

INTERACTIVE HELP VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

*F-W Table
 Find 3/22/76*

C FPM BIG BEAVER ISLAND FIS
 1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	WVINS	Q	WSEL	FG
	-1.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.900	-0.000
J2	NPROF	IPL0T	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J3	-2.000	200.000	38.000	1.000	50.000	3.000	5.000	10.000	26.000	4.000
J3	21.000	22.000	53.000	54.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J4	-1.000	-10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
QT	7.000	11800.000	11800.000	18400.000	9500.000	5700.000	11800.000	11800.000	-0.000	-0.000
NC	.140	.070	.050	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	1.000	22.000	417.000	485.000	-0.000	-0.000	-0.000	-0.000	-2.000	-0.000
GR	580.000	-0.000	556.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	2.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	3.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	4.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	700.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
NC	.040	.040	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	795.000	25.000	419.000	507.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
GR	572.600	-0.000	564.600	50.000	556.600	68.000	553.700	100.000	553.600	200.000
GR	553.600	300.000	554.400	400.000	562.700	419.000	542.700	461.000	542.700	465.000
GR	562.700	507.000	554.000	530.000	553.300	600.000	553.000	645.000	552.400	663.000
GR	553.100	700.000	555.800	728.000	555.000	800.000	555.800	900.000	560.800	1000.000
GR	566.000	1012.000	564.800	1150.000	565.200	1200.000	567.000	1300.000	573.500	1400.000
SB	-0.000	1.140	2.500	-0.000	4.000	-0.000	923.000	2.100	542.700	542.700
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	805.000	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	562.700	572.400	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
BT	12.000	-0.000	572.400	-0.000	50.000	572.500	-0.000	68.000	572.500	-0.000

BT	572,400	554,400	419,000	572,500	562,700	507,000	572,600	562,700	530,000	572,600
BT	554,000	600,000	572,800	-0.000	1400,000	573,500	-0.000	-0.000	-0.000	-0.000
NH	4,000	.200	417,000	.050	485,000	.150	1100,000	.070	1400,000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234,000	734,000
X1	900,000	22,000	417,000	485,000	95,000	95,000	95,000	-0.000	-0.000	-0.000
GR	580,000	-0.000	556,600	68,000	553,700	100,000	553,600	300,000	554,400	400,000
GR	555,400	417,000	544,400	432,000	544,500	473,000	554,800	485,000	554,300	500,000
GR	553,000	645,000	552,400	663,000	553,100	700,000	555,800	728,000	555,000	800,000
GR	555,800	900,000	560,800	1000,000	566,000	1012,000	564,800	1150,000	565,200	1200,000
GR	567,000	1300,000	573,200	1400,000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234,000	734,000
X1	1500,000	-0.000	-0.000	-0.000	600,000	600,000	600,000	-0.000	-0.000	-0.000
NC	.200	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580,000	1080,000
X1	2200,000	22,000	673,000	734,000	700,000	700,000	700,000	-0.000	-0.000	-0.000
GR	572,300	56,000	567,700	100,000	565,100	200,000	562,900	300,000	563,000	390,000
GR	562,900	400,000	562,000	500,000	561,700	522,000	556,100	600,000	557,100	673,000
GR	548,200	675,000	548,200	722,000	556,200	734,000	556,400	800,000	555,000	855,000
GR	554,800	900,000	554,800	1000,000	554,300	1100,000	555,700	1200,000	584,000	1280,000
GR	584,300	1300,000	583,100	1400,000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.060	.060	.045	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580,000	1080,000
X1	3000,000	-0.000	-0.000	-0.000	800,000	800,000	800,000	-0.000	-0.000	-0.000
NH	5,000	.060	100,000	.045	1060,000	.070	1223,000	.045	1314,000	.060
NH	1700,000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	950,000	1450,000
X1	3300,000	28,000	1000,000	1060,000	300,000	300,000	300,000	-0.000	-0.000	-0.000
X3	10,000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580,000	-0.000	567,800	500,000	569,100	545,000	569,200	600,000	569,200	627,000
GR	567,900	649,000	566,400	700,000	565,600	800,000	565,000	900,000	559,100	1000,000
GR	549,200	1016,000	548,900	1024,000	549,000	1050,000	558,300	1060,000	557,400	1100,000
GR	557,800	1200,000	557,600	1223,000	550,700	1246,000	550,700	1272,000	551,100	1285,000
GR	555,700	1300,000	559,000	1314,000	558,800	1400,000	558,700	1500,000	561,500	1530,000
GR	566,200	1540,000	566,800	1558,000	580,000	1700,000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000,000	1430,000
X1	3685,000	30,000	1000,000	1430,000	385,000	385,000	385,000	-0.000	-0.000	-0.000
X3	10,000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567,800	568,400	-0.000
X4	2,000	575,000	1101,000	575,000	1344,000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580,000	-0.000	568,000	500,000	569,300	545,000	569,300	625,000	567,700	650,000
GR	566,400	700,000	565,400	800,000	565,000	900,000	559,500	945,000	559,300	960,000
GR	558,000	1000,000	554,400	1005,000	552,500	1010,000	551,500	1015,000	552,000	1035,000
GR	553,500	1040,000	558,300	1050,000	557,300	1100,000	557,700	1345,000	557,600	1370,000
GR	553,000	1390,000	553,000	1410,000	551,000	1420,000	550,200	1425,000	559,000	1430,000
GR	558,800	1645,000	561,500	1675,000	566,300	1685,000	567,000	1705,000	580,000	1845,000
NH	5,000	.050	1000,000	.040	1040,000	.050	1390,000	1040,000	1430,000	.050
NH	1910,000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000,000	1430,000
X1	3690,000	25,000	1000,000	1430,000	5,000	5,000	5,000	-0.000	-0.000	-0.000
BT	5,000	1000,000	567,800	564,600	1040,000	567,900	564,700	1300,000	568,000	565,000
BT	1390,000	568,400	565,200	1430,000	568,400	565,200	-0.000	-0.000	-0.000	-0.000
GR	580,000	-0.000	573,200	500,000	571,000	600,000	569,400	700,000	568,400	800,000
GR	567,300	900,000	567,800	1000,000	558,000	1000,000	554,400	1005,000	552,500	1010,000
GR	551,500	1015,000	552,000	1035,000	553,500	1040,000	567,900	1040,000	568,000	1300,000
GR	568,400	1390,000	553,000	1390,000	553,000	1410,000	551,000	1420,000	550,700	1430,000
GR	568,400	1430,000	569,000	1500,000	570,400	1600,000	575,700	1700,000	580,000	1910,000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	850,000	1450,000
X1	3710,000	-0.000	-0.000	-0.000	20,000	20,000	20,000	-0.000	-0.000	-0.000

FINAL F U TABLE

X2	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000
NH	5.000	.100	1000.000	.055	1045.000	.070	1390.000	.055	1430.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000
X1	3715.000	35.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
GR	580.000	330.000	570.500	500.000	567.200	550.000	564.400	620.000	562.300	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	558.000	1000.000
GR	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000	553.500	1040.000
GR	560.300	1045.000	558.400	1100.000	559.000	1120.000	558.000	1200.000	560.800	1240.000
GR	565.300	1260.000	565.000	1290.000	560.800	1300.000	559.500	1385.000	553.000	1390.000
GR	553.000	1410.000	551.000	1420.000	550.700	1425.000	559.500	1430.000	559.000	1500.000
GR	558.300	1550.000	560.300	1580.000	563.400	1630.000	572.500	1700.000	580.000	1760.000
NH	5.000	.100	980.000	.055	1030.000	.070	1550.000	.055	1585.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	3765.000	29.000	980.000	1255.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	565.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
QT	7.000	8400.000	8400.000	13200.000	6700.000	3700.000	8400.000	8400.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1245.000
X1	4700.000	29.000	980.000	1255.000	935.000	935.000	935.000	-0.000	2.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	580.000	1255.000	580.000	1285.000	560.700	1300.000
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
NH	5.000	.200	133.000	.070	927.000	.100	968.000	.060	1018.000	.070
NH	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1245.000
X1	5700.000	27.000	968.000	1018.000	1000.000	1000.000	1000.000	-0.000	-0.000	-0.000
GR	589.800	-0.000	582.900	133.000	570.700	300.000	565.800	387.000	562.500	500.000
GR	562.400	600.000	563.200	700.000	562.600	800.000	562.600	900.000	563.300	927.000
GR	565.400	940.000	564.900	968.000	558.600	976.000	556.700	1003.000	557.400	1012.000
GR	564.000	1018.000	563.500	1100.000	562.100	1200.000	563.300	1300.000	561.700	1400.000
GR	562.500	1420.000	566.900	1479.000	570.300	1500.000	582.900	1562.000	588.300	1600.000
GR	593.100	1653.000	594.500	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.170	.090	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	6400.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	3.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	870.000	1430.000
X1	7100.000	19.000	968.000	1018.000	700.000	700.000	700.000	-0.000	-4.500	-0.000
GR	600.000	500.000	580.000	800.000	575.000	875.000	572.600	900.000	573.300	927.000
GR	575.400	940.000	574.900	968.000	568.600	976.000	566.700	1003.000	567.400	1012.000
GR	574.000	1018.000	573.500	1100.000	572.100	1300.000	573.300	1300.000	571.700	1400.000
GR	572.500	1470.000	576.900	1550.000	580.300	1650.000	600.000	1700.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	900.000	1400.000
X1	7700.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	2.500	-0.000
NH	4.000	.200	277.000	.070	523.000	.060	591.000	.100	713.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	350.000	650.000
X1	9350.000	19.000	523.000	591.000	1650.000	1650.000	1650.000	-0.000	-0.000	-0.000

GR	581.400	-0.000	593.000	100.000	507.700	200.000	504.200	243.000	503.000	277.000
GR	582.900	300.000	577.600	400.000	577.300	500.000	579.000	523.000	572.300	538.000
GR	571.300	555.000	571.700	577.000	578.800	591.000	578.700	600.000	579.100	666.000
GR	581.200	671.000	595.000	691.000	599.000	700.000	601.300	713.000	-0.000	-0.000
NC	.150	.090	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	460.000	760.000

X1	11350.000	10.000	525.000	590.000	2000.000	2000.000	2000.000	-0.000	-4.000	-0.000
GR	617.500	-0.000	600.000	400.000	594.000	525.000	587.000	540.000	586.000	555.000
GR	587.000	580.000	594.000	590.000	594.000	600.000	600.000	900.000	620.000	1100.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	600.000

X1	12800.000	25.000	315.000	367.000	1450.000	1450.000	1450.000	-0.000	-5.500	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	597.000	315.000	590.600	326.000	590.300	341.000	589.400	358.000	598.100	367.000
GR	596.900	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000

X1	13085.000	24.000	300.000	420.000	285.000	285.000	285.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	611.500	300.000	589.600	352.500	589.600	367.500	611.500	420.000	596.900	420.000
GR	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000	603.900	620.000
GR	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	-0.000	-0.000
SB	1.250	1.620	2.500	-0.000	15.000	2.000	1427.600	2.400	589.600	589.600
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000

X1	13115.000	-0.000	-0.000	-0.000	30.000	30.000	30.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	611.500	612.700	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000
BT	15.000	0.000	623.700	0.000	50.000	614.100	0.000	64.000	613.900	0.000
BT	100.000	613.100	-0.000	200.000	612.800	-0.000	250.000	612.700	-0.000	300.000
BT	612.900	569.700	300.000	612.900	611.500	420.000	612.900	611.500	420.000	612.900
BT	596.900	450.000	612.700	-0.000	500.000	613.000	-0.000	550.000	613.800	-0.000
BT	600.000	614.900	0.000	750.000	621.100	0.000	-0.000	-0.000	-0.000	-0.000
NC	.120	.120	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	250.000	500.000

X1	13235.000	25.000	315.000	367.000	120.000	120.000	120.000	-0.000	1.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	597.000	315.000	590.600	326.000	590.300	341.000	589.400	358.000	598.100	367.000
GR	596.900	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000
NC	.150	.200	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	500.000

X1	13700.000	-0.000	-0.000	-0.000	465.000	465.000	465.000	-0.000	2.000	-0.000
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000

X1	14188.000	25.000	195.000	315.000	300.000	650.000	488.000	.860	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000
GR	616.500	20.000	611.500	70.000	607.700	120.000	606.500	145.000	602.300	155.000
GR	600.500	170.000	609.600	195.000	593.500	226.000	593.500	284.000	609.600	315.000
GR	601.500	320.000	602.500	370.000	602.500	420.000	602.700	445.000	605.700	470.000
GR	612.400	520.000	612.500	550.000	612.500	570.000	615.500	620.000	617.400	670.000
GR	617.900	680.000	619.500	700.000	622.000	750.000	624.500	800.000	627.300	850.000
SB	1.250	1.380	2.500	-0.000	58.000	2.000	1200.000	1.930	593.500	593.500
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000

X1	14212.000	-0.000	-0.000	-0.000	24.000	24.000	24.000	.860	-0.000	-0.000
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AZ	-0.000	-0.000	1.000	609.000	912.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000
BT	16.000	20.000	616.500	-0.000	70.000	612.100	-0.000	120.000	612.000	-0.000
BT	170.000	612.000	600.500	195.000	612.100	609.600	315.000	612.100	609.600	320.000
BT	612.100	601.500	370.000	612.200	-0.000	420.000	612.500	-0.000	445.000	612.800
BT	-0.000	520.000	614.000	-0.000	620.000	616.500	-0.000	700.000	619.500	-0.000
BT	750.000	622.000	-0.000	800.000	624.500	-0.000	850.000	627.300	-0.000	-0.000
NC	.150	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	290.000	420.000

X1	14320.000	21.000	287.000	400.000	108.000	108.000	108.000	.860	-0.000	-0.000
GR	625.400	-0.000	623.200	25.000	621.800	50.000	617.700	100.000	612.900	150.000
GR	609.200	200.000	608.000	227.000	603.700	236.000	501.500	250.000	597.900	287.000
GR	595.000	290.000	595.000	386.000	603.000	400.000	604.000	450.000	604.400	523.000
GR	607.300	550.000	613.000	600.000	614.200	631.000	613.900	650.000	617.100	700.000
GR	619.500	760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.150	.150	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	14950.000	18.000	64.000	122.000	630.000	630.000	630.000	-0.000	-0.000	-0.000
GR	632.200	-0.000	619.000	25.000	605.500	50.000	604.300	64.000	600.800	72.000
GR	600.100	100.000	599.600	119.000	601.300	122.000	604.600	150.000	612.200	193.000
GR	613.200	200.000	621.800	230.000	621.100	256.000	620.700	263.000	626.600	289.000
GR	627.900	300.000	630.900	338.000	634.100	357.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	16450.000	-0.000	-0.000	-0.000	1500.000	1500.000	1500.000	-0.000	15.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	17450.000	-0.000	-0.000	-0.000	1000.000	1000.000	1000.000	-0.000	10.000	-0.000
NC	.100	.100	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
QT	7.000	7800.000	7800.000	12400.000	6100.000	3300.000	7800.000	7800.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	18400.000	15.000	290.000	344.000	950.000	950.000	950.000	-0.000	-0.000	-0.000
GR	670.200	-0.000	659.100	100.000	646.700	200.000	642.300	240.000	643.000	255.000
GR	646.300	290.000	635.000	300.000	634.800	315.000	634.400	331.000	644.900	344.000
GR	646.000	400.000	648.100	438.000	657.100	470.000	664.300	500.000	671.000	536.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	19700.000	-0.000	-0.000	-0.000	500.000	1500.000	1300.000	-0.000	5.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	21000.000	16.000	337.000	398.000	1300.000	1300.000	1300.000	-0.000	4.000	-0.000
GR	684.900	-0.000	672.800	100.000	660.800	200.000	657.300	233.000	655.800	300.000
GR	656.100	337.000	647.300	351.000	647.500	369.000	647.400	388.000	656.200	398.000
GR	656.300	400.000	656.800	410.000	665.200	438.000	671.300	500.000	677.000	600.000
GR	682.400	675.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	22300.000	-0.000	-0.000	-0.000	1300.000	1300.000	1300.000	-0.000	4.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1200.000	1600.000

X1	24500.000	11.000	1370.000	1431.000	2200.000	2200.000	2200.000	-0.000	-0.000	-0.000
GR	700.000	0.000	680.000	600.000	660.000	1220.000	658.000	1370.000	649.000	1384.000
GR	649.000	1402.000	649.000	1421.000	658.000	1431.000	660.000	1600.000	680.000	2450.000
GR	700.000	2600.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
EJ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 FLOODWAY
 T3 BIG-BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10.	3.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	557.900	-0.000
J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL,CHSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000
 7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH
 ERROR STATEMENT APPLIES TO SECTION 795.000

NORFOLK SOUTHERN RR-SECTION B-11

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWF	BAREA	SS	ELCHU	ELCHD
	-0.00	1.14	2.50	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

6070 LOW FLOW BY NORMAL BRIDGE

EGPRS= 562.708 EGLWC= 564.442 ELLC= 562.700 PCWSE= 559.815 ELTRD= 572.400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.16	566.16	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.36	566.36	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.68	566.68	0.00

*** SECTION B-1 ***

*** SECTION B-2 ***

*** SR 1169 SECTION B-3 ***

FLOODWAY DATA, BIG BEAVER ISLAND CREEK
 PROFILE NO. 2

STATION	FLOODWAY		MEAN VELOCITY	WATER SURFACE ELEVATION		DIFFERENCE
	WIDTH (FT)	SECTION AREA		WITH FLOODWAY	WITHOUT FLOODWAY	
1.000	585.	3972.	3.0	557.9	556.9	1.0
2.000	585.	3977.	3.0	557.9	556.9	1.0
3.000	585.	3981.	3.0	557.9	556.9	1.0
4.000	585.	3985.	3.0	557.9	556.9	1.0
700.000	585.	4513.	2.6	558.8	557.9	.9
795.000	76.	684.	17.3	559.8	559.9	-.0
805.000	84.	837.	14.1	561.7	561.7	.0
900.000	500.	6263.	1.9	565.3	565.4	-.1
1500.000	500.	6443.	1.8	565.7	565.6	.1
2200.000	500.	5707.	2.1	566.1	565.9	.3
3000.000	500.	5944.	2.0	566.6	566.2	.5
3300.000	500.	5004.	2.4	566.7	566.2	.5
3685.000	186.	2128.	5.5	566.7	566.1	.5
3690.000	80.	998.	11.8	565.7	565.2	.5
3710.000	80.	1131.	10.4	566.7	566.1	.6
3715.000	600.	5912.	2.0	568.6	568.2	.4
3765.000	600.	5413.	2.2	568.6	568.2	.4
4700.000	620.	4600.	1.8	569.2	568.5	.7
5700.000	620.	4372.	1.9	569.7	569.0	.7
6400.000	600.	2858.	2.9	570.5	569.4	1.0
7100.000	560.	2814.	3.0	573.2	572.3	.9
7700.000	500.	2376.	3.5	575.4	574.9	.5
9350.000	300.	1662.	5.1	582.6	582.3	.3
11350.000	300.	1273.	6.6	594.1	594.4	-.2
12800.000	300.	1884.	4.5	603.0	602.7	.3
13085.000	83.	696.	12.1	603.8	603.6	.2
13115.000	86.	739.	11.4	604.3	604.4	-.1
13235.000	250.	2315.	3.6	606.6	607.2	-.6
13700.000	260.	2135.	3.9	607.7	607.8	-.2

14188.000	102.	1183.	7.1	609.1	608.9	.2
14212.000	83.	1088.	7.7	609.2	609.0	.3
14320.000	112.	1476.	5.7	609.9	610.0	-.1
14950.000	100.	918.	9.1	611.0	610.4	.7
16450.000	100.	929.	9.0	626.2	626.2	-.1
17450.000	100.	923.	9.1	636.1	635.8	.3
18400.000	160.	801.	9.7	647.2	647.0	.1
19700.000	160.	1461.	5.3	656.3	655.6	.7
21000.000	160.	1649.	4.7	659.9	659.1	.8
22300.000	160.	1503.	5.2	662.9	662.3	.6
24500.000	400.	3453.	2.3	666.4	665.8	.6

14188
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SUMMARY PRINTOUT

RIG BEAVER ISLAND CREEK

SFCNO	CWSFL	DIFWSP	EG	10K+S	HV	VCH	TOP*10	STC-	STC+	SS*1	ENOS*
1.00	556.90	0.00	557.17	16.13	.27	5.95	900.00	417.00	485.00	61.32	962.7
1.00	557.90	1.00	558.19	14.12	.29	5.86	585.00	417.00	485.00	215.00	800.0
2.00	556.91	0.00	557.18	16.06	.27	5.94	900.00	417.00	485.00	61.29	962.1
2.00	557.91	1.00	558.20	14.07	.29	5.85	585.00	417.00	485.00	215.00	800.0
3.00	556.92	0.00	557.19	15.99	.27	5.93	901.05	417.00	485.00	61.27	962.3
3.00	557.92	1.00	558.20	14.03	.29	5.85	585.00	417.00	485.00	215.00	800.0
4.00	556.93	0.00	557.19	15.93	.27	5.92	901.24	417.00	485.00	61.25	962.4
4.00	557.92	1.00	558.21	13.99	.29	5.84	585.00	417.00	485.00	215.00	800.0
700.00	557.91	0.00	558.08	9.81	.17	4.89	923.70	417.00	485.00	58.40	982.1
700.00	558.82	.92	559.04	9.77	.21	5.10	585.00	417.00	485.00	215.00	800.0
795.00	559.86	0.00	564.44	99.08	4.58	17.18	76.06	419.00	507.00	424.97	501.0
795.00	559.82	-.04	564.44	100.35	4.63	17.26	75.88	419.00	507.00	425.06	500.9
805.00	561.70	0.00	564.81	59.18	3.11	14.16	83.77	419.00	507.00	421.12	504.8
805.00	561.74	.04	564.83	58.52	3.09	14.10	83.94	419.00	507.00	421.03	504.9
900.00	565.41	0.00	565.49	3.12	.08	3.60	1100.09	417.00	485.00	42.40	1211.6
900.00	565.32	-.09	565.53	5.91	.21	4.93	500.00	417.00	485.00	234.00	734.0
1500.00	565.60	0.00	565.68	2.97	.08	3.53	1133.24	417.00	485.00	41.85	1222.1
1500.00	565.57	.03	565.87	5.45	.20	4.80	500.00	417.00	485.00	234.00	734.0
2200.00	565.34	0.00	565.98	6.13	.12	4.37	1057.96	673.00	734.00	170.76	1228.7
2200.00	565.14	.20	566.36	8.71	.22	5.27	500.00	673.00	734.00	580.00	1080.0
3000.00	566.16	0.00	566.20	1.30	.04	2.26	1070.31	673.00	734.00	159.25	1229.5
3000.00	566.61	.45	566.68	2.08	.07	2.91	500.00	673.00	734.00	580.00	1080.0
3300.00	566.19	0.00	566.27	2.82	.09	3.29	813.16	1000.00	1060.00	726.81	1539.9
3300.00	566.67	.48	566.77	2.91	.10	3.41	500.00	1000.00	1060.00	950.00	1450.0
3600.00	566.15	0.00	566.67	19.23	.52	5.80	185.99	1000.00	1430.00	1000.00	1430.0
3600.00	566.66	.51	567.14	16.32	.48	5.54	186.05	1000.00	1430.00	1000.00	1430.0
3690.00	565.10	0.00	567.36	460.10	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3690.00	565.67	.48	567.84	467.98	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.08	0.00	567.89	139.45	1.84	10.88	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.67	.62	568.36	120.94	1.69	10.43	80.00	1000.00	1430.00	1000.00	1430.0
3715.00	568.29	0.00	568.25	3.67	.06	2.13	895.22	1000.00	1430.00	534.78	1430.0
3715.00	568.62	.43	568.69	3.90	.07	2.24	600.00	1000.00	1430.00	850.00	1450.0
3765.00	568.24	0.00	568.27	2.41	.03	1.72	1131.68	980.00	1255.00	535.34	1667.2
3765.00	568.63	.39	568.73	6.08	.09	2.80	600.00	980.00	1255.00	655.00	1255.0
4765.00	568.93	0.00	568.62	6.70	.08	2.63	676.51	980.00	1255.00	568.02	1244.5
4765.00	569.19	.66	569.26	5.16	.07	2.40	620.00	980.00	1255.00	625.00	1245.0

SECNO	CWSEL	DJFWSP	EG	10K*S	HV	VCH	TOPWTD	STCHL	STCHR	SSTA	ENDST
5700.00	569.02	0.00	569.05	2.92	.03	1.99	1162.36	968.00	1018.00	329.76	1492.1
5700.00	569.74	.71	569.80	5.66	.06	2.89	620.00	968.00	1018.00	625.00	1245.0
6400.00	569.43	0.00	569.62	39.89	.19	5.79	1096.99	968.00	1018.00	375.75	1472.7
6400.00	570.45	1.02	570.77	46.20	.32	6.77	600.00	968.00	1018.00	655.00	1255.0
7100.00	572.33	0.00	572.60	44.42	.27	6.32	701.48	968.00	1018.00	847.41	1548.8
7100.00	573.22	.89	573.45	31.70	.23	5.71	560.00	968.00	1018.00	870.00	1430.0
7700.00	574.93	0.00	575.18	41.69	.26	6.17	704.73	968.00	1018.00	846.08	1550.8
7700.00	575.41	.48	575.73	44.87	.33	6.64	500.00	968.00	1018.00	900.00	1400.0
9350.00	582.29	0.00	582.90	50.82	.61	7.71	361.22	523.00	591.00	311.37	672.5
9350.00	582.62	.32	583.18	44.27	.57	7.35	300.00	523.00	591.00	350.00	650.0
11350.00	594.38	0.00	595.66	78.57	1.27	10.03	385.42	525.00	590.00	433.70	819.1
11350.00	594.14	.24	595.51	86.01	1.36	10.33	300.00	525.00	590.00	467.00	760.0
12800.00	602.70	0.00	603.15	35.25	.45	7.09	464.22	315.00	367.00	149.73	613.9
12800.00	603.02	.32	603.56	37.48	.54	7.45	300.00	315.00	367.00	300.00	600.0
* 13085.00	603.58	0.00	606.59	234.23	3.02	13.94	101.00	300.00	420.00	300.00	401.0
13085.00	603.79	.21	606.05	129.17	2.26	12.08	83.03	300.00	420.00	300.00	401.5
13115.00	604.45	0.00	606.74	153.78	2.29	12.14	103.10	300.00	420.00	300.00	403.1
13115.00	604.31	.14	606.31	110.55	2.00	11.36	85.52	300.00	420.00	300.00	402.7
13235.00	607.23	0.00	607.45	9.62	.21	5.19	514.48	315.00	367.00	123.04	637.5
13235.00	606.59	.65	607.06	18.14	.47	6.91	250.00	315.00	367.00	250.00	500.0
13700.00	607.81	0.00	608.26	28.65	.45	6.97	496.27	315.00	367.00	130.56	626.8
13700.00	607.65	.16	608.37	40.37	.72	8.21	260.00	315.00	367.00	240.00	500.0
14188.00	608.91	0.00	609.73	25.35	.81	7.23	100.93	170.50	273.70	171.63	272.5
14188.00	609.12	.20	609.90	24.14	.78	7.10	101.60	170.50	273.70	171.30	272.9
14212.00	608.97	0.00	610.06	34.96	1.09	8.36	86.95	149.43	238.18	150.33	237.2
14212.00	609.24	.27	610.17	28.02	.93	7.72	83.12	170.50	273.70	190.00	273.1
14320.00	610.03	0.00	610.37	8.56	.34	5.04	328.82	246.82	344.00	162.28	491.1
14320.00	609.90	.14	610.46	14.85	.56	6.06	111.80	246.82	344.00	249.40	361.2
14950.00	610.38	0.00	612.38	120.99	2.01	12.34	141.72	64.00	122.00	40.97	182.6
14950.00	611.05	.67	612.96	102.24	1.91	11.85	100.00	64.00	122.00	60.00	160.0
16450.00	626.25	0.00	627.87	88.26	1.62	11.15	148.27	64.00	122.00	39.35	187.6
16450.00	626.16	.09	628.02	98.57	1.86	11.72	100.00	64.00	122.00	60.00	160.0
17450.00	635.75	0.00	637.58	105.39	1.83	12.80	144.52	64.00	122.00	40.28	184.8
17450.00	636.10	.35	637.99	100.52	1.89	11.79	100.00	64.00	122.00	60.00	160.0
18400.00	647.04	0.00	649.08	139.93	2.04	12.32	221.69	290.00	344.00	197.22	418.9
18400.00	647.18	.14	649.41	144.70	2.22	12.63	160.00	290.00	344.00	240.00	400.0
19700.00	655.57	0.00	656.11	30.66	.54	7.05	277.95	290.00	344.00	168.82	446.7
19700.00	656.30	.73	656.97	32.04	.67	7.46	160.00	290.00	344.00	240.00	400.0

SECNO	CWSEL	DIFWSP	EG	IAK*S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
21000.00	659.06	0.00	659.54	22.83	.48	6.45	249.74	337.00	398.00	181.14	430.8
21000.00	659.85	.79	660.37	21.33	.51	6.47	160.00	337.00	398.00	240.00	400.0
22300.00	662.34	0.00	662.93	29.22	.59	7.04	241.34	337.00	398.00	187.14	428.4
22300.00	662.94	.60	663.56	27.83	.62	7.08	160.00	337.00	398.00	240.00	400.0
24500.00	665.82	0.00	665.94	7.53	.12	3.89	807.93	1370.00	1431.00	1039.51	1847.4
24500.00	666.44	.62	666.59	7.77	.15	4.06	400.00	1370.00	1431.00	1200.00	1600.0

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR-CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

C FPM BIG BEAVER ISLAND FIS
 1 FPM BR MADISON-MAYODAN FIS
 T2 100-YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FO
	-1.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.900	-0.000
J2	NPROF	IPLDT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J3	-2.000	200.000	38.000	1.000	50.000	3.000	5.000	10.000	26.000	4.000
J3	21.000	22.000	53.000	54.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J4	-1.000	-10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
QT	7.000	11800.000	11800.000	18400.000	9500.000	5700.000	11800.000	11800.000	-0.000	-0.000
NC	.140	.070	.050	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	1.000	22.000	417.000	485.000	-0.000	-0.000	-0.000	-0.000	-2.000	-0.000
GR	580.000	-0.000	556.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	2.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	3.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	4.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	700.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
NC	.040	.040	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	795.000	25.000	419.000	507.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
GR	572.600	-0.000	564.600	50.000	556.600	68.000	553.700	100.000	553.600	200.000
GR	553.600	300.000	554.400	400.000	562.700	419.000	542.700	461.000	542.700	465.000
GR	562.700	507.000	554.000	530.000	553.300	600.000	553.000	645.000	552.400	663.000
GR	553.100	700.000	555.800	728.000	555.000	800.000	555.800	900.000	560.800	1000.000
GR	566.000	1012.000	564.800	1150.000	565.200	1200.000	567.000	1300.000	573.500	1400.000
SB	-0.000	1.140	2.500	-0.000	4.000	-0.000	923.000	2.100	542.700	542.700
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	805.000	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000

X2	-0.000	-0.000	1.000	582.700	572.400	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
BT	12.000	-0.000	572.400	-0.000	50.000	572.500	-0.000	68.000	572.500	-0.000
BT	100.000	572.600	-0.000	200.000	572.500	-0.000	300.000	572.200	-0.000	400.000
BT	572.400	554.400	419.000	572.500	562.700	507.000	572.600	562.700	530.000	572.600
BT	554.000	600.000	572.800	-0.000	1400.000	573.500	-0.000	-0.000	-0.000	-0.000
NH	4.000	.200	417.000	.050	485.000	.150	1100.000	.070	1400.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	0.000	-0.000	-0.000	-0.000	234.000	734.000
X1	900.000	22.000	417.000	485.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	556.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234.000	734.000
X1	1500.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	-0.000	-0.000
NC	.200	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1080.000
X1	2200.000	22.000	673.000	734.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
GR	572.300	56.000	567.700	100.000	565.100	200.000	562.900	300.000	563.000	390.000
GR	562.900	400.000	562.000	500.000	561.700	522.000	556.100	600.000	557.100	673.000
GR	548.200	675.000	548.200	722.000	556.200	734.000	556.400	800.000	555.000	855.000
GR	554.800	900.000	554.800	1000.000	554.300	1100.000	555.700	1200.000	584.000	1280.000
GR	584.300	1300.000	583.100	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.060	.060	.045	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1080.000
X1	3000.000	-0.000	-0.000	-0.000	800.000	800.000	800.000	-0.000	-0.000	-0.000
NH	5.000	.060	100.000	.045	1060.000	.070	1223.000	.045	1314.000	.060
NH	1700.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	950.000	1450.000
X1	3300.000	28.000	1000.000	1060.000	300.000	300.000	300.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	567.800	500.000	569.100	545.000	569.200	600.000	569.200	627.000
GR	567.900	649.000	566.400	700.000	565.600	800.000	565.000	900.000	559.100	1000.000
GR	549.200	1016.000	548.900	1024.000	549.000	1050.000	558.300	1060.000	557.400	1100.000
GR	557.800	1200.000	557.600	1223.000	550.700	1246.000	550.700	1272.000	551.100	1285.000
GR	555.700	1300.000	559.000	1314.000	558.800	1400.000	558.700	1500.000	561.500	1530.000
GR	566.200	1540.000	566.800	1558.000	580.000	1700.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3685.000	30.000	1000.000	1430.000	385.000	385.000	385.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
X4	2.000	575.000	1101.000	575.000	1344.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	568.000	500.000	569.300	545.000	569.300	625.000	567.700	650.000
GR	566.400	700.000	565.400	800.000	565.600	900.000	559.500	945.000	559.300	960.000
GR	558.000	1000.000	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000
GR	553.500	1040.000	558.300	1050.000	557.300	1100.000	557.700	1345.000	557.600	1370.000
GR	553.000	1390.000	553.000	1410.000	551.000	1420.000	550.200	1425.000	559.000	1430.000
GR	558.800	1645.000	561.500	1675.000	566.300	1685.000	567.000	1705.000	580.000	1845.000
NH	5.000	.050	1000.000	.040	1040.000	.050	1390.000	1040.000	1430.000	.050
NH	1910.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3690.000	25.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
BT	5.000	1000.000	567.800	564.600	1040.000	567.900	564.700	1300.000	568.000	565.000
BT	1390.000	568.400	569.200	1430.000	568.400	565.200	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	573.200	500.000	571.000	600.000	569.400	700.000	568.400	800.000
GR	567.300	900.000	567.800	1000.000	558.000	1000.000	554.400	1005.000	552.500	1010.000
GR	551.500	1015.000	552.000	1035.000	553.500	1040.000	567.900	1040.000	568.000	1300.000
GR	568.400	1390.000	553.000	1390.000	553.000	1410.000	551.000	1420.000	550.700	1430.000
GR	568.400	1430.000	569.000	1500.000	570.400	1600.000	575.700	1700.000	580.000	1910.000

ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	020.000	1420.000
X1	3710.000	-0.000	-0.000	-0.000	20.000	20.000	20.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
NH	5.000	.100	1000.000	.055	1045.000	.070	1390.000	.055	1430.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000
X1	3715.000	35.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
GR	580.000	330.000	570.500	500.000	567.200	550.000	564.400	620.000	562.300	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	558.000	1000.000
GR	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000	553.500	1040.000
GR	560.300	1045.000	558.400	1100.000	559.000	1120.000	558.000	1200.000	560.800	1240.000
GR	565.300	1260.000	565.000	1290.000	560.800	1300.000	559.500	1385.000	553.000	1390.000
GR	553.000	1410.000	551.000	1420.000	550.700	1425.000	559.500	1430.000	559.000	1500.000
GR	558.300	1550.000	560.300	1580.000	563.400	1630.000	572.500	1700.000	580.000	1760.000
NH	5.000	.100	980.000	.055	1030.000	.070	1550.000	.055	1585.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	3765.000	29.000	980.000	1255.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	565.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
QT	7.000	8400.000	8400.000	13200.000	6700.000	3700.000	8400.000	8400.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1245.000
X1	4700.000	29.000	980.000	1255.000	935.000	935.000	935.000	-0.000	2.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	580.000	1255.000	580.000	1285.000	560.700	1300.000
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
NH	5.000	.200	133.000	.070	927.000	.100	968.000	.060	1018.000	.070
NH	1680.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1245.000
X1	5700.000	27.000	968.000	1018.000	1000.000	1000.000	1000.000	-0.000	-0.000	-0.000
GR	589.800	-0.000	582.900	133.000	570.700	300.000	565.800	387.000	562.500	500.000
GR	562.400	600.000	563.200	700.000	562.600	800.000	562.600	900.000	563.300	927.000
GR	565.400	940.000	564.900	968.000	558.600	976.000	556.700	1003.000	557.400	1012.000
GR	564.000	1018.000	563.500	1100.000	562.100	1200.000	563.300	1300.000	561.700	1400.000
GR	562.500	1420.000	566.900	1479.000	570.300	1500.000	582.900	1562.000	588.300	1600.000
GR	593.100	1653.000	594.500	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.170	.090	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	6400.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	3.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	870.000	1430.000
X1	7100.000	19.000	968.000	1018.000	700.000	700.000	700.000	-0.000	-4.500	-0.000
GR	600.000	500.000	580.000	800.000	575.000	875.000	572.600	900.000	573.300	927.000
GR	575.400	940.000	574.900	968.000	568.600	976.000	566.700	1003.000	567.400	1012.000
GR	574.000	1018.000	573.500	1100.000	572.100	1300.000	573.300	1300.000	571.700	1400.000
GR	572.500	1470.000	576.900	1550.000	580.300	1650.000	600.000	1700.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	900.000	1400.000
X1	7700.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	2.500	-0.000
NH	4.000	.200	277.000	.070	523.000	.060	591.000	.100	713.000	-0.000

ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	320.000	620.000
X1	9350.000	19.000	523.000	591.000	1650.000	1650.000	1650.000	-0.000	-0.000	-0.000	-0.000
GR	601.400	-0.000	593.600	100.000	585.900	200.000	584.200	243.000	583.600	277.000	277.000
GR	582.900	300.000	577.600	400.000	577.300	500.000	579.000	523.000	572.300	538.000	538.000
GR	571.300	555.000	571.700	577.000	578.800	591.000	578.700	600.000	579.100	665.000	665.000
GR	581.200	671.000	595.000	691.000	599.000	700.000	601.300	713.000	-0.000	-0.000	-0.000
NC	.150	.090	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	460.000	760.000
X1	11350.000	10.000	525.000	590.000	2000.000	2000.000	2000.000	-0.000	-4.000	-0.000	-0.000
GR	617.500	-0.000	600.000	400.000	594.000	525.000	587.000	540.000	586.000	555.000	555.000
GR	587.000	580.000	594.000	590.000	594.000	600.000	600.000	900.000	620.000	1100.000	1100.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	600.000	600.000
X1	12800.000	25.000	315.000	367.000	1450.000	1450.000	1450.000	-0.000	-.500	-0.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000	300.000
GR	597.000	315.000	590.600	326.000	590.300	341.000	589.400	358.000	598.100	367.000	367.000
GR	596.900	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	777.000
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000
X1	13085.000	24.000	300.000	420.000	285.000	285.000	285.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000	300.000
GR	611.500	300.000	589.600	352.500	589.600	367.500	611.500	420.000	596.900	420.000	420.000
GR	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000	603.900	620.000	620.000
GR	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	-0.000	-0.000	-0.000
SB	1.250	1.620	2.500	-0.000	15.000	2.000	1427.600	2.400	589.600	589.600	589.600
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000	420.000
X1	13115.000	-0.000	-0.000	-0.000	30.000	30.000	30.000	-0.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	611.500	612.700	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000	-0.000
BT	15.000	0.000	623.700	0.000	50.000	614.100	0.000	64.000	613.900	0.000	0.000
BT	100.000	613.100	-0.000	200.000	612.800	-0.000	250.000	612.700	-0.000	300.000	300.000
BT	612.900	569.700	300.000	612.900	611.500	420.000	612.900	611.500	420.000	612.900	612.900
BT	596.900	450.000	612.700	-0.000	500.000	613.000	-0.000	550.000	613.900	-0.000	-0.000
BT	600.000	614.900	0.000	750.000	621.100	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.120	.120	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	250.000	500.000
X1	13235.000	25.000	315.000	367.000	120.000	120.000	120.000	-0.000	-1.000	-0.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000	300.000
GR	597.000	315.000	590.600	326.000	590.300	341.000	589.400	358.000	598.100	367.000	367.000
GR	596.900	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	777.000
NC	.150	.200	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	500.000
X1	13700.000	-0.000	-0.000	-0.000	465.000	465.000	465.000	-0.000	-2.000	-0.000	-0.000
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000
X1	14188.000	25.000	195.000	315.000	300.000	650.000	488.000	.860	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000	-0.000
GR	616.500	20.000	611.500	70.000	607.700	120.000	606.500	145.000	602.300	155.000	155.000
GR	600.500	170.000	609.600	195.000	593.500	226.000	593.500	284.000	609.600	315.000	315.000
GR	601.500	320.000	602.500	370.000	602.500	420.000	602.700	445.000	605.700	470.000	470.000
GR	617.400	520.000	612.500	550.000	612.500	570.000	615.500	620.000	617.400	670.000	670.000
GR	617.900	680.000	619.500	700.000	622.000	750.000	624.500	800.000	627.300	850.000	850.000
SB	1.250	1.380	2.500	-0.000	58.000	2.000	1200.000	1.930	593.500	593.500	593.500

ET -0.000 -0.000 9.100 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 190.000 320.000

X1	14212.000	-0.000	-0.000	-0.000	24.000	24.000	24.000	.860	-0.000	-0.000
X2	-0.000	-0.000	1.000	609.600	912.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	19.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000
BT	16.000	20.000	616.500	-0.000	70.000	612.100	-0.000	120.000	612.000	-0.000
BT	170.000	612.000	600.500	195.000	612.100	609.600	315.000	612.100	609.600	320.000
RT	612.100	601.500	370.000	612.200	-0.000	420.000	612.500	-0.000	445.000	612.800
BT	-0.000	520.000	614.000	-0.000	620.000	616.500	-0.000	700.000	619.500	-0.000
BT	750.000	622.000	-0.000	800.000	624.500	-0.000	850.000	627.300	-0.000	-0.000
NC	.150	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	290.000	420.000

X1	14320.000	21.000	287.000	400.000	108.000	108.000	108.000	.860	-0.000	-0.000
GR	625.400	-0.000	623.200	25.000	621.800	50.000	617.700	100.000	612.900	150.000
GR	609.200	200.000	600.000	227.000	603.700	236.000	601.500	250.000	597.900	287.000
GR	595.000	290.000	595.000	386.000	603.000	400.000	604.000	450.000	604.400	523.000
GR	607.300	550.000	613.800	600.000	614.200	631.000	613.900	650.000	617.100	700.000
GR	619.500	760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.150	.150	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	14950.000	18.000	64.000	122.000	630.000	630.000	630.000	-0.000	-0.000	-0.000
GR	632.200	-0.000	619.000	25.000	605.900	50.000	604.300	64.000	600.800	72.000
GR	600.100	100.000	599.600	119.000	601.300	122.000	604.600	150.000	612.200	193.000
GR	613.200	200.000	621.800	230.000	621.100	256.000	620.700	263.000	626.600	289.000
GR	627.900	300.000	630.900	338.000	634.100	357.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	16450.000	-0.000	-0.000	-0.000	1500.000	1500.000	1500.000	-0.000	15.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	17450.000	-0.000	-0.000	-0.000	1000.000	1000.000	1000.000	-0.000	10.000	-0.000
NC	.100	.100	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
QT	7.000	7300.000	7800.000	12400.000	6100.000	3300.000	7800.000	7800.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	18400.000	15.000	290.000	344.000	950.000	950.000	950.000	-0.000	-0.000	-0.000
GR	670.200	-0.000	659.100	100.000	646.700	200.000	642.300	240.000	643.000	255.000
GR	646.300	290.000	635.000	300.000	634.800	315.000	634.400	331.000	644.900	344.000
GR	646.000	400.000	648.100	438.000	657.100	470.000	664.300	500.000	671.000	536.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	19700.000	-0.000	-0.000	-0.000	500.000	1500.000	1300.000	-0.000	5.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	21000.000	16.000	337.000	398.000	1300.000	1300.000	1300.000	-0.000	-4.000	-0.000
GR	684.900	-0.000	672.800	100.000	660.800	200.000	657.300	233.000	655.800	300.000
GR	656.100	337.000	647.300	351.000	647.500	369.000	647.400	388.000	656.200	398.000
GR	656.300	400.000	656.800	410.000	665.200	438.000	671.300	500.000	677.000	600.000
GR	682.400	675.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	22300.000	-0.000	-0.000	-0.000	1300.000	1300.000	1300.000	-0.000	4.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1275.000	1525.000

X1	24500.000	11.000	1370.000	1431.000	2200.000	2200.000	2200.000	-0.000	-0.000	-0.000
GR	700.000	0.000	680.000	600.000	660.000	1220.000	658.000	1370.000	649.000	1384.000
GR	649.000	1402.000	649.000	1421.000	658.000	1431.000	660.000	1600.000	680.000	2450.000
GR	700.000	2600.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
EJ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7185 MIN SPECIFIC ENERGY

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 FLOODWAY
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FO
	-10.	3.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	557.900	-0.000

J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

NORFOLK SOUTHER RR-SECTION B-11

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.14	2.50	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

6070 LOW FLOW BY NORMAL BRIDGE

EGPRS= 562.708 FGLWC= 564.442 ELLC= 562.700 PCWSE= 559.815 ELTRD= 572.400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.16	566.16	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.36	566.36	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.68	566.68	0.00

*** SECTION B-1 ***

*** SECTION B-2 ***

*** SR 1169 SECTION B-3 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.62	2.50	-0.00	15.00	2.00	1427.60	2.40	589.60	589.60

*** NC 704 SECTION B-4 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.38	2.50	-0.00	58.00	2.00	1200.00	1.93	593.50	593.50

*** SECTION B-5 ***

*** SECTION B-6 ***

*** SURVEYED AT 22300 ***

*** SECTION B-7 ***

XXX SECTION FABRICATED XXX

FLOODWAY DATA, BIG BEAVER ISLAND CREEK
 PROFILE NO. 2

STATION	FLOODWAY		MEAN VELOCITY	WATER SURFACE ELEVATION		DIFFERENCE
	WIDTH (FT)	SECTION AREA		WITH FLOODWAY	WITHOUT FLOODWAY	
1.000	585.	3972.	3.0	557.9	556.9	1.0
2.000	585.	3977.	3.0	557.9	556.9	1.0
3.000	585.	3981.	3.0	557.9	556.9	1.0
4.000	585.	3985.	3.0	557.9	556.9	1.0
700.000	585.	4513.	2.6	558.8	557.9	.9
795.000	76.	684.	17.3	559.8	559.9	-.0
805.000	84.	837.	14.1	561.7	561.7	.0
900.000	500.	6263.	1.9	565.3	565.4	-.1
1500.000	500.	6443.	1.8	565.7	565.6	.1
2200.000	500.	5707.	2.1	566.1	565.9	.3
3000.000	500.	5944.	2.0	566.6	566.2	.5
3300.000	500.	5004.	2.4	566.7	566.2	.5
3685.000	186.	2128.	5.5	566.7	566.1	.5
3690.000	80.	998.	11.8	565.7	565.2	.5
3710.000	80.	1131.	10.4	566.7	566.1	.6
3715.000	600.	5912.	2.0	568.6	568.2	.4
3765.000	600.	5413.	2.2	568.6	568.2	.4
4700.000	620.	4600.	1.8	569.2	568.5	.7
5700.000	620.	4372.	1.9	569.7	569.0	.7
6400.000	600.	2858.	2.9	570.5	569.4	1.0
7100.000	560.	2814.	3.0	573.2	572.3	.9
7700.000	500.	2376.	3.5	575.4	574.9	.5
9350.000	300.	1662.	5.1	582.6	582.3	.3
11350.000	300.	1273.	6.6	594.1	594.4	-.2
12800.000	300.	1884.	4.5	603.0	602.7	.3
13085.000	83.	696.	12.1	603.8	603.6	.2
13115.000	86.	739.	11.4	604.3	604.4	-.1

13235.000	220.	2312.	3.0	600.0	607.2	-.8
13700.000	260.	2135.	3.9	607.7	607.8	-.2
14188.000	102.	1183.	7.1	609.1	608.9	.2
14212.000	83.	1088.	7.7	609.2	609.0	.3
14320.000	112.	1476.	5.7	609.9	610.0	-.1
14950.000	100.	918.	9.1	611.0	610.4	.7
16450.000	100.	929.	9.0	626.2	626.2	-.1
17450.000	100.	923.	9.1	636.1	635.8	.3
18400.000	160.	801.	9.7	647.2	647.0	.1
19700.000	160.	1461.	5.3	656.3	655.6	.7
21000.000	160.	1649.	4.7	659.9	659.1	.8
22300.000	160.	1503.	5.2	662.9	662.3	.6
24500.000	250.	2559.	3.0	666.9	665.8	1.1

SUMMARY PRINTOUT

BIG BEAVER ISLAND CREEK

SECNO	CWSFL	DIFWSP	EG	10K+S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
1.00	556.90	0.00	557.17	16.13	.27	5.95	900.68	417.00	485.00	61.32	962.0
1.00	557.90	1.00	558.19	14.12	.29	5.86	585.00	417.00	485.00	215.00	800.0
2.00	556.91	0.00	557.18	16.06	.27	5.94	900.87	417.00	485.00	61.29	962.1
2.00	557.91	1.00	558.20	14.07	.29	5.85	585.00	417.00	485.00	215.00	800.0
3.00	556.92	0.00	557.19	15.99	.27	5.93	901.05	417.00	485.00	61.27	962.3
3.00	557.92	1.00	558.20	14.03	.29	5.85	585.00	417.00	485.00	215.00	800.0
4.00	556.93	0.00	557.19	15.93	.27	5.92	901.24	417.00	485.00	61.25	962.4
4.00	557.92	1.00	558.21	13.99	.29	5.84	585.00	417.00	485.00	215.00	800.0
700.00	557.91	0.00	558.08	9.81	.17	4.89	923.70	417.00	485.00	58.40	982.1
700.00	558.82	.92	559.04	9.77	.21	5.10	585.00	417.00	485.00	215.00	800.0
* 795.00	559.86	0.00	564.44	99.08	4.58	17.18	76.06	419.00	507.00	424.97	501.0
* 795.00	559.82	-.04	564.44	100.35	4.63	17.26	75.88	419.00	507.00	425.06	500.9
805.00	561.70	0.00	564.81	59.18	3.11	14.16	83.77	419.00	507.00	421.12	504.8
805.00	561.74	.04	564.83	58.52	3.09	14.10	83.94	419.00	507.00	421.03	504.9
900.00	565.41	0.00	565.49	3.12	.08	3.60	1100.09	417.00	485.00	42.40	1211.6
900.00	565.32	-.09	565.53	5.91	.21	4.93	500.00	417.00	485.00	234.00	734.0
1500.00	565.60	0.00	565.68	2.97	.08	3.53	1133.24	417.00	485.00	41.85	1222.1
1500.00	565.67	.08	565.87	5.45	.20	4.80	500.00	417.00	485.00	234.00	734.0
2200.00	565.86	0.00	565.98	6.13	.12	4.37	1057.96	673.00	734.00	170.76	1228.7
2200.00	566.14	.28	566.36	8.71	.22	5.27	500.00	673.00	734.00	580.00	1080.0
3000.00	566.16	0.00	566.20	1.30	.04	2.26	1070.31	673.00	734.00	159.25	1229.5
3000.00	566.61	.45	566.68	2.08	.07	2.91	500.00	673.00	734.00	580.00	1080.0
3300.00	566.19	0.00	566.27	2.82	.09	3.29	813.16	1000.00	1060.00	726.81	1539.9
3300.00	566.67	.48	566.77	2.91	.10	3.41	500.00	1000.00	1060.00	950.00	1450.0
3685.00	566.15	0.00	566.67	19.23	.52	5.80	185.99	1000.00	1430.00	1000.00	1100.5
3685.00	566.66	.51	567.14	16.32	.48	5.54	186.05	1000.00	1430.00	1000.00	1430.0
3690.00	565.19	0.00	567.36	466.10	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3690.00	565.67	.48	567.84	467.98	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.05	0.00	567.89	139.45	1.84	10.88	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.67	.62	568.36	120.94	1.69	10.43	80.00	1000.00	1430.00	1000.00	1430.0
3715.00	568.20	0.00	568.25	3.67	.06	2.13	895.22	1000.00	1430.00	534.78	1430.0
3715.00	568.62	.43	568.69	3.90	.07	2.24	600.00	1000.00	1430.00	850.00	1450.0
3765.00	568.24	0.00	568.27	2.41	.03	1.72	1131.88	980.00	1255.00	535.34	1667.2
3765.00	568.63	.39	568.73	6.08	.09	2.80	600.00	980.00	1255.00	655.00	1255.0
4700.00	568.53	0.00	568.62	6.70	.08	2.63	676.51	980.00	1255.00	568.02	1244.5
4700.00	569.19	.66	569.26	5.16	.07	2.40	620.00	980.00	1255.00	625.00	1245.0

SFCNO	CWSL	DIFWSP	EG	10K+S	HV	VCH	TOPWID	STCHL	STCHR	STTA	STST
5700.00	569.02	0.00	569.05	2.92	.03	1.99	1162.36	968.00	1018.00	327.75	1472.7
5700.00	569.74	.71	569.80	5.66	.06	2.89	620.00	968.00	1018.00	625.00	1245.0
6400.00	569.43	0.00	569.62	39.89	.19	5.79	1096.99	968.00	1018.00	375.75	1472.7
6400.00	570.45	1.02	570.77	46.20	.32	6.77	600.00	968.00	1018.00	655.00	1255.7
7100.00	572.33	0.00	572.60	44.42	.27	6.32	701.48	968.00	1018.00	847.41	1543.8
7100.00	573.22	.89	573.45	31.70	.23	5.71	560.00	968.00	1018.00	870.00	1430.0
7700.00	574.93	0.00	575.18	41.69	.26	6.17	704.73	968.00	1018.00	846.00	1550.8
7700.00	575.41	.48	575.73	44.87	.33	6.64	500.00	968.00	1018.00	900.00	1400.0
9350.00	582.29	0.00	582.90	50.82	.61	7.71	361.22	523.00	591.00	311.37	672.5
9350.00	582.62	.32	583.18	44.27	.57	7.35	300.00	523.00	591.00	350.00	650.0
11350.00	594.38	0.00	595.66	78.57	1.27	10.03	385.42	525.00	590.00	433.70	819.1
11350.00	594.14	-.24	595.51	86.01	1.36	10.33	300.00	525.00	590.00	460.00	760.0
12800.00	602.70	0.00	603.15	35.25	.45	7.09	464.22	315.00	367.00	149.73	613.9
12800.00	603.02	.32	603.56	37.48	.54	7.45	300.00	315.00	367.00	300.00	600.0
13085.00	603.58	0.00	606.59	234.23	3.02	13.94	101.00	300.00	420.00	300.00	401.0
13085.00	603.79	.21	606.05	129.17	2.26	12.08	83.03	300.00	420.00	300.00	401.5
13115.00	604.45	0.00	606.74	153.78	2.29	12.14	103.10	300.00	420.00	300.00	403.1
13115.00	604.31	-.14	606.31	110.55	2.00	11.36	85.52	300.00	420.00	300.00	402.7
13235.00	607.23	0.00	607.45	9.62	.21	5.19	514.48	315.00	367.00	123.04	637.5
13235.00	606.59	-.65	607.06	18.14	.47	6.91	250.00	315.00	367.00	250.00	500.0
13700.00	607.81	0.00	608.26	28.65	.45	6.97	496.27	315.00	367.00	130.56	626.8
13700.00	607.65	-.16	608.37	40.37	.72	8.21	260.00	315.00	367.00	240.00	500.0
14188.00	608.91	0.00	609.73	25.35	.81	7.23	100.93	170.50	273.70	171.63	272.5
14188.00	609.12	.20	609.90	24.14	.78	7.10	101.60	170.50	273.70	171.30	272.9
14212.00	608.97	0.00	610.06	34.96	1.09	8.36	86.95	149.43	238.18	150.33	237.2
14212.00	609.24	.27	610.17	28.02	.93	7.72	83.12	170.50	273.70	190.00	273.1
14320.00	610.03	0.00	610.37	8.56	.34	5.04	328.82	246.82	344.00	162.28	491.1
14320.00	609.90	-.14	610.46	14.85	.56	6.06	111.80	246.82	344.00	249.40	361.2
14950.00	610.38	0.00	612.38	120.99	2.01	12.34	141.72	64.00	122.00	40.97	182.6
14950.00	611.05	.67	612.96	102.24	1.91	11.85	100.00	64.00	122.00	60.00	160.0
16450.00	626.25	0.00	627.87	88.26	1.62	11.15	148.27	64.00	122.00	39.35	187.6
16450.00	626.16	-.09	628.02	98.57	1.86	11.72	100.00	64.00	122.00	60.00	160.0
17450.00	635.75	0.00	637.58	105.39	1.83	11.80	144.52	64.00	122.00	40.28	184.8
17450.00	636.10	.35	637.99	100.52	1.89	11.79	100.00	64.00	122.00	60.00	160.0
18400.00	647.04	0.00	649.08	139.93	2.04	12.32	221.69	290.00	344.00	197.22	418.9
18400.00	647.18	.14	649.41	144.70	2.22	12.63	160.00	290.00	344.00	240.00	400.0
19700.00	655.57	0.00	656.11	30.66	.54	7.05	277.95	290.00	344.00	168.82	446.7
19700.00	656.30	.73	656.97	32.04	.67	7.46	160.00	290.00	344.00	240.00	400.0

SECNO	CWSEL	DIFWSP	EG	10K+S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
21000.00	659.06	0.00	659.54	22.83	.48	6.45	249.74	337.00	398.00	181.14	430.8
21000.00	659.85	.79	660.37	21.33	.51	6.47	160.00	337.00	398.00	240.00	400.0
22300.00	662.34	0.00	662.93	29.22	.59	7.04	241.34	337.00	398.00	187.14	428.4
22300.00	662.94	.60	663.56	27.83	.62	7.08	160.00	337.00	398.00	240.00	400.0
24500.00	665.82	0.00	665.94	7.53	.12	3.89	807.93	1370.00	1431.00	1039.51	1847.4
24500.00	666.92	1.10	667.16	10.36	.24	4.78	250.00	1370.00	1431.00	1275.00	1525.0

1200 1600

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

CONTROLS AND LOGS BOOK 13085.00

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

File table

C FPM BIG BEAVER ISLAND FIS
 1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	ING	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FG
	-1.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.900	-0.000
J2	NPROF	IPL0T	PRFVS	XSECV	XSFCH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J3	-2.000	200.000	38.000	1.000	50.000	3.000	5.000	10.000	26.000	4.000
J3	21.000	22.000	53.000	54.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
QT	7.000	11800.000	11800.000	18400.000	9500.000	5700.000	11800.000	11800.000	-0.000	-0.000
NC	.140	.070	.050	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	1.000	22.000	417.000	485.000	-0.000	-0.000	-0.000	-0.000	-2.000	-0.000
GR	580.000	-0.000	556.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	577.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	2.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	3.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	4.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	700.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
NC	.040	.040	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	795.000	25.000	419.000	507.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
GR	572.600	-0.000	564.600	50.000	556.600	68.000	553.700	100.000	553.600	200.000
GR	553.600	300.000	554.400	400.000	562.700	419.000	542.700	461.000	542.700	465.000
GR	562.700	507.000	554.000	530.000	553.300	600.000	553.000	645.000	552.400	663.000
GR	553.100	700.000	555.800	728.000	555.000	800.000	555.800	900.000	560.800	1000.000
GR	566.000	1012.000	564.800	1150.000	565.200	1200.000	567.000	1300.000	573.500	1400.000
SB	-0.000	1.140	2.500	-0.000	4.000	-0.000	923.000	2.100	542.700	542.700
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	805.000	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	562.700	572.400	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000

FILE TABLE

BT	12.000	-0.000	572.400	-0.000	20.000	272.500	-0.000	68.000	572.500	-0.000
BT	100.000	572.600	-0.000	200.000	572.500	-0.000	300.000	572.200	-0.000	400.000
BT	572.400	554.400	419.000	572.500	562.700	507.000	572.600	562.700	530.000	572.600
BT	554.000	600.000	572.800	-0.000	1400.000	573.500	-0.000	-0.000	-0.000	-0.000
NH	4.000	.200	417.000	.050	485.000	.150	1100.000	.070	1400.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234.000	734.000
X1	900.000	22.000	417.000	485.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	556.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234.000	734.000
X1	1500.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	-0.000	-0.000
NC	.200	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1080.000
X1	2200.000	22.000	673.000	734.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
GR	572.300	56.000	567.700	100.000	565.100	200.000	562.900	300.000	563.000	390.000
GR	562.900	400.000	562.000	500.000	561.700	522.000	556.100	600.000	557.100	673.000
GR	548.200	675.000	548.200	722.000	556.200	734.000	556.400	800.000	555.000	855.000
GR	554.800	900.000	554.800	1060.000	554.300	1100.000	555.700	1200.000	584.000	1280.000
GR	584.300	1300.000	583.100	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.060	.060	.045	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1080.000
X1	3000.000	-0.000	-0.000	-0.000	800.000	800.000	800.000	-0.000	-0.000	-0.000
NH	5.000	.060	100.000	.045	1060.000	.070	1223.000	.045	1314.000	.060
NH	1700.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	950.000	1450.000
X1	3300.000	28.000	1000.000	1060.000	300.000	300.000	300.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	567.800	500.000	569.100	545.000	569.200	600.000	569.200	627.000
GR	567.900	649.000	566.400	700.000	565.600	800.000	565.000	900.000	559.100	1000.000
GR	549.200	1016.000	548.900	1024.000	549.000	1050.000	558.300	1060.000	557.400	1100.000
GR	557.800	1200.000	557.600	1223.000	550.700	1246.000	550.700	1272.000	551.100	1285.000
GR	555.700	1300.000	559.000	1314.000	558.800	1400.000	558.700	1500.000	561.500	1530.000
GR	566.200	1540.000	566.800	1558.000	580.000	1700.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3685.000	30.000	1000.000	1430.000	385.000	385.000	385.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
X4	2.000	575.000	1101.000	575.000	1344.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	568.000	500.000	569.300	545.000	569.300	625.000	567.700	650.000
GR	566.400	700.000	565.400	800.000	565.000	900.000	559.500	945.000	559.300	960.000
GR	558.000	1000.000	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000
GR	553.500	1040.000	558.300	1050.000	557.300	1100.000	557.700	1345.000	557.600	1370.000
GR	553.000	1390.000	553.000	1410.000	551.000	1420.000	550.200	1425.000	559.000	1430.000
GR	558.800	1645.000	561.500	1675.000	566.300	1685.000	567.000	1705.000	580.000	1845.000
NH	5.000	.050	1000.000	.040	1040.000	.050	1390.000	1040.000	1430.000	.050
NH	1910.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3690.000	25.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
BT	5.000	1000.000	567.800	564.600	1040.000	567.900	564.700	1300.000	568.000	565.000
BT	1390.000	568.400	565.200	1430.000	568.400	565.200	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	573.200	500.000	571.000	600.000	569.400	700.000	568.400	800.000
GR	567.300	900.000	567.800	1000.000	558.000	1000.000	554.400	1005.000	552.500	1010.000
GR	551.500	1015.000	552.000	1035.000	553.500	1040.000	567.900	1040.000	568.000	1300.000
GR	568.400	1390.000	553.000	1390.000	553.000	1410.000	551.000	1420.000	550.700	1430.000
GR	568.400	1430.000	569.000	1500.000	570.400	1600.000	575.700	1700.000	580.000	1910.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000

X1	3710.000	-0.000	-0.000	-0.000	20.000	20.000	20.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
NH	5.000	.100	1000.000	.055	1045.000	.070	1390.000	.055	1430.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000
X1	3715.000	35.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
GR	580.000	330.000	570.500	500.000	567.200	550.000	564.400	620.000	562.300	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	558.000	1000.000
GR	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000	553.500	1040.000
GR	560.300	1045.000	558.400	1100.000	559.000	1120.000	558.000	1200.000	560.800	1240.000
GR	565.300	1260.000	565.000	1290.000	560.800	1300.000	559.500	1385.000	553.000	1390.000
GR	553.000	1410.000	551.000	1420.000	550.700	1425.000	559.500	1430.000	559.000	1500.000
GR	558.300	1550.000	560.300	1580.000	563.400	1630.000	572.500	1700.000	580.000	1760.000
NH	5.000	.100	980.000	.055	1030.000	.070	1550.000	.055	1585.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	3765.000	29.000	980.000	1255.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	565.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
QT	7.000	8400.000	8400.000	13200.000	6700.000	3700.000	8400.000	8400.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	4700.000	29.000	980.000	1255.000	935.000	935.000	935.000	-0.000	2.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	580.000	1255.000	580.000	1285.000	560.700	1300.000
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
NH	5.000	.200	133.000	.070	927.000	.100	968.000	.060	1018.000	.070
NH	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1225.000
X1	5700.000	27.000	968.000	1018.000	1000.000	1000.000	1000.000	-0.000	-0.000	-0.000
GR	589.800	-0.000	582.900	133.000	570.700	300.000	565.800	387.000	562.500	500.000
GR	562.400	600.000	563.200	700.000	562.600	800.000	562.600	900.000	563.300	927.000
GR	565.400	940.000	564.900	968.000	558.600	976.000	556.700	1003.000	557.400	1012.000
GR	564.000	1018.000	563.500	1100.000	562.100	1200.000	563.300	1300.000	561.700	1400.000
GR	562.500	1420.000	566.900	1479.000	570.300	1500.000	582.900	1562.000	588.300	1600.000
GR	593.100	1653.000	594.500	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.170	.090	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	6400.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	3.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	870.000	1430.000
X1	7100.000	19.000	968.000	1018.000	700.000	700.000	700.000	-0.000	-4.500	-0.000
GR	600.000	500.000	580.000	800.000	575.000	875.000	572.600	900.000	573.300	927.000
GR	575.400	940.000	574.900	968.000	568.600	976.000	566.700	1003.000	567.400	1012.000
GR	574.000	1018.000	573.500	1100.000	572.100	1300.000	573.300	1300.000	571.700	1400.000
GR	572.500	1470.000	576.900	1550.000	580.300	1650.000	600.000	1700.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	900.000	1400.000
X1	7700.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	2.500	-0.000
NH	4.000	.200	277.000	.070	523.000	.060	591.000	.100	713.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	350.000	650.000

X1	9350.000	79.000	326.000	594.000	1030.000	1256.000	1050.000	00.000	240.000	-0.000
GR	601.400	-0.000	593.600	100.000	585.900	200.000	584.200	243.000	583.600	277.000
GR	582.900	300.000	577.600	400.000	577.300	500.000	579.000	523.000	572.300	538.000
GR	571.300	555.000	571.700	577.000	578.800	591.000	578.700	600.000	579.100	666.000
GR	581.200	671.000	595.000	691.000	599.000	700.000	601.300	713.000	-0.000	-0.000
NC	.150	.090	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	460.000	760.000
X1	11350.000	10.000	525.000	590.000	2000.000	2000.000	2000.000	-0.000	-4.000	-0.000
GR	617.500	-0.000	600.000	400.000	594.000	525.000	587.000	540.000	586.000	555.000
GR	587.000	580.000	594.000	590.000	594.000	600.000	600.000	900.000	620.000	1100.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	600.000
X1	12800.000	25.000	315.000	367.000	1450.000	1450.000	1450.000	-0.000	-.500	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	597.000	315.000	590.600	326.000	590.300	341.000	589.400	358.000	598.100	367.000
GR	596.900	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000
X1	13085.000	24.000	300.000	420.000	285.000	285.000	285.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	611.500	300.000	589.600	352.500	589.600	367.500	611.500	420.000	596.900	420.000
GR	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000	603.900	620.000
GR	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	-0.000	-0.000
SB	1.250	1.620	2.500	-0.000	15.000	2.000	1427.600	2.400	589.600	589.600
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000
X1	13115.000	-0.000	-0.000	-0.000	30.000	30.000	30.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	611.500	612.700	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000
BT	15.000	0.000	623.700	0.000	50.000	614.100	-0.000	64.000	613.900	0.000
BT	100.000	613.100	-0.000	200.000	612.800	-0.000	250.000	612.700	-0.000	300.000
BT	612.900	569.700	300.000	612.900	611.500	420.000	612.900	611.500	420.000	612.900
BT	596.900	450.000	612.700	-0.000	500.000	613.000	-0.000	550.000	613.800	-0.000
BT	600.000	614.900	0.000	750.000	621.100	0.000	-0.000	-0.000	-0.000	-0.000
NC	.120	.120	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	250.000	500.000
X1	13235.000	25.000	315.000	367.000	120.000	120.000	120.000	-0.000	1.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	597.000	315.000	590.600	326.000	590.300	341.000	589.400	358.000	598.100	367.000
GR	596.900	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000
NC	.150	.200	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	500.000
X1	13700.000	-0.000	-0.000	-0.000	465.000	465.000	465.000	-0.000	2.000	-0.000
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000
X1	14188.000	25.000	195.000	315.000	300.000	650.000	488.000	.860	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000
GR	616.500	20.000	611.500	70.000	607.700	120.000	600.500	145.000	602.300	155.000
GR	600.500	170.000	609.600	195.000	593.500	226.000	593.500	284.000	609.600	315.000
GR	601.500	320.000	602.500	370.000	602.500	420.000	602.700	445.000	605.700	470.000
GR	612.400	520.000	612.500	550.000	612.500	570.000	615.500	620.000	617.400	670.000
GR	617.900	680.000	619.500	700.000	622.000	750.000	624.500	800.000	627.300	850.000
SB	1.250	1.380	2.500	-0.000	58.000	2.000	1200.000	1.930	593.500	593.500
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000

X1	14212,000	-0,000	-0,000	-0,000	609,600	912,000	24,000	24,000	24,000	-0,000	-0,000	-0,000
X2	-0,000	-0,000	1,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	612,100	612,100	-0,000
X3	10,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	612,100	612,100	-0,000
BT	16,000	20,000	616,500	-0,000	70,000	612,100	612,100	-0,000	-0,000	120,000	612,000	-0,000
BT	170,000	612,000	600,500	195,000	612,100	609,600	315,000	612,100	609,600	612,100	609,600	320,000
BT	612,100	601,500	370,000	612,200	-0,000	420,000	612,500	-0,000	445,000	-0,000	445,000	612,800
BT	-0,000	520,000	614,000	-0,000	620,000	616,500	-0,000	-0,000	700,000	619,500	-0,000	-0,000
BT	750,000	622,000	-0,000	800,000	624,500	-0,000	850,000	627,500	-0,000	-0,000	-0,000	-0,000
NC	,150	,150	,050	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	290,000	-0,000	420,000
X1	14320,000	21,000	287,000	400,000	108,000	108,000	108,000	108,000	,860	-0,000	-0,000	-0,000
GR	625,400	-0,000	623,200	25,000	621,800	50,000	617,700	100,000	612,900	150,000	612,900	150,000
GR	609,200	200,000	608,000	227,000	603,700	236,000	601,500	250,000	597,900	250,000	597,900	287,000
GR	595,000	290,000	595,000	386,000	603,000	400,000	604,000	450,000	604,400	450,000	604,400	523,000
GR	607,300	550,000	613,800	600,000	614,200	631,000	613,900	650,000	617,100	650,000	617,100	700,000
GR	619,500	760,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
NC	,150	,150	,060	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	60,000	-0,000	160,000
X1	14950,000	18,000	64,000	122,000	630,000	630,000	630,000	630,000	-0,000	-0,000	-0,000	-0,000
GR	632,200	-0,000	619,000	25,000	605,500	50,000	604,300	64,000	600,800	64,000	600,800	72,000
GR	600,100	100,000	599,600	119,000	601,500	122,000	604,600	150,000	612,200	150,000	612,200	193,000
GR	613,200	200,000	621,800	230,000	621,100	256,000	620,700	263,000	626,600	263,000	626,600	289,000
GR	627,900	300,000	630,900	358,000	634,100	357,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	60,000	160,000
X1	16450,000	-0,000	-0,000	-0,000	1500,000	1500,000	1500,000	1500,000	-0,000	-0,000	15,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	60,000	-0,000	160,000
X1	17450,000	-0,000	-0,000	-0,000	1000,000	1000,000	1000,000	1000,000	-0,000	-0,000	10,000	-0,000
NC	,100	,100	,060	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
OT	7,000	7800,000	7800,000	12400,000	6100,000	3300,000	7800,000	7800,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	240,000	-0,000	400,000
X1	18400,000	15,000	290,000	344,000	950,000	950,000	950,000	950,000	-0,000	-0,000	-0,000	-0,000
GR	670,200	-0,000	659,100	100,000	646,700	200,000	642,300	240,000	643,000	240,000	643,000	255,000
GR	646,300	290,000	635,000	500,000	634,800	315,000	634,400	331,000	644,900	331,000	644,900	344,000
GR	646,000	400,000	648,100	430,000	657,100	470,000	664,300	500,000	671,000	500,000	671,000	536,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	240,000	-0,000	400,000
X1	19700,000	-0,000	-0,000	-0,000	500,000	1500,000	1300,000	1300,000	-0,000	-0,000	5,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	240,000	-0,000	400,000
X1	21000,000	16,000	337,000	398,000	1300,000	1300,000	1300,000	1300,000	-0,000	-4,000	-0,000	-0,000
GR	684,900	-0,000	672,800	100,000	660,800	200,000	657,300	233,000	655,800	233,000	655,800	300,000
GR	656,100	337,000	647,500	351,000	647,500	369,000	647,400	388,000	656,200	388,000	656,200	398,000
GR	656,300	400,000	656,800	410,000	665,200	438,000	671,300	500,000	677,000	500,000	677,000	600,000
GR	682,400	675,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	240,000	-0,000	400,000
X1	22300,000	-0,000	-0,000	-0,000	1300,000	1300,000	1300,000	1300,000	-0,000	-0,000	4,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	1275,000	-0,000	1525,000
X1	24500,000	11,000	1370,000	1431,000	2200,000	2200,000	2200,000	2200,000	-0,000	-0,000	-0,000	-0,000
GR	700,000	0,000	680,000	600,000	660,000	1220,000	658,000	1370,000	649,000	1370,000	649,000	1384,000
GR	649,000	1402,000	649,000	1421,000	658,000	1431,000	660,000	1600,000	680,000	1600,000	680,000	2450,000
GR	700,000	2600,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
EJ	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM RR MADISON-MAYODAN FIS
 T2 FLOODWAY
 T3 RIG BEAVER ISLAND CREEK

J1	ICHECK	IND	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FG
	-10.	3.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	557.900	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

*PROF 2

CCHV= .200 CEHV= .400

*SECNO 1.000

SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	DLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VR0B	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 215.0 800.0 TYPE= 1 TARGET= 585.000
 1.00 15.50 557.90 0.00 557.90 558.19 .29 0.00 0.00 553.40
 11800. 1592. 5311. 4897. 1209. 906. 1857. 0. 0. 552.80
 0.00 1.32 5.86 2.64 .140 .050 .070 0.000 542.40 215.00
 .001412 -0. -0. -0. 0 0 1 0.00 585.00 800.00

*SECNO 2.000

3470 ENCROACHMENT STATIONS= 215.0 800.0 TYPE= 1 TARGET= 585.000
 2.00 15.51 557.91 0.00 0.00 558.20 .29 .01 .00 553.40
 11800. 1592. 5308. 4899. 1210. 907. 1859. 0. 0. 552.80
 .00 1.32 5.85 2.63 .140 .050 .070 .042 542.40 215.00
 .001407 5. 5. 5. 0 0 1 0.00 585.00 800.00

*SECNO 3.000

3470 ENCROACHMENT STATIONS= 215.0 800.0 TYPE= 1 TARGET= 585.000
 3.00 15.52 557.92 0.00 0.00 558.20 .29 .01 .00 553.40
 11800. 1593. 5305. 4902. 1212. 907. 1862. 1. 0. 552.80
 .00 1.32 5.85 2.63 .140 .050 .070 .042 542.40 215.00
 .001403 5. 5. 5. 0 0 1 0.00 585.00 800.00

*SECNO 4.000

3470 ENCROACHMENT STATIONS= 215.0 800.0 TYPE= 1 TARGET= 585.000
 4.00 15.52 557.92 0.00 0.00 558.21 .29 .01 .00 553.40
 11800. 1594. 5302. 4904. 1213. 908. 1864. 1. 0. 552.80

FLOODWAY DATA, BIG BEAVER ISLAND CREEK
 PROFILE NO. 2

STATION	FLOODWAY		MEAN VELOCITY	WATER SURFACE ELEVATION		
	WIDTH (FT)	SECTION AREA		WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
1.000	585.	3972.	3.0	557.9	556.9	1.0
2.000	585.	3977.	3.0	557.9	556.9	1.0
3.000	585.	3981.	3.0	557.9	556.9	1.0
4.000	585.	3985.	3.0	557.9	556.9	1.0
700.000	585.	4513.	2.6	558.8	557.9	.9
795.000	76.	684.	17.3	559.8	559.9	-.0
805.000	84.	837.	14.1	561.7	561.7	.0
900.000	500.	6263.	1.9	565.3	565.4	-.1
1500.000	500.	6443.	1.8	565.7	565.6	.1
2200.000	500.	5707.	2.1	566.1	565.9	.3
3000.000	500.	5944.	2.0	566.6	566.2	.5
3300.000	500.	5004.	2.4	566.7	566.2	.5
3685.000	186.	2128.	5.5	566.7	566.1	.5
3690.000	80.	998.	11.8	565.7	565.2	.5
3710.000	80.	1131.	10.4	566.7	566.1	.6
3715.000	600.	5912.	2.0	568.6	568.2	.4
3765.000	600.	5413.	2.2	568.6	568.2	.4
4700.000	590.	4503.	1.9	569.2	568.5	.7
5700.000	600.	4237.	2.0	569.8	569.0	.7
6400.000	600.	2893.	2.9	570.5	569.4	1.1
7100.000	560.	2815.	3.0	573.2	572.3	.9
7700.000	500.	2377.	3.5	575.4	574.9	.5
9350.000	300.	1662.	5.1	582.6	582.3	.3
11350.000	300.	1273.	6.6	594.1	594.4	-.2
12800.000	300.	1884.	4.5	603.0	602.7	.3
13085.000	80.	696.	12.1	603.8	603.6	.2
13115.000	86.	739.	11.4	604.3	604.4	-.1

CONSOLIDATED ENGINEERING & SURVEYING CO., INC.

13255.000	250.	2515.	3.8	606.8	607.7	.9
13700.000	260.	2135.	3.9	607.6	607.8	-.2
14188.000	102.	1183.	7.1	609.1	608.9	.2
14212.000	83.	1088.	7.7	609.2	609.0	.3
14320.000	112.	1476.	5.7	609.9	610.0	-.1
14950.000	100.	918.	9.1	611.0	610.4	.7
16450.000	100.	929.	9.0	626.2	626.2	-.1
17450.000	100.	923.	9.1	636.1	635.8	.3
18400.000	160.	801.	9.7	647.2	647.0	.1
19700.000	160.	1461.	5.3	656.3	655.6	.7
21000.000	160.	1649.	4.7	659.9	659.1	.8
22300.000	160.	1503.	5.2	662.9	662.3	.6
24500.000	250.	2559.	3.0	666.9	665.8	1.1

COMPARATIVE INSTRUMENTS & MEASUREMENTS LABORATORY

SUMMARY PRINTOUT

BIG BEAVER ISLAND CREEK

SECNO	CWSEL	DIFWSP	EG	10K+S	HV	VCH	TOPWID	STGHL	STCHR	SSTA	ENDST
1.00	556.90	0.00	557.17	16.13	.27	5.95	900.68	417.00	485.00	61.32	962.0
1.00	557.90	1.00	558.19	14.12	.29	5.86	585.00	417.00	485.00	215.00	800.0
2.00	556.91	0.00	557.18	16.06	.27	5.94	900.87	417.00	485.00	61.29	962.1
2.00	557.91	1.00	558.20	14.07	.29	5.85	585.00	417.00	485.00	215.00	800.0
3.00	556.92	0.00	557.19	15.99	.27	5.93	901.05	417.00	485.00	61.27	962.3
3.00	557.92	1.00	558.20	14.03	.29	5.85	585.00	417.00	485.00	215.00	800.0
4.00	556.93	0.00	557.19	15.93	.27	5.92	901.24	417.00	485.00	61.25	962.4
4.00	557.92	1.00	558.21	13.99	.29	5.84	585.00	417.00	485.00	215.00	800.0
700.00	557.91	0.00	558.08	9.81	.17	4.89	923.70	417.00	485.00	58.40	982.1
700.00	558.82	.92	559.04	9.77	.21	5.10	585.00	417.00	485.00	215.00	800.0
* 795.00	559.86	0.00	564.44	99.08	4.58	17.18	76.06	419.00	507.00	424.97	501.0
* 795.00	559.82	-.04	564.44	100.35	4.63	17.26	75.88	419.00	507.00	425.06	500.9
805.00	561.70	0.00	564.81	59.18	3.11	14.16	83.77	419.00	507.00	421.12	504.8
805.00	561.74	.04	564.83	58.52	3.09	14.10	83.94	419.00	507.00	421.03	504.9
900.00	565.41	0.00	565.49	3.12	.08	3.60	1100.09	417.00	485.00	42.40	1211.6
900.00	565.32	-.09	565.53	5.91	.21	4.93	500.00	417.00	485.00	234.00	734.0
1500.00	565.60	0.00	565.68	2.97	.08	3.53	1133.24	417.00	485.00	41.85	1222.1
1500.00	565.67	.08	565.87	5.45	.20	4.80	500.00	417.00	485.00	234.00	734.0
2200.00	565.86	0.00	565.98	6.13	.12	4.37	1057.96	673.00	734.00	170.76	1228.7
2200.00	566.14	.28	566.36	8.71	.22	5.27	500.00	673.00	734.00	580.00	1080.0
3000.00	566.16	0.00	566.20	1.30	.04	2.26	1070.31	673.00	734.00	159.25	1229.5
3000.00	566.61	.45	566.68	2.08	.07	2.91	500.00	673.00	734.00	580.00	1080.0
3300.00	566.19	0.00	566.27	2.82	.09	3.29	813.16	1000.00	1060.00	726.81	1539.9
3300.00	566.67	.48	566.77	2.91	.10	3.41	500.00	1000.00	1060.00	950.00	1450.0
3685.00	566.15	0.00	566.67	19.23	.32	5.80	185.99	1000.00	1430.00	1000.00	1100.5
3685.00	566.66	.51	567.14	16.32	.48	5.54	186.05	1000.00	1430.00	1000.00	1430.0
3690.00	565.19	0.00	567.36	466.10	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3690.00	565.67	.48	567.84	467.98	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.05	0.00	567.89	139.45	1.84	10.88	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.67	.62	568.36	120.94	1.69	10.43	80.00	1000.00	1430.00	1000.00	1430.0
3715.00	568.20	0.00	568.25	3.67	.06	2.13	895.22	1000.00	1430.00	534.78	1430.0
3715.00	568.62	.43	568.69	3.90	.07	2.24	600.00	1000.00	1430.00	850.00	1450.0
3765.00	568.24	0.00	568.27	2.41	.03	1.72	1131.88	980.00	1255.00	535.34	1667.2
3765.00	568.63	.39	568.73	6.08	.09	2.80	600.00	980.00	1255.00	655.00	1255.0
4700.00	568.53	0.00	568.62	6.70	.08	2.63	676.51	980.00	1255.00	568.02	1244.5
4700.00	569.19	.66	569.27	5.24	.07	2.42	590.05	980.00	1255.00	655.00	1245.0

THE UNIVERSITY OF MICHIGAN LIBRARY

SECNO	CWSEL	DIFWSP	EG	10K+S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
5700.00	569.02	0.00	569.05	2.92	.03	1.99	1162.36	968.00	1018.00	329.76	1492.1
5700.00	569.76	.73	569.83	6.01	.07	2.97	600.00	968.00	1018.00	625.00	1225.0
6400.00	569.43	0.00	569.62	39.89	.19	5.79	1096.99	968.00	1018.00	375.75	1472.7
6400.00	570.51	1.08	570.82	44.60	.31	6.68	600.00	968.00	1018.00	655.00	1255.0
7100.00	572.33	0.00	572.60	44.42	.27	6.32	701.48	968.00	1018.00	847.41	1548.8
7100.00	573.22	.89	573.45	31.67	.23	5.71	560.00	968.00	1018.00	870.00	1430.0
7700.00	574.93	0.00	575.18	41.69	.26	6.17	704.73	968.00	1018.00	846.08	1550.8
7700.00	575.41	.48	575.73	44.84	.33	6.64	500.00	968.00	1018.00	900.00	1400.0
9350.00	582.29	0.00	582.90	50.82	.61	7.71	361.22	523.00	591.00	311.37	672.5
9350.00	582.62	.32	583.18	44.28	.57	7.35	300.00	523.00	591.00	350.00	650.0
11350.00	594.38	0.00	595.66	78.57	1.27	10.03	385.42	525.00	590.00	433.70	819.1
11350.00	594.15	.24	595.51	85.99	1.36	10.33	300.00	525.00	590.00	460.00	760.0
12800.00	602.70	0.00	603.15	35.25	.45	7.09	464.22	315.00	367.00	149.73	613.9
12800.00	603.02	.32	603.56	37.48	.54	7.45	300.00	315.00	367.00	300.00	600.0
* 13085.00	603.58	0.00	606.59	234.23	3.02	13.94	101.00	300.00	420.00	300.00	401.0
13085.00	603.79	.21	606.05	129.17	2.26	12.08	83.03	300.00	420.00	300.00	401.5
13115.00	604.45	0.00	606.74	153.78	2.29	12.14	103.10	300.00	420.00	300.00	403.1
13115.00	604.31	.14	606.31	110.55	2.00	11.36	85.52	300.00	420.00	300.00	402.7
13235.00	607.23	0.00	607.45	9.62	.21	5.19	514.48	315.00	367.00	123.04	637.5
13235.00	606.59	.65	607.06	18.14	.47	6.91	250.00	315.00	367.00	250.00	500.0
13700.00	607.81	0.00	608.26	28.65	.45	6.97	496.27	315.00	367.00	130.56	626.8
13700.00	607.65	.16	608.37	40.37	.72	8.21	260.00	315.00	367.00	240.00	500.0
14188.00	608.91	0.00	609.73	25.35	.81	7.23	100.93	170.50	273.70	171.63	272.5
14188.00	609.12	.20	609.90	24.14	.78	7.10	101.60	170.50	273.70	171.30	272.9
14212.00	608.97	0.00	610.06	34.96	1.09	8.36	86.95	149.43	238.18	150.33	257.2
14212.00	609.24	.27	610.17	28.02	.93	7.72	83.12	170.50	273.70	190.00	273.1
14320.00	610.03	0.00	610.37	8.56	.34	5.04	328.82	246.82	344.00	162.28	491.1
14320.00	609.90	.14	610.46	14.85	.56	6.06	111.80	246.82	344.00	249.40	361.2
14950.00	610.38	0.00	612.38	120.99	2.01	12.34	141.72	64.00	122.00	40.97	182.6
14950.00	611.05	.67	612.96	102.24	1.91	11.85	100.00	64.00	122.00	60.00	160.0
16450.00	626.25	0.00	627.87	88.26	1.62	11.15	148.27	64.00	122.00	39.35	187.6
16450.00	626.16	.09	628.02	98.57	1.86	11.72	100.00	64.00	122.00	60.00	160.0
17450.00	635.75	0.00	637.58	105.39	1.83	11.80	144.52	64.00	122.00	40.28	184.8
17450.00	636.10	.35	637.99	100.52	1.89	11.79	100.00	64.00	122.00	60.00	160.0
18400.00	647.04	0.00	649.08	139.93	2.04	12.32	221.69	290.00	344.00	197.22	418.9
18400.00	647.18	.14	649.41	144.70	2.22	12.63	160.00	290.00	344.00	240.00	400.0
19700.00	655.57	0.00	656.11	30.66	.54	7.05	277.95	290.00	344.00	168.82	446.7
19700.00	656.30	.73	656.97	32.04	.67	7.46	160.00	290.00	344.00	240.00	400.0

SECNO	CWSEL	DIFWSP	EG	10K*S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
21000.00	659.06	0.00	659.54	22.83	.48	6.45	249.74	337.00	398.00	181.14	430.8
21000.00	659.85	.79	660.37	21.33	.51	6.47	160.00	337.00	398.00	240.00	400.0
22300.00	662.34	0.00	662.93	29.22	.59	7.04	241.34	337.00	398.00	187.14	428.4
22300.00	662.94	.60	663.56	27.83	.62	7.08	160.00	337.00	398.00	240.00	400.0
24500.00	665.82	0.00	665.94	7.53	.12	3.89	807.93	1370.00	1431.00	1039.51	1847.4
24500.00	666.92	1.10	667.16	10.36	.24	4.78	250.00	1370.00	1431.00	1275.00	1525.0

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

FW Table
3/18/76

C FPM BIG BEAVER ISLAND FIS
 1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	SIRT	METRIC	HVINS	Q	WSEL	EQ
	-1.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.900	-0.000
J2	NPROF	IPL0T	PREVS	XSECV	XSECH	FN	ALLDC	IRW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J3	-2.000	200.000	38.000	1.000	50.000	3.000	5.000	10.000	26.000	4.000
J3	21.000	22.000	53.000	54.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
QT	7.000	11800.000	11800.000	18400.000	9500.000	5700.000	11800.000	11800.000	-0.000	-0.000
NC	.140	.070	.050	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	1.000	22.000	417.000	485.000	-0.000	-0.000	-0.000	-0.000	-2.000	-0.000
GR	580.000	-0.000	556.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	2.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	3.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	4.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	700.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
NC	.040	.040	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	795.000	25.000	419.000	507.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
GR	572.600	-0.000	564.600	50.000	556.600	68.000	553.700	100.000	553.600	200.000
GR	553.600	300.000	554.400	400.000	562.700	419.000	553.700	461.000	542.700	465.000
GR	562.700	507.000	554.000	530.000	553.300	600.000	553.000	645.000	552.400	663.000
GR	553.100	700.000	555.800	728.000	555.000	800.000	555.800	900.000	560.800	1000.000
GR	566.000	1012.000	564.800	1150.000	565.200	1200.000	567.000	1300.000	573.500	1400.000
SB	-0.000	1.140	2.500	-0.000	4.000	-0.000	923.000	2.100	542.700	542.700
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	805.000	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	562.700	572.400	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
BT	12.000	-0.000	572.400	-0.000	50.000	572.500	-0.000	68.000	572.500	-0.000

CONTINUOUS MONITORING SYSTEM REPORT

BT	100,000	572,600	-0,000	200,000	572,500	-0,000	300,000	572,200	-0,000	400,000
BT	572,400	554,400	419,000	572,500	562,700	507,000	572,600	562,700	530,000	572,600
BT	554,000	600,000	572,800	-0,000	1400,000	573,500	-0,000	-0,000	-0,000	-0,000
NH	4,000	.200	417,000	.050	485,000	.150	1100,000	.070	1400,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	234,000	734,000

X1	900,000	22,000	417,000	485,000	95,000	95,000	95,000	-0,000	-0,000	-0,000
GR	580,000	-0,000	556,600	68,000	553,700	100,000	553,600	300,000	554,400	400,000
GR	555,400	417,000	544,400	432,000	544,500	473,000	554,800	485,000	554,300	500,000
GR	553,000	645,000	552,400	663,000	553,100	700,000	555,800	728,000	555,000	800,000
GR	555,800	900,000	560,800	1000,000	566,000	1012,000	564,800	1150,000	565,200	1200,000
GR	567,000	1300,000	573,200	1400,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	234,000	734,000

X1	1500,000	-0,000	-0,000	-0,000	600,000	600,000	600,000	-0,000	-0,000	-0,000
NC	.200	.150	.050	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	580,000	1080,000

X1	2200,000	22,000	673,000	734,000	700,000	700,000	700,000	-0,000	-0,000	-0,000
GR	572,300	56,000	567,700	100,000	565,100	200,000	562,900	300,000	563,000	390,000
GR	562,900	400,000	562,000	500,000	561,700	522,000	556,100	600,000	557,100	673,000
GR	548,200	675,000	548,200	722,000	556,200	734,000	556,400	800,000	555,000	855,000
GR	554,800	900,000	554,800	1000,000	554,300	1100,000	555,700	1200,000	584,000	1280,000
GR	584,300	1300,000	583,100	1400,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
NC	.060	.060	.045	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	580,000	1080,000

X1	3000,000	-0,000	-0,000	-0,000	800,000	800,000	800,000	-0,000	-0,000	-0,000
NH	5,000	.060	100,000	.045	1060,000	.070	1223,000	.045	1314,000	.060
NH	1700,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	950,000	1450,000

X1	3300,000	28,000	1000,000	1060,000	300,000	300,000	300,000	-0,000	-0,000	-0,000
X3	10,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
GR	580,000	-0,000	567,800	500,000	569,100	545,000	569,200	600,000	569,200	627,000
GR	567,900	649,000	566,400	700,000	565,600	800,000	565,000	900,000	559,100	1000,000
GR	549,200	1016,000	548,900	1024,000	549,000	1050,000	558,300	1060,000	557,400	1100,000
GR	557,800	1200,000	557,600	1223,000	550,700	1246,000	550,700	1272,000	551,100	1285,000
GR	555,700	1300,000	559,000	1314,000	558,800	1400,000	558,700	1500,000	561,500	1530,000
GR	566,200	1540,000	566,800	1558,000	580,000	1700,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	1000,000	1430,000

X1	3685,000	30,000	1000,000	1430,000	385,000	385,000	385,000	-0,000	-0,000	-0,000
X3	10,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	567,800	568,400	-0,000
X4	2,000	575,000	1101,000	575,000	1344,000	-0,000	-0,000	-0,000	-0,000	-0,000
GR	580,000	-0,000	568,000	500,000	569,300	545,000	569,300	625,000	567,700	650,000
GR	566,400	700,000	565,400	800,000	565,000	900,000	559,500	945,000	559,300	960,000
GR	558,000	1000,000	554,400	1005,000	552,500	1010,000	551,500	1015,000	552,000	1035,000
GR	553,500	1040,000	558,300	1050,000	557,300	1100,000	557,700	1345,000	557,600	1370,000
GR	553,000	1390,000	553,000	1410,000	551,000	1420,000	550,200	1425,000	559,000	1430,000
GR	558,800	1645,000	561,500	1675,000	566,300	1685,000	567,000	1705,000	580,000	1845,000
NH	5,000	.050	1000,000	.040	1040,000	.050	1390,000	1040,000	1430,000	.050
NH	1910,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	1000,000	1430,000

X1	3690,000	25,000	1000,000	1430,000	5,000	5,000	5,000	-0,000	-0,000	-0,000
BT	5,000	1000,000	567,800	564,600	1040,000	567,900	564,700	1300,000	568,300	565,000
BT	1390,000	568,400	565,200	1430,000	568,400	565,200	-0,000	-0,000	-0,000	-0,000
GR	580,000	-0,000	573,200	500,000	571,000	600,000	569,400	700,000	568,400	800,000
GR	567,300	900,000	567,800	1000,000	558,000	1000,000	554,400	1005,000	552,500	1010,000
GR	551,500	1015,000	552,000	1035,000	553,500	1040,000	567,900	1040,000	568,000	1300,000
GR	568,400	1390,000	553,000	1390,000	553,000	1410,000	551,000	1420,000	550,700	1430,000
GR	568,400	1430,000	569,000	1500,000	570,400	1600,000	575,700	1700,000	580,000	1910,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	850,000	1450,000

X1	3710,000	-0,000	-0,000	-0,000	20,000	20,000	20,000	-0,000	-0,000	-0,000
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X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
NH	5.000	.100	1000.000	.055	1045.000	.070	1390.000	.055	1430.000	.080	
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000
X1	3715.000	35.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.200	550.000	564.400	620.000	562.300	720.000	
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	558.000	1000.000	
GR	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000	553.500	1040.000	
GR	560.300	1045.000	558.400	1100.000	559.000	1120.000	558.000	1200.000	560.800	1240.000	
GR	565.300	1260.000	565.000	1290.000	560.800	1300.000	559.500	1385.000	553.000	1390.000	
GR	553.000	1410.000	551.000	1420.000	550.700	1425.000	559.500	1430.000	559.000	1500.000	
GR	558.300	1550.000	560.300	1580.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	
NH	5.000	.100	980.000	.055	1030.000	.070	1550.000	.055	1585.000	.080	
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	3765.000	29.000	980.000	1255.000	50.000	50.000	50.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000	
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000	
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000	
GR	558.000	1200.000	560.700	1240.000	565.300	1255.000	565.000	1285.000	560.700	1300.000	
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000	
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000	
QT	7.000	8400.000	8400.000	13200.000	6700.000	3700.000	8400.000	8400.000	-0.000	-0.000	
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	4700.000	29.000	980.000	1255.000	935.000	935.000	935.000	-0.000	2.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000	
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000	
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000	
GR	558.000	1200.000	560.700	1240.000	580.000	1255.000	580.000	1285.000	560.700	1300.000	
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000	
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000	
NH	5.000	.200	133.000	.070	927.000	.100	968.000	.060	1018.000	.070	
NH	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1225.000
X1	5700.000	27.000	968.000	1018.000	1000.000	1000.000	1000.000	-0.000	-0.000	-0.000	-0.000
GR	589.800	-0.000	582.900	133.000	570.700	300.000	565.800	387.000	562.500	500.000	
GR	562.400	600.000	563.200	700.000	562.600	800.000	562.600	900.000	563.300	927.000	
GR	565.400	940.000	564.900	968.000	558.600	976.000	556.700	1003.000	557.400	1012.000	
GR	564.000	1018.000	563.500	1100.000	562.100	1200.000	563.300	1300.000	561.700	1400.000	
GR	562.500	1420.000	566.900	1479.000	570.300	1500.000	582.900	1562.000	588.300	1600.000	
GR	593.100	1653.000	594.500	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.170	.090	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1195.000
X1	6400.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	3.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	870.000	1430.000	
X1	7100.000	19.000	968.000	1018.000	700.000	700.000	700.000	-0.000	-4.500	-0.000	-0.000
GR	600.000	500.000	580.000	800.000	575.000	875.000	572.600	900.000	573.300	927.000	
GR	575.400	940.000	574.900	968.000	568.600	976.000	566.700	1003.000	567.400	1012.000	
GR	574.000	1018.000	573.500	1100.000	572.100	1300.000	573.300	1300.000	571.700	1400.000	
GR	572.500	1470.000	576.900	1550.000	580.300	1650.000	600.000	1700.000	-0.000	-0.000	
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	900.000	1400.000	
X1	7700.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	2.500	-0.000	-0.000
NH	4.000	.200	277.000	.070	523.000	.060	591.000	.100	713.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	650.000	
X1	9350.000	19.000	523.000	591.000	1650.000	1650.000	1650.000	-0.000	-0.000	-0.000	-0.000

CONTRACT REVISIONS - 2001 WATER RENTAL

GR	601,400	-0,000	593,600	100,000	585,900	200,000	584,200	243,000	583,600	277,000
GR	582,900	300,000	577,600	400,000	577,300	500,000	579,000	523,000	572,300	538,000
GR	571,300	555,000	571,700	577,000	578,800	591,000	578,700	600,000	579,100	666,000
GR	581,200	671,000	595,000	691,000	599,000	700,000	601,300	713,000	-0,000	-0,000
NC	.150	.090	.060	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	460,000	760,000

X1	11350,000	10,000	525,000	590,000	2000,000	2000,000	2000,000	-0,000	-4,000	-0,000
GR	617,500	-0,000	600,000	400,000	594,000	525,000	587,000	540,000	586,000	555,000
GR	587,000	580,000	594,000	590,000	594,000	600,000	600,000	900,000	620,000	1100,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	300,000	600,000

X1	12800,000	25,000	315,000	367,000	1450,000	1450,000	1450,000	-0,000	-5,500	-0,000
GR	623,700	-0,000	617,800	24,000	614,100	50,000	613,700	67,000	610,600	100,000
GR	603,400	138,000	603,200	150,000	600,100	200,000	599,000	250,000	596,700	300,000
GR	597,000	315,000	590,600	326,000	590,300	341,000	589,400	358,000	598,100	367,000
GR	596,900	400,000	597,500	450,000	598,500	500,000	599,600	550,000	601,600	600,000
GR	603,900	620,000	607,900	650,000	612,900	700,000	621,100	750,000	624,100	777,000
NC	.080	.080	.050	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	300,000	420,000

X1	13085,000	24,000	300,000	420,000	285,000	285,000	285,000	-0,000	-0,000	-0,000
X3	10,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	612,900	612,900	-0,000
GR	623,700	-0,000	617,800	24,000	614,100	50,000	613,700	67,000	610,600	100,000
GR	603,400	138,000	603,200	150,000	600,100	200,000	599,000	250,000	596,700	300,000
GR	611,500	300,000	589,600	352,500	589,600	367,500	611,500	420,000	596,900	420,000
GR	597,500	450,000	598,500	500,000	599,600	550,000	601,600	600,000	603,900	620,000
GR	607,900	650,000	612,900	700,000	621,100	750,000	624,100	777,000	-0,000	-0,000
SA	1,250	1,620	2,500	-0,000	15,000	2,000	1427,600	2,400	589,600	589,600
EY	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	300,000	420,000

X1	13115,000	-0,000	-0,000	-0,000	30,000	30,000	30,000	-0,000	-0,000	-0,000
X2	-0,000	-0,000	1,000	611,500	612,700	-0,000	-0,000	-0,000	-0,000	-0,000
X3	10,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	612,900	612,900	-0,000
BT	15,000	0,000	623,700	0,000	50,000	614,100	0,000	64,000	613,900	0,000
BT	100,000	613,100	-0,000	200,000	612,800	-0,000	250,000	612,700	-0,000	300,000
BT	612,900	569,700	300,000	612,900	611,500	420,000	612,900	611,500	420,000	612,900
BT	596,900	450,000	612,700	-0,000	500,000	613,000	-0,000	550,000	613,800	-0,000
BT	600,000	614,900	0,000	750,000	621,100	0,000	-0,000	-0,000	-0,000	-0,000
NC	.120	.120	.050	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	250,000	500,000

X1	13235,000	25,000	315,000	367,000	120,000	120,000	120,000	-0,000	1,000	-0,000
GR	623,700	-0,000	617,800	24,000	614,100	50,000	613,700	67,000	610,600	100,000
GR	603,400	138,000	603,200	150,000	600,100	200,000	599,000	250,000	596,700	300,000
GR	597,000	315,000	590,600	326,000	590,300	341,000	589,400	358,000	598,100	367,000
GR	596,900	400,000	597,500	450,000	598,500	500,000	599,600	550,000	601,600	600,000
GR	603,900	620,000	607,900	650,000	612,900	700,000	621,100	750,000	624,100	777,000
NC	.150	.200	.060	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	240,000	500,000

X1	13700,000	-0,000	-0,000	-0,000	465,000	465,000	465,000	-0,000	2,000	-0,000
NC	.080	.080	.050	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	190,000	320,000

X1	14188,000	25,000	195,000	315,000	300,000	650,000	488,000	.860	-0,000	-0,000
X3	10,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	612,100	612,100	-0,000
GR	616,500	20,000	611,500	70,000	607,700	120,000	606,500	145,000	602,300	155,000
GR	600,500	170,000	609,600	195,000	593,500	226,000	593,500	284,000	609,600	315,000
GR	601,500	320,000	602,500	370,000	602,500	420,000	602,700	445,000	605,700	470,000
GR	612,400	520,000	612,500	550,000	612,500	570,000	615,500	620,000	617,400	670,000
GR	617,900	680,000	619,500	700,000	622,000	750,000	624,500	800,000	627,300	850,000
SB	1,250	1,380	2,500	-0,000	58,000	2,000	1200,000	1,930	593,500	593,500
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	190,000	320,000

X1	14212,000	-0,000	-0,000	-0,000	24,000	24,000	24,000	.860	-0,000	-0,000
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X3	110,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	612,100	612,100	-0,000
BT	16,000	20,000	616,500	-0,000	70,000	612,100	-0,000	120,000	612,000	-0,000	-0,000
BT	170,000	612,000	600,500	195,000	612,100	609,600	315,000	612,100	609,600	320,000	-0,000
BT	612,100	601,500	370,000	612,200	-0,000	420,000	612,500	-0,000	445,000	612,800	-0,000
BT	-0,000	520,000	614,000	-0,000	620,000	616,500	-0,000	700,000	619,500	-0,000	-0,000
BT	750,000	622,000	-0,000	800,000	624,500	-0,000	850,000	627,300	-0,000	-0,000	-0,000
NC	.150	.150	.050	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	290,000	420,000	-0,000
X1	14320,000	21,000	287,000	400,000	108,000	108,000	108,000	.860	-0,000	-0,000	-0,000
GR	625,400	-0,000	623,200	25,000	621,800	50,000	617,700	100,000	612,900	150,000	-0,000
GR	609,200	200,000	608,000	227,000	603,700	236,000	601,500	250,000	597,900	287,000	-0,000
GR	595,000	290,000	595,000	386,000	603,000	400,000	604,000	450,000	604,400	523,000	-0,000
GR	607,300	550,000	613,800	600,000	614,200	631,000	613,900	650,000	617,100	700,000	-0,000
GR	619,500	760,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
NC	.150	.150	.060	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	60,000	160,000	-0,000
X1	14950,000	18,000	64,000	122,000	630,000	630,000	630,000	-0,000	-0,000	-0,000	-0,000
GR	632,200	-0,000	619,000	25,000	605,500	50,000	604,300	64,000	600,800	72,000	-0,000
GR	600,100	100,000	599,600	119,000	601,300	122,000	604,600	150,000	612,200	193,000	-0,000
GR	613,200	200,000	621,800	230,000	621,100	256,000	620,700	263,000	626,600	289,000	-0,000
GR	627,900	300,000	630,900	338,000	634,100	357,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	60,000	160,000	-0,000
X1	16450,000	-0,000	-0,000	-0,000	1500,000	1500,000	1500,000	-0,000	15,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	60,000	160,000	-0,000
X1	17450,000	-0,000	-0,000	-0,000	1000,000	1000,000	1000,000	-0,000	10,000	-0,000	-0,000
NC	.100	.100	.060	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
QT	7,000	7800,000	7800,000	12400,000	6100,000	3300,000	7800,000	7800,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	240,000	400,000	-0,000
X1	18400,000	15,000	290,000	344,000	950,000	950,000	950,000	-0,000	-0,000	-0,000	-0,000
GR	670,200	-0,000	659,100	100,000	646,700	200,000	642,300	240,000	643,000	255,000	-0,000
GR	646,300	290,000	635,000	300,000	634,800	315,000	634,400	331,000	644,900	344,000	-0,000
GR	646,000	400,000	646,100	438,000	657,100	470,000	664,300	500,000	671,000	536,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	240,000	400,000	-0,000
X1	19700,000	-0,000	-0,000	-0,000	500,000	1500,000	1300,000	-0,000	5,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	260,000	400,000	-0,000
X1	21000,000	16,000	337,000	398,000	1300,000	1300,000	1300,000	-0,000	-4,000	-0,000	-0,000
GR	684,900	-0,000	672,800	100,000	660,800	200,000	657,300	233,000	655,800	300,000	-0,000
GR	656,100	337,000	647,300	351,000	647,500	369,000	647,400	388,000	656,200	398,000	-0,000
GR	656,300	400,000	656,800	410,000	665,200	438,000	671,300	500,000	677,000	600,000	-0,000
GR	682,400	675,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	270,000	400,000	-0,000
X1	22300,000	-0,000	-0,000	-0,000	1300,000	1300,000	1300,000	-0,000	4,000	-0,000	-0,000
ET	-0,000	-0,000	9,100	-0,000	-0,000	-0,000	-0,000	-0,000	1300,000	1500,000	-0,000
X1	24500,000	11,000	1370,000	1431,000	2200,000	2200,000	2200,000	-0,000	-0,000	-0,000	-0,000
GR	700,000	0,000	680,000	600,000	660,000	1220,000	658,000	1370,000	649,000	1384,000	-0,000
GR	649,000	1402,000	649,000	1421,000	658,000	1431,000	660,000	1600,000	680,000	2450,000	-0,000
GR	700,000	2600,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
EJ	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000

CONTINUOUS IMPROVEMENT PROGRAM

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 FLOODWAY
 T3 BIG BEAVER ISLAND CREEK

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL EQ
 -10. 3. -0. -0. -0.000000 -0.00 -0.0 -0. 557.900 -0.000

J2 NPROF IPLOT PREVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 15.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF 2

CCHV= .200 CEHV= .400

*SECNO 1.000

SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	LOSS	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

3470 ENCROACHMENT STATIONS= 215.0 800.0 TYPE= 1 TARGET= 585.000

1.00	15.50	557.90	0.00	557.90	558.19	.29	0.00	0.00	553.40
11800.	1592.	5311.	4897.	1209.	906.	1857.	0.	0.	552.80
0.00	1.32	5.86	2.64	.140	.050	.070	0.000	542.40	215.00
.001412	-0.	-0.	-0.	0	0	1	0.00	585.00	800.00

*SECNO 2.000

3470 ENCROACHMENT STATIONS= 215.0 800.0 TYPE= 1 TARGET= 585.000

2.00	15.51	557.91	0.00	0.00	558.20	.29	.01	.00	553.40
11800.	1592.	5308.	4899.	1210.	907.	1859.	0.	0.	552.80
.00	1.32	5.85	2.63	.140	.050	.070	.042	542.40	215.00
.001407	5.	5.	5.	0	0	1	0.00	585.00	800.00

*SECNO 3.000

3470 ENCROACHMENT STATIONS= 215.0 800.0 TYPE= 1 TARGET= 585.000

3.00	15.52	557.92	0.00	0.00	558.20	.29	.01	.00	553.40
11800.	1593.	5305.	4902.	1212.	907.	1862.	1.	0.	552.80
.00	1.32	5.85	2.63	.140	.050	.070	.042	542.40	215.00
.001403	5.	5.	5.	0	0	1	0.00	585.00	800.00

*SECNO 4.000

3470 ENCROACHMENT STATIONS= 215.0 800.0 TYPE= 1 TARGET= 585.000

4.00	15.52	557.92	0.00	0.00	558.21	.29	.01	.00	553.40
11800.	1594.	5302.	4904.	1213.	908.	1864.	1.	0.	552.80
.00	1.31	5.84	2.63	.140	.050	.070	.042	542.40	215.00

FLOODWAY DATA, BIG BEAVER ISLAND CREEK
 PROFILE NO. 2

STATION	FLOODWAY SECTION		MEAN VELOCITY	WATER SURFACE ELEVATION		DIFFERENCE
	WIDTH (FT)	AREA		WITH FLOODWAY	WITHOUT FLOODWAY	
1.000	585,	3972,	3,0	557,9	556,9	1,0
2.000	585,	3977,	3,0	557,9	556,9	1,0
3.000	585,	3981,	3,0	557,9	556,9	1,0
4.000	585,	3985,	3,0	557,9	556,9	1,0
700.000	585,	4513,	2,6	558,8	557,9	,9
795.000	76,	684,	17,3	559,8	559,9	-,0
805.000	84,	837,	14,1	561,7	561,7	,0
900.000	500,	6263,	1,9	565,3	565,4	-,1
1500.000	500,	6443,	1,8	565,7	565,6	,1
2200.000	500,	5707,	2,1	566,1	565,9	,3
3000.000	500,	5944,	2,0	566,6	566,2	,5
3300.000	500,	5004,	2,4	566,7	566,2	,5
3685.000	186,	2128,	5,5	566,7	566,1	,5
3690.000	80,	998,	11,8	565,7	565,2	,5
3710.000	80,	1131,	10,4	566,7	566,1	,6
3715.000	600,	5912,	2,0	568,6	568,2	,4
3765.000	600,	5413,	2,2	568,6	568,2	,4
4700.000	590,	4503,	1,9	569,2	568,5	,7
5700.000	600,	4237,	2,0	569,8	569,0	,7
6400.000	540,	2582,	3,3	570,5	569,4	1,1
7100.000	560,	2954,	2,8	573,5	572,3	1,1
7700.000	500,	2395,	3,5	575,4	574,9	,5
9350.000	344,	1710,	4,9	582,6	582,3	,3
11350.000	300,	1276,	6,6	594,2	594,4	-,2
12800.000	300,	1882,	4,5	603,0	602,7	,3
13085.000	83,	695,	12,1	603,8	603,6	,2
13115.000	86,	739,	11,4	604,3	604,4	-,1
13235.000	280,	2315,	3,6	606,6	607,2	-,6

13700.000	260,	2135.	3.9	607,6	607,8	-.2
14188.000	102,	1183,	7.1	609,1	608,9	.2
14212.000	83,	1088,	7,7	609,2	609,0	.3
14320.000	112,	1476,	5,7	609,9	610,0	-.1
14950.000	100,	918,	9,1	611,0	610,4	.7
16450.000	100,	929,	9,0	626,2	626,2	-.1
17450.000	100,	923,	9,1	636,1	635,8	.3
18400.000	160,	801,	9,7	647,2	647,0	.1
19700.000	160,	1461,	5,3	656,3	655,6	.7
21000.000	140,	1519,	5,1	659,9	659,1	.9
22300.000	130,	1353,	5,8	663,2	662,3	.9
24500.000	200,	2269,	3,4	667,4	665,8	1,6

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SUMMARY PRINTOUT

BIG BEAVER ISLAND CREEK

SECNO	CWSEL	DIFWSP	EG	10K+S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
1.00	556.90	0.00	557.17	16.13	.27	5.95	900.68	417.00	485.00	61.32	962.0
1.00	557.90	1.00	558.19	14.12	.29	5.86	585.00	417.00	485.00	215.00	800.0
2.00	556.91	0.00	557.18	16.06	.27	5.94	900.87	417.00	485.00	61.29	962.1
2.00	557.91	1.00	558.20	14.07	.29	5.85	585.00	417.00	485.00	215.00	800.0
3.00	556.92	0.00	557.19	15.99	.27	5.93	901.05	417.00	485.00	61.27	962.3
3.00	557.92	1.00	558.20	14.03	.29	5.85	585.00	417.00	485.00	215.00	800.0
4.00	556.93	0.00	557.19	15.93	.27	5.92	901.24	417.00	485.00	61.25	962.4
4.00	557.92	1.00	558.21	13.99	.29	5.84	585.00	417.00	485.00	215.00	800.0
700.00	557.91	0.00	558.08	9.81	.17	4.89	923.70	417.00	485.00	58.40	982.1
700.00	558.82	.92	559.04	9.77	.21	5.10	585.00	417.00	485.00	215.00	800.0
795.00	559.86	0.00	564.44	99.08	4.58	17.18	76.06	419.00	507.00	424.97	501.0
795.00	559.82	-.04	564.44	100.35	4.63	17.26	75.88	419.00	507.00	425.06	500.9
805.00	561.70	0.00	564.81	59.18	3.11	14.16	83.77	419.00	507.00	421.12	504.8
805.00	561.74	.04	564.83	58.52	3.09	14.10	83.94	419.00	507.00	421.03	504.9
900.00	565.41	0.00	565.49	3.12	.08	3.60	1100.09	417.00	465.00	42.40	1211.6
900.00	565.32	-.09	565.53	5.91	.21	4.93	500.00	417.00	485.00	234.00	734.0
1500.00	565.60	0.00	565.68	2.97	.08	3.53	1133.24	417.00	485.00	41.85	1222.1
1500.00	565.67	.08	565.87	5.45	.20	4.80	500.00	417.00	485.00	234.00	734.0
2200.00	565.86	0.00	565.98	6.13	.12	4.37	1057.96	673.00	734.00	170.76	1228.7
2200.00	566.14	.28	566.36	8.71	.22	5.27	500.00	673.00	734.00	580.00	1080.0
3000.00	566.16	0.00	566.20	1.30	.04	2.26	1070.31	673.00	734.00	159.25	1229.5
3000.00	566.61	.45	566.68	2.08	.07	2.91	500.00	673.00	734.00	580.00	1080.0
3300.00	566.19	0.00	566.27	2.82	.09	3.29	813.16	1000.00	1060.00	726.81	1539.9
3300.00	566.67	.48	566.77	2.91	.10	3.41	500.00	1000.00	1060.00	950.00	1450.0
3685.00	566.15	0.00	566.67	19.23	.52	5.80	185.99	1000.00	1430.00	1000.00	1100.5
3685.00	566.66	.51	567.14	16.32	.48	5.54	186.05	1000.00	1430.00	1000.00	1430.0
3690.00	565.19	0.00	567.36	466.10	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3690.00	565.67	.48	567.84	467.98	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.05	0.00	567.89	139.45	1.84	10.88	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.67	.62	568.36	120.94	1.69	10.43	80.00	1000.00	1430.00	1000.00	1430.0
3715.00	568.20	0.00	568.25	3.67	.06	2.13	895.22	1000.00	1430.00	534.78	1430.0
3715.00	568.62	.43	568.69	3.90	.07	2.24	600.00	1000.00	1430.00	850.00	1450.0
3765.00	568.24	0.00	568.27	2.41	.03	1.72	1131.88	980.00	1255.00	535.34	1667.2
3765.00	568.63	.39	568.73	6.08	.09	1.80	600.00	980.00	1255.00	655.00	1255.0
4700.00	568.53	0.00	568.62	6.70	.08	2.63	676.51	980.00	1255.00	568.02	1244.5
4700.00	569.19	.66	569.27	5.24	.07	2.42	590.05	980.00	1255.00	655.00	1245.0

W.C.

1255

SECNO	CWSEL	DIFWSP	EG	10K*S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
5700.00	569.02	0.00	569.05	2.92	.03	1.99	1162.36	968.00	1018.00	329.76	1492.1
5700.00	569.76	.73	569.83	6.01	.07	2.97	600.00	968.00	1018.00	625.00	1225.0
6400.00	569.43	0.00	569.62	39.89	.19	5.79	1096.99	968.00	1018.00	375.75	1472.7
6400.00	570.50	1.07	570.93	57.76	.43	7.59	540.00	968.00	1018.00	655.00	1195.0
7100.00	572.33	0.00	572.60	44.42	.27	6.32	701.48	968.00	1018.00	847.41	1548.8
7100.00	573.46	1.13	573.67	27.43	.20	5.41	560.00	968.00	1018.00	870.00	1430.0
7700.00	574.93	0.00	575.18	41.69	.26	6.17	704.73	968.00	1018.00	846.08	1550.8
7700.00	575.45	.52	575.77	43.87	.32	6.59	500.00	968.00	1018.00	900.00	1400.0
9350.00	582.29	0.00	582.90	50.82	.61	7.71	361.22	523.00	591.00	311.37	672.5
9350.00	582.60	.31	583.16	44.63	.56	7.37	344.34	523.00	591.00	305.66	650.0
11350.00	594.38	0.00	595.66	78.57	1.27	10.03	385.42	525.00	590.00	433.70	819.1
11350.00	594.16	-.22	595.51	85.46	1.36	10.31	300.00	525.00	590.00	460.00	760.0
12800.00	602.70	0.00	603.15	35.25	.45	7.09	464.22	315.00	367.00	149.73	613.9
12800.00	603.02	.31	603.56	37.57	.54	7.45	300.00	315.00	367.00	300.00	500.0
13085.00	603.58	0.00	606.59	234.23	3.02	13.94	101.00	300.00	420.00	300.00	401.0
13085.00	603.79	.21	606.05	129.26	2.27	12.08	83.65	300.00	420.00	300.00	401.5
13115.00	604.45	0.00	606.74	153.78	2.29	12.14	103.10	300.00	420.00	300.00	403.1
13115.00	604.31	-.14	606.31	110.61	2.01	11.36	85.51	300.00	420.00	300.00	402.7
13235.00	607.23	0.00	607.45	9.62	.21	5.19	514.48	315.00	367.00	123.04	637.5
13235.00	606.59	-.65	607.06	18.14	.47	6.91	250.00	315.00	367.00	250.00	500.0
13700.00	607.81	0.00	608.26	28.65	.45	6.97	496.27	315.00	367.00	130.56	626.8
13700.00	607.65	-.16	608.37	40.38	.72	8.21	260.00	315.00	367.00	240.00	500.0
14188.00	608.91	0.00	609.73	25.35	.81	7.23	100.93	170.50	273.70	171.63	272.5
14188.00	609.12	.20	609.90	24.14	.78	7.10	101.60	170.50	273.70	171.30	272.9
14212.00	608.97	0.00	610.06	34.96	1.09	8.36	86.95	149.43	238.18	150.33	237.2
14212.00	609.24	.27	610.17	28.02	.93	7.72	83.12	170.50	273.70	190.00	273.1
14320.00	610.03	0.00	610.37	8.56	.34	5.04	328.82	246.82	344.00	162.28	491.1
14320.00	609.90	-.14	610.46	14.85	.56	6.06	111.80	246.82	344.00	249.40	361.2
14950.00	610.38	0.00	612.38	120.99	2.01	12.34	141.72	64.00	122.00	40.97	182.6
14950.00	611.05	.67	612.96	102.25	1.91	11.85	100.00	64.00	122.00	60.00	160.0
16450.00	626.25	0.00	627.87	88.26	1.62	11.15	148.27	64.00	122.00	39.35	187.6
16450.00	626.16	-.09	628.02	98.57	1.86	11.72	100.00	64.00	122.00	60.00	160.0
17450.00	635.75	0.00	637.58	105.39	1.83	11.80	144.52	64.00	122.00	40.28	184.8
17450.00	636.10	.35	637.99	100.52	1.89	11.79	100.00	64.00	122.00	60.00	160.0
18400.00	647.04	0.00	649.08	139.93	2.04	12.32	221.69	290.00	344.00	197.22	418.9
18400.00	647.18	.14	649.41	144.70	2.22	12.63	160.00	290.00	344.00	240.00	400.0
19700.00	655.57	0.00	656.11	30.66	.54	7.05	277.95	290.00	344.00	168.82	446.7
19700.00	656.30	.73	656.97	32.04	.67	7.46	160.00	290.00	344.00	240.00	400.0

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SECNO	CWSEL	DIFWSP	EG	10K*S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
21000,00	659,06	0,00	659,54	22,83	,48	6,45	249,74	337,00	398,00	181,14	430,8
21000,00	659,92	,85	660,49	22,95	,57	6,73	140,00	337,00	398,00	260,00	400,0
22300,00	662,34	0,00	662,93	29,22	,59	7,04	241,34	337,00	398,00	187,14	428,4
22300,00	663,20	,86	663,91	29,38	,71	7,36	130,00	337,00	398,00	270,00	400,0
24500,00	665,82	0,00	665,94	7,53	,12	3,89	807,93	1370,00	1431,00	1039,51	1847,4
24500,00	667,44	1,62	667,73	11,03	,28	5,04	200,00	1370,00	1431,00	1300,00	1500,0

POSSIBLE ERROR SECNO= 795,00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795,00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795,00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795,00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 13085,00 PROFILE= 1 CRITICAL DEPTH ASSUMED

 INTERACTIVE HELP VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

Robert F. W. Talbot
 3/15/76

C FPH SIG BEAVER ISLAND FIS
 L FPM BR MADISON-MAYOAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	TCHECK	IND	NINV	JOIR	STRT	METRIC	HVINS	Q	VSEL	FO
	-1.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.900	-0.000
J2	RPROF	IPLDT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J3	-2.000	200.000	38.000	43.000	1.000	50.000	3.000	5.000	10.000	26.000
J5	53.000	54.000	27.000	28.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J4	-1.000	-10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
OT	7.000	11800.000	11800.000	18400.000	9500.000	5700.000	11800.000	11800.000	-0.000	-0.000
NC	.140	.070	.050	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	1.000	22.000	417.000	485.000	-0.000	-0.000	-0.000	-0.000	-2.000	-0.000
GR	580.000	-0.000	550.000	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	2.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	3.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	4.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	700.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
NC	.040	.040	.035	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	795.000	25.000	419.000	507.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
X5	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
GR	572.600	-0.000	564.600	50.000	556.600	68.000	553.700	100.000	553.600	200.000
GR	553.600	300.000	554.400	400.000	562.700	419.000	542.700	461.000	542.700	465.000
GR	562.700	507.000	554.000	530.000	553.300	600.000	553.000	645.000	552.400	663.000
GR	553.100	700.000	555.800	728.000	555.000	800.000	555.800	900.000	560.800	1000.000
GR	566.000	1012.000	564.800	1150.000	565.200	1200.000	567.000	1300.000	573.500	1400.000
SB	-0.000	1.140	2.500	-0.000	4.000	-0.000	923.000	2.100	542.700	542.700
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	805.000	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000

X2	-0.000	-0.000	1.000	562.700	572.400	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
BT	12.000	-0.000	572.400	-0.000	50.000	572.500	-0.000	68.000	572.500	-0.000
BT	100.000	572.600	-0.000	265.000	572.500	-0.000	300.000	572.200	-0.000	400.000
BT	572.400	554.400	417.000	572.500	562.700	507.000	572.600	562.700	530.000	572.600
BT	554.000	600.000	572.800	-0.000	1400.000	573.500	-0.000	-0.000	-0.000	-0.000
NH	4.000	.200	417.000	.050	485.000	.150	1100.000	.070	1400.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234.000	734.000
X1	900.000	22.000	417.000	485.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
GR	550.000	-0.000	556.000	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.000	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	557.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234.000	734.000
X1	1500.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	-0.000	-0.000
NC	.200	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1080.000
X1	2200.000	22.000	673.000	734.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
GR	572.300	56.000	567.700	100.000	565.100	200.000	562.900	300.000	563.000	390.000
GR	562.900	400.000	562.000	500.000	561.700	522.000	556.100	600.000	557.100	673.000
GR	548.200	675.000	546.200	722.000	556.200	734.000	556.400	600.000	555.000	855.000
GR	554.800	900.000	554.800	1000.000	554.300	1100.000	555.700	1200.000	584.000	1280.000
GR	584.300	1300.000	583.100	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.060	.060	.045	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1080.000
X1	3000.000	-0.000	-0.000	-0.000	800.000	800.000	800.000	-0.000	-0.000	-0.000
NH	5.000	.060	104.000	.045	1060.000	.070	1223.000	.045	1314.000	.060
NH	1700.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	950.000	1450.000
X1	3300.000	28.000	1000.000	1060.000	300.000	300.000	300.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	567.800	500.000	569.100	545.000	569.200	600.000	569.200	627.000
GR	567.900	649.000	566.400	700.000	565.600	800.000	565.000	900.000	559.100	1000.000
GR	549.200	1016.000	549.900	1024.000	549.000	1050.000	558.300	1060.000	557.400	1100.000
GR	557.800	1200.000	557.000	1223.000	559.700	1246.000	559.700	1272.000	551.100	1285.000
GR	558.700	1300.000	559.000	1314.000	558.800	1400.000	558.700	1500.000	561.500	1530.000
GR	566.200	1540.000	566.800	1558.000	580.000	1700.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3635.000	30.000	1000.000	1430.000	385.000	385.000	385.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
X4	2.000	575.000	1101.000	575.000	1344.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	560.000	-0.000	568.000	500.000	569.300	545.000	569.300	625.000	567.700	650.000
GR	566.400	700.000	565.400	800.000	565.000	900.000	559.500	945.000	559.300	960.000
GR	558.000	1000.000	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000
GR	553.500	1040.000	558.300	1050.000	557.300	1100.000	557.700	1345.000	557.600	1370.000
GR	553.000	1300.000	553.000	1410.000	551.000	1420.000	550.200	1425.000	559.000	1430.000
GR	558.800	1645.000	561.500	1675.000	564.300	1685.000	567.000	1705.000	580.000	1845.000
NH	5.000	.050	1000.000	.040	1040.000	.050	1390.000	1040.000	1430.000	.050
NH	1910.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3690.000	25.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
BT	5.000	1000.000	567.800	561.500	1040.000	567.900	564.700	1300.000	568.000	565.000
BT	1390.000	568.400	565.200	1430.000	568.400	565.200	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	573.200	500.000	571.000	600.000	569.400	700.000	568.400	800.000
GR	567.300	900.000	567.800	1000.000	558.000	1000.000	554.400	1005.000	552.500	1010.000
GR	551.500	1015.000	552.000	1035.000	553.500	1040.000	567.900	1040.000	568.000	1300.000
GR	568.400	1300.000	553.000	1390.000	553.000	1410.000	551.000	1420.000	550.700	1430.000
GR	568.400	1430.000	569.000	1500.000	570.400	1600.000	575.700	1700.000	580.000	1910.000

ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X1	3710.000	-0.000	-0.000	-0.000	20.000	20.000	20.000	-0.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000	-0.000
NH	5.000	.100	1000.000	.055	1045.000	.070	1390.000	.055	1430.000	.080	
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000
X1	3715.000	35.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	560.000	330.000	570.500	500.000	567.200	550.000	564.400	620.000	562.300	720.000	
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	558.000	1000.000	
GR	554.400	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000	
GR	560.300	1200.000	560.700	1240.000	580.000	1255.000	580.000	1265.000	560.700	1300.000	
GR	565.300	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000	
GR	558.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000	
NH	5.000	.100	133.000	.070	927.000	.100	968.000	.060	1018.000	.070	
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	3765.000	29.000	980.000	1255.000	50.000	50.000	50.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	560.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000	
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000	
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000	
GR	558.000	1200.000	560.700	1240.000	580.000	1255.000	580.000	1265.000	560.700	1300.000	
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000	
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000	
OT	7.000	6400.000	8400.000	13200.000	6700.000	3700.000	8400.000	8400.000	-0.000	-0.000	
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000
X1	4700.000	29.000	980.000	1255.000	935.000	935.000	935.000	-0.000	2.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	560.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000	
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000	
GR	552.500	1025.000	560.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000	
GR	558.000	1200.000	560.700	1240.000	580.000	1255.000	580.000	1265.000	560.700	1300.000	
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000	
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000	
NH	5.000	.200	133.000	.070	927.000	.100	968.000	.060	1018.000	.070	
NH	1680.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1225.000
Y1	5700.000	27.000	960.000	1010.000	1000.000	1000.000	1000.000	-0.000	-0.000	-0.000	-0.000
GR	560.000	-0.000	587.000	133.000	570.700	300.000	565.800	587.000	562.500	500.000	
GR	562.400	600.000	564.200	700.000	562.600	800.000	562.600	900.000	563.300	927.000	
GR	565.400	940.000	564.000	960.000	559.600	970.000	556.700	1003.000	557.400	1012.000	
GR	554.000	1015.000	564.000	1100.000	562.100	1200.000	563.300	1300.000	561.700	1400.000	
GR	562.500	1420.000	565.000	1470.000	570.300	1500.000	582.900	1562.000	588.300	1600.000	
GR	593.100	1653.000	590.500	1680.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	
NC	.170	.100	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	900.000	1400.000
X1	7700.000	19.000	960.000	1010.000	2000.000	2000.000	2000.000	-0.000	-2.000	-0.000	-0.000
GR	600.000	500.000	580.000	800.000	575.000	875.000	572.600	900.000	573.300	927.000	
GR	575.400	940.000	574.000	960.000	568.600	975.000	566.700	1003.000	567.400	1012.000	
GR	574.000	1015.000	573.500	1100.000	572.100	1300.000	573.300	1300.000	571.700	1400.000	
GR	572.500	1470.000	570.000	1550.000	580.300	1650.000	600.000	1700.000	-0.000	-0.000	
NH	4.700	.200	277.000	.070	523.000	.060	591.000	.100	713.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	650.000
X1	9350.000	19.000	523.000	591.000	1650.000	1650.000	1650.000	-0.000	-0.000	-0.000	-0.000
GR	561.400	-0.000	593.600	100.000	585.900	200.000	584.200	243.000	583.600	277.000	
GR	562.200	300.000	577.600	400.000	577.300	500.000	579.000	523.000	572.300	538.000	
GR	571.300	555.000	571.700	577.000	578.800	591.000	578.700	600.000	579.100	666.000	

GR	581.700	671.000	595.000	651.000	590.000	760.000	601.300	713.000	-0.000	-0.000
NC	.150	.090	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	460.000	760.000
X1	11350.000	9.000	540.000	596.000	2000.000	2000.000	2000.000	-0.000	-0.000	-0.000
GR	617.500	-0.000	600.000	400.000	594.000	525.000	587.000	540.000	586.000	555.000
GR	587.000	580.000	594.000	590.000	594.000	600.000	600.000	900.000	620.000	1100.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	600.000
X1	12800.000	25.000	315.000	367.000	1450.000	1450.000	1450.000	-0.000	-0.500	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	597.000	315.000	590.000	326.000	590.300	341.000	589.400	358.000	598.100	367.000
GR	596.900	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000
X1	13085.000	24.000	300.000	420.000	285.000	285.000	285.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	611.500	300.000	589.600	332.500	589.600	367.500	611.500	420.000	596.900	420.000
GR	597.500	450.000	590.500	500.000	599.600	550.000	601.600	600.000	603.900	620.000
GR	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	-0.000	-0.000
SB	1.250	1.620	2.500	-0.000	15.000	2.000	1427.600	2.400	589.600	589.600
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000
X1	13115.000	-0.000	-0.000	-0.000	30.000	30.000	30.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	611.500	612.700	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000
BT	15.000	0.000	623.700	0.000	50.000	614.100	0.000	64.000	613.900	0.000
ET	100.000	613.100	-0.000	200.000	612.800	-0.000	250.000	612.700	-0.000	300.000
BT	612.900	589.700	300.000	612.900	611.500	420.000	612.900	611.500	420.000	612.900
BT	596.900	450.000	612.700	-0.000	500.000	613.000	-0.000	550.000	613.800	-0.000
BT	500.000	614.900	3.000	750.000	621.100	0.000	-0.000	-0.000	-0.000	-0.000
NC	.120	.120	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.500	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	250.000	500.000
X1	13235.000	25.000	315.000	367.000	120.000	120.000	120.000	-0.000	1.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	597.000	315.000	590.000	326.000	590.300	341.000	589.400	358.000	598.100	367.000
GR	596.900	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000
NC	.150	.200	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	500.000
X1	13700.000	-0.000	-0.000	-0.000	465.000	465.000	465.000	-0.000	-2.000	-0.000
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.500	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000
X1	14100.000	25.000	195.000	315.000	300.000	650.000	488.000	.860	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000
GR	616.500	20.000	611.500	70.000	637.700	120.000	605.500	145.000	602.300	155.000
GR	600.500	170.000	609.600	195.000	593.500	226.000	593.500	284.000	609.600	315.000
GR	601.500	320.000	602.500	370.000	602.500	420.000	602.700	445.000	605.700	470.000
GR	612.400	520.000	612.500	550.000	612.500	570.000	615.500	620.000	617.400	670.000
GR	617.900	586.000	619.500	700.000	622.600	750.000	624.500	600.000	627.300	850.000
SB	1.250	1.380	2.500	-0.000	58.000	2.000	1200.000	1.930	593.500	593.500
ET	-0.000	-0.000	9.100	-0.000	-0.100	-0.000	-0.000	-0.000	190.000	320.000
X1	14212.000	-0.000	-0.000	-0.000	24.000	24.000	24.000	.860	-0.000	-0.000
X2	-0.000	-0.000	1.000	609.600	612.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.000	612.100	-0.000
BT	16.000	20.000	616.500	-0.000	70.000	612.100	-0.000	120.000	612.000	-0.000

BT	170.000	612.000	600.000	192.000	612.100	609.000	315.000	612.100	609.000	524.000
BT	612.100	601.500	370.000	612.200	-0.000	420.000	612.500	-0.000	445.000	612.000
BT	-0.000	520.000	614.000	-0.000	620.000	616.500	-0.000	700.000	619.500	-0.000
BT	750.000	622.000	-0.000	800.000	624.500	-0.000	850.000	627.300	-0.000	-0.000
NC	.150	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	290.000	420.000
X1	14320.000	21.000	287.000	400.000	108.000	108.000	108.000	87.860	-0.000	-0.000
GR	625.400	-0.000	623.200	25.000	621.800	50.000	617.700	100.000	612.900	150.000
GR	609.200	200.000	609.000	227.000	603.700	236.000	601.500	250.000	597.900	287.000
GR	695.000	200.000	695.000	366.000	603.000	400.000	604.000	450.000	604.400	523.000
GR	607.300	550.000	613.000	600.000	614.200	631.000	613.900	650.000	617.100	700.000
GR	619.500	760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.150	.150	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000
X1	14950.000	18.000	64.000	122.000	630.000	630.000	630.000	-0.000	-0.000	-0.000
GR	632.200	-0.000	619.000	25.000	605.500	50.000	604.300	64.000	600.800	72.000
GR	600.100	100.000	599.600	119.000	601.300	122.000	604.600	150.000	612.200	193.000
GR	613.200	200.000	621.800	230.000	621.100	256.000	620.700	263.000	626.600	289.000
GR	627.900	300.000	630.900	338.000	634.100	357.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000
X1	16450.000	-0.000	-0.000	-0.000	1500.000	1500.000	1500.000	-0.000	15.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	70.000	-0.000	-0.000	-0.000	60.000	160.000
X1	17450.000	-0.000	-0.000	-0.000	1000.000	1000.000	1000.000	-0.000	10.000	-0.000
NC	.100	.100	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
OT	7.000	7800.000	7800.000	12400.000	6100.000	3300.000	7800.000	7800.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000
X1	18400.000	15.000	290.000	344.000	950.000	950.000	950.000	-0.000	-0.000	-0.000
GR	670.200	-0.000	659.100	100.000	646.700	200.000	642.300	240.000	643.000	255.000
GR	646.300	290.000	635.600	300.000	634.800	315.000	634.400	331.000	644.900	344.000
GR	646.000	400.000	646.100	438.000	657.100	470.000	664.300	500.000	671.000	536.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000
X1	19700.000	-0.000	-0.000	-0.000	500.000	1500.000	1300.000	-0.000	5.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	260.000	400.000
X1	21000.000	16.000	337.000	398.000	1300.000	1300.000	1300.000	-0.000	-4.000	-0.000
GR	684.900	-0.000	672.200	100.000	660.800	200.000	657.300	233.000	655.800	300.000
GR	656.100	337.000	647.300	351.000	647.500	369.000	647.400	388.000	656.200	398.000
GR	656.300	400.000	656.800	416.000	665.200	438.000	671.300	500.000	677.000	600.000
GR	682.400	675.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	270.000	400.000
X1	22300.000	-0.000	-0.000	-0.000	1300.000	1300.000	1300.000	-0.000	4.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1310.000	1440.000
X1	24500.000	11.000	1370.000	1431.000	2200.000	2200.000	2200.000	-0.000	-0.000	-0.000
GR	700.000	0.000	680.000	600.000	660.000	1220.000	658.000	1370.000	649.000	1384.000
GR	649.000	1402.000	649.000	1421.000	565.000	1431.000	660.000	1600.000	680.000	2450.000
GR	700.000	2600.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
RJ	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED PSEL, C4SEL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7100 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795.000

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM RR MADISON-MAYODAN FIS
 T2 FLOODWAY
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	IND	MINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FQ
	-10.	3.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	557.900	-0.000

J2	RPROF	IPLT	PREVS	XSECV	XSECH	FN	ALLD	ISW	CHNIN	ITRACE
	15.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795.000

NORFOLK SOUTHERN RR-SECTION B-11

SPECIAL BRIDGE

SR	XK	YKOR	COHQ	RDLEN	HWC	RWP	HAREA	SS	FLCHU	FLCHD
	-0.00	1.14	2.50	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

6070 LOW FLOW BY NORMAL BRIDGE

EGPRS= 562.700 BALNCE= 564.442 FLLO= 562.700 PCWSE= 559.815 ELTRD= 572.400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3510 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.16	566.16	0.00
3610 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.36	566.36	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.68	566.68	0.00

*** SECTION B-1 ***

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 7700.000

CONSULT HEC2 USER'S MANUAL FOR A COMPLETE LIST OF ERROR MESSAGES

FLOODWAY DATA, BIG BEAVER ISLAND CREEK
 PROFILE NO. 2

STATION	WIDTH (FT)	FLOODWAY SECTION AREA	MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
1.000	585.	3972.	3.0	557.9	556.9	1.0
2.000	585.	3977.	3.0	557.9	556.9	1.0
3.000	585.	3981.	3.0	557.9	556.9	1.0
4.000	585.	3985.	3.0	557.9	556.9	1.0
A 700.000	585.	4513.	2.6	558.8	557.9	.9
B 795.000	76.	684.	17.3	559.8	559.9	-.1
805.000	84.	837.	14.1	561.7	561.7	.0
C 900.000	500.	6263.	1.9	565.3	565.4	-.1
1500.000	500.	6443.	1.8	565.7	565.6	.1
2200.000	500.	5707.	2.1	566.1	565.9	.2
3000.000	500.	5944.	2.0	566.6	566.2	.4
D 3300.000	500.	5004.	2.4	566.7	566.2	.5
E 3685.000	186.	2128.	5.5	566.7	566.1	.6
3690.000	80.	998.	11.8	565.7	565.2	.5
3710.000	80.	1131.	10.4	566.7	566.1	.6
F 3715.000	600.	5912.	2.0	568.6	568.2	.4
3765.000	600.	5413.	2.2	568.6	568.2	.4
4700.000	500.	4503.	1.9	569.2	568.5	.7
G 5705.000	600.	4237.	2.0	569.8	569.0	.8
H 7700.000	500.	1405.	6.0	573.5	573.1	.4
I 9350.000	350.	2076.	4.0	583.5	583.5	.0
J 11350.000	300.	1101.	7.5	597.6	597.4	.2
K 12800.000	300.	2491.	3.4	605.1	604.7	.4
L 13000.000	200.	813.	11.3	605.2	604.4	.8
13100.000	91.	838.	10.0	605.4	604.9	.5
M 13235.000	250.	2457.	3.4	607.2	607.3	-.1
N 13700.000	260.	2241.	3.7	608.1	607.9	.2

CONSULT ENGINEER'S OFFICE FOR FURTHER INFORMATION

	14188.000	102.	1208.	7.0	609.4	609.0	.4
O	14212.000	94.	1112.	7.6	609.5	609.0	.5
P	14320.000	112.	1584.	5.6	610.1	610.1	.1
Q	14950.000	100.	938.	9.0	611.2	610.4	.8
	16450.000	100.	919.	9.1	626.1	626.2	-.2
R	17450.000	100.	928.	9.0	636.1	635.8	.4
S	18400.000	169.	797.	9.8	647.2	647.0	.1
T	19700.000	160.	1462.	5.3	656.3	655.6	.7
U	21000.000	149. 130.	1520.	5.1	659.9	659.1	.9
V	22500.000	150.	1353.	5.8	663.2	662.3	.9
W	24500.000	130.	2618.	3.0	665.4	665.2	2.2

100% RECYCLED PAPER
 100% RECYCLED PAPER
 100% RECYCLED PAPER

SUMMARY PRINTOUT

BIG BEAVER ISLAND CREEK

SPCNO	Q	GWSEL	DIFWSP	EG	10K+S	HV	VCH	SSTA	ENDST	STENCL	STENCR
1.00	11800.00	556.90	0.00	557.17	16.13	.27	5.95	61.32	962.00	0.00	0.0
1.00	11800.00	557.92	1.00	558.19	14.12	.29	5.86	215.00	800.00	215.00	800.0
										236	349
2.00	11800.00	556.91	0.00	557.18	16.06	.27	5.94	61.29	962.16	0.00	0.0
2.00	11800.00	557.91	1.00	558.20	14.07	.29	5.85	215.00	800.00	215.00	800.0
3.00	11800.00	556.92	0.00	557.19	15.99	.27	5.93	61.27	962.32	0.00	0.0
3.00	11800.00	557.92	1.00	558.20	14.03	.29	5.85	215.00	800.00	215.00	800.0
4.00	11800.00	556.93	0.00	557.19	15.93	.27	5.92	61.25	962.48	0.00	0.0
4.00	11800.00	557.92	1.00	558.21	13.99	.29	5.84	215.00	800.00	215.00	800.0
700.00	11800.00	557.91	0.00	558.08	9.81	.17	4.89	58.40	982.10	0.00	0.0
700.00	11800.00	558.82	.92	559.04	9.77	.21	5.10	215.00	800.00	215.00	800.0
										236	349
795.00	11800.00	559.86	0.00	564.44	99.08	4.58	17.18	424.97	501.03	0.00	0.0
795.00	11800.00	559.82	-.04	564.44	100.35	4.63	17.26	425.06	500.94	419.00	507.0
										44	44
805.00	11800.00	561.70	0.00	564.81	59.18	3.11	14.16	421.12	504.80	0.00	0.0
805.00	11800.00	561.74	.04	564.83	58.52	3.09	14.10	421.03	504.97	419.00	507.0
										44	44
900.00	11800.00	565.41	0.00	565.49	3.12	.08	3.60	42.40	1211.68	0.00	0.0
900.00	11800.00	565.32	-.09	565.53	5.91	.21	4.93	234.00	734.00	234.00	734.0
										217	283
1500.00	11800.00	565.67	0.00	565.68	2.97	.08	3.53	41.85	1222.16	0.00	0.0
1500.00	11800.00	565.67	.05	565.87	5.45	.20	4.80	234.00	734.00	234.00	734.0
										217	283
2200.00	11800.00	565.86	0.00	565.98	6.13	.12	4.37	170.76	1228.72	0.00	0.0
2200.00	11800.00	566.14	.28	566.36	8.71	.22	5.27	580.00	1080.00	580.00	1080.0
										123	377
3000.00	11800.00	566.16	0.00	566.20	1.30	.04	2.26	159.25	1229.57	0.00	0.0
3000.00	11800.00	566.61	.45	566.68	2.08	.07	2.91	580.00	1080.00	580.00	1080.0
										123	377
3300.00	11800.00	566.19	0.00	566.27	2.82	.09	3.29	726.81	1539.97	0.00	0.0
3300.00	11800.00	566.67	.48	566.77	2.91	.10	3.41	950.00	1450.00	950.00	1450.0
										80	420
3600.00	11800.00	566.15	0.00	566.67	19.23	.52	5.80	1000.00	1100.50	0.00	0.0
3600.00	11800.00	566.61	.51	567.14	16.32	.48	5.54	1000.00	1430.00	1000.00	1430.0
										78	78
3600.00	11800.00	565.19	0.00	567.36	466.10	2.17	11.82	1000.00	1430.00	0.00	0.0
3600.00	11800.00	565.67	.48	567.84	467.98	2.17	11.82	1000.00	1430.00	1000.00	1430.0
										78	78
3700.00	11800.00	566.05	0.00	567.69	139.45	1.84	10.88	1000.00	1430.00	0.00	0.0
3700.00	11800.00	566.67	.62	568.36	120.94	1.69	10.43	1000.00	1430.00	850.00	1450.0
										70	70
3715.00	11800.00	568.20	0.00	568.25	3.67	.06	2.13	534.78	1430.00	0.00	0.0
3715.00	11800.00	568.62	.43	568.69	3.90	.07	2.24	850.00	1450.00	850.00	1450.0
										172	428
3765.00	11800.00	568.24	0.00	568.27	2.41	.03	1.72	535.34	1667.22	0.00	0.0
3765.00	11800.00	568.51	.32	568.73	6.08	.09	2.80	655.00	1255.00	655.00	1255.0
										350	250
4700.00	8400.00	568.53	0.00	568.62	6.70	.08	2.63	568.02	1244.53	0.00	0.0
4700.00	8400.00	569.19	.66	569.27	5.24	.07	2.42	655.00	1245.05	655.00	1255.0
										350	250

SFCNO	U	CMSFL	DIFXSP	FG	10K+S	HV	VCH	SSTA	ENDST	STENCL	993STENCR
5700.00	8400.00	569.02	0.00	569.05	2.92	.03	1.99	329.76	1492.12	0.00	0.0
5700.00	8400.00	569.75	.73	569.83	6.01	.07	2.97	625.00	1225.00	625.00	1225.0
										367	232
* 7700.00	8400.00	573.12	0.00	574.14	193.40	1.01	11.30	873.16	1517.68	0.00	0.0
* 7700.00	8400.00	573.46	.34	574.62	192.96	1.16	11.67	900.00	1400.00	900.00	1400.0
										93	407
9350.00	8400.00	583.44	0.00	583.82	27.44	.36	6.10	281.59	674.28	0.00	0.0
9350.00	8400.00	583.87	.19	584.00	26.15	.36	6.03	300.00	650.00	300.00	650.0
										257	93
* 11350.00	8400.00	597.44	0.00	599.71	141.45	2.28	13.40	453.41	771.82	0.00	0.0
* 11350.00	8400.00	597.57	.13	599.67	130.24	2.10	12.97	460.00	760.00	460.00	760.0
										105	195
12800.00	8400.00	604.72	0.00	604.92	14.38	.20	5.04	128.39	629.90	0.00	0.0
12800.00	8400.00	605.05	.33	605.33	16.91	.28	5.55	300.00	600.00	300.00	600.0
										41	259
13085.00	8400.00	604.42	0.00	606.73	155.76	2.31	12.19	300.00	403.03	0.00	0.0
13085.00	8400.00	605.15	.73	606.81	86.55	1.66	10.33	300.00	404.79	300.00	420.0
										60	60
13115.00	8400.00	604.93	0.00	606.92	124.83	1.99	11.33	300.00	404.24	0.00	0.0
13115.00	8400.00	605.43	.50	606.99	80.25	1.56	10.03	300.00	405.44	300.00	420.0
										60	60
13235.00	8400.00	607.34	0.00	607.55	9.26	.21	5.11	122.45	638.35	0.00	0.0
13235.00	8400.00	607.16	-.19	607.57	15.29	.42	6.52	250.00	500.00	250.00	500.0
										91	157
13700.00	8400.00	607.90	0.00	608.33	27.68	.43	6.88	130.08	627.50	0.00	0.0
13700.00	8400.00	608.05	.15	608.70	35.37	.65	7.64	240.00	500.00	240.00	500.0
										101	159
14188.00	8400.00	608.97	0.00	609.77	25.02	.80	7.10	171.55	272.65	0.00	0.0
14188.00	8400.00	609.37	.40	610.12	22.75	.75	6.95	170.89	273.31	166.20	278.0
										55	57
14212.00	8400.00	609.02	0.00	610.10	34.52	1.08	8.33	150.25	237.36	0.00	0.0
14212.00	8400.00	609.53	.51	610.42	26.35	.89	7.55	190.00	273.59	190.00	320.0
										64	65
14320.00	8400.00	610.08	0.00	610.41	8.46	.33	5.02	161.79	491.38	0.00	0.0
14320.00	8400.00	610.15	.07	610.69	14.04	.54	5.95	249.40	361.20	249.40	361.2
										49	63
14950.00	8400.00	610.41	0.00	612.40	119.38	1.99	12.28	40.90	182.89	0.00	0.0
14950.00	8400.00	611.22	.81	613.06	96.49	1.84	11.64	60.00	160.00	60.00	160.0
										33	67
16450.00	8400.00	620.23	0.00	627.55	89.00	1.63	11.18	39.40	187.49	0.00	0.0
16450.00	8400.00	626.06	-.16	627.97	102.01	1.90	11.84	60.00	160.00	60.00	160.0
										33	67
17450.00	8400.00	635.76	0.00	637.58	105.02	1.82	11.79	40.26	184.85	0.00	0.0
17450.00	8400.00	636.15	.39	638.01	98.84	1.87	11.73	60.00	160.00	60.00	160.0
										33	67
18400.00	7800.00	647.34	0.00	649.08	140.29	2.04	12.33	197.26	418.81	0.00	0.0
18400.00	7800.00	647.15	.21	649.39	146.17	2.24	12.68	240.00	400.00	240.00	400.0
										17	83
19700.00	7800.00	655.57	0.00	656.31	30.63	.54	7.04	168.80	446.78	0.00	0.0
19700.00	7800.00	656.30	.73	656.48	31.99	.67	7.46	240.00	400.00	240.00	400.0
										77	83
21000.00	7800.00	657.06	0.00	659.54	22.82	.48	6.45	161.13	430.88	0.00	0.0
21000.00	7800.00	657.22	.16	659.40	22.94	.57	6.73	260.00	400.00	260.00	400.0
										107	33
22300.00	7800.00	662.34	0.00	662.93	29.22	.59	7.04	187.14	428.48	0.00	0.0
22300.00	7800.00	663.29	.95	663.91	29.36	.71	7.36	270.00	400.00	270.00	400.0
										97	33

FORM 100 (REV. 1-60) U.S. GOVERNMENT PRINTING OFFICE: 1960 O - 317-100

21400

SECNO	Q	CWSEL	DIFWSP	EG	10K*S	HV	VCH	SSTA	ENDST	STENCL	STENCR
24500.00	7800.00	665.20	0.00	665.21	.22	.01	.49	1121.05	1735.65	0.00	0.0
24500.00	7800.00	665.43	2.21	665.69	3.47	.28	2.13	1310.00	1440.00	1310.00	1440.0

- POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 11350.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

COPY 6 21400

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

Find F-U
3/15/76

C FPM BIG BEAVER ISLAND FIS
 1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FO
	-1.	2.	-0.	-0.	-6.000000	-0.00	-0.0	-0.	556.900	-0.000
J2	NPROF	IPL0T	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNTM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J3	-2.000	200.000	38.000	1.000	50.000	3.000	5.000	10.000	26.000	4.000
J3	21.000	22.000	53.000	54.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J4	-1.000	-10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
Q1	0.000	11800.000	31800.000	16400.000	9500.000	5700.000	11800.000	11800.000	-0.000	-0.000
NC	0.340	0.070	0.050	0.200	0.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	-215.000	800.000
X1	1.000	22.000	417.000	485.000	-0.000	-0.000	-0.000	-0.000	-2.000	-0.000
GR	580.000	-0.000	556.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	944.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.600	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	2.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	3.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	4.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	700.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
NC	0.340	0.070	0.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	795.000	25.000	419.000	507.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
GR	572.600	-0.000	554.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	553.600	300.000	554.400	465.000	542.700	412.000	542.700	461.000	542.700	465.000
GR	562.700	507.000	554.600	537.000	553.300	600.000	553.000	545.000	552.400	663.000
GR	553.100	700.000	555.800	728.000	555.000	800.000	557.800	900.000	560.800	1000.000
GR	566.000	1012.000	564.800	1150.000	565.200	1200.000	567.000	1300.000	573.500	1400.000
SB	-0.000	1.140	2.500	-0.000	4.000	-0.000	923.000	2.100	542.700	542.700
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	805.000	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000

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XZ	-0.000	-0.000	1.000	562.700	572.400	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
BT	12.000	-0.000	572.400	-0.000	50.000	572.500	-0.000	68.000	572.500	-0.000
BT	100.000	572.000	-0.000	200.000	572.500	-0.000	300.000	572.200	-0.000	400.000
BT	572.400	554.400	419.000	572.500	562.700	507.000	572.600	562.700	530.000	572.600
BT	554.000	600.000	572.200	-0.000	1400.000	573.500	-0.000	-0.000	-0.000	-0.000
NH	4.000	.200	417.000	.050	485.000	.150	1100.000	.070	1400.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234.000	734.000
X1	700.000	22.000	417.000	485.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
GR	500.000	-0.000	556.600	68.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	725.000	555.000	800.000
GR	555.800	900.000	550.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	234.000	734.000
X1	1500.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	-0.000	-0.000
NC	.200	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1080.000
X1	2200.000	22.000	473.000	734.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
GR	572.300	56.000	567.700	100.000	565.100	200.000	562.900	300.000	563.000	390.000
GR	562.900	400.000	562.000	560.000	561.700	522.000	556.100	600.000	557.100	673.000
GR	548.200	675.000	545.200	722.000	556.200	734.000	556.400	800.000	555.000	855.000
GR	554.800	900.000	554.800	1000.000	554.300	1100.000	555.700	1200.000	584.000	1280.000
GR	564.300	1300.000	583.100	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.060	.060	.045	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1080.000
X1	3000.000	-0.000	-0.000	-0.000	800.000	800.000	800.000	-0.000	-0.000	-0.000
NH	5.000	.060	100.000	.045	1060.000	.070	1225.000	.045	1314.000	.060
NH	1700.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	950.000	1450.000
X1	3300.000	28.000	1000.000	1060.000	300.000	300.000	300.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	567.800	500.000	569.100	545.000	569.200	600.000	569.200	627.000
GR	557.900	649.000	566.400	700.000	565.000	800.000	565.000	900.000	559.100	1000.000
GR	549.200	1000.000	548.200	1024.000	549.000	1050.000	558.300	1060.000	557.400	1100.000
GR	557.600	1200.000	557.600	1223.000	550.700	1246.000	550.700	1272.000	551.100	1285.000
GR	555.700	1300.000	550.000	1317.000	555.800	1400.000	558.700	1500.000	561.500	1530.000
GR	566.200	1500.000	560.000	1558.000	580.000	1700.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3600.000	30.000	1000.000	1430.000	385.000	385.000	385.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
X4	2.000	575.000	1000.000	574.000	1344.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	568.000	500.000	569.300	545.000	569.300	625.000	567.700	650.000
GR	566.400	700.000	565.400	800.000	565.000	900.000	559.500	945.000	559.300	960.000
GR	558.000	1000.000	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000
GR	553.500	1200.000	554.300	1250.000	557.300	1200.000	557.700	1345.000	557.600	1370.000
GR	553.000	1300.000	553.000	1410.000	551.000	1420.000	550.200	1425.000	550.000	1430.000
GR	569.800	1645.000	561.500	1675.000	566.300	1685.000	567.000	1705.000	580.000	1845.000
NH	5.000	.050	1000.000	.040	1040.000	.050	1390.000	1040.000	1430.000	.050
NH	1910.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3500.000	25.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
BT	5.000	1000.000	557.800	564.500	1040.000	567.900	564.700	1300.000	568.000	565.000
BT	1390.000	568.400	567.200	1430.000	568.400	565.200	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	575.200	500.000	571.000	500.000	569.400	700.000	568.400	800.000
GR	567.300	900.000	567.800	1000.000	558.000	1000.000	554.400	1005.000	552.500	1010.000
GR	551.500	1015.000	552.000	1035.000	553.500	1040.000	567.900	1040.000	568.000	1300.000
GR	558.400	1390.000	555.000	1390.000	553.000	1410.000	551.000	1420.000	550.700	1430.000
GR	568.400	1430.000	560.000	1500.000	570.400	1600.000	575.700	1700.000	580.000	1910.000

ET -0.000 -0.000 9.100 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 850.000 1450.000

X1	3710.000	-0.000	-0.000	-0.000	20.000	20.000	20.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
NH	5.000	.100	1400.000	.055	1045.000	.070	1390.000	.055	1430.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000

X1	3715.000	35.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
GR	580.000	330.000	570.500	500.000	567.200	550.000	564.400	620.000	562.300	720.000
GR	561.500	320.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000	553.500	1040.000
GR	560.300	1045.000	558.400	1100.000	559.000	1120.000	558.000	1200.000	560.800	1240.000
GR	565.300	1260.000	565.000	1290.000	560.800	1300.000	559.500	1385.000	553.000	1390.000
GR	553.000	1410.000	551.000	1420.000	550.700	1425.000	559.500	1430.000	559.000	1500.000
GR	558.300	1550.000	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000
NH	5.000	.100	960.000	.055	1030.000	.070	1550.000	.055	1585.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000

X1	3765.000	29.000	980.000	1255.000	935.000	935.000	935.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	320.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	550.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	562.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	557.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000

X1	4700.000	29.000	980.000	1255.000	935.000	935.000	935.000	-0.000	2.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	320.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	550.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	562.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	557.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
NH	5.000	.200	133.000	.070	927.000	.100	968.000	.060	1018.000	.070
NH	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1225.000

X1	5700.000	27.000	960.000	1018.000	1000.000	1000.000	1000.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	320.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	550.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	562.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	557.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
NH	5.000	.200	133.000	.070	927.000	.100	968.000	.060	1018.000	.070
NH	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1225.000

X1	5700.000	27.000	960.000	1018.000	1000.000	1000.000	1000.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	320.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	550.300	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	560.700	1240.000	562.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	557.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
NH	5.000	.200	133.000	.070	927.000	.100	968.000	.060	1018.000	.070
NH	1689.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	625.000	1225.000

X1	9350.000	19.000	523.000	591.000	1650.000	1650.000	1650.000	-0.000	-0.000	-0.000
GR	601.400	-0.000	593.200	100.000	585.900	200.000	584.200	243.000	583.600	277.000
GR	582.900	300.000	577.600	400.000	577.300	500.000	579.000	523.000	572.300	538.000
GR	571.300	555.000	571.700	572.000	578.800	591.000	578.700	600.000	579.100	666.000

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GR	289.200	871.000	599.000	691.000	599.000	700.000	801.300	713.000	40.000	40.000
NC	.150	.000	.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	460.000	760.000
X1	11350.000	9.000	540.000	590.000	2000.000	2000.000	2000.000	-0.000	-0.000	-0.000
GR	617.500	-0.000	600.000	400.000	594.000	525.000	587.000	540.000	586.000	555.000
GR	507.000	580.000	590.000	590.000	594.000	600.000	600.000	900.000	620.000	1100.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	600.000
X1	12000.000	23.000	315.000	367.000	1450.000	1450.000	1450.000	-0.000	-0.500	-0.000
GR	623.700	-0.000	617.800	24.000	611.100	50.000	613.700	67.000	610.500	100.000
GR	603.400	130.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	597.000	315.000	590.000	320.000	590.300	341.000	589.400	358.000	598.100	367.000
GR	596.000	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000
NC	.050	.000	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000
X1	13005.000	24.000	300.000	420.000	285.000	285.000	285.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	130.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	611.500	300.000	589.000	352.500	589.600	367.500	511.500	420.000	596.900	420.000
GR	597.500	450.000	590.500	500.000	590.600	550.000	601.500	600.000	603.900	620.000
GR	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	-0.000	-0.000
SB	1.250	1.620	2.500	-0.000	15.000	2.000	1427.600	2.400	589.600	589.600
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000
X1	13115.000	-0.000	-0.000	-0.000	30.000	30.000	30.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	611.900	612.700	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000
BT	15.000	0.000	623.700	0.000	50.000	614.100	0.000	64.000	613.900	0.000
BT	100.000	613.100	-0.000	200.000	612.800	-0.000	250.000	612.700	-0.000	300.000
BT	612.900	569.700	300.300	612.900	611.500	420.000	612.900	611.500	420.000	612.900
BT	596.900	450.000	612.700	-0.000	500.000	613.000	-0.000	550.000	613.800	-0.000
BT	600.000	614.900	1.000	250.000	621.100	0.000	-0.000	-0.000	-0.000	-0.000
NC	.120	.120	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	250.000	500.000
X1	13235.000	25.000	315.000	367.000	120.000	120.000	120.000	-0.000	1.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000
GR	603.400	130.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000
GR	597.000	315.000	590.000	320.000	590.300	341.000	589.400	358.000	598.100	367.000
GR	596.000	400.000	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000
NC	.150	.200	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	500.000
X1	13700.000	-0.000	-0.000	-0.000	465.000	465.000	465.000	-0.000	2.000	-0.000
NC	.000	.000	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000
X1	14100.000	25.000	395.000	315.000	300.000	650.000	488.000	.860	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000
GR	616.500	20.000	617.500	70.000	607.700	120.000	606.500	145.000	602.300	155.000
GR	600.500	170.000	609.600	195.000	593.500	226.000	593.500	284.000	609.600	315.000
GR	601.500	320.000	602.500	370.000	602.500	420.000	602.700	445.000	605.700	470.000
GR	612.400	520.000	612.500	550.000	612.500	570.000	615.500	620.000	617.400	670.000
GR	617.900	580.000	612.500	700.000	622.000	750.000	624.500	800.000	627.300	850.000
SB	1.250	1.500	2.500	-0.000	58.000	2.000	1200.000	1.930	593.500	593.500
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000
X1	14212.000	-0.000	-0.000	-0.000	24.000	24.000	24.000	.860	-0.000	-0.000
X2	-0.000	-0.000	1.000	609.000	612.300	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000
BT	16.000	20.000	616.500	-0.000	70.000	612.100	-0.000	120.000	612.000	-0.000

CHARTERED BY THE BOARD OF DIRECTORS OF THE COMPANY

BT	170.000	612.000	609.500	195.000	612.100	609.000	612.000	609.000	320.000	
BT	612.100	609.500	374.000	612.200	-0.000	420.000	612.500	-0.000	445.000	612.800
BT	-0.000	520.000	614.000	-0.000	620.000	616.500	-0.000	700.000	619.500	-0.000
BT	750.000	622.000	-0.000	500.000	624.500	-0.000	850.000	627.300	-0.000	-0.000
NC	.150	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	290.000	420.000

X1	14320.000	21.000	287.000	400.000	108.000	108.000	108.000	.860	-0.000	-0.000
GR	625.400	-0.000	623.200	25.000	621.800	50.000	617.700	100.000	612.900	150.000
GR	609.200	200.000	653.000	227.000	503.700	236.000	601.500	250.000	597.900	287.000
GR	595.000	290.000	595.000	386.000	603.000	400.000	604.000	450.000	504.400	523.000
GR	637.300	550.000	613.800	600.000	614.200	631.000	613.900	650.000	617.100	700.000
GR	619.500	760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.150	.150	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	14950.000	19.000	64.000	122.000	630.000	630.000	630.000	-0.000	-0.000	-0.000
GR	637.200	-0.000	619.000	25.000	605.500	50.000	604.300	64.000	600.800	72.000
GR	600.100	100.000	799.600	119.000	601.300	122.000	604.600	150.000	612.200	193.000
GR	613.200	200.000	621.800	230.000	621.100	256.000	620.700	263.000	626.600	289.000
GR	627.900	300.000	630.900	338.000	634.100	357.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	16450.000	-0.000	-0.000	-0.000	1500.000	1500.000	1500.000	-0.000	15.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000

X1	17450.000	-0.000	-0.000	-0.000	1000.000	1000.000	1000.000	-0.000	10.000	-0.000
NC	.100	.100	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
BT	7.000	7800.000	7350.000	12400.000	6100.000	3300.000	7800.000	7800.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	28400.000	15.000	290.000	344.000	950.000	950.000	950.000	-0.000	-0.000	-0.000
GR	670.200	-0.000	659.100	100.000	646.700	200.000	642.300	240.000	643.000	255.000
GR	646.300	290.000	635.000	300.000	634.800	315.000	634.400	331.000	644.900	344.000
GR	646.000	400.000	643.100	438.000	657.100	470.000	664.300	500.000	671.000	536.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000

X1	19700.000	-0.000	-0.000	-0.000	500.000	1500.000	1300.000	-0.000	5.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	260.000	400.000

X1	21000.000	16.000	337.000	398.000	1300.000	1300.000	1300.000	-0.000	-4.000	-0.000
GR	664.900	-0.000	672.800	100.000	660.800	200.000	657.300	233.000	655.800	300.000
GR	656.100	337.000	647.300	351.000	647.500	369.000	647.400	388.000	656.200	398.000
GR	656.300	400.000	656.800	410.000	665.200	438.000	671.300	500.000	677.000	600.000
GR	682.400	675.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	270.000	400.000

X1	22300.000	-0.000	-0.000	-0.000	1300.000	1300.000	1300.000	-0.000	4.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1300.000	1500.000

X1	24500.000	11.000	1370.000	1431.000	2200.000	2200.000	2200.000	-0.000	-0.000	-0.000
GR	700.000	0.000	660.000	660.000	660.000	1220.000	658.000	1370.000	649.000	1384.000
GR	649.000	1402.000	647.000	1421.000	568.000	1431.000	660.000	1600.000	680.000	2450.000
GR	700.000	2500.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSFL, CRSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795.000

CONTINUED FROM PREVIOUS PAGE

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM RR MADISON-MAYODAN FIS
 T2 FLOODWAY
 T3 BIG RIVER ISLAND CREEK

J1	ICHECK	INC	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	PG
	-10.	3.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	557.900	-0.000
J2	UPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLOD	ISW	CHNTH	ITRACE
	15.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL,CHSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795.000

*** NORFOLK + SOUTHERN RR SECTION B-11 ***

SPECIAL BRIDGE

SB	XK	PKOR	COFO	WLETH	FWC	DWF	AREA	SS	ELCHD	ELCHD
	-0.00	1.14	2.59	0.00	4.00	0.00	925.00	2.10	542.70	542.70

5070.000 FLOW BY NORMAL BRIDGE

EGPR5# 562.700 EGJNC# 564.442 FELIC# 562.700 PCWSE# 559.815 ELTRD# 572.400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.16	566.16	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.36	566.36	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.68	566.68	0.00

*** SECTION B-1 ***

3685 20 TRIALS USED WSEL,CHSEL
 ERROR STATEMENT APPLIES TO SECTION 7700.000

COMPUTER SOFTWARE BY BOCK ENGINEERING, INC.
 10000 WOODBURN AVENUE, WOODBURN, NJ 07095

FLOODWAY DATA, BIG BEAVER ISLAND CREEK
 PROFILE NO. 2

STATION	FLOODWAY		MEAN VELOCITY	WATER SURFACE ELEVATION		
	WIDTH (FT)	SECTION AREA		WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE

1.000	585.	3972.	3.0	557.9	556.9	1.0
2.000	585.	3977.	3.0	557.9	556.9	1.0
3.000	585.	3981.	3.0	557.9	556.9	1.0
4.000	585.	3985.	3.0	557.9	556.9	1.0
700.000	585.	4513.	2.6	558.8	557.9	.9
795.000	76.	644.	17.3	559.8	559.9	-.1
802.000	84.	837.	14.1	561.7	561.7	.0
900.000	500.	6263.	1.9	565.3	565.4	-.1
1500.000	500.	6443.	1.8	565.7	565.6	.1
2200.000	500.	5707.	2.1	566.1	565.9	.2
3000.000	500.	5944.	2.0	566.6	566.2	.4
3300.000	500.	5014.	2.4	566.7	566.2	.5
3685.000	186.	2128.	5.5	566.7	566.1	.6
3690.000	80.	998.	11.8	565.7	565.2	.5
3730.000	80.	1131.	10.4	565.7	566.1	-.4
3715.000	600.	5912.	2.0	568.6	568.2	.4
3765.000	600.	5413.	2.2	568.6	568.2	.4
4700.000	500.	4503.	1.7	569.2	568.5	.7
5700.000	600.	4237.	2.0	569.8	569.0	.8
7700.000	500.	1405.	6.0	573.5	573.1	.4
9350.000	450.	2070.	4.0	583.6	583.5	.1
11000.000	300.	1101.	7.6	597.6	597.4	.2
12000.000	300.	2491.	3.4	603.1	604.7	-.6
13000.000	20.	113.	10.3	605.2	604.4	.8
13110.000	91.	833.	10.0	605.4	604.9	.5
13235.000	250.	2457.	3.4	607.2	607.3	-.1
15700.000	200.	2241.	3.7	608.1	607.9	.2

14100.000	102.	1200.	7.0	609.4	609.0	.4
14212.000	84.	1112.	7.6	609.5	609.0	.5
14320.000	112.	1504.	5.6	610.1	610.1	.1
14990.000	100.	936.	9.0	611.2	610.9	.3
16450.000	100.	919.	9.1	626.1	626.2	-.2
17450.000	100.	928.	9.0	630.1	630.8	-.4
18400.000	160.	797.	9.8	647.2	647.0	.2
19700.000	160.	1462.	5.3	656.3	655.6	.7
21000.000	140.	1220.	5.1	659.9	659.1	.8
22300.000	130.	1353.	5.8	663.2	662.3	.9
24500.000	200.	7017.	1.1	664.2	663.2	1.0

SUMMARY PRINT II

BIG BEAVER ISLAND CREEK

SEOND	CRSEL	DIFWSP	EG	10K*S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
1.00	556.90	0.00	557.17	16.13	.27	5.95	900.68	417.00	485.00	61.32	962.0
1.00	557.90	1.00	558.19	14.12	.29	5.86	585.00	417.00	485.00	215.00	800.0
2.00	556.91	0.00	557.18	16.06	.27	5.94	900.87	417.00	485.00	61.29	962.1
2.00	557.91	1.00	558.20	14.07	.29	5.85	585.00	417.00	485.00	215.00	800.0
3.00	556.92	0.00	557.19	15.99	.27	5.93	901.05	417.00	485.00	61.27	962.3
3.00	557.92	1.00	558.20	14.03	.29	5.85	585.00	417.00	485.00	215.00	800.0
4.00	556.93	0.00	557.19	15.93	.27	5.92	901.24	417.00	485.00	61.25	962.4
4.00	557.93	1.00	558.21	13.99	.29	5.84	585.00	417.00	485.00	215.00	800.0
700.00	557.91	0.00	558.08	9.81	.17	4.89	923.79	417.00	485.00	58.40	982.1
700.00	558.82	.72	559.04	9.77	.21	5.10	565.00	417.00	485.00	215.00	800.0
795.00	559.86	0.00	564.44	99.08	4.58	17.18	76.06	419.00	507.00	424.97	501.0
795.00	559.82	-.04	564.44	100.35	4.63	17.26	75.88	419.00	507.00	425.06	500.9
805.00	551.70	0.00	564.01	59.16	3.11	14.16	63.77	419.00	507.00	421.12	504.8
805.00	551.74	.04	564.83	58.52	3.09	14.10	63.94	419.00	507.00	421.03	504.9
900.00	565.41	0.00	565.49	3.12	.08	3.60	1100.09	417.00	485.00	42.40	1211.6
900.00	565.32	-.09	565.53	5.91	.21	4.93	500.00	417.00	485.00	234.00	734.0
1500.00	565.60	0.00	565.68	2.97	.08	3.53	1133.24	417.00	485.00	41.85	1222.1
1500.00	565.57	.03	565.67	5.45	.20	4.80	500.00	417.00	485.00	234.00	734.0
2200.00	565.80	0.00	565.98	6.13	.12	4.37	1057.96	673.00	734.00	170.76	1228.7
2200.00	566.14	.28	566.36	8.71	.22	5.27	500.00	673.00	734.00	580.00	1080.0
3000.00	566.16	0.00	566.20	1.30	.04	2.26	1070.31	673.00	734.00	159.25	1229.5
3000.00	566.61	.45	566.68	2.08	.07	2.91	500.00	673.00	734.00	580.00	1080.0
3300.00	560.19	0.00	568.27	2.82	.09	3.29	813.16	1000.00	1060.00	726.81	1539.9
3300.00	560.67	.48	568.77	2.91	.10	3.41	500.00	1000.00	1060.00	950.00	1450.0
3685.00	566.15	0.00	566.67	19.23	.52	5.80	185.99	1000.00	1430.00	1000.00	1100.5
3685.00	566.66	.51	567.14	1.32	.48	5.54	186.05	1000.00	1430.00	1000.00	1430.0
3690.00	565.10	0.00	567.36	46.10	2.17	11.62	80.00	1000.00	1430.00	1000.00	1430.0
3690.00	565.57	.46	567.84	46.98	2.17	11.82	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.00	1.00	567.49	137.45	1.84	10.85	80.00	1000.00	1430.00	1000.00	1430.0
3710.00	566.67	.67	568.36	120.94	1.69	10.43	80.00	1000.00	1430.00	1000.00	1430.0
3715.00	568.20	0.00	568.25	3.67	.06	2.13	895.22	1000.00	1430.00	534.78	1430.0
3715.00	568.62	.42	568.69	3.90	.07	2.24	800.00	1000.00	1430.00	850.00	1450.0
3765.00	568.24	1.00	568.27	27.41	.63	1.72	1131.88	980.00	1255.00	535.34	1667.2
3765.00	568.63	.39	568.73	7.08	.69	2.80	600.00	980.00	1255.00	655.00	1255.0
4700.00	568.53	0.00	568.62	6.70	.08	2.63	676.51	980.00	1255.00	568.02	1244.5
4700.00	569.19	.66	569.27	5.24	.07	2.42	590.05	980.00	1255.00	655.00	1245.0

SECNO	CMSFL	DIFUSP	EG	10K+S	HV	VCH	TOPWID	STGHL	STCHR	SSTA	ENDST
5700.00	559.02	0.00	559.05	2.92	.03	1.99	1162.36	968.00	1018.00	329.76	1492.1
5700.00	559.76	0.73	559.83	8.01	.07	2.97	660.00	968.00	1018.00	625.00	1225.0
7700.00	573.12	0.01	574.14	193.46	1.01	11.30	627.26	968.00	1018.00	873.16	1517.6
7700.00	573.96	.33	574.62	192.96	1.16	11.67	300.00	968.00	1018.00	900.00	1400.0
9550.00	583.46	0.77	583.82	27.44	.36	6.10	392.68	523.00	591.00	281.59	674.2
9550.00	583.88	.17	584.00	26.15	.36	6.03	350.00	523.00	591.00	300.00	690.0
11350.00	597.44	0.00	599.71	141.45	2.28	13.40	318.41	540.00	590.00	453.41	771.8
11350.00	597.87	.33	599.67	130.74	2.10	12.97	300.00	540.00	590.00	460.00	760.0
12000.00	604.72	0.00	604.92	14.38	.20	5.04	501.51	315.00	367.00	128.39	629.9
12000.00	605.05	.33	605.33	16.97	.28	5.55	300.00	315.00	367.00	300.00	600.0
13085.00	604.42	0.01	606.73	155.76	2.31	12.19	103.03	300.00	420.00	300.00	403.0
13085.00	605.16	.73	606.81	86.55	1.66	10.33	89.58	300.00	420.00	300.00	404.7
13115.00	604.93	0.00	606.92	124.83	1.99	11.33	124.24	300.00	420.00	300.00	404.2
13115.00	605.43	.50	606.99	80.25	1.56	11.03	90.88	300.00	420.00	300.00	405.4
13235.00	607.34	0.01	607.55	9.26	.21	5.11	515.89	315.00	367.00	122.45	638.3
13235.00	607.16	-.37	607.57	15.29	.42	6.52	250.00	315.00	367.00	250.00	500.0
13700.00	607.96	0.00	608.33	27.68	.43	6.88	497.42	315.00	367.00	130.08	627.5
13700.00	608.05	.15	608.70	35.37	.65	7.84	200.00	315.00	367.00	240.00	500.0
14188.00	608.97	0.00	609.77	25.02	.80	7.19	101.11	170.50	273.70	171.55	272.6
14188.00	609.37	.40	610.12	22.75	.75	6.95	102.43	170.50	273.70	170.89	273.3
14212.00	609.02	0.00	610.10	34.52	1.08	8.33	87.10	179.43	238.18	150.25	237.3
14212.00	609.53	.51	610.42	26.35	.89	7.55	63.59	170.50	273.70	190.00	273.5
14320.00	610.08	0.04	610.41	6.46	.33	5.02	329.59	246.82	344.00	161.79	491.3
14320.00	610.35	.07	610.69	14.04	.54	5.95	111.80	246.82	344.00	249.40	361.2
14950.00	610.41	0.01	612.47	119.38	1.99	12.28	141.98	64.00	122.00	40.90	182.8
14950.00	611.22	.81	613.50	96.29	1.84	11.64	100.00	64.00	122.00	60.00	160.0
16450.00	626.23	0.00	627.85	89.00	1.63	11.18	148.09	64.00	122.00	39.40	187.4
16450.00	626.36	-.13	627.77	162.01	1.90	11.84	100.00	64.00	122.00	60.00	160.0
17450.00	633.75	0.00	637.58	155.02	1.82	11.79	144.59	64.00	122.00	40.26	184.8
17450.00	633.15	.37	638.11	98.84	1.87	11.73	100.00	64.00	122.00	60.00	160.0
18400.00	647.67	0.01	649.08	140.29	2.04	12.33	221.55	290.00	344.00	197.26	418.8
18400.00	647.15	.11	649.59	146.17	2.24	12.68	160.00	290.00	344.00	240.00	400.0
19710.00	655.57	0.01	656.11	39.03	.54	7.04	277.97	290.00	344.00	168.80	446.7
19710.00	655.37	.73	656.98	51.99	.67	7.46	180.00	290.00	344.00	240.00	400.0
21000.00	659.06	0.00	659.54	22.62	.48	6.45	249.75	337.00	398.00	181.13	430.8
21000.00	659.22	.36	659.47	22.94	.57	6.73	140.00	337.00	398.00	260.00	400.0
22300.00	662.34	0.01	662.93	29.22	.59	7.04	241.34	337.00	398.00	187.14	428.4
22300.00	663.20	.89	663.92	29.38	.71	7.36	130.00	337.00	398.00	270.00	400.0

SECNO	CHSEL	DIFWSP	EG	10K+S	HV	VCH	TOPWID	STCHL	STCHR	SSTA	ENDST
24500.00	663.20	0.00	663.21	.22	.01	.49	614.60	1370.00	1431.00	1121.05	1735.6
24500.00	654.22	1.00	664.25	.20	.02	.58	200.00	1370.00	1431.00	1300.00	1500.0

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

COMPUTER INFORMATION SYSTEMS INC.

 INTERACTIVE PC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

*SECTION
 Added
 ET changes*

C FPM BIG BEAVER ISLAND FIS
 J FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 PIG BEAVER ISLAND CREEK

J1	ICHECK	INC	MINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FO
	-1.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.400	-0.000
J2	NPROF	IPLOT	PREVS	XSECV	XSECH	FN	ALLDC	IHW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J3	-1.000	200.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J4	-1.000	-10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
DT	7.000	11800.000	11800.000	58400.000	9500.000	5700.000	11800.000	11800.000	-0.000	-0.000
NC	.140	.070	.050	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	1.000	22.000	417.000	485.000	-0.000	-0.000	-0.000	-0.000	-2.000	-0.000
GR	580.000	-0.000	555.600	62.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	566.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	2.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	2.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	3.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	2.100	-0.000	-0.000	-0.000	-0.000	-0.000	215.000	800.000
X1	4.000	-0.000	-0.000	-0.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	2.100	-0.000	-0.000	-0.000	-0.000	-0.000	195.000	830.000
X1	700.000	-0.000	-0.000	-0.000	700.000	700.000	700.000	-0.000	-0.000	-0.000
NC	.140	.070	.050	.200	.400	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	795.000	25.000	417.000	463.000	507.000	95.000	95.000	95.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
GR	572.600	-0.000	551.600	50.000	550.600	68.000	553.700	100.000	553.600	200.000
GR	553.600	300.000	550.600	400.000	552.700	419.000	542.700	461.000	542.700	465.000
GR	562.700	507.000	554.000	530.000	553.300	600.000	553.000	645.000	552.400	663.000
GR	553.100	700.000	555.800	728.000	555.000	800.000	555.800	900.000	560.800	1000.000
GR	566.000	1012.000	564.800	1150.000	565.200	1200.000	567.000	1300.000	573.500	1400.000
SB	-0.000	1.140	2.500	-0.000	4.000	-0.000	923.000	2.100	542.700	542.700
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	419.000	507.000
X1	805.000	-0.000	-0.000	-0.000	10.000	10.000	10.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	562.700	572.400	-0.000	-0.000	-0.000	-0.000	-0.000

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X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	572.500	572.600	-0.000
BT	12.000	-0.000	572.400	-0.000	54.000	572.500	-0.000	68.000	572.500	-0.000
BT	100.000	572.600	-0.000	200.000	572.500	-0.000	300.000	572.200	-0.000	400.000
BT	572.400	554.400	419.000	572.500	562.700	507.000	572.600	562.700	530.000	572.600
BT	554.000	600.000	572.800	-0.000	1400.000	573.500	-0.000	-0.000	-0.000	-0.000
NH	4.000	.271	417.000	.350	485.000	.150	1100.000	.070	1400.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	138.000	886.000
X1	900.000	22.000	417.000	485.000	95.000	95.000	95.000	-0.000	-0.000	-0.000
GR	530.000	-0.000	558.600	58.000	553.700	100.000	553.600	300.000	554.400	400.000
GR	555.400	417.000	544.400	432.000	544.500	473.000	554.800	485.000	554.300	500.000
GR	553.000	645.000	552.400	663.000	553.100	700.000	555.800	728.000	555.000	800.000
GR	555.800	900.000	560.800	1000.000	565.000	1012.000	564.800	1150.000	565.200	1200.000
GR	567.000	1300.000	573.200	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	155.000	890.000
X1	1500.000	-0.000	-0.000	-0.000	600.000	600.000	600.000	-0.000	-0.000	-0.000
NC	.200	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1050.000
X1	2200.000	22.000	673.000	734.600	700.000	700.000	700.000	-0.000	-0.000	-0.000
GR	572.300	55.000	557.700	100.000	565.100	200.000	562.900	300.000	563.000	390.000
GR	562.900	400.000	562.000	500.000	561.700	522.000	556.100	600.000	557.100	673.000
GR	548.200	575.000	548.200	722.000	556.200	734.000	554.400	800.000	555.000	855.000
GR	554.800	900.000	554.800	1000.000	554.300	1100.000	555.700	1200.000	584.000	1280.000
GR	584.300	1300.000	583.100	1400.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.060	.060	.045	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	580.000	1050.000
X1	3000.000	-0.000	-0.000	-0.000	800.000	800.000	800.000	-0.000	-0.000	-0.000
NH	5.000	.060	100.000	.045	1050.000	.070	1223.000	.045	1314.000	.060
NH	1700.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	950.000	1350.000
X1	3300.000	28.000	1000.000	1060.000	300.000	300.000	300.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	567.800	500.000	569.100	545.000	569.200	600.000	569.200	627.000
GR	567.900	649.000	566.400	700.000	565.600	800.000	565.000	900.000	559.100	1000.000
GR	549.200	1016.000	548.900	1024.000	549.000	1050.000	558.300	1060.000	557.400	1100.000
GR	557.600	1200.000	557.600	1223.000	550.700	1246.000	550.700	1272.000	551.100	1285.000
GR	555.700	1300.000	552.000	1314.000	558.800	1400.000	558.700	1500.000	561.500	1530.000
GR	565.200	1540.000	565.800	1558.000	586.000	1700.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3685.000	30.000	1000.000	1430.000	385.000	385.000	385.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
X4	2.000	575.000	1101.000	575.000	1344.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	568.000	500.000	569.300	545.000	569.300	625.000	567.700	650.000
GR	566.400	700.000	565.400	800.000	565.000	900.000	559.500	945.000	559.300	960.000
GR	558.000	1000.000	554.400	1005.000	552.500	1010.000	551.500	1015.000	552.000	1035.000
GR	557.500	1040.000	558.300	1050.000	557.300	1100.000	557.700	1345.000	557.600	1370.000
GR	557.000	1300.000	557.000	1410.000	551.000	1420.000	550.200	1425.000	559.000	1430.000
GR	558.800	1645.000	561.500	1675.000	565.300	1685.000	567.000	1705.000	560.000	1845.000
NH	5.000	.050	1000.000	.045	1040.000	.050	1320.000	1040.000	1430.000	.050
NH	1010.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	1000.000	1430.000
X1	3690.000	25.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
BT	5.000	1000.000	567.000	564.600	1040.000	567.900	564.700	1300.000	568.000	565.000
BT	1390.000	565.400	565.200	1430.000	568.400	565.200	-0.000	-0.000	-0.000	-0.000
GR	580.000	-0.000	573.200	500.000	571.500	600.000	569.400	700.000	568.400	800.000
GR	567.300	900.000	567.800	1000.000	558.000	1000.000	554.400	1005.000	552.500	1010.000
GR	551.500	1015.000	552.000	1035.000	553.500	1040.000	567.900	1040.000	568.000	1300.000
GR	568.400	1390.000	557.000	1390.000	557.000	1410.000	557.000	1420.000	550.700	1430.000
GR	560.400	1430.000	560.000	1500.000	570.400	1600.000	575.700	1700.000	580.000	1910.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000

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X1	3710.000	-0.000	-0.000	-0.000	20.000	20.000	20.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	1.000	-0.000	-0.000	-0.000
NH	5.000	.100	1000.000	.055	1045.000	.070	1390.000	.055	1430.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	7.100	-0.000	-0.000	-0.000	-0.000	-0.000	850.000	1450.000

X1	3715.000	35.000	1000.000	1430.000	5.000	5.000	5.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	567.800	568.400	-0.000
GR	580.000	330.000	570.500	500.000	567.200	550.000	564.400	620.000	562.300	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	554.400	1025.000	552.500	1010.000	551.500	1015.000	552.000	1035.000	553.500	1040.000
GR	560.300	1045.000	553.400	1100.000	559.000	1120.000	558.000	1200.000	560.800	1240.000
GR	565.300	1260.000	563.000	1290.000	560.800	1300.000	559.500	1385.000	553.000	1390.000
GR	553.000	1410.000	551.000	1420.000	550.700	1425.000	559.500	1430.000	559.000	1500.000
GR	558.300	1550.000	550.300	1530.000	553.400	1630.000	572.500	1700.000	580.000	1760.000
NH	5.000	.100	930.000	.055	1030.000	.070	1550.000	.055	1585.000	.080
NH	1760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	7.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000

X1	3765.000	29.000	980.000	1255.000	50.000	50.000	50.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	550.500	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	563.700	1240.000	565.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
QT	7.000	8400.000	8400.000	13200.000	5700.000	3700.000	8400.000	8400.000	-0.000	-0.000
ET	-0.000	-0.000	7.100	-0.000	-0.000	-0.000	-0.000	-0.000	655.000	1255.000

X1	4700.000	29.000	980.000	1255.000	935.000	935.000	935.000	-0.000	2.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
GR	580.000	330.000	570.500	500.000	567.300	550.000	564.300	620.000	562.400	720.000
GR	561.500	820.000	559.100	860.000	559.400	890.000	558.500	980.000	551.800	985.000
GR	552.500	1025.000	550.500	1030.000	560.300	1040.000	558.400	1100.000	559.000	1120.000
GR	558.000	1200.000	563.700	1240.000	565.300	1255.000	565.000	1285.000	560.700	1300.000
GR	559.500	1400.000	559.000	1500.000	558.300	1550.000	553.300	1555.000	553.300	1580.000
GR	560.300	1585.000	563.400	1630.000	572.500	1700.000	580.000	1760.000	-0.000	-0.000
NH	5.000	.100	930.000	.055	927.000	.100	958.000	.060	1018.000	.070
NH	1430.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	7.100	-0.000	-0.000	-0.000	-0.000	-0.000	520.000	1350.000

X1	3700.000	27.000	950.000	1010.000	1000.000	1000.000	1000.000	-0.000	-0.000	-0.000
GR	560.800	-0.000	582.900	133.000	570.700	300.000	565.800	387.000	562.500	500.000
GR	552.400	570.000	553.200	770.000	552.600	800.000	562.600	900.000	563.300	927.000
GR	565.400	920.000	561.200	950.000	558.600	976.000	556.700	1003.000	557.400	1012.000
GR	564.000	1010.000	563.500	1100.000	562.100	1200.000	563.300	1300.000	561.700	1400.000
GR	562.500	1470.000	566.500	1470.000	570.300	1500.000	582.900	1562.000	588.300	1600.000
GR	563.100	1653.000	574.500	1682.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.170	.400	.260	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	7.100	-0.000	-0.000	-0.000	-0.000	-0.000	900.000	1400.000

X1	7700.000	19.000	523.000	1010.000	2000.000	2000.000	2000.000	-0.000	-2.000	-0.000
GR	566.000	580.000	580.000	800.000	575.000	875.000	572.600	900.000	573.300	927.000
GR	575.400	940.000	574.000	960.000	568.400	976.000	566.700	1003.000	567.400	1012.000
GR	574.000	1010.000	573.500	1100.000	572.100	1300.000	573.300	1300.000	571.700	1400.000
GR	772.500	1470.000	576.000	1550.000	530.300	1550.000	600.000	1700.000	-0.000	-0.000
NH	4.000	.200	277.000	.070	523.000	.050	591.000	.100	713.000	-0.000
ET	-0.000	-0.000	7.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	650.000

X1	9350.000	19.000	523.000	590.000	1650.000	1650.000	1650.000	-0.000	-0.000	-0.000
GR	601.400	-0.000	593.600	100.000	585.900	200.000	584.200	243.000	583.600	277.000
GR	582.900	300.000	577.800	400.000	577.300	500.000	579.000	523.000	572.300	538.000
GR	571.300	555.000	571.700	577.100	578.800	591.000	573.700	600.000	579.100	666.000
GR	581.200	671.000	575.000	691.000	599.000	700.000	601.300	713.000	-0.000	-0.000

NC	.150	.000	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	460.000	760.000
ET	-0.000	-0.000	0.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000		
X1	11350.000	9.100	549.000	593.000	2000.000	2000.000	2000.000	-0.000	-0.000	-0.000	-0.000
GR	617.500	-0.000	607.000	400.000	594.000	525.000	587.000	540.000	586.000	555.000	
GR	587.000	580.000	594.000	590.000	594.000	600.000	600.000	900.000	620.000	1100.000	
ET	-0.000	-0.000	0.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	600.000
X1	12800.000	25.000	315.000	367.000	1450.000	1450.000	1450.000	-0.000	-0.500	-0.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000	
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000	
GR	597.000	315.000	590.600	326.000	590.300	341.000	589.400	358.000	598.100	367.000	
GR	598.900	400.000	597.500	450.000	598.500	500.000	599.700	550.000	601.600	600.000	
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	
NC	.080	.080	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	0.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000
X1	13065.000	24.000	300.000	420.000	285.000	285.000	285.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000	
GR	603.400	138.000	603.000	150.000	600.100	200.000	599.000	250.000	596.700	300.000	
GR	611.500	300.000	599.600	352.500	589.600	367.500	611.500	420.000	596.900	420.000	
GR	597.500	450.000	598.500	500.000	599.600	550.000	601.600	600.000	603.900	620.000	
GR	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	-0.000	-0.000	
SR	1.250	1.620	2.500	-0.000	15.000	2.000	1427.600	2.400	589.600	589.600	
ET	-0.000	-0.000	0.100	-0.000	-0.000	-0.000	-0.000	-0.000	300.000	420.000	
X1	13115.000	-0.000	-0.000	-0.000	30.000	30.000	30.000	-0.000	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	611.900	612.700	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.900	612.900	-0.000	-0.000
BT	15.000	0.000	623.700	0.000	50.000	614.100	0.000	64.000	613.900	0.000	0.000
BT	100.000	613.100	-0.000	200.000	612.800	-0.000	250.000	612.700	-0.000	300.000	
BT	612.900	569.700	300.000	612.900	611.500	420.000	612.900	611.500	420.000	612.900	
BT	598.900	450.000	612.700	-0.000	500.000	613.000	-0.000	550.000	613.800	-0.000	
BT	600.000	614.900	0.000	750.000	621.100	0.000	-0.000	-0.000	-0.000	-0.000	
NC	.120	.120	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	0.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	250.000	500.000
X1	13235.000	25.000	315.000	367.000	120.000	120.000	120.000	-0.000	1.000	-0.000	-0.000
GR	623.700	-0.000	617.800	24.000	614.100	50.000	613.700	67.000	610.600	100.000	
GR	603.400	138.000	603.200	150.000	600.100	200.000	599.000	250.000	596.700	300.000	
GR	597.000	315.000	590.600	326.000	590.300	341.000	589.400	358.000	598.100	367.000	
GR	598.900	400.000	597.500	450.000	598.500	500.000	599.700	550.000	601.600	600.000	
GR	603.900	620.000	607.900	650.000	612.900	700.000	621.100	750.000	624.100	777.000	
NC	.150	.200	.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	0.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	500.000
X1	13300.000	-0.000	-0.000	-0.000	465.000	465.000	465.000	-0.000	2.000	-0.000	-0.000
ET	-0.000	-0.000	0.100	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000
X1	14227.500	25.000	315.000	315.000	300.000	650.000	488.000	.860	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000	-0.000
GR	16.500	20.000	611.500	70.000	607.700	120.000	606.500	145.000	602.300	155.000	
GR	600.500	170.000	609.600	195.000	593.500	226.000	593.500	284.000	609.600	315.000	
GR	604.500	320.000	602.500	370.000	602.500	420.000	602.700	445.000	605.700	470.000	
GR	612.400	500.000	612.500	550.000	612.500	570.000	615.500	620.000	617.400	670.000	
GR	617.000	580.000	619.500	700.000	622.000	750.000	624.500	800.000	627.300	850.000	
SR	1.250	1.360	2.500	-0.000	58.000	2.000	1200.000	1.030	593.500	593.500	
ET	-0.000	-0.000	0.100	-0.000	-0.000	-0.000	-0.000	-0.000	190.000	320.000	
X1	14212.000	-0.000	-0.000	-0.000	24.000	24.000	24.000	.860	-0.000	-0.000	-0.000
X2	-0.000	-0.000	1.000	609.600	612.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
X3	10.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	612.100	612.100	-0.000	-0.000
BT	16.000	20.000	616.500	-0.000	70.000	612.100	-0.000	120.000	612.000	-0.000	-0.000
BT	170.000	612.000	600.500	195.000	612.100	609.600	315.000	612.100	609.600	320.000	

COMPACT PRINTING CO. 1000 W. 10TH ST. MINNAPOLIS, MN 55401

BT	612.100	601.200	370.000	612.200	-0.000	420.000	612.500	-0.000	445.000	612.800
BT	-0.000	520.000	614.000	-0.000	620.000	616.500	-0.000	700.000	619.500	-0.000
BT	750.000	622.000	-0.000	300.000	624.500	-0.000	850.000	627.300	-0.000	-0.000
MC	.150	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	290.000	420.000
X1	14320.000	21.000	287.000	400.000	108.000	108.000	108.000	.860	-0.000	-0.000
GR	625.400	-0.000	623.200	25.000	621.800	50.000	617.700	100.000	612.900	150.000
GR	609.200	200.000	608.000	227.000	603.700	236.000	601.500	250.000	597.900	287.000
GR	895.000	200.000	895.000	386.000	603.000	400.000	604.000	450.000	604.400	523.000
GR	567.300	550.000	613.800	600.000	614.200	631.000	613.900	650.000	617.100	700.000
GF	619.500	760.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
NC	.150	.150	.050	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000
X1	14950.000	10.000	64.000	122.000	630.000	630.000	630.000	-0.000	-0.000	-0.000
GR	632.200	-0.000	619.000	25.000	605.500	50.000	604.300	64.000	600.800	72.000
GR	600.300	100.000	589.600	119.000	601.300	122.000	604.600	150.000	612.200	193.000
GR	613.200	200.000	621.000	230.000	621.100	256.000	620.700	263.000	626.600	289.000
GR	627.900	300.000	630.900	338.000	634.100	357.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000
X1	16450.000	-0.000	-0.000	-0.000	1500.000	1500.000	1500.000	-0.000	15.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	60.000	160.000
X1	17450.000	-0.000	-5.000	60.000	1000.000	1000.000	1000.000	-0.000	10.000	-0.000
NC	.100	.100	.060	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
OT	7.000	7800.000	7800.000	12400.000	6100.000	3300.000	7800.000	7800.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000
X1	18400.000	15.000	290.000	344.000	950.000	950.000	950.000	-0.000	-0.000	-0.000
GR	670.200	-0.000	659.100	100.000	646.700	200.000	642.300	240.000	643.000	255.000
GR	646.300	290.000	635.000	300.000	634.800	315.000	634.400	331.000	644.900	344.000
GR	646.000	400.000	646.100	438.000	657.100	470.000	664.300	500.000	671.000	536.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	240.000	400.000
X1	19700.000	-0.000	-0.000	-0.000	500.000	1500.000	1300.000	-0.000	5.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	260.000	400.000
X1	21000.000	15.000	337.000	390.000	1300.000	1300.000	1300.000	-0.000	-4.000	-0.000
GR	684.900	-0.000	672.800	200.000	660.800	200.000	657.300	233.000	655.800	300.000
GR	656.100	337.000	647.300	351.000	647.500	369.000	647.400	388.000	656.200	398.000
GR	656.300	400.000	657.800	410.000	669.200	438.000	671.300	500.000	677.000	600.000
GR	682.400	675.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
ET	-0.000	-0.000	9.100	-0.000	-0.000	-0.000	-0.000	-0.000	270.000	400.000
X1	22300.000	-0.000	-0.000	-0.000	1300.000	1300.000	1300.000	-0.000	4.000	-0.000
ET	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL, CWSL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795.000

PORTOLK + SOUTHER RR-SECTION B-11

SPECIAL BRIDGE

SB	XK	YKOR	COFO	ROLEN	RWC	RWP	HAREA	SS	ELCHU	ELCHD
	-0.00	1.14	2.59	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

THE ABOVE DATA IS FOR INFORMATION ONLY AND IS NOT TO BE USED FOR DESIGN PURPOSES.

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FROM BR MADISON-HAYODAN FIS
 T2 FLOODWAY
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	MINV	IQIR	STRT	METRIC	HVINS	0	WSEL	EO
	-10.	3	0.	0.	-0.000000	-0.00	-0.0	-0.	557.900	-0.000

J2	NPROJ	IPLT	PRFVS	XSECV	XSECH	FN	ALDCC	IBW	CHNIN	ITRAGE
	15.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL, CHSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795.000

*** NORFOLK + SOUTHER BR-SECTION B-11 ***

SPECIAL BRIDGE

SB	YK	YKOR	COFO	RDLN	RWC	RWR	HAREA	SS	ELCHU	ELCHD
	-0.00	1.14	2.50	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

6070, LOW FLOW BY NORMAL BRIDGE

FGPR5= 562.700 EGLNC= 566.442 ELIC= 562.700 PCWSE= 559.815 ELTRD= 572.400

*** FROM OLD STUDY ***

*** US 11 SECTION B-12 ***

*** SECTION B-1 ***

3685 20 TRIALS USED WSEL, CHSEL
 ERROR STATEMENT APPLIES TO SECTION 7700.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 7700.000

3685 20 TRIALS USED WSEL, CHSEL

FLOODWAY DATA, BIG BEAVER ISLAND CREEK
 PROFILE NO. 2

STATION	FLOODWAY			WATER SURFACE ELEVATION		
	WIDTH (FT)	SECTION AREA	MEAN VELOCITY	WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
1.000	585.	3972.	3.0	557.9	556.9	1.0
2.000	505.	3977.	3.0	557.9	556.9	1.0
3.000	585.	3981.	3.0	557.9	556.9	1.0
4.000	585.	3985.	3.0	557.9	556.9	1.0
700.000	585.	4883.	2.7	558.8	557.9	.9
795.000	76.	684.	17.3	559.8	559.9	-.1
805.000	84.	837.	14.1	561.7	561.7	.0
960.000	225.500	8720.	1.4	565.4	565.4	.0
1500.000	735.500	8970.	1.3	565.6	565.6	.0
2200.000	470.500	5266.	2.2	565.9	565.9	.0
3000.000	470.500	5524.	2.1	566.5	566.2	.3
3300.000	400.500	4173.	2.8	566.6	566.2	.4
3605.000	180.	2120.	5.4	566.6	566.1	.5
3690.000	80.	958.	11.8	565.6	565.2	.4
3710.000	80.	992.	11.8	566.6	566.1	.4
3715.000	500.	6195.	1.9	569.1	568.7	.4
3765.000	400.	5700.	2.1	569.1	568.7	.4
4300.000	590.000	4738.	1.8	569.6	569.0	.6
5700.000	830.600	6052.	1.4	570.0	569.4	.6
7700.000	500.	1396.	6.0	573.4	573.1	.3
9350.000	350.	2080.	4.0	583.7	583.5	.2
11350.000	300.	1101.	7.6	597.6	597.4	.1
12800.000	300.	2491.	3.4	605.1	604.7	.3
13085.000	90.	813.	10.3	605.2	604.4	.7
13125.000	91.	830.	10.0	605.4	604.9	.5
13235.000	250.	2457.	3.4	607.2	607.3	-.2
13700.000	260.	2241.	3.7	608.1	607.9	.2

14150.000	102.	1208.	7.0	609.4	609.0	.4
14212.000	64.	1112.	7.60	609.5	609.0	.5
14320.000	112.	1504.	5.6	610.1	610.1	.1
14950.000	100.	936.	9.0	611.2	610.4	.8
16450.000	100.	919.	9.1	626.1	626.2	-.2
17450.000	100.	928.	9.0	636.1	635.8	.4
18400.000	100.	797.	9.8	647.2	647.0	.1
19700.000	100.	1462.	5.3	656.3	655.6	.7
21000.000	140.	1520.	5.1	659.9	659.1	.9
22500.000	150.	1553.	5.8	663.2	662.3	.9

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

Handwritten:
 FFF Table
 3/9/76

Handwritten:
 Report
 with Division
 shown

0 FPH BIG BEAVER ISLAND FIS
 1 FPH BR MADISON MAYODAN FIS
 12 10 YR NATURAL
 13 BIG BEAVER ISLAND CREEK

J1	CHECK	IND	NTCV	IDIR	STRT	MTRIC	HVINS	Q	WSEL	FO
-10	6	0	-0	-0	0.000000	-0.00	0.0	-0	556.000	-0.000

J2	NPROF	IPLCT	PRFVS	XSECV	XSECH	FN	ALDCC	IBW	CHNIM	ITRACE
0	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

*PROF

SECNO	DEPTH	CWSEL	CRWS	WSELK	EG	HV	HL	LOSS	BANK ELEV
TIME	VLQB	VGH	VRQB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XICH	XLDBR	ITRIAL	IDC	IDCNT	CORAR	TOPWID	ENDST
1.00	13.60	556.00	0.00	556.00	556.10	.10	0.00	0.00	553.40
5700.	959.	2728.	2013.	1417.	777.	1567.	0.	0.	552.80
0.00	.68	3.04	1.28	.140	.050	.070	0.000	542.40	63.93
.000622	0.	0.	0.	0	0	1	0.00	800.07	944.00
2.00	13.60	556.00	0.00	0.00	556.10	.10	.00	.00	553.40
5700.	959.	2727.	2014.	1418.	777.	1569.	0.	0.	552.80
.00	.68	3.51	1.28	.140	.050	.070	.042	542.40	63.92
.000621	5.	5.	5.	0	0	1	0.00	880.14	944.06
3.00	13.61	556.01	0.00	0.00	556.11	.10	.00	.00	553.40
5700.	960.	2725.	2015.	1419.	778.	1570.	1.	0.	552.80
.00	.68	3.50	1.28	.140	.050	.070	.042	542.40	63.91
.000619	5.	5.	5.	0	0	1	0.00	880.21	944.12
4.00	13.61	556.01	0.00	0.00	556.11	.10	.00	.00	553.40
5700.	960.	2724.	2016.	1420.	778.	1571.	1.	0.	552.80
.00	.68	3.50	1.28	.140	.050	.070	.042	542.40	63.90
.000618	5.	5.	5.	0	0	1	0.00	880.28	944.19
700.00	14.02	556.42	0.00	0.00	556.50	.08	.38	.00	553.40
5700.	1001.	2568.	2131.	1365.	806.	1761.	65.	15.	552.80
.10	.64	3.19	1.21	.140	.050	.070	.050	542.40	62.72
.000489	700.	700.	700.	2	0	1	0.00	889.65	952.36

 INTERACTIVE LOG2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM RR MADISON-MAYODIN FIS
 T2 50-YR NATURAL
 T3 RTG BEAVER ISLAND CREEK

J1 TCHECK INC MINV IDIR SIRT METRIC HVINS 0 WSEL FQ
 10 5 -0 -0 -0.00000 -0.00 -0.0 -0. 556.000 -0.000
 J2 NPROF JPLUT PRFS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 2.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

PROF 2
 CURVE 200 DEPTH 400
 SECD DEPTH CWSEL CRWS WSELK EG HV HL LOSS BANK ELEV
 QLOB QCH QROB ALOB ACH AROB VOL TWA LEFT/RIGHT
 TIME VLOB VCH VROB XNL XNCH XNR VTN ELMIN SSTA
 SLOPE XLOBL XLOH XLOBR ITRIAL IDC ICONT CORAR TORWID ENDST

1.00	13.60	556.00	0.00	556.00	556.28	.28	0.00	0.00	553.40
9500.	1598.	4547.	3355.	1417.	777.	1567.	0.	0.	552.80
0.00	1.13	5.85	2.14	.140	.050	.070	0.000	542.40	63.93
.001727	-0.	-0.	-0.	0	0	1	0.00	880.07	944.00
2.00	13.61	556.01	0.00	556.01	556.29	.28	.01	0.00	553.40
9500.	1600.	4541.	3360.	1420.	778.	1571.	0.	0.	552.80
0.00	1.13	5.84	2.14	.140	.050	.070	.042	542.40	63.91
.001718	5.	5.	5.	0	0	1	0.00	880.27	944.17
3.00	13.62	556.02	0.00	556.02	556.30	.28	.01	0.00	553.40
9500.	1601.	4539.	3364.	1423.	778.	1575.	1.	0.	552.80
0.00	1.13	5.83	2.14	.140	.050	.070	.042	542.40	63.88
.001709	5.	5.	5.	0	0	1	0.00	880.46	944.34
4.00	13.63	556.03	0.00	556.03	556.31	.28	.01	0.00	553.40
9500.	1603.	4529.	3368.	1426.	779.	1579.	1.	0.	552.80
0.00	1.12	5.81	2.13	.140	.050	.070	.042	542.40	63.86
.001701	5.	5.	5.	0	0	1	0.00	880.66	944.52
700.00	14.65	557.05	0.00	557.05	557.21	.16	.88	0.00	553.40
9500.	1753.	3939.	3809.	1789.	849.	2060.	69.	15.	552.80
0.07	1.98	4.64	1.85	.140	.050	.070	.050	542.40	60.88
.000967	700.	700.	700.	2	0	1	0.00	904.11	964.99

 INTERACTIVE HPC2 VERSION UPDATED FEB 1976

ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 EPM DR MADISON MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	IND	NINV	IDIR	STRT	METRIC	HVINS	0	WSBL	FO
	-10	2	-0	-0	-0.000000	-0.00	-0.0	-0	556.900	-0.000

J2	NPROF	IPCOT	PREVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	3.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

*PROF 3

CCHV=	.200	CERV=	.400	SECNO	DEPTH	CWSEL	CRHS	WSELK	EG	HV	HL	LOSS	BANK	ELEV
0	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT					
TIME	VEOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELNIN	SSTA					
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAP	TOPWID	ENDST					

1.00	14.50	556.90	0.00	556.90	557.17	.27	0.00	0.00	553.40
11800.	2154.	4986.	4660.	1736.	938.	1988.	0.	0.	552.80
0.00	1.24	5.95	2.34	.140	.050	.070	0.000	542.40	61.32
.001613	-0.	-0.	-0.	0	0	1	0.00	900.68	962.00

2.00	14.51	556.91	0.00	0.00	557.18	.27	.01	.00	553.40
11800.	2156.	4980.	4664.	1739.	839.	1992.	1.	0.	552.80
.90	1.24	5.94	2.34	.140	.050	.070	.042	542.40	61.29
.001606	5.	5.	5.	0	0	1	0.00	900.87	962.16

3.00	14.52	556.92	0.00	0.00	557.19	.27	.01	.00	553.40
11800.	2157.	4975.	4668.	1741.	840.	1996.	1.	0.	552.80
.00	1.24	5.93	2.34	.140	.050	.070	.042	542.40	61.27
.001599	5.	5.	5.	0	0	1	0.00	901.05	962.32

4.00	14.53	556.93	0.00	0.00	557.19	.27	.01	.00	553.40
11800.	2158.	4970.	4672.	1744.	840.	2000.	2.	0.	552.80
.00	1.24	5.92	2.34	.140	.050	.070	.042	542.40	61.25
.001593	5.	5.	5.	0	0	1	0.00	901.24	962.48

700.00	19.51	557.91	0.00	0.00	558.08	.17	.86	.02	553.40
11800.	2285.	4430.	5085.	2095.	907.	2478.	82.	15.	552.80
.07	1.09	4.89	2.05	.140	.050	.070	.050	542.40	58.40
.000981	700.	700.	700.	2	0	1	0.00	923.70	982.10

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 EPPM BRIMADISON-MAYODAN FIS
 T2 500 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1 SIDHECK INQ UNIV IDIR STRT METRIC HVINS 0 WSEL FQ
 -10. 4 -0 -0 -0.000000 -0.00 -0.0 -0 558.700 -0.000
 J2 NPROF TPLCT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 15.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF A

DEPTH	WSEL	CRIWS	WSELK	EG	HV	HL	QLOSS	BANK	ELEV
QCOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT	RIGHT
TIME	VDOB	VDR	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1.00	558.70	0.00	558.70	559.00	.30	0.00	0.00	553.40	
18400.	3680.	6372.	8348.	2381.	961.	2879.	0.	552.80	
0.00	1.55	6.63	2.90	.140	.050	.070	0.000	542.40	56.09
.001673	-0.	-0.	-0.	0	0	1	0.00	941.91	998.00
2.00	556.71	0.00	0.00	559.01	.30	.01	.00	553.40	
18400.	3681.	6367.	8352.	2384.	961.	2884.	1.	552.80	
.00	1.54	6.62	2.90	.140	.050	.070	.042	542.40	56.06
.001667	5.	5.	5.	0	0	1	0.00	942.11	998.17
3.00	558.72	0.00	0.00	559.02	.30	.01	.00	553.40	
18400.	3682.	6362.	8356.	2387.	962.	2888.	1.	552.80	
.00	1.54	6.61	2.89	.140	.050	.070	.042	542.40	56.04
.001661	5.	5.	5.	0	0	1	0.00	942.30	998.33
4.00	558.73	0.00	0.00	559.03	.30	.01	.00	553.40	
18400.	3683.	6357.	8360.	2390.	963.	2892.	2.	552.80	
.00	1.54	6.60	2.89	.140	.050	.070	.042	542.40	56.01
.001655	5.	5.	5.	0	0	1	0.00	942.49	998.50
700.00	559.77	0.00	0.00	559.97	.21	.93	.02	553.40	
18400.	3785.	5788.	6827.	2767.	1033.	3429.	110.	552.80	
.05	1.37	5.60	2.57	.140	.050	.070	.050	542.40	52.99
.001023	700.	700.	700.	2	0	1	0.00	949.24	1002.23

3685 20 TRIALS USED WSEL, QWSEL

FLOOD INSURANCE ZONE DATA FOR HIG BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION CUMULATIVE ELEVATION DIFFERENCE
NUMBER DISTANCE BETWEEN BASE FLOOD AND

10' 2' 0.2'

1.000	0.	-1.9	-1.9	1.8
2.000	5.	-1.9	-1.9	1.8
3.000	10.	-1.9	-1.9	1.8
4.000	15.	-1.9	-1.9	1.8
700.000	715.	-1.5	-1.9	1.9
795.000	810.	-4.6	-1.5	3.3
805.000	820.	-1.9	-1.6	5.5
900.000	915.	-5.9	-1.9	5.4
1500.000	1515.	-5.8	-1.9	5.3
2200.000	2215.	-5.7	-1.9	5.2
3000.000	3015.	-5.4	-1.8	5.1
3300.000	3315.	-5.4	-1.8	5.1
3685.000	3700.	-5.0	-1.7	5.2
3690.000	3705.	-4.5	-1.5	5.9
3710.000	3725.	-5.0	-2.0	5.2
3715.000	3730.	-6.5	-2.0	3.1
3765.000	3780.	-6.4	-2.6	3.1
4700.000	4715.	-4.6	-2.4	3.0
5700.000	5715.	-3.9	-2.0	3.0
7700.000	7715.	-1.1	-1.1	.7
9350.000	9365.	-2.7	0.8	1.9
11350.000	11365.	-4.6	-1.2	2.1
12900.000	12815.	-3.4	-1.0	2.2
13085.000	13100.	-2.8	-.8	1.5
13115.000	13130.	-3.1	-.9	2.2
13235.000	13250.	-4.1	-1.3	3.2
13700.000	13715.	-4.0	-1.3	3.1
14180.000	14203.	-3.9	-1.2	2.9
14212.000	14227.	-4.0	-1.2	5.1
14320.000	14335.	-4.6	-1.5	4.1
14950.000	14965.	-4.6	-1.4	3.9
16450.000	16465.	-3.1	-1.0	2.2
17450.000	17465.	-4.1	-1.3	3.1
18400.000	18415.	-3.4	-1.0	2.3
19700.000	19715.	-4.0	-1.2	2.3
21000.000	21015.	-4.1	-1.3	2.7
22300.000	22315.	-4.2	-1.3	2.9

WEIGHTED AVG FOR REACH -3.9 -1.3 2.8

FHE FOR THE REACH = 0.40 WITH 53.1% OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH 4.54 0

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC TOTAL AVG ELEVATION DATA WTD. PERCENT

0						SEC.	1,000
1	120	556.0	557.0	-1.0	-1.0	010	100
	5					SEC.	2,000
	10					SEC.	3,000
	15					SEC.	4,000
2	240	556.1	557.1	-1.0	-1.0	010	100
3	360	556.2	557.3	-1.1	-1.0	010	100
4	480	556.2	557.5	-1.2	-1.1	010	100
5	600	556.3	557.7	-1.3	-1.1	010	100
	715					SEC.	700,000
6	720	556.4	557.9	-1.5	-1.2	010	100
	810					SEC.	795,000
	820					SEC.	800,000

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

WEIGHTED AVG FOR REACH -1.2 -1.9 -1.8

FHF FOR REACH 1 = DID WITH 100% OF THE REACH WITHIN .5 FEET
ZONE FOR THE REACH = A 2

7	840	557.1	562.1	-5.0	-5.0	050	86
	915					SEC.	900,000
8	960	558.4	564.0	-5.5	-5.3	055	88
9	1080	559.5	565.4	-5.9	-5.5	055	89
10	1200	559.6	565.5	-5.9	-5.6	055	90
11	1320	559.6	565.5	-5.9	-5.6	055	91
12	1440	559.7	565.6	-5.9	-5.7	055	92
	1515					SEC.	1500,000
13	1560	559.8	565.6	-5.8	-5.7	055	92
14	1680	559.8	565.6	-5.8	-5.7	055	93
15	1800	559.9	565.7	-5.8	-5.7	055	93
16	1920	560.0	565.7	-5.7	-5.7	055	94
17	2040	560.1	565.8	-5.7	-5.7	055	94
18	2160	560.1	565.8	-5.7	-5.7	055	94
	2215					SEC.	2200,000
19	2280	560.2	565.9	-5.7	-5.7	055	95
20	2400	560.3	565.9	-5.6	-5.7	055	95
21	2520	560.4	566.0	-5.6	-5.7	055	95
22	2640	560.5	566.0	-5.5	-5.7	055	95
23	2760	560.5	566.0	-5.5	-5.7	055	96
24	2880	560.6	566.1	-5.5	-5.7	055	96
25	3000	560.7	566.1	-5.4	-5.7	055	96
	3015					SEC.	3000,000
26	3120	560.8	566.2	-5.4	-5.6	055	96
27	3240	560.8	566.2	-5.4	-5.6	055	96
	3315					SEC.	3300,000
28	3360	560.8	566.2	-5.3	-5.6	055	96
29	3480	560.9	566.2	-5.3	-5.6	055	97
30	3600	561.0	566.2	-5.2	-5.6	055	97
	3700					SEC.	3685,000
	3705					SEC.	3690,000
31	3720	560.9	565.5	-4.7	-5.5	055	97
	3725					SEC.	3710,000
	3730					SEC.	3715,000
	3780					SEC.	3765,000

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

WEIGHTED AVG FOR REACH -5.5 -1.9 5.3

ZONE FOR THE REACH = A11

32	3840.	562.3	568.7	-6.4	-6.4	065	97.
33	3960.	562.5	568.7	-6.2	-6.3	065	97.
34	4080.	562.8	568.8	-6.0	-6.2	060	97.
35	4200.	563.1	568.8	-5.7	-6.1	060	97.
36	4320.	563.3	568.8	-5.5	-6.0	060	97.
37	4440.	563.6	568.9	-5.3	-5.8	060	97.
38	4560.	563.9	568.9	-5.0	-5.7	055	97.
39	4680.	564.1	568.9	-4.8	-5.6	055	100.
	4715.					SEC. 4700.000	
40	4800.	564.4	569.0	-4.6	-5.5	055	100.
41	4920.	564.5	569.0	-4.5	-5.4	055	100.
42	5040.	564.6	569.1	-4.4	-5.3	055	98.
43	5150.	564.8	569.1	-4.3	-5.2	050	98.
44	5200.	564.9	569.2	-4.3	-5.2	050	95.
45	5400.	565.0	569.2	-4.2	-5.1	050	96.
46	5520.	565.2	569.3	-4.1	-5.0	050	96.
47	5640.	565.3	569.3	-4.0	-5.0	050	94.
	5715.					SEC. 5700.000	

ELEVATION DIFFERENCE

BETWEEN BASE FLOOD AND

10' 2' 0.2'

WEIGHTED AVG FOR REACH -5.0 -2.4 3.0

FHF FOR REACH 3 = 030 WITH 94.0% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A10

48	5760.	565.5	569.4	-3.9	-3.9	040	100.
49	5880.	565.8	569.6	-3.8	-3.9	040	100.
50	6000.	566.2	569.8	-3.6	-3.8	040	100.
51	6120.	566.6	570.0	-3.4	-3.7	035	100.
52	6240.	567.0	570.2	-3.3	-3.6	035	100.
53	6360.	567.4	570.5	-3.1	-3.5	035	100.
54	6480.	567.8	570.7	-2.9	-3.4	035	100.
55	6600.	568.2	570.9	-2.8	-3.4	035	100.
56	6720.	568.5	571.1	-2.6	-3.3	035	100.
57	6840.	568.9	571.4	-2.4	-3.2	030	100.
58	6960.	569.3	571.6	-2.2	-3.1	030	100.
59	7080.	569.7	571.8	-2.1	-3.0	030	98.

ELEVATION DIFFERENCE

BETWEEN BASE FLOOD AND

10' 2' 0.2'

WEIGHTED AVG FOR REACH -3.0 -1.5 2.2

FHF FOR REACH 4 = 030 WITH 98.0% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A 6

60	7200.	570.1	572.0	-1.9	-1.9	020	100.
61	7320.	570.5	572.3	-1.7	-1.8	020	100.
62	7440.	570.9	572.5	-1.6	-1.7	015	100.
63	7560.	571.3	572.7	-1.4	-1.6	015	100.
64	7680.	571.7	572.9	-1.2	-1.6	015	98.
	7715.					SEC. 7700.000	
65	7800.	572.2	573.3	-1.1	-1.5	015	98.
66	7920.	572.8	574.0	-1.2	-1.4	015	98.
67	8010.	573.4	574.8	-1.3	-1.4	015	99.
68	8160.	574.1	575.5	-1.5	-1.4	015	99.
69	8250.	574.7	576.3	-1.6	-1.5	015	99.
70	8400.	575.3	577.0	-1.7	-1.5	015	99.

DAN RIVER BACK WATER
 U.S. elev.
 107R 571.2
 507R 577.0
 1007R 579.6
 5007R 586.3

080

72	8640	575.9	578.5	-2.6	-1.7	0.15	99
73	8760	577.2	579.3	-2.1	-1.6	0.15	100
74	8880	577.9	580.0	-2.2	-1.6	0.15	99
75	9000	578.5	580.8	-2.3	-1.7	0.15	96
76	9120	579.1	581.6	-2.4	-1.7	0.15	96
77	9240	579.8	582.3	-2.5	-1.7	0.15	92

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

10#	2#	0.20					
WEIGHTED AVG FOR REACH	-1.7	-1.6	-1.2				
CHF FOR REACH	51	0.15	92%	OF THE REACH WITHIN .5 FEET			
ZONE FOR THE REACH	A-3						

0.20

78	9360	580.4	583.1	-2.7	-2.7	0.25	100
SEC. 9350.000							
79	9365	581.1	583.9	-2.8	-2.7	0.25	100
80	9480	581.8	584.7	-2.9	-2.8	0.30	100
81	9600	582.5	585.5	-3.0	-2.8	0.30	100
82	9720	583.2	586.4	-3.2	-2.9	0.30	100
83	9840	583.9	587.2	-3.3	-3.0	0.30	100
84	9960	584.6	588.0	-3.4	-3.0	0.30	100
85	10080	585.4	588.9	-3.5	-3.1	0.30	100
86	10200	586.1	589.7	-3.6	-3.2	0.30	100
87	10440	586.8	590.6	-3.8	-3.2	0.30	100
88	10560	587.5	591.4	-3.9	-3.3	0.35	100
89	10680	588.2	592.2	-4.0	-3.3	0.35	100
90	10800	588.9	593.1	-4.1	-3.4	0.35	100
91	10920	589.6	593.9	-4.3	-3.5	0.35	100
92	11040	590.4	594.7	-4.4	-3.5	0.35	100
93	11160	591.1	595.6	-4.5	-3.6	0.35	99
94	11280	591.8	596.4	-4.6	-3.6	0.35	99
SEC. 11350.000							
95	11365	592.5	597.2	-4.7	-3.7	0.35	97
96	11400	593.2	597.9	-4.7	-3.8	0.40	98
97	11520	593.9	598.5	-4.6	-3.8	0.40	97
98	11640	594.7	599.1	-4.5	-3.8	0.40	97
99	11760	595.4	599.7	-4.4	-3.9	0.40	97
100	11880	596.1	600.3	-4.2	-3.9	0.40	97
101	12000	596.8	600.9	-4.1	-3.9	0.40	97
102	12120	597.5	601.5	-4.0	-3.9	0.40	97
103	12240	598.2	602.1	-3.9	-3.9	0.40	97
104	12360	598.9	602.7	-3.8	-3.9	0.40	97
105	12480	599.7	603.3	-3.7	-3.9	0.40	97
106	12600	600.4	603.9	-3.6	-3.9	0.40	97
SEC. 12800.000							
107	12815	601.0	604.5	-3.4	-3.9	0.40	97
108	12840	601.4	604.6	-3.2	-3.8	0.40	97
109	12960	601.5	604.5	-3.0	-3.8	0.40	97
SEC. 13085.000							
SEC. 13115.000							
110	13200	602.3	605.6	-3.4	-3.8	0.40	97
SEC. 13235.000							
111	13250	603.0	606.9	-3.9	-3.5	0.40	97
112	13320	603.5	607.5	-4.0	-3.8	0.40	97
113	13440	603.6	607.6	-4.0	-3.8	0.40	97
114	13560	603.8	607.8	-4.0	-3.8	0.40	97
SEC. 13700.000							
115	13715	604.0	608.0	-4.0	-3.8	0.40	97
116	13800	604.2	608.2	-4.0	-3.8	0.40	97
117	13920	604.5	608.5	-4.0	-3.8	0.40	97
118	14040	604.8	608.7	-3.9	-3.8	0.40	97
SEC. 14188.000							
119	14160	604.8	608.7	-3.9	-3.8	0.40	97
120	14203						

Handwritten notes and scribbles in the top right area.

Handwritten calculations and notes, including a diagram with a triangle and various numbers.

Handwritten calculations: $\frac{13 \times 120}{13 \times 120}$

119	14280	605.7	609.3	-4.1	-3.8	040	97
	14335					SEC. 14320.000	
120	14400	605.4	609.8	-4.4	-3.8	040	98
121	14520	605.6	610.1	-4.6	-3.9	040	98
122	14640	605.6	610.2	-4.6	-3.9	040	98
123	14760	605.7	610.3	-4.6	-3.9	040	98
124	14880	605.7	610.3	-4.6	-3.9	040	97
	14965					SEC. 14950.000	
125	15000	606.0	610.6	-4.6	-3.9	040	97
126	15120	606.9	611.4	-4.5	-3.9	040	97
127	15240	608.3	612.7	-4.4	-3.9	040	97
128	15360	609.7	613.9	-4.3	-4.0	040	97
129	15480	611.1	615.2	-4.2	-4.0	040	97
130	15600	612.4	616.5	-4.0	-4.0	040	97
131	15720	613.6	617.7	-3.9	-4.0	040	97
132	15840	615.2	619.0	-3.8	-4.0	040	97
133	15960	616.6	620.3	-3.7	-4.0	040	97
134	16080	618.0	621.5	-3.5	-3.9	040	97
135	16200	619.4	622.8	-3.4	-3.9	040	97
136	16320	620.8	624.1	-3.3	-3.9	040	97
137	16440	622.1	625.3	-3.2	-3.9	040	97
	16465					SEC. 16450.000	
138	16560	623.4	626.5	-3.2	-3.9	040	98
139	16680	624.4	627.7	-3.3	-3.9	040	98
140	16800	625.5	628.8	-3.4	-3.9	040	98
141	16920	626.5	630.0	-3.5	-3.9	040	98
142	17040	627.5	631.1	-3.6	-3.9	040	98
143	17160	628.5	632.3	-3.8	-3.9	040	98
144	17280	629.5	633.4	-3.9	-3.9	040	98
145	17400	630.6	634.6	-4.0	-3.9	040	98
	17465					SEC. 17450.000	
146	17520	631.7	635.8	-4.1	-3.9	040	98
147	17640	633.1	637.1	-4.1	-3.9	040	98
148	17760	634.6	638.5	-4.0	-3.9	040	98
149	17880	636.1	640.0	-3.9	-3.9	040	98
150	18000	637.6	641.4	-3.8	-3.9	040	98
151	18120	639.1	642.8	-3.7	-3.9	040	98
152	18240	640.7	644.2	-3.6	-3.9	040	98
153	18360	642.2	645.7	-3.5	-3.9	040	98
	18415					SEC. 18400.000	
154	18480	643.5	646.9	-3.4	-3.9	040	98
155	18600	644.4	647.9	-3.5	-3.9	040	98
156	18720	645.1	648.6	-3.5	-3.9	040	98
157	18840	645.8	649.4	-3.6	-3.8	040	98
158	18960	646.6	650.2	-3.6	-3.8	040	98
159	19080	647.3	651.0	-3.7	-3.8	040	98
160	19200	648.0	651.8	-3.8	-3.8	040	98
161	19320	648.8	652.6	-3.8	-3.8	040	98
162	19440	649.5	653.4	-3.9	-3.8	040	98
163	19560	650.2	654.2	-4.0	-3.8	040	98
164	19680	650.9	654.9	-4.0	-3.8	040	98
	19715					SEC. 19700.000	
165	19800	651.5	655.6	-4.0	-3.8	040	98
166	19920	651.9	656.0	-4.1	-3.9	040	98
167	20040	652.2	656.3	-4.1	-3.9	040	98
168	20160	652.5	656.6	-4.1	-3.9	040	98
169	20280	652.9	656.9	-4.1	-3.9	040	98
170	20400	653.2	657.2	-4.1	-3.9	040	98
171	20520	653.5	657.6	-4.1	-3.9	040	98
172	20640	653.8	657.9	-4.1	-3.9	040	98
173	20760	654.1	658.2	-4.1	-3.9	040	98
174	20880	654.5	658.5	-4.1	-3.9	040	98
175	21000	654.8	658.9	-4.1	-3.9	040	98
	21015					SEC. 21000.000	
176	21120	655.1	659.2	-4.1	-3.9	040	98

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179	21480	655.9	660.1	-4.2	-3.9	0.40	98
180	21600	656.2	660.4	-4.2	-3.9	0.40	98
181	21720	656.5	660.7	-4.2	-3.9	0.40	98
182	21840	656.8	661.0	-4.2	-3.9	0.40	98
183	21960	657.1	661.3	-4.2	-3.9	0.40	98
184	22080	657.4	661.6	-4.2	-3.9	0.40	98
185	22200	657.7	661.9	-4.2	-3.9	0.40	98
	22315						
						SEC. 22300.000	

ELEVATION DIFFERENCE
 BETWEEN BASE FLOOD AND
 100 20 0.25
 WEIGHTED AVG FOR REACH -3.9 -1.2 2.6

FHQ FOR REACH 5 = 0.0 WITH 90.0 OF THE REACH WITHIN 1.0 FEET
 ZONE FOR THE REACH = A B

- POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 7760.00 PROFILE= 3 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 4 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 7700.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL
- POSSIBLE ERROR SECNO= 11350.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 11350.00 PROFILE= 3 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 11350.00 PROFILE= 4 CRITICAL DEPTH ASSUMED
- POSSIBLE ERROR SECNO= 11350.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

C1 FPM-BIG-BE-AVER-ISLAND-FIS
 1 FPM-BR-MADISON-MAYODAN-FIS
 T2 10-YR-NATURAL
 T3 BIG-BE-AVER-ISLAND-GREEK

J1	IGHECK	INO	NINV	IDIR	STRT	METRIG	HVINS	Q	WSEL	FQ
	-10.	6.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.000	-0.000
J2	NPROF	IPL0T	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	0.000	-1.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000
J3	39.000	53.000	54.000	4.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685-20 TRIALS USED-WSEL,CHSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000
 7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH
 ERROR STATEMENT APPLIES TO SECTION 795.000

NORFOLK+SOUTHER RR-SECTION B-11

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLN	BHC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.14	2.50	0.00	4.00	0.00	923.00	2.10	542.70	542.70

6070 LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 558.725 ELLC= 562.700 PCWSE= 555.294 ELTRD= 572.400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS	3995.00	-564.70	-564.70	564.70	0.00	1040.00	560.90	560.90	0.00
3810 HT IS	3995.00	-564.70	-564.70	564.70	0.00	1040.00	560.99	560.99	0.00
3810 HT IS	3995.00	-564.70	-564.70	564.70	0.00	1040.00	561.14	561.14	0.00

*** SECTION B-1 ***

Final FHF TABLE

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR-CORRECTIONS-01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 50 YR NATURAL
 T3 BIO BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FG
	*10.	5.	*0.	*0.	*0.000000	*0.00	*0.0	*0.	556.000	*0.000
J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	IYRACE
	2.000	*0.000	*1.000	*0.000	*0.000	*0.000	*0.000	*0.000	*0.000	*0.000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

NORFOLK+SOUTHER-RR-SECTION 8-11

SPECIAL BRIDGE

SB	XK	XKOR	COFG	RDLEN	BWC	BWP	AREA	SS	ELCHU	ELCHD
	*0.00	1.14	2.50	*0.00	4.00	*0.00	923.00	2.10	542.70	542.70

6070 LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 562,561 ELLC= 562,700 PCWSE= 558,327 ELTRD= 572,400

*** FROM OLD STUDY ***

*** US 311 SECTION 8-12 ***

3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	563.87	563.87	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	563.97	563.97	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	564.15	564.15	0.00

*** SECTION 8-1 ***

3685-20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 7700,000

7185 MIN SPECIFIC ENERGY

CHARLES W. HARRIS & ASSOCIATES, INC.

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS: 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 B70 BEAVER-ISLAND-CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FO
	-10.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.900	-0.000
J2	NPROF	IPL0T	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	3.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795.000

7.85 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795.000

NORFOLK + SOUTHER-RR-SECTION-B-11

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
0	-0.00	1.14	2.50	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 562.751 EGLWC= 564.441 ELLC= 562.700 PCWSE= 559.858 ELTRD= 572.400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	565.67	565.67	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	565.82	565.82	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.06	566.06	0.00

*** SECTION B-1 ***

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 7700.000

7.85 MIN SPECIFIC ENERGY

 INTERACTIVE MEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 500 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	ING	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10,	4,	-0,	-0,	-0,000000	-0,00	-0,0	-0,	558,700	-0,000
J2	NPROF	IPL0T	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15,000	-0,000	-1,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

NORFOLK SOUTHERN RR SECTION B-11

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0,00	1,14	2,50	-0,00	4,00	-0,00	923,00	2,10	542,70	542,70

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

*** SECTION B-1 ***

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 7700,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 7700,000

*** SECTION B-2 ***

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 775,000

COMPUTER GENERATED BY HEC-2

FLOOD INSURANCE ZONE DATA FOR BIG BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		10'	20'	30'
1,000	0	-0.9	-0.9	1.8
2,000	5	-0.9	-0.9	1.8
3,000	10	-0.9	-0.9	1.8
4,000	15	-0.9	-0.9	1.8
700,000	715	-1.5	-1.5	1.9
795,000	810	-4.6	-1.5	3.3
805,000	820	-4.9	-1.6	5.5
900,000	915	-5.9	-1.9	5.4
1500,000	1515	-5.8	-1.9	5.3
2200,000	2215	-5.7	-1.9	5.2
3000,000	3015	-5.4	-1.8	5.1
3300,000	3315	-5.4	-1.8	5.1
3685,000	3700	-5.0	-1.7	5.2
3690,000	3705	-4.5	-1.5	5.9
3710,000	3725	-4.9	-1.9	5.2
3715,000	3730	-6.0	-2.3	3.5
3765,000	3780	-6.0	-2.2	3.5
4700,000	4715	-4.2	-2.0	3.4
5700,000	5715	-3.6	-1.7	3.3
7700,000	7715	-1.1	-1.3	6
9350,000	9365	-2.7	-1.8	1.9
11350,000	11365	-4.8	-1.2	2.1
12800,000	12815	-3.4	-1.0	2.2
13085,000	13100	-2.8	-1.8	1.5
13115,000	13130	-3.1	-1.9	2.2
13235,000	13250	-4.1	-1.3	3.2
13700,000	13715	-4.0	-1.3	3.1
14188,000	14203	-3.9	-1.2	2.9
14212,000	14227	-4.0	-1.2	5.1
14320,000	14335	-4.6	-1.5	4.1
14950,000	14965	-4.6	-1.4	3.9
16450,000	16465	-3.1	-1.0	2.2
17450,000	17465	-4.1	-1.3	3.1
18400,000	18415	-3.4	-1.0	2.3
19700,000	19715	-4.0	-1.2	2.3
21000,000	21015	-4.1	-1.3	2.7
22300,000	22315	-4.2	-1.3	2.9
24500,000	24515	-3.9	-1.3	2.8
ENTIRE REACH		-3.5	-1.3	2.8

NOTE FOR THE REACH = 0.40 WITH 10.00 OF THE REACH WITHIN 1.0 FEET
 FROM THE END OF THE REACH = 0.0

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

THE SLOPE TOTAL VERTICAL AVERAGE ELEVATION DIFFERENCE BETWEEN THE FLOOD AND THE BASE FLOOD

FLOOD INSURANCE ZONE DATA FOR BIG BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		10'	20'	0.2'
1.000	0.	-0.9	-0.9	1.8
2.000	5.	-0.9	-0.9	1.8
3.000	10.	-0.9	-0.9	1.8
4.000	15.	-0.9	-0.9	1.8
700.000	715.	-1.5	-0.9	1.9
795.000	810.	-4.6	-1.5	3.3
805.000	820.	-4.9	-1.6	5.5
900.000	915.	-5.9	-1.9	5.4
1500.000	1515.	-5.8	-1.9	5.3
2200.000	2215.	-5.7	-1.9	5.2
3000.000	3015.	-5.4	-1.8	5.1
3300.000	3315.	-5.4	-1.8	5.1
3685.000	3700.	-5.0	-1.7	5.2
3690.000	3705.	-4.5	-1.5	5.9
3710.000	3725.	-4.9	-1.9	5.2
3715.000	3730.	-6.0	-2.3	3.5
3765.000	3780.	-6.0	-2.2	3.5
4700.000	4715.	-4.2	-2.0	3.4
5700.000	5715.	-3.6	-1.7	3.3
7700.000	7715.	-1.1	-0.3	0.6
9350.000	9365.	-2.7	-0.8	1.9
11350.000	11365.	-4.8	-1.2	2.1
12800.000	12815.	-3.4	-1.0	2.2
13085.000	13100.	-2.8	-0.8	1.5
13115.000	13130.	-3.1	-0.9	2.2
13235.000	13250.	-4.1	-1.3	3.2
13700.000	13715.	-4.0	-1.3	3.1
14188.000	14203.	-3.9	-1.2	2.9
14212.000	14227.	-4.0	-1.2	5.1
14320.000	14335.	-4.6	-1.5	4.1
14950.000	14965.	-4.6	-1.4	3.9
16450.000	16465.	-3.1	-1.0	2.2
17450.000	17465.	-4.1	-1.3	3.1
18400.000	18415.	-3.4	-1.0	2.3
19700.000	19715.	-4.0	-1.2	2.3
21000.000	21015.	-4.1	-1.3	2.7
22300.000	22315.	-4.2	-1.3	2.9
24500.000	24515.	-3.9	-1.3	2.8
WEIGHTED AVG FOR REACH		-3.8	-1.3	2.8

FHF FOR THE REACH = 0.40 WITH 66.4% OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH = A-8

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC. TOTAL AVG ELEVATION DATA WTD. PERCENT
 NO. LENGTH 100 10 DIFF. AVG. FHF WITHIN

INC. NO.	TOTAL LENGTH	AVG 100	ELEVATION 10	DATA DIFF.	WTD. AVG.	FHF	PERCENT WITHIN
1	0, 129, 5,	556,0	557,0	-1,0	-1,0	010	100, 1,000
	10, 15,						2,000
							3,000
							4,000
2	258,	556,1	557,1	-1,0	-1,0	010	100,
3	387,	556,2	557,4	-1,2	-1,1	010	100,
4	516,	556,3	557,5	-1,3	-1,1	010	100,
5	645,	556,3	557,7	-1,4	-1,2	010	100,
	715,						SEC, 700,000
6	774,	556,0	558,5	-2,4	-1,4	015	83,
	810,						SEC, 795,000
	820,						SEC, 805,000
7	903,	558,0	563,3	-5,4	-1,9	020	14,
	915,						SEC, 900,000
8	1032,	559,3	565,2	-5,9	-2,4	025	13,
9	1161,	559,6	565,5	-5,9	-2,8	030	11,
10	1290,	559,6	565,5	-5,9	-3,1	030	10,
11	1419,	559,7	565,5	-5,9	-3,4	039	9,
	1515,						SEC, 1500,000
12	1548,	559,8	565,6	-5,8	-3,6	035	0,
13	1677,	559,8	565,6	-5,8	-3,7	035	0,
14	1806,	559,9	565,7	-5,8	-3,9	040	0,
15	1935,	560,0	565,7	-5,7	-4,0	040	0,
16	2064,	560,1	565,8	-5,7	-4,1	040	0,
17	2193,	560,2	565,8	-5,7	-4,2	040	0,
	2215,						SEC, 2200,000
18	2322,	560,2	565,9	-5,6	-4,3	045	0,
19	2451,	560,3	565,9	-5,6	-4,4	045	5,
20	2580,	560,4	566,0	-5,6	-4,4	045	5,
21	2709,	560,5	566,0	-5,5	-4,5	045	5,
22	2838,	560,6	566,1	-5,5	-4,5	045	14,
23	2967,	560,7	566,1	-5,4	-4,6	045	17,
	3015,						SEC, 3000,000
24	3096,	560,8	566,2	-5,4	-4,6	045	25,
25	3225,	560,8	566,2	-5,4	-4,6	045	32,
	3315,						SEC, 3300,000
26	3354,	560,8	566,2	-5,3	-4,7	045	38,
27	3483,	560,9	566,2	-5,3	-4,7	045	41,
28	3612,	561,0	566,2	-5,2	-4,7	045	46,
	3700,						SEC, 3685,000
	3705,						SEC, 3690,000
	3725,						SEC, 3710,000
	3730,						SEC, 3715,000
29	3741,	562,2	568,2	-6,0	-4,7	045	48,
	3780,						SEC, 3765,000
30	3870,	562,3	568,2	-5,9	-4,8	050	53,
31	3999,	562,6	568,3	-5,7	-4,8	050	58,
32	4128,	562,9	568,3	-5,4	-4,8	050	59,
33	4257,	563,2	568,4	-5,2	-4,8	050	64,
34	4386,	563,5	568,4	-4,9	-4,8	050	65,
35	4515,	563,8	568,4	-4,7	-4,8	050	66,
36	4644,	564,0	568,5	-4,4	-4,8	050	64,
	4715,						SEC, 4700,000
37	4773,	564,3	568,5	-4,2	-4,8	050	65,
38	4902,	564,5	568,6	-4,1	-4,8	050	63,
39	5031,	564,6	568,7	-4,0	-4,8	050	62,
40	5160,	564,8	568,7	-4,0	-4,7	045	63,
41	5289,	564,9	568,8	-3,9	-4,7	045	61,
42	5418,	565,0	568,8	-3,8	-4,7	045	60,
43	5547,	565,2	568,9	-3,7	-4,7	045	60,
44	5676,	565,3	569,0	-3,7	-4,7	045	55,
	5715,						SEC, 5700,000
45	5845,	565,4	569,1	-3,5	-4,6	045	53,

CORNING'S PATENTED G-MOOR BUSINESS FORMS, INC.

45	5805.	585.8	569.1	-3.5	-4.8	045	53.
46	5934.	565.9	569.3	-3.4	-4.6	045	52.
47	6063.	566.4	569.6	-3.2	-4.6	045	49.
48	6192.	566.8	569.9	-3.1	-4.5	045	48.
49	6321.	567.2	570.1	-2.9	-4.5	045	45.
50	6450.	567.6	570.4	-2.8	-4.5	045	44.
51	6579.	568.1	570.7	-2.6	-4.4	045	41.
52	6708.	568.5	570.9	-2.4	-4.4	045	37.
53	6837.	568.9	571.2	-2.3	-4.4	045	34.
54	6966.	569.3	571.5	-2.1	-4.3	045	30.
55	7095.	569.8	571.7	-1.9	-4.3	045	29.
56	7224.	570.2	572.0	-1.8	-4.2	040	29.
57	7353.	570.6	572.2	-1.6	-4.2	040	28.
58	7482.	571.0	572.5	-1.5	-4.1	040	24.
59	7611.	571.5	572.8	-1.3	-4.1	040	24.

SEC. 7700.000

60	7740.	571.9	573.1	-1.2	-4.0	040	25.
61	7869.	572.5	573.7	-1.2	-4.0	040	25.
62	7998.	573.2	574.5	-1.3	-4.0	040	24.
63	8127.	573.9	575.3	-1.4	-3.9	040	24.
64	8256.	574.5	576.1	-1.6	-3.9	040	23.
65	8385.	575.2	576.9	-1.7	-3.8	040	23.
66	8514.	575.9	577.7	-1.8	-3.8	040	23.
67	8643.	576.6	578.5	-1.9	-3.8	040	22.
68	8772.	577.3	579.3	-2.1	-3.8	040	22.
69	8901.	577.9	580.1	-2.2	-3.7	035	23.
70	9030.	578.6	581.0	-2.3	-3.7	035	23.
71	9159.	579.3	581.8	-2.5	-3.7	035	23.
72	9288.	580.0	582.6	-2.6	-3.7	035	21.

SEC. 9350.000

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

WEIGHTED AVG FOR REACH	10#	2#	0.2#
	-3.7	-1.4	-3.2

FHF FOR REACH 1 = 035 WITH 21# OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 7

73	941.	580.7	583.4	-2.7	-2.7	025	100.
74	9546.	581.4	584.3	-2.8	-2.8	030	100.
75	9675.	582.2	585.2	-3.0	-2.8	030	100.
76	9804.	583.0	586.1	-3.1	-2.9	030	100.
77	9933.	583.7	587.0	-3.2	-3.0	030	100.
78	10062.	584.5	587.9	-3.4	-3.0	030	100.
79	10191.	585.3	588.8	-3.5	-3.1	030	100.
80	10320.	586.0	589.7	-3.6	-3.2	030	100.
81	10449.	586.8	590.6	-3.8	-3.2	030	100.
82	10578.	587.6	591.5	-3.9	-3.3	035	100.
83	10707.	588.4	592.4	-4.0	-3.4	035	100.
84	10836.	589.1	593.3	-4.2	-3.4	035	100.
85	10965.	589.9	594.2	-4.3	-3.5	035	100.
86	11094.	590.7	595.1	-4.4	-3.6	035	100.
87	11223.	591.4	596.0	-4.6	-3.6	035	99.
88	11352.	592.2	596.9	-4.7	-3.7	035	99.

SEC. 11350.000

89	11481.	593.0	597.7	-4.7	-3.8	040	98.
90	11610.	593.7	598.3	-4.6	-3.8	040	98.
91	11739.	594.5	599.0	-4.5	-3.8	040	97.
92	11868.	595.3	599.6	-4.4	-3.9	040	97.
93	11997.	596.0	600.3	-4.2	-3.9	040	97.
94	12126.	596.8	600.9	-4.1	-3.9	040	97.
95	12255.	597.6	601.6	-4.0	-3.9	040	97.
96	12384.	598.3	602.2	-3.9	-3.9	040	97.
97	12513.	599.1	602.9	-3.8	-3.9	040	97.
98	12642.	599.8	603.5	-3.7	-3.9	040	97.

99	12771.	600.7	604.2	-3.5	-3.9	040	97.
	12815.					SEC, 12800,000	
100	12900.	601.2	604.6	-3.4	-3.9	040	97.
101	13029.	601.5	604.6	-3.1	-3.8	040	98.
	13100.					SEC, 13085,000	
	13130.					SEC, 13115,000	
102	13158.	602.0	605.2	-3.2	-3.8	040	98.
	13250.					SEC, 13235,000	
103	13287.	602.8	606.4	-3.7	-3.8	040	98.
104	13416.	603.4	607.5	-4.0	-3.8	040	98.
105	13545.	603.6	607.6	-4.0	-3.8	040	98.
106	13674.	603.8	607.8	-4.0	-3.8	040	98.
	13715.					SEC, 13700,000	
107	13803.	604.0	608.0	-4.0	-3.8	040	98.
108	13932.	604.3	608.2	-4.0	-3.8	040	98.
109	14061.	604.6	608.5	-4.0	-3.8	040	98.
110	14190.	604.9	608.8	-3.9	-3.8	040	97.
	14203.					SEC, 14180,000	
	14227.					SEC, 14212,000	
111	14319.	605.2	609.5	-4.2	-3.9	040	97.
	14335.					SEC, 14320,000	
112	14448.	605.5	610.0	-4.5	-3.9	040	97.
113	14577.	605.6	610.2	-4.6	-3.9	040	97.
114	14706.	605.6	610.2	-4.6	-3.9	040	97.
115	14835.	605.7	610.3	-4.6	-3.9	040	97.
116	14964.	605.8	610.4	-4.6	-3.9	040	97.
	14965.					SEC, 14950,000	
117	15093.	606.5	611.1	-4.5	-3.9	040	97.
118	15222.	608.0	612.4	-4.4	-4.0	040	97.
119	15351.	609.5	613.8	-4.3	-4.0	040	97.
120	15480.	611.0	615.2	-4.2	-4.0	040	98.
121	15609.	612.5	616.5	-4.0	-4.0	040	98.
122	15738.	614.0	617.9	-3.9	-4.0	040	98.
123	15867.	615.5	619.2	-3.8	-4.0	040	98.
124	15996.	617.0	620.6	-3.6	-4.0	040	98.
125	16125.	618.5	622.0	-3.5	-3.9	040	98.
126	16254.	619.9	623.3	-3.4	-3.9	040	98.
127	16383.	621.4	624.7	-3.2	-3.9	040	98.
	16465.					SEC, 16450,000	
128	16512.	622.9	626.0	-3.2	-3.9	040	98.
129	16641.	624.1	627.3	-3.2	-3.9	040	98.
130	16770.	625.2	628.5	-3.3	-3.9	040	98.
131	16899.	626.3	629.7	-3.5	-3.9	040	98.
132	17028.	627.4	631.0	-3.6	-3.9	040	98.
133	17157.	628.5	632.2	-3.8	-3.9	040	98.
134	17286.	629.5	633.4	-3.9	-3.9	040	98.
135	17415.	630.6	634.7	-4.0	-3.9	040	98.
	17465.					SEC, 17450,000	
136	17544.	631.9	636.0	-4.1	-3.9	040	98.
137	17673.	633.4	637.5	-4.0	-3.9	040	98.
138	17802.	635.1	639.0	-3.9	-3.9	040	98.
139	17931.	636.7	640.5	-3.8	-3.9	040	98.
140	18060.	638.3	642.1	-3.7	-3.9	040	98.
141	18189.	640.0	643.6	-3.6	-3.9	040	98.
142	18318.	641.6	645.1	-3.5	-3.9	040	98.
	18415.					SEC, 18400,000	
143	18447.	643.1	646.6	-3.5	-3.9	040	98.
144	18576.	644.2	647.7	-3.5	-3.9	040	98.
145	18705.	645.0	648.5	-3.5	-3.9	040	98.
146	18834.	645.8	649.4	-3.6	-3.9	040	98.
147	18963.	646.6	650.2	-3.6	-3.9	040	98.
148	19092.	647.3	651.1	-3.7	-3.9	040	98.
149	19221.	648.1	651.9	-3.8	-3.8	040	98.
150	19350.	648.9	652.7	-3.8	-3.8	040	98.
151	19479.	649.7	653.6	-3.9	-3.8	040	98.
152	19608.	650.5	654.4	-3.9	-3.8	040	98.

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152	19608.	650.5	654.4	-4.0	-3.9	040	98.
	19715.					SEC, 19700.000	
153	19737.	651.2	655.2	-4.0	-3.9	040	98.
154	19866.	651.8	655.8	-4.0	-3.9	040	98.
155	19995.	652.1	656.1	-4.1	-3.9	040	98.
156	20124.	652.4	656.5	-4.1	-3.9	040	98.
157	20253.	652.8	656.8	-4.1	-3.9	040	98.
158	20382.	653.1	657.2	-4.1	-3.9	040	98.
159	20511.	653.5	657.5	-4.1	-3.9	040	98.
160	20640.	653.8	657.9	-4.1	-3.9	040	98.
161	20769.	654.1	658.2	-4.1	-3.9	040	98.
162	20898.	654.5	658.6	-4.1	-3.9	040	98.
	21015.					SEC, 21000.000	
163	21027.	654.8	658.9	-4.1	-3.9	040	98.
164	21156.	655.2	659.3	-4.1	-3.9	040	98.
165	21285.	655.5	659.6	-4.1	-3.9	040	98.
166	21414.	655.8	659.9	-4.1	-3.9	040	98.
167	21543.	656.1	660.2	-4.1	-3.9	040	98.
168	21672.	656.4	660.6	-4.2	-3.9	040	98.
169	21801.	656.7	660.9	-4.2	-3.9	040	98.
170	21930.	657.0	661.2	-4.2	-3.9	040	98.
171	22059.	657.3	661.5	-4.2	-3.9	040	98.
172	22188.	657.6	661.9	-4.2	-3.9	040	98.
	22315.					SEC, 22300.000	
173	22317.	658.0	662.2	-4.2	-3.9	040	98.
174	22446.	658.2	662.4	-4.2	-3.9	040	98.
175	22575.	658.4	662.7	-4.2	-3.9	040	98.
176	22704.	658.7	662.9	-4.2	-3.9	040	98.
177	22833.	658.9	663.1	-4.2	-3.9	040	98.
178	22962.	659.1	663.3	-4.2	-3.9	040	98.
179	23091.	659.3	663.5	-4.1	-3.9	040	98.
180	23220.	659.5	663.7	-4.1	-3.9	040	98.
181	23349.	659.8	663.9	-4.1	-3.9	040	98.
182	23478.	660.0	664.1	-4.1	-3.9	040	98.
183	23607.	660.2	664.3	-4.1	-3.9	040	98.
184	23736.	660.4	664.5	-4.1	-3.9	040	98.
185	23865.	660.7	664.7	-4.0	-3.9	040	98.
186	23994.	660.9	664.9	-4.0	-3.9	040	98.
187	24123.	661.1	665.1	-4.0	-3.9	040	98.
188	24252.	661.3	665.3	-4.0	-3.9	040	98.
189	24381.	661.5	665.5	-4.0	-3.9	040	98.
190	24510.	661.8	665.7	-3.9	-3.9	040	98.
	24515.					SEC, 24500.000	

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ELEVATION DIFFERENCE
 BETWEEN BASE FLOOD AND

WEIGHTED AVG FOR REACH	10%	2%	0.2%
	-3.9	-1.2	2.6

FHF FOR REACH 2 = 040 WITH 98.0% OF THE REACH WITHIN 1.0 FEET
 ZONE FOR THE REACH = A B

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SUMMARY PRINTOUT

BIG-BE-AVER-ISLAND-CREEK

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
1.00	556.00	556.10	3.51	.10	5700.00	-0.00	63.93	944.00	880.07
1.00	556.00	556.28	5.85	.28	9500.00	-0.00	63.93	944.00	880.07
1.00	556.90	557.17	5.95	.27	11800.00	-0.00	61.32	962.00	900.68
1.00	558.70	559.00	6.63	.30	18400.00	-0.00	56.09	998.00	941.91
2.00	556.00	556.10	3.51	.10	5700.00	5.00	63.92	944.00	880.14
2.00	556.01	556.29	5.84	.28	9500.00	5.00	63.91	944.17	880.27
2.00	556.91	557.18	5.94	.27	11800.00	5.00	61.29	962.16	900.87
2.00	558.71	559.01	6.62	.30	18400.00	5.00	56.06	998.17	942.11
3.00	556.01	556.11	3.50	.10	5700.00	5.00	63.91	944.12	880.21
3.00	556.02	556.30	5.83	.28	9500.00	5.00	63.88	944.34	880.46
3.00	556.92	557.19	5.93	.27	11800.00	5.00	61.27	962.32	901.05
3.00	558.72	559.02	6.61	.30	18400.00	5.00	56.04	998.33	942.30
4.00	556.01	556.11	3.50	.10	5700.00	5.00	63.90	944.19	880.28
4.00	556.03	556.31	5.81	.28	9500.00	5.00	63.86	944.52	880.66
4.00	556.93	557.19	5.92	.27	11800.00	5.00	61.25	962.48	901.24
4.00	558.73	559.03	6.60	.30	18400.00	5.00	56.01	998.50	942.49
700.00	556.42	556.50	3.19	.08	5700.00	700.00	62.72	952.36	889.65
700.00	557.05	557.21	4.64	.16	9500.00	700.00	60.88	964.99	904.11
700.00	557.91	558.08	4.89	.17	11800.00	700.00	58.40	982.10	923.70
700.00	559.77	559.97	5.60	.21	18400.00	700.00	52.99	1002.23	949.24
795.00	555.29	558.73	14.87	3.43	5700.00	95.00	434.55	491.45	56.89
795.00	558.33	562.56	16.51	4.23	9500.00	95.00	428.18	497.82	69.63
795.00	559.86	564.44	17.18	4.58	11800.00	95.00	424.97	501.03	76.06
795.00	563.17	568.86	19.13	5.68	18400.00	95.00	419.00	507.00	88.00
805.00	556.79	559.04	12.05	2.25	5700.00	10.00	431.42	494.58	63.17
805.00	560.11	562.92	13.45	2.81	9500.00	10.00	424.43	501.57	77.13
805.00	561.70	564.81	14.16	3.11	11800.00	10.00	421.12	504.88	83.77
805.00	567.15	570.21	14.02	3.05	18400.00	10.00	419.00	507.00	88.00
900.00	559.47	559.59	3.64	.12	5700.00	95.00	59.67	973.36	913.69
900.00	563.46	563.55	3.54	.09	9500.00	95.00	48.05	1006.15	958.10
900.00	565.41	565.49	3.60	.08	11800.00	95.00	42.40	1211.68	1100.09
900.00	570.80	570.86	3.39	.06	18400.00	95.00	26.73	1361.34	1334.61
1500.00	559.77	559.88	3.47	.10	5700.00	600.00	58.77	979.50	920.72
1500.00	563.67	563.75	3.46	.08	9500.00	600.00	47.45	1006.63	959.18
1500.00	565.60	565.68	3.53	.08	11800.00	600.00	41.85	1222.16	1133.24
1500.00	570.92	570.98	3.35	.06	18400.00	600.00	26.40	1363.17	1336.77
2200.00	560.20	560.39	4.58	.18	5700.00	700.00	542.85	1212.73	669.88
2200.00	563.97	564.10	4.40	.14	9500.00	700.00	251.51	1223.37	971.86
2200.00	565.86	565.98	4.37	.12	11800.00	700.00	170.76	1228.72	1057.96
2200.00	571.08	571.18	4.16	.09	18400.00	700.00	67.65	1243.48	1175.84
3000.00	560.76	560.81	2.55	.05	5700.00	800.00	535.07	1214.31	679.24
3000.00	564.32	564.36	2.34	.04	9500.00	800.00	235.34	1224.37	989.03
3000.00	566.16	566.20	2.26	.04	11800.00	800.00	159.25	1229.57	1070.31
3000.00	571.28	571.30	2.04	.03	18400.00	800.00	65.80	1244.03	1178.23

CONSOLIDATED REPORTING & ANALYTICAL SERVICES, INC.

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
3300.00	560.83	560.97	3.86	.13	5700.00	300.00	970.63	1522.85	552.22
3300.00	564.36	564.45	3.43	.09	9500.00	300.00	910.86	1536.08	625.22
3300.00	566.19	566.27	3.29	.09	11800.00	300.00	726.81	1539.97	813.16
3300.00	571.29	571.34	2.70	.05	18400.00	300.00	356.96	1606.30	1249.34
3685.00	561.12	561.54	5.18	.42	5700.00	385.00	1000.00	1100.22	185.41
3685.00	564.41	564.89	5.56	.48	9500.00	385.00	1000.00	1100.40	185.79
3685.00	566.15	566.67	5.80	.52	11800.00	385.00	1000.00	1100.50	185.99
3685.00	571.35	571.41	2.43	.07	18400.00	385.00	360.93	1751.71	1147.37
3690.00	560.71	561.86	8.62	1.15	5700.00	5.00	1000.00	1430.00	80.00
3690.00	563.68	565.41	10.57	1.73	9500.00	5.00	1000.00	1430.00	80.00
3690.00	565.19	567.36	11.82	2.17	11800.00	5.00	1000.00	1430.00	80.00
3690.00	571.13	571.56	5.20	.43	18400.00	5.00	593.95	1613.83	1019.88
3710.00	561.14	562.18	8.19	1.04	5700.00	20.00	1000.00	1430.00	80.00
3710.00	564.15	565.75	10.14	1.60	9500.00	20.00	1000.00	1430.00	80.00
3710.00	566.05	567.89	10.88	1.84	11800.00	20.00	1000.00	1430.00	80.00
3710.00	571.29	571.67	5.34	.38	18400.00	20.00	586.95	1616.74	1029.79
3715.00	562.18	562.37	3.51	.19	5700.00	5.00	1000.00	1246.12	379.41
3715.00	565.91	566.05	3.06	.15	9500.00	5.00	1000.00	1430.00	430.00
3715.00	568.20	568.25	2.13	.06	11800.00	5.00	534.78	1430.00	895.22
3715.00	571.70	571.74	1.85	.04	18400.00	5.00	478.52	1693.85	1215.33
3765.00	562.27	562.51	4.21	.24	5700.00	50.00	734.24	1245.13	510.88
3765.00	566.06	566.10	1.91	.04	9500.00	50.00	578.96	1650.45	1071.50
3765.00	568.24	568.27	1.72	.03	11800.00	50.00	535.34	1667.22	1131.88
3765.00	571.71	571.75	1.83	.04	18400.00	50.00	478.32	1693.93	1215.61
4700.00	564.35	564.45	2.68	.10	3700.00	935.00	725.52	1241.28	515.76
4700.00	566.53	566.64	2.95	.11	6700.00	935.00	614.52	1242.98	628.46
4700.00	568.53	568.62	2.63	.08	8400.00	935.00	568.02	1244.53	676.51
4700.00	571.94	572.02	2.67	.08	13200.00	935.00	508.78	1247.18	738.40
5700.00	565.43	565.47	2.63	.04	3700.00	1000.00	399.64	1459.30	1059.67
5700.00	567.35	567.39	2.38	.04	6700.00	1000.00	359.46	1481.79	1122.33
5700.00	569.02	569.05	1.99	.03	8400.00	1000.00	329.76	1492.12	1162.36
5700.00	572.28	572.30	1.82	.02	13200.00	1000.00	278.45	1509.71	1231.26
* 7700.00	572.03	572.74	8.39	.71	3700.00	2000.00	885.11	1497.80	575.10
* 7700.00	572.80	573.70	10.37	.90	6700.00	2000.00	877.11	1511.77	602.80
* 7700.00	573.12	574.14	11.30	1.01	8400.00	2000.00	873.16	1517.68	627.26
* 7700.00	573.76	575.18	13.92	1.42	13200.00	2000.00	863.58	1529.30	665.73
9350.00	580.74	581.01	4.91	.27	3700.00	1650.00	340.79	669.90	329.11
9350.00	582.63	582.96	5.74	.33	6700.00	1650.00	305.09	673.07	367.98
9350.00	583.46	583.82	6.10	.36	8400.00	1650.00	281.59	674.28	392.68
9350.00	585.40	585.84	6.87	.43	13200.00	1650.00	212.53	677.09	464.57
* 11350.00	592.66	595.34	13.33	2.68	3700.00	2000.00	527.88	588.08	60.20
* 11350.00	596.27	598.68	13.20	2.40	6700.00	2000.00	477.67	713.59	235.92
* 11350.00	597.44	599.71	13.40	2.28	8400.00	2000.00	453.41	771.82	318.41
* 11350.00	599.51	601.72	14.39	2.21	13200.00	2000.00	410.15	875.63	465.48

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SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
12800.00	601.30	601.47	4,16	.17	3700.00	1450.00	172.58	601.74	429.16
12800.00	603.74	603.92	4,71	.19	6700.00	1450.00	133.58	622.53	488.95
12800.00	604.72	604.92	5,04	.20	8400.00	1450.00	128.39	629.90	501.51
12800.00	606.91	607.17	5,87	.26	13200.00	1450.00	116.82	646.34	529.52
13085.00	601.59	602.88	9,09	1.28	3700.00	285.00	300.00	396.25	96.25
13085.00	603.64	605.52	10,99	1.88	6700.00	285.00	300.00	401.16	101.16
13085.00	604.42	606.73	12,19	2.31	8400.00	285.00	300.00	403.03	103.03
13085.00	605.92	609.70	15,60	3.78	13200.00	285.00	300.00	406.63	106.63
13115.00	601.84	602.99	8,58	1.14	3700.00	30.00	300.00	396.85	96.85
13115.00	604.03	605.68	10,33	1.66	6700.00	30.00	300.00	402.08	102.08
13115.00	604.93	606.92	11,33	1.99	8400.00	30.00	300.00	404.24	104.24
13115.00	607.08	609.95	13,59	2.87	13200.00	30.00	300.00	409.40	109.40
13235.00	603.28	603.47	4,26	.19	3700.00	120.00	164.82	605.93	441.11
13235.00	606.05	606.25	4,87	.20	6700.00	120.00	129.28	628.64	499.36
13235.00	607.34	607.55	5,11	.21	8400.00	120.00	122.45	638.35	515.89
13235.00	610.52	610.74	5,62	.22	13200.00	120.00	105.69	666.22	560.53
13700.00	603.90	604.33	5,93	.43	3700.00	465.00	187.08	582.53	395.45
13700.00	606.63	607.06	6,64	.44	6700.00	465.00	136.80	617.63	480.83
13700.00	607.90	608.33	6,88	.43	8400.00	465.00	130.08	627.50	497.42
13700.00	611.02	611.45	7,38	.43	13200.00	465.00	113.61	651.21	537.61
14188.00	605.04	605.37	4,65	.34	3700.00	488.00	178.06	266.14	88.09
14188.00	607.74	608.38	6,41	.64	6700.00	488.00	173.58	270.62	97.04
14188.00	608.97	609.77	7,19	.80	8400.00	488.00	171.55	272.65	101.11
14188.00	611.84	613.10	9,02	1.26	13200.00	488.00	170.50	273.70	103.20
14212.00	605.06	605.51	5,39	.45	3700.00	24.00	155.90	231.71	75.81
14212.00	607.78	608.63	7,42	.86	6700.00	24.00	152.02	235.59	83.57
14212.00	609.02	610.10	8,33	1.08	8400.00	24.00	150.25	237.36	87.10
14212.00	614.14	614.43	5,29	.29	13200.00	24.00	37.44	447.03	409.59
14320.00	605.49	605.68	3,58	.19	3700.00	108.00	199.73	458.55	258.82
14320.00	608.61	608.90	4,60	.29	6700.00	108.00	183.36	481.69	298.33
14320.00	610.08	610.41	5,02	.33	8400.00	108.00	161.79	491.38	329.59
14320.00	614.17	614.56	5,67	.39	13200.00	108.00	117.62	562.63	441.39
14950.00	605.80	607.64	11,27	1.84	3700.00	630.00	49.44	156.79	107.35
14950.00	608.98	610.86	11,78	1.88	6700.00	630.00	43.55	174.81	131.27
14950.00	610.41	612.40	12,28	1.99	8400.00	630.00	40.90	182.89	141.98
14950.00	614.32	616.37	12,87	2.05	13200.00	630.00	33.66	203.93	170.27
16450.00	623.13	623.88	7,37	.75	3700.00	1500.00	45.13	169.97	124.84
16450.00	625.20	626.54	10,05	1.34	6700.00	1500.00	41.29	181.71	140.42
16450.00	626.23	627.85	11,18	1.63	8400.00	1500.00	39.40	187.49	148.09
16450.00	628.39	630.87	14,04	2.48	13200.00	1500.00	35.39	200.67	165.28
17450.00	631.61	632.91	9,55	1.30	3700.00	1000.00	47.94	161.40	113.46
17450.00	634.48	636.11	11,02	1.63	6700.00	1000.00	42.63	177.60	134.96
17450.00	635.76	637.58	11,79	1.82	8400.00	1000.00	40.26	184.85	144.59
17450.00	638.87	641.11	13,40	2.24	13200.00	1000.00	34.48	202.38	167.90

CONTINUED FROM PREVIOUS PAGE

SECNO	CWSFL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
18400.00	643.63	644.89	9.04	1.26	3300.00	950.00	227.91	342.43	83.83
18400.00	646.00	647.90	11.53	1.90	6100.00	950.00	206.35	400.03	190.24
18400.00	647.04	649.08	12.33	2.04	7800.00	950.00	197.26	418.81	221.55
18400.00	649.34	651.43	13.39	2.09	12400.00	950.00	178.69	442.42	263.72

19700.00	651.52	651.98	5.71	.45	3300.00	1300.00	201.60	409.48	207.88
19700.00	654.40	654.89	6.53	.50	6100.00	1300.00	178.24	442.62	264.38
19700.00	655.57	656.11	7.04	.54	7800.00	1300.00	168.80	446.78	277.97
19700.00	657.89	658.58	8.35	.69	12400.00	1300.00	150.09	455.03	304.94

21000.00	654.97	655.29	4.83	.32	3300.00	1300.00	217.27	417.23	199.96
21000.00	657.78	658.20	5.92	.42	6100.00	1300.00	191.82	426.60	234.78
21000.00	659.06	659.54	6.45	.48	7800.00	1300.00	181.13	430.88	249.75
21000.00	661.80	662.41	7.62	.61	12400.00	1300.00	158.34	444.09	285.75

22300.00	658.10	658.55	5.57	.45	3300.00	1300.00	225.43	414.34	188.91
22300.00	661.00	661.54	6.59	.54	6100.00	1300.00	198.37	423.98	225.61
22300.00	662.34	662.93	7.04	.59	7800.00	1300.00	187.14	428.48	241.34
22300.00	665.26	665.96	8.04	.70	12400.00	1300.00	162.81	438.64	275.83

24500.00	661.88	662.02	3.54	.14	3300.00	2200.00	1161.70	1679.92	518.22
24500.00	664.56	664.68	3.80	.13	6100.00	2200.00	1078.71	1793.71	715.00
24500.00	665.82	665.94	3.89	.12	7800.00	2200.00	1039.51	1847.44	807.93
24500.00	668.61	668.72	4.05	.11	12400.00	2200.00	952.95	1966.12	1013.17

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

FHF Table
3/18/76

C FPM BIG BEAVER ISLAND FIS
 1 FPM BR MADISON-MAYODAN FIS
 T2 10 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	IND	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	EQ
	-10.	6.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.000	-0.000
J2	NPROF	IPLOT	PREVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
J3	39.000	53.000	54.000	4.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

CCHV= .200 CEHV= .400
 *SECNO 1.000

SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	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
1.00	13.60	556.00	0.00	556.00	556.10	.10	0.00	0.00	553.40
5700.	959.	2728.	2013.	1417.	777.	1567.	0.	0.	552.80
0.00	.68	3.51	1.28	.140	.050	.070	0.000	542.40	63.93
.000622	-0.	-0.	-0.	0	0	1	0.00	880.07	944.00

*SECNO 2.000

2.00	13.60	556.00	0.00	0.00	556.10	.10	.00	.00	553.40
5700.	959.	2727.	2014.	1418.	777.	1569.	0.	0.	552.80
.00	.68	3.51	1.28	.140	.050	.070	.042	542.40	63.92
.000621	5.	5.	5.	0	0	1	0.00	880.14	944.06

*SECNO 3.000

3.00	13.61	556.01	0.00	0.00	556.11	.10	.00	.00	553.40
5700.	960.	2725.	2015.	1419.	778.	1570.	1.	0.	552.80
.00	.68	3.50	1.28	.140	.050	.070	.042	542.40	63.91
.000619	5.	5.	5.	0	0	1	0.00	880.21	944.12

*SECNO 4.000

4.00	13.61	556.01	0.00	0.00	556.11	.10	.00	.00	553.40
5700.	960.	2724.	2016.	1420.	778.	1571.	1.	0.	552.80
.00	.68	3.50	1.28	.140	.050	.070	.042	542.40	63.90
.000618	5.	5.	5.	0	0	1	0.00	880.28	944.19

*SECNO 700.000

SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 50 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS 0 WSEL FG
 -10. 5. -0. -0. -0.000000 -2.00 -0.0 -0. 556.000 -0.000
 J2 NPROF I PLOT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 2.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF 2

CCHV= ,200 CEHV= ,400

*SECNO 1.000

SECNO	DEPTH	CWSEL	CRIS	WSELK	EG	HV	HL	OLOSS	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
1.00	13.60	556.00	0.00	556.00	556.28	.28	0.00	0.00	553.40
9500.	1598.	4547.	3355.	1417.	777.	1567.	0.	0.	552.80
0.00	1.13	5.85	2.14	.140	.050	.070	0.000	542.40	63.93
.001727	-0.	-0.	-0.	0	0	1	0.00	880.07	944.00

*SECNO 2.000

2.00	13.61	556.01	0.00	0.00	556.29	.28	.01	.00	553.40
9500.	1600.	4541.	3360.	1420.	778.	1571.	0.	0.	552.80
.00	1.13	5.84	2.14	.140	.050	.070	.042	542.40	63.91
.001718	5.	5.	5.	0	0	1	0.00	880.27	944.17

*SECNO 3.000

3.00	13.62	556.02	0.00	0.00	556.30	.28	.01	.00	553.40
9500.	1601.	4535.	3364.	1423.	778.	1575.	1.	0.	552.80
.00	1.13	5.83	2.14	.140	.050	.070	.042	542.40	63.88
.001709	5.	5.	5.	0	0	1	0.00	880.46	944.34

*SECNO 4.000

4.00	13.63	556.03	0.00	0.00	556.31	.28	.01	.00	553.40
9500.	1603.	4529.	3368.	1426.	779.	1579.	1.	0.	552.80
.00	1.12	5.81	2.13	.140	.050	.070	.042	542.40	63.86
.001701	5.	5.	5.	0	0	1	0.00	880.66	944.52

*SECNO 700,000

SECNO	DEPTH	CWSEL	CRIS	WSELK	EG	HV	HL	OLOSS	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

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR-CORRECTIONS-01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER-ISLAND-CREEK

J1 ICHECK IND NINV IDIR STRT METRIC HVINS Q WSEL FQ
 -10. 2. -0. -0, -0.000000 -0.00 -0.0 -0. 556,900 -0.000
 J2 NPROF IPLOT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 3.000 -0.000 -1.000 -0,000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF 3

CCHV= ,200 CEHV= ,400

*SECNO 1.000

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	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

1.00	14.50	556.90	0.00	556.90	557.17	.27	0.00	0.00	553.40	
11800.	2154.	4986.	4660.	1736.	838.	1988.	0.	0.	552.80	
0.00	1.24	5.95	2.34	.140	.050	.070	0.000	542.40	61.32	
.001613	-0.	-0.	-0.	0	0	1	0.00	900.68	962.00	

*SECNO 2.000

2.00	14.51	556.91	0.00	0.00	557.18	.27	.01	.00	553.40	
11800.	2156.	4980.	4664.	1739.	839.	1992.	1.	0.	552.80	
.00	1.24	5.94	2.34	.140	.050	.070	.042	542.40	61.29	
.001606	5.	5.	5.	0	0	1	0.00	900.87	962.16	

*SECNO 3.000

3.00	14.52	556.92	0.00	0.00	557.19	.27	.01	.00	553.40	
11800.	2157.	4975.	4668.	1741.	840.	1996.	1.	0.	552.80	
.00	1.24	5.93	2.34	.140	.050	.070	.042	542.40	61.27	
.001599	5.	5.	5.	0	0	1	0.00	901.05	962.32	

*SECNO 4.000

4.00	14.53	556.93	0.00	0.00	557.19	.27	.01	.00	553.40	
11800.	2158.	4970.	4672.	1744.	840.	2000.	2.	0.	552.80	
.00	1.24	5.92	2.34	.140	.050	.070	.042	542.40	61.25	
.001593	5.	5.	5.	0	0	1	0.00	901.24	962.48	

*SECNO 700.000

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	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 500 YR NATURAL
 T3 BIG BEAVER-ISLAND CREEK

J1 ICHECK INO NINV IDIR STRT METRIC HVINS O WSEL FO
 -10, 4, -0, -0, -0,000000 -0,00 -0,0 -0, 558,700 -0,000
 J2 NPROF I PLOT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 15,000 -0,000 -1,000 -0,000 -0,000 -0,000 -0,000 -0,000 -0,000 -0,000

*PROF 4

GCHV= ,200 GEHV= ,400

*SECNO 1,000

SECNO	DEPTH	CWSEL	GRWS	WSELK	EG	HV	HL	LOSS	BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	
1,00	16,30	558,70	0,00	558,70	559,00	,30	0,00	0,00	553,40	
18400,	3680,	6372,	8348,	2381,	961,	2879,	0,	0,	552,80	
0,00	1,55	6,63	2,90	,140	,050	,070	0,000	542,40	56,09	
,001673	-0,	-0,	-0,	0	0	1	0,00	941,91	998,00	

*SECNO 2,000

2,00	16,31	558,71	0,00	0,00	559,01	,30	,01	,00	553,40	
18400,	3681,	6367,	8352,	2384,	961,	2884,	1,	0,	552,80	
,00	1,54	6,62	2,90	,140	,050	,070	,042	542,40	56,06	
,001667	5,	5,	5,	0	0	1	0,00	942,11	998,17	

*SECNO 3,000

3,00	16,32	558,72	0,00	0,00	559,02	,30	,01	,00	553,40	
18400,	3682,	6362,	8356,	2387,	962,	2888,	1,	0,	552,80	
,00	1,54	6,61	2,89	,140	,050	,070	,042	542,40	56,04	
,001661	5,	5,	5,	0	0	1	0,00	942,30	998,33	

*SECNO 4,000

4,00	16,33	558,73	0,00	0,00	559,03	,30	,01	,00	553,40	
18400,	3683,	6357,	8360,	2390,	963,	2892,	2,	0,	552,80	
,00	1,54	6,60	2,89	,140	,050	,070	,042	542,40	56,01	
,001655	5,	5,	5,	0	0	1	0,00	942,49	998,50	

*SECNO 700,000

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

FLOOD INSURANCE ZONE DATA FOR BIG BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		10'	20'	0,2'
1.000	0.	-1.9	-1.9	1.8
2.000	5.	-1.9	-1.9	1.8
3.000	10.	-1.9	-1.9	1.8
4.000	15.	-1.9	-1.9	1.8
700.000	715.	-1.5	-1.9	1.9
795.000	810.	-4.6	-1.5	3.3
805.000	820.	-4.9	-1.6	5.5
900.000	915.	-5.9	-1.9	5.4
1500.000	1515.	-5.8	-1.9	5.3
2200.000	2215.	-5.7	-1.9	5.2
3000.000	3015.	-5.4	-1.8	5.1
3300.000	3315.	-5.4	-1.8	5.1
3685.000	3700.	-5.0	-1.7	5.2
3690.000	3705.	-4.5	-1.5	5.9
3710.000	3725.	-4.9	-1.9	5.2
3715.000	3730.	-6.0	-2.3	3.5
3765.000	3780.	-6.0	-2.2	3.5
4700.000	4715.	-4.2	-2.0	3.4
5700.000	5715.	-3.6	-1.7	3.3
6400.000	6415.	-2.5	-1.4	3.1
7100.000	7115.	-1.4	-1.3	1.6
7700.000	7715.	-2.0	-1.6	1.4
9350.000	9365.	-2.3	-1.7	1.6
11350.000	11365.	-3.2	-1.9	2.0
12800.000	12815.	-3.0	-1.9	2.0
13085.000	13100.	-2.4	-1.9	2.1
13115.000	13130.	-2.9	-1.0	2.6
13235.000	13250.	-4.0	-1.3	3.3
13700.000	13715.	-4.0	-1.3	3.2
14188.000	14203.	-3.9	-1.2	2.9
14212.000	14227.	-3.9	-1.3	5.2
14320.000	14335.	-4.6	-1.5	4.1
14950.000	14965.	-4.6	-1.4	3.9
16450.000	16465.	-3.1	-1.0	2.1
17450.000	17465.	-4.1	-1.3	3.1
18400.000	18415.	-3.4	-1.0	2.3
19700.000	19715.	-4.0	-1.2	2.3
21000.000	21015.	-4.1	-1.3	2.7
22300.000	22315.	-4.2	-1.3	2.9
24500.000	24515.	-3.9	-1.3	2.8
WEIGHTED AVG FOR REACH		-3.7	-1.2	2.9

FHF FOR THE REACH = 035 WITH 69.0% OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH = A 7

INC NO.	TOTAL LENGTH	AVG ELEVATION DATA			WTD. AVG.	FHF	PERCENT WITHIN
		10'	1'	DIFF.			
	0.					SEC, 1.000	
1	122.	556,0	557,0	-1,0	-1,0	010	100,
	5.					SEC, 2,000	
	10.					SEC, 3,000	
	15.					SEC, 4,000	
2	244.	556,1	557,1	-1,0	-1,0	010	100,
3	366.	556,2	557,3	-1,2	-1,0	010	100,
4	488.	556,3	557,5	-1,3	-1,1	010	100,
5	610.	556,3	557,7	-1,4	-1,1	010	100,
	715.					SEC, 700,000	
6	732.	556,3	558,0	-1,7	-1,2	010	100,
	810.					SEC, 795,000	
	820.					SEC, 805,000	
7	854.	557,3	562,4	-5,1	-1,8	020	29,
	915.					SEC, 900,000	
8	976.	558,6	564,2	-5,6	-2,3	025	25,
9	1098.	559,5	565,4	-5,9	-2,7	025	11,
10	1220.	559,6	565,5	-5,9	-3,0	030	0,
11	1342.	559,7	565,5	-5,9	-3,3	035	0,
12	1464.	559,7	565,6	-5,8	-3,5	035	0,
	1515.					SEC, 1500,000	
13	1586.	559,8	565,6	-5,8	-3,7	035	0,
14	1708.	559,9	565,6	-5,8	-3,8	040	0,
15	1830.	559,9	565,7	-5,8	-3,9	040	0,
16	1952.	560,0	565,7	-5,7	-4,1	040	0,
17	2074.	560,1	565,8	-5,7	-4,1	040	6,
18	2196.	560,2	565,8	-5,7	-4,2	040	6,
	2215.					SEC, 2200,000	
19	2318.	560,2	565,9	-5,6	-4,3	045	5,
20	2440.	560,3	565,9	-5,6	-4,4	045	5,
21	2562.	560,4	566,0	-5,6	-4,4	045	5,
22	2684.	560,5	566,0	-5,5	-4,5	045	5,
23	2806.	560,6	566,1	-5,5	-4,5	045	9,
24	2928.	560,7	566,1	-5,4	-4,6	045	17,
	3015.					SEC, 3000,000	
25	3050.	560,7	566,1	-5,4	-4,6	045	24,
26	3172.	560,8	566,2	-5,4	-4,6	045	35,
27	3294.	560,8	566,2	-5,4	-4,7	045	41,
	3315.					SEC, 3300,000	
28	3416.	560,9	566,2	-5,3	-4,7	045	43,
29	3538.	561,0	566,2	-5,2	-4,7	045	48,
30	3660.	561,0	566,2	-5,1	-4,7	045	53,
	3700.					SEC, 3685,000	
	3705.					SEC, 3690,000	
	3725.					SEC, 3710,000	
	3730.					SEC, 3715,000	
	3780.					SEC, 3765,000	
31	3782.	562,3	568,2	-6,0	-4,7	045	55,
32	3904.	562,4	568,3	-5,8	-4,8	050	56,
33	4026.	562,7	568,3	-5,6	-4,8	050	61,
34	4148.	563,0	568,3	-5,4	-4,8	050	65,
35	4270.	563,2	568,4	-5,1	-4,8	050	66,
36	4392.	563,5	568,4	-4,9	-4,8	050	67,
37	4514.	563,8	568,5	-4,7	-4,8	050	68,
38	4636.	564,0	568,5	-4,4	-4,8	050	68,
	4715.					SEC, 4700,000	
39	4758.	564,3	568,5	-4,2	-4,8	050	67,
40	4880.	564,5	568,6	-4,1	-4,8	050	65,
41	5002.	564,6	568,6	-4,0	-4,8	050	66,
42	5124.	564,7	568,7	-4,0	-4,8	050	64,
43	5246.	564,9	568,8	-3,9	-4,7	045	63,
44	5368.	565,0	568,8	-3,8	-4,7	045	64,

45	5490.	565.1	568.9	-3.8	-4.7	045	62.
46	5612.	565.3	568.9	-3.7	-4.7	045	61.
	5715.					SEC, 5700.000	
47	5734.	565.4	569.0	-3.6	-4.6	045	60.
48	5856.	565.6	569.1	-3.5	-4.6	045	56.
49	5978.	565.9	569.1	-3.3	-4.6	045	51.
50	6100.	566.1	569.2	-3.1	-4.6	045	50.
51	6222.	566.4	569.3	-2.9	-4.5	045	47.
52	6344.	566.7	569.4	-2.7	-4.5	045	44.
	6415.					SEC, 6400.000	
53	6466.	567.0	569.5	-2.5	-4.5	045	43.
54	6588.	567.6	569.9	-2.3	-4.4	045	41.
55	6710.	568.3	570.4	-2.1	-4.4	045	35.
56	6832.	569.0	570.9	-1.9	-4.3	045	32.
57	6954.	569.7	571.4	-1.7	-4.3	045	30.
58	7076.	570.4	571.9	-1.5	-4.2	040	31.
	7115.					SEC, 7100.000	
59	7198.	571.0	572.4	-1.5	-4.2	040	29.
60	7320.	571.4	573.0	-1.5	-4.1	040	28.
61	7442.	571.8	573.5	-1.6	-4.1	040	25.
62	7564.	572.2	574.0	-1.8	-4.1	040	24.
63	7686.	572.7	574.5	-1.9	-4.0	040	24.
	7715.					SEC, 7700.000	
64	7808.	573.1	575.1	-2.0	-4.0	040	23.
65	7930.	573.6	575.6	-2.0	-4.0	040	23.
66	8052.	574.1	576.2	-2.0	-3.9	040	23.
67	8174.	574.7	576.7	-2.0	-3.9	040	22.
68	8296.	575.2	577.2	-2.1	-3.9	040	22.
69	8418.	575.7	577.8	-2.1	-3.9	040	22.
70	8540.	576.2	578.3	-2.1	-3.8	040	21.
71	8662.	576.8	578.9	-2.1	-3.8	040	21.
72	8784.	577.3	579.4	-2.1	-3.8	040	21.
73	8906.	577.8	580.0	-2.2	-3.8	040	21.
74	9028.	578.3	580.5	-2.2	-3.7	035	20.
75	9150.	578.8	581.1	-2.2	-3.7	035	20.
76	9272.	579.4	581.6	-2.2	-3.7	035	20.
	9365.					SEC, 9350.000	

ELEVATION-DIFFERENCE

BETWEEN BASE FLOOD AND

10# 2# 0.2#

WEIGHTED-AVG-FOR-REACH -3.7 -1.4 3.3

FHF FOR REACH 1 = 035 WITH 20% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A-7

77	9394.	579.9	582.2	-2.3	-2.3	025	100.
78	9516.	580.5	582.8	-2.3	-2.3	025	100.
79	9638.	581.2	583.6	-2.4	-2.3	025	100.
80	9760.	581.9	584.3	-2.4	-2.3	025	100.
81	9882.	582.6	585.0	-2.5	-2.4	025	100.
82	10004.	583.2	585.8	-2.5	-2.4	025	100.
83	10126.	583.9	586.5	-2.6	-2.4	025	100.
84	10248.	584.6	587.3	-2.7	-2.5	025	100.
85	10370.	585.3	588.0	-2.7	-2.5	025	100.
86	10492.	586.0	588.7	-2.8	-2.5	025	100.
87	10614.	586.6	589.5	-2.8	-2.5	025	100.
88	10736.	587.3	590.2	-2.9	-2.6	025	100.
89	10858.	588.0	590.9	-3.0	-2.6	025	100.
90	10980.	588.7	591.7	-3.0	-2.6	025	100.
91	11102.	589.3	592.4	-3.1	-2.7	025	100.
92	11224.	590.0	593.2	-3.1	-2.7	025	100.
93	11346.	590.7	593.9	-3.2	-2.7	025	100.
	11365.					SEC, 11350.000	
94	11468.	591.4	594.6	-3.2	-2.7	025	100.

364

95	11590.	592.1	595.3	-3.2	-2.8	030	100.
96	11712.	592.8	596.0	-3.2	-2.8	030	100.
97	11834.	593.5	596.7	-3.2	-2.8	030	100.
98	11956.	594.3	597.4	-3.2	-2.8	030	100.
99	12078.	595.0	598.1	-3.2	-2.8	030	100.
100	12200.	595.7	598.8	-3.1	-2.9	030	100.
101	12322.	596.4	599.5	-3.1	-2.9	030	100.
102	12444.	597.1	600.2	-3.1	-2.9	030	100.
103	12566.	597.8	600.9	-3.1	-2.9	030	100.
104	12688.	598.6	601.6	-3.1	-2.9	030	100.
105	12810.	599.3	602.3	-3.1	-2.9	030	100.
	12815.					SEC, 12800,000	
106	12932.	600.0	602.9	-2.9	-2.9	030	100.
107	13054.	600.6	603.2	-2.6	-2.9	030	100.
	13100.					SEC, 13085,000	
	13130.					SEC, 13115,000	
108	13176.	601.9	605.0	-3.1	-2.9	030	100.
	13250.					SEC, 13235,000	
109	13298.	602.7	606.4	-3.7	-2.9	030	100.
110	13420.	603.4	607.4	-4.0	-3.0	030	99.
111	13542.	603.5	607.5	-4.0	-3.0	030	98.
112	13664.	603.7	607.7	-4.0	-3.0	030	99.
	13715.					SEC, 13700,000	
113	13786.	603.9	607.9	-4.0	-3.0	030	100.
114	13908.	604.2	608.1	-3.9	-3.1	030	100.
115	14030.	604.5	608.4	-3.9	-3.1	030	100.
116	14152.	604.7	608.7	-3.9	-3.1	030	100.
	14203.					SEC, 14188,000	
	14227.					SEC, 14212,000	
117	14274.	605.1	609.2	-4.1	-3.1	030	100.
	14335.					SEC, 14320,000	
118	14396.	605.4	609.7	-4.4	-3.2	030	99.
119	14518.	605.5	610.1	-4.6	-3.2	030	98.
120	14640.	605.6	610.2	-4.6	-3.2	030	98.
121	14762.	605.6	610.2	-4.6	-3.3	035	96.
122	14884.	605.7	610.3	-4.6	-3.3	035	94.
	14965.					SEC, 14950,000	
123	15006.	606.0	610.6	-4.6	-3.3	035	93.
124	15128.	607.0	611.5	-4.5	-3.3	035	92.
125	15250.	608.4	612.7	-4.4	-3.4	035	91.
126	15372.	609.8	614.0	-4.3	-3.4	035	90.
127	15494.	611.2	615.3	-4.1	-3.4	035	91.
128	15616.	612.6	616.6	-4.0	-3.4	035	92.
129	15738.	614.0	617.9	-3.9	-3.4	035	92.
130	15860.	615.4	619.2	-3.8	-3.4	035	92.
131	15982.	616.8	620.5	-3.6	-3.4	035	92.
132	16104.	618.3	621.8	-3.5	-3.4	035	92.
133	16226.	619.7	623.1	-3.4	-3.4	035	92.
134	16348.	621.1	624.4	-3.3	-3.4	035	93.
	16465.					SEC, 16450,000	
135	16470.	622.5	625.7	-3.2	-3.4	035	93.
136	16592.	623.7	626.9	-3.2	-3.4	035	93.
137	16714.	624.7	628.0	-3.3	-3.4	035	93.
138	16836.	625.8	629.2	-3.4	-3.4	035	93.
139	16958.	626.8	630.4	-3.6	-3.4	035	93.
140	17080.	627.8	631.5	-3.7	-3.4	035	93.
141	17202.	628.9	632.7	-3.8	-3.4	035	93.
142	17324.	629.9	633.8	-3.9	-3.4	035	92.
143	17446.	630.9	635.0	-4.1	-3.4	035	92.
	17465.					SEC, 17450,000	
144	17568.	632.2	636.3	-4.1	-3.4	035	92.
145	17690.	633.7	637.7	-4.0	-3.5	035	92.
146	17812.	635.2	639.1	-3.9	-3.5	035	92.
147	17934.	636.8	640.6	-3.8	-3.5	035	93.
148	18056.	638.3	642.0	-3.7	-3.5	035	93.
149	18178.	639.8	643.5	-3.6	-3.5	035	93.

CONTINUED FROM PREVIOUS PAGE

150	18300,	641,4	644,9	-3,5	-3,5	035	93,
	18415,						
151	18422,	642,9	646,4	-3,5	-3,5	035	93,
152	18544,	644,0	647,5	-3,4	-3,5	035	93,
153	18666,	644,8	648,3	-3,5	-3,5	035	93,
154	18788,	645,5	649,1	-3,6	-3,5	035	93,
155	18910,	646,3	649,9	-3,6	-3,5	035	93,
156	19032,	647,0	650,7	-3,7	-3,5	035	93,
157	19154,	647,7	651,5	-3,7	-3,5	035	92,
158	19276,	648,5	652,3	-3,8	-3,5	035	92,
159	19398,	649,2	653,1	-3,9	-3,5	035	92,
160	19520,	650,0	653,9	-3,9	-3,5	035	93,
161	19642,	650,7	654,7	-4,0	-3,5	035	93,
	19715,						
162	19764,	651,4	655,4	-4,0	-3,5	035	93,
163	19886,	651,8	655,9	-4,0	-3,5	035	93,
164	20008,	652,1	656,2	-4,1	-3,5	035	93,
165	20130,	652,5	656,5	-4,1	-3,5	035	93,
166	20252,	652,8	656,8	-4,1	-3,5	035	93,
167	20374,	653,1	657,2	-4,1	-3,5	035	93,
168	20496,	653,4	657,5	-4,1	-3,5	035	93,
169	20618,	653,8	657,8	-4,1	-3,5	035	93,
170	20740,	654,1	658,2	-4,1	-3,6	035	93,
171	20862,	654,4	658,5	-4,1	-3,6	035	93,
172	20984,	654,7	658,8	-4,1	-3,6	035	93,
	21015,						
173	21106,	655,0	659,1	-4,1	-3,6	035	94,
174	21228,	655,3	659,4	-4,1	-3,6	035	95,
175	21350,	655,6	659,8	-4,1	-3,6	035	95,
176	21472,	655,9	660,1	-4,1	-3,6	035	95,
177	21594,	656,2	660,4	-4,2	-3,6	035	96,
178	21716,	656,5	660,7	-4,2	-3,6	035	96,
179	21838,	656,8	661,0	-4,2	-3,6	035	96,
180	21960,	657,1	661,3	-4,2	-3,6	035	96,
181	22082,	657,4	661,6	-4,2	-3,6	035	96,
182	22204,	657,7	661,9	-4,2	-3,6	035	96,
	22315,						
183	22326,	658,0	662,2	-4,2	-3,6	035	96,
184	22448,	658,2	662,5	-4,2	-3,6	035	96,
185	22570,	658,4	662,7	-4,2	-3,6	035	96,
186	22692,	658,6	662,8	-4,2	-3,6	035	96,
187	22814,	658,9	663,0	-4,2	-3,6	035	95,
188	22936,	659,1	663,2	-4,2	-3,7	035	95,
189	23058,	659,3	663,4	-4,1	-3,7	035	95,
190	23180,	659,5	663,6	-4,1	-3,7	035	95,
191	23302,	659,7	663,8	-4,1	-3,7	035	95,
192	23424,	659,9	664,0	-4,1	-3,7	035	95,
193	23546,	660,1	664,2	-4,1	-3,7	035	95,
194	23668,	660,3	664,4	-4,1	-3,7	035	95,
195	23790,	660,5	664,6	-4,0	-3,7	035	95,
196	23912,	660,7	664,8	-4,0	-3,7	035	95,
197	24034,	660,9	665,0	-4,0	-3,7	035	95,
198	24156,	661,2	665,2	-4,0	-3,7	035	95,
199	24278,	661,4	665,3	-4,0	-3,7	035	95,
200	24400,	661,6	665,5	-4,0	-3,7	035	95,
	24515,						

SEC. 18400,000

SEC. 19700,000

SEC. 21000,000

SEC. 22300,000

SEC. 24500,000

124
 ELEVATION DIFFERENCE
 BETWEEN BASE FLOOD AND
 10# 2# 0,2#
 WEIGHTED AVG FOR REACH -3,7 -1,1 2,6

FHF FOR REACH - 2 - 035 WITH 95% OF THE REACH WITHIN 1,0 FEET
 ZONE FOR THE REACH = A 7

420
 3.8

SUMMARY PRINTOUT

BIG BEAVER ISLAND CREEK

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
1.00	556.00	556.10	3.51	.10	5700.00	-0.00	63.93	944.00	880.07
1.00	556.00	556.28	5.85	.28	9500.00	-0.00	63.93	944.00	880.07
1.00	556.90	557.17	5.95	.27	11800.00	-0.00	61.32	962.00	900.68
1.00	558.70	559.00	6.63	.30	18400.00	-0.00	56.09	998.00	941.91
2.00	556.00	556.10	3.51	.10	5700.00	5.00	63.92	944.06	880.14
2.00	556.01	556.29	5.84	.28	9500.00	5.00	63.91	944.17	880.27
2.00	556.91	557.18	5.94	.27	11800.00	5.00	61.29	962.16	900.87
2.00	558.71	559.01	6.62	.30	18400.00	5.00	56.06	998.17	942.11
3.00	556.01	556.11	3.50	.10	5700.00	5.00	63.91	944.12	880.21
3.00	556.02	556.30	5.83	.28	9500.00	5.00	63.88	944.34	880.46
3.00	556.92	557.19	5.93	.27	11800.00	5.00	61.27	962.32	901.05
3.00	558.72	559.02	6.61	.30	18400.00	5.00	56.04	998.33	942.30
4.00	556.01	556.11	3.50	.10	5700.00	5.00	63.90	944.19	880.28
4.00	556.03	556.31	5.81	.28	9500.00	5.00	63.86	944.52	880.66
4.00	556.93	557.19	5.92	.27	11800.00	5.00	61.25	962.48	901.24
4.00	558.73	559.03	6.60	.30	18400.00	5.00	56.01	998.50	942.49
700.00	556.42	556.50	3.19	.08	5700.00	700.00	62.72	952.36	889.65
700.00	557.05	557.21	4.64	.16	9500.00	700.00	60.88	964.99	904.11
700.00	557.91	558.08	4.89	.17	11800.00	700.00	58.40	982.10	923.70
700.00	559.77	559.97	5.60	.21	18400.00	700.00	52.99	1002.23	949.24
* 795.00	555.29	558.73	14.87	3.43	5700.00	95.00	434.55	491.45	56.89
* 795.00	558.33	562.56	16.51	4.23	9500.00	95.00	428.18	497.82	69.63
* 795.00	559.86	564.44	17.18	4.58	11800.00	95.00	424.97	501.03	76.06
* 795.00	563.17	568.86	19.13	5.68	18400.00	95.00	419.00	507.00	88.00
805.00	556.79	559.04	12.05	2.25	5700.00	10.00	431.42	494.58	63.17
805.00	560.11	562.92	13.45	2.81	9500.00	10.00	424.43	501.57	77.13
805.00	561.70	564.81	14.16	3.11	11800.00	10.00	421.12	504.88	83.77
805.00	567.15	570.21	14.02	3.05	18400.00	10.00	419.00	507.00	88.00
900.00	559.47	559.59	3.64	.12	5700.00	95.00	59.67	973.36	913.69
900.00	563.46	563.55	3.54	.09	9500.00	95.00	48.05	1006.15	958.10
900.00	565.41	565.49	3.60	.08	11800.00	95.00	42.40	1211.68	1100.09
900.00	570.80	570.86	3.39	.06	18400.00	95.00	26.73	1361.34	1334.61
1500.00	559.77	559.88	3.47	.10	5700.00	600.00	58.77	979.50	920.72
1500.00	563.67	563.75	3.46	.08	9500.00	600.00	47.45	1006.63	959.18
1500.00	565.60	565.68	3.53	.08	11800.00	600.00	41.85	1222.16	1133.24
1500.00	570.92	570.98	3.35	.06	18400.00	600.00	26.40	1363.17	1336.77
2200.00	560.20	560.39	4.58	.18	5700.00	700.00	542.85	1212.73	669.88
2200.00	563.97	564.10	4.40	.14	9500.00	700.00	251.51	1223.37	971.86
2200.00	565.86	565.98	4.37	.12	11800.00	700.00	170.76	1228.72	1057.96
2200.00	571.08	571.18	4.16	.09	18400.00	700.00	67.65	1243.48	1175.84
3000.00	560.76	560.81	2.55	.05	5700.00	800.00	535.07	1214.31	679.24
3000.00	564.32	564.36	2.34	.04	9500.00	800.00	235.34	1224.37	989.03
3000.00	566.16	566.20	2.26	.04	11800.00	800.00	159.25	1229.57	1070.31
3000.00	571.28	571.30	2.04	.03	18400.00	800.00	65.80	1244.03	1178.23

CONTINUED ON REVERSE SIDE OF FORM 112

SECNO	CWSEL	EG	VCH	HV	O	XLCH	SSTA	ENDST	TOPWID
3300.00	560.83	560.97	3.86	.13	5700.00	300.00	970.63	1522.85	552.22
3300.00	564.36	564.45	3.43	.09	9500.00	300.00	910.86	1536.08	625.22
3300.00	566.19	566.27	3.29	.09	11800.00	300.00	726.81	1539.97	813.16
3300.00	571.29	571.34	2.70	.05	18400.00	300.00	356.96	1606.30	1249.34
3685.00	561.12	561.54	5.18	.42	5700.00	385.00	1000.00	1100.22	185.41
3685.00	564.41	564.89	5.56	.48	9500.00	385.00	1000.00	1100.40	185.79
3685.00	566.15	566.67	5.80	.52	11800.00	385.00	1000.00	1100.50	185.99
3685.00	571.35	571.41	2.43	.07	18400.00	385.00	360.93	1751.71	1147.37
3690.00	560.71	561.86	8.62	1.15	5700.00	5.00	1000.00	1430.00	80.00
3690.00	563.68	565.41	10.57	1.73	9500.00	5.00	1000.00	1430.00	80.00
3690.00	565.19	567.36	11.82	2.17	11800.00	5.00	1000.00	1430.00	80.00
3690.00	571.13	571.56	5.20	.43	18400.00	5.00	593.95	1613.83	1019.88
3710.00	561.14	562.18	8.19	1.04	5700.00	20.00	1000.00	1430.00	80.00
3710.00	564.15	565.75	10.14	1.60	9500.00	20.00	1000.00	1430.00	80.00
3710.00	566.05	567.89	10.88	1.84	11800.00	20.00	1000.00	1430.00	80.00
3710.00	571.29	571.67	5.34	.38	18400.00	20.00	586.95	1616.74	1029.79
3715.00	562.18	562.37	3.51	.19	5700.00	5.00	1000.00	1246.12	379.41
3715.00	565.91	566.05	3.06	.15	9500.00	5.00	1000.00	1430.00	430.00
3715.00	568.20	568.25	2.13	.06	11800.00	5.00	534.78	1430.00	895.22
3715.00	571.70	571.74	1.85	.04	18400.00	5.00	478.52	1693.85	1215.33
3765.00	562.27	562.51	4.21	.24	5700.00	50.00	734.24	1245.13	510.88
3765.00	566.06	566.10	1.91	.04	9500.00	50.00	578.96	1650.45	1071.50
3765.00	568.24	568.27	1.72	.03	11800.00	50.00	535.34	1667.22	1131.88
3765.00	571.71	571.75	1.83	.04	18400.00	50.00	478.32	1693.93	1215.61
4700.00	564.35	564.45	2.68	.10	3700.00	935.00	725.52	1241.28	515.76
4700.00	566.53	566.64	2.95	.11	6700.00	935.00	614.52	1242.98	628.46
4700.00	568.53	568.62	2.63	.08	8400.00	935.00	568.02	1244.53	676.51
4700.00	571.94	572.02	2.67	.08	13200.00	935.00	508.78	1247.18	738.40
5700.00	565.43	565.47	2.63	.04	3700.00	1000.00	399.64	1459.30	1059.67
5700.00	567.35	567.39	2.38	.04	6700.00	1000.00	359.46	1481.79	1122.33
5700.00	569.02	569.05	1.99	.03	8400.00	1000.00	329.76	1492.12	1162.36
5700.00	572.28	572.30	1.82	.02	13200.00	1000.00	278.45	1509.71	1231.26
6400.00	566.94	567.53	7.93	.58	3700.00	700.00	450.59	1439.35	941.10
6400.00	568.08	568.48	7.73	.40	6700.00	700.00	411.63	1454.61	1023.13
6400.00	569.43	569.62	5.79	.19	8400.00	700.00	375.75	1472.74	1096.99
6400.00	572.50	572.60	4.36	.10	13200.00	700.00	321.26	1495.07	1173.81
7100.00	570.95	571.10	4.37	.14	3700.00	700.00	868.24	1523.65	655.41
7100.00	572.05	572.26	5.48	.21	6700.00	700.00	851.77	1543.61	691.83
7100.00	572.33	572.60	6.32	.27	8400.00	700.00	847.41	1548.89	701.48
7100.00	573.96	574.25	6.68	.28	13200.00	700.00	823.06	1595.97	772.91
7700.00	572.95	573.18	5.33	.23	3700.00	600.00	875.41	1514.73	611.97
7700.00	574.32	574.56	5.87	.24	6700.00	600.00	855.17	1539.49	684.32
7700.00	574.93	575.18	6.17	.26	8400.00	600.00	846.08	1550.81	704.73
7700.00	576.37	576.66	6.83	.30	13200.00	600.00	824.61	1592.92	768.31

SFCNO	CWSFL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
9350.00	580.03	580.47	5.97	.43	3700.00	1650.00	354.08	668.22	314.14
9350.00	581.59	582.14	7.21	.56	6700.00	1650.00	324.86	671.55	346.70
9350.00	582.29	582.90	7.71	.61	8400.00	1650.00	311.37	672.59	361.22
9350.00	583.90	584.65	8.83	.75	13200.00	1650.00	259.96	674.91	414.96
11350.00	591.15	592.10	7.88	.95	3700.00	2000.00	501.11	657.33	156.21
11350.00	593.47	594.67	9.45	1.21	6700.00	2000.00	452.78	773.33	320.55
11350.00	594.38	595.66	10.03	1.27	8400.00	2000.00	433.70	819.12	385.42
11350.00	596.34	597.67	11.07	1.33	13200.00	2000.00	392.18	903.42	511.25
12800.00	599.65	600.10	6.14	.45	3700.00	1450.00	199.12	563.87	364.75
12800.00	601.79	602.23	6.77	.44	6700.00	1450.00	164.57	606.06	441.49
12800.00	602.70	603.15	7.09	.45	8400.00	1450.00	149.73	613.95	464.22
12800.00	604.67	605.18	7.98	.51	13200.00	1450.00	128.66	629.52	500.87
13085.00	601.17	602.75	10.08	1.58	3700.00	285.00	300.00	395.25	95.25
13085.00	602.70	605.33	13.00	2.62	6700.00	285.00	300.00	398.92	98.92
13085.00	603.58	606.59	13.94	3.02	8400.00	285.00	300.00	401.00	101.00
13085.00	605.67	609.70	16.11	4.03	13200.00	285.00	300.00	406.03	106.03
13115.00	601.55	602.86	9.19	1.31	3700.00	30.00	300.00	396.14	96.14
13115.00	603.45	605.45	11.35	2.00	6700.00	30.00	300.00	400.71	100.71
13115.00	604.45	606.74	12.14	2.29	8400.00	30.00	300.00	403.10	103.10
13115.00	607.08	609.95	13.59	2.87	13200.00	30.00	300.00	409.40	109.40
13235.00	603.20	603.39	4.33	.19	3700.00	120.00	166.12	605.22	439.11
13235.00	605.91	606.12	4.97	.21	6700.00	120.00	130.04	627.56	497.52
13235.00	607.23	607.45	5.19	.21	8400.00	120.00	123.04	637.51	514.48
13235.00	610.52	610.74	5.62	.22	13200.00	120.00	105.69	666.21	560.52
13700.00	603.85	604.20	6.00	.44	3700.00	465.00	187.96	581.17	393.21
13700.00	606.52	606.97	6.76	.46	6700.00	465.00	137.43	616.60	479.17
13700.00	607.81	608.26	6.97	.45	8400.00	465.00	130.56	626.83	496.27
13700.00	611.02	611.45	7.38	.43	13200.00	465.00	113.61	651.21	537.61
14188.00	605.01	605.35	4.66	.34	3700.00	488.00	178.10	266.10	88.00
14188.00	607.68	608.32	6.44	.64	6700.00	488.00	173.68	270.52	96.83
14188.00	608.91	609.73	7.23	.81	8400.00	488.00	171.63	272.57	100.93
14188.00	611.84	613.10	9.02	1.26	13200.00	488.00	170.50	273.70	103.20
14212.00	605.03	605.48	5.41	.45	3700.00	24.00	155.94	231.67	75.74
14212.00	607.72	608.58	7.46	.86	6700.00	24.00	152.11	235.50	83.39
14212.00	608.97	610.06	8.36	1.09	8400.00	24.00	150.33	237.28	86.95
14212.00	614.14	614.43	5.29	.29	13200.00	24.00	37.44	447.03	409.59
14320.00	605.47	605.66	3.59	.19	3700.00	108.00	199.77	458.36	258.59
14320.00	608.56	608.85	4.62	.29	6700.00	108.00	184.34	481.35	297.02
14320.00	610.03	610.37	5.04	.34	8400.00	108.00	162.28	491.10	328.82
14320.00	614.17	614.56	5.67	.39	13200.00	108.00	117.62	562.63	441.40
14950.00	605.78	607.64	11.32	1.86	3700.00	630.00	49.48	156.68	107.20
14950.00	608.94	610.84	11.85	1.90	6700.00	630.00	43.62	174.58	130.95
14950.00	610.38	612.38	12.34	2.01	8400.00	630.00	40.97	182.68	141.72
14950.00	614.32	616.37	12.87	2.05	13200.00	630.00	33.66	203.93	170.27

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
16450.00	623.15	623.89	7.36	.74	3700.00	1500.00	45.11	170.04	124.94
16450.00	625.23	626.56	10.01	1.33	6700.00	1500.00	41.24	181.86	140.63
16450.00	626.25	627.87	11.15	1.62	8400.00	1500.00	39.35	187.62	148.27
16450.00	628.39	630.87	14.04	2.48	13200.00	1500.00	35.39	200.67	165.28
17450.00	631.60	632.90	9.56	1.30	3700.00	1000.00	47.95	161.36	113.42
17450.00	634.46	636.10	11.04	1.63	6700.00	1000.00	42.66	177.52	134.87
17450.00	635.75	637.58	11.80	1.83	8400.00	1000.00	40.28	184.80	144.52
17450.00	638.87	641.11	13.40	2.24	13200.00	1000.00	34.48	202.38	167.90
18400.00	643.63	644.89	9.04	1.26	3300.00	950.00	227.87	342.43	83.94
18400.00	646.00	647.90	11.50	1.89	6100.00	950.00	206.25	400.22	190.65
18400.00	647.04	649.08	12.32	2.04	7800.00	950.00	197.22	418.91	221.69
18400.00	649.34	651.43	13.39	2.09	12400.00	950.00	178.69	442.42	263.72
19700.00	651.52	651.98	5.71	.45	3300.00	1300.00	201.61	409.46	207.85
19700.00	654.39	654.89	6.54	.50	6100.00	1300.00	178.29	442.60	264.31
19700.00	655.57	656.11	7.05	.54	7800.00	1300.00	168.82	446.77	277.95
19700.00	657.89	658.58	8.35	.69	12400.00	1300.00	150.09	455.03	304.94
21000.00	654.97	655.29	4.83	.32	3300.00	1300.00	217.27	417.23	199.96
21000.00	657.78	658.20	5.92	.42	6100.00	1300.00	191.83	426.60	234.77
21000.00	659.06	659.54	6.45	.48	7800.00	1300.00	181.14	430.88	249.74
21000.00	661.80	662.41	7.62	.61	12400.00	1300.00	158.34	444.09	285.75
22300.00	658.10	658.55	5.57	.45	3300.00	1300.00	225.43	414.34	188.91
22300.00	661.00	661.54	6.59	.54	6100.00	1300.00	198.37	423.98	225.61
22300.00	662.34	662.93	7.04	.59	7800.00	1300.00	187.14	428.48	241.34
22300.00	665.26	665.96	8.04	.70	12400.00	1300.00	162.81	438.64	275.83
24500.00	661.88	662.02	3.54	.14	3300.00	2200.00	1161.70	1679.92	518.22
24500.00	664.56	664.68	3.80	.13	6100.00	2200.00	1078.71	1793.71	715.00
24500.00	665.82	665.94	3.89	.12	7800.00	2200.00	1039.51	1847.44	807.93
24500.00	668.61	668.72	4.05	.11	12400.00	2200.00	952.95	1966.12	1013.17

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 6400.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 6400.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR-CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

FNF -

~~3/17/76~~ 3/17/76

C FPM BIG BEAVER ISLAND FIS
 1 FPM BR MADISON-MAYODAN FIS
 T2 10 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FO
	-10.	6.	-0.	-0.	-0.000000	+0.00	-0.0	-0.	556.000	-0.000

J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1.000	+0.000	-1.000	-0.000	+0.000	+0.000	-0.000	-0.000	+0.000	+0.000

J3	39,000	53,000	54,000	4,000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685-20 TRIALS-USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

NORFOLK SOUTHERN RR SECTION B-11

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.14	2.50	+0.00	4.00	+0.00	923.00	-2.10	542.70	542.70

6070 LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 558.725 ELLC= 562.700 PCWSE= 555.294 ELTRD= 572.400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	560.90	560.90	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	560.99	560.99	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	561.14	561.14	0.00

*** SECTION B-1 ***

3685-20 TRIALS-USED WSEL,CWSEL

COMPUTER INPUTS BY HOOD BUSINESS FORMS, INC.

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 50 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FO
	-10.	5.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.000	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIN	ITRACE
	2.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

*** NORFOLK SOUTHERN RR SECTION B-11 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	0.00	1.14	2.50	0.00	4.00	0.00	923.00	2.10	542.70	542.70

6070, LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 562,561 ELLC= 562,700 PCWSE= 558,327 ELTRD= 572,400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	563.87	563.87	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	563.97	563.97	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	564.15	564.15	0.00

*** SECTION B-1 ***

*** SECTION B-2 ***

CONTINUED FROM PREVIOUS PAGE

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1 ICHECK INO NJNV IDIR STRT METRIC HVINS 0 WSEL FO
 -10. 2. -0. -0. -0.00000 -0.00 -0.0 -0. 556.900 -0.000

J2 NPROF IPLOT PRFVS XSECV XSECH FN ALLDC JBW CHNIM ITRACE
 3.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

*** NORFOLK SOUTHER RR SECTION B-11 ***

SPECIAL BRIDGE

SB XK XKOR COFO RDLEN BWC BWP BAREA SS ELCHU ELCHD
 -0.00 1.14 2.50 -0.00 4.00 -0.00 923.00 2.10 542.70 542.70

6070, LOW FLOW BY NORMAL BRIDGE

EGPRS= 562.751 EGLWC= 564.441 ELLC= 562.700 PCWSE= 559.858 ELTRD= 572.400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	565.67	565.67	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	565.82	565.82	0.00
3810 HT IS-	3995.00	-564.70	-564.70	564.70	0.00	1040.00	566.06	566.06	0.00

*** SECTION B-1 ***

*** SECTION B-2 ***

CONRADUS INTERNATIONAL INC. 10001 MARKET ROAD, INC.

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FFM BR MADISON-MAYODAN FIS
 T2 500 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10.	4.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	558.700	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15,000	-0,000	-1,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

NORFOLK SOUTHERN RR SECTION B-11

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.14	2.50	0.00	4.00	0.00	923.00	2.10	542.70	542.70

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

*** SECTION B-1 ***

*** SECTION B-2 ***

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 13085,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 13085,000

FLOOD INSURANCE ZONE DATA FOR BIG BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		10'	20'	0, 2'
1.000	0.	-0.9	-0.9	1.8
2.000	5.	-0.9	-0.9	1.8
3.000	10.	-0.9	-0.9	1.8
4.000	15.	-0.9	-0.9	1.8
700.000	715.	-1.5	-0.9	1.0
795.000	810.	-4.6	-1.5	3.3
805.000	820.	-4.9	-1.6	5.5
900.000	915.	-5.9	-1.9	5.4
1500.000	1515.	-5.8	-1.9	5.3
2200.000	2215.	-5.7	-1.9	5.2
3000.000	3015.	-5.4	-1.8	5.1
3300.000	3315.	-5.4	-1.8	5.1
3685.000	3700.	-5.0	-1.7	5.2
3690.000	3705.	-4.5	-1.5	5.9
3710.000	3725.	-4.9	-1.9	5.2
3715.000	3730.	-6.0	-2.3	3.5
3765.000	3780.	-6.0	-2.2	3.5
4700.000	4715.	-4.2	-2.0	3.4
5700.000	5715.	-3.6	-1.7	3.3
6400.000	6415.	-2.5	-1.4	3.1
7100.000	7115.	-1.4	-0.3	1.6
7700.000	7715.	-2.0	-0.6	1.4
9350.000	9365.	-2.3	-0.7	1.6
11350.000	11365.	-3.2	-0.9	2.0
12800.000	12815.	-3.0	-0.9	2.0
13085.000	13100.	-2.4	-0.9	2.1
13115.000	13130.	-2.9	-1.0	2.6
13235.000	13250.	-4.0	-1.3	3.3
13700.000	13715.	-4.0	-1.3	3.2
14188.000	14203.	-3.9	-1.2	2.9
14212.000	14227.	-3.9	-1.3	5.2
14320.000	14335.	-4.6	-1.5	4.1
14950.000	14965.	-4.6	-1.4	3.9
16450.000	16465.	-3.1	-1.0	2.1
17450.000	17465.	-4.1	-1.3	3.1
18400.000	18415.	-3.4	-1.0	2.3
19700.000	19715.	-4.0	-1.2	2.3
21000.000	21015.	-4.1	-1.3	2.7
22300.000	22315.	-4.2	-1.3	2.9
24500.000	24515.	-3.9	-1.3	2.8
WEIGHTED AVG FOR REACH		-3.7	-1.2	2.9

FHF FOR THE REACH = 0.35 WITH 69.0% OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH = A 7

INC NO.	TOTAL LENGTH	AVG ELEVATION DATA 10'	AVG ELEVATION DATA 1'	DATA DIFF.	WTD. AVG.	FHF	PERCENT WITHIN
	0.					SEC.	1.000
1	122.	556.0	557.0	-1.0	-1.0	010	100.
	5.					SEC.	2.000
	10.					SEC.	3.000
	15.					SEC.	4.000
2	244.	556.1	557.1	-1.0	-1.0	010	100.
3	366.	556.2	557.3	-1.2	-1.0	010	100.
4	488.	556.3	557.5	-1.3	-1.1	010	100.
5	610.	556.3	557.7	-1.4	-1.1	010	100.
	715.					SEC.	700.000
6	732.	556.3	558.0	-1.7	-1.2	010	100.
	810.					SEC.	795.000
	820.					SEC.	805.000
7	854.	557.3	562.4	-5.1	-1.8	020	29.
	915.					SEC.	900.000
8	976.	558.6	564.2	-5.6	-2.3	025	25.
9	1098.	559.5	565.4	-5.9	-2.7	025	11.
10	1220.	559.6	565.5	-5.9	-3.0	030	0.
11	1342.	559.7	565.5	-5.9	-3.3	035	0.
12	1464.	559.7	565.6	-5.8	-3.5	035	0.
	1515.					SEC.	1500.000
13	1586.	559.8	565.6	-5.8	-3.7	035	0.
14	1708.	559.9	565.6	-5.8	-3.8	040	0.
15	1830.	559.9	565.7	-5.8	-3.9	040	0.
16	1952.	560.0	565.7	-5.7	-4.1	040	0.
17	2074.	560.1	565.8	-5.7	-4.1	040	6.
18	2196.	560.2	565.8	-5.7	-4.2	040	6.
	2215.					SEC.	2200.000
19	2318.	560.2	565.9	-5.6	-4.3	045	5.
20	2440.	560.3	565.9	-5.6	-4.4	045	5.
21	2562.	560.4	566.0	-5.6	-4.4	045	5.
22	2684.	560.5	566.0	-5.5	-4.5	045	5.
23	2806.	560.6	566.1	-5.5	-4.5	045	9.
24	2928.	560.7	566.1	-5.4	-4.6	045	17.
	3015.					SEC.	3000.000
25	3050.	560.7	566.1	-5.4	-4.6	045	24.
26	3172.	560.8	566.2	-5.4	-4.6	045	35.
27	3294.	560.8	566.2	-5.4	-4.7	045	41.
	3315.					SEC.	3300.000
28	3416.	560.9	566.2	-5.3	-4.7	045	43.
29	3538.	561.0	566.2	-5.2	-4.7	045	48.
30	3660.	561.0	566.2	-5.1	-4.7	045	53.
	3700.					SEC.	3685.000
	3705.					SEC.	3690.000
	3725.					SEC.	3710.000
	3730.					SEC.	3715.000
	3780.					SEC.	3765.000
31	3782.	562.3	568.2	-6.0	-4.7	045	55.
32	3904.	562.4	568.3	-5.8	-4.8	050	56.
33	4026.	562.7	568.3	-5.6	-4.8	050	61.
34	4148.	563.0	568.3	-5.4	-4.8	050	65.
35	4270.	563.2	568.4	-5.1	-4.8	050	66.
36	4392.	563.5	568.4	-4.9	-4.8	050	67.
37	4514.	563.8	568.5	-4.7	-4.8	050	68.
38	4636.	564.0	568.5	-4.4	-4.8	050	68.
	4715.					SEC.	4700.000
39	4758.	564.3	568.5	-4.2	-4.8	050	67.
40	4880.	564.5	568.6	-4.1	-4.8	050	65.
41	5002.	564.6	568.6	-4.0	-4.8	050	66.
42	5124.	564.7	568.7	-4.0	-4.8	050	64.
43	5246.	564.9	568.8	-3.9	-4.7	045	63.

CONTINUED FROM PREVIOUS PAGE
 THE BUREAU OF REVENUE

44	5308.	505.0	508.0	-3.0	-4.7	045	64.
45	5490.	565.1	568.9	-3.8	-4.7	045	62.
46	5612.	505.3	568.9	-3.7	-4.7	045	61.
	5715.					SEC, 5700,000	
47	5734.	565.4	569.0	-3.6	-4.6	045	60.
48	5856.	565.6	569.1	-3.5	-4.6	045	56.
49	5978.	565.9	569.1	-3.3	-4.6	045	51.
50	6100.	566.1	569.2	-3.1	-4.6	045	50.
51	6222.	566.4	569.3	-2.9	-4.5	045	47.
52	6344.	566.7	569.4	-2.7	-4.5	045	44.
	6415.					SEC, 6400,000	
53	6466.	567.0	569.5	-2.5	-4.5	045	43.
54	6588.	567.6	569.9	-2.3	-4.4	045	41.
55	6710.	568.3	570.4	-2.1	-4.4	045	35.
56	6832.	569.0	570.9	-1.9	-4.3	045	32.
57	6954.	569.7	571.4	-1.7	-4.3	045	30.
58	7076.	570.4	571.9	-1.5	-4.2	040	31.
	7115.					SEC, 7100,000	
59	7198.	571.0	572.4	-1.5	-4.2	040	29.
60	7320.	571.4	573.0	-1.5	-4.1	040	28.
61	7442.	571.8	573.5	-1.6	-4.1	040	25.
62	7564.	572.2	574.0	-1.8	-4.1	040	24.
63	7686.	572.7	574.5	-1.9	-4.0	040	24.
	7715.					SEC, 7700,000	
64	7808.	573.1	575.1	-2.0	-4.0	040	23.
65	7930.	573.6	575.6	-2.0	-4.0	040	23.
66	8052.	574.1	576.2	-2.0	-3.9	040	23.
67	8174.	574.7	576.7	-2.0	-3.9	040	22.
68	8296.	575.2	577.2	-2.1	-3.9	040	22.
69	8418.	575.7	577.8	-2.1	-3.9	040	22.
70	8540.	576.2	578.3	-2.1	-3.8	040	21.
71	8662.	576.8	578.9	-2.1	-3.8	040	21.
72	8784.	577.3	579.4	-2.1	-3.8	040	21.

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

WEIGHTED AVG FOR REACH 10.0 20.0 0.20
 -3.8 -1.5 3.4

FHF FOR REACH = 1 = 040 WITH 21.0 OF THE REACH WITHIN 1.0 FEET
 ZONE FOR THE REACH = A 8

73	8906.	577.8	580.0	-2.2	-2.2	020	100.
74	9028.	578.3	580.5	-2.2	-2.2	020	100.
75	9150.	578.8	581.1	-2.2	-2.2	020	100.
76	9272.	579.4	581.6	-2.2	-2.2	020	100.
	9365.					SEC, 9350,000	
77	9394.	579.9	582.2	-2.3	-2.2	020	100.
78	9516.	580.5	582.8	-2.3	-2.2	020	100.
79	9638.	581.2	583.6	-2.4	-2.2	020	100.
80	9760.	581.9	584.3	-2.4	-2.3	025	100.
81	9882.	582.6	585.0	-2.5	-2.3	025	100.
82	10004.	583.2	585.8	-2.5	-2.3	025	100.
83	10126.	583.9	586.5	-2.6	-2.3	025	100.
84	10248.	584.6	587.3	-2.7	-2.4	025	100.
85	10370.	585.3	588.0	-2.7	-2.4	025	100.
86	10492.	586.0	588.7	-2.8	-2.4	025	100.
87	10614.	586.6	589.5	-2.8	-2.5	025	100.
88	10736.	587.3	590.2	-2.9	-2.5	025	100.
89	10858.	588.0	590.9	-3.0	-2.5	025	100.
90	10980.	588.7	591.7	-3.0	-2.5	025	100.
91	11102.	589.3	592.4	-3.1	-2.6	025	100.
92	11224.	590.0	593.2	-3.1	-2.6	025	100.
93	11346.	590.7	593.9	-3.2	-2.6	025	100.
	11369.					SEC, 11350,000	

95	11590.	592,1	595,3	-3,2	-2,7	025	100.
96	11712.	592,8	596,0	-3,2	-2,7	025	100.
97	11834.	593,5	596,7	-3,2	-2,7	025	100.
98	11956.	594,3	597,4	-3,2	-2,7	025	100.
99	12078.	595,0	598,1	-3,2	-2,7	025	100.
100	12200.	595,7	598,8	-3,1	-2,8	030	100.
101	12322.	596,4	599,5	-3,1	-2,8	030	100.
102	12444.	597,1	600,2	-3,1	-2,8	030	100.
103	12566.	597,8	600,9	-3,1	-2,8	030	100.
104	12688.	598,6	601,6	-3,1	-2,8	030	100.
105	12810.	599,3	602,3	-3,1	-2,8	030	100.
	12815.					SEC, 12800,000	
106	12932.	600,0	602,9	-2,9	-2,8	030	100.
107	13054.	600,6	603,2	-2,6	-2,8	030	100.
	13100.					SEC, 13085,000	
	13130.					SEC, 13115,000	
108	13176.	601,9	605,0	-3,1	-2,8	030	100.
	13250.					SEC, 13235,000	
109	13298.	602,7	606,4	-3,7	-2,8	030	100.
110	13420.	603,4	607,4	-4,0	-2,9	030	99.
111	13542.	603,5	607,5	-4,0	-2,9	030	98.
112	13664.	603,7	607,7	-4,0	-2,9	030	97.
	13715.					SEC, 13700,000	
113	13786.	603,9	607,9	-4,0	-3,0	030	96.
114	13908.	604,2	608,1	-3,9	-3,0	030	97.
115	14030.	604,5	608,4	-3,9	-3,0	030	98.
116	14152.	604,7	608,7	-3,9	-3,0	030	100.
	14203.					SEC, 14188,000	
	14227.					SEC, 14212,000	
117	14274.	605,1	609,2	-4,1	-3,0	030	99.
	14335.					SEC, 14320,000	
118	14396.	605,4	609,7	-4,4	-3,1	030	98.
119	14518.	605,5	610,1	-4,6	-3,1	030	98.
120	14640.	605,6	610,2	-4,6	-3,1	030	98.
121	14762.	605,6	610,2	-4,6	-3,2	030	96.
122	14884.	605,7	610,3	-4,6	-3,2	030	93.
	14965.					SEC, 14950,000	
123	15006.	606,0	610,6	-4,6	-3,2	030	92.
124	15128.	607,0	611,5	-4,5	-3,2	030	90.
125	15250.	608,4	612,7	-4,4	-3,3	035	89.
126	15372.	609,8	614,0	-4,3	-3,3	035	89.
127	15494.	611,2	615,3	-4,1	-3,3	035	89.
128	15616.	612,6	616,6	-4,0	-3,3	035	88.
129	15738.	614,0	617,9	-3,9	-3,3	035	88.
130	15860.	615,4	619,2	-3,8	-3,3	035	88.
131	15982.	616,8	620,5	-3,6	-3,3	035	89.
132	16104.	618,3	621,8	-3,5	-3,3	035	89.
133	16226.	619,7	623,1	-3,4	-3,3	035	89.
134	16348.	621,1	624,4	-3,3	-3,3	035	89.
	16465.					SEC, 16450,000	
135	16470.	622,5	625,7	-3,2	-3,3	035	89.
136	16592.	623,7	626,9	-3,2	-3,3	035	89.
137	16714.	624,7	628,0	-3,3	-3,3	035	89.
138	16836.	625,8	629,2	-3,4	-3,3	035	89.
139	16958.	626,8	630,4	-3,6	-3,3	035	89.
140	17080.	627,8	631,5	-3,7	-3,3	035	89.
141	17202.	628,9	632,7	-3,8	-3,3	035	89.
142	17324.	629,9	633,8	-3,9	-3,4	035	89.
143	17446.	630,9	635,0	-4,1	-3,4	035	89.
	17465.					SEC, 17450,000	
144	17568.	632,2	636,3	-4,1	-3,4	035	90.
145	17690.	633,7	637,7	-4,0	-3,4	035	90.
146	17812.	635,2	639,1	-3,9	-3,4	035	90.
147	17934.	636,8	640,6	-3,8	-3,4	035	90.
148	18056.	638,3	642,0	-3,7	-3,4	035	91.

CONTINUOUS RECORDING SYSTEMS COMPANY, INC.

149	18178.	641.4	644.9	-3.5	-3.4	035	91.
150	18300.	641.4	644.9	-3.5	-3.4	035	91.
	18415.					SEC, 18400,000	
151	18422.	642.9	646.4	-3.5	-3.4	035	91.
152	18544.	644.0	647.5	-3.4	-3.4	035	91.
153	18666.	644.8	648.3	-3.5	-3.4	035	91.
154	18788.	645.5	649.1	-3.6	-3.4	035	91.
155	18910.	646.3	649.9	-3.6	-3.4	035	91.
156	19032.	647.0	650.7	-3.7	-3.4	035	91.
157	19154.	647.7	651.5	-3.7	-3.4	035	90.
158	19276.	648.5	652.3	-3.8	-3.4	035	91.
159	19398.	649.2	653.1	-3.9	-3.4	035	91.
160	19520.	650.0	653.9	-3.9	-3.4	035	91.
161	19642.	650.7	654.7	-4.0	-3.4	035	91.
	19715.					SEC, 19700,000	
162	19764.	651.4	655.4	-4.0	-3.4	035	91.
163	19886.	651.8	655.9	-4.0	-3.5	035	91.
164	20008.	652.1	656.2	-4.1	-3.5	035	91.
165	20130.	652.5	656.5	-4.1	-3.5	035	91.
166	20252.	652.8	656.8	-4.1	-3.5	035	91.
167	20374.	653.1	657.2	-4.1	-3.5	035	90.
168	20496.	653.4	657.5	-4.1	-3.5	035	90.
169	20618.	653.8	657.8	-4.1	-3.5	035	91.
170	20740.	654.1	658.2	-4.1	-3.5	035	91.
171	20862.	654.4	658.5	-4.1	-3.5	035	91.
172	20984.	654.7	658.8	-4.1	-3.5	035	91.
	21015.					SEC, 21000,000	
173	21106.	655.0	659.1	-4.1	-3.5	035	91.
174	21228.	655.3	659.4	-4.1	-3.5	035	91.
175	21350.	655.6	659.8	-4.1	-3.5	035	91.
176	21472.	655.9	660.1	-4.1	-3.5	035	91.
177	21594.	656.2	660.4	-4.2	-3.5	035	91.
178	21716.	656.5	660.7	-4.2	-3.5	035	91.
179	21838.	656.8	661.0	-4.2	-3.6	035	91.
180	21960.	657.1	661.3	-4.2	-3.6	035	91.
181	22082.	657.4	661.6	-4.2	-3.6	035	91.
182	22204.	657.7	661.9	-4.2	-3.6	035	92.
	22315.					SEC, 22300,000	
183	22326.	658.0	662.2	-4.2	-3.6	035	93.
184	22448.	658.2	662.5	-4.2	-3.6	035	93.
185	22570.	658.4	662.7	-4.2	-3.6	035	94.
186	22692.	658.6	662.8	-4.2	-3.6	035	94.
187	22814.	658.9	663.0	-4.2	-3.6	035	94.
188	22936.	659.1	663.2	-4.2	-3.6	035	94.
189	23058.	659.3	663.4	-4.1	-3.6	035	94.
190	23180.	659.5	663.6	-4.1	-3.6	035	94.

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

WEIGHTED AVG FOR REACH	10'	2'	0.2'
	-3.6	-1.1	2.6

FHF FOR REACH 2 = 035 WITH 94% OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 7

191	23302.	659.7	663.8	-4.1	-4.1	040	100.
192	23424.	659.9	664.0	-4.1	-4.1	040	100.
193	23546.	660.1	664.2	-4.1	-4.1	040	100.
194	23668.	660.3	664.4	-4.1	-4.1	040	100.
195	23790.	660.5	664.6	-4.0	-4.1	040	100.
196	23912.	660.7	664.8	-4.0	-4.1	040	100.
197	24034.	660.9	665.0	-4.0	-4.1	040	100.
198	24156.	661.2	665.2	-4.0	-4.1	040	100.
199	24278.	661.4	665.3	-4.0	-4.0	040	100.
200	24400.	661.6	665.5	-4.0	-4.0	040	100.

SUMMARY PRINTOUT

BIG BEAVER ISLAND CREEK

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
1.00	556.00	556.10	3.51	.10	5700.00	-0.00	63.93	944.00	880.07
1.00	556.00	556.28	5.85	.28	9500.00	-0.00	63.93	944.00	880.07
1.00	556.90	557.17	5.95	.27	11800.00	-0.00	61.32	962.00	900.68
1.00	558.70	559.00	6.63	.30	18400.00	-0.00	56.09	998.00	941.91
2.00	556.00	556.10	3.51	.10	5700.00	5.00	63.92	944.06	880.14
2.00	556.01	556.29	5.84	.28	9500.00	5.00	63.91	944.17	880.27
2.00	556.91	557.18	5.94	.27	11800.00	5.00	61.29	962.16	900.87
2.00	558.71	559.01	6.62	.30	18400.00	5.00	56.06	998.17	942.11
3.00	556.01	556.11	3.50	.10	5700.00	5.00	63.91	944.12	880.21
3.00	556.02	556.30	5.83	.28	9500.00	5.00	63.88	944.34	880.46
3.00	556.92	557.19	5.93	.27	11800.00	5.00	61.27	962.32	901.05
3.00	558.72	559.02	6.61	.30	18400.00	5.00	56.04	998.33	942.30
4.00	556.01	556.11	3.50	.10	5700.00	5.00	63.90	944.19	880.28
4.00	556.03	556.31	5.81	.28	9500.00	5.00	63.86	944.52	880.66
4.00	556.93	557.19	5.92	.27	11800.00	5.00	61.25	962.48	901.24
4.00	558.73	559.03	6.60	.30	18400.00	5.00	56.01	998.50	942.49
700.00	556.42	556.50	3.19	.08	5700.00	700.00	62.72	952.36	889.65
700.00	557.05	557.21	4.64	.16	9500.00	700.00	60.88	964.99	904.11
700.00	557.91	558.08	4.89	.17	11800.00	700.00	58.40	982.10	923.70
700.00	559.77	559.97	5.60	.21	18400.00	700.00	52.99	1002.23	949.24
* 795.00	555.29	558.73	14.87	3.43	5700.00	95.00	434.55	491.45	56.89
* 795.00	558.33	562.56	16.51	4.23	9500.00	95.00	428.18	497.82	69.63
* 795.00	559.86	564.44	17.18	4.58	11800.00	95.00	424.97	501.03	76.06
* 795.00	563.17	568.86	19.13	5.68	18400.00	95.00	419.00	507.00	88.00
805.00	556.79	559.04	12.05	2.25	5700.00	10.00	431.42	494.58	63.17
805.00	560.11	562.92	13.45	2.81	9500.00	10.00	424.43	501.57	77.13
805.00	561.70	564.81	14.16	3.11	11800.00	10.00	421.12	504.88	83.77
805.00	567.15	570.21	14.02	3.05	18400.00	10.00	419.00	507.00	88.00
900.00	559.47	559.59	3.64	.12	5700.00	95.00	59.67	973.36	913.69
900.00	563.46	563.55	3.54	.09	9500.00	95.00	48.05	1006.15	958.10
900.00	565.41	565.49	3.60	.08	11800.00	95.00	42.40	1211.68	1100.09
900.00	570.80	570.86	3.39	.06	18400.00	95.00	26.73	1361.34	1334.61
1500.00	559.77	559.88	3.47	.10	5700.00	600.00	58.77	979.50	920.72
1500.00	563.67	563.75	3.46	.08	9500.00	600.00	47.45	1006.63	959.18
1500.00	565.60	565.68	3.53	.08	11800.00	600.00	41.85	1222.16	1133.24
1500.00	570.92	570.98	3.35	.06	18400.00	600.00	26.40	1363.17	1336.77
2200.00	560.20	560.39	4.58	.18	5700.00	700.00	542.85	1212.73	669.88
2200.00	563.97	564.10	4.40	.14	9500.00	700.00	251.51	1223.37	971.86
2200.00	565.86	565.98	4.37	.12	11800.00	700.00	170.76	1228.72	1057.96
2200.00	571.08	571.18	4.16	.09	18400.00	700.00	67.65	1243.48	1175.84
3000.00	560.76	560.81	2.55	.05	5700.00	800.00	535.07	1214.31	679.24
3000.00	564.32	564.36	2.34	.04	9500.00	800.00	235.34	1224.37	989.03
3000.00	566.16	566.20	2.26	.04	11800.00	800.00	159.25	1229.57	1070.31
3000.00	571.28	571.30	2.04	.03	18400.00	800.00	65.80	1244.03	1178.23

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SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
3300.00	560.83	560.97	3.86	.13	5700.00	300.00	970.63	1522.85	552.22
3300.00	564.36	564.45	3.43	.09	9500.00	300.00	910.86	1536.08	625.22
3300.00	566.19	566.27	3.29	.09	11800.00	300.00	726.81	1539.97	813.16
3300.00	571.29	571.34	2.70	.05	18400.00	300.00	356.96	1606.30	1249.34
3685.00	561.12	561.54	5.18	.42	5700.00	385.00	1000.00	1100.22	185.41
3685.00	564.41	564.89	5.56	.48	9500.00	385.00	1000.00	1100.40	185.79
3685.00	566.15	566.67	5.80	.52	11800.00	385.00	1000.00	1100.50	185.99
3685.00	571.35	571.41	2.43	.07	18400.00	385.00	360.93	1751.71	1147.37
3690.00	560.71	561.86	8.62	1.15	5700.00	5.00	1000.00	1430.00	80.00
3690.00	563.68	565.41	10.57	1.73	9500.00	5.00	1000.00	1430.00	80.00
3690.00	565.19	567.36	11.82	2.17	11800.00	5.00	1000.00	1430.00	80.00
3690.00	571.13	571.56	5.20	.43	18400.00	5.00	593.95	1613.83	1019.88
3710.00	561.14	562.18	8.19	1.04	5700.00	20.00	1000.00	1430.00	80.00
3710.00	564.15	565.75	10.14	1.60	9500.00	20.00	1000.00	1430.00	80.00
3710.00	566.05	567.89	10.88	1.84	11800.00	20.00	1000.00	1430.00	80.00
3710.00	571.29	571.67	5.34	.38	18400.00	20.00	586.95	1616.74	1029.79
3715.00	562.18	562.37	3.51	.19	5700.00	5.00	1000.00	1246.12	379.41
3715.00	565.91	566.05	3.06	.15	9500.00	5.00	1000.00	1430.00	430.00
3715.00	568.20	568.25	2.13	.06	11800.00	5.00	534.78	1430.00	895.22
3715.00	571.70	571.74	1.85	.04	18400.00	5.00	478.52	1693.85	1215.33
3765.00	562.27	562.51	4.21	.24	5700.00	50.00	734.24	1245.13	510.88
3765.00	566.06	566.10	1.91	.04	9500.00	50.00	578.96	1650.45	1071.50
3765.00	568.24	568.27	1.72	.03	11800.00	50.00	535.34	1667.22	1131.88
3765.00	571.71	571.75	1.83	.04	18400.00	50.00	478.32	1693.93	1215.61
4700.00	564.35	564.45	2.68	.10	3700.00	935.00	725.52	1241.28	515.76
4700.00	566.53	566.64	2.95	.11	6700.00	935.00	614.52	1242.98	628.46
4700.00	568.53	568.62	2.63	.08	8400.00	935.00	568.02	1244.53	676.51
4700.00	571.94	572.02	2.67	.08	13200.00	935.00	508.78	1247.18	738.40
5700.00	565.43	565.47	2.63	.04	3700.00	1000.00	399.64	1459.30	1059.67
5700.00	567.35	567.39	2.38	.04	6700.00	1000.00	359.46	1481.79	1122.33
5700.00	569.02	569.05	1.99	.03	8400.00	1000.00	329.76	1492.12	1162.36
5700.00	572.28	572.30	1.82	.02	13200.00	1000.00	278.45	1509.71	1231.26
6400.00	566.94	567.53	7.93	.58	3700.00	700.00	450.59	1439.35	941.10
6400.00	568.08	568.48	7.73	.40	6700.00	700.00	411.63	1454.61	1023.13
6400.00	569.43	569.62	5.79	.19	8400.00	700.00	375.75	1472.74	1096.99
6400.00	572.50	572.60	4.36	.10	13200.00	700.00	321.26	1495.07	1173.81
7100.00	570.95	571.10	4.37	.14	3700.00	700.00	868.24	1523.65	655.41
7100.00	572.05	572.26	5.48	.21	6700.00	700.00	851.77	1543.61	691.83
7100.00	572.33	572.60	6.32	.27	8400.00	700.00	847.41	1548.89	701.48
7100.00	573.96	574.25	6.68	.28	13200.00	700.00	823.06	1595.97	772.91
7700.00	572.95	573.18	5.33	.23	3700.00	600.00	875.41	1514.73	611.97
7700.00	574.32	574.56	5.87	.24	6700.00	600.00	855.17	1539.49	684.32
7700.00	574.93	575.18	6.17	.26	8400.00	600.00	846.08	1550.81	704.73
7700.00	576.37	576.66	6.83	.30	13200.00	600.00	824.61	1592.92	768.31

CONTINUED ON REVERSE SIDE OF SHEET

SECNO	CWSEL	FG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
9350.00	580.03	580.47	5.97	.43	3700.00	1650.00	354.08	668.22	314.14
9350.00	581.59	582.14	7.21	.56	6700.00	1650.00	324.86	671.55	346.70
9350.00	582.29	582.90	7.71	.61	8400.00	1650.00	311.37	672.59	361.22
9350.00	583.90	584.65	8.83	.75	13200.00	1650.00	259.96	674.91	414.96
11350.00	591.15	592.10	7.88	.95	3700.00	2000.00	501.11	657.33	156.21
11350.00	593.47	594.67	9.45	1.21	6700.00	2000.00	452.78	773.33	320.55
11350.00	594.38	595.66	10.03	1.27	8400.00	2000.00	433.70	819.12	385.42
11350.00	596.34	597.67	11.07	1.33	13200.00	2000.00	392.18	903.42	511.25
12800.00	599.65	600.10	6.14	.45	3700.00	1450.00	199.12	563.87	364.75
12800.00	601.79	602.23	6.77	.44	6700.00	1450.00	164.57	606.06	441.49
12800.00	602.70	603.15	7.09	.45	8400.00	1450.00	149.73	613.95	464.22
12800.00	604.67	605.18	7.98	.51	13200.00	1450.00	128.66	629.52	500.87
13085.00	601.17	602.75	10.08	1.58	3700.00	285.00	300.00	395.25	95.25
13085.00	602.70	605.33	13.00	2.62	6700.00	285.00	300.00	398.92	98.92
13085.00	603.58	606.59	13.94	3.02	8400.00	285.00	300.00	401.00	101.00
13085.00	605.67	609.70	16.11	4.03	13200.00	285.00	300.00	406.03	106.03
13115.00	601.55	602.86	9.19	1.31	3700.00	30.00	300.00	396.14	96.14
13115.00	603.45	605.45	11.35	2.00	6700.00	30.00	300.00	400.71	100.71
13115.00	604.45	606.74	12.14	2.29	8400.00	30.00	300.00	403.10	103.10
13115.00	607.08	609.95	13.59	2.87	13200.00	30.00	300.00	409.40	109.40
13235.00	603.20	603.39	4.33	.19	3700.00	120.00	166.12	605.22	439.11
13235.00	605.91	606.12	4.97	.21	6700.00	120.00	130.04	627.56	497.52
13235.00	607.23	607.45	5.19	.21	8400.00	120.00	123.04	637.51	514.48
13235.00	610.52	610.74	5.62	.22	13200.00	120.00	105.69	666.21	560.52
13700.00	603.85	604.29	6.00	.44	3700.00	465.00	187.96	581.17	393.21
13700.00	606.52	606.97	6.76	.46	6700.00	465.00	137.43	616.60	479.17
13700.00	607.81	608.26	6.97	.45	8400.00	465.00	130.56	626.83	496.27
13700.00	611.02	611.45	7.38	.43	13200.00	465.00	113.61	651.21	537.61
14188.00	605.01	605.35	4.66	.34	3700.00	488.00	178.10	266.10	88.00
14188.00	607.68	608.32	6.44	.64	6700.00	488.00	173.68	270.52	96.83
14188.00	608.91	609.73	7.23	.81	8400.00	488.00	171.63	272.57	100.93
14188.00	611.84	613.10	9.02	1.26	13200.00	488.00	170.50	273.70	103.20
14212.00	605.03	605.48	5.41	.45	3700.00	24.00	155.94	231.67	75.74
14212.00	607.72	608.58	7.46	.86	6700.00	24.00	152.11	235.50	83.39
14212.00	608.97	610.06	8.36	1.09	8400.00	24.00	150.33	237.28	86.95
14212.00	614.14	614.43	5.29	.29	13200.00	24.00	37.44	447.03	409.59
14320.00	605.47	605.66	3.59	.19	3700.00	108.00	199.77	458.36	258.59
14320.00	608.56	608.85	4.62	.29	6700.00	108.00	184.34	481.35	297.02
14320.00	610.03	610.37	5.04	.34	8400.00	108.00	162.28	491.10	328.82
14320.00	614.17	614.56	5.67	.39	13200.00	108.00	117.62	562.63	441.40
14950.00	605.78	607.64	11.32	1.86	3700.00	630.00	49.48	156.68	107.20
14950.00	608.94	610.84	11.85	1.90	6700.00	630.00	43.62	174.58	130.95
14950.00	610.38	612.38	12.34	2.01	8400.00	630.00	40.97	182.68	141.72
14950.00	614.32	616.37	12.87	2.05	13200.00	630.00	33.66	203.93	170.27

CONTINUED FROM PAGE 1

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
16450.00	623.15	623.89	7.36	.74	3700.00	1500.00	45.11	170.04	124.94
16450.00	625.23	626.56	10.01	1.33	6700.00	1500.00	41.24	181.86	140.63
16450.00	626.25	627.87	11.15	1.62	8400.00	1500.00	39.35	187.62	148.27
16450.00	628.39	630.87	14.04	2.48	13200.00	1500.00	35.39	200.67	165.28
17450.00	631.60	632.90	9.56	1.30	3700.00	1000.00	47.95	161.36	113.42
17450.00	634.46	636.10	11.04	1.63	6700.00	1000.00	42.66	177.52	134.87
17450.00	635.75	637.58	11.80	1.83	8400.00	1000.00	40.28	184.80	144.52
17450.00	638.87	641.11	13.40	2.24	13200.00	1000.00	34.48	202.38	167.90
18400.00	643.63	644.89	9.04	1.26	3300.00	950.00	227.87	342.43	83.94
18400.00	646.00	647.90	11.50	1.89	6100.00	950.00	206.25	400.22	190.65
18400.00	647.04	649.08	12.32	2.04	7800.00	950.00	197.22	418.91	221.69
18400.00	649.34	651.43	13.39	2.09	12400.00	950.00	178.69	442.42	263.72
19700.00	651.52	651.98	5.71	.45	3300.00	1300.00	201.61	409.46	207.85
19700.00	654.39	654.89	6.54	.50	6100.00	1300.00	178.29	442.60	264.31
19700.00	655.57	656.11	7.05	.54	7800.00	1300.00	168.82	446.77	277.95
19700.00	657.89	658.58	8.35	.69	12400.00	1300.00	150.09	455.03	304.94
21000.00	654.97	655.29	4.83	.32	3300.00	1300.00	217.27	417.23	199.96
21000.00	657.78	658.20	5.92	.42	6100.00	1300.00	191.83	426.60	234.77
21000.00	659.06	659.54	6.45	.48	7800.00	1300.00	181.14	430.88	249.74
21000.00	661.80	662.41	7.62	.61	12400.00	1300.00	158.34	444.09	285.75
22300.00	658.10	658.55	5.57	.45	3300.00	1300.00	225.43	414.34	188.91
22300.00	661.00	661.54	6.59	.54	6100.00	1300.00	198.37	423.98	225.61
22300.00	662.34	662.93	7.04	.59	7800.00	1300.00	187.14	428.48	241.34
22300.00	665.26	665.96	8.04	.70	12400.00	1300.00	162.81	438.64	275.83
24500.00	661.88	662.02	3.54	.14	3300.00	2200.00	1161.70	1679.92	518.22
24500.00	664.56	664.68	3.80	.13	6100.00	2200.00	1078.71	1793.71	715.00
24500.00	665.82	665.94	3.89	.12	7800.00	2200.00	1039.51	1847.44	807.93
24500.00	668.61	668.72	4.05	.11	12400.00	2200.00	952.95	1966.12	1013.17

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 6400.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 6400.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 13085.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

~~FHF~~ FHF
 3/16/76

C FPM BIG BEAVER ISLAND FIS
 1 FPM BR MADISON-MAYODAN FIS
 T2 10 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FG
	-10.	6.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556,000	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1,000	-0,000	-1,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000
J3	39,000	53,000	54,000	4,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000

3685 20 TRIALS USED WSEL,CHSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH
 ERROR STATEMENT APPLIES TO SECTION 795,000

***NORFOLK + SOUTHER RR-SECTION B-11 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-9,00	1.14	2.50	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

6070, LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLWC= 558,725 ELLC= 562,700 PCWSE= 555,294 ELTRD= 572,400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-	3995,00	-564,70	-564,70	564,70	0,00	1040,00	560,90	560,90	0,00
3810 HT IS-	3995,00	-564,70	-564,70	564,70	0,00	1040,00	560,99	560,99	0,00
381 HT IS-	3995,00	-564,70	-564,70	564,70	0,00	1040,00	561,14	561,14	0,00

*** SECTION B-1 ***

3889 20 TRIALS USED NSEL, CWSEL
ERROR STATEMENT APPLIES TO SECTION 7700.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 7700.000

*** SECTION B-2 ***

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 11350.000

*** SR 1169 SECTION B-3 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1,25	1,62	2,50	-0,00	15,00	2,00	1427,60	2,40	589,60	589,60

*** NC 704 SECTION B-4 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1,25	1,38	2,50	-0,00	58,00	2,00	1200,00	1,93	593,50	593,50

*** SECTION B-5 ***

*** SECTION B-6 ***

*** SURVEYED AT 22300 ***

*** SECTION B-7 ***

XXX SECTION FABRICATED XXX

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 50 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	IND	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10.	5.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556,000	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	2,000	-0,000	-1,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH
 ERROR STATEMENT APPLIES TO SECTION 795,000

***NORFOLK + SOUTHER RR-SECTION B-11 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.14	2.50	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

6070,LOW FLOW BY NORMAL BRIDGE

EGPRS= 0.000 EGLKCF= 562,561 ELLCF= 562,700 PCWSE= 558,327 ELTRD= 572,400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS=	3995,00	-564,70	-564,70	564,70	0,00	1040,00	563,87	563,87	0,00
3810 HT IS=	3995,00	-564,70	-564,70	564,70	0,00	1040,00	563,97	563,97	0,00
3810 HT IS=	3995,00	-564,70	-564,70	564,70	0,00	1040,00	564,15	564,15	0,00

*** SECTION B-1 ***

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 7700,000

3685 20 TRIALS USED WSEL,CWSEL

3720 ASSUMED CRITICAL DEPTH
ERROR STATEMENT APPLIES TO SECTION 7700,000

*** SECTION B-2 ***

7185 MIN SPECIFIC ENERGY
3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 11330,000

*** SR 1169 SECTION B-3 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1,25	1,62	2,50	-0,00	15,00	2,00	1427,60	2,40	589,60	589,60

*** NC 704 SECTION B-4 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1,25	1,38	2,50	-0,00	58,00	2,00	1200,00	1,93	593,50	593,50

*** SECTION B-5 ***

*** SECTION B-6 ***

*** SURVEYED AT 22300 ***

*** SECTION B-7 ***

XXX SECTION FABRICATED XXX

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556,900	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	3,000	-0,000	-1,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

***NORFOLK + SOUTHER RR-SECTION B-11 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0,00	1,14	2,50	-0,00	4,00	-0,00	923,00	2,10	542,70	542,70

6070, LOW FLOW BY NORMAL BRIDGE

EGPRS= 562,751 EGLWC= 564,441 ELLC= 562,700 PCWSE= 559,858 ELTRD= 572,400

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

3810 HT IS-										
3995.00	-564,70	-564,70	564,70	0,00	1040,00	565,67	565,67	0,00		
3810 HT IS-										
3995.00	-564,70	-564,70	564,70	0,00	1040,00	565,82	565,82	0,00		
3810 HT IS-										
3995.00	-564,70	-564,70	564,70	0,00	1040,00	566,06	566,06	0,00		

*** SECTION B-1 ***

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 7700,000

3685 20 TRIALS USED WSEL,CWSEL

3720 ASSUMED CRITICAL DEPTH
ERROR STATEMENT APPLIES TO SECTION 7700.000

*** SECTION B-2 ***

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH
ERROR STATEMENT APPLIES TO SECTION 11350.000

*** SR 1169 SECTION B-3 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	RWP	BAREA	SS	ELCHU	ELCHD
	1,25	1,62	2,50	-0,00	15,00	2,00	1427,60	2,40	589,60	589,60

*** NC 704 SECTION B-4 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1,25	1,38	2,50	-0,00	58,00	2,00	1200,00	1,93	593,50	593,50

*** SECTION B-5 ***

*** SECTION B-6 ***

*** SURVEYED AT 22300 ***

*** SECTION B-7 ***

XXX SECTION FABRICATED XXX

CONTINUOUS INTERLOCK BLOCK SYSTEM FROM INC.

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 500 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10.	4.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	558,700	-0,000
J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15,000	-0,000	-1,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000	-0,000

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 795,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 795,000

***NORFOLK + SOUTHER RR-SECTION B-11 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	-0.00	1.14	2.50	-0.00	4.00	-0.00	923.00	2.10	542.70	542.70

*** FROM OLD STUDY ***

*** US 311 SECTION B-12 ***

*** SECTION B-1 ***

3685 20 TRIALS USED WSEL,CWSEL
 ERROR STATEMENT APPLIES TO SECTION 7700,000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 7700,000

*** SECTION B-2 ***

3685 20 TRIALS USED WSEL,CWSEL

ERROR STATEMENT APPLIES TO SECTION 11350.000

7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

ERROR STATEMENT APPLIES TO SECTION 11350.000

*** SR 1169 SECTION B-3 ***

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 603,36 ,NOT 605,92 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1,25	1,62	2,50	-0,00	15,00	2,00	1427,60	2,40	589,60	589,60

*** NC 704 SECTION B-4 ***

SPECIAL BRIDGE

SB	XK	XKOR	COFO	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1,25	1,38	2,50	-0,00	58,00	2,00	1200,00	1,93	593,50	593,50

*** SECTION B-5 ***

*** SECTION B-6 ***

*** SURVEYED AT 22300 ***

*** SECTION B-7 ***

XXX SECTION FABRICATED XXX

FLOOD INSURANCE ZONE DATA FOR B:G BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		10'	2'	0.2'
1,000	0.	-.9	-.9	1.8
2,000	5.	-.9	-.9	1.8
3,000	10.	-.9	-.9	1.8
4,000	15.	-.9	-.9	1.8
700,000	715.	-1.5	-.9	1.9
795,000	810.	-4.6	-1.5	3.3
805,000	820.	-4.9	-1.6	5.5
900,000	915.	-5.9	-1.9	5.4
1500,000	1515.	-5.8	-1.9	5.3
2200,000	2215.	-5.7	-1.9	5.2
3000,000	3015.	-5.4	-1.8	5.1
3300,000	3315.	-5.4	-1.8	5.1
3685,000	3700.	-5.0	-1.7	5.2
3690,000	3705.	-4.5	-1.5	5.9
3710,000	3725.	-4.9	-1.9	5.2
3715,000	3730.	-6.0	-2.3	3.5
3765,000	3780.	-6.0	-2.2	3.5
4700,000	4715.	-4.2	-2.0	3.4
5700,000	5715.	-3.6	-1.7	3.3
7700,000	7715.	-1.1	-.3	.6
9350,000	9365.	-2.7	-.8	1.9
11350,000	11365.	-4.8	-1.2	2.1
12800,000	12815.	-3.4	-1.0	2.2
13085,000	13100.	-2.8	-.8	1.5
13115,000	13130.	-3.1	-.9	2.2
13235,000	13250.	-4.1	-1.3	3.2
13700,000	13715.	-4.0	-1.3	3.1
14188,000	14203.	-3.9	-1.2	2.9
14212,000	14227.	-4.0	-1.2	5.1
14320,000	14335.	-4.6	-1.5	4.1
14950,000	14965.	-4.6	-1.4	3.9
16450,000	16465.	-3.1	-1.0	2.2
17450,000	17465.	-4.1	-1.3	3.1
18400,000	18415.	-3.4	-1.0	2.3
19700,000	19715.	-4.0	-1.2	2.3
21000,000	21015.	-4.1	-1.3	2.7
22300,000	22315.	-4.2	-1.3	2.9
24500,000	24515.	-4.5	-1.4	3.2

WEIGHTED AVG FOR REACH		-3.9	-1.3	2.9

FHF FOR THE REACH = 0.40 WITH 66.4% OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH = A 8

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC NO.	TOTAL LENGTH	AVG ELEVATION DATA			WTD. AVG.	FHF	PERCENT WITHIN
		10'	1'	DIFF.			
1	0.					SEC, 1,000	
	129.	556.0	557.0	-1.0	-1.0	010	100.
	5.					SEC,	2,000
	10.					SEC,	3,000
	15.					SEC,	4,000
2	258.	556.1	557.1	-1.0	-1.0	010	100.
3	387.	556.2	557.4	-1.2	-1.1	010	100.
4	516.	556.3	557.5	-1.3	-1.1	010	100.
5	645.	556.3	557.7	-1.4	-1.2	010	100.
6	715.					SEC,	700,000
	774.	556.0	558.5	-2.4	-1.4	015	83.
	810.					SEC,	795,000
7	820.					SEC,	805,000
	903.	558.0	563.3	-5.4	-1.9	020	14.
	915.					SEC,	900,000
8	1032.	559.3	565.2	-5.9	-2.4	025	13.
9	1161.	559.6	565.5	-5.9	-2.8	030	11.
10	1290.	559.6	565.5	-5.9	-3.1	030	10.
11	1419.	559.7	565.5	-5.9	-3.4	035	9.
12	1515.					SEC,	1500,000
	1548.	559.8	565.6	-5.8	-3.6	035	0.
13	1677.	559.8	565.6	-5.8	-3.7	035	0.
14	1806.	559.9	565.7	-5.8	-3.9	040	0.
15	1935.	560.0	565.7	-5.7	-4.0	040	0.
16	2064.	560.1	565.8	-5.7	-4.1	040	0.
17	2193.	560.2	565.8	-5.7	-4.2	040	0.
18	2215.					SEC,	2200,000
	2322.	560.2	565.9	-5.6	-4.3	045	0.
19	2451.	560.3	565.9	-5.6	-4.4	045	5.
20	2580.	560.4	566.0	-5.6	-4.4	045	5.
21	2709.	560.5	566.0	-5.5	-4.5	045	5.
22	2838.	560.6	566.1	-5.5	-4.5	045	14.
23	2967.	560.7	566.1	-5.4	-4.6	045	17.
24	3015.					SEC,	3000,000
	3006.	560.8	566.2	-5.4	-4.6	045	25.
25	3225.	560.8	566.2	-5.4	-4.6	045	32.
26	3315.					SEC,	3300,000
	3354.	560.8	566.2	-5.3	-4.7	045	38.
27	3483.	560.9	566.2	-5.3	-4.7	045	41.
28	3612.	561.0	566.2	-5.2	-4.7	045	46.
29	3700.					SEC,	3685,000
	3705.					SEC,	3690,000
	3725.					SEC,	3710,000
	3730.					SEC,	3715,000
	3741.	562.2	568.2	-6.0	-4.7	045	48.
30	3780.					SEC,	3765,000
	3870.	562.3	568.2	-5.9	-4.8	050	53.
31	3999.	562.6	568.3	-5.7	-4.8	050	58.
32	4128.	562.9	568.3	-5.4	-4.8	050	59.
33	4257.	563.2	568.4	-5.2	-4.8	050	64.
34	4386.	563.5	568.4	-4.9	-4.8	050	65.
35	4515.	563.8	568.4	-4.7	-4.8	050	66.
36	4644.	564.0	568.5	-4.4	-4.8	050	64.
37	4715.					SEC,	4700,000
	4773.	564.3	568.5	-4.2	-4.8	050	65.
38	4902.	564.5	568.6	-4.1	-4.8	050	63.
39	5031.	564.6	568.7	-4.0	-4.8	050	62.
40	5160.	564.6	568.7	-4.0	-4.7	045	63.
41	5289.	564.9	568.8	-3.9	-4.7	045	61.
42	5418.	565.0	568.8	-3.8	-4.7	045	60.
43	5547.	565.2	568.9	-3.7	-4.7	045	60.
44	5676.	565.3	569.0	-3.7	-4.7	045	55.
	5715.					SEC,	5700,000

45	5885.	585.6	589.1	-3.5	-4.8	045	53.
46	5934.	565.9	569.3	-3.4	-4.6	045	49.
47	6063.	566.4	569.6	-3.2	-4.6	045	48.
48	6192.	566.8	569.9	-3.1	-4.5	045	45.
49	6321.	567.2	570.1	-2.9	-4.5	045	44.
50	6450.	567.6	570.4	-2.8	-4.5	045	41.
51	6579.	568.1	570.7	-2.6	-4.4	045	37.
52	6708.	568.5	570.9	-2.4	-4.4	045	34.
53	6837.	568.9	571.2	-2.3	-4.4	045	30.
54	6966.	569.3	571.5	-2.1	-4.3	045	29.
55	7095.	569.8	571.7	-1.9	-4.3	045	29.
56	7224.	570.2	572.0	-1.8	-4.2	040	28.
57	7353.	570.6	572.2	-1.6	-4.2	040	24.
58	7482.	571.0	572.5	-1.5	-4.1	040	24.
59	7611.	571.5	572.8	-1.3	-4.1	040	

SEC, 7700,000

60	7740.	571.9	573.1	-1.2	-4.0	040	25.
61	7869.	572.5	573.7	-1.2	-4.0	040	24.
62	7998.	573.2	574.5	-1.3	-4.0	040	24.
63	8127.	573.9	575.3	-1.4	-3.9	040	23.
64	8256.	574.5	576.1	-1.6	-3.9	040	23.
65	8385.	575.2	576.9	-1.7	-3.8	040	22.
66	8514.	575.9	577.7	-1.8	-3.8	040	22.
67	8643.	576.6	578.5	-1.9	-3.8	040	23.
68	8772.	577.3	579.3	-2.1	-3.7	035	23.
69	8901.	577.9	580.1	-2.2	-3.7	035	23.
70	9030.	578.6	581.0	-2.3	-3.7	035	23.
71	9159.	579.3	581.8	-2.5	-3.7	035	21.
72	9288.	580.0	582.6	-2.6	-3.7	035	

SEC, 9350,000

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

WEIGHTED AVG FOR REACH 10# 2# 0.2#
-3.7 -1.4 3.2

FHF FOR REACH 1 = 035 WITH 21% OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A 7

73	9417.	580.7	583.4	-2.7	-2.7	025	100.
74	9546.	581.4	584.3	-2.8	-2.9	030	100.
75	9675.	582.2	585.2	-3.0	-2.8	030	100.
76	9804.	583.0	586.1	-3.1	-2.9	030	100.
77	9933.	583.7	587.0	-3.2	-3.0	030	100.
78	10062.	584.5	587.9	-3.4	-3.0	030	100.
79	10191.	585.3	588.8	-3.5	-3.1	030	100.
80	10320.	586.0	589.7	-3.6	-3.2	030	100.
81	10449.	586.8	590.6	-3.8	-3.2	030	100.
82	10578.	587.6	591.5	-3.9	-3.3	035	100.
83	10707.	588.4	592.4	-4.0	-3.4	035	100.
84	10836.	589.1	593.3	-4.2	-3.4	035	100.
85	10965.	589.9	594.2	-4.3	-3.5	035	100.
86	11094.	590.7	595.1	-4.4	-3.6	035	100.
87	11223.	591.4	596.0	-4.6	-3.6	035	99.
88	11352.	592.2	596.9	-4.7	-3.7	035	99.

SEC, 11350,000

89	11481.	593.0	597.7	-4.7	-3.8	040	98.
90	11610.	593.7	598.3	-4.6	-3.8	040	98.
91	11739.	594.5	599.0	-4.5	-3.8	040	97.
92	11868.	595.3	599.6	-4.4	-3.9	040	97.
93	11997.	596.0	600.3	-4.2	-3.9	040	97.
94	12126.	596.8	600.9	-4.1	-3.9	040	97.
95	12255.	597.6	601.6	-4.0	-3.9	040	97.
96	12384.	598.3	602.2	-3.9	-3.9	040	97.
97	12513.	599.1	602.9	-3.8	-3.9	040	97.

98	12642.	599.9	603.5	-3.6	-3.9	040	97.
99	12771.	600.7	604.2	-3.5	-3.9	040	97.
	12815.					SEC, 12800,000	
100	12900.	601.2	604.6	-3.4	-3.9	040	97.
101	13029.	601.5	604.6	-3.1	-3.8	040	98.
	13100.					SEC, 13085,000	
	13130.					SEC, 13115,000	
102	13158.	602.0	605.2	-3.2	-3.8	040	98.
	13250.					SEC, 13235,000	
103	13287.	602.8	606.4	-3.7	-3.8	040	98.
104	13416.	603.4	607.5	-4.0	-3.8	040	98.
105	13545.	603.6	607.6	-4.0	-3.8	040	98.
106	13674.	603.8	607.8	-4.0	-3.8	040	98.
	13715.					SEC, 13700,000	
107	13803.	604.0	608.0	-4.0	-3.8	040	98.
108	13932.	604.3	608.2	-4.0	-3.8	040	98.
109	14061.	604.6	608.5	-4.0	-3.8	040	98.
110	14190.	604.9	608.8	-3.9	-3.8	040	97.
	14203.					SEC, 14188,000	
	14227.					SEC, 14212,000	
111	14319.	605.2	609.5	-4.2	-3.9	040	97.
	14335.					SEC, 14320,000	
112	14448.	605.5	610.0	-4.5	-3.9	040	97.
113	14577.	605.6	610.2	-4.6	-3.9	040	97.
114	14706.	605.6	610.2	-4.6	-3.9	040	97.
115	14835.	605.7	610.3	-4.6	-3.9	040	97.
116	14964.	605.8	610.4	-4.6	-3.9	040	97.
	14965.					SEC, 14950,000	
117	15093.	606.5	611.1	-4.5	-3.9	040	97.
118	15222.	608.0	612.4	-4.4	-4.0	040	97.
119	15351.	609.5	613.8	-4.3	-4.0	040	97.
120	15480.	611.0	615.2	-4.2	-4.0	040	98.
121	15609.	612.5	616.5	-4.0	-4.0	040	98.
122	15738.	614.0	617.9	-3.9	-4.0	040	98.
123	15867.	615.5	619.2	-3.8	-4.0	040	98.
124	15996.	617.0	620.6	-3.6	-4.0	040	98.
125	16125.	618.5	622.0	-3.5	-3.9	040	98.
126	16254.	619.9	623.3	-3.4	-3.9	040	98.
127	16383.	621.4	624.7	-3.2	-3.9	040	98.
	16465.					SEC, 16450,000	
128	16512.	622.9	626.0	-3.2	-3.9	040	98.
129	16641.	624.1	627.3	-3.2	-3.9	040	98.
130	16770.	625.2	628.5	-3.3	-3.9	040	98.
131	16899.	626.3	629.7	-3.5	-3.9	040	98.
132	17028.	627.4	631.0	-3.6	-3.9	040	98.
133	17157.	628.5	632.2	-3.8	-3.9	040	98.
134	17286.	629.5	633.4	-3.9	-3.9	040	98.
135	17415.	630.6	634.7	-4.0	-3.9	040	98.
	17465.					SEC, 17450,000	
136	17544.	631.9	636.0	-4.1	-3.9	040	98.
137	17673.	633.4	637.5	-4.0	-3.9	040	98.
138	17802.	635.1	639.0	-3.9	-3.9	040	98.
139	17931.	636.7	640.5	-3.8	-3.9	040	98.
140	18060.	638.3	642.1	-3.7	-3.9	040	98.
141	18189.	640.0	643.6	-3.6	-3.9	040	98.
142	18318.	641.6	645.1	-3.5	-3.9	040	98.
	18415.					SEC, 18400,000	
143	18447.	643.1	646.6	-3.5	-3.9	040	98.
144	18576.	644.2	647.7	-3.5	-3.9	040	98.
145	18705.	645.0	648.5	-3.5	-3.9	040	98.
146	18834.	645.8	649.4	-3.6	-3.9	040	98.
147	18963.	646.6	650.2	-3.6	-3.9	040	98.
148	19092.	647.3	651.1	-3.7	-3.9	040	98.
149	19221.	648.1	651.9	-3.8	-3.8	040	98.
150	19350.	648.9	652.7	-3.8	-3.8	040	98.
151	19479.	649.7	653.6	-3.9	-3.8	040	98.

152	19600,	650,5	654,4	-4,0	-3,9	040	98,
	19715,						
153	19737,	651,2	655,2	-4,0	-3,9	040	98,
154	19866,	651,8	655,8	-4,0	-3,9	040	98,
155	19995,	652,1	656,1	-4,1	-3,9	040	98,
156	20124,	652,4	656,5	-4,1	-3,9	040	98,
157	20253,	652,8	656,8	-4,1	-3,9	040	98,
158	20382,	653,1	657,2	-4,1	-3,9	040	98,
159	20511,	653,5	657,5	-4,1	-3,9	040	98,
160	20640,	653,8	657,9	-4,1	-3,9	040	98,
161	20769,	654,1	658,2	-4,1	-3,9	040	98,
162	20898,	654,5	658,6	-4,1	-3,9	040	98,
	21015,						
163	21027,	654,8	658,9	-4,1	-3,9	040	98,
164	21156,	655,2	659,3	-4,1	-3,9	040	98,
165	21285,	655,5	659,6	-4,1	-3,9	040	98,
166	21414,	655,8	659,9	-4,1	-3,9	040	98,
167	21543,	656,1	660,2	-4,1	-3,9	040	98,
168	21672,	656,4	660,6	-4,2	-3,9	040	98,
169	21801,	656,7	660,9	-4,2	-3,9	040	98,
170	21930,	657,0	661,2	-4,2	-3,9	040	98,
171	22059,	657,3	661,5	-4,2	-3,9	040	98,
172	22188,	657,6	661,9	-4,2	-3,9	040	98,
	22315,						
173	22317,	658,0	662,2	-4,2	-3,9	040	98,
174	22446,	658,1	662,4	-4,2	-3,9	040	98,
175	22575,	658,2	662,4	-4,3	-3,9	040	98,
176	22704,	658,2	662,5	-4,3	-3,9	040	98,
177	22833,	658,2	662,5	-4,3	-3,9	040	98,
178	22962,	658,3	662,6	-4,3	-3,9	040	98,
179	23091,	658,3	662,6	-4,3	-3,9	040	98,
180	23220,	658,3	662,7	-4,3	-3,9	040	98,
181	23349,	658,4	662,7	-4,4	-3,9	040	98,
182	23478,	658,4	662,8	-4,4	-3,9	040	98,
183	23607,	658,4	662,8	-4,4	-3,9	040	98,
184	23736,	658,5	662,9	-4,4	-3,9	040	98,
185	23865,	658,5	662,9	-4,4	-4,0	040	98,
186	23994,	658,5	663,0	-4,4	-4,0	040	98,
187	24123,	658,6	663,0	-4,5	-4,0	040	98,
188	24252,	658,6	663,1	-4,5	-4,0	040	98,
189	24381,	658,6	663,1	-4,5	-4,0	040	98,
190	24510,	658,7	663,2	-4,5	-4,0	040	98,
	24515,						

SEC, 24500,000

 ELEVATION DIFFERENCE
 BETWEEN BASE FLOOD AND
 10# 20 0,20
 WEIGHTED AVG FOR REACH -4,0 -1,2 2,7
 FHF FOR REACH 2 = 040 WITH 98,0 OF THE REACH WITHIN 1,0 FEET
 ZONE FOR THE REACH = A B

SUMMARY PRINTOUT
BIG BEAVER ISLAND CREEK

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
1.00	556.00	556.10	3.51	.10	5700.00	-0.00	63.93	944.00	880.07
1.00	556.00	556.28	5.85	.28	9500.00	-0.00	63.93	944.00	890.07
1.00	556.90	557.17	5.95	.27	11800.00	-0.00	61.32	962.00	900.68
1.00	558.70	559.00	6.63	.30	18400.00	-0.00	56.09	998.00	941.91
2.00	556.00	556.10	3.51	.10	5700.00	5.00	63.92	944.06	880.14
2.00	556.01	556.29	5.84	.28	9500.00	5.00	63.91	944.17	880.27
2.00	556.91	557.18	5.94	.27	11800.00	5.00	61.29	962.16	900.87
2.00	558.71	559.01	6.62	.30	18400.00	5.00	56.06	998.17	942.11
3.00	556.01	556.11	3.50	.10	5700.00	5.00	63.91	944.12	880.21
3.00	556.02	556.30	5.83	.28	9500.00	5.00	63.88	944.34	880.46
3.00	556.92	557.19	5.93	.27	11800.00	5.00	61.27	962.32	901.05
3.00	558.72	559.02	6.61	.30	18400.00	5.00	56.04	998.33	942.30
4.00	556.01	556.11	3.50	.10	5700.00	5.00	63.90	944.19	880.28
4.00	556.03	556.31	5.81	.28	9500.00	5.00	63.86	944.52	880.66
4.00	556.93	557.19	5.92	.27	11800.00	5.00	61.25	962.48	901.24
4.00	558.73	559.03	6.60	.30	18400.00	5.00	56.01	998.50	942.49
700.00	556.42	556.50	3.19	.08	5700.00	700.00	62.72	952.36	889.65
700.00	557.05	557.21	4.64	.16	9500.00	700.00	60.88	964.99	904.11
700.00	557.91	558.08	4.89	.17	11800.00	700.00	58.40	982.10	923.70
700.00	559.77	559.97	5.60	.21	18400.00	700.00	52.99	1002.23	949.20
795.00	555.29	558.73	14.87	3.43	5700.00	95.00	434.55	491.45	56.89
795.00	558.33	562.56	16.51	4.23	9500.00	95.00	428.18	497.82	69.63
795.00	559.86	564.44	17.18	4.58	11800.00	95.00	424.97	501.03	6.06
795.00	563.17	568.86	19.13	5.68	18400.00	95.00	419.00	507.00	88.00
805.00	556.79	559.04	12.05	2.25	5700.00	10.00	431.42	494.58	63.17
805.00	560.11	562.92	13.45	2.81	9500.00	10.00	424.43	501.57	77.13
805.00	561.70	564.81	14.16	3.11	11800.00	10.00	421.12	504.88	83.77
805.00	567.15	570.21	14.02	3.05	18400.00	10.00	419.00	507.00	88.00
900.00	559.47	559.59	3.64	.12	5700.00	95.00	59.67	973.36	913.69
900.00	563.46	563.55	3.54	.09	9500.00	95.00	48.05	1006.15	958.10
900.00	565.41	565.49	3.60	.08	11800.00	95.00	42.40	1211.68	1100.09
900.00	570.80	570.86	3.39	.06	18400.00	95.00	26.73	1361.34	1334.61
1500.00	559.77	559.88	3.47	.10	5700.00	600.00	58.77	979.50	920.72
1500.00	563.67	563.75	3.46	.08	9500.00	600.00	47.45	1006.63	959.18
1500.00	565.60	565.68	3.53	.08	11800.00	600.00	41.85	1222.16	1133.24
1500.00	570.92	570.98	3.35	.06	18400.00	600.00	26.40	1363.17	1336.77
2200.00	560.20	560.39	4.58	.18	5700.00	700.00	542.85	1212.73	669.88
2200.00	563.97	564.10	4.40	.14	9500.00	700.00	251.51	1223.37	971.86
2200.00	565.86	565.98	4.37	.12	11800.00	700.00	170.76	1228.72	1057.96
2200.00	571.08	571.18	4.16	.09	18400.00	700.00	67.65	1243.48	1175.84
3000.00	560.76	560.81	2.55	.05	5700.00	800.00	535.07	1214.31	679.24
3000.00	564.32	564.36	2.34	.04	9500.00	800.00	235.34	1224.37	989.03
3000.00	566.16	566.20	2.26	.04	11800.00	800.00	159.25	1229.57	1070.31
3000.00	571.28	571.30	2.04	.03	18400.00	800.00	65.80	1244.03	1178.23

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
3300.00	560.83	560.97	3.86	.13	5700.00	300.00	970.63	1522.85	552.22
3300.00	564.36	564.45	3.43	.09	9500.00	300.00	910.86	1536.08	625.22
3300.00	566.19	566.27	3.29	.09	11800.00	300.00	726.81	1539.97	813.16
3300.00	571.29	571.34	2.70	.05	18400.00	300.00	356.96	1606.30	1249.34
3685.00	561.12	561.54	5.18	.42	5700.00	385.00	1000.00	1100.22	185.41
3685.00	564.41	564.89	5.56	.48	9500.00	385.00	1000.00	1100.40	185.79
3685.00	566.15	566.67	5.80	.52	11800.00	385.00	1000.00	1100.50	185.99
3685.00	571.35	571.41	2.43	.07	18400.00	385.00	360.93	1751.71	1147.37
3690.00	560.71	561.86	8.62	1.15	5700.00	5.00	1000.00	1430.00	80.00
3690.00	563.68	565.41	10.57	1.73	9500.00	5.00	1000.00	1430.00	80.00
3690.00	565.19	567.36	11.82	2.17	11800.00	5.00	1000.00	1430.00	80.00
3690.00	571.13	571.56	5.20	.43	18400.00	5.00	593.95	1613.83	1019.88
3710.00	561.14	562.18	8.19	1.04	5700.00	20.00	1000.00	1430.00	80.00
3710.00	564.15	565.75	10.14	1.60	9500.00	20.00	1000.00	1430.00	80.00
3710.00	566.05	567.89	10.88	1.84	11800.00	20.00	1000.00	1430.00	80.00
3710.00	571.29	571.67	5.34	.38	18400.00	20.00	586.95	1616.74	1029.79
3715.00	562.18	562.37	3.51	.19	5700.00	5.00	1000.00	1246.12	379.41
3715.00	565.91	566.05	3.06	.15	9500.00	5.00	1000.00	1430.00	430.00
3715.00	568.20	568.25	2.13	.06	11800.00	5.00	534.78	1430.00	895.22
3715.00	571.70	571.74	1.85	.04	18400.00	5.00	478.52	1693.85	1215.33
3765.00	562.27	562.51	4.21	.24	5700.00	50.00	734.24	1245.13	510.88
3765.00	566.06	566.10	1.91	.04	9500.00	50.00	578.96	1650.45	1071.50
3765.00	568.24	568.27	1.72	.03	11800.00	50.00	535.34	1667.22	1131.88
3765.00	571.71	571.75	1.83	.04	18400.00	50.00	478.32	1693.93	1215.61
4700.00	564.35	564.45	2.68	.10	3700.00	935.00	725.52	1241.28	515.76
4700.00	566.53	566.64	2.95	.11	6700.00	935.00	614.52	1242.98	628.46
4700.00	568.53	568.62	2.63	.08	8400.00	935.00	568.02	1244.53	676.51
4700.00	571.94	572.02	2.67	.08	13200.00	935.00	508.78	1247.18	738.40
5700.00	565.43	565.47	2.63	.04	3700.00	1000.00	399.64	1459.30	1059.67
5700.00	567.35	567.39	2.38	.04	6700.00	1000.00	359.46	1481.79	1122.33
5700.00	569.02	569.05	1.99	.03	8400.00	1000.00	329.76	1492.12	1162.36
5700.00	572.28	572.30	1.82	.02	13200.00	1000.00	278.45	1509.71	1231.26
* 7700.00	572.03	572.74	8.39	.71	3700.00	2000.00	885.11	1497.80	575.10
* 7700.00	572.80	573.70	10.37	.90	6700.00	2000.00	877.11	1511.77	602.80
* 7700.00	573.12	574.14	11.30	1.01	8400.00	2000.00	873.16	1517.68	627.26
* 7700.00	573.76	575.18	13.92	1.42	13200.00	2000.00	863.58	1529.30	665.73
9350.00	580.74	581.01	4.91	.27	3700.00	1650.00	340.79	669.90	329.11
9350.00	582.63	582.96	5.74	.33	6700.00	1650.00	305.09	673.07	367.98
9350.00	583.46	583.82	6.10	.36	8400.00	1650.00	281.59	674.28	392.68
9350.00	585.40	585.84	6.87	.43	13200.00	1650.00	212.53	677.09	464.57
* 11350.00	592.66	595.34	13.33	2.68	3700.00	2000.00	527.88	588.08	60.20
* 11350.00	596.27	598.68	13.20	2.40	6700.00	2000.00	477.67	713.59	235.92
* 11350.00	597.44	599.71	13.40	2.28	8400.00	2000.00	453.41	771.82	318.41
* 11350.00	599.51	601.72	14.39	2.21	13200.00	2000.00	410.15	875.63	465.48

SECNO	CWSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
12800.00	601.30	601.47	4.16	.17	3700.00	1450.00	172.58	601.74	429.16
12800.00	603.74	603.92	4.71	.19	6700.00	1450.00	133.58	622.53	488.95
12800.00	604.72	604.92	5.04	.20	8400.00	1450.00	128.39	629.90	501.51
12800.00	606.91	607.17	5.87	.26	13200.00	1450.00	116.82	646.34	529.52
13085.00	601.59	602.88	9.09	1.28	3700.00	285.00	300.00	396.25	96.25
13085.00	603.64	605.52	10.99	1.88	6700.00	285.00	300.00	401.16	101.16
13085.00	604.42	606.73	12.19	2.31	8400.00	285.00	300.00	403.03	103.03
13085.00	605.92	609.70	15.60	3.78	13200.00	285.00	300.00	406.63	106.63
13115.00	601.84	602.99	8.58	1.14	3700.00	30.00	300.00	396.85	96.85
13115.00	604.03	605.68	10.33	1.66	6700.00	30.00	300.00	402.08	102.08
13115.00	604.93	606.92	11.33	1.99	8400.00	30.00	300.00	404.24	104.24
13115.00	607.08	609.95	13.59	2.87	13200.00	30.00	300.00	409.40	109.40
13235.00	603.28	603.47	4.26	.19	3700.00	120.00	164.82	605.93	441.11
13235.00	606.05	606.25	4.87	.20	6700.00	120.00	129.28	628.64	499.36
13235.00	607.34	607.55	5.11	.21	8400.00	120.00	122.45	638.35	515.89
13235.00	610.52	610.74	5.62	.22	13200.00	120.00	105.69	666.22	560.53
13700.00	603.90	604.33	5.93	.43	3700.00	465.00	187.08	582.53	395.45
13700.00	606.63	607.06	6.64	.44	6700.00	465.00	136.80	617.63	480.83
13700.00	607.90	608.33	6.88	.43	8400.00	465.00	130.08	627.50	497.42
13700.00	611.02	611.45	7.38	.43	13200.00	465.00	113.61	651.21	537.61
14188.00	605.04	605.37	4.65	.34	3700.00	488.00	178.06	266.14	88.09
14188.00	607.74	608.38	6.41	.64	6700.00	488.00	173.58	270.62	97.04
14188.00	608.97	609.77	7.19	.80	8400.00	488.00	171.55	272.65	101.11
14188.00	611.84	613.10	9.02	1.26	13200.00	488.00	170.50	273.70	103.20
14212.00	605.06	605.51	5.39	.45	3700.00	24.00	155.90	231.71	75.81
14212.00	607.78	608.63	7.42	.86	6700.00	24.00	152.02	235.59	83.57
14212.00	609.02	610.10	8.33	1.08	8400.00	24.00	150.25	237.36	87.10
14212.00	614.14	614.43	5.29	.29	13200.00	24.00	37.44	447.03	409.59
14320.00	605.49	605.68	3.58	.19	3700.00	108.00	199.73	458.55	258.82
14320.00	608.61	608.90	4.60	.29	6700.00	108.00	183.36	481.69	298.33
14320.00	610.08	610.41	5.02	.33	8400.00	108.00	161.79	491.38	329.59
14320.00	614.17	614.56	5.67	.39	13200.00	108.00	117.62	562.63	441.39
14950.00	605.80	607.64	11.27	1.84	3700.00	630.00	49.44	156.79	107.35
14950.00	608.98	610.86	11.78	1.88	6700.00	630.00	43.55	174.81	131.27
14950.00	610.41	612.40	12.28	1.99	8400.00	630.00	40.90	182.89	141.98
14950.00	614.32	616.37	12.87	2.05	13200.00	630.00	33.66	203.93	170.27
16450.00	623.13	623.88	7.37	.75	3700.00	1500.00	45.13	169.97	124.84
16450.00	625.20	626.54	10.05	1.34	6700.00	1500.00	41.29	181.71	140.42
16450.00	626.23	627.85	11.18	1.63	8400.00	1500.00	39.40	187.49	148.09
16450.00	628.39	630.87	14.04	2.48	13200.00	1500.00	35.39	200.67	165.28
17450.00	631.61	632.91	9.55	1.30	3700.00	1000.00	47.94	161.40	113.46
17450.00	634.48	636.11	11.02	1.63	6700.00	1000.00	42.63	177.60	134.96
17450.00	635.76	637.58	11.79	1.82	8400.00	1000.00	40.26	184.85	144.59
17450.00	638.87	641.11	13.40	2.24	13200.00	1000.00	34.48	202.38	167.90

SECNO	WSEL	EG	VCH	HV	Q	XLCH	SSTA	ENDST	TOPWID
18400.00	643.63	644.89	9.04	1.26	3300.00	950.00	227.91	342.43	83.83
18400.00	646.00	647.90	11.53	1.90	6100.00	950.00	206.35	400.03	190.24
18400.00	647.04	649.08	12.33	2.04	7800.00	950.00	197.26	418.81	221.55
18400.00	649.34	651.43	13.39	2.09	12400.00	950.00	178.69	442.42	263.72
19700.00	651.52	651.98	5.71	.45	3300.00	1300.00	201.60	409.48	207.88
19700.00	654.40	654.89	6.53	.50	6100.00	1300.00	178.24	442.62	264.38
19700.00	655.57	656.11	7.04	.54	7800.00	1300.00	168.80	446.78	277.97
19700.00	657.89	658.58	8.35	.69	12400.00	1300.00	150.09	455.03	304.94
21000.00	654.97	655.29	4.83	.32	3300.00	1300.00	217.27	417.23	199.96
21000.00	657.78	658.20	5.92	.42	6100.00	1300.00	191.82	426.60	234.78
21000.00	659.06	659.54	6.45	.48	7800.00	1300.00	181.13	430.88	249.75
21000.00	661.80	662.41	7.62	.61	12400.00	1300.00	158.34	444.09	285.75
22300.00	658.10	658.55	5.57	.45	3300.00	1300.00	225.43	414.34	188.91
22300.00	661.00	661.54	6.59	.54	6100.00	1300.00	198.37	423.98	225.61
22300.00	662.34	662.93	7.04	.59	7800.00	1300.00	187.14	428.48	241.34
22300.00	665.26	665.96	8.04	.70	12400.00	1300.00	162.81	438.64	275.83
24500.00	658.68	658.68	.21	.00	3300.00	2200.00	1318.87	1597.58	278.71
24500.00	661.75	661.76	.39	.01	6100.00	2200.00	1165.77	1674.35	508.59
24500.00	663.20	663.21	.49	.01	7800.00	2200.00	1121.05	1735.65	614.60
24500.00	666.36	666.38	.74	.02	12400.00	2200.00	1023.09	1869.96	846.87

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL
 POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL
 POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL
 POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL
 POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL
 POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL
 POSSIBLE ERROR SECNO= 7700.00 PROFILE= 3 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 7700.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL
 POSSIBLE ERROR SECNO= 7700.00 PROFILE= 4 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 7700.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL
 POSSIBLE ERROR SECNO= 11350.00 PROFILE= 1 CRITICAL DEPTH ASSUMED
 POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

FHF Table
 #3

C PPM BIG BEAVER ISLAND FIS
 1 PPM BR MADISON-MAYODAN FIS
 120 10 YR NATURAL
 13 BIG BEAVER ISLAND CREEK

J1 ICHKC INQ NLEV IDIR STPT METRIC HVINS C WSEL FO
 0-10. 6A -0. -0. -0.00000 -0.00 -0.0 -0. 556.000 -0.000
 J2 NPROF TPLOT PRFVS XSECV YSECH FN ALLDC IRW CHNIM ITRACE
 0.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF 1

CCHV= .200 CEHV= .400

SECNO	DEPT	WSEL	CRWS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICUNT	CORAR	TOPWID	ENDST	
1.00	13.60	556.00	0.00	556.00	556.10	.10	0.00	0.00	553.40	
5700.	959.	2728.	2013.	1417.	777.	1567.	0.	0.	552.80	
0.00	.68	3.51	1.28	.140	.050	.070	0.000	542.40	63.93	
000622	0.	0.	0.	0	0	1	0.00	880.07	944.00	
2.00	13.60	556.00	0.00	556.10	556.10	.10	.00	.00	553.40	
5700.	959.	2727.	2014.	1418.	777.	1569.	0.	0.	552.80	
0.00	.68	3.51	1.28	.140	.050	.070	.042	542.40	63.92	
000621	5.	5.	5.	0	0	1	0.00	880.14	944.06	
3.00	13.61	556.01	0.00	556.11	556.11	.10	.00	.00	553.40	
5700.	960.	2729.	2015.	1419.	778.	1570.	1.	0.	552.80	
0.00	.68	3.50	1.28	.140	.050	.070	.042	542.40	63.91	
000619	5.	5.	5.	0	0	1	0.00	880.21	944.12	
4.00	13.61	556.01	0.00	556.11	556.11	.10	.00	.00	553.40	
5700.	960.	2724.	2016.	1420.	778.	1571.	1.	0.	552.80	
0.00	.68	3.50	1.28	.140	.050	.070	.042	542.40	63.90	
000618	5.	5.	5.	0	0	1	0.00	880.28	944.19	
700.00	14.02	556.42	0.00	556.50	556.50	.08	.38	.00	553.40	
5700.	1001.	2568.	2131.	1565.	806.	1761.	65.	15.	552.80	
.10	.64	3.19	1.21	.140	.050	.070	.050	542.40	62.72	
000489	700.	700.	700.	2	0	1	0.00	889.65	952.36	

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM RR MADISON-MAYODAN FIS
 T2 50 YR NATURAL
 T3 BIG BEAR ISLAND CREEK

J1 ICHECK INO MINV IDIR STRT METRIC HVINS Q WSEL FQ
 -10. 5. -0. -0. -0.000000 -0.00 -0.0 -0. 556.000 -0.000
 J2 NPROF IPLOT PRFVS XSECV XSECH FN ALLOC IBW CHNIM ITRACE
 2.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF 2

CCHV= .200 CEHV= .400

SECNO	DEPTH	CWSEL	CRINS	WSELK	EQ	HV	HL	LOSS	BANK	ELEV
Q	QLOB	QCH	QRQB	ALOB	ACH	ARQB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VRQB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLQBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

1.00	13.60	556.00	0.00	556.00	556.28	.28	0.00	0.00	553.40	
9500.	1598.	4547.	3355.	1417.	777.	1567.	0.	0.	552.80	
0.00	1.13	5.85	2.14	.140	.050	.070	0.000	542.40	63.93	
.001727	-0.	-0.	-0.	0	0	1	0.000	880.07	944.00	

2.00	13.61	556.01	0.00	0.00	556.29	.28	.01	.00	553.40	
9500.	1600.	4541.	3360.	1420.	778.	1571.	0.	0.	552.80	
.00	1.13	5.84	2.14	.140	.050	.070	.042	542.40	63.91	
.001710	5.	5.	5.	0	0	1	0.000	880.27	944.17	

3.00	13.62	556.02	0.00	0.00	556.30	.28	.01	.00	553.40	
9500.	1601.	4535.	3364.	1423.	778.	1575.	1.	0.	552.80	
.00	1.13	5.83	2.14	.140	.050	.070	.042	542.40	63.88	
.001709	5.	5.	5.	0	0	1	0.000	880.46	944.34	

4.00	13.63	556.03	0.00	0.00	556.31	.28	.01	.00	553.40	
9500.	1603.	4529.	3368.	1426.	779.	1579.	1.	0.	552.80	
.00	1.12	5.81	2.13	.140	.050	.070	.042	542.40	63.86	
.001701	5.	5.	5.	0	0	1	0.000	880.66	944.52	

700.00	14.65	557.05	0.00	0.00	557.21	.16	.88	.02	553.40	
9500.	1753.	3939.	3809.	1789.	849.	2060.	69.	15.	552.80	
.07	.98	4.64	1.85	.140	.050	.070	.050	542.40	60.88	
.000967	700.	700.	700.	2	0	1	0.000	904.11	964.99	

 INTER/ *****
 ERR: ACTIVE HEC2 VERSION UPDATED FEB 1976
 MOD OR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 RIG BEAVER ISLAND CREEK

J1	ICHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FQ
	-10.	2.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	556.900	-0.000
J2	NPROF	IPLUT	PRFVS	XSECV	XSECH	FN	ALLOC	IBW	CHNIM	ITRACE
	3.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

*PROF 3

SECNO	DEPTH	CWSEL	CHHS	WSELK	EG	HV	HL	LOSS	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
1.00	14.50	556.90	0.00	556.90	557.17	.27	0.00	0.00	553.40
11800.	2154.	4986.	4660.	1736.	838.	1988.	0.	0.	552.80
0.00	1.24	5.95	2.34	.140	.050	.070	0.000	542.40	61.32
.001613	-0.	-0.	-0.	0	0	1	0.00	900.68	962.00
2.00	14.51	556.91	0.00	0.00	557.18	.27	.01	.00	553.40
11800.	2156.	4980.	4664.	1739.	839.	1992.	1.	0.	552.80
.00	1.24	5.94	2.34	.140	.050	.070	.042	542.40	61.29
.001606	5.	5.	5.	0	0	1	0.00	900.87	962.16
3.00	14.52	556.92	0.00	0.00	557.19	.27	.01	.00	553.40
11800.	2157.	4975.	4668.	1741.	840.	1996.	1.	0.	552.80
.00	1.24	5.93	2.34	.140	.050	.070	.042	542.40	61.27
.001599	5.	5.	5.	0	0	1	0.00	901.05	962.32
4.00	14.53	556.93	0.00	0.00	557.19	.27	.01	.00	553.40
11800.	2158.	4970.	4672.	1744.	840.	2000.	2.	0.	552.80
.00	1.24	5.92	2.34	.140	.050	.070	.042	542.40	61.25
.001593	5.	5.	5.	0	0	1	0.00	901.24	962.48
700.00	15.51	557.91	0.00	0.00	558.08	.17	.86	.02	553.40
11800.	2285.	4430.	5085.	2095.	907.	2478.	82.	15.	552.80
.07	1.09	4.80	2.05	.140	.050	.070	.050	542.40	58.40
.000981	700.	700.	700.	2	0	1	0.00	923.70	982.10

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 500 YR NATURAL
 T3 BIG HEAVEN ISLAND CREEK

J1	ICHECK	INO	NIMV	IDIR	STRT	METRIC	HVINS	0	WSEL	FO
	-10.	4.	-0.	-0.	-0.000000	-0.00	-0.0	-0.	558.700	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLOC	IRW	CHNIM	ITRACE
	15.000	-0.000	-1.000	-0.000	-0.001	-0.000	-0.000	-0.000	-0.000	-0.000

*PROF 4

CCNV= .200 CEHV= .400

SEGNO	DEPTH	CWSEL	CRWS	WSELK	EG	HV	HL	LOSS	BANK	ELEV
Q	CLCH	QCH	QROB	ALOR	ACH	AROB	VOL	TWA	LEFT/RIGHT	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XL0BL	XLCH	XL0BR	ITRIAL	IDC	ICONT	CORAR	TOPWD	ENDST	
1.00	16.30	558.70	0.00	558.70	559.00	.30	0.00	0.00	553.40	
18400.	3680.	6372.	8548.	2381.	961.	2879.	0.	0.	552.80	
0.00	1.55	6.630	2.90	.140	.050	.070	0.000	542.40	56.09	
.001673	-0.	-0.	-0.	0	0	1	0.00	941.91	998.00	
2.00	16.31	558.71	0.00	0.00	559.01	.30	.01	.00	553.40	
18400.	3681.	6367.	8542.	2384.	961.	2884.	1.	0.	552.80	
.00	1.54	6.62	2.90	.140	.050	.070	.042	542.40	56.06	
.001667	5.	5.	5.	0	0	1	0.00	942.11	998.17	
3.00	16.32	558.72	0.00	0.00	559.02	.30	.01	.00	553.40	
18400.	3682.	6362.	8536.	2387.	962.	2888.	1.	0.	552.80	
.00	1.54	6.61	2.89	.140	.050	.070	.042	542.40	56.04	
.001661	5.	5.	5.	0	0	1	0.00	942.30	998.33	
4.00	16.33	558.74	0.00	0.00	559.04	.30	.01	.00	553.40	
18400.	3683.	6357.	8530.	2390.	963.	2892.	2.	0.	552.80	
.00	1.54	6.60	2.89	.140	.050	.070	.042	542.40	56.01	
.001655	5.	5.	5.	0	0	1	0.00	942.40	998.50	
700.00	-17.37	559.77	0.00	0.00	559.97	.21	.93	.02	553.40	
18400.	3785.	5780.	8827.	2767.	1033.	3429.	110.	16.	552.80	
.00	1.37	5.60	2.57	.140	.050	.070	.050	542.40	52.99	
.001083	700.	700.	700.	2	0	1	0.00	949.24	1002.23	

3685 20 TRIALS USED WSEL,CWSEL

FLOOD INSURANCE ZONE DATA FOR BIG BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		10'	2'	0.2'
1.000	0.	-1.9	-1.9	1.8
2.000	5.	-1.9	-1.9	1.8
3.000	10.	-1.9	-1.9	1.8
4.000	15.	-1.9	-1.9	1.8
700.000	715.	-1.5	-1.9	1.9
795.000	810.	-4.6	-1.5	3.3
805.000	820.	-4.9	-1.6	5.5
900.000	915.	-5.0	-1.9	5.4
1300.000	1515.	-5.8	-1.9	5.3
2200.000	2215.	-5.7	-1.9	5.2
3080.000	3015.	-5.4	-1.8	5.1
3300.000	3315.	-5.4	-1.8	5.1
3055.000	3700.	-5.0	-1.7	5.2
3650.000	3705.	-4.5	-1.5	5.0
3710.000	3725.	-5.0	-2.0	5.2
3715.000	3750.	-6.4	-2.8	3.1
3765.000	3780.	-6.4	-2.6	3.1
4700.000	4715.	-4.6	-2.4	3.0
5700.000	5715.	-3.9	-2.0	3.0
7700.000	7715.	-1.1	-1.3	1.7
9350.000	9365.	-2.7	-1.8	1.9
11350.000	11365.	-4.8	-1.2	2.1
12800.000	12815.	-3.4	-1.0	2.2
13085.000	13100.	-2.8	-1.8	1.5
13115.000	13130.	-3.1	-1.9	2.2
13235.000	13250.	-4.1	-1.3	3.2
13700.000	13715.	-4.0	-1.3	3.1
14188.000	14203.	-3.9	-1.2	2.9
14212.000	14227.	-5.0	-1.2	5.1
14320.000	14335.	-4.6	-1.5	4.1
14950.000	14965.	-4.6	-1.4	3.9
16450.000	16465.	-3.1	-1.0	2.2
17450.000	17465.	-4.1	-1.3	3.1
18400.000	18415.	-3.4	-1.0	2.3
19700.000	19715.	-4.0	-1.2	2.3
21000.000	21015.	-4.1	-1.3	2.7
22300.000	22315.	-4.2	-1.3	2.9
WEIGHTED AVG FOR REACH		-3.9	-1.3	2.8

FHF FOR THE REACH = 0.40 WITH 63.1% OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH = A 8

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC TOTAL AVG ELEVATION DATA WTD. PERCENT

NO. LENGTH 10' 20' 0.2'

	0.					SEC.	1.000
1	120.	556.0	557.0	-1.0	-1.0	010	100.
	5.					SEC.	2.000
	10.					SEC.	3.000
	15.					SEC.	4.000
2	240.	556.1	557.1	-1.0	-1.0	010	100.
3	360.	556.2	557.3	-1.1	-1.0	010	100.
4	480.	556.2	557.5	-1.2	-1.1	010	100.
5	600.	556.3	557.7	-1.3	-1.1	010	100.
	715.					SEC.	700.000
6	720.	556.4	557.9	-1.5	-1.2	010	100.
	810.					SEC.	795.000
	820.					SEC.	805.000

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

	10'	20'	0.2'
WEIGHTED AVG FOR REACH	-1.2	-1.0	1.8

FHF FOR REACH 1 = 010 WITH 100% OF THE REACH WITHIN 5 FEET
ZONE FOR THE REACH = A-2

7	840.	557.1	562.1	-5.0	-5.0	050	86.
	915.					SEC.	900.000
8	960.	558.4	564.0	-5.5	-5.3	055	88.
9	1080.	559.5	565.4	-5.9	-5.5	055	89.
10	1200.	559.6	565.5	-5.9	-5.6	055	90.
11	1320.	559.6	565.5	-5.9	-5.6	055	91.
12	1440.	559.7	565.6	-5.9	-5.7	055	92.
	1515.					SEC.	1500.000
13	1560.	559.8	565.6	-5.8	-5.7	055	92.
14	1680.	559.8	565.6	-5.8	-5.7	055	93.
15	1800.	559.9	565.7	-5.8	-5.7	055	93.
16	1920.	560.0	565.7	-5.7	-5.7	055	94.
17	2040.	560.1	565.8	-5.7	-5.7	055	94.
18	2160.	560.1	565.8	-5.7	-5.7	055	94.
	2215.					SEC.	2200.000
19	2280.	560.2	565.9	-5.7	-5.7	055	95.
20	2400.	560.3	565.9	-5.6	-5.7	055	95.
21	2520.	560.4	566.0	-5.6	-5.7	055	95.
22	2640.	560.5	566.0	-5.5	-5.7	055	95.
23	2760.	560.5	566.0	-5.5	-5.7	055	96.
24	2880.	560.6	566.1	-5.5	-5.7	055	96.
25	3000.	560.7	566.1	-5.4	-5.7	055	96.
	3015.					SEC.	3000.000
26	3120.	560.8	566.2	-5.4	-5.6	055	96.
27	3240.	560.8	566.2	-5.4	-5.6	055	96.
	3315.					SEC.	3300.000
28	3360.	560.8	566.2	-5.3	-5.6	055	96.
29	3480.	560.9	566.2	-5.3	-5.6	055	97.
30	3600.	561.0	566.2	-5.2	-5.6	055	97.
	3700.					SEC.	3685.000
	3705.					SEC.	3690.000
31	3720.	560.9	565.5	-4.7	-5.5	055	97.
	3725.					SEC.	3710.000
	3730.					SEC.	3715.000
	3780.					SEC.	3765.000

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND

	10'	20'	0.2'
WEIGHTED AVG FOR REACH	-5.5	-1.0	5.3

FHF FOR REACH 2 = 099 WITH 97.0% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A11

=====

32	3840.	562.3	568.7	-6.4	-6.4	065	97.
33	3960.	562.5	568.7	-6.2	-6.3	065	97.
34	4080.	562.8	568.8	-6.0	-6.2	060	97.
35	4200.	563.1	568.8	-5.7	-6.1	060	97.
36	4320.	563.3	568.7	-5.5	-6.0	060	97.
37	4440.	563.6	568.7	-5.3	-5.8	060	97.
38	4560.	563.9	568.9	-5.0	-5.7	055	97.
39	4680.	564.1	568.9	-4.8	-5.6	055	100.

SEC. 4700.000

40	4800.	564.4	569.0	-4.6	-5.5	055	100.
41	4920.	564.5	569.0	-4.5	-5.4	055	100.
42	5040.	564.6	569.1	-4.4	-5.3	055	98.
43	5160.	564.8	569.1	-4.3	-5.2	050	98.
44	5280.	564.9	569.2	-4.3	-5.2	050	95.
45	5400.	565.0	569.2	-4.2	-5.1	050	96.
46	5520.	565.2	569.3	-4.1	-5.0	050	96.
47	5640.	565.3	569.3	-4.0	-5.0	050	94.

SEC. 5700.000

48	5760.	565.5	569.4	-3.9	-4.9	050	94.
49	5880.	565.8	569.6	-3.8	-4.8	050	92.
50	6000.	566.2	569.8	-3.6	-4.8	050	92.
51	6120.	566.6	570.0	-3.4	-4.7	045	88.
52	6240.	567.0	570.2	-3.3	-4.6	045	87.
53	6360.	567.4	570.5	-3.1	-4.6	045	87.
54	6480.	567.8	570.7	-2.9	-4.5	045	85.
55	6600.	568.2	570.9	-2.8	-4.4	045	84.
56	6720.	568.5	571.1	-2.6	-4.3	045	82.
57	6840.	568.9	571.4	-2.4	-4.3	045	81.
58	6960.	569.3	571.6	-2.2	-4.2	040	79.
59	7080.	569.7	571.8	-2.1	-4.1	040	78.
60	7200.	570.1	572.0	-1.9	-4.0	040	78.
61	7320.	570.5	572.3	-1.7	-4.0	040	75.
62	7440.	570.9	572.5	-1.6	-3.9	040	76.
63	7560.	571.3	572.7	-1.4	-3.8	040	75.
64	7680.	571.7	572.9	-1.2	-3.7	035	73.

SEC. 7700.000

65	7800.	572.2	573.3	-1.1	-3.7	035	71.
66	7920.	572.8	574.0	-1.2	-3.6	035	68.
67	8040.	573.4	574.8	-1.3	-3.5	035	69.
68	8160.	574.1	575.5	-1.5	-3.5	035	66.
69	8280.	574.7	576.3	-1.6	-3.4	035	64.
70	8400.	575.3	577.0	-1.7	-3.4	035	64.
71	8520.	576.0	577.8	-1.8	-3.3	035	62.
72	8640.	576.6	578.5	-1.9	-3.3	035	61.
73	8760.	577.2	579.3	-2.1	-3.3	035	60.
74	8880.	577.9	580.0	-2.2	-3.2	030	58.
75	9000.	578.5	580.8	-2.3	-3.2	030	60.
76	9120.	579.1	581.6	-2.4	-3.2	030	61.
77	9240.	579.8	582.3	-2.5	-3.2	030	61.

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND
10# 2# 0.2#

WEIGHTED AVG FOR REACH -3.2 -1.4 2.1

FHF FOR REACH 3 = 030 WITH 61.0% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A 6

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78	9360.	580.4	583.1	-2.7	-2.7	025	100.
79	9480.	581.1	583.9	-2.8	-2.7	025	100.

SEC. 9350.000

CONSOLIDATED SURVEYING & MAPPING SERVICE, INC.

80	9800.	581.8	584.7	-2.9	-2.8	030	100.
81	9720.	582.5	585.3	-3.0	-2.8	030	100.
82	9840.	583.2	586.4	-3.2	-2.9	030	100.
83	9960.	583.9	587.2	-3.3	-3.0	030	100.
84	10080.	584.6	588.0	-3.4	-3.0	030	100.
85	10200.	585.4	588.9	-3.5	-3.1	030	100.
86	10320.	586.1	589.7	-3.6	-3.2	030	100.
87	10440.	586.8	590.6	-3.8	-3.2	030	100.
88	10560.	587.5	591.5	-3.9	-3.3	035	100.
89	10680.	588.2	592.2	-4.0	-3.3	035	100.
90	10800.	588.9	593.1	-4.1	-3.4	035	100.
91	10920.	589.6	593.9	-4.3	-3.5	035	100.
92	11040.	590.4	594.7	-4.4	-3.5	035	100.
93	11160.	591.1	595.6	-4.5	-3.6	035	99.
94	11280.	591.8	596.4	-4.6	-3.6	035	99.
	11365.					SEC. 11350.000	
95	11400.	592.5	597.2	-4.7	-3.7	035	97.
96	11520.	593.2	597.9	-4.7	-3.8	040	98.
97	11640.	593.9	598.5	-4.6	-3.8	040	97.
98	11760.	594.7	599.1	-4.5	-3.8	040	97.
99	11880.	595.4	599.7	-4.4	-3.9	040	97.
100	12000.	596.1	600.3	-4.2	-3.9	040	97.
101	12120.	596.8	600.9	-4.1	-3.9	040	97.
102	12240.	597.5	601.5	-4.0	-3.9	040	97.
103	12360.	598.2	602.1	-3.9	-3.9	040	97.
104	12480.	598.9	602.7	-3.8	-3.9	040	97.
105	12600.	599.7	603.3	-3.7	-3.9	040	97.
106	12720.	600.4	603.9	-3.6	-3.9	040	97.
	12815.					SEC. 12800.000	
107	12840.	601.0	604.5	-3.4	-3.9	040	97.
108	12960.	601.6	604.6	-3.2	-3.8	040	97.
109	13080.	601.5	604.5	-3.0	-3.8	040	97.
	13100.					SEC. 13085.000	
	13130.					SEC. 13115.000	
110	13200.	602.3	605.6	-3.4	-3.8	040	97.
	13250.					SEC. 13235.000	
111	13320.	603.0	606.9	-3.9	-3.8	040	97.
112	13440.	603.5	607.5	-4.0	-3.8	040	97.
113	13560.	603.6	607.6	-4.0	-3.8	040	97.
114	13680.	603.8	607.8	-4.0	-3.8	040	97.
	13715.					SEC. 13700.000	
115	13800.	604.0	608.0	-4.0	-3.8	040	97.
116	13920.	604.2	608.2	-4.0	-3.8	040	97.
117	14040.	604.5	608.5	-4.0	-3.8	040	97.
118	14160.	604.8	608.7	-3.9	-3.8	040	97.
	14205.					SEC. 14188.000	
	14227.					SEC. 14212.000	
119	14280.	605.2	609.3	-4.1	-3.8	040	97.
	14335.					SEC. 14320.000	
120	14400.	605.4	609.8	-4.4	-3.8	040	98.
121	14520.	605.6	610.1	-4.6	-3.9	040	98.
122	14640.	605.8	610.2	-4.6	-3.9	040	98.
123	14760.	605.7	610.3	-4.6	-3.9	040	98.
124	14880.	605.7	610.3	-4.6	-3.9	040	97.
	14965.					SEC. 14950.000	
125	15000.	606.0	610.6	-4.6	-3.9	040	97.
126	15120.	606.2	611.4	-4.5	-3.9	040	97.
127	15240.	608.3	612.7	-4.4	-3.9	040	97.
128	15360.	609.7	613.9	-4.3	-4.0	040	97.
129	15480.	611.1	615.2	-4.2	-4.0	040	97.
130	15600.	612.4	616.5	-4.0	-4.0	040	97.
131	15720.	613.8	617.7	-3.9	-4.0	040	97.
132	15840.	615.2	619.0	-3.8	-4.0	040	97.
133	15960.	616.6	620.3	-3.7	-4.0	040	97.
134	16080.	618.0	621.5	-3.5	-3.9	040	97.
135	16200.	619.4	622.8	-3.4	-3.9	040	97.

136	16320.	620.8	624.1	-3.3	-3.9	0.40	97.
137	16440.	622.1	625.3	-3.2	-3.9	0.40	97.
	16465.					SEC. 16450.000	
138	16560.	623.4	626.5	-3.2	-3.9	0.40	98.
139	16680.	624.4	627.7	-3.3	-3.9	0.40	98.
140	16800.	625.5	628.8	-3.4	-3.9	0.40	98.
141	16920.	626.5	630.0	-3.5	-3.9	0.40	98.
142	17040.	627.5	631.1	-3.6	-3.9	0.40	98.
143	17160.	628.5	632.3	-3.8	-3.9	0.40	98.
144	17280.	629.5	633.4	-3.9	-3.9	0.40	98.
145	17400.	630.6	634.6	-4.0	-3.9	0.40	98.
	17465.					SEC. 17450.000	
146	17520.	631.7	635.8	-4.1	-3.9	0.40	98.
147	17640.	633.1	637.1	-4.1	-3.9	0.40	98.
148	17760.	634.6	638.5	-4.0	-3.9	0.40	98.
149	17880.	636.1	640.0	-3.9	-3.9	0.40	98.
150	18000.	637.6	641.4	-3.8	-3.9	0.40	98.
151	18120.	639.1	642.8	-3.7	-3.9	0.40	98.
152	18240.	640.7	644.2	-3.6	-3.9	0.40	98.
153	18360.	642.2	645.7	-3.5	-3.9	0.40	98.
	18415.					SEC. 18400.000	
154	18480.	643.5	646.9	-3.4	-3.9	0.40	98.
155	18600.	644.4	647.9	-3.5	-3.9	0.40	98.
156	18720.	645.1	648.6	-3.5	-3.9	0.40	98.
157	18840.	645.8	649.4	-3.6	-3.8	0.40	98.
158	18960.	646.6	650.2	-3.6	-3.8	0.40	98.
159	19080.	647.3	651.0	-3.7	-3.8	0.40	98.
160	19200.	648.0	651.8	-3.8	-3.8	0.40	98.
161	19320.	648.8	652.6	-3.8	-3.8	0.40	98.
162	19440.	649.5	653.4	-3.9	-3.8	0.40	98.
163	19560.	650.2	654.2	-4.0	-3.8	0.40	98.
164	19680.	650.9	654.9	-4.0	-3.8	0.40	98.
	19715.					SEC. 19700.000	
165	19800.	651.5	655.6	-4.1	-3.8	0.40	98.
166	19920.	651.9	656.0	-4.1	-3.9	0.40	98.
167	20040.	652.2	656.3	-4.1	-3.9	0.40	98.
168	20160.	652.5	656.6	-4.1	-3.9	0.40	98.
169	20280.	652.9	656.9	-4.1	-3.9	0.40	98.
170	20400.	653.2	657.2	-4.1	-3.9	0.40	98.
171	20520.	653.5	657.6	-4.1	-3.9	0.40	98.
172	20640.	653.8	657.9	-4.1	-3.9	0.40	98.
173	20760.	654.1	658.2	-4.1	-3.9	0.40	98.
174	20880.	654.5	658.5	-4.1	-3.9	0.40	98.
175	21000.	654.8	658.9	-4.1	-3.9	0.40	98.
	21015.					SEC. 21000.000	
176	21120.	655.1	659.2	-4.1	-3.9	0.40	98.
177	21240.	655.4	659.5	-4.1	-3.9	0.40	98.
178	21360.	655.7	659.8	-4.1	-3.9	0.40	98.
179	21480.	655.9	660.1	-4.1	-3.9	0.40	98.
180	21600.	656.2	660.4	-4.2	-3.9	0.40	98.
181	21720.	656.5	660.7	-4.2	-3.9	0.40	98.
182	21840.	656.8	661.0	-4.2	-3.9	0.40	98.
183	21960.	657.1	661.3	-4.2	-3.9	0.40	98.
184	22080.	657.4	661.6	-4.2	-3.9	0.40	98.
185	22200.	657.7	661.9	-4.2	-3.9	0.40	98.
	22215.					SEC. 22300.000	

ELEVATION DIFFERENCE
BETWEEN BASE FLOOD AND
10# 2# 0.2#

WEIGHTED AVG FOR REACH -3.9 -3.2 2.6
FH FOR REACH 4 = 0.40 WITH 98% OF THE REACH WITHIN 1.0 FEET
ZONE FOR THE REACH = A-B

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976

ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 21,52,53,54,55,56,57,58

Radon F.H. Tall
 #2

0 EPM BIG BEAVER ISLAND FIS
 1 EPM BR MADISON-MAYODAN FIS
 12 10 YR NATURAL
 13 BIG BEAVER ISLAND CREEK

J1 CHECK INO NINV DIR STRI METRIC HVINS 0 WSEL CO
 -10 6 -0 -0 -0.00000 -0.00 -0.0 -0. 556.000 -0.000

J2 NPROF TPOI PRFS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 1.000 0.000 1.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

PROP 1

CCHVE 200 CERV 400

SEONO	DEPTH	CWSEL	CRTQS	WSELK	EG	HV	HL	LOSS	BANK ELEV
TIME	VECB	VCH	VRQB	XNL	XNGH	XNR	HTN	ELMIN	SSA
SLOPE	XLGBL	XEGH	XLQBR	ITRIAL	IDC	ICONT	CORAR	TORPID	ENDST

1.00	13.60	556.00	0.00	556.00	556.10	.10	0.00	0.00	553.40
5700.	960.	2728.	2013.	1417.	777.	1567.	1.	0.	552.80
1.00	.68	3.51	1.28	.140	.050	.070	0.000	542.40	63.93
.000622	5.	5.	5.	0	0	1	0.00	880.07	944.00

2.00	13.60	556.00	0.00	0.00	556.10	.10	.00	.00	553.40
5700.	960.	2728.	2014.	1418.	777.	1569.	1.	0.	552.80
1.00	.68	3.51	1.28	.140	.050	.070	.042	542.40	63.92
.000621	5.	5.	5.	0	0	1	0.00	880.14	944.06

3.00	13.61	556.01	0.00	0.00	556.11	.10	.00	.00	553.40
5700.	960.	2728.	2015.	1419.	778.	1570.	1.	0.	552.80
1.00	.68	3.50	1.28	.140	.050	.070	.042	542.40	63.91
.000619	5.	5.	5.	0	0	1	0.00	880.21	944.12

4.00	13.61	556.01	0.00	0.00	556.11	.10	.00	.00	553.40
5700.	960.	2728.	2016.	1420.	778.	1571.	1.	0.	552.80
1.00	.68	3.50	1.28	.140	.050	.070	.042	542.40	63.90
.000618	5.	5.	5.	0	0	1	0.00	880.28	944.19

7.00.00	14.02	556.42	0.00	0.00	556.50	.08	.38	.00	553.40
5700.	1001.	2568.	2131.	1565.	806.	1761.	65.	15.	552.80
1.10	.64	3.19	1.21	.140	.050	.070	.050	542.40	62.72
.000489	700.	700.	700.	2	0	1	0.00	889.65	952.36

 INTERACTIVE HEC2 VERSION UPDATED FEB 1975
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1: ERMA MADISON-MAYODAN FLS
 T2: 50 YR NATURAL
 T3: BIG BEAVER ISLAND CREEK

J1	ICHECK	IND	NINV	IDIR	STRT	METRIC	HVINS	Q	NSEL	FO
	-10	5	-0	-0	-0.000000	-0.00	-0.0	-0	-556.000	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLOC	IBW	CHNTH	ITRACE
	2.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

APRGE 2

CCRVS = .200 CCHV = .400

SECNO	DEPTH	CWSEL	CRHS	WSELK	EG	HV	HC	GLOSS	BANK ELEV
Q	QLOB	QGH0	QRQB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XNL	XNQH	XNR	WTN	ELMIN	SSTA
SCORE	XLOB	XLOH	XROB	TRIAL	IDC	ICONT	GORAR	TOPWD	ENDST
1.00	13.60	556.00	0.00	556.00	556.28	.28	0.00	0.00	553.40
9500.	1598.	4547.	3355.	1417.	777.	1567.	0.	0.	552.80
0.00	1.13	5.85	2.14	.140	.050	.070	0.000	542.40	63.93
001727	5.	5.	5.	0	0	1	0.00	880.07	944.00
2.00	13.61	556.01	0.00	0.00	556.29	.28	.01	.00	553.40
9500.	1600.	4541.	3360.	1420.	778.	1571.	0.	0.	552.80
0.00	1.13	5.84	2.14	.140	.050	.070	.042	542.40	63.91
001718	5.	5.	5.	0	0	1	0.00	880.27	944.17
3.00	13.62	556.02	0.00	0.00	556.30	.28	.01	.00	553.40
9500.	1601.	4535.	3364.	1423.	778.	1575.	1.	0.	552.80
0.00	1.13	5.83	2.14	.140	.050	.070	.042	542.40	63.88
001709	5.	5.	5.	0	0	1	0.00	880.46	944.34
4.00	13.63	556.03	0.00	0.00	556.31	.28	.01	.00	553.40
9500.	1603.	4529.	3368.	1426.	779.	1579.	1.	0.	552.80
0.00	1.12	5.81	2.13	.140	.050	.070	.042	542.40	63.86
001701	5.	5.	5.	0	0	1	0.00	880.65	944.52
7.00	14.65	557.05	0.00	0.00	557.21	.16	.88	.02	553.40
9500.	1753.	3939.	3809.	1789.	849.	2060.	69.	15.	552.80
0.00	1.98	4.64	1.85	.140	.050	.070	.050	542.40	60.86
000967	700.	700.	700.	2	0	1	0.00	904.11	964.99

3685 20 TRIALS USED WSEL,CWSEL

 INTERACTIVE HED2 VERSION UPDATED FEB 1976

ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09

MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1: FPM BR MADISON-MAYODAN EIS

T2: 100YR NATURAL

T3: BIG BEAVER ISLAND CREEK

J1	T/CHECK	INO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FO
	-10	2	-0	-0	-0.000000	-0.00	-0.0	-0	556.900	-0.000

J2	INPROF	IPLOT	PRFVS	XSECV	XSEQH	FN	ALLDC	IBW	CHNM	ITRACE
	3.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

PROP

CCHV= .200 CERV= .400

SECNO	DEPTH	CHSEL	CRINS	WSEL	EG	HV	HL	QLOSS	BANK ELEV
Q	QDOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VDOB	VCH	VROB	XMLE	XNCH	XNR	HTN	ELMIN	SSTA
SLOPE	XSOBL	XLOH	XLOBR	ITRIAL	IDC	ICONT	GORAR	TOPWID	ENDST

1.00	14.50	556.90	0.00	556.90	557.17	.27	0.00	0.00	553.40
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11800	2154	4986	4660	1736	838	1988	0	0	552.80
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0.00	1.24	5.95	2.34	1.140	.050	.070	0.000	542.40	61.52
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.001613	5	5	5	0	0	1	0.00	900.68	962.00
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2.00	14.51	556.91	0.00	0.00	557.18	.27	.01	.00	553.40
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11800	2156	4980	4664	1739	839	1992	1	0	552.80
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0.00	1.24	5.94	2.34	1.140	.050	.070	.042	542.40	61.29
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.001606	5	5	5	0	0	1	0.00	900.87	962.16
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3.00	14.52	556.92	0.00	0.00	557.19	.27	.01	.00	553.40
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11800	2157	4975	4668	1741	840	1996	1	0	552.80
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0.00	1.24	5.91	2.34	1.140	.050	.070	.042	542.40	61.27
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.001599	5	5	5	0	0	1	0.00	901.05	962.32
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4.00	14.53	556.93	0.00	0.00	557.19	.27	.01	.00	553.40
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11800	2158	4970	4672	1744	840	2000	2	0	552.80
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0.00	1.24	5.92	2.34	1.140	.050	.070	.042	542.40	61.25
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.001593	5	5	5	0	0	1	0.00	901.24	962.48
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700.00	15.51	557.91	0.00	0.00	558.08	.17	.86	.02	553.40
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11800	2285	4430	5085	2095	907	2478	82	15	552.80
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.07	1.09	4.89	2.05	1.140	.050	.070	.050	542.40	58.40
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.000981	700	700	700	2	0	1	0.00	923.70	982.10
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3685 20 TRIALS USED WSEL,CWSEL

DATE 11/11/76

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 EPM BR MADISON-MAYODAN FIS
 T2 500 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1 TCHECK TNO NINV IDIR STRT METRIC HVINS 0 WSEL FO
 -10 -40 -50 -0 -0.000000 -0.00 -0.0 -0. 558.700 -0.000
 J2 NPROF TPLOT PRFVS XSECV XSECH 0 FN ALLDC TRW CHNIM ITRACE
 15.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF=1
 CCHV= .200 CERV= .100

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	BANK	ELEV
Q	QLOB	QCR	QROB	ALUB	ACH	AROB	VOL	TNA	LEFT/RIGHT	
SLOPE	XL0BL	XL0CH	XL0BR	TERRAL	XNCH	XNR	WINJ	ELMIN	SSTA	
					IDOC	ICONT	CBRAR	TOPWID	ENDST	
1.00	16.30	558.70	0.00	558.70	559.00	.30	0.00	0.00		553.40
18400.	3680.	6372.	8348.	2381.	961.	2879.	0.	0.		552.80
0.00	1.54	6.63	2.70	.140	.050	.070	0.000	542.40		56.09
.001673	5.	5.	5.	0	0	1	0.00	941.91		998.00
2.00	16.31	558.71	0.00	0.00	559.01	.30	.01	0.00		553.40
18400.	3680.	6367.	8352.	2384.	961.	2884.	1.	0.		552.80
0.00	1.54	6.62	2.70	.140	.050	.070	.042	542.40		56.06
.001667	5.	5.	5.	0	0	1	0.00	942.11		998.17
3.00	16.32	558.72	0.00	0.00	559.02	.30	.01	0.00		553.40
18400.	3682.	6362.	8356.	2387.	962.	2888.	1.	0.		552.80
0.00	1.54	6.61	2.89	.140	.050	.070	.042	542.40		56.04
.001661	5.	5.	5.	0	0	1	0.00	942.30		998.33
4.00	16.33	558.73	0.00	0.00	559.03	.30	.01	0.00		553.40
18400.	3683.	6357.	8360.	2390.	963.	2892.	2.	0.		552.80
0.00	1.54	6.60	2.89	.140	.050	.070	.042	542.40		56.01
.001655	5.	5.	5.	0	0	1	0.00	942.49		998.50
700.00	17.37	559.77	0.00	0.00	559.97	.21	.93	.02		553.40
18400.	3785.	5789.	8827.	2767.	1033.	3429.	110.	16.		552.80
0.06	1.37	5.60	2.57	.140	.050	.070	.050	542.40		52.99
.001083	700.	700.	700.	2	0	1	0.00	949.24		1002.23

FLOOD INSURANCE ZONE DATA FOR BIG BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		100	20	0.20
1.000	0.	-0.9	-0.9	1.8
2.000	5.	-0.9	-0.9	1.8
3.000	10.	-0.9	-0.9	1.8
4.000	15.	-0.9	-0.9	1.8
700.000	715.	-1.5	-1.0	1.9
795.000	781.0	-4.6	-1.5	3.3
805.000	820.	-4.9	-1.6	5.5
900.000	915.	-5.9	-1.9	5.4
1500.000	1515.	-5.8	-1.9	5.3
2200.000	2215.	-5.7	-1.9	5.2
3000.000	3015.	-5.4	-1.8	5.1
3300.000	3315.	-5.4	-1.8	5.1
3685.000	3700.	-5.0	-1.7	5.2
3690.000	3705.	-4.5	-1.5	5.9
3710.000	3725.	-5.0	-2.0	5.2
3715.000	3730.	-6.5	-2.8	3.1
3765.000	3780.	-5.4	-2.0	3.1
4700.000	4715.	-4.6	-2.4	3.0
5700.000	5715.	-3.9	-2.0	3.0
7700.000	7715.	-1.1	-1.3	1.7
9350.000	9365.	-2.7	-1.8	1.9
11350.000	11365.	-4.8	-1.2	2.1
12800.000	12815.	-3.4	-1.0	2.2
13080.000	13100.	-2.8	-0.8	1.5
13115.000	13130.	-3.1	-0.9	2.2
13235.000	13250.	-4.1	-1.3	3.2
13700.000	13715.	-5.0	-1.3	3.1
14188.000	14203.	-3.9	-1.2	2.9
14212.000	14227.	-4.0	-1.2	2.1
14320.000	14335.	-4.6	-1.5	4.1
14980.000	14965.	-4.6	-1.4	3.9
16450.000	16465.	-3.1	-1.0	2.2
17450.000	17465.	-4.1	-1.3	3.1
18400.000	18415.	-3.4	-1.0	2.3
19700.000	19715.	-4.0	-1.2	2.3
21000.000	21015.	-4.1	-1.3	2.7
22300.000	22315.	-4.2	-1.3	2.9
WEIGHTED AVG FOR REACH		-3.9	-1.3	2.8

FHE FOR THE REACH = 0.40 WITH 63.1% OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH = A 8

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC. TOTAL WEIGHTED AVG DIFFERENCE

NO. LENGTH BETWEEN BASE FLOOD AND

6 720. -1.2 -1.9 4.8

FHF FOR REACH 1 = 010 WITH 100% OF THE REACH WITHIN .5 FEET

ZONE FOR THE REACH = A 2

31 5720. -5.9 -1.9 5.3

FHF FOR REACH 2 = 055 WITH 97% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A 11

77 9240. -3.2 -1.4 2.1

FHF FOR REACH 3 = 030 WITH 61% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A 6

185 22200. -3.9 -1.2 2.6

FHF FOR REACH 4 = 040 WITH 98% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A 8

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 795.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 1 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 2 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 3 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 7700.00 PROFILE= 4 20 TRIALS REQUIRED TO BALANCE WSEL

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 1 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 2 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 3 CRITICAL DEPTH ASSUMED

POSSIBLE ERROR SECNO= 11350.00 PROFILE= 4 CRITICAL DEPTH ASSUMED

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01, 02, 03, 04, 05, 06, 07, 08, 09
 MODIFICATIONS 50, 51, 52, 53, 54, 55, 56, 57, 58

*Profile
 FFF-Tabl*

C EPMAD/B BEAVER ISLAND F.I.S
 1 EPMAD/B MADISON-HAYDOAN F.I.S
 2 10-YR NATURAL
 3 BIG BEAVER ISLAND CREEK

J1 ICHECK IAND INIV IDIR STRI METRIC HVINS HSEL CG
 -10 6 -0.0 -0.0 -0.000000 -0.00 -0.0 -0.0 556.000 -0.000

J2 NPROF IPILOT PRFVS XSECV XSECH FN ALLCOC IBW CRNIM ITRACE
 1.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF 1

COHV= .200 CEHV= .400

*SEOND 1.000
 SEOND DEPTH CWSEL CRTWS WSELK EG HV HSEL OLOSS BANK ELEV
 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA
 SLOPE XLOBL XLOH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

1.00 13.50 556.00 0.00 0.00 556.10 .10 .00 .00 553.40

*SEOND 2.000
 2.00 13.60 556.00 0.00 0.00 556.10 .10 .00 .00 553.40

*SEOND 3.000
 3.00 13.61 556.00 0.00 0.00 556.11 .10 .00 .00 553.40

*SEOND 4.000
 4.00 13.61 556.01 0.00 0.00 556.11 .10 .00 .00 553.40

*SEOND 700.000
 700.00 14.02 556.42 0.00 0.00 556.50 .08 .38 .00 553.40

*SEOND 795.000
 3689 20 TRIALS USED WSEL, CWSEL

7.105 MIN SPECIFIC ENERGY

37.20 ASSUMED CRITICAL DEPTH

SEOND DEPTH CWSEL CRTWS WSELK EG HV HSEL OLOSS BANK ELEV
 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
 TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA
 SLOPE XLOBL XLOH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1: 7.5 FPM BR MADISON-MAYODAN FIS
 T2: 50 YR NATURAL
 T3: BIG BEAVER ISLAND CREEK

J1 TCHECK INO MINV IDIR STRY METRIC HVINS 0 WSEL FO
 -10.7 5 -0.0 -0.0 -0.000000 -0.00 -0.00 -0.0 556.000 -0.0000

J2 NPROF IPLOT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 2.000 -0.000 -1.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000

*PROF 12
 CCHV= .200 CEVE= .400
 *SECNO 1.000

SECNO	DEPTH	CWSEL	CRTWS	WSELK	EG	HV	HL	OCLOSS	BANK ELEV
1.00	13.60	556.00	0.00	556.00	556.28	.28	0.00	0.00	553.40

*SECNO 2.000
 2.00 13.61 556.01 0.00 0.00 556.29 .28 .01 .00 553.40

*SECNO 3.000
 3.00 13.62 556.02 0.00 0.00 556.30 .28 .01 .00 553.40

*SECNO 4.000
 4.00 13.63 556.03 0.00 0.00 556.31 .28 .01 .00 553.40

*SECNO 700.000
 700.00 14.65 557.05 0.00 0.00 557.21 .16 .88 .02 553.40

3685.72 TRIALS USED WSEL AND SEL
 7185 MIN SPECIFIC ENERGY

3720 ASSUMED CRITICAL DEPTH

SECNO	DEPTH	CWSEL	CRTWS	WSELK	EG	HV	HL	OCLOSS	BANK ELEV
0	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
	TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	SSTA
	SLOPE	XLOB	XCH	XROB	TRIAL	IDC	ICONT	ORAR	TOPWID
									ENDST

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 572.50 ELREA= 572.60

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976

ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 EPM BR MADISON-MAYODAN FIS
 T2 100 YR NATURAL
 T3 BIG-BEaver ISLAND CREEK

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	0	WSEL	FO
	-10	2	-0	-0	-0.000020	-0.00	-0.0	-0	556.900	-0.000
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALDCC	IBW	CHNTM	ITRACE
	5.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

*PROF 3
 CCHVE = .200 CERV = .400
 *SECNO 1.000

SECNO	DEPTH	WSEL	CRIWS	WSELK	EG	HV	HL	ULOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1.00	14.50	556.90	0.00	556.90	557.17	.27	0.00	0.00	553.40
2.00	14.51	556.91	0.00	0.00	557.18	.27	.01	.00	553.40
3.00	14.52	556.92	0.00	0.00	557.19	.27	.01	.00	553.40
4.00	14.50	556.93	0.00	0.00	557.19	.27	.01	.00	553.40
7.00	15.51	557.91	0.00	0.00	558.06	.17	.86	.02	553.40

*SECNO 7.957000
 3685 TRIALS USED WSEL,OWSEL
 7.189 MIN SPECIFIC ENERGY

*720 ASSUMED CRITICAL DEPTH

SECNO	DEPTH	WSEL	CRIWS	WSELK	EG	HV	HL	ULOSS	BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	LEFT/RIGHT
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 572.50 ELREA= 572.60

 INTERACTIVE HEC2 VERSION UPDATED FEB 1976
 ERROR CORRECTIONS 01,02,03,04,05,06,07,08,09
 MODIFICATIONS 50,51,52,53,54,55,56,57,58

T1 FPM BR MADISON-MAYODAN FIS
 T2 500 YR NATURAL
 T3 BIG BEAVER ISLAND CREEK

J1	ICHECK	JNO	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FO
	-10	4	-0	-0	-0.000000	-0.00	-0.0	-0	558.700	-0.000
J2	NPROF	IPLOT	PREVS	XSECV	XSECH	FN	ALCDC	IBW	CRNIM	ITRACE
	15.000	-0.000	-1.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000

*PROF
 CCHV= .200 CERV= .400
 *SECNO 1.000

SECNO	DEPTH	CHSEL	CRHS	WSELK	EG	HV	HL	LOSS	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	XLOH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPHD	ENDST
1.00	16.30	558.70	0.00	558.70	559.00	.30	0.00	0.00	553.40

*SECNO 2.000	2.00	16.31	558.71	0.00	0.00	559.01	.30	.01	.00	553.40
*SECNO 3.000	3.00	16.32	558.72	0.00	0.00	559.02	.30	.01	.00	553.40
*SECNO 4.000	4.00	16.33	558.73	0.00	0.00	559.03	.30	.01	.00	553.40
*SECNO 700.000	700.00	17.37	559.77	0.00	0.00	559.97	.21	.93	.02	553.40

*SECNO 795.000
 3685 20 TRIALS USED WSEL,CHSEL
 7185 MIN SPECIFIC ENERGY

3720 ASSUMED GRADUAL DEPTH

SECNO	DEPTH	CHSEL	CRHS	WSELK	EG	HV	HL	LOSS	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	XLOH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPHD	ENDST

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 572.50 ELREA= 572.60

FLOOD INSURANCE ZONE DATA FOR BIG BEAVER ISLAND CREEK

FLOOD HAZARD FACTOR FOR ENTIRE REACH USING SECTIONS

SECTION NUMBER	CUMULATIVE DISTANCE	ELEVATION DIFFERENCE BETWEEN BASE FLOOD AND		
		10R	2R	0.2R
1.000	0.	-0.9	-0.9	1.8
2.000	5.	-0.9	-0.9	1.8
3.000	10.	-0.9	-0.9	1.8
4.000	15.	-0.9	-0.9	1.8
700.000	715.	-1.5	-1.5	1.9
795.000	810.	-4.6	-1.5	3.3
805.000	820.	-4.9	-1.6	5.5
900.000	915.	-5.9	-1.9	5.4
1500.000	1515.	-5.8	-1.9	5.3
2200.000	2215.	-5.7	-1.9	5.2
3000.000	3015.	-5.4	-1.8	5.1
3300.000	3315.	-5.4	-1.8	5.1
3685.000	3700.	-5.0	-1.7	5.2
3690.000	3705.	-4.5	-1.5	5.9
3710.000	3725.	-5.0	-2.0	5.2
3715.000	3730.	-6.5	-2.8	3.1
3725.000	3740.	-6.4	-2.6	3.1
4700.000	4715.	-4.6	-2.4	3.0
5700.000	5715.	-3.9	-2.0	3.0
7700.000	7715.	-1.1	-1.3	1.7
9350.000	9365.	-2.7	-1.8	1.9
11350.000	11365.	-4.8	-1.2	2.1
12800.000	12812.	-3.4	-1.0	2.2
13085.000	13100.	-2.8	-1.8	1.5
13112.000	13130.	-3.1	-0.9	2.2
13232.000	13250.	-4.1	-1.3	3.2
13700.000	13712.	-4.0	-1.3	3.1
14188.000	14209.	-3.9	-1.2	2.9
14242.000	14270.	-4.0	-1.2	3.1
14320.000	14335.	-4.6	-1.5	4.1
14930.000	14965.	-4.6	-1.4	3.9
16420.000	16465.	-3.1	-1.0	2.2
17450.000	17465.	-4.1	-1.3	3.1
18400.000	18415.	-3.4	-1.0	2.3
19700.000	19715.	-4.0	-1.2	2.3
21000.000	21015.	-4.1	-1.3	2.7
22500.000	22515.	-4.2	-1.3	2.9
WEIGHTED AVG FOR REACH		-3.9	-1.3	2.8

FHF FOR THE REACH = 0.40 WITH 63.1% OF THE REACH WITHIN 1.0 FEET ZONE FOR THE REACH = A-B

CONTINUOUS FLOOD HAZARD FACTORS BY EVEN INCREMENTS

INC. TOTAL WEIGHTED AVG DIFFERENCE

NO. LENGTH BETWEEN BASE FLOOD AND

6 720. -1.2 -1.9 1.8

FHF FOR REACH 1 = 010 WITH 100% OF THE REACH WITHIN .5 FEET

ZONE FOR THE REACH = A 2

165 22200. -3.9 -1.3 2.8

FHF FOR REACH 2 = 040 WITH 68% OF THE REACH WITHIN 1.0 FEET

ZONE FOR THE REACH = A 8

POSSIBLE ERROR	SECNO=	795.00	PROFILE=	1	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	795.00	PROFILE=	1	20 TRIALS REQUIRED TO BALANCE WSEL
POSSIBLE ERROR	SECNO=	795.00	PROFILE=	2	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	795.00	PROFILE=	2	20 TRIALS REQUIRED TO BALANCE WSEL
POSSIBLE ERROR	SECNO=	795.00	PROFILE=	3	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	795.00	PROFILE=	3	20 TRIALS REQUIRED TO BALANCE WSEL
POSSIBLE ERROR	SECNO=	795.00	PROFILE=	4	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	795.00	PROFILE=	4	20 TRIALS REQUIRED TO BALANCE WSEL
POSSIBLE ERROR	SECNO=	7700.00	PROFILE=	1	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	7700.00	PROFILE=	1	20 TRIALS REQUIRED TO BALANCE WSEL
POSSIBLE ERROR	SECNO=	7700.00	PROFILE=	2	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	7700.00	PROFILE=	2	20 TRIALS REQUIRED TO BALANCE WSEL
POSSIBLE ERROR	SECNO=	7700.00	PROFILE=	3	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	7700.00	PROFILE=	3	20 TRIALS REQUIRED TO BALANCE WSEL
POSSIBLE ERROR	SECNO=	7700.00	PROFILE=	4	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	7700.00	PROFILE=	4	20 TRIALS REQUIRED TO BALANCE WSEL
POSSIBLE ERROR	SECNO=	11350.00	PROFILE=	1	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	11350.00	PROFILE=	2	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	11350.00	PROFILE=	3	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	11350.00	PROFILE=	4	CRITICAL DEPTH ASSUMED
POSSIBLE ERROR	SECNO=	11350.00	PROFILE=	4	20 TRIALS REQUIRED TO BALANCE WSEL