

THIS RUN EXECUTED 25 JUN 87 15:31:52

HEC2 RELEASE DATED NOV 76 UPDATED MAY 1984
ERROR CORR - 01,02,03,04,05,06
MODIFICATION - 50,51,52,53,54,55,56

Hiwassee

River

*****HEC-2 WATER SURFACE PROFILES*****
 * Version 4.5.0; September 1990 *
 * RUN DATE 23DEC91 TIME 10:33:06 *

*****ARMY CORPS OF ENGINEERS*****
 * HYDROLOGIC ENGINEERING CENTER *
 * 609 SECOND STREET, SUITE D *
 * DAVIS, CALIFORNIA 95616-4687 *
 * (916) 756-1104 *

MULTIPLE
 PROFILE

HIAWASEE RIVER

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X   X   XXXXXX   XXXXX   XXXXX
X   X   X       X   X   X   X
X   X   X       X       X
XXXXXXX XXXX   X       XXXXX XXXXX
X   X   X       X       X
X   X   X       X   X   X
X   X   XXXXXX   XXXXX   XXXXXXX
  
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END OF BANNER

1 23DEC91 10:33:07

FOR 7/19/93 FIRM REVISION

PAGE 1

THIS RUN EXECUTED 23DEC91 10:33:07

 HEC-2 WATER SURFACE PROFILES
 Version 4.5.0; September 1990

T1 CHEROKEE CO, NC LMMP
 T2 10-YEAR FLOOD
 T3 HIWASSEE RIVER

CHEROK.DAT
 Q'S JWB/BLB 11/7/91
 2,10,50,100,500,1/36,2/36

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		3			1001			14600	1550.52	
J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1		-1							
NC	.070	.030	.038	.1	.5					
OT	7	9000	14600	18900	20700	24400		16000	20000	
X1	99.13	16	610	810						
GR	1591.5	115	1571.0	220	1549.0	302		1546.8	420	1551.2
GR	1551.2	570	1550.0	610	1539.8	630		1539.5	650	1538.0
GR	1539.1	780	1559.8	810	1559.9	830		1559.9	850	1583.5
GR	1590.0	880								870
NC	.060	.060	.040							
QT	7	8910	14450	18720	20490	24170		15850	19710	
X1	100.00	24	624	780	4600	4600		4600		
DISTANCES FROM 99.13 TO 100.00 OBTAINED FROM BISHOP PROPERTY STUDY										
GR	1580.0	0	1572.0	34	1560.0	70		1556.6	170	1556.8
GR	1559.0	554	1558.9	592	1554.0	608		1552.5	624	1547.0
GR	1543.0	648	1542.8	660	1541.0	704		1542.0	709	1543.0
GR	1556.0	780	1557.0	832	1551.0	885		1556.7	930	1562.8
GR	1569.0	1000	1569.0	1015	1570.0	1022		1569.0	1040	1570.0

TVA SURVEYED SECTION OCTOBER 1991

NC	.060	.060	.040							
QT	7	8870	14380	18640	20400	24060	15780	19580		
X1	100.39	23	989	1222	2120	2120	2120			
GR	1568.1	0	1562.9	53	1559.8	268	1559.9	717	1560.7	989
GR	1554.0	1027	1550.9	1036	1549.1	1044	1548.6	1057	1547.5	1073
GR	1549.0	1083	1547.2	1098	1548.7	1117	1548.1	1133	1548.1	1166
GR	1547.9	1195	1549.4	1198	1556.5	1211	1559.5	1222	1558.9	1227
GR	1557.7	1748	1573.7	2040	1582.2	2056				

TVA SURVEYED SECTION FROM FILE

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NC	0.06	0.06	0.04							
QT	7	8820	14290	18530	20270	23910	15690	19390		
X1	100.95	23	1330	1470	3040	3040	3040			
GR	1585.0	0	1577.7	30	1569.8	105	1560.9	350	1561.8	555
GR	1560.0	650	1562.6	890	1563.7	1025	1563.5	1155	1562.1	1260
GR	1564.9	1330	1549.9	1358	1549.9	1380	1548.9	1400	1547.9	1422
GR	1549.3	1450	1549.3	1460	1560.0	1470	1561.9	1528	1565.0	1560
GR	1562.1	2040	1565.0	2400	1580.0	2400				

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

NC	.12	.08	.045							
QT	7	8760	14200	18420	20140	23760	15600	19200		
X1	101.45	9	285	473	2640	2640	2640			
GR	1580	0	1560.8	285	1552.6	293	1553.2	330	1554.4	400
GR	1552.1	441	1551.6	458	1565.5	473	1575	670		

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

NC	.12	.08	.045							
QT	7	8760	14200	18420	20130	23750	15600	19190		
X1	101.48	11	424	586	160	160	160			
GR	1582.7	69	1572.0	119	1566.6	287	1559.4	424	1553.2	428
GR	1551.4	500	1553.7	569	1567.7	586	1565.4	725	1574.1	919
GR	1583.7	1157								

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

NC	.120	.090	.045							
QT	7	8750	14180	18400	20110	23730	15580	19160		
X1	101.62	11	126	290	720	720	720			
GR	1576.0	0	1564.3	18	1563.2	126	1552.4	135	1552.4	200
GR	1553.9	271	1567.3	290	1568.2	508	1574.2	601	1579.0	745
GR	1598.4	858								

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

NC	.120	.100	.040							
QT	7	8740	14160	18380	20090	23700	15560	19130		
X1	101.72	10	118	277	720	720	720			
GR	1582.4	53	1567.4	76	1564.8	118	1554.0	126	1553.7	200
GR	1550.7	262	1560.0	277	1560.1	289	1560.0	350	1559.0	428
GR	1583.7	1157								

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

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NC	.090	.080	.040							
QT	7	8710	14120	18330	20030	23640	15520	19040		
X1	101.97	11	228	390	1360	1200	1200			
GR	1646.4	59	1572.9	127	1564.6	228	1556.9	236	1556.0	300
GR	1557.1	364	1565.2	390	1572.9	455	1568.2	570	1570.0	898
GR	1583.2	1086								

TVA SURVEYED SECTION FROM FILE

NC	.120	.055	.045							
QT	7	8700	14100	18300	20000	23640	15500	19000		
X1	102.10	20	210	387	680	680	680			
GR	1595.0	52	1584.8	70	1580.2	169	1570.0	190	1560.5	210
GR	1560.1	221	1557.7	242	1555.9	274	1556.2	290	1556.5	310
GR	1556.2	327	1557.9	374	1565.2	387	1568.0	435	1571.8	460
GR	1570.5	615	1573.2	790	1571.0	1000	1576.5	1115	1602.8	1233

TVA SURVEYED SECTION FROM FILE

NC	.12	.12	.045							
QT	7	8700	14100	18300	20000	23640	15500	19000		
X1	102.22	18	150	400	560	560	560			
GR	1590.0	18	1578.4	42	1572.5	60	1571.5	102	1567.2	120
GR	1565.0	150	1562.2	163	1559.8	200	1561.9	243	1561.0	265
GR	1561.9	304	1560.0	342	1561.8	385	1570.8	394	1571.5	400
GR	1570.5	445	1573.5	475	1590.5	505				

CROSS SECTION AT WHAT APPEARED DURING FIELD INSPECTION TO BE THE NARROW POINT IN THIS SECTION OF THE RIVER

NC	0.12	0.12	0.06	0.1	0.3					
QT	7	8670	14050	18220	19920	23550	15450	18930		
X1	102.36	22	46	311	720	720	720			
GR	1587.7	0.	1572.9	20.	1569.3	46.	1566.5	53.	1565.5	66.
GR	1564.6	86.	1564.0	105.	1566.0	130.	1563.9	147.	1563.0	166.
GR	1567.9	177.	1563.8	188.	1565.7	198.	1563.7	214.	1563.2	236.
GR	1563.8	250.	1562.7	269.	1562.4	287.	1565.3	291.	1582.8	311.
GR	1583.4	321.	1608.6	351.						

CROSS SECTION NEAR HOUSES ON RIGHT BANK OF RIVER

NC	0.12	0.1	0.055							
QT	7	8640	14010	18160	19860	23480	15410	18880		
X1	102.55	27	27	334	1040	1040	1040			
GR	1602.6	0.	1590.2	11.	1589.0	27.	1574.3	44.	1574.3	50.
GR	1571.9	67.	1574.8	93.	1575.0	116.	1574.0	133.	1571.4	156.
GR	1571.9	192.	1573.9	215.	1573.1	237.	1571.7	262.	1572.8	283.
GR	1574.5	299.	1573.0	308.	1572.6	316.	1574.3	318.	1576.0	321.
GR	1578.4	334.	1578.2	360.	1580.0	397.	1580.5	431.	1580.4	475.

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CROSS SECTION JUST DOWNSTREAM FROM OLD BRIDGE ABUTMENTS:
 THIS CROSS SECTION WAS GENERATED TO ALLOW THE FLOW THRU THE OLD BRIDGE
 ABUTMENTS TO EXPAND TO A CROSS SECTION JUST DOWNSTREAM INSTEAD OF ONE
 1/2 MILE DOWNSTREAM.

NC	0.12	0.12	0.04	0.3	0.5						
QT	7	8580	13900	18000	19700	23300	15300	18740			
X1	103.0	17	65	250	2150	2150	2150				
GR	1610.8	0.	1592.5	30.	1585.0	50.	1576.7	65.	1576.0	100.	
GR	1573.4	140.	1570.2	155.	1569.5	175.	1570.2	190.	1574.0	216.	
GR	1576.0	250.	1578.0	300.	1580.0	350.	1581.5	400.	1585.0	450.	
GR	1595.0	500.	1600.0	525.							

CROSS SECTION AT OLD BRIDGE ALIGNMENT, CONTROLLING POINT,
 JUST DOWNSTREAM FROM INFLOW FROM BRASSTOWN CREEK

NC	0.12	0.12	0.04	0.6	0.8						
QT	7	8580	13900	18000	19700	23300	15300	18740			
X1	103.05	25	107	223	250	250	250				
GR	1610.8	0.	1595.9	22.	1595.5	59.	1596.9	100.	1595.7	107.	
GR	1581.8	109.	1577.4	118.	1573.7	128.	1578.5	136.	1578.4	143.	
GR	1569.0	149.	1568.5	162.	1567.5	192.	1572.5	204.	1577.5	210.	
GR	1583.3	212.	1583.1	223.	1595.2	223.	1596.3	235.	1595.5	257.	
GR	1598.1	308.	1599.3	324.	1599.1	342.	1598.5	345.	1611.1	349.	

CROSS SECTION BELOW BRIDGE, JUST ABOVE BRASSTOWN CREEK INFLOW
 X-SECTION HAS ISLAND

NC	0.12	0.12	0.055								
QT	7	6440	10400	13500	14800	17500	11500	14060			
X1	103.09	26	4	223	120	120	120				
GR	1585.3	0.	1585.6	4.	1577.6	16.	1576.2	23.	1576.3	35.	
GR	1576.2	48.	1577.8	59.	1582.6	78.	1583.7	98.	1581.2	116.	
GR	1576.6	128.	1573.8	137.	1573.1	153.	1574.4	165.	1575.1	176.	
GR	1577.7	181.	1579.6	184.	1579.1	196.	1578.0	208.	1581.7	210.	
GR	1585.5	223.	1586.8	249.	1597.5	272.	1598.7	292.	1598.8	314.	
GR	1603.3	324.									

CROSS SECTION BELOW BRIDGE, ISLAND REMOVED
 AND LEFT BANK MOVED IN TO MORE ACCURATELY MODEL THE
 RESTRICTED FLOW AREA OF THE CHANNEL

NC	0.12	0.12	0.07	0.3	0.5						
QT	7	6440	10400	13500	14800	17500	11500	14060			
X1	103.10	26	48	223	60	60	60				
GR	1585.3	0.	1585.3	4.	1585.3	16.	1585.3	23.	1585.6	35.	
GR	1585.6	48.	1577.8	59.	1576.6	78.	1576.4	98.	1575.6	116.	
GR	1574.6	128.	1573.8	137.	1573.1	153.	1574.4	165.	1575.1	176.	
GR	1577.7	181.	1579.6	184.	1579.1	196.	1578.0	208.	1581.7	210.	
GR	1585.5	223.	1586.8	249.	1597.5	272.	1598.7	292.	1598.8	314.	
GR	1603.3	324.									

BRIDGE OVER HIWASSEE RIVER, US 64, ROAD TO BRASSTOWN, NC

QT 7 6440 10400 13500 14800 17500 11500 14060
 X1 103.12 140 140 140

EFFECTIVE AREA OPTION TO CONTROL THE FLOW TO THE BRIDGE WIDTH UP TO EL. 1595
 X3 10 1595 1595
 SPECIAL BRIDGE INPUT BETWEEN DOWNSTREAM AND UPSTREAM SECTIONS

SB 0.90 1.56 2.6 0 110 10 3300 2.667

REMAINING BRIDGE INPUT IS PROVIDED WITH THE UPSTREAM SECTION

X1 103.13 30 30 30
 X2 INPUT FOR SPECIAL BRIDGE, MAX. LOW-CHORD ELEV, AND MIN TOP OF ROAD ELEV.

X2 1 1595 1598.7
 EFFECTIVE AREA OPTION TO CONTROL THE FLOW TO THE BRIDGE WIDTH UP TO EL. 1598.7
 X3 10 1598.7 1598.7
 BRIDGE TABLE TO DEFINE TOP-OF ROAD PROFILE.

BT	9	0	1598.7	1595	100	1598.7	1595	200	1598.7	1595
BT	300	1598.7	1595	400	1598.7	1595	500	1598.7	1595	600
BT	1599	1595	660	1599.1	1595	700	1600.5	1595		

CROSS SECTION CREATED TO MATCH UPSTEAM SECTION AT 103.23, BUT PROVIDE
 A MORE REASONABLE MODEL FOR THE CONTRACTION LOSSES BECAUSE OF THE BRIDGE

NC	0.07	0.15	0.05							
QT	7	6440	10400	13500	14800	17500	11500	14060		
X1	103.15	20	174	346	100	100	100			
GR	1612.8	0.	1602.9	55.	1594.6	98.	1589.7	144.	1588.4	174.
GR	1581.0	192.	1579.6	207.	1578.1	211.	1575.5	220.	1573.0	229.
GR	1572.7	245.	1572.8	280.	1574.1	313.	1578.1	324.	1581.5	325.
GR	1589.8	346.	1590.1	384.	1588.8	423.	1598.6	480.	1613.6	510.

FIELD SURVEY CROSS SECTION DATA UPSTEAM FROM BRIDGE

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NC	0.07	0.15	0.055	0.1	0.5					
QT	7	6440	10400	13500	14800	17500	11500	14060		
X1	103.23	20	174	346	430	430	430			
GR	1612.8	0.	1602.9	55.	1594.6	98.	1589.7	144.	1588.4	174.
GR	1581.0	192.	1579.6	207.	1578.1	211.	1575.5	220.	1573.0	229.
GR	1572.7	245.	1572.8	280.	1574.1	313.	1578.1	324.	1581.5	325.
GR	1589.8	346.	1590.1	384.	1588.8	423.	1598.6	480.	1613.6	510.

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

*PROF 1
 0

CCHV= .100 CEHV= .500
 *SECNO 99.130

CCHV= .100 CEHV= .500
 *SECNO 103.230
 103.230 16.02 1588.72 .00 .00 1589.14 .42 .61 .01 1588.40
 10400.0 .3 10399.7 .0 1.2 2005.7 .0 1313.9 288.8 1589.80
 .98 .24 5.18 .00 .070 .055 .000 .000 1572.70 166.67
 .001440 430. 430. 430. 2 0 0 .00 176.59 343.26

1
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T1 CHEROKEE CO NC BISHOP PROPERTY
 T2 50-YEAR FLOOD
 T3 HIWASSEE RIVER

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 4 18900 1552.43

J2 NPROF IPLIT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 2 -1

1
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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV
 Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV
 TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA
 SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

*PROF 2
 0

CCHV= .100 CEHV= .500
 *SECNO 99.130
 99.130 14.43 1552.43 .00 1552.43 1553.18 .75 .00 .00 1550.00
 18900.0 1840.7 17059.3 .0 1023.2 2335.4 .0 .0 .0 1559.80
 .00 1.80 7.30 .00 .070 .038 .000 .000 1538.00 289.22
 .001282 0. 0. 0. 0 0 0 .00 510.10 799.32

*SECNO 100.000

3265 DIVIDED FLOW

100.000 17.22 1558.22 .00 .00 1559.03 .81 5.82 .03 1552.50
 18720.0 695.6 16940.4 1083.9 545.7 2243.2 518.3 352.0 64.8 1556.00
 .18 1.27 7.55 2.09 .060 .040 .060 .000 1541.00 122.39
 .001247 4600. 4600. 4600. 2 0 0 .00 717.06 941.45

*SECNO 100.390

100.390 13.98 1561.18 .00 .00 1561.65 .48 2.59 .03 1560.70
 18640.0 848.2 15040.4 2751.4 899.5 2457.8 1618.7 553.5 122.1 1559.50
 .30 .94 6.12 1.70 .060 .040 .060 .000 1547.20 172.55
 .001201 2120. 2120. 2120. 2 0 0 .00 1638.89 1811.44

*SECNO 100.950

3420 BRIDGE W.S. = 1589.96 BRIDGE VELOCITY = 5.52 CALCULATED CHANNEL AREA = 2445

EGPRS	ESI.WC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1590.61	.04	0.	13500.	3300.	3469.	1595.00	1598.70	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1598.70 ELREA= 1598.70

103.130	16.97	1590.07	.00	.00	1590.61	.54	.04	.00	1585.60
13500.0	.0	13500.0	.0	.0	2287.3	.0	1780.4	410.5	1585.50
.92	.00	5.90	.00	.000	.050	.000	.000	1573.10	48.00
.001347	30.	30.	30.	0	0	0	.00	175.00	223.00

*SECNO 103.150

103.150	17.50	1590.20	.00	.00	1590.75	.55	.14	.00	1588.40
13500.0	30.2	13457.9	11.9	35.7	2259.4	44.5	1785.7	411.0	1589.80
.92	.84	5.96	.27	.070	.050	.150	.000	1572.70	139.30
.001370	100.	100.	100.	0	0	0	.00	291.85	431.15

CCHV= .100 CEHV= .500

*SECNO 103.230

103.230	18.16	1590.86	.00	.00	1591.35	.49	.59	.01	1588.40
13500.0	67.1	13390.9	42.0	60.5	2372.0	101.5	1809.8	414.0	1589.80
.94	1.11	5.65	.41	.070	.055	.150	.000	1572.70	133.15
.001396	430.	430.	430.	2	0	0	.00	301.81	434.90

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T1 CHEROKEE CO NC BISHOP PROPERTY
 T2 100-YEAR FLOOD
 T3 HIWASSEE RIVER

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		5						20700	1553.03	

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
		3	-1							

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 3

0

CCHV= .100 CEHV= .500

*SECNO 99.130

99.130	15.03	1553.03	.00	1553.03	1553.81	.78	.00	.00	1550.00
20700.0	2378.3	18321.7	.0	1216.3	2449.2	.0	.0	.0	1559.80
.00	1.96	7.48	.00	.070	.038	.000	.000	1538.00	286.98

SB XK XKOR COFQ RDLEN BWC BWP BAREA SS ELCHU ELCHD
 .90 1.56 2.60 .00 110.00 10.00 3300.00 2.67 1573.10 1573.10

*SECNO 103.130
 3280 CROSS SECTION 103.13 EXTENDED 5.62 FEET

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CLASS A LOW FLOW

3420 BRIDGE W.S.= 1590.82 BRIDGE VELOCITY= 5.67 CALCULATED CHANNEL AREA= 2609.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1591.49	.04	0.	14800.	3300.	3469.	1595.00	1598.70	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1598.70 ELREA= 1598.70

103.130	17.82	1590.92	.00	.00	1591.49	.57	.04	.00	1585.60
14800.0	.0	14800.0	.0	.0	2437.1	.0	1974.3	431.8	1585.50
.91	.00	6.07	.00	.000	.050	.000	.000	1573.10	48.00
.001310	30.	30.	30.	0	0	0	.00	175.00	223.00

*SECNO 103.150

103.150	18.35	1591.05	.00	.00	1591.63	.57	.13	.00	1588.40
14800.0	78.7	14668.7	52.6	68.7	2406.0	119.2	1980.1	432.4	1589.80
.92	1.15	6.10	.44	.070	.050	.150	.000	1572.70	131.30
.001320	100.	100.	100.	0	0	0	.00	304.81	436.11

CCHV= .100 CEHV= .500

*SECNO 103.230

103.230	18.99	1591.69	.00	.00	1592.21	.51	.58	.01	1588.40
14800.0	133.1	14565.9	101.1	98.0	2516.3	178.2	2006.7	435.4	1589.80
.94	1.36	5.79	.57	.070	.055	.150	.000	1572.70	125.27
.001356	430.	430.	430.	2	0	0	.00	314.56	439.84

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T1 CHEROKEE CO NC BISHOP PROPERTY
 T2 500-YEAR FLOOD
 T3 HIWASSEE RIVER

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		6						24400	1554.43	
J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE

 HEC-2 WATER SURFACE PROFILES
 Version 4.5.0; September 1990

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

HIWASSEE RIVER

SUMMARY PRINTOUT TABLE 150

Stream bed

A
B D
C
D
E
F

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIS	EG	10*KS	VCH	AREA	.01K
99.130	.00	.00	.00	1538.00	14600.00	1550.52	.00	1551.26	14.58	7.05	2443.77	3823.49
99.130	.00	.00	.00	1538.00	18900.00	1552.43	.00	1553.18	12.82	7.30	3358.55	5278.95
99.130	.00	.00	.00	1538.00	20700.00	1553.03	.00	1553.81	12.71	7.48	3665.54	5806.94
99.130	.00	.00	.00	1538.00	24400.00	1554.43	.00	1555.20	11.64	7.61	4389.11	7153.05
100.000	4600.00	.00	.00	1541.00	14450.00	1556.67	.00	1557.39	12.20	6.92	2351.82	4136.91
100.000	4600.00	.00	.00	1541.00	18720.00	1558.22	.00	1559.03	12.47	7.55	3307.20	5301.58
100.000	4600.00	.00	.00	1541.00	20490.00	1558.78	.00	1559.60	12.39	7.72	3728.17	5821.16
100.000	4600.00	.00	.00	1541.00	24170.00	1559.84	.00	1560.67	12.01	7.96	4633.98	6973.39
100.390	2120.00	.00	.00	1547.20	14380.00	1559.70	.00	1560.29	15.32	6.36	2884.09	3673.53
100.390	2120.00	.00	.00	1547.20	18640.00	1561.18	.00	1561.65	12.01	6.12	4976.03	5378.67
100.390	2120.00	.00	.00	1547.20	20400.00	1561.67	.00	1562.11	10.95	6.02	5792.67	6164.07
100.390	2120.00	.00	.00	1547.20	24060.00	1562.57	.00	1562.96	9.42	5.89	7353.79	7838.76
100.950	3040.00	.00	.00	1547.90	14290.00	1563.70	.00	1564.24	11.14	6.53	3961.88	4281.19
100.950	3040.00	.00	.00	1547.90	18530.00	1564.66	.00	1565.17	11.05	6.76	5751.93	5574.50
100.950	3040.00	.00	.00	1547.90	20270.00	1564.98	.00	1565.47	11.02	6.84	6427.89	6106.87
100.950	3040.00	.00	.00	1547.90	23910.00	1565.59	.00	1566.04	10.70	6.93	7739.44	7308.82
101.450	2640.00	.00	.00	1551.60	14200.00	1566.65	.00	1567.16	10.96	5.80	2676.39	4289.51
101.450	2640.00	.00	.00	1551.60	18420.00	1567.79	.00	1568.50	13.65	6.86	3041.65	4985.82
101.450	2640.00	.00	.00	1551.60	20140.00	1568.18	.00	1568.98	14.80	7.27	3175.71	5234.84
101.450	2640.00	.00	.00	1551.60	23760.00	1568.86	.00	1569.86	17.41	8.14	3426.50	5693.97
101.480	160.00	.00	.00	1551.40	14200.00	1566.79	.00	1567.38	11.97	6.27	2773.20	4104.70
101.480	160.00	.00	.00	1551.40	18420.00	1567.99	.00	1568.76	14.58	7.28	3353.05	4824.16
101.480	160.00	.00	.00	1551.40	20130.00	1568.40	.00	1569.24	15.56	7.66	3574.73	5102.59
101.480	160.00	.00	.00	1551.40	23750.00	1569.14	.00	1570.14	17.64	8.43	4011.01	5655.10
101.620	720.00	.00	.00	1552.40	14180.00	1567.65	.00	1568.22	11.30	6.12	2689.75	4218.13
101.620	720.00	.00	.00	1552.40	18400.00	1569.03	.00	1569.76	13.20	7.05	3340.83	5065.09
101.620	720.00	.00	.00	1552.40	20110.00	1569.51	.00	1570.31	13.88	7.38	3589.09	5397.98
101.620	720.00	.00	.00	1552.40	23730.00	1570.41	.00	1571.34	15.35	8.06	4058.61	6055.97

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIS	EG	10*KS	VCH	AREA	.01K
101.720	720.00	.00	.00	1553.70	14160.00	1568.37	.00	1569.00	9.52	6.38	2338.65	4589.62
101.720	720.00	.00	.00	1553.70	18380.00	1569.85	.00	1570.69	11.22	7.41	2807.42	5487.00

	101.720	720.00	.00	.00	1553.70	23700.00	1571.35	.00	1572.44	13.17	8.55	3400.43	6531.62
	101.970	1200.00	.00	.00	1556.00	14120.00	1569.64	.00	1570.37	12.96	6.96	2427.29	3921.74
H	101.970	1200.00	.00	.00	1556.00	18330.00	1571.32	.00	1572.12	12.63	7.49	3540.61	5158.58
	101.970	1200.00	.00	.00	1556.00	20030.00	1571.95	.00	1572.76	12.32	7.62	4002.34	5705.79
	101.970	1200.00	.00	.00	1556.00	23640.00	1573.15	.00	1573.97	11.76	7.85	4954.01	6893.24
	102.100	680.00	.00	.00	1555.90	14100.00	1570.67	.00	1571.17	10.14	5.81	2657.67	4428.70
I	102.100	680.00	.00	.00	1555.90	18300.00	1572.33	.00	1572.93	10.63	6.44	3500.12	5613.14
	102.100	680.00	.00	.00	1555.90	20000.00	1572.94	.00	1573.55	10.53	6.59	3961.77	6162.38
	102.100	680.00	.00	.00	1555.90	23640.00	1574.12	.00	1574.72	10.02	6.75	4985.26	7468.45
	102.220	560.00	.00	.00	1559.80	14100.00	1571.36	.00	1571.85	14.54	5.69	2645.60	3697.18
J	102.220	560.00	.00	.00	1559.80	18300.00	1573.03	.00	1573.62	14.21	6.24	3290.84	4853.97
	102.220	560.00	.00	.00	1559.80	20000.00	1573.61	.00	1574.24	14.23	6.45	3534.22	5302.61
	102.220	560.00	.00	.00	1559.80	23640.00	1574.74	.00	1575.45	14.47	6.90	4005.24	6214.27
*	102.360	720.00	.00	.00	1562.40	14050.00	1572.91	.00	1573.59	43.96	6.63	2158.62	2118.98
*	102.360	720.00	.00	.00	1562.40	18220.00	1574.51	.00	1575.30	41.25	7.17	2608.05	2836.97
K	102.360	720.00	.00	.00	1562.40	19920.00	1575.08	.00	1575.92	40.87	7.40	2771.05	3115.92
*	102.360	720.00	.00	.00	1562.40	23550.00	1576.20	.00	1577.15	40.67	7.87	3092.38	3692.75
*	102.550	1040.00	.00	.00	1571.40	14010.00	1579.08	.00	1580.14	93.40	8.27	1717.71	1449.63
*	102.550	1040.00	.00	.00	1571.40	18160.00	1580.19	.00	1581.42	86.04	8.91	2110.68	1957.79
L	102.550	1040.00	.00	.00	1571.40	19860.00	1580.64	.00	1581.91	82.78	9.11	2292.90	2182.82
	102.550	1040.00	.00	.00	1571.40	23480.00	1581.57	.00	1582.91	76.00	9.42	2714.19	2693.31
*	103.000	2150.00	.00	.00	1569.50	13900.00	1584.85	.00	1585.36	10.43	6.02	3119.51	4303.89
*	103.000	2150.00	.00	.00	1569.50	18000.00	1586.24	.00	1586.88	11.41	6.81	3685.19	5329.63
*	103.000	2150.00	.00	.00	1569.50	19700.00	1586.76	.00	1587.46	11.81	7.12	3896.93	5732.08
*	103.000	2150.00	.00	.00	1569.50	23300.00	1587.76	.00	1588.57	12.65	7.73	4314.01	6551.59
*	103.050	250.00	.00	.00	1567.50	13900.00	1585.06	.00	1586.76	37.65	10.49	1325.64	2265.33
M	103.050	250.00	.00	.00	1567.50	18000.00	1586.41	.00	1588.71	44.79	12.15	1481.28	2689.44
	103.050	250.00	.00	.00	1567.50	19700.00	1586.91	.00	1589.46	41.73	12.80	1536.72	2851.53
	103.050	250.00	.00	.00	1567.50	23300.00	1587.88	.00	1590.98	39.98	14.13	1649.19	3171.32
N	103.090	120.00	.00	.00	1573.10	10400.00	1587.44	.00	1587.88	22.49	5.34	1982.41	2193.04
	103.090	120.00	.00	.00	1573.10	13500.00	1589.68	.00	1590.15	17.62	5.50	2549.14	3215.87
	103.090	120.00	.00	.00	1573.10	14800.00	1590.56	.00	1591.04	16.33	5.57	2774.93	3662.54
*	103.090	120.00	.00	.00	1573.10	17500.00	1592.37	.00	1592.87	14.15	5.69	3242.85	4652.66
	103.100	60.00	.00	.00	1573.10	10400.00	1587.58	.00	1588.05	30.75	5.53	1993.80	1875.49
	103.100	60.00	.00	.00	1573.10	13500.00	1589.79	.00	1590.29	26.33	5.81	2552.44	2631.14
	103.100	60.00	.00	.00	1573.10	14800.00	1590.66	.00	1591.18	24.96	5.91	2776.10	2962.62
	103.100	60.00	.00	.00	1573.10	17500.00	1592.45	.00	1592.99	22.38	6.08	3240.66	3698.94

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRISW	EG	10*KS	VCH	AREA	.01K
*	103.120	140.00	.00	.00	1573.10	10400.00	1587.88	.00	1588.34	14.73	5.46	1903.95	2709.57
O	103.120	140.00	.00	.00	1573.10	13500.00	1590.03	.00	1590.57	13.60	5.92	2280.42	3660.17
	103.120	140.00	.00	.00	1573.10	14800.00	1590.88	.00	1591.46	13.23	6.09	2429.82	4068.52
	103.120	140.00	.00	.00	1573.10	17500.00	1592.63	.00	1593.27	12.44	6.39	2736.86	4961.00
	103.130	30.00	1598.70	1595.00	1573.10	10400.00	1587.91	.00	1588.37	14.58	5.45	1909.99	2723.92
	103.130	30.00	1598.70	1595.00	1573.10	13500.00	1590.07	.00	1590.61	13.47	5.90	2287.29	3678.59
	103.130	30.00	1598.70	1595.00	1573.10	14800.00	1590.92	.00	1591.49	13.10	6.07	2437.06	4088.75
	103.130	30.00	1598.70	1595.00	1573.10	17500.00	1592.68	.00	1593.31	12.33	6.38	2744.55	4984.26
	103.150	100.00	.00	.00	1572.70	10400.00	1588.05	.00	1588.52	14.11	5.49	1894.45	2769.02
	103.150	100.00	.00	.00	1572.70	13500.00	1590.20	.00	1590.75	13.70	5.96	2339.63	3646.95
	103.150	100.00	.00	.00	1572.70	14800.00	1591.05	.00	1591.62	13.20	6.10	2552.82	4038.27

103.150	100.00	.00	.00	1572.70	17500.00	1592.84	.00	1593.44	11.93	6.28	3164.04	5065.93
103.230	430.00	.00	.00	1572.70	10400.00	1586.72	.00	1589.14	14.40	5.18	2006.90	2740.26
103.230	430.00	.00	.00	1572.70	13500.00	1590.86	.00	1591.35	13.96	5.65	2534.03	3613.46
103.230	430.00	.00	.00	1572.70	14800.00	1591.69	.00	1592.21	13.56	5.79	2792.52	4018.47
103.230	430.00	.00	.00	1572.70	17500.00	1593.43	.00	1593.97	12.53	6.00	3362.49	4944.28

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HIWASSEE RIVER
SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH	100 10' 15 500
10 99.130	14600.00	1550.52	.00	.00	.00	407.87	.00	
50 99.130	18900.00	1552.43	1.91	.00	.00	510.10	.00	
100 99.130	20700.00	1553.03	.60	.00	.00	513.21	.00	
500 99.130	24400.00	1554.43	1.40	.00	.00	520.46	.00	
100.000	14450.00	1556.67	.00	6.15	.00	387.84	4600.00	
100.000	18720.00	1558.22	1.55	5.79	.00	717.06	4600.00	
100.000	20490.00	1558.78	.56	5.75	.00	783.99	4600.00	
100.000	24170.00	1559.84	1.06	5.41	.00	879.10	4600.00	
100.390	14380.00	1559.70	.00	3.03	.00	789.80	2120.00	
100.390	18640.00	1561.18	1.48	2.96	.00	1638.89	2120.00	
100.390	20400.00	1561.67	.49	2.89	.00	1681.98	2120.00	
100.390	24060.00	1562.57	.91	2.73	.00	1761.41	2120.00	
100.950	14290.00	1563.70	.00	4.01	.00	1706.58	3040.00	
100.950	18530.00	1564.66	.96	3.49	.00	2044.77	3040.00	
100.950	20270.00	1564.98	.32	3.31	.00	2156.59	3040.00	
100.950	23910.00	1565.59	.60	3.01	.00	2178.97	3040.00	
101.450	14200.00	1566.65	.00	2.94	.00	298.48	2640.00	
101.450	18420.00	1567.79	1.14	3.13	.00	339.24	2640.00	
101.450	20140.00	1568.18	.39	3.20	.00	353.02	2640.00	
101.450	23760.00	1568.86	.69	3.28	.00	377.45	2640.00	
101.480	14200.00	1566.79	.00	.15	.00	419.26	160.00	
101.480	18420.00	1567.99	1.19	.20	.00	538.87	160.00	
101.480	20130.00	1568.40	.41	.22	.00	560.41	160.00	
101.480	23750.00	1569.14	.74	.28	.00	600.55	160.00	
101.620	14180.00	1567.65	.00	.86	.00	363.10	720.00	
101.620	18400.00	1569.03	1.37	1.04	.00	510.12	720.00	
101.620	20110.00	1569.51	.48	1.11	.00	518.35	720.00	
101.620	23730.00	1570.41	.90	1.27	.00	533.56	720.00	
101.720	14160.00	1568.37	.00	.71	.00	219.73	720.00	
101.720	18380.00	1569.85	1.48	.82	.00	390.14	720.00	
101.720	20090.00	1570.37	.52	.86	.00	394.31	720.00	
101.720	23700.00	1571.35	.98	.94	.00	402.14	720.00	
101.970	14120.00	1569.64	.00	1.27	.00	559.03	1200.00	
101.970	18330.00	1571.32	1.68	1.47	.00	718.75	1200.00	
101.970	20030.00	1571.95	.63	1.58	.00	755.90	1200.00	
101.970	23640.00	1573.15	1.20	1.81	.00	816.14	1200.00	

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
102.100	14100.00	1570.67	.00	1.03	.00	295.10	680.00
102.100	18300.00	1572.33	1.66	1.01	.00	703.55	680.00
102.100	20000.00	1572.94	.61	.99	.00	814.97	680.00
102.100	23640.00	1574.12	1.18	.97	.00	883.77	680.00
102.220	14100.00	1571.36	.00	.69	.00	343.19	560.00
102.220	18300.00	1573.03	1.67	.70	.00	411.90	560.00
102.220	20000.00	1573.61	.59	.67	.00	418.60	560.00
102.220	23640.00	1574.74	1.12	.61	.00	423.98	560.00
* 102.360	14050.00	1572.91	.00	1.56	.00	279.72	720.00
* 102.360	18220.00	1574.51	1.60	1.48	.00	283.70	720.00
* 102.360	19920.00	1575.08	.57	1.47	.00	285.13	720.00
* 102.360	23550.00	1576.20	1.12	1.47	.00	287.93	720.00
* 102.550	14010.00	1579.08	.00	6.16	.00	339.67	1040.00
* 102.550	18160.00	1580.19	1.12	5.69	.00	373.21	1040.00
102.550	19860.00	1580.64	.45	5.56	.00	444.58	1040.00
102.550	23480.00	1581.57	.92	5.36	.00	469.27	1040.00
* 103.000	13900.00	1584.85	.00	5.77	.00	397.53	2150.00
* 103.000	18000.00	1586.24	1.39	6.05	.00	409.56	2150.00
* 103.000	19700.00	1586.76	.52	6.12	.00	413.50	2150.00
* 103.000	23300.00	1587.76	1.00	6.19	.00	421.16	2150.00
* 103.050	13900.00	1585.06	.00	.21	.00	114.47	250.00
* 103.050	18000.00	1586.41	1.36	.17	.00	114.66	250.00
* 103.050	19700.00	1586.91	.50	.16	.00	114.74	250.00
* 103.050	23300.00	1587.88	.96	.12	.00	114.87	250.00
103.090	10400.00	1587.44	.00	2.38	.00	250.36	120.00
103.090	13500.00	1589.68	2.24	3.27	.00	255.18	120.00
103.090	14800.00	1590.56	.88	3.65	.00	257.07	120.00
* 103.090	17500.00	1592.37	1.81	4.49	.00	260.96	120.00
103.100	10400.00	1587.58	.00	.14	.00	250.68	60.00
103.100	13500.00	1589.79	2.21	.11	.00	255.42	60.00
103.100	14800.00	1590.66	.87	.10	.00	257.30	60.00
103.100	17500.00	1592.45	1.79	.08	.00	261.15	60.00
* 103.120	10400.00	1587.88	.00	.30	.00	175.00	140.00
103.120	13500.00	1590.03	2.15	.24	.00	175.00	140.00
103.120	14800.00	1590.88	.85	.22	.00	175.00	140.00
103.120	17500.00	1592.63	1.75	.18	.00	175.00	140.00
103.130	10400.00	1587.91	.00	.03	.00	175.00	30.00
103.130	13500.00	1590.07	2.16	.04	.00	175.00	30.00
103.130	14800.00	1590.92	.86	.04	.00	175.00	30.00
103.130	17500.00	1592.68	1.76	.04	.00	175.00	30.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
103.150	10400.00	1588.05	.00	.14	.00	166.75	100.00
103.150	13500.00	1590.20	2.15	.13	.00	291.85	100.00
103.150	14800.00	1591.05	.86	.13	.00	304.81	100.00
103.150	17500.00	1592.84	1.79	.17	.00	332.03	100.00
103.230	10400.00	1588.72	.00	.67	.00	176.59	430.00

103.230 14800.00 1591.69 .84 .64 .00 314.56 430.00
103.230 17500.00 1593.43 1.74 .59 .00 341.00 430.00

1

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SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 102.360 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 102.360 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 102.360 PROFILE= 3 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 102.360 PROFILE= 4 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 102.550 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 102.550 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 103.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 103.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 103.000 PROFILE= 3 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 103.000 PROFILE= 4 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 103.050 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 103.050 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 103.050 PROFILE= 3 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 103.050 PROFILE= 4 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 103.090 PROFILE= 4 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 103.120 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

HEC-2 WATER SURFACE PROFILES

Version 4.5.0; September 1990

T1 CHEROKEE CO NC
T2 100-YEAR FLOOD
T3 HIWASSEE RIVER
CHEROKEE.DAT
Q'S JWB/BLB 11/7/91
2,10,50,100,500,1/36,2/36

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
5 20700 1553.03

J2 NPROF IPLOT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
1 -1

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

110 200

NC	.070	.030	.038	.1	.5							
QT	7	9000	14600	18900	20700	24400	16000	20000	20700			
ET	420	810							1.11			
X1	99.13	16	610	810								
GR	1591.5	115	1571.0	220	1549.0	302	1546.8	420	1551.2	515		
GR	1551.2	570	1550.0	610	1539.8	630	1539.5	650	1538.0	670		
GR	1539.1	780	1559.8	810	1559.9	830	1559.9	850	1583.5	870		
GR	1590.0	880										

*Floodway Discharge
Chil. Do you*

NC	.060	.060	.040									
QT	7	8910	14450	18720	20490	24170	15850	19710	20490			
ET	600	900							1.11			
X1	100.00	24	624	780	4600	4600	4600					
DISTANCES FROM 99.13 TO 100.00 OBTAINED FROM BISHOP PROPERTY STUDY												
GR	1580.0	0	1572.0	34	1560.0	70	1556.6	170	1556.8	380		
GR	1559.0	554	1558.9	592	1554.0	608	1552.5	624	1547.0	630		
GR	1543.0	648	1542.8	660	1541.0	704	1542.0	709	1543.0	759		
GR	1556.0	780	1557.0	832	1551.0	885	1556.7	930	1562.8	976		
GR	1563.4	1002	1567.8	1015	1570.0	1033	1580.0	1040				

157000 - 100000

TVA SURVEYED SECTION OCTOBER 1991

NC	.060	.060	.040									
QT	7	8870	14380	18640	20400	24060	15780	19580	20400			
ET	850	1450							1.11			

100 yd floodway

*method of encroachment
what column to look for
encroachment
station*

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Difference in Floodway width

X1	100.39	23	989	1222	2120	2120	2120					
GR	1568.1	0	1562.9	53	1559.8	268	1559.9	717	1560.7	989		
GR	1554.0	1027	1550.9	1036	1549.1	1044	1548.6	1057	1547.5	1073		
GR	1549.0	1083	1547.2	1098	1548.7	1117	1548.1	1133	1548.1	1166		
GR	1547.9	1195	1549.4	1198	1556.5	1211	1559.5	1222	1558.9	1227		
GR	1557.7	1748	1573.7	2040	1582.2	2056						

B

IVA SURVEYED SECTION FROM FILE

NC	0.06	0.06	0.04							
QT	7	8820	14290	18530	20270	23910	15690	19390	20270	
ET	670	1500							1.11	
C X1	100.95	23	1330	1470	3040	3040	3040			
GR	1585.0	0	1577.7	30	1569.8	105	1560.9	350	1561.8	555
GR	1560.0	650	1562.6	890	1563.7	1025	1563.5	1155	1562.1	1260
GR	1564.9	1330	1549.9	1358	1549.9	1380	1548.9	1400	1547.9	1422
GR	1549.3	1450	1549.3	1460	1560.0	1470	1561.9	1528	1565.0	1560
GR	1562.1	2040	1565.0	2400	1580.0	2400				

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

NC	.12	.08	.045							
QT	7	8760	14200	18420	20140	23760	15600	19200	20140	
ET	284	474							1.11	
D X1	101.45	9	285	473	2640	2640	2640			
GR	1580	0	1560.8	285	1552.6	293	1553.2	330	1554.4	400
GR	1552.1	441	1551.6	458	1565.5	473	1575	670		

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

NC	.12	.08	.045							
QT	7	8760	14200	18420	20130	23750	15600	19190	20130	
ET	420	590							1.11	
W X1	101.48	11	424	586	160	160	160			
GR	1582.7	69	1572.0	119	1566.6	287	1559.4	424	1553.2	428
GR	1551.4	500	1553.7	569	1567.7	586	1565.4	725	1574.1	919
GR	1583.7	1157								

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

NC	.120	.090	.045							
QT	7	8750	14180	18400	20110	23730	15580	19160	20110	
F ET	122	292							1.11	
X1	101.62	11	126	290	720	720	720			
GR	1576.0	0	1564.3	18	1563.2	126	1552.4	135	1552.4	200
GR	1553.9	271	1567.3	290	1568.2	508	1574.2	601	1579.0	745
GR	1598.4	858								

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

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NC	.120	.100	.040							
QT	7	8740	14160	18380	20090	23700	15560	19130	20090	
ET	118	278							1.11	
G X1	101.72	10	118	277	720	720	720			
GR	1582.4	53	1567.4	76	1564.8	118	1554.0	126	1553.7	200
GR	1553.7	263	1563.9	277	1569.6	299	1568.4	453	1582.6	545

SURVEYED SECTION FROM BISHOP PROPERTY STUDY

NC	.090	.080	.040							
QT	7	8710	14120	18330	20030	23640	15520	19040	20030	
ET	225	395							1.11	
H X1	101.97	11	228	390	1360	1200	1200			

GR	1646.4	59	1572.9	127	1564.6	228	1556.9	236	1556.0	300
GR	1557.1	364	1565.2	390	1572.9	455	1568.2	570	1570.0	898
GR	1583.2	1086								

TVA SURVEYED SECTION FROM FILE

NC	.120	.057	.045							
QT	7	8700	14100	18300	20000	23640	15500	19000	20000	
ET	190	523							1.11	
X1	102.10	19	190	523	680	680	680			
GR	1595.0	52	1584.8	70	1580.2	169	1570.0	190	1560.5	210
GR	1560.1	221	1557.7	242	1555.9	274	1556.2	290	1556.5	310
GR	1556.2	327	1557.9	374	1565.2	387	1568.0	435	1571.8	460
GR	1570.5	615	1573.2	790	1571.0	1000	1576.5	1115	1602.8	1233

TVA SURVEYED SECTION FROM FILE

NC	.12	.12	.045							
QT	7	8700	14100	18300	20000	23640	15500	19000	20000	
ET	120	450							1.11	
X1	102.22	18	150	400	560	560	560			
GR	1590.0	18	1578.4	42	1572.5	60	1571.5	102	1567.2	120
GR	1565.0	150	1562.2	163	1559.8	200	1561.9	243	1561.0	265
GR	1561.9	304	1560.0	342	1561.8	385	1570.8	394	1571.5	400
GR	1570.5	445	1573.5	475	1590.5	505				

CROSS SECTION AT WHAT APPEARED DURING FIELD INSPECTION TO BE THE NARROW POINT IN THIS SECTION OF THE RIVER

NC	0.12	0.12	0.06	0.1	0.3					
QT	7	8670	14050	18220	19920	23550	15450	18930	19920	
ET	46	311							1.11	

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X1	102.36	22	46	311	720	720	720			
GR	1587.7	0.	1572.9	20.	1569.3	46.	1566.5	53.	1565.5	66.
GR	1564.6	86.	1564.0	105.	1566.0	130.	1563.9	147.	1563.0	166.
GR	1567.9	177.	1563.8	188.	1565.7	198.	1563.7	214.	1563.2	236.
GR	1563.8	250.	1562.7	269.	1562.4	287.	1565.3	291.	1582.8	311.
GR	1583.4	321.	1608.6	351.						

CROSS SECTION NEAR HOUSES ON RIGHT BANK OF RIVER

NC	0.12	0.1	0.055							
QT	7	8640	14010	18160	19860	23480	15410	18880	19860	
ET	27	334							1.11	
X1	102.55	27	27	334	1040	1040	1040			
GR	1602.6	0.	1590.2	11.	1589.0	27.	1574.3	44.	1574.3	50.
GR	1571.9	67.	1574.8	93.	1575.0	116.	1574.0	133.	1571.4	156.
GR	1571.9	192.	1573.9	215.	1573.1	237.	1571.7	262.	1572.8	283.
GR	1574.5	299.	1573.0	308.	1572.6	316.	1574.3	318.	1576.0	321.
GR	1578.4	334.	1578.2	360.	1580.0	397.	1580.5	431.	1580.4	475.
GR	1582.0	516.	1599.8	562.						

CROSS SECTION JUST DOWNSTREAM FROM OLD BRIDGE ABUTMENTS.
 THIS CROSS SECTION WAS GENERATED TO ALLOW THE FLOW THRU THE OLD BRIDGE ABUTMENTS TO EXPAND TO A CROSS SECTION JUST DOWNSTREAM INSTEAD OF ONE 1/2 MILE DOWNSTREAM.

NC	0.12	0.12	0.04	0.3	0.5	23300	15300	18740	19700	
QT	7	8580	13900	18000	19700					
ET	65	250							1.11	
X1	103.0	17	65	250	2150	2150	2150			
GR	1610.8	0.	1592.5	30.	1585.0	50.	1576.7	65.	1576.0	100.
GR	1573.4	140.	1570.2	155.	1569.5	175.	1570.2	190.	1574.0	216.
GR	1576.0	250.	1578.0	300.	1580.0	350.	1581.5	400.	1585.0	450.
GR	1595.0	500.	1600.0	525.						

CROSS SECTION AT OLD BRIDGE ALIGNMENT, CONTROLLING POINT,
JUST DOWNSTREAM FROM INFLOW FROM BRASSTOWN CREEK

NC	0.12	0.12	0.04	0.6	0.8	23300	15300	18740	19700	
QT	7	8580	13900	18000	19700					
ET	107	223							1.11	
X1	103.05	25	107	223	250	250	250			
GR	1610.8	0.	1595.9	22.	1595.5	59.	1596.9	100.	1595.7	107.
GR	1581.8	109.	1577.4	118.	1573.7	128.	1578.5	136.	1578.4	143.
GR	1569.0	149.	1568.5	162.	1567.5	192.	1572.5	204.	1577.5	210.
GR	1583.3	212.	1583.1	223.	1595.2	223.	1596.3	235.	1595.5	257.
GR	1598.1	308.	1599.3	324.	1599.1	342.	1598.5	345.	1611.1	349.

CROSS SECTION BELOW BRIDGE, JUST ABOVE BRASSTOWN CREEK INFLOW
X-SECTION HAS ISLAND

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NC	0.12	0.12	0.055	0.3	0.5	17500	11500	14060	14800	
QT	7	6440	10400	13500	14800					
ET	4	223							1.11	
X1	103.09	26	4	223	120	120	120			
GR	1585.3	0.	1585.6	4.	1577.6	16.	1576.2	23.	1576.3	35.
GR	1576.2	48.	1577.8	59.	1582.6	78.	1583.7	98.	1581.2	116.
GR	1576.6	128.	1573.8	137.	1573.1	153.	1574.4	165.	1575.1	176.
GR	1577.7	181.	1579.6	184.	1579.1	196.	1578.0	208.	1581.7	210.
GR	1585.5	223.	1586.8	249.	1597.5	272.	1598.7	292.	1598.8	314.
GR	1603.3	324.								

CROSS SECTION BELOW BRIDGE, ISLAND REMOVED
AND LEFT BANK MOVED IN TO MORE ACCURATELY MODEL THE
RESTRICTED FLOW AREA OF THE CHANNEL

NC	0.12	0.12	0.07	0.3	0.5	17500	11500	14060	14800	
QT	7	6440	10400	13500	14800					
ET	48	223							1.11	
X1	103.10	26	48	223	60	60	60			
GR	1585.3	0.	1585.3	4.	1585.3	16.	1585.3	23.	1585.6	35.
GR	1585.6	48.	1577.8	59.	1576.6	78.	1576.4	98.	1575.6	116.
GR	1574.6	128.	1573.8	137.	1573.1	153.	1574.4	165.	1575.1	176.
GR	1577.7	181.	1579.6	184.	1579.1	196.	1578.0	208.	1581.7	210.
GR	1585.5	223.	1586.8	249.	1597.5	272.	1598.7	292.	1598.8	314.
GR	1603.3	324.								

BRIDGE OVER HIWASSEE RIVER, US 64, ROAD TO BRASSTOWN, NC

NC	0.10	0.12	0.05	0.3	0.5	17500	11500	14060	14800	
QT	7	6440	10400	13500	14800					
ET	48	223							1.11	
X1	103.12			140	140	140				

EFFECTIVE AREA OPTION TO CONTROL THE FLOW TO THE BRIDGE WIDTH UP TO EL. 1595
 X3 10 SPECIAL BRIDGE INPUT BETWEEN DOWNSTREAM AND UPSTREAM SECTIONS 1595 1595

SB 0.90 1.56 2.6 0 110 10 3300 2.667

REMAINING BRIDGE INPUT IS PROVIDED WITH THE UPSTREAM SECTION

X1 103.13 30 30 30
 X2 INPUT FOR SPECIAL BRIDGE, MAX. LOW-CHORD ELEV, AND MIN TOP OF ROAD ELEV.

X2 1 1595 1598.7
 EFFECTIVE AREA OPTION TO CONTROL THE FLOW TO THE BRIDGE WIDTH UP TO EL. 1598.7

X3 10 BRIDGE TABLE TO DEFINE TOP-OF ROAD PROFILE. 1598.7 1598.7

BT	9	0	1598.7	1595	100	1598.7	1595	200	1598.7	1595
BT	300	1598.7	1595	400	1598.7	1595	500	1598.7	1595	600
BT	1599	1595	660	1599.1	1595	700	1600.5	1595		

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CROSS SECTION CREATED TO MATCH UPSTEAM SECTION AT 103.23, BUT PROVIDE
 A MORE REASONABLE MODEL FOR THE CONTRACTION LOSSES BECAUSE OF THE BRIDGE

NC	0.07	0.15	0.05							
QT	7	6440	10400	13500	14800	17500	11500	14060	14800	
ET	174	346							1.11	
X1	103.15	20	174	346	100	100	100			
GR	1612.8	0.	1602.9	55.	1594.6	98.	1589.7	144.	1588.4	174.
GR	1581.0	192.	1579.6	207.	1578.1	211.	1575.5	220.	1573.0	229.
GR	1572.7	245.	1572.8	280.	1574.1	313.	1578.1	324.	1581.5	325.
GR	1589.8	346.	1590.1	384.	1588.8	423.	1598.6	480.	1613.6	510.

FIELD SURVEY CROSS SECTION DATA UPSTEAM FROM BRIDGE

NC	0.07	0.15	0.055	0.1	0.5					
QT	7	6440	10400	13500	14800	17500	11500	14060	14800	
ET	174	346							1.11	
X1	103.23	20	174	346	430	430	430			
GR	1612.8	0.	1602.9	55.	1594.6	98.	1589.7	144.	1588.4	174.
GR	1581.0	192.	1579.6	207.	1578.1	211.	1575.5	220.	1573.0	229.
GR	1572.7	245.	1572.8	280.	1574.1	313.	1578.1	324.	1581.5	325.
GR	1589.8	346.	1590.1	384.	1588.8	423.	1598.6	480.	1613.6	510.

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOEL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 1
 0

CCHV=	.100	CEHV=	.500							
*SECNO	99.130									
	99.130	15.03	1553.03	.00	1553.03	1553.81	.78	.00	.00	1550.00
	20700.0	2378.3	18321.7	.0	1216.3	2449.2	.0	.0	.0	1559.80
	.00	1.96	7.48	.00	.070	.038	.000	.000	1538.00	286.98

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
99.130	1553.03	.00	1553.81	513.21	2378.26	18321.74	.00	.00	.00	610.00	810.00	.00
99.130	1553.56	.53	1554.42	380.96	1217.63	19482.37	.00	390.00	420.00	610.00	810.00	810.00
100.000	1558.78	.00	1559.60	783.99	1115.99	17999.23	1374.78	.00	.00	624.00	780.00	.00
100.000	1559.27	.49	1560.16	300.00	332.69	18897.66	1259.64	300.00	600.00	624.00	780.00	900.00
100.390	1561.67	.00	1562.11	1681.98	1467.36	15496.56	3436.08	.00	.00	989.00	1222.00	.00
100.390	1562.22	.55	1562.87	600.00	305.95	18411.36	1682.69	600.00	850.00	989.00	1222.00	1450.00
100.950	1564.98	.00	1565.47	2156.59	5207.79	13261.81	1800.40	.00	.00	1330.00	1470.00	.00
100.950	1566.00	1.02	1566.68	830.00	4380.21	15492.97	396.82	830.00	670.00	1330.00	1470.00	1500.00
101.450	1568.18	.00	1568.98	353.02	458.74	19616.81	64.46	.00	.00	285.00	473.00	.00
101.450	1569.17	.99	1569.93	190.00	3.39	20134.57	2.04	190.00	284.00	285.00	473.00	474.00
101.480	1568.40	.00	1569.24	560.41	1130.96	18621.90	377.14	.00	.00	424.00	586.00	.00
101.480	1569.30	.90	1570.24	170.00	37.72	20087.15	5.13	170.00	420.00	424.00	586.00	590.00
101.620	1569.51	.00	1570.31	518.35	938.82	18820.48	350.70	.00	.00	126.00	290.00	.00
101.620	1570.39	.88	1571.25	170.00	24.18	20081.61	4.20	170.00	122.00	126.00	290.00	292.00
101.720	1570.37	.00	1571.29	394.31	204.24	19652.49	233.27	.00	.00	118.00	277.00	.00
101.720	1571.24	.87	1572.12	160.00	.00	20086.74	3.26	160.00	118.00	118.00	277.00	278.00
101.970	1571.95	.00	1572.76	755.90	452.57	17884.16	1693.27	.00	.00	228.00	390.00	.00
101.970	1572.61	.66	1573.63	170.00	24.00	19956.03	49.97	170.00	225.00	228.00	390.00	395.00
102.100	1573.09	.00	1573.58	841.58	5.05	19138.25	856.70	.00	.00	190.00	460.00	.00
102.100	1573.97	.88	1574.45	333.00	.00	19781.65	218.35	333.00	190.00	190.00	460.00	523.00
102.220	1573.72	.00	1574.33	419.12	549.83	19306.42	143.75	.00	.00	150.00	400.00	.00
102.220	1574.52	.79	1575.07	330.00	375.88	19458.35	165.77	330.00	120.00	150.00	400.00	450.00

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SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
102.360	1575.14	.00	1575.98	285.28	210.45	19709.54	.00	.00	.00	46.00	311.00	.00
102.360	1575.70	.55	1576.47	256.88	.00	19920.00	.00	265.00	46.00	46.00	311.00	311.00
102.550	1580.63	.00	1581.91	444.43	.00	19599.00	261.00	.00	.00	27.00	334.00	.00
102.550	1580.73	.10	1582.02	297.45	.00	19860.00	.00	307.00	27.00	27.00	334.00	334.00
103.000	1586.76	.00	1587.46	413.50	114.40	17392.34	2193.27	.00	.00	65.00	250.00	.00
103.000	1587.50	.74	1588.40	185.00	.00	19700.00	.00	165.00	65.00	65.00	250.00	250.00
103.050	1586.91	.00	1589.46	114.74	.00	19700.00	.00	.00	.00	107.00	223.00	.00
103.050	1587.80	.88	1590.04	114.86	.00	19700.00	.00	116.00	107.00	107.00	223.00	223.00
103.090	1590.56	.00	1591.04	257.07	17.31	14617.95	164.74	.00	.00	4.00	223.00	.00
103.090	1590.95	.38	1591.41	219.00	.00	14800.00	.00	219.00	4.00	4.00	223.00	223.00
103.100	1590.66	.00	1591.18	257.30	452.12	14135.67	212.21	.00	.00	48.00	223.00	.00
103.100	1591.02	.36	1591.58	175.00	.00	14800.00	.00	175.00	48.00	48.00	223.00	223.00
103.120	1590.88	.00	1591.46	175.00	.00	14800.00	.00	.00	.00	48.00	223.00	.00
103.120	1591.29	.41	1591.84	175.00	.00	14800.00	.00	175.00	48.00	48.00	223.00	223.00
103.130	1590.92	.00	1591.49	175.00	.00	14800.00	.00	.00	.00	48.00	223.00	.00
103.130	1591.33	.41	1591.87	175.00	.00	14800.00	.00	.00	48.00	48.00	223.00	223.00

103.150	1591.05	.00	1591.63	304.80	78.69	14668.71	52.61	.00	.00	174.00	346.00	.00
103.150	1591.45	.39	1592.00	172.00	.00	14800.00	.00	172.00	174.00	174.00	346.00	346.00
103.230	1591.69	.00	1592.21	314.56	133.08	14565.87	101.05	.00	.00	174.00	346.00	.00
103.230	1592.06	.36	1592.57	172.00	.00	14800.00	.00	172.00	174.00	174.00	346.00	346.00

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SUMMARY OF ERRORS AND SPECIAL NOTES

- WARNING SECNO= 102.360 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
- WARNING SECNO= 102.360 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
- WARNING SECNO= 102.550 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
- WARNING SECNO= 102.550 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
- WARNING SECNO= 103.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
- WARNING SECNO= 103.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
- WARNING SECNO= 103.050 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
- WARNING SECNO= 103.050 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
- WARNING SECNO= 103.120 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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FLOODWAY DATA, HIWASSEE RIVER
PROFILE NO. 2

STATION	FLOODWAY		MEAN VELOCITY	WATER SURFACE ELEVATION		
	WIDTH	SECTION AREA		WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
99.130	381.	3233.	6.4	1553.5	1553.0	.5
A 100.000	300.	3069.	6.7	1559.3	1558.8	.5
B 100.390	600.	3752.	5.4	1562.2	1561.7	.5
C 100.950	830.	4468.	4.5	1566.0	1565.0	1.0
L 101.450	190.	2896.	7.0	1569.2	1568.2	1.0
E 101.480	170.	2623.	7.7	1569.3	1568.4	.9
F 101.620	170.	2728.	7.4	1570.4	1569.5	.9
G 101.720	160.	2668.	7.5	1571.3	1570.4	.9
H 101.970	170.	2514.	8.0	1572.6	1571.9	.7
I 102.100	333.	3695.	5.4	1574.0	1573.1	.9
J 102.220	330.	3652.	5.5	1574.5	1573.7	.8
K 102.360	257.	2822.	7.1	1575.7	1575.1	.6
L 102.550	297.	2181.	9.1	1580.7	1580.6	.1
103.000	185.	2580.	7.6	1587.5	1586.8	.7
m 103.050	115.	1640.	12.0	1587.3	1586.9	.9
N 103.090	219.	2710.	5.5	1591.0	1590.6	.4
103.100	175.	2454.	6.0	1591.1	1590.7	.4
o 103.120	175.	2502.	5.9	1591.3	1590.9	.4
103.130	175.	2509.	5.9	1591.3	1590.9	.4
103.150	172.	2475.	6.0	1591.5	1591.1	.4
p 103.230	172.	2579.	5.7	1592.1	1591.7	.4