 | |
| 3 | 1.99 | 2.08 | 2.17 | 2.26 | 2.36 | 2.45 | 2.54 | 2.64 | 2.73 | 2.83 | |
| 4 | 2.92 | 3.02 | 3.11 | 3.20 | 3.30 | 3.40 | 3.49 | 3.59 | 3.69 | 3.78 | |
| 5 | 3.88 | 3.97 | 4.07 | 4.17 | 4.26 | 4.36 | 4.46 | 4.56 | 4.65 | 4.75 | |
| 6 | 4.85 | 4.95 | 5.04 | 5.14 | 5.24 | 5.34 | 5.44 | 5.54 | 5.63 | 5.73 | CURVE 90 |
| 7 | 5.83 | 5.92 | 6.02 | 6.12 | 6.21 | 6.31 | 6.41 | 6.51 | 6.61 | 6.71 | |
| 8 | 6.81 | 6.91 | 7.01 | 7.11 | 7.20 | 7.30 | 7.40 | 7.50 | 7.60 | 7.70 | |
| 9 | 7.79 | 7.89 | 7.99 | 8.09 | 8.19 | 8.29 | 8.39 | 8.49 | 8.58 | 8.68 | |
| 10 | 8.78 | 8.88 | 8.98 | 9.08 | 9.18 | 9.28 | 9.38 | 9.48 | 9.57 | 9.67 | |
| 11 | 9.77 | 9.87 | 9.97 | 10.07 | 10.17 | 10.27 | 11.37 | 10.47 | 10.57 | 10.67 | |
| 12 | 10.77 | 10.86 | 10.96 | 11.06 | 11.16 | 11.26 | 11.36 | 11.46 | 11.56 | 11.66 | |
| 0 | 0.00 | 0.00 | 0.00 | 0.01 | 0.03 | 0.07 | 0.12 | 0.17 | 0.23 | 0.29 | |
| 1 | 0.36 | 0.43 | 0.50 | 0.58 | 0.66 | 0.74 | 0.82 | 0.91 | 0.99 | 1.08 | |
| 2 | 1.17 | 1.25 | 1.34 | 1.43 | 1.52 | 1.61 | 1.70 | 1.80 | 1.89 | 1.98 | |
| 3 | 2.07 | 2.16 | 2.26 | 2.35 | 2.44 | 2.54 | 2.63 | 2.73 | 2.83 | 2.92 | |
| 4 | 3.02 | 3.11 | 3.21 | 3.30 | 3.40 | 3.50 | 3.59 | 3.69 | 3.79 | 3.89 | |
| 5 | 3.99 | 4.08 | 4.17 | 4.27 | 4.37 | 4.47 | 4.56 | 4.66 | 4.76 | 4.86 | |
| 6 | 4.96 | 5.05 | 5.15 | 5.25 | 5.34 | 5.44 | 5.54 | 5.64 | 5.74 | 5.84 | CURVE 91 |
| 7 | 5.94 | 6.04 | 6.14 | 6.24 | 6.34 | 6.44 | 6.53 | 6.63 | 6.73 | 6.83 | |
| 8 | 6.93 | 7.03 | 7.13 | 7.23 | 7.33 | 7.43 | 7.52 | 7.62 | 7.72 | 7.82 | |
| 9 | 7.92 | 8.02 | 8.12 | 8.22 | 8.31 | 8.41 | 8.51 | 8.61 | 8.71 | 8.81 | |
| 10 | 8.91 | 9.01 | 9.11 | 9.21 | 9.31 | 9.41 | 9.51 | 9.61 | 9.71 | 9.80 | |
| 11 | 9.90 | 10.00 | 10.10 | 10.20 | 10.30 | 10.40 | 10.50 | 10.60 | 10.70 | 10.80 | |
| 12 | 10.89 | 10.99 | 11.09 | 11.19 | 11.29 | 11.39 | 11.49 | 11.59 | 11.69 | 11.79 | |

Exhibit 2-7A

| REFERENCE | U. S. DEPARTMENT OF AGRICULTURE | RTSC-NE-ENG. |
|---|---|---|
| SCS TR-16 | SOIL CONSERVATION SERVICE<br>ENGINEERING & WATERSHED PLANNING UNIT<br>UPPER DARBY, PENNSYLVANIA | 220<br>SHEET 11 OF 14 |

5 of 5

# RAINFALL-RUNOFF DEPTHS FOR SELECTED RUNOFF CURVE NUMBERS

| Inches \ Tenths | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.00 | 0.00 | 0.01 | 0.05 | 0.11 | 0.17 | 0.24 | 0.32 | 0.40 | 0.48 | |
| 1 | 0.56 | 0.65 | 0.74 | 0.83 | 0.92 | 1.01 | 1.11 | 1.20 | 1.30 | 1.39 | |
| 2 | 1.48 | 1.58 | 1.68 | 1.78 | 1.87 | 1.97 | 2.07 | 2.16 | 2.26 | 2.36 | |
| 3 | 2.44 | 2.54 | 2.64 | 2.74 | 2.84 | 2.93 | 3.03 | 3.13 | 3.23 | 3.32 | |
| 4 | 3.42 | 3.52 | 3.62 | 3.72 | 3.82 | 3.92 | 4.02 | 4.12 | 4.21 | 4.31 | |
| 5 | 4.41 | 4.51 | 4.61 | 4.71 | 4.81 | 4.91 | 5.01 | 5.11 | 5.21 | 5.30 | CURVE 95 |
| 6 | 5.40 | 5.50 | 5.60 | 5.70 | 5.80 | 5.90 | 6.00 | 6.10 | 6.20 | 6.30 | |
| 7 | 6.40 | 6.50 | 6.60 | 6.70 | 6.80 | 6.90 | 7.00 | 7.10 | 7.19 | 7.29 | |
| 8 | 7.39 | 7.49 | 7.59 | 7.69 | 7.79 | 7.89 | 7.99 | 8.09 | 8.19 | 8.29 | |
| 9 | 8.39 | 8.49 | 8.59 | 8.69 | 8.79 | 8.89 | 8.99 | 9.09 | 9.19 | 9.29 | |
| 10 | 9.39 | 9.49 | 9.59 | 9.69 | 9.79 | 9.89 | 9.99 | 10.09 | 10.19 | 10.29 | |
| 11 | 10.39 | 10.49 | 10.59 | 10.69 | 10.79 | 10.89 | 10.99 | 11.09 | 11.19 | 11.29 | |
| 12 | 11.39 | 11.49 | 11.59 | 11.69 | 11.79 | 11.89 | 11.99 | 12.09 | 12.19 | 12.29 | |
| 0 | 0.00 | 0.01 | 0.04 | 0.08 | 0.14 | 0.22 | 0.29 | 0.37 | 0.46 | 0.55 | |
| 1 | 0.64 | 0.73 | 0.82 | 0.91 | 1.01 | 1.10 | 1.20 | 1.29 | 1.39 | 1.48 | |
| 2 | 1.58 | 1.68 | 1.77 | 1.87 | 1.97 | 2.07 | 2.17 | 2.26 | 2.36 | 2.46 | |
| 3 | 2.56 | 2.66 | 2.76 | 2.86 | 2.95 | 3.05 | 3.15 | 3.25 | 3.35 | 3.45 | |
| 4 | 3.55 | 3.65 | 3.75 | 3.85 | 3.95 | 4.05 | 4.14 | 4.24 | 4.34 | 4.44 | |
| 5 | 4.54 | 4.64 | 4.74 | 4.84 | 4.94 | 5.04 | 5.14 | 5.24 | 5.34 | 5.44 | |
| 6 | 5.54 | 5.64 | 5.74 | 5.84 | 5.95 | 6.05 | 6.15 | 6.25 | 6.35 | 6.45 | CURVE 96 |
| 7 | 6.55 | 6.65 | 6.75 | 6.85 | 6.95 | 7.05 | 7.15 | 7.25 | 7.35 | 7.45 | |
| 8 | 7.55 | 7.65 | 7.75 | 7.85 | 7.95 | 8.05 | 8.15 | 8.25 | 8.35 | 8.45 | |
| 9 | 8.55 | 8.65 | 8.75 | 8.85 | 8.95 | 9.05 | 9.15 | 9.25 | 9.33 | 9.43 | |
| 10 | 9.53 | 9.63 | 9.73 | 9.83 | 9.93 | 10.03 | 10.13 | 10.23 | 10.32 | 10.42 | |
| 11 | 10.52 | 10.62 | 10.72 | 10.82 | 10.92 | 11.02 | 11.12 | 11.22 | 11.32 | 11.42 | |
| 12 | 11.52 | 11.62 | 11.72 | 11.82 | 11.92 | 12.02 | 12.12 | 12.22 | 12.32 | 12.42 | |
| 0 | 0.00 | 0.00 | 0.04 | 0.11 | 0.18 | 0.26 | 0.35 | 0.44 | 0.53 | 0.62 | |
| 1 | 0.71 | 0.81 | 0.90 | 1.00 | 1.10 | 1.19 | 1.29 | 1.39 | 1.49 | 1.58 | |
| 2 | 1.68 | 1.78 | 1.88 | 1.98 | 2.08 | 2.17 | 2.27 | 2.37 | 2.47 | 2.57 | |
| 3 | 2.67 | 2.77 | 2.87 | 2.97 | 3.07 | 3.16 | 3.26 | 3.36 | 3.46 | 3.56 | |
| 4 | 3.66 | 3.76 | 3.86 | 3.96 | 4.06 | 4.16 | 4.26 | 4.36 | 4.46 | 4.56 | |
| 5 | 4.66 | 4.76 | 4.86 | 4.96 | [illegible]6 | 5.16 | 5.26 | 5.36 | 5.46 | 5.55 | CURVE 97 |
| 6 | 5.65 | 5.75 | 5.85 | 5.95 | [illegible]5 | 6.15 | 6.25 | 6.35 | 6.45 | 6.55 | |
| 7 | 6.65 | 6.75 | 6.85 | 6.95 | [illegible]5 | 7.15 | 7.25 | 7.35 | 7.45 | 7.55 | |
| 8 | 7.65 | 7.75 | 7.85 | 7.95 | 8.05 | 8.15 | 8.25 | 8.35 | 8.45 | 8.55 | |
| 9 | 8.65 | 8.75 | 8.85 | 8.95 | 9.05 | 9.15 | 9.25 | 9.35 | 9.45 | 9.55 | |
| 10 | 9.65 | 9.75 | 9.85 | 9.95 | 10.05 | 10.15 | 10.25 | 10.35 | 10.45 | 10.55 | |
| 11 | 10.65 | 10.75 | 10.85 | 10.95 | 11.05 | 11.15 | 11.25 | 11.35 | 11.45 | 11.55 | |
| 12 | 11.65 | 11.75 | 11.85 | 11.95 | 12.05 | 12.15 | 12.25 | 12.35 | 12.45 | 12.55 | |

Exhibit 2-7A

| REFERENCE | U. S. DEPARTMENT OF AGRICULTURE | RTSC-NE-ENG. |
|---|---|---|
| SCS TR-16 | SOIL CONSERVATION SERVICE<br>ENGINEERING & WATERSHED PLANNING UNIT<br>UPPER DARBY, PENNSYLVANIA | 220<br>SHEET 13 OF 14 |

# APPENDIX 10-G

## POND-2 Analysis of Wetland 1C (Proposed)

POND-2

25 Year, 24 Hour Storm

| Golder Associates | SUBJECT POND 2 STORAGE VS ELEVATION | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEZ<br>Checked CLM<br>Reviewed GBR | Date 5-19-92<br>Sheet 1 of 1 |

The following page estabishes the storage vs. elevation relationship in POND2. This relationship was calculated 11-21-92 by MK (see Appendix 10-E, Storage vs Elevation Relationships).

POND-2 Version: 5.16
S/N: 1295130217

VOLUME CALCULATION FOR WETLAND 1C - PROPOSED

CALCULATED 04-09-1992 18:40:57
DISK FILE: c:\ISRT\VERN .VOL

Planimeter scale: 1 inch = 50 ft.

| Elevation (ft) | Planimeter (sq.in.) | Area (acres) | A1+A2+sqr(A1*A2) (acres) | * Volume (acre-ft) | Volume Sum (acre-ft) |
|---|---|---|---|---|---|
| 70.00 | 68.50 | 3.93 | 0.00 | 0.00 | 0.00 |
| 71.00 | 93.00 | 5.34 | 13.85 | 4.62 | 4.62 |
| 72.00 | 111.00 | 6.37 | 17.54 | 5.85 | 10.46 |
| 74.00 | 144.00 | 8.26 | 21.89 | 14.59 | 25.06 |
| 76.00 | 144.00 | 8.26 | 24.79 | 16.53 | 41.59 |

$$IA = (sq.rt(Area1) + ((Ei-E1)/(E2-E1))*(sq.rt(Area2)-sq.rt(Area1)))^2$$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1,Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

| Golder Associates | SUBJECT POND2 - Inflow Hydrographs | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RK | Made by UEZ<br>Checked CEN<br>Reviewed GSS | Date 5-19-92<br>Sheet of |

The following three pages show the addition of the inflow hydrographs to Wetland 1C. These hydrographs were generated in HEC-1.

5D = Flow from Subwatershed 5D (Appendix 10-B)

6PN = Subwatershed 6PN (Appendix 10-E)

7P = Subwatershed 7P (Appendix 10-E

1C = Addition of 5D, 6PN and 7P

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Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D25 (cfs) | 6PN25 (cfs) | 7P25 (cfs) | 1C25 (Total) |
|---|---|---|---|---|
| 0.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.75 | 1.0 | 0.0 | 0.0 | 1.0 |
| 4.00 | 1.0 | 0.0 | 0.0 | 1.0 |
| 4.25 | 2.0 | 0.0 | 0.0 | 2.0 |
| 4.50 | 2.0 | 0.0 | 0.0 | 2.0 |
| 4.75 | 2.0 | 0.0 | 0.0 | 2.0 |
| 5.00 | 3.0 | 0.0 | 0.0 | 3.0 |
| 5.25 | 3.0 | 0.0 | 0.0 | 3.0 |
| 5.50 | 3.0 | 0.0 | 0.0 | 3.0 |
| 5.75 | 3.0 | 0.0 | 0.0 | 3.0 |
| 6.00 | 3.0 | 0.0 | 0.0 | 3.0 |
| 6.25 | 3.0 | 0.0 | 0.0 | 3.0 |
| 6.50 | 3.0 | 1.0 | 0.0 | 4.0 |
| 6.75 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.00 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.25 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.50 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.75 | 4.0 | 1.0 | 0.0 | 5.0 |
| 8.00 | 4.0 | 1.0 | 0.0 | 5.0 |
| 8.25 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.50 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.75 | 4.0 | 2.0 | 0.0 | 6.0 |
| 9.00 | 4.0 | 2.0 | 0.0 | 6.0 |
| 9.25 | 5.0 | 2.0 | 0.0 | 7.0 |
| 9.50 | 5.0 | 2.0 | 0.0 | 7.0 |
| 9.75 | 5.0 | 2.0 | 0.0 | 7.0 |

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Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D25 (cfs) | 6PN25 (cfs) | 7P25 (cfs) | 1C25 (Total) |
|---|---|---|---|---|
| 10.00 | 5.0 | 3.0 | 0.0 | 8.0 |
| 10.25 | 6.0 | 3.0 | 0.0 | 9.0 |
| 10.50 | 6.0 | 3.0 | 0.0 | 9.0 |
| 10.75 | 7.0 | 4.0 | 0.0 | 11.0 |
| 11.00 | 7.0 | 5.0 | 0.0 | 12.0 |
| 11.25 | 8.0 | 7.0 | 0.0 | 15.0 |
| 11.50 | 9.0 | 10.0 | 0.0 | 19.0 |
| 11.75 | 10.0 | 15.0 | 1.0 | 26.0 |
| 12.00 | 12.0 | 31.0 | 1.0 | 44.0 |
| 12.25 | 17.0 | 74.0 | 3.0 | 94.0 |
| 12.50 | 25.0 | 43.0 | 2.0 | 70.0 |
| 12.75 | 35.0 | 23.0 | 1.0 | 59.0 |
| 13.00 | 37.0 | 15.0 | 1.0 | 53.0 |
| 13.25 | 39.0 | 10.0 | 0.0 | 49.0 |
| 13.50 | 40.0 | 7.0 | 0.0 | 47.0 |
| 13.75 | 40.0 | 6.0 | 0.0 | 46.0 |
| 14.00 | 41.0 | 5.0 | 0.0 | 46.0 |
| 14.25 | 41.0 | 5.0 | 0.0 | 46.0 |
| 14.50 | 41.0 | 4.0 | 0.0 | 45.0 |
| 14.75 | 41.0 | 4.0 | 0.0 | 45.0 |
| 15.00 | 41.0 | 4.0 | 0.0 | 45.0 |
| 15.25 | 41.0 | 4.0 | 0.0 | 45.0 |
| 15.50 | 41.0 | 4.0 | 0.0 | 45.0 |
| 15.75 | 41.0 | 4.0 | 0.0 | 45.0 |
| 16.00 | 40.0 | 4.0 | 0.0 | 44.0 |
| 16.25 | 40.0 | 4.0 | 0.0 | 44.0 |
| 16.50 | 40.0 | 3.0 | 0.0 | 43.0 |
| 16.75 | 40.0 | 3.0 | 0.0 | 43.0 |
| 17.00 | 40.0 | 3.0 | 0.0 | 43.0 |
| 17.25 | 40.0 | 3.0 | 0.0 | 43.0 |
| 17.50 | 39.0 | 3.0 | 0.0 | 42.0 |
| 17.75 | 39.0 | 3.0 | 0.0 | 42.0 |
| 18.00 | 39.0 | 3.0 | 0.0 | 42.0 |
| 18.25 | 39.0 | 2.0 | 0.0 | 41.0 |
| 18.50 | 38.0 | 2.0 | 0.0 | 40.0 |
| 18.75 | 38.0 | 2.0 | 0.0 | 40.0 |
| 19.00 | 38.0 | 2.0 | 0.0 | 40.0 |
| 19.25 | 37.0 | 2.0 | 0.0 | 39.0 |
| 19.50 | 37.0 | 2.0 | 0.0 | 39.0 |
| 19.75 | 37.0 | 2.0 | 0.0 | 39.0 |
| 20.00 | 36.0 | 1.0 | 0.0 | 37.0 |

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Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D25 (cfs) | 6PN25 (cfs) | 7P25 (cfs) | 1C25 (Total) |
|---|---|---|---|---|
| 20.25 | 36.0 | 1.0 | 0.0 | 37.0 |
| 20.50 | 35.0 | 1.0 | 0.0 | 36.0 |
| 20.75 | 35.0 | 1.0 | 0.0 | 36.0 |
| 21.00 | 33.0 | 1.0 | 0.0 | 34.0 |
| 21.25 | 32.0 | 1.0 | 0.0 | 33.0 |
| 21.50 | 31.0 | 1.0 | 0.0 | 32.0 |
| 21.75 | 30.0 | 1.0 | 0.0 | 31.0 |
| 22.00 | 30.0 | 1.0 | 0.0 | 31.0 |
| 22.25 | 29.0 | 1.0 | 0.0 | 30.0 |
| 22.50 | 28.0 | 1.0 | 0.0 | 29.0 |
| 22.75 | 27.0 | 1.0 | 0.0 | 28.0 |
| 23.00 | 27.0 | 1.0 | 0.0 | 28.0 |
| 23.25 | 26.0 | 1.0 | 0.0 | 27.0 |
| 23.50 | 26.0 | 1.0 | 0.0 | 27.0 |
| 23.75 | 25.0 | 1.0 | 0.0 | 26.0 |
| 24.00 | 25.0 | 1.0 | 0.0 | 26.0 |

| Golder Associates | SUBJECT POND 2 - Rating Tables | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by UEZ<br>Checked CRZ<br>Reviewed | Date 5-19-92<br>Sheet of |

The following 9 pages are the rating tables generated for the outflow structures by POND 2.

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

***** COMPOSITE OUTFLOW SUMMARY ****

| Elevation (ft) | Q (cfs) | Contributing Structures |
|---|---|---|
| 71.00 | 0.0 | 1 +2 |
| 71.10 | 1.1 | 1 +2 |
| 71.20 | 2.6 | 1 +2 |
| 71.30 | 4.3 | 1 +2 |
| 71.40 | 6.2 | 1 +2 |
| 71.50 | 8.3 | 1 +2 |
| 71.60 | 12.3 | 1 +2 |
| 71.70 | 16.4 | 1 +2 |
| 71.80 | 20.8 | 1 +2 |
| 71.90 | 25.4 | 1 +2 |
| 72.00 | 30.2 | 1 +2 |
| 72.10 | 35.7 | 1 +2 |
| 72.20 | 41.5 | 1 +2 |
| 72.30 | 47.5 | 1 +2 |
| 72.40 | 53.8 | 1 +2 |
| 72.50 | 60.2 | 1 +2 |
| 72.60 | 64.2 | 1 +2 |
| 72.70 | 68.3 | 1 +2 |
| 72.80 | 72.7 | 1 +2 |
| 72.90 | 77.3 | 1 +2 |
| 73.00 | 82.2 | 1 +2 |
| 73.10 | 87.3 | 1 +2 |
| 73.20 | 92.7 | 1 +2 |
| 73.30 | 98.4 | 1 +2 |
| 73.40 | 104.3 | 1 +2 |
| 73.50 | 110.4 | 1 +2 |
| 73.60 | 116.9 | 1 +2 |
| 73.70 | 123.6 | 1 +2 |
| 73.80 | 130.6 | 1 +2 |
| 73.90 | 137.8 | 1 +2 |
| 74.00 | 145.4 | 1 +2 |
| 74.10 | 153.2 | 1 +2 |
| 74.20 | 161.3 | 1 +2 |
| 74.30 | 169.7 | 1 +2 |
| 74.40 | 178.4 | 1 +2 |
| 74.50 | 187.4 | 1 +2 |
| 74.60 | 196.7 | 1 +2 |
| 74.70 | 206.2 | 1 +2 |
| 74.80 | 216.1 | 1 +2 |

| | | |
|---|---|---|
| 74.90 | 226.3 | 1 +2 |
| 75.00 | 236.9 | 1 +2 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outlet Structure File: c:\ISRT\VERN .STR
Planimeter Input File: c:\ISRT\VERN .VOL
Rating Table Output File: c:\ISRT\VERN .PND

Min. Elev.(ft) = 71 Max. Elev.(ft) = 75 Incr.(ft) = .1

Additional elevations (ft) to be included in table:
* * * * * * * * * * * * * * * * * * * * * * * * * * *

**********
SYSTEM CONNECTIVITY
**********

| Structure | No. | Q Table | | Q Table |
|---|---|---|---|---|
| TABLE | 1 | | -> | 1 |
| WEIR-XY | 2 | | -> | 2 |

Outflow rating table summary was stored in file:
c:\ISRT\VERN .PND

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

>>>>>> Structure No. 1 <<<<<<
(Input Data)

TABLE
Input your own rating table.
E1 (ft) =71 E2 (ft) =75.1

Constant (ft) added to each elevation was:

| Elev. (ft) | Q (cfs) |
|---|---|
| 71 | 0 |
| 71.5 | 4 |
| 72 | 16.1 |
| 72.5 | 31 |
| 73 | 32 |
| 73.5 | 33 |
| 74 | 34 |
| 74.5 | 35 |
| 75 | 36 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

>>>>>> Structure No. 2 <<<<<<
(Input Data)

WEIR-XY
Weir - Defined by X, Y Coordinates
E1 (ft) =71 E2 (ft) =75.1

| X dist.(ft) | Y elev.(ft) |
|---|---|
| 0 | 75 |
| 8 | 71 |
| 12 | 71 |
| 20 | 75 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outflow Rating Table for Structure #1
TABLE Input your own rating table.

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 71.00 | 0.0 | |
| 71.10 | 0.8 | Interpolated from input table |
| 71.20 | 1.6 | Interpolated from input table |
| 71.30 | 2.4 | Interpolated from input table |
| 71.40 | 3.2 | Interpolated from input table |
| 71.50 | 4.0 | |
| 71.60 | 6.4 | Interpolated from input table |
| 71.70 | 8.8 | Interpolated from input table |
| 71.80 | 11.3 | Interpolated from input table |
| 71.90 | 13.7 | Interpolated from input table |
| 72.00 | 16.1 | |
| 72.10 | 19.1 | Interpolated from input table |
| 72.20 | 22.1 | Interpolated from input table |
| 72.30 | 25.0 | Interpolated from input table |
| 72.40 | 28.0 | Interpolated from input table |
| 72.50 | 31.0 | |
| 72.60 | 31.2 | Interpolated from input table |
| 72.70 | 31.4 | Interpolated from input table |
| 72.80 | 31.6 | Interpolated from input table |
| 72.90 | 31.8 | Interpolated from input table |
| 73.00 | 32.0 | |
| 73.10 | 32.2 | Interpolated from input table |
| 73.20 | 32.4 | Interpolated from input table |
| 73.30 | 32.6 | Interpolated from input table |
| 73.40 | 32.8 | Interpolated from input table |
| 73.50 | 33.0 | |
| 73.60 | 33.2 | Interpolated from input table |
| 73.70 | 33.4 | Interpolated from input table |
| 73.80 | 33.6 | Interpolated from input table |
| 73.90 | 33.8 | Interpolated from input table |
| 74.00 | 34.0 | |
| 74.10 | 34.2 | Interpolated from input table |
| 74.20 | 34.4 | Interpolated from input table |
| 74.30 | 34.6 | Interpolated from input table |
| 74.40 | 34.8 | Interpolated from input table |
| 74.50 | 35.0 | |
| 74.60 | 35.2 | Interpolated from input table |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

>>>>> CONTINUED from previous page <<<<<

Outflow Rating Table for Structure #1
TABLE Input your own rating table.

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 74.70 | 35.4 | Interpolated from input table |
| 74.80 | 35.6 | Interpolated from input table |
| 74.90 | 35.8 | Interpolated from input table |
| 75.00 | 36.0 | |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outflow Rating Table for Structure #2
WEIR-XY Weir - Defined by X, Y Coordinates

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 71.00 | 0.0 | E = Y min= 71 | |
| 71.10 | 0.3 | W(ft)=4.4 | Max. D(ft)=.1 |
| 71.20 | 1.0 | W(ft)=4.8 | Max. D(ft)=.2 |
| 71.30 | 1.9 | W(ft)=5.2 | Max. D(ft)=.3 |
| 71.40 | 3.0 | W(ft)=5.6 | Max. D(ft)=.4 |
| 71.50 | 4.3 | W(ft)=6.0 | Max. D(ft)=.5 |
| 71.60 | 5.9 | W(ft)=6.4 | Max. D(ft)=.6 |
| 71.70 | 7.6 | W(ft)=6.8 | Max. D(ft)=.7 |
| 71.80 | 9.5 | W(ft)=7.2 | Max. D(ft)=.8 |
| 71.90 | 11.7 | W(ft)=7.6 | Max. D(ft)=.9 |
| 72.00 | 14.1 | W(ft)=8.0 | Max. D(ft)=1.0 |
| 72.10 | 16.7 | W(ft)=8.400 | Max. D(ft)=1.1 |
| 72.20 | 19.5 | W(ft)=8.8 | Max. D(ft)=1.2 |
| 72.30 | 22.5 | W(ft)=9.200 | Max. D(ft)=1.3 |
| 72.40 | 25.8 | W(ft)=9.6 | Max. D(ft)=1.4 |
| 72.50 | 29.2 | W(ft)=10.0 | Max. D(ft)=1.5 |
| 72.60 | 33.0 | W(ft)=10.4 | Max. D(ft)=1.6 |
| 72.70 | 36.9 | W(ft)=10.8 | Max. D(ft)=1.7 |
| 72.80 | 41.1 | W(ft)=11.2 | Max. D(ft)=1.8 |
| 72.90 | 45.5 | W(ft)=11.6 | Max. D(ft)=1.9 |
| 73.00 | 50.2 | W(ft)=12.0 | Max. D(ft)=2.0 |
| 73.10 | 55.1 | W(ft)=12.4 | Max. D(ft)=2.1 |
| 73.20 | 60.3 | W(ft)=12.8 | Max. D(ft)=2.2 |
| 73.30 | 65.8 | W(ft)=13.2 | Max. D(ft)=2.3 |
| 73.40 | 71.5 | W(ft)=13.6 | Max. D(ft)=2.4 |
| 73.50 | 77.4 | W(ft)=14.0 | Max. D(ft)=2.5 |
| 73.60 | 83.7 | W(ft)=14.4 | Max. D(ft)=2.6 |
| 73.70 | 90.2 | W(ft)=14.8 | Max. D(ft)=2.7 |
| **73.80** | **97.0** | **W(ft)=15.2** | **Max. D(ft)=2.8** |
| 73.90 | 104.0 | W(ft)=15.6 | Max. D(ft)=2.9 |
| 74.00 | 111.4 | W(ft)=16.0 | Max. D(ft)=3.0 |
| 74.10 | 119.0 | W(ft)=16.4 | Max. D(ft)=3.1 |
| 74.20 | 126.9 | W(ft)=16.8 | Max. D(ft)=3.2 |
| 74.30 | 135.1 | W(ft)=17.2 | Max. D(ft)=3.3 |
| 74.40 | 143.6 | W(ft)=17.6 | Max. D(ft)=3.4 |
| 74.50 | 152.4 | W(ft)=18.0 | Max. D(ft)=3.5 |
| 74.60 | 161.5 | W(ft)=18.4 | Max. D(ft)=3.6 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

>>>>> CONTINUED from previous page <<<<<

Outflow Rating Table for Structure #2
WEIR-XY Weir - Defined by X, Y Coordinates

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 74.70 | 170.8 | W(ft)=18.8 | Max. D(ft)=3.7 |
| 74.80 | 180.5 | W(ft)=19.2 | Max. D(ft)=3.8 |
| 74.90 | 190.5 | W(ft)=19.6 | Max. D(ft)=3.9 |
| 75.00 | 200.9 | W(ft)=20.0 | Max. D(ft)=4.0 |

| Golder Associates | SUBJECT POND2 - Hydrograph Routing | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEZ<br>Checked CMM<br>Reviewed | Date 5-19-92<br>Sheet of |

The following 6 pages showing the hydrologic routing of the storm flows through wetland 1C using the Storage Indication Method.

```
*****************************************
*                                       *
*   OUTLETS FOR WETLAND 1C - PROPOSED   *
*       25 yr 24 hr STORM EVENT         *
*                                       *
*                                       *
*                                       *
*****************************************
```

Inflow Hydrograph: c:\isrt\1C25 .HYD
Rating Table file: c:\isrt\VERN .PND

----INITIAL CONDITIONS----
Elevation = 71.00 ft
Outflow = 0.00 cfs
Storage = 4.62 ac-ft

GIVEN POND DATA

| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) |
|---|---|---|
| 71.00 | 0.0 | 4.617 |
| 71.10 | 1.1 | 5.155 |
| 71.20 | 2.6 | 5.704 |
| 71.30 | 4.3 | 6.263 |
| 71.40 | 6.2 | 6.831 |
| 71.50 | 8.3 | 7.411 |
| 71.60 | 12.3 | 8.000 |
| 71.70 | 16.4 | 8.600 |
| 71.80 | 20.8 | 9.210 |
| 71.90 | 25.4 | 9.831 |
| 72.00 | 30.2 | 10.463 |
| 72.10 | 35.7 | 11.104 |
| 72.20 | 41.5 | 11.755 |
| 72.30 | 47.5 | 12.414 |
| 72.40 | 53.8 | 13.083 |
| 72.50 | 60.2 | 13.760 |
| 72.60 | 64.2 | 14.447 |
| 72.70 | 68.3 | 15.143 |
| 72.80 | 72.7 | 15.848 |
| 72.90 | 77.3 | 16.562 |
| 73.00 | 82.2 | 17.286 |
| 73.10 | 87.3 | 18.020 |
| 73.20 | 92.7 | 18.763 |
| 73.30 | 98.4 | 19.515 |
| 73.40 | 104.3 | 20.278 |
| 73.50 | 110.4 | 21.049 |
| 73.60 | 116.9 | 21.831 |
| 73.70 | 123.6 | 22.623 |
| 73.80 | 130.6 | 23.424 |
| 73.90 | 137.8 | 24.235 |
| 74.00 | 145.4 | 25.057 |

INTERMEDIATE ROUTING COMPUTATIONS

| 2S/t (cfs) | 2S/t + O (cfs) |
|---|---|
| 446.9 | 446.9 |
| 499.0 | 500.1 |
| 552.1 | 554.7 |
| 606.2 | 610.5 |
| 661.3 | 667.5 |
| 717.3 | 725.6 |
| 774.4 | 786.7 |
| 832.5 | 848.9 |
| 891.6 | 912.4 |
| 951.7 | 977.1 |
| 1012.8 | 1043.0 |
| 1074.9 | 1110.6 |
| 1137.9 | 1179.4 |
| 1201.7 | 1249.2 |
| 1266.4 | 1320.2 |
| 1332.0 | 1392.2 |
| 1398.5 | 1462.7 |
| 1465.8 | 1534.1 |
| 1534.1 | 1606.8 |
| 1603.2 | 1680.5 |
| 1673.3 | 1755.5 |
| 1744.3 | 1831.6 |
| 1816.2 | 1908.9 |
| 1889.1 | 1987.5 |
| 1962.9 | 2067.2 |
| 2037.6 | 2148.0 |
| 2113.3 | 2230.2 |
| 2189.9 | 2313.5 |
| 2267.5 | 2398.1 |
| 2346.0 | 2483.8 |
| 2425.5 | 2570.9 |

GIVEN POND DATA

| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) |
|---|---|---|
| 74.10 | 153.2 | 25.883 |
| 74.20 | 161.3 | 26.710 |
| 74.30 | 169.7 | 27.536 |
| 74.40 | 178.4 | 28.363 |
| 74.50 | 187.4 | 29.189 |
| 74.60 | 196.7 | 30.016 |
| 74.70 | 206.2 | 30.842 |
| 74.80 | 216.1 | 31.668 |
| 74.90 | 226.3 | 32.495 |
| 75.00 | 236.9 | 33.321 |

INTERMEDIATE ROUTING COMPUTATIONS

| 2S/t (cfs) | 2S/t + O (cfs) |
|---|---|
| 2505.5 | 2658.7 |
| 2585.5 | 2746.8 |
| 2665.5 | 2835.2 |
| 2745.5 | 2923.9 |
| 2825.5 | 3012.9 |
| 2905.5 | 3102.2 |
| 2985.5 | 3191.7 |
| 3065.5 | 3281.6 |
| 3145.5 | 3371.8 |
| 3225.5 | 3462.4 |

Time increment (t) = 0.250 hrs.

Pond File: c:\isrt\VERN .PND
Inflow Hydrograph: c:\isrt\1C25 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 0.000 | 0.00 | ----- | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.250 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.500 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.750 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 1.000 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 1.250 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 1.500 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 1.750 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 2.000 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 2.250 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 2.500 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 2.750 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 3.000 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 3.250 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 3.500 | 0.00 | 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 3.750 | 1.00 | 1.0 | 447.8 | 447.9 | 0.02 | 71.00 |
| 4.000 | 1.00 | 2.0 | 449.7 | 449.8 | 0.06 | 71.01 |
| 4.250 | 2.00 | 3.0 | 452.5 | 452.7 | 0.12 | 71.01 |
| 4.500 | 2.00 | 4.0 | 456.1 | 456.5 | 0.20 | 71.02 |
| 4.750 | 2.00 | 4.0 | 459.5 | 460.1 | 0.27 | 71.02 |
| 5.000 | 3.00 | 5.0 | 463.8 | 464.5 | 0.36 | 71.03 |
| 5.250 | 3.00 | 6.0 | 468.9 | 469.8 | 0.47 | 71.04 |
| 5.500 | 3.00 | 6.0 | 473.7 | 474.9 | 0.58 | 71.05 |
| 5.750 | 3.00 | 6.0 | 478.3 | 479.7 | 0.68 | 71.06 |
| 6.000 | 3.00 | 6.0 | 482.8 | 484.3 | 0.77 | 71.07 |
| 6.250 | 3.00 | 6.0 | 487.1 | 488.8 | 0.87 | 71.08 |
| 6.500 | 4.00 | 7.0 | 492.1 | 494.1 | 0.97 | 71.09 |
| 6.750 | 5.00 | 9.0 | 498.9 | 501.1 | 1.13 | 71.10 |
| 7.000 | 5.00 | 10.0 | 506.2 | 508.9 | 1.34 | 71.12 |
| 7.250 | 5.00 | 10.0 | 513.1 | 516.2 | 1.54 | 71.13 |
| 7.500 | 5.00 | 10.0 | 519.6 | 523.1 | 1.73 | 71.14 |
| 7.750 | 5.00 | 10.0 | 525.8 | 529.6 | 1.91 | 71.15 |
| 8.000 | 5.00 | 10.0 | 531.7 | 535.8 | 2.08 | 71.17 |
| 8.250 | 6.00 | 11.0 | 538.1 | 542.7 | 2.27 | 71.18 |
| 8.500 | 6.00 | 12.0 | 545.2 | 550.1 | 2.47 | 71.19 |
| 8.750 | 6.00 | 12.0 | 551.8 | 557.2 | 2.67 | 71.20 |
| 9.000 | 6.00 | 12.0 | 558.1 | 563.8 | 2.88 | 71.22 |
| 9.250 | 7.00 | 13.0 | 564.9 | 571.1 | 3.10 | 71.23 |
| **9.500** | **7.00** | **14.0** | **572.2** | **578.9** | **3.34** | **71.24** |
| 9.750 | 7.00 | 14.0 | 579.1 | 586.2 | 3.56 | 71.26 |
| 10.000 | 8.00 | 15.0 | 586.5 | 594.1 | 3.80 | 71.27 |
| 10.250 | 9.00 | 17.0 | 595.3 | 603.5 | 4.09 | 71.29 |
| 10.500 | 9.00 | 18.0 | 604.5 | 613.3 | 4.39 | 71.30 |
| 10.750 | 11.00 | 20.0 | 615.0 | 624.5 | 4.77 | 71.32 |
| 11.000 | 12.00 | 23.0 | 627.6 | 638.0 | 5.22 | 71.35 |

nd File: c:\isrt\VERN .PND
...flow Hydrograph: c:\isrt\1C25 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 11.250 | 15.00 | 27.0 | 643.0 | 654.6 | 5.77 | 71.38 |
| 11.500 | 19.00 | 34.0 | 663.9 | 677.0 | 6.54 | 71.42 |
| 11.750 | 26.00 | 45.0 | 693.5 | 708.9 | 7.70 | 71.47 |
| 12.000 | 44.00 | 70.0 | 742.0 | 763.5 | 10.78 | 71.56 |
| 12.250 | 94.00 | 138.0 | 842.9 | 880.0 | 18.56 | 71.75 |
| 12.500 | 70.00 | 164.0 | 951.7 | 1006.9 | 27.57 | 71.95 |
| 12.750 | 59.00 | 129.0 | 1014.2 | 1080.7 | 33.27 | 72.06 |
| 13.000 | 53.00 | 112.0 | 1052.2 | 1126.2 | 37.01 | 72.12 |
| 13.250 | 49.00 | 102.0 | 1075.4 | 1154.2 | 39.37 | 72.16 |
| 13.500 | 47.00 | 96.0 | 1089.8 | 1171.4 | 40.83 | 72.19 |
| 13.750 | 46.00 | 93.0 | 1099.2 | 1182.8 | 41.79 | 72.20 |
| 14.000 | 46.00 | 92.0 | 1106.1 | 1191.2 | 42.51 | 72.22 |
| 14.250 | 46.00 | 92.0 | 1111.9 | 1198.1 | 43.11 | 72.23 |
| 14.500 | 45.00 | 91.0 | 1115.9 | 1202.9 | 43.52 | 72.23 |
| 14.750 | 45.00 | 90.0 | 1118.3 | 1205.9 | 43.78 | 72.24 |
| 15.000 | 45.00 | 90.0 | 1120.3 | 1208.3 | 43.99 | 72.24 |
| 15.250 | 45.00 | 90.0 | 1122.0 | 1210.3 | 44.16 | 72.24 |
| 15.500 | 45.00 | 90.0 | 1123.4 | 1212.0 | 44.31 | 72.25 |
| 15.750 | 45.00 | 90.0 | 1124.6 | 1213.4 | 44.42 | 72.25 |
| 16.000 | 44.00 | 89.0 | 1124.7 | 1213.6 | 44.44 | 72.25 |
| 16.250 | 44.00 | 88.0 | 1124.0 | 1212.7 | 44.36 | 72.25 |
| 16.500 | 43.00 | 87.0 | 1122.5 | 1211.0 | 44.21 | 72.25 |
| 16.750 | 43.00 | 86.0 | 1120.5 | 1208.5 | 44.01 | 72.24 |
| 17.000 | 43.00 | 86.0 | 1118.8 | 1206.5 | 43.83 | 72.24 |
| 17.250 | 43.00 | 86.0 | 1117.5 | 1204.8 | 43.69 | 72.24 |
| 17.500 | 42.00 | 85.0 | 1115.5 | 1202.5 | 43.49 | 72.23 |
| 17.750 | 42.00 | 84.0 | 1113.0 | 1199.5 | 43.23 | 72.23 |
| 18.000 | 42.00 | 84.0 | 1111.0 | 1197.0 | 43.02 | 72.23 |
| 18.250 | 41.00 | 83.0 | 1108.5 | 1194.0 | 42.76 | 72.22 |
| 18.500 | 40.00 | 81.0 | 1104.7 | 1189.5 | 42.37 | 72.21 |
| 18.750 | 40.00 | 80.0 | 1100.8 | 1184.7 | 41.96 | 72.21 |
| 19.000 | 40.00 | 80.0 | 1097.6 | 1180.8 | 41.63 | 72.20 |
| 19.250 | 39.00 | 79.0 | 1094.0 | 1176.6 | 41.26 | 72.20 |
| 19.500 | 39.00 | 78.0 | 1090.3 | 1172.0 | 40.88 | 72.19 |
| 19.750 | 39.00 | 78.0 | 1087.1 | 1168.3 | 40.56 | 72.18 |
| 20.000 | 37.00 | 76.0 | 1082.9 | 1163.1 | 40.13 | 72.18 |
| 20.250 | 37.00 | 74.0 | 1077.7 | 1156.9 | 39.60 | 72.17 |
| 20.500 | 36.00 | 73.0 | 1072.5 | 1150.7 | 39.08 | 72.16 |
| 20.750 | 36.00 | 72.0 | 1067.4 | 1144.5 | 38.56 | 72.15 |
| 21.000 | 34.00 | 70.0 | 1061.5 | 1137.4 | 37.96 | 72.14 |
| 21.250 | 33.00 | 67.0 | 1054.1 | 1128.5 | 37.21 | 72.13 |
| 21.500 | 32.00 | 65.0 | 1046.2 | 1119.1 | 36.41 | 72.11 |
| 21.750 | 31.00 | 63.0 | 1038.1 | 1109.2 | 35.59 | 72.10 |
| 22.000 | 31.00 | 62.0 | 1030.4 | 1100.1 | 34.84 | 72.08 |
| 22.250 | 30.00 | 61.0 | 1023.1 | 1091.4 | 34.14 | 72.07 |
| 22.500 | 29.00 | 59.0 | 1015.3 | 1082.1 | 33.38 | 72.06 |

Pond File: c:\isrt\VERN .PND
Inflow Hydrograph: c:\isrt\1C25 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 22.750 | 28.00 | 57.0 | 1007.2 | 1072.3 | 32.59 | 72.04 |
| 23.000 | 28.00 | 56.0 | 999.5 | 1063.2 | 31.84 | 72.03 |
| 23.250 | 27.00 | 55.0 | 992.2 | 1054.5 | 31.13 | 72.02 |
| 23.500 | 27.00 | 54.0 | 985.3 | 1046.2 | 30.46 | 72.00 |
| 23.750 | 26.00 | 53.0 | 978.6 | 1038.3 | 29.86 | 71.99 |
| 24.000 | 26.00 | 52.0 | 972.0 | 1030.6 | 29.30 | 71.98 |

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: c:\isrt\VERN .PND
Inflow Hydrograph: c:\isrt\1C25 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

Starting Pond W.S. Elevation = 71.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 94.00 cfs
Peak Outflow = 44.44 cfs
Peak Elevation = 72.25 ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 4.62 ac-ft
Peak Storage From Storm = 7.46 ac-ft
---
Total Storage in Pond = 12.08 ac-ft

Warning: Inflow hydrograph truncated on right side.

| Golder Associates | SUBJECT GPN - Proposed Outflow - 25 yr storm | | |
|---|---|---|---|
| | Job No. 903-6001912. Ref. FSRT - 100% RTC | Made by VET Checked Reviewed | Date 3-21-92 Sheet 1 of 4 |

Objective: To determine how much discharge can be attributed to each outlet for Wetland 1C (East-West Hide Pile Wetland) after remediation. Outflow points are the West Branch of the Abenjona River and the channel connecting to the Creation Wetland.

Method: Using Pond2 rating curves and analyses, determine the outflow for each structure (i.e. a channel to the Creation Wetland and either a channel/24" culvert to the West Branch of the Abenjona River depending on the stage).

**Golder Associates**

SUBJECT UPN - Proposed Outflow - 25 yr storm

Job No. 903-6400.9/2 | Made by VEF | Date 4-23-92

Ref. 100% RTC. | Checked [illegible] | Sheet 2 of 4

Reviewed [illegible]

| Time (hr) | Total Outflow (cfs) | Outflow to Creation Wetland (cfs) | Outflow to the West Branch of the Abajona River (cfs) |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0.25 | 0 | 0 | 0 |
| 0.50 | 0 | 0 | 0 |
| 0.75 | 0 | 0 | 0 |
| 1.00 | 0 | 0 | 0 |
| 1.25 | 0 | 0 | 0 |
| 1.50 | 0 | 0 | 0 |
| 1.75 | 0 | 0 | 0 |
| 2.00 | 0 | 0 | 0 |
| 2.25 | 0 | 0 | 0 |
| 2.50 | 0 | 0 | 0 |
| 2.75 | 0 | 0 | 0 |
| 3.00 | 0 | 0 | 0 |
| 3.25 | 0 | 0 | 0 |
| 3.50 | 0 | 0 | 0 |
| 3.75 | 0.02 | 0.01 | 0.01 |
| 4.00 | 0.06 | 0.03 | 0.03 |
| 4.25 | 0.12 | 0.03 | 0.09 |
| 4.50 | 0.20 | 0.06 | 0.14 |
| 4.75 | 0.27 | 0.06 | 0.21 |
| 5.00 | 0.36 | 0.09 | 0.27 |
| 5.25 | 0.47 | 0.12 | 0.35 |
| 5.50 | 0.58 | 0.15 | 0.43 |
| 5.75 | 0.68 | 0.18 | 0.50 |
| 6.00 | 0.77 | 0.21 | 0.56 |
| 6.25 | 0.87 | 0.24 | 0.63 |
| 6.50 | 0.97 | 0.27 | 0.70 |
| 6.75 | 1.13 | 0.30 | 0.83 |
| 7.00 | 1.34 | 0.44 | 0.90 |
| 7.25 | 1.54 | 0.51 | 1.03 |
| 7.50 | 1.73 | 0.58 | 1.15 |
| 7.75 | 1.91 | 0.65 | 1.26 |

**Golder Associates**

SUBJECT GPN - Proposed outflow - 25 yr storm

Job No. 903-0400.912 | Made by VEZ | Date 4-28-92

Ref. 100% RTC. | Checked CRN | Sheet 3 of 4

Reviewed

| Time (hr) | Total Outflow (cfs) | Outflow to Creation Wetland (cfs) | Outflow to the West Branch of the Abayoma River (cfs) |
|---|---|---|---|
| 8.00 | 2.08 | 0.79 | 1.29 |
| 8.25 | 2.27 | 0.86 | 1.41 |
| 8.50 | 2.47 | 0.93 | 1.54 |
| 8.75 | 2.67 | 1.00 | 1.67 |
| 9.00 | 2.88 | 1.18 | 1.70 |
| 9.25 | 3.10 | 1.27 | 1.83 |
| 9.50 | 3.34 | 1.36 | 1.98 |
| 9.75 | 3.56 | 1.54 | 2.02 |
| 10.00 | 3.80 | 1.63 | 2.17 |
| 10.25 | 4.09 | 1.81 | 2.28 |
| 10.50 | 4.39 | 1.90 | 2.49 |
| 10.75 | 4.77 | 2.12 | 2.65 |
| 11.00 | 5.22 | 2.45 | 2.77 |
| 11.25 | 5.77 | 2.78 | 2.99 |
| 11.50 | 6.54 | 3.26 | 3.23 |
| 11.75 | 7.70 | 3.91 | 3.79 |
| 12.00 | 10.78 | 5.26 | 5.52 |
| 12.25 | 18.56 | 8.55 | 10.01 |
| 12.50 | 27.57 | 12.90 | 14.67 |
| 12.75 | 33.27 | 15.66 | 17.61 |
| 13.00 | 37.01 | 17.26 | 19.75 |
| 13.25 | 39.37 | 18.38 | 20.99 |
| 13.50 | 40.83 | 19.22 | 21.61 |
| 13.75 | 41.79 | 19.50 | 22.29 |
| 14.00 | 42.51 | 20.10 | 22.41 |
| 14.25 | 43.11 | 20.40 | 22.71 |
| 14.50 | 43.52 | 20.40 | 23.12 |
| 14.75 | 43.78 | 20.70 | 23.08 |
| 15.00 | 43.99 | 20.70 | 23.29 |
| 15.25 | 44.16 | 20.70 | 23.46 |
| 15.50 | 44.31 | 21.00 | 23.31 |
| 15.75 | 44.42 | 21.00 | 23.42 |

**Golder Associates**

SUBJECT GPN - Proposed Outflow - 25 yr storm

Job No. 903-6400.912 | Made by VEZ | Date 4-28-92

Ref. 100% RTC. | Checked CRM | Sheet 4 of 4

Reviewed

| Time (hr) | Total Outflow (cfs) | Outflow to Creation Wetland (cfs) | Outflow to the West Branch of the Abujona River (cfs) |
|---|---|---|---|
| 16.00 | 44.44 | 21.00 | 23.44 |
| 16.25 | 44.36 | 21.00 | 23.36 |
| 16.50 | 44.21 | 21.00 | 23.21 |
| 16.75 | 44.01 | 20.7 | 23.31 |
| 17.00 | 43.83 | 20.7 | 23.13 |
| 17.25 | 43.69 | 20.7 | 22.99 |
| 17.50 | 43.49 | 20.4 | 23.09 |
| 17.75 | 43.23 | 20.4 | 22.83 |
| 18.00 | 43.02 | 20.4 | 22.62 |
| 18.25 | 42.76 | 20.1 | 22.66 |
| 18.50 | 42.37 | 19.8 | 22.57 |
| 18.75 | 41.96 | 19.8 | 22.16 |
| 19.00 | 41.63 | 19.5 | 22.13 |
| 19.25 | 41.26 | 19.5 | 21.76 |
| 19.50 | 40.88 | 19.22 | 21.66 |
| 19.75 | 40.56 | 18.94 | 21.62 |
| 20.00 | 40.13 | 18.94 | 21.19 |
| 20.25 | 39.60 | 18.66 | 20.94 |
| 20.50 | 39.08 | 18.36 | 20.72 |
| 20.75 | 38.56 | 18.10 | 20.46 |
| 21.00 | 37.96 | 17.82 | 20.14 |
| 21.25 | 37.21 | 17.54 | 19.67 |
| 21.50 | 36.41 | 16.98 | 19.43 |
| 21.75 | 35.59 | 16.70 | 18.89 |
| 22.00 | 34.84 | 16.18 | 18.66 |
| 22.25 | 34.14 | 15.92 | 18.22 |
| 22.50 | 33.38 | 15.66 | 17.72 |
| 22.75 | 32.59 | 15.14 | 17.45 |
| 23.00 | 31.84 | 14.88 | 16.96 |
| 23.25 | 31.13 | 14.62 | 16.51 |
| 23.50 | 30.46 | 14.10 | 16.36 |
| 23.75 | 29.86 | 13.86 | 16.00 |
| 24.00 | 29.30 | 13.62 | 15.68 |

**Golder Associates**

| SUBJECT POND 2 STORAGE VS ELEVATION | | |
|---|---|---|
| Job No. 903-6400<br>Ref. 100% RTC | Made by VEF<br>Checked CRM<br>Reviewed | Date 5-19-92<br>Sheet 1 of 1 |

The following page estabishes the storage vs. elevation relationship in POND2. This relationship was calculated 3-21-92 by VEF (see Appendix 10-E, Storage vs. Elevation Relationships) for the creation wetland.

POND-2 Version: 5.16
S/N: 1295130217

MITIGATION AREA

CALCULATED 04-28-1992 11:57:11
DISK FILE: c:\isrt\MA .VOL

Planimeter scale: 1 inch = 50 ft.

| Elevation (ft) | Planimeter (sq.in.) | Area (acres) | A1+A2+sqr(A1*A2) (acres) | * Volume (acre-ft) | Volume Sum (acre-ft) |
|---|---|---|---|---|---|
| 67.00 | 13.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| 68.00 | 34.50 | 1.98 | 3.94 | 1.31 | 1.31 |
| 69.00 | 51.40 | 2.95 | 7.35 | 2.45 | 3.76 |
| 71.00 | 60.30 | 3.46 | 9.61 | 6.40 | 10.17 |
| 73.00 | 66.90 | 3.84 | 10.95 | 7.30 | 17.46 |

$$IA = (sq.rt(Area1) + ((Ei-E1)/(E2-E1))*(sq.rt(Area2)-sq.rt(Area1)))^2$$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1,Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

| Golder Associates | SUBJECT POND2 - Inflow Hydrographs | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RK | Made by UE 7<br>Checked CEM<br>Reviewed [illegible] | Date 5-19-92<br>Sheet of |

The following three pages show the addition of the inflow hydrographs to Creation Wetland. These hydrographs were generated in HEC-1 and POND2.

CW = Inflows to Creation wetland from wetland 1C. (POND 2)

GPS = Inflows from Subwatershed GPS (Appendix D-E

MA = Addition of CW and GPS

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Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | CW25 (cfs) | 6PS25 (cfs) | MA25 (Total) |
|---|---|---|---|
| 0.00 | 0.0 | 0.0 | 0.0 |
| 0.25 | 0.0 | 0.0 | 0.0 |
| 0.50 | 0.0 | 0.0 | 0.0 |
| 0.75 | 0.0 | 0.0 | 0.0 |
| 1.00 | 0.0 | 0.0 | 0.0 |
| 1.25 | 0.0 | 0.0 | 0.0 |
| 1.50 | 0.0 | 0.0 | 0.0 |
| 1.75 | 0.0 | 0.0 | 0.0 |
| 2.00 | 0.0 | 0.0 | 0.0 |
| 2.25 | 0.0 | 0.0 | 0.0 |
| 2.50 | 0.0 | 0.0 | 0.0 |
| 2.75 | 0.0 | 0.0 | 0.0 |
| 3.00 | 0.0 | 0.0 | 0.0 |
| 3.25 | 0.0 | 0.0 | 0.0 |
| 3.50 | 0.0 | 0.0 | 0.0 |
| 3.75 | 0.0 | 0.0 | 0.0 |
| 4.00 | 0.0 | 0.0 | 0.0 |
| 4.25 | 0.0 | 0.0 | 0.0 |
| 4.50 | 0.1 | 0.0 | 0.1 |
| 4.75 | 0.1 | 0.0 | 0.1 |
| 5.00 | 0.1 | 0.0 | 0.1 |
| 5.25 | 0.1 | 0.0 | 0.1 |
| 5.50 | 0.2 | 0.0 | 0.2 |
| 5.75 | 0.2 | 0.0 | 0.2 |
| 6.00 | 0.2 | 0.0 | 0.2 |
| 6.25 | 0.2 | 0.0 | 0.2 |
| 6.50 | 0.3 | 0.0 | 0.3 |
| 6.75 | 0.3 | 0.0 | 0.3 |
| 7.00 | 0.4 | 0.0 | 0.4 |
| 7.25 | 0.5 | 0.0 | 0.5 |
| 7.50 | 0.6 | 0.0 | 0.6 |
| 7.75 | 0.6 | 0.0 | 0.6 |
| 8.00 | 0.8 | 0.0 | 0.8 |
| 8.25 | 0.9 | 0.0 | 0.9 |
| 8.50 | 0.9 | 0.0 | 0.9 |
| 8.75 | 1.0 | 0.0 | 1.0 |
| 9.00 | 1.2 | 0.0 | 1.2 |
| 9.25 | 1.3 | 0.0 | 1.3 |
| 9.50 | 1.4 | 0.0 | 1.4 |
| 9.75 | 1.5 | 0.0 | 1.5 |

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Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | CW25 (cfs) | 6PS25 (cfs) | MA25 (Total) |
|---|---|---|---|
| 10.00 | 1.6 | 0.0 | 1.6 |
| 10.25 | 1.8 | 1.0 | 2.8 |
| 10.50 | 1.9 | 1.0 | 2.9 |
| 10.75 | 2.1 | 1.0 | 3.1 |
| 11.00 | 2.5 | 1.0 | 3.5 |
| 11.25 | 2.8 | 2.0 | 4.8 |
| 11.50 | 3.3 | 2.0 | 5.3 |
| 11.75 | 3.9 | 4.0 | 7.9 |
| 12.00 | 5.3 | 8.0 | 13.3 |
| 12.25 | 8.6 | 22.0 | 30.5 |
| 12.50 | 12.9 | 14.0 | 26.9 |
| 12.75 | 15.7 | 8.0 | 23.7 |
| 13.00 | 17.3 | 5.0 | 22.3 |
| 13.25 | 18.4 | 3.0 | 21.4 |
| 13.50 | 19.2 | 3.0 | 22.2 |
| 13.75 | 19.6 | 2.0 | 21.6 |
| 14.00 | 20.1 | 2.0 | 22.1 |
| 14.25 | 20.4 | 2.0 | 22.4 |
| 14.50 | 20.4 | 2.0 | 22.4 |
| 14.75 | 20.7 | 1.0 | 21.7 |
| 15.00 | 20.7 | 1.0 | 21.7 |
| 15.25 | 20.7 | 2.0 | 22.7 |
| 15.50 | 21.0 | 2.0 | 23.0 |
| 15.75 | 21.0 | 2.0 | 23.0 |
| 16.00 | 21.0 | 1.0 | 22.0 |
| 16.25 | 21.0 | 1.0 | 22.0 |
| 16.50 | 21.0 | 1.0 | 22.0 |
| 16.75 | 20.7 | 1.0 | 21.7 |
| 17.00 | 20.7 | 1.0 | 21.7 |
| 17.25 | 20.7 | 1.0 | 21.7 |
| 17.50 | 20.4 | 1.0 | 21.4 |
| 17.75 | 20.4 | 1.0 | 21.4 |
| 18.00 | 20.4 | 1.0 | 21.4 |
| 18.25 | 20.1 | 1.0 | 21.1 |
| 18.50 | 19.8 | 1.0 | 20.8 |
| 18.75 | 19.8 | 1.0 | 20.8 |
| 19.00 | 19.5 | 1.0 | 20.5 |
| 19.25 | 19.5 | 1.0 | 20.5 |
| 19.50 | 19.2 | 1.0 | 20.2 |
| 19.75 | 18.9 | 1.0 | 19.9 |
| 20.00 | 18.9 | 1.0 | 19.9 |

Executed 04-28-1992 13:35:18

Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | CW25 (cfs) | 6PS25 (cfs) | MA25 (Total) |
|---|---|---|---|
| 20.25 | 18.7 | 1.0 | 19.7 |
| 20.50 | 18.4 | 1.0 | 19.4 |
| 20.75 | 18.1 | 0.0 | 18.1 |
| 21.00 | 17.8 | 0.0 | 17.8 |
| 21.25 | 17.5 | 0.0 | 17.5 |
| 21.50 | 17.0 | 0.0 | 17.0 |
| 21.75 | 16.7 | 0.0 | 16.7 |
| 22.00 | 16.2 | 0.0 | 16.2 |
| 22.25 | 15.9 | 0.0 | 15.9 |
| 22.50 | 15.7 | 0.0 | 15.7 |
| 22.75 | 15.1 | 0.0 | 15.1 |
| 23.00 | 14.9 | 0.0 | 14.9 |
| 23.25 | 14.6 | 0.0 | 14.6 |
| 23.50 | 14.1 | 0.0 | 14.1 |
| 23.75 | 13.9 | 0.0 | 13.9 |
| 24.00 | 13.6 | 0.0 | 13.6 |

| Golder Associates | SUBJECT POND 2 - Rating Tables | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% [illegible] | Made by UEZ<br>Checked [illegible]<br>Reviewed [illegible] | Date 5-14-92<br>Sheet of |

The following 8 pages are the rating tables generated for the outflow structures by POND 2.

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

***** COMPOSITE OUTFLOW SUMMARY ****

| Elevation (ft) | Q (cfs) | Contributing Structures |
|---|---|---|
| 68.00 | 0.0 | 1 |
| 68.20 | 0.2 | 1 |
| 68.40 | 0.5 | 1 |
| 68.60 | 1.0 | 1 |
| 68.80 | 1.5 | 1 |
| 69.00 | 2.2 | 1 |
| 69.20 | 2.5 | 1 |
| 69.40 | 3.2 | 1 |
| 69.60 | 3.9 | 1 |
| 69.80 | 4.4 | 1 |
| 70.00 | 4.9 | 2 +1 |
| 70.20 | 5.5 | 2 +1 |
| 70.40 | 6.4 | 2 +1 |
| 70.60 | 7.4 | 2 +1 |
| 70.80 | 8.7 | 2 +1 |
| 71.00 | 9.9 | 2 +1 |
| 71.20 | 11.3 | 2 +1 |
| 71.40 | 12.7 | 2 +1 |
| 71.60 | 13.4 | 2 +1 |
| 71.80 | 14.8 | 2 +1 |
| 72.00 | 16.5 | 3 +2 +1 |
| 72.20 | 22.1 | 3 +2 +1 |
| 72.40 | 31.2 | 3 +2 +1 |
| 72.60 | 42.3 | 3 +2 +1 |
| 72.80 | 55.1 | 3 +2 +1 |
| 73.00 | 46.8 | 3 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outlet Structure File: c:\ISRT\MA .STR
Planimeter Input File: c:\ISRT\MA .VOL
Rating Table Output File: c:\ISRT\MA .PND

Min. Elev.(ft) = 68 Max. Elev.(ft) = 73 Incr.(ft) = .2

Additional elevations (ft) to be included in table:
* * * * * * * * * * * * * * * * * * * * * * * * * * *

**********
SYSTEM CONNECTIVITY
**********

| Structure | No. | Q Table | | Q Table |
|---|---|---|---|---|
| INLET BOX | 3 | | -> | 3 |
| CULVERT-CR | 2 | | -> | 2 |
| CULVERT-CR | 1 | | -> | 1 |

Outflow rating table summary was stored in file:
c:\ISRT\MA .PND

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 3 <<<<<<
(Input Data)

INLET BOX
Weir & Orifice defined by length and area

| | |
|---|---|
| E1 elev.(ft)? | 72 |
| E2 elev.(ft)? | 73.1 |
| Crest elev.(ft)? | 72 |
| Weir length (ft)? | 18 |
| Weir coefficient? | 2.6 |
| Orifice area (sq.ft)? | 20 |
| Orifice coefficient? | 0.6 |
| Start transition elev.(ft) @ ? | |
| Transition height (ft)? | |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 2 <<<<<<
(Input Data)

CULVERT-CR
Circular Culvert (With Inlet Control)

| | |
|---|---|
| E1 elev.(ft)? | 70 |
| E2 elev.(ft)? | 73 |
| Diam. (ft)? | 1.50 |
| Inv. el.(ft)? | 70 |
| Slope (ft/ft)? | 0 |
| T1 ratio? | 1.0 |
| T2 ratio? | 1.1 |
| K Coeff.? | .519 |
| M Coeff.? | .64 |
| c Coeff.? | .0289 |
| Y Coeff.? | .9 |
| Form 1 or 2? | 2 |
| Slope factor? | -0.5 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 1 <<<<<<
(Input Data)

CULVERT-CR
Circular Culvert (With Inlet Control)

| | |
|---|---|
| E1 elev.(ft)? | 68 |
| E2 elev.(ft)? | 73 |
| Diam. (ft)? | 1.0 |
| Inv. el.(ft)? | 68 |
| Slope (ft/ft)? | 0 |
| T1 ratio? | 1.0 |
| T2 ratio? | 1.1 |
| K Coeff.? | .519 |
| M Coeff.? | .64 |
| c Coeff.? | .0289 |
| Y Coeff.? | .9 |
| Form 1 or 2? | 2 |
| Slope factor? | -0.5 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #3
INLET BOX Weir & Orifice defined by length and area

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 68.00 | 0.0 | E < Inv.El.= 72 | |
| 68.20 | 0.0 | E < El=72 | |
| 68.40 | 0.0 | E < El=72 | |
| 68.60 | 0.0 | E < El=72 | |
| 68.80 | 0.0 | E < El=72 | |
| 69.00 | 0.0 | E < El=72 | |
| 69.20 | 0.0 | E < El=72 | |
| 69.40 | 0.0 | E < El=72 | |
| 69.60 | 0.0 | E < El=72 | |
| 69.80 | 0.0 | E < El=72 | |
| 70.00 | 0.0 | E < El=72 | |
| 70.20 | 0.0 | E < El=72 | |
| 70.40 | 0.0 | E < El=72 | |
| 70.60 | 0.0 | E < El=72 | |
| 70.80 | 0.0 | E < El=72 | |
| 71.00 | 0.0 | E < El=72 | |
| 71.20 | 0.0 | E < El=72 | |
| 71.40 | 0.0 | E < El=72 | |
| 71.60 | 0.0 | E < El=72 | |
| 71.80 | 0.0 | E < El=72 | |
| 72.00 | 0.0 | Weir: | H =0.0 |
| 72.20 | 4.2 | Weir: | H =.2 |
| 72.40 | 11.8 | Weir: | H =.4 |
| 72.60 | 21.8 | Weir: | H =.6 |
| 72.80 | 33.5 | Weir: | H =.8 |
| 73.00 | 46.8 | Weir: | H =1.0 |

Weir Cw = 2.6 Weir length = 18 ft
Orifice Co = .6 Orifice area = 20 sq.ft.
Q (cfs) = (Cw * L * H**1.5) or (Co * A * sqr(2*g*H))
No transition used, transition height = 0.0
Weir equation = Orifice equation @ elev.= 74.05769 ft

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #2
CULVERT-CR Circular Culvert (With Inlet Control)

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 68.00 | 0.0 | E < Inv.El.= 70 |
| 68.20 | 0.0 | E < Inv.El.= 70 |
| 68.40 | 0.0 | E < Inv.El.= 70 |
| 68.60 | 0.0 | E < Inv.El.= 70 |
| 68.80 | 0.0 | E < Inv.El.= 70 |
| 69.00 | 0.0 | E < Inv.El.= 70 |
| 69.20 | 0.0 | E < Inv.El.= 70 |
| 69.40 | 0.0 | E < Inv.El.= 70 |
| 69.60 | 0.0 | E < Inv.El.= 70 |
| 69.80 | 0.0 | E < Inv.El.= 70 |
| 70.00 | 0.0 | Equ.2: HW =0.0 |
| 70.20 | 0.3 | Equ.2: HW =.2 |
| 70.40 | 0.8 | Equ.2: HW =.4 |
| 70.60 | 1.4 | Equ.2: HW =.6 |
| 70.80 | 2.3 | Equ.2: HW =.8 |
| 71.00 | 3.2 | Equ.2: HW =1.0 |
| 71.20 | 4.3 | Equ.2: HW =1.2 |
| 71.40 | 5.4 | Equ.2: HW =1.4 |
| 71.60 | 5.8 | Transition: HW =1.6 |
| 71.80 | 7.0 | Submerged: HW =1.8 |
| 72.00 | 8.4 | Submerged: HW =2.0 |
| 72.20 | 9.5 | Submerged: HW =2.2 |
| 72.40 | 10.7 | Submerged: HW =2.4 |
| 72.60 | 11.6 | Submerged: HW =2.6 |
| 72.80 | 12.5 | Submerged: HW =2.8 |
| 73.00 | 0.0 | E = or > E2=73 |

Used Unsubmerged Equ. Form (2) for elev. less than 71.5 ft
Used Submerged Equation for elevations greater than 71.65 ft
HW=Headwater (ft)

Transition flows interpolated from the following values:
E1=71.5 ft; Q1=6.01 cfs; E2=71.65 ft; Q2=5.72 cfs

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #1
CULVERT-CR Circular Culvert (With Inlet Control)

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 68.00 | 0.0 | No headwater |
| 68.20 | 0.2 | Equ.2: HW =.2 |
| 68.40 | 0.5 | Equ.2: HW =.4 |
| 68.60 | 1.0 | Equ.2: HW =.6 |
| 68.80 | 1.5 | Equ.2: HW =.8 |
| 69.00 | 2.2 | Transition: HW =1.0 |
| 69.20 | 2.5 | Submerged: HW =1.2 |
| 69.40 | 3.2 | Submerged: HW =1.4 |
| 69.60 | 3.9 | Submerged: HW =1.6 |
| 69.80 | 4.4 | Submerged: HW =1.8 |
| 70.00 | 4.9 | Submerged: HW =2.0 |
| 70.20 | 5.3 | Submerged: HW =2.2 |
| 70.40 | 5.7 | Submerged: HW =2.4 |
| 70.60 | 6.0 | Submerged: HW =2.6 |
| 70.80 | 6.4 | Submerged: HW =2.8 |
| 71.00 | 6.7 | Submerged: HW =3.0 |
| 71.20 | 7.0 | Submerged: HW =3.2 |
| 71.40 | 7.3 | Submerged: HW =3.4 |
| 71.60 | 7.6 | Submerged: HW =3.6 |
| 71.80 | 7.9 | Submerged: HW =3.8 |
| 72.00 | 8.1 | Submerged: HW =4.0 |
| 72.20 | 8.4 | Submerged: HW =4.2 |
| 72.40 | 8.7 | Submerged: HW =4.4 |
| 72.60 | 8.9 | Submerged: HW =4.6 |
| 72.80 | 9.1 | Submerged: HW =4.8 |
| 73.00 | 0.0 | E = or > E2=73 |

Used Unsubmerged Equ. Form (2) for elev. less than 69.0 ft
Used Submerged Equation for elevations greater than 69.1 ft
HW=Headwater (ft)

Transition flows interpolated from the following values:
E1=69.0 ft; Q1=2.19 cfs; E2=69.1 ft; Q2=2.1 cfs

| Golder Associates | SUBJECT POND2 - Hydrograph Routing | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEZ<br>Checked CMB<br>Reviewed | Date 5-19-92<br>Sheet of |

The following 6 pages showing the hydrologic routing of the storm flows through using the Storage Indication Method.

```
*****************************
*                           *
*     MITIGATION AREA       *
* 25 yr 24 hr STORM EVENT   *
*                           *
*                           *
*                           *
*****************************
```

Inflow Hydrograph: c:\isrt\MA25 .HYD
Rating Table file: c:\isrt\MA .PND

----INITIAL CONDITIONS----
Elevation = 68.00 ft
Outflow = 0.00 cfs
Storage = 1.31 ac-ft

| GIVEN POND DATA | | | INTERMEDIATE ROUTING COMPUTATIONS | |
|---|---|---|---|---|
| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) | 2S/t (cfs) | 2S/t + O (cfs) |
| 68.00 | 0.0 | 1.314 | 127.2 | 127.2 |
| 68.20 | 0.2 | 1.728 | 167.2 | 167.4 |
| 68.40 | 0.5 | 2.178 | 210.8 | 211.3 |
| 68.60 | 1.0 | 2.666 | 258.1 | 259.1 |
| 68.80 | 1.5 | 3.194 | 309.2 | 310.7 |
| 69.00 | 2.2 | 3.763 | 364.2 | 366.4 |
| 69.20 | 2.5 | 4.358 | 421.8 | 424.3 |
| 69.40 | 3.2 | 4.963 | 480.4 | 483.6 |
| 69.60 | 3.9 | 5.577 | 539.9 | 543.8 |
| 69.80 | 4.4 | 6.202 | 600.4 | 604.8 |
| 70.00 | 4.9 | 6.837 | 661.8 | 666.7 |
| 70.20 | 5.5 | 7.482 | 724.3 | 729.8 |
| 70.40 | 6.4 | 8.138 | 787.7 | 794.1 |
| 70.60 | 7.4 | 8.804 | 852.2 | 859.6 |
| 70.80 | 8.7 | 9.480 | 917.6 | 926.3 |
| 71.00 | 9.9 | 10.167 | 984.1 | 994.0 |
| 71.20 | 11.3 | 10.863 | 1051.5 | 1062.8 |
| 71.40 | 12.7 | 11.566 | 1119.6 | 1132.3 |
| 71.60 | 13.4 | 12.277 | 1188.4 | 1201.8 |
| 71.80 | 14.8 | 12.995 | 1257.9 | 1272.7 |
| 72.00 | 16.5 | 13.720 | 1328.1 | 1344.6 |
| 72.20 | 22.1 | 14.454 | 1399.1 | 1421.2 |
| 72.40 | 31.2 | 15.195 | 1470.9 | 1502.1 |
| 72.60 | 42.3 | 15.943 | 1543.3 | 1585.6 |
| 72.80 | 55.1 | 16.700 | 1616.5 | 1671.6 |
| 73.00 | 46.8 | 17.464 | 1690.5 | 1737.3 |

Time increment (t) = 0.250 hrs.

Pond File: c:\isrt\MA .PND
Inflow Hydrograph: c:\isrt\MA25 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

INFLOW HYDROGRAPH

| TIME (hrs) | INFLOW (cfs) |
|---|---|
| 0.000 | 0.00 |
| 0.250 | 0.00 |
| 0.500 | 0.00 |
| 0.750 | 0.00 |
| 1.000 | 0.00 |
| 1.250 | 0.00 |
| 1.500 | 0.00 |
| 1.750 | 0.00 |
| 2.000 | 0.00 |
| 2.250 | 0.00 |
| 2.500 | 0.00 |
| 2.750 | 0.00 |
| 3.000 | 0.00 |
| 3.250 | 0.00 |
| 3.500 | 0.00 |
| 3.750 | 0.01 |
| 4.000 | 0.03 |
| 4.250 | 0.03 |
| 4.500 | 0.06 |
| 4.750 | 0.06 |
| 5.000 | 0.09 |
| 5.250 | 0.12 |
| 5.500 | 0.15 |
| 5.750 | 0.18 |
| 6.000 | 0.21 |
| 6.250 | 0.24 |
| 6.500 | 0.27 |
| 6.750 | 0.30 |
| 7.000 | 0.44 |
| 7.250 | 0.51 |
| 7.500 | 0.58 |
| 7.750 | 0.65 |
| 8.000 | 0.79 |
| 8.250 | 0.86 |
| 8.500 | 0.93 |
| 8.750 | 1.00 |
| 9.000 | 1.18 |
| 9.250 | 1.27 |
| 9.500 | 1.36 |
| 9.750 | 1.54 |
| 10.000 | 1.63 |
| 10.250 | 2.81 |
| 10.500 | 2.90 |
| 10.750 | 3.12 |
| 11.000 | 3.45 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| ----- | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.1 | 127.3 | 127.3 | 0.00 | 68.00 |
| 0.1 | 127.4 | 127.4 | 0.00 | 68.00 |
| 0.1 | 127.5 | 127.5 | 0.00 | 68.00 |
| 0.2 | 127.6 | 127.6 | 0.00 | 68.00 |
| 0.2 | 127.8 | 127.8 | 0.00 | 68.00 |
| 0.3 | 128.1 | 128.1 | 0.00 | 68.00 |
| 0.3 | 128.4 | 128.4 | 0.01 | 68.01 |
| 0.4 | 128.8 | 128.8 | 0.01 | 68.01 |
| 0.5 | 129.2 | 129.2 | 0.01 | 68.01 |
| 0.5 | 129.7 | 129.7 | 0.01 | 68.01 |
| 0.6 | 130.2 | 130.3 | 0.02 | 68.02 |
| 0.7 | 131.0 | 131.0 | 0.02 | 68.02 |
| 1.0 | 131.9 | 131.9 | 0.02 | 68.02 |
| 1.1 | 132.9 | 132.9 | 0.03 | 68.03 |
| 1.2 | 134.0 | 134.1 | 0.03 | 68.03 |
| 1.4 | 135.4 | 135.5 | 0.04 | 68.04 |
| 1.7 | 137.0 | 137.1 | 0.05 | 68.05 |
| 1.8 | 138.6 | 138.7 | 0.06 | 68.06 |
| 1.9 | 140.4 | 140.6 | 0.07 | 68.07 |
| 2.2 | 142.5 | 142.6 | 0.08 | 68.08 |
| 2.5 | 144.7 | 144.9 | 0.09 | 68.09 |
| 2.6 | 147.2 | 147.4 | 0.10 | 68.10 |
| 2.9 | 149.8 | 150.1 | 0.11 | 68.11 |
| 3.2 | 152.7 | 153.0 | 0.13 | 68.13 |
| 4.4 | 156.9 | 157.2 | 0.15 | 68.15 |
| 5.7 | 162.2 | 162.6 | 0.18 | 68.18 |
| 6.0 | 167.9 | 168.3 | 0.21 | 68.20 |
| 6.6 | 173.9 | 174.4 | 0.25 | 68.23 |

Pond File: c:\isrt\MA .PND
Inflow Hydrograph: c:\isrt\MA25 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 11.250 | 4.78 | 8.2 | 181.6 | 182.2 | 0.30 | 68.27 |
| 11.500 | 5.26 | 10.0 | 190.9 | 191.6 | 0.37 | 68.31 |
| 11.750 | 7.91 | 13.2 | 203.1 | 204.0 | 0.45 | 68.37 |
| 12.000 | 13.26 | 21.2 | 223.0 | 224.3 | 0.64 | 68.45 |
| 12.250 | 30.55 | 43.8 | 264.7 | 266.8 | 1.08 | 68.63 |
| 12.500 | 26.90 | 57.5 | 318.9 | 322.1 | 1.64 | 68.84 |
| 12.750 | 23.66 | 50.6 | 365.0 | 369.4 | 2.22 | 69.01 |
| 13.000 | 22.26 | 45.9 | 406.0 | 410.9 | 2.43 | 69.15 |
| 13.250 | 21.38 | 43.6 | 444.1 | 449.7 | 2.80 | 69.29 |
| 13.500 | 22.22 | 43.6 | 481.2 | 487.7 | 3.25 | 69.41 |
| 13.750 | 21.59 | 43.8 | 517.6 | 525.0 | 3.68 | 69.54 |
| 14.000 | 22.10 | 43.7 | 553.2 | 561.3 | 4.04 | 69.66 |
| 14.250 | 22.40 | 44.5 | 589.1 | 597.7 | 4.34 | 69.78 |
| 14.500 | 22.40 | 44.8 | 624.6 | 633.9 | 4.63 | 69.89 |
| 14.750 | 21.70 | 44.1 | 658.8 | 668.7 | 4.92 | 70.01 |
| 15.000 | 21.70 | 43.4 | 691.8 | 702.2 | 5.24 | 70.11 |
| 15.250 | 22.70 | 44.4 | 725.0 | 736.2 | 5.59 | 70.22 |
| 15.500 | 23.00 | 45.7 | 758.5 | 770.7 | 6.07 | 70.33 |
| 15.750 | 23.00 | 46.0 | 791.4 | 804.5 | 6.56 | 70.43 |
| 16.000 | 22.00 | 45.0 | 822.3 | 836.4 | 7.05 | 70.53 |
| 16.250 | 22.00 | 44.0 | 851.3 | 866.3 | 7.53 | 70.62 |
| 16.500 | 22.00 | 44.0 | 879.1 | 895.3 | 8.09 | 70.71 |
| 16.750 | 21.70 | 43.7 | 905.5 | 922.8 | 8.63 | 70.79 |
| 17.000 | 21.70 | 43.4 | 930.7 | 948.9 | 9.10 | 70.87 |
| 17.250 | 21.70 | 43.4 | 955.0 | 974.1 | 9.55 | 70.94 |
| 17.500 | 21.40 | 43.1 | 978.2 | 998.1 | 9.98 | 71.01 |
| 17.750 | 21.40 | 42.8 | 1000.1 | 1021.0 | 10.45 | 71.08 |
| 18.000 | 21.40 | 42.8 | 1021.1 | 1042.9 | 10.89 | 71.14 |
| 18.250 | 21.10 | 42.5 | 1040.9 | 1063.6 | 11.32 | 71.20 |
| 18.500 | 20.80 | 41.9 | 1059.4 | 1082.8 | 11.70 | 71.26 |
| 18.750 | 20.80 | 41.6 | 1076.9 | 1101.0 | 12.07 | 71.31 |
| 19.000 | 20.50 | 41.3 | 1093.4 | 1118.2 | 12.42 | 71.36 |
| 19.250 | 20.50 | 41.0 | 1108.9 | 1134.4 | 12.72 | 71.41 |
| 19.500 | 20.22 | 40.7 | 1123.9 | 1149.6 | 12.87 | 71.45 |
| 19.750 | 19.94 | 40.2 | 1138.0 | 1164.0 | 13.02 | 71.49 |
| 20.000 | 19.94 | 39.9 | 1151.6 | 1177.9 | 13.16 | 71.53 |
| 20.250 | 19.66 | 39.6 | 1164.6 | 1191.2 | 13.29 | 71.57 |
| 20.500 | 19.36 | 39.0 | 1176.7 | 1203.6 | 13.44 | 71.61 |
| 20.750 | 18.10 | 37.5 | 1186.9 | 1214.2 | 13.65 | 71.64 |
| 21.000 | 17.82 | 35.9 | 1195.2 | 1222.8 | 13.82 | 71.66 |
| 21.250 | 17.54 | 35.4 | 1202.6 | 1230.6 | 13.97 | 71.68 |
| 21.500 | 16.98 | 34.5 | 1208.9 | 1237.1 | 14.10 | 71.70 |
| 21.750 | 16.70 | 33.7 | 1214.2 | 1242.6 | 14.21 | 71.72 |
| 22.000 | 16.18 | 32.9 | 1218.5 | 1247.1 | 14.29 | 71.73 |
| 22.250 | 15.92 | 32.1 | 1221.9 | 1250.6 | 14.36 | 71.74 |
| 22.500 | 15.66 | 31.6 | 1224.6 | 1253.4 | 14.42 | 71.75 |

```
 ond File:            c:\isrt\MA       .PND
 flow Hydrograph:     c:\isrt\MA25     .HYD
Outflow Hydrograph:   c:\isrt\OUT      .HYD
```

INFLOW HYDROGRAPH

| TIME (hrs) | INFLOW (cfs) |
|---|---|
| 22.750 | 15.14 |
| 23.000 | 14.88 |
| 23.250 | 14.62 |
| 23.500 | 14.10 |
| 23.750 | 13.86 |
| 24.000 | 13.62 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| 30.8 | 1226.5 | 1255.4 | 14.46 | 71.75 |
| 30.0 | 1227.5 | 1256.5 | 14.48 | 71.75 |
| 29.5 | 1228.1 | 1257.0 | 14.49 | 71.76 |
| 28.7 | 1227.8 | 1256.8 | 14.49 | 71.76 |
| 28.0 | 1226.8 | 1255.8 | 14.47 | 71.75 |
| 27.5 | 1225.4 | 1254.3 | 14.44 | 71.75 |

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: c:\isrt\MA .PND
Inflow Hydrograph: c:\isrt\MA25 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

Starting Pond W.S. Elevation = 68.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 30.55 cfs
Peak Outflow = 14.49 cfs
Peak Elevation = 71.76 ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 1.31 ac-ft
Peak Storage From Storm = 11.52 ac-ft
---
Total Storage in Pond = 12.84 ac-ft

Warning: Inflow hydrograph truncated on right side.

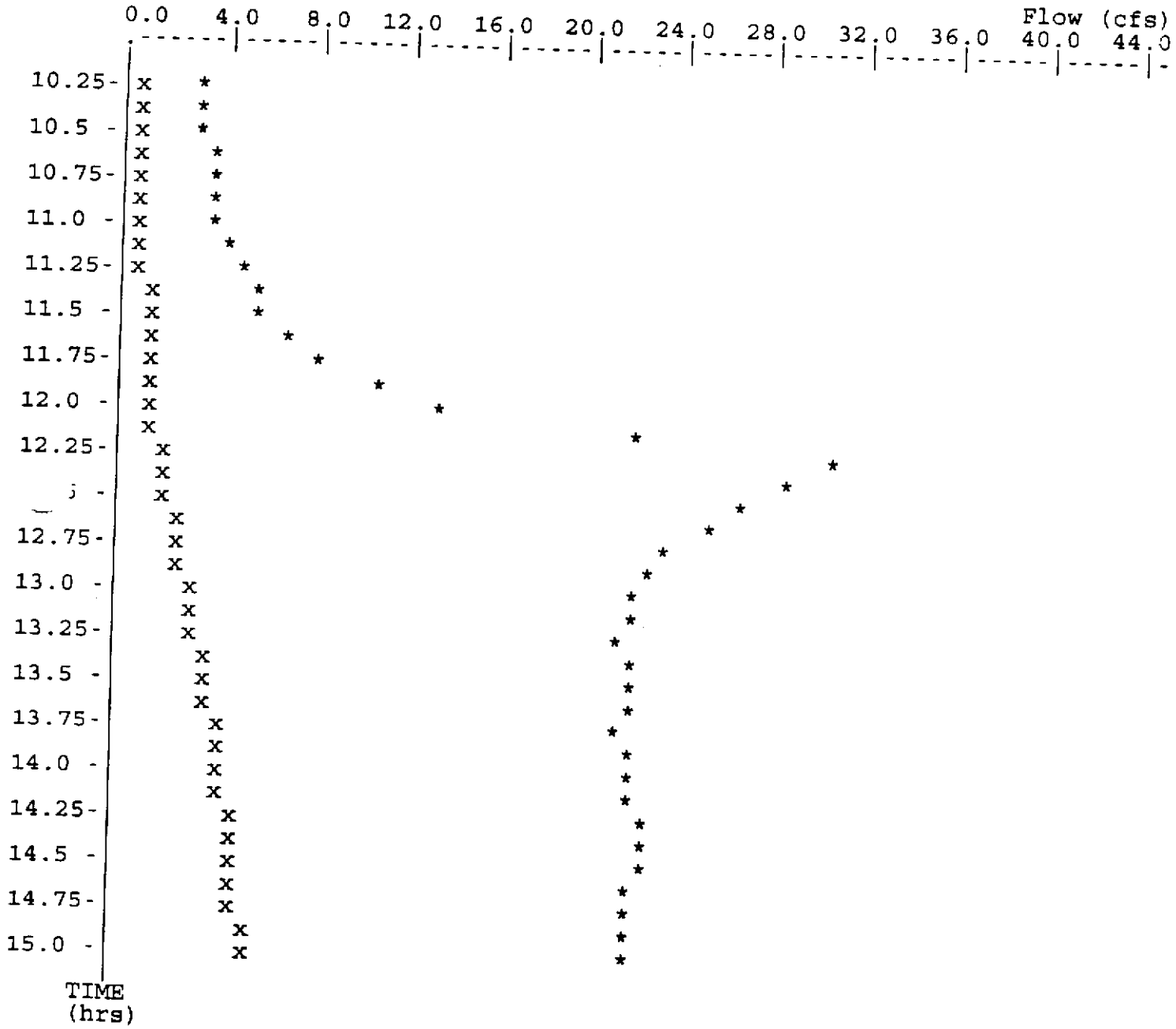
POND-2 Version: 5.16 S/N: 1295130217



Pond File: c:\isrt\MA .PND
Inflow Hydrograph: c:\isrt\MA25 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

Peak Inflow = 30.55 cfs
Peak Outflow = 14.49 cfs
Peak Elevation = 71.76 ft

EXECUTED: 04-28-1992
13:35:50




* File: c:\isrt\MA25 .HYD Qmax = 30.5 cfs
x File: c:\isrt\OUT .HYD Qmax = 14.5 cfs

POND-2

50 Year, 24 Hour Storm

| Golder Associates | SUBJECT POND 2 STORAGE VS ELEVATION | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEZ<br>Checked CLN<br>Reviewed GSR | Date 5-19-92<br>Sheet 1 of 1 |

The following page estabishes the storage vs. elevation relationship in POND 2. This relationship was calculated 11-21-92 by MK (see Appendix 10-E, Storage vs. Elevation Relationships).

POND-2 Version: 5.16
S/N: 1295130217

VOLUME CALCULATION FOR WETLAND 1C - PROPOSED

CALCULATED 04-09-1992 18:40:57
DISK FILE: c:\ISRT\VERN .VOL

Planimeter scale: 1 inch = 50 ft.

| Elevation (ft) | Planimeter (sq.in.) | Area (acres) | A1+A2+sqr(A1*A2) (acres) | * Volume (acre-ft) | Volume Sum (acre-ft) |
|---|---|---|---|---|---|
| 70.00 | 68.50 | 3.93 | 0.00 | 0.00 | 0.00 |
| 71.00 | 93.00 | 5.34 | 13.85 | 4.62 | 4.62 |
| 72.00 | 111.00 | 6.37 | 17.54 | 5.85 | 10.46 |
| 74.00 | 144.00 | 8.26 | 21.89 | 14.59 | 25.06 |
| 76.00 | 144.00 | 8.26 | 24.79 | 16.53 | 41.59 |

$$IA = (sq.rt(Area1) + ((Ei-E1)/(E2-E1))*(sq.rt(Area2)-sq.rt(Area1)))^2$$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1,Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

| Golder Associates | SUBJECT POND2 - Inflow Hydrographs | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RK | Made by UE7<br>Checked CEN<br>Reviewed GSB | Date 5-19-92<br>Sheet of |

The following three pages show the addition of the inflow hydrographs to Wetland 1C. These hydrographs were generated in HEC-1.

5D = Flow from Subwatershed 5D (Appendix 10-B)

6PN = Subwatershed 6PN (Appendix 10-E)

7P = Subwatershed 7P (Appendix 10-E

1C = Addition of 5D, 6PN and 7P

Executed 04-28-1992 10:55:24

Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D50 (cfs) | 6PN50 (cfs) | 7P50 (cfs) | 1C50 (Total) |
|---|---|---|---|---|
| 0.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.75 | 1.0 | 0.0 | 0.0 | 1.0 |
| 4.00 | 1.0 | 0.0 | 0.0 | 1.0 |
| 4.25 | 2.0 | 0.0 | 0.0 | 2.0 |
| 4.50 | 2.0 | 0.0 | 0.0 | 2.0 |
| 4.75 | 2.0 | 0.0 | 0.0 | 2.0 |
| 5.00 | 3.0 | 0.0 | 0.0 | 3.0 |
| 5.25 | 3.0 | 0.0 | 0.0 | 3.0 |
| 5.50 | 3.0 | 0.0 | 0.0 | 3.0 |
| 5.75 | 3.0 | 0.0 | 0.0 | 3.0 |
| 6.00 | 3.0 | 0.0 | 0.0 | 3.0 |
| 6.25 | 3.0 | 1.0 | 0.0 | 4.0 |
| 6.50 | 3.0 | 1.0 | 0.0 | 4.0 |
| 6.75 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.00 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.25 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.50 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.75 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.00 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.25 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.50 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.75 | 5.0 | 2.0 | 0.0 | 7.0 |
| 9.00 | 5.0 | 3.0 | 0.0 | 8.0 |
| 9.25 | 5.0 | 3.0 | 0.0 | 8.0 |
| 9.50 | 6.0 | 3.0 | 0.0 | 9.0 |
| 9.75 | 6.0 | 4.0 | 0.0 | 10.0 |

Executed 04-28-1992 10:55:24

Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D50 (cfs) | 6PN50 (cfs) | 7P50 (cfs) | 1C50 (Total) |
|---|---|---|---|---|
| 10.00 | 7.0 | 4.0 | 0.0 | 11.0 |
| 10.25 | 7.0 | 4.0 | 0.0 | 11.0 |
| 10.50 | 8.0 | 5.0 | 0.0 | 13.0 |
| 10.75 | 8.0 | 6.0 | 0.0 | 14.0 |
| 11.00 | 9.0 | 7.0 | 0.0 | 16.0 |
| 11.25 | 10.0 | 8.0 | 0.0 | 18.0 |
| 11.50 | 12.0 | 11.0 | 0.0 | 23.0 |
| 11.75 | 13.0 | 17.0 | 1.0 | 31.0 |
| 12.00 | 16.0 | 35.0 | 2.0 | 53.0 |
| 12.25 | 21.0 | 88.0 | 4.0 | 113.0 |
| 12.50 | 31.0 | 50.0 | 2.0 | 83.0 |
| 12.75 | 38.0 | 25.0 | 1.0 | 64.0 |
| 13.00 | 41.0 | 16.0 | 1.0 | 58.0 |
| 13.25 | 43.0 | 12.0 | 1.0 | 56.0 |
| 13.50 | 45.0 | 9.0 | 0.0 | 54.0 |
| 13.75 | 47.0 | 8.0 | 0.0 | 55.0 |
| 14.00 | 48.0 | 7.0 | 0.0 | 55.0 |
| 14.25 | 48.0 | 7.0 | 0.0 | 55.0 |
| 14.50 | 48.0 | 6.0 | 0.0 | 54.0 |
| 14.75 | 49.0 | 6.0 | 0.0 | 55.0 |
| 15.00 | 49.0 | 5.0 | 0.0 | 54.0 |
| 15.25 | 49.0 | 5.0 | 0.0 | 54.0 |
| 15.50 | 49.0 | 5.0 | 0.0 | 54.0 |
| 15.75 | 48.0 | 4.0 | 0.0 | 52.0 |
| 16.00 | 48.0 | 4.0 | 0.0 | 52.0 |
| 16.25 | 48.0 | 4.0 | 0.0 | 52.0 |
| 16.50 | 48.0 | 4.0 | 0.0 | 52.0 |
| 16.75 | 47.0 | 4.0 | 0.0 | 51.0 |
| 17.00 | 47.0 | 4.0 | 0.0 | 51.0 |
| 17.25 | 47.0 | 4.0 | 0.0 | 51.0 |
| 17.50 | 46.0 | 3.0 | 0.0 | 49.0 |
| 17.75 | 46.0 | 3.0 | 0.0 | 49.0 |
| 18.00 | 46.0 | 3.0 | 0.0 | 49.0 |
| 18.25 | 45.0 | 2.0 | 0.0 | 47.0 |
| 18.50 | 45.0 | 2.0 | 0.0 | 47.0 |
| 18.75 | 44.0 | 2.0 | 0.0 | 46.0 |
| 19.00 | 44.0 | 2.0 | 0.0 | 46.0 |
| 19.25 | 44.0 | 2.0 | 0.0 | 46.0 |
| 19.50 | 43.0 | 2.0 | 0.0 | 45.0 |
| 19.75 | 43.0 | 2.0 | 0.0 | 45.0 |
| 20.00 | 42.0 | 2.0 | 0.0 | 44.0 |

Executed 04-28-1992 10:55:24

Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D50 (cfs) | 6PN50 (cfs) | 7P50 (cfs) | 1C50 (Total) |
|---|---|---|---|---|
| 20.25 | 42.0 | 2.0 | 0.0 | 44.0 |
| 20.50 | 41.0 | 2.0 | 0.0 | 43.0 |
| 20.75 | 41.0 | 2.0 | 0.0 | 43.0 |
| 21.00 | 40.0 | 2.0 | 0.0 | 42.0 |
| 21.25 | 40.0 | 2.0 | 0.0 | 42.0 |
| 21.50 | 39.0 | 1.0 | 0.0 | 40.0 |
| 21.75 | 39.0 | 1.0 | 0.0 | 40.0 |
| 22.00 | 38.0 | 1.0 | 0.0 | 39.0 |
| 22.25 | 38.0 | 1.0 | 0.0 | 39.0 |
| 22.50 | 37.0 | 1.0 | 0.0 | 38.0 |
| 22.75 | 37.0 | 1.0 | 0.0 | 38.0 |
| 23.00 | 36.0 | 1.0 | 0.0 | 37.0 |
| 23.25 | 36.0 | 1.0 | 0.0 | 37.0 |
| 23.50 | 35.0 | 1.0 | 0.0 | 36.0 |
| 23.75 | 34.0 | 1.0 | 0.0 | 35.0 |
| 24.00 | 32.0 | 1.0 | 0.0 | 33.0 |

| Golder Associates | SUBJECT POND 2 - Rating Tables. | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTR | Made by UEZ<br>Checked CAM<br>Reviewed GBB | Date 5-19-92<br>Sheet of |

The following 9 pages are the rating tables generated for the outflow structures by POND 2.

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

***** COMPOSITE OUTFLOW SUMMARY ****

| Elevation (ft) | Q (cfs) | Contributing Structures |
|---|---|---|
| 71.00 | 0.0 | 1 +2 |
| 71.10 | 1.1 | 1 +2 |
| 71.20 | 2.6 | 1 +2 |
| 71.30 | 4.3 | 1 +2 |
| 71.40 | 6.2 | 1 +2 |
| 71.50 | 8.3 | 1 +2 |
| 71.60 | 12.3 | 1 +2 |
| 71.70 | 16.4 | 1 +2 |
| 71.80 | 20.8 | 1 +2 |
| 71.90 | 25.4 | 1 +2 |
| 72.00 | 30.2 | 1 +2 |
| 72.10 | 35.7 | 1 +2 |
| 72.20 | 41.5 | 1 +2 |
| 72.30 | 47.5 | 1 +2 |
| 72.40 | 53.8 | 1 +2 |
| 72.50 | 60.2 | 1 +2 |
| 72.60 | 64.2 | 1 +2 |
| 72.70 | 68.3 | 1 +2 |
| 72.80 | 72.7 | 1 +2 |
| 72.90 | 77.3 | 1 +2 |
| 73.00 | 82.2 | 1 +2 |
| 73.10 | 87.3 | 1 +2 |
| 73.20 | 92.7 | 1 +2 |
| 73.30 | 98.4 | 1 +2 |
| 73.40 | 104.3 | 1 +2 |
| 73.50 | 110.4 | 1 +2 |
| 73.60 | 116.9 | 1 +2 |
| 73.70 | 123.6 | 1 +2 |
| 73.80 | 130.6 | 1 +2 |
| 73.90 | 137.8 | 1 +2 |
| 74.00 | 145.4 | 1 +2 |
| 74.10 | 153.2 | 1 +2 |
| 74.20 | 161.3 | 1 +2 |
| 74.30 | 169.7 | 1 +2 |
| 74.40 | 178.4 | 1 +2 |
| 74.50 | 187.4 | 1 +2 |
| 74.60 | 196.7 | 1 +2 |
| 74.70 | 206.2 | 1 +2 |
| 74.80 | 216.1 | 1 +2 |

| | | |
|---|---|---|
| 74.90 | 226.3 | 1 +2 |
| 75.00 | 236.9 | 1 +2 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outlet Structure File: c:\ISRT\VERN .STR
Planimeter Input File: c:\ISRT\VERN .VOL
Rating Table Output File: c:\ISRT\VERN .PND

Min. Elev.(ft) = 71 Max. Elev.(ft) = 75 Incr.(ft) = .1

Additional elevations (ft) to be included in table:
* * * * * * * * * * * * * * * * * * * * * * * * * *

**********
SYSTEM CONNECTIVITY
**********

| Structure | No. | Q Table | | Q Table |
|---|---|---|---|---|
| TABLE | 1 | | -> | 1 |
| WEIR-XY | 2 | | -> | 2 |

Outflow rating table summary was stored in file:
c:\ISRT\VERN .PND

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

>>>>>> Structure No. 1 <<<<<<
(Input Data)

TABLE
Input your own rating table.
E1 (ft) =71 E2 (ft) =75.1

Constant (ft) added to each elevation was:

| Elev. (ft) | Q (cfs) |
|---|---|
| 71 | 0 |
| 71.5 | 4 |
| 72 | 16.1 |
| 72.5 | 31 |
| 73 | 32 |
| 73.5 | 33 |
| 74 | 34 |
| 74.5 | 35 |
| 75 | 36 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

>>>>>> Structure No. 2 <<<<<<
(Input Data)

WEIR-XY
Weir - Defined by X, Y Coordinates
E1 (ft) =71 E2 (ft) =75.1

| X dist.(ft) | Y elev.(ft) |
|---|---|
| 0 | 75 |
| 8 | 71 |
| 12 | 71 |
| 20 | 75 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outflow Rating Table for Structure #1
TABLE Input your own rating table.

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 71.00 | 0.0 | |
| 71.10 | 0.8 | Interpolated from input table |
| 71.20 | 1.6 | Interpolated from input table |
| 71.30 | 2.4 | Interpolated from input table |
| 71.40 | 3.2 | Interpolated from input table |
| 71.50 | 4.0 | |
| 71.60 | 6.4 | Interpolated from input table |
| 71.70 | 8.8 | Interpolated from input table |
| 71.80 | 11.3 | Interpolated from input table |
| 71.90 | 13.7 | Interpolated from input table |
| 72.00 | 16.1 | |
| 72.10 | 19.1 | Interpolated from input table |
| 72.20 | 22.1 | Interpolated from input table |
| 72.30 | 25.0 | Interpolated from input table |
| 72.40 | 28.0 | Interpolated from input table |
| 72.50 | 31.0 | |
| 72.60 | 31.2 | Interpolated from input table |
| 72.70 | 31.4 | Interpolated from input table |
| 72.80 | 31.6 | Interpolated from input table |
| 72.90 | 31.8 | Interpolated from input table |
| 73.00 | 32.0 | |
| 73.10 | 32.2 | Interpolated from input table |
| 73.20 | 32.4 | Interpolated from input table |
| 73.30 | 32.6 | Interpolated from input table |
| 73.40 | 32.8 | Interpolated from input table |
| 73.50 | 33.0 | |
| 73.60 | 33.2 | Interpolated from input table |
| 73.70 | 33.4 | Interpolated from input table |
| 73.80 | 33.6 | Interpolated from input table |
| 73.90 | 33.8 | Interpolated from input table |
| 74.00 | 34.0 | |
| 74.10 | 34.2 | Interpolated from input table |
| 74.20 | 34.4 | Interpolated from input table |
| 74.30 | 34.6 | Interpolated from input table |
| 74.40 | 34.8 | Interpolated from input table |
| 74.50 | 35.0 | |
| 74.60 | 35.2 | Interpolated from input table |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

>>>>> CONTINUED from previous page <<<<<

Outflow Rating Table for Structure #1
TABLE Input your own rating table.

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 74.70 | 35.4 | Interpolated from input table |
| 74.80 | 35.6 | Interpolated from input table |
| 74.90 | 35.8 | Interpolated from input table |
| 75.00 | 36.0 | |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outflow Rating Table for Structure #2
WEIR-XY Weir - Defined by X, Y Coordinates

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 71.00 | 0.0 | E = Y min= 71 | |
| 71.10 | 0.3 | W(ft)=4.4 | Max. D(ft)=.1 |
| 71.20 | 1.0 | W(ft)=4.8 | Max. D(ft)=.2 |
| 71.30 | 1.9 | W(ft)=5.2 | Max. D(ft)=.3 |
| 71.40 | 3.0 | W(ft)=5.6 | Max. D(ft)=.4 |
| 71.50 | 4.3 | W(ft)=6.0 | Max. D(ft)=.5 |
| 71.60 | 5.9 | W(ft)=6.4 | Max. D(ft)=.6 |
| 71.70 | 7.6 | W(ft)=6.8 | Max. D(ft)=.7 |
| 71.80 | 9.5 | W(ft)=7.2 | Max. D(ft)=.8 |
| 71.90 | 11.7 | W(ft)=7.6 | Max. D(ft)=.9 |
| 72.00 | 14.1 | W(ft)=8.0 | Max. D(ft)=1.0 |
| 72.10 | 16.7 | W(ft)=8.400 | Max. D(ft)=1.1 |
| 72.20 | 19.5 | W(ft)=8.8 | Max. D(ft)=1.2 |
| 72.30 | 22.5 | W(ft)=9.200 | Max. D(ft)=1.3 |
| 72.40 | 25.8 | W(ft)=9.6 | Max. D(ft)=1.4 |
| 72.50 | 29.2 | W(ft)=10.0 | Max. D(ft)=1.5 |
| 72.60 | 33.0 | W(ft)=10.4 | Max. D(ft)=1.6 |
| 72.70 | 36.9 | W(ft)=10.8 | Max. D(ft)=1.7 |
| 72.80 | 41.1 | W(ft)=11.2 | Max. D(ft)=1.8 |
| 72.90 | 45.5 | W(ft)=11.6 | Max. D(ft)=1.9 |
| 73.00 | 50.2 | W(ft)=12.0 | Max. D(ft)=2.0 |
| 73.10 | 55.1 | W(ft)=12.4 | Max. D(ft)=2.1 |
| 73.20 | 60.3 | W(ft)=12.8 | Max. D(ft)=2.2 |
| 73.30 | 65.8 | W(ft)=13.2 | Max. D(ft)=2.3 |
| 73.40 | 71.5 | W(ft)=13.6 | Max. D(ft)=2.4 |
| 73.50 | 77.4 | W(ft)=14.0 | Max. D(ft)=2.5 |
| 73.60 | 83.7 | W(ft)=14.4 | Max. D(ft)=2.6 |
| 73.70 | 90.2 | W(ft)=14.8 | Max. D(ft)=2.7 |
| 73.80 | 97.0 | W(ft)=15.2 | Max. D(ft)=2.8 |
| 73.90 | 104.0 | W(ft)=15.6 | Max. D(ft)=2.9 |
| 74.00 | 111.4 | W(ft)=16.0 | Max. D(ft)=3.0 |
| 74.10 | 119.0 | W(ft)=16.4 | Max. D(ft)=3.1 |
| 74.20 | 126.9 | W(ft)=16.8 | Max. D(ft)=3.2 |
| 74.30 | 135.1 | W(ft)=17.2 | Max. D(ft)=3.3 |
| 74.40 | 143.6 | W(ft)=17.6 | Max. D(ft)=3.4 |
| 74.50 | 152.4 | W(ft)=18.0 | Max. D(ft)=3.5 |
| 74.60 | 161.5 | W(ft)=18.4 | Max. D(ft)=3.6 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

>>>>> CONTINUED from previous page <<<<<

Outflow Rating Table for Structure #2
WEIR-XY Weir - Defined by X, Y Coordinates

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 74.70 | 170.8 | W(ft)=18.8 | Max. D(ft)=3.7 |
| 74.80 | 180.5 | W(ft)=19.2 | Max. D(ft)=3.8 |
| 74.90 | 190.5 | W(ft)=19.6 | Max. D(ft)=3.9 |
| 75.00 | 200.9 | W(ft)=20.0 | Max. D(ft)=4.0 |

| Golder Associates | SUBJECT POND2 - Hydrograph Routing | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by DEF<br>Checked CAM<br>Reviewed GBP | Date 5-19-92<br>Sheet of |

The following 6 pages showing the hydrologic routing of the storm flows through Wetland 1C using the Storage Indication Method.

```
*****************************************
*                                       *
*   OUTLETS FOR WETLAND 1C - PROPOSED   *
*        50 yr 24 hr STORM EVENT        *
*                                       *
*                                       *
*                                       *
*****************************************
```

Inflow Hydrograph: c:\isrt\1C50 .HYD
Rating Table file: c:\isrt\VERN .PND

----INITIAL CONDITIONS----
Elevation = 71.00 ft
Outflow = 0.00 cfs
Storage = 4.62 ac-ft

GIVEN POND DATA

| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) |
|---|---|---|
| 71.00 | 0.0 | 4.617 |
| 71.10 | 1.1 | 5.155 |
| 71.20 | 2.6 | 5.704 |
| 71.30 | 4.3 | 6.263 |
| 71.40 | 6.2 | 6.831 |
| 71.50 | 8.3 | 7.411 |
| 71.60 | 12.3 | 8.000 |
| 71.70 | 16.4 | 8.600 |
| 71.80 | 20.8 | 9.210 |
| 71.90 | 25.4 | 9.831 |
| 72.00 | 30.2 | 10.463 |
| 72.10 | 35.7 | 11.104 |
| 72.20 | 41.5 | 11.755 |
| 72.30 | 47.5 | 12.414 |
| 72.40 | 53.8 | 13.083 |
| 72.50 | 60.2 | 13.760 |
| 72.60 | 64.2 | 14.447 |
| 72.70 | 68.3 | 15.143 |
| 72.80 | 72.7 | 15.848 |
| 72.90 | 77.3 | 16.562 |
| 73.00 | 82.2 | 17.286 |
| 73.10 | 87.3 | 18.020 |
| 73.20 | 92.7 | 18.763 |
| 73.30 | 98.4 | 19.515 |
| 73.40 | 104.3 | 20.278 |
| 73.50 | 110.4 | 21.049 |
| 73.60 | 116.9 | 21.831 |
| 73.70 | 123.6 | 22.623 |
| 73.80 | 130.6 | 23.424 |
| 73.90 | 137.8 | 24.235 |
| 74.00 | 145.4 | 25.057 |

INTERMEDIATE ROUTING COMPUTATIONS

| 2S/t (cfs) | 2S/t + O (cfs) |
|---|---|
| 446.9 | 446.9 |
| 499.0 | 500.1 |
| 552.1 | 554.7 |
| 606.2 | 610.5 |
| 661.3 | 667.5 |
| 717.3 | 725.6 |
| 774.4 | 786.7 |
| 832.5 | 848.9 |
| 891.6 | 912.4 |
| 951.7 | 977.1 |
| 1012.8 | 1043.0 |
| 1074.9 | 1110.6 |
| 1137.9 | 1179.4 |
| 1201.7 | 1249.2 |
| 1266.4 | 1320.2 |
| 1332.0 | 1392.2 |
| 1398.5 | 1462.7 |
| 1465.8 | 1534.1 |
| 1534.1 | 1606.8 |
| 1603.2 | 1680.5 |
| 1673.3 | 1755.5 |
| 1744.3 | 1831.6 |
| 1816.2 | 1908.9 |
| 1889.1 | 1987.5 |
| 1962.9 | 2067.2 |
| 2037.6 | 2148.0 |
| 2113.3 | 2230.2 |
| 2189.9 | 2313.5 |
| 2267.5 | 2398.1 |
| 2346.0 | 2483.8 |
| 2425.5 | 2570.9 |

GIVEN POND DATA

| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) |
|---|---|---|
| 74.10 | 153.2 | 25.883 |
| 74.20 | 161.3 | 26.710 |
| 74.30 | 169.7 | 27.536 |
| 74.40 | 178.4 | 28.363 |
| 74.50 | 187.4 | 29.189 |
| 74.60 | 196.7 | 30.016 |
| 74.70 | 206.2 | 30.842 |
| 74.80 | 216.1 | 31.668 |
| 74.90 | 226.3 | 32.495 |
| 75.00 | 236.9 | 33.321 |

INTERMEDIATE ROUTING COMPUTATIONS

| 2S/t (cfs) | 2S/t + O (cfs) |
|---|---|
| 2505.5 | 2658.7 |
| 2585.5 | 2746.8 |
| 2665.5 | 2835.2 |
| 2745.5 | 2923.9 |
| 2825.5 | 3012.9 |
| 2905.5 | 3102.2 |
| 2985.5 | 3191.7 |
| 3065.5 | 3281.6 |
| 3145.5 | 3371.8 |
| 3225.5 | 3462.4 |

Time increment (t) = 0.250 hrs.

Pond File: c:\isrt\VERN .PND
Inflow Hydrograph: c:\isrt\1C50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

INFLOW HYDROGRAPH

| TIME (hrs) | INFLOW (cfs) |
|---|---|
| 0.000 | 0.00 |
| 0.250 | 0.00 |
| 0.500 | 0.00 |
| 0.750 | 0.00 |
| 1.000 | 0.00 |
| 1.250 | 0.00 |
| 1.500 | 0.00 |
| 1.750 | 0.00 |
| 2.000 | 0.00 |
| 2.250 | 0.00 |
| 2.500 | 0.00 |
| 2.750 | 0.00 |
| 3.000 | 0.00 |
| 3.250 | 0.00 |
| 3.500 | 0.00 |
| 3.750 | 1.00 |
| 4.000 | 1.00 |
| 4.250 | 2.00 |
| 4.500 | 2.00 |
| 4.750 | 2.00 |
| 5.000 | 3.00 |
| 5.250 | 3.00 |
| 5.500 | 3.00 |
| 5.750 | 3.00 |
| 6.000 | 3.00 |
| 6.250 | 4.00 |
| 6.500 | 4.00 |
| 6.750 | 5.00 |
| 7.000 | 5.00 |
| 7.250 | 5.00 |
| 7.500 | 5.00 |
| 7.750 | 6.00 |
| 8.000 | 6.00 |
| 8.250 | 6.00 |
| 8.500 | 6.00 |
| 8.750 | 7.00 |
| 9.000 | 8.00 |
| 9.250 | 8.00 |
| 9.500 | 9.00 |
| 9.750 | 10.00 |
| 10.000 | 11.00 |
| 10.250 | 11.00 |
| 10.500 | 13.00 |
| 10.750 | 14.00 |
| 11.000 | 16.00 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| ----- | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 1.0 | 447.8 | 447.9 | 0.02 | 71.00 |
| 2.0 | 449.7 | 449.8 | 0.06 | 71.01 |
| 3.0 | 452.5 | 452.7 | 0.12 | 71.01 |
| 4.0 | 456.1 | 456.5 | 0.20 | 71.02 |
| 4.0 | 459.5 | 460.1 | 0.27 | 71.02 |
| 5.0 | 463.8 | 464.5 | 0.36 | 71.03 |
| 6.0 | 468.9 | 469.8 | 0.47 | 71.04 |
| 6.0 | 473.7 | 474.9 | 0.58 | 71.05 |
| 6.0 | 478.3 | 479.7 | 0.68 | 71.06 |
| 6.0 | 482.8 | 484.3 | 0.77 | 71.07 |
| 7.0 | 488.0 | 489.8 | 0.89 | 71.08 |
| 8.0 | 494.0 | 496.0 | 1.02 | 71.09 |
| 9.0 | 500.6 | 503.0 | 1.18 | 71.11 |
| 10.0 | 507.9 | 510.6 | 1.39 | 71.12 |
| 10.0 | 514.7 | 517.9 | 1.59 | 71.13 |
| 10.0 | 521.1 | 524.7 | 1.77 | 71.14 |
| 11.0 | 528.2 | 532.1 | 1.98 | 71.16 |
| 12.0 | 535.8 | 540.2 | 2.20 | 71.17 |
| 12.0 | 543.0 | 547.8 | 2.41 | 71.19 |
| 12.0 | 549.7 | 555.0 | 2.61 | 71.20 |
| 13.0 | 557.1 | 562.7 | 2.84 | 71.21 |
| 15.0 | 565.8 | 572.1 | 3.13 | 71.23 |
| 16.0 | 575.0 | 581.8 | 3.42 | 71.25 |
| 17.0 | 584.5 | 592.0 | 3.73 | 71.27 |
| 19.0 | 595.3 | 603.5 | 4.09 | 71.29 |
| 21.0 | 607.3 | 616.3 | 4.49 | 71.31 |
| 22.0 | 619.5 | 629.3 | 4.93 | 71.33 |
| 24.0 | 632.7 | 643.5 | 5.40 | 71.36 |
| 27.0 | 647.8 | 659.7 | 5.94 | 71.39 |
| 30.0 | 664.7 | 677.8 | 6.57 | 71.42 |

Pond File: c:\isrt\VERN .PND
flow Hydrograph: c:\isrt\1C50 .HYD
tflow Hydrograph: c:\isrt\OUT .HYD

INFLOW HYDROGRAPH

| TIME (hrs) | INFLOW (cfs) |
|---|---|
| 11.250 | 18.00 |
| 11.500 | 23.00 |
| 11.750 | 31.00 |
| 12.000 | 53.00 |
| 12.250 | 113.00 |
| 12.500 | 83.00 |
| 12.750 | 64.00 |
| 13.000 | 58.00 |
| 13.250 | 56.00 |
| 13.500 | 54.00 |
| 13.750 | 55.00 |
| 14.000 | 55.00 |
| 14.250 | 55.00 |
| 14.500 | 54.00 |
| 14.750 | 55.00 |
| 15.000 | 54.00 |
| 15.250 | 54.00 |
| 15.500 | 54.00 |
| 15.750 | 52.00 |
| 16.000 | 52.00 |
| 6.250 | 52.00 |
| 6.500 | 52.00 |
| 16.750 | 51.00 |
| 17.000 | 51.00 |
| 17.250 | 51.00 |
| 17.500 | 49.00 |
| 17.750 | 49.00 |
| 18.000 | 49.00 |
| 18.250 | 47.00 |
| 18.500 | 47.00 |
| 18.750 | 46.00 |
| 19.000 | 46.00 |
| 19.250 | 46.00 |
| 19.500 | 45.00 |
| 19.750 | 45.00 |
| 20.000 | 44.00 |
| 20.250 | 44.00 |
| 20.500 | 43.00 |
| 20.750 | 43.00 |
| 21.000 | 42.00 |
| 21.250 | 42.00 |
| 21.500 | 40.00 |
| 21.750 | 40.00 |
| 22.000 | 39.00 |
| 22.250 | 39.00 |
| 22.500 | 38.00 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| 34.0 | 684.0 | 698.7 | 7.33 | 71.45 |
| 41.0 | 708.4 | 725.0 | 8.28 | 71.50 |
| 54.0 | 741.0 | 762.4 | 10.71 | 71.56 |
| 84.0 | 795.4 | 825.0 | 14.83 | 71.66 |
| 166.0 | 912.8 | 961.4 | 24.28 | 71.88 |
| 196.0 | 1037.7 | 1108.8 | 35.55 | 72.10 |
| 147.0 | 1100.8 | 1184.7 | 41.96 | 72.21 |
| 122.0 | 1132.3 | 1222.8 | 45.23 | 72.26 |
| 114.0 | 1151.8 | 1246.3 | 47.25 | 72.30 |
| 110.0 | 1164.6 | 1261.8 | 48.62 | 72.32 |
| 109.0 | 1174.2 | 1273.6 | 49.66 | 72.33 |
| 110.0 | 1183.0 | 1284.2 | 50.61 | 72.35 |
| 110.0 | 1190.2 | 1293.0 | 51.39 | 72.36 |
| 109.0 | 1195.4 | 1299.2 | 51.94 | 72.37 |
| 109.0 | 1199.6 | 1304.4 | 52.40 | 72.38 |
| 109.0 | 1203.0 | 1308.6 | 52.77 | 72.38 |
| 108.0 | 1205.1 | 1311.0 | 52.99 | 72.39 |
| 108.0 | 1206.7 | 1313.1 | 53.17 | 72.39 |
| 106.0 | 1206.5 | 1312.7 | 53.14 | 72.39 |
| 104.0 | 1204.6 | 1310.5 | 52.94 | 72.39 |
| 104.0 | 1203.0 | 1308.6 | 52.77 | 72.38 |
| 104.0 | 1201.8 | 1307.0 | 52.63 | 72.38 |
| 103.0 | 1199.9 | 1304.8 | 52.43 | 72.38 |
| 102.0 | 1197.6 | 1301.9 | 52.18 | 72.37 |
| 102.0 | 1195.6 | 1299.6 | 51.97 | 72.37 |
| 100.0 | 1192.4 | 1295.6 | 51.62 | 72.37 |
| 98.0 | 1188.1 | 1290.4 | 51.15 | 72.36 |
| 98.0 | 1184.5 | 1286.1 | 50.77 | 72.35 |
| 96.0 | 1180.0 | 1280.5 | 50.28 | 72.34 |
| 94.0 | 1174.6 | 1274.0 | 49.70 | 72.33 |
| 93.0 | 1169.3 | 1267.6 | 49.13 | 72.33 |
| 92.0 | 1164.2 | 1261.3 | 48.58 | 72.32 |
| 92.0 | 1159.9 | 1256.2 | 48.12 | 72.31 |
| 91.0 | 1155.6 | 1250.9 | 47.65 | 72.30 |
| 90.0 | 1151.2 | 1245.6 | 47.19 | 72.29 |
| 89.0 | 1146.8 | 1240.2 | 46.73 | 72.29 |
| 88.0 | 1142.3 | 1234.8 | 46.26 | 72.28 |
| 87.0 | 1137.7 | 1229.3 | 45.79 | 72.27 |
| 86.0 | 1133.1 | 1223.7 | 45.31 | 72.26 |
| 85.0 | 1128.4 | 1218.1 | 44.83 | 72.26 |
| 84.0 | 1123.7 | 1212.4 | 44.34 | 72.25 |
| 82.0 | 1118.2 | 1205.7 | 43.77 | 72.24 |
| 80.0 | 1112.0 | 1198.2 | 43.12 | 72.23 |
| 79.0 | 1106.0 | 1191.0 | 42.50 | 72.22 |
| 78.0 | 1100.2 | 1184.0 | 41.90 | 72.21 |
| 77.0 | 1094.5 | 1177.2 | 41.32 | 72.20 |

Pond File: c:\isrt\VERN .PND
Inflow Hydrograph: c:\isrt\1C50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 22.750 | 38.00 | 76.0 | 1089.0 | 1170.5 | 40.76 | 72.19 |
| 23.000 | 37.00 | 75.0 | 1083.6 | 1164.0 | 40.21 | 72.18 |
| 23.250 | 37.00 | 74.0 | 1078.3 | 1157.6 | 39.67 | 72.17 |
| 23.500 | 36.00 | 73.0 | 1073.0 | 1151.3 | 39.13 | 72.16 |
| 23.750 | 35.00 | 71.0 | 1067.0 | 1144.0 | 38.52 | 72.15 |
| 24.000 | 33.00 | 68.0 | 1059.5 | 1135.0 | 37.76 | 72.14 |

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: c:\isrt\VERN .PND
Inflow Hydrograph: c:\isrt\1C50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

Starting Pond W.S. Elevation = 71.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 113.00 cfs
Peak Outflow = 53.17 cfs
Peak Elevation = 72.39 ft

***** Summary of Approximate Peak Storage *****

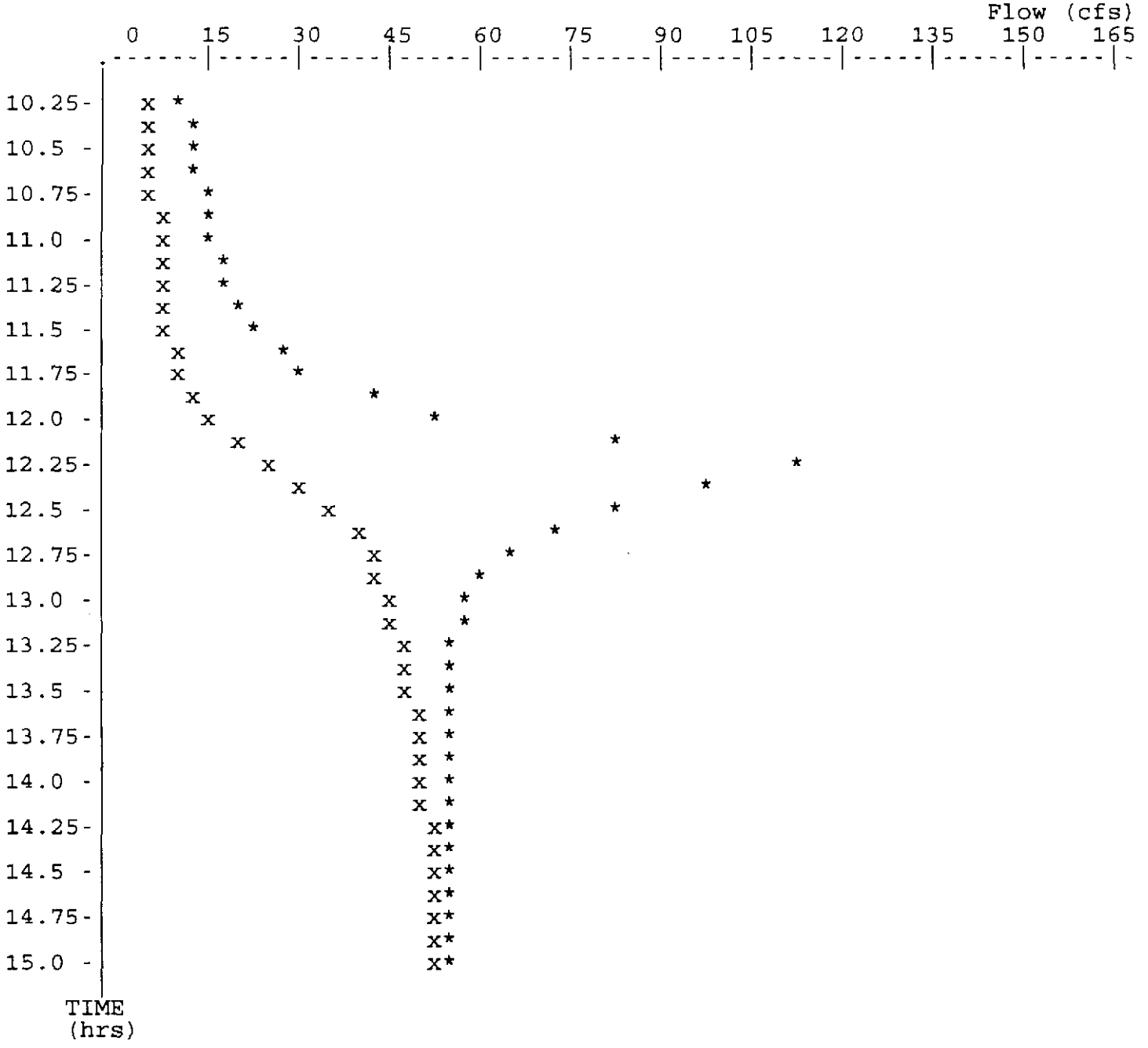
Initial Storage = 4.62 ac-ft
Peak Storage From Storm = 8.40 ac-ft
---
Total Storage in Pond = 13.02 ac-ft

Warning: Inflow hydrograph truncated on right side.

Pond File: c:\isrt\VERN .PND
Inflow Hydrograph: c:\isrt\1C50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

EXECUTED: 04-28-1992
11:07:09

Peak Inflow = 113.00 cfs
Peak Outflow = 53.17 cfs
Peak Elevation = 72.39 ft




* File: c:\isrt\1C50 .HYD Qmax = 113.0 cfs
x File: c:\isrt\OUT .HYD Qmax = 53.2 cfs

| Golder Associates | SUBJECT GPN - Proposed Outflow - 50 yr. storm | | |
|---|---|---|---|
| | Job No. 903-6400912. Ref. ISRT-100% RIC | Made by VET Checked CKM Reviewed | Date 3-21-92 Sheet 1 of 4 |

Objective: To determine how much discharge can be attributed to each outlet for Wetland 1C (East-West Hide Pile Wetland) after remediation. Outflow points are the West Branch of the Abenjona River and the channel connecting to the Creation Wetland.

Method: Using Pond2 rating curves and analyses, determine the outflow for each structure (i.e. a channel to the Creation Wetland and either a channel/24" culvert to the West Branch of the Abenjona River depending on the stage).

**Golder Associates**

SUBJECT UPN - Proposed Outflow - 50 yr storm

Job No. 903-6400.912 | Made by VEF | Date 4-28-92

Ref. 100% RTC. | Checked CRM | Sheet 2 of 4

Reviewed

| Time (hr) | Total Outflow (cfs) | Outflow to Creation Wetland (cfs) | Outflow to the West Branch of the Abeyjona River (cfs) |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 0.25 | 0 | 0 | 0 |
| 0.50 | 0 | 0 | 0 |
| 0.75 | 0 | 0 | 0 |
| 1.00 | 0 | 0 | 0 |
| 1.25 | 0 | 0 | 0 |
| 1.50 | 0 | 0 | 0 |
| 1.75 | 0 | 0 | 0 |
| 2.00 | 0 | 0 | 0 |
| 2.25 | 0 | 0 | 0 |
| 2.50 | 0 | 0 | 0 |
| 2.75 | 0 | 0 | 0 |
| 3.00 | 0 | 0 | 0 |
| 3.25 | 0 | 0 | 0 |
| 3.50 | 0 | 0 | 0 |
| 3.75 | 0.02 | 0.01 | 0.01 |
| 4.00 | 0.06 | 0.03 | 0.03 |
| 4.25 | 0.12 | 0.03 | 0.09 |
| 4.50 | 0.20 | 0.06 | 0.14 |
| 4.75 | 0.27 | 0.06 | 0.21 |
| 5.00 | 0.36 | 0.09 | 0.27 |
| 5.25 | 0.47 | 0.12 | 0.35 |
| 5.50 | 0.58 | 0.15 | 0.43 |
| 5.75 | 0.68 | 0.18 | 0.50 |
| 6.00 | 0.77 | 0.21 | 0.56 |
| 6.25 | 0.89 | 0.24 | 0.65 |
| 6.50 | 1.02 | 0.27 | 0.75 |
| 6.75 | 1.13 | 0.37 | 0.81 |
| 7.00 | 1.39 | 0.44 | 0.95 |
| 7.25 | 1.59 | 0.51 | 1.08 |
| 7.50 | 1.77 | 0.58 | 1.19 |
| 7.75 | 1.98 | 0.72 | 1.26 |

**Golder Associates**

SUBJECT GPN - Proposed outflow - 50 yr storm

Job No. 903-6400.912 | Made by VEF | Date 4-28-92

Ref. 100% RTC. | Checked [illegible] | Sheet 3 of 4

Reviewed

| Time (hr) | Total Outflow (cfs) | Outflow to Creation Wetland (cfs) | Outflow to the West Branch of the Aboyoma River (cfs) |
|---|---|---|---|
| 8.00 | 2.20 | 0.79 | 1.41 |
| 8.25 | 2.41 | 0.93 | 1.48 |
| 8.50 | 2.61 | 1.00 | 1.61 |
| 8.75 | 2.84 | 1.09 | 1.75 |
| 9.00 | 3.13 | 1.27 | 1.86 |
| 9.25 | 3.42 | 1.45 | 1.97 |
| 9.50 | 3.73 | 1.63 | 2.10 |
| 9.75 | 4.09 | 1.81 | 2.28 |
| 10.00 | 4.49 | 2.01 | 2.48 |
| 10.25 | 4.93 | 2.23 | 2.70 |
| 10.50 | 5.40 | 2.56 | 2.84 |
| 10.75 | 5.94 | 2.89 | 3.05 |
| 11.00 | 6.57 | 3.26 | 3.31 |
| 11.25 | 7.33 | 3.65 | 3.68 |
| 11.50 | 8.28 | 4.30 | 3.98 |
| 11.75 | 10.71 | 5.26 | 5.45 |
| 12.00 | 14.83 | 6.92 | 7.91 |
| 12.25 | 24.28 | 11.26 | 13.02 |
| 12.50 | 35.55 | 16.70 | 18.85 |
| 12.75 | 41.96 | 19.80 | 22.16 |
| 13.00 | 45.23 | 21.30 | 23.93 |
| 13.25 | 47.25 | 22.50 | 24.75 |
| 13.50 | 48.62 | 23.16 | 25.46 |
| 13.75 | 49.66 | 23.49 | 26.17 |
| 14.00 | 50.61 | 24.15 | 26.46 |
| 14.25 | 51.39 | 24.48 | 26.91 |
| 14.50 | 51.94 | 24.81 | 27.13 |
| 14.75 | 52.40 | 25.14 | 27.26 |
| 15.00 | 52.77 | 25.14 | 27.63 |
| 15.25 | 52.99 | 25.47 | 27.52 |
| 15.50 | 53.17 | 25.47 | 27.70 |
| 15.75 | 53.14 | 25.47 | 27.67 |

**Golder Associates**

SUBJECT GPN - Proposed Outflow - 50yr storm

Job No. 903-6400.912 | Made by VEF | Date 4-28-92

Ref. 100% RTC. | Checked CKM | Sheet 4 of 4

Reviewed [illegible]

| Time (hr) | Total Outflow (cfs) | Outflow to Creation Wetland (cfs) | Outflow to the West Branch of the Abeyjona River (cfs) |
|---|---|---|---|
| 16.00 | 52.94 | 25.47 | 27.47 |
| 16.25 | 52.77 | 25.14 | 27.63 |
| 16.50 | 52.63 | 25.14 | 27.49 |
| 16.75 | 52.43 | 25.14 | 27.29 |
| 17.00 | 52.18 | 24.81 | 27.37 |
| 17.25 | 51.97 | 24.81 | 27.16 |
| 17.50 | 51.62 | 24.81 | 26.81 |
| 17.75 | 51.15 | 24.48 | 26.67 |
| 18.00 | 50.77 | 24.15 | 26.62 |
| 18.25 | 50.28 | 23.82 | 26.46 |
| 18.50 | 49.70 | 23.49 | 26.21 |
| 18.75 | 49.13 | 23.49 | 25.64 |
| 19.00 | 48.58 | 23.16 | 25.42 |
| 19.25 | 48.12 | 22.83 | 25.29 |
| 19.50 | 47.65 | 22.50 | 25.15 |
| 19.75 | 47.19 | 22.20 | 24.99 |
| 20.00 | 46.73 | 22.20 | 24.53 |
| 20.25 | 46.26 | 21.90 | 24.36 |
| 20.50 | 45.79 | 21.60 | 24.19 |
| 20.75 | 45.31 | 21.30 | 24.01 |
| 21.00 | 44.83 | 21.30 | 23.53 |
| 21.25 | 44.34 | 21.00 | 23.34 |
| 21.50 | 43.77 | 20.70 | 23.07 |
| 21.75 | 43.12 | 20.40 | 22.72 |
| 22.00 | 42.50 | 20.10 | 22.40 |
| 22.25 | 41.90 | 19.80 | 22.10 |
| 22.50 | 41.32 | 19.50 | 21.82 |
| 22.75 | 40.76 | 19.22 | 21.54 |
| 23.00 | 40.21 | 18.94 | 21.27 |
| 23.25 | 39.67 | 18.66 | 21.01 |
| 23.50 | 39.13 | 18.38 | 20.75 |
| 23.75 | 38.52 | 18.10 | 20.42 |
| 24.00 | 37.76 | 17.82 | 19.94 |

| Golder Associates | SUBJECT POND 2 STORAGE VS ELEVATION | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEF<br>Checked CLM<br>Reviewed | Date 5-19-92<br>Sheet 1 of 1 |

The following page estabishes the storage vs. elevation relationship in POND2. This relationship was calculated 3-21-92 by VEF (see Appendix 10-E, Storage vs. Elevation Relationships) for the creation wetland

POND-2 Version: 5.16
S/N: 1295130217

MITIGATION AREA

CALCULATED 04-28-1992 11:57:11
DISK FILE: c:\isrt\MA .VOL

Planimeter scale: 1 inch = 50 ft.

| Elevation (ft) | Planimeter (sq.in.) | Area (acres) | A1+A2+sqr(A1*A2) (acres) | * Volume (acre-ft) | Volume Sum (acre-ft) |
|---|---|---|---|---|---|
| 67.00 | 13.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| 68.00 | 34.50 | 1.98 | 3.94 | 1.31 | 1.31 |
| 69.00 | 51.40 | 2.95 | 7.35 | 2.45 | 3.76 |
| 71.00 | 60.30 | 3.46 | 9.61 | 6.40 | 10.17 |
| 73.00 | 66.90 | 3.84 | 10.95 | 7.30 | 17.46 |

IA = (sq.rt(Area1) + ((Ei-E1)/(E2-E1))*(sq.rt(Area2)-sq.rt(Area1)))$^2$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1,Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

| Golder Associates | SUBJECT POND2 - Inflow Hydrographs | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RK | Made by UE 7<br>Checked cem<br>Reviewed | Date 5-19-92<br>Sheet of |

The following three pages show the addition of the inflow hydrographs to Creation Wetland. These hydrographs were generated in HEC-1 and POND2.

CW = Inflows to Creation Wetland from Wetland 1C. (POND2)

6PS = Inflows from Subwatershed 6PS. (Appendix 10-E)

MA = Addition of CW and 6PS.

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Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | CW50 (cfs) | 6PS50 (cfs) | MA50 (Total) |
|---|---|---|---|
| 0.00 | 0.0 | 0.0 | 0.0 |
| 0.25 | 0.0 | 0.0 | 0.0 |
| 0.50 | 0.0 | 0.0 | 0.0 |
| 0.75 | 0.0 | 0.0 | 0.0 |
| 1.00 | 0.0 | 0.0 | 0.0 |
| 1.25 | 0.0 | 0.0 | 0.0 |
| 1.50 | 0.0 | 0.0 | 0.0 |
| 1.75 | 0.0 | 0.0 | 0.0 |
| 2.00 | 0.0 | 0.0 | 0.0 |
| 2.25 | 0.0 | 0.0 | 0.0 |
| 2.50 | 0.0 | 0.0 | 0.0 |
| 2.75 | 0.0 | 0.0 | 0.0 |
| 3.00 | 0.0 | 0.0 | 0.0 |
| 3.25 | 0.0 | 0.0 | 0.0 |
| 3.50 | 0.0 | 0.0 | 0.0 |
| 3.75 | 0.0 | 0.0 | 0.0 |
| 4.00 | 0.0 | 0.0 | 0.0 |
| 4.25 | 0.0 | 0.0 | 0.0 |
| 4.50 | 0.1 | 0.0 | 0.1 |
| 4.75 | 0.1 | 0.0 | 0.1 |
| 5.00 | 0.1 | 0.0 | 0.1 |
| 5.25 | 0.1 | 0.0 | 0.1 |
| 5.50 | 0.2 | 0.0 | 0.2 |
| 5.75 | 0.2 | 0.0 | 0.2 |
| 6.00 | 0.2 | 0.0 | 0.2 |
| 6.25 | 0.2 | 0.0 | 0.2 |
| 6.50 | 0.3 | 0.0 | 0.3 |
| 6.75 | 0.4 | 0.0 | 0.4 |
| 7.00 | 0.4 | 0.0 | 0.4 |
| 7.25 | 0.5 | 0.0 | 0.5 |
| 7.50 | 0.6 | 0.0 | 0.6 |
| 7.75 | 0.7 | 0.0 | 0.7 |
| 8.00 | 0.8 | 0.0 | 0.8 |
| 8.25 | 0.9 | 0.0 | 0.9 |
| 8.50 | 1.0 | 0.0 | 1.0 |
| 8.75 | 1.1 | 0.0 | 1.1 |
| 9.00 | 1.3 | 0.0 | 1.3 |
| 9.25 | 1.5 | 0.0 | 1.5 |
| 9.50 | 1.6 | 1.0 | 2.6 |
| 9.75 | 1.8 | 1.0 | 2.8 |

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Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | CW50 (cfs) | 6PS50 (cfs) | MA50 (Total) |
|---|---|---|---|
| 10.00 | 2.0 | 1.0 | 3.0 |
| 10.25 | 2.2 | 1.0 | 3.2 |
| 10.50 | 2.6 | 1.0 | 3.6 |
| 10.75 | 2.9 | 1.0 | 3.9 |
| 11.00 | 3.3 | 2.0 | 5.3 |
| 11.25 | 3.7 | 2.0 | 5.7 |
| 11.50 | 4.3 | 3.0 | 7.3 |
| 11.75 | 5.3 | 5.0 | 10.3 |
| 12.00 | 6.9 | 10.0 | 16.9 |
| 12.25 | 11.3 | 28.0 | 39.3 |
| 12.50 | 16.7 | 18.0 | 34.7 |
| 12.75 | 19.8 | 9.0 | 28.8 |
| 13.00 | 21.3 | 6.0 | 27.3 |
| 13.25 | 22.5 | 4.0 | 26.5 |
| 13.50 | 23.2 | 3.0 | 26.2 |
| 13.75 | 23.5 | 3.0 | 26.5 |
| 14.00 | 24.1 | 3.0 | 27.1 |
| 14.25 | 24.5 | 2.0 | 26.5 |
| 14.50 | 24.8 | 2.0 | 26.8 |
| 14.75 | 25.1 | 2.0 | 27.1 |
| 15.00 | 25.1 | 2.0 | 27.1 |
| 15.25 | 25.5 | 2.0 | 27.5 |
| 15.50 | 25.5 | 2.0 | 27.5 |
| 15.75 | 25.5 | 2.0 | 27.5 |
| 16.00 | 25.5 | 2.0 | 27.5 |
| 16.25 | 25.1 | 2.0 | 27.1 |
| 16.50 | 25.1 | 1.0 | 26.1 |
| 16.75 | 25.1 | 1.0 | 26.1 |
| 17.00 | 24.8 | 1.0 | 25.8 |
| 17.25 | 24.8 | 1.0 | 25.8 |
| 17.50 | 24.8 | 1.0 | 25.8 |
| 17.75 | 24.5 | 1.0 | 25.5 |
| 18.00 | 24.1 | 1.0 | 25.1 |
| 18.25 | 23.8 | 1.0 | 24.8 |
| 18.50 | 23.5 | 1.0 | 24.5 |
| 18.75 | 23.5 | 1.0 | 24.5 |
| 19.00 | 23.2 | 1.0 | 24.2 |
| 19.25 | 22.8 | 1.0 | 23.8 |
| 19.50 | 22.5 | 1.0 | 23.5 |
| 19.75 | 22.2 | 1.0 | 23.2 |
| 20.00 | 22.2 | 1.0 | 23.2 |

Executed 04-28-1992 11:55:52

Data directory: c:\isrt*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | CW50 (cfs) | 6PS50 (cfs) | MA50 (Total) |
|---|---|---|---|
| 20.25 | 21.9 | 1.0 | 22.9 |
| 20.50 | 21.6 | 1.0 | 22.6 |
| 20.75 | 21.3 | 1.0 | 22.3 |
| 21.00 | 21.3 | 1.0 | 22.3 |
| 21.25 | 21.0 | 1.0 | 22.0 |
| 21.50 | 20.7 | 1.0 | 21.7 |
| 21.75 | 20.4 | 1.0 | 21.4 |
| 22.00 | 20.1 | 1.0 | 21.1 |
| 22.25 | 19.8 | 1.0 | 20.8 |
| 22.50 | 19.5 | 1.0 | 20.5 |
| 22.75 | 19.2 | 0.0 | 19.2 |
| 23.00 | 18.9 | 0.0 | 18.9 |
| 23.25 | 18.7 | 0.0 | 18.7 |
| 23.50 | 18.4 | 0.0 | 18.4 |
| 23.75 | 18.1 | 0.0 | 18.1 |
| 24.00 | 17.8 | 0.0 | 17.8 |

| Golder Associates | SUBJECT POND 2 - Rating Tables. | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by UEZ<br>Checked<br>Reviewed | Date 5-19-92<br>Sheet of |

The following 8 pages are the rating tables generated for the outflow structures by POND 2.

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

***** COMPOSITE OUTFLOW SUMMARY ****

| Elevation (ft) | Q (cfs) | Contributing Structures |
|---|---|---|
| 68.00 | 0.0 | 1 |
| 68.20 | 0.2 | 1 |
| 68.40 | 0.5 | 1 |
| 68.60 | 1.0 | 1 |
| 68.80 | 1.5 | 1 |
| 69.00 | 2.2 | 1 |
| 69.20 | 2.5 | 1 |
| 69.40 | 3.2 | 1 |
| 69.60 | 3.9 | 1 |
| 69.80 | 4.4 | 1 |
| 70.00 | 4.9 | 2 +1 |
| 70.20 | 5.5 | 2 +1 |
| 70.40 | 6.4 | 2 +1 |
| 70.60 | 7.4 | 2 +1 |
| 70.80 | 8.7 | 2 +1 |
| 71.00 | 9.9 | 2 +1 |
| 71.20 | 11.3 | 2 +1 |
| 71.40 | 12.7 | 2 +1 |
| 71.60 | 13.4 | 2 +1 |
| 71.80 | 14.8 | 2 +1 |
| 72.00 | 16.5 | 3 +2 +1 |
| 72.20 | 22.1 | 3 +2 +1 |
| 72.40 | 31.2 | 3 +2 +1 |
| 72.60 | 42.3 | 3 +2 +1 |
| 72.80 | 55.1 | 3 +2 +1 |
| 73.00 | 46.8 | 3 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outlet Structure File: c:\ISRT\MA .STR
Planimeter Input File: c:\ISRT\MA .VOL
Rating Table Output File: c:\ISRT\MA .PND

Min. Elev.(ft) = 68 Max. Elev.(ft) = 73 Incr.(ft) = .2

Additional elevations (ft) to be included in table:
* * * * * * * * * * * * * * * * * * * * * * * * * *

**********
SYSTEM CONNECTIVITY
**********

| Structure | No. | Q Table | | Q Table |
|---|---|---|---|---|
| INLET BOX | 3 | | -> | 3 |
| CULVERT-CR | 2 | | -> | 2 |
| CULVERT-CR | 1 | | -> | 1 |

Outflow rating table summary was stored in file:
c:\ISRT\MA .PND

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 3 <<<<<<
(Input Data)

INLET BOX
Weir & Orifice defined by length and area

| | |
|---|---|
| E1 elev.(ft)? | 72 |
| E2 elev.(ft)? | 73.1 |
| Crest elev.(ft)? | 72 |
| Weir length (ft)? | 18 |
| Weir coefficient? | 2.6 |
| Orifice area (sq.ft)? | 20 |
| Orifice coefficient? | 0.6 |
| Start transition elev.(ft) @ ? | |
| Transition height (ft)? | |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 2 <<<<<<
(Input Data)

CULVERT-CR
Circular Culvert (With Inlet Control)

| | |
|---|---|
| E1 elev.(ft)? | 70 |
| E2 elev.(ft)? | 73 |
| Diam. (ft)? | 1.50 |
| Inv. el.(ft)? | 70 |
| Slope (ft/ft)? | 0 |
| T1 ratio? | 1.0 |
| T2 ratio? | 1.1 |
| K Coeff.? | .519 |
| M Coeff.? | .64 |
| c Coeff.? | .0289 |
| Y Coeff.? | .9 |
| Form 1 or 2? | 2 |
| Slope factor? | -0.5 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 1 <<<<<<
(Input Data)

CULVERT-CR
Circular Culvert (With Inlet Control)

| | |
|---|---|
| E1 elev.(ft)? | 68 |
| E2 elev.(ft)? | 73 |
| Diam. (ft)? | 1.0 |
| Inv. el.(ft)? | 68 |
| Slope (ft/ft)? | 0 |
| T1 ratio? | 1.0 |
| T2 ratio? | 1.1 |
| K Coeff.? | .519 |
| M Coeff.? | .64 |
| c Coeff.? | .0289 |
| Y Coeff.? | .9 |
| Form 1 or 2? | 2 |
| Slope factor? | -0.5 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #3
INLET BOX Weir & Orifice defined by length and area

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 68.00 | 0.0 | E < Inv.El.= 72 | |
| 68.20 | 0.0 | E < El=72 | |
| 68.40 | 0.0 | E < El=72 | |
| 68.60 | 0.0 | E < El=72 | |
| 68.80 | 0.0 | E < El=72 | |
| 69.00 | 0.0 | E < El=72 | |
| 69.20 | 0.0 | E < El=72 | |
| 69.40 | 0.0 | E < El=72 | |
| 69.60 | 0.0 | E < El=72 | |
| 69.80 | 0.0 | E < El=72 | |
| 70.00 | 0.0 | E < El=72 | |
| 70.20 | 0.0 | E < El=72 | |
| 70.40 | 0.0 | E < El=72 | |
| 70.60 | 0.0 | E < El=72 | |
| 70.80 | 0.0 | E < El=72 | |
| 71.00 | 0.0 | E < El=72 | |
| 71.20 | 0.0 | E < El=72 | |
| 71.40 | 0.0 | E < El=72 | |
| 71.60 | 0.0 | E < El=72 | |
| 71.80 | 0.0 | E < El=72 | |
| 72.00 | 0.0 | Weir: | H =0.0 |
| 72.20 | 4.2 | Weir: | H =.2 |
| 72.40 | 11.8 | Weir: | H =.4 |
| 72.60 | 21.8 | Weir: | H =.6 |
| 72.80 | 33.5 | Weir: | H =.8 |
| 73.00 | 46.8 | Weir: | H =1.0 |

Weir Cw = 2.6 Weir length = 18 ft
Orifice Co = .6 Orifice area = 20 sq.ft.
Q (cfs) = (Cw * L * H**1.5) or (Co * A * sqr(2*g*H))
No transition used, transition height = 0.0
Weir equation = Orifice equation @ elev.= 74.05769 ft

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #2
CULVERT-CR Circular Culvert (With Inlet Control)

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 68.00 | 0.0 | E < Inv.El.= 70 |
| 68.20 | 0.0 | E < Inv.El.= 70 |
| 68.40 | 0.0 | E < Inv.El.= 70 |
| 68.60 | 0.0 | E < Inv.El.= 70 |
| 68.80 | 0.0 | E < Inv.El.= 70 |
| 69.00 | 0.0 | E < Inv.El.= 70 |
| 69.20 | 0.0 | E < Inv.El.= 70 |
| 69.40 | 0.0 | E < Inv.El.= 70 |
| 69.60 | 0.0 | E < Inv.El.= 70 |
| 69.80 | 0.0 | E < Inv.El.= 70 |
| 70.00 | 0.0 | Equ.2: HW =0.0 |
| 70.20 | 0.3 | Equ.2: HW =.2 |
| 70.40 | 0.8 | Equ.2: HW =.4 |
| 70.60 | 1.4 | Equ.2: HW =.6 |
| 70.80 | 2.3 | Equ.2: HW =.8 |
| 71.00 | 3.2 | Equ.2: HW =1.0 |
| 71.20 | 4.3 | Equ.2: HW =1.2 |
| 71.40 | 5.4 | Equ.2: HW =1.4 |
| 71.60 | 5.8 | Transition: HW =1.6 |
| 71.80 | 7.0 | Submerged: HW =1.8 |
| 72.00 | 8.4 | Submerged: HW =2.0 |
| 72.20 | 9.5 | Submerged: HW =2.2 |
| 72.40 | 10.7 | Submerged: HW =2.4 |
| 72.60 | 11.6 | Submerged: HW =2.6 |
| 72.80 | 12.5 | Submerged: HW =2.8 |
| 73.00 | 0.0 | E = or > E2=73 |

Used Unsubmerged Equ. Form (2) for elev. less than 71.5 ft
Used Submerged Equation for elevations greater than 71.65 ft
HW=Headwater (ft)

Transition flows interpolated from the following values:
E1=71.5 ft; Q1=6.01 cfs; E2=71.65 ft; Q2=5.72 cfs

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #1
CULVERT-CR Circular Culvert (With Inlet Control)

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 68.00 | 0.0 | No headwater |
| 68.20 | 0.2 | Equ.2: HW =.2 |
| 68.40 | 0.5 | Equ.2: HW =.4 |
| 68.60 | 1.0 | Equ.2: HW =.6 |
| 68.80 | 1.5 | Equ.2: HW =.8 |
| 69.00 | 2.2 | Transition: HW =1.0 |
| 69.20 | 2.5 | Submerged: HW =1.2 |
| 69.40 | 3.2 | Submerged: HW =1.4 |
| 69.60 | 3.9 | Submerged: HW =1.6 |
| 69.80 | 4.4 | Submerged: HW =1.8 |
| 70.00 | 4.9 | Submerged: HW =2.0 |
| 70.20 | 5.3 | Submerged: HW =2.2 |
| 70.40 | 5.7 | Submerged: HW =2.4 |
| 70.60 | 6.0 | Submerged: HW =2.6 |
| 70.80 | 6.4 | Submerged: HW =2.8 |
| 71.00 | 6.7 | Submerged: HW =3.0 |
| 71.20 | 7.0 | Submerged: HW =3.2 |
| 71.40 | 7.3 | Submerged: HW =3.4 |
| 71.60 | 7.6 | Submerged: HW =3.6 |
| 71.80 | 7.9 | Submerged: HW =3.8 |
| 72.00 | 8.1 | Submerged: HW =4.0 |
| 72.20 | 8.4 | Submerged: HW =4.2 |
| 72.40 | 8.7 | Submerged: HW =4.4 |
| 72.60 | 8.9 | Submerged: HW =4.6 |
| 72.80 | 9.1 | Submerged: HW =4.8 |
| 73.00 | 0.0 | E = or > E2=73 |

Used Unsubmerged Equ. Form (2) for elev. less than 69.0 ft
Used Submerged Equation for elevations greater than 69.1 ft
HW=Headwater (ft)

Transition flows interpolated from the following values:
E1=69.0 ft; Q1=2.19 cfs; E2=69.1 ft; Q2=2.1 cfs

| Golder Associates | SUBJECT POND2 - Hydrograph Routing | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEZ<br>Checked CMB<br>Reviewed | Date 5-19-92<br>Sheet of |

The following 6 pages showing the hydrologic routing of the storm flows through using the Storage Indication Method.

```
*****************************
*                           *
*     MITIGATION AREA       *
* 50 yr 24 hr STORM EVENT   *
*                           *
*                           *
*                           *
*****************************
```

Inflow Hydrograph: c:\isrt\MA50 .HYD
Rating Table file: c:\isrt\MA .PND

----INITIAL CONDITIONS----
Elevation = 68.00 ft
Outflow = 0.00 cfs
Storage = 1.31 ac-ft

| GIVEN POND DATA | | | INTERMEDIATE ROUTING COMPUTATIONS | |
|---|---|---|---|---|
| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) | 2S/t (cfs) | 2S/t + O (cfs) |
| 68.00 | 0.0 | 1.314 | 127.2 | 127.2 |
| 68.20 | 0.2 | 1.728 | 167.2 | 167.4 |
| 68.40 | 0.5 | 2.178 | 210.8 | 211.3 |
| 68.60 | 1.0 | 2.666 | 258.1 | 259.1 |
| 68.80 | 1.5 | 3.194 | 309.2 | 310.7 |
| 69.00 | 2.2 | 3.763 | 364.2 | 366.4 |
| 69.20 | 2.5 | 4.358 | 421.8 | 424.3 |
| 69.40 | 3.2 | 4.963 | 480.4 | 483.6 |
| 69.60 | 3.9 | 5.577 | 539.9 | 543.8 |
| 69.80 | 4.4 | 6.202 | 600.4 | 604.8 |
| 70.00 | 4.9 | 6.837 | 661.8 | 666.7 |
| 70.20 | 5.5 | 7.482 | 724.3 | 729.8 |
| 70.40 | 6.4 | 8.138 | 787.7 | 794.1 |
| 70.60 | 7.4 | 8.804 | 852.2 | 859.6 |
| 70.80 | 8.7 | 9.480 | 917.6 | 926.3 |
| 71.00 | 9.9 | 10.167 | 984.1 | 994.0 |
| 71.20 | 11.3 | 10.863 | 1051.5 | 1062.8 |
| 71.40 | 12.7 | 11.566 | 1119.6 | 1132.3 |
| 71.60 | 13.4 | 12.277 | 1188.4 | 1201.8 |
| 71.80 | 14.8 | 12.995 | 1257.9 | 1272.7 |
| 72.00 | 16.5 | 13.720 | 1328.1 | 1344.6 |
| 72.20 | 22.1 | 14.454 | 1399.1 | 1421.2 |
| 72.40 | 31.2 | 15.195 | 1470.9 | 1502.1 |
| 72.60 | 42.3 | 15.943 | 1543.3 | 1585.6 |
| 72.80 | 55.1 | 16.700 | 1616.5 | 1671.6 |
| 73.00 | 46.8 | 17.464 | 1690.5 | 1737.3 |

Time increment (t) = 0.250 hrs.

Pond File: c:\isrt\MA .PND
Inflow Hydrograph: c:\isrt\MA50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 0.000 | 0.00 | ----- | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.250 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.500 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.750 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 1.000 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 1.250 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 1.500 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 1.750 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 2.000 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 2.250 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 2.500 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 2.750 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 3.000 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 3.250 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 3.500 | 0.00 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 3.750 | 0.01 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 4.000 | 0.03 | 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 4.250 | 0.03 | 0.1 | 127.3 | 127.3 | 0.00 | 68.00 |
| 4.500 | 0.06 | 0.1 | 127.4 | 127.4 | 0.00 | 68.00 |
| 4.750 | 0.06 | 0.1 | 127.5 | 127.5 | 0.00 | 68.00 |
| 5.000 | 0.09 | 0.2 | 127.6 | 127.6 | 0.00 | 68.00 |
| 5.250 | 0.12 | 0.2 | 127.8 | 127.8 | 0.00 | 68.00 |
| 5.500 | 0.15 | 0.3 | 128.1 | 128.1 | 0.00 | 68.00 |
| 5.750 | 0.18 | 0.3 | 128.4 | 128.4 | 0.01 | 68.01 |
| 6.000 | 0.21 | 0.4 | 128.8 | 128.8 | 0.01 | 68.01 |
| 6.250 | 0.24 | 0.5 | 129.2 | 129.2 | 0.01 | 68.01 |
| 6.500 | 0.27 | 0.5 | 129.7 | 129.7 | 0.01 | 68.01 |
| 6.750 | 0.37 | 0.6 | 130.3 | 130.3 | 0.02 | 68.02 |
| 7.000 | 0.44 | 0.8 | 131.1 | 131.1 | 0.02 | 68.02 |
| 7.250 | 0.51 | 1.0 | 132.0 | 132.0 | 0.02 | 68.02 |
| 7.500 | 0.58 | 1.1 | 133.0 | 133.1 | 0.03 | 68.03 |
| 7.750 | 0.72 | 1.3 | 134.3 | 134.3 | 0.04 | 68.04 |
| 8.000 | 0.79 | 1.5 | 135.7 | 135.8 | 0.04 | 68.04 |
| 8.250 | 0.93 | 1.7 | 137.3 | 137.4 | 0.05 | 68.05 |
| 8.500 | 1.00 | 1.9 | 139.1 | 139.2 | 0.06 | 68.06 |
| 8.750 | 1.09 | 2.1 | 141.1 | 141.2 | 0.07 | 68.07 |
| 9.000 | 1.27 | 2.4 | 143.3 | 143.4 | 0.08 | 68.08 |
| 9.250 | 1.45 | 2.7 | 145.8 | 146.0 | 0.09 | 68.09 |
| 9.500 | 2.63 | 4.1 | 149.6 | 149.9 | 0.11 | 68.11 |
| 9.750 | 2.81 | 5.4 | 154.8 | 155.1 | 0.14 | 68.14 |
| 10.000 | 3.01 | 5.8 | 160.3 | 160.6 | 0.17 | 68.17 |
| 10.250 | 3.23 | 6.2 | 166.1 | 166.5 | 0.20 | 68.20 |
| 10.500 | 3.56 | 6.8 | 172.5 | 172.9 | 0.24 | 68.23 |
| 10.750 | 3.89 | 7.5 | 179.3 | 179.9 | 0.29 | 68.26 |
| 11.000 | 5.26 | 9.2 | 187.8 | 188.5 | 0.34 | 68.30 |

Pond File: c:\isrt\MA .PND
Flow Hydrograph: c:\isrt\MA50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

INFLOW HYDROGRAPH — ROUTING COMPUTATIONS

| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|---|---|
| 11.250 | 5.65 | 10.9 | 197.9 | 198.7 | 0.41 | 68.34 |
| 11.500 | 7.30 | 13.0 | 209.8 | 210.8 | 0.50 | 68.40 |
| 11.750 | 10.26 | 17.6 | 226.1 | 227.4 | 0.67 | 68.47 |
| 12.000 | 16.92 | 27.2 | 251.4 | 253.2 | 0.94 | 68.58 |
| 12.250 | 39.26 | 56.2 | 304.6 | 307.5 | 1.47 | 68.79 |
| 12.500 | 34.70 | 74.0 | 374.0 | 378.6 | 2.26 | 69.04 |
| 12.750 | 28.80 | 63.5 | 432.2 | 437.5 | 2.66 | 69.24 |
| 13.000 | 27.30 | 56.1 | 481.8 | 488.3 | 3.26 | 69.42 |
| 13.250 | 26.50 | 53.8 | 528.0 | 535.6 | 3.81 | 69.57 |
| 13.500 | 26.16 | 52.7 | 572.3 | 580.7 | 4.20 | 69.72 |
| 13.750 | 26.49 | 52.7 | 615.8 | 624.9 | 4.56 | 69.87 |
| 14.000 | 27.15 | 53.6 | 659.6 | 669.4 | 4.93 | 70.01 |
| 14.250 | 26.48 | 53.6 | 702.5 | 713.2 | 5.34 | 70.15 |
| 14.500 | 26.81 | 53.3 | 744.1 | 755.8 | 5.86 | 70.28 |
| 14.750 | 27.14 | 54.0 | 785.1 | 798.0 | 6.46 | 70.41 |
| 15.000 | 27.14 | 54.3 | 825.2 | 839.4 | 7.09 | 70.54 |
| 15.250 | 27.47 | 54.6 | 864.2 | 879.8 | 7.79 | 70.66 |
| 15.500 | 27.47 | 54.9 | 902.0 | 919.2 | 8.56 | 70.78 |
| 15.750 | 27.47 | 54.9 | 938.5 | 957.0 | 9.24 | 70.89 |
| 16.000 | 27.47 | 54.9 | 973.7 | 993.4 | 9.89 | 71.00 |
| 16.250 | 27.14 | 54.6 | 1007.1 | 1028.3 | 10.60 | 71.10 |
| 16.500 | 26.14 | 53.3 | 1037.9 | 1060.4 | 11.25 | 71.19 |
| 16.750 | 26.14 | 52.3 | 1066.4 | 1090.1 | 11.85 | 71.28 |
| 17.000 | 25.81 | 52.0 | 1093.5 | 1118.4 | 12.42 | 71.36 |
| 17.250 | 25.81 | 51.6 | 1119.5 | 1145.2 | 12.83 | 71.44 |
| 17.500 | 25.81 | 51.6 | 1144.9 | 1171.1 | 13.09 | 71.51 |
| 17.750 | 25.48 | 51.3 | 1169.5 | 1196.2 | 13.34 | 71.58 |
| 18.000 | 25.15 | 50.6 | 1192.6 | 1220.2 | 13.76 | 71.65 |
| 18.250 | 24.82 | 50.0 | 1214.2 | 1242.6 | 14.21 | 71.72 |
| 18.500 | 24.49 | 49.3 | 1234.3 | 1263.5 | 14.62 | 71.77 |
| 18.750 | 24.49 | 49.0 | 1253.2 | 1283.3 | 15.05 | 71.83 |
| 19.000 | 24.16 | 48.7 | 1270.8 | 1301.8 | 15.49 | 71.88 |
| 19.250 | 23.83 | 48.0 | 1287.0 | 1318.8 | 15.89 | 71.93 |
| 19.500 | 23.50 | 47.3 | 1301.9 | 1334.4 | 16.26 | 71.97 |
| 19.750 | 23.20 | 46.7 | 1315.0 | 1348.6 | 16.79 | 72.01 |
| 20.000 | 23.20 | 46.4 | 1325.9 | 1361.4 | 17.72 | 72.04 |
| 20.250 | 22.90 | 46.1 | 1335.0 | 1372.0 | 18.50 | 72.07 |
| 20.500 | 22.60 | 45.5 | 1342.3 | 1380.5 | 19.12 | 72.09 |
| 20.750 | 22.30 | 44.9 | 1348.0 | 1387.2 | 19.61 | 72.11 |
| 21.000 | 22.30 | 44.6 | 1352.6 | 1392.6 | 20.00 | 72.13 |
| 21.250 | 22.00 | 44.3 | 1356.2 | 1396.9 | 20.32 | 72.14 |
| 21.500 | 21.70 | 43.7 | 1358.8 | 1399.9 | 20.54 | 72.14 |
| 21.750 | 21.40 | 43.1 | 1360.6 | 1401.9 | 20.69 | 72.15 |
| 22.000 | 21.10 | 42.5 | 1361.5 | 1403.1 | 20.77 | 72.15 |
| 22.250 | 20.80 | 41.9 | 1361.8 | 1403.4 | 20.80 | 72.15 |
| 22.500 | 20.50 | 41.3 | 1361.6 | 1403.1 | 20.78 | 72.15 |

Pond File: c:\isrt\MA .PND
Inflow Hydrograph: c:\isrt\MA50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

INFLOW HYDROGRAPH

| TIME (hrs) | INFLOW (cfs) |
|---|---|
| 22.750 | 19.22 |
| 23.000 | 18.94 |
| 23.250 | 18.66 |
| 23.500 | 18.38 |
| 23.750 | 18.10 |
| 24.000 | 17.82 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| 39.7 | 1360.0 | 1401.3 | 20.64 | 72.15 |
| 38.2 | 1357.3 | 1398.2 | 20.41 | 72.14 |
| 37.6 | 1354.6 | 1394.9 | 20.18 | 72.13 |
| 37.0 | 1351.8 | 1391.6 | 19.94 | 72.12 |
| 36.5 | 1348.9 | 1388.2 | 19.69 | 72.11 |
| 35.9 | 1345.9 | 1384.8 | 19.43 | 72.10 |

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: c:\isrt\MA .PND
Inflow Hydrograph: c:\isrt\MA50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

Starting Pond W.S. Elevation = 68.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 39.26 cfs
Peak Outflow = 20.80 cfs
Peak Elevation = 72.15 ft

***** Summary of Approximate Peak Storage *****

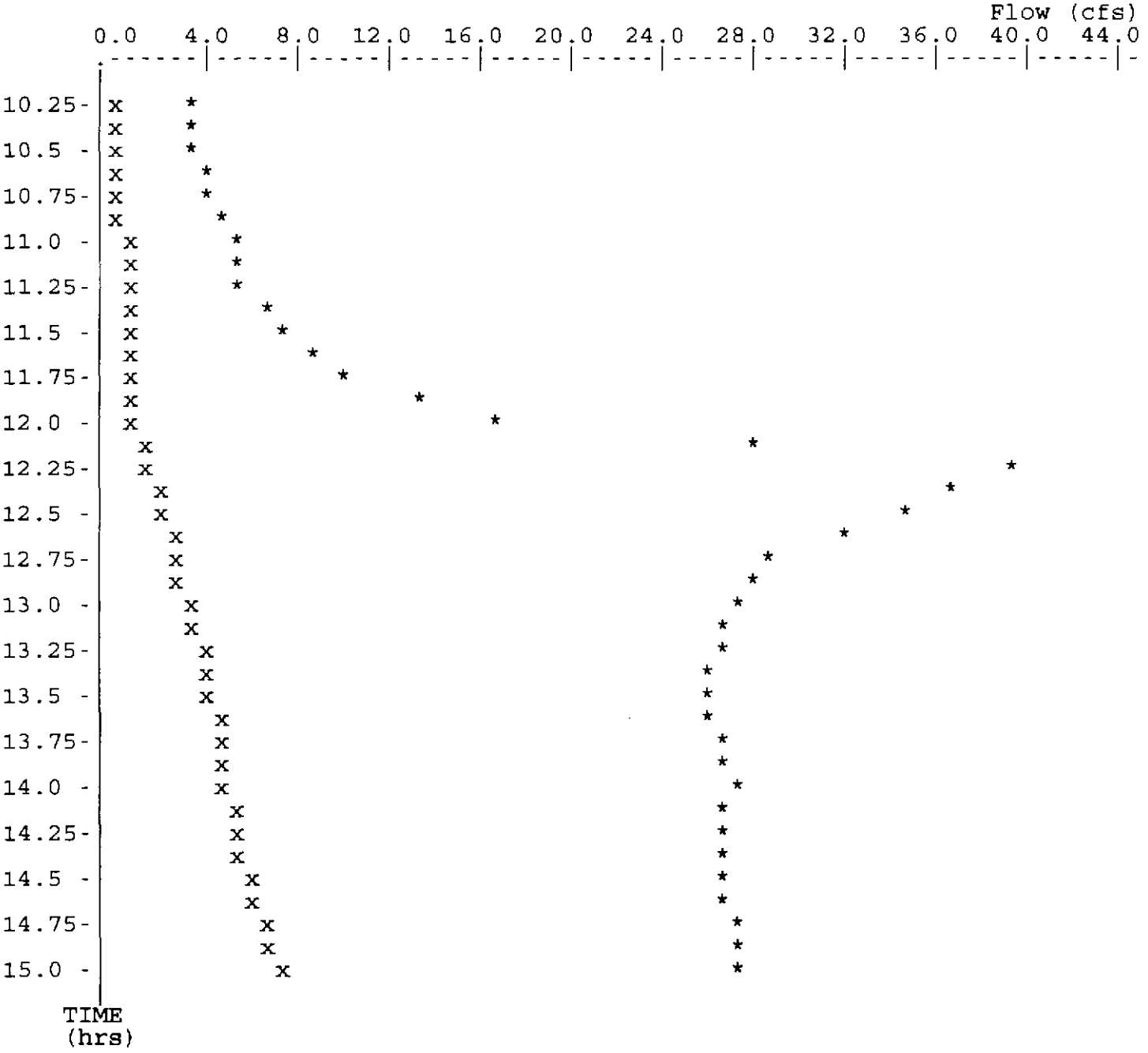
Initial Storage = 1.31 ac-ft
Peak Storage From Storm = 12.97 ac-ft
---
Total Storage in Pond = 14.28 ac-ft

Warning: Inflow hydrograph truncated on right side.

Pond File: c:\isrt\MA .PND
Inflow Hydrograph: c:\isrt\MA50 .HYD
Outflow Hydrograph: c:\isrt\OUT .HYD

EXECUTED: 04-28-1992
12:00:33

Peak Inflow = 39.26 cfs
Peak Outflow = 20.80 cfs
Peak Elevation = 72.15 ft




* File: c:\isrt\MA50 .HYD Qmax = 39.3 cfs
x File: c:\isrt\OUT .HYD Qmax = 20.8 cfs

POND-2

100 Year, 24 Hour Storm

| Golder Associates | SUBJECT POND 2 STORAGE VS ELEVATION | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEF<br>Checked CLM<br>Reviewed [illegible] | Date 5-19-92<br>Sheet 1 of 1 |

The following page estabishes the storage vs. elevation relationship in POND2. This relationship was calculated 11-21-92 by MK (see Appendix 10-E, Storage vs. Elevation Relationships).

POND-2 Version: 5.16
S/N: 1295130217

VOLUME CALCULATION FOR WETLAND 1C - PROPOSED

CALCULATED 04-09-1992 18:40:57
DISK FILE: c:\ISRT\VERN .VOL

Planimeter scale: 1 inch = 50 ft.

| Elevation (ft) | Planimeter (sq.in.) | Area (acres) | A1+A2+sqr(A1*A2) (acres) | * Volume (acre-ft) | Volume Sum (acre-ft) |
|---|---|---|---|---|---|
| 70.00 | 68.50 | 3.93 | 0.00 | 0.00 | 0.00 |
| 71.00 | 93.00 | 5.34 | 13.85 | 4.62 | 4.62 |
| 72.00 | 111.00 | 6.37 | 17.54 | 5.85 | 10.46 |
| 74.00 | 144.00 | 8.26 | 21.89 | 14.59 | 25.06 |
| 76.00 | 144.00 | 8.26 | 24.79 | 16.53 | 41.59 |

IA = (sq.rt(Area1) + ((Ei-E1)/(E2-E1))*(sq.rt(Area2)-sq.rt(Area1)))$^2$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1,Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

| Golder Associates | SUBJECT POND2 - Inflow Hydrographs | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by UEZ<br>Checked CAS<br>Reviewed GSS | Date 5-19-92<br>Sheet of |

The following three pages show the addition of the inflow hydrographs to Wetland 1C. These hydrographs were generated in HEC-1.

5D = Flow from Subwatershed 5D (Appendix 10-B)

6PN = Subwatershed 6PN (Appendix 10-E)

7P = Subwatershed 7P (Appendix 10-E

1C = Addition of 5D, 6PN and 7P

Executed 04-09-1992 18:39:59

Data directory: c:\ISRT*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D100 (cfs) | 6PN100 (cfs) | 7P100 (cfs) | 1C100 (Total) |
|---|---|---|---|---|
| 0.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 2.75 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.25 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.50 | 0.0 | 0.0 | 0.0 | 0.0 |
| 3.75 | 1.0 | 0.0 | 0.0 | 1.0 |
| 4.00 | 1.0 | 0.0 | 0.0 | 1.0 |
| 4.25 | 2.0 | 0.0 | 0.0 | 2.0 |
| 4.50 | 2.0 | 0.0 | 0.0 | 2.0 |
| 4.75 | 2.0 | 0.0 | 0.0 | 2.0 |
| 5.00 | 3.0 | 0.0 | 0.0 | 3.0 |
| 5.25 | 3.0 | 0.0 | 0.0 | 3.0 |
| 5.50 | 3.0 | 1.0 | 0.0 | 4.0 |
| 5.75 | 3.0 | 1.0 | 0.0 | 4.0 |
| 6.00 | 3.0 | 1.0 | 0.0 | 4.0 |
| 6.25 | 3.0 | 1.0 | 0.0 | 4.0 |
| 6.50 | 3.0 | 1.0 | 0.0 | 4.0 |
| 6.75 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.00 | 4.0 | 1.0 | 0.0 | 5.0 |
| 7.25 | 4.0 | 2.0 | 0.0 | 6.0 |
| 7.50 | 4.0 | 2.0 | 0.0 | 6.0 |
| 7.75 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.00 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.25 | 4.0 | 2.0 | 0.0 | 6.0 |
| 8.50 | 5.0 | 2.0 | 0.0 | 7.0 |
| 8.75 | 5.0 | 3.0 | 0.0 | 8.0 |
| 9.00 | 5.0 | 3.0 | 0.0 | 8.0 |
| 9.25 | 6.0 | 3.0 | 0.0 | 9.0 |
| 9.50 | 6.0 | 4.0 | 0.0 | 10.0 |
| 9.75 | 7.0 | 4.0 | 0.0 | 11.0 |

Executed 04-09-1992 18:39:59

Data directory: c:\ISRT*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D100 (cfs) | 6PN100 (cfs) | 7P100 (cfs) | 1C100 (Total) |
|---|---|---|---|---|
| 10.00 | 7.0 | 5.0 | 0.0 | 12.0 |
| 10.25 | 8.0 | 5.0 | 0.0 | 13.0 |
| 10.50 | 9.0 | 6.0 | 0.0 | 15.0 |
| 10.75 | 10.0 | 6.0 | 0.0 | 16.0 |
| 11.00 | 11.0 | 7.0 | 0.0 | 18.0 |
| 11.25 | 12.0 | 11.0 | 0.0 | 23.0 |
| 11.50 | 13.0 | 15.0 | 1.0 | 29.0 |
| 11.75 | 16.0 | 20.0 | 1.0 | 37.0 |
| 12.00 | 19.0 | 40.0 | 2.0 | 61.0 |
| 12.25 | 25.0 | 91.0 | 5.0 | 121.0 |
| 12.50 | 35.0 | 53.0 | 2.0 | 90.0 |
| 12.75 | 40.0 | 30.0 | 1.0 | 71.0 |
| 13.00 | 44.0 | 20.0 | 1.0 | 65.0 |
| 13.25 | 48.0 | 13.0 | 1.0 | 62.0 |
| 13.50 | 50.0 | 10.0 | 0.0 | 60.0 |
| 13.75 | 52.0 | 9.0 | 0.0 | 61.0 |
| 14.00 | 53.0 | 8.0 | 0.0 | 61.0 |
| 14.25 | 54.0 | 7.0 | 0.0 | 61.0 |
| 14.50 | 54.0 | 7.0 | 0.0 | 61.0 |
| 14.75 | 54.0 | 6.0 | 0.0 | 60.0 |
| 15.00 | 54.0 | 6.0 | 0.0 | 60.0 |
| 15.25 | 54.0 | 5.0 | 0.0 | 59.0 |
| 15.50 | 54.0 | 5.0 | 0.0 | 59.0 |
| 15.75 | 54.0 | 5.0 | 0.0 | 59.0 |
| 16.00 | 54.0 | 4.0 | 0.0 | 58.0 |
| 16.25 | 53.0 | 4.0 | 0.0 | 57.0 |
| 16.50 | 53.0 | 4.0 | 0.0 | 57.0 |
| 16.75 | 53.0 | 4.0 | 0.0 | 57.0 |
| 17.00 | 52.0 | 4.0 | 0.0 | 56.0 |
| 17.25 | 52.0 | 4.0 | 0.0 | 56.0 |
| 17.50 | 51.0 | 3.0 | 0.0 | 54.0 |
| 17.75 | 51.0 | 3.0 | 0.0 | 54.0 |
| 18.00 | 50.0 | 3.0 | 0.0 | 53.0 |
| 18.25 | 50.0 | 3.0 | 0.0 | 53.0 |
| 18.50 | 50.0 | 3.0 | 0.0 | 53.0 |
| 18.75 | 49.0 | 2.0 | 0.0 | 51.0 |
| 19.00 | 49.0 | 2.0 | 0.0 | 51.0 |
| 19.25 | 48.0 | 2.0 | 0.0 | 50.0 |
| 19.50 | 48.0 | 2.0 | 0.0 | 50.0 |
| 19.75 | 47.0 | 2.0 | 0.0 | 49.0 |
| 20.00 | 47.0 | 2.0 | 0.0 | 49.0 |

Executed 04-09-1992 18:39:59

Data directory: c:\ISRT*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | 5D100 (cfs) | 6PN100 (cfs) | 7P100 (cfs) | 1C100 (Total) |
|---|---|---|---|---|
| 20.25 | 46.0 | 2.0 | 0.0 | 48.0 |
| 20.50 | 45.0 | 2.0 | 0.0 | 47.0 |
| 20.75 | 45.0 | 2.0 | 0.0 | 47.0 |
| 21.00 | 44.0 | 2.0 | 0.0 | 46.0 |
| 21.25 | 44.0 | 2.0 | 0.0 | 46.0 |
| 21.50 | 43.0 | 2.0 | 0.0 | 45.0 |
| 21.75 | 43.0 | 2.0 | 0.0 | 45.0 |
| 22.00 | 42.0 | 2.0 | 0.0 | 44.0 |
| 22.25 | 42.0 | 2.0 | 0.0 | 44.0 |
| 22.50 | 41.0 | 2.0 | 0.0 | 43.0 |
| 22.75 | 41.0 | 2.0 | 0.0 | 43.0 |
| 23.00 | 40.0 | 2.0 | 0.0 | 42.0 |
| 23.25 | 39.0 | 2.0 | 0.0 | 41.0 |
| 23.50 | 39.0 | 2.0 | 0.0 | 41.0 |
| 23.75 | 38.0 | 2.0 | 0.0 | 40.0 |
| 24.00 | 38.0 | 2.0 | 0.0 | 40.0 |

| Golder Associates | SUBJECT POND 2 - Rating Tables. | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTR | Made by UEZ<br>Checked<br>Reviewed | Date 5-19-92<br>Sheet of |

The following 9 pages are the rating tables generated for the outflow structures by POND 2.

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

***** COMPOSITE OUTFLOW SUMMARY ****

| Elevation (ft) | Q (cfs) | Contributing Structures |
|---|---|---|
| 71.00 | 0.0 | 1 +2 |
| 71.10 | 1.1 | 1 +2 |
| 71.20 | 2.6 | 1 +2 |
| 71.30 | 4.3 | 1 +2 |
| 71.40 | 6.2 | 1 +2 |
| 71.50 | 8.3 | 1 +2 |
| 71.60 | 12.3 | 1 +2 |
| 71.70 | 16.4 | 1 +2 |
| 71.80 | 20.8 | 1 +2 |
| 71.90 | 25.4 | 1 +2 |
| 72.00 | 30.2 | 1 +2 |
| 72.10 | 35.7 | 1 +2 |
| 72.20 | 41.5 | 1 +2 |
| 72.30 | 47.5 | 1 +2 |
| 72.40 | 53.8 | 1 +2 |
| 72.50 | 60.2 | 1 +2 |
| 72.60 | 64.2 | 1 +2 |
| 72.70 | 68.3 | 1 +2 |
| 72.80 | 72.7 | 1 +2 |
| 72.90 | 77.3 | 1 +2 |
| 73.00 | 82.2 | 1 +2 |
| 73.10 | 87.3 | 1 +2 |
| 73.20 | 92.7 | 1 +2 |
| 73.30 | 98.4 | 1 +2 |
| 73.40 | 104.3 | 1 +2 |
| 73.50 | 110.4 | 1 +2 |
| 73.60 | 116.9 | 1 +2 |
| 73.70 | 123.6 | 1 +2 |
| 73.80 | 130.6 | 1 +2 |
| 73.90 | 137.8 | 1 +2 |
| 74.00 | 145.4 | 1 +2 |
| 74.10 | 153.2 | 1 +2 |
| 74.20 | 161.3 | 1 +2 |
| 74.30 | 169.7 | 1 +2 |
| 74.40 | 178.4 | 1 +2 |
| 74.50 | 187.4 | 1 +2 |
| 74.60 | 196.7 | 1 +2 |
| 74.70 | 206.2 | 1 +2 |
| 74.80 | 216.1 | 1 +2 |

| | | |
|---|---|---|
| 74.90 | 226.3 | 1 +2 |
| 75.00 | 236.9 | 1 +2 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outlet Structure File: c:\ISRT\VERN .STR
Planimeter Input File: c:\ISRT\VERN .VOL
Rating Table Output File: c:\ISRT\VERN .PND

Min. Elev.(ft) = 71 Max. Elev.(ft) = 75 Incr.(ft) = .1

Additional elevations (ft) to be included in table:
* * * * * * * * * * * * * * * * * * * * * * * * * *

**********
SYSTEM CONNECTIVITY
**********

| Structure | No. | Q Table | | Q Table |
|---|---|---|---|---|
| TABLE | 1 | | -> | 1 |
| WEIR-XY | 2 | | -> | 2 |

Outflow rating table summary was stored in file:
c:\ISRT\VERN .PND

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

>>>>>> Structure No. 1 <<<<<<
(Input Data)

TABLE
Input your own rating table.
E1 (ft) =71 E2 (ft) =75.1

Constant (ft) added to each elevation was:

| Elev. (ft) | Q (cfs) |
|---|---|
| 71 | 0 |
| 71.5 | 4 |
| 72 | 16.1 |
| 72.5 | 31 |
| 73 | 32 |
| 73.5 | 33 |
| 74 | 34 |
| 74.5 | 35 |
| 75 | 36 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

>>>>>> Structure No. 2 <<<<<<
(Input Data)

WEIR-XY
Weir - Defined by X, Y Coordinates
E1 (ft) =71 E2 (ft) =75.1

| X dist.(ft) | Y elev.(ft) |
|---|---|
| 0 | 75 |
| 8 | 71 |
| 12 | 71 |
| 20 | 75 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outflow Rating Table for Structure #1
TABLE Input your own rating table.

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 71.00 | 0.0 | |
| 71.10 | 0.8 | Interpolated from input table |
| 71.20 | 1.6 | Interpolated from input table |
| 71.30 | 2.4 | Interpolated from input table |
| 71.40 | 3.2 | Interpolated from input table |
| 71.50 | 4.0 | |
| 71.60 | 6.4 | Interpolated from input table |
| 71.70 | 8.8 | Interpolated from input table |
| 71.80 | 11.3 | Interpolated from input table |
| 71.90 | 13.7 | Interpolated from input table |
| 72.00 | 16.1 | |
| 72.10 | 19.1 | Interpolated from input table |
| 72.20 | 22.1 | Interpolated from input table |
| 72.30 | 25.0 | Interpolated from input table |
| 72.40 | 28.0 | Interpolated from input table |
| 72.50 | 31.0 | |
| 72.60 | 31.2 | Interpolated from input table |
| 72.70 | 31.4 | Interpolated from input table |
| 72.80 | 31.6 | Interpolated from input table |
| 72.90 | 31.8 | Interpolated from input table |
| 73.00 | 32.0 | |
| 73.10 | 32.2 | Interpolated from input table |
| 73.20 | 32.4 | Interpolated from input table |
| 73.30 | 32.6 | Interpolated from input table |
| 73.40 | 32.8 | Interpolated from input table |
| 73.50 | 33.0 | |
| 73.60 | 33.2 | Interpolated from input table |
| 73.70 | 33.4 | Interpolated from input table |
| 73.80 | 33.6 | Interpolated from input table |
| 73.90 | 33.8 | Interpolated from input table |
| 74.00 | 34.0 | |
| 74.10 | 34.2 | Interpolated from input table |
| 74.20 | 34.4 | Interpolated from input table |
| 74.30 | 34.6 | Interpolated from input table |
| 74.40 | 34.8 | Interpolated from input table |
| 74.50 | 35.0 | |
| 74.60 | 35.2 | Interpolated from input table |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

>>>>> CONTINUED from previous page <<<<<

Outflow Rating Table for Structure #1
TABLE Input your own rating table.

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 74.70 | 35.4 | Interpolated from input table |
| 74.80 | 35.6 | Interpolated from input table |
| 74.90 | 35.8 | Interpolated from input table |
| 75.00 | 36.0 | |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
OUTLETS FOR WETLAND 1C - PROPOSED

**********

Outflow Rating Table for Structure #2
WEIR-XY Weir - Defined by X, Y Coordinates

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 71.00 | 0.0 | E = Y min= 71 | |
| 71.10 | 0.3 | W(ft)=4.4 | Max. D(ft)=.1 |
| 71.20 | 1.0 | W(ft)=4.8 | Max. D(ft)=.2 |
| 71.30 | 1.9 | W(ft)=5.2 | Max. D(ft)=.3 |
| 71.40 | 3.0 | W(ft)=5.6 | Max. D(ft)=.4 |
| 71.50 | 4.3 | W(ft)=6.0 | Max. D(ft)=.5 |
| 71.60 | 5.9 | W(ft)=6.4 | Max. D(ft)=.6 |
| 71.70 | 7.6 | W(ft)=6.8 | Max. D(ft)=.7 |
| 71.80 | 9.5 | W(ft)=7.2 | Max. D(ft)=.8 |
| 71.90 | 11.7 | W(ft)=7.6 | Max. D(ft)=.9 |
| 72.00 | 14.1 | W(ft)=8.0 | Max. D(ft)=1.0 |
| 72.10 | 16.7 | W(ft)=8.400 | Max. D(ft)=1.1 |
| 72.20 | 19.5 | W(ft)=8.8 | Max. D(ft)=1.2 |
| 72.30 | 22.5 | W(ft)=9.200 | Max. D(ft)=1.3 |
| 72.40 | 25.8 | W(ft)=9.6 | Max. D(ft)=1.4 |
| 72.50 | 29.2 | W(ft)=10.0 | Max. D(ft)=1.5 |
| 72.60 | 33.0 | W(ft)=10.4 | Max. D(ft)=1.6 |
| 72.70 | 36.9 | W(ft)=10.8 | Max. D(ft)=1.7 |
| 72.80 | 41.1 | W(ft)=11.2 | Max. D(ft)=1.8 |
| 72.90 | 45.5 | W(ft)=11.6 | Max. D(ft)=1.9 |
| 73.00 | 50.2 | W(ft)=12.0 | Max. D(ft)=2.0 |
| 73.10 | 55.1 | W(ft)=12.4 | Max. D(ft)=2.1 |
| 73.20 | 60.3 | W(ft)=12.8 | Max. D(ft)=2.2 |
| 73.30 | 65.8 | W(ft)=13.2 | Max. D(ft)=2.3 |
| 73.40 | 71.5 | W(ft)=13.6 | Max. D(ft)=2.4 |
| 73.50 | 77.4 | W(ft)=14.0 | Max. D(ft)=2.5 |
| 73.60 | 83.7 | W(ft)=14.4 | Max. D(ft)=2.6 |
| 73.70 | 90.2 | W(ft)=14.8 | Max. D(ft)=2.7 |
| 73.80 | 97.0 | W(ft)=15.2 | Max. D(ft)=2.8 |
| 73.90 | 104.0 | W(ft)=15.6 | Max. D(ft)=2.9 |
| 74.00 | 111.4 | W(ft)=16.0 | Max. D(ft)=3.0 |
| 74.10 | 119.0 | W(ft)=16.4 | Max. D(ft)=3.1 |
| 74.20 | 126.9 | W(ft)=16.8 | Max. D(ft)=3.2 |
| 74.30 | 135.1 | W(ft)=17.2 | Max. D(ft)=3.3 |
| 74.40 | 143.6 | W(ft)=17.6 | Max. D(ft)=3.4 |
| 74.50 | 152.4 | W(ft)=18.0 | Max. D(ft)=3.5 |
| 74.60 | 161.5 | W(ft)=18.4 | Max. D(ft)=3.6 |

Outlet Structure File: VERN .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

>>>>> CONTINUED from previous page <<<<<

Outflow Rating Table for Structure #2
WEIR-XY Weir - Defined by X, Y Coordinates

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 74.70 | 170.8 | W(ft)=18.8 | Max. D(ft)=3.7 |
| 74.80 | 180.5 | W(ft)=19.2 | Max. D(ft)=3.8 |
| 74.90 | 190.5 | W(ft)=19.6 | Max. D(ft)=3.9 |
| 75.00 | 200.9 | W(ft)=20.0 | Max. D(ft)=4.0 |

| Golder Associates | SUBJECT POND2 - Hydrograph Routing | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by JEZ<br>Checked CAM<br>Reviewed GBP | Date 5-19-92<br>Sheet of |

The following 6 pages showing the hydrologic routing of the storm flows through Wetland 1C using the Storage Indication Method.

```
*************************************
*                                   *
*   OUTLETS FOR WETLAND 1C - PROPOSED *
*       100 yr 24 hr STORM EVENT    *
*                                   *
*                                   *
*                                   *
*************************************
```

Inflow Hydrograph: c:\ISRT\1C100 .HYD
Rating Table file: c:\ISRT\VERN .PND

----INITIAL CONDITIONS----
Elevation = 71.00 ft
Outflow = 0.00 cfs
Storage = 4.62 ac-ft

GIVEN POND DATA

| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) |
|---|---|---|
| 71.00 | 0.0 | 4.617 |
| 71.10 | 1.1 | 5.155 |
| 71.20 | 2.6 | 5.704 |
| 71.30 | 4.3 | 6.263 |
| 71.40 | 6.2 | 6.831 |
| 71.50 | 8.3 | 7.411 |
| 71.60 | 12.3 | 8.000 |
| 71.70 | 16.4 | 8.600 |
| 71.80 | 20.8 | 9.210 |
| 71.90 | 25.4 | 9.831 |
| 72.00 | 30.2 | 10.463 |
| 72.10 | 35.7 | 11.104 |
| 72.20 | 41.5 | 11.755 |
| 72.30 | 47.5 | 12.414 |
| 72.40 | 53.8 | 13.083 |
| 72.50 | 60.2 | 13.760 |
| 72.60 | 64.2 | 14.447 |
| 72.70 | 68.3 | 15.143 |
| 72.80 | 72.7 | 15.848 |
| 72.90 | 77.3 | 16.562 |
| 73.00 | 82.2 | 17.286 |
| 73.10 | 87.3 | 18.020 |
| 73.20 | 92.7 | 18.763 |
| 73.30 | 98.4 | 19.515 |
| 73.40 | 104.3 | 20.278 |
| 73.50 | 110.4 | 21.049 |
| 73.60 | 116.9 | 21.831 |
| 73.70 | 123.6 | 22.623 |
| 73.80 | 130.6 | 23.424 |
| 73.90 | 137.8 | 24.235 |
| 74.00 | 145.4 | 25.057 |

INTERMEDIATE ROUTING COMPUTATIONS

| 2S/t (cfs) | 2S/t + O (cfs) |
|---|---|
| 446.9 | 446.9 |
| 499.0 | 500.1 |
| 552.1 | 554.7 |
| 606.2 | 610.5 |
| 661.3 | 667.5 |
| 717.3 | 725.6 |
| 774.4 | 786.7 |
| 832.5 | 848.9 |
| 891.6 | 912.4 |
| 951.7 | 977.1 |
| 1012.8 | 1043.0 |
| 1074.9 | 1110.6 |
| 1137.9 | 1179.4 |
| 1201.7 | 1249.2 |
| 1266.4 | 1320.2 |
| 1332.0 | 1392.2 |
| 1398.5 | 1462.7 |
| 1465.8 | 1534.1 |
| 1534.1 | 1606.8 |
| 1603.2 | 1680.5 |
| 1673.3 | 1755.5 |
| 1744.3 | 1831.6 |
| 1816.2 | 1908.9 |
| 1889.1 | 1987.5 |
| 1962.9 | 2067.2 |
| 2037.6 | 2148.0 |
| 2113.3 | 2230.2 |
| 2189.9 | 2313.5 |
| 2267.5 | 2398.1 |
| 2346.0 | 2483.8 |
| 2425.5 | 2570.9 |

| GIVEN POND DATA | | | INTERMEDIATE ROUTING COMPUTATIONS | |
|---|---|---|---|---|
| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) | 2S/t (cfs) | 2S/t + O (cfs) |
| 74.10 | 153.2 | 25.883 | 2505.5 | 2658.7 |
| 74.20 | 161.3 | 26.710 | 2585.5 | 2746.8 |
| 74.30 | 169.7 | 27.536 | 2665.5 | 2835.2 |
| 74.40 | 178.4 | 28.363 | 2745.5 | 2923.9 |
| 74.50 | 187.4 | 29.189 | 2825.5 | 3012.9 |
| 74.60 | 196.7 | 30.016 | 2905.5 | 3102.2 |
| 74.70 | 206.2 | 30.842 | 2985.5 | 3191.7 |
| 74.80 | 216.1 | 31.668 | 3065.5 | 3281.6 |
| 74.90 | 226.3 | 32.495 | 3145.5 | 3371.8 |
| 75.00 | 236.9 | 33.321 | 3225.5 | 3462.4 |

Time increment (t) = 0.250 hrs.

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Pond File: c:\ISRT\VERN .PND
Inflow Hydrograph: c:\ISRT\1C100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

INFLOW HYDROGRAPH

| TIME (hrs) | INFLOW (cfs) |
|---|---|
| 0.000 | 0.00 |
| 0.250 | 0.00 |
| 0.500 | 0.00 |
| 0.750 | 0.00 |
| 1.000 | 0.00 |
| 1.250 | 0.00 |
| 1.500 | 0.00 |
| 1.750 | 0.00 |
| 2.000 | 0.00 |
| 2.250 | 0.00 |
| 2.500 | 0.00 |
| 2.750 | 0.00 |
| 3.000 | 0.00 |
| 3.250 | 0.00 |
| 3.500 | 0.00 |
| 3.750 | 1.00 |
| 4.000 | 1.00 |
| 4.250 | 2.00 |
| 4.500 | 2.00 |
| 4.750 | 2.00 |
| 5.000 | 3.00 |
| 5.250 | 3.00 |
| 5.500 | 4.00 |
| 5.750 | 4.00 |
| 6.000 | 4.00 |
| 6.250 | 4.00 |
| 6.500 | 4.00 |
| 6.750 | 5.00 |
| 7.000 | 5.00 |
| 7.250 | 6.00 |
| 7.500 | 6.00 |
| 7.750 | 6.00 |
| 8.000 | 6.00 |
| 8.250 | 6.00 |
| 8.500 | 7.00 |
| 8.750 | 8.00 |
| 9.000 | 8.00 |
| 9.250 | 9.00 |
| 9.500 | 10.00 |
| 9.750 | 11.00 |
| 10.000 | 12.00 |
| 10.250 | 13.00 |
| 10.500 | 15.00 |
| 10.750 | 16.00 |
| 11.000 | 18.00 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| ----- | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 0.0 | 446.9 | 446.9 | 0.00 | 71.00 |
| 1.0 | 447.8 | 447.9 | 0.02 | 71.00 |
| 2.0 | 449.7 | 449.8 | 0.06 | 71.01 |
| 3.0 | 452.5 | 452.7 | 0.12 | 71.01 |
| 4.0 | 456.1 | 456.5 | 0.20 | 71.02 |
| 4.0 | 459.5 | 460.1 | 0.27 | 71.02 |
| 5.0 | 463.8 | 464.5 | 0.36 | 71.03 |
| 6.0 | 468.9 | 469.8 | 0.47 | 71.04 |
| 7.0 | 474.7 | 475.9 | 0.60 | 71.05 |
| 8.0 | 481.2 | 482.7 | 0.74 | 71.07 |
| 8.0 | 487.4 | 489.2 | 0.87 | 71.08 |
| 8.0 | 493.4 | 495.4 | 1.00 | 71.09 |
| 8.0 | 499.2 | 501.4 | 1.14 | 71.10 |
| 9.0 | 505.5 | 508.2 | 1.32 | 71.11 |
| 10.0 | 512.5 | 515.5 | 1.52 | 71.13 |
| 11.0 | 520.0 | 523.5 | 1.74 | 71.14 |
| 12.0 | 528.0 | 532.0 | 1.98 | 71.16 |
| 12.0 | 535.6 | 540.0 | 2.20 | 71.17 |
| 12.0 | 542.8 | 547.6 | 2.41 | 71.19 |
| 12.0 | 549.6 | 554.8 | 2.60 | 71.20 |
| 13.0 | 556.9 | 562.6 | 2.84 | 71.21 |
| 15.0 | 565.7 | 571.9 | 3.12 | 71.23 |
| 16.0 | 574.9 | 581.7 | 3.42 | 71.25 |
| 17.0 | 584.4 | 591.9 | 3.73 | 71.27 |
| 19.0 | 595.2 | 603.4 | 4.08 | 71.29 |
| 21.0 | 607.2 | 616.2 | 4.49 | 71.31 |
| 23.0 | 620.3 | 630.2 | 4.96 | 71.33 |
| 25.0 | 634.4 | 645.3 | 5.46 | 71.36 |
| 28.0 | 650.3 | 662.4 | 6.03 | 71.39 |
| 31.0 | 667.9 | 681.3 | 6.70 | 71.42 |
| 34.0 | 687.1 | 701.9 | 7.44 | 71.46 |

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..flow Hydrograph: c:\ISRT\1C100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 11.250 | 23.00 | 41.0 | 711.1 | 728.1 | 8.46 | 71.50 |
| 11.500 | 29.00 | 52.0 | 741.6 | 763.1 | 10.76 | 71.56 |
| 11.750 | 37.00 | 66.0 | 780.3 | 807.6 | 13.68 | 71.63 |
| 12.000 | 61.00 | 98.0 | 841.4 | 878.3 | 18.44 | 71.75 |
| 12.250 | 121.00 | 182.0 | 965.8 | 1023.4 | 28.77 | 71.97 |
| 12.500 | 90.00 | 211.0 | 1094.3 | 1176.8 | 41.29 | 72.20 |
| 12.750 | 71.00 | 161.0 | 1159.2 | 1255.3 | 48.04 | 72.31 |
| 13.000 | 65.00 | 136.0 | 1192.0 | 1295.2 | 51.58 | 72.36 |
| 13.250 | 62.00 | 127.0 | 1211.6 | 1319.0 | 53.70 | 72.40 |
| 13.500 | 60.00 | 122.0 | 1223.6 | 1333.6 | 54.99 | 72.42 |
| 13.750 | 61.00 | 121.0 | 1232.7 | 1344.6 | 55.97 | 72.43 |
| 14.000 | 61.00 | 122.0 | 1241.0 | 1354.7 | 56.87 | 72.45 |
| 14.250 | 61.00 | 122.0 | 1247.8 | 1363.0 | 57.60 | 72.46 |
| 14.500 | 61.00 | 122.0 | 1253.3 | 1369.8 | 58.21 | 72.47 |
| 14.750 | 60.00 | 121.0 | 1257.1 | 1374.3 | 58.61 | 72.48 |
| 15.000 | 60.00 | 120.0 | 1259.4 | 1377.1 | 58.86 | 72.48 |
| 15.250 | 59.00 | 119.0 | 1260.4 | 1378.4 | 58.97 | 72.48 |
| 15.500 | 59.00 | 118.0 | 1260.5 | 1378.4 | 58.98 | 72.48 |
| 15.750 | 59.00 | 118.0 | 1260.5 | 1378.5 | 58.98 | 72.48 |
| 16.000 | 58.00 | 117.0 | 1259.7 | 1377.5 | 58.90 | 72.48 |
| 16.250 | 57.00 | 115.0 | 1257.4 | 1374.7 | 58.65 | 72.48 |
| 16.500 | 57.00 | 114.0 | 1254.7 | 1371.4 | 58.36 | 72.47 |
| 16.750 | 57.00 | 114.0 | 1252.5 | 1368.7 | 58.11 | 72.47 |
| 17.000 | 56.00 | 113.0 | 1249.8 | 1365.5 | 57.83 | 72.46 |
| 17.250 | 56.00 | 112.0 | 1246.8 | 1361.8 | 57.50 | 72.46 |
| 17.500 | 54.00 | 110.0 | 1242.7 | 1356.8 | 57.06 | 72.45 |
| 17.750 | 54.00 | 108.0 | 1237.7 | 1350.7 | 56.51 | 72.44 |
| 18.000 | 53.00 | 107.0 | 1232.7 | 1344.7 | 55.98 | 72.43 |
| 18.250 | 53.00 | 106.0 | 1227.8 | 1338.7 | 55.45 | 72.43 |
| 18.500 | 53.00 | 106.0 | 1223.8 | 1333.8 | 55.01 | 72.42 |
| 18.750 | 51.00 | 104.0 | 1218.9 | 1327.8 | 54.48 | 72.41 |
| 19.000 | 51.00 | 102.0 | 1213.1 | 1320.9 | 53.86 | 72.40 |
| 19.250 | 50.00 | 101.0 | 1207.6 | 1314.1 | 53.26 | 72.39 |
| 19.500 | 50.00 | 100.0 | 1202.3 | 1307.6 | 52.68 | 72.38 |
| 19.750 | 49.00 | 99.0 | 1197.0 | 1301.3 | 52.12 | 72.37 |
| 20.000 | 49.00 | 98.0 | 1191.9 | 1295.0 | 51.57 | 72.36 |
| 20.250 | 48.00 | 97.0 | 1186.8 | 1288.9 | 51.02 | 72.36 |
| 20.500 | 47.00 | 95.0 | 1181.0 | 1281.8 | 50.40 | 72.35 |
| 20.750 | 47.00 | 94.0 | 1175.5 | 1275.0 | 49.79 | 72.34 |
| 21.000 | 46.00 | 93.0 | 1170.0 | 1268.5 | 49.21 | 72.33 |
| 21.250 | 46.00 | 92.0 | 1164.8 | 1262.0 | 48.64 | 72.32 |
| 21.500 | 45.00 | 91.0 | 1159.6 | 1255.8 | 48.08 | 72.31 |
| 21.750 | 45.00 | 90.0 | 1154.5 | 1249.6 | 47.54 | 72.30 |
| 22.000 | 44.00 | 89.0 | 1149.5 | 1243.5 | 47.01 | 72.29 |
| 22.250 | 44.00 | 88.0 | 1144.5 | 1237.5 | 46.50 | 72.28 |
| 22.500 | 43.00 | 87.0 | 1139.5 | 1231.5 | 45.98 | 72.27 |

Pond File: c:\ISRT\VERN .PND
Inflow Hydrograph: c:\ISRT\1C100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

INFLOW HYDROGRAPH

| TIME (hrs) | INFLOW (cfs) |
|---|---|
| 22.750 | 43.00 |
| 23.000 | 42.00 |
| 23.250 | 41.00 |
| 23.500 | 41.00 |
| 23.750 | 40.00 |
| 24.000 | 40.00 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| 86.0 | 1134.6 | 1225.5 | 45.47 | 72.27 |
| 85.0 | 1129.7 | 1219.6 | 44.96 | 72.26 |
| 83.0 | 1124.0 | 1212.7 | 44.36 | 72.25 |
| 82.0 | 1118.4 | 1206.0 | 43.79 | 72.24 |
| 81.0 | 1113.0 | 1199.4 | 43.22 | 72.23 |
| 80.0 | 1107.6 | 1193.0 | 42.67 | 72.22 |

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: c:\ISRT\VERN .PND
Inflow Hydrograph: c:\ISRT\1C100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

Starting Pond W.S. Elevation = 71.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 121.00 cfs
Peak Outflow = 58.98 cfs
Peak Elevation = 72.48 ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 4.62 ac-ft
Peak Storage From Storm = 9.01 ac-ft
---
Total Storage in Pond = 13.63 ac-ft

Warning: Inflow hydrograph truncated on right side.

Pond File: c:\ISRT\VERN .PND
Inflow Hydrograph: c:\ISRT\1C100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

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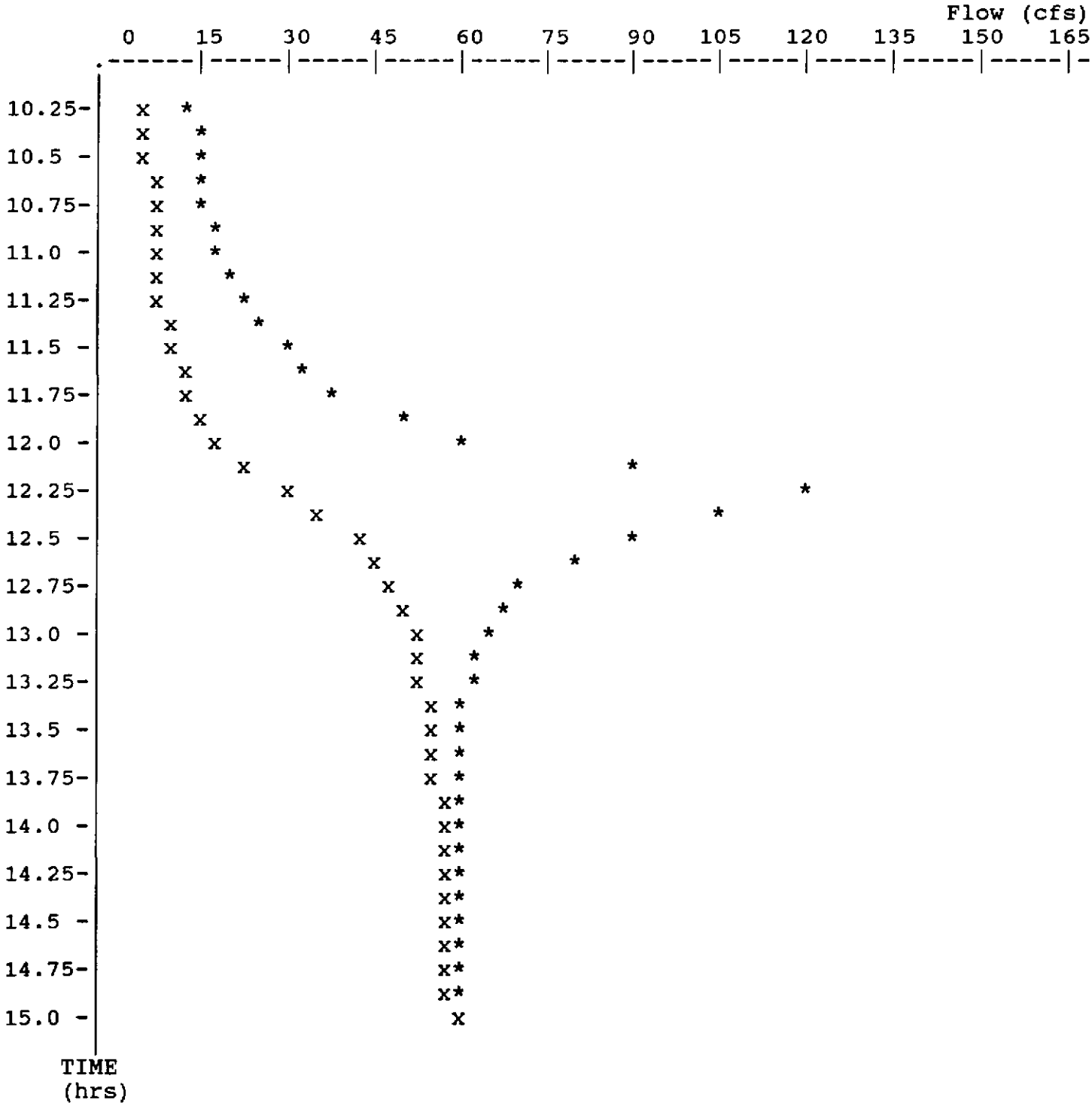
Peak Inflow = 121.00 cfs
Peak Outflow = 58.98 cfs
Peak Elevation = 72.48 ft




* File: c:\ISRT\1C100 .HYD Qmax = 121.0 cfs
x File: c:\ISRT\OUT .HYD Qmax = 59.0 cfs

| Golder Associates | SUBJECT GPN - Proposed Outflow - 100 | | |
|---|---|---|---|
| | Job No. 903-6400.912 Ref. ISRT - 100% RTC | Made by VET Checked CAM Reviewed | Date 3-21-92 Sheet 1 of 2 |

Objective: To determine how much discharge can be attributed to each outlet for Wetland 1C (East-West Hide Pile Wetland) after remediation. Outflow points are the West Branch of the Abenjona River and the channel connecting to the Creation Wetland.

Method: Using Pond2 rating curves and analyses, determine the outflow for each structure (i.e. a channel to the Creation Wetland and either a channel/24" culvert to the West Branch of the Abenjona River depending on the stage).

**Golder Associates**

| SUBJECT 6PN- Proposed Outflow- 100 [illegible] | | |
|---|---|---|
| Job No. 903-6400.912 | Made by VET | Date 3-21-92 |
| Ref. PART-100% RTC | Checked [illegible] | Sheet 2 of 2 |
| | Reviewed [illegible] | |

| Time (hr) | Total Outflow (cfs) | Created Wetland Outflow (cfs) | West Branch of the Abeyona River Outflow (cfs) |
|---|---|---|---|
| 0.00 | 0 | 0 | 0 |
| 0.25 | 0 | 0 | 0 |
| 0.50 | 0 | 0 | 0 |
| 0.75 | 0 | 0 | 0 |
| 1.00 | 0 | 0 | 0 |
| 1.25 | 0 | 0 | 0 |
| 1.50 | 0 | 0 | 0 |
| 1.75 | 0 | 0 | 0 |
| 2.00 | 0 | [illegible] | |
| 2.25 | 0 | 0 | 0 |
| 2.50 | 0 | 0 | 0 |
| 2.75 | 0 | 0 | 0 |
| 3.00 | 0 | 0 | 0 |
| 3.25 | 0 | 0 | 0 |
| 3.50 | 0 | 0 | 0 |
| 3.75 | 0.02 | 0.01 | 0.01 |
| 4.00 | 0.03 | 0.03 | 0.02 |
| 4.25 | 0.16 | 0.04 | 0.13 |
| 4.50 | 0.2[illegible] | 0.[illegible] | 0.14 |
| 4.75 | 0.27 | [illegible] | 0.[illegible] |
| 5.00 | 0.36 | [illegible] | 0.27 |
| 5.25 | 0.[illegible] | 0.[illegible] | 0.3[illegible] |
| 5.50 | 0.50 | 0.[illegible] | 0.45 |
| 5.75 | 0.74 | 0.[illegible] | 0.63 |
| 6.00 | 0.97 | 0.[illegible] | 0.92 |
| 6.25 | 1.00 | 0.[illegible] | 0.73 |
| 6.50 | 1.[illegible]7 | 0.30 | 0.84 |
| 6.75 | 1.32 | 0.37 | 0.95 |
| 7.00 | 1.52 | 0.5[illegible] | 1.01 |
| 7.25 | 1.74 | 0.63 | 1.16 |
| 7.50 | 1.93 | 0.72 | 1.26 |
| 7.75 | 2.20 | 0.79 | 1.41 |
| 8.00 | 2.41 | 0.93 | 1.48 |
| 8.25 | 2.60 | 1.00 | 1.60 |
| 8.50 | 2.94 | 1.09 | 1.75 |
| 8.75 | 3.12 | 1.27 | 1.85 |
| 9.00 | 3.42 | 1.45 | 1.97 |
| 9.25 | 3.73 | 1.63 | 2.10 |
| 9.50 | 4.03 | 1.81 | 2.27 |
| 9.75 | 4.23 | 2.01 | 2.43 |
| 10.00 | 4.36 | 2.23 | 2.53 |

**Golder Associates**

SUBJECT 6PN- Proposed Outflow- 100 yr Storm

Job No. 903-6400.912 | Made by VET | Date 3-21-92

Ref. BRT-100% RTC | Checked [illegible] | Sheet [illegible] of [illegible]

Reviewed [illegible]

| Time (hr) | Total Outflow (cfs) | Created Wetland Outflow (cfs) | West Branch of the Abiyona River Outflow (cfs) |
|---|---|---|---|
| 10.25 | 5.46 | 2.56 | 2.90 |
| 10.50 | 6.03 | 2.89 | 3.14 |
| 10.75 | 6.70 | 3.26 | 3.44 |
| 11.00 | 7.44 | 3.78 | 3.66 |
| 11.25 | 8.46 | 4.50 | 3.96 |
| 11.50 | 10.76 | 5.26 | 5.50 |
| 11.75 | 13.69 | 6.4[illegible] | 7.27 |
| 12.00 | 18.[illegible] | 8.55 | 9.39 |
| 12.25 | 23.[illegible] | 13.53 | [illegible] |
| 12.50 | [illegible] | 19.50 | 21.79 |
| 12.75 | 43.24 | 22.33 | 25.21 |
| 13.00 | 51.53 | 24.43 | 27.10 |
| 13.25 | 53.70 | 25.80 | 27.90 |
| 13.50 | 54.[illegible] | 26.43 | 28.51 |
| 13.75 | 55.27 | 26.82 | 29.15 |
| 14.00 | 56.37 | 27.50 | 29.37 |
| 14.25 | [illegible] | 27.34 | 29.76 |
| 14.50 | 59.[illegible] | 28.18 | 30.03 |
| 14.75 | [illegible] | 28.52 | 30.[illegible] |
| 15.00 | 58.93 | 28.52 | 30.34 |
| 15.25 | 58.17 | 28.52 | 30.45 |
| 15.50 | 58.93 | 28.52 | 30.46 |
| 15.75 | 58.93 | 28.52 | 30.46 |
| 16.00 | 58.[illegible] | 28.52 | 30.33 |
| 16.25 | 58.[illegible] | 28.52 | 30.13 |
| 16.50 | 58.36 | 28.13 | 30.13 |
| 16.75 | 58.11 | 28.13 | 29.93 |
| 17.00 | 57.33 | 27.84 | 29.[illegible] |
| 17.25 | 57.50 | 27.84 | 29.[illegible] |
| 17.50 | 57.06 | 27.50 | 29.56 |
| 17.75 | 56.51 | 27.16 | 29.35 |
| 18.00 | 55.93 | 26.82 | 29.16 |
| 18.25 | 55.45 | 26.82 | 28.63 |
| 18.50 | 55.01 | 26.48 | 28.53 |
| 18.75 | 54.43 | 26.14 | 28.34 |
| 19.00 | 53.86 | 25.80 | 28.06 |
| 19.25 | 53.26 | 25.47 | 27.79 |
| 19.50 | 52.63 | 25.14 | 27.54 |
| 19.75 | 52.12 | 24.81 | 27.31 |
| 20.00 | 51.57 | 24.48 | 27.09 |

**Golder Associates**

| | | |
|---|---|---|
| SUBJECT 6PN - Proposed Outflow - [illegible] | | |
| Job No. 903-6400.912 | Made by VET | Date 3-21-92 |
| Ref. BRT-100% RTC | Checked [illegible] | Sheet 4 of [illegible] |
| | Reviewed [illegible] | |

| Time (hr) | Total Outflow (cfs) | Created Wetland Outflow (cfs) | West Branch of the Abeinona River Outflow (cfs) |
|---|---|---|---|
| 20.25 | 51.02 | 24.48 | 26.54 |
| 20.50 | 50.40 | 24.15 | 26.25 |
| 20.75 | 49.79 | 23.82 | 25.97 |
| 21.00 | 49.21 | 23.49 | 25.72 |
| 21.25 | 48.64 | 23.16 | 25.49 |
| 21.50 | 48.08 | 22.83 | 25.25 |
| 21.75 | 47.54 | 22.50 | 25.04 |
| 22.00 | 47.01 | [illegible] | 24.81 |
| 22.25 | [illegible] | [illegible] | 24.60 |
| 22.50 | [illegible] | 21.60 | 24.33 |
| 22.75 | [illegible] | 21.60 | 23.87 |
| 23.00 | [illegible] | 21.30 | 23.66 |
| 23.25 | [illegible] | 21.00 | 23.36 |
| 23.50 | [illegible] | 20.70 | 23.09 |
| 23.75 | [illegible] | 20.40 | 22.82 |
| 24.00 | [illegible] | 20.10 | 22.57 |

| Golder Associates | SUBJECT POND 2 STORAGE VS ELEVATION | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEF<br>Checked CRW<br>Reviewed | Date 5-19-92<br>Sheet 1 of 1 |

The following page estabishes the storage vs. elevation relationship in POND2. This relationship was calculated 3-21-92 by VEF (see Appendix 10-E, Storage vs. Elevation Relationships) for the creation wetland.

POND-2 Version: 5.16
S/N: 1295130217

MITIGATION AREA

CALCULATED 04-28-1992 11:57:11
DISK FILE: c:\isrt\MA .VOL

Planimeter scale: 1 inch = 50 ft.

| Elevation (ft) | Planimeter (sq.in.) | Area (acres) | A1+A2+sqr(A1*A2) (acres) | * Volume (acre-ft) | Volume Sum (acre-ft) |
|---|---|---|---|---|---|
| 67.00 | 13.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| 68.00 | 34.50 | 1.98 | 3.94 | 1.31 | 1.31 |
| 69.00 | 51.40 | 2.95 | 7.35 | 2.45 | 3.76 |
| 71.00 | 60.30 | 3.46 | 9.61 | 6.40 | 10.17 |
| 73.00 | 66.90 | 3.84 | 10.95 | 7.30 | 17.46 |

IA = (sq.rt(Area1) + ((Ei-E1)/(E2-E1))*(sq.rt(Area2)-sq.rt(Area1)))$^2$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1,Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

| Golder Associates | SUBJECT POND2 - Inflow Hydrographs | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RK | Made by UE7<br>Checked cem<br>Reviewed | Date 5-19-92<br>Sheet of |

The following three pages show the addition of the inflow hydrographs to Creation Wetland. These hydrographs were generated in HEC-1 and POND2.

CW = Inflows to Creation Wetland from Wetland 1C. (POND2)

6P3 = Inflows from Subwatershed 6P3. (Appendix 10-E)

MA = Addition of CW and 6PS

Executed 04-10-1992 06:52:37

Data directory: c:\ISRT*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | RC100 (cfs) | 6PS100 (cfs) | MA100 (Total) |
|---|---|---|---|
| 0.00 | 0.0 | 0.0 | 0.0 |
| 0.25 | 0.0 | 0.0 | 0.0 |
| 0.50 | 0.0 | 0.0 | 0.0 |
| 0.75 | 0.0 | 0.0 | 0.0 |
| 1.00 | 0.0 | 0.0 | 0.0 |
| 1.25 | 0.0 | 0.0 | 0.0 |
| 1.50 | 0.0 | 0.0 | 0.0 |
| 1.75 | 0.0 | 0.0 | 0.0 |
| 2.00 | 0.0 | 0.0 | 0.0 |
| 2.25 | 0.0 | 0.0 | 0.0 |
| 2.50 | 0.0 | 0.0 | 0.0 |
| 2.75 | 0.0 | 0.0 | 0.0 |
| 3.00 | 0.0 | 0.0 | 0.0 |
| 3.25 | 0.0 | 0.0 | 0.0 |
| 3.50 | 0.0 | 0.0 | 0.0 |
| 3.75 | 0.0 | 0.0 | 0.0 |
| 4.00 | 0.0 | 0.0 | 0.0 |
| 4.25 | 0.0 | 0.0 | 0.0 |
| 4.50 | 0.1 | 0.0 | 0.1 |
| 4.75 | 0.1 | 0.0 | 0.1 |
| 5.00 | 0.1 | 0.0 | 0.1 |
| 5.25 | 0.1 | 0.0 | 0.1 |
| 5.50 | 0.2 | 0.0 | 0.2 |
| 5.75 | 0.2 | 0.0 | 0.2 |
| 6.00 | 0.2 | 0.0 | 0.2 |
| 6.25 | 0.3 | 0.0 | 0.3 |
| 6.50 | 0.3 | 0.0 | 0.3 |
| 6.75 | 0.4 | 0.0 | 0.4 |
| 7.00 | 0.5 | 0.0 | 0.5 |
| 7.25 | 0.6 | 0.0 | 0.6 |
| 7.50 | 0.7 | 0.0 | 0.7 |
| 7.75 | 0.8 | 0.0 | 0.8 |
| 8.00 | 0.9 | 0.0 | 0.9 |
| 8.25 | 1.0 | 0.0 | 1.0 |
| 8.50 | 1.1 | 0.0 | 1.1 |
| 8.75 | 1.3 | 0.0 | 1.3 |
| 9.00 | 1.5 | 0.0 | 1.5 |
| 9.25 | 1.6 | 1.0 | 2.6 |
| 9.50 | 1.8 | 1.0 | 2.8 |
| 9.75 | 2.0 | 1.0 | 3.0 |

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Data directory: c:\ISRT*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | RC100 (cfs) | 6PS100 (cfs) | MA100 (Total) |
|---|---|---|---|
| 10.00 | 2.2 | 1.0 | 3.2 |
| 10.25 | 2.6 | 1.0 | 3.6 |
| 10.50 | 2.9 | 1.0 | 3.9 |
| 10.75 | 3.3 | 2.0 | 5.3 |
| 11.00 | 3.8 | 2.0 | 5.8 |
| 11.25 | 4.3 | 3.0 | 7.3 |
| 11.50 | 5.3 | 4.0 | 9.3 |
| 11.75 | 6.4 | 6.0 | 12.4 |
| 12.00 | 8.6 | 12.0 | 20.5 |
| 12.25 | 13.4 | 30.0 | 43.4 |
| 12.50 | 19.5 | 19.0 | 38.5 |
| 12.75 | 22.8 | 11.0 | 33.8 |
| 13.00 | 24.5 | 7.0 | 31.5 |
| 13.25 | 25.8 | 5.0 | 30.8 |
| 13.50 | 26.5 | 4.0 | 30.5 |
| 13.75 | 26.8 | 3.0 | 29.8 |
| 14.00 | 27.5 | 3.0 | 30.5 |
| 14.25 | 27.8 | 3.0 | 30.8 |
| 14.50 | 28.2 | 3.0 | 31.2 |
| 14.75 | 28.5 | 2.0 | 30.5 |
| 15.00 | 28.5 | 2.0 | 30.5 |
| 15.25 | 28.5 | 2.0 | 30.5 |
| 15.50 | 28.5 | 2.0 | 30.5 |
| 15.75 | 28.5 | 2.0 | 30.5 |
| 16.00 | 28.5 | 2.0 | 30.5 |
| 16.25 | 28.5 | 2.0 | 30.5 |
| 16.50 | 28.2 | 1.0 | 29.2 |
| 16.75 | 28.2 | 1.0 | 29.2 |
| 17.00 | 27.8 | 1.0 | 28.8 |
| 17.25 | 27.8 | 1.0 | 28.8 |
| 17.50 | 27.5 | 1.0 | 28.5 |
| 17.75 | 27.2 | 1.0 | 28.2 |
| 18.00 | 26.8 | 1.0 | 27.8 |
| 18.25 | 26.8 | 1.0 | 27.8 |
| 18.50 | 26.5 | 1.0 | 27.5 |
| 18.75 | 26.1 | 1.0 | 27.1 |
| 19.00 | 25.8 | 1.0 | 26.8 |
| 19.25 | 25.5 | 1.0 | 26.5 |
| 19.50 | 25.1 | 1.0 | 26.1 |
| 19.75 | 24.8 | 1.0 | 25.8 |
| 20.00 | 24.5 | 1.0 | 25.5 |

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Data directory: c:\ISRT*.HYD

File Summary for Composite Hydrograph

| Time (hrs) | RC100 (cfs) | 6PS100 (cfs) | MA100 (Total) |
|---|---|---|---|
| 20.25 | 24.5 | 1.0 | 25.5 |
| 20.50 | 24.1 | 1.0 | 25.1 |
| 20.75 | 23.8 | 1.0 | 24.8 |
| 21.00 | 23.5 | 1.0 | 24.5 |
| 21.25 | 23.2 | 1.0 | 24.2 |
| 21.50 | 22.8 | 1.0 | 23.8 |
| 21.75 | 22.5 | 1.0 | 23.5 |
| 22.00 | 22.2 | 1.0 | 23.2 |
| 22.25 | 21.9 | 1.0 | 22.9 |
| 22.50 | 21.6 | 1.0 | 22.6 |
| 22.75 | 21.6 | 1.0 | 22.6 |
| 23.00 | 21.3 | 1.0 | 22.3 |
| 23.25 | 21.0 | 1.0 | 22.0 |
| 23.50 | 20.7 | 1.0 | 21.7 |
| 23.75 | 20.4 | 1.0 | 21.4 |
| 24.00 | 20.1 | 1.0 | 21.1 |

POND-2 Version: 5.16
S/N: 1295130217

MITIGATION AREA

CALCULATED 04-10-1992 06:58:27
DISK FILE: c:\ISRT\MA .VOL

Planimeter scale: 1 inch = 50 ft.

| Elevation (ft) | Planimeter (sq.in.) | Area (acres) | A1+A2+sqr(A1*A2) (acres) | * Volume (acre-ft) | Volume Sum (acre-ft) |
|---|---|---|---|---|---|
| 67.00 | 13.00 | 0.75 | 0.00 | 0.00 | 0.00 |
| 68.00 | 34.50 | 1.98 | 3.94 | 1.31 | 1.31 |
| 69.00 | 51.40 | 2.95 | 7.35 | 2.45 | 3.76 |
| 71.00 | 60.30 | 3.46 | 9.61 | 6.40 | 10.17 |
| 73.00 | 66.90 | 3.84 | 10.95 | 7.30 | 17.46 |

$$IA = (sq.rt(Area1) + ((Ei-E1)/(E2-E1))*(sq.rt(Area2)-sq.rt(Area1)))^2$$

where: E1, E2 = Closest two elevations with planimeter data
Ei = Elevation at which to interpolate area
Area1,Area2 = Areas computed for E1, E2, respectively
IA = Interpolated area for Ei

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

| Golder Associates | SUBJECT POND 2 - Rating Tables | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by UEZ<br>Checked CCM<br>Reviewed | Date 5-19-92<br>Sheet of |

The following 8 pages are the rating tables generated for the outflow structures by POND 2.

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

***** COMPOSITE OUTFLOW SUMMARY ****

| Elevation (ft) | Q (cfs) | Contributing Structures |
|---|---|---|
| 68.00 | 0.0 | 1 |
| 68.20 | 0.2 | 1 |
| 68.40 | 0.5 | 1 |
| 68.60 | 1.0 | 1 |
| 68.80 | 1.5 | 1 |
| 69.00 | 2.2 | 1 |
| 69.20 | 2.5 | 1 |
| 69.40 | 3.2 | 1 |
| 69.60 | 3.9 | 1 |
| 69.80 | 4.4 | 1 |
| 70.00 | 4.9 | 2 +1 |
| 70.20 | 5.5 | 2 +1 |
| 70.40 | 6.4 | 2 +1 |
| 70.60 | 7.4 | 2 +1 |
| 70.80 | 8.7 | 2 +1 |
| 71.00 | 9.9 | 2 +1 |
| 71.20 | 11.3 | 2 +1 |
| 71.40 | 12.7 | 2 +1 |
| 71.60 | 13.4 | 2 +1 |
| 71.80 | 14.8 | 2 +1 |
| 72.00 | 16.5 | 3 +2 +1 |
| 72.20 | 22.1 | 3 +2 +1 |
| 72.40 | 31.2 | 3 +2 +1 |
| 72.60 | 42.3 | 3 +2 +1 |
| 72.80 | 55.1 | 3 +2 +1 |
| 73.00 | 46.8 | 3 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outlet Structure File: c:\ISRT\MA .STR
Planimeter Input File: c:\ISRT\MA .VOL
Rating Table Output File: c:\ISRT\MA .PND

Min. Elev.(ft) = 68 Max. Elev.(ft) = 73 Incr.(ft) = .2

Additional elevations (ft) to be included in table:
* * * * * * * * * * * * * * * * * * * * * * * * * *

**********
SYSTEM CONNECTIVITY
**********

| Structure | No. | Q Table | | Q Table |
|---|---|---|---|---|
| INLET BOX | 3 | | -> | 3 |
| CULVERT-CR | 2 | | -> | 2 |
| CULVERT-CR | 1 | | -> | 1 |

Outflow rating table summary was stored in file:
c:\ISRT\MA .PND

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 3 <<<<<<
(Input Data)

INLET BOX
Weir & Orifice defined by length and area

| | |
|---|---|
| E1 elev.(ft)? | 72 |
| E2 elev.(ft)? | 73.1 |
| Crest elev.(ft)? | 72 |
| Weir length (ft)? | 18 |
| Weir coefficient? | 2.6 |
| Orifice area (sq.ft)? | 20 |
| Orifice coefficient? | 0.6 |
| Start transition elev.(ft) @ ? | |
| Transition height (ft)? | |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 2 <<<<<<
(Input Data)

CULVERT-CR
Circular Culvert (With Inlet Control)

| | |
|---|---|
| E1 elev.(ft)? | 70 |
| E2 elev.(ft)? | 73 |
| Diam. (ft)? | 1.50 |
| Inv. el.(ft)? | 70 |
| Slope (ft/ft)? | 0 |
| T1 ratio? | 1.0 |
| T2 ratio? | 1.1 |
| K Coeff.? | .519 |
| M Coeff.? | .64 |
| c Coeff.? | .0289 |
| Y Coeff.? | .9 |
| Form 1 or 2? | 2 |
| Slope factor? | -0.5 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

>>>>>> Structure No. 1 <<<<<<
(Input Data)

CULVERT-CR
Circular Culvert (With Inlet Control)

| | |
|---|---|
| E1 elev.(ft)? | 68 |
| E2 elev.(ft)? | 73 |
| Diam. (ft)? | 1.0 |
| Inv. el.(ft)? | 68 |
| Slope (ft/ft)? | 0 |
| T1 ratio? | 1.0 |
| T2 ratio? | 1.1 |
| K Coeff.? | .519 |
| M Coeff.? | .64 |
| c Coeff.? | .0289 |
| Y Coeff.? | .9 |
| Form 1 or 2? | 2 |
| Slope factor? | -0.5 |

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #3
INLET BOX Weir & Orifice defined by length and area

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages | |
|---|---|---|---|
| 68.00 | 0.0 | E < Inv.El.= 72 | |
| 68.20 | 0.0 | E < El=72 | |
| 68.40 | 0.0 | E < El=72 | |
| 68.60 | 0.0 | E < El=72 | |
| 68.80 | 0.0 | E < El=72 | |
| 69.00 | 0.0 | E < El=72 | |
| 69.20 | 0.0 | E < El=72 | |
| 69.40 | 0.0 | E < El=72 | |
| 69.60 | 0.0 | E < El=72 | |
| 69.80 | 0.0 | E < El=72 | |
| 70.00 | 0.0 | E < El=72 | |
| 70.20 | 0.0 | E < El=72 | |
| 70.40 | 0.0 | E < El=72 | |
| 70.60 | 0.0 | E < El=72 | |
| 70.80 | 0.0 | E < El=72 | |
| 71.00 | 0.0 | E < El=72 | |
| 71.20 | 0.0 | E < El=72 | |
| 71.40 | 0.0 | E < El=72 | |
| 71.60 | 0.0 | E < El=72 | |
| 71.80 | 0.0 | E < El=72 | |
| 72.00 | 0.0 | Weir: | H =0.0 |
| 72.20 | 4.2 | Weir: | H =.2 |
| 72.40 | 11.8 | Weir: | H =.4 |
| 72.60 | 21.8 | Weir: | H =.6 |
| 72.80 | 33.5 | Weir: | H =.8 |
| 73.00 | 46.8 | Weir: | H =1.0 |

Weir Cw = 2.6 Weir length = 18 ft
Orifice Co = .6 Orifice area = 20 sq.ft.
Q (cfs) = (Cw * L * H**1.5) or (Co * A * sqr(2*g*H))
No transition used, transition height = 0.0
Weir equation = Orifice equation @ elev.= 74.05769 ft

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #2
CULVERT-CR Circular Culvert (With Inlet Control)

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 68.00 | 0.0 | E < Inv.El.= 70 |
| 68.20 | 0.0 | E < Inv.El.= 70 |
| 68.40 | 0.0 | E < Inv.El.= 70 |
| 68.60 | 0.0 | E < Inv.El.= 70 |
| 68.80 | 0.0 | E < Inv.El.= 70 |
| 69.00 | 0.0 | E < Inv.El.= 70 |
| 69.20 | 0.0 | E < Inv.El.= 70 |
| 69.40 | 0.0 | E < Inv.El.= 70 |
| 69.60 | 0.0 | E < Inv.El.= 70 |
| 69.80 | 0.0 | E < Inv.El.= 70 |
| 70.00 | 0.0 | Equ.2: HW =0.0 |
| 70.20 | 0.3 | Equ.2: HW =.2 |
| 70.40 | 0.8 | Equ.2: HW =.4 |
| 70.60 | 1.4 | Equ.2: HW =.6 |
| 70.80 | 2.3 | Equ.2: HW =.8 |
| 71.00 | 3.2 | Equ.2: HW =1.0 |
| 71.20 | 4.3 | Equ.2: HW =1.2 |
| 71.40 | 5.4 | Equ.2: HW =1.4 |
| 71.60 | 5.8 | Transition: HW =1.6 |
| 71.80 | 7.0 | Submerged: HW =1.8 |
| 72.00 | 8.4 | Submerged: HW =2.0 |
| 72.20 | 9.5 | Submerged: HW =2.2 |
| 72.40 | 10.7 | Submerged: HW =2.4 |
| 72.60 | 11.6 | Submerged: HW =2.6 |
| 72.80 | 12.5 | Submerged: HW =2.8 |
| 73.00 | 0.0 | E = or > E2=73 |

Used Unsubmerged Equ. Form (2) for elev. less than 71.5 ft
Used Submerged Equation for elevations greater than 71.65 ft
HW=Headwater (ft)

Transition flows interpolated from the following values:
E1=71.5 ft; Q1=6.01 cfs; E2=71.65 ft; Q2=5.72 cfs

Outlet Structure File: MA .STR

POND-2 Version: 5.16 S/N: 1295130217
Date Executed: Time Executed:

**********
MITIGATION AREA

**********

Outflow Rating Table for Structure #1
CULVERT-CR Circular Culvert (With Inlet Control)

***** INLET CONTROL ASSUMED *****

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 68.00 | 0.0 | No headwater |
| 68.20 | 0.2 | Equ.2: HW =.2 |
| 68.40 | 0.5 | Equ.2: HW =.4 |
| 68.60 | 1.0 | Equ.2: HW =.6 |
| 68.80 | 1.5 | Equ.2: HW =.8 |
| 69.00 | 2.2 | Transition: HW =1.0 |
| 69.20 | 2.5 | Submerged: HW =1.2 |
| 69.40 | 3.2 | Submerged: HW =1.4 |
| 69.60 | 3.9 | Submerged: HW =1.6 |
| 69.80 | 4.4 | Submerged: HW =1.8 |
| 70.00 | 4.9 | Submerged: HW =2.0 |
| 70.20 | 5.3 | Submerged: HW =2.2 |
| 70.40 | 5.7 | Submerged: HW =2.4 |
| 70.60 | 6.0 | Submerged: HW =2.6 |
| 70.80 | 6.4 | Submerged: HW =2.8 |
| 71.00 | 6.7 | Submerged: HW =3.0 |
| 71.20 | 7.0 | Submerged: HW =3.2 |
| 71.40 | 7.3 | Submerged: HW =3.4 |
| 71.60 | 7.6 | Submerged: HW =3.6 |
| 71.80 | 7.9 | Submerged: HW =3.8 |
| 72.00 | 8.1 | Submerged: HW =4.0 |
| 72.20 | 8.4 | Submerged: HW =4.2 |
| 72.40 | 8.7 | Submerged: HW =4.4 |
| 72.60 | 8.9 | Submerged: HW =4.6 |
| 72.80 | 9.1 | Submerged: HW =4.8 |
| 73.00 | 0.0 | E = or > E2=73 |

Used Unsubmerged Equ. Form (2) for elev. less than 69.0 ft
Used Submerged Equation for elevations greater than 69.1 ft
HW=Headwater (ft)

Transition flows interpolated from the following values:
E1=69.0 ft; Q1=2.19 cfs; E2=69.1 ft; Q2=2.1 cfs

| Golder Associates | SUBJECT POND2 - Hydrograph Routing | | |
|---|---|---|---|
| | Job No. 903-6400<br>Ref. 100% RTC | Made by VEZ<br>Checked CMB<br>Reviewed | Date 5-19-92<br>Sheet of |

The following 6 pages showing the hydrologic routing of the storm flows through using the Storage Indication Method.

EXECUTED: 04-10-1992 06:59:59

```
*****************************
*                           *
*      MITIGATION AREA      *
*  100 yr 24 hr STORM EVENT *
*                           *
*                           *
*                           *
*****************************
```

Inflow Hydrograph: c:\ISRT\MA100 .HYD
Rating Table file: c:\ISRT\MA .PND

----INITIAL CONDITIONS----
Elevation = 68.00 ft
Outflow = 0.00 cfs
Storage = 1.31 ac-ft

| GIVEN POND DATA | | | INTERMEDIATE ROUTING COMPUTATIONS | |
|---|---|---|---|---|
| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (ac-ft) | 2S/t (cfs) | 2S/t + O (cfs) |
| 68.00 | 0.0 | 1.314 | 127.2 | 127.2 |
| 68.20 | 0.2 | 1.728 | 167.2 | 167.4 |
| 68.40 | 0.5 | 2.178 | 210.8 | 211.3 |
| 68.60 | 1.0 | 2.666 | 258.1 | 259.1 |
| 68.80 | 1.5 | 3.194 | 309.2 | 310.7 |
| 69.00 | 2.2 | 3.763 | 364.2 | 366.4 |
| 69.20 | 2.5 | 4.358 | 421.8 | 424.3 |
| 69.40 | 3.2 | 4.963 | 480.4 | 483.6 |
| 69.60 | 3.9 | 5.577 | 539.9 | 543.8 |
| 69.80 | 4.4 | 6.202 | 600.4 | 604.8 |
| 70.00 | 4.9 | 6.837 | 661.8 | 666.7 |
| 70.20 | 5.5 | 7.482 | 724.3 | 729.8 |
| 70.40 | 6.4 | 8.138 | 787.7 | 794.1 |
| 70.60 | 7.4 | 8.804 | 852.2 | 859.6 |
| 70.80 | 8.7 | 9.480 | 917.6 | 926.3 |
| 71.00 | 9.9 | 10.167 | 984.1 | 994.0 |
| 71.20 | 11.3 | 10.863 | 1051.5 | 1062.8 |
| 71.40 | 12.7 | 11.566 | 1119.6 | 1132.3 |
| 71.60 | 13.4 | 12.277 | 1188.4 | 1201.8 |
| 71.80 | 14.8 | 12.995 | 1257.9 | 1272.7 |
| 72.00 | 16.5 | 13.720 | 1328.1 | 1344.6 |
| 72.20 | 22.1 | 14.454 | 1399.1 | 1421.2 |
| 72.40 | 31.2 | 15.195 | 1470.9 | 1502.1 |
| 72.60 | 42.3 | 15.943 | 1543.3 | 1585.6 |
| 72.80 | 55.1 | 16.700 | 1616.5 | 1671.6 |
| 73.00 | 46.8 | 17.464 | 1690.5 | 1737.3 |

Time increment (t) = 0.250 hrs.

nd File: c:\ISRT\MA .PND
nflow Hydrograph: c:\ISRT\MA100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

INFLOW HYDROGRAPH

| TIME (hrs) | INFLOW (cfs) |
|---|---|
| 0.000 | 0.00 |
| 0.250 | 0.00 |
| 0.500 | 0.00 |
| 0.750 | 0.00 |
| 1.000 | 0.00 |
| 1.250 | 0.00 |
| 1.500 | 0.00 |
| 1.750 | 0.00 |
| 2.000 | 0.00 |
| 2.250 | 0.00 |
| 2.500 | 0.00 |
| 2.750 | 0.00 |
| 3.000 | 0.00 |
| 3.250 | 0.00 |
| 3.500 | 0.00 |
| 3.750 | 0.01 |
| 4.000 | 0.03 |
| 4.250 | 0.04 |
| 4.500 | 0.06 |
| 4.750 | 0.06 |
| 5.000 | 0.09 |
| 5.250 | 0.12 |
| 5.500 | 0.15 |
| 5.750 | 0.21 |
| 6.000 | 0.24 |
| 6.250 | 0.27 |
| 6.500 | 0.30 |
| 6.750 | 0.37 |
| 7.000 | 0.51 |
| 7.250 | 0.58 |
| 7.500 | 0.72 |
| 7.750 | 0.79 |
| 8.000 | 0.93 |
| 8.250 | 1.00 |
| 8.500 | 1.09 |
| 8.750 | 1.27 |
| 9.000 | 1.45 |
| 9.250 | 2.63 |
| 9.500 | 2.81 |
| 9.750 | 3.01 |
| 10.000 | 3.23 |
| 10.250 | 3.56 |
| .500 | 3.89 |
| .750 | 5.26 |
| 11.000 | 5.78 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| ----- | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.0 | 127.2 | 127.2 | 0.00 | 68.00 |
| 0.1 | 127.3 | 127.3 | 0.00 | 68.00 |
| 0.1 | 127.4 | 127.4 | 0.00 | 68.00 |
| 0.1 | 127.5 | 127.5 | 0.00 | 68.00 |
| 0.2 | 127.7 | 127.7 | 0.00 | 68.00 |
| 0.2 | 127.9 | 127.9 | 0.00 | 68.00 |
| 0.3 | 128.1 | 128.1 | 0.00 | 68.00 |
| 0.4 | 128.5 | 128.5 | 0.01 | 68.01 |
| 0.5 | 128.9 | 128.9 | 0.01 | 68.01 |
| 0.5 | 129.4 | 129.4 | 0.01 | 68.01 |
| 0.6 | 129.9 | 130.0 | 0.01 | 68.01 |
| 0.7 | 130.6 | 130.6 | 0.02 | 68.02 |
| 0.9 | 131.4 | 131.4 | 0.02 | 68.02 |
| 1.1 | 132.4 | 132.5 | 0.03 | 68.03 |
| 1.3 | 133.7 | 133.7 | 0.03 | 68.03 |
| 1.5 | 135.1 | 135.2 | 0.04 | 68.04 |
| 1.7 | 136.7 | 136.8 | 0.05 | 68.05 |
| 1.9 | 138.5 | 138.7 | 0.06 | 68.06 |
| 2.1 | 140.5 | 140.6 | 0.07 | 68.07 |
| 2.4 | 142.7 | 142.9 | 0.08 | 68.08 |
| 2.7 | 145.2 | 145.4 | 0.09 | 68.09 |
| 4.1 | 149.1 | 149.3 | 0.11 | 68.11 |
| 5.4 | 154.3 | 154.5 | 0.14 | 68.14 |
| 5.8 | 159.8 | 160.1 | 0.16 | 68.16 |
| 6.2 | 165.6 | 166.0 | 0.19 | 68.19 |
| 6.8 | 171.9 | 172.4 | 0.23 | 68.22 |
| 7.5 | 178.8 | 179.4 | 0.28 | 68.25 |
| 9.2 | 187.3 | 188.0 | 0.34 | 68.29 |
| 11.0 | 197.5 | 198.3 | 0.41 | 68.34 |

Pond File: c:\ISRT\MA .PND
Inflow Hydrograph: c:\ISRT\MA100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 11.250 | 7.30 | 13.1 | 209.6 | 210.6 | 0.50 | 68.40 |
| 11.500 | 9.26 | 16.6 | 224.9 | 226.2 | 0.66 | 68.46 |
| 11.750 | 12.41 | 21.7 | 244.8 | 246.5 | 0.87 | 68.55 |
| 12.000 | 20.55 | 33.0 | 275.4 | 277.7 | 1.18 | 68.67 |
| 12.250 | 43.38 | 63.9 | 335.6 | 339.3 | 1.86 | 68.90 |
| 12.500 | 38.50 | 81.9 | 412.5 | 417.5 | 2.46 | 69.18 |
| 12.750 | 33.83 | 72.3 | 478.4 | 484.9 | 3.22 | 69.40 |
| 13.000 | 31.48 | 65.3 | 536.0 | 543.8 | 3.90 | 69.60 |
| 13.250 | 30.80 | 62.3 | 589.5 | 598.2 | 4.35 | 69.78 |
| 13.500 | 30.48 | 61.3 | 641.3 | 650.8 | 4.77 | 69.95 |
| 13.750 | 29.82 | 60.3 | 691.1 | 701.6 | 5.23 | 70.11 |
| 14.000 | 30.50 | 60.3 | 739.8 | 751.4 | 5.80 | 70.27 |
| 14.250 | 30.84 | 61.3 | 788.2 | 801.2 | 6.51 | 70.42 |
| 14.500 | 31.18 | 62.0 | 835.7 | 850.2 | 7.26 | 70.57 |
| 14.750 | 30.52 | 61.7 | 881.1 | 897.4 | 8.14 | 70.71 |
| 15.000 | 30.52 | 61.0 | 924.2 | 942.1 | 8.98 | 70.85 |
| 15.250 | 30.52 | 61.0 | 965.7 | 985.2 | 9.74 | 70.97 |
| 15.500 | 30.52 | 61.0 | 1005.6 | 1026.8 | 10.57 | 71.10 |
| 15.750 | 30.52 | 61.0 | 1043.9 | 1066.7 | 11.38 | 71.21 |
| 16.000 | 30.52 | 61.0 | 1080.7 | 1105.0 | 12.15 | 71.32 |
| 16.250 | 30.52 | 61.0 | 1116.1 | 1141.7 | 12.79 | 71.43 |
| 16.500 | 29.18 | 59.7 | 1149.5 | 1175.8 | 13.14 | 71.53 |
| 16.750 | 29.18 | 58.4 | 1180.8 | 1207.9 | 13.52 | 71.62 |
| 17.000 | 28.84 | 58.0 | 1210.6 | 1238.9 | 14.13 | 71.70 |
| 17.250 | 28.84 | 57.7 | 1238.9 | 1268.3 | 14.71 | 71.79 |
| 17.500 | 28.50 | 57.3 | 1265.5 | 1296.2 | 15.36 | 71.87 |
| 17.750 | 28.16 | 56.7 | 1290.2 | 1322.1 | 15.97 | 71.94 |
| 18.000 | 27.82 | 56.0 | 1313.0 | 1346.2 | 16.61 | 72.00 |
| 18.250 | 27.82 | 55.6 | 1332.1 | 1368.6 | 18.25 | 72.06 |
| 18.500 | 27.48 | 55.3 | 1348.1 | 1387.4 | 19.63 | 72.11 |
| 18.750 | 27.14 | 54.6 | 1361.3 | 1402.8 | 20.75 | 72.15 |
| 19.000 | 26.80 | 53.9 | 1371.9 | 1415.2 | 21.66 | 72.18 |
| 19.250 | 26.47 | 53.3 | 1380.1 | 1425.2 | 22.54 | 72.21 |
| 19.500 | 26.14 | 52.6 | 1385.9 | 1432.7 | 23.39 | 72.23 |
| 19.750 | 25.81 | 52.0 | 1389.9 | 1437.9 | 23.97 | 72.24 |
| 20.000 | 25.48 | 51.3 | 1392.5 | 1441.2 | 24.35 | 72.25 |
| 20.250 | 25.48 | 51.0 | 1394.3 | 1443.5 | 24.60 | 72.26 |
| 20.500 | 25.15 | 50.6 | 1395.4 | 1444.9 | 24.76 | 72.26 |
| 20.750 | 24.82 | 50.0 | 1395.7 | 1445.3 | 24.81 | 72.26 |
| 21.000 | 24.49 | 49.3 | 1395.5 | 1445.0 | 24.78 | 72.26 |
| 21.250 | 24.16 | 48.7 | 1394.8 | 1444.1 | 24.68 | 72.26 |
| 21.500 | 23.83 | 48.0 | 1393.7 | 1442.7 | 24.52 | 72.25 |
| 21.750 | 23.50 | 47.3 | 1392.4 | 1441.0 | 24.33 | 72.25 |
| 22.000 | 23.20 | 46.7 | 1390.9 | 1439.1 | 24.11 | 72.24 |
| 22.250 | 22.90 | 46.1 | 1389.2 | 1437.0 | 23.87 | 72.24 |
| 22.500 | 22.60 | 45.5 | 1387.5 | 1434.7 | 23.62 | 72.23 |

nd File: c:\ISRT\MA .PND
Inflow Hydrograph: c:\ISRT\MA100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

| INFLOW HYDROGRAPH | | ROUTING COMPUTATIONS | | | | |
|---|---|---|---|---|---|---|
| TIME (hrs) | INFLOW (cfs) | I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
| 22.750 | 22.60 | 45.2 | 1385.9 | 1432.7 | 23.39 | 72.23 |
| 23.000 | 22.30 | 44.9 | 1384.4 | 1430.8 | 23.18 | 72.22 |
| 23.250 | 22.00 | 44.3 | 1382.9 | 1428.7 | 22.95 | 72.22 |
| 23.500 | 21.70 | 43.7 | 1381.2 | 1426.6 | 22.70 | 72.21 |
| 23.750 | 21.40 | 43.1 | 1379.4 | 1424.3 | 22.44 | 72.21 |
| 24.000 | 21.10 | 42.5 | 1377.5 | 1421.9 | 22.17 | 72.20 |

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: c:\ISRT\MA .PND
Inflow Hydrograph: c:\ISRT\MA100 .HYD
Outflow Hydrograph: c:\ISRT\OUT .HYD

Starting Pond W.S. Elevation = 68.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 43.38 cfs
Peak Outflow = 24.81 cfs
Peak Elevation = 72.26 ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 1.31 ac-ft
Peak Storage From Storm = 13.36 ac-ft
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Total Storage in Pond = 14.67 ac-ft

Warning: Inflow hydrograph truncated on right side.