

CHINA GROVE, N.C.  
STREAM 9-1CG  
EAST CENTERVIEW BRANCH

[illegible]

PROGRAMMER=KEZIAN

ACCOUNT=RTI.A25.P03079

| JOB TURN-AROUND         |         |            | JOB PARAMETERS |           | TIME USED INCLUDES |                  | MISC. JOB VALUES |                        |
|-------------------------|---------|------------|----------------|-----------|--------------------|------------------|------------------|------------------------|
|                         | DATE    | TIME       |                | SPECIFIED | USED               | NO.              | EQUIVALENT       |                        |
| ENTERED                 | 7/07/77 | 10:43:16.0 | TIME           | 2:00.0    | 0:16.7             | CPU              | 0:05.3           | LINES IN 92            |
| EXECUTED                | 7/07/77 | 10:44:43.8 | PAGES          | 100       | 24                 | OR EXCPS         | 1381 0:05.5      | LINES OUT 1019         |
| RETURNED                | 7/07/77 | 10:45:08.9 | CARDS          | 0         | 0                  | DISK EXCPS       | 295 0:05.9       | MEMORY TIME 8370 K-SEC |
| JOB ENTERED ON THURSDAY |         |            | PLOTS          | 0         | 0                  | TAPE READ-WRITE  | 0:00.0           | PRIORITY 02            |
|                         |         |            |                |           |                    | TAPE FILE SEARCH | 0:00.0           | APPROX. COST \$7.36    |

## J O B C O N S O L E L O G

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9 10.44.12 JCL      9 -- R*AKC1      -- JCL INTERPRETED, TUCC CPU #2
9 10.44.43 JCL      9 -- R*AKC1      -- BEGINNING EXEC - INIT 1 - CLASS
L*10.44.43 JCL      9 ++++S=0~A.T=02,J=R*AKC1      10:44:43 KEZIAH
9 10.44.45 JCL      9 END EXECUTION.

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 HEC2 VERSION UPDATED JAN 1975  
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08  
 MODIFICATIONS 52,53,54,55,56,57,58  
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I1 CHINA GROVE-ROWAN CO. BASIN A STRM 9-1CG  
 I2 FLOODPLAIN STUDY AT ROWAN & DAVIDSON COUNTIES M-G JOB NO. 6918  
 I3 10 YEAR FLOOD WATER SURFACE PROFILE

| J1 | ICHECK   | IND      | NINV     | IDIR     | STRT     | METRIC   | HVINS    | Q        | WSEL     | FO       |
|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|    | -1.      | 2.       | 0.       | 0.       | 0.036000 | 0.0      | 0.0      | 0.       | 694.100  | 0.0      |
| J2 | IPROF    | IPLOT    | PREVS    | XSECV    | XSECH    | FN       | ALLDC    | IBW      | CHN1M    | ITRACE   |
|    | 0.0      | 0.0      | -1.000   | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      |
| J3 | 1.000    | 34.000   | 3.000    | 4.000    | 27.000   | 28.000   | 26.000   | 0.0      | 0.0      | 0.0      |
| NC | 0.100    | 0.100    | 0.080    | 0.100    | 0.300    | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      |
| QT | 5.000    | 329.000  | 620.000  | 774.000  | 1153.000 | 774.000  | 0.0      | 0.0      | 0.0      | 0.0      |
| ET | 5.000    | 0.0      | 0.0      | 0.0      | 0.0      | -10.400  | 0.0      | 0.0      | 0.0      | 0.0      |
| X1 | 625.000  | 13.000   | 1450.000 | 1472.000 | 625.000  | 625.000  | 625.000  | 0.0      | 0.0      | 0.0      |
| GR | 695.700  | 1000.000 | 694.100  | 1100.000 | 693.500  | 1200.000 | 695.600  | 1300.000 | 695.000  | 1400.000 |
| GR | 695.800  | 1450.000 | 689.200  | 1458.000 | 689.100  | 1463.000 | 689.200  | 1468.000 | 696.100  | 1472.000 |
| GR | 696.800  | 1500.000 | 703.400  | 1600.000 | 711.700  | 1660.000 | 0.0      | 0.0      | 0.0      | 0.0      |
| NC | 0.055    | 0.055    | 0.055    | 0.100    | 0.300    | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      |
| QT | 5.000    | 226.000  | 426.000  | 536.000  | 807.000  | 536.000  | 0.0      | 0.0      | 0.0      | 0.0      |
| X1 | 4125.000 | 9.000    | 1100.000 | 1120.000 | 3500.000 | 3500.000 | 3500.000 | 0.0      | 0.0      | 0.0      |
| GR | 761.300  | 1000.000 | 745.500  | 1100.000 | 738.900  | 1102.000 | 738.700  | 1105.000 | 738.900  | 1108.000 |
| GR | 742.600  | 1120.000 | 742.800  | 1200.000 | 754.900  | 1300.000 | 761.300  | 1330.000 | 0.0      | 0.0      |
| X1 | 4175.000 | 0.0      | 0.0      | 0.0      | 50.000   | 50.000   | 50.000   | 0.0      | 0.500    | 0.0      |
| NC | 0.025    | 0.025    | 0.025    | 0.100    | 0.300    | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      |
| X1 | 4225.000 | 19.000   | 1787.500 | 1792.500 | 50.000   | 50.000   | 50.000   | 0.0      | 0.0      | 0.0      |
| GR | 770.200  | 1000.000 | 774.800  | 1100.000 | 770.500  | 1200.000 | 766.700  | 1300.000 | 763.400  | 1400.000 |
| GR | 761.300  | 1500.000 | 760.700  | 1600.000 | 760.600  | 1697.000 | 746.400  | 1785.000 | 743.500  | 1787.500 |
| GR | 739.600  | 1787.500 | 739.600  | 1792.500 | 743.500  | 1792.500 | 743.500  | 1805.000 | 743.700  | 1885.000 |
| GR | 755.800  | 1985.000 | 762.200  | 2015.000 | 775.100  | 2100.000 | 779.300  | 2200.000 | 0.0      | 0.0      |
| SB | 0.900    | 1.500    | 2.500    | 0.0      | 5.000    | 0.010    | 27.500   | 0.0      | 0.0      | 0.0      |
| X1 | 4415.000 | 0.0      | 0.0      | 0.0      | 190.000  | 190.000  | 190.000  | 0.0      | 0.0      | 0.0      |
| X2 | 0.0      | 0.0      | 1.000    | 745.000  | 760.500  | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      |
| SI | 15.000   | 1000.000 | 773.200  | 0.0      | 1100.000 | 774.800  | 0.0      | 1200.000 | 770.500  | 0.0      |
| BT | 1300.000 | 766.700  | 0.0      | 1400.000 | 763.400  | 0.0      | 1500.000 | 761.300  | 0.0      | 1600.000 |
| BT | 760.700  | 0.0      | 1700.000 | 760.500  | 0.0      | 1787.500 | 763.100  | 745.000  | 1792.500 | 763.100  |
| BT | 745.000  | 1800.000 | 763.000  | 0.0      | 1900.000 | 766.700  | 0.0      | 2000.000 | 771.000  | 0.0      |
| BT | 2100.000 | 775.100  | 0.0      | 2200.000 | 779.300  | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      |
| NC | 0.055    | 0.055    | 0.055    | 0.100    | 0.300    | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      |
| X1 | 4465.000 | 9.000    | 1100.000 | 1120.000 | 50.000   | 50.000   | 50.000   | 0.0      | 0.900    | 0.0      |
| GR | 761.300  | 1000.000 | 745.500  | 1100.000 | 738.900  | 1102.000 | 738.700  | 1105.000 | 738.900  | 1108.000 |
| GR | 742.600  | 1120.000 | 742.800  | 1200.000 | 754.900  | 1300.000 | 761.300  | 1330.000 | 0.0      | 0.0      |

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 HEC2 VERSION UPDATED JAN 1975  
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08  
 MODIFICATIONS 52,53,54,55,56,57,58  
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T1 CHINA GROVE-ROWAN CO. BASIN A STRM 9-1CG  
 T2 FLOODPLAIN STUDY AT ROWAN & DAVIDSON COUNTIES M-6 JOB NO. 6918  
 T3 50 YEAR FLOOD WATER SURFACE PROFILE

| J1 | ICHECK | INO | NINV | IDIR | STRT     | METRIC | HVINS | Q  | WSEL    | FO  |
|----|--------|-----|------|------|----------|--------|-------|----|---------|-----|
|    | -10.   | 3.  | 0.   | 0.   | 0.036000 | 0.0    | 0.0   | 0. | 695.100 | 0.0 |

  

| J2 | NPROF | IPLOT | PREVS  | XSECV | XSECH | FN  | ALLDC | IBW | CHNIM | ITRACE |
|----|-------|-------|--------|-------|-------|-----|-------|-----|-------|--------|
|    | 2.000 | 0.0   | -1.000 | 0.0   | 0.0   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0    |

CCHV= 0.100 CEHV= 0.300

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

| SECNO    | DEPTH | CWSEL  | CRIS   | WSELK  | EG     | HV    | HL    | QLOSS  | BANK ELEV  |
|----------|-------|--------|--------|--------|--------|-------|-------|--------|------------|
| Q        | QLOB  | ACH    | QROB   | ALOB   | ACH    | AROB  | VOL   | TWA    | LEFT/RIGHT |
| TIME     | VLOB  | VCH    | VROB   | XNL    | XNCH   | XNR   | WTN   | ELMIN  | SSTA       |
| SLOPE    | XLOBL | XLCH   | XLOBR  | ITRIAL | IDC    | ICONT | CORAR | TOPWID | ENDST      |
| 625.00   | 5.29  | 694.39 | 694.39 | 695.10 | 694.93 | 0.54  | 0.0   | 0.0    | 696.80     |
| 620.     | 131.  | 489.   | 0.     | 81.    | 74.    | 0.    | 0.    | 0.     | 696.10     |
| 0.0      | 1.62  | 6.56   | 0.0    | 0.100  | 0.080  | 0.100 | 0.0   | 689.10 | 1081.58    |
| 0.026880 | 625.  | 625.   | 625.   | 0      | 12     | 1     | 0.0   | 179.49 | 1471.01    |

CCHV= 0.100 CEHV= 0.300

|          |       |        |        |       |        |       |       |        |         |
|----------|-------|--------|--------|-------|--------|-------|-------|--------|---------|
| 4125.00  | 4.44  | 743.14 | 743.12 | 0.0   | 743.74 | 0.60  | 48.79 | 0.02   | 745.50  |
| 420.     | 0.    | 376.   | 48.    | 0.    | 58.    | 35.   | 10.   | 11.    | 742.60  |
| 0.16     | 0.0   | 6.57   | 1.32   | 0.055 | 0.035  | 0.055 | 0.035 | 739.70 | 1100.71 |
| 0.007036 | 3500. | 3500.  | 3500.  | 14    | 9      | 1     | 0.0   | 102.16 | 1202.87 |

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

| SECNO | DEPTH | CWSEL | CRIS  | WSELK  | EG   | HV    | HL    | QLOSS  | BANK ELEV  |
|-------|-------|-------|-------|--------|------|-------|-------|--------|------------|
| Q     | QLOB  | ACH   | QROB  | ALOB   | ACH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| TIME  | VLOB  | VCH   | VROB  | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA       |
| SLOPE | XLOBL | XLCH  | XLOBR | ITRIAL | IDC  | ICONT | CORAR | TOPWID | ENDST      |

|          |      |        |      |       |        |       |       |        |         |
|----------|------|--------|------|-------|--------|-------|-------|--------|---------|
| 3470.00  | 4.34 | 160.14 | 0.0  | 0.0   | 100.00 | 0.72  | 5.32  | 0.02   | 160.10  |
| 255.     | 78.  | 155.   | 22.  | 25.   | 18.    | 8.    | 13.   | 14.    | 765.10  |
| 0.25     | 3.17 | 8.39   | 2.90 | 0.055 | 0.035  | 0.055 | 0.034 | 763.80 | 1329.76 |
| 0.008079 | 518. | 518.   | 518. | 4     | 0      | 1     | 0.0   | 26.30  | 1356.06 |

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 HEC2 VERSION UPDATED JAN 1975  
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 MODIFICATIONS 52,53,54,55,56,57,58  
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T1 CHINA GROVE-ROWAN CO. BASIN A STRM 9-1CG  
 T2 FLOODPLAIN STUDY AT ROWAN & DAVIDSON COUNTIES M-G JOB NO. 6918  
 T3 100 YEAR FLOOD WATER SURFACE PROFILE

|    |        |       |        |       |          |        |       |     |         |        |
|----|--------|-------|--------|-------|----------|--------|-------|-----|---------|--------|
| J1 | ICHECK | ING   | NINV   | IDIR  | STRT     | METRIC | HVINS | Q   | WSEL    | FG     |
|    | -10.   | 4.    | 0.     | 0.    | 0.036000 | 0.0    | 0.0   | 0.  | 697.100 | 0.0    |
| J2 | NPROF  | IPLOT | PREVS  | XSECV | XSECH    | FN     | ALLOC | IBW | CHNIM   | ITRACE |
|    | 3.000  | 0.0   | -1.000 | 0.0   | 0.0      | 0.0    | 0.0   | 0.0 | 0.0     | 0.0    |

CCHV= 0.100 CEHV= 0.300

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

| SECNO    | DEPTH | CWSEL  | CRISW  | WSELK  | EG     | HV    | HL    | QLOSS  | BANK ELEV  |
|----------|-------|--------|--------|--------|--------|-------|-------|--------|------------|
| Q        | QLOB  | QCH    | QROB   | ALOB   | ACH    | AROB  | VOL   | TWA    | LEFT/RIGHT |
| TIME     | VLOB  | VCH    | VROB   | XNL    | XNCH   | XNR   | WTN   | ELMIN  | SSTA       |
| SLOPE    | XLOBL | XLCH   | XLOBR  | ITRIAL | IDC    | ICONT | CORAR | TOPWID | ENDST      |
| 625.00   | 5.55  | 694.65 | 694.65 | 697.10 | 695.14 | 0.49  | 0.0   | 0.0    | 696.80     |
| 774.     | 243.  | 529.   | 0.     | 125.   | 79.    | 0.    | 0.    | 0.     | 696.10     |
| 0.0      | 1.96  | 6.68   | 0.0    | 0.100  | 0.080  | 0.100 | 0.0   | 659.10 | 1065.87    |
| 0.026625 | 625.  | 625.   | 625.   | 0      | 15     | 1     | 0.0   | 207.59 | 1471.16    |

CCHV= 0.100 CEHV= 0.300

|          |       |        |        |       |        |       |       |        |         |
|----------|-------|--------|--------|-------|--------|-------|-------|--------|---------|
| 4125.00  | 4.70  | 743.40 | 743.37 | 0.0   | 744.01 | 0.61  | 48.84 | 0.04   | 745.50  |
| 536.     | 0.    | 433.   | 103.   | 0.    | 63.    | 58.   | 13.   | 13.    | 742.60  |
| 0.16     | 0.0   | 6.93   | 1.78   | 0.055 | 0.035  | 0.055 | 0.035 | 738.70 | 1100.64 |
| 0.007134 | 3500. | 3500.  | 3500.  | 14    | 9      | 1     | 0.0   | 104.34 | 1204.98 |

3685 20 TRIALS USED WSEL,CWSEL

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

| SECNO | DEPTH | CWSEL | CRISW | WSELK  | EG   | HV    | HL    | QLOSS  | BANK ELEV  |
|-------|-------|-------|-------|--------|------|-------|-------|--------|------------|
| Q     | QLOB  | QCH   | QROB  | ALOB   | ACH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| TIME  | VLOB  | VCH   | VROB  | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA       |
| SLOPE | XLOBL | XLCH  | XLOBR | ITRIAL | IDC  | ICONT | CORAR | TOPWID | ENDST      |

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 HEC2 VERSION UPDATED JAN 1975  
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I1 CHINA GROVE-ROWAN CO. BASIN A STRM 9-1CG  
 I2 FLOODPLAIN STUDY AT ROWAN & DAVIDSON COUNTIES M-G JOB NO. 6918  
 I3 500 YEAR FLOOD WATER SURFACE PROFILE

| J1 | ICHECK | INO | NINV | IDIR | STRT     | METRIC | HVINS | Q  | WSEL    | EQ  |
|----|--------|-----|------|------|----------|--------|-------|----|---------|-----|
|    | -10.   | 5.  | 0.   | 0.   | 0.036000 | 0.0    | 0.0   | 0. | 698.100 | 0.0 |

  

| J2 | NPROF  | IPL0T | PRFVS  | XSECV | XSECH | FN  | ALLDC | IBW | CHNIM | ITRACE |
|----|--------|-------|--------|-------|-------|-----|-------|-----|-------|--------|
|    | 15.000 | 0.0   | -1.000 | 0.0   | 0.0   | 0.0 | 0.0   | 0.0 | 0.0   | 0.0    |

CCHV= 0.100 CEHV= 0.300

3720 ASSUMED CRITICAL DEPTH

3265 DIVIDED FLOW

| SECNO    | DEPTH | CWSEL  | CRWS   | WSELK  | EG     | HV    | HL    | QLOSS  | BANK ELEV  |
|----------|-------|--------|--------|--------|--------|-------|-------|--------|------------|
| Q        | QLOB  | QCH    | QROB   | ALOB   | ACH    | AROB  | VOL   | TWA    | LEFT/RIGHT |
| TIME     | VLOB  | VCH    | VROB   | XNL    | XNCH   | XNR   | WTN   | ELMIN  | SSTA       |
| SLOPE    | XLOBL | XLCH   | XLOBR  | ITRIAL | IDC    | ICONT | CORAR | TOPWID | ENDST      |
| 625.00   | 5.92  | 695.02 | 695.02 | 698.10 | 695.53 | 0.51  | 0.0   | 0.0    | 696.80     |
| 1153.    | 519.  | 634.   | 0.     | 203.   | 86.    | 0.    | 0.    | 0.     | 696.10     |
| 0.0      | 2.55  | 7.35   | 0.0    | 0.100  | 0.080  | 0.100 | 0.0   | 689.10 | 1042.51    |
| 0.030236 | 625.  | 625.   | 625.   | 0      | 18     | 1     | 0.0   | 253.16 | 1471.37    |

CCHV= 0.100 CEHV= 0.300

|          |       |        |       |       |        |       |       |        |         |
|----------|-------|--------|-------|-------|--------|-------|-------|--------|---------|
| 4125.00  | 5.26  | 743.96 | 0.0   | 0.0   | 744.55 | 0.58  | 49.00 | 0.02   | 745.50  |
| 807.     | 0.    | 537.   | 270.  | 0.    | 74.    | 107.  | 19.   | 15.    | 742.60  |
| 0.17     | 0.0   | 7.30   | 2.52  | 0.055 | 0.035  | 0.055 | 0.035 | 730.70 | 1100.46 |
| 0.006599 | 3500. | 3500.  | 3500. | 9     | 0      | 1     | 0.0   | 109.20 | 1209.66 |

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

| SECNO | DEPTH | CWSEL | CRWS  | WSELK  | EG   | HV    | HL    | QLOSS  | BANK ELEV  |
|-------|-------|-------|-------|--------|------|-------|-------|--------|------------|
| Q     | QLOB  | QCH   | QROB  | ALOB   | ACH  | AROB  | VOL   | TWA    | LEFT/RIGHT |
| TIME  | VLOB  | VCH   | VROB  | XNL    | XNCH | XNR   | WTN   | ELMIN  | SSTA       |
| SLOPE | XLOBL | XLCH  | XLOBR | ITRIAL | IDC  | ICONT | CORAR | TOPWID | ENDST      |

## SUMMARY PRINTOUT FOR MULTIPLE PROFILES

500 YEAR FLOOD WATER SUR

| SECTION<br>NUMBER | CHANNEL<br>LENGTH | MIN EL OF<br>ROADWAY | MAX EL OF<br>LOW CHORD | MIN EL<br>GROUND | DISCHARGE<br>(CFS) | CWSEL  | TQ      | EG     | TOPWID | STENCL | STENCR | VCH  |
|-------------------|-------------------|----------------------|------------------------|------------------|--------------------|--------|---------|--------|--------|--------|--------|------|
| 625.00            | 625.00            | 0.0                  | 0.0                    | 689.10           | 329.00             | 693.00 | 17.34   | 693.66 | 16.21  | 0.0    | 0.0    | 6.54 |
| 625.00            | 625.00            | 0.0                  | 0.0                    | 689.10           | 620.00             | 694.39 | 37.82   | 694.93 | 179.49 | 0.0    | 0.0    | 6.56 |
| 625.00            | 625.00            | 0.0                  | 0.0                    | 689.10           | 774.00             | 694.65 | 47.43   | 695.14 | 207.59 | 0.0    | 0.0    | 6.60 |
| 625.00            | 625.00            | 0.0                  | 0.0                    | 689.10           | 1153.00            | 695.02 | 66.31   | 695.53 | 253.16 | 0.0    | 0.0    | 7.35 |
| 4125.00           | 3500.00           | 0.0                  | 0.0                    | 738.70           | 226.00             | 742.41 | 29.50   | 742.83 | 18.46  | 0.0    | 0.0    | 5.19 |
| 4125.00           | 3500.00           | 0.0                  | 0.0                    | 738.70           | 426.00             | 743.14 | 50.78   | 743.74 | 102.16 | 0.0    | 0.0    | 6.57 |
| 4125.00           | 3500.00           | 0.0                  | 0.0                    | 738.70           | 536.00             | 743.40 | 63.46   | 744.01 | 104.34 | 0.0    | 0.0    | 6.93 |
| 4125.00           | 3500.00           | 0.0                  | 0.0                    | 738.70           | 807.00             | 743.96 | 99.35   | 744.55 | 109.20 | 0.0    | 0.0    | 7.30 |
| 4175.00           | 50.00             | 0.0                  | 0.0                    | 739.20           | 226.00             | 742.68 | 25.75   | 743.19 | 17.63  | 0.0    | 0.0    | 5.74 |
| 4175.00           | 50.00             | 0.0                  | 0.0                    | 739.20           | 426.00             | 743.65 | 51.06   | 744.24 | 102.21 | 0.0    | 0.0    | 6.54 |
| 4175.00           | 50.00             | 0.0                  | 0.0                    | 739.20           | 536.00             | 743.89 | 63.03   | 744.51 | 104.27 | 0.0    | 0.0    | 6.97 |
| 4175.00           | 50.00             | 0.0                  | 0.0                    | 739.20           | 807.00             | 744.38 | 93.15   | 745.04 | 108.45 | 0.0    | 0.0    | 7.69 |
| 4225.00           | 50.00             | 0.0                  | 0.0                    | 739.60           | 226.00             | 744.06 | 35.13   | 744.36 | 100.95 | 0.0    | 0.0    | 5.54 |
| 4225.00           | 50.00             | 0.0                  | 0.0                    | 739.60           | 426.00             | 744.34 | 56.51   | 744.74 | 103.55 | 0.0    | 0.0    | 6.76 |
| 4225.00           | 50.00             | 0.0                  | 0.0                    | 739.60           | 536.00             | 744.47 | 68.34   | 744.92 | 104.75 | 0.0    | 0.0    | 7.16 |
| 4225.00           | 50.00             | 0.0                  | 0.0                    | 739.60           | 807.00             | 744.92 | 116.91  | 745.36 | 108.76 | 0.0    | 0.0    | 6.68 |
| 4415.00           | 190.00            | 760.50               | 745.00                 | 739.60           | 226.00             | 744.06 | 35.19   | 744.36 | 100.96 | 0.0    | 0.0    | 5.53 |
| 4415.00           | 190.00            | 760.50               | 745.00                 | 739.60           | 426.00             | 744.35 | 56.63   | 744.74 | 103.57 | 0.0    | 0.0    | 6.75 |
| 4415.00           | 190.00            | 760.50               | 745.00                 | 739.60           | 536.00             | 744.48 | 68.53   | 744.92 | 104.76 | 0.0    | 0.0    | 7.14 |
| 4415.00           | 190.00            | 760.50               | 745.00                 | 739.60           | 807.00             | 761.03 | 1172.69 | 761.03 | 464.88 | 0.0    | 0.0    | 0.17 |
| 4465.00           | 50.00             | 0.0                  | 0.0                    | 739.60           | 226.00             | 744.38 | 57.64   | 744.47 | 104.99 | 0.0    | 0.0    | 2.78 |
| 4465.00           | 50.00             | 0.0                  | 0.0                    | 739.60           | 426.00             | 744.73 | 90.13   | 744.93 | 108.07 | 0.0    | 0.0    | 4.17 |
| 4465.00           | 50.00             | 0.0                  | 0.0                    | 739.60           | 536.00             | 744.89 | 101.32  | 745.14 | 109.43 | 0.0    | 0.0    | 4.78 |
| 4465.00           | 50.00             | 0.0                  | 0.0                    | 739.60           | 807.00             | 761.03 | 5824.96 | 761.03 | 317.12 | 0.0    | 0.0    | 0.37 |
| 4515.00           | 50.00             | 0.0                  | 0.0                    | 740.00           | 226.00             | 744.39 | 48.33   | 744.57 | 101.69 | 0.0    | 0.0    | 3.62 |
| 4515.00           | 50.00             | 0.0                  | 0.0                    | 740.00           | 426.00             | 744.78 | 68.14   | 745.12 | 105.06 | 0.0    | 0.0    | 5.20 |
| 4515.00           | 50.00             | 0.0                  | 0.0                    | 740.00           | 536.00             | 744.97 | 79.20   | 745.36 | 106.64 | 0.0    | 0.0    | 5.81 |
| 4515.00           | 50.00             | 0.0                  | 0.0                    | 740.00           | 807.00             | 761.03 | 5549.82 | 761.03 | 312.72 | 0.0    | 0.0    | 0.38 |
| 4665.00           | 150.00            | 0.0                  | 0.0                    | 747.89           | 161.00             | 751.29 | 15.09   | 751.83 | 39.75  | 0.0    | 0.0    | 7.24 |
| 4665.00           | 150.00            | 0.0                  | 0.0                    | 747.89           | 312.00             | 751.92 | 27.96   | 752.56 | 54.66  | 0.0    | 0.0    | 8.69 |
| 4665.00           | 150.00            | 0.0                  | 0.0                    | 747.89           | 397.00             | 752.23 | 36.44   | 752.86 | 61.91  | 0.0    | 0.0    | 8.99 |
| 4665.00           | 150.00            | 0.0                  | 0.0                    | 747.89           | 644.00             | 761.03 | 1348.03 | 761.03 | 191.36 | 0.0    | 0.0    | 0.89 |
| 4715.00           | 50.00             | 0.0                  | 0.0                    | 750.34           | 161.00             | 753.75 | 15.29   | 754.28 | 40.02  | 0.0    | 0.0    | 7.17 |
| 4715.00           | 50.00             | 0.0                  | 0.0                    | 750.34           | 312.00             | 754.39 | 28.30   | 755.01 | 54.98  | 0.0    | 0.0    | 8.61 |
| 4715.00           | 50.00             | 0.0                  | 0.0                    | 750.34           | 397.00             | 754.61 | 34.44   | 755.31 | 60.31  | 0.0    | 0.0    | 9.40 |
| 4715.00           | 50.00             | 0.0                  | 0.0                    | 750.34           | 644.00             | 761.03 | 760.38  | 761.04 | 159.66 | 0.0    | 0.0    | 1.36 |
| 4765.00           | 50.00             | 0.0                  | 0.0                    | 752.70           | 161.00             | 755.39 | 20.57   | 755.82 | 35.71  | 0.0    | 0.0    | 6.36 |
| 4765.00           | 50.00             | 0.0                  | 0.0                    | 752.70           | 312.00             | 755.91 | 39.61   | 756.50 | 45.59  | 0.0    | 0.0    | 7.51 |
| 4765.00           | 50.00             | 0.0                  | 0.0                    | 752.70           | 397.00             | 756.15 | 50.61   | 756.79 | 50.06  | 0.0    | 0.0    | 7.92 |
| 4765.00           | 50.00             | 0.0                  | 0.0                    | 752.70           | 644.00             | 761.03 | 1645.33 | 761.04 | 412.76 | 0.0    | 0.0    | 0.77 |

| SECTION<br>NUMBER | CHANNEL<br>LENGTH | MIN EL OF<br>ROADWAY | MAX EL OF<br>LOW CHORD | MIN EL<br>GROUND | DISCHARGE<br>(CFS) | CWSEL  | TQ      | EG     | TOPWID | STENCL | STENCR | VCH   |
|-------------------|-------------------|----------------------|------------------------|------------------|--------------------|--------|---------|--------|--------|--------|--------|-------|
| 4852.00           | 87.00             | 757.70               | 755.70                 | 752.70           | 161.00             | 750.36 | 270.06  | 758.37 | 245.59 | 0.0    | 0.0    | 0.88  |
| 4852.00           | 87.00             | 757.70               | 755.70                 | 752.70           | 312.00             | 758.72 | 359.31  | 758.73 | 289.77 | 0.0    | 0.0    | 1.35  |
| 4852.00           | 87.00             | 757.70               | 755.70                 | 752.70           | 397.00             | 758.87 | 405.32  | 758.89 | 308.70 | 0.0    | 0.0    | 1.55  |
| 4852.00           | 87.00             | 757.70               | 755.70                 | 752.70           | 644.00             | 761.09 | 1698.14 | 761.10 | 415.44 | 0.0    | 0.0    | 0.75  |
| 4902.00           | 50.00             | 0.0                  | 0.0                    | 755.80           | 161.00             | 759.20 | 15.04   | 759.74 | 39.66  | 0.0    | 0.0    | 7.26  |
| 4902.00           | 50.00             | 0.0                  | 0.0                    | 755.80           | 312.00             | 759.90 | 29.71   | 760.47 | 56.27  | 0.0    | 0.0    | 8.29  |
| 4902.00           | 50.00             | 0.0                  | 0.0                    | 755.80           | 397.00             | 760.18 | 37.45   | 760.77 | 62.69  | 0.0    | 0.0    | 8.80  |
| 4902.00           | 50.00             | 0.0                  | 0.0                    | 755.80           | 644.00             | 760.64 | 53.79   | 761.45 | 73.71  | 0.0    | 0.0    | 10.76 |
| 4952.00           | 50.00             | 0.0                  | 0.0                    | 758.82           | 161.00             | 762.23 | 15.31   | 762.76 | 40.05  | 0.0    | 0.0    | 7.16  |
| 4952.00           | 50.00             | 0.0                  | 0.0                    | 758.82           | 312.00             | 762.83 | 27.41   | 763.49 | 54.14  | 0.0    | 0.0    | 8.83  |
| 4952.00           | 50.00             | 0.0                  | 0.0                    | 758.82           | 397.00             | 763.16 | 36.32   | 763.79 | 61.81  | 0.0    | 0.0    | 9.02  |
| 4952.00           | 50.00             | 0.0                  | 0.0                    | 758.82           | 644.00             | 763.69 | 54.89   | 764.47 | 74.37  | 0.0    | 0.0    | 10.59 |
| 5470.00           | 518.00            | 0.0                  | 0.0                    | 763.80           | 129.00             | 767.17 | 14.34   | 767.72 | 19.49  | 0.0    | 0.0    | 6.85  |
| 5470.00           | 518.00            | 0.0                  | 0.0                    | 763.80           | 255.00             | 768.14 | 28.37   | 768.86 | 26.30  | 0.0    | 0.0    | 8.39  |
| 5470.00           | 518.00            | 0.0                  | 0.0                    | 763.80           | 329.00             | 768.45 | 34.37   | 769.33 | 28.55  | 0.0    | 0.0    | 9.44  |
| 5470.00           | 518.00            | 0.0                  | 0.0                    | 763.80           | 517.00             | 769.34 | 54.71   | 770.35 | 34.73  | 0.0    | 0.0    | 10.65 |

| SECTION<br>NUMBER | DISCHARGE<br>CFS | CWSEL   | CWSEL DIFF<br>EACH Q | CWSEL DIFF<br>EACH SECTION | CWSEL-WSELK | TOPWID  | T.W. DIFF | LENGTH   |
|-------------------|------------------|---------|----------------------|----------------------------|-------------|---------|-----------|----------|
| 625.000           | 329.000          | 693.000 | 0.0                  | 0.0                        | 0.0         | 16.206  | 0.0       | 625.000  |
| 625.000           | 620.000          | 694.394 | 1.393                | 0.0                        | 0.0         | 179.489 | -163.283  | 625.000  |
| 625.000           | 774.000          | 694.646 | 0.252                | 0.0                        | 0.0         | 207.591 | -191.385  | 625.000  |
| 625.000           | 1153.000         | 695.019 | 0.374                | 0.0                        | 0.0         | 253.164 | -236.958  | 625.000  |
| 4125.000          | 226.000          | 742.410 | 0.0                  | 49.409                     | 0.0         | 18.456  | 0.0       | 3500.000 |
| 4125.000          | 426.000          | 743.139 | 0.729                | 48.745                     | 0.0         | 102.160 | -83.704   | 3500.000 |
| 4125.000          | 536.000          | 743.401 | 0.263                | 48.756                     | 0.0         | 104.343 | -85.687   | 3500.000 |
| 4125.000          | 807.000          | 743.962 | 0.561                | 48.943                     | 0.0         | 109.200 | -90.745   | 3500.000 |
| 4175.000          | 226.000          | 742.679 | 0.0                  | 0.269                      | 0.0         | 17.631  | 0.0       | 50.000   |
| 4175.000          | 426.000          | 743.653 | 0.974                | 0.514                      | 0.0         | 102.213 | -84.582   | 50.000   |
| 4175.000          | 536.000          | 743.894 | 0.241                | 0.493                      | 0.0         | 104.275 | -86.644   | 50.000   |
| 4175.000          | 807.000          | 744.381 | 0.488                | 0.419                      | 0.0         | 108.450 | -90.819   | 50.000   |
| 4225.000          | 226.000          | 744.059 | 0.0                  | 1.330                      | 0.0         | 100.952 | 0.0       | 50.000   |
| 4225.000          | 426.000          | 744.344 | 0.285                | 0.691                      | 0.0         | 103.555 | -2.603    | 50.000   |
| 4225.000          | 536.000          | 744.474 | 0.131                | 0.581                      | 0.0         | 104.747 | -3.794    | 50.000   |
| 4225.000          | 807.000          | 744.920 | 0.446                | 0.539                      | 0.0         | 108.763 | -7.811    | 50.000   |
| 4415.000          | 226.000          | 744.060 | 0.0                  | 0.001                      | 0.0         | 100.961 | 0.0       | 190.000  |
| 4415.000          | 426.000          | 744.345 | 0.286                | 0.002                      | 0.0         | 103.568 | -2.607    | 190.000  |
| 4415.000          | 536.000          | 744.476 | 0.131                | 0.002                      | 0.0         | 104.765 | -3.804    | 190.000  |
| 4415.000          | 807.000          | 744.831 | 16.554               | 16.111                     | 0.0         | 464.877 | -363.917  | 190.000  |
| 4465.000          | 226.000          | 744.376 | 0.0                  | 0.316                      | 0.0         | 104.988 | 0.0       | 50.000   |
| 4465.000          | 426.000          | 744.735 | 0.359                | 0.389                      | 0.0         | 108.074 | -3.085    | 50.000   |
| 4465.000          | 536.000          | 744.894 | 0.159                | 0.418                      | 0.0         | 109.434 | -4.445    | 50.000   |
| 4465.000          | 807.000          | 744.831 | 16.137               | 0.0                        | 0.0         | 317.125 | -212.136  | 50.000   |
| 4515.000          | 226.000          | 744.390 | 0.0                  | 0.014                      | 0.0         | 101.686 | 0.0       | 50.000   |
| 4515.000          | 426.000          | 744.782 | 0.392                | 0.047                      | 0.0         | 105.063 | -3.377    | 50.000   |
| 4515.000          | 536.000          | 744.966 | 0.184                | 0.072                      | 0.0         | 106.643 | -4.957    | 50.000   |
| 4515.000          | 807.000          | 744.830 | 16.064               | -0.081                     | 0.0         | 312.719 | -211.033  | 50.000   |



|          |         |         |       |        |     |         |          |         |
|----------|---------|---------|-------|--------|-----|---------|----------|---------|
| 4665.000 | 161.000 | 751.231 | 0.0   | 6.901  | 0.0 | 59.726  | 0.0      | 150.000 |
| 4665.000 | 312.000 | 751.925 | 0.634 | 7.143  | 0.0 | 54.661  | -14.935  | 150.000 |
| 4665.000 | 397.000 | 752.232 | 0.308 | 7.267  | 0.0 | 61.913  | -22.187  | 150.000 |
| 4665.000 | 644.000 | 761.029 | 8.796 | -0.001 | 0.0 | 191.356 | -151.631 | 150.000 |
| 4715.000 | 161.000 | 753.753 | 0.0   | 2.463  | 0.0 | 40.019  | 0.0      | 50.000  |
| 4715.000 | 312.000 | 754.388 | 0.635 | 2.463  | 0.0 | 54.977  | -14.958  | 50.000  |
| 4715.000 | 397.000 | 754.614 | 0.226 | 2.382  | 0.0 | 60.314  | -20.295  | 50.000  |
| 4715.000 | 644.000 | 761.026 | 6.412 | -0.003 | 0.0 | 159.656 | -119.637 | 50.000  |
| 4765.000 | 161.000 | 755.395 | 0.0   | 1.642  | 0.0 | 35.711  | 0.0      | 50.000  |
| 4765.000 | 312.000 | 755.914 | 0.519 | 1.526  | 0.0 | 45.593  | -9.881   | 50.000  |
| 4765.000 | 397.000 | 756.148 | 0.234 | 1.534  | 0.0 | 50.059  | -14.347  | 50.000  |
| 4765.000 | 644.000 | 761.034 | 4.886 | 0.008  | 0.0 | 412.762 | -377.051 | 50.000  |
| 4852.000 | 161.000 | 758.364 | 0.0   | 2.969  | 0.0 | 245.587 | 0.0      | 87.000  |
| 4852.000 | 312.000 | 758.721 | 0.358 | 2.808  | 0.0 | 289.774 | -44.186  | 87.000  |
| 4852.000 | 397.000 | 758.872 | 0.151 | 2.724  | 0.0 | 308.702 | -63.115  | 87.000  |
| 4852.000 | 644.000 | 761.095 | 2.223 | 0.061  | 0.0 | 415.437 | -169.850 | 87.000  |
| 4902.000 | 161.000 | 759.198 | 0.0   | 0.834  | 0.0 | 39.656  | 0.0      | 50.000  |
| 4902.000 | 312.000 | 759.903 | 0.705 | 1.182  | 0.0 | 56.271  | -16.615  | 50.000  |
| 4902.000 | 397.000 | 760.176 | 0.273 | 1.304  | 0.0 | 62.695  | -23.038  | 50.000  |
| 4902.000 | 644.000 | 760.644 | 0.468 | -0.451 | 0.0 | 73.714  | -34.057  | 50.000  |
| 4952.000 | 161.000 | 762.234 | 0.0   | 3.036  | 0.0 | 40.048  | 0.0      | 50.000  |
| 4952.000 | 312.000 | 762.832 | 0.598 | 2.929  | 0.0 | 54.137  | -14.090  | 50.000  |
| 4952.000 | 397.000 | 763.158 | 0.326 | 2.982  | 0.0 | 61.815  | -21.767  | 50.000  |
| 4952.000 | 644.000 | 763.691 | 0.533 | 3.048  | 0.0 | 74.369  | -34.322  | 50.000  |
| 5470.000 | 129.000 | 767.170 | 0.0   | 4.936  | 0.0 | 19.494  | 0.0      | 518.000 |
| 5470.000 | 255.000 | 768.140 | 0.970 | 5.308  | 0.0 | 26.298  | -6.804   | 518.000 |
| 5470.000 | 329.000 | 768.447 | 0.308 | 5.289  | 0.0 | 28.551  | -9.057   | 518.000 |
| 5470.000 | 517.000 | 769.337 | 0.889 | 5.646  | 0.0 | 34.728  | -15.234  | 518.000 |

DATA FOR LAST CROSS SECTION

| PROFILE | TYPE ENC | TARGET | TOP WIDTH<br>AREA-ACRES | TOP WIDTH<br>AREA-DIFF |
|---------|----------|--------|-------------------------|------------------------|
| 1       | 0.0      | 0.0    | 3.336                   | 0.0                    |
| 2       | 0.0      | 0.0    | 13.717                  | 10.381                 |
| 3       | 0.0      | 0.0    | 15.079                  | 11.744                 |
| 4       | 0.0      | 0.0    | 20.108                  | 16.772                 |

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HLC2 VERSION UPDATED JAN 1975  
ERROR CORRECTIONS 01,02,03,04,05,06,07,08  
MODIFICATIONS 52,53,54,55,56,57,58  
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EJ