
Existing Conditions Model Input

StonyBrookDari en1-ex. txt

HEC-RAS Version 4.1.0 Jan 2010
U. S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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X      X  XXXXXX      XXXX      XXXX      XX      XXXX
X      X  X          X      X      X  X      X
X      X  X          X          X  X      X  X      X
XXXXXXXX XXXX      X          XXX XXXX      XXXXXX      XXXX
X      X  X          X          X  X      X  X          X
X      X  X          X      X      X  X      X  X      X
X      X  XXXXXX      XXXX      X  X      X  X      XXXXX
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PROJECT DATA

Project Title: StonyBrookDari en1
Project File : StonyBrookDari en1. prj
Run Date and Time: 4/14/2011 12:46:09 PM

Project in English units

Project Description:
Stony Brook, Dari en, CT

PLAN DATA

Plan Title: Existing Conditions-Updated Flow+Geometry
Plan File : p:\1581-05\Design\Comps\Hydraulics\Model s\StonyBrookDari en1. p03

Geometry Title: MMI Existing Conditions- Update Geometry
Geometry File :
p:\1581-05\Design\Comps\Hydraulics\Model s\StonyBrookDari en1. g02

Flow Title : MMI Existing Conditions Flows
Flow File :
p:\1581-05\Design\Comps\Hydraulics\Model s\StonyBrookDari en1. f02

Plan Description:
Existing Conditions geometry created using HEC-GEO-RAS software in ArcMap 9.2.
Topography based on town data of 1 foot contour data provided by Sewell in 2008. FEMA section locations preserved as close as possible.

Plan Summary Information:

Number of:	Cross Sections =	96	Multiple Openings =	1
	Culverts =	1	Inline Structures =	5
	Bridges =	10	Lateral Structures =	0

Computational Information

Water surface calculation tolerance =	0.01
Critical depth calculation tolerance =	0.01
Maximum number of iterations =	20
Maximum difference tolerance =	0.3
Flow tolerance factor =	0.001

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Computati on Opti ons

Critical depth computed only where necessary
 Conveyance Calculati on Method: At breaks in n values only
 Fricti on Slope Method: Average Conveyance
 Computational Flow Regime: Subcritical Flow

Encroachment Data

Equal Conveyance = True
 Left Offset = 0
 Right Offset = 0

Ri ver = StonyBrook	Reach = StonyBrook	RS	Profile	Method	Val ue1	Val ue2
14464			100-yr (encr)	4	0	
14368			100-yr (encr)	2	130	
14237			100-yr (encr)	4	.5	
14202			100-yr (encr)	4	.5	
14188			100-yr (encr)	2	300	
14135			100-yr (encr)	4	.2	
14092			100-yr (encr)	4	1	
13938			100-yr (encr)	4	1	
13611			100-yr (encr)	1	1148.8	1380
13592			100-yr (encr)	4	.8	
12955			100-yr (encr)	4	1	
12171			100-yr (encr)	4	1	
11548			100-yr (encr)	4	.2	
11454			100-yr (encr)	4	.2	
10727			100-yr (encr)	4	.2	
10699			100-yr (encr)	4	1	
10637			100-yr (encr)	2	100	
10603			100-yr (encr)	4	.5	
10374			100-yr (encr)	4	1	
10145			100-yr (encr)	4	1	
9719			100-yr (encr)	4	.58	
9698			100-yr (encr)	4	1	
9638			100-yr (encr)	4	1	
9605			100-yr (encr)	4	1	
9457			100-yr (encr)	1	790	884
9428			100-yr (encr)	2	120	
8754			100-yr (encr)	2	65	
8699			100-yr (encr)	4	1	
8668			100-yr (encr)	4	1	
8613			100-yr (encr)	1	769	829.11
8587			100-yr (encr)	4	1	
8530			100-yr (encr)	4	1	
8292			100-yr (encr)	1	726	825.5
8266			100-yr (encr)	1	735	837
8122			100-yr (encr)	2	150	
8082			100-yr (encr)	2	150	
8056			100-yr (encr)	4	.4	
7650			100-yr (encr)	1	665	744.9
7450			100-yr (encr)	4	1	
7015			100-yr (encr)	4	1	
6766			100-yr (encr)	4	1	
6349			100-yr (encr)	2	200	
6286			100-yr (encr)	4	1	
6226			100-yr (encr)	2	162	
6177			100-yr (encr)	4	1	
5927			100-yr (encr)	2	130	
5733			100-yr (encr)	4	1	
5703			100-yr (encr)	4	1	
5614			100-yr (encr)	2	318	
5586			100-yr (encr)	4	1	

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5299	100-yr	(encr)	4	1	
5199	100-yr	(encr)	4	1	
5048	100-yr	(encr)	4	0	
4989	100-yr	(encr)	4	0	
4922	100-yr	(encr)	4	1	
4879	100-yr	(encr)	4	1	
4774	100-yr	(encr)	4	1	
4688	100-yr	(encr)	4	1	
4678	100-yr	(encr)	4	1	
4672	100-yr	(encr)	4	1	
4327	100-yr	(encr)	5	1	1
4288	100-yr	(encr)	5	1	1
4229	100-yr	(encr)	5	1	1
3952	100-yr	(encr)	5	1	1
3698	100-yr	(encr)	5	1.5	1
3588	100-yr	(encr)	5	1	1
3567	100-yr	(encr)	5	1	1
3514	100-yr	(encr)	2	350	
3482	100-yr	(encr)	5	1	1
3409	100-yr	(encr)	5	1	1
3266	100-yr	(encr)	5	1	1
3008	100-yr	(encr)	5	1	1
2576	100-yr	(encr)	1	1160	1345
2444	100-yr	(encr)	4	1	
2212	100-yr	(encr)	4	1	
2060	100-yr	(encr)	4	1	
2001	100-yr	(encr)	4	1	
1934	100-yr	(encr)	4	1	
1887	100-yr	(encr)	4	1	
1684	100-yr	(encr)	4	1	
1432	100-yr	(encr)	4	1	
1408	100-yr	(encr)	4	1	
1384	100-yr	(encr)	4	1	
1346	100-yr	(encr)	2	60	
1290	100-yr	(encr)	5	1	1.5
1200	100-yr	(encr)	2	135	
1156	100-yr	(encr)	4	.1	
849	100-yr	(encr)	5	1	1.5
710	100-yr	(encr)	2	250	
687	100-yr	(encr)	4	0	
647	100-yr	(encr)	4	0	
632	100-yr	(encr)	1	119	302
574	100-yr	(encr)	1	115	286
404	100-yr	(encr)	4	0	
218	100-yr	(encr)	4	1	
0	100-yr	(encr)	4	1	

FLOW DATA

Flow Title: MMI Existing Conditions Flows

Flow File : p:\1581-05\Design\Comps\Hydraulics\Model s\StonyBrookDari en1. f02

Flow Data (cfs)

River	Reach	RS	100-yr	100-yr (encr)
2-yr	10-yr	50-yr	500-yr	
StonyBrook	StonyBrook	14464	765	765
174	394	630	988	
StonyBrook	StonyBrook	12171	1350	1350

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310	713	1	1745		
StonyBrook	StonyBrook	4688		2380	2380
570	1	1	3041		
StonyBrook	StonyBrook	2576		2741	2741
679	1	2	3507		

Boundary Condi ti ons

Ri ver Downstream	Reach	Profi le	Upstream
StonyBrook Normal S = 0.002	StonyBrook	100-yr	Normal S = 0.00625
StonyBrook Normal S = 0.002	StonyBrook	100-yr (encl)	Normal S = 0.00625
StonyBrook Normal S = 0.002	StonyBrook	2-yr	Normal S = 0.00625
StonyBrook Normal S = 0.002	StonyBrook	10-yr	Normal S = 0.00625
StonyBrook Normal S = 0.002	StonyBrook	50-yr	Normal S = 0.00625
StonyBrook Normal S = 0.002	StonyBrook	500-yr	Normal S = 0.00625

GEOMETRY DATA

Geometry Title: MMI Existing Condi ti ons- Update Geometry
 Geometry File : p:\1581-05\Desi gn\Comps\Hydraul i cs\Model s\StonyBrookDari en1. g02

CROSS SECTI ON

RIVER: StonyBrook
 REACH: StonyBrook RS: 14464

INPUT

Description: US limit of model , in golf course (MMI added section)
 Station Elevation Data num= 340

Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	144.08	1.35	144	2.7	143.97	5.85	143.84	13.42	143
14.38	142.88	17.99	142.41	19.54	142.23	20.84	142.1	21.52	142
24.32	141.64	28.23	141	33.12	140.1	33.62	140	35.68	139.68
40.24	139	41.68	138.79	46.82	138	48.71	137.72	53.12	137
58.49	136.14	59.37	136	63.89	135.26	65.47	135	69.76	134.27
71.33	134	72.12	133.87	77.39	133	80.22	132.52	83.42	132
86.45	131.49	89.72	131	93.17	130.58	98.09	130	101.48	129.58
106.69	129	108.18	128.81	115.11	128	118.2	127.59	122.34	127
125.34	126.52	128.29	126	128.81	125.91	133.85	125	134.74	124.85
139.79	124	142.08	123.79	150.13	123	160.2	122.44	168.37	122
169.64	121.96	170.2	121.94	171.28	121.9	194.95	121	221.95	120.19
228.24	120	235.19	119.79	241.4	119.63	244.17	119.56	259.9	119
269.91	118.33	273.2	118	278.02	117.85	281.39	117.67	291.63	117
296.13	116.58	298.81	116.29	302.19	116	307.15	115.57	312.26	115.21
313.56	115.12	315.6	115	318.57	114.8	323.9	114.49	327.48	114.07
327.94	114	375.23	113.97	382.21	113.94	386.83	113.9	388.94	113.83

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389.31	113.82	400.03	113.63	400.64	113.61	401.69	113.6	406.71	113.49
409.1	113.51	411.05	113.53	421.43	113.2	422.71	113.11	424.72	113
425.16	112.72	425.39	112.6	426.17	112.17	428.03	112.08	428.17	112
428.33	111.86	428.78	111.46	429.28	111	429.8	110.76	431.48	110.03
435.8	108.99	439.2	109	444.2	109.54	446.8	110.73	450.07	112
457.45	113.61	464.19	113.62	466.97	113.64	467.56	113.65	470.41	113.67
470.99	113.69	476.27	113.71	499.49	114	506.66	114.37	508.49	114.47
509.22	114.5	511.14	114.48	513.94	115	515.9	115.42	518.27	116
522.27	116.84	523.27	117	523.76	117.12	527.56	118	528.01	118.09
532.62	119	536.77	119.41	539.05	119.61	540.94	119.74	544	120
546.86	120.49	549.63	121	649.65	120.88	668.04	120	669.1	119.91
680.18	119	704.84	118.66	721.27	118.77	734.9	119	746.87	118.93
747.45	118.91	751.37	118.79	756.65	118.63	774.69	118	788.43	117.31
794.34	117	805.74	116.4	809.17	116.19	812	116	812.81	115.95
818.68	115.63	826.17	115.43	830.07	115.31	834.17	115.17	838.79	115
840.91	114.95	851.61	114.69	852.63	114.68	874.99	114.4	876.39	114.39
884.82	114.52	889.47	114.56	890.41	114.57	892.88	114.59	899.91	114.65
902.78	114.7	903.9	114.72	909.06	114.78	910.1	114.79	911.12	114.8
916.7	114.86	917.37	114.87	918.43	114.88	924.3	114.92	933.8	114.95
936.26	114.97	938.49	115	939.6	115.04	945.99	115.32	958.41	115.84
960.52	115.93	962.46	116	969.97	116.28	972.97	116.41	976.03	116.51
981.35	116.7	996.54	117	999.74	117.08	1003.29	117.11	1013.95	117.13
1016.92	117.1	1020.18	117.11	1022.91	117.14	1024.15	117.13	1026.57	117.17
1029.67	117.22	1031.92	117.24	1036.11	117.34	1038.43	117.38	1041.11	117.42
1045.08	117.51	1049.29	117.6	1052.05	117.67	1064.42	118	1098.86	117.64
1100.67	117.56	1103.14	117.44	1112.13	117	1114.6	116.91	1118.69	116.79
1122.63	116.68	1128.37	116.61	1140.95	116.42	1145.7	116.32	1152.04	116.21
1152.6	116.2	1161.95	116.07	1163.65	116.04	1165.61	116.02	1166.81	116.01
1166.87	116.02	1173.77	116	1176.86	115.99	1179.21	116	1190.15	116.1
1191.32	116.14	1191.97	116.17	1194.11	116.22	1196.3	116.29	1200.14	116.37
1217.45	117	1222.22	117.13	1234.31	118	1236.47	118.08	1244.4	118.39
1264.66	119	1310.92	118.77	1311.98	118.75	1312.62	118.73	1313.37	118.71
1325.35	118.33	1335.2	118	1376.38	117.7	1377.7	117.72	1379.44	117.71
1394.42	118	1423.23	118.48	1428.65	118.63	1429.97	118.66	1433.61	118.74
1435.82	118.75	1439.2	118.81	1443.1	118.86	1443.59	118.87	1444.41	118.88
1445.11	118.89	1449.36	119	1477.7	118.81	1507.8	118	1527.71	118.1
1535.63	118.11	1543.37	118.12	1592.07	118	1624.1	118.93	1624.32	119
1624.8	119.14	1627.6	119.96	1627.72	120	1631.27	121	1642.89	120.97
1642.94	120.96	1645.62	120	1648.1	119.61	1651.49	119	1652.7	118.83
1657.99	118.09	1658.46	118	1659.21	117.86	1665.25	117	1756.59	116.8
1759.85	116.79	1767.78	116.78	1792.12	116.45	1799.89	116.32	1802.52	116.29
1813.08	116.11	1816.75	116.07	1820.33	116	1867.46	115.24	1876.15	115.1
1881.79	115	1921.28	115.86	1923.48	116	1940.41	116.69	1948.34	117
1950.41	117.07	1952.48	117.15	1953.8	117.21	1956.5	117.32	1967.99	117.8
1970.95	117.9	1971.36	117.92	1972.01	117.93	1974.33	117.98	1974.59	117.97
1976.79	117.98	1983.54	117.94	1985.93	118	1988	118.07	1989.4	118.15
2001.78	119	2007.61	119.46	2014.93	120	2061.09	121	2061.67	121.03
2073.87	121.74	2077.88	122	2079.42	122.15	2083.82	122.57	2088.43	123
2096.6	123.9	2097.52	124	2100.8	124.37	2106.77	125	2109.74	125.31
2113.22	125.64	2116.83	126	2124.08	126.69	2125.98	126.87	2127.39	127
2137.43	127.93	2138.22	128	2139.77	128.11	2151.09	128.9	2152.46	129
2160.14	129.49	2168.05	130	2171.04	130.16	2172.66	130.24	2181.48	130.81

Manning's n Values	num=	5							
Sta 0	n Val .04	Sta 424.72	n Val .03	Sta 457.45	n Val .04	Sta 680.18	n Val .06	Sta 1003.29	n Val .04
Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.		
424.72	457.45	96.8	96.51	96.65	.1		.3		

CROSS SECTION

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RIVER: StonyBrook
 REACH: StonyBrook

RS: 14368

INPUT

Description: In golf course (MMI added section)

Station	Elevation	Data	num=	398	Station	Elevation	Station	Elevation	Station	Elevation
0	140.07	1.57	140.06	2.08	140.07	7.31	140.02	8.46	140	
9.75	139.98	12.47	139.91	14.67	139.82	15.75	139.81	20.51	139.63	
23.94	139.61	30.95	139.39	40.98	139.38	57.01	139.1	57.55	139.09	
61.53	139	66.02	138.37	68.09	138	71.58	137.37	73.63	137	
75.62	136.57	78.18	136	80.64	135.37	82.06	135	83.52	134.63	
86.2	134	90.06	133.07	90.33	133	90.42	132.98	95.61	132	
97.3	131.74	101.27	131	103.59	130.64	107.23	130	108.99	129.54	
111.58	129	115.14	128.26	116.39	128	120.05	127.22	121.05	127	
123.09	126.89	147.5	126	158.16	125.55	163.22	125	166.4	124.24	
167.35	124	168.7	123.73	171.96	123	176.2	122.09	176.62	122	
183.38	121.24	185.7	121	206.36	120.64	208	120.65	210.32	120.64	
211.18	120.66	213.25	120.64	213.96	120.65	217.64	120.72	220.32	120.7	
261.53	120	265.12	119.86	265.62	119.83	270.23	119.58	272.88	119.48	
276.9	119.29	279.62	119.17	281.8	119	283.39	118.92	283.72	118.9	
287.02	118.61	292.22	118.16	293.57	118	299.23	117.53	306.24	117	
311.37	116.65	314.88	116.43	317	116.3	321.6	116	328.52	115.52	
335.88	115	354.64	114.07	355.98	114	370.67	113.45	373.84	113.4	
377.01	113.3	380.18	113.27	384.17	113.18	393.3	113	416.83	112.94	
435.02	112.42	439.26	112.31	445.36	112.1	447.7	112.04	448.69	112	
464	111.93	468.8	110.15	470.48	109.42	474.8	108.38	478.2	108.39	
483.2	108.93	485.8	110.12	487.69	112.11	488	112.1	540.75	113	
546.06	113.29	551.46	114	554.6	114.64	556.22	115	559.6	115.83	
560.32	116	562.69	116.44	564.7	116.79	566.26	117	567.06	117.14	
567.52	117.22	571.02	117.66	574.19	118	574.53	118.05	575.98	118.5	
577.27	118.89	577.38	118.93	577.54	119	578.62	119.36	580.55	120	
581.53	120.27	583.81	120.84	584.43	121	587.76	120.83	591.9	120	
603.22	120.36	606.79	120.45	618.31	121	630.66	120.75	632.15	120.77	
634.04	120.78	634.36	120.76	636.55	120.75	637.68	120.72	639.26	120.69	
649.35	120	667.43	119.88	668.23	119.86	673.42	119.8	675.43	119.76	
676.96	119.73	687.08	119.49	692.93	119.35	697.05	119.27	698.7	119.24	
700.15	119.23	711.59	119	716.33	118.9	732.3	118	767.22	117.02	
767.78	117	799.3	116.82	803.44	116.77	805.35	116.72	809.17	116.61	
815.61	116.5	822.65	116.25	828.99	116	832.88	115.9	861.79	115	
868.87	114.38	869.74	114.19	870.82	114	901.88	113.96	902.99	113.94	
903.29	113.93	907.69	113.8	917.72	113.57	918.64	113.54	922.39	113.43	
931.9	113	952.15	112.73	955.14	112.71	959.22	112.67	962.98	112.61	
966.61	112.55	969.98	112.54	978.46	112.53	980.32	112.51	981.87	112.49	
983.77	112.48	992.76	112.24	998.37	112	1036.62	112.5	1040.18	112.76	
1044.44	113	1044.72	113.02	1048.76	113.21	1052.04	113.33	1055.73	113.55	
1059.24	113.77	1067.87	113.93	1068.15	113.94	1070.48	114	1073.15	114.06	
1073.44	114.07	1081.58	114.31	1091.68	115	1092.74	115.06	1093.54	115.11	
1103.43	115.74	1106.12	116	1112.15	116.43	1113.56	116.48	1123.74	117	
1160.02	116.5	1167.72	116.13	1169.57	116	1180.94	115.13	1182.7	115	
1183.78	114.91	1184.13	114.89	1188.26	114.61	1190.18	114.53	1191.78	114.44	
1193.26	114.37	1194.58	114.32	1197.44	114.25	1199.26	114.19	1202.16	114.17	
1203.51	114.13	1206.13	114.15	1209.3	114.16	1212.94	114.32	1217.54	114.43	
1219.51	114.46	1221.25	114.56	1223.27	114.6	1225.75	114.65	1229.34	115	
1233.55	115.45	1233.94	115.49	1238.64	115.58	1241.55	115.55	1244.48	115.57	
1249.49	116	1251.98	116.42	1255.16	117	1256.79	117.5	1258.21	118	
1260.27	118.82	1260.48	118.81	1263.1	118	1328.16	119	1334.21	119.75	
1335.63	120	1347.91	119.27	1348.74	119	1349.25	118.88	1350.42	118.57	
1352.36	118	1355.91	117.64	1366.25	117	1374.49	116.52	1384.44	116.01	
1384.74	116	1392.19	115.59	1400.14	115.6	1405.55	115.98	1405.77	116	
1443.47	116.37	1445.13	116.41	1445.8	116.42	1452.61	116.58	1453.47	116.6	
1455.45	116.63	1469.54	117	1490.15	117.42	1505.45	117.86	1508.35	117.89	
1511.87	117.98	1512.75	118	1516.01	118.13	1516.32	118.15	1519.58	118.25	

StonyBrookDari en1-ex. txt

1520. 1	118. 27	1522. 67	118. 33	1524. 18	118. 35	1529. 83	118. 42	1530. 44	118. 41
1531. 18	118. 38	1533. 48	118. 45	1536. 9	118. 46	1538. 07	118. 43	1540. 2	118. 4
1542. 03	118. 39	1544. 58	118. 31	1548. 03	118. 32	1551. 36	118. 31	1557. 34	118. 21
1564. 16	118	1572. 14	117. 99	1572. 84	117. 98	1574. 49	117. 97	1576. 31	117. 95
1649. 38	117	1682. 83	116. 97	1751. 15	116	1753. 08	115. 9	1753. 6	115. 89
1754. 44	115. 87	1755. 22	115. 86	1755. 9	115. 85	1768. 42	115. 48	1779. 32	115. 56
1785. 66	115. 51	1790	115. 47	1790. 74	115. 46	1792. 25	115. 44	1792. 52	115. 43
1794. 09	115. 44	1797. 32	115. 46	1807. 33	115. 27	1808. 25	115. 28	1819. 46	115. 27
1820. 99	115. 26	1829. 94	115. 28	1831. 2	115. 27	1837. 26	115. 26	1839. 39	115. 23
1844. 88	115. 24	1853. 13	115. 2	1857. 28	115. 18	1866. 98	115	1879. 39	114. 62
1883. 91	114. 49	1886. 17	114. 46	1892. 76	114. 39	1895. 18	114. 37	1899. 46	114. 35
1900. 4	114. 33	1904. 4	114. 3	1907. 74	114. 23	1909. 99	114. 25	1913. 72	114. 28
1914. 3	114. 26	1920. 01	114. 25	1922. 47	114. 28	1925. 15	114. 3	1927. 42	114. 34
1929. 58	114. 38	1932. 24	114. 43	1960. 78	114. 12	1962. 53	114. 06	1963. 9	114
1965. 15	113. 97	1971. 01	113	1983. 71	113. 37	1991. 67	114	1996. 2	114. 71
1998. 31	115	2000. 06	115. 41	2002. 45	116	2004. 79	116. 69	2005. 95	117
2007. 19	117. 4	2009. 08	118	2010. 63	118. 62	2011. 78	119	2023. 99	118. 88
2024. 69	118. 89	2028. 39	118. 75	2030. 61	118. 73	2032. 37	118. 77	2033. 44	118. 78
2038. 44	118. 96	2039. 34	119	2044. 11	119. 27	2045. 3	119. 33	2047. 44	119. 48
2052. 83	120	2058. 14	120. 4	2062. 06	120. 73	2063. 44	120. 97	2063. 53	120. 98
2063. 68	121	2145. 11	121. 89	2145. 43	121. 9	2146. 91	122	2147. 64	122. 06
2148. 31	122. 11	2159. 59	123	2165. 52	123. 73	2167. 88	124	2173. 28	124. 69
2175. 9	125	2181. 93	125. 77	2183. 71	126	2184. 24	126. 07	2190. 24	127
2194. 11	127. 59	2197. 08	128	2206. 86	128. 73				

Manning's n	Values	num=	5						
Station	Val	Station	Val	Station	Val	Station	Val	Station	Val
0	.04	464	.03	487.69	.04	716.33	.06	1103.43	.04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 464 487.69 132.25 130.44 130.44 .1 .3

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 14237

INPUT

Description: In golf course (MMI added section)

Station	Elevation	Data	num=	389						
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	
0	130.05	.53	130	1.85	129.82	7.52	129.09	8.28	129	
12.03	128.01	12.08	128	15.13	127	15.53	126.86	18.14	126	
20.53	125.43	22.82	125	23.48	124.9	29.53	124	32.01	123.64	
38.28	123	41.45	122.82	44.13	122.64	48.56	122.33	51.37	122.16	
53.28	122	59.01	121.54	65.92	121	73.52	120.31	77.18	120	
91.75	119.85	99.02	119.79	110.23	119.7	122.14	119.63	128.04	119.58	
135.2	119.53	145.67	119.44	149.39	119.4	154.24	119.36	172.92	119	
201.02	118.86	203.75	118.74	206.72	118.6	208.18	118.51	220.49	118	
229.41	117.67	232.56	117.6	237.21	117.39	243.34	117	261.31	116.63	
267.55	116.45	278.98	116	279.67	115.94	290.55	115	294.25	114.51	
297.91	114	313.94	113.24	320.75	113	322.41	112.9	322.81	112.88	
324.38	112.82	336.05	112.23	339.06	112.15	343.4	112	350.98	111.65	
352.29	111.6	353.43	111.56	354.16	111.51	355.97	111.46	356.83	111.41	
361.76	111	384.89	110.23	385.3	109.34	386.98	108.61	391.3	107.57	
394.7	107.58	399.7	108.12	402.3	109.31	405.57	110.58	406.83	111	
407.3	111.01	422.24	111.41	444.26	112	456.68	112.53	462.3	112.75	
469.68	113	473.04	113.16	473.45	113.18	475.75	113.31	483.57	113.72	
491.13	114	496.62	114.64	500.1	115	500.99	115.14	501.75	115.23	
504.39	115.54	507.15	115.84	508.82	116	512.18	116.39	516.01	116.5	
519.66	116.73	523.4	117	526.68	117.31	528.25	117.41	529.75	117.53	
534.64	117.74	535.21	117.79	537.31	118	538.46	118.13	538.63	118.12	

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544.32	118.51	546.81	118.44	549.49	118.46	557.78	118.91	559.38	119
577.39	118.87	578.94	118.84	580.19	118.76	583.85	118.51	587.98	118.44
592.59	118.31	602.69	118	604.92	117.89	605.36	117.88	607.41	117.79
609.64	117.68	611.04	117.59	618.25	117.25	620.6	117.11	623.34	117
626.79	116.83	628.25	116.79	631.22	116.63	633	116.52	636.2	116.4
637.54	116.37	640.19	116.33	641.23	116.32	651.14	116	651.85	115.93
655.36	115.47	655.86	115.43	657.55	115.24	659.94	115.21	663.24	115.13
663.83	115.08	667.07	115	669.28	114.95	674.14	114.82	679.27	114.7
687.75	114.46	695.32	114.28	699.32	114.18	702.55	114.09	704.95	114
722.45	113.62	733.83	113.39	735.98	113.35	738.23	113.31	740.65	113.29
744.58	113.21	750.74	113.23	760.77	113.22	761.96	113.24	778.61	113.34
779.81	113.37	788.69	113.21	789.2	113.23	790.32	113.2	790.8	113.22
794.4	113.14	795.2	113.13	796.48	113.15	801.32	113.19	803.75	113.23
814.07	113.19	814.79	113.17	815.73	113.16	817.85	113.13	818.53	113.14
821.87	113.16	822.17	113.17	834.15	113.15	834.57	113.14	837.35	113.16
837.75	113.18	847.01	113.24	847.61	113.19	848.94	113.41	849.66	113.32
850.61	113.27	851.17	113.3	853.09	114	860.38	114.69	861.47	114.78
865.15	115	868.32	115.16	872.22	115.29	873.87	115.32	874.09	115.31
875.72	115.32	877.38	115.3	879.17	115.26	881.16	115.2	881.4	115.19
883.69	115.1	885.7	115	888.17	114.8	890.05	114.74	895.32	114.37
899.01	114.29	904.39	114.13	905.06	114.1	905.64	114.08	908.21	114
912.48	113.67	914.07	113.63	917.97	113.45	919.18	113.36	922.68	113.28
925.7	113.09	929.63	113.27	932.38	113.25	933.45	113.39	934.75	113.45
937.5	113.81	939.05	114	973.86	113.59	980.92	113	987.41	112.29
990.2	112	992.23	111.75	997.41	111	1001.63	110.87	1016.42	110.58
1023.01	110.4	1024.75	110.36	1027.34	110.3	1032.13	110.19	1035.11	110.13
1036.88	110.1	1039.27	110.06	1043.31	110	1084.31	110.82	1085.96	110.93
1087.18	111	1095.27	110.57	1096.56	110.36	1098.48	110	1128.77	109.83
1153.09	109.61	1153.5	109.59	1156.04	109.78	1158.3	109.98	1158.73	110
1160.02	110.14	1160.72	110.21	1164.24	110.51	1166.37	110.68	1168.3	110.83
1170.76	111	1171.05	111.03	1171.22	111.05	1174.84	111.49	1177.78	111.84
1178.36	111.91	1179.05	112	1183.59	112.59	1186.94	113	1190.99	113.46
1195.99	114	1196.23	114.03	1196.79	114.09	1202.25	114.65	1203.53	114.79
1206.21	115	1221.87	115.83	1223.43	115.91	1225.37	116	1303.83	115.74
1304.82	115.69	1316.08	115	1317.06	114.98	1362.99	114.87	1365.96	114.9
1371.85	114.95	1375.85	114.98	1377.61	114.99	1377.88	115	1446.39	115.04
1450.33	115.18	1452.02	115.22	1455.8	115.33	1456.9	115.36	1459.83	115.43
1467.34	115.71	1470.73	115.79	1473.97	115.93	1476.08	116	1480.48	116.09
1483.74	116.12	1483.87	116.13	1486.96	116.18	1493.76	116.29	1498.35	116.34
1504.31	116.43	1506.79	116.46	1509.68	116.52	1513.22	116.55	1515.4	116.6
1518.72	116.65	1528.13	116.71	1529.65	116.7	1531.79	116.68	1551.09	116.18
1554.08	116.08	1556.3	116	1587.73	115.93	1592.17	115.84	1592.89	115.83
1597.33	115.73	1599.09	115.7	1606.14	115.54	1608.49	115.51	1612.36	115.43
1635.73	115	1637.67	114.62	1638.47	114.33	1639.39	114	1640.33	113.3
1640.73	113	1641.18	112.6	1641.86	112	1676.37	112.97	1676.44	113
1676.77	113.17	1678.4	114	1679.21	114.39	1680.49	115	1734.05	114
1734.2	113.94	1736.45	113	1736.75	112.87	1738.71	112	1844.83	112.51
1846.26	113	1862.46	112.71	1862.98	112.74	1865.8	112	1878.7	112.21
1907.66	113	1913.22	113.25	1926.15	114	1933.43	114.52	1938.2	114.84
1940.78	115	1945.39	115.27	1947.04	115.34	1950.79	115.53	1952.75	115.61
1954.04	115.65	1956.56	115.7	1964.45	116	1966.41	116.06	1983.18	116.18
1984.72	116.17	1987.16	116.14	1994.73	116.16	1997.98	116.18	2001.57	116.2
2003.74	116.25	2004.64	116.28	2008.08	116.32	2009.22	116.35	2010.89	116.42
2014.07	116.55	2016.39	116.61	2018.02	116.65	2019.05	116.7	2024.1	117
2033.24	117.5	2042.75	118	2052.54	118.62	2058.4	119	2070.31	119.87
2072.09	120	2073.1	120.09	2083.82	121	2087.62	121.41	2093.68	122
2103.17	122.97	2103.48	123	2103.63	123.01	2110.36	123.63		

Manning's n	Val	Sta	num=	5	n Val	Sta	n Val	Sta	n Val
0	.04	384.89	.03	407.3	.04	779.81	.1	973.86	.04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

StonyBrookDari en1-ex. txt

384.89 407.3 36.94 35.02 34.45 .1 .3
 Blocked Obstructions num= 1
 Sta L Sta R Elev
 832.53 928.28 137

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 14202

INPUT

Description: US section of Hanson Road Bridge (MMI added section)

Station	Elevation	Data	num=	357	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	148.99	1.92	148.79	11.42	148	16.24	147.08	16.85	147			
19.91	146.56	22.06	146.33	26.85	146.37	27.6	146.34	32.23	146			
77.45	145.37	78.12	145.36	85.48	145.22	96.66	145.02	96.7	145.01			
97.54	145	131.26	144.44	133.45	144.43	136.53	144.33	138.83	144.3			
140.22	144.29	144.33	144.15	145.63	144.11	151.52	144.06	156.63	144.02			
163.98	144.03	171.35	144.1	177.48	144.17	181.82	144.2	184.76	144			
199.58	143.87	200.91	143.85	202.49	143.79	203.82	143.72	204.86	143.65			
215.43	143.49	229.23	143	243.02	142.45	246.5	142.27	250.3	142			
262.61	141.39	264.84	141.19	267.33	141	294.34	140.58	306.94	140.39			
308.18	140.37	316.08	140	330.8	139.4	336.49	139	347.42	138.57			
358.12	138	382.12	137.82	383.19	137.84	383.87	137.83	390.12	138			
391.66	138.05	394.76	139	402.07	138.47	404.11	138	412.67	137.03			
413.01	137	418.35	136.64	430.82	136	431.55	135.96	432.13	135.92			
436.46	135.63	441.97	135.27	443.58	135.15	445.86	135	457.45	134.45			
462.39	134.36	473.51	134	484.11	133.4	491.67	133	493.13	132.9			
494.8	132.77	499.54	132.4	504.67	132.01	504.85	132	507.02	131.81			
507.93	131.73	518.05	131	518.56	130.97	528.39	130	529.59	129.88			
536.22	129.19	537.54	129.05	537.76	129.03	538.08	129	542.99	128.54			
547.6	128.18	549.52	128	550.7	127.9	552.59	127.73	556.87	127.33			
560.71	127	563.77	126.68	569.47	126	570.79	125.61	571.73	125			
574.42	124.04	574.52	124	574.62	123.97	577.65	123	579.17	122.72			
581.09	122.4	583.39	122	597.45	121.36	601.06	121.23	602.68	121.19			
607.41	121	619.38	120.4	625.44	120	647.02	119.55	648.79	119.52			
659	119.33	661.69	119.3	684.91	119.24	696.89	119.18	699.95	119.15			
701.19	119.14	703.13	119.12	726.73	119	742.52	118.57	756.49	118			
760.42	117.82	777.65	117	798.32	116.45	800.82	116.37	804.59	116.28			
806.26	116.25	808.35	116.17	809.24	116.15	812.97	116	842.21	115.47			
843.55	115.43	848.86	115.37	854.17	115.21	854.53	115.2	860.93	115.04			
860.99	115.03	862.39	115	869.53	114.62	872.94	114.44	877.07	114.23			
880.52	114.08	880.78	114.07	883.94	114	884.81	113.99	884.9	113.98			
897.39	113.88	897.87	113.85	898.45	113.82	899.1	113.8	907.06	113.66			
912.74	113.57	916.06	113.49	919.51	113.39	922.23	113.32	926.92	113.08			
928.22	113	934.94	112.5	938.37	112	942.29	111.65	945	110.9			
949.8	109.12	951.48	108.39	955.8	107.35	959.2	107.36	964.2	107.9			
966.8	109.09	970.07	110.36	973.35	111	977.34	111.19	977.83	111.22			
979.78	111.31	986.64	111.64	988.7	111.75	995.17	112	1006.57	112.41			
1008.46	112.4	1032.61	113	1053.33	113.02	1063.01	113.58	1069.17	113.92			
1069.75	113.95	1069.98	113.96	1070.11	113.97	1071.27	114	1079.84	114.13			
1088.6	115	1089.51	115.09	1090.33	115.17	1093.67	115.43	1096.15	115.58			
1098.35	116	1128.83	115.36	1131.57	115.24	1134.49	115	1167.61	115.25			
1168.31	115.31	1177.27	115.77	1180.23	115.72	1181.99	115.68	1183.89	115.61			
1187.65	115.44	1189.18	115.39	1190.43	115.34	1197.13	115	1216.94	114.05			
1217.7	114	1218.88	113.91	1231.16	113	1265.92	112.83	1267.65	112.77			
1269.08	112.72	1271.43	112.71	1273.17	112.66	1275.27	112.6	1277.68	112.55			
1280.43	112.51	1294.89	112.16	1297.71	112.14	1300.73	112.12	1303.74	112.11			
1315.71	112	1330.84	111.54	1334.63	111.39	1341.44	111.01	1341.71	111			
1375.86	111.47	1384.59	111.25	1386.34	111.23	1389.5	111.16	1396.41	111.05			
1398.44	111	1409.13	110.65	1410.09	110.63	1421.65	110	1421.94	109.97			

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1422.16	109.95	1423.83	109.8	1431.17	109.15	1432.57	109	1434.41	108.75
1438.01	108.33	1439.52	108.17	1440.41	108.12	1441.34	108	1596.6	108.16
1599.57	108.45	1602.32	108.72	1604.7	109	1612.26	109.13	1613.66	109.15
1615.86	109.19	1617.2	109.2	1621.84	109.3	1630.11	109.48	1632.5	109.54
1636.55	109.5	1674.72	109.63	1711.7	109	1749.48	109.75	1752.26	109.88
1754.56	110	1756.25	110.11	1767.58	111	1776.03	111.3	1805.42	112
1806.51	112.07	1809.87	112.16	1817.12	112.42	1820.49	112.55	1822.76	112.6
1836.62	113	1842.68	113.17	1849.59	113.23	1850.84	113.22	1851.59	113.2
1856.77	113.11	1857.23	113.09	1863.68	113	1912.78	113.01	1916.58	113.16
1927.33	113.47	1945.75	114	1958.11	114.29	1959.04	114.3	1969.27	114.44
1971.55	114.49	1972.3	114.5	1974.34	114.55	1985.08	114.76	1986	114.77
1987.57	114.78	1997.74	115	2076.08	115.04	2079.3	115.06	2104.77	115.08
2110.39	115	2156.3	114.67	2157.12	114.42	2158.48	114	2160.57	113.04
2160.66	113	2160.72	112.97	2162.1	112.19	2162.38	112	2288.97	112.16
2291.82	113	2308.65	112.52	2310.54	113	2328.83	112.83	2335.82	112
2395.95	111.44	2399.69	111	2407.89	111.76	2409.73	112	2460.37	112.57
2492.03	112.93	2498.33	113	2500.36	113.17	2508.91	114	2530.52	114.85
2534.63	115	2586.27	115.98	2586.49	116	2587.07	116.03	2590.63	116.18
2610.5	117	2612.93	117.1	2618.91	117.35	2634.56	118	2637.24	118.23
2647.72	119	2650.78	119.3	2656.52	120	2665.76	120.99	2665.87	121
2666.11	121.03	2675.13	122	2680.05	122.61	2683.4	123	2687.49	123.48
2692.21	124	2696.95	124.6	2699.75	125	2704.6	125.79	2705.85	126
2710.75	126.81	2711.88	127	2714.95	127.5	2717.96	128	2720.08	128.39
2723.2	129	2726.05	129.59						

Manning's n Values	num=	3
Station Val	Station Val	Station Val
0 .05	945 .03	973.35 .05

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.	
	945	973.35		13.54	13.8	13.6	.3	.5

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 14188

INPUT

Description: US face of Hanson Road (MMI added section)

Station Elevation Data	num=	402		
Station Elev	Station Elev	Station Elev		
0 147.54	2.622 147.01	2.706 147	5.948 146.5	7.762 146.29
12.479 146.34	13.231 146.31	17.168 146	59.37 145.38	60.018 145.37
66.803 145.23	77.102 145.03	78.962 145	110.705 144.42	112.707 144.41
115.657 144.31	117.725 144.29	118.974 144.28	122.902 144.13	124.152 144.09
126.144 144.1	129.386 144.05	134.263 144	141.038 144.01	148.18 144.08
154.006 144.15	158.178 144.19	160.716 144	174.708 143.85	176.155 143.83
177.602 143.77	178.824 143.7	179.763 143.63	190.184 143.46	202.485 143
214.917 142.5	217.915 142.33	222.284 142	233.796 141.42	235.797 141.23
238.56 141	262.926 140.6	275.151 140.4	276.354 140.38	284.031 140
297.572 139.42	303.22 139	314.064 138.55	323.696 138	346.258 137.83
347.273 137.85	347.884 137.84	353.4 138	354.959 138.02	357.957 139
364.807 138.5	366.818 138	374.533 137.07	375.341 137	380.059 136.67
392.171 136	392.491 135.98	392.745 135.96	396.992 135.66	401.775 135.33
403.598 135.18	406.192 135	416.801 134.46	421.321 134.38	432.249 134
441.703 133.43	449.361 133	450.31 132.93	451.4 132.84	456.258 132.44
461.652 132	467.676 131.32	470.438 131	472.759 130.78	474.131 130.65
474.3 130.64	476.518 130.46	479.187 130.25	482.758 130	486.244 129.72
488.866 129.49	493.639 129	497.868 128.65	503.619 128	509.172 127.59
510.826 127.47	516.681 127	521.886 126.35	524.377 126.05	524.518 126.04
524.687 126.02	524.847 126	530.917 125.19	532.167 125	535.747 124.17
536.179 124	538.773 123.03	538.857 123	538.989 122.95	541.77 122

StonyBrookDari en1-ex. txt

547.061	121.63	552.361	121.37	554.381	121.25	556.345	121.15	560.536	121
564.755	120.88	566.776	120.84	568.993	120.76	587.214	120	620.789	119.18
621.334	119.17	624.463	119.11	625.29	119.1	653.284	119.03	658.33	119
664.645	118.87	666.844	118.82	676.128	118.66	677.716	118.64	680.516	118.61
681.907	118.6	683.138	118.57	686.314	118.54	687.113	118.51	704.882	118
715.623	117.87	716.112	117.84	717.709	117.78	718.423	117.75	719.748	117.69
723.92	117.55	725.161	117.49	728.111	117.39	736.306	117	744.688	116.97
744.772	116.96	749.593	116.87	750.241	116.84	752.271	116.77	753.361	116.73
755.269	116.64	765.257	116.33	767.052	116.26	768.161	116.2	775.697	116.05
776.947	116	788.393	115.87	789.389	115.84	790.761	115.81	792.161	115.77
793.336	115.74	796.211	115.66	807.102	115.35	814.845	115.18	818.059	115.13
820.981	115.09	831.017	115.01	831.401	115	837.435	114.83	842.049	114.67
845.639	114.62	847.847	114.59	852.686	114.44	857.488	114.36	860.561	114.27
872.758	114.06	874.337	114	876.122	113.89	877.372	113.71	878.536	113.52
880.53	113.22	882.061	113	883.612	112.62	886.346	112	887.953	111.79
889.521	111.57	891.458	111.12	891.937	111	892.52	106	893.93	103.51
895.057	103.46	900.132	103.82	902.293	103.69	905.206	103.81	906.615	106.1
908.532	109.83	909.077	110	910.214	110.38	910.412	110.45	911.511	110.86
911.943	111	914.462	111.31	915.214	111.37	922.055	111.78	924.844	112
926.565	112.11	926.819	112.12	927.514	112.23	928.576	112.25	932.25	112.56
936.047	112.57	940.764	112.56	946.919	112.84	950.537	112.82	957.246	113
994.749	112.86	996.826	112.88	998.997	112.89	1020.018	112.9	1029.49	112.95
1041.997	113	1044.365	113.21	1045.201	113.28	1045.859	113.34	1046.865	113.43
1050.924	113.79	1053.508	114	1055.575	114.19	1057.521	114.31	1059.898	114.44
1063.112	114.56	1066.288	114.72	1070.94	114.88	1074.604	115	1125.498	114.92
1127.396	114.83	1131.343	114.67	1142.187	114.08	1142.817	114.04	1143.324	114.02
1143.559	114	1143.756	113.98	1153.473	113	1159.524	112.86	1190.252	112.45
1195.562	112.25	1199.903	112.11	1200.232	112.11	1203.474	112	1204.874	111.95
1208.351	111.86	1211.207	111.81	1213.81	111.77	1216.272	111.74	1218.631	111.72
1219.148	111.73	1221.403	111.72	1227.276	111.73	1236.089	111.67	1239.013	111.64
1252.939	111	1292.444	110.84	1293.59	110.81	1295.855	110.69	1305.938	110.39
1308.616	110.25	1309.621	110.22	1310.975	110.21	1313.324	110.14	1317.148	110
1323.228	109.47	1325.155	109.31	1328.707	109.05	1329.223	109	1331.469	108.68
1335.482	108	1482.51	108	1482.51	104.5	1486.51	104.5	1486.51	108
1513.027	108.67	1514.598	109	1523.073	109.21	1526.531	109.29	1528.57	109.27
1581.333	109.46	1606.668	109	1633.674	109.22	1634.445	109.26	1635.272	109.31
1637.086	109.42	1645.712	110	1651.181	110.51	1656.678	111	1663.566	111.18
1671.629	111.38	1676.722	111.49	1683.083	111.64	1689.981	111.79	1698.786	112
1709.329	112.39	1716.546	112.64	1722.005	112.85	1723.34	112.91	1727.146	113
1803.026	113.06	1817.854	113.52	1824.207	113.71	1826.575	113.79	1832.87	114
1833.923	114.02	1837.7	114.11	1857.453	114.53	1859.144	114.55	1861.306	114.58
1879.921	115	1965.846	114.94	1967.81	114.93	1971.09	114.91	1971.456	114.9
1975.91	114.85	1980.806	114.79	1993.219	114.56	1997.195	114.47	2002.485	114.35
2016.007	114.37	2016.543	114.47	2016.975	114.51	2018.215	114	2019.24	113.59
2020.161	113	2021.091	112.42	2021.767	112	2071.87	112	2071.87	106.5
2080.37	106.5	2080.37	112	2120.604	112.01	2120.642	112.02	2124.41	113
2136.908	112.67	2141.691	112.85	2141.907	113	2153.511	112.95	2175.821	112.96
2177.7	112.95	2183.271	112.94	2185.274	112.92	2187.323	112.88	2205.975	112
2239.955	111.66	2240.844	111.56	2241.505	111.49	2246.053	111	2255.104	111.48
2256.115	111.57	2258.598	111.82	2262.338	112	2286.385	112.22	2297.877	112.36
2303.384	112.43	2309.567	112.5	2337.26	112.86	2339.233	112.88	2348.273	113
2350.745	113.24	2354.842	113.66	2358.149	114	2366.106	114.33	2367.593	114.4
2369.595	114.48	2372.536	114.59	2379.086	114.82	2380.194	114.86	2383.746	115
2386.021	115.05	2425.666	116	2435.58	116.39	2451.555	117	2460.331	117.36
2475.423	118	2484.51	118.68	2488.588	119	2489.819	119.16	2492.178	119.45
2496.632	120	2501.48	120.63	2504.732	121	2510.926	121.74	2513.001	122
2517.23	122.51	2521.345	123	2526.599	123.62	2529.756	124	2532.19	124.38
2536.315	125	2539.04	125.49	2541.868	126.65	2545.599	126.65	2547.573	127
2552.036	127.82	2553.135	128	2555.663	128.53	2557.873	129	2558.999	129.25
2561.189	129.76	2561.649	129.86						

StonyBrookDari en1-ex. txt

0 .05 891.458 .045 910.412 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 891.458 910.412 58.27 53.08 54.47 .3 .5
 Skew Angle = 20

MULTIPLE OPENING

RIVER: StonyBrook
 REACH: StonyBrook RS: 14164

INPUT

Description: Hanson Road - MMI added bridge - extended model US
 internal

sections to define footers
 culverts field measured, channels
 approximate

applied 20% skew
 Distance from Upstream XS = 5
 Deck/Roadway Width = 31.7
 Weir Coefficient = 2.6
 Bridge Deck/Roadway Skew = 20

Upstream Deck/Roadway Coordinates

num= 27														
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		125.5			18.117		125			106.148		124		
356.519		123			447.275		122			505.451		121		
585.927		120			633.155		119			671.354		118		
746.558		117			783.581		116			869.761		115		
892.52	113.89		0	892.52	113.89	111.44	906.615	113.89	111.44					
906.615	113.89		0	971.999	113		1096.978	112						
1181.795		111			1212.589		110			1278.424		109		
1467.01		108			1677.408		109			1717.805		110		
1753.354		111			1918.392		112			2300.636		112		

Upstream Bridge Cross Section Data

Station Elevation Data num= 402											
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	147.54	2.622	147.01	2.706	147	5.948	146.5	7.762	146.29		
12.479	146.34	13.231	146.31	17.168	146	59.37	145.38	60.018	145.37		
66.803	145.23	77.102	145.03	78.962	145	110.705	144.42	112.707	144.41		
115.657	144.31	117.725	144.29	118.974	144.28	122.902	144.13	124.152	144.09		
126.144	144.1	129.386	144.05	134.263	144	141.038	144.01	148.18	144.08		
154.006	144.15	158.178	144.19	160.716	144	174.708	143.85	176.155	143.83		
177.602	143.77	178.824	143.7	179.763	143.63	190.184	143.46	202.485	143		
214.917	142.5	217.915	142.33	222.284	142	233.796	141.42	235.797	141.23		
238.56	141	262.926	140.6	275.151	140.4	276.354	140.38	284.031	140		
297.572	139.42	303.22	139	314.064	138.55	323.696	138	346.258	137.83		
347.273	137.85	347.884	137.84	353.4	138	354.959	138.02	357.957	139		
364.807	138.5	366.818	138	374.533	137.07	375.341	137	380.059	136.67		
392.171	136	392.491	135.98	392.745	135.96	396.992	135.66	401.775	135.33		
403.598	135.18	406.192	135	416.801	134.46	421.321	134.38	432.249	134		
441.703	133.43	449.361	133	450.31	132.93	451.4	132.84	456.258	132.44		
461.652	132	467.676	131.32	470.438	131	472.759	130.78	474.131	130.65		
474.3	130.64	476.518	130.46	479.187	130.25	482.758	130	486.244	129.72		
488.866	129.49	493.639	129	497.868	128.65	503.619	128	509.172	127.59		
510.826	127.47	516.681	127	521.886	126.35	524.377	126.05	524.518	126.04		
524.687	126.02	524.847	126	530.917	125.19	532.167	125	535.747	124.17		
536.179	124	538.773	123.03	538.857	123	538.989	122.95	541.77	122		
547.061	121.63	552.361	121.37	554.381	121.25	556.345	121.15	560.536	121		
564.755	120.88	566.776	120.84	568.993	120.76	587.214	120	620.789	119.18		
621.334	119.17	624.463	119.11	625.29	119.1	653.284	119.03	658.33	119		

StonyBrookDari en1-ex. txt

664. 645	118. 87	666. 844	118. 82	676. 128	118. 66	677. 716	118. 64	680. 516	118. 61
681. 907	118. 6	683. 138	118. 57	686. 314	118. 54	687. 113	118. 51	704. 882	118
715. 623	117. 87	716. 112	117. 84	717. 709	117. 78	718. 423	117. 75	719. 748	117. 69
723. 92	117. 55	725. 161	117. 49	728. 111	117. 39	736. 306	117	744. 688	116. 97
744. 772	116. 96	749. 593	116. 87	750. 241	116. 84	752. 271	116. 77	753. 361	116. 73
755. 269	116. 64	765. 257	116. 33	767. 052	116. 26	768. 161	116. 2	775. 697	116. 05
776. 947	116	788. 393	115. 87	789. 389	115. 84	790. 761	115. 81	792. 161	115. 77
793. 336	115. 74	796. 211	115. 66	807. 102	115. 35	814. 845	115. 18	818. 059	115. 13
820. 981	115. 09	831. 017	115. 01	831. 401	115	837. 435	114. 83	842. 049	114. 67
845. 639	114. 62	847. 847	114. 59	852. 686	114. 44	857. 488	114. 36	860. 561	114. 27
872. 758	114. 06	874. 337	114	876. 122	113. 89	877. 372	113. 71	878. 536	113. 52
880. 53	113. 22	882. 061	113	883. 612	112. 62	886. 346	112	887. 953	111. 79
889. 521	111. 57	891. 458	111. 12	891. 937	111	892. 52	106	893. 93	106
893. 93	103. 51	895. 057	103. 46	900. 132	103. 82	902. 293	103. 69	905. 206	103. 81
905. 206	105. 92	906. 615	105. 92	908. 532	109. 83	909. 077	110	910. 214	110. 38
910. 412	110. 45	911. 511	110. 86	911. 943	111	914. 462	111. 31	915. 214	111. 37
922. 055	111. 78	924. 844	112	926. 565	112. 11	926. 819	112. 12	927. 514	112. 23
928. 576	112. 25	932. 25	112. 56	936. 047	112. 57	940. 764	112. 56	946. 919	112. 84
950. 537	112. 82	957. 246	113	994. 749	112. 86	996. 826	112. 88	998. 997	112. 89
1020. 018	112. 9	1029. 49	112. 951041.	997	1131044.	365	113. 211045.	201	113. 28
1045. 859	113. 341046.	865	113. 431050.	924	113. 791053.	508	1141055.	575	114. 19
1057. 521	114. 311059.	898	114. 441063.	112	114. 561066.	288	114. 72	1070. 94	114. 88
1074. 604	1151125.	498	114. 921127.	396	114. 831131.	343	114. 671142.	187	114. 08
1142. 817	114. 041143.	324	114. 021143.	559	1141143.	756	113. 981153.	473	113
1159. 524	112. 861190.	252	112. 451195.	562	112. 251199.	903	112. 111200.	232	112. 1
1203. 474	1121204.	874	111. 951208.	351	111. 861211.	207	111. 81	1213. 81	111. 77
1216. 272	111. 741218.	631	111. 721219.	148	111. 731221.	403	111. 721227.	276	111. 73
1236. 089	111. 671239.	013	111. 641252.	939	1111292.	444	110. 84	1293. 59	110. 8
1295. 855	110. 691305.	938	110. 391308.	616	110. 251309.	621	110. 221310.	975	110. 2
1313. 324	110. 141317.	148	1101323.	228	109. 471325.	155	109. 31328.	707	109. 05
1329. 223	1091331.	469	108. 681335.	482	108	1482. 51	108	1482. 51	104. 5
1486. 51	104. 5	1486. 51	108	1513. 03	108. 671526.	531	109. 29	1528. 57	109. 27
1581. 333	109. 461606.	668	1091633.	674	109. 221634.	445	109. 261635.	272	109. 31
1637. 086	109. 421645.	712	1101651.	181	110. 511656.	678	1111663.	566	111. 18
1671. 629	111. 381676.	722	111. 491683.	083	111. 641689.	981	111. 791698.	786	112
1709. 329	112. 391716.	546	112. 641722.	005	112. 85	1723. 34	112. 91727.	146	113
1803. 026	113. 061817.	854	113. 521824.	207	113. 711826.	575	113. 79	1832. 87	114
1833. 923	114. 02	1837. 7	114. 111857.	453	114. 531859.	144	114. 551861.	306	114. 58
1879. 921	1151965.	846	114. 94	1967. 81	114. 93	1971. 09	114. 911971.	456	114. 9
1975. 91	114. 851980.	806	114. 791993.	219	114. 561997.	195	114. 472002.	485	114. 35
2016. 007	114. 372016.	543	114. 472016.	975	114. 512018.	215	114	2019. 24	113. 59
2020. 161	1132021.	091	112. 42021.	767	112	2071. 87	112	2071. 87	106. 5
2080. 37	106. 5	2080. 37	1122120.	604	112. 012120.	642	112. 02	2124. 41	113
2136. 908	112. 672141.	691	112. 852141.	907	1132153.	511	112. 952175.	821	112. 96
2177. 7	112. 952183.	271	112. 942185.	274	112. 92187.	323	112. 882205.	975	112
2239. 955	111. 662240.	844	111. 562241.	505	111. 492246.	053	1112255.	104	111. 48
2256. 115	111. 572258.	598	111. 822262.	338	1122286.	385	112. 222297.	877	112. 36
2303. 384	112. 432309.	567	112. 5	2337. 26	112. 862339.	233	112. 882348.	273	113
2350. 745	113. 242354.	842	113. 662358.	149	1142366.	106	114. 332367.	593	114. 4
2369. 595	114. 482372.	536	114. 592379.	086	114. 822380.	194	114. 862383.	746	115
2386. 021	115. 052425.	666	116	2435. 58	116. 392451.	555	1172460.	331	117. 36
2475. 423	118	2484. 51	118. 682488.	588	1192489.	819	119. 162492.	178	119. 45
2496. 632	120	2501. 48	120. 632504.	732	1212510.	926	121. 742513.	001	122
2517. 23	122. 512521.	345	1232526.	599	123. 622529.	756	124	2532. 19	124. 38
2536. 315	125	2539. 04	125. 492541.	868	1262545.	599	126. 652547.	573	127
2552. 036	127. 82553.	135	1282555.	663	128. 532557.	873	1292558.	999	129. 25
2561. 189	129. 762561.	649	129. 86						

Manning's n Values num= 3
 Station Val Sta n Val Sta n Val
 0 .05 891. 458 .045 910. 412 .06

Bank Sta: Left Right Coeff Contr. Expan.

StonyBrookDari en1-ex. txt

891.458 910.412
Skew Angle = 20

.3 .5

Downstream Deck/Roadway Coordi nates

num= 27											
Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
0		125.5		18.117		125		106.148		124	
356.519		123		447.275		122		505.451		121	
585.927		120		633.155		119		671.354		118	
746.558		117		783.581		116		869.761		115	
915.449	113.89		0	915.449	113.89		111.44	929.544	113.89		111.44
929.544	113.89		0	971.999		113		1096.978		112	
1181.795		111		1212.589		110		1278.424		109	
1467.01		108		1677.408		109		1717.805		110	
1753.354		111		1918.392		112		2400		112	

Downstream Bridge Cross Section Data

Stati on El evati on Data num= 411											
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	122.46	.46	122.44	19.687	122	23.69	121.77	25.907	121.56		
27.89	121.41	31.527	121	35.088	120.38	37.682	120	55.292	120.55		
62.226	121	69.152	121.44	71.774	121.72	74.969	122	76.228	122.06		
80.09	122.19	93.199	122.01	93.856	122	110.264	122.01	140.221	122.32		
142.871	122.35	146.413	122.25	149.796	122.17	151.215	122.19	152.296	122.17		
153.292	122.19	155.378	122.17	156.919	122.19	169.257	122.25	171.278	122.27		
174.896	122.3	179.669	122.23	181.398	122.26	184.556	122.22	187.168	122.23		
188.718	122.26	191.556	122.34	193.943	122.39	196.415	122.49	198.623	122.54		
201.536	122.57	204.599	122.53	206.253	122.54	209.176	122.53	211.102	122.51		
214.259	122.53	219.766	122.43	222.35	122.45	224.859	122.47	227.603	122.43		
230.046	122.44	234.472	122.39	236.699	122.4	239.612	122.42	248.511	122		
250.221	121.97	254.187	121.91	260.896	121.85	265.989	121.57	270.594	121.47		
272.003	121.38	273.328	121.34	275.433	121.29	279.079	121.25	287.668	121.38		
290.666	121.34	294.284	121.31	303.013	121.22	304.075	121.21	307.862	121.18		
318.283	121.21	323.724	121.25	327.154	121.24	333.347	121.23	336.241	121.22		
340.892	121.23	346.155	121.27	348.025	121.28	348.579	121.3	349.923	121.36		
351.924	121.4	353.512	121.5	354.809	121.54	356.425	121.69	358.709	121.96		
358.793	121.97	358.991	122	364.178	122.52	367.072	122.64	367.88	122.61		
368.867	122.7	370.079	122.62	370.831	122.68	371.507	122.61	372.165	122.6		
374.016	122.23	374.355	122.18	375.003	122	377.146	121.75	383.479	121		
385.763	120.92	385.988	120.91	389.493	120.82	393.036	120.74	393.731	120.73		
396.936	120.68	401.033	120.63	406.426	120.62	409.687	120.59	412.45	120.61		
413.352	120.62	418.586	120.61	424.628	120.54	430.295	120.53	434.119	120.56		
436.741	120.55	437.69	120.54	447.989	120.31	451.363	120.25	452.058	120.24		
464.866	120.11	469.151	120	472.524	119.93	474.338	119.48	475.907	119.07		
476.293	119	484.242	118.71	488.462	118.57	492.671	118.44	494.344	118.39		
496.393	118.33	505.291	118.01	505.461	118	506.043	117.99	566.672	117		
644.592	116.5	649.779	116.37	650.662	116.33	653.575	116.18	656.798	116		
658.151	115.76	659.815	115.53	663.893	115	699.47	114.95	699.958	114.86		
704.862	114	708.632	114.41	712.719	115	721.938	115.44	730.122	115.81		
733.327	115.97	733.862	116	781.129	116.47	786.09	116.64	787.171	116.68		
789.624	116.77	795.572	117	798.485	117.08	798.673	117.09	803.343	117.25		
807.675	117.37	808.455	117.38	812.327	117.46	815.381	117.48	818.2	117.51		
826.3	117.65	830.012	117.64	838.507	117.51	840.123	117.49	841.523	117.46		
843.355	117.43	852.217	117.22	853.457	117.2	859.678	117	862.826	116.68		
869.31	116	872.636	115.64	877.626	115	880.276	114.61	883.922	114		
894.136	113.94	895.273	113.95	895.987	113.84	896.758	113.8	897.078	113.78		
898.515	113.63	901.41	113	903.373	112.53	903.514	112.47	913.475	107.82		
915.449	106.3	916.858	106.3	916.858	105.2	919.207	105.17	922.966	106.11		
928.134	106.61	929.544	106.6	930.766	107.39	933.961	107.98	941.985	112		
953.29	111.62	955.442	111.57	958.665	111.53	967.517	111.55	974.461	111.68		
994.204	111.52	996.037	111.45	997.484	111.4	998.809	111.38	1000.603	111.32		
1002.981	111.26	1006.091	111.18	1009.192	111.13	1014.736	111.10	1015.047	110.99		
1015.141	110.98	1021.822	110.77	1023.485	110.73	1025.534	110.7	1041.01	110.31		

StonyBrookDari en1-ex. txt

1044. 177	110. 281055. 172	110. 211059. 334	110. 171078. 739	110. 091080. 026	110. 07
1090. 946	1101127. 998	110. 11129. 567	110. 081144. 611	110. 11 1159. 9	110. 02
1160. 379	1101198. 841	109. 751200. 138	109. 731213. 754	109. 631214. 205	109. 62
1220. 341	109. 581222. 174	109. 571223. 301	109. 551224. 512	109. 531227. 041	109. 47
1231. 242	109. 34 1231. 73	109. 331233. 395	109. 31238. 421	109. 2 1238. 77	109. 19
1241. 813	109. 141250. 177	109 1260. 56	108. 9 1265. 85	108. 891270. 464	108. 9
1270. 793	108. 891273. 563	108. 841275. 398	108. 831281. 448	108. 771281. 872	108. 75
1282. 408	108. 741288. 131	108. 67 1289. 7	108. 651291. 344	108. 62 1293. 43	108. 6
1294. 389	108. 581296. 804	108. 561301. 521	108. 551315. 654	108. 291318. 624	108. 3
1324. 816	108. 291330. 755	108. 281335. 905	108. 291341. 411	108. 251347. 059	108. 21
1357. 668	108. 11362. 442	108. 061364. 913	108. 07 1371. 82	1081375. 672	107. 97
1378. 125	107. 951384. 327	107. 911395. 171	107. 91397. 464	107. 881398. 911	107. 84
1429. 771	107. 861432. 279	107. 841438. 416	107. 861440. 107	107. 85 1440. 53	107. 86
1440. 831	107. 851441. 319	107. 861446. 779	107. 84 1468. 1	107. 441471. 117	107. 41
1473. 729	107. 391476. 671	107. 361492. 036	107 1504. 94	104. 5 1509. 94	104. 5
1510. 847	106. 521513. 018	1071525. 751	107. 5 1527. 95	107. 61532. 545	107. 8
1535. 204	107. 911537. 863	1081584. 773	108. 111586. 455	108. 131603. 678	108. 26
1605. 531	108. 271608. 538	108. 261609. 318	108. 271644. 039	1091683. 168	108. 7
1707. 675	1091711. 443	109. 341716. 132	1101756. 765	109. 61759. 903	109. 61
1768. 483	109. 64 1780. 36	109. 651785. 848	109. 661804. 125	109. 761836. 911	109. 94
1840. 369	110 1847. 99	110. 641848. 601	110. 651849. 118	110. 641850. 696	110. 74
1863. 852	110. 641865. 619	110. 6 1883. 99	110. 371888. 801	110. 491889. 036	110. 48
1894. 204	1111912. 876	111. 011914. 708	111. 021917. 311	111. 051959. 889	111. 09
1961. 646	111. 071974. 924	1112023. 863	111. 022033. 636	1122072. 483	111. 18
2073. 441	111. 172080. 968	1112083. 581	110. 422085. 742	1102090. 102	109. 15
2090. 797	109 2093. 4	108. 262094. 274	1082094. 396	107. 94 2094. 8	106
2102. 8	106 2102. 91	106. 71 2103. 37	1072104. 338	107. 592105. 015	108
2105. 936	108. 572106. 659	1092114. 412	109. 752115. 583	109. 852116. 498	109. 86
2117. 109	109. 912120. 538	109. 92123. 226	109. 862124. 645	109. 82133. 835	109. 57
2137. 351	109. 412139. 125	109. 342144. 961	109. 082145. 395	109. 062146. 784	109
2151. 398	108. 91 2157. 13	108. 812158. 511	108. 82169. 027	108. 642177. 296	108. 55
2194. 53	108. 442206. 097	1082220. 541	108. 782221. 029	108. 892221. 527	109
2222. 317	109. 072231. 497	1102237. 051	110. 842239. 786	110. 972240. 227	111
2254. 689	111. 292256. 089	111. 332258. 495	111. 42264. 556	111. 57 2274. 8	111. 84
2279. 807	1122365. 864	112. 142368. 392	112. 222387. 336	1132395. 164	113. 2
2410. 415	1142418. 111	114. 52419. 389	114. 562425. 835	114. 88 2426. 38	114. 91
2426. 568	114. 922428. 288	1152437. 864	115. 872438. 343	115. 912439. 376	116
2485. 562	116. 82488. 406	117 2496. 97	117. 982497. 139	1182497. 919	118. 09
2503. 51	118. 76				

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .1 896. 758 .035 941. 985 .05

Bank Sta: Left Right Coeff Contr. Expan.
 896. 758 941. 985 .3 .5

Blocked Obstructions num= 1
 Sta L Sta R Elev
 559. 991 585. 87 126. 9
 Skew Angle = 20

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data
 Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Energy Only

Additional Bridge Parameters

Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

Number of Culverts = 2

Culvert Name	Shape	Rise	Span				
Culvert #1	Circular	1					
FHWA Chart # 1 - Concrete Pipe Culvert							
FHWA Scale # 1 - Square edge entrance with headwall							
Solution Criteria = Highest U. S. EG							
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef		
Exit Loss Coef							
	5	31.7	.013	.013	0		.5
1							
Upstream	Elevation = 104.5						
	Centerline Station = 1484.51						
Downstream	Elevation = 104.5						
	Centerline Station = 1507.44						

Culvert Name	Shape	Rise	Span				
Culvert #2	Circular	3.5					
FHWA Chart # 1 - Concrete Pipe Culvert							
FHWA Scale # 1 - Square edge entrance with headwall							
Solution Criteria = Highest U. S. EG							
Culvert Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef		
Exit Loss Coef							
	5	31.7	.013	.013	0		.5
1							
Number of Barrels = 2							
Upstream	Elevation = 106.5						
Centerline Stations							
	Sta.	Sta.					
	2073.87	2077.87					
Downstream	Elevation = 106.5						
Centerline Stations							
	Sta.	Sta.					
	2096.8	2100.8					

Multiple Opening Stagnation Limits

	Upstream		Downstream	
Opening Type	Sta. Left	Sta. Right	Sta. Left	Sta. Right
Bridge	0	1400	0	1400
Culvert Group	920	1965	950	2030
Culvert Group	1650	2561.65	1680	2503.51

CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook

RS: 14135

StonyBrookDari en1-ex. txt

INPUT

Description: FEMA AM - DS face of Hanson Road, US limit of FEMA model (HEC2-53)
 Station Elevation Data num= 408

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	122.46	.46	122.44	19.687	122	23.69	121.77	25.907	121.56
27.89	121.41	31.527	121	35.088	120.38	37.682	120	55.292	120.55
62.226	121	69.152	121.44	71.774	121.72	74.969	122	76.228	122.06
80.09	122.19	93.199	122.01	93.856	122	110.264	122.01	140.221	122.32
142.871	122.35	146.413	122.25	149.796	122.17	151.215	122.19	152.296	122.17
153.292	122.19	155.378	122.17	156.919	122.19	169.257	122.25	171.278	122.27
174.896	122.3	179.669	122.23	181.398	122.26	184.556	122.22	187.168	122.23
188.718	122.26	191.556	122.34	193.943	122.39	196.415	122.49	198.623	122.54
201.536	122.57	204.599	122.53	206.253	122.54	209.176	122.53	211.102	122.51
214.259	122.53	219.766	122.43	222.35	122.45	224.859	122.47	227.603	122.43
230.046	122.44	234.472	122.39	236.699	122.4	239.612	122.42	248.511	122
250.221	121.97	254.187	121.91	260.896	121.85	265.989	121.57	270.594	121.47
272.003	121.38	273.328	121.34	275.433	121.29	279.079	121.25	287.668	121.38
290.666	121.34	294.284	121.31	303.013	121.22	304.075	121.21	307.862	121.18
318.283	121.21	323.724	121.25	327.154	121.24	333.347	121.23	336.241	121.22
340.892	121.23	346.155	121.27	348.025	121.28	348.579	121.3	349.923	121.36
351.924	121.4	353.512	121.5	354.809	121.54	356.425	121.69	358.709	121.96
358.793	121.97	358.991	122	364.178	122.52	367.072	122.64	367.88	122.61
368.867	122.7	370.079	122.62	370.831	122.68	371.507	122.61	372.165	122.6
374.016	122.23	374.355	122.18	375.003	122	377.146	121.75	383.479	121
385.763	120.92	385.988	120.91	389.493	120.82	393.036	120.74	393.731	120.73
396.936	120.68	401.033	120.63	406.426	120.62	409.687	120.59	412.45	120.61
413.352	120.62	418.586	120.61	424.628	120.54	430.295	120.53	434.119	120.56
436.741	120.55	437.69	120.54	447.989	120.31	451.363	120.25	452.058	120.24
464.866	120.11	469.151	120	472.524	119.93	474.338	119.48	475.907	119.07
476.293	119	484.242	118.71	488.462	118.57	492.671	118.44	494.344	118.39
496.393	118.33	505.291	118.01	505.461	118	506.043	117.99	566.672	117
644.592	116.5	649.779	116.37	650.662	116.33	653.575	116.18	656.798	116
658.151	115.76	659.815	115.53	663.893	115	699.47	114.95	699.958	114.86
704.862	114	708.632	114.41	712.719	115	721.938	115.44	730.122	115.81
733.327	115.97	733.862	116	781.129	116.47	786.09	116.64	787.171	116.68
789.624	116.77	795.572	117	798.485	117.08	798.673	117.09	803.343	117.25
807.675	117.37	808.455	117.38	812.327	117.46	815.381	117.48	818.2	117.51
826.3	117.65	830.012	117.64	838.507	117.51	840.123	117.49	841.523	117.46
843.355	117.43	852.217	117.22	853.457	117.2	859.678	117	862.826	116.68
869.31	116	872.636	115.64	877.626	115	880.276	114.61	883.922	114
894.136	113.94	895.273	113.95	895.987	113.84	896.758	113.8	897.078	113.78
898.515	113.63	901.41	113	903.373	112.53	903.514	112.47	913.475	107.82
915.449	107.22	920.523	106.46	925.409	107.59	927.665	107.98	930.766	107.39
933.961	107.98	941.985	112	953.29	111.62	955.442	111.57	958.665	111.53
967.517	111.55	974.461	111.68	994.204	111.52	996.037	111.45	997.484	111.4
998.809	111.38	1000.603	111.32	1002.981	111.26	1006.091	111.18	1009.192	111.13
1014.736	111	1015.047	110.99	1015.141	110.98	1021.822	110.77	1023.485	110.73
1025.534	110.7	1041.01	110.31	11044.177	110.28	1055.172	110.21	1059.334	110.17
1078.739	110.09	1080.026	110.07	1090.946	110	1127.998	110.11	1129.567	110.08
1144.611	110.11	1159.9	110.02	1160.379	110	1198.841	109.75	1200.138	109.73
1213.754	109.63	1214.205	109.62	1220.341	109.58	1222.174	109.57	1223.301	109.55
1224.512	109.53	1227.041	109.47	1231.242	109.34	1231.73	109.33	1233.395	109.3
1238.421	109.2	1238.77	109.19	1241.813	109.14	1250.177	109	1260.56	108.9
1265.85	108.89	1270.464	108.91	1270.793	108.89	1273.563	108.84	1275.398	108.83
1281.448	108.77	1281.872	108.75	1282.408	108.74	1288.131	108.67	1289.7	108.65
1291.344	108.62	1293.43	108.61	1294.389	108.58	1296.804	108.56	1301.521	108.55
1315.654	108.29	1318.624	108.31	1324.816	108.29	1330.755	108.28	1335.905	108.29
1341.411	108.25	1347.059	108.21	1357.668	108.11	1362.442	108.06	1364.913	108.07
1371.82	108	1375.672	107.97	1378.125	107.95	1384.327	107.91	1395.171	107.9
1397.464	107.88	1398.911	107.84	1429.771	107.85	1432.279	107.84	1438.416	107.86
1440.107	107.85	1440.53	107.86	1440.831	107.85	1441.319	107.86	1446.779	107.84
1468.1	107.44	1471.117	107.41	1473.729	107.39	1476.671	107.36	1492.036	107

StonyBrookDari en1-ex. txt

1504.94	104.5	1509.94	104.51510.847	106.521513.018	1071525.751	107.5
1527.95	107.61532.545	107.81535.204	107.911537.863	1081584.773	108.11	
1586.455	108.131603.678	108.261605.531	108.271608.538	108.261609.318	108.27	
1644.039	1091683.168	108.71707.675	1091711.443	109.341716.132	110	
1756.765	109.61759.903	109.611768.483	109.64 1780.36	109.651785.848	109.66	
1804.125	109.761836.911	109.941840.369	110 1847.99	110.641848.601	110.65	
1849.118	110.641850.696	110.741863.852	110.641865.619	110.6 1883.99	110.37	
1888.801	110.491889.036	110.481894.204	1111912.876	111.011914.708	111.02	
1917.311	111.051959.889	111.091961.646	111.071974.924	1112023.863	111.02	
2033.636	1122072.483	111.182073.441	111.172080.968	1112083.581	110.42	
2085.742	1102090.102	109.152090.797	109 2093.4	108.262094.274	108	
2094.396	107.94 2094.8	106 2102.8	106 2102.91	106.71 2103.37	107	
2104.338	107.592105.015	1082105.936	108.572106.659	1092114.412	109.75	
2115.583	109.852116.498	109.862117.109	109.912120.538	109.92123.226	109.86	
2124.645	109.82133.835	109.572137.351	109.412139.125	109.342144.961	109.08	
2145.395	109.062146.784	1092151.398	108.91 2157.13	108.812158.511	108.8	
2169.027	108.642177.296	108.55 2194.53	108.442206.097	1082220.541	108.78	
2221.029	108.892221.527	1092222.317	109.072231.497	1102237.051	110.84	
2239.786	110.972240.227	1112254.689	111.292256.089	111.332258.495	111.4	
2264.556	111.57 2274.8	111.842279.807	1122365.864	112.142368.392	112.22	
2387.336	1132395.164	113.22410.415	1142418.111	114.52419.389	114.56	
2425.835	114.88 2426.38	114.912426.568	114.922428.288	1152437.864	115.87	
2438.343	115.912439.376	1162485.562	116.82488.406	117 2496.97	117.98	
2497.139	1182497.919	118.09 2503.51	118.76			

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1 896.758 .035 941.985 .05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 896.758 941.985 46.09 42.77 44.77 .3 .5
 Blocked Obstructions num= 1
 Sta L Sta R Elev
 559.991 585.87 126.9
 Skew Angle = 20

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 14092

INPUT

Description: DS section of Hanson Road - MMI added section

Station Elevation Data num= 274									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	120.4	5.51	120.15	6.03	120.14	6.43	120.13	8.53	120
17.42	119.5	23.18	119.19	26.46	119	27.37	118.91	27.45	118.9
36.65	118.52	40.07	119	44.02	119.31	56.36	120	57.81	120.04
58.16	120.05	59.86	120.1	64.99	120.26	67.37	120.31	70.65	120.41
73.6	120.47	84.76	120.71	86.39	120.72	89.89	120.76	98.83	121
210.02	120.61	215.92	120.47	217.75	120.43	218.73	120.39	220.5	120.36
221.5	120.33	229.68	120	234.22	119.79	234.86	119.76	236.47	119.69
238.24	119.6	248.98	119	252.69	118.74	264.19	118.34	280.55	118
284.33	117.95	285.04	117.94	288.04	117.86	301.47	117.63	308.37	117.37
312.41	117.3	314.4	117.26	316.21	117.16	317.18	117.12	319.78	117.16
320.18	117.14	321.53	117.18	331.27	118	332.04	118.03	342.12	118.01
342.64	118	437.43	117.46	438.97	117.44	451.29	117.36	453.29	117.33
455.68	117.31	473.02	117.03	475.39	117	482.11	116.84	483.14	116.83
488.07	116.69	496.59	116.51	498.79	116.52	500.72	116.48	502.43	116.46
503.97	116.44	505.96	116.46	514.57	116.52	516.36	116.55	518.53	116.58
520.12	116.61	522.52	116.64	523.69	116.66	528.47	116.72	531	116.73
542.04	116.71	546.24	116.68	567.48	117	598.57	116.66	602.56	116.6

StonyBrookDari en1-ex. txt

606.65	116.53	618.04	116.36	621.63	116.3	630.88	116.05	632.76	116
645.01	115.24	649.11	115	651.34	114.86	657.45	114.62	669.16	114.1
673.62	114	731.25	114.48	744.03	115	746.45	115.1	766.51	116
773.45	116.88	774.82	117	779.95	117.45	785.11	117.88	786.56	118
802.65	118.24	825.52	118.34	825.96	118.36	826.68	118.35	831.06	118.45
832.19	118.46	835.14	118.55	836.37	118.58	842.6	118.79	843.39	118.81
848.23	119	871.06	118.74	879.75	118	880.77	117.95	882.21	117.87
884.33	117.76	889.56	117.47	898.22	117	905.95	116.17	907.52	116
907.86	115.96	915.76	115	917.02	114.84	923.9	114	927.11	113.63
931.49	113	943.85	112.31	953.9	107.61	955.56	107.27	958.88	106.95
962.04	106.96	965.75	106.74	968.79	106.98	969.92	107.17	976.8	111.36
979.88	110.9559	1039.74	110.07	1040.67	110	1241.14	109.16	1246.43	109.08
1250.48	109	1275.15	108.46	1289.37	108	1348.05	107.32	1349.04	107.31
1349.53	107.3	1361.74	107	1522.13	106.82	1538.24	106.55	1542.77	106.48
1569.72	106	1577.91	106.29	1581	107	1589.74	107.39	1590.22	107.4
1591.42	107.43	1601.11	108	1633.65	108.77	1643.42	109	1710.49	108.82
1726.52	108.38	1735.16	108.15	1740.47	108	1797.09	108.34	1804.93	109
1902.54	109.11	1936.44	110	2000.65	110.18	2002.58	110.19	2034.57	110.69
2038.34	110.78	2039.7	110.8	2047.63	111	2054.42	111.31	2058.71	111.48
2063.86	111.54	2067.73	111.75	2068.75	111.77	2072.27	112	2075.5	112.67
2077.21	113	2142.08	112.02	2142.22	112.01	2142.72	112	2159.93	111.14
2161.44	111.06	2162.21	111	2162.7	110.84	2165.4	110	2166.71	109.58
2168.54	109	2169.59	108.49	2170.66	108	2172.58	107.02	2172.62	107
2172.75	106.93	2174.08	106.22	2174.52	106	2179.46	106.24	2181.84	107
2184.41	107.49	2187.78	108	2192.32	108.24	2198.47	108.49	2210.85	108.71
2211.87	108.7	2232.64	108.24	2236.44	108.1	2236.82	108.09	2239.68	108
2286.63	107.08	2287.08	107	2290.79	107.29	2291.94	107.65	2293.02	108
2299.01	108.54	2305.33	109	2307.64	109.08	2311.69	109.2	2326.06	109.58
2327.96	109.61	2332.22	109.66	2342.98	109.81	2349.75	109.87	2352.82	109.89
2367.52	109.99	2367.99	110	2388.54	110.03	2390.2	110	2434.86	109.97
2435.57	109.98	2437.67	110	2455.9	110.15	2460.79	110.24	2480.32	110.51
2481.44	110.54	2484.79	110.61	2498.72	111	2501.08	111.05	2501.64	111.07
2501.79	111.08	2507.12	111.17	2509	111.24	2513.39	111.35	2513.74	111.36
2517.12	111.47	2520.71	111.51	2533.31	112	2545.04	112.4	2560.34	113
2562.16	113.24	2582.86	114	2585.07	114.01	2585.75	114.04	2592.15	114.32
2605.24	114.91	2607.35	115	2623.49	115.85	2626.82	116	2633.6	116.19
2634.84	116.23	2652.9	117	2657.91	117.09	2659.44	117.15	2669.24	118
2678.86	118.6	2682.58	119	2682.8	119.02	2688.29	119.66		

Mann ng' s n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .1 931.49 .035 976.8 .05 1601.11 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 931.49 976.8 151.94 154.82 162.96 .3 .5

Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 787.58 851.64 129.3 545.82 588.77 126.9 1621.66 1712.64 129.4

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 13938

INPUT

Description: MMI added section
 Station Elevation Data num= 354
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
 0 117.06 1.15 117 17.97 116.14 20.64 116 27.62 115.45
 33.33 115 47.29 116 51.55 117 102.13 116.47 105.07 116.43
 114.2 116.25 117.03 116.26 121.22 116.36 125.18 116.49 126.12 116.5
 127.04 116.51 127.96 116.54 129.37 116.57 130.8 116.62 132.37 116.63

StonyBrookDari en1-ex. txt

133.97	116.69	136.36	116.76	136.94	116.77	137.85	116.78	140.49	116.77
148.9	116.73	150.84	116.71	151.6	116.72	157.92	116.7	172.6	116.89
173.84	116.9	175.16	116.89	179.63	116.95	180.06	116.94	183.53	116.95
183.93	116.94	199.65	116.93	200.07	116.92	203.36	116.9	204.14	116.88
206.7	116.84	208.52	116.79	210.45	116.7	213.4	116.55	224.34	116
228.58	115.92	229.15	115.9	233.39	115.81	240.31	115.58	245.84	115.42
250.1	115.29	254.43	115.14	260.03	115.01	260.64	115	261.67	114.93
263.53	114.89	263.72	114.87	267.46	114.59	269.17	114.54	272.34	114.55
273.06	114.51	273.5	114.55	285.51	114.57	290.57	114.82	293.9	115
333.8	114.87	351.12	114.52	352.74	114.47	357.88	114.43	365.27	114.2
366.09	114.18	367.54	114.14	368.15	114.13	376.68	114	446.52	114.44
455.61	114.4	458.94	114.32	461.14	114.28	466.2	114.21	476.41	114.14
476.71	114.15	483.35	114.08	487.49	114.05	495.68	114.14	496.79	114.15
498.69	114.2	501.29	114.27	502.89	114.33	503.96	114.36	506.38	114.48
511.21	114.65	519.99	114.72	522.04	114.77	526.15	114.82	529.27	114.81
530.92	114.79	532.17	114.78	549.16	114.66	553.44	114.64	561.71	114.58
565.11	114.57	577.03	114.27	578.81	114.24	581.14	114.21	588.1	114
594.49	113.39	599.55	113	601.2	112.89	602.89	112.9	606.67	112.88
607.11	112.87	633.43	112.44	637.74	112.4	639.77	112.38	645.99	112.37
650.97	112.33	664.23	112.3	667.32	112.31	704.13	112.8	704.88	112.81
712.02	113	714.22	113.02	714.72	113.04	726.67	113.63	732.45	113.84
734.28	113.93	736.57	114	747.7	114.42	758.85	115	804.87	115.61
819.93	115.81	832.78	116	856.11	115.4	856.61	115	857.27	114.83
858.88	114.8	859.38	114.81	861.34	114.58	863.54	114.38	864.99	114.27
869.1	114.06	869.43	114.04	871.13	114	871.95	113.98	874.59	113.97
874.67	113.98	875.94	114	877.01	114.02	877.17	114.03	881.13	114.23
882.64	114.32	884.98	114.49	887.36	114.71	887.85	114.76	889.32	114.97
889.45	115	890.89	115.32	892.8	116	899.89	115.21	899.99	115
900.22	114.06	900.24	114	900.6	113.22	900.69	113.03	900.7	113.02
904.48	112.84	910.32	112.76	910.94	112.73	911.58	112.69	912.39	112.62
913.17	112.59	915.91	112.28	918.05	112	920.74	111.57	925.24	111
927.66	110.93	955.92	110.56	961.79	105.66	963.6	105.36	965.25	105.32
969.26	105.36	973.74	105.63	975.48	105.98	984.56	109.13	985.73	109
988.11	108.99	1059.49	108.73	1059.96	108.71	1060.26	108.69	1061.22	108.72
1062.75	108.74	1066.83	108.75	1072.73	108.71	1074.98	108.72	1077.59	108.75
1081.01	108.73	1084.98	108.81	1092.98	108.83	1096.21	108.82	1097	108.83
1103.12	108.74	1107.61	108.76	1111.11	108.78	1112.4	108.8	1118.57	108.79
1123.96	108.83	1124.54	108.85	1127.31	108.84	1128.16	108.87	1131.01	108.84
1131.91	108.87	1134.35	108.83	1148.19	108.75	1151.52	108.79	1163.66	108.89
1165.49	108.88	1168.1	108.87	1207.89	108.56	1260.61	108	1269.8	107.24
1275.03	107.06	1277.07	107	1343.41	106.8	1345.62	106.76	1347.14	106.72
1348.67	106.68	1352.09	106.63	1392.8	106.3	1414.38	106.06	1414.78	106.07
1423.3	106.02	1426.07	106	1519.03	106.63	1519.3	106.7	1519.63	106.78
1520.17	106.91	1520.53	107	1521.38	106.9	1527.97	106	1549.45	106.85
1552.81	107	1589.55	107.68	1601.63	108	1604.33	108.08	1605.66	108.13
1610.84	108.31	1627.75	108.92	1631.39	109	1648.95	108.92	1655.29	108.76
1656.94	108.72	1660.13	108.63	1679.25	108	1689.39	107.5	1699.33	107.83
1699.5	107.84	1700.03	107.86	1703.69	107.94	1704.11	107.96	1704.28	107.97
1706.64	107.96	1708.65	108	1721.19	108.19	1723.46	108.18	1731.49	108.45
1739.8	108.52	1758.23	109	1849.29	109.17	1890.21	109.7	1908.78	110
1917.34	110.37	1940.93	111	1945.02	111.21	1956.82	112	1962.7	112.57
1965.83	113	1966.18	113.45	1966.64	114	2021.44	113.96	2023.37	113.97
2031.99	113.96	2032.92	113.95	2039.79	113.94	2040.07	113.93	2040.61	113.92
2045.5	113.89	2046.26	113.87	2047.6	113.84	2050.98	113.79	2058.07	113.55
2069.5	113.16	2070.51	113.13	2073.85	113	2077.56	112.74	2087.3	112
2092.94	111.24	2095.5	111	2098.02	110.65	2100.56	110.36	2103.48	110
2110.37	109.11	2111.22	109	2112.13	108.81	2115.8	108	2117.53	107.55
2119.78	107	2120.81	106.67	2123.04	106	2132.07	106.88	2132.48	107
2133.61	107.13	2140.65	108	2219.51	108.38	2234.22	108.22	2239.63	108
2243.98	107.05	2244.2	107	2246.65	107.48	2247.37	107.88	2247.58	108
2247.69	108.04	2249.83	109	2274.34	108.42	2274.51	108.43	2276.46	108.24
2276.74	108.27	2277.82	108.2	2344.04	109	2388.11	109.26	2394.86	109.29
2411.78	109.52	2415.39	109.58	2439.65	109.96	2442.02	110	2455.06	110.58

StonyBrookDari en1-ex. txt

2462.08	110.8	2465.06	111	2468.92	111.41	2472.44	112	2475.67	112.51
2478.91	112.89	2479.27	112.94	2479.9	113	2489.2	113.27	2496.4	113.46
2499.99	113.57	2514.57	114	2522.92	114.33	2536.34	114.8	2537.87	114.86
2541.41	115	2548.8	115.43	2563.58	116	2565.83	116.17		

Manning's n Values num= 7

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	832.78	.1	900.22	.06	955.92	.035	984.56	.06
1207.89	.1	1343.41	.06						

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

955.92	984.56	393.57	326.64	281.51	.1	.3
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Blocked Obstructions num= 3

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
851.39	896.51	132	1213.41	1256.47	130.9	1971.46	2055.06	128.7

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 13611

INPUT

Description: US of Dam ds of Hanson Rd (MMI added section)

Station Elevation Data num= 281

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	115.95	11.74	115.27	15.67	115	33.43	115.52	39.41	116
73.94	115.68	89.45	115	150.32	114.88	164.83	114.67	167.79	114.65
168.47	114.63	171.73	114.6	172.62	114.58	175.64	114.54	178.22	114.5
182.54	114.43	194.47	114.25	208.48	114	275.06	113.6	279.08	113.36
285.47	113	434.99	112.55	436.22	112.52	451.16	112	453.42	111.51
455.56	111	457.49	110.56	459.84	110	470.22	110.25	472.46	110.35
478	110.58	485.09	110.86	488.06	111	527.27	110.83	527.67	110.82
531.7	110.77	542.23	110.49	552.89	110.07	553.2	110.06	554.73	110
583.22	109.08	583.46	109.07	585.38	109	597.78	108.45	602.58	108.25
607.5	108	618.36	107.29	622.8	107	685.1	107.4	691.78	107.73
695.16	107.92	697.6	108	697.7	108.01	701.99	108.27	702.27	108.28
702.6	108.26	703.13	108.32	703.5	108.29	703.91	108.35	713.49	109
721.73	109.55	725.64	110	732.51	110.83	733.23	110.93	733.98	111
739.99	111.89	740.78	112	745.48	112.67	746.4	112.78	749.7	113
795.55	112.65	796.54	112.46	798.56	112	803.04	111.04	803.21	111
804.74	110.8	810.87	110	812.87	109.76	818.38	109.08	818.94	109.01
819.04	109	819.18	108.99	845.54	108.38	846.16	108.35	847.28	108.42
847.94	108.39	850.21	108.61	850.67	108.6	852.44	108.84	853.46	109
855.55	109.54	857.21	110	858.71	110.43	860.94	111	862.93	111.41
865.93	112	885.75	112.74	893.82	113	1016.27	112.47	1021.13	112
1025.99	111.48	1030.28	111	1035.25	110.43	1039.2	110	1051.7	109.44
1057.47	109	1067.67	108.32	1072.42	108	1075.87	107.75	1086.31	107
1090.31	106.47	1091.56	106.4	1094.09	106.29	1094.87	106.21	1097.18	106
1108.11	105.99	1110.97	105.85	1111.55	105.88	1112.24	105.85	1112.63	105.86
1148.8	105.67	1151.2	104.15	1155	102.99	1160.2	103.41	1164.47	103.34
1172.19	103.39	1177.47	103.51	1182.67	104.23	1187.77	106.43	1194.22	106.43
1195.5	106.58	1196.78	106.65	1198.31	106.7	1199.13	106.77	1200.33	106.84
1209.52	106.94	1209.66	106.95	1210.01	106.96	1210.27	106.97	1211.81	107
1328.22	106.42	1335.21	106.35	1343.59	106.26	1344.72	106.25	1347.52	106.23
1370.59	106	1432.98	105.84	1435.19	105.81	1442.34	105.66	1446.98	105.6
1449.12	105.56	1480.85	105.08	1485.12	105.06	1489.56	105.05	1492.38	105.06
1494.17	105.07	1495.92	105.08	1498.37	105.12	1500.68	105.14	1501.78	105.15
1503.91	105.17	1506.07	105.2	1510.43	105.26	1560	105.15	1563.74	105
1637.78	105.49	1639.93	106	1645.73	106.29	1657.19	107	1659.48	107.24
1665.89	108	1698.97	108.81	1699.6	109	1700.17	109.16	1703.07	110
1711.26	110.74	1715.29	111	1718.93	111.24	1720.21	111.29	1720.43	111.27
1727.29	111.24	1728.82	111.27	1744.67	111.57	1748.48	111.6	1752.44	111.64

StonyBrookDari en1-ex. txt

1755.89	111.67	1759.84	111.7	1760.71	111.71	1766.11	111.68	1772.72	112
1825.8	111.58	1834.62	111	1842.05	110.3	1845.05	110	1847.23	109.85
1847.86	109.84	1854.22	109.58	1861.72	109.75	1864.03	110	1879.98	109.35
1881.62	109	1884.24	109.03	1900.52	109.48	1919.63	110	1930.01	110.56
1935.85	111	1945.4	111.3	1946.25	111.32	1947.06	111.33	1950.39	111.38
1972.96	112	1986.05	112.06	2014.97	113	2019.68	113.08	2046.02	113.04
2046.41	113.05	2050.28	113	2053.2	112.95	2053.84	112.94	2057.42	112.88
2060.34	112.83	2063.05	112.8	2063.83	112.79	2064.68	112.77	2065.65	112.75
2069.49	112.63	2071.07	112.6	2072.74	112.55	2086.56	112	2094.71	111.41
2100.4	111	2104.51	110.16	2105.55	110	2107.41	109.71	2110.51	109.29
2112.5	109	2113.78	108.9	2121.39	108	2127.73	107.1	2128.44	107
2128.86	106.86	2131.57	106	2140.95	106.84	2141.57	107	2141.86	107.05
2147.53	108	2164.94	108.99	2165.13	109	2171.73	108.47	2173.41	108
2189.89	108.71	2192.81	108.76	2195.98	108.91	2197.85	109	2205.23	109.41
2209.22	109.62	2214.53	110	2237.04	109.56	2239.36	109	2246.66	108.59
2257.7	108	2261.21	107.37	2263.61	107	2274.34	107.8	2276.07	108
2280.7	108.05	2365.13	109	2444.83	109.32	2445.2	109.33	2445.6	109.34
2457.44	110	2472.43	110.97	2472.6	110.98	2472.95	111	2473.35	111.03
2484.47	112	2490.5	112.44	2499	112.9	2500.69	113	2503.59	113.17
2521	114								

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .06 1148.8 .035 1194.22 .08 1698.97 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1148.8 1194.22 24.85 19.07 116 .3 .5

Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev
 1962.47 2061.14 128.7 1729.75 1826.11 125.1

INLINE STRUCTURE

RIVER: StonyBrook
 REACH: StonyBrook RS: 13602

INPUT

Description: DAM #9 - DS of Hanson Road (MMI added dam)

Distance from Upstream XS = 8.8

Deck/Roadway Width = 2

Weir Coefficient = 2.6

Weir Embankment Coordinates num = 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
1148.8	105.67	1153.08	104.31	1157.75	104.21	1165.04	104.24	1170.75	103.96
1188.1	106.43								

Upstream Embankment side slope = 0 horiz. to 1.0 vertical

Downstream Embankment side slope = 0 horiz. to 1.0 vertical

Maximum allowable submergence for weir flow = .98

Elevation at which weir flow begins =

Weir crest shape = Broad Crested

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 13592

INPUT

Description: DS of Dam - MMI added section

Station Elevation Data num= 334

StonyBrookDari en1-ex. txt

Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	115.96	9.93	115.39	17.15	115	33.72	115.02	33.86	115.03
34.05	115.04	34.35	115.06	45.7	115.75	47.56	115.79	48.26	115.83
51.68	115.78	56.19	115.75	60.53	115.86	62.23	115.85	63.84	115.84
87.9	115	153.19	114.67	156.33	114.65	196.67	114	267.76	113.93
271.69	113.81	274.81	113.75	280.87	113.67	288.47	113.27	288.78	113.25
293.5	113	410.68	112.51	412.38	112.33	413.93	112.16	415.72	112.07
417.93	112.03	418.06	112.02	424.83	112.08	424.9	112.07	427.12	112
444.14	111.96	446.65	111.68	452.81	111	453.06	110.94	457.03	110
477.75	110.49	481.02	110.55	487.94	110.64	490.98	110.69	497.6	110.76
499.83	110.79	504.4	110.83	510.63	110.89	511.74	110.9	521.29	111
549.12	110.77	553.7	110.72	555.48	110.68	558.74	110.62	561.63	110.57
564.24	110.53	565.67	110.51	574.32	110.39	585.92	110.11	586.4	110.1
590.05	110	608.71	109.41	612.15	109.28	617.74	109.05	618.97	109
630.09	108.35	636.24	108	636.71	107.95	640.62	107.55	645.69	107
686.7	107.27	693.95	107.65	700.66	108	710.5	108.72	714.02	109
717.16	109.91	717.49	110	717.79	110.01	726.82	110.34	739.39	110.48
757.5	111	761.98	111.17	765.75	111.28	772.1	111.5	774.82	111.59
783.04	111.79	784.38	111.82	791.01	112	792.06	112.03	792.34	112
807.65	111.95	810.63	111	812.01	110.55	813.44	110.08	813.69	110
823.25	109.02	823.44	109	823.65	108.98	835.64	108	855.25	109
858.16	110	860.07	110.66	861.14	111	879.55	111.65	889.56	112
911.69	112.92	913.37	113	914.71	113.03	917.56	113.09	920.36	113.16
980.08	113.52	1022.37	113.09	1024.85	113.07	1030.34	113	1030.64	112.98
1030.71	112.97	1031.62	112.91	1040.38	112.29	1044.35	112	1057.28	111.08
1058.45	111	1059.1	110.98	1059.43	110.97	1060.94	110.89	1074.8	110.1
1076.39	110.01	1076.5	110	1091.22	109.18	1094.99	109	1096.18	108.89
1100.58	108.49	1103.48	108.19	1105.82	108	1112.17	107.42	1115.37	107.23
1116.28	107.14	1119.47	107.09	1121.75	107	1122.18	106.98	1124.79	106.85
1126.84	106.72	1128.53	106.69	1136.26	106	1147.07	105.81	1148.36	105.69
1148.58	105.67	1149.69	105.66	1152.95	105.44	1155.23	105.49	1155.86	105.48
1156.17	105.46	1157.64	105.51	1184.36	105.29	1191.68	103.33	1196.31	102.47
1205.07	100.75	1207.81	102.17	1211.13	102.9	1212.25	105.31	1212.56	105.71
1215.09	105.73	1216.41	105.78	1218.98	105.77	1222.08	105.82	1224.3	105.88
1224.31	105.88	1227.98	106	1233.96	106.09	1234.47	106.1	1236.25	106.14
1237.93	106.19	1239.65	106.18	1241.31	106.23	1243.66	106.32	1245.69	106.38
1248.02	106.36	1256.08	106.49	1258.2	106.46	1260.17	106.5	1262.3	106.53
1264.23	106.5	1340.61	106.09	1348.1	106	1367.41	105.8	1440.55	105
1649.17	105.01	1653.21	106	1655.67	106.56	1657.74	107	1675.03	107.12
1681.72	107.45	1684.01	107.49	1686.8	107.72	1687.19	107.73	1690.47	108
1691.37	108.32	1692.79	108.83	1693.28	109	1695.52	109.86	1695.88	110
1697.26	110.51	1698.71	111	1773.56	111.82	1783.78	111.97	1785.53	112
1840.45	111.91	1841.32	111.87	1843.16	111.79	1850.91	111.47	1856.79	111.24
1862.92	111	1869.45	110.56	1876.42	110	1878.62	109.4	1880.65	109
1929.34	109.33	1930.54	109.37	1934.19	109.54	1936.03	109.62	1937.8	109.7
1944.16	110	1953.31	110.36	1954.58	110.41	1957.57	110.52	1958.98	110.57
1961.02	110.62	1964.14	110.69	1967.24	110.76	1968.85	110.79	1969.72	110.8
1971.01	110.82	1973	110.83	1975.69	110.8	1977.1	110.81	1989.54	110.79
1992.59	110.8	2003.18	110.85	2006.39	110.74	2008.97	110.6	2013.59	110.4
2016.97	110.24	2022.55	110	2025.65	109.87	2026.87	109.86	2027.73	109.84
2032.73	109.68	2049.21	109.11	2050.63	109.07	2050.86	109.06	2052.73	109
2054.17	108.96	2063.22	108.81	2066.31	108.76	2070.39	108.67	2078.42	108.51
2085.36	108.4	2087.38	108.34	2089.6	108.33	2095.82	108	2108.35	107.31
2111.79	107	2115.86	106.13	2116.62	106	2119.29	105.65	2122.7	105.26
2124.64	105	2127.32	105.19	2129.09	106	2129.88	106.23	2132.06	107
2148.89	107.17	2149.84	107.18	2153.07	107.23	2153.99	107.27	2159.95	107.48
2162.35	107.5	2168.29	107.49	2170.81	107.5	2173.06	107.51	2175.13	107.53
2183.88	107.56	2187.79	107.57	2189.52	107.59	2191.41	107.61	2193.19	107.63
2194.92	107.66	2198.58	107.74	2200.41	107.78	2207.83	108	2219.03	107.87
2219.51	107.85	2222.84	107.72	2225.34	107.67	2234.03	107.34	2238.93	107.28
2240.35	107.24	2251.25	107	2343.42	107.51	2351.15	107.5	2356.66	107.48
2364.62	107.55	2367.89	107.59	2395.67	108	2421.89	108.34	2423.8	108.36
2436.14	108.7	2437.24	108.72	2445.27	109	2451.14	109.44	2459.66	110

StonyBrookDari en1-ex. txt

2468.43	110.53	2469.93	110.58	2471.49	110.65	2474.17	110.71	2475.93	110.75
2484.15	110.88	2489.22	110.98	2490.05	111	2493.55	111.17	2498.69	111.44
2504.84	111.78	2505.81	111.83	2506.49	111.85	2506.98	111.87	2508.82	112
2511.41	112.22	2521.48	113	2528.98	113.64	2529.95	113.75	2531.69	113.89
2532.86	114	2540.76	114.42	2541.41	114.45	2541.65	114.46		

Manning's n Values

num=	4
Sta n Val	Sta n Val
0 .1	810.63
.06	1184.36
.04	1212.56
.08	

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1184.36 1212.56 474.04 636.59 643.47 .3 .5

Blocked Obstructions

num=	2
Sta L Sta R Elev	Sta L Sta R Elev
540.98 589.97 120	759.69 793.19 122

CROSS SECTION

RIVER: StonyBrook

REACH: StonyBrook

RS: 12955

INPUT

Description: FEMA AL (HEC2 -52)

Station Elevation Data

num=	328			
Sta Elev	Sta Elev	Sta Elev	Sta Elev	Sta Elev
0 117.37	7.44 117	9.11 116.92	28.17 116	30.89 115.85
32.41 115.77	35.89 115.57	45.49 115	60.27 114.37	61.27 114.36
69.3 114.88	69.59 114.89	69.9 114.9	71.16 115	73.47 115.12
73.96 115.11	90.34 115.47	91.81 115.45	94.07 115.44	94.71 115.43
107.67 115	188.37 114.37	194.6 114.33	214.51 114	301.02 113.55
302.45 113.56	303.93 113.54	321.4 113	408.32 112.77	422.83 112.59
438.81 112	448.14 111.09	449.16 111	454.24 110.84	477.76 110
502.79 109.66	510.33 110	514.28 110.06	530.19 110.29	531.33 110.3
542.05 110.46	543.49 110.47	592.53 111	654.37 110.95	655.47 110.87
660.57 110.52	668.03 110	671.36 109.73	679.94 109	685.89 108.15
687.07 108	689.44 107.68	693.51 107	769.12 107.9	770.1 108
776.82 108.57	780.81 108.65	787 108.85	788.81 108.87	794.1 108.89
794.41 108.9	800.59 108.91	813.6 108.92	818.78 108.9	831.88 108.7
832.99 108.68	838.18 108.57	840.07 108.52	844.03 108.43	844.87 108.4
856.93 108	882.94 107.47	890.21 107.26	892.85 107.18	899.09 107.04
906.23 107.05	912.83 107	918.67 106.97	936.19 107	963.16 107.23
964.57 107.24	967.75 107.25	973.37 107.3	975.4 107.31	977.41 107.33
1006.63 107.07	1007 107.08	1008.13 107.05	1008.98 107.07	1009.99 107.15
1010.73 107.16	1014.86 107.49	1018.18 107.7	1019.36 107.79	1021.24 108
1021.38 108.11	1022.35 109	1047.85 108.39	1049.27 108.17	1050.68 108.03
1050.78 108.02	1050.85 108.01	1051.27 108	1053.99 107.98	1054.01 107.97
1055.68 108	1066.87 108.28	1082.9 108.62	1084.23 108.66	1086.99 108.77
1088.06 108.78	1090.06 108.76	1091.32 108.82	1092.01 108.78	1093.01 108.77
1094.2 108.67	1094.82 108.59	1096.61 108.51	1098.05 108	1111.95 107.93
1114.07 107.97	1114.13 107.98	1116.47 107.97	1116.97 107.96	1126 107.83
1127.25 107.82	1128.39 107.81	1133.46 107.82	1134.23 107.81	1135.3 107.78
1138.67 107.75	1144.3 107.67	1157.1 107.22	1157.68 107.2	1158.17 107.18
1158.57 107.16	1161.22 107.06	1162.44 107	1166.77 106.58	1176.61 106
1177.71 105.96	1178.09 105.95	1178.27 105.94	1179.03 105.91	1184.97 105.83
1188.07 105.7	1188.53 105.67	1192.82 105.55	1195.13 105.42	1196.39 105.3
1197.39 105.25	1200.52 105.03	1200.63 105.02	1200.99 105	1223.77 104.62
1230.19 104.41	1234.04 104.34	1241.86 104	1298.02 103.92	1304.63 103.51
1308.53 103.3	1309.41 103.25	1309.54 103.24	1311.09 103.16	1312.32 103
1318.39 102.99	1321.5 102.63	1322.1 101.13	1323.17 100.17	1326.89 100.18
1331.41 100.47	1337.6 100.85	1350.03 101.4	1353.64 103.37	1359.7 103.93
1360.16 104	1361.54 103.98	1361.65 104	1367.16 103.91	1370.17 103.86
1373.79 103.81	1377.59 103.75	1423.35 103	1548.08 103.68	1551.26 104

StonyBrookDari en1-ex. txt

1574. 1	104. 05	1581. 5	104. 23	1595. 61	104. 57	1606. 35	104. 91	1609. 2	105
1646. 54	105. 61	1649. 94	105. 65	1652. 9	105. 69	1656. 17	105. 79	1661. 9	105. 96
1663. 4	106	1675. 41	106. 26	1712. 56	107	1717. 9	107. 07	1721. 61	107. 09
1722. 65	107. 1	1753. 83	107. 34	1766. 46	107. 42	1774. 11	107. 43	1775. 88	107. 44
1779. 59	107. 45	1808. 72	107. 25	1810. 19	107. 26	1811. 13	107. 24	1812. 11	107. 23
1814. 39	107. 24	1821. 2	107. 19	1825. 89	107. 14	1828. 85	107. 12	1830. 28	107. 11
1846. 55	107	1890. 8	106. 42	1904. 45	106	1912. 66	105. 78	1913. 27	105. 77
1915. 82	105. 72	1919. 04	105. 64	1930. 25	105. 44	1932. 41	105. 41	1934. 19	105. 38
1935. 54	105. 35	1939. 75	105. 33	1941. 93	105. 3	1946. 16	105. 28	1948. 57	105. 25
1949. 35	105. 24	1955. 18	105. 23	1956. 89	105. 22	1977. 23	105. 18	1979. 68	105. 19
1981. 57	105. 21	1991. 45	105. 26	1995. 41	105. 29	1998. 33	105. 3	2001. 87	105. 34
2008. 86	105. 49	2009. 92	105. 52	2015. 51	105. 59	2018. 61	105. 61	2019. 71	105. 62
2020. 81	105. 63	2025. 54	105. 67	2026. 73	105. 66	2027. 95	105. 64	2031. 08	105. 65
2034. 01	105. 6	2038. 05	105. 58	2041. 08	105. 52	2062. 47	105. 88	2063. 73	105. 95
2065. 22	106	2123. 74	105. 8	2146. 71	105. 83	2153. 83	105. 76	2161. 29	106
2170. 54	106. 05	2196. 85	106. 29	2220. 5	106. 16	2223. 85	106. 14	2233. 98	106
2262. 76	106. 16	2268. 09	106. 12	2273. 57	106	2277. 52	105. 78	2279. 68	106
2287. 48	106. 23	2288. 5	106. 36	2291. 83	107	2300. 12	107. 64	2304. 58	108
2307. 87	108. 81	2308. 58	109	2316. 39	109. 16	2365. 69	110	2470. 01	110. 06
2474. 94	110. 31	2475. 81	110. 34	2477. 14	110. 39	2478. 15	110. 44	2482. 68	110. 56
2486. 01	110. 73	2490. 28	110. 83	2500. 19	111	2508. 92	110. 79	2523. 67	111
2533. 8	111. 22	2536	111. 29	2537. 75	111. 34	2540. 47	111. 43	2543. 32	111. 51
2547. 7	111. 66	2549. 26	111. 72	2555. 73	111. 88	2562. 97	112	2572. 44	112. 27
2573. 85	112. 35	2581. 19	112. 72	2583. 57	112. 82	2586. 66	113	2602. 09	113. 97
2602. 45	114	2602. 86	114. 06	2607. 65	114. 75	2610. 13	114. 96	2610. 45	115
2614. 2	115. 15	2634. 12	115. 92	2637. 04	116	2640. 22	116. 41	2642. 03	116. 72
2643. 46	116. 91	2643. 89	117	2645. 89	117. 4	2649. 06	118	2650. 02	118. 15
2655. 05	119	2656. 59	119. 19	2667. 13	119. 87	2668. 3	119. 95	2668. 5	119. 97
2669. 05	120	2672. 56	120. 25	2676. 63	120. 53				

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .1 1298.02 .04 1360.16 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1298.02 1360.16 444.56 784.29 637.88 .1 .3
 Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 1062.52 1092.4 129.2 568.8 594.23 120 1706.52 1800.13 128

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 12171

INPUT

Description: MMI added section - across split channel

ST 963.38 Baseball

field at EL: 105

ST 1190.32 Football / track at EL: 110

Station Elevation Data num= 227

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	116.3	7.45	116	13.78	115.64	25.01	115	28.38	114.75
29.54	114.67	33.21	114.43	36.92	114.17	38.13	114.08	39.1	114
45.06	113.46	50.41	113	66.05	112.21	67.28	112.23	68.47	112.24
71.24	112.3	79.87	112.54	84.71	112.69	90.2	112.93	91.45	113
97.2	113.2	120.4	114	136.42	114.49	146.06	114.75	147.13	114.78
147.69	114.8	149.31	114.85	149.54	114.86	150.54	114.88	151.74	114.91
155.97	114.85	157.93	114.87	158.36	114.83	162.51	115	165.08	115.11
172.69	115.01	173.01	115	180.42	114.85	181.72	114.82	188.8	114.62
198.87	114.33	203.61	114.18	208.5	114.13	210.34	114.12	223.55	114.14

StonyBrookDari en1-ex. txt

224.24	114.13	224.46	114.12	231.79	114.08	231.92	114.07	232.83	114
236.16	113.97	237.21	113.91	239.03	113.79	247.79	113	257.61	112.01
257.73	112	262.24	111.37	265.03	111	298.03	111.07	304.33	111.22
304.71	111.21	309.35	111	343.92	110.73	345.44	110.69	349.16	110.6
356.73	110.43	359.8	110.36	370.59	110.11	371.29	110.09	375.21	110
440.96	110.01	455.28	110.02	455.64	110.03	465.41	110.09	468.72	110.12
477.27	110.18	482.18	110.19	489.01	110.2	500	110.15	503.22	110.14
529.55	110.02	531.68	110	551.58	109.94	556.35	109.93	557.76	109.92
558.83	109.91	560.22	109.9	560.97	109.89	584.94	109.48	599.86	109.23
611.11	109	615.81	108.84	620.53	108.69	623.8	108.6	631.11	108.42
633.54	108.39	639.82	108.23	642.44	108.19	649.34	108	650.28	107.97
650.4	107.96	650.83	107.95	672.08	107	683.38	106	688.08	105.39
689.74	105	693.8	104.05	694.03	104	694.42	103.91	698.36	103
700.16	102.58	702.61	102	777.34	101.39	777.92	101.19	778.49	101
779.16	100.75	782.14	100	784.85	98.74	788.65	98.45	793.23	98.56
797.13	98.8	800	98.85	801.66	101.29	815.97	101.62	829.03	101.29
832.31	99.43	835.12	98.73	839.77	98.6	842.69	98.83	848.38	99.56
851.96	101.51	852.73	102	854.79	102.03	874.59	102.49	888.52	102.83
896.11	103	930.67	103.38	938.85	104	945.11	104.88	946.08	105
961.59	104.9	963.38	105	966.92	105.17	991.62	106	1010.27	106.03
1011.92	106.06	1019.03	106.2	1031.71	106.44	1038.09	106.56	1053.32	107
1120.17	107.54	1154.58	108	1156.76	108.21	1164.57	109	1182.21	109.75
1190.32	110	1205.76	110.1	1226.85	110.25	1255.69	110.45	1319.84	110.82
1325.5	110.86	1327.55	110.87	1329.25	110.88	1330.68	110.89	1332.98	110.9
1335.43	110.91	1350.78	111	1361.58	111.34	1377.04	111.79	1381.01	111.91
1384.32	112	1401.03	112.55	1414.9	113	1421.5	113.22	1445.13	113.99
1445.31	114	1462.68	114.55	1476.51	115	1479.11	115.08	1482.79	115.2
1497.92	115.67	1508.48	116	1514.69	116.19	1519.85	116.35	1529.75	116.65
1541.54	117	1542.98	117.04	1575	118	1581.17	118.19	1583.1	118.26
1586.91	118.4	1593.03	118.61	1601.72	118.99	1601.86	119	1612.27	119.6
1617.65	120	1627.25	120.93	1628.06	121	1629.8	121.22	1635.93	122
1636.77	122.13	1639.34	122.51	1642.64	123	1643.33	123.11	1648.66	124
1657.82	124.76	1660.46	125	1894.27	124.1	1898.45	124.09	1903.95	124.08
1914.01	124.05	1922.83	124.07	1943.37	124.25	1945.16	124.28	1947.85	124.31
1983.68	125	2195.39	125.65	2207.74	125.68	2231.4	125.72	2288.86	125.88
2299.35	125.86	2311.79	125.94	2315.57	125.96	2315.94	125.95	2319.12	125.96
2326.17	125.98	2329.02	126						

Manning's n Values

Station	n Value	Station	n Value	Station	n Value	Station	n Value	Station	n Value
0	.1	599.86	.08	777.34	.04	854.79	.06	991.62	.04
1482.79	.1								

Bank Station: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

777.34	854.79	569.11	623.22	506.18	.1	.3
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Blocked Obstructions

num=	Station L	Station R	Elevation
1	1522.74	1890.45	168.63

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 11548

INPUT
 Description: FEMA AK (HEC2-51)

ST 1110.46 Football / track at EL: 110

Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation
0	125.31	.3	125.29	2.13	125.21	4.23	125.12	6.12	125
16.2	124.48	25.11	124	26.75	123.91	27.11	123.88	27.64	123.85

StonyBrookDari en1-ex. txt

31.87	123.58	36.65	123.25	43.37	123	58.76	122.42	62.35	122.29
66.72	122	77.86	121.49	83.06	121.3	91.39	121	112.05	120.94
114.71	120.93	124.51	120.81	127.33	120.78	132.52	120.81	139.43	120.82
143.95	120.8	154.19	120.86	157.8	120.84	161.93	120.81	170.98	121
211.54	120.75	212.22	120.77	213.11	120.76	214.42	120.73	215.18	120.75
217.58	120.8	220.4	120.82	221.7	120.84	224.5	120.85	226.39	120.84
227.59	120.83	229.68	120.81	230.18	120.8	241.88	120.65	245.52	120.56
256.43	120	261.83	119.49	262.23	119.46	263.05	119.37	264.37	119.21
264.7	119.18	265.03	119.19	265.92	119.15	280.01	119.09	281.63	119
282.91	118.88	295.31	118	295.89	117.93	296.53	117.86	297.47	117.7
299.3	117.41	301.6	117	307.3	116.06	307.61	116	309.69	115.63
313.52	115	317.25	114.22	318.09	114	320.91	113.34	321.69	113.17
322.44	113	328.48	112.05	328.85	112	338.63	111.48	346.45	111
348.17	110.62	351.18	110	355.63	109.21	356.84	109	367.88	108.09
368.93	108	391.16	107.04	392.12	107	409.32	106.17	410.27	106.13
410.78	106.11	411.11	106.1	413.38	106	415.79	105.75	417.04	105.65
419.36	105.49	427.22	105	439.63	104.3	443.81	104.09	444.26	104.07
445.97	104	464.43	103.36	466.54	103.28	471.21	103.11	473.5	103
476.39	102.85	478.2	102.74	491.03	102	515.2	101.51	520.67	101.4
522.38	101.37	524.87	101.31	540.37	101	603.96	100.57	606.33	100.55
608.61	100.54	617.04	100.51	646.63	100.66	647.28	100.67	649.07	100.65
650.08	100.64	655.45	100.63	662.27	100.61	664.83	100.6	683.28	100
710.32	99.97	711.72	99.9	723.42	99.48	730.88	98.72	731.14	98.58
733.03	96.75	735.59	95.55	739.28	94.71	743.05	94.31	747.77	95.6
751.11	96.79	754.84	98.87	758.71	99	784	100	788.03	100.17
812.56	101	821.09	101.19	826.78	101.34	848.9	101.9	850.73	101.95
851.35	101.97	852.82	102	871.93	102.46	877.66	102.6	884.35	102.78
887.1	102.85	888.2	102.88	892.98	103	897.8	103.07	901.64	103.14
902.72	103.16	921.12	103.46	928.33	103.58	950.34	104	988.57	104.11
990.56	104.15	1021.06	105	1041.18	105.08	1041.74	105.09	1046.89	105.21
1078.85	106	1088.58	106.45	1093.88	107	1096.46	107.46	1099.61	108
1101.73	108.38	1105.02	109	1108.56	109.65	1110.46	110	1133.64	110.21
1160.18	110.44	1173.46	110.55	1206.64	110.74	1212	110.78	1215.91	110.8
1220.49	110.83	1228.68	110.88	1253.5	111	1261.29	111.42	1272.29	112
1285.37	112.7	1290.97	113	1301.33	113.55	1309.62	114	1317.71	114.43
1328.32	115	1335.78	115.4	1346.98	116	1350.63	116.2	1365.63	117
1366.07	117.02	1366.64	117.05	1384.34	118	1388.47	118.22	1393.55	118.5
1399.28	118.8	1403	119	1412.75	119.52	1416.96	119.74	1421.76	120
1436.43	120.79	1440.22	121	1444.48	121.22	1448.1	121.43	1452.82	121.67
1458.67	122	1464.92	122.32	1467.84	122.49	1476.92	123	1480.25	123.15
1480.55	123.18	1481.2	123.22	1483.01	123.32	1490.75	123.72	1494.9	123.98
1495.33	124	1516.75	124.97	1517.05	124.98	1517.79	125		

Manning's n Values	num=	5							
Sta n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta
0	.05	478.2	.1	730.88	.035	754.84	.1	850.73	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
730.88	754.84	119.07	93.36	73.34	.1	.3	
Blocked Obstructions	num=	1					
Sta L	Sta R	Elev					
1412.72	1517.79	168.63					

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 11454

INPUT
 Description: FEMA AJ (HEC2-50)

ST 1110.07 Football / track at EL: 110

StonyBrookDari en1-ex. txt

Station		Elevation		Data		num= 238			
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	117.74	4.05	117.59	6.22	117.56	9.69	117.47	11.64	117.43
15.66	117.39	19	117.37	21.78	117.39	23.54	117.38	28.36	117.43
31.63	117.44	35.8	117.43	45.82	117.38	48.74	117.36	53.79	117.28
54.6	117.27	58.45	117.38	59.3	117.35	63.09	117.69	63.57	117.68
64.11	117.69	65.75	118	67.37	118.38	68.77	118.47	70.22	118.69
75.97	118.9	78.14	119	80.16	119.06	81.32	119.11	90.2	119.47
95.49	119.7	102.78	120	112.48	120.44	119.45	120.91	120.06	120.94
120.85	121	131.25	121.83	133.12	122	135.43	122.21	136.49	122.31
138.74	122.5	141.19	122.73	142.57	122.83	144.47	123	163.19	122.93
165.89	122.78	167.75	122.7	169.76	122.55	171.61	122.44	174.22	122.26
177.58	122	178	121.99	178.15	121.98	187.79	121.71	190.82	121.53
195.1	121.59	199.28	121	201.18	120.71	203.22	120.35	205.17	120
207.06	119.65	210.69	119	211.58	118.75	214.12	118	216.7	117.3
217.78	117	220.74	116.19	221.41	116	221.58	115.96	225.21	115
228.73	114.13	229.26	114	229.74	113.88	233.31	113	234.75	112.65
237.5	112	240.84	111.19	241.59	111	245.67	110.02	245.74	110
245.85	109.99	247.3	109.84	255.35	109	259.37	108.71	268.95	108
271.11	107.84	281.89	107	286.35	106.65	288.49	106.44	289.39	106.36
293.45	106	306.52	105.21	310.42	105	312.22	104.94	319	104.7
338.26	104	340.91	103.85	344.98	103.64	357.17	103	360.64	102.96
385	102	392.23	101.43	395.03	101.2	396.76	101.19	396.82	101.18
399.41	101	409.99	100.73	411.14	100.7	438.32	100	613.56	99.55
620.24	99	624.11	98.55	632.25	98.55	634.75	95.59	637.7	95.36
641.96	95.25	644.96	95.54	648.96	98.41	660.85	99	665.59	99.71
667.56	100	668.78	100.18	670.48	100.44	674.22	101	693.65	101.49
712.91	102	737.66	102.66	746.47	103	751.51	103.1	752.62	103.11
755.4	103.14	765.84	103.3	776.37	103.43	814.38	104	822.09	104.21
828.47	104.41	838.61	104.67	843.16	104.73	845.02	104.76	854.58	104.92
855.49	104.94	859.7	105	864.63	105.12	866.09	105.15	876.26	105.42
878.64	105.46	882.07	105.53	886.1	105.6	890.8	105.67	891.97	105.69
897.03	105.8	897.92	105.82	899.45	105.84	901.77	105.85	905.52	105.86
913.07	105.94	917.01	106	928.8	106.02	930.67	106.05	931.92	106.04
935.36	106.09	939.27	106.15	946.3	106.27	955.9	106.32	962.37	106.4
963.03	106.41	989.53	107	993.98	107.51	997.25	108	999.69	108.38
1003.75	109	1010.07	109.97	1010.23	110	1029.41	110.13	1050.81	110.27
1087.53	110.48	1107.5	110.58	1121.42	110.65	1188.83	111	1189.11	111.02
1189.49	111.04	1207.01	112	1211.37	112.24	1225.15	113	1227.48	113.13
1232.51	113.41	1239.81	113.81	1243.27	114	1254.97	114.64	1261.54	115
1271.16	115.52	1279.8	116	1281.17	116.08	1284.21	116.24	1293.74	116.76
1298.29	117	1309.28	117.59	1316.98	118	1325.46	118.45	1336.03	119
1338.97	119.15	1342.04	119.31	1348.82	119.66	1355.72	120	1357.74	120.1
1358.94	120.16	1362.91	120.36	1370.26	120.71	1372.32	120.8	1376.71	121
1380.16	121.18	1382.25	121.28	1388.13	121.56	1393.44	121.81	1394.8	121.87
1395.47	121.9	1397.93	122	1404.21	122.27	1407.49	122.42	1412.28	122.6
1419.55	122.96	1420.11	123	1424.15	123.36	1424.49	123.38	1426.13	123.56
1427.04	123.55	1430.9	123.63	1434.2	123.53	1435.7	123.52	1440.21	123.48
1447.58	123.43	1449.64	123.42	1451.9	123.39	1453.43	123.42	1458.52	123.51
1461.11	123.54	1467.12	123.45	1473.5	123.44				

Manning's n Values		num= 6	
Station	n Value	Station	n Value
0	.045	357.17	.1
1316.98	.1	632.25	.035
		648.96	.1
		693.65	.04

Bank Station	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	632.25	648.96		655.45	727.91		.1	.3
				660.69				

Blocked Obstructions			num= 1
Sta L	Sta R	Elev	
1349.29	1473.5	168.63	

CROSS SECTION

StonyBrookDari en1-ex. txt

RIVER: StonyBrook
 REACH: StonyBrook

RS: 10727

INPUT

Description: FEMA AI - US section of High School Lane Bridge (HEC2-49)
 Station Elevation Data num= 223

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	109.62	.66	109.65	2.23	109.71	6.89	109.91	7.88	109.94
9.13	110	14.64	110.17	18.22	110.31	27.46	110.69	34.97	111
44.27	111.46	48.6	111.53	53.08	111.69	53.73	111.7	63.59	112
129.48	111.49	133.56	111.46	134.22	111.35	135.5	111.32	136.29	111.25
137.09	111.22	141.12	111	228.7	110.52	237.03	110.17	239.91	110.06
241.17	110	254.63	109.58	271.55	109	282.05	108.72	284.28	108.67
300.33	108.39	312.97	108.12	314.1	108.11	318.1	108	319.32	107.95
319.65	107.93	329.14	107.5	331.4	107.41	334.58	107.31	337.39	107.2
338.48	107.15	339.23	107.13	345.19	107	355.73	106.86	359.75	106.72
371.8	106.44	379.57	106.2	382.17	106.15	386.83	106	393.34	105.85
394.93	105.79	402.66	105.61	407.15	105.42	413.09	105.26	415.58	105.12
417.89	105	425.51	104.66	439.49	104	468.8	103.56	471.46	103.53
473.42	103.52	474.56	103.5	485.88	103.45	495	103.14	498.67	103
505.05	102.89	509.27	102.81	509.77	102.8	529.84	102.45	533.64	102.4
535.52	102.38	537.51	102.36	555.49	102	561.1	101.92	566.73	101.78
569.86	101.59	573.4	101.49	577.22	101.38	580.63	101	581.96	100.73
585.54	100	589.74	99.52	593.34	99.13	593.69	99.09	596.61	99
596.92	98.99	597.1	98.98	616.2	98.59	619.87	97.8	623.21	94.04
626.67	93.38	634.53	93.77	642.56	93.89	646.5	94.27	648.36	94.74
654.69	97.84	676.7	98.38	679.59	98.39	681.1	98.4	681.62	98.41
691.57	98.47	694.71	98.52	715.26	99	731.5	98.18	733.28	98.17
744.85	98.14	764.28	99	778.5	98.96	778.79	98.95	787.43	98.64
789.48	98.66	798.76	98.44	805.46	98.26	808.78	98.21	815.46	98.09
816.58	98.07	824.25	98	964.81	98.01	970.19	98.12	971.61	98.16
976.58	98.27	978.7	98.22	979.48	98.25	980.3	98.22	980.76	98.27
982.87	98.17	1008.64	99	1048.39	99.91	1049.78	100	1050.18	100.03
1050.35	100.04	1050.75	100.07	1057.7	100.61	1063.98	101	1070.5	101.36
1078.48	101.78	1082.95	102	1091.91	102.23	1096.37	102.27	1097.83	102.29
1101.18	102.37	1108.69	102.43	1116.79	102.56	1124.38	102.71	1132.08	103
1140.47	103.79	1142.3	104	1147.68	104.84	1148.56	105	1154.02	105.98
1154.1	106	1165.37	105.98	1165.52	105.95	1169.05	105	1169.68	104.79
1173.09	104	1205.34	104.59	1207.78	105	1209.36	105.34	1212.26	106
1215.89	106.84	1216.57	107	1217.12	107.1	1221.22	108	1233.14	108.6
1242.35	109	1250.67	109.41	1265.53	110	1276.03	110.03	1281.52	111
1281.57	111.01	1285.5	112	1285.86	112.09	1289.63	113	1291.36	113.4
1293.85	114	1299.9	114.69	1302.83	115	1313.2	115.77	1315.56	115.95
1316.34	116	1324.01	116.19	1357.62	117	1369.64	117.16	1380.88	117.29
1390.02	117.4	1397.15	117.49	1416.71	117.71	1424.24	117.81	1433.93	117.92
1435.89	117.94	1441.34	118	1471.83	118.36	1474.48	118.39	1477.25	118.41
1488.07	118.53	1517.58	118.88	1525.47	119	1527.18	119.52	1528.87	120
1530.49	120.42	1532.75	121	1534.4	121.44	1536.48	122	1542.9	122.93
1543.28	122.98	1543.4	123	1556.67	123.11	1659.58	124	1762.04	123.37
1792.66	123.16	1810.36	123	1819.82	123.41	1822.43	124	1822.84	124.16
1825.06	125	1827.12	125.56	1828.75	126	1830.68	126.51	1832.54	127
1834.36	127.31	1839.16	128	1841.67	128.06				

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.04	580.63	.08	619.87	.035	654.69	.08	1101.18	.04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 619.87 654.69 23.85 27.25 24.9 .3 .5

CROSS SECTION

StonyBrookDari en1-ex. txt

RIVER: StonyBrook
 REACH: StonyBrook

RS: 10699

INPUT

Description: US face of High School Lane (HEC2-49.1)

Station	Elevation	Data	num=	237	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	111	54.49	110.31	56.91	110.27	64.7	110	67.17	109.92			
67.76	109.9	81.25	109.46	86.32	109.32	89.9	109.28	91	109.26			
99.39	109	109.81	108.83	113.5	108.75	120.36	108.63	122.39	108.58			
125.17	108.54	130.52	108.37	135.17	108.31	141.73	108.04	142	108.03			
142.72	108	147.55	107.82	151.57	107.71	153.59	107.66	162.24	107.57			
166.71	107.47	169.5	107.42	182.27	107	183.86	106.96	184.4	106.95			
196.61	106.68	199.96	106.58	203.78	106.47	208.14	106.31	220.67	106.03			
221.48	106	224.2	105.91	225.62	105.84	229.14	105.67	231.32	105.56			
240.62	105.13	242.43	105.05	242.7	105.04	243.7	105	247.13	104.85			
247.44	104.84	251.17	104.69	253.9	104.6	254.67	104.57	256.83	104.51			
260.36	104.39	263.17	104.33	265.14	104.29	271.29	104	277.12	103.93			
281.58	103.88	284.87	103.86	285.21	103.85	304.49	103.75	308.61	103.61			
312.52	103.46	317.05	103.41	317.68	103.39	319.96	103.28	322.23	103.19			
323.36	103.17	326.1	103	334.36	102.93	341.18	102.87	344.8	102.85			
348.83	102.81	354.18	102.72	374.03	102.54	378.8	102.52	402.1	102			
407.62	101.75	410.39	101.53	411.83	101.43	413.41	101.33	415.35	101.23			
416.19	101.19	420.9	101	421.34	100.98	421.48	100.97	425.92	100.72			
427.93	100.49	429.08	100.37	431.56	100	438.8	99.46	446.5	96.97			
451.95	94.42	457.15	93.1	462.78	93.64	467.2	93.21	472.89	94.3			
482.91	96.54	505.03	98.9	511.77	98.91	518.43	98.93	521.89	98.94			
532.91	99	538.61	99.33	540.85	99.37	542.89	99.41	545.84	99.46			
548.9	99.44	551	99.42	556.02	99.02	559.14	99.29	560.34	99.27			
568.76	99.12	569.45	99.11	570.48	99.1	578.15	99	581.55	98.96			
581.82	98.97	589.51	98.91	590.62	98.9	597.42	98.86	598.6	98.84			
605.27	98.79	606.95	98.78	608.49	98.67	613.9	98.61	616.72	98.56			
617.36	98.67	622.8	98.59	625.79	98.55	629.45	98.5	633.05	98.4			
635.24	98.35	642.57	98.07	642.98	98.05	643.28	98	689.56	98.25			
690.45	98.27	690.78	98.28	691.14	98.29	693.19	98.33	699.63	98.51			
704.6	98.53	709.95	98.56	718.23	98.57	719.89	98.65	723.24	98.69			
723.72	98.68	724.61	98.65	726.79	98.66	730.12	98.64	731.79	98.62			
733	98.6	734.77	98.61	739.63	98.54	746.61	98.67	753.02	98.79			
753.81	98.84	755.16	98.85	762.43	98.97	764.41	99	769.45	99.11			
770.84	99.12	772.51	99.17	786.09	99.45	786.88	99.31	790.08	99.44			
794.59	99.7	797.04	99.74	799.78	99.76	800.32	99.75	801.3	99.72			
803.84	99.69	807.24	99.55	814.61	99	815.74	98.94	817.12	98.92			
824.6	99	854.84	99.07	855.13	99.08	856.68	99.32	858.38	99.42			
859.76	99.61	860.27	99.65	864.74	99.98	864.81	99.99	864.99	100			
868.76	100.42	871.5	100.58	872.41	100.64	876.88	100.96	877.15	100.98			
877.42	101	880	101.21	880.43	101.22	882.89	101.39	885.81	101.44			
887.77	101.56	894.06	101.79	895.01	101.84	897.8	102	908.64	102.71			
911.42	102.8	913.95	102.9	914.59	102.92	918.51	103	923.47	103.13			
938.92	103.34	943.14	103.35	946.66	103.4	947.41	103.41	949.03	103.46			
952.29	103.66	953.03	103.69	957.51	104	961.28	104.33	963.28	104.56			
965.27	104.77	966.89	105	971.65	105.55	975.78	106	992.54	105.39			
993.49	105	996.32	104.47	998.02	104	1012.27	104.09	1017.41	104.83			
1018.55	105	1021.75	105.47	1025.13	106	1027.05	106.3	1031.47	107			
1032.06	107.04	1032.28	107.06	1041.84	108	1043.79	108.05	1044.7	108.08			
1069.79	109	1088.39	109.71									

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.06	438.8	.035
		505.03	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

StonyBrookDari en1-ex. txt

438.8 505.03 61.32 62.69 68.11 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 435 103 F
 487 1088.39 103 F

BRI DGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 10667

INPUT

Descripti on: High School Lane Bridge
 Di stance from Upstream XS = 14
 Deck/Roadway Wi dth = 35
 Wei r Coeffi ci ent = 2.6

Upstream Deck/Roadway Coordi nates

num= 17			
Sta	Hi	Cord	Lo Cord
0	110		
150.7	108		
260.73	105		
449	103.14	449	103.14
473	103.13		
975.78	106		

Upstream Bridge Cross Secti on Data

Stati on Elevati on Data num= 237									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	111	54.49	110.31	56.91	110.27	64.7	110	67.17	109.92
67.76	109.9	81.25	109.46	86.32	109.32	89.9	109.28	91	109.26
99.39	109	109.81	108.83	113.5	108.75	120.36	108.63	122.39	108.58
125.17	108.54	130.52	108.37	135.17	108.31	141.73	108.04	142	108.03
142.72	108	147.55	107.82	151.57	107.71	153.59	107.66	162.24	107.57
166.71	107.47	169.5	107.42	182.27	107	183.86	106.96	184.4	106.95
196.61	106.68	199.96	106.58	203.78	106.47	208.14	106.31	220.67	106.03
221.48	106	224.2	105.91	225.62	105.84	229.14	105.67	231.32	105.56
240.62	105.13	242.43	105.05	242.7	105.04	243.7	105	247.13	104.85
247.44	104.84	251.17	104.69	253.9	104.6	254.67	104.57	256.83	104.51
260.36	104.39	263.17	104.33	265.14	104.29	271.29	104	277.12	103.93
281.58	103.88	284.87	103.86	285.21	103.85	304.49	103.75	308.61	103.61
312.52	103.46	317.05	103.41	317.68	103.39	319.96	103.28	322.23	103.19
323.36	103.17	326.1	103	334.36	102.93	341.18	102.87	344.8	102.85
348.83	102.81	354.18	102.72	374.03	102.54	378.8	102.52	402.1	102
407.62	101.75	410.39	101.53	411.83	101.43	413.41	101.33	415.35	101.23
416.19	101.19	420.9	101	421.34	100.98	421.48	100.97	425.92	100.72
427.93	100.49	429.08	100.37	431.56	100	438.8	99.46	446.5	96.97
451.95	94.42	457.15	93.1	462.78	93.64	467.2	93.21	472.89	94.3
482.91	96.54	505.03	98.9	511.77	98.91	518.43	98.93	521.89	98.94
532.91	99	538.61	99.33	540.85	99.37	542.89	99.41	545.84	99.46
548.9	99.44	551	99.42	556.02	99.02	559.14	99.29	560.34	99.27
568.76	99.12	569.45	99.11	570.48	99.1	578.15	99	581.55	98.96
581.82	98.97	589.51	98.91	590.62	98.9	597.42	98.86	598.6	98.84
605.27	98.79	606.95	98.78	608.49	98.67	613.9	98.61	616.72	98.56
617.36	98.67	622.8	98.59	625.79	98.55	629.45	98.5	633.05	98.4
635.24	98.35	642.57	98.07	642.98	98.05	643.28	98	689.56	98.25
690.45	98.27	690.78	98.28	691.14	98.29	693.19	98.33	699.63	98.51
704.6	98.53	709.95	98.56	718.23	98.57	719.89	98.65	723.24	98.69
723.72	98.68	724.61	98.65	726.79	98.66	730.12	98.64	731.79	98.62
733	98.6	734.77	98.61	739.63	98.54	746.61	98.67	753.02	98.79
753.81	98.84	755.16	98.85	762.43	98.97	764.41	99	769.45	99.11
770.84	99.12	772.51	99.17	786.09	99.45	786.88	99.31	790.08	99.44

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794.59	99.7	797.04	99.74	799.78	99.76	800.32	99.75	801.3	99.72
803.84	99.69	807.24	99.55	814.61	99	815.74	98.94	817.12	98.92
824.6	99	854.84	99.07	855.13	99.08	856.68	99.32	858.38	99.42
859.76	99.61	860.27	99.65	864.74	99.98	864.81	99.99	864.99	100
868.76	100.42	871.5	100.58	872.41	100.64	876.88	100.96	877.15	100.98
877.42	101	880	101.21	880.43	101.22	882.89	101.39	885.81	101.44
887.77	101.56	894.06	101.79	895.01	101.84	897.8	102	908.64	102.71
911.42	102.8	913.95	102.9	914.59	102.92	918.51	103	923.47	103.13
938.92	103.34	943.14	103.35	946.66	103.4	947.41	103.41	949.03	103.46
952.29	103.66	953.03	103.69	957.51	104	961.28	104.33	963.28	104.56
965.27	104.77	966.89	105	971.65	105.55	975.78	106	992.54	105.39
993.49	105	996.32	104.47	998.02	104	1012.27	104.09	1017.41	104.83
1018.55	105	1021.75	105.47	1025.13	106	1027.05	106.3	1031.47	107
1032.06	107.04	1032.28	107.06	1041.84	108	1043.79	108.05	1044.7	108.08
1069.79	109	1088.39	109.71						

Manning's n Values num= 3

Station	Value	Station	Value	Station	Value
0	.06	438.8	.035	505.03	.08

Bank Station: Left Right Coeff Contr. Expan.

438.8	505.03	.3	.5
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Ineffective Flow num= 2

Station L	Station R	Elevation	Permanent
0	435	103	F
487	1088.39	103	F

Downstream Deck/Roadway Coordinates num= 18

Station	Hi	Cord	Lo Cord	Station	Hi	Cord	Lo Cord	Station	Hi	Cord	Lo Cord
0	110			79.01	110			107.78	109		
150.7	108			181.61	107			229.01	106		
260.73	105			314.04	104			360.94	103		
456	103.16			456	103.16	100.61		481	103.14	100.58	
481	103.14			683.1	103			754.75	104		
975.78	106			1041.84	108			1081	109		

Downstream Bridge Cross Section Data Station Elevation Data num= 232

Station	Elev	Station	Elev	Station	Elev	Station	Elev	Station	Elev
0	110	33.88	109.83	36.7	109.79	37.48	109.77	40.67	109.67
42.49	109.64	46.24	109.58	48.66	109.57	50.12	109.56	56.97	109.55
60.98	109.54	62.36	109.53	65.48	109.5	66.87	109.46	68.9	109.43
70.49	109.37	73.17	109.3	77.18	109.18	82.31	109	84.23	108.94
84.51	108.93	85.02	108.91	97.46	108.46	99.6	108.37	102.46	108.27
105.4	108.16	110.57	108.03	112.27	108	137.24	107.7	138.78	107.66
149.23	107.54	154.28	107.34	157.61	107.22	158.37	107.21	162.6	107.09
166.66	107	170.47	106.96	171.53	106.92	177.59	106.74	180.1	106.64
183.66	106.49	192.4	106.18	196.48	106.02	197.13	106	201.51	105.83
206.16	105.67	209.03	105.59	212.23	105.49	213.83	105.45	217.82	105.39
220.96	105.33	223.5	105.28	228.05	105.22	229.04	105.2	229.84	105.18
241.57	105	249.71	104.87	250.29	104.86	251.15	104.84	251.41	104.83
259	104.68	259.47	104.67	273.8	104	301.91	103.53	303.19	103.48
306.16	103.52	308.25	103.62	308.65	103.64	309.55	103.59	315.36	103.16
316.6	103	320.16	102.63	325.46	102.08	326.26	102	354.05	101.43
357	101.12	358.28	101	383.01	101.3	387.26	101.57	388.79	101.66
389.76	101.71	390.53	101.73	392.72	101.87	393.45	101.89	395.66	101.98
397.33	102	410.53	101.89	413.17	101.84	426.85	101.5	434.02	101.33
436.71	101.25	438.05	101.18	439.54	101.05	439.87	101	441.68	100.69
445.88	100	446.72	99.83	447	99.02	454	97.49	459.4	93.36
465.2	92.87	469.58	93.25	475.19	93.45	479.08	94.24	485.19	97.72
487.12	98	488.17	98.58	489.17	98.92	489.41	99	489.92	99.14
491.24	99.16	493.98	99.36	495.93	99.47	497.54	99.54	503.21	99.58

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506.55	99.6	517.81	99.57	526.09	99.58	540.2	99.53	552.62	99.52
561.55	99.5	565.46	99.49	574.73	99.48	578.44	99.47	584.88	99.48
588.62	99.47	591.55	99.49	597.89	99.5	607.49	99.53	613.47	99.54
616.77	99.55	625.79	99.57	629.29	99.58	633.55	99.59	637.11	99.61
643.87	99.64	654.82	99.67	659.77	99.7	667.52	99.77	671.52	99.82
679.76	99.9	689.73	99.99	690.84	100	699.63	100.08	700.67	100.09
703.52	100.18	704.68	100.21	711.24	100.55	714.47	100.77	715.05	100.81
719.35	101	722.03	101.14	723.13	101.22	727.76	101.5	730.8	101.68
736.43	102	736.97	102.03	737.22	102.04	747.09	102.55	753.57	102.58
756.95	102.62	758.15	102.66	765.96	102.7	767.28	102.76	769.67	102.88
788.88	102.96	789.33	102.97	799.05	102.98	800.35	103	803.33	103.12
806.9	103.32	811.33	103.48	817.59	103.5	820.44	103.6	822.94	103.72
835.47	103.7	837.15	103.73	838.81	103.76	843.87	103.81	845.35	103.83
847.41	103.86	849.28	103.88	854.11	104	875.52	103.45	877.8	103.04
878.07	103	884.64	102.98	884.9	103	896.72	103.42	904.15	103.45
909.34	103.41	913.01	103.39	918.99	103.44	922.55	103.42	926.21	103.43
933.4	103.44	939.81	103.47	943.51	103.51	952.03	103.52	953.91	103.55
961.1	103.84	961.35	103.85	964.28	104	967.92	104.12	971.48	104.23
977.54	104.39	981.06	104.42	985.28	104.51	987	104.53	989.46	104.58
992.2	104.62	1005.8	105	1008.67	105.14	1009.61	105.18	1010.03	105.19
1011.42	105.22	1018.4	105.49	1020.25	105.53	1023.1	105.63	1024.72	105.68
1030.09	105.93	1030.33	105.94	1031.51	106	1041.25	106.49	1049.96	107
1050.74	107.05	1065.62	108	1067.47	108.11	1067.67	108.13	1070.23	108.29
1080.95	109	1085.35	109.28						

Manning's n Values num= 3
 Station Val Station Val Station Val
 0 .06 439.54 .035 489.17 .08

Bank Sta: Left Right Coeff Contr. Expan.
 439.54 489.17 .3 .5

Ineffective Flow num= 2
 Station L Station R Elev Permanent
 494.69 800 101.86 F
 300 442.31 101.86 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method
 Energy Only

Additional Bridge Parameters

Add Friction component to Momentum
 Do not add Weight component to Momentum
 Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

StonyBrookDari en1-ex. txt

RIVER: StonyBrook
REACH: StonyBrook

RS: 10637

INPUT

Description: DS face of High School Lane Bridge (HEC2-47.1)

Station Elevation Data		num= 232		Sta Elev		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	110	33.88	109.83	36.7	109.79	37.48	109.77	40.67	109.67		
42.49	109.64	46.24	109.58	48.66	109.57	50.12	109.56	56.97	109.55		
60.98	109.54	62.36	109.53	65.48	109.5	66.87	109.46	68.9	109.43		
70.49	109.37	73.17	109.3	77.18	109.18	82.31	109	84.23	108.94		
84.51	108.93	85.02	108.91	97.46	108.46	99.6	108.37	102.46	108.27		
105.4	108.16	110.57	108.03	112.27	108	137.24	107.7	138.78	107.66		
149.23	107.54	154.28	107.34	157.61	107.22	158.37	107.21	162.6	107.09		
166.66	107	170.47	106.96	171.53	106.92	177.59	106.74	180.1	106.64		
183.66	106.49	192.4	106.18	196.48	106.02	197.13	106	201.51	105.83		
206.16	105.67	209.03	105.59	212.23	105.49	213.83	105.45	217.82	105.39		
220.96	105.33	223.5	105.28	228.05	105.22	229.04	105.2	229.84	105.18		
241.57	105	249.71	104.87	250.29	104.86	251.15	104.84	251.41	104.83		
259	104.68	259.47	104.67	273.8	104	301.91	103.53	303.19	103.48		
306.16	103.52	308.25	103.62	308.65	103.64	309.55	103.59	315.36	103.16		
316.6	103	320.16	102.63	325.46	102.08	326.26	102	354.05	101.43		
357	101.12	358.28	101	383.01	101.3	387.26	101.57	388.79	101.66		
389.76	101.71	390.53	101.73	392.72	101.87	393.45	101.89	395.66	101.98		
397.33	102	410.53	101.89	413.17	101.84	426.85	101.5	434.02	101.33		
436.71	101.25	438.05	101.18	439.54	101.05	439.87	101	441.68	100.69		
445.88	100	446.72	99.83	447	99.02	454	97.49	459.4	93.36		
465.2	92.87	469.58	93.25	475.19	93.45	479.08	94.24	485.19	97.72		
487.12	98	488.17	98.58	489.17	98.92	489.41	99	489.92	99.14		
491.24	99.16	493.98	99.36	495.93	99.47	497.54	99.54	503.21	99.58		
506.55	99.6	517.81	99.57	526.09	99.58	540.2	99.53	552.62	99.52		
561.55	99.5	565.46	99.49	574.73	99.48	578.44	99.47	584.88	99.48		
588.62	99.47	591.55	99.49	597.89	99.5	607.49	99.53	613.47	99.54		
616.77	99.55	625.79	99.57	629.29	99.58	633.55	99.59	637.11	99.61		
643.87	99.64	654.82	99.67	659.77	99.7	667.52	99.77	671.52	99.82		
679.76	99.9	689.73	99.99	690.84	100	699.63	100.08	700.67	100.09		
703.52	100.18	704.68	100.21	711.24	100.55	714.47	100.77	715.05	100.81		
719.35	101	722.03	101.14	723.13	101.22	727.76	101.5	730.8	101.68		
736.43	102	736.97	102.03	737.22	102.04	747.09	102.55	753.57	102.58		
756.95	102.62	758.15	102.66	765.96	102.7	767.28	102.76	769.67	102.88		
788.88	102.96	789.33	102.97	799.05	102.98	800.35	103	803.33	103.12		
806.9	103.32	811.33	103.48	817.59	103.5	820.44	103.6	822.94	103.72		
835.47	103.7	837.15	103.73	838.81	103.76	843.87	103.81	845.35	103.83		
847.41	103.86	849.28	103.88	854.11	104	875.52	103.45	877.8	103.04		
878.07	103	884.64	102.98	884.9	103	896.72	103.42	904.15	103.45		
909.34	103.41	913.01	103.39	918.99	103.44	922.55	103.42	926.21	103.43		
933.4	103.44	939.81	103.47	943.51	103.51	952.03	103.52	953.91	103.55		
961.1	103.84	961.35	103.85	964.28	104	967.92	104.12	971.48	104.23		
977.54	104.39	981.06	104.42	985.28	104.51	987	104.53	989.46	104.58		
992.2	104.62	1005.8	105	1008.67	105.14	1009.61	105.18	1010.03	105.19		
1011.42	105.22	1018.4	105.49	1020.25	105.53	1023.1	105.63	1024.72	105.68		
1030.09	105.93	1030.33	105.94	1031.51	106	1041.25	106.49	1049.96	107		
1050.74	107.05	1065.62	108	1067.47	108.11	1067.67	108.13	1070.23	108.29		
1080.95	109	1085.35	109.28								

Manning's n Values		num= 3		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val
0	.06	439.54	.035	489.17	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	439.54	489.17		30.85	33.15	.3	.5
Ineffective Flow							
Sta L		Sta R	num=	Permanent			
			2				

StonyBrookDari en1-ex. txt

494.69 800 101.86
300 442.31 101.86

F
F

CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook

RS: 10603

INPUT

Description: FEAMA AH - DS section of High School Lane Bridge (HEC2-47)

Station		Elevation		Data		num= 228		Sta		Elev		Sta		Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	109.89	3.07	110	26.86	109.6	32.62	109.39	33.2	109.38	38.04	109	74.86	108.89	75.36	108.88
80.59	108.75	94.23	108.39	111.54	108	117.04	107.99	118.13	107.96	156.71	107	182.84	106.57	183.29	106.56
202.24	106.05	202.53	106.04	203.28	106	203.48	105.97	204.14	105.86	209.55	105	210.08	104.91	216.25	104
228.25	103.75	241.13	103.83	241.94	103.84	243.77	103.85	245.35	103.83	246.51	103.79	248.01	103.86	270.84	103.89
299.76	103.32	307.72	103	317.51	102.39	324.03	102	324.6	101.98	329.88	101.77	333.21	101.66	337.03	101.55
349.81	100.97	352.05	100.91	355.32	100.8	379.09	100	388.66	99.6	402.61	99	414.27	99.02	417.16	99.07
427.44	98.91	428.32	98.86	432.15	98.7	436.02	98.51	436.7	98.48	438.28	98.4	447.12	98	452.5	97.83
460.93	93.32	467.12	92.98	472.98	92.54	478.86	93.65	483.37	97.03967	505.54	97.5	506.57	97.49	509.01	97.5
519.9	97.49	531.06	97.55	532.52	97.57	536.77	97.63	547.11	97.78	547.99	97.8	557.77	97.94	561.98	97.99
580.77	97.88	583	97.83	590.64	97.71	620.98	97	642.08	97.01	645.79	97.1	646.82	97.11	653.82	97.26
662.38	97.39	694.35	98	703.64	98.49	713.09	99	715.05	99.06	716.04	99.09	725.08	99.37	728.65	99.47
744.74	99.88	746.07	99.91	749.63	99.98	751.36	100	753.08	100.03	758.98	100.11	759.34	100.12	764.64	100.15
779.11	100.23	780.79	100.28	783.12	100.33	794.4	100.42	797.42	100.49	800.89	100.55	805.88	100.61	816.13	100.71
834.18	100.92	839.45	100.96	843.12	101	844.47	101.03	844.8	101.04	849.22	101.18	850.66	101.22	854.39	101.35
862.21	101.67	866.45	101.87	867.31	101.9	868.75	101.93	869.26	101.96	882.53	101.83	883.04	101.81	885.14	101.78
900.31	101.44	900.75	101.43	903.62	101.27	904.03	101.25	907.23	101	908.49	100.87	916.76	101	933.72	101.41
957.06	102.26	960.01	102.33	965.11	102.41	970.11	102.47	974.94	102.6	984.11	102.87	984.34	102.88	988.15	103
1026.75	104.13	1054.3	105	1063.48	105.6	1069.57	106	1079.4	106.6	1086.37	107	1100.88	107.78	1105.17	108
1123.83	109.85	1125.31	110	1134.88	110.95	1135.44	111	1141.74	111.57	1146.4	112	1147.22	112.07	1158.11	113
1168.56	113.75	1171.86	114	1182.5	114.63	1187.55	115	1198.49	115.41	1217.66	116	1219.05	116.05	1221.66	116.15
1276.8	118	1292.85	118.49	1307.31	119	1309.7	119.09	1313.91	119.24	1334.53	120	1345.07	120.35	1359.25	120.78
1370.77	121.19	1395.04	122	1402.68	122.14	1403.69	122.16	1407.98	122.27	1410.57	122.33	1412.69	122.38	1419.2	122.58
1431.97	122.97	1433.04	123	1441.88	123.23	1444.19	123.28	1448.86	123.39	1460.78	123.55	1472.37	124	1474.14	124.08

Manning's n Values		num= 5		Sta		n Val		Sta		n Val	
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.06	452.5	.035	483.37	.08	794.4	.1	933.72	.08		

StonyBrookDari en1-ex. txt

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 452.5 483.37 223.44 229.05 230.9 .3 .5
 Blocked Obstructions num= 1
 Sta L Sta R Elev
 811.51 889.1 121

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 10374

INPUT

Description: MMI additional section across pond
 Station Elevation Data num= 182

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	107.59	1.95	107.71	5.16	107.88	8.37	108	8.7	108.01
12.48	108.1	16.32	108.13	20.1	108.12	23.74	108.06	25.95	108
32.74	107.83	35.17	107.74	37.62	107.64	47.17	107.25	48.64	107.18
49.99	107.11	54.12	107	59.64	106.87	63.38	106.75	67.56	106.66
70.8	106.6	75.85	106.56	81.78	106.42	84.17	106.35	87.02	106.29
90.62	106.17	94.8	106	97.5	105.89	99.23	105.76	105.5	105.37
110.08	105	113.97	104.69	118.82	104.07	118.98	104.05	119.34	104
126.72	103.22	128.73	103	141.54	102.22	145.4	102	150.79	101.72
165.69	101	191.12	100.08	193.17	100	278.7	99.58	292.34	99
314.84	98.77	367.38	98	393.3	97.45	402.45	95.02	406.14	94.16
411.56	92.91	420.61	93.03	430.38	92.24	435.98	91.53	439.78	91.73
446.92	92.49	460.39	92.53	472.99	92.04	481.33	91.49	486.88	92.53
494.58	94.23	511.52	96.88	511.84	96.9	512.38	97	513.66	97.07
518.39	97.34	529.7	98	540	98.63	548.82	99	558.61	99.38
561.51	99.5	566.06	99.67	570.76	99.85	575.58	100	620.67	99.86
624.56	99.76	633.75	99.59	638.87	99.43	640.85	99.37	642.18	99.33
652.38	99	659.47	98.26	661.51	98	748.71	97.95	755.3	97.87
759.87	97.83	770.28	97.75	773.9	97.72	779.06	97.63	782.66	97.59
788.16	97.49	791.18	97.45	793.59	97.41	796.14	97.37	797.88	97.34
800.13	97.32	802.26	97.28	804.99	97.25	810.65	97.2	811.44	97.19
823.43	97.25	824.04	97.27	825.13	97.29	835.65	97.4	837.07	97.43
840.13	97.46	841.77	97.5	844.37	97.53	845.97	97.56	848.04	97.59
850.97	97.62	852.26	97.63	863.75	98	872.27	98.21	874.94	98.45
880.76	99	909.24	99.57	927.53	100	937.76	100.17	945.79	100.33
964.94	100.59	979.63	100.97	981	101	994.47	101.17	997.41	101.22
1004.89	101.35	1010.16	101.42	1016.72	101.58	1026.57	101.88	1027.66	101.89
1028.1	101.9	1028.76	101.91	1030.92	102	1057.88	102.66	1061.15	103
1063.2	103.22	1071.29	104	1081.92	104.96	1082.29	105	1082.72	105.05
1091.86	106	1095.36	106.41	1100.61	107	1104.63	107.51	1108.27	107.86
1109.81	108	1114.01	108.51	1115.19	108.63	1120.16	109	1129.22	109.6
1130.36	109.71	1134.23	110	1143.85	110.56	1145.48	110.71	1149.07	111
1149.37	111.02	1157.18	111.4	1162.2	111.68	1165.33	111.83	1167.65	112
1208.83	112.94	1210.38	112.98	1211.21	113	1216.42	113.97	1216.61	114
1217.05	114.08	1221.99	115	1223.17	115.22	1227.28	116	1228.24	116.21
1232	117	1234.98	117.79	1235.79	118	1236.26	118.11	1239.76	119
1242.04	119.26	1243.22	119.31	1249.62	119.51	1256.85	119.89	1258.52	119.94
1266.26	120	1291.24	120.19						

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .05 393.3 .03 513.66 .04 570.76 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 393.3 513.66 177.28 229.85 225.6 .1 .3
 Blocked Obstructions num= 2
 Sta L Sta R Elev
 Sta L Sta R Elev

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684.11 790.38 108.3 897.56 974.55 110.4

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 10145

INPUT

Description: FEMA AG (HEC2-46)

Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	105.46	11.55	105.28	16.35	105.07	17.92	105	29.19	104.41
37	104	51.81	103.24	52.24	103.21	54.03	103.06	55.05	103
58.39	102.86	60.88	102.54	61.79	102.45	65.2	102	69.19	101.5
70.39	101.4	74.53	101.11	75.56	101.06	77.97	101	106.08	100.97
106.24	100.96	107.39	100.97	108.79	100.96	109.08	100.94	110.75	100.91
114.24	100.8	117.06	100.66	126.6	100	132.75	99.58	134.59	99.49
135.93	99.42	137.1	99.37	148.06	99	228.99	98.99	237.23	98.69
252.45	98	306.8	98.12	311.57	98.06	314.21	98	325.19	97.96
325.41	97.97	333.09	98	406.55	97.09	409.93	97.01	410.22	97
437.65	96.58	462.85	96.08	463.75	96.06	465.43	96.02	466.2	96.14
477.8	94.26	480.4	92.95	485.8	92.09	489.8	91.69	495.2	94.13
500.3	96.13	523.31	96	537.44	95.68	539.3	95.6	540.74	95.53
547.94	95	571.15	95.17	597.91	96	601.73	96.4	607.68	96.95
607.99	96.98	608.21	97	608.51	97.03	619.66	98	696.71	97.91
700.68	97.82	701.48	97.8	704.77	97.72	708.43	97.64	710.89	97.57
724.06	97.27	734.69	97	744.35	96.74	771.47	96	813.63	96.67
822.43	96.94	824.6	97	845.01	97.64	846.95	97.68	851.33	97.81
852	97.82	856.06	97.96	857.25	98	883.38	97.49	883.99	97.48
884.62	97.45	895.03	97.29	896.93	97.23	897.59	97.22	905.46	97
946.63	96.42	951.91	96	1006.72	96.84	1007.49	96.88	1009.44	97
1020.48	97.71	1025.4	98	1031.1	98.56	1036.3	98.8	1037.64	98.85
1038.07	98.86	1038.46	98.88	1040.84	99	1056.34	99.42	1059.11	99.54
1061.02	99.61	1062.34	99.66	1063.79	99.72	1065.05	99.76	1066.02	99.81
1073.71	99.94	1076.47	100	1124.99	100.09	1125.11	100.1	1129.38	100.09
1139.65	100.05	1145.67	100.07	1145.86	100.08	1150.08	100.11	1152.31	100.15
1152.76	100.16	1154.81	100.21	1156.89	100.28	1164.8	100.48	1166.88	100.55
1171.66	100.7	1174.94	100.8	1186.6	100.99	1187.18	101	1196.59	101.21
1198.35	101.26	1202.07	101.36	1204.64	101.43	1227.79	102	1228.76	102.02
1228.82	102.03	1239.21	102.35	1240.42	102.4	1242.35	102.46	1245.09	102.56
1247.98	102.65	1248.92	102.69	1257.59	102.9	1259.83	103	1266.39	103.45
1269.83	104	1276.59	104.37	1278.83	104.51	1284.5	105	1299.71	105.92

Manning's n Values

num= 5

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.1	306.8	.07	465.43	.045	500.3	.08	607.68	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 465.43 500.3 351.34 425.17 529.49 .1 .3

Blocked Obstructions

num= 5

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
626.28	668.21	117.11	84.97	124.29	114.49	228.17	258.9	113.74
871.44	934.51	107.57	1050.65	1152.57	111.17			

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 9719

INPUT

Description: FEMA AF - US section of Middlesex Road (HEC2-45)

StonyBrookDari en1-ex. txt

Station		Elevation		Data		num= 265		Sta		Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	104.97	.85	105	4.09	105.6	6.34	106	8.07	106.81		
8.54	107	9.7	107.61	10.61	108	11.85	108.28	14	108.22		
17.97	108.41	24.53	108.19	24.91	108.2	25.36	108.23	26.07	108.33		
26.51	108.34	29.92	109	34.35	109.48	35.35	109.6	36.77	109.75		
39.63	110	67.17	109.77	72.36	109	74.77	108.64	78.67	108		
80.24	107.36	80.54	107.28	80.62	107.26	82.38	107	88.2	106.62		
89.66	106.41	91.1	106.09	91.37	106	92.77	105.63	94.87	105		
97.01	104.64	99.43	104.23	100.64	104	103.62	103.64	109.24	103.15		
110.58	103	112.61	102.91	131.65	102	132.29	101.96	132.54	101.95		
132.78	101.94	148.95	101	153.92	100.67	156.34	100.51	163.21	100		
163.9	99.92	164.83	99.82	168.93	99.37	172.2	99.01	172.28	99		
177.16	98.47	178.36	98.34	179.11	98.28	180.71	98.15	181.17	98.13		
181.6	98.11	184.29	98	185.97	97.93	191.6	97.78	191.88	97.79		
192.05	97.81	195.17	97.89	197.52	98	198.96	98.1	202	98		
209.63	97.81	215.14	97.54	218.43	97.4	220.53	97.31	224.69	97		
253.24	97.36	266.83	97.8	268.66	97.71	269.43	97.65	269.93	97.63		
279.23	97.05	279.62	97.02	279.95	97	284.07	96.75	292.19	96.16		
293.4	96.07	293.71	96.04	294.23	96	294.96	95.96	296.11	95.9		
311.59	95	358.7	94.73	363.3	91.94	365.9	91.04	368.2	89.34		
372.8	89.21	378.2	89.65	383.9	91.1	395	93.91	404.94	94		
410.66	94.17	422.7	94.46	424.46	94.5	426.12	94.54	427.43	94.57		
428.68	94.61	435.77	94.72	436.79	94.76	440.35	95	487.8	94.9		
494.28	94.62	497.87	94.44	501.06	94.31	502.84	94.24	505.01	94.13		
505.7	94.11	508.12	94	547.99	94.48	552.58	94.91	553.97	95		
554.19	95.01	558.01	95.07	568.49	96	572.55	96.07	577.86	96		
696.88	96.35	700.08	96.38	701.98	96.39	702.86	96.4	704.67	96.41		
705.62	96.42	707.16	96.44	708.14	96.45	709.36	96.47	711.89	96.51		
727.52	96.66	729.15	96.65	730.75	96.64	758.07	96.59	777.31	96.72		
794.13	96.82	794.92	96.83	824.51	97	831.14	97.17	833.81	97.26		
840.45	97.5	845.42	97.66	847.96	97.76	854.31	98	946.07	97.91		
946.21	97.9	952.85	97.71	954.37	97.69	956.39	97.61	959.92	97.49		
961.96	97.43	964.18	97.36	968.06	97.25	969.57	97.2	971.17	97.16		
972.12	97.13	972.84	97.12	974.17	97.09	974.58	97.08	975.32	97.07		
976.63	97.06	980.47	97.05	995.5	97.08	997.85	97.04	1015.53	97.03		
1020.98	97.01	1022.33	97	1025.7	96.98	1029.22	96.94	1031.42	96.89		
1039.56	97	1072.9	97.29	1077.37	98	1081.43	98.59	1084.13	99		
1095.96	99.51	1107.98	99.94	1109.84	100	1131.72	99.98	1139.65	99.86		
1191.97	99	1202.33	98.59	1205.12	98.5	1210.16	98.36	1215.38	98.18		
1225.6	98	1253.77	98.04	1262.23	98.82	1264.07	98.99	1264.2	99		
1273.41	99.47	1277.8	99.68	1280.38	99.81	1284.59	100	1289.77	100.24		
1291.1	100.31	1297.61	100.6	1300.32	100.72	1302.51	100.81	1305.35	100.92		
1308.24	101	1313.42	100.97	1316.66	100.91	1317.6	100.93	1319.32	100.9		
1327.86	100.84	1331.84	100.79	1335.38	100.74	1378.96	100	1391.26	99.57		
1395.73	99.32	1400.85	99	1414.34	98.79	1417.18	98.73	1419.6	98.64		
1427.21	98	1465.16	98.66	1483.03	98.92	1488.11	99	1490.97	99.06		
1491.73	99.07	1492.22	99.08	1495.86	99.14	1504.83	99.32	1511.82	99.45		
1517.73	99.55	1531.9	100	1537.78	100.55	1542.08	101	1552.92	101.91		
1553.88	102	1556.01	102.14	1557.82	102.25	1570.11	103	1572.94	103.06		
1590.23	103.44	1615.54	104	1639.83	104.32	1640.5	104.33	1644.06	104.39		
1663.07	105	1688.81	105.09	1704.58	106	1717.19	106.65	1726.54	107		
1728.07	107.06	1734.97	107.31	1744.84	107.65	1747.99	107.76	1749.56	107.81		
1755.97	108	1759.27	108.11	1759.9	108.13	1770.62	108.44	1786.23	109		
1792.2	109.13	1792.85	109.15	1793.59	109.17	1796.06	109.23	1804.61	109.4		

Manning's n Values		num= 4	
Station	n Value	Station	n Value
0	.1	268.66	.06
		358.7	.045
			395
			.12

Bank	Sta: Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
Blocked	358.7	395		22.88	21.12		.3	.5
Obstructions			num=	4				

StonyBrookDari en1-ex. txt

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
237.79	287	108.9	1319.35	1364.53	111.13	1112.14	1162.42	112.95
104.78	149.45	119.74						

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook

RS: 9698

INPUT

Description: US face of Middlesex Road (HEC2-45.1)

Station Elevation Data num= 340

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	108.9	4.2	108.62	13.07	108	33.32	107.42	40.92	107.21
49.39	107	75.8	106.39	82.43	106.28	84.56	106.24	94.48	106
129.76	105.91	134.46	105.84	135.64	105.79	136.34	105.77	152.74	105
193.32	105.63	195.93	105.61	201.33	105.74	202.28	105.72	203.89	105.73
205.29	105.68	206.93	105.58	207.85	105.56	208.77	105.57	210.33	105.63
211.9	105.7	215.98	106	220.1	106.25	220.6	106.28	222.76	106.34
223.4	106.36	224.17	106.38	226.98	106.39	230.23	106.37	233.59	106.36
236.03	106.3	239.33	106.11	242.77	106.01	247.07	106	252.29	105.94
253.4	105.88	257.96	105.68	261.65	105.43	267.74	105	270.5	104.84
271.51	104.79	273.23	104.68	275.6	104.52	277.53	104.33	280.16	104
285.61	103.44	286.86	103.33	289.94	103.03	290.26	103	324.47	102.72
328.36	102.17	328.95	102.1	329.21	102.08	329.6	102	335.97	102.33
336.7	102.35	338.79	102.4	340.06	102.36	344.36	102.22	345.16	102.18
347.19	102.06	347.82	102	349.72	101.8	350.18	101.74	352.55	101.47
354.13	101.42	357.84	101	360.52	100.8	361	100.67	361.53	100.57
363.67	100.36	365.66	100	375.64	99.79	376.3	99.77	377.16	99.76
386.71	99.32	390.75	99.19	392.4	99	410.62	98	423.72	97.59
436.64	97.09	438.8	97	463.13	96.31	464.68	96.29	468.41	96.19
469.74	96.17	476.54	96	511.97	95.37	513.83	95.33	523.86	95
569.57	94.25	574	94.32	574.5	94.32	575	94.32	575	87.25
581.79	87.25	585.68	87.73	589.22	87.12	593.65	87.25	600	88.47
606.79	89.35	613.07	89.35	613.07	93.73	613.57	93.73	614.07	93.73
634.41	94	636.08	94.19	637.04	94.24	639.65	94.53	641.1	94.56
647.55	95	671.77	95.11	671.93	95.12	675.16	95.23	694.31	95.39
695.08	95.42	695.74	95.38	696.67	95.34	698.22	95.3	699.21	95.29
703.09	95.23	704.9	95.25	711.2	95.06	718.04	95.25	723.89	95.31
726.01	95.42	726.57	95.48	728.29	95.56	731.76	95.64	735.18	95.67
742.34	96	757.09	96.15	759.84	96.18	760	96.19	764.19	96.26
764.69	96.27	766.29	96.31	768.74	96.39	778.1	96.43	787.62	96.62
791.07	96.7	796.94	96.84	805.89	96.82	807.3	96.78	816.61	96.75
817.31	96.73	821.7	96.74	822.03	96.73	822.4	96.72	842.59	96.86
843.64	96.87	861.02	97	870.84	97.06	871.19	97.08	876.03	97.1
876.32	97.11	884.43	97.1	892.05	97.03	894.11	97	904.95	96.91
907.4	96.95	911.33	96.99	914.02	97	917.87	97.04	924.98	97.14
926.66	97.15	929.66	97.22	930.59	97.23	932.96	97.31	933.56	97.32
939.01	97.74	940	97.8	942.21	98	946.04	98.27	952.52	98.78
959.68	99	965.39	99.23	966.32	99.25	968.82	99.36	972.24	99.55
977	99.81	977.55	99.84	978.12	99.87	982.5	100	983.53	100.04
991.87	100.28	994.71	100.4	997.07	100.49	1000.23	100.65	1006.54	101
1007.69	101.04	1017.11	101.37	1019.12	101.4	1020.98	101.44	1024.97	101.47
1027.43	101.5	1029.2	101.53	1031.01	101.56	1035.24	101.58	1037.97	101.63
1042.46	101.76	1047.17	102	1051.02	102.23	1052.69	102.28	1054.17	102.43
1057.06	102.53	1061.98	102.85	1062.34	102.86	1066.68	102.95	1067.01	102.94
1069.37	103	1073.36	103.15	1073.69	103.16	1074.52	103.17	1080.54	103.38
1081.82	103.41	1083.76	103.4	1085.09	103.41	1086.43	103.4	1093.25	103.29
1094.38	103.26	1098.81	103.24	1100.64	103.2	1104.76	103.21	1106.28	103.18
1111.4	103.22	1112.7	103.2	1115.12	103.24	1119.35	103.28	1123.39	103.31
1124.32	103.33	1125.41	103.34	1133.66	103	1135.93	102.93	1140.07	103
1159.38	103.47	1166.7	103.42	1170.55	103.15	1170.85	103.14	1172.76	103

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1175.83	102.9	1178.42	102.86	1181.26	102.8	1183.83	102.77	1186.15	102.74
1187.35	102.68	1189	102.59	1191.33	102.5	1195.73	102.29	1197.2	102.22
1199.25	102.16	1200.44	102.1	1201.04	102.09	1203.08	102.06	1205.65	102.04
1218.51	102.06	1232.95	102.08	1233.25	102.07	1237.92	102.1	1238.74	102.09
1240.86	102.16	1243.95	102.21	1247.08	102.28	1249.86	102.37	1251.61	102.42
1253.94	102.5	1255.68	102.54	1257.45	102.6	1260.96	102.69	1268.12	102.72
1271.19	102.79	1272.44	102.83	1274.48	102.85	1275.25	102.87	1277.59	102.89
1278.17	102.9	1279	102.91	1294.76	102.93	1296.07	102.91	1300.49	102.9
1302.57	102.88	1304.36	102.85	1307.02	102.83	1308.88	102.79	1310.28	102.75
1313.03	102.72	1314.34	102.68	1318.44	102.61	1320.48	102.55	1321.75	102.5
1334.19	102.21	1335.82	102.2	1348.41	102.22	1360.56	102.28	1362.55	102.29
1368.52	102.37	1395.22	102.25	1396.14	102.28	1397.38	102.32	1400.12	102.25
1401.03	102.27	1410.22	102.71	1411.85	102.81	1412.37	102.84	1412.77	102.86
1414.33	102.93	1416.33	102.96	1416.67	102.98	1416.96	102.99	1425.03	102.98
1425.29	102.97	1431.72	102.92	1436.95	102.86	1444.91	103	1464.47	102.89
1471.08	102.94	1474.65	103	1486.68	103.01	1486.93	103	1515.58	103.03
1517.75	103.02	1519.24	103	1541.43	103.05	1541.87	103.06	1547.18	103.21
1550.47	103.28	1555.21	103.39	1558.09	103.43	1560.77	103.44	1563.57	103.46
1570.32	103.65	1571.08	103.68	1573.19	103.78	1581.68	104	1585.8	104.15

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .06 575 .04 613.07 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 575 613.07 79.91 60.32 66.06 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 573.79 95.83 F
 614.79 1585.8 95.83 F

BRIDGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 9666

INPUT

Description: Middlesex Road Bridge
 concrete parapet
 Distance from Upstream XS = 8
 Deck/Roadway Width = 41.5
 Weir Coefficient = 2.6
 Upstream Deck/Roadway Coordinates

num= 28			
Sta	Hi	Cord	Lo Cord
0	107.69		
97.44	105		
219.23	102		
358.14	99		
520.75	96		
581.79	99.19		
606.79	99.2		
661.9	96		
828.38	97		
839.3	97		
Sta	Hi	Cord	Lo Cord
29.38	107		
166.05	104		
261.75	101		
389.86	98		
580.79	95.85		
581.79	99.19	93.83	
607.79	99.2		
810.1	97		
832.76	97		
Sta	Hi	Cord	Lo Cord
66.48	106		
186.94	103		
324.67	100		
475.32	97		
580.79	99.19		
606.79	99.2	93.85	
607.79	95.83		
822.77	97		
836.7	97		

Upstream Bridge Cross Section Data

Station Elevation Data num= 340					
Sta	Elev	Sta	Elev	Sta	Elev
0	108.9	4.2	108.62	13.07	108
49.39	107	75.8	106.39	82.43	106.28
129.76	105.91	134.46	105.84	135.64	105.79
				136.34	105.77
				152.74	105

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193.32	105.63	195.93	105.61	201.33	105.74	202.28	105.72	203.89	105.73
205.29	105.68	206.93	105.58	207.85	105.56	208.77	105.57	210.33	105.63
211.9	105.7	215.98	106	220.1	106.25	220.6	106.28	222.76	106.34
223.4	106.36	224.17	106.38	226.98	106.39	230.23	106.37	233.59	106.36
236.03	106.3	239.33	106.11	242.77	106.01	247.07	106	252.29	105.94
253.4	105.88	257.96	105.68	261.65	105.43	267.74	105	270.5	104.84
271.51	104.79	273.23	104.68	275.6	104.52	277.53	104.33	280.16	104
285.61	103.44	286.86	103.33	289.94	103.03	290.26	103	324.47	102.72
328.36	102.17	328.95	102.1	329.21	102.08	329.6	102	335.97	102.33
336.7	102.35	338.79	102.4	340.06	102.36	344.36	102.22	345.16	102.18
347.19	102.06	347.82	102	349.72	101.8	350.18	101.74	352.55	101.47
354.13	101.42	357.84	101	360.52	100.8	361	100.67	361.53	100.57
363.67	100.36	365.66	100	375.64	99.79	376.3	99.77	377.16	99.76
386.71	99.32	390.75	99.19	392.4	99	410.62	98	423.72	97.59
436.64	97.09	438.8	97	463.13	96.31	464.68	96.29	468.41	96.19
469.74	96.17	476.54	96	511.97	95.37	513.83	95.33	523.86	95
569.57	94.25	574	94.32	574.5	94.32	575	94.32	575	87.25
581.79	87.25	585.68	87.73	589.22	87.12	593.65	87.25	600	88.47
606.79	89.35	613.07	89.35	613.07	93.73	613.57	93.73	614.07	93.73
634.41	94	636.08	94.19	637.04	94.24	639.65	94.53	641.1	94.56
647.55	95	671.77	95.11	671.93	95.12	675.16	95.23	694.31	95.39
695.08	95.42	695.74	95.38	696.67	95.34	698.22	95.3	699.21	95.29
703.09	95.23	704.9	95.25	711.2	95.06	718.04	95.25	723.89	95.31
726.01	95.42	726.57	95.48	728.29	95.56	731.76	95.64	735.18	95.67
742.34	96	757.09	96.15	759.84	96.18	760	96.19	764.19	96.26
764.69	96.27	766.29	96.31	768.74	96.39	778.1	96.43	787.62	96.62
791.07	96.7	796.94	96.84	805.89	96.82	807.3	96.78	816.61	96.75
817.31	96.73	821.7	96.74	822.03	96.73	822.4	96.72	842.59	96.86
843.64	96.87	861.02	97	870.84	97.06	871.19	97.08	876.03	97.1
876.32	97.11	884.43	97.1	892.05	97.03	894.11	97	904.95	96.91
907.4	96.95	911.33	96.99	914.02	97	917.87	97.04	924.98	97.14
926.66	97.15	929.66	97.22	930.59	97.23	932.96	97.31	933.56	97.32
939.01	97.74	940	97.8	942.21	98	946.04	98.27	952.52	98.78
959.68	99	965.39	99.23	966.32	99.25	968.82	99.36	972.24	99.55
977	99.81	977.55	99.84	978.12	99.87	982.5	100	983.53	100.04
991.87	100.28	994.71	100.4	997.07	100.49	1000.23	100.65	1006.54	101
1007.69	101.04	1017.11	101.37	1019.12	101.4	1020.98	101.44	1024.97	101.47
1027.43	101.5	1029.2	101.53	1031.01	101.56	1035.24	101.58	1037.97	101.63
1042.46	101.76	1047.17	102	1051.02	102.23	1052.69	102.28	1054.17	102.43
1057.06	102.53	1061.98	102.85	1062.34	102.86	1066.68	102.95	1067.01	102.94
1069.37	103	1073.36	103.15	1073.69	103.16	1074.52	103.17	1080.54	103.38
1081.82	103.41	1083.76	103.4	1085.09	103.41	1086.43	103.4	1093.25	103.29
1094.38	103.26	1098.81	103.24	1100.64	103.2	1104.76	103.21	1106.28	103.18
1111.4	103.22	1112.7	103.2	1115.12	103.24	1119.35	103.28	1123.39	103.31
1124.32	103.33	1125.41	103.34	1133.66	103	1135.93	102.93	1140.07	103
1159.38	103.47	1166.7	103.42	1170.55	103.15	1170.85	103.14	1172.76	103
1175.83	102.9	1178.42	102.86	1181.26	102.8	1183.83	102.77	1186.15	102.74
1187.35	102.68	1189	102.59	1191.33	102.5	1195.73	102.29	1197.2	102.22
1199.25	102.16	1200.44	102.1	1201.04	102.09	1203.08	102.06	1205.65	102.04
1218.51	102.06	1232.95	102.08	1233.25	102.07	1237.92	102.1	1238.74	102.09
1240.86	102.16	1243.95	102.21	1247.08	102.28	1249.86	102.37	1251.61	102.42
1253.94	102.5	1255.68	102.54	1257.45	102.6	1260.96	102.69	1268.12	102.72
1271.19	102.79	1272.44	102.83	1274.48	102.85	1275.25	102.87	1277.59	102.89
1278.17	102.9	1279	102.91	1294.76	102.93	1296.07	102.91	1300.49	102.9
1302.57	102.88	1304.36	102.85	1307.02	102.83	1308.88	102.79	1310.28	102.75
1313.03	102.72	1314.34	102.68	1318.44	102.61	1320.48	102.55	1321.75	102.5
1334.19	102.21	1335.82	102.2	1348.41	102.22	1360.56	102.28	1362.55	102.29
1368.52	102.37	1395.22	102.25	1396.14	102.28	1397.38	102.32	1400.12	102.25
1401.03	102.27	1410.22	102.71	1411.85	102.81	1412.37	102.84	1412.77	102.86
1414.33	102.93	1416.33	102.96	1416.67	102.98	1416.96	102.99	1425.03	102.98
1425.29	102.97	1431.72	102.92	1436.95	102.86	1444.91	103	1464.47	102.89
1471.08	102.94	1474.65	103	1486.68	103.01	1486.93	103	1515.58	103.03
1517.75	103.02	1519.24	103	1541.43	103.05	1541.87	103.06	1547.18	103.21

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1550.47 103.28 1555.21 103.39 1558.09 103.43 1560.77 103.44 1563.57 103.46
 1570.32 103.65 1571.08 103.68 1573.19 103.78 1581.68 104 1585.8 104.15

Manning's n Values num= 3
 Station Val Sta n Val Sta n Val
 0 .06 575 .04 613.07 .08

Bank Sta: Left Right Coeff Contr. Expan.
 575 613.07 .3 .5

Ineffective Flow num= 2
 Station L Sta R Elev Permanent
 0 573.79 95.83 F
 614.79 1585.8 95.83 F

Downstream Deck/Roadway Coordinates

num= 28
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord
 0 107.69 29.38 107 66.48 106
 97.44 105 166.05 104 186.94 103
 219.23 102 261.75 101 324.67 100
 358.14 99 389.86 98 475.32 97
 520.75 96 589 95.84 589 99.21
 590 99.21 590 99.21 93.87 615 99.19 93.9
 615 99.19 616 99.19 616 95.9
 661.9 96 810.1 97 822.77 97
 828.38 97 832.76 97 836.7 97
 893.31 97.94

Downstream Bridge Cross Section Data

Station Elevation Data num= 186
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
 0 110.41 5.98 110 8.93 109.96 12.6 109.55 17.7 109
 19.48 108.64 25.5 108 28.88 107.39 30.46 107.02 30.54 107
 31 106.84 33.59 106 34.85 105.57 36.35 105 37.66 104.78
 41.85 104 45.35 103.34 47.09 103 56.7 102.12 58.2 102
 61.29 101.82 76.1 101 83.73 100.79 105.45 100.3 108.44 100.14
 109.68 100.12 110.62 100.07 113.33 100 121.79 99.78 128.54 100
 137.7 99.92 143.74 99.43 145.04 99.32 149.02 99 151.98 98.39
 153.07 98.28 154.27 98.09 154.43 98.08 157.91 98 162.13 97.95
 162.41 97.94 162.82 97.93 180.66 97.72 182.23 97.69 184.49 97.66
 191.9 97.59 209.75 97.41 220.68 97.33 221.84 97.31 222.61 97.28
 237.25 97.18 237.6 97.16 238.16 97.14 248.28 97.06 248.57 97.05
 248.77 97.04 254.95 97 255.91 96.99 261.75 96.91 262.7 96.89
 269.72 96.77 274 96.7 280.88 96.55 283 96.5 286.48 96.48
 288.08 96.44 292.8 96.43 295.44 96.35 298.91 96.34 303.01 96.31
 306.19 96.25 318.48 96.05 320.42 96 324.44 95.44 326.64 95.17
 328.27 95 333.71 94.9 334.93 94.84 335.38 94.83 351.86 94.6
 352.54 94.59 355.72 94.61 359.35 94.67 359.98 94.68 360.67 94.71
 364.06 94.74 366.78 94.81 371.41 94.98 372.06 95 449.56 94.44
 466.26 94.47 467.29 94.43 470.36 94.52 471.14 94.54 472.25 94.56
 480.37 94.25 481.16 94.24 488.29 94 511.16 94.13 515.44 94.19
 518.85 94.22 524.97 94.2 530.92 94.12 533.64 94.14 574 94.27
 580.93 92.11 585.08 90.98 587.12 88.96 589.6 88.2 596.34 87.78
 602.43 88.28 608.39 88.32 614.3 89.45 618.15 90.97 630.68 95.59
 683.63 95 695.54 95.28 701.75 95.32 705.01 95.34 708.05 95.31
 711.37 95.3 715.03 95.25 716.9 95.22 725.89 95.05 726.28 95.04
 728.18 95 736.13 94.83 736.98 94.82 743.54 94.71 744.76 94.69
 749.31 94.65 750.64 94.64 752.66 94.63 756.19 94.64 761.81 94.68
 764.73 94.7 773.33 94.77 777.42 94.81 782.38 94.83 787.49 94.84
 788.65 94.85 793.45 94.83 794.79 94.82 799.08 94.78 806.02 94.7
 806.26 94.71 808.99 94.69 811.5 94.67 832.34 94.94 834.6 95
 850.75 95.82 854.25 96 864.59 96.53 873.91 97 880.14 97.32
 882.71 97.45 893.31 97.94 894.21 97.99 894.55 98 961.69 98.02

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968.77	98.21	975.26	98.4	980.77	98.57	990.57	98.87	994.47	99
1000.48	99.3	1007.76	99.57	1010.92	99.69	1018.48	100	1023.5	100.39
1026.66	100.66	1030.87	101	1043.46	101.76	1046.01	101.9	1047.46	102
1055.22	102.7	1058.74	103	1060.7	103.18	1068.84	104	1071.44	104.38
1074.65	105	1078.33	105.7	1079.11	105.85	1079.91	106	1080.49	106.09
1086.88	106.82								

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .06 351.86 .04 574 .03 630.68 .06

Bank Sta: Left Right Coeff Contr. Expan.
 574 630.68 .3 .5

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 579.18 94.87 F
 625.82 1086.88 94.87 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow
 Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 93.85

Additional Bridge Parameters

Add Friction component to Momentum
 Do not add Weight component to Momentum
 Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 9638

INPUT

Description: DS face of Middlesex Road (HEC2-43.1)

Station Elevation Data num= 186

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	110.41	5.98	110	8.93	109.96	12.6	109.55	17.7	109
19.48	108.64	25.5	108	28.88	107.39	30.46	107.02	30.54	107
31	106.84	33.59	106	34.85	105.57	36.35	105	37.66	104.78
41.85	104	45.35	103.34	47.09	103	56.7	102.12	58.2	102
61.29	101.82	76.1	101	83.73	100.79	105.45	100.3	108.44	100.14
109.68	100.12	110.62	100.07	113.33	100	121.79	99.78	128.54	100
137.7	99.92	143.74	99.43	145.04	99.32	149.02	99	151.98	98.39
153.07	98.28	154.27	98.09	154.43	98.08	157.91	98	162.13	97.95

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162.41	97.94	162.82	97.93	180.66	97.72	182.23	97.69	184.49	97.66
191.9	97.59	209.75	97.41	220.68	97.33	221.84	97.31	222.61	97.28
237.25	97.18	237.6	97.16	238.16	97.14	248.28	97.06	248.57	97.05
248.77	97.04	254.95	97	255.91	96.99	261.75	96.91	262.7	96.89
269.72	96.77	274	96.7	280.88	96.55	283	96.5	286.48	96.48
288.08	96.44	292.8	96.43	295.44	96.35	298.91	96.34	303.01	96.31
306.19	96.25	318.48	96.05	320.42	96	324.44	95.44	326.64	95.17
328.27	95	333.71	94.9	334.93	94.84	335.38	94.83	351.86	94.6
352.54	94.59	355.72	94.61	359.35	94.67	359.98	94.68	360.67	94.71
364.06	94.74	366.78	94.81	371.41	94.98	372.06	95	449.56	94.44
466.26	94.47	467.29	94.43	470.36	94.52	471.14	94.54	472.25	94.56
480.37	94.25	481.16	94.24	488.29	94	511.16	94.13	515.44	94.19
518.85	94.22	524.97	94.2	530.92	94.12	533.64	94.14	574	94.27
580.93	92.11	585.08	90.98	587.12	88.96	589.6	88.2	596.34	87.78
602.43	88.28	608.39	88.32	614.3	89.45	618.15	90.97	630.68	95.59
683.63	95	695.54	95.28	701.75	95.32	705.01	95.34	708.05	95.31
711.37	95.3	715.03	95.25	716.9	95.22	725.89	95.05	726.28	95.04
728.18	95	736.13	94.83	736.98	94.82	743.54	94.71	744.76	94.69
749.31	94.65	750.64	94.64	752.66	94.63	756.19	94.64	761.81	94.68
764.73	94.7	773.33	94.77	777.42	94.81	782.38	94.83	787.49	94.84
788.65	94.85	793.45	94.83	794.79	94.82	799.08	94.78	806.02	94.7
806.26	94.71	808.99	94.69	811.5	94.67	832.34	94.94	834.6	95
850.75	95.82	854.25	96	864.59	96.53	873.91	97	880.14	97.32
882.71	97.45	893.31	97.94	894.21	97.99	894.55	98	961.69	98.02
968.77	98.21	975.26	98.4	980.77	98.57	990.57	98.87	994.47	99
1000.48	99.3	1007.76	99.57	1010.92	99.69	1018.48	100	1023.5	100.39
1026.66	100.66	1030.87	101	1043.46	101.76	1046.01	101.9	1047.46	102
1055.22	102.7	1058.74	103	1060.7	103.18	1068.84	104	1071.44	104.38
1074.65	105	1078.33	105.7	1079.11	105.85	1079.91	106	1080.49	106.09
1086.88	106.82								

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .06 351.86 .04 574 .03 630.68 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 574 630.68 26.85 32.87 27.55 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 579.18 94.87 F
 625.82 1086.88 94.87 F

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 9605

INPUT

Description: FEMA AE - DS of Middlesex Road Bridge (HEC2-43)

Station Elevation Data num= 201									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	108.59	5.06	108.65	6.75	108.6	8.44	108.59	17.05	108.2
20.64	108.01	20.89	108	26.72	107.51	28.72	107.35	29.77	107.29
33.63	107	36.23	106.82	44.11	106	47.36	105.39	48.74	105.15
49.6	105	51.07	104.72	52.69	104.41	54.92	104	58.13	103.57
62.5	103	71.63	102.14	73.28	102	89.28	101.45	99.85	101
106.26	100.57	115.8	100	120.43	99.47	125.09	99	144.81	98.57
145.57	98.49	151.72	98	159.94	97.7	164.28	97	190.36	96.58
193.66	96.55	205.34	96.29	207.31	96.27	209.11	96.25	210.85	96.24
215.13	96.11	219.39	96	232.1	95.84	233	95.83	243.36	95.79
244.48	95.78	246.73	95.76	264.95	95.72	266.61	95.71	267.91	95.69
271.64	95.63	277.69	95.61	279.71	95.58	284.94	95.54	286.64	95.52

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295.68	95.46	298.03	95.49	303.8	95.52	308.16	95.53	309.81	95.55
311.51	95.58	314.45	95.57	335.41	95	342.95	94.82	345.01	94.72
353.66	94.31	360.31	94	380.8	94.12	383.05	94.26	391.97	94.63
392.46	94.64	419.3	95	480.47	94.1	484.11	94.11	485.82	94.05
486.2	94.07	488.44	94	531.15	93.88	532.68	93.84	536.57	93.83
537.41	93.81	541	93.78	544.22	93.7	547.05	93.61	550.21	93.55
563.67	93.04	564.09	93.03	564.75	93	577	92.74	582	91.34
585.33	90.88	590	89.3	597.82	88.21	604.79	87.8	613.9	88.3
621.4	87.7	625.4	89	630.12	91.04	648.13	91.18	650.56	91.42
656.91	92	659.36	92.22	663.09	92.34	667.86	92.58	670.54	92.71
682.76	93	689.7	93.43	700.75	94	704.74	94.19	705.74	94.22
706.93	94.24	711.21	94.38	713.1	94.39	714.67	94.43	715.96	94.45
717.13	94.46	719.45	94.47	721.72	94.46	724.34	94.45	728.62	94.41
734.18	94.36	740.12	94.21	742.3	94.16	746.8	94.07	747.37	94.06
751.39	94	755.05	93.99	763.49	94	768.12	94.02	786.29	94.13
791.31	94.14	801.87	94.09	802.33	94.08	804.22	94.07	804.94	94.09
807.96	94.11	818.26	94.37	841.49	95	845.42	95.12	854.08	95.52
863.82	96	867.27	96.17	869.95	96.3	883.02	96.92	884.73	97
889.01	97.15	891.92	97.24	896	97.35	897.1	97.36	902.92	97.49
906.43	97.52	909.52	97.55	911.69	97.56	923.41	97.59	927.68	97.58
929.21	97.55	931.31	97.56	961.44	97.83	964.88	97.93	967.19	98
971.28	98.11	971.54	98.12	975.31	98.24	1006.7	99	1015.18	99.45
1019.54	99.72	1020.67	99.78	1021.01	99.8	1023.12	100	1025.49	100.17
1028.34	100.35	1032.15	100.6	1037.6	101	1040.14	101.19	1043	101.41
1046.02	101.67	1049.68	102	1051.8	102.24	1056.02	102.71	1058.65	103
1063.61	103.56	1066.73	103.91	1067.6	104	1072.55	104.6	1075.56	104.97
1075.78	105	1076.5	105.08	1085.88	106	1091.78	106.48	1094.09	106.66
1098.08	107	1103.47	107.65	1106.49	108	1110.49	108.3	1114.39	108.57
1120.81	109	1133.18	109.88	1134.48	110	1135.65	110.11	1143.52	111
1147.75	111.33								

Manning's n Values

Station	Value	Station	Value	Station	Value	Station	Value
0	.04	353.66	.04	577	.03	630.12	.06

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	577	630.12		177.61	147.87		.3	.5

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook

RS: 9457

INPUT

Description: US of Dam near Middlesex Road (MMI added section)

Station	Elevation	Data	num=	221	Station	Elevation	Station	Elevation	Station	Elevation
0	109.22	1.63	109	3.87	108.67	8.67	108	15.42	107.28	
16.69	107.15	18.1	107	23.28	106.56	30.57	106	32.09	105.86	
36.3	105.73	42.39	105.25	42.66	105.23	45.42	105	49.96	104.48	
51.67	104.27	53.41	104	58.03	103.08	58.42	103	59.2	102.89	
65.72	102	72.3	101.7	76.89	101.57	93.93	101	94.81	100.91	
100.24	100	109.4	99.59	120.7	99	158.55	98.29	161.36	98.2	
168.56	98	172.73	97.83	184.07	97.38	185.6	97.34	186.62	97.31	
187.7	97.29	193.31	97.08	193.45	97.07	194.86	97	204.67	97.15	
205.55	97.31	209.57	98	218.21	98.38	219.23	98.4	223.41	98.5	
224.12	98.52	225.55	98.57	234.21	99	235.01	99.04	237.99	99.1	
240.72	99.12	249.24	99	271.59	98.95	282.23	98.87	287.42	99	
314.06	99.14	316	99.12	318.74	99.11	325.28	99	347.56	99.01	
347.72	99.02	352.87	99.17	355.28	99.25	358.52	99.34	360.82	99.41	
365.13	99.56	368.36	99.67	378.23	100	378.48	100.01	379.03	100	
418.65	99.83	420.52	99	420.99	98.74	422.49	98	423.26	97.54	

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424.54	97	424.9	96.82	425.59	96.62	426.95	96.14	427.13	96.1
427.27	96.09	427.52	96	434.74	96.85	434.87	97	436.17	97.57
438.28	98	439.75	98.21	442.32	98.04	442.52	98	445.68	96.38
446.34	97.22	447.72	97	448.45	96.81	451.39	96.12	451.72	96.04
451.8	96.02	451.85	96	458.72	95.76	459.82	95.75	463.33	95.72
466.24	95.64	468.24	95.61	479.65	95.81	480.91	95.85	485.09	96
486.21	96.22	486.47	96.17	486.84	96.14	495.21	96	510.28	96.1
510.38	96.11	512.81	96.05	513.94	96	531.22	95.5	537.57	95
577.05	94.86	582.78	94.68	594.55	94.32	599.74	94	611.24	93.78
628.11	93	654.47	92.16	655.1	92	655.53	91.67	657.54	91
674.86	91.9	676.12	92	680.12	92.18	686.41	92.44	698.19	92.94
699.79	93	741.75	92.78	744.77	92.75	745.77	92.73	760.37	92.56
763.54	92.57	772.98	92.52	775.54	92.46	776.7	92.45	779.72	92.37
783.22	92.28	787.24	92.16	787.73	92.14	791.97	92	799.6	91.95
802.24	90.85	810.51	89.33	820.11	89.14	831.93	88.64	838.75	89.64
851.7	90.03	862.23	89.65	872.9	90.86	874.3	91.92	964.01	92
970.08	92.36	975.45	92.82	977.59	93	978.27	93.05	980.85	93.17
989.88	93.62	993.67	93.79	997.44	94	1000.24	94.23	1010.52	95
1014.92	95.37	1023.08	96	1028.39	96.45	1031.88	96.73	1033.5	96.86
1035.47	97	1042.33	97.27	1047.01	97.22	1047.62	97.25	1048.7	97.29
1050.26	97.34	1051.85	97.44	1053.06	97.49	1057.67	97.6	1060.39	97.43
1064.78	97.08	1065.68	97	1070.94	96.8	1074.58	96.67	1077.63	96.65
1096.41	96	1152.24	96.8	1153.12	96.82	1153.63	96.83	1163.35	97
1166.8	97.2	1169.13	97.38	1174.2	97.72	1177.86	98	1194.26	98.47
1202.63	98.66	1208.91	98.82	1210.64	98.86	1214.04	98.92	1217.37	99
1224.68	99.65	1225.21	99.72	1227.26	100	1231.71	100.18	1235.18	100.37
1244.52	101	1246.05	101.13	1257.23	102	1262.36	102.49	1267.74	103
1269.3	103.15	1275.06	103.73	1277.77	104	1287.65	104.8	1288.9	104.9
1289.41	104.94	1290.16	105	1294.62	105.41	1299.2	105.84	1300.79	106
1302.29	106.09								

Manning's n Values	num=	5
Sta n Val Sta	n Val Sta	n Val Sta
0 .08 741.75	.04 799.6	.03 874.3
		.06 970.08
		.1

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
799.6	874.3	55.22	29.65	27.05		.3	.5
Blocked Obstructions	num=	1					
Sta L Sta R Elev							
989.33 1042.39 112.1							

INLINE STRUCTURE

RIVER: StonyBrook
 REACH: StonyBrook RS: 9445

INPUT

Description: Dam #5 - DS of Middlesex Road (MMI added dam)

Distance from Upstream XS = 12

Deck/Roadway Width = 4

Weir Coefficient = 2.6

Weir Embankment Coordinates	num =	9
Sta Elev Sta Elev Sta Elev	Sta Elev Sta Elev	Sta Elev
791.97 91.95 836.8 91.81 838.4 90.89	843.4 90.88 849.06 90.96	
854.27 91 856.69 91.18 866.86 91.15	874.3 91.92	

Upstream Embankment side slope = 0 hori z. to 1.0 vertical
 Downstream Embankment side slope = 0 hori z. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Weir crest shape = Broad Crested

StonyBrookDari en1-ex. txt

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook

RS: 9428

INPUT

Description: DS of Dam near Middlesex Road (MMI added section)

Station Elevation Data		num= 269							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	113.77	3.25	113.68	32.33	113	33.87	112.84	35.45	112.69
42.34	112	44.85	111.03	44.93	111	45.02	110.97	47.54	110
47.56	109.99	48.49	109.61	49.96	109	51.24	108.52	52.62	108
54.17	107.43	55.36	107	59.35	106.6	64.3	106	74.05	105.58
83.76	105.21	86.36	105.1	89.37	105	116.18	104.73	119.39	104.62
123.51	104.55	128.73	104.48	134.75	104.12	136.48	104	141.53	103.73
145.57	103.52	153.86	103	158.69	102.46	162.31	102	164.26	101.83
165.08	101.79	167	101.68	176.61	101.04	176.97	101.02	177.23	101
186.1	100.34	187.64	100.22	190.78	100	222.87	99.45	230.98	99.25
239.56	99	241.72	98.86	242.7	98.82	246.64	98.74	251.05	98.49
254.28	98.34	254.98	98.29	261.46	98	268.22	97.85	277.94	97.66
279.5	97.63	282.01	97.52	285.32	97.31	286.66	97.3	287.05	97.29
289.53	97.09	290.63	97	290.83	96.63	291.87	96.52	293.15	96
321.96	96.51	323.61	96.69	324.52	97	331.64	97.8	332.54	97.9
332.89	97.92	333.59	98	335.22	98.75	335.78	99	336.45	99.32
337.53	99.74	338.1	99.98	340.65	99.96	341.5	100	354.39	100.77
356.56	101	365.86	100.72	368.15	100	368.73	99.84	369.27	99.67
371.05	99	388.51	99.09	388.94	99.1	393.34	99.3	395.66	99.37
402.81	99.65	413.82	100	415.19	100.03	416.39	100.08	435.41	101
440.28	101.5	443.91	101.81	445.18	101.92	445.49	101.94	446.13	102
447.36	102.1	459.78	103	469.41	103.65	474.38	104	478.7	104.39
481.22	104.61	486.12	105	500.26	105.96	500.83	106	561.67	105.86
584.23	105	585.41	104.87	587.45	104.41	589.24	104	590.62	103.7
593.84	103	596.16	102.62	599.8	102	604.82	101.34	607.38	101
611.37	100.47	614.85	100	619.93	99.08	620.18	99.04	620.37	99
620.91	98.87	624.53	98	628.31	97.12	628.84	97	630.26	96.86
638.84	96	643.85	95.66	653.04	95	656.72	94.74	658.98	94.62
672.04	94	675.28	93.94	677.22	93.92	682.2	93.84	691.69	93.68
697.89	93.57	709.06	93.37	713.37	93.29	729.94	93	764.12	92.14
764.82	92	775.2	91.07	775.97	91	778.46	90.78	782.68	90.56
785.24	90.38	789.22	90.2	791.12	90.21	795.58	90	803.05	90.14
803.3	90.15	804.87	90.21	809.97	90.23	812.79	90.35	817.67	90.67
822.53	90.77	824.31	90.83	825.16	90.85	834.58	90.95	836.95	90.98
839.25	91	842.62	90.99	847.77	90.96	849.5	91	851.93	91.03
856.82	91.07	866.37	91	887.41	91.04	888.54	91	897.87	90.98
900.02	90.94	901.36	90.91	902.03	90.89	902.49	90.88	903.77	90.81
907.89	90.68	912.63	90.51	918.83	91.65	920.83	91.65	923.52	88.43
927.53	88.12	933.73	88.3	937.43	88.85	942.03	88.79	948.01	91.4
1011.09	91.53	1030.86	91.77	1048.15	92	1056.8	92.74	1059.94	93
1061.34	93.11	1069.81	93.81	1072.07	94	1087.12	94.21	1093.49	94.57
1098.35	94.8	1101.34	95	1103.76	95.02	1108.23	95.16	1112.53	95.22
1115.09	95.31	1117.89	95.26	1126.45	95.15	1127.86	95.18	1128.14	95.19
1128.7	95.21	1131.13	95.23	1134.29	95.37	1135.02	95.39	1144.59	95.44
1146.36	95.43	1148.34	95.42	1149.61	95.43	1150.25	95.44	1152.39	95.48
1152.91	95.49	1153.75	95.5	1154.59	95.54	1167.59	95.8	1168.62	95.84
1170.64	95.89	1171.66	95.91	1172.4	95.92	1172.78	95.91	1175.48	95.92
1182.02	95.89	1183.03	95.87	1190.56	95.78	1195.88	95.81	1201.02	96
1207	96.09	1208.05	96.11	1249.9	97	1252.29	97.2	1252.8	97.26
1254.22	97.38	1257.02	97.58	1261.34	97.74	1262.75	97.89	1263.48	98
1264.81	98.06	1273.51	98.37	1280.75	98.88	1281.99	98.92	1282.55	99
1294.9	99.6	1298.56	100	1306.26	100.55	1313.12	101	1314.63	101.12
1315.99	101.22	1324.5	101.87	1326.46	102	1328.26	102.19	1335.61	103

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1345.64 104 1352.79 104.65 1357.84 105 1361.93 105.24 1370.13 105.92
 1370.58 105.95 1370.99 106 1378.72 106.35 1383.82 106.56

Manning's n Values num= 4
 Station Val Station Val Station Val Station Val
 0 .08 920.83 .035 948.01 .08 1048.15 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 920.83 948.01 627.51 673.09 550.01 .3 .5

Blocked Obstructions num= 1
 Station L Station R Elev
 1079.35 1116.91 112.1

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8754

INPUT

Description: FEMA AD- US section for Private Driveway Bridge (HEC2-39)
 Station Elevations Data num= 263

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	112	5.38	111.68	6.56	111	7.02	110.67	8.15	110
8.72	109.67	9.45	109.41	9.89	109.26	10.79	109	11.92	108.69
13.04	108.36	14	108.09	14.26	108	17.06	107.23	17.38	107
17.93	106.63	19.53	106	20.36	105.28	20.74	105	22.15	104.63
27.34	104	28.39	103.93	31.4	103.49	34.37	103.12	34.86	103
35.69	102.85	37.25	102.62	41.54	102	43.31	101.83	45.26	101.65
49.21	101.3	49.99	101.24	50.67	101.2	52.67	101.18	53.45	101.16
60.1	101.2	61.13	101.21	61.79	101.22	66.79	101.33	69.72	101.47
71.16	101.54	74.8	101.75	76.07	101.84	78.33	102	79.62	102.05
79.9	102.06	83.87	102.17	84.18	102.18	88.29	102.24	92.28	102.31
92.78	102.32	94.77	102.41	96.53	102.48	98.2	102.42	101.02	102.49
112.17	102.4	115.95	102.32	124.17	102.18	133.32	102	144.76	101.53
145.76	101.45	147.95	101.31	150.49	101.2	151.07	101.18	153.72	101
155.65	100.87	159.07	100.54	162.61	100.23	165	100	166.65	99.75
170.3	99	173.08	98.37	174.73	98	176.7	97.55	179.19	97
182.7	96.21	183.58	96	186.97	95.56	191.54	95	199.5	94.54
208.75	94	217.63	93.13	218.65	93.04	219.08	93	226.69	92.27
229.38	92	237.16	91.23	239.34	91	242.09	90.79	252.68	90
282.29	90.1	287.8	91	298.36	91.81	300.03	91.87	301.45	91.9
302.35	91.91	303.16	91.96	303.69	91.94	316.55	92	347.47	92.03
361.4	92.16	375.12	92.31	378.25	92.35	383.07	92.4	386.8	92.44
391.84	92.52	394.28	92.54	402.11	92.67	419.16	93	437.35	93.24
450.74	93.5	468.79	93.84	476.64	94	505.27	94.08	515.53	94
567.07	93.85	568.59	93.2	569.06	93	678.57	92.78	680.77	92.51
681.98	92.35	684.56	92	686.15	91.79	691.07	91	694.54	90.81
698.84	90.39	699.57	90.33	700.47	90.24	702.75	90	709.64	89.66
721.38	89.2	723.68	89.1	726.03	89	726.24	88.9	728.43	88
730.33	87.62	731.76	86.18	735.53	85.68	739.77	85.3	742.23	85.44
745.07	86.07	751.66	88.07	752.24	89	753.22	89.17	758.19	90
761.05	90.34	762.12	90.46	766.82	91	777.45	91.79	780.3	92
784.51	92.24	789.58	92.44	792.41	92.41	797.31	92.52	798.55	92.57
808.53	93	809.9	93.14	814.11	93.55	818.18	94	823.77	94.71
825.97	95	837.64	95.18	841.06	95.22	858.26	95.33	886.14	95.83
890.59	96	891.9	96.14	898.1	96.84	899.14	96.96	899.46	97
900.34	97.07	910.07	98	918.36	98.39	922.21	98.58	924.93	98.74
930.31	99	930.88	99.02	933.13	99.09	934.94	99.13	937.39	99.2
941.84	99.34	954.19	99.68	958.06	99.73	966.25	99.85	972.39	99.93
973.03	99.92	977.94	100	983.24	100.13	983.44	100.14	987.7	100.17
992.21	100.11	992.34	100.1	995.84	100	996.77	99.99	1000.11	99.9
1003.4	99.81	1004.51	99.79	1007.85	99.69	1010.57	99.59	1012.33	99.51

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1021.49	99	1028.81	98.68	1030.45	98.67	1034.31	98.66	1039.37	98.52
1045.31	98.51	1067.02	98.21	1073.15	98.22	1078.33	98.27	1087.01	98.28
1097.23	98.25	1099.43	98.27	1103.17	98.29	1104.95	98.31	1114.36	98.4
1120	98.36	1123.66	98.29	1124.63	98.33	1125.98	98.31	1126.56	98.33
1129.24	98.34	1132.33	98.36	1144.29	98.08	1146.37	98	1178.54	98.4
1185.78	99	1186.09	99.06	1186.32	99.1	1186.72	99.16	1187.77	99.37
1192.06	99.8	1193.22	99.97	1193.8	100	1196.61	100.26	1197.63	100.39
1207.62	100.97	1207.8	100.99	1208.05	101	1210.52	101.15	1211.16	101.22
1212.44	101.36	1214.87	101.61	1215.88	101.73	1219.22	102	1221.67	102.22
1223.07	102.41	1224.96	102.6	1227.73	102.92	1229.92	103	1231.7	103.14
1233.54	103.33	1240.48	104	1242.31	104.14	1243.79	104.27	1244.84	104.33
1245.83	104.43	1247.73	104.53	1249.87	104.69	1253.02	105	1253.1	105.01
1253.21	105.02	1253.46	105.05	1253.99	105.1				

Manning's n Values	num=	4
Sta n Val Sta n Val Sta n Val Sta n Val		
0 .1 567.07 .08 726.03 .035 752.24 .06		

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.								
726.03 752.24 69.84 55.56 40.65 .3 .5								

Ineffective Flow num= 1					
Sta L Sta R Elev Permanent					
0 476.64 94 F					
Blocked Obstructions num= 2					
Sta L Sta R Elev Sta L Sta R Elev					
487.74 545.01 114 101.71 137.51 120					

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8699

INPUT

Description: US face of Private Driveway Bridge (HEC2-39.1)

Station Elevati on Data num= 210										
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev										
0 110 9.73 109.71 13.15 109 13.79 108.72 15.58 108										
15.59 107.99 18.04 107 18.84 106.71 20.8 106 20.85 105.97										
20.98 105.9 22.29 105.23 22.72 105 23.39 104.57 24.14 104										
25.36 103.1 25.5 103 25.58 102.97 27.32 102 29.22 101.36										
30.55 101 68.41 100.23 80 100.43 86.18 100.36 86.66 100.38										
87.92 100.46 90.07 100.59 92.71 100.8 92.97 100.81 94.33 100.9										
96.18 101 98.65 101.13 102.69 101.36 111.67 101.84 112.27 101.86										
112.45 101.87 114.84 102 138.63 101.08 139.03 101 142.05 100.35										
143.73 100 146.86 99.32 148.28 99 153.52 98.09 153.95 98.01										
154.01 98 154.49 97.92 158.71 97.25 160.47 97 163.58 96.61										
168.27 96 172.66 95.48 176.11 95 182.51 94.23 184.3 94										
191.42 93.06 191.81 93.01 191.92 93 192.03 92.99 208.11 92										
212.9 91.72 214.07 91.66 220.48 91.27 222 91.22 226.43 91										
233.47 90.93 234.2 90.94 238.22 91 275.46 90.49 277.09 90.48										
280.23 90.54 282.18 90.59 288.64 90.76 290.18 90.77 290.69 90.79										
290.85 90.78 291.46 90.81 296.78 90.88 302.84 90.81 303.87 90.8										
323.36 90.44 325.17 90.4 344.03 90.16 347.47 90.01 347.68 90										
386.36 90.82 388.56 90.83 391.32 90.84 397.07 91 405.14 91.75										
407.43 92 410.98 92.56 413.08 92.89 413.77 93 416.03 93.4										
419.68 94 421.1 94.15 422.69 94.33 426.92 94.71 428.75 95										
430.71 95.38 432.82 95.8 433.2 95.89 433.84 96 435.97 96.55										
438.28 97 440.27 97.41 443.64 98 444.22 98.11 445.64 98.37										
447.79 98.77 449 99 451.6 99.52 454.25 100 454.77 100.11										
456.1 100.27 459.43 100.68 462.11 100.93 462.35 100.96 463.76 100.95										
464.84 101 466.53 101.08 466.88 101.06 471.1 101 474.14 100.96										
474.39 100.95 474.59 100.94 478.5 100.59 481.79 100.24 482.31 100.19										

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483.62	100	485.14	99.79	485.88	99.69	489.73	99.36	491.59	99.23
492.3	99.14	493.4	99	497.54	98.49	500.72	98	501.25	97.93
508.28	97	508.37	96.99	508.53	96.98	516.95	96.26	519.51	96
527.58	95.22	529.83	95	532.63	94.8	533.53	94.74	538.46	94.4
541.99	94.13	543.93	94	551.27	93.5	559.59	93	561.9	92.95
562.42	92.94	566.65	92.85	570.28	92.77	571.54	92.76	577.65	92.62
579.18	92.61	585.37	92.57	593.83	92.48	598.49	92.39	600.97	92.37
615.92	92.18	626.14	92.2	631.46	92	672.29	91.76	674.25	91.34
675.04	91	676.98	90.27	678.38	90	678.46	89.98	678.61	87.96
680.03	85.9	687.14	83.45	690.33	83.29	694.37	83.76	700.14	84.57
703.08	85.96	716.13	91.95	717.42	92	721.2	92.32	725.39	92.57
727.04	92.65	728.06	92.74	736.91	93	738.75	93.08	738.89	93.09
739.41	93.13	744.99	93.67	747.98	93.87	749.73	94	754.07	94.35
757.78	94.53	767.39	95	775.22	95.03	775.6	95.04	775.88	95.05
777.91	95.09	778.33	95.11	783.19	95.22	788.54	95.24	790.12	95.25
791.23	95.26	793.01	95.31	797.05	95.46	803.74	95.47	805.58	95.53

Manning's n Values num= 3
 Station Val Station Val Station Val
 0 .08 678.46 .04 716.13 .05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 678.46 716.13 31.75 30.69 30.69 .3 .5
 Ineffective Flow num= 3
 Station L Station R Elev Permanent
 460 679.85 91.66 F
 708.12 800 91.66 F
 100 460 93 F

BRIDGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 8686

INPUT

Description: Private Driveway Bridge
 internal bridge sections used to define
 Large scour hole
 Distance from Upstream XS = 7
 Deck/Roadway Width = 12
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates num= 27

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
589.12	91.81				595.71	91.79				598.56	91.8			
598.89	91.8				609.04	91.79				609.5	91.8			
616.14	91.79				616.82	91.79				628.02	91.87			
630.39	91.86				630.58	91.86				632.79	91.89			
635.81	91.79				636.15	91.77				637.99	91.81			
640.43	91.84				640.76	91.82				641.29	91.79			
646.81	91.82				665.12	91.9				686.85	91.66		0	
686.85	91.66	89.7			701.12	92.28	90.12			701.12	92.28		0	
706.94	92.5				731	94				756.09	95			

Upstream Bridge Cross Section Data

Station Elevation Data num= 210

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	110	9.73	109.71	13.15	109	13.79	108.72	15.58	108
15.59	107.99	18.04	107	18.84	106.71	20.8	106	20.85	105.97
20.98	105.9	22.29	105.23	22.72	105	23.39	104.57	24.14	104
25.36	103.1	25.5	103	25.58	102.97	27.32	102	29.22	101.36
30.55	101	68.41	100.23	80	100.43	86.18	100.36	86.66	100.38

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87.92	100.46	90.07	100.59	92.71	100.8	92.97	100.81	94.33	100.9
96.18	101	98.65	101.13	102.69	101.36	111.67	101.84	112.27	101.86
112.45	101.87	114.84	102	138.63	101.08	139.03	101	142.05	100.35
143.73	100	146.86	99.32	148.28	99	153.52	98.09	153.95	98.01
154.01	98	154.49	97.92	158.71	97.25	160.47	97	163.58	96.61
168.27	96	172.66	95.48	176.11	95	182.51	94.23	184.3	94
191.42	93.06	191.81	93.01	191.92	93	192.03	92.99	208.11	92
212.9	91.72	214.07	91.66	220.48	91.27	222	91.22	226.43	91
233.47	90.93	234.2	90.94	238.22	91	275.46	90.49	277.09	90.48
280.23	90.54	282.18	90.59	288.64	90.76	290.18	90.77	290.69	90.79
290.85	90.78	291.46	90.81	296.78	90.88	302.84	90.81	303.87	90.8
323.36	90.44	325.17	90.4	344.03	90.16	347.47	90.01	347.68	90
386.36	90.82	388.56	90.83	391.32	90.84	397.07	91	405.14	91.75
407.43	92	410.98	92.56	413.08	92.89	413.77	93	416.03	93.4
419.68	94	421.1	94.15	422.69	94.33	426.92	94.71	428.75	95
430.71	95.38	432.82	95.8	433.2	95.89	433.84	96	435.97	96.55
438.28	97	440.27	97.41	443.64	98	444.22	98.11	445.64	98.37
447.79	98.77	449	99	451.6	99.52	454.25	100	454.77	100.11
456.1	100.27	459.43	100.68	462.11	100.93	462.35	100.96	463.76	100.95
464.84	101	466.53	101.08	466.88	101.06	471.1	101	474.14	100.96
474.39	100.95	474.59	100.94	478.5	100.59	481.79	100.24	482.31	100.19
483.62	100	485.14	99.79	485.88	99.69	489.73	99.36	491.59	99.23
492.3	99.14	493.4	99	497.54	98.49	500.72	98	501.25	97.93
508.28	97	508.37	96.99	508.53	96.98	516.95	96.26	519.51	96
527.58	95.22	529.83	95	532.63	94.8	533.53	94.74	538.46	94.4
541.99	94.13	543.93	94	551.27	93.5	559.59	93	561.9	92.95
562.42	92.94	566.65	92.85	570.28	92.77	571.54	92.76	577.65	92.62
579.18	92.61	585.37	92.57	593.83	92.48	598.49	92.39	600.97	92.37
615.92	92.18	626.14	92.2	631.46	92	672.29	91.76	674.25	91.34
675.04	91	676.98	90.27	678.38	90	678.46	89.982	678.62	87.96
686.85	81.52	689.85	80.81	692.35	81.63	695	82.16	697.08	83.7
701.12	84.75	716.13	91.95	717.42	92	721.2	92.32	725.39	92.57
727.04	92.65	728.06	92.74	736.91	93	738.75	93.08	738.89	93.09
739.41	93.13	744.99	93.67	747.98	93.87	749.73	94	754.07	94.35
757.78	94.53	767.39	95	775.22	95.03	775.6	95.04	775.88	95.05
777.91	95.09	778.33	95.11	783.19	95.22	788.54	95.24	790.12	95.25
791.23	95.26	793.01	95.31	797.05	95.46	803.74	95.47	805.58	95.53

Manning's	num=	3
Station	Station	Station
0	.08	678.46
	.04	716.13
		.05

Bank Station	Left	Right	Coeff	Contr.	Expan.
	678.46	716.13	.3	.3	.5

Ineffective Flow	num=	3	
Station L	Station R	Elev	Permanent
460	679.85	91.66	F
708.12	800	91.66	F
100	460	93	F

Downstream Deck/Roadway	Coordinates										
num=	28										
Station	Hi	Cord	Lo Cord	Station	Hi	Cord	Lo Cord	Station	Hi	Cord	Lo Cord
652.68	91.81			708.81	91.79			711.66	91.8		
711.99	91.8			722.14	91.79			722.6	91.8		
729.24	91.79			729.92	91.79			741.12	91.87		
743.49	91.86			743.68	91.86			745.89	91.89		
748.91	91.79			749.25	91.77			751.09	91.81		
753.53	91.84			753.86	91.82			754.39	91.79		
759.91	91.82			780.22	91.9			800.22	91.53		0
800.22	91.53	89.64		814.72	92.28	90.17		814.72	92.28		0
820.04	92.5			844.1	94			869.19	95		
905.28	96										

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Downstream Bridge Cross Section Data

Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation
0	104.65	1.84	104	4.79	103.02	4.84	103	6.39	102.37
7.23	102	7.82	101.69	9.27	101	10.46	100.37	11.19	100
12.05	99.65	13.54	99	14.82	98.52	16.2	98	18.14	97.23
18.73	97	20.72	96.28	21.5	96	23.68	95.21	24.25	95
27.04	94.04	27.15	94	27.29	93.95	29.89	93	30.49	92.77
32.55	92	33.49	91.64	35.36	91	37.77	90.42	39.47	90
41.01	89.61	43.69	89	45.72	88.51	48.04	88	51.07	87.39
52.51	87.29	53.82	87.15	54.93	87	56.92	86.74	59.41	86.47
60.64	86.44	61.59	86.39	63.71	86.35	67.18	86.16	68.06	86.15
72.58	86.13	73.89	86.12	79.17	86.26	81.62	86.35	83.28	86.32
84.27	86.3	85.41	86.31	86.42	86.37	88.35	86.32	89.36	86.31
90.66	86.4	92.7	86.41	102.88	87	134.23	87.95	135.81	88
146.56	88.45	148.86	88.52	161.19	89	166.62	89.67	169.15	90
181.27	90.36	188.24	90.4	189.05	90.42	190.74	90.44	191.47	90.46
193.88	90.48	206.91	90.89	207.51	90.91	209.38	91	230.48	91.26
231.41	91.27	243.72	91.29	254.8	91.24	256.26	91.22	257.73	91.23
265.59	91.22	271.69	91.11	273.97	91.14	276.25	91.06	278.52	91.03
284.88	91.11	286.43	91	315.05	90.77	324.26	90	339.67	89.66
350.67	89.46	369.87	89.11	374.91	89	394.16	88.81	395.36	88.78
397.2	88.72	408.5	88.57	411.76	88.43	416.02	88.28	419.9	88.21
421.14	88.19	422.36	88.13	423.44	88.11	426.31	88	434.91	88.15
443.26	89	460.98	88.42	470.02	88.17	471.58	88	473.96	87.6
478.12	87	492.91	87.79	494.48	88	497.27	88.52	499.97	89
500.5	89.15	503.44	90	503.83	90.17	505.67	91	506.82	91.5
508.06	92	509.44	92.52	510.72	93	512.29	93.6	513.4	94
515.28	94.92	515.48	95	516.05	95.3	517.32	96	518.1	96.62
518.66	97	519.3	97.57	519.76	98	520.3	98.47	520.91	99
521.39	99.52	521.91	100	522.13	100.34	522.53	101	522.75	101.21
523.5	102	525.2	102.74	525.7	103	533.7	102.26	534.51	102.13
535.25	102	536.95	101.5	538.68	101	538.89	100.9	541.26	100
541.77	99.79	544.07	99	546.28	98.35	546.75	98.26	547.49	98
548.95	97.53	550.75	97	551.74	96.68	554.39	96	556.36	95.49
557.07	95.37	558.67	95	560.83	94.73	567.14	94	567.48	93.96
567.72	93.93	571.49	93.56	574.33	93.16	575.17	93.06	575.6	93
632.21	92.81	632.52	92.8	638.82	92.83	645.67	92.81	647.54	92.77
648.3	92.75	663.58	92.55	667.25	92.53	669.07	92.5	673.33	92.43
680.86	92.26	681.27	92.25	682.95	92.19	683.5	92.17	688.35	92.07
688.54	92.06	691.78	92	694.63	91.97	709.78	91.82	713.28	91.79
723.13	91.71	726.31	91.7	735.26	91.67	741.44	91.64	742.56	91.65
751.11	91.67	756.95	91.65	757.45	91.64	759.08	91.65	769.75	91.26
771.11	91.18	771.59	91.19	774.01	91.07	775.52	91	776.91	90.8
781.26	90.24	782.85	90.04	783.28	90	787.1	89.49	788.8	89.34
789.44	89.27	790.78	89.12	791.54	89	794.1	88.43	795.42	88
795.63	87.35	799.8	81.29	803.11	81.78	806.13	81.55	809.27	81.65
811.63	82.19	815.14	84.01	820.03	88.1	830.58	89.45	832.76	89.52
836.79	90	836.86	90.01	840.84	90.46	845.65	90.81	846.57	90.89
846.8	90.92	848.98	91	854.3	91.23	855.15	91.26	858.74	91.45
863.09	91.68	863.35	91.72	865.54	91.88	866.42	92	867.27	92.06
869.98	92.48	871.77	92.76	873.13	93	878.38	93.79	879.84	94
881.94	94.31	886.53	95	890.21	95.52	893.58	96	895.72	96.3
896.18	96.34	896.52	96.35	898.78	96.51	902.97	96.65	906.08	96.64
908.46	96.69	910.83	96.76	914.33	96.9	914.48	96.91	914.94	96.93
918.72	97								

Manning's n	Values	num=	4
Sta	n Val	Sta	n Val
0	.1	632.21	.06
		795.42	.035
		830.58	.05

Bank Sta: Left Right Coeff Contr. Expan.

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795.42 820.03
 Ineffective Flow num= 3
 Sta L Sta R Elev Permanent
 525 793.93 90.59 F
 831.81 900 90.59 F
 0 525 93 F
 Left Levee Station= 254.8 Elevati on= 91.24
 Blocked Obstructions num= 1
 Sta L Sta R Elev
 29.83 58.02101.1204

Upstream Embankment side slope = 0 hori z. to 1.0 verti cal
 Downstream Embankment side slope = 0 hori z. to 1.0 verti cal
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow
 Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 90.17

Additional Bridge Parameters

Add Friction component to Momentum
 Do not add Weight component to Momentum
 Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8668

INPUT

Description: DS face of Private Dri veway Bridge (HEC2-37.1)

Station	Elevation	Data	num=	261	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	104.65	1.84		104	4.79	103.02	4.84	103	6.39	102.37		
7.23	102	7.82		101.69	9.27	101	10.46	100.37	11.19	100		
12.05	99.65	13.54		99	14.82	98.52	16.2	98	18.14	97.23		
18.73	97	20.72		96.28	21.5	96	23.68	95.21	24.25	95		
27.04	94.04	27.15		94	27.29	93.95	29.89	93	30.49	92.77		
32.55	92	33.49		91.64	35.36	91	37.77	90.42	39.47	90		
41.01	89.61	43.69		89	45.72	88.51	48.04	88	51.07	87.39		
52.51	87.29	53.82		87.15	54.93	87	56.92	86.74	59.41	86.47		
60.64	86.44	61.59		86.39	63.71	86.35	67.18	86.16	68.06	86.15		
72.58	86.13	73.89		86.12	79.17	86.26	81.62	86.35	83.28	86.32		
84.27	86.3	85.41		86.31	86.42	86.37	88.35	86.32	89.36	86.31		
90.66	86.4	92.7		86.41	102.88	87	134.23	87.95	135.81	88		
146.56	88.45	148.86		88.52	161.19	89	166.62	89.67	169.15	90		
181.27	90.36	188.24		90.4	189.05	90.42	190.74	90.44	191.47	90.46		
193.88	90.48	206.91		90.89	207.51	90.91	209.38	91	230.48	91.26		

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231.41	91.27	243.72	91.29	254.8	91.24	256.26	91.22	257.73	91.23
265.59	91.22	271.69	91.11	273.97	91.14	276.25	91.06	278.52	91.03
284.88	91.11	286.43	91	315.05	90.77	324.26	90	339.67	89.66
350.67	89.46	369.87	89.11	374.91	89	394.16	88.81	395.36	88.78
397.2	88.72	408.5	88.57	411.76	88.43	416.02	88.28	419.9	88.21
421.14	88.19	422.36	88.13	423.44	88.11	426.31	88	434.91	88.15
443.26	89	460.98	88.42	470.02	88.17	471.58	88	473.96	87.6
478.12	87	492.91	87.79	494.48	88	497.27	88.52	499.97	89
500.5	89.15	503.44	90	503.83	90.17	505.67	91	506.82	91.5
508.06	92	509.44	92.52	510.72	93	512.29	93.6	513.4	94
515.28	94.92	515.48	95	516.05	95.3	517.32	96	518.1	96.62
518.66	97	519.3	97.57	519.76	98	520.3	98.47	520.91	99
521.39	99.52	521.91	100	522.13	100.34	522.53	101	522.75	101.21
523.5	102	525.2	102.74	525.7	103	533.7	102.26	534.51	102.13
535.25	102	536.95	101.5	538.68	101	538.89	100.9	541.26	100
541.77	99.79	544.07	99	546.28	98.35	546.75	98.26	547.49	98
548.95	97.53	550.75	97	551.74	96.68	554.39	96	556.36	95.49
557.07	95.37	558.67	95	560.83	94.73	567.14	94	567.48	93.96
567.72	93.93	571.49	93.56	574.33	93.16	575.17	93.06	575.6	93
632.21	92.81	632.52	92.8	638.82	92.83	645.67	92.81	647.54	92.77
648.3	92.75	663.58	92.55	667.25	92.53	669.07	92.5	673.33	92.43
680.86	92.26	681.27	92.25	682.95	92.19	683.5	92.17	688.35	92.07
688.54	92.06	691.78	92	694.63	91.97	709.78	91.82	713.28	91.79
723.13	91.71	726.31	91.7	735.26	91.67	741.44	91.64	742.56	91.65
751.11	91.67	756.95	91.65	757.45	91.64	759.08	91.65	769.75	91.26
771.11	91.18	771.59	91.19	774.01	91.07	775.52	91	776.91	90.8
781.26	90.24	782.85	90.04	783.28	90	787.1	89.49	788.8	89.34
789.44	89.27	790.78	89.12	791.54	89	794.1	88.43	795.42	88
795.63	87.35	799.8	85.74	803.11	85.08	806.13	84.68	809.27	83.55
811.63	83	815.14	84.06	820.03	88.1	830.58	89.45	832.76	89.52
836.79	90	836.86	90.01	840.84	90.46	845.65	90.81	846.57	90.89
846.8	90.92	848.98	91	854.3	91.23	855.15	91.26	858.74	91.45
863.09	91.68	863.35	91.72	865.54	91.88	866.42	92	867.27	92.06
869.98	92.48	871.77	92.76	873.13	93	878.38	93.79	879.84	94
881.94	94.31	886.53	95	890.21	95.52	893.58	96	895.72	96.3
896.18	96.34	896.52	96.35	898.78	96.51	902.97	96.65	906.08	96.64
908.46	96.69	910.83	96.76	914.33	96.9	914.48	96.91	914.94	96.93
918.72	97								

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .1 632.21 .06 795.42 .035 830.58 .05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 795.42 820.03 62.46 54.8 41.83 .3 .5

Ineffective Flow num= 3
 Sta L Sta R Elev Permanent
 525 793.93 90.59 F
 831.81 900 90.59 F
 0 525 93 F

Left Levee Station= 254.8 Elevation= 91.24
 Blocked Obstructions num= 1
 Sta L Sta R Elev
 29.83 58.02 101.1204

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8613

INPUT
 Description: FEMA AC - US of Dam #3 / DS of Private Driveway (HEC2-37)
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Station		Elevation		Data		num=	334		Sta	Elev	Sta	Elev	Sta	Elev
0	107.03	.08	107	1.95	106.23	2.49	106	2.64	105.94					
4.97	105	7.43	104	9.78	103	10.19	102.83	11.54	102.41					
12.9	102	14	101.64	15.42	101.23	16.12	101	17.99	100.21					
18.44	100	20.35	99.25	20.81	99	22.27	98.14	22.49	98					
22.78	97.74	23.74	97	24.28	96.62	25.1	96	26.31	95.4					
27.09	95	27.6	94.84	30.87	94	30.93	93.98	34.52	93					
38.02	92.06	38.25	92	38.41	91.96	39.11	91.77	41.47	91.14					
42.02	91	44.78	90.27	45.82	90	47.94	89.46	49.75	89					
50.66	88.81	54.12	88	58.55	87.02	58.66	87	58.82	86.96					
62.8	86	65.56	85.35	67.14	85	69.19	84.9	76.47	84.59					
96.1	84.84	97.89	85	100.47	85.39	104.05	86	104.54	86.1					
109.73	86.97	109.87	87	117.8	87.79	120.74	88	123.66	88.21					
124.79	88.28	127.24	88.48	129.05	88.62	133.39	89	140.5	89.2					
143.49	89.28	148.04	89.43	155.79	89.68	158.67	89.76	160.37	89.8					
164.5	89.89	168.32	90	171.8	90.15	189.69	91	193.8	91.24					
206.72	92	208.73	92.27	213.73	93	214.36	93.08	222.37	94					
222.75	94.04	222.88	94.05	224.97	94.2	228.3	94.39	231.08	94.53					
232.45	94.59	233.36	94.62	235.58	94.61	239.63	95	240.21	95.04					
240.49	95.07	241.99	95	245.49	94.14	245.56	94	251.56	93.89					
253.36	93.88	254.93	93.87	257.82	93.86	261.26	93.85	265.34	93.84					
272.99	93.75	274.45	93.76	277.13	93.77	306.97	93.99	308.73	94					
334.5	93.67	335.65	93.65	344.83	93.15	345.94	93.1	347.09	93					
359.49	92.25	359.86	92.26	361.65	92	363.76	91.97	370.36	91					
381.82	90.86	383.16	90.67	384.59	90.45	388	90	391.79	89.93					
394.17	89.75	398.43	89.57	399.68	89.37	402.15	89.03	402.3	89.02					
402.4	89	409.43	88.7	412.81	88.44	415.29	88.33	418.53	88.07					
419.1	88.05	419.65	88	422.01	87.92	425.35	87.83	427.46	87.73					
428.95	87.66	438.77	87.39	442.62	87.19	445.45	87.05	445.67	87.04					
446.3	87	452.45	87.17	455.97	88	458.42	88.92	458.65	89					
465.76	88.9	483.54	88	485.08	87.69	486.05	87.63	489.91	87					
507.14	87.31	511.17	88	513.65	88.65	515.02	89	516.53	89.43					
518.41	90	520.06	90.56	521.18	91	521.91	91.3	523.63	92					
525.88	92.98	525.93	93	526.01	93.04	528.05	94	529.77	94.81					
530.17	95	530.86	95.38	531.93	96	532.05	97	532.14	97.28					
532.39	98	532.52	98.85	532.54	99	532.62	99.25	532.88	100					
532.95	100.25	533.17	101	533.3	101.92	533.31	102	533.44	102.4					
533.63	103	535.97	102.89	536.17	102.86	540.95	102	541.72	101.94					
552.38	101	553.61	100.08	553.71	100	553.97	99.83	554.77	99.29					
555.17	99	555.75	98.92	562.55	98	575.33	97.38	582.47	97					
585.86	96.58	593.52	96	598.89	95.26	602.67	95	602.95	94.96					
609.92	94	612.62	93.62	615.03	93.19	615.93	93.05	616.25	93					
617.76	92.94	645.93	92	662.17	91.79	667.89	91.63	671.74	91.55					
674.94	91.5	681.11	91.33	682.17	91.3	693.58	91	694.01	90.99					
698.68	90.88	700.47	90.85	701.06	90.84	709.41	90.67	713.25	90.61					
717.89	90.57	719.67	90.54	725.13	90.5	726.29	90.49	729.99	90.48					
736.99	90.35	737.54	90.34	738.92	90.32	739.77	90.31	741.6	90.29					
744.7	90.26	745.98	90.25	748.03	90.22	752.16	90.17	755.81	90.15					
758.9	90	789.22	89.06	790.47	89	792.72	88.34	793.75	88					
794.51	87.75	795.81	86.16	799.31	84.67	804.26	83.83	809.01	84.27					
813.91	84.95	819.21	85.53	823.01	86.18	829.11	88.11	833.47	88.1					
836.08	88.41	841.05	89	842.12	89.15	848.74	90	852.51	90.5					
855.86	90.82	856.75	90.9	857.87	91	860.99	91.68	862.3	92					
865.3	92.62	867.21	93	869.57	93.25	875.86	94	880.74	94.53					
884.63	95	889.17	95.46	895.62	96	907.13	96.79	909.15	96.93					
910.3	97	961.18	97.24	975.5	97.13	975.67	97.15	976.93	97.21					
981.31	97.53	987.4	98	990.65	98.09	1033.01	99	1073.74	99.02					
1077.64	99.16	1089.39	99.53	1103.72	100	1157.96	99.53	1168.19	99.57					
1174.36	99.75	1179.67	99.88	1180.06	99.89	1182.27	99.93	1184.02	99.95					
1186.66	99.97	1193.67	99.96	1194.16	99.97	1200.05	99.98	1204.81	99.97					
1205.03	99.98	1210.61	99.96	1212.66	100	1257.73	100.18	1261.85	101					
1265.37	101.7	1267.1	102	1268.74	102.24	1269.28	102.26	1271.67	102.51					

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1274.2	102.62	1275.62	102.59	1276.87	102.58	1284.99	102.27	1287.63	102.2
1288.3	102.19	1290.74	102.12	1293.19	102.1	1293.52	102.11	1293.91	102.13
1295.63	102.18	1296.29	102.23	1297.76	102.33	1299.26	102.5	1300.27	102.61
1302.91	103	1306.69	103.52	1310.1	104	1311.82	104.22	1314.73	104.42
1317.88	104.68	1319.23	104.78	1323.45	105	1327.63	105.17	1328.54	105.23
1330.12	105.34	1332.74	105.5	1338.18	106	1345.18	106.24		

Manning's n Values num= 5

Sta	n	Val	Sta	n	Val	Sta	n	Val	Sta	n	Val
0	.1	616.25	.06	792.72	.035	829.11	.04	880.74			.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

789.22	829.11	36.3	26.56	20.3	.3	.5
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Ineffective Flow num= 1

Sta L Sta R Elev Permanent

0	612.62	93	F
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Left Levee Station= 239.63 Elevati on= 95

Blocked Obstructions num= 3

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev	
889.84	923.14	117.36	551.87	586.83	101.04	52	265.53	319	118

INLINE STRUCTURE

RIVER: StonyBrook
 REACH: StonyBrook RS: 8597

INPUT
 Description: Dam # 3 FEMA AB (HEC2 section 36)
 Large stones, some loose
 creating spillways

Distance from Upstream XS = 14
 Deck/Roadway Width = 1.8
 Weir Coefficient = 2.6

Weir Embankment Coordinates num = 9

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
794.51	87.12	796.91	86.01	801.7	85.88	802.4	86.44	806.14	86.33
806.65	85.69	814.28	86.18	816.45	86.4	826.71	86.94		

Upstream Embankment side slope = 0 hori z. to 1.0 vertical
 Downstream Embankment side slope = 0 hori z. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Weir crest shape = Broad Crested

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8587

INPUT
 Description: DS of Dam #3 @ FEMA AB (MMI added section)

Station Elevation Data num= 309

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	102.02	.05	102	.14	101.97	.33	101.91	2.85	101
4.01	100.26	4.43	100	4.99	99.55	5.74	99	6.17	98.7
6.54	98.4	7.05	98	7.96	97.06	8.02	97	8.05	96.97
8.41	96.53	8.82	96.03	8.84	96	8.89	95.94	9.58	95
9.81	94.65	10.27	94.08	10.33	94	10.93	93.22	11.11	93
11.53	92.51	12.05	92	12.25	91.74	12.9	91	33.55	90.96
34.82	90.95	36.08	90.92	36.37	90.91	39.28	90.88	43.01	90.82

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47.38	90.67	51.15	90.57	54.02	90.45	56.23	90.37	60.68	90.22
63.57	90.13	66.65	90	70.81	89.29	71.6	89.31	72.08	89
72.74	88.59	73.69	88	74.24	87.13	74.33	87	74.44	86.84
75.05	86	75.49	85.3	75.67	85	76.92	84.5	77.72	84
99.27	84.89	99.67	85	99.96	85.12	102.22	86	103.6	86.59
104.67	87	106.52	87.74	107.21	88	108.85	88.65	109.76	89
109.89	89.07	110.4	89.32	111.75	90	113.72	90.96	113.79	90.99
113.8	91	117.38	92	118.21	92.14	119.27	92.21	120.34	92.27
123.61	92.34	125.46	92.32	125.92	92.34	127.86	92.2	128.39	92.18
129.76	92	135.43	91.48	138.17	91	141.37	90.7	142.73	90.61
144.37	90.64	150.5	90.56	155.2	90.6	157.82	90.65	173.2	91
174.13	91.02	180.08	91.17	191.52	91.39	193.57	91.47	195.03	91.49
197	91.58	197.99	91.61	204.4	92	209.58	92.52	214.25	93
218.76	93.52	223.04	94	227.37	94.46	232.43	95	241.87	95.75
245.22	96	251.22	96.38	260.32	97	262.23	97.09	267.08	97
289.17	96.24	296.49	96	301.5	95.88	303.19	95.86	320.83	95.5
325.65	95.44	336.09	95.26	342.13	95	346.63	94.71	349.65	94.55
351.22	94.43	354.69	94.19	355.15	94.15	356.03	94.08	357.57	94
363.25	93.26	363.47	93	363.64	92.76	364.3	92	364.95	91.27
365.22	91	366.14	90.69	367.86	90	371.15	89.83	377.33	89.53
383.23	89.25	387.9	89	413.72	88.18	414.77	88.15	418.57	88
432.67	87.49	445.35	87	470.71	87.65	471.68	88	494.48	87.9
498.79	87.44	503.07	87	520.48	87.63	521.93	88	525.96	88.93
526.28	89	526.52	89.05	530.89	90	534.97	90.89	535.41	91
535.79	91.12	538.6	92	541.22	92.96	541.33	93	541.45	93.05
542.26	93.37	543.85	94	543.99	94.09	544.26	94.29	545.15	95
545.55	95.53	545.94	96	546.07	96.88	546.09	97	546.13	97.19
546.18	97.47	546.29	98	546.32	98.17	546.49	99	546.55	99.46
546.63	100	546.74	100.75	546.78	101	546.79	101.04	546.93	102
554.69	101.76	566.33	101	568	100.02	568.03	100	568.07	99.98
569.68	99	571.54	98.68	574.7	98	586.85	97.26	590.19	97.19
590.84	97.15	599.72	97.02	599.83	97.01	600.65	97	609.24	96.87
611.64	96.83	619.99	96.69	620.25	96.65	622.57	96	623.32	95.98
623.66	95.92	627.51	95.27	628.9	95	631.01	94.78	635.01	94
638.66	93.25	639.27	93.15	640.08	93	657.61	92.02	657.89	92
682.21	91.36	688.83	91.19	695.05	91	712.03	90.35	722.54	90
732.19	89.72	733.05	89.69	739.06	89.51	743.59	89.37	744.61	89.34
748.37	89.25	749.85	89.21	756.78	89.01	757.19	89	765.57	88.86
781.47	88.97	783.3	88.91	786.2	88.87	786.72	88.85	805.04	88.47
807.3	88.34	810.56	88.18	811.47	86.89	818.57	84.83	821.47	84.18
824.47	84.58	827.67	84.42	830.87	84.78	836.87	84.81	839.77	84.55
842.97	84.84	846.87	86.31	850.17	87.66	852.28	88.53	856.11	89
858.35	89.32	861.1	89.71	863.11	90	866.42	90.51	869.94	91
874.24	91.81	875.39	92	877.99	92.42	881.61	93	882.68	93.09
883.84	93.15	892.02	93.73	897.11	94	909.65	94.39	915.75	94.64
918.15	94.8	920.07	95	922.52	95.26	929.62	96	935.75	96.64
939.13	97	944.81	97.6	948.51	98	983.93	98.39	985.52	98.41
992.9	98.47	994.18	98.51	1001.18	98.82	1003.58	98.93	1003.9	98.94
1005.34	99	1023.6	99.68	1033.89	100	1034.86	100.04	1035.13	100.05
1035.52	100.06	1044.4	100.31	1055.11	100.08	1055.25	100.09	1056.65	100
1064.12	100.06	1064.91	100.1	1066.64	100.21	1067.85	100.32	1070.43	100.38
1080.59	101	1108.32	101.81	1111.43	101.9	1114.45	102	1117.76	102.22
1121.67	102.47	1130.7	103	1132.55	103.2	1134.19	103.36	1137.7	103.68
1140.92	103.88	1141.46	103.93	1143.96	103.99	1143.99	104	1150.07	104.02
1150.32	104.03	1155.74	104.1	1156.12	104.11	1157.78	104.13		

Mann ng' s	n	Val ues	num=	5	Sta	n	Val	Sta	n	Val	Sta	n	Val	Sta	n	Val
0	.1	638.66	.06	810.56	.04	852.28	.04	892.02	.1							

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	810.56	852.28		28.01	56.41	79.11		.1	.3

Ineffecti ve Flow num= 1

StonyBrookDari en1-ex. txt

Sta L Sta R Elev Permanent
 0 640.08 93 F
 Left Levee Station= 260.32 El evati on= 97
 Blocked Obstructi ons num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 903.57 947.01 117.36 565.58 614.1 101.049 275.82 331.1 118

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8530

INPUT

Description: MMI added cross section

Station	Elevation	Data	num=	318	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	99.2	.51	99.09	.79	99	2.15	98.6	4.42	98					
5.84	97.58	7.43	97	8.81	96.08	8.94	96	9.97	95.37					
10.55	95	10.6	94.93	11.37	94	11.9	93.32	12.16	93					
12.41	92.71	13.03	92	13.1	91.91	13.9	91	45.56	90.31					
47.72	90.29	60.1	90	71.39	89.47	72.72	89	74.11	88.22					
74.54	88	75.41	87.41	75.98	87	77.01	86.31	77.49	86					
77.65	85.91	79.08	85	79.49	84.87	82.1	84	83.18	83.93					
83.3	83.92	102.26	83.83	104.03	84	107.32	84.56	110.05	85					
111.09	85.83	111.29	86	112.18	86.82	112.39	87	112.45	87.05					
113.62	88	114.24	88.32	115.48	89	116.55	89.54	117.52	90					
118.72	90.4	120.79	91	122.43	91.57	123.99	92	125.7	92.64					
126.8	93	129.31	93.92	129.53	94	129.66	94.05	129.89	94.12					
131.87	94.76	132.93	95	140.61	94.85	141.23	94.76	146.9	94					
147.8	93.73	150.25	93	154.19	92.01	154.22	92	159.26	91.82					
160.52	91.83	170.98	91.73	174.2	91.79	176.44	91.82	178.32	91.84					
180.68	91.86	183.42	91.87	193.69	92	215.63	92.71	219.04	92.89					
220.33	93	223.03	93.34	228.45	94	231.82	94.42	236.35	95					
243.05	95.9	243.76	96	249.83	96.79	251.11	97	251.92	97.15					
252.83	97.29	254.12	97.68	255.39	98	257.48	98.99	257.5	99					
257.52	99.01	259.74	100	261.37	100.87	261.48	100.9	261.55	100.89					
261.66	101	283.06	101.04	284.5	101	284.91	100.24	285.08	100					
285.89	99.25	286.19	99	286.43	98.58	287.57	98	289.51	97.97					
299.5	97.96	304.56	97.92	306.23	97.87	308.35	97.8	309.97	97.72					
312.2	97.49	313.75	97.36	315.84	97	318.44	96.8	321.08	96.57					
323.09	96.39	328.06	96	348.25	95.5	357.51	95	370.14	94.35					
374.84	94.08	376.05	94	376.27	93.69	376.69	93	376.78	92.84					
377.27	92	377.41	91.8	377.82	91	378.9	90.82	379.96	90.72					
387.01	90	390.63	89.95	392.13	89.88	404.03	89.28	409.49	89.02					
409.97	89	415.72	88.77	420.51	88.57	426.07	88.34	433.08	88					
443.91	87.49	453.73	87	478.14	88	504.71	87.54	516.58	87					
525.78	87.79	526.46	88	530.14	89	530.28	89.03	534.16	90					
535.83	90.38	538.5	91	541.21	91.79	541.96	92	542.82	92.28					
545.22	93	547.29	93.69	548.3	94	548.93	94.2	551.5	95					
552.99	95.42	554.8	96	555.68	96.79	555.98	97	556.17	97.69					
556.26	98	556.36	98.35	556.54	99	556.81	99.98	556.82	100.02					
557.1	101	557.2	101.34	557.37	102	563.3	101.8	574.11	101					
606.59	100.88	615.16	100.53	619.4	100.46	625.46	100.27	630.5	100.1					
630.58	100.09	632.77	100.03	633.64	100	635.6	99.97	635.88	99.94					
636.84	99.85	640.06	99.48	642.19	99.23	643.16	99.12	644.12	99					
645.3	98.46	646.3	98	647.76	97.38	648.6	97	649.81	96.28					
650.38	96	651.29	95.42	651.98	95	652.64	94.61	653.71	94					
657.3	93.25	658.68	93	659.8	92.92	669.6	92.31	674.37	92.02					
674.63	92	675.92	91.93	678.38	91.82	691.94	91.15	693.5	91.08					
695.51	91	715.32	90.38	725.43	90	738.54	89.37	745.95	89					
753.21	88.71	761.41	88.39	762.63	88.36	764.53	88.29	766.08	88.24					
767.82	88.19	768.63	88.18	770.94	88.16	771.8	88.14	781.22	88					

StonyBrookDari en1-ex. txt

801.95	87.71	803.14	87.78	803.77	87.68	804.19	87.61	804.65	87.6
807.43	87.16	808.22	87	808.74	86.73	810.74	85.53	816.14	83.87
819.34	83.64	822.94	83.59	827.04	83.39	832.54	84.05	837.64	84.21
844.94	87.33	847.36	88	848.75	88.32	850.88	88.9	851.3	89
852.01	89.18	855.17	90	858.32	90.65	859.69	91	863.92	91.81
864.92	92	866.36	92.26	870.33	93	872.08	93.32	875.86	94
879.54	94.56	881.88	94.82	884.22	95	889.33	95.51	894.1	96
897.51	96.33	903.52	97	912.42	97.89	914.93	98	925.2	98.55
925.75	98.58	926.9	98.63	929	98.73	930.66	98.79	937.23	98.73
939.95	98.72	940.59	98.74	944.84	98.76	947.7	98.8	948.56	98.82
949.28	98.85	961.24	99	967.04	99.08	967.76	99.1	968.18	99.11
968.85	99.13	969.75	99.16	980	99.4	992.44	100	993.32	100.06
993.73	100.1	1003.6	101	1014.38	101.95	1014.9	102	1015.21	102.03
1026.19	103	1032.62	103.34	1042.22	104	1051.88	104.66	1057.89	105
1068.35	105.91	1069.47	106	1070.79	106.13	1080.04	107	1084.84	107.53
1088.7	108	1091.54	108.34	1096.85	109	1101.2	109.56	1104.74	110
1110.5	110.76	1112.29	111	1114.02	111.23	1119.98	112	1120.48	112.06
1120.63	112.08	1124.68	112.53	1125.25	112.58				

Manning's n Values num= 4

Station	Value	Station	Value	Station	Value	Station	Value
0	.1	669.6	.06	803.77	.04	844.94	.06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

803.77	844.94	244.89	238.24	208.02	.1	.3
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Ineffective Flow num= 1

Left Levee Station= 261.37 Elevation= 100.87

Blocked Obstructions num= 1

Sta L	Sta R	Elev
0	600	93
280.22	336.61	118

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8292

INPUT

Description: US of DAM #3 at FEMA AA (MMI added section)
 Downstream dam top

curves up through this section, with a scour channel on DS/Right side of dam

Station Elevation Data num= 294

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	80.32	.66	80.31	5.2	80.13	6.96	80.15	13.84	80.06
16.04	80.05	21.13	80.1	21.87	80.09	25.55	80.23	26.59	80.21
37.56	80	55	80.2	58.35	80.35	60.18	80.45	69.77	81
88.59	81.98	88.93	82	98.13	82.62	103.81	83	110.9	83.43
120.52	84	124.85	84.23	129.78	84.5	138.99	85	142.19	85.16
146.78	85.38	155.6	85.82	160.25	86	164.68	86.17	170.95	86.37
176.68	86.72	180.32	87	181.33	87.08	182.54	87.1	184.41	87.16
207.65	88	209.25	88.12	220.43	89	220.8	89.04	224.1	89.36
229.48	89.9	230.58	90	237.41	90.68	240.53	91	240.81	91.06
246.18	92	249.74	92.94	250	93	252.86	93.72	254.03	94
255.38	94.48	256.25	94.73	257.19	95	257.79	95.66	258.14	96
258.35	96.54	258.54	97	258.79	97.38	259.06	97.78	259.22	98
262.45	98.19	264.57	98.34	266.91	98.5	273.17	99	274.57	99.1
280.9	99.44	287.9	99.85	290.97	100	298.65	100.13	300.24	100.14
306.82	100.25	312.35	100.28	315.27	100.3	326.17	100.32	327.74	100.3
331.9	100.29	333.03	100.28	336.58	100.27	342.62	100.19	345.64	100.15
352.42	100.06	355.43	100.01	355.83	100	360.57	99.99	361.52	99.97

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362.23	99.96	392.74	99	407.49	98.05	407.66	98	410.02	97.2
410.61	97	411.86	96.51	412.97	96	414.39	95.42	415.39	95
416.37	94.64	417.98	94	419.5	93.55	421.32	93	424.36	92.08
424.63	92	424.74	91.97	428.1	91	432.03	90.03	432.15	90
432.46	89.93	435.49	89.27	436.64	89	440.06	88.17	440.82	88
444.86	87.52	446.26	87.38	449.03	87.21	450	87.14	451.57	87
453.83	86.18	454.23	86	454.78	85.83	457.49	85	467.68	85.82
468.37	86	469.92	86.34	471.95	86.86	472.55	87	497.46	86.23
504.02	86	527.26	86.03	527.67	86.06	533.04	87	535.14	87.16
535.75	87.56	536.44	87.91	536.59	88	542.36	88.74	545.22	88.86
546.48	88.95	546.98	89	553.09	89.59	557.84	90	563.39	90.54
565.54	90.58	569.03	90.84	569.46	90.83	569.84	90.82	572.87	91
573.98	91.05	576.32	91.2	582.21	92	582.5	92.03	582.74	92.06
583.6	92.13	589.08	92.68	592.06	93	592.43	93.07	594.41	93.37
599.65	94	601.17	94.15	603.03	94.3	606.08	94.53	607.71	94.67
610.72	95	612.88	95.29	616.04	95.67	617.28	95.82	618.92	96
621.93	96.19	628.48	96.55	634.94	97	637.87	97.18	639.55	97.26
646.17	97.66	647.73	97.76	649.01	97.85	650.26	97.89	651.36	97.85
652.24	97.84	654.78	97.76	655.51	97.73	658	97.69	658.89	97.65
660	97.58	662.14	97.49	662.99	97.44	663.33	97.42	665.17	97.35
666.1	97.31	669.16	97.08	669.4	97.07	670.7	97	671.19	96.97
671.92	96.87	674.21	96.59	676.23	96.29	678.08	96	682.5	95.12
683.08	95	683.27	94.96	683.64	94.89	687.84	94	691.62	93.03
691.73	93	691.97	92.94	695.38	92	696.92	91.57	698.93	91
701.16	90.41	702.69	90	703.84	89.71	706.24	89.13	706.76	89
707.37	88.94	718.72	88	725.99	87.92	726.15	87	726.25	86.89
726.84	86.25	727.05	86	731.14	85.18	731.93	85	732.61	84.98
749.09	84.99	750.13	85	766.44	84.87	772.02	84.59	777.68	84.64
780	84.54	782.75	83.21	785.6	82.17	790.2	81.82	795.4	82.01
800.9	81.42	805.2	82.25	806	84.08	808	84.08	808.5	82.88
810.7	82.88	819.4	83.6	825.5	87.06	829.74	87	831.98	87.74
832.72	88	833.25	88.19	835.52	89	836.49	89.46	837.64	90
839.7	90.96	839.79	91	839.83	91.01	842.06	92	842.4	92.15
844.26	93	844.56	93.14	846.41	94	848.01	94.73	848.61	95
850.46	95.92	850.62	96	850.67	96.02	850.82	96.08	853.12	97
855.24	97.94	855.36	98	856.05	98.29	857.75	99	858.02	99.11
860.24	100	861.29	100.4	862.83	101	865.02	101.79	865.61	102
868.12	102.88	868.45	103	868.53	103.03	869.02	103.16	871.87	103.92
872.4	104	876.84	104.16	879.11	104.27	884.63	104.47	888.19	104.62
894.33	105	896.44	105.15	899.11	105.26	911.75	106	916.61	106.44
918.72	106.62	923.76	107	927.49	107.57	930.37	108	935.43	108.96
935.69	109	935.98	109.06	936.13	109.09	939.26	109.74		

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .08 780 .035 825.5 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 780 825.5 22.08 25.92 28.95 .1 .3
 Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 546.98 89 F
 Left Levee Station= 360.57 Elevati on= 99.99
 Right Levee Station= 806 Elevati on= 84.08

INLINE STRUCTURE

RIVER: StonyBrook
 REACH: StonyBrook RS: 8282

INPUT
 Description: Dam #2 at FEMA AA (HEC2 section 35)
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Distance from Upstream XS = 10.3
 Deck/Roadway Width = 1.8
 Weir Coefficient = 2.6
 Weir Embankment Coordinates num = 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
780	83.77	785.74	83.48	786.04	82.99	794.23	82.52	795	83.19
799.5	83.21	800.46	83.04	804.1	82.76	804.5	83.54	808	84.08

Upstream Embankment side slope = 0 hori z. to 1.0 verti cal
 Downstream Embankment side slope = 0 hori z. to 1.0 verti cal
 Maximum allowable submergence for weir flow = .98
 Elevati on at whi ch weir flow begi ns =
 Weir crest shape = Broad Crested

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8266

INPUT

Description: DS of Dam #2 at FEMA AA (MMI added section)
 Station Elevati on Data num= 262

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	81	51.73	81.53	61.37	82	97.62	82.79	101.11	83
124.82	83.73	130.13	84	145.75	84.57	153.16	85	171.76	85.9
173.77	86	180.11	86.32	189.66	86.81	193.44	87	201.81	87.41
205.85	87.59	211.22	87.83	214.96	88	218.19	88.12	219.89	88.19
240.23	89	249.63	89.23	256.38	89.66	258.4	89.78	261.34	90
262.48	90.09	263.26	90.15	272.52	91	274.38	91.22	282.06	92
285.29	92.48	289.13	92.95	289.47	93	289.68	93.05	293.58	94
296.45	94.69	297.81	95	300.95	95.73	302.28	96	305.82	96.49
309.51	96.88	310.18	96.95	310.81	97	313.69	97.22	315.33	97.3
318.78	97.5	326.8	97.79	327.85	97.85	328.76	97.9	332.65	98
337.24	98.2	343.29	98.36	353.78	98.63	356.97	98.72	362.35	98.84
363.4	98.87	369.46	98.96	375.91	98.95	376.19	98.96	381.9	98.91
382.46	98.9	388.12	98.82	389.19	98.8	389.93	98.77	395.69	98.79
396.46	98.76	398.16	98.74	400.96	98.49	403.58	98.31	404.27	98.26
406.94	98.02	407.01	98.01	407.13	98	411.26	97.56	412.46	97.46
415.66	97	418.86	96.58	422.75	96	423.5	95.89	428.63	95
430.41	94.62	433.05	94	434.13	93.73	437.05	93	437.61	92.86
440.94	92	442.54	91.62	444.99	91	449.33	90.02	449.4	90
449.44	89.99	453.49	89	455.58	88.53	457.71	88	461.99	87.12
462.57	87	463.33	86.84	466.99	86	470.77	85.18	471.5	85
484.5	85.77	485.35	86	509.47	86.02	510.44	86	534.02	85.65
535.16	85.42	535.85	85.56	536.59	85.62	537.61	85.59	540.17	85.34
543.37	85.16	543.79	85.13	544.06	85.11	545.14	85	556.44	84.93
558.14	84.96	561.04	85	572.52	85.17	572.93	85.24	575.38	85.45
576.9	85.69	577.62	85.82	580.23	86	583.19	86.3	584.89	86.42
590.52	87	590.57	87.01	593.62	87.27	598.73	87.85	599.44	87.94
599.6	87.96	599.69	87.97	599.96	88	603.25	88.81	604.58	89
606.7	89.37	609.69	89.75	610.64	89.89	612.03	90	615.6	90.36
618.53	90.59	620.37	90.81	622.75	91	624.51	91.24	626.48	91.45
628.5	91.75	629.25	91.87	629.9	92	634.41	92.87	635.06	93
636.72	93.33	637.14	93.42	639.62	94	643.36	94.71	645.01	95
646.18	95.19	648.9	95.59	652.34	96	654.32	96.16	654.6	96.17
658.09	96.37	662.62	96.39	663.96	96.37	665.97	96.29	667.4	96.26
673.15	96	675.67	95.78	677.26	95.62	679.04	95.41	682.78	95
687.08	94.51	690.58	94	691.66	93.85	693.15	93.61	697.19	93
698.67	92.76	699.12	92.68	701.45	92.26	702.76	92	704.74	91.57
707.43	91	709.22	90.55	711.29	90	712.93	89.56	715	89
725.82	88.44	726.5	88	727.28	87.51	728.11	87	729.54	86.49

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730.7	86	732.07	85.72	735.29	85	742.44	84.54	746.51	84.31
748.87	84.27	749.82	84.25	754.46	84.21	756.75	84.12	760.88	84.14
780.14	84	794.2	84.28	800.2	81.15	803.8	81.15	809	80.59
815.1	80.94	819.8	81.46	826.6	81.63	833.1	83.88	841.2	86.47
843.36	87.78	844.02	88	845.12	88.38	846.94	89	848.05	89.46
849.32	90	851.03	90.8	851.46	91	853.33	91.87	853.61	92
854.51	92.41	855.81	93	856.24	93.19	858	94	858.55	94.25
860.05	95	860.73	95.32	862.2	96	863.61	96.56	864.72	97
865.29	97.23	867.33	98	868.45	98.43	869.97	99	871.57	99.65
872.53	100	875	100.69	875.98	101	878.05	101.6	879.03	101.88
879.49	102	881.14	102.52	882.69	103	885.55	103.43	888.03	104
899.52	104.7	903.79	105	911.13	105.68	914.64	106	916.93	106.21
925.26	107	930.3	107.71	932.3	108	938.54	108.85	939.53	109
941.95	109.34	947.28	110	950.63	110.52	953.82	111	957.44	111.55
960.52	112	961.05	112.14						

Manning's n Values num= 3
 Station Val Sta n Val Sta n Val
 0 .08 794.2 .045 833.1 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 794.2 833.1 140.88 144.4 137.39 .1 .3
 Ineffective Flow num= 1
 Station L Sta R Elev Permanent
 0 604.58 89 F
 Left Levee Station= 381.9 Elevation= 98.91

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8122

INPUT

Description: US of Dam #1 at FEMA Z (MMI added section)
 Station Elevation Data num= 261

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	94.85	.73	94.9	1.31	94.89	3.08	94.84	3.34	94.83
3.66	94.81	5.08	94.68	7.12	94.55	8.95	94.46	12.12	94
12.48	93.94	15.6	93.53	18.71	93.14	19.63	93	21.36	92.75
26.45	92	29.07	91.64	30.37	91.44	33.02	91	35.52	90.55
38.65	90	40.95	89.64	45.02	89	51.77	88.14	53.27	88
54.32	87.88	56.76	87.56	62.55	87	64.88	86.84	77.84	86
78.92	85.94	79.24	85.93	80.51	85.86	88	85.44	92.9	85.18
96.49	85	96.87	84.99	97.15	84.98	97.53	84.97	113.17	84.44
115.25	84.36	123.88	84	143.5	83.45	158.08	83	186.52	83.59
187.11	83.6	189.31	83.61	191.44	83.62	198.59	83.6	223.91	83.93
225.85	84	241.46	84.35	242.3	84.36	246.48	84.43	252.56	84.48
256.01	84.51	257.52	84.54	259.27	84.57	261.3	84.61	263.7	84.68
264.9	84.7	270.66	84.89	271.11	84.9	273.82	85	284.68	85.85
286.82	86	288.04	86.13	295.97	87	296.27	87.02	297.09	87.08
308.69	87.89	310.32	88	327.47	88.02	327.53	88.03	331.76	88
338.47	87.92	338.97	87.93	341.78	87.97	343.22	88	354.56	88.25
355.15	88.29	359	88.71	359.47	88.74	359.93	88.78	362	89
371.53	89.53	376.73	90	386.24	90.71	390.75	91	391.29	91.04
391.62	91.06	393.22	91.16	404.45	91.91	406.85	92	413.04	92.29
415.07	92.35	416.16	92.4	417.86	92.48	420.89	92.63	427.57	93
427.71	93.01	436.93	93.45	447.18	94	456.06	94.64	460.21	95
478.52	94.74	479.13	94	479.3	93.8	479.87	93	480.49	92.3
480.77	92	481.57	91.46	482.25	91	482.42	90.89	483.56	90
483.74	89.87	484.86	89	486.08	88.06	486.17	88	486.23	87.96
487.62	87	489.58	86.02	489.62	86	489.67	85.98	491.71	85
493.15	84.63	494.39	84.31	495.64	84	555.89	83.58	571.74	83

StonyBrookDari en1-ex. txt

655.88	83.1	656.44	83.16	658.39	83.38	663.9	84	666.7	84.96
666.81	85	669.2	85.43	669.91	85.52	671.06	85.65	672.22	85.76
674.83	86	675.63	86.09	676.18	86.12	679.45	86.35	681.79	86.28
686.21	86.9	686.59	86.92	687.36	87	688.95	87.05	693.02	87.11
693.82	87.15	697.54	87.21	698.75	87.24	700.76	87.25	702.72	87.26
706.45	87.49	709.18	87.51	709.52	87.63	710.05	87.76	711.03	87.67
712.14	87.7	713.43	87.58	718.22	87	719.98	86.8	726.74	86
729.72	85.65	734.95	85	740.31	84.34	742.3	84	747.3	83.14
748.16	83	749.15	82.94	759.68	82.41	762.31	82.29	767.27	82
789.56	82.05	792.06	79.89	795.16	78.95	797.46	77.44	801.76	77.15
807.46	77.27	813.56	77.52	820.26	78.49	826.16	79.6	830.96	80.47
834.86	80.84	837.56	80.5	841.26	79.82	844.86	80.38	847.56	83.39
853.72	84	855.9	84.25	856.51	84.36	857.43	84.54	861.37	85
867.37	85.62	869.11	86	871.7	86.7	872.89	87	875.92	87.82
876.59	88	877.54	88.24	880.39	89	882.82	89.62	884.24	90
885.6	90.35	888.16	91	890.2	91.44	892.87	92	894.8	92.42
897.44	93	900.97	93.78	902	94	902.93	94.2	906.62	95
913.71	95.8	915.79	96	923.59	96.87	924.66	97	926.36	97.2
933.41	98	934.17	98.09	941.98	99	947.33	99.64	949.14	99.86
950.4	100	955.69	100.63	958.64	101	959.25	101.08	966.91	102
967.87	102.09	968.35	102.17	969.93	102.38	974.95	103	977.18	103.28
979.52	103.54	983.49	104	984.95	104.23	989.59	105	993.56	105.49
998.79	106	1001.18	106.11	1003.14	106.17	1011.98	106.55	1019.45	106.86
1021.94	107	1022.86	107.14	1029.81	108	1047.38	108.92	1048.83	109
1081.31	108.41	1085.18	108.21	1088.42	108	1088.95	107.95	1094.46	107.64
1095.73	107.63	1098.52	107.6	1101.76	107.61	1102.25	107.62	1102.66	107.63
1105.85	107.8								

Manning's n	Values	num=	5						
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.1	747.3	.06	789.56	.035	847.56	.06	923.59	.1

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	789.56	847.56		37.19	40.02			
Left Levee		Station=	478.52	Elevation=	94.74		.3	.5
Blocked Obstructions		num=	2					
Sta L	Sta R	Elev	Sta L	Sta R	Elev			
918.59	961.14	111.85	706.09	730.06	105.2			

INLINE STRUCTURE

RIVER: StonyBrook
 REACH: StonyBrook RS: 8094

INPUT

Description: Dam #1 - FEMA Z (HEC2 section 34)

Distance from Upstream XS = 28

Deck/Roadway Width = 2

Weir Coefficient = 2.6

Weir Embankment Coordinates	num =	10							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
789.56	82.05	798	80.8	799.52	80.31	804.68	80.02	807.74	80.78
814.04	80.19	828.24	80.44	836.44	82.05	851.54	82.79	858.5	83.39

Upstream Embankment side slope = 0 hori z. to 1.0 verti cal
 Downstream Embankment side slope = 0 hori z. to 1.0 verti cal
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Weir crest shape = Broad Crested

CROSS SECTION

StonyBrookDari en1-ex. txt

RIVER: StonyBrook
 REACH: StonyBrook

RS: 8082

INPUT

Description: DS of Dam #1 at FEMA Z (MMI added section)
 Station Elevation Data num= 255

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	95.88	2.42	95.68	4.11	95.52	8.78	95	12.9	94.35
18.7	94	20.32	93.85	21.36	93.71	22.72	93.53	24.48	93.26
25.94	93	29.81	92.28	31.32	92	33.34	91.73	36.98	91.29
39.29	91	42.05	90.67	47.59	90	49.33	89.79	55.29	89.01
55.38	89	60.18	88.33	62.22	88	68.29	87.41	71.9	87
76.29	86.69	79.78	86.47	87.19	86	89.51	85.87	90.62	85.82
91.49	85.76	92.68	85.69	96	85.47	97.7	85.35	105.34	85
106.61	84.97	106.83	84.96	107.15	84.95	107.58	84.93	108.94	84.85
112.37	84.68	119.04	84.31	124.56	84	143.18	83.04	143.95	83
144.89	82.98	172.94	82.56	174.68	82.53	178.77	82.51	185.93	82.45
190.44	82.42	194.77	82.35	198.31	82.36	199.54	82.35	212.07	82.52
217.92	82.74	218.95	82.75	219.81	82.78	221.86	82.82	222.9	82.84
224.29	82.87	225.88	82.88	226.74	82.89	237.75	82.84	244.59	83
252.99	83.18	265.95	83.92	267.27	83.99	269.09	84	279.42	83.83
283.39	84	291.93	84.31	293.5	84.34	295.5	84.4	296.66	84.42
301.86	84.54	303.09	84.52	306.5	84.54	312.05	84.59	314.48	84.66
318.17	84.76	322.52	84.92	324.39	85	327.13	85.15	328.09	85.18
335.29	85.59	338.45	85.67	345.44	86	360.72	86.56	361.73	86.58
363.74	86.6	377.99	86.95	378.99	87	379.52	87.17	382.05	88
385.23	88.98	385.44	89	387.06	89.16	389.45	89.43	391.92	89.72
394.04	90	395.54	90.19	398.02	90.53	400.01	90.82	401.18	91
405.34	91.6	408.17	92	408.46	92.04	409.21	92.12	413.08	92.61
416.53	93	417.98	93.16	420.86	93.49	425.92	94	426.87	94.1
428.82	94.24	430.22	94.34	434.51	94.71	436.68	94.88	437.87	95
474.75	94.7	476.27	94	477.24	93.56	478.52	93	480.2	92.25
480.75	92	481.17	91.72	482.29	91	483.21	90.36	483.77	90
484.86	89.42	485.67	89	487.66	88.19	488.07	88.03	488.15	88
488.31	87.95	490.92	87	494.4	86.23	495.1	86.07	495.42	86
499.46	85.12	499.92	85	501.42	84.75	506.06	84	507.34	83.85
509.73	83.72	517.25	83	536.51	82.62	542.37	82.53	562.41	82
630.64	81.73	630.87	81.72	638.54	81.77	638.72	81.76	639	81.75
639.37	81.74	646.01	81.76	649.32	81.83	649.85	81.82	651.11	81.79
656.59	82	670.77	82.29	671.24	82.31	671.82	82.33	678.29	82.46
681.2	82.48	683.1	82.5	690.09	82.54	694.09	82.55	698.95	82.63
705.08	82.49	706.25	82.48	709.23	82.3	710.01	82.31	711.65	82.27
712.77	82.25	713.35	82.23	719.93	82.04	720.88	82	722.74	81.96
727.78	81.9	732.55	81.86	734.51	81.83	736.69	81.76	740.23	81.71
745.95	81.43	746.84	81.4	761.8	81.18	765.6	76.88	767.4	76.47
769.7	77.15	772.8	77.78	779.4	77.41	781.1	77.73	781.3	78.08
785.1	79.4	801	81.48	803.2	82	804.72	82.1	815.19	83
815.24	83.01	820.16	83.72	823.17	84	824.28	84.07	834.2	85
835.07	85.1	843.74	86	845.83	86.3	850.85	87	853.99	87.55
856.43	88	860.2	88.66	862.02	89	862.83	89.16	864.6	89.44
867.94	90	874.09	90.89	874.73	91	877.58	91.98	877.64	92
877.73	92.03	880.84	93	880.96	93.03	884.45	94	889.35	94.53
895.39	95	898.18	95.29	901.79	95.67	905.29	96	911.44	96.72
913.85	97	915.69	97.22	922.55	98	928.42	98.67	931.31	99
932.8	99.17	934.68	99.39	935.49	99.47	936.88	99.61	939.89	100
943.77	100.52	947.41	101	950.17	101.22	950.82	101.26	951.79	101.34
953.85	101.53	958.69	102	965.7	102.69	970.11	103	971.89	103.25
978.66	104	979.16	104.08	979.31	104.11	979.84	104.19	981.38	104.47

Manning's n Values num= 5
 Sta n Val Sta n Val Sta n Val Sta n Val Sta n Val

StonyBrookDari en1-ex. txt

0 .1 474.75 .08 761.8 .045 785.1 .06 905.29 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 761.8 785.1 27.99 25.6 24.67 .3 .5
 Left Levee Station= 474.75 Elevati on= 94.7
 Blocked Obstructi ons num= 2
 Sta L Sta R Elev Sta L Sta R Elev
 897.05 937.87 111.85 377.01 431.63 103.3

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 8056

INPUT

Description: MMI additional section at top of rip-rap channel
 higher

Station		Elevation		Data		contraction/		expansion due to		contraction of channel	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	95.73	1.92	95.72	13.26	95.02	13.54	95	20.14	94.72		
34.42	94.66	38.4	94.21	38.47	94.22	39.16	94.21	41.08	94		
41.99	93.83	43.41	93.5	45.06	93.14	45.86	93	48.73	92.49		
50.98	92.13	51.66	92	52.98	91.85	55.45	91.5	56.91	91.29		
57.59	91.17	58.77	91	60.55	90.71	65	90	68.31	89.44		
70.9	89	76.22	88.14	77.09	88	79.22	87.59	82.58	87		
83.69	86.91	90.13	86	96.84	85.59	106.16	85	109.81	84.76		
121.69	84	128.36	83.59	138.02	83	140.33	82.93	143.25	82.85		
152.56	82.6	157.6	82.47	162.05	82.35	170.39	82.16	177.82	82		
180.11	81.95	184.85	81.86	188.26	81.81	195.87	81.71	210.75	81.74		
216.5	81.6	221.66	81.78	222.43	81.76	229.1	81.99	229.35	82		
238.98	82.14	239.18	82.15	242.26	82.18	246.86	82.22	247.3	82.23		
253.2	82.26	254.79	82.27	258.55	82.31	278.24	82.38	283.75	82.51		
288.22	82.64	292.3	83	302.26	83.29	305.45	83.35	313.31	83.41		
318.27	83.62	322.05	83.75	325.66	83.83	331.11	84	334.76	84.14		
335.29	84.16	338.74	84.17	339.18	84.2	340.75	84.28	344.85	84.47		
347.61	84.63	349.57	84.76	352.8	84.93	353.9	85	356.96	85.18		
359.78	85.46	362.29	85.68	364.69	86	369.53	86.77	369.99	86.83		
371.47	87	372.82	87.17	375.81	87.47	377.07	87.61	380.01	88		
383.98	88.49	387.43	89	389.68	89.34	394.14	90	396.93	90.44		
400.57	91	403.3	91.41	407.21	92	411.36	92.44	413.91	92.8		
415.47	93	419.09	93.36	425.77	94	428.85	94.31	432.67	94.68		
435.94	95	451.43	95.84	460.95	95.6	462.92	95.61	466.04	95.33		
466.72	95.3	469.88	95	473.11	94.68	478.92	94.11	479.13	94.09		
480.08	94	480.79	93.8	483.63	93	484.87	92.54	487.19	92		
489.79	91.43	491.57	91	494.23	90.46	496.09	90	498.77	89.22		
499.45	89	500.04	88.82	502.36	88	505.12	87.22	505.84	87		
509.25	86.12	509.72	86	509.96	85.94	510.88	85.75	514.33	85		
516.59	84.5	519.11	84	522.45	83.41	524.69	83	531.72	82.17		
532.88	82	566.05	81.89	576.73	82	588.93	81.91	633.47	81		
703.29	81.42	706.48	81.44	719.88	81.03	720.6	81	734.04	80.75		
734.83	80.76	736.69	80.73	738.34	80.62	738.96	80.57	756.6	80.52		
762.2	77.99	765.9	77.17	768.6	77.21	770.6	77.14	773.2	78.01		
778.74	79.46	779.13	80	780.34	80.19	785.42	80.99	785.49	81		
794.97	81.53	801.7	82	812.65	82.66	817.45	82.93	817.85	82.94		
818.33	83	819.98	83.15	829.13	84	834.78	84.52	840.24	85		
844.22	85.54	847.64	86	850.1	86.36	854.43	87	857.53	87.54		
860.22	88	865.1	88.86	865.87	89	867.02	89.21	871.36	90		
874.66	90.49	878.59	91	880.78	91.54	883.92	92	885.97	92.71		
887.84	93	892.38	93.7	893.18	93.83	894.31	94	894.75	94.04		
894.86	94.05	899.28	94.37	901.37	94.52	904.05	94.8	905.2	94.92		
905.76	95	911.02	95.56	913.87	95.81	915.62	96	923.21	96.9		

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924.21	97	929.84	97.74	931.63	98	934.61	98.39	938.97	99
939.72	99.1	946.35	100	947.54	100.16	948.09	100.22	948.86	100.29
951.75	100.61	954.39	100.74	956.22	100.89	957.97	101	962.22	101.16
964.11	101.36	965.36	101.52	968.2	102	972.18	102.87	972.98	103
976.26	103.32	977.65	103.44	978.8	103.51	979.82	103.57	985.77	103.82

Manning's n Values

num=	4
Sta n Val	Sta n Val
0 .1	505.12 .08
	756.6 .035
	780.34 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 756.6 780.34 380.81 406.53 375.83 .3 .5

Left Levee Station= 451.43 Elevation= 95.84

Blocked Obstructions num= 1

Sta L	Sta R	El ev
381.42	391.01	103.3

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook

RS: 7650

INPUT

Description: FEMA Y (HEC2-33)

Station	El evation	Data	num=	246					
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	92.47	5.22	92.59	7.82	92.67	9.47	92.69	10.93	92.7
14.61	92.65	16	92.67	17.02	92.7	28.26	92.8	30.81	92.82
35.01	92.81	35.64	92.79	37.71	92.75	40.01	92.65	40.77	92.59
43.95	92.43	46.4	92.24	48.68	92.1	50.17	92	60.21	91.31
64.72	91	68.15	90.74	75.31	90	77.16	89.76	79.72	89.46
82.57	89.07	83.05	89	83.32	88.95	88.22	88	92.9	87.2
94.03	87	94.9	86.88	99.57	86.2	100.92	86	101.3	85.93
107.27	85	108.7	84.63	111.63	84	114.13	83.5	116.34	83
122.62	82.01	122.67	82	123.08	81.96	132.49	81	133.3	80.95
136.63	80.73	142.95	80.31	147.39	80	155.98	79.43	162.79	79
164.46	78.9	172.98	78.33	176.36	78.11	177.06	78.07	177.81	78
180.14	77.72	186.11	77	191.44	76.79	200.65	76.41	207.8	76.12
210.8	76	232.65	75.69	240.94	75.62	252.22	75.58	259.11	75.59
263.68	75.61	268.14	75.63	273.83	75.65	275.79	75.66	288.8	75.76
297.01	75.68	297.84	75.69	301.3	75.62	306.25	75.49	306.68	75.48
315.04	75.41	318.55	75.48	318.99	75.47	321.26	75.53	322.76	75.55
334.27	76	337.17	76.09	341.29	76.21	341.66	76.23	347.51	76.35
351.28	76.4	351.74	76.42	353.91	76.44	354.61	76.46	357.37	76.48
359.6	76.56	364.3	76.66	366.27	76.73	370.23	76.82	370.86	76.83
371.57	76.84	379.97	76.98	380.7	77	383.3	77.12	384.14	77.16
384.47	77.19	384.69	77.2	385.65	77.21	395.14	77.71	396.93	77.72
399.95	77.58	401.75	77.51	403.29	77.41	404.61	77.4	406.28	77.32
409.19	77.36	414.14	77.29	414.77	77.28	416.04	77.21	418.76	77.28
419.9	77.29	422.82	77.23	423.28	77.19	430.65	77	456.16	77.12
457.42	77.16	507.14	77.03	507.32	77.02	508.56	77	529.41	76.55
533.3	76.49	540.92	76.21	544.73	76.11	545.09	76.1	549.6	76.01
550.13	76	558.12	76.75	558.84	77	561.39	77.61	563.24	78
579.63	78.33	580.26	78.34	581.64	78.35	583.27	78.38	615.08	78.94
617.15	79	659.07	78.15	661.38	78.09	662.43	78.07	665.89	78
692.86	77.31	693.52	77.29	695.07	77.24	700.69	77.04	701.65	77
702.53	76.91	706	76.97	714.3	74.99	715.65	72.54	719	71.32
723.2	70.68	726	70.55	729.8	71.6	731.7	72.82	744.9	76.02
749.56	76.18	761.96	76.15	762.86	76.16	768.63	76.18	769.4	76.19
771.6	76.22	772.56	76.21	774.22	76.24	774.64	76.25	775.43	76.27
776.19	76.31	778.38	76.41	780.36	76.42	784.21	76.59	791.98	76.58
792.3	76.6	795.6	76.73	800.03	76.71	800.38	76.72	809.97	77

StonyBrookDari en1-ex. txt

865.98	77.18	867.39	77.21	870.64	77.29	872.46	77.36	892.1	77.74
893.32	77.78	893.9	77.8	903.08	78	926.12	78.91	926.97	79
929.09	79.16	932.37	79.54	936.79	80	938.56	80.17	941.61	80.4
951.12	81	961.91	81.38	962.79	81.43	965.53	81.54	968.08	81.66
973.53	81.94	974.58	82	1000.64	81.98	1033.94	81.99	1037.76	82
1046.39	82.29	1047.38	82.6	1048.63	83	1050	83.45	1051.63	84
1052.91	84.41	1054.7	85	1055.78	85.34	1057.67	86	1058.55	86.17
1061.32	86.38	1067.61	87	1070.59	87.23	1071.07	87.25	1073.82	87.28
1080.2	87.64	1090.11	88	1096.76	88.27	1100.66	88.55	1103.21	88.6
1112.97	89	1119.93	89.29	1134.51	90	1139.41	90.16	1141.44	90.23
1150.67	90.51	1162.05	91	1163.36	91.06	1163.74	91.09	1164.23	91.14
1171.96	92	1173.82	92.2	1180.5	93	1183.88	93.42	1190.28	94
1201.51	94.68	1205.95	95	1210.5	95.51	1215.13	95.96	1215.54	96
1221.14	96.62								

Manning's n Values	num=	3
Sta n Val	Sta n Val	Sta n Val
0 .1	706 .035	744.9 .06

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
706	744.9	224.92	199.94	169.2	.1	.3	
Blocked Obstructions	num=	1					
Sta L	Sta R	Elev					
622.22	661.15	90.2					

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 7450

INPUT

Description: MMI additional cross section

Station	Elevation	Data	num=	172					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	84.81	.88	84.74	17.25	84	20.25	83.86	23.57	83.87
24.25	83.86	27.02	83.78	30.04	83.7	32.45	83.63	46.81	83
50.23	82.56	54.95	82	62.11	81.14	63.19	81	65.32	80.74
68.96	80.34	70.73	80.17	72.25	80	73.25	79.9	76.4	79.75
78.23	79.71	85.18	79.37	86.33	79.32	87.06	79.28	88.28	79.19
90.74	79.2	93.81	79.35	97.5	79.33	101.12	79.32	106.91	79.33
108.91	79.31	109.44	79.3	113.98	79.22	114.41	79.21	115.26	79.16
115.81	79.15	128.06	79.16	128.64	79.14	132.19	79.11	132.74	79.09
137.15	79.04	139.52	79.03	146.96	79	160.44	78.86	161.13	78.83
161.38	78.82	162.24	78.76	164.09	78.66	167.44	78.44	168.69	78.36
170.16	78.29	172.39	78.22	174.23	78.07	174.39	78.06	176.58	78
206.76	77.84	207.48	77.82	212.38	77.65	217.4	77.55	218.44	77.5
229.7	77.15	230.91	77.11	235.16	77	235.57	76.98	236.56	76.91
243.9	76.39	245.02	76.3	248.85	76	257.53	75.49	259.26	75.39
262.29	75.24	264.57	75.12	266.74	75.03	267.02	75.02	269.77	75.04
274.44	75.02	277.65	75.04	282.75	75.1	285.15	75	314.69	75.08
320.07	75.15	321.63	75.18	340.24	76	428.23	75.02	430.52	75
435.72	74.7	444.52	74	472.41	74.73	473.34	75	474.55	75.13
479.96	75.85	481.05	76	507.5	75.4	510.01	75	583.7274.	23824
587.42	74.2	595	74.36	599.1	71.72	601.5	70.51	607.6	70.6
614	71.19	621.1	71.76	624.5	71.83	631.2	73.87	631.57	74.34
637.66	74.5	644.79	74.66	659.86	75	666.09	75.28	670.76	75.42
671	75.45	673.21	75.64	678.3	76	698.52	76.79	704.23	77
730.09	77.98	730.57	78	751.58	78.87	752.83	78.91	753.55	78.94
755.17	79	758.74	79.36	766.16	80	773.48	80.42	776.49	80.61
785.26	81	828.45	80.86	846.67	80.7	855.37	80.69	857.8	80.7
871.28	80.43	872.77	80.42	874.71	80.4	876.34	80.37	888.21	80.12
889.57	80.09	893.06	80.03	894.96	80.02	896.09	80.03	897.75	80.06

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985.44	75.79	986.5	75.83	987.87	75.86	994.22	75.95	996.73	75.98
997.88	76	1008.34	76.18	1009.67	76.19	1009.99	76.2	1020.83	76.4
1021.37	76.41	1025.03	76.47	1030.89	76.57	1037.96	76.68	1042.07	76.76
1047	76.88	1050.03	76.97	1050.93	77	1063.96	77.59	1071.49	78
1100.07	78.85	1104.73	79	1106.36	79.05	1109.78	79.11	1112.31	79.17
1120.32	79.36	1147.72	80	1155.98	80.26	1163.56	80.48	1181.49	81
1187.86	81.28	1200.37	82	1205.78	82.32	1212.79	82.73	1216.77	83
1224.41	83.98	1224.57	84	1224.89	84.08	1228.48	85	1230.56	85.66
1231.62	86	1234.57	86.99	1234.59	87	1234.65	87.02	1237.15	87.9
1237.48	88	1238.39	88.23	1241.38	89	1244	89.62	1245.28	89.89
1245.83	90	1250.02	90.85	1250.88	91	1253.5	91.44	1255.69	91.71
1258.07	92	1262.67	92.62						

Manning's n Values	num=	4							
Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val
0 .06	493	.035	536.73	.06	692.87	.1			
Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.		
493	536.73	37.3	249.07	282.69	.1	.3			
Blocked Obstructions	num=	1							
Sta L	Sta R	El ev							
701.61	747.08	92.55							

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 6766

INPUT

Description: MMI additional section

Station	Elevation	Data	num=	274						
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta
0	90.27	1.02	90.17	1.56	90.16	3.94	90.06	4.35	90	
5.27	89.88	5.55	89.82	8	89.28	9.25	89	11.32	88.53	
13.68	88.01	13.7	88	16.5	87.28	16.91	87.18	17.6	87	
19.69	86.45	21.36	86	23.25	85.56	25.83	85	26.65	84.82	
30.73	84	32.17	83.84	34.69	83.55	36.64	83.36	39.03	83.12	
39.69	83.05	40.1	83	48.36	82.02	48.53	82	56.36	81.19	
58.22	81	59.38	80.9	61.3	80.67	66.02	80	66.43	79.89	
69.01	79	71.12	78.31	72.13	78	83.28	77.75	89.76	77.26	
90.27	77.23	93.24	77	98.73	76.57	106.14	76	109.93	75.86	
130.91	75	140.67	74.32	143.79	74	147.11	73.86	148.74	73.8	
149.14	73.78	150.9	73.68	156.5	73.49	158.92	73.36	159.83	73.33	
162.03	73.21	165.48	73	167.39	72.95	175.01	72.74	179.13	72.63	
183.03	72.54	184.97	72.51	186.65	72.47	190	72.42	193.05	72.38	
196.03	72.35	199.67	72.37	207.56	72.35	220.66	72.29	227.11	72.24	
248.01	72.03	250.96	72	261.21	72.04	262.3	72.05	273.11	72.18	
281.78	72.29	283.48	72.32	288.58	72.37	289.85	72.39	290.75	72.4	
293.33	72.42	296.3	72.44	299.44	72.45	313.15	72.69	318.06	72.7	
320.67	72.71	332.55	72.69	336.58	72.68	357.41	72.36	358.48	72.35	
362.81	72.33	365.5	72.32	366.53	72.3	367.84	72.29	376.71	72.07	
377.39	72.06	381.7	72.09	389.94	72.08	394.18	72.16	406.31	72.19	
411.74	72.14	412.32	72.15	416.24	72	423.72	72.08	431.42	72.45	
432.74	72.38	432.96	72.39	434.1	72.35	437.56	72.12	439.24	72.05	
441.07	72	443.6	71.88	448.51	71.72	449.13	71.75	452.1	71.45	
452.85	71.39	453.14	71.37	454.98	71.21	460	71.07	463.15	69.38	
468.95	68.05	472.73	68.52	477.16	68.31	480.49	69.36	480.49	71.98	
482.49	71.98	489.73	72	490.67	72.06	491.37	72.11	493.91	72.32	
495.06	72.41	496.25	72.49	497.59	72.51	499.52	72.56	500.79	72.53	
504.02	72.73	506.01	72.75	506.42	72.79	508.42	73	510.72	73.06	
511.02	73.08	518.12	73.28	518.73	73.32	527.39	74	537.88	74.19	
541.83	74.26	542.92	74.27	543.81	74.3	545.61	74.34	546.51	74.36	

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550.75	74.47	553.26	74.5	556.82	74.47	558.35	74.44	559.75	74.43
564.11	74.48	565.43	74.42	571.1	74.34	574.07	74.28	575.6	74.23
583.16	74.07	583.72	74.06	583.96	74.05	586.36	74	595.27	73.8
596.05	73.79	600.12	73.76	602.8	73.77	604.44	73.72	606.97	73.74
617.03	73.84	618.26	73.85	619.46	73.78	621.34	73.83	622.16	73.82
627.6	73.79	632.28	73.76	634.98	73.68	636.99	73.75	649.86	73.68
650.62	73.7	651.63	73.76	654.61	73.77	655.78	73.8	660.48	73.99
660.66	74	667.23	74.19	668.9	74.27	673.22	74.48	676.81	74.71
680.34	74.87	684.2	75	741.56	74.86	748.32	74	752.66	73.24
753.95	73	821.71	73.84	823.66	74	825.48	74.18	829.78	74.54
834.95	75	836.44	75.16	844.44	76	849.72	76.31	854.71	76.53
858.96	76.64	860.4	76.69	860.98	76.71	873.74	77	875.51	77.04
883.88	77.02	885.11	77.03	885.86	77.04	888.65	77.1	888.93	77.11
890.9	77.18	891.75	77.2	894.26	77.33	908.17	77.58	920.83	78
956.2	78.04	956.58	78.05	957.67	78.12	958.08	78.13	959.02	78.14
959.86	78.19	981.63	78.82	989.28	79	1016.82	79.15	1029.84	80
1038.75	80.73	1042.56	81	1050.85	81.79	1052.77	82	1069.26	82.7
1070.31	82.82	1072.67	83	1075.14	83.14	1076.75	83.29	1079.77	83.52
1083.85	84	1097.71	84.69	1099.49	84.66	1102.63	84.75	1103.93	84.71
1104.88	84.72	1112.4	85	1116.05	85.13	1117.92	85.23	1119.28	85.28
1126.54	85.57	1131.09	85.68	1133.65	85.77	1134.96	85.84	1139.18	86
1144.31	86.2	1145.15	86.23	1152.67	86.58	1157.96	86.79	1160.42	86.97
1160.75	87	1162.77	87.43	1165.51	88	1168.8	88.57	1170.87	89
1171.98	89.19	1175.8	90	1176.27	90.12	1179.9	91	1180.91	91.24
1184.07	92	1188.03	92.99	1188.08	93	1190.44	93.61		

Manning's n Values	num=	5
Sta n Val	Sta n Val	Sta n Val
0 .06	460 .035	480.49 .06
		558.35 .1
		741.56 .07

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
460	480.49	227.67	416.64	120.84	.1	.3	
Blocked Obstructions	num=	3					
Sta L	Sta R	El ev	Sta L	Sta R	El ev	Sta L	Sta R
627.96	698.87	89.7	710.85	729.26	82.1	589.72	609.15
							82

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 6349

INPUT

Description: FEMA W - US section of West Avenue (HEC2-31)

Station	Elevation	Data	num=	194					
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	92.11	1.06	92	3.57	91.8	7.65	91.47	13.62	91
15.67	90.9	18.69	90.8	32.38	90.27	42.84	90	44.33	89.94
44.75	89.92	45.79	89.87	51.07	89.61	53.41	89.47	61.51	89
61.96	88.91	62.58	88.81	65.14	88.31	67.27	88	68.13	87.85
73.14	87.1	73.68	87.02	73.79	87	74.26	86.93	77.56	86.43
79.27	86	82.68	85.17	83.4	85	87.24	84.02	87.33	84
91.43	83.05	91.65	83	95.26	82.22	96.31	82	102.21	81.38
106.3	81	107.8	80.47	108.88	80	110.13	79.42	111.02	79
111.99	78.56	113.46	78	115.33	77.43	116.93	77	119.79	76.45
122.45	76	123.98	75.77	127.42	75.37	129.29	75.14	130.03	75
136.75	74.35	140.02	74	140.6	73.97	140.97	73.96	141.3	73.95
150.39	73.57	154.79	73.3	156.55	73.2	159.96	73	163.71	72.61
165.39	72.41	167.07	72.28	170.32	72.34	174.5	72.26	175.11	72.23
175.47	72.21	176.39	72.19	178.2	71.91	186.9	68.5	188.5	67.17
192.5	67.1	196.2	67.54	198.5	68.33	209.6	71.09	212.72	71.16
213.54	71.17	216.31	71.24	225.29	71.39	228.6	71.49	230.85	71.57
234.27	71.62	235.58	71.26	236.26	71.32	236.99	71.68	238.94	71.7

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240.01	71.73	241.63	71.72	246.75	72	280.07	72.03	281.34	72.06
314.41	73	325.37	73.72	328.66	74	341.43	74.45	345.06	74.44
345.2	74.43	346.53	74.46	347.25	74.49	364.3	74.41	368.51	74.48
373.82	74.51	378.79	74.59	391.45	75	570.03	75.85	572.22	75.9
575.17	75.95	575.75	75.96	577.69	76	616.32	75.85	624.03	75
628.81	74.48	633.49	74	661.9	74.6	669.43	75	681.08	75.85
683.81	75.99	683.92	76	694.16	76.76	696.9	77	698.89	77.12
700.68	77.24	707.8	77.7	712.13	78	713.07	78.08	723.88	79
804.74	78.76	808.51	78.65	835.32	78	872.07	77.42	878.86	77.11
881.68	77	883.27	76.87	884.69	76.79	885.86	76.72	888.27	76.66
893.35	76.42	896.16	76.45	897.56	76.5	900.77	76.53	904.94	76.78
907.69	77	911.97	77.17	917.99	77.72	919.36	77.87	921	78
925.22	78.47	928.3	78.85	929.49	79	935.43	79.93	935.95	80
937.54	80.23	942.69	81	944.93	81.31	949.83	82	953.54	82.44
957.55	83	962.56	83.44	968.03	84	972.79	84.41	979.43	85
983.2	85.34	986.28	85.59	987.85	85.7	993.35	86	998.56	86.44
1004.32	87	1004.56	87.02	1015.36	88	1019.53	88.4	1020.91	88.5
1023.54	88.67	1024.91	88.68	1026.43	88.77	1033.68	89	1037.07	89.15
1037.15	89.17	1037.33	89.2	1038.35	89.32	1041.99	89.61	1045.21	90
1051.72	90.78	1052.71	90.95	1052.97	90.98	1053.13	91	1067.98	91.59
1068.66	91.68	1069.98	91.79	1071.29	91.86	1073.22	92	1078.91	92.37
1079.89	92.46	1082.89	92.69	1086.58	93	1087.37	93.06		

Manning's n Values	num=	4
Sta n Val	Sta n Val	Sta n Val
0 .08	175.47	.035 209.6 .04 341.43 .12

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.	
175.47	209.6	40.12	62.89	51.88		.3	.5	
Blocked Obstructions	num=	4						
Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
455.61	474.22	82.32	379.5	408.41	89.07	585.27	624.54	83.2
738.12	775.43	99.6						

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 6286

INPUT

Description: US face of West Avenue Bridge (HEC2-31.1)

Station	Elevation	Data	num=	140					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	85.33	.31	85.29	2.41	85	6.09	84.19	6.95	84
7.5	83.88	11.38	83	11.53	82.97	16.28	82	25.78	81.1
26.37	81.05	27.12	81	35.65	80.16	37.83	80	38.13	79.94
42.89	79	43.58	78.83	44.82	78.53	46.54	78.17	47.34	78
51.6	77.07	52.01	77	56.3	76.51	58.11	76.33	60.6	76
62.63	75.8	64.25	75.61	66.98	75	72.98	74.9	73.92	74.85
77.04	74.67	80.33	74.62	82.84	74.59	84.43	74.17	86.98	74.6
90.31	74.67	93.97	74.74	95.12	74.75	99.92	74.56	100.24	74.55
100.42	74.54	105.85	74.37	108.28	74.27	110.54	74.25	112.15	74.19
115.33	74.16	116.96	74.06	117.34	74	118.8	73.28	123.4	73.25
124.15	73.25	129.4	68.24	134.7	67.32	139.2	67.57	143.5	67.52
146.5	68.3	154.2	71.43	158.57	71.51	161.02	72	166.23	72.16
167.24	72.19	167.74	72.21	169.22	72.27	176.87	72.82	185.06	73
187.51	73.27	188.58	73.33	189.55	73.37	189.72	73.38	191.64	73.49
192.03	73.5	194.73	73.61	203.16	73.77	204.5	73.8	205.55	73.81
211.36	73.82	211.97	73.75	215.63	73.71	217.5	73.69	220.77	73.79
221.77	73.78	229.23	73.73	231.59	74	233.38	74.23	233.57	74.22
235.03	74.17	236.25	74.19	236.89	74.2	239.12	74.26	251.31	74.7
260.51	75	417.33	75.06	417.95	75.07	418.85	75.09	440.05	75.48

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444.29	75.54	448.6	75.62	454.34	75.69	467.85	75.9	468.4	75.91
474.13	76	509.05	75.69	509.38	75.67	522.27	75.8	523.59	75.78
525.41	75.41	526.45	75.29	529.37	75	561.77	75.19	563.94	75.39
566.65	75.77	569.47	76	569.84	76.1	572.96	76.11	580.65	76.38
585.27	76.56	588.1	76.67	596.14	77	608.07	77.05	608.32	77.07
610.97	77.34	618.05	77.83	618.5	77.87	620.28	78	623.28	78.12
631.97	78.34	637.73	78.39	639.59	78.4	642.03	78.45	646.46	78.44
647.48	78.45	649.83	78.52	654.92	78.51	661.29	78.58	667.16	78.65
671.19	78.76	679.96	78.97	680.05	78.98	681.28	79	693.58	79.1

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .06 124.15 .035 154.2 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 124.15 154.2 71.29 60.46 60.15 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 116.72 76.53 F
 155.17 600 75 F

BRI DGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 6255

INPUT

Description: West Avenue Bri dge
 Distance from Upstream XS = 10.6
 Deck/Roadway Width = 41
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates num= 29

Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
0	84.51			7.13	84			19.37	83		
34.51	82			53.79	81			73.17	80		
97.14	79			119.8	77.36			119.8	80.38		
125.46	80.17	69.03	127.32	80.1	71.55	129.43	79.9	73.08			
131.13	79.85	73.82	133.96	79.8	74.49	135.46	79.75	74.53			
138.28	79.7	74.12	140.69	79.66	73.29	143.1	79.58	71.69			
144.57	79.54	70.04	144.7	79.54	68.29	150.57	79.35				
150.57	76.53		203.52	76		226.83	75				
425.81	75		490.65	76		556.2	77				
608.1	78		650	78							

Upstream Bridge Cross Section Data

Station Elevati on Data num= 142

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	85.33	.31	85.29	2.41	85	6.09	84.19	6.95	84
7.5	83.88	11.38	83	11.53	82.97	16.28	82	25.78	81.1
26.37	81.05	27.12	81	35.65	80.16	37.83	80	38.13	79.94
42.89	79	43.58	78.83	44.82	78.53	46.54	78.17	47.34	78
51.6	77.07	52.01	77	56.3	76.51	58.11	76.33	60.6	76
62.63	75.8	64.25	75.61	66.98	75	72.98	74.9	73.92	74.85
77.04	74.67	80.33	74.62	82.84	74.59	84.43	74.17	86.98	74.6
90.31	74.67	93.97	74.74	95.12	74.75	99.92	74.56	100.24	74.55
100.42	74.54	105.85	74.37	108.28	74.27	110.54	74.25	112.15	74.19
115.33	74.16	116.96	74.06	117.34	74	118.8	73.28	123.4	73.25
124.15	73.25	125.46	69.03	129.4	68.24	134.7	67.32	139.2	67.57
143.5	67.52	144.7	68.29	146.5	68.3	154.2	71.43	158.57	71.51
161.02	72	166.23	72.16	167.24	72.19	167.74	72.21	169.22	72.27
176.87	72.82	185.06	73	187.51	73.27	188.58	73.33	189.55	73.37

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189.72	73.38	191.64	73.49	192.03	73.5	194.73	73.61	203.16	73.77
204.5	73.8	205.55	73.81	211.36	73.82	211.97	73.75	215.63	73.71
217.5	73.69	220.77	73.79	221.77	73.78	229.23	73.73	231.59	74
233.38	74.23	233.57	74.22	235.03	74.17	236.25	74.19	236.89	74.2
239.12	74.26	251.31	74.7	260.51	75	417.33	75.06	417.95	75.07
418.85	75.09	440.05	75.48	444.29	75.54	448.6	75.62	454.34	75.69
467.85	75.9	468.4	75.91	474.13	76	509.05	75.69	509.38	75.67
522.27	75.8	523.59	75.78	525.41	75.41	526.45	75.29	529.37	75
561.77	75.19	563.94	75.39	566.65	75.77	569.47	76	569.84	76.1
572.96	76.11	580.65	76.38	585.27	76.56	588.1	76.67	596.14	77
608.07	77.05	608.32	77.07	610.97	77.34	618.05	77.83	618.5	77.87
620.28	78	623.28	78.12	631.97	78.34	637.73	78.39	639.59	78.4
642.03	78.45	646.46	78.44	647.48	78.45	649.83	78.52	654.92	78.51
661.29	78.58	667.16	78.65	671.19	78.76	679.96	78.97	680.05	78.98
681.28	79	693.58	79.1						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .06 124.15 .035 154.2 .06

Bank Sta: Left Right Coeff Contr. Expan.
 124.15 154.2 .3 .5
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 116.72 76.53 F
 155.17 600 75 F

Downstream Deck/Roadway Coordinates num= 28

Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
0	84.51			7.13		84		19.37		83	
34.51		82		53.79		81		73.17		80	
97.14		79		131.3		77.11		131.3		80.55	
140.3	80.15	68.84	140.75	80.13	70.82	141.98	80.08	71.79			
144.05		80	146.7	79.9	73.77	149.13	79.8	74			
152.23	79.7	73.84	153.65	79.6	73.46	155.23	79.5	72.91			
158.93	79.34	68.52	163.4	79.2		163.4	76.54				
203.52		76	226.83	75		384.88	75				
490.65	76		556.2	77		609.74	78				
650	78										

Downstream Bridge Cross Section Data Station Elevation Data num= 135

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	86.2	1.1	86.09	2.33	86	8.03	85.59	12.37	85.55
13.39	85.49	18.71	85.25	22.29	85	27.06	84.63	33.25	84
39.51	83.88	42.78	83.29	43.96	83.07	44.37	83	45	82.94
45.73	82.87	55	82	56.46	81.81	63.64	81	66.5	80.69
70.85	80.22	72.4	80.06	72.97	80	87.62	79.14	89.77	79.01
89.87	79	93.37	78.75	97.4	78.53	100.53	78.1	101.39	78
104.2	77.52	105.6	77.34	108.19	77	109.23	76.86	110.73	76.6
114.08	76.07	114.34	76	135.6	75.91	139.6	75.75	140.3	68.84
144.15	68.09	148.4	67.21	151.9	67.56	156.13	68	158.93	68.52
160.86	68.14	161.86	69.09	161.86	73.04	162.3	73.04	165.36	73.49
165.98	73.7	166.92	74	168.41	74.42	172.11	74.96	172.2	74.97
172.25	74.98	172.59	75	174.08	75.04	184.27	75.06	194.55	75.08
195.32	75.07	199.57	75.1	201.66	75	211.78	74.92	218.79	74.96
230.07	74.8	230.56	74.82	231.15	74.85	234.88	74.82	235.63	74.86
236.17	74.88	240.16	74.85	241.8	75	367.6	74.03	368.46	74
379.81	73.98	381.92	74	405.39	74.01	413.51	74.08	414.29	74.12
421.84	74.16	422.14	74.18	422.48	74.2	425.25	74.23	425.81	74.25
428.09	74.32	429.09	74.35	433.47	74.45	435.65	74.48	439.16	74.57
440.42	74.62	442.57	74.7	443.83	74.76	452.49	75	468.94	75.19

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470.96	75.26	477.45	75.36	477.99	75.37	478.54	75.38	492.04	75.71
498.06	75.73	504.58	75.76	508.22	75.77	511.99	75.78	517.35	75.82
526.47	75.81	540.67	76	546.96	76.05	551.34	76.27	555.72	76.33
579.81	77	590.84	77.25	611.04	78	642.81	78.54	644.62	79
648.13	79.73	648.84	79.82	651.76	80	652.34	80.03	652.72	80.06
657.13	80.45	660.4	80.58	662.41	80.71	665.02	80.86	666.43	81
668.76	81.35	670.2	81.52	671.36	81.56	672.29	81.61	673.53	81.62
674.62	81.65	676.11	82	683.31	82.55	684.3	82.69	685.13	83

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .06 139.6 .035 161.86 .06

Bank Sta: Left Right Coeff Contr. Expan.
 139.6 161.86 .3 .5

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 167.72 685.13 75 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow
 Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 74.53

Additional Bridge Parameters

Add Friction component to Momentum
 Do not add Weight component to Momentum
 Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook

REACH: StonyBrook

RS: 6226

INPUT

Description: DS face of West Avenue Bridge (HEC2-29.1)

Station Elevation Data		num= 134									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	86.2	1.1	86.09	2.33	86	8.03	85.59	12.37	85.55		
13.39	85.49	18.71	85.25	22.29	85	27.06	84.63	33.25	84		
39.51	83.88	42.78	83.29	43.96	83.07	44.37	83	45	82.94		
45.73	82.87	55	82	56.46	81.81	63.64	81	66.5	80.69		
70.85	80.22	72.4	80.06	72.97	80	87.62	79.14	89.77	79.01		
89.87	79	93.37	78.75	97.4	78.53	100.53	78.1	101.39	78		
104.2	77.52	105.6	77.34	108.19	77	109.23	76.86	110.73	76.6		

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114.08	76.07	114.34	76	135.6	75.91	139.6	75.75	139.6	68.09
144.15	68.09	148.4	67.21	151.9	67.56	156.13	68	160.86	68.14
161.86	69.09	161.86	73.04	162.3	73.04	165.36	73.49	165.98	73.7
166.92	74	168.41	74.42	172.11	74.96	172.2	74.97	172.25	74.98
172.59	75	174.08	75.04	184.27	75.06	194.55	75.08	195.32	75.07
199.57	75.1	201.66	75	211.78	74.92	218.79	74.96	230.07	74.8
230.56	74.82	231.15	74.85	234.88	74.82	235.63	74.86	236.17	74.88
240.16	74.85	241.8	75	367.6	74.03	368.46	74	379.81	73.98
381.92	74	405.39	74.01	413.51	74.08	414.29	74.12	421.84	74.16
422.14	74.18	422.48	74.2	425.25	74.23	425.81	74.25	428.09	74.32
429.09	74.35	433.47	74.45	435.65	74.48	439.16	74.57	440.42	74.62
442.57	74.7	443.83	74.76	452.49	75	468.94	75.19	470.96	75.26
477.45	75.36	477.99	75.37	478.54	75.38	492.04	75.71	498.06	75.73
504.58	75.76	508.22	75.77	511.99	75.78	517.35	75.82	526.47	75.81
540.67	76	546.96	76.05	551.34	76.27	555.72	76.33	579.81	77
590.84	77.25	611.04	78	642.81	78.54	644.62	79	648.13	79.73
648.84	79.82	651.76	80	652.34	80.03	652.72	80.06	657.13	80.45
660.4	80.58	662.41	80.71	665.02	80.86	666.43	81	668.76	81.35
670.2	81.52	671.36	81.56	672.29	81.61	673.53	81.62	674.62	81.65
676.11	82	683.31	82.55	684.3	82.69	685.13	83		

Manning's n Values num= 3
 Station Val Sta n Val Sta n Val
 0 .06 139.6 .035 161.86 .06

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 139.6 161.86 44.24 48.94 39.06 .3 .5
 Ineffective Flow num= 1
 Station L Sta R Elev Permanent
 167.72 685.13 75 F

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 6177

INPUT

Description: FEMA V - DS section of West Avenue (HEC2-29)
 Station Elevati on Data num= 208

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	86.37	.11	86.36	4.59	86.22	8.92	86	8.98	85.99
16.1	85.38	20.61	85	27.74	84.93	28.48	84.85	34.71	84
37.14	83.74	39.25	83.57	41.46	83.33	42.84	83.17	44.16	83
49.52	82.23	52.01	82	52.05	81.99	52.2	81.97	57.69	81.11
58.52	81	61.01	80.6	64.21	80	70.57	79.64	80.83	79
96.63	78.43	105.55	78	108.43	77.65	118.52	77	118.57	76.99
122.82	76.31	125.16	76	130.15	75.26	131.99	75	135.03	75.08
136.51	75.37	137.26	75.42	146.05	75.87	146.86	75.89	149.34	76
152.33	75.32	153	75.69	155.46	75	158.01	74.59	160.69	74.13
161.48	74	164.86	73.46	166.34	73.24	167.27	73.1	167.59	73.06
167.92	73	170	72.89	172.2	72.89	172.2	67.82	173.2	66.7
175.9	65.71	179.9	66.2	183.2	66.67	185.5	67.74	195.36	72.48
216.21	72.56	226.01	72.38	227.84	72.46	228.49	72.43	229.39	72.47
231.2	72.61	231.66	72.6	232.83	72.73	234.5	73	239.01	73.77
240.44	74	241.35	74.23	241.64	74.28	243.33	74.6	244.8	74.63
245.49	74.68	248.4	74.71	250.61	74.72	251.36	74.47	252.61	74.41
253.54	74.21	255.43	74.44	259.64	74.7	262.08	74.91	262.9	75
269.28	74.72	277.7	74.09	278.17	74.06	278.39	74.05	278.61	74.04
279.16	74	281.29	73.98	294.76	73.12	295.68	73.1	296.59	73
300.23	73.12	300.96	73.11	306.45	73	316.45	72.96	316.63	72.97
328.3	72.94	329.45	72.93	331.38	72.94	334.3	72.95	350.88	72.94
353.32	72.91	356.07	72.9	357.93	72.89	360.67	72.8	363.97	72.74

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367.61	72.6	369.66	72.54	373.16	72.39	381.47	72	403.32	72.19
413.01	72.55	423.8	73	427.28	73.08	438.12	73.3	442	73.39
449.89	73.51	450.73	73.54	454.84	73.64	459.18	73.69	463.11	73.79
465.6	73.78	472.13	73.95	473.89	74	476.39	74.06	480.91	74.24
484.45	74.41	495.16	74.82	496.43	74.88	497.03	74.92	497.37	74.93
498.63	74.91	500.27	74.87	503.11	74.76	503.84	74.73	504.69	74.69
507.66	74.64	510.62	74.52	522.91	74.57	524.22	74.64	525.95	74.7
527.96	74.77	531.97	74.78	533.09	74.83	535.35	74.87	537.58	74.86
542.14	75	553.61	75.22	555.44	75.27	557.36	75.36	560.6	75.51
564.93	75.68	572.18	76	578.78	76.25	590.99	76.69	596.51	77
598.43	77.37	602.06	78	602.71	78.12	603.91	78.3	606.41	78.63
607.9	79	608.63	79.19	611.75	80	615.01	80.83	615.67	81
616.7	81.25	620.13	82	625.39	82.59	629.19	83	636.68	83.95
637.11	84	637.85	84.26	639.98	85	641.45	85.55	642.69	86
645.14	86.83	645.62	87	646.61	87.36	648.35	88	649.08	88.26
651.24	89	653.22	89.62	654.48	90	656.67	90.73	657.56	91
660.49	91.92	660.78	92	662.65	92.6	663.78	93	663.97	93.07
666.57	94	667.68	94.4	668.73	94.79	669.35	95	669.96	95.26
671.89	96	673.83	96.85	674.21	97	674.56	97.1	674.74	97.13
676.46	97.49	677.21	97.53	678.13	97.63				

Manning's n Values num= 3

Station	Value	Station	Value	Station	Value
0	.12	172.2	.035	195.36	.12

Bank Station: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

172.2	195.36	243.99	249.44	200.14	.3	.5
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Blocked Obstructions num= 8

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
423.61	449.14	86.33	374.79	399.29	86.13	265.47	352.14	95
88.43	130.99	89.4	577.5	603.57	96.95	532.4	557.04	95.13
515.14	523.4	83.8	474.22	502.64	86.25			

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 5927

INPUT
 Description: MMI additional section

Station Elevation Data num= 166

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	84	9.37	83.83	11.01	83.62	13.66	83.25	14.99	83.07
15.35	83	18.11	82.32	19.04	82.09	19.42	82	19.64	81.94
24.61	81	28.93	80.16	29.79	80	30.1	79.93	30.77	79.78
34.43	79	38.4	78.12	39.1	78	43.38	77.22	44.87	77
50.16	76.19	51.44	76	53.83	75.66	55.06	75.45	57.03	75
59.65	74.37	61.05	74	62.12	73.72	65.54	73	69.07	72.35
71.2	72	75.6	71.29	77.64	71	78.96	70.81	80.05	70.63
82.8	70	84.33	69.93	84.48	69.91	86.9	69.64	91.98	69
109.94	69.49	112.19	69.77	112.89	69.8	115.13	70	118.24	70.27
118.69	70.29	121.14	70.27	121.46	70.26	121.71	70.23	125.96	70
149.4	69.72	156.5	66.66	159	65.98	162.4	65.78	166.4	66.22
170.04	66.83	170.04	69.94	171.04	69.94	171.04	69.88	171.7	70.14
171.73	70.17	173.91	70.48	176.07	70.82	177.08	71	184.2	71.13
187.25	71.17	188.07	71.19	201.67	71.23	203.36	71.22	211.39	71.19
212.86	71.21	214.45	71.28	215.1	71.29	221.68	71.42	224.99	71.43
228.12	71.44	229.4	71.41	230.27	71.43	238.63	71.36	244.92	71.43
247.28	71.46	247.91	71.47	249.96	71.48	257.02	71.59	267.01	71.64
270.56	71.66	279.66	72	313.89	72.11	313.95	72.12	315.56	72.25
317.4	72.41	323.75	73	326.23	73.32	326.7	73.37	327.35	73.44
332.18	74	339.77	74.78	341.14	75	341.71	75.06	342.1	75.08

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342.57	75.12	350.71	76	351.55	76.11	354.09	76.21	358.05	76.44
360.41	76.56	365.62	76.87	366.05	76.89	367.45	77	368.91	77.5
369.81	77.9	370.11	78	370.94	78.27	371.52	78.47	372.25	78.72
373	79	374.28	79.54	375.43	80	375.55	80.05	376.43	80.39
377.97	81	382.41	81.63	384.12	81.87	385.32	82	387.1	82.16
388.02	82.24	389.11	82.36	392.11	82.81	392.66	82.89	393.56	83
402.45	83.43	406.14	83.75	407.99	83.87	409.14	84	410.05	84.32
412.03	85	413.18	85.41	414.95	86	416.81	86.71	417.69	87
418.54	87.29	420.54	88	421.91	88.45	423.48	89	425.62	89.57
427.27	90	430.07	90.73	431.13	91	432.45	91.36	434.9	92
437.8	92.78	438.64	93	439.18	93.14	442.5	94	443.81	94.39
445.86	95	447.72	95.69	448.15	95.82	448.94	96	452.11	96.83
453.43	97	456.38	97.31	457.54	97.32	458.85	97.42	460.77	97.55
461.35	97.56								

Manning's n Values num= 3
 Station Val Sta n Val Sta n Val
 0 .08 149.4 .035 170.04 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 149.4 170.04 153.32 194.61 214.29 .1 .3

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 5733

INPUT

Description: FEMA U- US section of Railroad Bridge (HEC2-28)
 Station Elevation Data num= 251

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	83.65	14.91	83	18.69	82.72	22.82	82.46	23.3	82.42
24.4	82.32	25.13	82.26	30.3	82	37.53	81.52	38.81	81.38
39.66	81.3	42.98	81	46.28	80.5	51.71	80	54.91	79.17
55.04	79.12	55.54	79	62.94	78.07	63.54	78	66.56	77.59
71.95	77	85.04	76.37	87.54	76.25	91.56	76.07	92.6	76.03
93.22	76	103.03	75.46	112.26	75.05	112.6	75.04	112.82	75.03
113.56	75	121.11	74.39	122.94	74.19	125.08	74	130.01	73.56
135.23	73	137.03	72.86	140.57	72.55	145.44	72.15	146.43	72
147.63	71.97	148.04	71.93	151.13	71.71	159.96	71	162.07	70.82
167.77	70.3	170.36	70.06	170.97	70	179.6	69.23	182.05	69
217.89	68.15	223.17	68	244.87	67.03	245.36	67	277.04	67.63
284.04	63.3	288.04	62.79	291.74	62.76	296.34	62.59	299.04	62.95
302.24	63.05	309.04	67.01	310.56	67	310.89	67.03	311.39	67.04
315.21	67.13	316.37	67.4	317.76	67.85	318.44	67.88	319.73	68
323.41	68.34	327.25	68.72	328.08	68.82	328.36	68.83	330.86	68.88
331.25	68.89	332.59	69	333.14	69.05	333.32	69	339.22	69.36
343.07	69.44	345.13	69.53	345.96	69.58	348.89	69.78	350.48	69.88
351.22	70	351.96	70.11	352.3	70.15	355.65	70.72	359.75	70.79
366.26	70.96	366.57	70.98	366.85	71	372.5	71.03	372.8	71.04
377.35	72	379.43	72.53	381.23	73	382.75	73.4	384.39	73.81
385.11	74	387.36	74.61	388.95	75	391.96	75.73	393.29	76
395.38	76.44	398.44	77	401.53	77.58	403.66	78	403.95	78.18
405.16	79	405.28	79.09	405.44	79.21	406.81	80	407.46	80.4
408.45	81	408.64	81.12	409.51	81.61	410.07	81.93	410.2	82
411.52	82.65	412.43	83	413.32	83.35	414.97	84	415.64	84.26
416.29	84.52	417.4	85	417.74	85.14	418.05	85.26	419.9	86
420.42	86.23	422.09	87	422.17	87.03	422.26	87.07	423.28	87.45
424.61	88	424.86	88.1	425.87	88.55	426.8	89	428.1	89.67
428.13	89.68	428.51	89.79	429.46	90	431.38	90.34	433.33	91
433.48	91.03	434.03	91.19	436.84	91.89	437	92	442.11	92.58
443.52	92.6	446.96	92.69	448.75	92.64	452.64	92.78	453.12	92.77

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454.14	92.74	458.44	93	458.76	93.01	458.84	93.02	463.08	93
465.25	92.99	465.29	92.98	467.47	92.87	467.71	92.85	469.51	92.74
469.96	92.68	470.68	92.59	472.16	92.4	473.31	92.24	475.01	92.01
475.09	92	476.15	91.66	476.42	91.58	476.8	91.46	477.32	91.3
477.82	91.15	478.31	91	478.5	90.93	478.58	90.9	479.2	90.68
479.45	90.59	479.84	90.45	480.22	90.31	480.25	90.3	480.44	90.23
481.04	90	481.41	89.84	481.6	89.75	482.01	89.56	482.39	89.46
482.67	89.36	483.45	89.17	483.55	89.15	483.63	89.13	484.17	89
484.46	88.91	485.12	88.71	485.57	88.47	485.79	88.39	485.95	88.33
486.98	88	487.04	87.99	487.06	88	488.54	87.92	489.82	87.86
490.94	87.81	491.53	87.74	492.26	87.66	495.14	87	496.65	86.99
497.6	87	503.09	87.22	503.7	87.19	504.14	87.17	504.49	87.15
508.13	87.3	508.84	87.28	509.73	87.25	510.46	87.23	517.79	87.49
520.47	87.46	522.83	87.51	524.03	87.57	529.6	87.67	531.05	87.74
534.46	87.76	534.86	87.75	539.97	87.74	545.47	88	546.6	88.17
547.21	88.41	548.74	89	549.37	89.99	549.38	90	561.87	89.76
564.9	89.64	573.81	89	577.85	88.31	579.32	88	584.8	87.04
585.06	87	634.57	86.76	640.51	86.72	644.13	86.64	653.54	86.76
654.03	86.78	655.72	86.72	656.26	86.73	657.84	86.7	659.42	86.65
661.82	86.6								

Manning's n Values	num=	4							
Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val	Sta n Val
0 .08	277.04	.035	309.04	.08	448.75	.04			
Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.		
277.04	309.04	35.49	30.13	32.13		.3	.5		

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 5703

INPUT

Description: US face of Railroad Crossing (MMI additional section)

Station	Elevation	Data	num=	311					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	81.56	1.21	81.42	3.11	81.22	5.54	81	8.64	80.84
10.94	80.72	16.62	80.46	22.19	80	22.41	79.98	29.21	79.57
38.53	79	45	78.63	47.86	78.5	50.01	78.4	52.55	78.32
53.89	78.27	60.54	78.12	60.95	78.1	62.61	78	74.61	77.51
75.78	77.48	78.34	77.39	80.09	77.36	81.26	77.34	83.41	77.31
93.31	77	103.89	76.84	106.98	76.53	135.7	77	161.21	76.95
162.31	76.9	162.86	76.88	163.38	76.85	164.8	76.8	169.94	76.51
174.8	76.27	178.82	76	183.6	75.63	190.2	75.16	192.23	75
198.14	74.95	211.8	74	221.41	73.54	223.74	73.52	224.36	73.54
224.76	73.51	228.91	73.35	229.86	73.33	230.72	73.32	231.46	73.29
236.67	73.15	237.53	73.14	238.63	73	241.54	72.96	241.71	72.94
243.47	72.7	244.52	72.56	251.4	72.12	252.37	72.07	253.17	72
257.09	71.62	262.72	71.1	263.09	71.07	263.23	71	264.54	70.98
264.89	70.95	266.55	70.86	266.95	70.81	271.25	70.78	271.49	70.72
272.02	70.64	274.4	70.44	275.46	70.32	277.47	70.33	281.85	70.35
282.58	70	284.16	70.36	285.28	70.37	288.2	70.38	289.38	70.36
293.52	70.33	294.66	70.3	294.69	70.31	294.76	70.3	299.64	70.26
300.92	70.24	302.34	70.32	304.3	70.38	305.92	70.44	308.43	70.59
310.49	70.67	312.68	70.7	313.82	70.6	315.37	70.49	315.76	70.45
315.94	70.44	316.19	70.4	316.26	70	316.35	70.39	317.71	70.29
318.66	70.22	321.21	70	321.33	69.99	321.41	69.98	324.33	69.72
325.24	69.7	327.79	69.75	328.5	69.78	331.35	69.83	331.58	69.84
331.76	69.79	332.56	69	332.66	69.81	334.76	69.86	335.19	69.91
338.6	69.96	338.76	69.97	344.92	69.98	346.76	70	347.35	69.98
351.17	69.99	354.26	69.48	355.9	69.13	356.11	69.09	356.49	69

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358.64	68.71	360.42	68	360.44	67.99	362.41	67.28	362.81	67
363.91	66.5	364.84	66	365.98	65.33	366.48	65.03	366.54	65
366.58	64.98	367.99	64.02	370.99	62.49	374.29	62.19	377.19	61.98
380.69	62.12	383.29	62.36	389.19	62.94	394.49	67.79	397.41	70
398.46	70.76	398.89	71	400.13	71.53	401.09	72	409.23	72.57
411.83	72.66	413.09	72.74	413.58	72.77	415.66	73	416.95	73.1
421.29	73.41	424.44	73.42	433.04	73.82	433.66	73.85	434.51	73.87
434.93	73.88	437.14	74	437.5	74.02	439.21	74.08	443.06	74.17
447.36	74.15	449.5	74.18	455.43	74.42	458.03	74.46	458.3	74.47
460.07	74.52	460.99	74.57	474.31	75	508	75.72	512.22	76
517.56	76.61	518.46	76.65	527.18	76.91	527.66	76.93	530.11	77
533.32	77.26	535.52	77.41	538.75	77.69	543.47	77.94	543.57	77.95
544.37	78	547.18	78.37	551.59	78.99	551.62	79	557.3	79.86
558.08	80	560.02	80.35	563.22	81	563.77	81.12	566.19	81.68
567.38	81.95	567.56	82	570.19	82.75	570.97	83	571.93	83.31
573.67	84	573.78	84.03	574.65	84.41	575.82	84.89	575.97	84.93
576.26	85	576.63	85.04	578.78	85	579.69	84.97	583.2	84.56
585.26	84.54	587.41	84.3	588.66	84.13	589.66	84	591.47	83.71
592.75	83.58	594.42	83.36	598.21	83.05	599.06	83	601.29	82.85
602.18	82.79	604.66	82.62	605.73	82.55	608.26	82.39	609.32	82.29
613.05	82.07	613.3	82.05	613.73	82	617.29	81.62	622.11	81
622.29	80.98	622.68	80.93	628.12	80.29	628.62	80.25	630.24	80.2
630.74	80.19	632.35	80.24	639.09	80.45	640.13	80.52	641.54	80.47
643.6	80.38	646.56	80.09	646.76	80.08	647.42	80	650.99	79.74
654.16	79.55	658.47	79.11	658.7	79.1	658.89	79.09	659.54	79
664.01	78.73	665.16	78.66	671.02	78.6	675.33	78.59	680.32	78.56
686.52	78.51	688.32	78.5	693.97	78.43	698.15	78.42	702.03	78.34
708.19	78.23	710.24	78.22	717.08	78.03	719.56	78.06	719.74	78.05
721.99	78.23	722.65	78.25	725.41	78.53	727.83	78.68	729.3	78.83
731.31	79	736.12	79.44	738.37	79.57	739.72	79.68	740.1	79.69
740.74	79.67	744.19	79.63	751.84	79.62	759.5	79.61	760.27	79.65
764.66	80	769.68	80.49	771.67	80.61	775.58	81	777.71	81.13
778.94	81.06	786.79	81.15	791.97	81.48	797.31	82	804.94	81.89
809.75	81.45	813.86	81.05	814.36	81	819.65	80.07	820.87	80
821.69	79.94	822.06	79.91	828.3	79.62	828.99	79.58	830.44	79.53
831.24	79.44	834.94	79.26	836.21	79.27	836.78	79.23	837.32	79.21
839.64	79.27	841.59	79.23	844.3	79.32	846.48	79.29	849.47	79.38
850.51	79.37								

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .08 365.98 .04 394.49 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 365.98 394.49 90.66 88.81 90.89 .5 .7
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 356.56 76 F
 395.56 850.51 76 F

BRI DGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 5662

INPUT

Description: Railroad Crossing
 used internal sections to set arch bottom
 elevation and specify n-value for concrete bottom
 Distance from Upstream XS = 14.5
 Deck/Roadway Width = 58
 Weir Coefficient = 2.6

StonyBrookDari en1-ex. txt

Upstream Deck/Roadway Coordi nates

num=	18	180	371.06	373.67	380.62	381.06	780	76.8	64.56	371.31	76.8	66.4	371.41	76.8	67.08	376.3	76.8	69.43	378.56	76.8	68.86	380.97	76.8	65.52	381.06	76.8	64.46	410	77	620	78	780	79	971	80	1180	81
0	75	180	371.06	373.67	380.62	381.06	780	76.8	64.56	371.31	76.8	66.4	371.41	76.8	67.08	376.3	76.8	69.43	378.56	76.8	68.86	380.97	76.8	65.52	381.06	76.8	64.46	410	77	620	78	780	79	971	80	1180	81

Upstream Bridge Cross Section Data

Station	Elevation	Data	num=	311	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
0	81.56	1.21	81.42	3.11	81.22	5.54	81	8.64	80.84	10.94	80.72	16.62	80.46	22.19	80	22.41	79.98	29.21	79.57	38.53	79	45	78.63	47.86	78.5	50.01	78.4	52.55	78.32	53.89	78.27	60.54	78.12	60.95	78.1	62.61	78	74.61	77.51	75.78	77.48	78.34	77.39	80.09	77.36	81.26	77.34	83.41	77.31	93.31	77	103.89	76.84	106.98	76.53	135.7	77	161.21	76.95	162.31	76.9	162.86	76.88	163.38	76.85	164.8	76.8	169.94	76.51	174.8	76.27	178.82	76	183.6	75.63	190.2	75.16	192.23	75	198.14	74.95	211.8	74	221.41	73.54	223.74	73.52	224.36	73.54	224.76	73.51	228.91	73.35	229.86	73.33	230.72	73.32	231.46	73.29	236.67	73.15	237.53	73.14	238.63	73	241.54	72.96	241.71	72.94	243.47	72.7	244.52	72.56	251.4	72.12	252.37	72.07	253.17	72	257.09	71.62	262.72	71.1	263.09	71.07	263.23	71	264.54	70.98	264.89	70.95	266.55	70.86	266.95	70.81	271.25	70.78	271.49	70.72	272.02	70.64	274.4	70.44	275.46	70.32	277.47	70.33	281.85	70.35	282.58	70	284.16	70.36	285.28	70.37	288.2	70.38	289.38	70.36	293.52	70.33	294.66	70.3	294.69	70.31	294.76	70.3	299.64	70.26	300.92	70.24	302.34	70.32	304.3	70.38	305.92	70.44	308.43	70.59	310.49	70.67	312.68	70.7	313.82	70.6	315.37	70.49	315.76	70.45	315.94	70.44	316.19	70.4	316.26	70	316.35	70.39	317.71	70.29	318.66	70.22	321.21	70	321.33	69.99	321.41	69.98	324.33	69.72	325.24	69.7	327.79	69.75	328.5	69.78	331.35	69.83	331.58	69.84	331.76	69.79	332.56	69	332.66	69.81	334.76	69.86	335.19	69.91	338.6	69.96	338.76	69.97	344.92	69.98	346.76	70	347.35	69.98	351.17	69.99	354.26	69.48	355.9	69.13	356.11	69.09	356.49	69	358.64	68.71	360.42	68	360.44	67.99	362.41	67.28	362.81	67	363.91	66.5	364.84	66	365.98	65.33	366.48	65.03	366.54	65	366.58	64.98	367.99	62.05	370.99	62.05	374.29	62.05	377.19	62.05	380.69	62.05	383.29	62.05	389.19	62.05	394.49	67.79	397.41	70	398.46	70.76	398.89	71	400.13	71.53	401.09	72	409.23	72.57	411.83	72.66	413.09	72.74	413.58	72.77	415.66	73	416.95	73.1	421.29	73.41	424.44	73.42	433.04	73.82	433.66	73.85	434.51	73.87	434.93	73.88	437.14	74	437.5	74.02	439.21	74.08	443.06	74.17	447.36	74.15	449.5	74.18	455.43	74.42	458.03	74.46	458.3	74.47	460.07	74.52	460.99	74.57	474.31	75	508	75.72	512.22	76	517.56	76.61	518.46	76.65	527.18	76.91	527.66	76.93	530.11	77	533.32	77.26	535.52	77.41	538.75	77.69	543.47	77.94	543.57	77.95	544.37	78	547.18	78.37	551.59	78.99	551.62	79	557.3	79.86	558.08	80	560.02	80.35	563.22	81	563.77	81.12	566.19	81.68	567.38	81.95	567.56	82	570.19	82.75	570.97	83	571.93	83.31	573.67	84	573.78	84.03	574.65	84.41	575.82	84.89	575.97	84.93	576.26	85	576.63	85.04	578.78	85	579.69	84.97	583.2	84.56	585.26	84.54	587.41	84.3	588.66	84.13	589.66	84	591.47	83.71	592.75	83.58	594.42	83.36	598.21	83.05	599.06	83	601.29	82.85	602.18	82.79	604.66	82.62	605.73	82.55	608.26	82.39	609.32	82.29	613.05	82.07	613.3	82.05	613.73	82	617.29	81.62	622.11	81	622.29	80.98	622.68	80.93	628.12	80.29	628.62	80.25	630.24	80.2	630.74	80.19	632.35	80.24	639.09	80.45	640.13	80.52	641.54	80.47	643.6	80.38	646.56	80.09	646.76	80.08	647.42	80	650.99	79.74	654.16	79.55	658.47	79.11	658.7	79.1	658.89	79.09	659.54	79

StonyBrookDari en1-ex. txt

664.01	78.73	665.16	78.66	671.02	78.6	675.33	78.59	680.32	78.56
686.52	78.51	688.32	78.5	693.97	78.43	698.15	78.42	702.03	78.34
708.19	78.23	710.24	78.22	717.08	78.03	719.56	78.06	719.74	78.05
721.99	78.23	722.65	78.25	725.41	78.53	727.83	78.68	729.3	78.83
731.31	79	736.12	79.44	738.37	79.57	739.72	79.68	740.1	79.69
740.74	79.67	744.19	79.63	751.84	79.62	759.5	79.61	760.27	79.65
764.66	80	769.68	80.49	771.67	80.61	775.58	81	777.71	81.13
778.94	81.06	786.79	81.15	791.97	81.48	797.31	82	804.94	81.89
809.75	81.45	813.86	81.05	814.36	81	819.65	80.07	820.87	80
821.69	79.94	822.06	79.91	828.3	79.62	828.99	79.58	830.44	79.53
831.24	79.44	834.94	79.26	836.21	79.27	836.78	79.23	837.32	79.21
839.64	79.27	841.59	79.23	844.3	79.32	846.48	79.29	849.47	79.38
850.51	79.37								

Manning's n Values num= 3
 Station Val Sta n Val Sta n Val
 0 .08 365.98 .013 394.49 .08

Bank Sta: Left Right Coeff Contr. Expan.
 365.98 394.49 .5 .7

Ineffective Flow num= 2
 Station Sta R Elev Permanent
 0 356.56 76 F
 395.56 850.51 76 F

Downstream Deck/Roadway Coordinates num= 19

Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
0		74.5			68		75			250		76		
438.7	76.8	61.67	438.7	76.8	63.88	438.7	76.8	64.84						
438.92	76.8	66.15	441.14	76.8	68.85	443.7	76.8	69.66						
446.76	76.8	68.71	448.19	76.8	66.9	448.7	76.8	64.95						
448.7	76.8	63.95	448.7	76.8	61.67	480		77						
690	78		850	79		1041		80						
1250	81													

Downstream Bridge Cross Section Data Station Elevation Data num= 372

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	96.03	.23	96	.39	95.89	1.78	95	2.45	94.56		
3.27	94	4.6	93.08	4.72	93	4.83	92.93	6.3	92		
7.45	91.24	7.79	91	8.95	90.2	9.26	90	9.6	89.77		
10.74	89	11.62	88.37	12.16	88	12.8	87.55	13.71	87		
14.75	86.33	15.29	86	16.79	85.31	17.51	85	18.46	84.58		
19.61	84.11	19.9	84	20.26	83.83	22.24	83	23.8	82.37		
24.64	82	26.35	81.2	26.78	81	26.93	80.94	33.91	80.6		
37.7	80.43	38.53	80.41	40.27	80.38	42.98	80.36	44.84	80.35		
50.42	80.34	54.44	80.22	57.44	80.03	58.12	80	64.42	79.66		
73.08	79.13	73.73	79.09	74.07	79.07	74.64	79.04	75.4	79		
84.56	78.51	91.93	78	94.01	77.87	104.34	77.16	106.19	77.03		
106.5	77	109.26	76.78	118.39	76	124.58	75.54	125.89	75.43		
127.2	75.31	127.93	75.25	131.7	75	139.22	74.58	146.93	74.14		
149.74	74.08	150.47	74.07	153.71	74.02	160.93	74.01	169.31	74.04		
170.22	74	193.21	73.74	195.58	73.43	200.73	73.17	203.5	73		
229.29	72.56	246.8	72.54	253.28	72.38	257.19	72.26	260.19	72.27		
262.65	72.15	264.65	72.07	266.63	72.05	269.78	72.07	272.45	72.05		
275.51	72	281.06	71.88	293.62	71.99	294.53	72	296.95	71.96		
297.34	71.94	302.03	71.77	306.38	71.58	311.05	71.55	313.44	71.6		
319.74	71.42	320.3	71.37	321.22	71.39	322.03	71.31	323.29	71.34		
324.07	71.24	325.04	71.16	328.32	71.06	335.43	71.01	336.31	71		
338.96	70.95	339.19	70.93	343.04	70.6	344.56	70.52	346.45	70.37		
349.71	70.21	350.34	70.17	354.27	70	354.81	69.97	361.68	69.96		
372.02	69.95	375.73	69.94	381.29	70	382.56	70.04	385.7	70.12		

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386.58	70.14	388.48	70.2	391.46	70.56	395.12	71	395.95	71.07
396.22	71.08	399.3	71.37	401.53	71.35	405.7	71.87	406.41	72
415.61	71.18	425.51	61.67	462.01	61.67	469.51	68.72	469.81	69.56
470.43	70	471.2	70.46	471.85	70.76	472.98	71	473.69	71.15
474.87	71.22	475.7	71.15	479.67	71	482.97	70.89	483.69	70.88
485.63	70.82	492.3	70.85	492.9	70.86	494.73	70.77	501.04	70.47
504.84	70.21	505.98	70.15	507.93	70	510.11	69.84	511.64	69.69
513.72	69.58	516.2	69.48	518.27	69.42	521.92	69.25	523.02	69.22
524.43	69	525.99	68.78	526.98	68.58	528.36	68.44	530.04	68.18
530.77	68.16	533.77	68.05	535.2	68	537.17	67.92	540.24	67.93
543.38	67.95	546.5	67.97	549.62	67.99	551.64	68	552.71	68.01
555.74	68.02	558.77	68.04	561.8	68.06	564.22	68.11	564.65	68.12
566.8	68.18	567.48	68.19	569.46	68.24	571.21	68.28	572.27	68.31
573.92	68.35	575.26	68.38	576.78	68.41	578.44	68.45	580.45	68.5
582.46	68.55	584.12	68.59	586.48	68.65	587.78	68.68	590.48	68.74
591.43	68.77	592.23	68.76	595.23	68.73	596.65	68.72	597.59	68.71
598.98	68.69	600.43	68.68	603.11	68.65	604.76	68.64	607.29	68.61
612.65	68.99	612.72	69	617.26	69.27	617.95	69.33	618.99	69.41
621.39	69.62	623.07	69.75	625.64	69.95	625.85	69.97	626.29	70
628.02	70.13	628.68	70.18	630.72	70.33	632.39	70.34	635.28	70.35
640.67	70.36	644.13	70.37	647.54	70.38	652.53	70.39	656.32	70.4
660.89	70.41	665.19	70.42	668.9	70.43	672.93	70.42	674.81	70.4
676.84	70.37	678.43	70.36	679.15	70.35	682.58	70.32	683.96	70.26
688.44	70.03	688.53	70.02	689.43	70	690.88	69.96	693.3	69.9
693.62	69.91	696.57	70	697.78	70.04	700.14	70.24	701.33	70.33
701.59	70.34	703.48	70.5	704.8	70.58	705.57	70.64	709.09	70.61
710.89	70.59	712.89	70.57	715.99	70.54	719.99	70.49	723.08	70.46
725.35	70.43	727.69	70.41	730.4	70.38	731.51	70.37	734.08	70.48
736.63	70.52	738.24	70.54	740.37	70.62	744.3	70.67	746.23	70.74
750.42	70.79	750.89	70.81	751.35	70.85	752.9	70.86	758.75	71
760.54	71.07	760.81	71.08	761.14	71.09	764.39	71.22	765.29	71.25
769.06	71.46	770.94	71.52	772.2	71.67	774.93	71.73	776.11	71.8
778.43	72	779.68	72.13	781.12	72.17	782.18	72.16	784.57	72.06
786.25	72.04	786.41	72.06	787.42	72.11	788.01	72.13	793.94	72.17
794.81	72.2	800.11	72.25	801.48	72.1	801.58	72.08	801.94	72
805.2	71.22	805.57	71.16	806.29	71	807.43	70.92	813.88	70.63
815.39	70.57	816.53	70.49	817.95	70.43	819.23	70.41	821.3	70.33
825.82	70.41	827.58	70.45	829.71	70.49	831.26	70.6	832.48	70.64
834.99	70.56	837.7	70.61	839.08	70.6	842.04	70.66	842.67	70.63
843.23	70.59	845.44	70.65	845.94	70.62	846.89	70.3	848.18	70.39
849.76	70.72	856.56	70.97	857.51	71	863.51	71.31	865.38	71.42
868.84	71.6	871.96	71.79	872.97	71.85	875.4	72	876.91	72.1
877.27	72.12	880.87	72.35	882.03	72.44	883.22	72.57	885.14	72.69
885.83	72.76	887.37	73	888.53	73.27	889.96	73.5	891.09	73.68
892.11	73.86	892.88	74	895.39	74.54	897.22	75	897.6	75.1
898.01	75.21	898.54	75.36	899.95	75.76	900.62	76	902.59	76.56
903.28	76.75	903.88	77	905.43	77.37	907.66	78	908	78.09
908.48	78.24	910.26	78.7	911.41	79	913.2	79.42	914.81	79.85
915.38	80	917.68	80.54	919.72	81	922.06	81.49	924.61	82
924.92	82.06	925.8	82.23	928.74	82.8	929.75	83	933.69	83.62
936.07	84	937.61	84.25						

Manning's n Values
 Sta n Val Sta num= 3
 0 .08 415.61 .013 471.2 .08

Bank Sta: Left Right Coeff Contr. Expan.
 415.61 471.2 .5 .7
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 427.83 72.43 F
 459.57 937.61 72.43 F

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Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow

Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 69.43

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook

REACH: StonyBrook

RS: 5614

INPUT

Description: DS face of Railroad Crossing (MMI additional section)

Station Elevation Data num= 378

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	96.03	.23	96	.39	95.89	1.78	95	2.45	94.56
3.27	94	4.6	93.08	4.72	93	4.83	92.93	6.3	92
7.45	91.24	7.79	91	8.95	90.2	9.26	90	9.6	89.77
10.74	89	11.62	88.37	12.16	88	12.8	87.55	13.71	87
14.75	86.33	15.29	86	16.79	85.31	17.51	85	18.46	84.58
19.61	84.11	19.9	84	20.26	83.83	22.24	83	23.8	82.37
24.64	82	26.35	81.2	26.78	81	26.93	80.94	33.91	80.6
37.7	80.43	38.53	80.41	40.27	80.38	42.98	80.36	44.84	80.35
50.42	80.34	54.44	80.22	57.44	80.03	58.12	80	64.42	79.66
73.08	79.13	73.73	79.09	74.07	79.07	74.64	79.04	75.4	79
84.56	78.51	91.93	78	94.01	77.87	104.34	77.16	106.19	77.03
106.5	77	109.26	76.78	118.39	76	124.58	75.54	125.89	75.43
127.2	75.31	127.93	75.25	131.7	75	139.22	74.58	146.93	74.14
149.74	74.08	150.47	74.07	153.71	74.02	160.93	74.01	169.31	74.04
170.22	74	193.21	73.74	195.58	73.43	200.73	73.17	203.5	73
229.29	72.56	246.8	72.54	253.28	72.38	257.19	72.26	260.19	72.27
262.65	72.15	264.65	72.07	266.63	72.05	269.78	72.07	272.45	72.05
275.51	72	281.06	71.88	293.62	71.99	294.53	72	296.95	71.96
297.34	71.94	302.03	71.77	306.38	71.58	311.05	71.55	313.44	71.6
319.74	71.42	320.3	71.37	321.22	71.39	322.03	71.31	323.29	71.34
324.07	71.24	325.04	71.16	328.32	71.06	335.43	71.01	336.31	71
338.96	70.95	339.19	70.93	343.04	70.6	344.56	70.52	346.45	70.37
349.71	70.21	350.34	70.17	354.27	70	354.81	69.97	361.68	69.96
372.02	69.95	375.73	69.94	381.29	70	382.56	70.04	385.7	70.12
386.58	70.14	388.48	70.2	391.46	70.56	395.12	71	395.95	71.07
396.22	71.08	399.3	71.37	401.53	71.35	405.7	71.87	406.41	72

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415.61	71.18	425.51	61.13	428.91	59.69	433.11	57.58	436.21	56.48
440.51	56.8	454.41	57.78	459.81	58.28	462.01	61.24	469.51	68.72
469.81	69.56	470.43	70	471.2	70.46	471.85	70.76	472.98	71
473.69	71.15	474.87	71.22	475.7	71.15	479.67	71	482.97	70.89
483.69	70.88	485.63	70.82	492.3	70.85	492.9	70.86	494.73	70.77
501.04	70.47	504.84	70.21	505.98	70.15	507.93	70	510.11	69.84
511.64	69.69	513.72	69.58	516.2	69.48	518.27	69.42	521.92	69.25
523.02	69.22	524.43	69	525.99	68.78	526.98	68.58	528.36	68.44
530.04	68.18	530.77	68.16	533.77	68.05	535.2	68	537.17	67.92
540.24	67.93	543.38	67.95	546.5	67.97	549.62	67.99	551.64	68
552.71	68.01	555.74	68.02	558.77	68.04	561.8	68.06	564.22	68.11
564.65	68.12	566.8	68.18	567.48	68.19	569.46	68.24	571.21	68.28
572.27	68.31	573.92	68.35	575.26	68.38	576.78	68.41	578.44	68.45
580.45	68.5	582.46	68.55	584.12	68.59	586.48	68.65	587.78	68.68
590.48	68.74	591.43	68.77	592.23	68.76	595.23	68.73	596.65	68.72
597.59	68.71	598.98	68.69	600.43	68.68	603.11	68.65	604.76	68.64
607.29	68.61	612.65	68.99	612.72	69	617.26	69.27	617.95	69.33
618.99	69.41	621.39	69.62	623.07	69.75	625.64	69.95	625.85	69.97
626.29	70	628.02	70.13	628.68	70.18	630.72	70.33	632.39	70.34
635.28	70.35	640.67	70.36	644.13	70.37	647.54	70.38	652.53	70.39
656.32	70.4	660.89	70.41	665.19	70.42	668.9	70.43	672.93	70.42
674.81	70.4	676.84	70.37	678.43	70.36	679.15	70.35	682.58	70.32
683.96	70.26	688.44	70.03	688.53	70.02	689.43	70	690.88	69.96
693.3	69.9	693.62	69.91	696.57	70	697.78	70.04	700.14	70.24
701.33	70.33	701.59	70.34	703.48	70.5	704.8	70.58	705.57	70.64
709.09	70.61	710.89	70.59	712.89	70.57	715.99	70.54	719.99	70.49
723.08	70.46	725.35	70.43	727.69	70.41	730.4	70.38	731.51	70.37
734.08	70.48	736.63	70.52	738.24	70.54	740.37	70.62	744.3	70.67
746.23	70.74	750.42	70.79	750.89	70.81	751.35	70.85	752.9	70.86
758.75	71	760.54	71.07	760.81	71.08	761.14	71.09	764.39	71.22
765.29	71.25	769.06	71.46	770.94	71.52	772.2	71.67	774.93	71.73
776.11	71.8	778.43	72	779.68	72.13	781.12	72.17	782.18	72.16
784.57	72.06	786.25	72.04	786.41	72.06	787.42	72.11	788.01	72.13
793.94	72.17	794.81	72.2	800.11	72.25	801.48	72.1	801.58	72.08
801.94	72	805.2	71.22	805.57	71.16	806.29	71	807.43	70.92
813.88	70.63	815.39	70.57	816.53	70.49	817.95	70.43	819.23	70.41
821.3	70.33	825.82	70.41	827.58	70.45	829.71	70.49	831.26	70.6
832.48	70.64	834.99	70.56	837.7	70.61	839.08	70.6	842.04	70.66
842.67	70.63	843.23	70.59	845.44	70.65	845.94	70.62	846.89	70.3
848.18	70.39	849.76	70.72	856.56	70.97	857.51	71	863.51	71.31
865.38	71.42	868.84	71.6	871.96	71.79	872.97	71.85	875.4	72
876.91	72.1	877.27	72.12	880.87	72.35	882.03	72.44	883.22	72.57
885.14	72.69	885.83	72.76	887.37	73	888.53	73.27	889.96	73.5
891.09	73.68	892.11	73.86	892.88	74	895.39	74.54	897.22	75
897.6	75.1	898.01	75.21	898.54	75.36	899.95	75.76	900.62	76
902.59	76.56	903.28	76.75	903.88	77	905.43	77.37	907.66	78
908	78.09	908.48	78.24	910.26	78.7	911.41	79	913.2	79.42
914.81	79.85	915.38	80	917.68	80.54	919.72	81	922.06	81.49
924.61	82	924.92	82.06	925.8	82.23	928.74	82.8	929.75	83
933.69	83.62	936.07	84	937.61	84.25				

Manning's n Values num= 3
 Station Val Sta n Val Sta n Val
 0 .08 415.61 .04 471.2 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 415.61 471.2 38.96 28.24 20.98 .5 .7
 Ineffective Flow num= 2
 Station L Station R Elev Permanent
 0 427.83 72.43 F
 459.57 937.61 72.43 F

CROSS SECTION

StonyBrookDari en1-ex. txt

RIVER: StonyBrook
 REACH: StonyBrook

RS: 5586

INPUT

Description: FEMA T - DS section of Railroad Bridge (HEC2-26)
 Station Elevation Data num= 236

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	81.58	4.73	81	5.12	80.97	5.27	80.96	5.66	80.92
10.1	80.5	14.8	80	14.89	79.99	15.49	79.92	22.31	79.15
23.66	79	28.88	78.41	32.59	78	37.63	77.49	41.36	77.11
42.47	77	44.56	76.87	57.9	76	67.66	75.43	70	75.29
75.57	75	77.05	74.95	113.96	74	114.59	73.96	116.81	73.79
124.22	73.28	127.18	73.1	127.35	73.08	127.54	73.07	128.37	73
134.87	72.55	140.32	72	159.53	71.06	160.93	71	167.11	70.27
169.24	70	170.73	69.71	174.24	69	174.82	68.97	178.51	68.8
181.57	68.68	195.17	68	204.1	67.67	208.86	67.54	211.01	67.41
211.98	67.39	214.32	67.26	218.92	67.02	219.15	67.01	219.48	67
226.73	66.73	229.16	66.61	237.66	66.22	241.6	66	251.97	65.53
253.36	65.49	255.9	65.44	262.07	65.32	265.73	65.26	270.59	65.22
271.19	65.2	271.74	65.19	273.58	65.2	275.7	65.22	279.85	65.54
284.08	65.57	286.43	66	288.6	66.75	289.4	67	291.89	67.82
292.53	67.86	292.92	67.95	307.3	68.79	315.6	61.7	320.6	61.2
322.2	59.67	326.3	59.19	330.2	59.71	333.4	60.26	339.1	61.13
346.1	62.13	359.6	64.74	359.87	65.68	360.3	65.73	362.23	65.89
363.03	65.97	364.48	66	368.15	66.19	369.3	66.2	371.41	66.35
373.07	66.34	374.85	66.47	375.42	66.48	379.67	66.81	380.7	66.89
381.8	66.95	382	66.96	388.88	67	390.96	67.14	391.47	67.12
393.67	67.2	398.39	67	414.42	66.45	415.75	66	416.27	65.83
418.21	65.22	418.84	65	433.23	64.03	433.52	64	469.55	63.84
472.17	63.71	475.88	63.81	476.61	63.76	478.91	63.8	479.34	63.77
490.96	63.83	492.6	63.77	494.03	63.75	495.07	63.73	497.42	63.76
499.83	63.82	500.44	63.84	503.58	63.98	504	64	509.27	64.33
512.44	64.41	527.81	65	529.06	65.09	529.74	65.1	531.34	65.15
537.96	65.1	538.57	65.11	540.1	65.15	542.91	65.3	544.73	65.33
545.74	65.36	547.03	65.34	547.64	65.36	550.65	65.5	553.84	65.8
564.48	65.94	564.95	65.96	566.05	66	567.4	66.05	570.11	66.24
572.17	66.35	574.3	66.39	575.7	66.5	577.95	66.56	579.32	66.68
590.3	67	592.97	67.24	594.16	67.26	595.94	67.33	599.98	67.32
607.44	67.38	611.18	67.5	615.47	67.55	616.46	67.59	619.54	67.61
621.51	67.64	621.98	67.66	624.04	67.76	626.46	67.89	627.81	68
629.26	68.2	630.11	68.24	632.86	68.55	636.86	68.62	640.47	68.82
646.13	69	651.12	69.35	656.09	70	656.81	70.09	657.13	70.11
659.77	70.41	660.99	70.45	663.25	70.68	664.2	70.76	665	70.82
668.53	70.83	669.81	70.88	675.62	70.85	682.25	70.78	684.11	70.75
686.26	70.65	687.86	70.6	690.31	70.48	698.34	70	722.47	69.18
725.31	69.08	725.73	69.07	727.46	69	751.09	69.47	754.56	69.51
756.7	69.56	758.56	69.65	759.78	69.68	761.15	69.73	767.43	70
767.51	70.01	767.58	70.02	769.65	70.4	772.34	70.75	774.43	71
776.19	71.31	780.14	72	781.42	72.18	782.57	72.39	784.37	72.64
786.84	73	791.4	73.55	794.98	74	795.38	74.16	795.8	74.31
797.37	75	798.5	75.56	799.5	76	800.19	76.31	801.92	77
803.55	77.5	804.5	77.79	805.24	78	807.03	78.48	809.02	79
810.1	79.3	812.56	80	814.55	80.47	816.9	81	818.34	81.3
819.17	81.49	820.04	81.68	821.56	82	823.76	82.46	826.15	83
826.7	83.1								

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.08	307.3	.045
			359.87
			.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

307.3 359.87

StonyBrookDari en1-ex. txt
338.32 286.76 216.02

.3

.5

CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook

RS: 5299

INPUT

Description: FEMA S (HEC2-25.2)

Station Elevation Data num= 135

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	68.34	4.38	68.84	5.95	69	11.51	68.72	18.97	68
22.22	67.56	26.19	67	29.25	66.33	30.7	66	33.97	65.29
35.28	65	42.29	64.28	45.6	64	54.04	63.71	57.32	63.56
70.03	63	87.97	62.36	94.35	62.21	98.24	62.09	101.14	62
118	60.43	126.2	59.89	129.5	57.33	133.5	57.15	138.2	56.93
141.9	56.95	144.3	57.68	145.3	57.8	149.1	60.91	153.8	61.05
154.77	62	162.57	61.75	164.28	61.62	166.52	61.41	170.6	61
192.24	61.01	199.96	61.02	207.56	61.14	208.95	61.19	211.77	61.3
215.56	61.42	218.52	61.54	222.41	61.66	225.19	61.76	228.42	61.86
228.88	61.87	230.16	61.92	230.66	61.93	233.12	61.96	235.25	62
243.66	62.1	243.9	62.11	248.44	62.34	250.87	62.43	251.83	62.49
263.73	63	273.08	63.55	276.93	63.72	277.39	63.74	284.12	64
287.7	64.17	294.46	64.44	303.93	65	308.34	65.36	310.96	65.56
316.05	66	319.57	66.91	319.84	67	320.19	67.12	323.6	68
324.98	68.21	331.71	69	332.08	69.04	333.93	69.28	340.12	70
341.2	70.15	341.94	70.25	348.16	71	362.9	70.89	375.29	70.6
387.82	70.17	390.54	70.12	393.07	70	400.8	69.64	407.53	69.4
409.11	69.36	414.25	69.15	415.39	69.12	417.41	69	436.5	69.44
447.51	70	451.29	70.11	466.92	71	467.26	71.06	471.72	72
475.22	72.7	476.7	73	479.13	73.69	480.17	74	480.89	74.21
481.91	74.52	483.63	75	484.65	75.45	486.17	76	486.59	76.14
487.98	76.63	489.07	77	490.86	77.61	492.07	78	493.56	78.51
495.2	79	497.87	79.88	498.24	80	498.45	80.06	501.46	81
501.75	81.09	502.28	81.25	504.73	82	506.42	82.51	508.06	83
508.44	83.12	509.16	83.36	510.47	83.79	511.06	84	512.57	84.5
514.56	85	514.66	85.02	514.7	85.03	517.89	85.41	519.39	85.36
522.77	85.64	524.52	85.63	529.42	85.79	530.01	85.81	532.2	85.92

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	126.2	.045	149.1	.08

Bank Sta: Left 126.2 Right 149.1 Lengths: Left Channel 78.09 Right 100.27 105.09 Coeff Contr. .1 Expan. .3

CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook

RS: 5199

INPUT

Description: FEMA R (HEC2-25.1)

Station Elevation Data num= 109

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	63.81	9.67	63.89	11.65	63.88	14.94	63.94	17.42	64
20.98	64.01	24.47	64.28	26.82	64.52	31.5	65	40.94	65.83
42.46	66	48.33	66.86	49.18	67	49.56	67.09	53.77	68
54.2	68.12	57.5	69	59.68	69.56	61.46	70	63.65	70.43
66.64	71	74.6	71.99	74.65	72	79.85	71.54	83.08	71
85.55	70.61	86.9	70.39	88.99	70	91.43	69.55	94.13	69

StonyBrookDari en1-ex. txt

95.9	68.64	99.02	68	100.67	67.66	103.88	67	108.06	66
111.65	65	115.12	64.08	115.43	64	115.86	63.88	119.11	63
120.43	62.67	122.92	62	126.69	61.44	129.85	61	133.09	60.56
147.3	60.35	152.3	59.34	153.8	57.24	159.5	56.91	165.8	56.68
171.7	56.66	176.8	56.3	183.1	59.94	215.1	60.07	215.66	60.13
219.48	60.56	223.93	61	250.46	61.34	251.63	61.37	271.15	62
271.49	62.02	271.75	62.05	275.46	62.32	282.55	63	283.73	63.17
284.79	63.33	288.97	64	293.93	64.79	295.33	65	298.53	65.49
301.9	66	303.03	66.31	305.17	67	305.74	67.18	308.2	68
310.69	68.82	311.13	68.97	311.22	69	311.69	69.14	314.64	70
315.25	70.19	317.84	71	319.94	71.53	321.66	72	321.92	72.1
324.14	72.58	326.06	73	327.16	73.23	330.75	74	332.16	74.25
333.98	74.46	337.73	75	342.98	75.83	344.16	76	344.32	76.09
346.21	77	347.79	77.82	348.2	78	348.46	78.1	350.33	79
353.83	79.37	354.68	79.44	355.25	79.48	359.44	79.72	362.49	79.74
365.6	79.36	366.57	79.32	368.57	79	369.4	78.87		

Manning's n Values num= 3
 Station Val Sta n Val Sta n Val
 0 .08 147.3 .045 183.1 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 147.3 183.1 145.48 150.89 132.43 .1 .3
 Left Levee Station= 74.6 Elevation= 71.99

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 5048

INPUT

Description: FEMA Q - multiple large rocks in section (HEC2-25)

Station Elevation Data num= 131

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	61.62	1.64	61.66	15.03	62	23.23	62.93	23.92	63
24.47	63.06	32.78	64	35.02	64.23	41.82	65	47.83	65.88
48.64	66	50.74	66.43	53.49	67	57.83	67.9	58.35	68
58.96	68.11	63.34	69	65.34	69.36	67.64	69.77	68.92	70
69.6	70.09	75.1	70.67	78.25	71	93.32	70.83	95.81	70
96.82	69.67	98.09	69.26	98.96	69	100.14	68.62	102.16	68
104.7	67.22	105.37	67	105.86	66.85	108.58	66	109.66	65.66
111.79	65	114.79	64.2	115.51	64	115.95	63.91	117.65	63.55
120.27	63	121.21	62.81	125.22	62	128.34	61.39	130.05	61
130.61	60.85	130.96	60.74	132.3	59.5	134.6	59.37	138.1	59.37
141.6	59.37	142.2	58.91	143.7	58.91	145.2	58.91	146.9	55.29
147.1	59.04	149.1	59.04	151.1	59.04	151.9	55.25	153.9	55.54
155.9	55.53	156.9	56.6	164.3	59.16	166.15	59.27	167.01	59.33
181.36	60	197.34	60.55	203.43	61	209.11	61.96	209.32	62
210.62	62.31	213.57	63	213.76	63.05	216.38	63.71	217.47	63.98
217.57	64	220.93	64.96	221.08	65	221.31	65.09	223.75	66
225.16	66.6	226.18	67	227.7	67.6	228.79	68	230.49	68.63
231.54	69	233.32	69.69	234.12	70	234.75	70.31	236.22	71
236.79	71.25	238.45	72	238.88	72.22	240.37	73	240.67	73.15
242.47	74	242.91	74.2	244.53	75	245.24	75.36	246.55	76
248.06	76.7	248.71	77	249.23	77.13	252.96	78	256.91	78.68
257.93	78.85	258.68	79	260.56	79.52	262.19	80	263	80.24
264.97	80.89	265.22	80.97	265.31	81	265.42	81.04	267.77	82
269.19	82.59	270.24	83	272.16	83.79	272.44	83.86	273.03	84
274.12	84.29	275.59	84.43	276.93	84.38	277.19	84.32	279.18	84
279.76	83.91	280.02	83.9	281.5	83.62	284.52	83.28	286.4	83
289.22	82.45								

StonyBrookDari en1-ex. txt

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .08 130.96 .05 164.3 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 130.96 164.3 41.19 59.04 69.14 .1 .3
 Left Levee Station= 93.32 Elevation= 70.83

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 4989

INPUT

Description: MMI additional cross section along cascade
 Station Elevation Data num= 97

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	66.89	.84	67	2.59	67.27	5.84	67.71	8.24	68
9.39	68.1	11.26	68.21	12.89	68.28	17.01	68.34	18.4	68.36
21.07	68.38	28.39	68.04	28.45	68.03	28.67	68	28.85	67.95
32.8	67	35.83	66.3	36.98	66	41	65.03	41.11	65
44.19	64.26	45.23	64	46.08	63.8	49.54	63	53.05	62.23
54.1	62	56.07	61.56	58.8	59.99	72.44	56.95	73.4	55.14
75.9	55.16	79.41	53.75	83.47	54.23	87.48	55.24	88.08	56.96
94.08	57.74	95.32	58.36	100.05	59	111.36	59.58	120.22	60
131.5	60.63	137.37	61	147.03	61.99	147.18	62	147.25	62.01
147.37	62.03	152.97	63	155.03	63.57	156.57	64	159.01	64.88
159.33	65	159.84	65.2	161.92	66	164.11	66.95	164.22	67
166.02	67.83	166.39	68	168.26	68.84	168.62	69	170.42	69.84
170.78	70	171.19	70.22	172.64	71	173.68	71.62	174.33	72
175.12	72.45	176.11	73	176.94	73.47	177.88	74	179.27	74.78
179.63	75	180.65	75.56	181.42	76	182.92	76.85	183.17	77
183.31	77.08	184.78	78	185.53	78.76	185.76	79	186.6	79.8
186.81	80	187.78	80.93	187.86	81	187.87	81.02	189	82
189.75	82.72	190.17	83	191.06	83.42	192.45	84	193.63	84.54
194.71	85	197.98	85.85	198.74	86	202.45	86.77	203.69	87
207.09	87.69	208.74	88						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .08 72.44 .05 88.08 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 72.44 88.08 31.75 66.86 78.88 .1 .3
 Left Levee Station= 21.07 Elevation= 68.38

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 4922

INPUT

Description: MMI added cross section along cascade
 Station Elevation Data num= 77

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	68	7.13	67.36	9.63	67	10.18	66.91	11.57	66.72
14.96	66.21	16.45	66	19.74	65.55	23.53	65	24.9	64.81
25.39	64.76	27.64	64.53	33.58	64	35.39	63.68	39.19	63
39.46	62.95	39.82	62.89	41.04	62.72	44.96	62.13	45.75	62
48.38	61.59	51.28	61.13	52.04	61	55.27	60.54	57.11	60.27
57.4	59.69	70.24	57.43	72.92	55.52	76.2	54.75	78.83	54.95

StonyBrookDari en1-ex. txt

82.08	54.68	84.43	52.99	85.65	52.06	88.24	52.16	91.04	53.5
95.63	54.26	100.53	56.33	110.32	57.62	113.81	59	119.15	59.53
123.35	60	126	60.27	130.38	60.74	132.61	61	140.94	61.61
145.96	62	146.88	62.08	154.54	63	154.77	63.09	157.25	64
158.8	64.61	159.89	65	160.78	65.34	162.42	66	165.05	66.95
165.21	67	169.66	67.83	170.53	68	173.96	68.65	175.56	68.92
176.02	69	181.41	69.81	182.52	70	188.31	70.94	188.65	71
197.24	71.7	197.58	71.72	201.51	72	203.9	72.17	214.17	72.94
214.53	72.97	214.76	72.98	214.86	72.99	214.98	73	225.48	73.94
225.99	74	227.47	74.19						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	55.27	.05	113.81	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

55.27	113.81	34.58	42.63	46.15	.1	.3
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CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook RS: 4879

INPUT

Description: MMI added cross section along cascade

Station Elevation Data num= 72

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	68	8.96	67.29	12.19	67	13.69	66.91	16.03	66.74
20.91	66.33	24.52	66	25.1	65.94	34.74	65	37.7	64
39.16	63.47	40.52	63	41.37	62.7	43.41	62	45.68	61.05
45.8	61	46.1	60.87	48.25	60	49.59	59.4	50.58	59
51.14	58.96	55	58.79	56.92	58.74	61.94	58.73	66.4	58.03
79.9	55.58	85.54	53.49	86.19	51.6	89.37	51.41	93.78	51.5
99.68	51.57	104.44	50.98	107.82	51.29	119.59	56.66	137.49	58.92
139.03	59	146.1	59.56	151.1	60	156.62	60.48	162.39	61
169.9	61.63	174.37	62	175.85	62.12	181.11	62.55	187.07	63
190.51	63.66	192.53	64	195.33	64.73	196.59	65	199.13	65.65
200.67	66	203.55	66.62	205.38	67	207.97	67.5	210.42	68
214.31	68.66	216.34	69	218.11	69.3	221.99	70	225.05	70.41
229.69	71	234.23	71.43	239.76	72	240.82	72.1	249.05	73
249.91	73.09	251.32	73.28	253.86	73.61	256.36	73.89	256.66	73.93
257.1	74	259.7	74.37						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	61.94	.05	137.49	.08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

61.94	137.49	112.16	105.68	93.01	.1	.3
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CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook RS: 4774

INPUT

Description: MMI added cross section along cascade

Station Elevation Data num= 180

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	60.01	.27	60	2.11	59.77	4.07	59.62	6.62	59.41
10.3	59.14	12.02	59	21.69	58.19	23.67	58	27.66	57.57

StonyBrookDari en1-ex. txt

32.5	57.08	32.95	57.04	33.05	57.02	33.22	57	35.01	56.78
41.36	56	42.04	55.92	43.01	55.83	49.06	55.28	53.34	55
57.4	54.77	61.51	54.6	64.4	54.49	65.63	54.46	67.19	54.37
68.12	54.38	70.67	54.13	70.98	54.1	71.83	54	75.58	53.6
78.58	53	79.74	52.71	82.6	52	85.28	51.31	86.39	51
86.98	50.85	87.37	50.73	88.11	50.53	89.16	50.27	89.57	50.18
91.65	50.19	93.55	50	95.13	49.82	98.67	49.28	100.38	49
103.87	48.46	106.35	48.28	109.68	48	113.58	47.22	114.59	47
118.11	46.39	119.98	46	120.53	45.88	120.84	45.85	127.4	45.22
129.75	45	130.37	44.85	133.25	44	134.34	43.37	134.91	43
136.8	42.56	141.02	37.72	142.96	36.99	146.12	37.26	151.06	37.57
156.69	37.86	163.8	39.57	169.8	39.18	172.75	39.53	180.5	42.02
190.01	44.99	190.11	46.17	194.62	47	195.04	47.09	198.92	48
200.31	48.33	202.22	48.67	203.18	48.74	205.1	49	205.43	49.06
205.53	49.08	207.14	49.26	207.72	49.3	209.27	49.37	209.94	49.35
211.98	49.27	212.3	49.23	213.83	49.62	214.17	49.71	214.79	50
215.91	50.6	216.66	51	216.87	51.11	218.61	52	220.68	52.4
221.37	52.48	222.38	52.62	225.35	52.79	225.63	52.81	226.1	52.84
226.36	52.83	226.61	52.82	228.68	52.9	229.7	53	230.97	53.12
232.63	53.25	235.42	53.67	236.05	53.71	237.62	53.94	237.85	53.98
238.22	54	240.08	53.99	241.42	53.91	241.7	53.92	254.04	53.85
254.7	53.84	256.36	54	266.94	54.49	268.01	54.59	269.25	54.64
271.53	54.79	274.29	55	275.08	55.11	279.26	56	281.36	56.36
282.4	56.48	283.39	56.61	284.01	56.67	284.46	56.72	285.13	56.78
287.75	57	295.62	57.73	299.05	58	301.65	58.23	311.08	58.96
311.39	58.98	311.62	59	314.9	59.28	317.84	59.49	322.55	59.92
323.43	60	326.48	60.37	330.95	61	332.73	61.24	337.98	62
339.2	62.28	339.67	62.36	342.16	62.83	347.43	62.94	348.72	63
349.34	63.07	353.14	63.75	357.78	64	358.83	64.12	360.94	64.34
363.52	64.69	367.31	65	374.61	65.35	375.6	65.42	377.96	65.54
379.49	65.66	382.09	65.84	384.1	66	387.41	66.4	391.98	67
393.53	67.19	395.38	67.47	398.81	68	400.53	68.62	401.5	69
402.09	69.37	402.92	69.87	403.13	70	403.99	70.5	404.82	71
406.94	71.55	408.68	72	410.02	72.34	412.69	73	413.09	73.08

Manning's n Values num= 3
 Station Val Sta n Val
 0 .08 127.4 .05 190.11 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 127.4 190.11 51.83 85.19 71.28 .1 .3

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 4688

INPUT

Description: FEMA P - US section of I-95 - DS end of cascade (HEC2-24)
 Station Elevation Data num= 114

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	51.04	.13	51.01	.18	51	.24	50.99	.85	50.87
4.13	50.19	5.26	50	7.74	49.38	9.24	49	9.65	48.89
10.54	48.69	12.45	48.27	13.99	48	16.16	47.59	19.43	47
22.56	46.35	23.55	46.17	24.31	46	26.29	45.59	29.78	45
34.85	44.02	34.96	44	35.36	43.92	40.12	43	44.54	42.27
46.09	42	47.58	41.81	51.13	41.38	53.81	41	55.63	40.83
62.17	40.25	65.49	40	67.55	39.68	71.44	39	74.46	38.08
74.67	38	74.87	37.94	75.25	37.91	76.8	37.72	79.75	37.48
81.34	37	87.67	36.12	87.74	36.1	87.93	36.05	99.19	30.91
110.96	24.83	112.71	25.51	114.44	25.35	118.33	25.41	118.76	25.42
119.21	25.43	122.2	25.1	122.51	25.11	122.9	25.12	125.48	25.53

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127.62	25.57	130.18	25.61	132.53	25.66	134.26	25.26	134.6	25.28
135.04	25.45	135.49	25.46	135.88	25.68	136.23	26	136.58	26.27
137.43	27	138.3	27.85	138.49	28	139.43	28.81	139.64	29
139.94	29.29	140.79	30	141.25	30.42	141.26	30.43	141.89	31
143.88	31.81	144.16	31.91	144.42	32	147.8	32.83	148.78	32.9
149	32.94	149.46	32.93	151.25	32.95	151.38	32.97	151.83	33
156.4233	20583	160.75	33.4	164.92	34	175.78	34.99	175.86	35
175.91	35.01	180.66	36	189.96	36.95	190.38	37	190.8	37.04
201.79	38	205.88	38.78	206.85	39	207.69	39.31	209.5	40
209.79	40.1	212.17	41	214.17	41.42	217.09	42	221.49	42.9
221.97	43	223.1	43.38	224.83	44	225.71	44.3	227.7	45
236.34	45.98	236.47	46	236.6	46.01	237.9	46.13		

Manning's n Values	num=	3
Sta n Val	Sta	n Val
0 .08	99.19	.05 156.42 .08

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
99.19	156.42	55.64	10.42	14.05	.1	.3	

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 4678

INPUT

Description: MMI added section - to define storage in Cummings Brook

Station	Elevation	Data	num=	176					
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	47.98	9.69	47.38	12.38	47.24	16.8	47.05	17.33	47.03
18.19	47	23.77	46.63	33.79	46	37.29	45.84	52.16	45
60.64	44.98	100.02	44	112.57	43.82	127.07	43	159.23	42.34
170.01	42	171.5	41.56	172.5	41	174.12	40.1	174.3	40
174.65	39.82	176.26	39	177.39	38.41	178.2	38	180.16	37.04
180.24	37	180.37	36.93	182.18	36	183.63	35.3	184.21	35
186.26	34.01	186.28	34	186.3	33.99	188.32	33	190.13	32.13
190.41	32	191.95	31.36	192.2	31.32	192.91	31.3	194.68	31.29
204.72	31.25	205.51	31.24	206.38	31	211.87	31.22	213.37	31.21
219	31.18	221.28	31.17	233.11	31.12	233.89	31.11	236.87	31.1
238.44	31.09	238.87	31	240.41	31.08	247.53	31.05	247.67	31.03
248.45	31	298.71	30.05	300.42	30	368.96	30.66	374.5	31
378.98	30.17	379.08	30	379.34	29.63	379.74	29	380.19	28.49
380.73	28	381.22	27.54	381.83	27	382.19	26.79	383.15	26
383.64	25.94	386.18	25.66	386.91	25.62	388.33	25.51	391.01	25.4
391.13	25.39	395.75	25	574.22	25.1	577.53	25.4	580.04	25.64
580.4	25.69	582.62	26	584.98	26.09	586.6	26.25	587.74	26.26
589.89	26.43	590.56	26.44	595.06	27	609.11	26.08	609.79	26
643.36	25.84	649.28	25.55	651.78	25.47	652.34	25.45	652.86	25.44
657.12	25	683.16	24.11	683.69	24.1	683.94	24.11	685.18	24
731.26	23.11	732.55	23	761.72	22.73	764.18	21.73	774.51	20
777.47	19.98	782.52	19.92	788.93	19.82	793.52	19.71	798.08	20.09
800.52	23.16	803.62	23.44	804.8	23.55	807.55	23.8	808.6	23.9
809.61	24	814.31	24.45	815.6	24.55	818.02	24.72	818.47	24.7
820.49	25	823.01	25.68	823.9	26	824.7	26.76	824.97	27
825.52	27.55	825.97	28	826.38	28.4	827	29	828.06	29.95
828.1	30	828.14	30.03	829.14	31	829.73	31.21	831.84	32
832.88	32.27	833.22	32.3	834.86	32.61	836.24	32.6	837.28	32.77
840.57	32.92	842.33	33	848.92	33.45	853.2	34	860.83	34.95
861.35	35	861.69	35.12	863.93	35.65	864.07	36	865.15	36.08
883.17	37	887.85	37.01	890.68	38	892.21	38.53	893.34	39
895.92	39.99	895.94	40	895.97	40.01	898.05	40.87	898.41	41
899.99	41.37	902.53	42	903.5	42.17	908.42	43	909.74	43.59

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910.67	43.81	911.17	44	912.73	44.56	913.85	45	915.13	45.33
918.38	45.74	918.71	45.78	919.93	45.9	920.65	46	923.39	46.13
925.03	46.2								

Manning's n Values num= 3
 Station Val Station Val Station Val
 0 .08 374.5 .05 840.57 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 374.5 840.57 21.49 5.85 8.33 .3 .5

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 4672

INPUT
 Description: US face of I-95 (MMI added section)
 Station Elevation Data num= 225

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	47.43	1.3	47.47	2.39	47.46	3.16	47.4	3.93	47.31
5.82	47	6.64	46.86	10.77	46	11.16	45.92	11.52	45.83
14.81	45	15.93	44.69	18.56	44	20.27	43.46	21.76	43
26.13	42.91	26.29	42.9	76.43	42	147.66	41.56	148.38	41.55
149.83	41.54	152.18	41.51	153.98	41.49	155.51	41.48	157.07	41.46
180.69	41	257.05	40.1	259.48	40	264.11	39.84	283.68	39.18
288.24	39	295.8	38.54	304.47	38	315.6	38.34	317.02	39
336.89	38.58	339.81	38.38	340.93	38	345.31	37.29	346.77	37
349.21	36.91	350.09	36.89	365.54	36.56	366.33	36.54	368.54	36.49
383.54	36.53	385.4	36.52	387.78	36.49	388.7	36.48	394.33	35.75
397.22	35.65	406.78	36.06	407.87	36	409.96	35.89	411.67	35
412.28	34.7	413.75	34	414.72	33.58	415.89	33	416.7	32.67
417.51	32.51	418.81	32.23	419.03	32.22	420.89	32.14	423.31	32.25
424.33	32.36	426.98	32.65	428.72	32.84	430.23	33	432.02	33.2
432.63	33.27	434.73	33.51	437.15	33.83	437.58	33.88	438.5	34
440.93	34.31	442.28	34.47	444.12	34.66	446.61	34.96	446.72	34.97
446.93	35	449.71	35.36	451.28	35.6	452.44	35.76	454.43	36
454.69	36.03	455	36.08	457.79	36.54	458.72	36.69	460.43	37
463.07	37.04	468.22	37.08	470.06	37.09	475.72	37.12	481.28	37.06
487.2	37.13	490.27	37.12	493.55	37.13	495.49	37.14	501.22	37.19
501.93	37.2	502.83	37.21	511.42	37	530.75	36.06	530.99	36
531.41	35.83	532.87	35	535.87	34.17	536.34	34	538.25	33.16
538.64	33	539.34	32.7	540.96	32	541.78	31.66	543	31.19
543.48	31	545.78	30.3	546.14	30.22	547.23	30.09	547.64	30.07
548.65	30	550.62	29.87	551.35	29.82	554.05	29.71	555.49	29
557.05	29.59	561.46	29.41	564.29	29.3	565.87	29.23	571.55	29.01
571.95	29	575.99	28.88	576.49	28.87	581.07	28.74	581.99	28.13
582.29	28.12	583.88	28.71	586.16	28.69	586.78	28.68	590.5	28.64
592.62	28.63	596.04	28.59	598.48	28.57	601.74	28.54	603.79	28.52
605.97	28.51	608.89	28.48	611.65	28.46	614.68	28	617.26	28.41
618.76	28.39	618.81	28.4	621.06	28.36	621.42	28.35	622.77	28.32
625.25	28.28	629.46	28.22	631.29	28.17	635.87	28.11	636.73	28.09
640.48	28	643.51	27.93	643.86	27.92	644.85	27.67	647.43	27.22
649.24	27.41	649.47	27.39	649.7	27.36	650.09	27.33	650.67	27.27
653.42	27	655.73	26.78	657.06	26.64	662.46	26.1	663.1	26.03
663.41	26	667.44	25.52	667.81	25.48	668.26	24.51	679.98	22.73
682.44	21.73	692.77	20	695.73	19.45	700.78	19.86	707.19	19.37
711.78	19.44	716.34	20.09	719.55	23.78	731.97	27.12	737.42	31.66
740	32.31	742.88	32.48	746.27	32.73	748.06	32.93	748.75	33
750.42	33.02	754.61	34	758.12	34.85	759.45	35	760.57	35.42
762.06	36	762.54	36.04	762.7	36.05	766.05	36.37	767.82	36.48
769.54	36.64	772.23	36.69	773.31	36.77	777.59	37	790.39	37.31

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791.78	38	792.47	38.27	794.33	39	796.39	39.75	797.09	40
797.29	40.07	799.76	41	801.86	41.79	802.41	42	803.5	42.35
805.53	43	808.51	43.54	811.11	43.67	819.18	43.88	819.44	43.89

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .08 667.81 .05 731.97 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 667.81 731.97 339.07 344.65 348.11 .5 .7
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 681.83 38 F
 724.69 819.44 38 F

CULVERT

RIVER: StonyBrook
 REACH: StonyBrook RS: 4443

INPUT
 Description: I-95 Crossing
 Pipe length and shape verified with 1990 DOT plans
 Ledge Road Elevation controls road deck
 Some large rocks piled at US entrance

Perched, scoured at DS
 Distance from Upstream XS = 11
 Deck/Roadway Width = 321
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates num= 23

Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
-82.43	44			3.57	43			91.57	42		
183.57	41			259.57	40			318.57	39.4		
356.57	39			464.57	38			647.57	38		
692.57	39			735.57	40			777.57	41		
805.57	42			830.57	43			858.57	44		
882.57	45			900.57	46			913.57	47		
929.57	48			948.57	49			974.57	50		
1072.57	55			1175.57	60						

Upstream Bridge Cross Section Data Station Elevation Data num= 225

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	47.43	1.3	47.47	2.39	47.46	3.16	47.4	3.93	47.31
5.82	47	6.64	46.86	10.77	46	11.16	45.92	11.52	45.83
14.81	45	15.93	44.69	18.56	44	20.27	43.46	21.76	43
26.13	42.91	26.29	42.9	76.43	42	147.66	41.56	148.38	41.55
149.83	41.54	152.18	41.51	153.98	41.49	155.51	41.48	157.07	41.46
180.69	41	257.05	40.1	259.48	40	264.11	39.84	283.68	39.18
288.24	39	295.8	38.54	304.47	38	315.6	38.34	317.02	39
336.89	38.58	339.81	38.38	340.93	38	345.31	37.29	346.77	37
349.21	36.91	350.09	36.89	365.54	36.56	366.33	36.54	368.54	36.49
383.54	36.53	385.4	36.52	387.78	36.49	388.7	36.48	394.33	35.75
397.22	35.65	406.78	36.06	407.87	36	409.96	35.89	411.67	35
412.28	34.7	413.75	34	414.72	33.58	415.89	33	416.7	32.67
417.51	32.51	418.81	32.23	419.03	32.22	420.89	32.14	423.31	32.25
424.33	32.36	426.98	32.65	428.72	32.84	430.23	33	432.02	33.2
432.63	33.27	434.73	33.51	437.15	33.83	437.58	33.88	438.5	34
440.93	34.31	442.28	34.47	444.12	34.66	446.61	34.96	446.72	34.97

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446.93	35	449.71	35.36	451.28	35.6	452.44	35.76	454.43	36
454.69	36.03	455	36.08	457.79	36.54	458.72	36.69	460.43	37
463.07	37.04	468.22	37.08	470.06	37.09	475.72	37.12	481.28	37.06
487.2	37.13	490.27	37.12	493.55	37.13	495.49	37.14	501.22	37.19
501.93	37.2	502.83	37.21	511.42	37	530.75	36.06	530.99	36
531.41	35.83	532.87	35	535.87	34.17	536.34	34	538.25	33.16
538.64	33	539.34	32.7	540.96	32	541.78	31.66	543	31.19
543.48	31	545.78	30.3	546.14	30.22	547.23	30.09	547.64	30.07
548.65	30	550.62	29.87	551.35	29.82	554.05	29.71	555.49	29
557.05	29.59	561.46	29.41	564.29	29.3	565.87	29.23	571.55	29.01
571.95	29	575.99	28.88	576.49	28.87	581.07	28.74	581.99	28.13
582.29	28.12	583.88	28.71	586.16	28.69	586.78	28.68	590.5	28.64
592.62	28.63	596.04	28.59	598.48	28.57	601.74	28.54	603.79	28.52
605.97	28.51	608.89	28.48	611.65	28.46	614.68	28	617.26	28.41
618.76	28.39	618.81	28.4	621.06	28.36	621.42	28.35	622.77	28.32
625.25	28.28	629.46	28.22	631.29	28.17	635.87	28.11	636.73	28.09
640.48	28	643.51	27.93	643.86	27.92	644.85	27.67	647.43	27.22
649.24	27.41	649.47	27.39	649.7	27.36	650.09	27.33	650.67	27.27
653.42	27	655.73	26.78	657.06	26.64	662.46	26.1	663.1	26.03
663.41	26	667.44	25.52	667.81	25.48	668.26	24.51	679.98	22.73
682.44	21.73	692.77	20	695.73	19.45	700.78	19.86	707.19	19.37
711.78	19.44	716.34	20.09	719.55	23.78	731.97	27.12	737.42	31.66
740	32.31	742.88	32.48	746.27	32.73	748.06	32.93	748.75	33
750.42	33.02	754.61	34	758.12	34.85	759.45	35	760.57	35.42
762.06	36	762.54	36.04	762.7	36.05	766.05	36.37	767.82	36.48
769.54	36.64	772.23	36.69	773.31	36.77	777.59	37	790.39	37.31
791.78	38	792.47	38.27	794.33	39	796.39	39.75	797.09	40
797.29	40.07	799.76	41	801.86	41.79	802.41	42	803.5	42.35
805.53	43	808.51	43.54	811.11	43.67	819.18	43.88	819.44	43.89

Manning's n Values

num=	3				
Sta	n Val	Sta	n Val	Sta	n Val
0	.08	667.81	.05	731.97	.08

Bank Sta: Left Right Coeff Contr. Expan.

667.81	731.97	.5	.7
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Ineffective Flow

num=	2		
Sta L	Sta R	Elev	Permanent
0	681.83	38	F
724.69	819.44	38	F

Downstream Deck/Roadway Coordinates

num=	24									
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	
-475	44				-389	43			-301	42
-209	41				-133	40			-74	39.4
-36	39				72	38			255	38
300	39				343	40			385	41
413	42				438	43			466	44
490	45				508	46			521	47
537	48				556	49			582	50
680	55				783	60			914.36	57.96

Downstream Bridge Cross Section Data

Stati on	Elevati on	Data	num=	442					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	45.49	.53	45.5	1.35	45.43	2	45.39	2.99	45.31
3.36	45.28	4	45.23	4.29	45.21	4.86	45.16	5.51	45.1
6.27	45.04	6.42	45.09	7.77	45.67	8.63	46	8.99	46.15
9.15	46.26	9.69	46.64	9.99	46.88	10.21	47	10.86	47.32
11.25	47.64	11.52	47.88	11.69	48	12	48.23	13.34	49
13.73	49.06	15.22	49.23	16.17	49.28	17.55	49.4	18.87	49.36
20.59	49.4	21.8	49.35	22.7	49.34	25.57	49.2	27.92	49

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28.64	48.91	28.93	48.88	31.29	48.61	32.53	48.47	33.75	48.33
35.17	48.17	35.76	48.11	36.03	48.08	36.75	48	38.2	47.83
38.48	47.81	38.99	47.75	40.8	47.54	41.94	47.4	42.85	47.28
44.52	47	44.85	46.92	44.95	46.89	45.14	46.84	46.84	46.42
47.47	46.27	48.56	46	50.21	45.53	51.46	45.15	51.69	45.08
51.96	45	53.21	44.73	53.72	44.63	54.67	44.44	55.67	44.26
56.17	44.18	57.17	44	57.34	43.96	57.4	43.94	57.5	43.92
58.75	43.62	59.32	43.49	60.05	43.32	61.56	43	61.67	42.97
61.71	42.96	62.99	42.66	63.58	42.57	64.45	42.43	65.13	42.28
66.1	42.05	66.17	42.03	66.31	42	67.32	41.55	67.76	41.39
68.19	41.22	68.87	41	69.59	40.81	69.81	40.76	70.86	40.49
71.36	40.39	72.75	40.11	72.92	40.07	73.26	40	74.42	39.76
75.14	39.56	76.44	39.28	76.78	39.2	77.76	39	78.2	38.91
78.36	38.88	79.49	38.64	80.12	38.52	81.41	38.27	81.94	38.13
82.77	38	83.52	37.87	83.87	37.82	85.44	37.44	86.44	37.25
87.76	37	88.15	36.92	88.38	36.89	89.68	36.64	90.88	36.47
92.02	36.2	93.1	36	94.37	35.76	96.89	35.22	97.61	35.05
97.7	35.04	98.29	35	102.66	34.72	104.82	34.59	107.83	34.41
112.62	34.12	113.23	34.08	114.61	34	118.51	33.83	120.7	33.74
125.19	33.55	126.71	33.46	135.24	33.15	135.84	33.11	136.11	33.09
136.25	33.07	137.11	33	143.29	32.47	146.52	32	146.77	31.98
146.83	31.97	152.26	31.41	152.83	31.39	153.42	31.35	154.78	31.29
156.3	31	160	30.17	160.91	30	165.4	29.08	165.8	29
165.91	28.97	170.71	28	171.55	27.82	176.55	27	177.99	26.76
182.77	26.04	182.94	26.02	183.05	26	186.93	25.55	188.03	25.45
189.24	25.38	190.86	25.33	198.98	25.14	199.58	25.13	205.08	25
207.75	24.93	215.18	24.89	216.14	24.9	223.23	25	225.51	25.03
225.73	25.04	233.74	25.15	234.81	25.17	237.5	25.04	238.04	25
244.29	24.47	245.53	24.36	250.3	24	251	23.95	251.72	23.9
257.75	23.53	260.68	23.33	262.42	23.27	267.32	23.06	267.64	23.05
267.81	23.04	268.76	23	272.94	22.82	273.78	22.73	275.78	22.6
277.16	22.51	279.22	22.32	279.99	22.26	284.44	22.13	284.81	22.11
285.56	22	286.83	21.69	288.4	21	288.97	20.78	289.5	19.22
294.5	16.03	296.8	13.55	300.7	12.74	304.1	12.42	310.1	13.83
317.5	13.65	321.6	14.56	327.4	15.06	332	19.85	332.56	21
332.75	21.06	332.95	21.09	334.05	21.26	335.48	21.34	335.97	21.38
339.36	21.45	344.55	21.58	346.17	21.59	353.37	22	353.56	22.03
353.72	22.04	357.78	22.33	359.63	22.41	361.83	22.51	363.21	22.57
364.97	22.65	366.36	22.71	371.06	22.92	376.24	22.88	378.81	22.86
380.89	22.84	389.49	22.83	402.97	22.82	413.28	22.79	415.66	22.77
418.69	22.75	419.59	22.74	421.76	22.73	422.74	22.72	426.31	22.69
427.41	22.67	428.69	22.64	431.98	22.57	433.54	22.54	434.96	22.51
436.79	22.47	438.04	22.44	439.22	22.42	441.3	22.37	442.3	22.35
444.67	22.3	446.21	22.27	448.76	22.2	451.79	22.13	452.46	22.12
454.38	22.15	456.15	22.19	456.63	22.2	457.18	22.21	460.53	22.28
461.25	22.29	464.15	22.35	465.03	22.37	467.52	22.42	469.93	22.48
471.76	22.58	474.02	22.7	476.25	22.81	479.36	22.98	479.83	23
482.18	23.12	482.6	23.14	485.08	23.54	488.18	24	488.22	24.01
491.58	25	493.37	25.5	495.18	26	496.98	26.44	499.62	27
501.1	27.29	505.15	28	505.34	28.04	505.87	28.13	507.6	28.47
508.84	28.71	510.8	29	513.6	29.57	515.49	30	517.22	30.34
520.34	31	520.46	31.02	522.55	31.39	525.83	31.96	526.06	32
530.02	32.75	531.27	33	535.38	33.88	535.93	34	536.26	34.07
540.49	35	547.76	35.4	554.54	36	561.56	36.67	565.3	37
568.52	37.76	569.62	38	572.51	38.65	574.27	39	576.89	39.19
577.44	39.24	579.28	39.36	581.59	39.47	582.19	39.51	584.69	39.54
586.89	39.62	588.5	39.81	589.73	40	600.71	39.27	601.3	39
601.69	38.84	602.44	38.44	602.94	38.19	603.25	38	604.31	37.5
605.37	37	606.28	36.67	608.1	36	609.75	35.52	611.21	35
612.88	34.54	614.63	34	617.96	33.19	619.53	33	620.33	32.96
623.58	32.88	626.83	32.84	634.02	32.9	637.66	33	638.29	33.03
641.66	33.18	642.97	33.22	645.53	33.31	646.53	33.32	648.52	33.28
650.06	33.37	653.54	33	653.71	32.98	653.86	33	657.71	33.51

StonyBrookDari en1-ex. txt

660.3	33.94	660.44	33.96	660.88	34	663.02	34.22	663.43	34.41
664.7	35	665.28	35.26	666.98	36	667.16	36.08	667.19	36.1
668.14	36.52	669.27	37	671.12	37.84	671.49	38	672.74	38.43
674.83	39	677.56	39.09	679.14	39.31	681.58	39.64	682.46	39.75
684.04	40	688.5	40.76	690.56	41	691.67	41.18	694.15	41.59
695.89	41.91	696.5	42	703.01	42.77	704.73	43	708.32	43.33
714.63	44	716.71	44.21	723.65	45	725.55	45.2	726.13	45.28
727.75	45.42	732.21	45.66	734.43	45.79	735.71	45.88	737.59	46
747.51	46.57	752.82	47	754.7	47.13	765.48	48	768.62	48.24
772.26	48.49	777.73	49	780.15	49.17	787.81	49.42	793.67	49.62
794.42	49.65	796.43	49.74	803.76	49.97	804	49.98	804.61	50
817.19	50.5	820.5	50.56	823.41	50.67	828.31	50.91	829.96	51
833.69	51.73	834.95	52	835.47	52.03	835.79	52.04	847.51	52.6
856.99	52.95	857.73	53	862.31	53.39	868.4	53.86	868.78	54
869.93	54.2	875.25	55	876.09	55.17	877.21	55.45	879.94	56
880.14	56.04	880.24	56.07	883.6	56.61	886.44	57	888.76	57.18
889.04	57.17	890	57.19	893.97	57.38	895.7	57.39	897.19	57.42
900.37	57.54	900.77	57.57	901.89	57.62	914.36	57.96	914.6	57.97
914.92	57.98	915.7	58						

Manning's n Values
 Sta n Val Sta n Val
 0 .08 288.97 .04 332.56 .08

Bank Sta: Left Right Coeff Contr. Expan.
 288.97 332.56 .5 .7

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 291.4 28.3 F
 329.18 915.7 28.3 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins = 38
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Culverts = 2

Culvert Name Shape Rise Span
 Culvert #2 Ellipse 6.5 9.5
 FHWA Chart # 29- Horizontal Ellipse; Concrete
 FHWA Scale # 1 - Square edge with headwall
 Solution Criteria = Highest U.S. EG
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef
 Exit Loss Coef
 1 11 321 .027 .027 0 .5
 Upstream Elevation = 19.35
 Centerline Station = 697.54
 Downstream Elevation = 16
 Centerline Station = 304.6

Culvert Name Shape Rise Span
 Culvert #1 Ellipse 6.5 9.5
 FHWA Chart # 29- Horizontal Ellipse; Concrete
 FHWA Scale # 1 - Square edge with headwall
 Solution Criteria = Highest U.S. EG
 Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef
 Exit Loss Coef
 1 11 321 .027 .027 0 .5

StonyBrookDari en1-ex. txt

1
 Upstream Elevation = 19.5
 Centerline Station = 708.94
 Downstream Elevation = 16.1
 Centerline Station = 316

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 4327

INPUT
 Description: DS face of I-95 Crossing (HEC2-22)

Station Elevation Data		num= 442									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	45.49	.53	45.5	1.35	45.43	2	45.39	2.99	45.31		
3.36	45.28	4	45.23	4.29	45.21	4.86	45.16	5.51	45.1		
6.27	45.04	6.42	45.09	7.77	45.67	8.63	46	8.99	46.15		
9.15	46.26	9.69	46.64	9.99	46.88	10.21	47	10.86	47.32		
11.25	47.64	11.52	47.88	11.69	48	12	48.23	13.34	49		
13.73	49.06	15.22	49.23	16.17	49.28	17.55	49.4	18.87	49.36		
20.59	49.4	21.8	49.35	22.7	49.34	25.57	49.2	27.92	49		
28.64	48.91	28.93	48.88	31.29	48.61	32.53	48.47	33.75	48.33		
35.17	48.17	35.76	48.11	36.03	48.08	36.75	48	38.2	47.83		
38.48	47.81	38.99	47.75	40.8	47.54	41.94	47.4	42.85	47.28		
44.52	47	44.85	46.92	44.95	46.89	45.14	46.84	46.84	46.42		
47.47	46.27	48.56	46	50.21	45.53	51.46	45.15	51.69	45.08		
51.96	45	53.21	44.73	53.72	44.63	54.67	44.44	55.67	44.26		
56.17	44.18	57.17	44	57.34	43.96	57.4	43.94	57.5	43.92		
58.75	43.62	59.32	43.49	60.05	43.32	61.56	43	61.67	42.97		
61.71	42.96	62.99	42.66	63.58	42.57	64.45	42.43	65.13	42.28		
66.1	42.05	66.17	42.03	66.31	42	67.32	41.55	67.76	41.39		
68.19	41.22	68.87	41	69.59	40.81	69.81	40.76	70.86	40.49		
71.36	40.39	72.75	40.11	72.92	40.07	73.26	40	74.42	39.76		
75.14	39.56	76.44	39.28	76.78	39.2	77.76	39	78.2	38.91		
78.36	38.88	79.49	38.64	80.12	38.52	81.41	38.27	81.94	38.13		
82.77	38	83.52	37.87	83.87	37.82	85.44	37.44	86.44	37.25		
87.76	37	88.15	36.92	88.38	36.89	89.68	36.64	90.88	36.47		
92.02	36.2	93.1	36	94.37	35.76	96.89	35.22	97.61	35.05		
97.7	35.04	98.29	35	102.66	34.72	104.82	34.59	107.83	34.41		
112.62	34.12	113.23	34.08	114.61	34	118.51	33.83	120.7	33.74		
125.19	33.55	126.71	33.46	135.24	33.15	135.84	33.11	136.11	33.09		
136.25	33.07	137.11	33	143.29	32.47	146.52	32	146.77	31.98		
146.83	31.97	152.26	31.41	152.83	31.39	153.42	31.35	154.78	31.29		
156.3	31	160	30.17	160.91	30	165.4	29.08	165.8	29		
165.91	28.97	170.71	28	171.55	27.82	176.55	27	177.99	26.76		
182.77	26.04	182.94	26.02	183.05	26	186.93	25.55	188.03	25.45		
189.24	25.38	190.86	25.33	198.98	25.14	199.58	25.13	205.08	25		
207.75	24.93	215.18	24.89	216.14	24.9	223.23	25	225.51	25.03		
225.73	25.04	233.74	25.15	234.81	25.17	237.5	25.04	238.04	25		
244.29	24.47	245.53	24.36	250.3	24	251	23.95	251.72	23.9		
257.75	23.53	260.68	23.33	262.42	23.27	267.32	23.06	267.64	23.05		
267.81	23.04	268.76	23	272.94	22.82	273.78	22.73	275.78	22.6		
277.16	22.51	279.22	22.32	279.99	22.26	284.44	22.13	284.81	22.11		
285.56	22	286.83	21.69	288.4	21	288.97	20.78	289.5	19.22		
294.5	16.03	296.8	13.55	300.7	12.74	304.1	12.42	310.1	13.83		
317.5	13.65	321.6	14.56	327.4	15.06	332	19.85	332.56	21		
332.75	21.06	332.95	21.09	334.05	21.26	335.48	21.34	335.97	21.38		
339.36	21.45	344.55	21.58	346.17	21.59	353.37	22	353.56	22.03		
353.72	22.04	357.78	22.33	359.63	22.41	361.83	22.51	363.21	22.57		
364.97	22.65	366.36	22.71	371.06	22.92	376.24	22.88	378.81	22.86		
380.89	22.84	389.49	22.83	402.97	22.82	413.28	22.79	415.66	22.77		

StonyBrookDari en1-ex. txt

418.69	22.75	419.59	22.74	421.76	22.73	422.74	22.72	426.31	22.69
427.41	22.67	428.69	22.64	431.98	22.57	433.54	22.54	434.96	22.51
436.79	22.47	438.04	22.44	439.22	22.42	441.3	22.37	442.3	22.35
444.67	22.3	446.21	22.27	448.76	22.2	451.79	22.13	452.46	22.12
454.38	22.15	456.15	22.19	456.63	22.2	457.18	22.21	460.53	22.28
461.25	22.29	464.15	22.35	465.03	22.37	467.52	22.42	469.93	22.48
471.76	22.58	474.02	22.7	476.25	22.81	479.36	22.98	479.83	23
482.18	23.12	482.6	23.14	485.08	23.54	488.18	24	488.22	24.01
491.58	25	493.37	25.5	495.18	26	496.98	26.44	499.62	27
501.1	27.29	505.15	28	505.34	28.04	505.87	28.13	507.6	28.47
508.84	28.71	510.8	29	513.6	29.57	515.49	30	517.22	30.34
520.34	31	520.46	31.02	522.55	31.39	525.83	31.96	526.06	32
530.02	32.75	531.27	33	535.38	33.88	535.93	34	536.26	34.07
540.49	35	547.76	35.4	554.54	36	561.56	36.67	565.3	37
568.52	37.76	569.62	38	572.51	38.65	574.27	39	576.89	39.19
577.44	39.24	579.28	39.36	581.59	39.47	582.19	39.51	584.69	39.54
586.89	39.62	588.5	39.81	589.73	40	600.71	39.27	601.3	39
601.69	38.84	602.44	38.44	602.94	38.19	603.25	38	604.31	37.5
605.37	37	606.28	36.67	608.1	36	609.75	35.52	611.21	35
612.88	34.54	614.63	34	617.96	33.19	619.53	33	620.33	32.96
623.58	32.88	626.83	32.84	634.02	32.9	637.66	33	638.29	33.03
641.66	33.18	642.97	33.22	645.53	33.31	646.53	33.32	648.52	33.28
650.06	33.37	653.54	33	653.71	32.98	653.86	33	657.71	33.51
660.3	33.94	660.44	33.96	660.88	34	663.02	34.22	663.43	34.41
664.7	35	665.28	35.26	666.98	36	667.16	36.08	667.19	36.1
668.14	36.52	669.27	37	671.12	37.84	671.49	38	672.74	38.43
674.83	39	677.56	39.09	679.14	39.31	681.58	39.64	682.46	39.75
684.04	40	688.5	40.76	690.56	41	691.67	41.18	694.15	41.59
695.89	41.91	696.5	42	703.01	42.77	704.73	43	708.32	43.33
714.63	44	716.71	44.21	723.65	45	725.55	45.2	726.13	45.28
727.75	45.42	732.21	45.66	734.43	45.79	735.71	45.88	737.59	46
747.51	46.57	752.82	47	754.7	47.13	765.48	48	768.62	48.24
772.26	48.49	777.73	49	780.15	49.17	787.81	49.42	793.67	49.62
794.42	49.65	796.43	49.74	803.76	49.97	804	49.98	804.61	50
817.19	50.5	820.5	50.56	823.41	50.67	828.31	50.91	829.96	51
833.69	51.73	834.95	52	835.47	52.03	835.79	52.04	847.51	52.6
856.99	52.95	857.73	53	862.31	53.39	868.4	53.86	868.78	54
869.93	54.2	875.25	55	876.09	55.17	877.21	55.45	879.94	56
880.14	56.04	880.24	56.07	883.6	56.61	886.44	57	888.76	57.18
889.04	57.17	890	57.19	893.97	57.38	895.7	57.39	897.19	57.42
900.37	57.54	900.77	57.57	901.89	57.62	914.36	57.96	914.6	57.97
914.92	57.98	915.7	58						

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .08 288.97 .04 332.56 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 288.97 332.56 42.9 39.38 31.59 .5 .7
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 291.4 28.3 F
 329.18 915.7 28.3 F

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 4288

INPUT

Description: DS section for I-95 crossing (MMI added section)
 Station Elevation Data num= 123

StonyBrookDari en1-ex. txt

Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	35.54	4.15	35	6.86	34.61	11.06	34	14.01	33.48
16.72	33	21.12	32.29	23.23	32	27.86	31.53	32.58	31
36.6	30.01	36.66	30	36.7	29.98	38.65	29	39.8	28.46
40.77	28	41.52	27.65	43.07	27	44.57	26.4	45.52	26
46.19	25.76	48.35	25	50.68	24.61	52.22	24.51	54.4	24.35
55.19	24.31	60.78	24.07	61.19	24.05	62.72	24	63.86	23.97
64.04	23.96	72.67	23.79	74.1	23.7	76.42	23.61	78.84	23.48
81.33	23.32	85.2	23.19	85.79	23.16	86.36	23.14	87.9	23.11
93.94	23	106.65	22.87	108.61	22.85	109.1	22.83	114.24	22.84
114.67	22.83	120.46	22.87	122.04	22.86	123.2	21.67	150.6	19.72
159.4	15.73	163.1	15.17	169.2	15.39	174.8	15.01	178.4	15.06
181.4	15.49	191.9	18.96	199.39	19.49	201.34	19.39	204.72	19.16
209.9	19	222.85	18.8	223.41	18.78	225.27	18.72	232.65	18.55
234.14	18.52	241.63	18.31	245.24	18.27	247.04	18.23	247.53	18.22
248.6	18.18	250.75	18.2	257.17	18.32	258.77	18.33	260.55	18.35
269.06	18.52	281.74	18.71	289.55	19	290.33	19.2	293.11	20
296.13	20.8	296.89	21	308.86	20.25	311.76	20	314.84	19.9
334.13	19.64	341.29	19.9	341.75	19.87	341.99	19.86	343.5	19.87
346.69	19.85	347.84	19.86	351.98	20	352.37	20.02	361.04	20.52
368.17	21	368.19	21.01	369.13	21.31	371.23	21.99	371.27	22
374.07	22.95	374.22	23	376.62	23.74	377.43	24	379.13	24.55
380.5	25	382.25	25.57	383.56	26	385.54	26.52	386.34	26.75
387.24	27	390.41	27.74	391.61	28	395.07	28.78	396.04	29
398.41	29.49	400.8	30	403.34	30.56	405.26	31	407.18	31.43
409.64	32	410.15	32.13	411.49	32.46				

Manning's n	Values	num=	3
Sta	n Val	Sta	n Val
0	.08	150.6	.035
		191.9	.08

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	150.6	191.9		57.29	59.38	58.68	.3
							.5

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 4229

INPUT

Description: FEMA 0 - (HEC2-21) no new wet section used FEMA effective wet section elevations

Station	Elevation	Data	num=	166	Sta	El ev	Sta	El ev	Sta	El ev
0	37.73	2.12	37.57	8.22	37	11.64	36.7	18.77	36	
27.39	35.33	29.02	35.19	31.29	35	35.06	34.74	45.6	34	
57.37	33.24	61.2	33	63.15	32.88	64.78	32.77	76.08	32	
80.31	31.71	89.95	31	98.56	30.45	105.83	30	119.55	29.18	
122.37	29	125.97	28.67	133.6	28	135.65	27.58	138.48	27	
143.25	26.02	143.34	26	143.46	25.98	149.32	25	153.41	24.3	
155.27	24	157.72	23.58	160.66	23	162.79	22.07	162.97	22	
163.16	21.9	180	15	185	13.6	195	13.3	203	14.1	
208	15	218.28	18.99	233	18.85	235.49	18.7	242.49	18.5	
256.77	18	310.21	17.82	311.26	17.85	313.02	17.87	318.24	17.9	
318.43	17.89	324.29	17.9	329.83	17.88	333.26	17.86	337.33	17.84	
342	17.83	350.74	17.85	355.93	17.9	356.6	17.91	356.87	17.92	
363.4	17.98	363.79	17.99	366.31	17.98	369.56	18	422.37	18.98	
422.54	19	424.78	19.3	429.6	20	431.09	20.09	431.29	20.1	
434.99	20.25	436.42	20.29	437.21	20.32	439.33	20.43	442.69	20.58	
448.45	20.87	451.19	20.95	452.34	21	455.14	21.19	457.26	21.35	
460.71	21.61	465.15	22	466.13	22.54	466.98	23	468.09	23.57	
468.86	24	469.8	24.52	470.71	25	471.56	25.47	472.58	25.99	

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472.59	26	472.61	26.01	474.49	27	475.01	27.27	476.4	28
477.1	28.37	478.29	29	478.72	29.32	479.57	30	479.9	30.26
480.76	31	481.69	31.8	481.96	32	482.18	32.08	482.36	32.11
482.65	32.14	484.29	32.45	485.16	32.57	487.43	32.69	488.85	32.63
492.14	32	494.08	31.7	497.91	31	503.84	30.1	504.51	30
505.24	29.88	511.22	29	517.76	29.29	519.07	29.34	520.21	29.36
521.28	29.35	522.37	29.3	522.59	29.31	523.82	29.2	525.31	29
527.47	28.73	532.27	28	534.16	27.72	535.38	27.62	540.37	27.33
542.62	27.16	543.04	27.13	543.57	27.1	546.45	27	567.58	27.9
568.85	28	575.52	28.93	575.98	29	576.73	29.57	577.3	30
577.55	30.18	578.74	31	578.97	31.13	580.36	32	581.03	32.35
582.35	33	583.34	33.48	584.47	34	586.17	34.83	586.5	35
586.74	35.17	587.94	36	588.27	36.23	589.4	37	590.31	37.63
590.86	38	591.44	38.43	592.27	39	596.1	39.33	605.13	39.87
606.82	39.96	607.17	40	608	40.13	613.71	41	616.85	41.48
617.12	41.52								

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .1 105.83 .05 160.66 .035 218.28 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 160.66 218.28 323.33 276.75 243.77 .1 .3
 Blocked Obstructions num= 1
 Sta L Sta R Elev
 0 89 66.37

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 3952

INPUT
 Description: FEMA N - (HEC2-20) no new wet section
 used wet section elevation
 and bank slope from FEMA duplicate

Station	Elevation	Data	num=	149							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	38	1	37.85	1.51	37	2.38	36.91	4.82	37.87		
8.28	36	10.68	35.75	16.18	35.33	17.13	35.23	20.18	35		
23.7	34.6	24.64	34.47	30.33	34	35.17	33.39	38	33		
40.27	32.68	41.2	32.58	43.09	32.35	45.63	32	52.47	31.01		
52.49	31	52.56	30.99	57.61	30	59.71	29.59	62.08	29		
66.82	28.03	66.98	28	67.25	27.97	76.4	27	79.94	26.3		
81.41	26	82.58	25.81	87.2	25	90.18	24.68	96.25	24		
99.24	23.66	103.95	23	108.67	22.07	109.03	22	109.32	21.94		
113.51	21	113.73	20.95	114.91	20.62	117.18	20	117.21	19.99		
118.13	19.56	119.35	19	119.79	18.77	121.21	18	122.77	17.13		
123.01	17	123.84	16.52	124.58	15.39	124.72	16	126.16	15.22		
126.55	15	127.15	14.7	128.58	14	132.48	11.5	142.97	11.5		
147.36	14.33	149.01	14.7	150.09	15	151.44	15.25	154.56	15.9		
154.85	15.93	155.48	16	159.68	16.1	160.61	16.11	161.21	16.12		
174.56	16.34	176.19	16.37	176.91	16.39	180.76	16.52	200.61	16		
213.36	15.05	213.88	15	225.49	15.48	240.42	15.86	242.55	15.96		
243	15.97	245.29	16	253.02	16.02	263.59	16.21	264.35	16.23		
268.45	16.3	275.04	16.45	278.07	16.52	291.23	17	301.41	17.35		
307.41	17.51	309.6	17.58	312.88	17.67	317.32	17.81	324.87	17.98		
325.82	18	334.3	18.63	337.43	19	339.42	19.32	343.46	20		
346.57	20.66	347.94	20.85	349.54	21	349.96	21.04	350.04	21.05		
352.16	21.16	354.44	21.22	358.11	21.13	358.28	21.11	359.22	21		
365.42	20.61	367.09	20.62	368.54	20.59	375.83	20.66	379.66	20.7		
391.19	20.82	395.21	21	402.84	21.73	405.47	22	411.33	22.61		

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415.41	23	424.64	23.91	424.97	23.95	425.55	24	435.41	24.97
435.68	25	439.25	25.37	445.16	26	445.8	26.05	447.98	26.19
450.53	26.31	455.62	26.56	459.93	26.76	465.13	27	474.01	27.48
474.82	27.52	477.81	27.49	480.47	27.61	480.81	27.62	482.25	27.75
482.61	27.78	485.74	28	488.66	28.25	489.86	28.38	491.47	28.55
494.04	28.77	494.81	28.83	496.5	29	497.91	29.16		

Manning's n Values num= 3

Sta n Val	Sta n Val	Sta n Val
0 .07	117.21	.035 154.85

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

117.21	154.85	186.06	254.2	260.47	.1	.3
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Blocked Obstructions num= 1

Sta L	Sta R	El ev
398.28	470.78	35.65

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 3698

INPUT

Description: MMI added section - no survey data here - added to define potential storage upstream of Hecker Avenue.

Station Elevati on Data num= 160

Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	29.9	9.87	29.55	12.41	29.52	19.35	29.44	25.61	29.37
29.56	29.33	43.32	29	44.98	28.93	50.27	28.58	60.96	28
61.42	27.97	64.72	27.83	72.57	27.47	81.67	27	84.04	26.36
85.31	26	86.46	25.66	87.81	25.38	88.74	25.17	88.98	25.14
90.49	25	95.85	24.78	97.43	24.68	101.06	24.5	104.43	24.49
107.21	24.42	108.57	24.36	109.84	24.31	112.52	24.28	113.58	24.24
120.84	24	133.93	23.24	134.36	23	135.14	22.65	136.67	22
138.42	21.29	139.29	21	141.09	20.47	142.27	20.17	143.16	20
146.93	19.2	148.04	19	154.53	18.07	154.95	18	166.39	17.5
171.55	17	185.25	16.28	185.92	16	186.37	15.82	186.8	15.64
188.32	15	190.06	14.33	190.88	14	194	9.7	202	9.7
204.98	14.28	208.95	15	211.63	15.09	212.89	15.17	215.42	15.18
222.41	15.47	244.52	15.81	247.41	15.88	249.73	15.92	250.78	15.94
251.46	15.95	252.82	15.97	253.8	16	341.19	16.47	346.19	16.63
348.77	16.7	358.11	17	378.23	17.26	386.11	17.35	439.95	18
443.93	18.43	459.71	19	464.99	19.54	466.03	19.55	468.85	19.58
473.06	19.63	474.59	19.64	482.03	19	485.94	19.86	487.05	20
491.21	20.49	492.28	20.58	492.78	20.6	496.88	20.66	499.05	21
499.84	21.07	505	22	508.09	22.6	510.34	23	514.17	23.73
515.56	24	516.55	24.19	520.63	25	524.33	25.49	526.13	25.74
527.62	26	528.62	26.12	529.65	26.14	532.92	26.27	535.88	26.41
546.56	26.77	548.86	27	548.97	27.61	549.07	28	550.75	28.41
553.48	29	555.09	29.66	555.82	29.87	556.39	29.96	556.57	30
557.59	30.18	558.49	31	558.91	31.86	558.98	32	559.21	32.37
559.6	33	560.31	33.17	563.91	34	564.48	34.66	564.67	35
564.89	35.22	568.37	36	568.55	36.03	568.72	36.07	570.64	36.73
571.34	37	572.98	37.54	574.34	38	577.06	38.43	578.77	38.59
579.96	38.7	584.31	39	585.28	39.08	586.5	39.16	591.49	39.51
598.34	40	600.05	40.12	602.11	40.28	607.43	40.64	611.87	41
612.63	41.07	612.87	41.09	617.88	41.32	620.11	41.46	623	41.6
627.14	41.89	627.45	41.91	628.12	42	632.45	42.55	633.88	42.73
635.82	43	637.26	43.23	637.88	43.3	639.48	43.42	641.69	43.57

Manning's n Values num= 3

Sta n Val	Sta n Val	Sta n Val
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StonyBrookDari en1-ex. txt

0 .07 186.8 .035 211.63 .07

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 186.8 211.63 111.32 109.74 101.43 .1 .3
 Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev
 476.67 521.28 43 117.53 127.83 29

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 3588

INPUT

Description: FEMA M - US section for Hecker Road (HEC2-19)
 Station Elevati on Data num= 135

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	30.19	3.39	30.08	5.74	30	33.66	29.11	37.26	29
37.65	28.91	37.84	28.85	41.1	28	54.12	27.6	57.23	27.53
58.9	27.47	61.56	27.39	65.13	27.33	66.73	27.27	69.45	27.22
76.84	27.03	77.95	27	82.04	26.06	82.3	26	88.72	25.19
89.45	25.09	90.17	25	102.95	24.18	103.79	24.13	104.72	24.11
108.51	24	113.84	23.55	120.33	23	120.62	22.98	121.14	22.94
127.78	22.44	131.98	22.14	133.44	22	134.56	21.9	135.29	21.81
137.27	21.58	140.62	21.06	140.77	21.04	141	21	150.6	20.18
151.31	20.13	153.1	20	154.69	19.54	156.14	19.17	156.55	19.07
156.8	19	157.5	18.61	164.52	11.77	166.35	10.47	169.58	8.97
173.32	9.54	176.48	10.04	176.48	16.05	177.11	16.05	177.69	17.84
177.81	18	178.16	18.11	179.05	18.38	180.19	18.72	182.52	19
185.6	19.15	186.68	19.14	187.43	19.15	203.34	19.11	204.85	19
244.48	18.79	247.66	18.76	250.18	18.7	252.06	18.65	253.75	18.64
255.24	18.59	276.11	18	395.32	17.99	396.05	18	425.98	17.97
436.24	17.8	444.28	17.66	479.43	17.33	480.39	17.31	488.91	17.15
492.77	17.16	502.17	17.19	509.62	17.45	510.16	17.49	511.62	17.5
512.24	17.53	513.63	17.56	514.26	17.58	515.39	17.62	516.06	17.63
516.78	17.67	521.33	18	560.64	18.95	560.76	18.96	563.05	19
565.96	19.11	568.94	19.33	573.86	19.64	577.72	20	580.58	20.39
584.39	21	586.48	21.55	588.19	22	589.7	22.58	590.8	23
592.51	23.64	593.42	24	594.37	24.62	594.99	25	595.99	25.73
596.36	26	596.77	26.29	597.75	27	598.64	27.64	599.16	28
600.5	28.82	600.8	29	600.99	29.14	602.24	30	602.67	30.33
603.65	31	604.08	31.33	604.92	32	612.66	32.54	619.24	33
623.43	33.28	628.3	33.63	629.52	33.71	633.8	33.87	638.07	33.88
638.72	33.87	644.85	34	645.33	34.01	649.55	34.04	652.5	34.02

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .12 156.14 .03 179.05 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 156.14 179.05 21.52 20.83 43.6 .3 .5
 Blocked Obstructions num= 4
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 293.15 328.19 30.55 207.19 236.65 30.63 102.32 139.38 33.93
 0 27.4 49

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 3567

StonyBrookDari en1-ex. txt

INPUT

Description: US Face of Hecker Road (HEC2-19.1)

Station Elevation Data num= 160									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	31.89	2.357	31.76	16.44	31	21.656	30.68	31.026	30
39.371	29.54	43.293	29.45	48.895	29.25	55.29	29.14	55.859	29.13
56.41	29.11	61.336	29	69.518	28.97	72.927	28.57	80.384	28
89.281	27.42	93.308	27.35	94.525	27.31	101.142	27	101.557	26.98
101.77	26.97	120.335	26	129.386	25.36	133.481	25	137.268	24.71
144.454	24.16	147.033	24	151.148	23.28	153.457	23	161.696	22.49
163.56	22	171.8	21.72	174.118	21.7	177.933	21	182.637	20.96
183.159	20.85	186.404	20	186.897	19.74	186.984	19.68	187.718	19.23
187.969	19.06	188.037	19	188.104	18.95	190.77	18.96	192.219	18.96
192.219	9.66	199.464	9.57	204.177	9.9	208.64	9.9	208.64	17.18
210.089	17.18	213.006	20.7	215.266	20.65	217.894	20.64	219.854	20.57
220.608	20.59	227.157	20.27	228.123	20.23	231.581	20	231.909	19.98
237.512	19.75	257.941	19	290.135	18.37	291.091	18.35	291.903	18.32
303.677	18.09	304.199	18.08	308.372	18	330.772	17.99	331.361	18
331.39	17.99	332.52	17.98	333.727	17.95	334.423	17.92	353.654	17.38
355.132	17.33	357.904	17.32	358.552	17.3	363.275	17.27	363.874	17.25
371.698	17.23	372.306	17.21	372.799	17.19	384.12	17.13	395.865	17.07
395.991	17.08	401.052	17.12	407.031	17.14	425.587	17.07	435.497	17.04
440.404	17.05	446.238	17.12	446.673	17.11	457.54	17.17	470.01	17.27
475.062	17.3	482.692	17.33	487.194	17.42	497.297	17.51	520.045	18
520.576	18.03	520.76	18.04	521.378	18.07	527.521	18.4	527.734	18.41
528.854	18.48	546.772	19	574.871	19.08	574.987	19.09	581.391	19.26
581.903	19.28	583.042	19.33	589.93	19.55	600.149	19.87	604.225	20
611.431	20.39	616.473	20.7	617.516	20.78	620.636	21	621.998	21.04
627.929	21.21	641.693	22	649.856	22.81	651.797	22.94	653.14	23
654.705	23.14	657.226	23.41	660.326	24	660.944	24.34	661.253	24.48
662.258	25	663.784	25.71	664.064	25.82	665.05	25.84	668.276	26
672.304	26.09	676.602	26.11	684.996	26.09	685.402	26.08	694.443	26.01
695.341	26	699.562	25.91	700.074	25.67	700.779	25.4	701.368	25.23
701.726	25.16	702.634	25	703.58	25.06	704.334	25.54	705.947	25.19
709.366	25.2	710.448	25.24	718.417	25.67	722.097	25.86	724.705	26
732.075	26.31	734.654	26.43	739.561	26.66	744.737	27	749.752	27.22

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.05	192.219	.03	208.64	.05

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
	192.219	208.64		50.69	52.72	.3	.5

Ineffective Flow num= 2			
Sta L	Sta R	Elev	Permanent
0	188.356	20.81	F
212.504	749.752	17	F

Skew Angle = 15

BRIDGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 3541

INPUT

Description: Hecker Road - applied 15 degree skew
 added internal section at us

end- to input 8 inch pipe on bed

Distance from Upstream XS	=	4
Deck/Roadway Width	=	39.5
Weir Coefficient	=	2.6
Bridge Deck/Roadway Skew	=	15

StonyBrookDari en1-ex. txt

Upstream Deck/Roadway Coordi nates

num=	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
26	-77.274		33			27.046		30			85.001		27		
	111.081		26			130.4		25			149.719		24		
	173.867		23			191.253	21.68				191.253	24.54			
	192.219	24.54		0		192.219	24.54		19.03		208.64	23.64		18.2	
	208.64	23.64		0		209.606	23.64				209.606	20.81			
	229.89		20			270.459		19			296.539		18		
	358.358		17			402.791	16.8				482.963		17		
	518.702		18			564.101		19			590.181		20		
	707.058		25			797.855		30							

Upstream Bridge Cross Section Data

Station	Elevati on	Data	num=	158	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	31.89	2.357		31.76	16.44	31	21.656	30.68	31.026	30				
39.371	29.54	43.293		29.45	48.895	29.25	55.29	29.14	55.859	29.13				
56.41	29.11	61.336		29	69.518	28.97	72.927	28.57	80.384	28				
89.281	27.42	93.308		27.35	94.525	27.31	101.142	27	101.557	26.98				
101.77	26.97	120.335		26	129.386	25.36	133.481	25	137.268	24.71				
144.454	24.16	147.033		24	151.148	23.28	153.457	23	161.696	22.49				
163.56		171.8		21.72	174.118	21.7	177.933	21	182.637	20.96				
183.159	20.85	186.404		20	186.897	19.74	186.984	19.68	187.718	19.23				
187.969	19.06	188.037		19	188.104	18.95	190.77	18.96	192.219	18.96				
192.219	11.08	208.64		11	208.64	17.18	210.089	17.18	213.006	20.7				
215.266	20.65	217.894		20.64	219.854	20.57	220.608	20.59	227.157	20.27				
228.123	20.23	231.581		20	231.909	19.98	237.512	19.75	257.941	19				
290.135	18.37	291.091		18.35	291.903	18.32	303.677	18.09	304.199	18.08				
308.372		330.772		17.99	331.361	18	331.39	17.99	332.52	17.98				
333.727	17.95	334.423		17.92	353.654	17.38	355.132	17.33	357.904	17.32				
358.552	17.3	363.275		17.27	363.874	17.25	371.698	17.23	372.306	17.21				
372.799	17.19	384.12		17.13	395.865	17.07	395.991	17.08	401.052	17.12				
407.031	17.14	425.587		17.07	435.497	17.04	440.404	17.05	446.238	17.12				
446.673	17.11	457.54		17.17	470.01	17.27	475.062	17.3	482.692	17.33				
487.194	17.42	497.297		17.51	520.045	18	520.576	18.03	520.76	18.04				
521.378	18.07	527.521		18.4	527.734	18.41	528.854	18.48	546.772	19				
574.871	19.08	574.987		19.09	581.391	19.26	581.903	19.28	583.042	19.33				
589.93	19.55	600.149		19.87	604.225	20	611.431	20.39	616.473	20.7				
617.516	20.78	620.636		21	621.998	21.04	627.929	21.21	641.693	22				
649.856	22.81	651.797		22.94	653.14	23	654.705	23.14	657.226	23.41				
660.326		660.944		24.34	661.253	24.48	662.258	25	663.784	25.71				
664.064	25.82	665.05		25.84	668.276	26	672.304	26.09	676.602	26.11				
684.996	26.09	685.402		26.08	694.443	26.01	695.341	26	699.562	25.91				
700.074	25.67	700.779		25.4	701.368	25.23	701.726	25.16	702.634	25				
703.58	25.06	704.334		25.54	705.947	25.19	709.366	25.2	710.448	25.24				
718.417	25.67	722.097		25.86	724.705	26	732.075	26.31	734.654	26.43				
739.561	26.66	744.737		27	749.752	27.22								

Manni ng' s n Val ues

num=	3
Sta n Val	Sta n Val
0 .05 192.219	.03 210.089 .05

Bank Sta: Left Right Coeff Contr. Expan.
 192.219 208.64 .3 .5

Ineffecti ve Flow num= 2
 Sta L Sta R Elev Permanent
 0 188.356 20.81 F
 212.504 749.752 17 F

Skew Angl e = 15

Downstream Deck/Roadway Coordi nates

num= 26

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Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
-65.683		33			38.637		30			96.593		27		
122.673		26			141.991		25			161.31		24		
185.458		23			204.776	21.09				204.776	24.08			
205.742	24.08		0		205.742	24.08	18.47			222.163	22.96	17.55		
222.163	22.96		0		223.129	22.96				223.129	20.04			
241.481		20			282.05		19			308.13		18		
369.95		17			414.382		16.8			494.554		17		
530.293		18			575.692		19			601.772		20		
718.649		25			809.446		30							

Downstream Bridge Cross Section Data

Station	Elevation	Data	num=	164	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	31.3	7.921	31	12.122	30.85	15.262	30.74	33.209	30.04			
33.73	30.02	34.155	30	34.706	29.97	55.299	29	59.211	28.78			
74.009	28	93.598	27.02	93.782	27.01	93.888	27	94.11	26.99			
113.303	26	123.011	25.22	125.686	25	131.066	24.71	145.932	24			
147.99	23.88	148.994	23.81	152.761	23.58	160.682	23.07	162.295	23			
164.893	22.8	166.4	22.63	173.181	22	173.355	21.99	177.856	21.65			
178.687	21.56	180.966	21.4	181.865	21.31	182.946	21.24	183.864	21.16			
184.733	21.12	186.926	21.03	188.983	21	200.555	20.83	200.729	20.81			
201.338	20.77	202.043	20.75	204.293	18.87	205.742	18.87	205.742	9.98			
211.924	9.49	217.044	9.92	222.163	10.06	226.027	10.06	226.027	19.16			
227.476	19.16	232.392	18.36	232.885	18.47	233.223	18.54	233.551	18.55			
233.744	18.56	234.102	18.63	234.372	18.68	235.686	18.42	236.565	18.5			
239.984	18.38	242.138	18.31	243.713	18.25	245.249	18.04	246.582	18			
253.333	17.82	256.714	17.75	263.649	17.58	264.161	17.6	268.296	17.53			
269.957	17.61	270.904	17.62	271.155	17.65	275.695	17.6	280.988	17.36			
283.132	17.33	287.17	17.16	288.078	17.14	293.641	17	295.37	16.99			
295.709	16.98	309.289	16.89	319.19	16.83	322.214	16.74	325.131	16.71			
330.221	16.56	338.644	16.47	345.927	16.25	348.429	16.21	352.631	16.18			
353.21	16.17	359.131	16.25	361.652	16.24	362.531	16.28	362.898	16.32			
365.902	16.34	368.935	16.59	371.553	16.75	378.43	16.76	380.304	16.85			
392.108	16.86	393.199	16.89	393.914	16.91	397.585	16.94	410.267	16.95			
410.412	16.94	411.861	17	440.955	17.54	445.813	18	454.429	17.94			
454.932	17.93	461.597	17.69	462.881	17.68	465.315	17.51	467.556	17.4			
469.343	17.31	471.633	17	498.186	17.85	499.055	17.9	501.238	18			
539.672	18.44	559.667	19	570.669	19.12	570.939	19.14	573.103	19.29			
574.629	19.38	577.421	19.53	578.947	19.63	579.275	19.64	580.222	19.72			
586.723	20	609.2	20.48	614.928	20.75	620.54	21	632.363	21.52			
637.704	22	651.807	22.73	656.627	23	681.142	23.09	681.267	23.1			
682.726	23.07	683.025	23.09	687.198	23.1	688.502	23.16	689.594	23.21			
702.566	23.4	704.546	23.54	706.932	23.61	714.495	24	717.2	24.18			
717.789	24.25	725.043	25	728.308	25.28	730.346	25.45	731.708	25.55			
733.186	25.62	739.32	26	741.049	26.1	741.184	26.12	741.503	26.15			
743.917	26.38	745.366	26.47	745.888	26.49	749.752	26.82					

Manning's n Values

Sta	n Val	Sta	n Val	Sta	n Val
0	.05	205.742	.03	226.027	.05

Bank Sta: Left Right Coeff Contr. Expan.
 205.742 226.027 .3 .5

Ineffective Flow num= 1
 Sta L Sta R El ev Permanent
 231.069 749.752 17 F
 Skew Angle = 15

Upstream Embankment side slope = 0 hori z. to 1.0 verti cal
 Downstream Embankment side slope = 0 hori z. to 1.0 verti cal
 Maximum allowable submergence for weir flow = .98
 El evati on at whi ch weir flow begi ns =

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Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow
 Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 19.03

Additional Bridge Parameters

Add Friction component to Momentum
 Do not add Weight component to Momentum
 Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 3514

INPUT

Description: DS face of Hecker Road (HEC2-17)

Station		Elevation Data		num=		164					
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	31.3	7.921	31	12.122	30.85	15.262	30.74	33.209	30.04		
33.73	30.02	34.155	30	34.706	29.97	55.299	29	59.211	28.78		
74.009	28	93.598	27.02	93.782	27.01	93.888	27	94.11	26.99		
113.303	26	123.011	25.22	125.686	25	131.066	24.71	145.932	24		
147.99	23.88	148.994	23.81	152.761	23.58	160.682	23.07	162.295	23		
164.893	22.8	166.4	22.63	173.181	22	173.355	21.99	177.856	21.65		
178.687	21.56	180.966	21.4	181.865	21.31	182.946	21.24	183.864	21.16		
184.733	21.12	186.926	21.03	188.983	21	200.555	20.83	200.729	20.81		
201.338	20.77	202.043	20.75	204.293	18.87	205.742	18.87	205.742	9.98		
211.924	9.49	217.044	9.92	222.163	10.06	226.027	10.06	226.027	19.16		
227.476	19.16	232.392	18.36	232.885	18.47	233.223	18.54	233.551	18.55		
233.744	18.56	234.102	18.63	234.372	18.68	235.686	18.42	236.565	18.5		
239.984	18.38	242.138	18.31	243.713	18.25	245.249	18.04	246.582	18		
253.333	17.82	256.714	17.75	263.649	17.58	264.161	17.6	268.296	17.53		
269.957	17.61	270.904	17.62	271.155	17.65	275.695	17.6	280.988	17.36		
283.132	17.33	287.17	17.16	288.078	17.14	293.641	17	295.37	16.99		
295.709	16.98	309.289	16.89	319.19	16.83	322.214	16.74	325.131	16.71		
330.221	16.56	338.644	16.47	345.927	16.25	348.429	16.21	352.631	16.18		
353.21	16.17	359.131	16.25	361.652	16.24	362.531	16.28	362.898	16.32		
365.902	16.34	368.935	16.59	371.553	16.75	378.43	16.76	380.304	16.85		
392.108	16.86	393.199	16.89	393.914	16.91	397.585	16.94	410.267	16.95		
410.412	16.94	411.861	17	440.955	17.54	445.813	18	454.429	17.94		
454.932	17.93	461.597	17.69	462.881	17.68	465.315	17.51	467.556	17.4		
469.343	17.31	471.633	17	498.186	17.85	499.055	17.9	501.238	18		
539.672	18.44	559.667	19	570.669	19.12	570.939	19.14	573.103	19.29		
574.629	19.38	577.421	19.53	578.947	19.63	579.275	19.64	580.222	19.72		
586.723	20	609.2	20.48	614.928	20.75	620.54	21	632.363	21.52		
637.704	22	651.807	22.73	656.627	23	681.142	23.09	681.267	23.1		
682.726	23.07	683.025	23.09	687.198	23.1	688.502	23.16	689.594	23.21		
702.566	23.4	704.546	23.54	706.932	23.61	714.495	24	717.2	24.18		

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717.789	24.25	725.043	25	728.308	25.28	730.346	25.45	731.708	25.55
733.186	25.62	739.32	26	741.049	26.1	741.184	26.12	741.503	26.15
743.917	26.38	745.366	26.47	745.888	26.49	749.752	26.82		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.05	205.742	.03	226.027	.05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 205.742 226.027 37.66 32.36 20.07 .3 .5

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 231.069 749.752 17 F
 Skew Angle = 15

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 3482

INPUT

Description: FEMA L - DS section for Hecker Road (HEC2-17)
 Station Elevation Data num= 161

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	30.36	16.27	30	20.03	29.81	34.69	29	41.07	28.8
45.8	28.68	52.91	28.49	56.76	28.39	59.36	28.33	61.38	28.28
73.06	28	74.32	27.96	74.89	27.94	75.6	27.91	94.86	27.23
104.67	27	116.52	26.54	120.18	26.39	125.26	26	131.47	25.63
138.25	25.47	149.74	25	156.48	24.48	162.04	24	173.42	23.34
180.33	23	184.69	22.61	191.85	22	197.91	21.41	201.92	21
203.26	20.87	211.64	20	227.24	19.06	227.4	19.05	228.25	19
228.37	18.7	228.5	18.35	228.63	18	228.98	17.2	229.07	17
229.17	16.76	229.43	16.17	229.51	16	229.88	15.06	229.9	15
230	13.59	230	11.63	230.37	11.63	232.1	10.8	237.17	10.04
243.71	10.37	251.38	10.85	257.36	10.73	260.21	10.56	265.35	13.8
268.71	14	269.64	14.18	270.21	14.26	271.08	14.38	272.55	14.59
274.21	14.78	275.31	15	281.99	15.77	282.98	15.88	284.23	16
289.23	16.06	292.6	16.08	293.42	16.06	296.78	16	303.9	15.82
304.67	15.84	309.17	15.85	325.39	15.66	335.39	15.55	338.72	15.59
341.75	15.6	348.69	15.55	352.71	15.56	358.87	15.53	360.08	15.54
375.66	15.8	382.2	16	385.58	16.14	394.42	16.34	398.89	16.47
421.6	16.64	431.45	16.63	441.14	17	455.69	17.68	461.06	18
495.27	17.25	498.91	17	510.83	17.3	511.26	17.31	522.65	18
559.78	18.44	572.13	19	581.22	19.25	592.12	19.59	605.01	20
629.02	20.15	629.4	20.17	630.71	20.22	641.72	20.72	643.22	20.75
644.23	20.76	644.83	20.75	650.77	20.95	650.95	20.94	651.92	21
663.05	21.54	668.19	22	669.35	22.07	680.04	22.38	681.25	22.46
683.76	22.51	684.29	22.52	689.04	22.57	690.41	22.56	695.09	22.48
697.44	22.44	699.42	22.43	701.59	22.35	704.31	22.18	705.79	22
707.76	21.81	708.16	21.8	714.87	21.61	719.41	21.69	721.24	21.7
722.29	21.71	734.94	22	737.31	22.07	737.76	22.08	738.11	22.12
738.21	22.14	739.66	22.3	741.77	22.52	743.36	22.72	747.01	22.85
749.1	23	752.44	23.33	763.56	24	766.73	24.18	768.42	24.32
771.19	24.58	773.82	24.85	775.32	25	778.63	25.6	780.39	26
787.25	26.61	789.18	26.89	789.87	27	792.16	27.28	798.39	28
801.78	28.46	803.2	28.54	806.02	28.77	808.12	29	810.01	29.07
814.78	29.21								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.08	227.4	.03	271.08	.06

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Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 227.4 271.08 74 72.94 51.99 .3 .5

CROSS SECTION

RIVER: StonyBrook RS: 3409
 REACH: StonyBrook

INPUT

Description: MMI additional cross section

Station	Elevation	Data	num=	203	Sta	Elev	Sta	Elev	Sta	Elev
0	28.75	7.51	28.83	19.6	28.96	19.81	28.97	22.17	29	
37.56	29.15	42.61	29.23	57.34	29.4	61.68	29.46	70.54	29.62	
73.25	29.66	75.37	29.7	79.72	29.77	84.53	29.84	86.71	29.88	
91.3	29.92	96.16	30	131.95	30.58	134.03	31	164.02	30.8	
170.82	30.7	172.41	30.68	233.16	30	272.19	29.37	274.31	29.33	
274.8	29.31	291.19	29	294	28.93	294.16	28.92	297.32	28.83	
297.7	28.82	299.19	28.77	316.32	28	318.85	27.86	324.67	27.6	
331.44	27	341.09	26.56	349.34	26.22	350.96	26.16	355.12	26	
364.22	25.88	364.51	25.86	364.89	25.84	365.48	25.8	366.61	25.78	
370.11	25.49	371.29	25.42	372.44	25.33	373.33	25.25	374.37	25.15	
376	25	378.11	24.86	392.01	24	402.76	23.02	402.96	23	
403.19	22.97	409.72	22	421.96	21.18	426.11	21	432.68	20.72	
438.63	20.32	441.4	20.17	442.55	20.07	443.47	20	444.27	19.09	
444.35	19	445.24	18.13	445.37	18	445.41	17.96	446.23	17	
446.92	16.06	446.97	16	447.05	15.89	447.77	15	448.04	14.64	
448.53	14	449.02	13.45	449.42	13	449.85	12.82	451.76	12	
454	10.4	457	10	464	9.8	476	9.8	481	10	
482.34	12	487.22	12.97	487.41	13	487.81	13.09	491.65	14	
493.44	14.03	494.12	14.05	557.63	15	580.46	15.93	582.05	16	
629.55	16.07	630.58	16.08	632.91	16.06	636.73	16.23	638.27	16.22	
639.17	16.29	640.8	16.33	650.59	17	652.35	17.11	665.8	18	
671.92	17.88	672.7	17.86	680.83	17.56	689.71	17.29	691.36	17.24	
692.48	17.2	694.95	17.14	696.98	17	705.91	17.15	706.32	17.16	
719.11	17.24	719.89	17.26	722.41	17.3	737.54	17.36	740.04	17.4	
743.47	17.79	743.71	17.8	744.23	18	752.49	18.51	760.54	18.67	
763.39	18.73	765.31	18.8	769.5	19	774.72	19.11	776.96	19.2	
783.7	19.36	787.83	19.46	790.63	19.51	791.96	19.57	792.9	19.61	
797.47	19.67	797.86	19.68	799.73	19.69	805.35	19.51	806.69	19.47	
808.19	19.4	809.48	19.37	810.66	19.35	811.69	19.3	813.43	19.27	
817.25	19.21	821.31	19.26	822.54	19.29	824.25	19.31	833.1	19.44	
834.86	19.46	838.19	19.49	841.09	19.48	847.53	19.61	849.33	19.7	
851.95	19.78	852.33	19.79	856.51	19.9	857.04	19.92	861.23	20	
862.9	20.05	863.31	20.06	874.18	20.31	876.96	20.35	879.97	20.37	
893.43	20.58	899.22	20.57	901.15	20.47	902.36	20.48	903.18	20.44	
903.59	20.43	904.05	20.42	906.32	20.35	907.2	20.3	912.18	20.19	
914.16	20.13	917.34	20.1	920.51	20.08	920.85	20.09	921.26	20.11	
923.89	20.12	924.4	20.14	926.77	20.19	927.52	20.25	928.66	20.35	
930.5	20.45	934.73	21	937.56	21.36	942.55	22	949.46	23	
966.98	23.28	973.7	24	974.76	24.22	975.74	24.28	981.83	25	
982.28	25.09	983.58	25.32	987.46	26	988.4	26.25	988.62	26.29	
989.59	26.41	991.13	26.4	992.04	26.45					

Manning's n	Values	num=	4
Sta	n Val	Sta	n Val
0	.08	442.55	.03
		493.44	.06
		640.8	.12

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 442.55 493.44 147.62 143.32 152.13 .1 .3

Blocked Obstructions	num=	5
Sta L	Sta R	Elev

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802.54 837.69 33.92 763.44 791.68 30.22 854.76 883.27 33.03
 709.9 738.59 28.93 652.86 684.33 37.79

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook

RS: 3266

INPUT

Description: MMI additional cross section

Station Elevation Data num= 325

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	28.73	25.51	28	78.24	27.72	94.46	27.24	102.57	27
108.34	26.18	109.63	26	112.57	25.51	115.7	25	115.99	24.92
120.03	24	129.09	23.5	133.43	23.26	137.18	23	164.6	22.52
194.96	22	314.73	22.16	319.42	22.37	330.52	23	333.84	23.17
339.23	23.45	349.99	24	360.29	24.43	372.86	25	387.81	25.43
401.01	25.81	407.52	26	412.37	26.29	425.41	27	470.65	27.94
472.04	27.98	473.48	28	570.11	27.31	577.73	27.21	578.22	27.22
578.75	27.23	579.3	27.22	586.4	27	601.29	26.54	608.13	26.36
611.86	26.24	619.78	26	628.2	25.72	632.28	25.62	635.78	25.57
641.72	25.44	657.92	25	668.43	24.67	675.88	24.45	683.53	24.21
691.32	24	700.58	23.72	703.5	23.54	704.38	23.52	704.83	23.49
708.99	23.47	712.36	23.29	716.3	23.24	724.51	23.09	727.33	23
732.73	22.48	736.08	22.19	737.86	22	745.1	21.31	746.2	21.23
749.72	21	750.99	20.89	751.43	20.85	754.51	20.51	760.39	20.2
761.78	20.09	762.85	20	771.66	19.03	771.98	19	778.02	18.33
779.55	18.18	781.33	18	789.29	17.41	793.57	17.17	794.97	17.08
795.13	17.07	797.35	17	807.75	16.67	809.48	16.63	815.91	16.49
818.28	16.42	820.19	16.33	827.03	16.21	827.51	16.18	828.55	16.15
830.69	16.13	831.16	16.12	834.77	16.14	840.34	16.19	844.73	16.25
846.18	16.23	854.3	16.46	855.76	16.61	860.1	17	860.37	17.04
867.69	18	869.72	18.37	873.37	19	878.09	19.87	878.41	19.93
878.79	20	879.23	20.09	884.01	21	890.32	21.24	892.7	21.34
908.42	22	911.33	22.25	921.85	23	929.06	23.76	930.81	24
936.54	24.92	937.07	25	937.49	25.07	942.5	26	949.62	26.7
953.16	27	956.8	27.28	966.07	28	970.31	28.32	974.32	28.6
980.77	29	1058.61	29.83	1074.88	30	1075.66	30.14	1076.18	30.19
1078.7	30.46	1084.65	31	1092.27	31.23	1105.93	32	1107.55	32.12
1110.19	32.22	1115.6	32.47	1120.87	32.64	1128.9	33	1130.71	33.13
1132.67	33.23	1135.03	33.29	1137.81	33.4	1140.32	33.48	1146.13	33.72
1148.47	33.77	1148.86	33.78	1149.49	33.77	1155.11	34	1155.54	34.02
1160.78	34.07	1163.48	34	1166.37	33.9	1167.03	33.92	1167.25	33.93
1176.06	33.88	1178.4	33.87	1189.12	33.86	1194.23	33.84	1194.68	33.83
1196.26	33.78	1200.24	33.7	1203.58	33.57	1208.53	33.36	1212.33	33.19
1216.67	33	1219.55	32.78	1221.06	32.7	1224.36	32.54	1229.04	32.25
1235.28	32	1240.07	31.36	1242.57	31	1269.44	30.95	1283.52	30.63
1284.28	30.64	1287.62	30.51	1289.08	30.4	1291.33	30.21	1291.6	30.19
1293.35	30	1302.64	29.11	1304.68	29	1315.97	28.48	1318.65	28.37
1321.84	28.22	1326.1	28.01	1326.2	28	1326.39	27.98	1333.89	27
1335.53	26.81	1342.31	26	1352.61	25.05	1353.16	25	1354.9	24.83
1363.48	24	1367.21	23.65	1374.66	23	1380.67	22.52	1389.54	22
1390.36	21.94	1397.94	21.6	1398.28	21.62	1399.35	20.52	1399.86	20.52
1399.86	14.06	1407.15	12.55	1413.43	9.14	1416.49	8.8	1426.03	8.87
1435.92	9.37	1441.05	9.27	1444.44	11.72	1446.51	12.8	1446.82	13
1448.92	13.02	1453.79	14	1454.45	14.02083	1463.93	14.32	1483.74	15
1489.21	14.97	1501.27	14.63	1549.66	14.76	1556.82	14.94	1557.23	14.95
1559.15	15	1695.38	14.95	1704.98	14.97	1705.47	15	1760.87	15.73
1776.3	15.89	1777.37	15.91	1782.16	16	1842.33	16.7	1844.49	17
1848.93	17.61	1851.77	18	1854.25	18.34	1858.54	19	1862.15	19.6
1864.94	20	1874.87	20.37	1879.09	21	1884.45	21.72	1887.42	22
1892.91	22.44	1897.4	22.68	1897.66	22.7	1899.78	23	1905.88	23.34

StonyBrookDari en1-ex. txt

1911.51	23.63	1918.48	24	1923.9	24.33	1927.42	24.49	1937.14	25
1944.62	25.21	1945.89	25.18	1946.84	25.19	1951.57	26	1952.13	26.1
1955.16	26.36	1963.89	27	1963.96	27.01	1970.86	27.54	1977.42	28
1979.99	28.19	1984.71	28.55	1991.9	29	1993.54	29.06	1994.1	29.08
1995.23	29.24	1997.27	29.36	1998.69	29.59	2000.03	29.72	2000.36	29.73
2001.71	30	2007.19	30.34	2013.99	30.75	2016.15	30.87	2017.06	30.91
2018.47	31	2030.53	31.69	2033.68	31.85	2034.89	31.89	2035.39	31.91
2040.84	31.9	2042.93	32	2048.11	32.1	2056.99	33	2058.13	33.12
2059.22	33.23	2061.82	33.47	2066.34	33.89	2067.33	33.97	2067.65	34
2070.92	34.44	2075.35	35	2076.05	35.12	2081.83	36	2082.2	36.07
2085.05	36.65	2086.44	36.93	2086.85	37	2087.88	37.18	2088.69	37.23
2090.67	37.4	2092.5	37.54	2093.83	37.6	2094.44	37.65	2097.15	38
2098.19	38.17	2098.97	38.31	2100.75	38.73	2102.21	39	2105.66	39.62
2106.93	39.79	2108.93	40	2112.01	40.35	2114.25	40.54	2116.81	40.77
2119.59	41	2120.2	41.06	2120.75	41.1	2126.21	41.58	2127.02	41.65

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .08 1399.86 .03 1454.45 .06 1549.66 .12

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1399.86 1454.45 256.22 257.57 253.92 .1 .3

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 1160.78 34.07 F

Blocked Obstructions num= 8
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 2005.36 2043.89 43 1910.04 1937.27 33 1861.14 1891.32 42
 1755.29 1788.08 25 1708.29 1741.82 25 1659.08 1690.48 32
 1607.83 1642.42 24 1556.01 1591.11 24

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 3008

INPUT

Description: FEMA K (HEC2-16)

Station Elevation Data num= 319

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	40.7	.61	40.66	1.39	40.62	8.03	40	10.28	39.38
11.4	39	12.91	38.34	13.72	38	14.44	37.52	15.2	37
16.2	36.33	16.67	36	17.66	35.3	18.08	35	18.18	34.93
19.48	34	21.95	33.41	23.52	33	24.94	32.59	26.83	32
28.87	31.38	30.12	31	33.19	30.06	33.4	30	33.54	29.96
37.16	29	40.99	28.29	42.46	28	42.93	27.9	47.83	27
62.69	26.51	78.72	26	96.11	25.37	105.23	25	107.58	24.64
113.54	24	118.77	23.18	119.88	23	123.88	22.34	125.93	22
260.4	21.48	271.45	21	327.69	20.98	330.55	21	394.96	21.2
409.65	22	414.85	22.35	423.51	23	437.2	23.95	438.03	24
438.95	24.08	444.71	24.57	449.66	25	450.22	25.05	460.84	26
476.42	26.9	478.18	27	628.9	26.54	643.43	26.19	647.77	26.09
651.22	26	662.28	25.18	663.04	25.12	664.65	25	671.25	24.47
675.31	24.15	677.21	24	687.08	23.11	688.27	23	688.83	22.94
697.53	22	703.12	21.49	704.99	21.33	705.97	21.26	708.67	21
721.1	20	721.31	19.99	733.01	19	738.78	18.63	748.26	18
749.92	17.93	763.02	17.47	767.74	17.4	776.12	17	777.54	16.92
789	16	789.44	15.91	795.04	15	797.91	14.09	798.3	14
801.33	13.78	802.72	13.52	805.15	13	965.26	13.28	966.78	13.85
967.17	14	967.4	14.08	969.7	14.93	969.89	15	969.91	15.01
972.5	16	973.62	16.43	975.18	17	977.52	17.87	977.87	18
978.04	18.06	978.38	18.17	980.87	19	983.6	19.97	983.68	20

StonyBrookDari en1-ex. txt

984.35	20.21	986.83	21	987.15	21.11	989.69	22	991.16	22.47
992.83	23	995.75	23.65	997.47	24	1003.08	24.4	1011.73	25
1020.37	25.47	1026.27	25.79	1030.29	26	1035.15	26.87	1035.78	27
1036.22	27.03	1038.98	27.25	1048.29	28	1059.9	28.67	1061.44	28.76
1064.94	29	1071.96	29.38	1082.88	30	1096.69	30.88	1098.02	30.96
1098.12	30.97	1098.92	31	1111.06	31.97	1111.47	32	1119.47	32.87
1121.6	33	1124.56	33.78	1125.57	34	1131.62	34.58	1132.79	34.69
1134.35	34.82	1135.46	35	1146.87	35.44	1149.67	35.57	1151.83	35.63
1152.97	35.64	1153.85	35.67	1159.11	35.63	1163.6	35.55	1167.89	35.52
1174.4	35.48	1177.73	35.47	1181.28	35.45	1185.11	35.42	1188.94	35.4
1194.2	35.36	1197.36	35.33	1200.07	35.29	1201.27	35.27	1203.99	35.2
1206.39	35	1209.33	34.73	1211.87	34.47	1215.13	34.39	1224.26	34
1226.33	33.96	1239.7	33	1255.15	32.26	1258.56	32.11	1259.1	32.08
1260.05	32	1261.7	31.84	1270.81	31	1281.45	30.03	1281.9	30
1285.12	29.84	1291.23	29.58	1309.41	29	1329.92	28.9	1331.47	28.86
1351.84	28.35	1365.31	28	1375.87	27.11	1377.21	27	1377.58	26.97
1390.3	26	1390.93	25.96	1392.96	25.82	1402.58	25.18	1403.31	25.13
1405.3	25	1410.86	24.46	1416.23	24	1417.35	23.35	1417.93	23
1418.54	22.63	1419.49	22	1420.13	21.61	1420.88	21.16	1421.13	21
1422.46	20.08	1422.58	20	1422.96	19.75	1424.12	19	1424.67	18.66
1425.73	18	1426.96	17.47	1427.59	17.2	1428.06	17	1428.79	16.75
1430.96	16	1432.72	15.38	1433.9	15	1435.96	14.11	1436.21	14
1436.51	13.87	1438.68	13	1439.37	12.71	1440.38	12.3	1441.09	12
1442.43	11.56	1444.07	11	1445.08	10.4	1446.56	9.71	1448.4	9.08
1448.99	8.5	1453.51	7.99	1459.71	7.9	1467.86	8.05	1471.19	7.75
1474.25	8.27	1474.25	12.69	1475.37	12.69	1477.61	12.69	1490.18	12.71
1493.59	12.88	1495.08	12.97	1495.27	12.98	1496.73	13	1628.04	13.17
1666.16	14	1758.34	14.47	1759.14	14.49	1759.7	14.51	1760.04	14.53
1763.22	14.65	1763.91	14.67	1774.53	15	1780.54	15.23	1789.11	15.58
1793.31	15.78	1794.35	15.83	1796.31	15.91	1798.22	16	1798.62	16.32
1799.27	17	1800	17.87	1800.12	18	1800.14	18.04	1800.22	18.12
1800.82	18.8	1800.97	19	1801.26	19.37	1801.76	20	1802.33	20.73
1802.58	21	1802.84	21.31	1803.45	22	1803.83	22.47	1804.36	23
1804.97	23.65	1805.35	24	1817.87	23.42	1819.03	23	1819.54	22.82
1820.57	22.44	1821.68	22	1822.53	21.66	1824.21	21	1826.46	20.11
1826.73	20	1827.36	19.75	1829.12	19	1829.62	18.78	1831.46	18
1833.78	17.59	1837.81	17	1861	17.38	1874.03	18	1882.72	18.43
1895.9	19	1896.97	19.05	1897.58	19.07	1900.4	19.18	1905.07	19.37
1919.31	19.93	1920.62	20	1926.58	20.67	1929.73	21	1930.29	21.09
1936.2	22	1938.92	22.41	1942.9	23	1949.67	23.81	1951.62	23.93
1953.03	23.98	1953.12	23.99	1953.48	24	1966.77	24.43	1970.71	24.63
1974.97	24.82	1976.03	24.86	1978.15	25	2000.52	25.85		

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .08 1440.38 .03 1474.25 .06 1789.11 .12

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1440.38 1474.25 432.66 432.16 522.32 .1 .3

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 1153.85 35.67 F

Blocked Obstructions num= 4
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 1807.54 1839.92 24 1958.78 1989.42 37.6 1920.41 1934.25 29.1
 1858.14 1888.58 27.25

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook

RS: 2576

StonyBrookDari en1-ex. txt

INPUT

Description: MMI additional cross section US of sediment pond
 Station Elevation Data num= 434

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	28.91	3.56	28.4	6.24	28	12.24	27	18.23	26
18.86	25.91	25.36	25	29.24	24.61	34.6	24	101.75	24.31
104.82	24.26	107.21	24.24	108.79	24.23	109.79	24.22	110.78	24.23
111.03	24.22	132.77	24.07	132.91	24.06	135.8	24	151.44	23.45
163.24	23	164.9	22.94	166.54	22.88	178.93	22.43	189.86	22
192.74	21.89	195.37	21.79	215.28	21	218.66	20.84	237.83	20
250.93	19.33	252.38	19.29	255.02	19.16	256.26	19.11	257.28	19.08
261.12	19	314.12	20	321.61	20.28	335.11	20.75	337.99	21
352.13	21.9	355.18	22	366.89	22.36	380.61	23	387.02	23.5
388.59	23.62	393.08	23.86	395.5	24	408.2	24.86	410.2	25
417.53	25.18	420.93	25.35	422.47	25.42	424.88	25.55	426.33	25.64
429	25.76	432.17	26	434.27	26.38	438.52	27	444.33	27.92
444.81	28	445.32	28.25	446.84	29	448.45	29.78	448.9	30
449.49	30.3	450.89	31	451.8	31.43	453.02	32	454.51	32.68
455.25	33	456.95	33.82	457.37	34	458.34	34.41	459.72	35
461.37	35.69	462.12	36	463.18	36.43	464.59	37	464.94	37.14
466.97	38	471.29	38.81	472.34	39	472.97	39.09	478.53	40
483.52	41	483.96	41.09	484.3	41.14	487.41	41.64	489.35	41.83
489.89	41.9	490.14	41.92	491.51	42	494.47	42.14	497.54	42.23
502.84	42	503.92	41.96	507.26	41.6	512.68	41.08	512.99	41
515.24	40.45	516.67	40	519.11	39.31	520.34	39	521.52	38.64
523.28	38	523.63	37.74	524.39	37.18	524.63	37	524.93	36.79
526.01	36	527.03	35.23	527.36	35	528.68	34.09	528.82	34
528.92	33.91	530.02	33	530.59	32.59	531.39	32	532.59	31.07
532.65	31.03	532.68	31	532.73	30.96	533.87	30	534.25	29.72
535.22	29	535.86	28.46	536.4	28	536.66	27.82	537.85	27
564.61	26.23	567.25	26	567.95	25.65	568.23	25.6	568.54	25.59
569.41	25.35	569.77	25.3	570.47	25	581.04	24.97	581.91	24
582.06	23.87	583.03	23	583.77	22.39	584.32	22	585.31	21.12
585.5	21	588.2	20.25	588.97	20	590.21	19.57	592.22	19
592.65	18.91	601.96	18	606.4	17.63	606.96	17.57	610.12	17
611.21	16.9	621.81	16	625.97	15.72	626.86	15.68	632.68	15.32
636.04	15.11	636.29	15.1	636.99	15.08	639.71	15	643.92	14.91
648.68	14	649.86	13.16	650.13	13	794.49	13.57	795.17	14
795.51	13.51	800.16	14.69	800.98	15	801.43	15.05	803.6	15.07
808.91	16	816.98	17	817.06	17.01	827.09	18	828.7	18.13
832.33	18.43	838.82	19	845.28	19.62	849.49	20	855.45	19.74
858.74	19.21	862.95	19	866.76	18.87	869.09	18.81	874.79	18.66
876.04	18.63	880.69	18.53	882.1	18.51	883.53	18.5	885.33	18.52
893.62	18.33	895	18.28	895.88	18.25	900.21	18	900.95	17.94
902.98	17.76	905.02	17.64	907.81	17.48	909.53	17.36	911.29	17.23
913.26	17.11	913.9	17.07	916.08	17	921.85	17.03	923.27	17
926.32	16.97	926.61	16.96	929.66	16.8	931.47	16.7	938.51	16.28
940.74	16.2	944.2	16.1	944.5	16.09	944.7	16.08	946.65	16
1014.8	16.14	1025.11	17	1044.27	17.79	1046.96	18	1049.62	18.08
1059.15	19	1078.33	19.66	1079.58	19.58	1080.31	19.59	1084.8	19.31
1085.49	19.29	1086.34	19.26	1090.25	19	1091.07	18.95	1092.02	18.9
1096.78	18.68	1100.09	18.57	1100.79	18.55	1103.58	18.48	1105.26	18.5
1107.34	18.47	1110.08	18.55	1111.38	18.59	1112.61	18.61	1119.29	18.76
1122.49	18.74	1129.84	18.67	1134.57	18.52	1138.04	18.5	1147.7	18.07
1148.29	18.05	1148.6	18.03	1149.21	18	1167.1	17.42	1170.85	17.23
1175.17	17	1178.66	16.82	1183.56	16.59	1185.54	16.51	1188	16.44
1191.53	16.32	1204.7	16.05	1205.63	16.03	1206.74	16	1215.42	15.77
1220.18	15.54	1224.23	15.39	1226.2	15.43	1228.94	15.33	1237.31	15
1238.08	14.92	1238.62	14.91	1239.63	14.84	1246.94	14.35	1251.55	14.16
1252.56	14.11	1254.63	14	1258.42	13.81	1259.78	13.79	1262.77	13.64
1265.25	13.51	1265.75	12.67	1280.37	11.42	1288.9	8.9	1290.69	6.93
1296.71	6.81	1306.85	5.91	1314.47	6.99	1316.68	7.92	1316.68	12.26
1317.68	12.26	1319.38	11.91	1322.58	12.67	1325.15	14.26	1327.27	15.45

StonyBrookDari en1-ex. txt

1330.63	16.69	1343.71	17.23	1354.77	17.87	1358.17	18	1363.04	18.31
1373.49	19	1387.56	19.67	1388.79	19.69	1391.83	19.8	1393.85	19.83
1394.91	19.82	1395.49	19.84	1402.76	19.92	1405.25	19.9	1481.21	20
1492.49	20.78	1495.53	21	1500.89	21.37	1504.94	21.68	1507.13	21.82
1509.51	22	1512.8	22.22	1514.04	22.32	1516.77	22.51	1519.88	22.71
1523.81	22.97	1523.94	22.98	1524.29	23	1527.17	23.15	1527.71	23.19
1531.97	23.37	1534.5	23.49	1537.65	23.66	1542.92	24	1545.24	24.15
1549.72	24.46	1558.04	25	1558.36	25.02	1558.73	25.05	1566.76	25.65
1572.59	26	1574.77	26.16	1577.89	26.35	1584.38	26.75	1590.67	27
1591.56	27.03	1594.73	27.09	1597.24	27.1	1599.77	27.08	1601.88	27.05
1602.07	27.04	1603.41	27	1605.47	26.93	1605.88	26.92	1606.32	26.91
1612.63	26.64	1613.64	26.61	1617.99	26.4	1620.56	26.37	1622.51	26.27
1623.51	26.23	1625.78	26.14	1626.39	26.11	1628.17	26	1661.11	25.99
1665.99	25.78	1667.05	25.73	1670.3	25.61	1671.74	25.55	1673.08	25.52
1677.33	25.32	1684.21	25	1695.95	24.28	1700.81	24	1704.93	23.72
1714.91	23	1719.25	22.69	1720.05	22.68	1720.96	22.67	1730.05	22.46
1738.7	22.57	1741.71	22.58	1742.49	22.6	1744.51	22.63	1745.73	22.65
1747.9	22.68	1749.25	22.67	1758.49	22.49	1760.31	22.43	1761.95	22.4
1763.18	22.37	1764.89	22.32	1766.36	22.28	1774.7	22.35	1777.06	22.42
1778.07	22.45	1788.07	22.3	1789.83	22	1795.3	21.06	1795.64	21
1797.65	20.65	1801.44	20	1802.38	19.84	1805.51	19.31	1807.37	19
1837.97	19.16	1845.04	19.84	1847.17	20	1875.86	20.67	1880.88	20.98
1881.2	21	1881.96	21.04	1883.8	21.12	1899.02	21.83	1903.77	22
1909.87	22.22	1928.86	23	1945.05	23.7	1955.18	24	1958.03	24.23
1959.37	24.35	1963.37	24.65	1967.14	25	1968.58	25.1	1977.03	26
1980.75	26.24	1991.5	26.65	1998.05	27	2000.12	27.14	2001.82	27.21
2003.76	27.29	2009.02	27.55	2013.46	27.77	2014.99	27.84	2015.75	27.88
2018.03	28	2030.9	28.92	2032.16	29	2032.53	29.03		

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .08 1280.37 .03 1316.68 .12

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1280.37 1316.68 93.04 131.93 139.01 .3 .5

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 849.49 20 F

Blocked Obstructions num= 1
 Sta L Sta R Elev
 1363.9 1636.29 74

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 2444

INPUT

Description: MMI additional cross section across sediment pond

Stations									
Elevation Data num= 361									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	42.32	1.47	42.6	2.7	42.79	3.8	42.11	3.97	42
4.13	41.92	5.73	41	6.65	40.49	7.55	40	7.97	39.79
9.58	39	10.4	38.59	11.5	38	12.27	37.54	13.19	37
13.7	36.73	15.05	36	16.25	35.36	16.86	35	18.12	34.45
19.16	34	20.28	33.65	22.53	33	24.4	32.61	27.01	32
30.28	31.53	33.37	31	37.38	30.38	39.71	30	41.36	29.62
44.15	29	46.49	28.46	48.56	28	52.04	27.25	53.29	27
55.74	26.49	58.17	26	59.17	25.78	62.48	25	64.76	24
120.26	24.13	124.76	24.51	126.22	24.64	132.41	25	137.69	25.54
142.3	26	145.86	26.27	147.75	26.46	153.72	27	159.63	27.29
164.27	27.49	166.6	27.56	171.32	27.73	172.39	27.75	174.72	27.72

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176.86	27.85	177.36	27.82	179.62	27.97	179.76	27.96	180.18	28
184.38	28.78	184.88	28.85	185.27	28.86	192.34	28	192.42	27.99
192.69	27.96	199.89	27.12	200.96	27	202.3	26.87	213.89	26
215.15	25.96	221.98	25	223.95	24.68	228.03	24	234.51	23.05
234.87	23	234.99	22.99	237.91	22.76	248.53	22	261.17	21.21
264.5	21	267.81	20.85	283.73	20	289.52	19.57	295.04	19.27
299.32	19	360.65	19.35	365.41	19.51	367.43	19.53	390.58	20
411.68	20.73	415.73	21	428.57	21.92	429.68	22	430.56	22.09
440.64	23	451.43	23.54	455.97	23.7	463.74	23.97	464.01	23.98
464.8	24	468.84	24.14	472.16	24.23	474.77	24.29	476.74	24.32
482.27	24.42	486.8	24.48	487.92	24.5	488.71	24.53	495.75	24.6
496.61	24.64	503.6	24.68	505.63	24.75	508.31	24.76	521.98	24.85
524.35	24.84	527.14	24.77	529	24.76	542.4	24.73	545.18	24.61
557.91	24.1	558.43	24.09	558.66	24.08	559.8	24	561.59	23.79
568.35	23	576.06	22.06	576.55	22	576.66	21.98	577.72	21.85
583.52	21.13	584.63	21	592.39	20.03	592.62	20	593.71	19.86
600.79	19	606.61	18.26	608.76	18	616.74	17.01	616.82	17
616.92	16.99	626	16	626.81	15.82	628.91	15.63	634.32	15
637.62	14.44	640.45	14	643.95	13.63	649.76	13	658.75	12.57
663.41	12.41	665.99	12.36	668.31	12.25	672.19	12	770.44	12.14
785.32	12.47	788.08	12.52	793.57	12.68	794.29	12.71	795.07	12.74
797.26	12.82	797.72	12.81	801.48	12.97	801.99	13	808.84	13.23
809.13	13.24	809.29	13.25	810.4	13.28	814.06	13.42	823.03	13.75
823.86	13.76	828.37	14	836.55	14.34	837.69	14.38	841.58	14.4
843.31	14.45	845.69	14.5	846.19	14.51	848.51	14.59	853.32	14.66
858.25	14.71	865.42	14.78	867	14.8	868.47	14.79	870.85	14.8
874.23	14.74	879.16	14.67	879.9	14.65	884.61	14.49	885.75	14.45
894.6	14.08	895.39	14.04	895.64	14.03	895.94	14.02	898.85	14
914.64	14.07	915.61	14.1	928.11	14.34	929.57	14.37	930.26	14.38
931.8	14.4	936.87	14.53	941.15	14.58	945.12	14.62	951.22	14.65
955.92	14.67	959.31	14.68	965.97	14.72	971.99	14.7	976.16	14.72
984.93	14.73	992.96	14.79	997.13	14.83	1003.99	14.9	1010.2	14.99
1011.64	15	1018.5	15.08	1019.23	15.1	1031.31	15.24	1033.62	15.31
1036.11	15.41	1041.68	15.43	1044.69	15.47	1045.67	15.45	1046.75	15.47
1048.73	15.52	1054.83	15.33	1055.33	15.34	1056.3	15.33	1058.48	15.35
1063.94	15.22	1065.77	15.24	1069.73	15.44	1071.59	15.5	1075.74	15.47
1078.32	15.45	1083.45	15.37	1086.01	15.38	1088.16	15.32	1088.69	15.31
1089.27	15.27	1090.12	15.28	1093.67	15.24	1094.09	15.22	1101.24	15.02
1101.39	15.01	1101.85	15	1104.63	14.93	1105.31	14.92	1105.7	14.91
1111.7	14.76	1119.12	14.54	1131.92	14.27	1133.64	14.22	1134.39	14.2
1137.6	14.19	1148.82	14.15	1149.54	14.16	1151.19	14.12	1154.91	14
1158.58	13.43	1160	13.49	1164.47	13	1165.27	11.93	1175.82	9.72
1182.13	7.59	1182.8	6.71	1186.81	5.52	1199.59	2.54	1216.77	4
1225.72	4	1237.23	3.68	1243.58	3.95	1260.78	4.83	1273.02	6.13
1275.13	7.45	1279.62	11	1287.18	13.47	1307.73	15.85	1308.95	16.99
1309.27	17	1321.74	17.29	1323.53	17.34	1328.48	17.47	1331.45	17.55
1347.55	18	1363.2	18.92	1364.25	19	1364.76	19.11	1368.59	20
1369.19	20.14	1372.62	21	1380.09	21.59	1382.65	21.74	1387.45	22
1403.91	22.49	1418.24	22.92	1420.23	23	1440.23	23.81	1441.73	23.86
1443.71	24	1446.96	24.99	1447	25	1447.06	25.02	1447.36	25.11
1450.34	26	1452.68	26.72	1453.56	27	1454.19	27.24	1456.13	28
1457.66	28.6	1458.63	29	1462.19	29.81	1463.01	30	1463.63	30.13
1467.38	31	1469.46	31.58	1470.93	32	1472.29	32.42	1474.23	33
1475.75	33.47	1477.33	34	1495.66	34.15	1499.81	34.13	1506.77	34
1515.77	34.3	1528.68	35	1532.96	35.16	1554.57	36	1560.84	36.16
1561.74	36.18	1591.58	37	1612.67	36.72	1614.24	36.59	1616.18	36.32
1623.76	36	1631.65	35.51	1640.07	35	1642.21	34.87	1656.33	34
1660.57	33.74	1673.86	33	1675.54	32.91	1676.12	32.88	1681.06	32.65
1682.72	32.59	1686.9	32.43	1693.78	32.27	1695.25	32.21	1702.54	32
1708.57	31.74	1710.59	31.67	1712.23	31.56	1715.36	31.41	1716.44	31.33
1719.58	31.12	1721.04	31	1721.84	30.94	1722.3	30.9	1731.09	30
1732.61	29.36								

StonyBrookDari en1-ex. txt

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .08 1154.91 .03 1308.95 .04 1475.75 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1154.91 1308.95 394.33 232.58 204.35 .3 .5

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 521.98 24.85 F

Blocked Obstructions num= 1
 Sta L Sta R Elev
 1624.2 1675.19 74

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 2212

INPUT

Description: MMI additional section - DS of sediment basin

Station	Elevation	Data	num=	238	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	45.75	.48	45.54	1.63	45	3.87	44.04	3.98	44			
4.04	43.97	6.34	43	6.38	42.97	8.11	42	8.78	41.66			
10.12	41	11.61	40.19	11.96	40	12.54	39.67	13.68	39			
14.73	38.45	15.58	38	16.86	37.17	17.12	37	17.6	36.5			
18.06	36	18.95	35.09	19.04	35	20.05	34.06	20.12	34			
20.2	33.93	21.14	33	22.67	32.01	22.68	32	25.19	31			
25.72	30.8	27.98	30	30.35	29.44	32.18	29	34.41	28.42			
35.92	28	39.77	27.19	40.79	27	41.85	26.84	47.14	26			
52.97	25.12	53.79	25	54.26	24.93	60.86	24	68.33	23.3			
71.96	23	76.04	22.81	91.51	22.78	92.8	22.7	94.99	22.67			
102.6	22.96	103.51	22.97	107.4	22.89	109.05	22.88	109.64	22.91			
110.05	22.93	113.7	22.68	121.45	23	183.27	22.71	189.36	22.6			
193.82	22.52	204.14	22.31	212.74	22.24	214.8	22.17	218.03	22.07			
218.84	22.06	219.23	22.05	220.78	22	334.12	21.9	348.43	21.51			
365.83	21.03	366.99	21	379.14	21.92	379.66	22	421.2	21.76			
421.75	21.57	423.71	21.41	424.34	21.16	425.92	21.26	429.37	21.57			
432.74	21.8	433.45	21.89	433.75	21.88	434.69	22	520.49	21.69			
528.28	21.66	548.34	21	578.76	20.65	581.47	20.61	607.33	20.22			
623.1	20	627.23	19.05	627.45	19	627.67	18.94	631.37	18			
641.11	17.53	642.78	17.44	650.5	17.07	651.5	17	667.61	16.89			
683.06	16.6	693.87	16.39	714.03	16	723.8	15.83	772.03	15			
787.59	14.71	822.54	14	841.22	13.64	849.83	13.48	854.95	13.38			
866.63	13.17	868.61	13.13	874.96	13	890.5	12.8	907.65	12.59			
917.66	12.47	960.94	12	1008.87	11.52	1030.87	11.32	1036.21	11.28			
1071.21	11	1078.88	10.95	1091.76	10.87	1095.67	10.85	1099.34	10.82			
1100.16	10.81	1142.98	10.52	1147.22	10.49	1172.44	10.3	1175.54	10.28			
1183.99	10.22	1186.62	10.21	1188.86	10.19	1216.26	10.02	1218.42	10			
1235.88	9.23	1236.35	9.21	1241.51	9	1251.16	8.7	1253.86	8.75			
1254.48	8.71	1255.32	8.66	1262.18	8.93	1262.31	8.92	1262.62	8.86			
1263.89	9	1266.92	9.31	1268.56	9	1269.98	9.72	1270.76	9.81			
1272.21	10	1276.27	9.88	1276.27	4.65	1284.38	5.05	1295.27	5.52			
1295.27	10.1	1297.27	10.1	1304.19	11	1304.6	11.37	1305.29	12			
1307	12.79	1307.46	13	1309.81	13.82	1310.33	14	1310.78	14.13			
1311.31	14.19	1312.81	14.35	1313.63	15	1317.22	15.26	1323.27	15.65			
1328.13	16	1331.13	16.07	1335.37	16.1	1358.46	16.43	1363.14	16.48			
1368.13	16.55	1400.99	17	1409.59	17.57	1412.98	18	1415.64	18.34			
1416.51	18.43	1422.83	19	1424.93	19.19	1433.54	20	1435.08	20.05			
1436.34	20.06	1447.52	20.32	1455.32	20.53	1458.1	20.54	1479.76	20.81			
1485.08	20.9	1487.23	20.94	1491.65	21	1510.31	21.01	1520.85	22			
1524.75	22.45	1529.78	23	1537.98	23.96	1538.31	24	1538.62	24.04			

StonyBrookDari en1-ex. txt

1545.96	25	1547.09	25.16	1549.05	25.42	1553.27	26	1557.82	26.65
1560.35	27	1563.44	27.46	1567.27	28	1569.23	28.32	1573.24	29
1575.34	29.35	1578.72	30	1580.92	30.37	1584.3	31	1588.57	31.7
1590.41	32	1591.78	32.17	1598.31	33	1602.13	33.35	1606.09	33.77
1608.14	34	1609.88	34.09	1619.61	34.55	1629.86	35	1638.08	35.39
1648.96	36	1665.76	36.4	1678.49	36.51	1678.73	36.52	1705.03	37
1750.36	36.23	1751.19	36.22	1754.09	36.02	1754.44	36	1781.51	35.02
1782	35	1788.91	34.65	1789.45	34.62				

Manning's n Values	num=	4
Sta n Val	Sta n Val	Sta n Val
0 .1	607.33 .04	1276.27 .03
		1295.27 .04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
1276.27	1295.27	117.61	151.8	154.04	.3	.5	

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 2060

INPUT

Description: FEMA J - US section for Renshaw Road (HEC2-15)
 Station Elevation Data num= 259

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	26.38	2.42	26	8.68	25.09	9.29	25	10.41	24.82
15.42	24	19.85	23.29	21.79	23	32.85	22.35	39.95	22
51.06	21.56	55.06	21.47	69.51	21.09	70.94	21.05	71.48	21.03
73.08	21	171.89	21.9	175.04	22	208.77	21.62	229.43	21
270.14	20.04	271.58	20.01	272.06	20	287.13	19.67	291.24	19.55
296.9	19.41	299.48	19.33	301.99	19.27	304.85	19.2	305.76	19.17
309.31	19.12	312.56	19.05	315.22	19.03	326.07	19.09	331.36	19.11
344.83	19.09	354.51	19.2	355.39	19.24	357.11	19.32	358.15	19.34
360.4	19.43	369.32	19.75	372.78	19.87	376.62	20	388.92	20.46
394.75	20.66	397.28	20.75	403.66	21	408.78	21.59	410.66	21.72
413.68	21.89	417.6	22	509.79	21.83	523.35	21.74	534.62	22
569.56	22.6	570.63	23	572.82	23.91	573.03	24	574.71	23.6
575.55	23	576.59	22.25	576.94	22	577.8	21.4	578.36	21
578.57	20.84	579.68	20	580.8	19.57	582.28	19	586.15	18.3
586.99	18.14	587.73	18	602.16	17.07	603.13	17	628.06	16.51
632.93	16.43	635	16.4	646.61	16.2	648.65	16.17	655.45	16.06
655.85	16.05	659.18	16	666.63	15.89	677.09	15.75	679.09	15.73
686.98	15.64	697.14	15.48	712.34	15.28	725.14	15.1	731.35	15
760.74	14.16	763.3	14.09	764.26	14.06	766.17	14	770.93	13.93
807.88	13	833.17	12.5	834.73	12.47	836.49	12.44	839.01	12.38
859.52	12	903.66	11.22	914.65	11	1022.92	10.13	1023.24	10.12
1025.48	10.11	1031.31	10.07	1035.06	10.06	1035.65	10.05	1041.78	10.04
1052.22	10	1109.3	10	1109.75	10	1109.75	5.91	1114.68	5.53
1121.62	5.79	1125.11	5.99	1127.96	6.4	1127.96	9.73	1129.15	9.73
1131.34	10	1131.49	10.49	1131.66	11	1147.56	11.68	1150.41	12
1150.8	12.03	1151.53	12.07	1155.52	12.22	1158.27	12.28	1162	12.41
1164.44	12.5	1165.96	12.57	1173.26	13	1181.42	13.9	1182.24	14
1182.63	14.07	1190.56	15	1191.29	15.15	1192.51	15.36	1194.19	15.43
1196.16	16	1198.32	16.41	1202.24	17	1202.65	17.03	1213.22	18
1225.38	18.4	1240.81	19	1240.89	19.01	1246.41	19.44	1248.73	19.62
1250.76	19.77	1252.69	19.87	1254.24	19.96	1254.5	19.97	1255.36	20
1261.29	20.32	1264.51	20.44	1266.02	20.47	1270.81	20.46	1275.46	20.56
1278.51	20.57	1283.92	20.69	1306.14	20.97	1306.76	21	1311.32	21.11
1311.97	21.12	1314.11	21.21	1315.44	21.25	1317.2	21.33	1318.74	21.38
1319.83	21.42	1324.87	21.67	1325.98	21.73	1331.89	22	1339.99	22.38
1342.39	22.51	1347.51	22.62	1348.94	22.69	1350.03	22.73	1354.51	22.85
1355.69	22.88	1359.91	23	1360.51	23.05	1360.83	23.08	1365.03	23.48

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1370.83	24	1370.94	24.01	1371.32	24.05	1375.73	24.42	1379.34	24.74
1381.32	24.89	1382.55	25	1389.33	25.38	1394.38	25.88	1395.76	26
1401.41	26.36	1403.29	26.46	1410.67	27	1413.59	27.19	1417.2	27.46
1419.36	27.59	1424.56	28	1430.67	28.45	1434.97	28.76	1436.07	28.83
1437.58	28.9	1438.42	29	1449.33	29.65	1455.86	30	1462.55	30.33
1470.96	30.74	1474.34	30.88	1476.69	31	1485.02	31.33	1488.14	31.51
1490.75	31.69	1492.13	31.76	1495.03	32	1498.11	32.19	1508.99	33
1515.23	33.26	1519.55	33.44	1532.63	34	1537.06	34.25	1548.87	35
1552.8	35.23	1554.83	35.32	1560.6	35.57	1563.64	35.68	1570.72	36
1575.47	36.16	1579.72	36.28	1580.39	36.3	1584.99	36.46	1599.66	37
1669.21	36.85	1669.62	36.83	1676.63	36.58	1677.57	36.53	1680.36	36.42
1683.43	36.28	1683.95	36.25	1688.96	36.06	1689.88	36	1695.06	35.82
1696.8	35.73	1699.38	35.61	1705.83	35.31	1707.38	35.24	1712.03	35
1715.82	34.81	1723.48	34.48	1732.93	34	1736.26	33.72	1744.71	33
1745.74	32.93	1746.31	32.89	1747.58	32.8	1751.45	32.52		

Manning's n Values

num=	4
Sta n Val	Sta n Val
0 .1	569.56 .04
	1109.75 .03
	1127.96 .04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1109.75 1127.96 71.53 58.99 31.11 .3 .5

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 569.56 22.6 F

Blocked Obstructions num= 2
 Sta L Sta R Elev
 427.34 453.58 39.84 189.14 239.62 34

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 2001

INPUT

Description: US face of Renshaw Road (HEC2-15.1)

Station	Elevation	Data	num=	380					
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	32.02	.035	32	1.29	31.27	1.758	31	3.248	30.08
3.377	30	4.711	29.1	4.867	29	5.179	28.8	6.443	28
7.257	27.5	8.054	27	9.284	26.16	9.518	26	10.773	25.19
11.068	25	12.324	24.15	12.557	24	12.774	23.86	14.004	23
17.329	22.21	17.866	22.08	18.247	22	19.009	21.86	23.816	21
26.31	20.81	28.146	20.68	38.841	20	54.767	19.52	62.016	19.41
64.198	19.38	67.637	19.36	74.807	19.22	82.558	19.3	91.504	19.7
93.41	19.75	94.137	19.78	95.168	19.82	98.259	20	140.27	20.08
156.655	20.12	160.613	20.01	160.899	20	237.689	19.76	249.078	19.27
258.474	19	265.307	18.92	277.068	18.69	282.835	18.56	306.521	18
339.768	18.5	346.722	18.66	357.591	18.84	366.84	19	382.714	19.2
383.511	19.3	387.538	19.49	388.516	19.54	390.465	19.7	392.656	20
397.142	20.29	399.177	20.44	401.126	20.6	402.312	20.7	408.011	21
411.189	21.22	413.397	21.6	415.943	21.97	416.03	21.99	416.125	22
479.969	22.1	484.048	22.17	512.99	22.71	518.957	22.82	527.825	22.9
528.466	23	530.025	23.67	530.813	24	533.844	23.66	534.597	23
553.009	22.89	556.906	22.81	557.469	22.78	562.354	22.69	565.333	22.41
566.623	22.36	569.403	22	571.88	21.75	583.268	21	583.554	20.93
583.805	20.91	584.117	20.88	584.654	20.84	588.837	20.4	591.374	20.28
592.041	20.23	592.587	20.18	595.73	20.06	597.436	20	597.653	19.93
597.895	19.88	599.324	19.51	601.403	19.11	601.611	19.03	602.052	19
603.481	18.73	604.347	18.57	607.465	18	607.56	17.99	610.288	17.71
610.938	17.7	614.003	17.81	614.705	17.84	616.809	17.78	619.91	17.67
625.721	17.41	627.86	17.3	629.921	17.2	633.61	17	636.252	16.87

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637. 169	16. 81	642. 418	16. 58	648. 229	16. 41	649. 285	16. 37	653. 269	16. 23
655. 018	16. 17	659. 409	16	659. 548	15. 99	662. 882	15. 93	663. 124	15. 92
663. 653	15. 84	667. 827	15. 7	670. 754	15. 59	671. 88	15. 75	673. 404	15. 78
677. 414	15. 83	678. 297	15. 81	680. 748	15. 75	684. 229	15. 6	688. 317	15. 43
690. 699	15. 37	694. 561	15. 24	695. 479	15	701. 281	15. 09	704. 035	15
706. 374	14. 93	706. 486	14. 91	706. 633	14. 9	710. 946	14. 66	711. 795	14. 59
715. 242	14. 46	721. 061	14. 24	721. 997	14. 2	727. 409	14	728. 293	13. 99
729. 964	13. 98	731. 575	13. 96	731. 809	13. 95	734. 779	13. 94	735. 152	13. 91
736. 174	13. 82	743. 708	13. 73	743. 924	13. 69	744. 331	13. 67	749. 813	13. 59
755. 062	13. 51	756. 811	13. 09	757. 036	13. 08	758. 361	13. 46	760. 509	13. 43
761. 669	13. 41	764. 207	13. 38	765. 411	13. 35	768. 901	13. 26	770. 91	13. 21
778. 505	13	779. 83	12. 99	785. 546	12. 94	785. 875	12. 93	786. 282	12. 89
788. 239	12. 86	790. 066	12. 83	795. 384	12. 77	796. 042	12. 78	797. 445	12. 68
802. 165	12. 61	803. 888	12. 52	807. 274	12. 46	818. 411	12. 14	819. 494	12. 13
819. 936	12	821. 373	12. 1	825. 088	12. 04	825. 452	12. 03	839. 231	12. 07
847. 977	12. 09	848. 61	12	851. 441	12. 09	869. 16	12. 31	872. 14	12. 3
873. 811	12. 28	876. 764	12. 08	881. 233	12. 28	892. 734	12. 24	894. 916	12. 23
899. 714	12. 26	901. 073	12. 29	904. 841	12. 21	905. 265	12. 19	909. 076	12. 36
916. 211	12. 55	918. 004	12. 54	919. 563	12. 55	925. 4	12. 51	929. 098	12. 52
930. 899	12. 53	932. 38	12. 58	936. 156	12. 51	936. 901	12. 46	939. 767	12. 18
940. 547	12. 15	941. 742	12	942. 582	11. 55	942. 842	11. 41	943. 526	11
944. 305	10. 49	944. 946	10	949. 311	9. 88	949. 311	4. 65	956. 335	5. 05
963. 167	5. 52	963. 167	10. 1	964. 034	10. 1	964. 562	10. 88	964. 614	11
964. 657	11. 02	965. 099	11. 27	965. 324	11. 39	967. 255	12	968. 632	12. 26
969. 013	12. 29	969. 126	12. 3	975. 881	12. 76	976. 383	12. 89	976. 833	12. 93
977. 855	13	983. 64	13. 35	984. 255	13. 43	985. 641	13. 54	987. 633	13. 66
989. 261	13. 75	991. 478	13. 84	992. 612	13. 88	993. 392	13. 91	995. 843	14
998. 467	14. 07	998. 787	14. 11	1003. 039	14. 28	1003. 862	14. 36	1009. 387	14. 6
1016. 385	15	1019. 113	15. 11	1019. 312	15. 13	1020. 005	15. 19	1023. 122	15. 36
1024. 04	15	1026. 301	15. 55	1033. 584	15. 93	1034. 13	15. 96	1034. 866	16
1039. 932	16. 24	1040. 876	16. 31	1041. 898	16. 39	1045. 232	16. 53	1047. 908	16. 75
1049. 493	16. 81	1052. 048	17	1052. 351	17. 04	1052. 55	17. 06	1054. 421	17. 36
1057. 148	17. 71	1058. 041	17. 84	1059. 166	18	1064. 865	18. 26	1070. 996	18. 57
1080. 237	19	1091. 019	19. 69	1094. 405	20	1096. 215	20. 27	1097. 029	20. 38
1098. 865	20. 58	1099. 904	20. 71	1102. 849	21	1114. 09	21. 62	1119. 39	22
1130. 605	22. 37	1130. 917	22. 4	1137. 49	22. 56	1138. 113	22. 61	1139. 508	22. 68
1142. 383	22. 76	1150. 48	23	1152. 862	23. 12	1152. 905	23. 13	1153. 286	23. 17
1157. 33	23. 63	1162. 916	23. 91	1163. 436	23. 95	1164. 362	23. 91	1169. 931	24. 41
1170. 225	24. 45	1172. 313	24. 64	1178. 548	25. 78	1179. 925	25. 07	1185. 554	25. 4
1185. 814	25. 45	1186. 351	25. 52	1189. 573	25. 78	1193. 21	26	1203. 169	26. 57
1203. 827	26. 66	1207. 378	26. 94	1207. 88	26. 99	1208. 209	27	1217. 753	27. 6
1219. 433	27. 73	1220. 568	27. 83	1221. 65	27. 92	1222. 966	28	1233. 939	28. 63
1234. 796	28. 72	1236. 087	28. 83	1237. 542	28. 94	1238. 234	29	1248. 869	29. 73
1251. 944	29. 98	1252. 212	30	1264. 795	30. 74	1266. 986	30. 95	1267. 125	30. 97
1267. 567	31	1284. 835	31. 87	1285. 294	31. 91	1286. 853	32	1302. 97	32. 82
1306. 304	33	1321. 78	33. 98	1322. 248	34	1340. 521	34. 79	1341. 543	34. 89
1343. 075	35	1353. 762	35. 53	1356. 984	35. 71	1357. 928	35. 76	1362. 293	36
1375. 612	36. 58	1385. 875	37	1450. 523	36. 83	1455. 806	36. 47	1462. 708	36
1475. 422	35. 18	1478. 236	35. 14	1481. 215	34. 79	1491. 408	34. 09	1491. 997	34. 05
1492. 699	34	1495. 557	33. 78	1506. 235	33	1513. 397	32. 41	1518. 29	32
1521. 451	31. 73	1531. 826	31	1540. 78	30. 22	1542. 919	30	1543. 863	29. 89
1553. 416	29	1556. 144	28. 87	1561. 045	28. 85	1563. 15	28. 87	1563. 418	28. 86

Manning's n Values	num= 4							
Sta 0	n Val .1	Sta 571.88	n Val .04	Sta 949.311	n Val .03	Sta 964.034	n Val .04	
Bank Sta: Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.	
949.311	963.167		59.6	66.71		.3	.5	
Ineffective Flow	num= 3							
Sta L	Sta R	Elev	Permanent					
0	557	22.89	F					
557	942.729	13	F					

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970.77 990 13 F
 Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev
 392.448 418.221 41 228.977 253.105 38
 Skew Angle = 30

BRI DGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 1966

INPUT

Description: Renshaw Road - applied 30 degree skew
 Distance from Upstream XS = 7.6
 Deck/Roadway Width = 48
 Weir Coefficient = 2.6
 Bridge Deck/Roadway Skew = 30

Upstream Deck/Roadway Coordinates

num= 22											
Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
523.945	22.9			627.868	20			792.413	15		
832.25	14			888.542	13			940.071	13.1		
947.839	13.1			947.839	15.29			949.311	15.29		0
949.311	15.29	9.99		963.167	15.27	9.9		963.167	15.27		0
964.293	15.27			964.293	13.4			969.948	13.4		
991.599	14			1017.58	15			1039.23	16		
1058.283	17			1073.871	18			1091.192	19		
1107.646	20										

Upstream Bridge Cross Section Data

Station Elevation Data num= 380											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	32.02	.035	32	1.29	31.27	1.758	31	3.248	30.08		
3.377	30	4.711	29.1	4.867	29	5.179	28.8	6.443	28		
7.257	27.5	8.054	27	9.284	26.16	9.518	26	10.773	25.19		
11.068	25	12.324	24.15	12.557	24	12.774	23.86	14.004	23		
17.329	22.21	17.866	22.08	18.247	22	19.009	21.86	23.816	21		
26.31	20.81	28.146	20.68	38.841	20	54.767	19.52	62.016	19.41		
64.198	19.38	67.637	19.36	74.807	19.22	82.558	19.3	91.504	19.7		
93.41	19.75	94.137	19.78	95.168	19.82	98.259	20	140.27	20.08		
156.655	20.12	160.613	20.01	160.899	20	237.689	19.76	249.078	19.27		
258.474	19	265.307	18.92	277.068	18.69	282.835	18.56	306.521	18		
339.768	18.5	346.722	18.66	357.591	18.84	366.84	19	382.714	19.2		
383.511	19.3	387.538	19.49	388.516	19.54	390.465	19.7	392.656	20		
397.142	20.29	399.177	20.44	401.126	20.6	402.312	20.7	408.011	21		
411.189	21.22	413.397	21.6	415.943	21.97	416.03	21.99	416.125	22		
479.969	22.1	484.048	22.17	512.99	22.71	518.957	22.82	527.825	22.9		
528.466	23	530.025	23.67	530.813	24	533.844	23.66	534.597	23		
553.009	22.89	556.906	22.81	557.469	22.78	562.354	22.69	565.333	22.41		
566.623	22.36	569.403	22	571.88	21.75	583.268	21	583.554	20.93		
583.805	20.91	584.117	20.88	584.654	20.84	588.837	20.4	591.374	20.28		
592.041	20.23	592.587	20.18	595.73	20.06	597.436	20	597.653	19.93		
597.895	19.88	599.324	19.51	601.403	19.11	601.611	19.03	602.052	19		
603.481	18.73	604.347	18.57	607.465	18	607.56	17.99	610.288	17.71		
610.938	17.7	614.003	17.81	614.705	17.84	616.809	17.78	619.91	17.67		
625.721	17.41	627.86	17.3	629.921	17.2	633.61	17	636.252	16.87		
637.169	16.81	642.418	16.58	648.229	16.41	649.285	16.37	653.269	16.23		
655.018	16.17	659.409	16	659.548	15.99	662.882	15.93	663.124	15.92		
663.653	15.84	667.827	15.7	670.754	15.59	671.88	15.75	673.404	15.78		
677.414	15.83	678.297	15.81	680.748	15.75	684.229	15.6	688.317	15.43		
690.699	15.37	694.561	15.24	695.479	15	701.281	15.09	704.035	15		
706.374	14.93	706.486	14.91	706.633	14.9	710.946	14.66	711.795	14.59		

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715.242	14.46	721.061	14.24	721.997	14.2	727.409	14	728.293	13.99
729.964	13.98	731.575	13.96	731.809	13.95	734.779	13.94	735.152	13.91
736.174	13.82	743.708	13.73	743.924	13.69	744.331	13.67	749.813	13.59
755.062	13.51	756.811	13.09	757.036	13.08	758.361	13.46	760.509	13.43
761.669	13.41	764.207	13.38	765.411	13.35	768.901	13.26	770.91	13.21
778.505	13	779.83	12.99	785.546	12.94	785.875	12.93	786.282	12.89
788.239	12.86	790.066	12.83	795.384	12.77	796.042	12.78	797.445	12.68
802.165	12.61	803.888	12.52	807.274	12.46	818.411	12.14	819.494	12.13
819.936	12	821.373	12.1	825.088	12.04	825.452	12.03	839.231	12.07
847.977	12.09	848.61	12	851.441	12.09	869.16	12.31	872.14	12.3
873.811	12.28	876.764	12.08	881.233	12.28	892.734	12.24	894.916	12.23
899.714	12.26	901.073	12.29	904.841	12.21	905.265	12.19	909.076	12.36
916.211	12.55	918.004	12.54	919.563	12.55	925.4	12.51	929.098	12.52
930.899	12.53	932.38	12.58	936.156	12.51	936.901	12.46	939.767	12.18
940.547	12.15	941.742	12	942.582	11.55	942.842	11.41	943.526	11
944.305	10.49	944.946	10	949.311	9.88	949.311	4.65	956.335	5.05
963.167	5.52	963.167	10.1	964.034	10.1	964.562	10.88	964.614	11
964.657	11.02	965.099	11.27	965.324	11.39	967.255	12	968.632	12.26
969.013	12.29	969.126	12.3	975.881	12.76	976.383	12.89	976.833	12.93
977.855	13	983.64	13.35	984.255	13.43	985.641	13.54	987.633	13.66
989.261	13.75	991.478	13.84	992.612	13.88	993.392	13.91	995.843	14
998.467	14.07	998.787	14.11	1003.039	14.28	1003.862	14.36	1009.387	14.6
1016.385	15	1019.113	15.11	1019.312	15.13	1020.005	15.19	1023.122	15.36
1024.04	15	1026.301	15.55	1033.584	15.93	1034.13	15.96	1034.866	16
1039.932	16.24	1040.876	16.31	1041.898	16.39	1045.232	16.53	1047.908	16.75
1049.493	16.81	1052.048	17	1052.351	17.04	1052.55	17.06	1054.421	17.36
1057.148	17.71	1058.041	17.84	1059.166	18	1064.865	18.26	1070.996	18.57
1080.237	19	1091.019	19.69	1094.405	20	1096.215	20.27	1097.029	20.38
1098.865	20.58	1099.904	20.71	1102.849	21	1114.09	21.62	1119.39	22
1130.605	22.37	1130.917	22.4	1137.49	22.56	1138.113	22.61	1139.508	22.68
1142.383	22.76	1150.48	23	1152.862	23.12	1152.905	23.13	1153.286	23.17
1157.33	23.63	1162.916	23.91	1163.436	23.95	1164.362	23.95	1169.931	24.41
1170.225	24.45	1172.313	24.64	1178.548	25	1179.925	25.07	1185.554	25.4
1185.814	25.45	1186.351	25.52	1189.573	25.78	1193.21	26	1203.169	26.57
1203.827	26.66	1207.378	26.94	1207.88	26.99	1208.209	27	1217.753	27.6
1219.433	27.73	1220.568	27.83	1221.65	27.92	1222.966	28	1233.939	28.63
1234.796	28.72	1236.087	28.83	1237.542	28.94	1238.234	29	1248.869	29.73
1251.944	29.98	1252.212	30	1264.795	30.74	1266.986	30.95	1267.125	30.97
1267.567	31	1284.835	31.87	1285.294	31.91	1286.853	32	1302.97	32.82
1306.304	33	1321.78	33.98	1322.248	34	1340.521	34.79	1341.543	34.89
1343.075	35	1353.762	35.53	1356.984	35.71	1357.928	35.76	1362.293	36
1375.612	36.58	1385.875	37	1450.523	36.83	1455.806	36.47	1462.708	36
1475.422	35.18	1478.236	35.14	1481.215	34.79	1491.408	34.09	1491.997	34.05
1492.699	34	1495.557	33.78	1506.235	33	1513.397	32.41	1518.29	32
1521.451	31.73	1531.826	31	1540.78	30.22	1542.919	30	1543.863	29.89
1553.416	29	1556.144	28.87	1561.045	28.85	1563.15	28.87	1563.418	28.86

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val
 0 .1 571.88 .04 949.311 .03 964.034 .04

Bank Sta: Left Right Coeff Contr. Expan.
 949.311 963.167 .3 .5

Ineffective Flow num= 3
 Sta L Sta R Elev Permanent
 0 557 22.89 F
 557 942.729 13 F
 970.77 990 13 F

Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev
 392.448 418.221 41 228.977 253.105 38
 Skew Angle = 30

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Downstream num=	Deck/Roadway	Coordinates												
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
510.955	22.9				614.878	20				779.423	15			
819.26	14				875.552	13				927.08	13.1			
934.667	13.1				934.667	15.3				936.052	15.3			0
936.052	15.3	10.01			949.909	15.31	9.84			949.909	15.31			0
950.956	15.31				950.956	13.4				956.958	13.4			
978.609	14				1004.589	15				1026.24	16			
1045.293	17				1060.881	18				1078.202	19			
1094.656	20													

Downstream Bridge Cross Section Data

Station	Elevation	Data	num=	428	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	35.6	.13	35.37	.355	35	.736	34.21	.849	34			
1.16	33.42	1.386	33	1.715	32.38	1.914	32	2.33	31.32			
2.529	31	3.352	30.13	3.464	30	3.551	29.95	4.867	29.17			
5.17	29	6.114	28.4	6.842	28	8.054	27.28	8.556	27			
8.686	26.92	10.219	26	10.721	25.7	11.899	25	12.09	24.8			
12.886	24	13.389	23.32	13.623	23	14.099	22.39	14.419	22			
15.311	21.1	15.407	21	16.489	20.09	16.619	20	48.948	19.56			
58.457	19.44	60.345	19.41	63.679	19.36	78.237	19	118.351	19.6			
120.378	19.63	129.272	20	179.068	19.45	203.161	19.5	209.535	19.49			
213.484	19.55	215.155	19.57	216.368	19.59	223.313	19.57	236.719	19.4			
238.01	19.39	243.206	19.38	254.464	19.21	258.327	19.16	263.748	19			
272.703	18.65	279.328	18.45	285.884	18.21	288.161	18.15	288.776	18.14			
293.115	18	326.544	17.52	330.822	17.28	332.597	17.2	336.399	17.07			
338.088	17.08	339.447	17.1	339.88	17.13	343.362	17.36	345.232	17.44			
346.453	17.46	349.043	17.44	350.48	17.47	353.122	17.5	357.859	17.51			
361.488	17.56	363.627	17.54	365.203	17.58	367.87	17.61	368.771	17.59			
372.919	17.4	373.924	17.38	375.768	17.39	377.258	17.49	378.843	17.53			
380.748	17.56	385.026	17.69	385.39	17.71	388.283	18	391.097	18.17			
392.301	18.22	392.422	18.24	399.948	18.47	406.036	18.57	406.469	18.59			
407.552	18.66	409.266	18.7	410.366	18.75	417.485	18.95	418.204	18.98			
418.489	19	426.656	19.5	434.771	20	449.848	20.83	454.793	21			
490.101	21.87	493.721	22	496.501	22.18	497.047	22.16	499.177	22.48			
508.054	22.85	514.644	22.75	551.433	22.73	551.97	22.69	552.438	22.72			
553.615	22.64	554.464	22.6	555.443	22.56	564.068	22	570.797	21.82			
577.864	21.62	585.251	21.42	588.049	21.34	595.756	21.12	595.99	21.11			
599.575	21	610.686	20.58	627.262	20	653.615	19.44	655.512	19.39			
661.314	19.34	662.934	19.29	664.726	19.26	666.086	19.24	670.364	19.18			
671.594	19.15	676.955	19	683.277	18.81	686.732	18.72	687.702	18.68			
690.482	18.61	692.63	18.56	693.409	18.53	695.808	18.45	699.662	18.38			
705.17	18	717.58	17.54	718.914	17.5	722.248	17.42	727.115	17.28			
730.328	17.22	740.322	17.01	740.625	17	743.595	16.94	743.907	16.92			
746.497	16.72	752.819	16.29	755.832	16	758.482	15.8	760.743	15.7			
768.901	15.29	772.642	15.08	774.625	15	816.818	14.55	820.49	14.52			
824.352	14.46	825.27	14.44	826.327	14.42	828.301	14.39	832.328	14.37			
834.26	14.34	842.019	14	848.419	13.5	850.212	13	854.273	12.52			
857.919	12.28	859.002	12.26	862.128	12.35	865.437	12.36	871.784	12.47			
877.041	12.5	879.492	12.47	883.822	12.38	885.502	12.35	886.923	12.31			
895.453	12.26	895.817	12.25	895.955	12.24	899.454	12.2	899.601	12.19			
910.73	12	916.445	11.98	916.861	11.96	920.62	11.79	926.405	11.74			
927.271	11.37	927.79	11.64	929.089	11.59	931.272	11.26	931.731	11.22			
933.004	11	934.658	11.87	936.044	10.01	936.044	5.43	938.901	4.28			
943.751	5.28	949.9	5.32	949.9	12.45	950.766	12.45	952.957	12.68			
953.823	13	956.438	13.02	956.681	13.03	957.166	13.05	986.195	14			
1002.684	14.76	1007.006	15	1011.509	15.11	1041.162	16	1051.294	16.95			
1052.039	17	1052.29	17.14	1052.533	17.22	1053.555	17.58	1054.767	18			
1054.802	18.06	1055.018	19	1066.415	19.41	1070.234	19.49	1074.945	19.51			
1076.314	19.59	1077.266	19.57	1078.141	19.59	1078.747	19.58	1080.245	19.59			
1086.55	19.78	1087.182	19.81	1088.525	19.81	1092.378	20	1096.743	20.25			

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1099. 116	20. 711099. 696	20. 791100. 701	211106. 174	21. 25 1108. 14	21. 28
1109. 985	21. 351110. 617	21. 381111. 301	21. 431112. 851	21. 47 1113. 57	21. 51
1115. 422	21. 611116. 315	21. 631117. 874	21. 641118. 255	21. 631118. 584	21. 65
1119. 424	21. 61 1131. 35	21. 991131. 549	221136. 658	22. 521138. 598	22. 64
1142. 296	22. 871143. 907	231145. 414	23. 111148. 177	23. 311156. 161	23. 89
1156. 733	23. 931157. 703	23. 961159. 383	241169. 576	24. 081174. 789	24. 39
1179. 951	24. 71184. 705	251191. 278	25. 81193. 089	261197. 609	26. 23
1208. 764	271209. 517	27. 06 1209. 89	27. 091211. 959	27. 241218. 922	27. 75
1222. 1	281223. 321	28. 36 1223. 91	28. 441225. 374	28. 731227. 123	28. 81
1228. 102	28. 741234. 615	28. 681240. 443	291241. 724	29. 21 1243. 24	29. 39
1244. 582	29. 331245. 847	29. 361250. 956	29. 521255. 581	301261. 539	30. 38
1271. 395	311271. 689	31. 791271. 828	321272. 746	32. 871272. 971	33
1274. 963	33. 831275. 127	33. 881275. 422	341276. 175	34. 291277. 994	35
1278. 972	35. 181279. 726	35. 311281. 648	35. 531282. 887	35. 66 1283. 77	35. 72
1285. 918	35. 87 1287. 13	361287. 477	36. 04 1289. 33	36. 161289. 824	36. 23
1293. 201	36. 31294. 422	36. 381296. 977	36. 491298. 839	36. 611301. 723	36. 74
1302. 909	36. 81306. 477	36. 951306. 642	36. 961307. 534	371310. 236	37. 12
1310. 478	37. 131311. 024	37. 141314. 367	37. 271315. 068	37. 31 1317. 71	37. 52
1319. 113	37. 671319. 857	37. 761321. 459	381323. 235	38. 311324. 265	38. 52
1325. 651	38. 71 1326. 89	38. 921327. 374	391328. 518	39. 181328. 864	39. 24
1329. 99	39. 381330. 726	39. 511331. 453	39. 61333. 991	39. 811334. 346	39. 82
1334. 666	39. 831336. 251	39. 761336. 797	39. 69 1338. 13	39. 381339. 793	39. 04
1339. 863	39. 021339. 984	39 1341. 88	38. 611345. 292	38. 011345. 318	38
1345. 344	38. 01 1347. 83	38. 831348. 072	39 1349. 9	39. 921350. 073	40
1350. 108	40. 021350. 203	40. 091351. 173	40. 64 1351. 84	41 1352. 55	41. 51
1353. 094	41. 451353. 935	41. 591354. 602	41. 541355. 858	41. 521357. 079	41. 45
1358. 569	41. 431359. 097	41. 391360. 768	41. 38 1362. 37	41. 27 1364. 31	41. 26
1365. 28	41. 211369. 264	411372. 538	40. 741373. 949	40. 681376. 331	40. 51
1377. 249	40. 491378. 253	40. 571379. 656	40. 711380. 514	40. 821381. 371	40. 83
1381. 579	40. 821384. 099	40. 671393. 106	401393. 478	39. 971393. 807	39. 96
1395. 972	39. 781398. 162	39. 57 1400. 51	39. 33 1403. 03	391406. 191	38. 68
1409. 647	38. 321410. 617	38. 211412. 331	381437. 507	37. 481458. 413	37
1466. 822	36. 151468. 251	36. 011468. 476	361472. 711	35. 811474. 928	35. 65
1479. 968	35. 351484. 593	351492. 292	34. 551495. 825	34. 351497. 644	34. 26
1498. 709	34. 211499. 861	34. 161500. 735	34. 141502. 215	34. 081504. 624	34. 01
1505. 265	34 1511. 37	33. 81515. 934	33. 471519. 528	33. 311522. 454	33. 06
1523. 027	331529. 401	32. 371532. 596	321535. 463	31. 741543. 959	31
1548. 479	30. 641552. 463	30. 41562. 353	30. 12		

Mann ng' s n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .1 551. 433 .04 934. 658 .03 950. 766 .04

Bank Sta: Left Right Coeff Contr. Expan.
 934. 658 949. 9 .3 .5

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 508.05 22. 85 F

Blocked Obstructions num= 1
 Sta L Sta R Elev
 257. 002 269. 585 38

Skew Angle = 30

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

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Low Flow Methods and Data

Energy

Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow

Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 9.9

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook

REACH: StonyBrook

RS: 1934

INPUT

Description: DS face of Renshaw Road (HEC2-13.1)

Station		Elevation Data		num= 428		Station		Elevation		Station		Elevation	
Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	35.6	.13	35.37	.355	35	.736	34.21	.849	34				
1.16	33.42	1.386	33	1.715	32.38	1.914	32	2.33	31.32				
2.529	31	3.352	30.13	3.464	30	3.551	29.95	4.867	29.17				
5.17	29	6.114	28.4	6.842	28	8.054	27.28	8.556	27				
8.686	26.92	10.219	26	10.721	25.7	11.899	25	12.09	24.8				
12.886	24	13.389	23.32	13.623	23	14.099	22.39	14.419	22				
15.311	21.1	15.407	21	16.489	20.09	16.619	20	48.948	19.56				
58.457	19.44	60.345	19.41	63.679	19.36	78.237	19	118.351	19.6				
120.378	19.63	129.272	20	179.068	19.45	203.161	19.5	209.535	19.49				
213.484	19.55	215.155	19.57	216.368	19.59	223.313	19.57	236.719	19.4				
238.01	19.39	243.206	19.38	254.464	19.21	258.327	19.16	263.748	19				
272.703	18.65	279.328	18.45	285.884	18.21	288.161	18.15	288.776	18.14				
293.115	18	326.544	17.52	330.822	17.28	332.597	17.2	336.399	17.07				
338.088	17.08	339.447	17.1	339.88	17.13	343.362	17.36	345.232	17.44				
346.453	17.46	349.043	17.44	350.48	17.47	353.122	17.5	357.859	17.51				
361.488	17.56	363.627	17.54	365.203	17.58	367.87	17.61	368.771	17.59				
372.919	17.4	373.924	17.38	375.768	17.39	377.258	17.49	378.843	17.53				
380.748	17.56	385.026	17.69	385.39	17.71	388.283	18	391.097	18.17				
392.301	18.22	392.422	18.24	399.948	18.47	406.036	18.57	406.469	18.59				
407.552	18.66	409.266	18.7	410.366	18.75	417.485	18.95	418.204	18.98				
418.489	19	426.656	19.5	434.771	20	449.848	20.83	454.793	21				
490.101	21.87	493.721	22	496.501	22.18	497.047	22.16	499.177	22.48				
508.054	22.85	514.644	22.75	551.433	22.73	551.97	22.69	552.438	22.72				
553.615	22.64	554.464	22.6	555.443	22.56	564.068	22	570.797	21.82				
577.864	21.62	585.251	21.42	588.049	21.34	595.756	21.12	595.99	21.11				
599.575	21	610.686	20.58	627.262	20	653.615	19.44	655.512	19.39				
661.314	19.34	662.934	19.29	664.726	19.26	666.086	19.24	670.364	19.18				
671.594	19.15	676.955	19	683.277	18.81	686.732	18.72	687.702	18.68				
690.482	18.61	692.63	18.56	693.409	18.53	695.808	18.45	699.662	18.38				
705.17	18	717.58	17.54	718.914	17.5	722.248	17.42	727.115	17.28				
730.328	17.22	740.322	17.01	740.625	17	743.595	16.94	743.907	16.92				
746.497	16.72	752.819	16.29	755.832	16	758.482	15.8	760.743	15.7				
768.901	15.29	772.642	15.08	774.625	15	816.818	14.55	820.49	14.52				
824.352	14.46	825.27	14.44	826.327	14.42	828.301	14.39	832.328	14.37				
834.26	14.34	842.019	14	848.419	13.5	850.212	13	854.273	12.52				
857.919	12.28	859.002	12.26	862.128	12.35	865.437	12.36	871.784	12.47				

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877.041	12.5	879.492	12.47	883.822	12.38	885.502	12.35	886.923	12.31
895.453	12.26	895.817	12.25	895.955	12.24	899.454	12.2	899.601	12.19
910.73	12	916.445	11.98	916.861	11.96	920.62	11.79	926.405	11.74
927.271	11.37	927.79	11.64	929.089	11.59	931.272	11.26	931.731	11.22
933.004	11	934.658	11.87	936.044	10.01	936.044	5.43	938.901	4.28
943.751	5.28	949.9	5.32	949.9	12.45	950.766	12.45	952.957	12.68
953.823	13	956.438	13.02	956.681	13.03	957.166	13.05	986.195	14
1002.684	14.761007	006		151011.509	15.111041	162		161051.294	16.95
1052.039	17	1052.29	17.141052	533	17.221053	555	17.581054	767	18
1054.802	18.061055	018		191066.415	19.41070	234	19.491074	945	19.51
1076.314	19.591077	266	19.571078	141	19.591078	747	19.581080	245	19.59
1086.55	19.781087	182	19.811088	525	19.81092	378		201096.743	20.25
1099.116	20.711099	696	20.791100	701		211106.174	21.25	1108.14	21.28
1109.985	21.351110	617	21.381111	301	21.431112	851	21.47	1113.57	21.51
1115.422	21.61116	315	21.631117	874	21.641118	255	21.631118	584	21.65
1119.424	21.61	1131.35	21.991131	549		221136.658	22.521138	598	22.64
1142.296	22.871143	907		231145.414	23.111148	177	23.311156	161	23.89
1156.733	23.931157	703	23.961159	383		241169.576	24.081174	789	24.39
1179.951	24.711184	705		251191.278	25.81193	089		261197.609	26.23
1208.764		271209.517	27.06	1209.89	27.091211	959	27.241218	922	27.75
1222.1		281223.321	28.36	1223.91	28.441225	374	28.731227	123	28.81
1228.102	28.741234	615	28.681240	443		291241.724	29.21	1243.24	29.39
1244.582	29.331245	847	29.361250	956	29.521255	581		301261.539	30.38
1271.395		311271.689	31.791271	828		321272.746	32.871272	971	33
1274.963	33.831275	127	33.881275	422		341276.175	34.291277	994	35
1278.972	35.181279	726	35.311281	648	35.531282	887	35.66	1283.77	35.72
1285.918	35.87	1287.13		361287.477	36.04	1289.33	36.161289	824	36.23
1293.201	36.31294	422	36.381296	977	36.491298	839	36.611301	723	36.74
1302.909	36.81306	477	36.951306	642	36.961307	534		371310.236	37.12
1310.478	37.131311	024	37.141314	367	37.271315	068	37.31	1317.71	37.52
1319.113	37.671319	857	37.761321	459		381323.235	38.311324	265	38.52
1325.651	38.71	1326.89	38.921327	374		391328.518	39.181328	864	39.24
1329.99	39.381330	726	39.511331	453	39.61333	991	39.811334	346	39.82
1334.666	39.831336	251	39.761336	797	39.69	1338.13	39.381339	793	39.04
1339.863	39.021339	984	39	1341.88	38.611345	292	38.011345	318	38
1345.344	38.01	1347.83	38.831348	072	39	1349.9	39.921350	073	40
1350.108	40.021350	203	40.091351	173	40.64	1351.84	41	1352.55	41.51
1353.094	41.451353	935	41.591354	602	41.541355	858	41.521357	079	41.45
1358.569	41.431359	097	41.391360	768	41.38	1362.37	41.27	1364.31	41.26
1365.28	41.211369	264		411372.538	40.741373	949	40.681376	331	40.51
1377.249	40.491378	253	40.571379	656	40.711380	514	40.821381	371	40.83
1381.579	40.821384	099	40.671393	106		401393.478	39.971393	807	39.96
1395.972	39.781398	162	39.57	1400.51	39.33	1403.03		391406.191	38.68
1409.647	38.321410	617	38.211412	331		381437.507	37.481458	413	37
1466.822	36.151468	251	36.011468	476		361472.711	35.811474	928	35.65
1479.968	35.351484	593		351492.292	34.551495	825	34.351497	644	34.26
1498.709	34.211499	861	34.161500	735	34.141502	215	34.081504	624	34.01
1505.265	34	1511.37	33.81515	934	33.471519	528	33.311522	454	33.06
1523.027		331529.401	32.371532	596		321535.463	31.741543	959	31
1548.479	30.641552	463	30.41562	353	30.12				

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .1 551.433 .04 934.658 .03 950.766 .04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 934.658 949.9 35.27 46.75 68.88 .3 .5
 Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 508.05 22.85 F
 Blocked Obstructions num= 1
 Sta L Sta R Elev
 257.002 269.585 38

StonyBrookDari en1-ex. txt

Skew Angle = 30

CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook

RS: 1887

INPUT

Description: FEMA I - DS section for Renshaw Road (HEC2-13)
Station Elevation Data num= 372

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	37.12	.08	37.05	.12	37	.14	36.98	.16	36.96
.97	36	1.53	35.26	1.72	35	2.27	34.05	2.29	34
2.3	33.98	2.72	33	2.83	32.79	3.25	32	3.7	31.16
3.79	31	3.86	30.94	4.98	30	5.08	29.93	5.38	29.76
6.29	29.21	6.66	29	7.99	28.13	8.22	28	9.03	27.58
10.15	27	10.85	26.64	12.1	26	13.37	25.35	14.02	25
14.56	24.5	15.1	24	15.42	23.5	15.71	23	16	22.65
16.56	22	16.67	21.84	17.37	21	18.5	20.55	19.42	20.18
19.74	20	63.31	19.43	77.45	19.27	80.24	19.24	85.14	19.18
93.33	19	147.37	19.77	150.32	19.8	155.7	20	211.77	19.39
235.82	19.44	244.19	19.42	248.15	19.47	249.83	19.49	251.05	19.51
260.62	19.49	278.87	19.29	285.32	19.28	305.71	19.02	306.56	19
310.52	18.89	312.88	18.81	319.4	18.61	326.26	18.33	338.51	18
385.78	17.22	390.29	17	418.66	16.96	424.26	16.92	427.34	16.91
428.46	16.85	431.28	16.78	431.72	16.74	437.77	16.47	443.01	16.04
443.37	16.05	446.3	16.22	447.34	16.29	448.27	16.37	449.63	16.45
451.38	16.65	455.91	16.92	457.01	17	463.02	17.32	463.4	17.33
465.13	17.42	468.83	17.67	472.98	17.83	475.31	17.95	475.54	17.96
476.2	18	477.47	18.07	494.43	19	500.41	19.31	512.56	20
518.75	20.31	521.74	20.51	530.41	21	538.6	21.1	538.74	21.11
542.36	21.19	544.5	21.25	545.08	21.27	550.16	21.42	568.74	22
574.69	22.62	575.78	23	577.43	23.61	578.55	24	579.73	24.44
581.25	25	584.17	24.35	584.94	24	586.26	23.38	587.05	23
648.28	22.82	656.48	22.52	663.9	22.22	666.06	22.14	667.64	22.11
671.54	22	679.64	21.87	680.15	21.85	680.88	21.84	696.42	21.5
700.28	21.43	708.86	21.29	710.65	21.25	716.74	21.13	718.16	21.1
721.63	21.05	726.56	21	736.58	20.83	739.24	20.78	744.5	20.7
747.56	20.72	752.97	20.65	753.84	20.63	756.71	20.58	763.01	20.38
767.8	20.3	782.3	20	784.12	19.97	788.68	19.88	789.88	19.87
806.25	19.41	812.59	19.23	820.75	19	824.59	18.97	824.67	18.96
831.42	18.81	832.99	18.76	842.97	18	845.91	17.95	848.47	17.78
852.07	17.65	853.37	17.6	854.52	17.55	857.71	17.44	859.33	17.39
861.66	17.3	866.68	17	869.81	16.67	872.85	16.36	874.3	16.23
874.6	16.19	875.67	16	876.46	15.94	888.88	15	898.37	14.11
900.93	14	924.38	14.69	925.7	14.83	926.53	14.89	926.94	14.9
934.28	15	982.89	14.86	983.28	14.83	986.44	14	989.16	13.27
990.11	13	991.11	12.11	991.51	12	993.47	11.89	994.3	11.57
995.6	11	1028.57	10.69	1034.94	10.67	1039.74	10.58	1043.62	10.55
1048.38	10.44	1050.92	10.42	1054.66	10.27	1060.36	10	1061.279	773133
1063.93	9.11	1064.16	9	1070.34	8.86	1070.8	8.86	1070.8	4.88
1075.13	4.97	1079.22	4.99	1083.34	4.88	1083.34	12.45	1083.51	12.45
1095.14	12.63	1098.26	12.79	1102.47	12.98	1102.6	12.99	1102.89	13
1112.77	13.08	1114.66	13.09	1119.48	13.16	1127.8	13.35	1152.6	14
1157.36	14.33	1166.54	15	1174.65	15.31	1188.59	16	1194.2	16.27
1209.74	16.89	1212.4	17	1216.59	17.85	1217.14	18	1217.31	18.16
1218.21	19	1218.53	19.31	1219.19	20	1219.28	20.2	1219.61	21
1220.06	21.91	1220.1	22	1221.58	21.43	1221.86	21	1231.22	20.22
1233.29	20.05	1233.73	20.03	1235.13	20.02	1236.5	20.03	1236.71	20.04
1238.15	20.09	1238.61	20.12	1239.56	20.19	1242.4	20.4	1246.07	20.68
1246.79	20.74	1250.13	21	1256.28	21.46	1263.18	22	1273.38	22.52
1275.4	22.63	1279.33	22.83	1281.18	22.9	1281.55	22.92	1281.74	22.93

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1284.16	23	1285.18	23.02	1295.59	23.22	1297.45	23.26	1299.57	23.35
1303.32	23.55	1305.15	23.61	1306.36	23.66	1311.65	24	1317.16	24.75
1318.56	25	1320.48	25.9	1320.7	26	1322.18	26.85	1322.37	26.95
1322.48	27	1337.51	26.46	1340.13	26	1343.57	25.34	1345.52	25
1346.38	24.84	1348.26	24.64	1349.9	24.45	1351.69	24.24	1353.99	24.32
1355.3	24.48	1356.83	24.46	1358.5	24.69	1359.2	24.81	1360.35	25
1362.69	25.18	1363.34	25.2	1364.15	25.25	1364.67	25.29	1366.42	25.46
1369.81	25.73	1371.51	26	1378.06	26.45	1380.35	26.6	1381.83	26.68
1383.85	26.77	1387.4	27	1404.45	27.9	1406.53	28	1407.08	28.05
1407.46	28.09	1408.11	28.14	1414.59	28.69	1419.19	29	1420.35	29.25
1421.46	30	1464.59	30.76	1468.01	31	1469.39	31.91	1469.69	32
1470.38	32.51	1471.21	32.57	1472.57	32.78	1473.32	32.9	1474.03	33
1474.6	33.15	1474.74	33.17	1474.88	33.18	1476.07	33.45	1476.4	33.48
1477.04	33.54	1477.76	33.67	1478.59	33.73	1478.91	33.82	1479.7	33.86
1480.66	34	1480.95	34.23	1480.99	34.24	1481.05	34.26	1481.41	34.56
1481.97	35	1482.51	35.99	1482.52	36	1482.95	37	1483.47	37.02
1484.96	37.09	1486.49	37.38	1488.12	37.59	1488.7	37.74	1489.04	37.78
1489.84	38	1492.03	38.56	1493.9	39	1496.99	39.54	1498.97	39.88
1499.46	40	1499.81	40.13	1504.36	41	1506.06	41.43	1507.31	41.56
1511.9	42	1516.64	42.48	1522.2	43	1526.79	43.45	1532.57	44
1540.52	44.76	1541.86	44.9	1542.95	45	1549.6	45.63	1553.53	46
1560.19	46.64	1563.93	47	1569.43	47.53	1574.44	48	1592.27	47.03
1592.42	47	1592.51	46.96	1594.23	46.37	1595.34	46	1595.76	45.89
1598.99	45	1600.23	44.72						

Manning's n Values num= 3
 Station Val Sta n Val
 0 .1 1070.8 .03 1083.34 .12

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 1070.8 1083.34 165.09 202.94 220.68 .3 .5

Ineffective Flow num= 1
 Station Sta R Elev Permanent
 0 648.28 22.82 F

Blocked Obstructions num= 10
 Station Sta R Elev Station Sta R Elev Station Sta R Elev
 921.83 983.49 23.49 831 867.89 37.28 1237.91 1266.59 40.53
 1287.13 1317.66 34 1336.83 1365.82 45.66 1398.33 1417.78 38.45
 1434.53 1467.2 50.64 1537.78 1586.21 59.84 1159.15 1215.7 25
 506.61 531.47 41

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 1684

INPUT

Description: MMI additional cross section
 Station Elevati on Data num= 212

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.65	.62	41	1.52	40.25	1.83	40	2.09	39.67
2.62	39	3.02	38.16	3.1	38	3.22	37.72	3.52	37
3.68	36.59	3.97	36	4.12	35.74	4.5	35	5.49	34.07
5.56	34	5.59	33.96	5.69	33.81	6.17	33.11	6.25	33
6.94	32.18	7.08	32	7.71	31.25	7.9	31	8.5	30.34
8.78	30	9.66	29.25	9.93	29	10.14	28.78	10.99	28
12.13	27.44	13.19	27.15	13.43	27	14.02	26.78	16.34	26
18.15	25.15	18.39	25	18.66	24.7	19.25	24	19.9	23.17
20.03	23	20.21	22.76	20.77	22	21.16	21.55	21.66	21
22.01	20.85	22.87	20.48	24.34	20	80.3	19.08	86.32	19
132.45	19.42	135.55	19.47	160.06	20	190.71	19.09	198.41	19
235.59	18.76	236.7	18.75	242.63	18.66	254.07	18.58	258.71	18.5

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268.98	18.43	280.78	18.03	281.95	18	292.16	17.71	298.6	17.63
301.37	17.58	315.34	17.56	319.34	17.5	324.32	17.33	327.01	17.28
333.15	17	347.68	17.13	348.07	17.12	351.01	17.16	351.55	17.14
357.56	17.22	359.78	17.16	362.28	17.17	369.57	17.25	371.58	17.26
382.02	17	465.33	16.71	470.42	16.74	472.61	16.76	489.06	17
490.12	17.03	491.2	17.06	498.91	17.35	517.37	18	518.29	18.04
537.92	19	566.01	19.29	569.43	20	571.17	20.34	572.51	20.75
573.61	21	579.8	21.79	580.6	21.89	580.82	21.91	580.97	21.92
582.64	22	588.08	21.96	588.57	21.94	591.78	21.73	593	21.67
596.37	21.37	599.91	21.35	602.54	21.25	604.4	21.26	612.15	21.01
612.33	21	616.96	20.89	618.07	21	621.18	21.19	623.2	21.09
636.57	21.47	677.13	22	739.06	21.58	741.19	21.57	770.37	21.23
770.88	21.22	784.22	21	820.32	20.54	823.48	20.52	837.8	20
839.05	19.91	842.89	19.57	846.76	19.23	849.43	19	851.15	18.81
859.13	18	863	17.44	866.36	17	870.78	16.24	873.98	16
880.59	15.7	891.96	15	904.54	14.28	910.18	14	915.2	13.38
922.59	13	932	12.79	945.32	12.48	952.85	12	959.26	11.84
979.57	11	984.95	10.67	993.08	9.55	997.33	9.82	999.54	9.82
999.54	5.26	1001.72	4.21	1004.51	4.52	1006.97	5.01	1008.69	5.66
1008.69	8.7	1010.79	8.7	1011.7	8.83	1018.17	10.62	1021.04	11
1023.18	11.2	1029.62	12	1068.94	11.4	1071.9	11.24	1073.45	11.32
1080.2	11.37	1082.25	11.42	1090.29	11.61	1093.08	11.69	1093.93	11.71
1105.2	12	1109.67	12.24	1113.62	12.5	1121.47	13	1126.17	13.1
1137.85	13.12	1143.76	13.51	1148.68	13.9	1149.81	14	1150.36	14.05
1159.48	15	1168.8	15.86	1170.86	16	1176.72	16.56	1181.08	16.89
1183.06	17	1194.22	17.75	1197.33	17.98	1197.55	18	1199.79	18.37
1202.84	19	1204.77	19.41	1207.39	20	1209.93	20.67	1210.84	21
1213.86	21.99	1213.9	22	1214	22.03	1216.31	22.74	1217.18	23
1219.39	23.64	1221.72	24	1227.06	24.44	1234.23	25	1237.35	25.28
1246.19	26	1250.56	26.36	1254.96	27	1255.66	27.11	1256.85	27.2
1257.47	27.26	1263.36	27.29						

Mannings n Values

Station	Value	Station	Value	Station	Value	Station	Value
0	.1	999.54	.03	1008.69	.055	1216.31	.1

Bank Station	Left	Right	Lengths	Left Channel	Right	Coeff	Contr.	Expan.
999.54	1008.69		249.31	252.55	261.15	.1		.3

Ineffective Flow num= 1
 Station L Station R Elev Permanent
 0 677.13 22 F

Blocked Obstructions num= 5

Station L	Station R	Elev	Station L	Station R	Elev	Station L	Station R	Elev
1220	1244.87	44	882.52	936.37	37	746.01	790.42	42
543.84	579.8	40.33	401.48	432.14	39			

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook

RS: 1432

INPUT

Description: FEMA H - US section of footbridge (HEC2-12)
 fence on left bank

Station Elevation Data num= 285

Station	Elev	Station	Elev	Station	Elev	Station	Elev	Station	Elev
0	30.72	.19	30.63	1.52	30	3.49	29.07	3.63	29
5.69	28.03	5.75	28	5.82	27.97	6.04	27.84	7.52	27
7.79	26.62	8.24	26	8.86	25.16	8.98	25	9.18	24.74
9.73	24	10.04	23.58	10.47	23	10.89	22.42	11.21	22
14.03	21.8	27.9	21	32.31	20.74	38.07	20.51	40.4	20.38
49.65	20	53	19.92	66.37	19.63	75.13	19.61	78.55	19.53

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85.52	19.19	87.08	19.2	95.95	19	136.86	19.79	138.6	19.61
141.38	20	148.05	21	156.08	22	158.42	22.17	161.67	22.31
165.99	22.38	178.95	22.07	179.49	22.06	179.63	22.05	190.45	22.11
192.6	22	194.9	21.83	202.25	21	202.39	20.93	202.74	20.73
204.1	20	205.81	19.08	205.92	19.02	205.95	19	206.03	18.99
218.44	18	224.64	17.7	255.26	17	258.45	16.82	262.92	16.62
264.39	16.55	265.83	16.46	272.8	16	290.82	15.51	292.89	15.5
298.12	15.35	303.61	15.23	326.77	15.55	340.28	16	352.78	16.64
361.84	17	366.22	17.16	367.42	17.4	369.92	18	370.81	18.2
374.2	19	378.39	19.86	379	19.98	379.1	20	385.37	20.91
386.15	21	389.43	21.41	393.96	21.85	394.59	21.92	396.33	22
397.47	22.09	397.83	22.12	400.38	22.23	403.34	22.25	405.23	22.33
409.95	22.3	411.37	22.31	412.53	22.26	417.62	22.23	418.65	22.22
424.14	22.18	424.98	22.17	431.51	22.13	432.09	22.12	432.7	22.18
437.26	23	440.78	23.48	445.28	23.45	452.02	24	493.73	23.92
496.34	23.9	497.17	23.88	498.1	23.86	512.93	23.74	518.56	23.72
520.87	23.68	523.04	23.66	535.37	23.19	536.72	23.12	537.33	23.1
539.73	23	558.66	22.62	559.45	22.61	573.12	22	610.82	21.19
621.52	21	644.08	20.51	646.01	20.47	657.44	20.25	661.22	20.17
670.08	20	699.08	19.83	702.74	19.74	724.73	19	740.04	18.63
742.82	18.56	765.38	18	788.42	18.61	789.89	18.65	793.35	18.67
795.83	18.66	799.98	18.72	805.76	18.7	807.44	18.64	808.93	18.57
817.44	18.07	818.41	18	819.03	17.88	826.3	17	827.66	16.53
832.95	16	836.37	15.76	837.88	15.57	841.2	15	843.76	14.89
844.16	14.86	853.83	14	864.46	13.63	874	13.35	888.25	13.2
890.19	13.17	893.8	13.18	896.92	13.15	898.05	13.16	900.18	13.19
910.42	13.32	920.41	13.22	927.33	13	937.16	11.04	943.89	8
944.54	4.45	948.54	3.6	954.54	3.4	958.54	4.55	959.47	8.03
959.52	8.07	960.52	9	961.02	9.37	961.84	10	962.33	10.39
963.05	11	963.08	10.99668	965.76	10.7	970.14	10.56	972.57	10.6
983.93	10.77	986.06	10.71	989.35	10.6	1003.06	10.16	1007.14	10.04
1008.28	10	1010.48	9.71	1013.56	9.46	1014.8	9.31	1018.83	9
1029.44	9.62	1030.9	10	1032.34	10.66	1033.31	11	1033.86	11.22
1035.12	12	1036.05	12.86	1036.17	13	1036.46	13.33	1037.09	14
1037.52	14.51	1037.9	15	1038.17	15.64	1038.38	16	1038.6	16.54
1038.8	17	1038.9	17.25	1039.23	18	1039.26	18.09	1039.84	18.45
1040.81	19	1044.23	18.52	1044.56	18	1044.64	17.89	1045.43	17
1045.66	16.77	1046.45	16.01	1047.38	15	1047.97	14.61	1048.9	14
1049.9	13.35	1050.29	13	1050.59	12.72	1051.39	12	1051.93	11.64
1052.9	11	1054.2	10.29	1054.62	10	1057.32	9.54	1060.6	9
1085.5	9.25	1103.63	9.5	1105.43	9.52	1105.79	9.53	1121.28	9.75
1135.8	10	1148.9	10.42	1152.04	10.52	1155.41	10.65	1158.17	10.78
1159.27	10.84	1160.84	10.9	1162.3	11	1167.98	11.28	1177.3	12
1183.88	12.5	1190.48	13	1198.42	13.75	1200.37	14	1202.34	14.26
1207.03	15	1208.16	15.63	1208.85	16	1209.81	16.97	1209.84	17
1227.8	17.3	1229.24	17.35	1238.09	18	1255.93	18.08	1257.55	19
1259.14	19.83	1259.44	20	1259.75	20.15	1261.48	21	1262.39	21.4
1263.66	22	1264.35	22.34	1265.7	23	1281.22	23.18	1284.35	24
1285.39	24.25	1287.73	25	1297.44	25.76	1302.07	26	1317.4	26.5
1326.9	27	1330.12	27.37	1336.79	28	1338.55	28.16	1348.52	29
1350.11	29.12	1357.08	29.7	1360.68	30	1361.77	30.09	1368.8	30.65

Manning's n Values

Sta	n Val	Sta	num=	4	n Val	Sta	n Val	Sta	n Val
0	.12	937.16	.03	963.08	.055	1209.81	.1		

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 937.16 963.08 24.2 23.59 38.17 .3 .5

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 573.12 22 F

Blocked Obstructions num= 5
 Sta L Sta R Elev Sta L Sta R Elev Sta R Elev

StonyBrookDari en1-ex. txt

1235.12 1261.92 39.42 828.12 872.17 26.62 415.03 443.29 43.2
 199.48 245.27 32.1 14.45 49.61 37

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook

RS: 1408

INPUT

Description: FEMA G - US face of footbridge (HEC2-11)

Station	Elevation	Data	num=	394	Sta	Elev	Sta	Elev	Sta	Elev
0	32.14	.37	32	1.15	31.69	2.78	31	2.94	30.87	
4.15	30	4.72	29.59	5.56	29	6.17	28.3	6.4	28	
6.97	27.01	6.98	27	7.56	26	7.84	25.42	8.04	25	
8.2	24.73	8.61	24	8.83	23.6	9.17	23	9.25	22.85	
9.7	22	17.06	21.66	34.83	21	39.41	20.81	41.61	20.75	
51.19	20.37	60.78	20	81.26	19.83	82.63	19.82	112.04	19.36	
127.52	19	144.59	19.65	145.41	20	146.14	20.31	147.87	21	
148.9	21.2	152.77	22	155.11	22.4	158.08	23	178.81	22.99	
179.06	22.97	180.2	22.91	190.36	22.36	196.98	22	203	21	
205.42	20	207.71	19.16	208.08	19	209.47	18.83	214.01	18	
217.67	17.77	221.27	17.66	224.51	17.47	231.69	17.18	239.8	17	
252.53	16.29	257.75	16	260.25	15.87	267.14	15.7	279.67	15.33	
298.05	15	328.37	15.66	339.23	16	344.22	16.33	353.78	17	
357.79	17.69	359.91	18	362.85	18.44	366.32	19	368.16	19.36	
371.65	20	375.69	20.91	376.26	21	380.89	21.99	380.92	22	
384.92	22.96	385.08	23	386.64	23.37	389.33	24	390.07	24.17	
391.77	24.55	394.54	25	397.62	25.8	398.61	26	402.46	26.81	
403.64	27	408	27.7	410.17	27.93	410.29	27.94	411.46	28	
412.67	28.07	415.23	28.13	415.74	28.16	417.42	28.22	417.94	28.25	
419.44	28.31	420.18	28.36	421.47	28.41	422.49	28.5	423.5	28.54	
424.88	28.67	425.66	28.65	426.71	28.66	427.51	28.65	429.95	28.66	
430.72	28.65	432.13	28.66	432.91	28.64	434.41	28.72	435.01	28.74	
436.75	28.83	437.12	28.84	439.08	28.94	440.42	29	441.26	29.04	
441.35	29.05	443.23	29.14	443.52	29.15	445.19	29.23	445.67	29.25	
447.14	29.32	448.12	29.36	448.8	29.39	449.42	29.42	450.34	29.46	
453.42	29.44	455.12	29.43	456.1	29.42	456.82	29.41	460.06	29.39	
463.31	29.37	464.75	29.42	465.63	29.46	466.27	29.48	467.32	29.53	
467.89	29.55	468.43	29.57	468.93	29.59	471.56	29.71	471.9	29.73	
472.22	29.74	472.55	29.7	473.82	29.56	474.32	29.5	475.79	29	
477.82	28.36	479.39	28	479.92	27.88	480.24	27.83	481.46	27.59	
482.75	27.38	483.38	27.26	485.15	27	485.68	26.94	485.92	26.93	
489.74	26.74	490.94	26.7	493.82	26.57	495.77	26.52	496.6	26.44	
497.16	26.39	497.94	26.25	499.48	26	502.21	25.55	508.29	25	
510.18	24.82	511.29	24.81	512.01	24.78	517.51	24.22	519.53	24	
532.92	23.43	539.85	23.17	543.81	23	551.2	22.67	565.19	22.18	
566.87	22.16	570.49	22	580.82	21.78	618.05	21.13	622.92	21.04	
624.13	21.02	625.15	21	627.93	20.95	628.96	20.93	643.56	20.64	
652.27	20.47	673.73	20	704.06	19.49	718.61	19	726.06	18.95	
762.54	18	778.32	17.95	787.1	17.98	794.4	17.97	794.64	17.98	
795.38	17.95	799.35	18	806.93	18.08	807.46	18.07	808.87	18	
812.11	17.84	816.38	17.51	820.8	17.17	823.45	17	827.57	16.66	
837.79	16.14	838.98	16.18	839.71	16.22	840.69	15.72	842.84	16	
848.01	15.49	849.89	15.35	850.83	15.36	851.5	15	854.2	14.41	
862.63	14	868.81	13.94	878.42	13.83	891.02	13.97	897.2	14	
897.21	13.99	897.65	14	905.5	14.04	905.61	14.03	907.14	14	
927.07	13.84	929.14	13.73	933.26	13.5	940.95	13	941.08	12.9	
941.28	12.91	941.92	12.71	943.35	12.27	944.22	12	944.85	11.92	
945.84	11.92	945.84	4.49	948.31	3.38	952.84	3.41	957.03	4.4	
958.6	5.56	964.45	9.81	965.08	10.03	982.08	10.83	984.66	11	
995.95	11.03	1005.16	11.05	1005.48	11.06	1008.98	11	1022.49	10.78	

StonyBrookDari en1-ex. txt

1024. 11	10. 87	1026. 06	11	1028. 72	11. 23	1035. 06	12	1056. 42	11. 61
1060. 59	11. 16	1062. 2	11	1063. 85	10. 84	1065. 77	10. 7	1067. 09	10. 65
1068. 73	10. 54	1078. 89	10	1081. 14	9. 93	1082. 85	9. 89	1110. 27	9. 86
1117. 81	10	1142. 38	10. 18	1143. 85	10. 23	1156. 73	11	1161. 85	11. 18
1163. 19	11. 33	1164. 43	11. 44	1165. 31	11. 53	1170. 93	12	1184. 63	12. 86
1186. 26	12. 96	1186. 97	13	1194. 19	13. 47	1199. 15	13. 84	1199. 92	13. 9
1200. 92	14	1203. 6	14. 38	1208. 38	15	1208. 89	15. 3	1210. 1	16
1210. 26	15. 54	1211. 06	15. 73	1212. 05	17	1212. 77	17. 39	1213. 98	18
1218. 1	18. 91	1218. 6	19	1240. 64	18. 74	1241. 49	18. 72	1245. 93	18. 64
1258. 84	18. 17	1260. 9	18. 1	1261. 52	18. 09	1264. 74	18	1266. 33	17. 99
1266. 51	17. 98	1267. 16	18	1279. 19	18. 58	1289. 47	18. 55	1292. 72	18. 63
1293. 33	18. 64	1294. 26	18. 63	1301. 13	18. 57	1302. 54	18. 56	1308. 89	18. 92
1309. 02	18. 93	1310. 19	19	1313. 32	19. 21	1317. 23	19. 24	1320. 85	19. 42
1325. 79	19. 61	1328. 14	19. 69	1331. 71	19. 77	1332. 76	19. 8	1333. 09	19. 79
1334. 66	19. 86	1336. 5	19. 83	1340. 44	19. 51	1344. 1	19. 19	1348. 61	19. 04
1349. 4	19	1351. 48	18. 78	1355. 04	18. 47	1359	18. 21	1362. 29	18
1365. 92	17. 77	1368. 67	17. 74	1377. 39	17. 38	1382. 52	17. 58	1386. 94	17. 54
1387. 67	18	1388. 75	18. 61	1389. 41	19	1390. 06	19. 35	1391. 21	20
1392. 28	20. 53	1393. 25	21	1401. 26	21. 33	1404. 38	21. 46	1411. 59	21. 78
1414. 5	21. 92	1415. 12	21. 94	1416. 65	22	1418. 22	22. 06	1428. 03	22. 68
1429. 77	22. 73	1430. 23	22. 74	1430. 74	22. 77	1440. 71	22. 89	1443. 45	23
1447. 46	23. 31	1448. 88	23. 36	1450. 75	23. 68	1456. 89	24	1463	24. 26
1464. 38	24. 34	1475. 25	24. 86	1477. 06	24. 95	1477. 71	25	1488. 31	25. 28
1500. 5	26	1515. 23	26. 83	1518. 17	27	1522. 16	27. 52	1526	28
1526. 71	28. 14	1530. 04	28. 8	1531. 07	29	1532. 54	29. 28	1536. 25	30
1540. 52	30. 75	1541. 91	30. 99	1542. 03	31	1551. 5	31. 82	1552. 73	32
1556. 11	32. 3	1563. 14	33	1570. 07	33. 67	1576. 43	34	1579. 13	34. 1
1582. 3	34. 31	1587. 25	34. 56	1588. 29	34. 6	1590. 29	34. 69	1595. 03	34. 87
1595. 88	34. 89	1596. 72	35	1601. 2	35. 52	1601. 88	35. 56		

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .12 945.84 .03 964.45 .055

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 945.84 964.45 17.51 24.21 29.13 .3 .5

Ineffective Flow num= 1
 Sta L Sta R Elev Permanent
 0 570.49 22 F

Blocked Obstructions num= 5
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 831.8 857.02 26.62 883.07 895.31 26.93 412.9 440.78 43.2
 197.92 245.55 32.1 13.68 52.7421.81841

BRI DGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 1395

INPUT

Description: Footbridge US of Boston Post Road (MMI added bridge)
 Distance from Upstream XS = 9
 Deck/Roadway Width = 7
 Weir Coefficient = 2.6
 Upstream Deck/Roadway Coordinates

num= 485											
Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
0		46.39		.7		46		1.92		45.31	
2.49		45		4.27		44.04		4.35		44	
4.37		43.97		4.44		43.88		5.09		43	
5.39		42.38		5.57		42		5.64		41.86	
5.95		41.14		6		41.04		6.01		41	

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6. 04	40. 94	6. 49	40	7. 12	39. 2
7. 28	39	7. 35	38. 93	8. 04	38
8. 09	37. 95	8. 39	37. 53	8. 77	37
9. 09	36. 5	9. 41	36	9. 88	35. 4
10. 22	35	10. 59	34. 83	12. 35	34
13. 82	33. 37	14. 69	33	16. 77	32. 13
17. 06	32	17. 39	31. 84	19. 09	31. 07
19. 26	31	19. 61	30. 83	21. 33	30
21. 51	29. 89	23. 04	29. 04	23. 12	29
23. 12	28. 98	23. 55	28	23. 86	27. 47
24. 08	27	24. 38	26. 53	24. 72	26
24. 94	25. 54	25. 18	25	26. 42	24. 24
26. 83	24. 06	27. 04	24	29. 55	23. 24
30. 38	23	35. 18	22. 62	40. 86	22
54. 49	21. 44	60. 75	21	63. 23	20. 81
66. 58	20. 55	72. 83	20. 09	73. 23	20. 07
73. 37	20. 06	76. 29	20. 03	77. 36	20
77. 62	20	85. 56	20	135. 99	19. 12
141. 59	19. 03	141. 99	19. 02	142. 52	19. 02
142. 95	19	145. 08	19	145. 94	19
155. 6	19	162. 48	19	163. 09	19. 3
164. 32	20	165. 48	20. 29	168. 58	21
170. 76	21. 39	172. 78	21. 65	175. 13	22
190. 78	22	190. 98	22	193. 6	21. 87
194. 31	21. 81	195. 73	21. 59	196. 39	21. 46
198. 05	21. 26	200. 32	21	200. 72	21
204. 66	20. 6	211. 08	20	211. 6	19. 94
211. 96	19. 89	214. 62	19. 5	217. 39	19
222. 33	18. 33	223. 8	18. 13	224. 61	18
225. 35	17. 93	232. 7	17	237. 98	16. 51
248. 01	16	251. 77	15. 84	254. 38	15. 74
259. 87	15. 49	269. 56	15	282. 57	15
283. 74	15	316. 11	15	338. 34	15
339. 89	15. 1	342. 51	15. 25	354. 04	16
359. 9	16. 87	361. 16	17	363. 07	17. 29
367. 97	18	372. 6	18. 82	373. 6	19
374. 15	19. 1	378. 42	19. 77	379. 66	19. 96
379. 9	20	380. 39	20. 08	386. 5	21
387. 53	21. 35	389. 42	22	390. 66	22. 43
392. 32	23	394. 11	23. 62	395. 2	24
397. 62	24. 93	397. 81	25	398. 37	25. 33
399. 5	26	399. 97	26. 26	401. 22	27
402. 69	27. 84	402. 96	28	403. 17	28. 13
404. 9	28. 96	404. 98	29	404. 99	29
405. 02	29. 01	407. 08	30	408. 58	30. 56
409. 61	31	410. 85	31. 53	411. 95	32
413. 29	32. 69	413. 91	33	414. 1	33. 18
415	34	416. 02	34. 71	416. 48	35
417. 9	35. 37	421. 42	36	422. 29	36. 16
423. 52	36. 25	425. 64	36. 47	428. 48	36. 76
430. 25	37	430. 3	37. 01	430. 4	37. 02
435. 44	37. 6	437. 63	37. 78	438. 12	37. 79
438. 83	37. 81	440. 14	37. 77	443. 19	37. 71
445. 73	37. 96	445. 95	37. 95	448. 07	37. 74
454. 21	37. 1	455	37	455. 59	36. 77
457. 89	36	459. 5	35. 5	461. 25	35
463. 24	34. 16	463. 64	34	464. 61	33. 89
469. 87	33. 5	472. 65	33. 3	475. 87	33
485. 45	32. 26	486. 45	32. 3	489. 7	32. 08
489. 92	32. 09	490. 22	32. 11	490. 65	32. 13
491. 02	32	492. 51	32	499. 35	31. 71
503. 37	31	503. 64	30. 96	504. 11	31
505. 69	31. 49	506. 7	31. 85	507. 29	31. 96

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507.35	31.96	507.48	32	507.8	32.2
507.89	32.18	508.72	32.16	508.94	32.14
509.81	32.12	510	32.09	511.82	32.06
511.89	32	512.51	31.48	513.09	31
513.93	30.05	513.98	30	514.02	29.99
515.47	29.71	517.35	29	517.87	28.89
518.25	28.8	521.29	28	523.9	27.14
524.21	27	524.65	26.84	526.98	26
528.59	25.62	531.2	25	531.24	25
531.63	24.96	532.58	24.9	542.65	24.16
545.07	24.03	545.49	24	551.92	23.7
567.06	23	568.11	22.95	585.9	22
585.94	22	586.63	21.99	619.07	21.47
633.96	21.37	642.27	21	642.63	21
643.96	21	645.19	21	668.75	20.51
691.69	20	696.67	20	697.45	20
698.63	20	700.67	20	722.2	20
722.23	20	722.26	20	730.09	19
731.2	19	736.11	19	739.06	19
751.71	18.59	774.65	18	781.95	18
784.12	18	796.76	17.68	803.05	17.71
808.42	17.72	809.28	17.73	811.06	17.74
811.35	17.74	818.49	17.53	822.82	17.59
825.3	17.54	826.96	17.45	829.28	17.34
833.8	17	838.02	17	851.02	16.33
853.79	16.42	855.44	16.5	857.65	15.36
861.22	15.85	861.65	16.2	862.38	16.17
863.02	16	864.18	16	864.9	15.28
865.45	15	866.81	15	881.65	14.16
881.83	14.15	884.04	14	885.19	14
890.76	13.92	898.06	14	900.01	14
911.16	14.26	912.58	14.3	918.18	14.4
919.06	14.36	919.28	14.35	939.52	14.09
939.84	14.08	940.17	14.07	940.56	14.07
942.78	14	942.91	14	944.8	14
950.12	13.68	956.48	13	957.47	11.87
957.49	11.84	958.09	12.45	958.84	12.76
963.64	12.76	963.64	12.76	975.44	11.19
975.44	11.19	986.31	11	988.3	11
1015.7	11.63	1020.89	11.76	1023.11	11.77
1028.13	11.91	1028.58	11.93	1029.99	11.9
1030.06	11.91	1031.06	12	1032.61	12
1033.17	12	1034.39	12	1044.28	12.24
1047.55	12.31	1050.3	12.38	1067.36	12.26
1070.11	12.06	1070.37	12.07	1070.51	12.07
1071.99	12	1072.15	12	1074.25	12
1082.73	11.49	1083.34	11.44	1091.03	11
1096.41	10.71	1097.76	10.65	1100.96	10.47
1101.12	10.46	1101.26	10.45	1103.87	10.29
1110.7	10.2	1129.98	10.34	1134.19	10.4
1137.73	10.4	1138.8	10.43	1149.29	10.73
1151.08	10.78	1158.5	11	1159.56	11
1164.18	11.32	1165.46	11.37	1177.2	12
1180.81	12	1182.46	12.19	1182.83	12.23
1184.31	12.42	1185.48	12.62	1188.56	13
1195.43	13.77	1195.75	13.83	1197.73	14
1203.63	14.53	1205.76	14.76	1206.18	14.72
1207.95	15	1210.47	15.4	1212.1	15.66
1213.56	16	1215.78	16.53	1218.42	16.69
1219.98	16.64	1222.28	16.65	1223.56	16.62
1231.69	16.48	1239.43	16.82	1244.06	17
1250.54	17.31	1251.83	17.35	1252.87	17.34
1256.46	17.4	1262.48	17.42	1264.08	17.4

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1270.97	17.31	1276.06	17.24	1278.34	17.21
1279.45	17.2	1289.65	17.15	1294.66	17.27
1297.7	17.32	1300.6	17.39	1301.28	17.4
1303.04	17.43	1306.8	17.44	1310.13	17.44
1313.55	17.47	1315.79	17.47	1320.79	17.69
1321.62	17.72	1322.14	17.73	1325.1	17.73
1331.33	17.7	1333.29	17.66	1339.13	17.82
1339.97	17.8	1340.7	17.78	1344.8	17.45
1348.61	17	1358.21	16.83	1382.7	16
1383.1	16	1385.93	16	1386.05	16
1386.06	16	1386.22	16.01	1386.57	16
1388.62	16	1394.87	16	1395.43	16
1396.09	16	1403.98	16	1404.57	16.55
1405.04	17	1405.69	17.61	1406.1	18
1407.01	18.86	1407.15	19	1407.41	19.28
1407.91	19.84	1408.07	20	1408.2	20.07
1410.24	21	1433.08	21.88	1436.04	22
1436.08	22	1436.52	22	1438.34	22
1453.52	22.66	1458.59	22.83	1462.55	23
1471.76	23.4	1476.55	23.59	1483.87	24
1486.46	24.2	1494.9	24.65	1501.07	25
1503.5	25.11	1512.9	25.76	1516.19	26
1520.81	26.43	1526.41	26.95	1527.22	27
1528.38	27.12	1537.47	28	1543.57	28.98
1543.71	29	1543.8	29.01	1549.86	30
1555.25	30.88	1556.03	31	1558.96	31.35
1561.64	31.7	1564.05	32	1565.27	32.14
1567.15	32.36	1570.15	32.71	1572.88	33
1583.58	33.64	1589.14	34	1592.03	34.39
1597.83	35	1605.91	35.8	1608.03	36
1612.59	36.71	1614.6	37		

Upstream Bridge Cross Section Data
Station Elevation Data

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	46.39	.7	46	4.37	43.97	4.44	43.88	5.09	43
5.64	41.86	5.95	41.14	6	41.04	6.01	41	6.04	40.94
6.49	40	7.12	39.2	7.28	39	7.35	38.93	8.04	38
9.09	36.5	9.41	36	9.88	35.4	10.22	35	10.59	34.83
12.35	34	13.82	33.37	14.69	33	16.77	32.13	17.06	32
17.39	31.84	19.09	31.07	19.26	31	19.61	30.83	21.33	30
21.51	29.89	23.04	29.04	23.12	29	23.12	28.98	23.55	28
23.86	27.47	24.08	27	24.38	26.53	24.72	26	24.94	25.54
25.18	25	26.42	24.24	26.83	24.06	27.04	24	29.55	23.24
30.38	23	35.18	22.62	40.86	22	54.49	21.44	60.75	21
63.23	20.81	66.58	20.55	72.83	20.09	73.23	20.07	73.37	20.06
76.29	20.03	77.36	20	77.62	20	85.56	20	135.99	19.12
141.59	19.03	141.99	19.02	142.52	19.02	142.95	19	145.08	19
145.94	19	155.6	19	162.48	19	163.09	19.3	164.32	20
165.48	20.29	168.58	21	170.76	21.39	172.78	21.65	175.13	22
190.78	22	190.98	22	193.6	21.87	194.31	21.81	195.73	21.59
196.39	21.46	198.05	21.26	200.32	21	200.72	21	204.66	20.6
211.08	20	211.6	19.94	211.96	19.89	214.62	19.5	217.39	19
222.33	18.33	223.8	18.13	224.61	18	225.35	17.93	232.7	17
237.98	16.51	248.01	16	251.77	15.84	254.38	15.74	259.87	15.49
269.56	15	282.57	15	283.74	15	316.11	15	338.34	15
339.89	15.1	342.51	15.25	354.04	16	359.9	16.87	361.16	17
363.07	17.29	367.97	18	372.6	18.82	373.6	19	374.15	19.1
378.42	19.77	379.66	19.96	379.9	20	380.39	20.08	386.5	21
387.53	21.35	389.42	22	390.66	22.43	392.32	23	394.11	23.62
395.2	24	397.62	24.93	397.81	25	398.37	25.33	399.5	26
399.97	26.26	401.22	27	402.69	27.84	402.96	28	403.17	28.13
404.9	28.96	404.98	29	404.99	29	405.02	29.01	407.08	30

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408.58	30.56	409.61	31	410.85	31.53	411.95	32	413.29	32.69
413.91	33	414.1	33.18	415	34	416.02	34.71	416.48	35
417.9	35.37	421.42	36	422.29	36.16	423.52	36.25	425.64	36.47
428.48	36.76	430.25	37	430.3	37.01	430.4	37.02	435.44	37.6
437.63	37.78	438.12	37.79	438.83	37.81	440.14	37.77	443.19	37.71
445.73	37.96	445.95	37.95	448.07	37.74	454.21	37.1	455	37
455.59	36.77	457.89	36	459.5	35.5	461.25	35	463.24	34.16
463.64	34	464.61	33.89	469.87	33.5	472.65	33.3	475.87	33
485.45	32.26	486.45	32.3	489.7	32.08	489.92	32.09	490.22	32.11
490.65	32.13	491.02	32	492.51	32	499.35	31.71	503.37	31
503.64	30.96	504.11	31	505.69	31.49	506.7	31.85	507.29	31.96
507.35	31.96	507.48	32	507.8	32.2	507.89	32.18	508.72	32.16
508.94	32.14	509.81	32.12	510	32.09	511.82	32.06	511.89	32
512.51	31.48	513.09	31	513.93	30.05	513.98	30	514.02	29.99
515.47	29.71	517.35	29	517.87	28.89	518.25	28.8	521.29	28
523.9	27.14	524.21	27	524.65	26.84	526.98	26	528.59	25.62
531.2	25	531.24	25	531.63	24.96	532.58	24.9	542.65	24.16
545.07	24.03	545.49	24	551.92	23.7	567.06	23	568.11	22.95
585.9	22	585.94	22	586.63	21.99	619.07	21.47	633.96	21.37
642.27	21	642.63	21	643.96	21	645.19	21	668.75	20.51
691.69	20	696.67	20	697.45	20	698.63	20	700.67	20
722.2	20	722.23	20	722.26	20	730.09	19	731.2	19
736.11	19	739.06	19	751.71	18.59	774.65	18	781.95	18
784.12	18	796.76	17.68	803.05	17.71	808.42	17.72	809.28	17.73
811.06	17.74	811.35	17.74	818.49	17.53	822.82	17.59	825.3	17.54
826.96	17.45	829.28	17.34	833.8	17	838.02	17	851.02	16.33
853.79	16.42	855.44	16.5	857.65	15.36	861.22	15.85	861.65	16.2
862.38	16.17	863.02	16	864.18	16	864.9	15.28	865.45	15
866.81	15	881.65	14.16	881.83	14.15	884.04	14	885.19	14
890.76	13.92	898.06	14	900.01	14	911.16	14.26	912.58	14.3
918.18	14.4	919.06	14.36	919.28	14.35	939.52	14.09	939.84	14.08
940.17	14.07	940.56	14.07	942.78	14	942.91	14	944.8	14
950.12	13.68	956.48	13	958.83	12.76	963.63	11.71	963.63	3.81
964.43	3.81	968.73	4.34	972.63	4.63	975.43	10.64	981.33	10.6
986.31	11	988.3	11	1015.7	11.63	1020.89	11.76	1023.11	11.77
1028.13	11.91	1028.58	11.93	1029.99	11.9	1030.06	11.91	1031.06	12
1032.61	12	1033.17	12	1034.39	12	1044.28	12.24	1047.55	12.31
1050.3	12.38	1067.36	12.26	1070.11	12.06	1070.37	12.07	1070.51	12.07
1071.99	12	1072.15	12	1074.25	12	1082.73	11.49	1083.34	11.44
1091.03	11	1096.41	10.71	1097.76	10.65	1100.96	10.47	1101.12	10.46
1101.26	10.45	1103.87	10.29	1110.7	10.2	1129.98	10.34	1134.19	10.4
1137.73	10.4	1138.8	10.43	1149.29	10.73	1151.08	10.78	1158.5	11
1159.56	11	1164.18	11.32	1165.46	11.37	1177.2	12	1180.81	12
1182.46	12.19	1182.83	12.23	1184.31	12.42	1185.48	12.62	1188.56	13
1195.43	13.77	1195.75	13.83	1197.73	14	1203.63	14.53	1205.76	14.76
1206.18	14.72	1207.95	15	1210.47	15.4	1212.1	15.66	1213.56	16
1215.78	16.53	1218.42	16.69	1219.98	16.64	1222.28	16.65	1223.56	16.62
1231.69	16.48	1239.43	16.82	1244.06	17	1250.54	17.31	1251.83	17.35
1252.87	17.34	1256.46	17.4	1262.48	17.42	1264.08	17.4	1270.97	17.31
1276.06	17.24	1278.34	17.21	1279.45	17.2	1289.65	17.15	1294.66	17.27
1297.7	17.32	1300.6	17.39	1301.28	17.4	1303.04	17.43	1306.8	17.44
1310.13	17.44	1313.55	17.47	1315.79	17.47	1320.79	17.69	1321.62	17.72
1322.14	17.73	1325.1	17.73	1331.33	17.7	1333.29	17.66	1339.13	17.82
1339.97	17.8	1340.7	17.78	1344.8	17.45	1348.61	17	1358.21	16.83
1382.7	16	1383.1	16	1385.93	16	1386.05	16	1386.06	16
1386.22	16.01	1386.57	16	1388.62	16	1394.87	16	1395.43	16
1396.09	16	1403.98	16	1404.57	16.55	1405.04	17	1405.69	17.61
1406.1	18	1407.01	18.86	1407.15	19	1407.41	19.28	1407.91	19.84
1408.07	20	1408.2	20.07	1410.24	21	1433.08	21.88	1436.04	22
1436.08	22	1436.52	22	1438.34	22	1453.52	22.66	1458.59	22.83
1462.55	23	1471.76	23.4	1476.55	23.59	1483.87	24	1486.46	24.2
1494.9	24.65	1501.07	25	1503.5	25.11	1512.9	25.76	1516.19	26
1520.81	26.43	1526.41	26.95	1527.22	27	1528.38	27.12	1537.47	28

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1543.57	28.98	1543.71	29	1543.8	29.01	1549.86	30	1555.25	30.88
1556.03	31	1558.96	31.35	1561.64	31.7	1564.05	32	1565.27	32.14
1567.15	32.36	1570.15	32.71	1572.88	33	1583.58	33.64	1589.14	34
1592.03	34.39	1597.83	35	1605.91	35.8	1608.03	36	1612.59	36.71
1614.6	37								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.1	958.83	.03	975.43	.1

Bank Sta: Left Right Coeff Contr. Expan.

958.83	975.43		.3	.5
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Ineffective Flow num= 1

Sta L	Sta R	Elev	Permanent
0	570.49	22	F

Blocked Obstructions num= 5

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
831.8	857.02	26.62	883.07	895.31	26.93	412.9	440.78	43.2
197.92	245.55	32.1	13.68	52.74	21.81	41	84	

Downstream Deck/Roadway Coordinates

num= 485											
Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
0	46.39			.7	46			1.92	45.31		
2.49	45			4.27	44.04			4.35	44		
4.37	43.97			4.44	43.88			5.09	43		
5.39	42.38			5.57	42			5.64	41.86		
5.95	41.14			6	41.04			6.01	41		
6.04	40.94			6.49	40			7.12	39.2		
7.28	39			7.35	38.93			8.04	38		
8.09	37.95			8.39	37.53			8.77	37		
9.09	36.5			9.41	36			9.88	35.4		
10.22	35			10.59	34.83			12.35	34		
13.82	33.37			14.69	33			16.77	32.13		
17.06	32			17.39	31.84			19.09	31.07		
19.26	31			19.61	30.83			21.33	30		
21.51	29.89			23.04	29.04			23.12	29		
23.12	28.98			23.55	28			23.86	27.47		
24.08	27			24.38	26.53			24.72	26		
24.94	25.54			25.18	25			26.42	24.24		
26.83	24.06			27.04	24			29.55	23.24		
30.38	23			35.18	22.62			40.86	22		
54.49	21.44			60.75	21			63.23	20.81		
66.58	20.55			72.83	20.09			73.23	20.07		
73.37	20.06			76.29	20.03			77.36	20		
77.62	20			85.56	20			135.99	19.12		
141.59	19.03			141.99	19.02			142.52	19.02		
142.95	19			145.08	19			145.94	19		
155.6	19			162.48	19			163.09	19.3		
164.32	20			165.48	20.29			168.58	21		
170.76	21.39			172.78	21.65			175.13	22		
190.78	22			190.98	22			193.6	21.87		
194.31	21.81			195.73	21.59			196.39	21.46		
198.05	21.26			200.32	21			200.72	21		
204.66	20.6			211.08	20			211.6	19.94		
211.96	19.89			214.62	19.5			217.39	19		
222.33	18.33			223.8	18.13			224.61	18		
225.35	17.93			232.7	17			237.98	16.51		
248.01	16			251.77	15.84			254.38	15.74		
259.87	15.49			269.56	15			282.57	15		
283.74	15			316.11	15			338.34	15		
339.89	15.1			342.51	15.25			354.04	16		
359.9	16.87			361.16	17			363.07	17.29		

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367. 97	18	372. 6	18. 82	373. 6	19
374. 15	19. 1	378. 42	19. 77	379. 66	19. 96
379. 9	20	380. 39	20. 08	386. 5	21
387. 53	21. 35	389. 42	22	390. 66	22. 43
392. 32	23	394. 11	23. 62	395. 2	24
397. 62	24. 93	397. 81	25	398. 37	25. 33
399. 5	26	399. 97	26. 26	401. 22	27
402. 69	27. 84	402. 96	28	403. 17	28. 13
404. 9	28. 96	404. 98	29	404. 99	29
405. 02	29. 01	407. 08	30	408. 58	30. 56
409. 61	31	410. 85	31. 53	411. 95	32
413. 29	32. 69	413. 91	33	414. 1	33. 18
415	34	416. 02	34. 71	416. 48	35
417. 9	35. 37	421. 42	36	422. 29	36. 16
423. 52	36. 25	425. 64	36. 47	428. 48	36. 76
430. 25	37	430. 3	37. 01	430. 4	37. 02
435. 44	37. 6	437. 63	37. 78	438. 12	37. 79
438. 83	37. 81	440. 14	37. 77	443. 19	37. 71
445. 73	37. 96	445. 95	37. 95	448. 07	37. 74
454. 21	37. 1	455	37	455. 59	36. 77
457. 89	36	459. 5	35. 5	461. 25	35
463. 24	34. 16	463. 64	34	464. 61	33. 89
469. 87	33. 5	472. 65	33. 3	475. 87	33
485. 45	32. 26	486. 45	32. 3	489. 7	32. 08
489. 92	32. 09	490. 22	32. 11	490. 65	32. 13
491. 02	32	492. 51	32	499. 35	31. 71
503. 37	31	503. 64	30. 96	504. 11	31
505. 69	31. 49	506. 7	31. 85	507. 29	31. 96
507. 35	31. 96	507. 48	32	507. 8	32. 2
507. 89	32. 18	508. 72	32. 16	508. 94	32. 14
509. 81	32. 12	510	32. 09	511. 82	32. 06
511. 89	32	512. 51	31. 48	513. 09	31
513. 93	30. 05	513. 98	30	514. 02	29. 99
515. 47	29. 71	517. 35	29	517. 87	28. 89
518. 25	28. 8	521. 29	28	523. 9	27. 14
524. 21	27	524. 65	26. 84	526. 98	26
528. 59	25. 62	531. 2	25	531. 24	25
531. 63	24. 96	532. 58	24. 9	542. 65	24. 16
545. 07	24. 03	545. 49	24	551. 92	23. 7
567. 06	23	568. 11	22. 95	585. 9	22
585. 94	22	586. 63	21. 99	619. 07	21. 47
633. 96	21. 37	642. 27	21	642. 63	21
643. 96	21	645. 19	21	668. 75	20. 51
691. 69	20	696. 67	20	697. 45	20
698. 63	20	700. 67	20	722. 2	20
722. 23	20	722. 26	20	730. 09	19
731. 2	19	736. 11	19	739. 06	19
751. 71	18. 59	774. 65	18	781. 95	18
784. 12	18	796. 76	17. 68	803. 05	17. 71
808. 42	17. 72	809. 28	17. 73	811. 06	17. 74
811. 35	17. 74	818. 49	17. 53	822. 82	17. 59
825. 3	17. 54	826. 96	17. 45	829. 28	17. 34
833. 8	17	838. 02	17	851. 02	16. 33
853. 79	16. 42	855. 44	16. 5	857. 65	15. 36
861. 22	15. 85	861. 65	16. 2	862. 38	16. 17
863. 02	16	864. 18	16	864. 9	15. 28
865. 45	15	866. 81	15	881. 65	14. 16
881. 83	14. 15	884. 04	14	885. 19	14
890. 76	13. 92	898. 06	14	900. 01	14
911. 16	14. 26	912. 58	14. 3	918. 18	14. 4
919. 06	14. 36	919. 28	14. 35	939. 52	14. 09
939. 84	14. 08	940. 17	14. 07	940. 56	14. 07
942. 78	14	942. 91	14	944. 8	14

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950.12	13.68	956.48	13	957.47	11.87	
957.49	11.84	958.09	12.45	958.84	12.67	
960.84	12.67	0 960.84	12.67	11.74 974.18	10.79	10.34
974.18	10.79	0 986.31	11	988.3	11	
1015.7	11.63	1020.89	11.76	1023.11	11.77	
1028.13	11.91	1028.58	11.93	1029.99	11.9	
1030.06	11.91	1031.06	12	1032.61	12	
1033.17	12	1034.39	12	1044.28	12.24	
1047.55	12.31	1050.3	12.38	1067.36	12.26	
1070.11	12.06	1070.37	12.07	1070.51	12.07	
1071.99	12	1072.15	12	1074.25	12	
1082.73	11.49	1083.34	11.44	1091.03	11	
1096.41	10.71	1097.76	10.65	1100.96	10.47	
1101.12	10.46	1101.26	10.45	1103.87	10.29	
1110.7	10.2	1129.98	10.34	1134.19	10.4	
1137.73	10.4	1138.8	10.43	1149.29	10.73	
1151.08	10.78	1158.5	11	1159.56	11	
1164.18	11.32	1165.46	11.37	1177.2	12	
1180.81	12	1182.46	12.19	1182.83	12.23	
1184.31	12.42	1185.48	12.62	1188.56	13	
1195.43	13.77	1195.75	13.83	1197.73	14	
1203.63	14.53	1205.76	14.76	1206.18	14.72	
1207.95	15	1210.47	15.4	1212.1	15.66	
1213.56	16	1215.78	16.53	1218.42	16.69	
1219.98	16.64	1222.28	16.65	1223.56	16.62	
1231.69	16.48	1239.43	16.82	1244.06	17	
1250.54	17.31	1251.83	17.35	1252.87	17.34	
1256.46	17.4	1262.48	17.42	1264.08	17.4	
1270.97	17.31	1276.06	17.24	1278.34	17.21	
1279.45	17.2	1289.65	17.15	1294.66	17.27	
1297.7	17.32	1300.6	17.39	1301.28	17.4	
1303.04	17.43	1306.8	17.44	1310.13	17.44	
1313.55	17.47	1315.79	17.47	1320.79	17.69	
1321.62	17.72	1322.14	17.73	1325.1	17.73	
1331.33	17.7	1333.29	17.66	1339.13	17.82	
1339.97	17.8	1340.7	17.78	1344.8	17.45	
1348.61	17	1358.21	16.83	1382.7	16	
1383.1	16	1385.93	16	1386.05	16	
1386.06	16	1386.22	16.01	1386.57	16	
1388.62	16	1394.87	16	1395.43	16	
1396.09	16	1403.98	16	1404.57	16.55	
1405.04	17	1405.69	17.61	1406.1	18	
1407.01	18.86	1407.15	19	1407.41	19.28	
1407.91	19.84	1408.07	20	1408.2	20.07	
1410.24	21	1433.08	21.88	1436.04	22	
1436.08	22	1436.52	22	1438.34	22	
1453.52	22.66	1458.59	22.83	1462.55	23	
1471.76	23.4	1476.55	23.59	1483.87	24	
1486.46	24.2	1494.9	24.65	1501.07	25	
1503.5	25.11	1512.9	25.76	1516.19	26	
1520.81	26.43	1526.41	26.95	1527.22	27	
1528.38	27.12	1537.47	28	1543.57	28.98	
1543.71	29	1543.8	29.01	1549.86	30	
1555.25	30.88	1556.03	31	1558.96	31.35	
1561.64	31.7	1564.05	32	1565.27	32.14	
1567.15	32.36	1570.15	32.71	1572.88	33	
1583.58	33.64	1589.14	34	1592.03	34.39	
1597.83	35	1605.91	35.8	1608.03	36	
1612.59	36.71	1614.6	37			

Downstream Bridge Cross Section Data

Station El evation Data num= 484

Sta El ev Sta El ev Sta El ev Sta El ev Sta El ev

StonyBrookDari en1-ex. txt

0	46.39	.7	46	1.92	45.31	2.49	45	4.27	44.04
4.35	44	4.37	43.97	4.44	43.88	5.09	43	5.39	42.38
5.57	42	5.64	41.86	5.95	41.14	6	41.04	6.01	41
6.04	40.94	6.49	40	7.12	39.2	7.28	39	7.35	38.93
8.04	38	8.09	37.95	8.39	37.53	8.77	37	9.09	36.5
9.41	36	9.88	35.4	10.22	35	10.59	34.83	12.35	34
13.82	33.37	14.69	33	16.77	32.13	17.06	32	17.39	31.84
19.09	31.07	19.26	31	19.61	30.83	21.33	30	21.51	29.89
23.04	29.04	23.12	29	23.12	28.98	23.55	28	23.86	27.47
24.08	27	24.38	26.53	24.72	26	24.94	25.54	25.18	25
26.42	24.24	26.83	24.06	27.04	24	29.55	23.24	30.38	23
35.18	22.62	40.86	22	54.49	21.44	60.75	21	63.23	20.81
66.58	20.55	72.83	20.09	73.23	20.07	73.37	20.06	76.29	20.03
77.36	20	77.62	20	85.56	20	135.99	19.12	141.59	19.03
141.99	19.02	142.52	19.02	142.95	19	145.08	19	145.94	19
155.6	19	162.48	19	163.09	19.3	164.32	20	165.48	20.29
168.58	21	170.76	21.39	172.78	21.65	175.13	22	190.78	22
190.98	22	193.6	21.87	194.31	21.81	195.73	21.59	196.39	21.46
198.05	21.26	200.32	21	200.72	21	204.66	20.6	211.08	20
211.6	19.94	211.96	19.89	214.62	19.5	217.39	19	222.33	18.33
223.8	18.13	224.61	18	225.35	17.93	232.7	17	237.98	16.51
248.01	16	251.77	15.84	254.38	15.74	259.87	15.49	269.56	15
282.57	15	283.74	15	316.11	15	338.34	15	339.89	15.1
342.51	15.25	354.04	16	359.9	16.87	361.16	17	363.07	17.29
367.97	18	372.6	18.82	373.6	19	374.15	19.1	378.42	19.77
379.66	19.96	379.9	20	380.39	20.08	386.5	21	387.53	21.35
389.42	22	390.66	22.43	392.32	23	394.11	23.62	395.2	24
397.62	24.93	397.81	25	398.37	25.33	399.5	26	399.97	26.26
401.22	27	402.69	27.84	402.96	28	403.17	28.13	404.9	28.96
404.98	29	404.99	29	405.02	29.01	407.08	30	408.58	30.56
409.61	31	410.85	31.53	411.95	32	413.29	32.69	413.91	33
414.1	33.18	415	34	416.02	34.71	416.48	35	417.9	35.37
421.42	36	422.29	36.16	423.52	36.25	425.64	36.47	428.48	36.76
430.25	37	430.3	37.01	430.4	37.02	435.44	37.6	437.63	37.78
438.12	37.79	438.83	37.81	440.14	37.77	443.19	37.71	445.73	37.96
445.95	37.95	448.07	37.74	454.21	37.1	455	37	455.59	36.77
457.89	36	459.5	35.5	461.25	35	463.24	34.16	463.64	34
464.61	33.89	469.87	33.5	472.65	33.3	475.87	33	485.45	32.26
486.45	32.3	489.7	32.08	489.92	32.09	490.22	32.11	490.65	32.13
491.02	32	492.51	32	499.35	31.71	503.37	31	503.64	30.96
504.11	31	505.69	31.49	506.7	31.85	507.29	31.96	507.35	31.96
507.48	32	507.8	32.2	507.89	32.18	508.72	32.16	508.94	32.14
509.81	32.12	510	32.09	511.82	32.06	511.89	32	512.51	31.48
513.09	31	513.93	30.05	513.98	30	514.02	29.99	515.47	29.71
517.35	29	517.87	28.89	518.25	28.8	521.29	28	523.9	27.14
524.21	27	524.65	26.84	526.98	26	528.59	25.62	531.2	25
531.24	25	531.63	24.96	532.58	24.9	542.65	24.16	545.07	24.03
545.49	24	551.92	23.7	567.06	23	568.11	22.95	585.9	22
585.94	22	586.63	21.99	619.07	21.47	633.96	21.37	642.27	21
642.63	21	643.96	21	645.19	21	668.75	20.51	691.69	20
696.67	20	697.45	20	698.63	20	700.67	20	722.2	20
722.23	20	722.26	20	730.09	19	731.2	19	736.11	19
739.06	19	751.71	18.59	774.65	18	781.95	18	784.12	18
796.76	17.68	803.05	17.71	808.42	17.72	809.28	17.73	811.06	17.74
811.35	17.74	818.49	17.53	822.82	17.59	825.3	17.54	826.96	17.45
829.28	17.34	833.8	17	838.02	17	851.02	16.33	853.79	16.42
855.44	16.5	857.65	15.36	861.22	15.85	861.65	16.2	862.38	16.17
863.02	16	864.18	16	864.9	15.28	865.45	15	866.81	15
881.65	14.16	881.83	14.15	884.04	14	885.19	14	890.76	13.92
898.06	14	900.01	14	911.16	14.26	912.58	14.3	918.18	14.4
919.06	14.36	919.28	14.35	939.52	14.09	939.84	14.08	940.17	14.07
940.56	14.07	942.78	14	942.91	14	944.8	14	950.12	13.68
956.48	13	958.84	12.66	960.84	11.74	960.84	3.94	963.63	3.94

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967.44	4.12	972.84	5.05	974.68	10.34	979.72	10.48	988.3	11
1015.7	11.63	1020.89	11.76	1023.11	11.77	1028.13	11.91	1028.58	11.93
1029.99	11.9	1030.06	11.91	1031.06	12	1032.61	12	1033.17	12
1034.39	12	1044.28	12.24	1047.55	12.31	1050.3	12.38	1067.36	12.26
1070.11	12.06	1070.37	12.07	1070.51	12.07	1071.99	12	1072.15	12
1074.25	12	1082.73	11.49	1083.34	11.44	1091.03	11	1096.41	10.71
1097.76	10.65	1100.96	10.47	1101.12	10.46	1101.26	10.45	1103.87	10.29
1110.7	10.2	1129.98	10.34	1134.19	10.4	1137.73	10.4	1138.8	10.43
1149.29	10.73	1151.08	10.78	1158.5	11	1159.56	11	1164.18	11.32
1165.46	11.37	1177.2	12	1180.81	12	1182.46	12.19	1182.83	12.23
1184.31	12.42	1185.48	12.62	1188.56	13	1195.43	13.77	1195.75	13.83
1197.73	14	1203.63	14.53	1205.76	14.76	1206.18	14.72	1207.95	15
1210.47	15.4	1212.1	15.66	1213.56	16	1215.78	16.53	1218.42	16.69
1219.98	16.64	1222.28	16.65	1223.56	16.62	1231.69	16.48	1239.43	16.82
1244.06	17	1250.54	17.31	1251.83	17.35	1252.87	17.34	1256.46	17.4
1262.48	17.42	1264.08	17.4	1270.97	17.31	1276.06	17.24	1278.34	17.21
1279.45	17.2	1289.65	17.15	1294.66	17.27	1297.7	17.32	1300.6	17.39
1301.28	17.4	1303.04	17.43	1306.8	17.44	1310.13	17.44	1313.55	17.47
1315.79	17.47	1320.79	17.69	1321.62	17.72	1322.14	17.73	1325.1	17.73
1331.33	17.7	1333.29	17.66	1339.13	17.82	1339.97	17.8	1340.7	17.78
1344.8	17.45	1348.61	17	1358.21	16.83	1382.7	16	1383.1	16
1385.93	16	1386.05	16	1386.06	16	1386.22	16.01	1386.57	16
1388.62	16	1394.87	16	1395.43	16	1396.09	16	1403.98	16
1404.57	16.55	1405.04	17	1405.69	17.61	1406.1	18	1407.01	18.86
1407.15	19	1407.41	19.28	1407.91	19.84	1408.07	20	1408.2	20.07
1410.24	21	1433.08	21.88	1436.04	22	1436.08	22	1436.52	22
1438.34	22	1453.52	22.66	1458.59	22.83	1462.55	23	1471.76	23.4
1476.55	23.59	1483.87	24	1486.46	24.2	1494.9	24.65	1501.07	25
1503.5	25.11	1512.9	25.76	1516.19	26	1520.81	26.43	1526.41	26.95
1527.22	27	1528.38	27.12	1537.47	28	1543.57	28.98	1543.71	29
1543.8	29.01	1549.86	30	1555.25	30.88	1556.03	31	1558.96	31.35
1561.64	31.7	1564.05	32	1565.27	32.14	1567.15	32.36	1570.15	32.71
1572.88	33	1583.58	33.64	1589.14	34	1592.03	34.39	1597.83	35
1605.91	35.8	1608.03	36	1612.59	36.71	1614.6	37		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val
 0 .1 956.48 .03 979.72 .1

Bank Sta: Left Right Coeff Contr. Expan.
 956.48 979.72 .3 .5

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 584.37 22 F
 978.45 1614.6 10.96 F

Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 446.32 465.39 55 881.66 915.58 26.93 934.65 943.6 24

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data
 Energy

Selected Low Flow Methods = Highest Energy Answer

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High Flow Method

Pressure and Weir flow

Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 11.74

Additional Bridge Parameters

Add Friction component to Momentum

Do not add Weight component to Momentum

Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end

Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook

REACH: StonyBrook

RS: 1384

INPUT

Description: MMI - additional section - DS face of footbridge

Station	Elevation	Data	num=	372	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	39.45	.61	39	1.43	38.45	2.08	38	2.86	37.47			
3.65	37	4.51	36.49	5.33	36	5.7	35.81	7.12	35			
8.57	34.41	9.58	34	11.17	33.3	11.85	33	14.32	32.03			
14.4	32	17.14	31.02	17.2	31	19.89	30.02	19.94	30			
22.42	29.05	22.55	29	22.79	28.9	24.67	28	25.58	27.59			
26.95	27	27.7	26.66	29.22	26	29.6	25.84	31.88	25			
32.23	24.89	35.41	24	36.32	23.75	38.39	23.22	39.34	23			
41.18	22.7	43.02	22.46	44.68	22.3	48.07	22	51.75	21.87			
52.78	21.81	60.01	21.46	60.79	21.45	62.63	21.36	64.28	21.25			
65.04	21.21	65.92	21.19	67.61	21	75.42	20.68	77.91	20.64			
80.79	20.45	85.34	20.28	91.67	20	101.7	19.85	112.85	19.68			
127.65	19.51	139.24	19	160.3	19.24	161.66	20	163.73	20.32			
172.61	20.79	175.65	20.92	177.38	20.87	177.84	20.85	186.75	20.56			
189.84	20.35	191.21	20.25	193.1	20	200.23	19.11	201.2	19			
202.76	18.83	206.3	18.5	211.34	18	215.35	17.84	222.01	17			
222.89	16.92	227.86	16.52	233.19	16.1	234.29	16	244.84	15.45			
246.76	15.36	252.19	15.13	255.89	15	343.22	15.6	350.29	16			
354.48	16.51	357.69	17	362.39	17.84	363.49	18	367.13	18.64			
369.16	19	370.04	19.17	374.41	20	376.53	20.41	380.39	21			
382.35	21.68	383.27	22	384.23	22.33	386.18	23	388.64	23.83			
389.14	24	389.79	24.24	391.82	25	392.5	25.39	393.51	26			
394.31	26.54	394.97	27	395.55	27.45	396.29	28	397.07	28.57			
397.78	29	398.56	29.45	399.51	30	401.22	30.64	402.18	31			
404.58	31.94	404.72	32	405.5	32.32	407.19	33	407.39	33.58			
407.56	34	407.77	34.8	407.82	35	407.92	35.47	408.03	36			
409.66	36.31	411.64	36.61	413.85	37	416.02	37.26	417.58	37.43			
418.62	37.53	420.76	37.72	422.23	37.82	425.04	38	427.62	38.19			
428.2	38.15	431.38	38.38	437.41	38.43	439.02	38.36	442.82	38.2			
443.74	38.17	444.93	38.16	447.03	38	453.1	37.19	454.01	37			
456.59	36.27	457.74	36	460.78	35.24	461.74	35	463.22	34.63			
466.19	34	468.28	33.85	477.25	33	480.43	32.75	483.29	32.85			
483.98	32.8	486.18	32.92	487.69	33	488.69	33.75	489.02	34			
489.66	34.39	490.08	34.64	490.7	35	494.69	34.73	495.31	34.74			
501.57	34	506.67	33.42	508.43	33	511.35	32.15	511.85	32			
512.33	31.81	514.22	31	515.27	30.48	516.66	30	517.56	29.35			
517.94	29	519.7	28.07	519.81	28	519.95	27.92	521.5	27			
523.27	26.26	523.88	26	526.78	25.46	529.2	25	529.71	24.96			
544.25	24	546.81	23.88	556.31	23.42	565.18	23	576.69	22.39			
584.37	22	604.19	21.71	626.67	21.55	638.94	21	652.62	20.73			
688.88	20	727.93	19.14	728.88	19	753.23	18.39	768.41	18			

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794.58	17.51	799.26	17.53	803.3	17.54	804.7	17.56	807.6	17.58
808.09	17.57	817.29	17.31	823.27	17.06	824.28	17.04	824.96	17
845.16	16.56	849.94	16.72	852.84	16.86	854.98	15.8	855.46	16.64
855.67	17	855.95	16.82	856.37	16	857.06	15.01	857.08	15
874.11	14.79	875.04	14.77	878.88	14.51	879.81	14.45	880.52	14.4
884.32	14.12	886.57	14.16	896.68	14.5	906.87	14.76	911.19	14.9
911.97	14.92	913.98	14.81	914.48	14.79	920.62	14.72	923.2	14.66
925.83	14.61	929.08	14.56	935.17	14.39	942.18	14	947.58	13.23
950.39	13	952.54	12.23	954.2	12.26	954.36	12.22	955.1	12
955.41	11.6	955.81	11.58	956.54	11.58	956.54	4.35	958.73	3.55
963.25	3.01	966	3.51	968.91	5.53	974.08	9.55	974.89	10.81
975.17	11	975.18	10.99	975.37	10.92	975.87	10.73	976.43	10.51
984.44	11.29	1013.94	12	1015.39	12.05	1016.87	12.08	1026.91	12.35
1032.08	12.43	1035.03	12.51	1042.13	12.68	1051.55	12.89	1052	12.9
1054.77	12.88	1055.22	12.85	1058.56	12.91	1060.43	12.88	1061.99	12.81
1063.69	12.73	1075.43	12	1076.95	11.91	1078.23	11.82	1084.12	11.46
1086.52	11.3	1091.49	11	1095.23	10.83	1115.22	10.59	1125.21	10.66
1133.49	10.79	1136.81	10.84	1142.26	11	1150.63	11.6	1157.38	12
1163.24	12.61	1166.66	13	1168.67	13.22	1172.17	13.63	1173.67	13.8
1174.79	13.93	1175	13.94	1175.34	14	1191.01	14.82	1192.81	15
1199.84	15.34	1207.37	15.7	1224.4	16	1232.22	16.19	1235.87	16.34
1236.93	16.37	1244.24	16.69	1248.73	16.75	1250.48	16.81	1259.23	16.83
1261.74	16.88	1263.76	16.87	1272.59	16.82	1274.96	16.8	1284.4	16.78
1291	16.82	1291.55	16.83	1294.14	16.84	1310.45	17	1324.04	16.86
1331.21	16.83	1332.36	16.84	1335.07	16.79	1348.42	16.56	1364.78	16
1382.58	16.28	1397.04	16.78	1398.53	16.74	1401.31	17	1401.91	17.54
1402.42	18	1403.03	18.56	1403.5	19	1404.48	19.82	1404.69	20
1404.88	20.1	1406.58	21	1424.03	21.73	1430.01	22	1444.27	22.23
1446	22.29	1450.2	22.46	1452.66	22.57	1453.55	22.6	1462.86	23
1475.26	23.36	1484.39	24	1490.48	24.37	1499.01	25	1504.42	25.48
1510.1	26	1513.97	26.39	1519.62	27	1526.26	27.56	1530.56	28
1538.62	28.97	1538.88	29	1544.15	29.81	1545.33	30	1551.18	30.93
1551.65	31	1552.49	31.08	1558.72	31.67	1560.7	31.85	1562.45	32
1563.56	32.12	1573.04	33	1579.84	33.45	1584.93	34	1591.34	34.77
1592.81	35	1593.25	35.09						

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .12 956.54 .03 974.89 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 956.54 974.89 27.1 37.87 64.75 .3 .5

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 584.37 22 F
 978.45 1593.25 10.96 F

Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 446.32 465.39 55 881.66 915.58 26.93 934.65 943.6 24

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 1346

INPUT

Description: US section of Boston Post / DS section footbridge - MMI additional cross section

Station Elevati on Data num= 346
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
 0 33.09 .69 33 3.22 32.15 3.67 32 4.11 31.85
 6.69 31 6.75 30.98 6.87 30.95 9.21 30.3 10.27 30

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11. 8	29. 57	13. 19	29. 31	14. 96	29	17. 29	28. 54	18. 98	28. 27
20. 78	28	22. 9	27. 64	24. 39	27. 45	26. 37	27. 17	26. 78	27. 12
27. 6	27	29. 25	26. 77	30. 3	26. 64	32. 46	26. 31	34. 24	26
36. 13	25. 68	39. 15	25. 16	39. 77	25. 05	40. 08	25	42. 74	24. 57
45. 93	24. 02	45. 98	24. 01	46. 03	24	49. 08	23. 54	51. 6	23. 29
53. 19	23. 21	54. 05	23. 12	55. 2	23	57. 78	22. 78	60. 41	22. 52
62. 93	22. 36	65. 19	22. 22	68. 64	22	68. 72	21. 99	73. 05	21. 61
77. 93	21. 34	79. 63	21. 19	83. 97	21	85. 88	20. 92	86. 27	20. 87
89. 84	20. 51	96. 24	20. 24	96. 84	20. 18	99. 4	20	100. 81	19. 97
107. 13	19. 76	112. 8	19. 64	116. 48	19. 29	119. 86	19	143. 69	19. 82
144. 07	20	159. 43	19. 83	161. 96	19. 77	163. 11	19. 71	166. 23	19. 52
171. 53	19. 25	173. 04	19. 19	174. 69	19	183. 71	18. 33	187. 52	18
188. 35	17. 88	188. 77	17. 86	189. 53	17. 82	199. 92	17	201. 02	16. 91
210. 95	16	216. 6	15. 69	227. 47	15. 31	233. 99	15	236. 04	14. 98
239. 03	14. 93	253. 68	15	324. 36	15. 66	329. 56	16	333. 91	16. 43
339. 18	17	342. 84	17. 67	344. 59	18	346. 56	18. 39	349. 67	19
351. 4	19. 33	354. 72	20	357. 8	20. 66	359. 57	21	361. 55	21. 73
362. 3	22	364. 44	22. 8	364. 99	23	365. 95	23. 36	367. 59	24
369. 3	24. 71	370. 05	25	371. 84	25. 99	371. 86	26	371. 9	26. 02
373. 75	27	374. 72	27. 57	375. 53	28	376. 85	28. 78	377. 23	29
377. 65	29. 21	379. 25	30	381. 51	31	381. 54	31. 01	383. 67	32
384. 06	32. 18	385. 9	33	385. 99	33. 35	386. 08	33. 7	386. 16	34
386. 19	34. 5	386. 22	35	386. 23	35. 25	386. 27	36	386. 33	36. 47
386. 37	36. 87	386. 39	37	386. 51	37. 04	387. 31	37. 22	389. 61	37. 79
389. 95	37. 87	390. 1	37. 91	390. 7	38	393. 04	38. 27	394. 46	38. 34
396. 72	38. 53	400. 29	38. 81	400. 86	38. 85	402. 53	39	415. 58	39. 09
417. 14	39. 06	424. 61	39. 02	425. 05	39	432. 07	38. 5	436. 67	38. 18
437. 85	38. 1	438. 97	38	444. 18	37. 26	447. 24	37	448. 66	36. 52
450. 15	36	450. 48	35. 89	450. 93	35. 73	451. 15	35. 84	451. 41	36
452. 36	36. 53	453. 08	37	457. 8	37. 14	462. 19	37	466. 41	36. 67
471. 21	36. 13	471. 98	36	473. 31	35. 69	477. 39	35	479. 64	34. 52
483. 35	34	485. 7	33. 42	486. 84	33	488. 56	32. 39	489. 62	32
490. 89	31. 52	492. 26	31	493. 61	30. 52	494. 81	30	495. 59	29. 71
497. 53	29	499. 36	28. 23	499. 95	28	501. 76	27. 33	502. 58	27
503. 23	26. 78	505. 52	26	506. 6	25. 85	511. 69	25	525. 08	24. 15
527. 41	24	543. 74	23. 23	548. 67	23	549. 12	22. 98	549. 72	22. 95
554. 76	22. 73	559. 99	22. 5	564. 78	22. 26	566. 57	22. 21	568. 19	22. 13
570. 39	22. 07	573. 6	22	601. 91	21. 83	606. 73	21. 62	616. 95	21
650. 09	20. 38	671. 97	20	712. 85	19. 25	714. 24	19	742. 86	18. 04
743. 81	18. 01	744. 12	18	778. 81	17. 14	780. 13	17. 15	783. 86	17. 18
789. 19	17. 22	797. 69	17	823. 34	16. 84	827. 17	17	829. 17	16. 31
829. 39	16	831. 58	15. 72	841. 52	15	870. 81	14. 91	871. 05	14. 92
873	15	898. 9	14. 91	903. 92	14. 68	905. 18	14. 62	917. 64	14
922. 97	13. 71	931. 7	13. 03	932. 14	13	934. 22	11. 77	935. 65	11. 88
935. 74	12	936. 79	11. 13	936. 92	11	938. 05	10. 12	938. 17	10
939. 3	9. 11	939. 43	9	940. 58	8. 1	940. 7	8	941. 47	5
944. 47	3. 6	948. 47	3. 15	952. 47	3. 6	953. 97	4. 5	955. 55	8. 57
956. 42	9	957. 61	9. 55	958. 55	10	960. 59	10. 63	961. 72	11
962. 51	11. 07	965. 59	11. 36	971. 43	12	988. 45	12. 56	998. 17	12. 86
1005. 04	12. 96	1006. 32	13	1009. 46	13. 02	1009. 62	13. 03	1013. 44	13. 13
1019. 6	13	1026. 26	12. 82	1030. 18	12. 55	1036. 55	12	1049. 57	12. 46
1054. 81	13	1062. 72	13. 5	1062. 76	13. 51	1067. 63	14	1074. 83	14. 57
1079. 5	15	1231. 44	15. 48	1232. 04	15. 49	1235. 53	15. 54	1244. 44	15. 79
1248. 9	16	1255. 87	16. 18	1263. 28	16. 61	1269. 29	16. 96	1269. 98	17
1275. 77	17. 34	1278. 12	18	1281. 9	18. 99	1281. 93	19	1281. 97	19. 01
1286. 95	20	1289. 85	20. 55	1292. 12	21	1314. 52	21. 01	1320. 85	21
1361. 16	20. 96	1362. 01	20. 94	1377. 65	20. 64	1378. 53	20. 65	1381. 78	20. 68
1385. 95	20. 7	1389. 31	20. 79	1390. 6	20. 78	1394. 12	21	1400. 04	21. 15
1403. 82	21. 22	1409. 55	21. 51	1414. 94	21. 65	1418. 99	22	1420. 54	22. 79
1420. 94	23	1421. 59	23. 32	1423. 29	24	1425. 73	24. 93	1425. 92	25
1426	25. 03	1426. 2	25. 1	1428. 14	25. 87	1428. 52	26	1429. 01	26. 13
1433. 85	27	1436. 85	27. 55	1439. 22	28	1441. 59	28. 3	1445. 9	29
1451. 47	29. 81	1453. 46	29. 98	1453. 54	29. 99	1454. 13	30	1455. 45	30. 04

StonyBrookDari en1-ex. txt

1459.67	30.08	1462.33	30.04	1462.56	30.06	1468.39	30.46	1472.2	30.74
1472.88	30.82	1473.08	30.84	1473.94	31	1478.1	31.76	1479.43	32
1479.64	32.04	1480.01	32.1	1485.24	33	1488.03	33.47	1491.12	34
1492.91	34.3	1497.03	35	1501.28	35.72	1503.91	36	1506.58	36.24
1510.05	36.47								

Manning's n Values

num=	3
Sta n Val	Sta n Val
0 .12	931.7 .03
	962.51 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

931.7	962.51	42.58	56.04	86.85	.3	.5
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Ineffective Flow num= 1

Sta L Sta R Elev	Permanent
0 573.6 22	F

Blocked Obstructions num= 3

Sta L Sta R Elev	Sta L Sta R Elev	Sta L Sta R Elev
407.82 453.27 55	871.92 880.44 26.93	895.84 926.71 24

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 1290

INPUT

Description: FEMA F- US face of Boston Post Road (HEC2-10)

Station Elevati on Data num= 283

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	33.45	1.91	33.03	2.03	33	2.15	32.96	3.66	32.67
7.02	32.06	7.34	32	11.49	31.28	13.01	31	18.24	30.21
19.27	30	25.82	29.23	27.97	29	35.98	28.17	37.85	28
49.6	27.02	49.74	27	49.87	26.98	51.09	26.87	59.31	26
60.98	25.88	64.5	25.61	70.51	25	72.87	24.87	76.91	24.52
78.86	24.35	83.26	24	89.35	23.53	90.79	23.46	96.01	23
101.62	22.78	102.29	22.82	108.12	22.6	116.76	22	120.04	21.03
120.13	21	120.16	20.98	121.77	20	123.32	19.31	123.92	19
125.53	18.91	137.34	18.42	144.29	18.12	147.28	18.03	147.37	18.04
150.1	18	163.15	18.16	167.55	18	171.19	17.89	187.92	17
202.03	16.46	205.37	16.39	217	16	232.36	15.03	232.88	15
254.2	14.43	255.46	14.41	256.68	14.39	261.8	14.38	299.64	14.6
307.83	14.61	308.64	14.64	311.75	14.73	319.09	15	334.27	15.88
336.32	16	343.07	16.8	344.72	17	345.92	17.19	350.4	18
354.1	18.62	356.19	19	358.97	19.86	359.66	20	360.29	20.19
362.68	21	364.83	21.81	365.35	22	365.97	22.24	367.91	23
368.85	23.38	370.39	24	371.81	24.61	372.77	25	374.34	25.69
375.03	26	375.36	26.17	376.28	26.61	377.08	27	377.54	27.21
379.24	28	380.72	28.68	381.4	29	381.85	29.26	383.11	30
384.52	30.91	384.66	31	386.18	31.95	386.26	32	386.37	32.08
386.69	32.3	387.77	33	388.04	33.81	388.12	34	388.17	34.23
388.36	35	388.48	35.43	388.63	36	388.84	36.63	388.97	37
389.06	37.61	389.12	38	396.72	38.59	398.31	39	401.12	39.22
408.68	40	412.86	40.57	420.49	40.47	427.9	40.21	436.73	40
438.78	39.95	439.16	39.92	448.46	39	448.73	38.98	449.32	38.97
451.94	38.85	469.05	38.09	470.25	38	471.43	37.85	475.01	37.23
476.29	37	476.59	36.95	477.47	36.77	481.27	36	482.4	35.28
482.89	35	483.2	34.75	484.02	34	485.04	33.7	486.56	33
488.62	32.54	491.6	32	495.13	31.02	495.23	31	495.37	30.96
498.83	30	500.34	29.43	501.5	29	503.42	28.29	504.2	28
504.85	27.81	507.47	27	510.71	26.02	510.77	26	511.23	25.94
517.33	25.22	519.57	25	528.49	24.41	533.43	24	539.84	23.73
556.03	23	556.64	22.97	572.81	22.49	591.69	22	601.75	21.78
607.56	21.37	609.43	21.22	613.73	21	617.3	20.94	618.45	20.95

StonyBrookDari en1-ex. txt

619.05	20.94	620.37	20.93	621.23	20.92	630.31	20.79	674.44	20
716.2	19.93	721.3	19	737.02	18.47	744	18	755.22	17.64
781.92	17	793.5	17.02	795.41	17	826.3	16.58	826.54	16
842.52	15.59	843.48	15.6	847.71	15.62	857.08	15.73	862.26	15.67
878.34	15.49	899.16	15	916.81	14.08	917.9	14.03	918.21	14
918.89	13.32	922.76	13.18	928.49	10.68	929.79	7.8	935.29	5.34
939.9	4.07	946.29	3.37	951.59	3.76	953.79	4.33	953.79	15.62
954.79	15.62	954.79	14	956.62	14	957.31	14.12	958.23	14.27
967.45	14.42	973.9	14	976.33	13.98	982.02	13.81	983.72	13.85
991.54	13.77	992.25	13.79	1002.57	13.85	1003.96	13.87	1004.61	13.88
1006.57	13.89	1017.72	13.97	1020.36	14	1031.77	14.54	1033.97	14.57
1036.24	14.66	1040.44	15	1044.4	15.15	1047.68	15.26	1060.76	15.72
1061.4	15.74	1065.41	15.85	1069.99	15.89	1085.16	15.83	1112.08	16
1147.73	16.17	1167.41	16.55	1186.87	16	1188.22	15.98	1190.86	16
1202.66	16.23	1208.3	16.45	1212.85	16.67	1215.62	16.8	1216.63	16.86
1218.47	16.92	1218.83	16.93	1219.68	16.95	1224.62	17	1245.26	17.3
1247.33	17.34	1248.53	17.33	1250.59	17.34	1251.3	17.3	1255.79	17
1291.78	17.11	1293.59	17.15	1307.94	17.43	1308.97	17.46	1310.27	17.5
1321.95	17.99	1322.21	18	1335.66	18.97	1336.05	19	1347.25	19.97
1348.41	20	1356.78	20.44	1361.73	21	1362.16	21.07	1374.84	22
1375.01	22.01	1382.35	22.39	1384.49	22.45	1399.37	22.81	1402.73	22.93
1407.01	23	1407.94	23.05	1408.64	23.07	1409.16	23.06	1412.35	23.18
1420.47	23.14	1423.49	23.1	1431.81	23.17				

Manning's n Values num= 3
 Station Val Station Val Station Val
 0 .12 922.76 .03 953.79 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 922.76 953.79 92.1 90.34 90.75 .3 .5

Ineffective Flow num= 3
 Station Station Elev Permanent
 450 911.76 14.96 F
 964.79 1400 14.96 F
 0 450 22 F

Blocked Obstructions num= 3
 Station Station Elev Station Station Elev Station Station Elev
 207.68 238.11 25 652.91 680.74 37.5 405.81 467.47 55

BRIDGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 1246

INPUT
 Description: Boston Post Road Bridge
 Bridge width and span verified with 1983
 DOT plans
 ineffective flow areas define actual bridge
 opening

DS low chord elevation lowered to account for 14 inch
 pipe across flow - pipe top actually at 10.04' on L 9.94' on R.

Distance from Upstream XS = 11
 Deck/Roadway Width = 65.5
 Weir Coefficient = 2.6

Upstream Deck/Roadway Coordinates num= 42

Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
899.16	15			906.79	14.96			906.79	17.04		
923.79	17.04	0		923.79	17.04	12.37		953.79	16.7	12.17	
953.79	14.77	0		958.45	15			966.9	15		

StonyBrookDari en1-ex. txt

969.62	15	976.79	15	985.31	15
991.2	15	1003.02	14.55	1007.18	14.53
1016.91	14.45	1020.47	14.44	1027.16	14.49
1028.03	14.5	1031.82	14.46	1042.33	15
1047.4	15	1052.77	15	1067.2	14.28
1073.19	14.28	1084.24	14.27	1090.2	14.28
1095.53	14.36	1110.68	14.37	1115.96	14.38
1122.96	14.5	1127	14.55	1131.63	14.6
1141.55	14.49	1152.12	14.65	1153.25	14.7
1155.75	14.71	1158.36	14.71	1167.63	14.69
1170.59	14.7	1173.84	14.73	1187.32	15

Upstream Bridge Cross Section Data

Station	Elevation	Data	num=	282	Station	Elevation	Station	Elevation	Station	Elevation
0	33.45	1.91	33.03	2.03	33	2.15	32.96	3.66	32.67	
7.02	32.06	7.34	32	11.49	31.28	13.01	31	18.24	30.21	
19.27	30	25.82	29.23	27.97	29	35.98	28.17	37.85	28	
49.6	27.02	49.74	27	49.87	26.98	51.09	26.87	59.31	26	
60.98	25.88	64.5	25.61	70.51	25	72.87	24.87	76.91	24.52	
78.86	24.35	83.26	24	89.35	23.53	90.79	23.46	96.01	23	
101.62	22.78	102.29	22.82	108.12	22.6	116.76	22	120.04	21.03	
120.13	21	120.16	20.98	121.77	20	123.32	19.31	123.92	19	
125.53	18.91	137.34	18.42	144.29	18.12	147.28	18.03	147.37	18.04	
150.1	18	163.15	18.16	167.55	18	171.19	17.89	187.92	17	
202.03	16.46	205.37	16.39	217	16	232.36	15.03	232.88	15	
254.2	14.43	255.46	14.41	256.68	14.39	261.8	14.38	299.64	14.6	
307.83	14.61	308.64	14.64	311.75	14.73	319.09	15	334.27	15.88	
336.32	16	343.07	16.8	344.72	17	345.92	17.19	350.4	18	
354.1	18.62	356.19	19	358.97	19.86	359.66	20	360.29	20.19	
362.68	21	364.83	21.81	365.35	22	365.97	22.24	367.91	23	
368.85	23.38	370.39	24	371.81	24.61	372.77	25	374.34	25.69	
375.03	26	375.36	26.17	376.28	26.61	377.08	27	377.54	27.21	
379.24	28	380.72	28.68	381.4	29	381.85	29.26	383.11	30	
384.52	30.91	384.66	31	386.18	31.95	386.26	32	386.37	32.08	
386.69	32.3	387.77	33	388.04	33.81	388.12	34	388.17	34.23	
388.36	35	388.48	35.43	388.63	36	388.84	36.63	388.97	37	
389.06	37.61	389.12	38	396.72	38.59	398.31	39	401.12	39.22	
408.68	40	412.86	40.57	420.49	40.47	427.9	40.21	436.73	40	
438.78	39.95	439.16	39.92	448.46	39	448.73	38.98	449.32	38.97	
451.94	38.85	469.05	38.09	470.25	38	471.43	37.85	475.01	37.23	
476.29	37	476.59	36.95	477.47	36.77	481.27	36	482.4	35.28	
482.89	35	483.2	34.75	484.02	34	485.04	33.7	486.56	33	
488.62	32.54	491.6	32	495.13	31.02	495.23	31	495.37	30.96	
498.83	30	500.34	29.43	501.5	29	503.42	28.29	504.2	28	
504.85	27.81	507.47	27	510.71	26.02	510.77	26	511.23	25.94	
517.33	25.22	519.57	25	528.49	24.41	533.43	24	539.84	23.73	
556.03	23	556.64	22.97	572.81	22.49	591.69	22	601.75	21.78	
607.56	21.37	609.43	21.22	613.73	21	617.3	20.94	618.45	20.95	
619.05	20.94	620.37	20.93	621.23	20.92	630.31	20.79	674.44	20	
716.2	19.93	721.3	19	737.02	18.47	744	18	755.22	17.64	
781.92	17	793.5	17.02	795.41	17	826.3	16.58	826.54	16	
842.52	15.59	843.48	15.6	847.71	15.62	857.08	15.73	862.26	15.67	
878.34	15.49	899.16	15	916.81	14.08	917.9	14.03	918.21	14	
918.89	13.32	922.76	13.18	923.79	5.29	931.79	4.78	940.69	3.94	
946.99	2.57	953.79	2.12	953.79	12.17	954.29	12.17	954.79	11.47	
954.79	12	956.62	13	957.31	14.12	958.23	14.27	967.45	14.42	
973.9	14	976.33	13.98	982.02	13.81	983.72	13.85	991.54	13.77	
992.25	13.79	1002.57	13.85	1003.96	13.87	1004.61	13.88	1006.57	13.89	
1017.72	13.97	1020.36	14	1031.77	14.54	1033.97	14.57	1036.24	14.66	
1040.44	15	1044.4	15.15	1047.68	15.26	1060.76	15.72	1061.4	15.74	
1065.41	15.85	1069.99	15.89	1085.16	15.83	1112.08	16	1147.73	16.17	
1167.41	16.55	1186.87	16	1188.22	15.98	1190.86	16	1202.66	16.23	

StonyBrookDari en1-ex. txt

1208.3	16.45	1212.85	16.67	1215.62	16.8	1216.63	16.86	1218.47	16.92
1218.83	16.93	1219.68	16.95	1224.62	17	1245.26	17.3	1247.33	17.34
1248.53	17.33	1250.59	17.34	1251.3	17.3	1255.79	17	1291.78	17.11
1293.59	17.15	1307.94	17.43	1308.97	17.46	1310.27	17.5	1321.95	17.99
1322.21	18	1335.66	18.97	1336.05	19	1347.25	19.97	1348.41	20
1356.78	20.44	1361.73	21	1362.16	21.07	1374.84	22	1375.01	22.01
1382.35	22.39	1384.49	22.45	1399.37	22.81	1402.73	22.93	1407.01	23
1407.94	23.05	1408.64	23.07	1409.16	23.06	1412.35	23.18	1420.47	23.14
1423.49	23.1	1431.81	23.17						

Manning's n Values num= 3

Station	Value	Station	Value	Station	Value
0	.12	922.76	.03	953.79	.1

Bank Sta: Left Right Coeff Contr. Expan.

922.76	953.79	.3	.5
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Ineffective Flow num= 3

Sta L	Sta R	Elev	Permanent
450	911.76	14.96	F
964.79	1400	14.96	F
0	450	22	F

Blocked Obstructions num= 3

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
207.68	238.11	25	652.91	680.74	37.5	405.81	467.47	55

Downstream Deck/Roadway Coordinates num= 53

Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord	Sta	Hi	Cord	Lo Cord
654.42	18.77			654.43	18.77			654.91	18.76		
657.69	18.74			661.81	18.68			690.45	18		
691.17	18			691.3	18			692.97	17.94		
697.6	17.77			714.86	17.21			718.55	17		
720.66	17			759.64	16.11			815.42	15.2		
815.42	17.36			840.42	17.36	0		840.42	17.36	11.39	
870.42	17.36	11.39		870.42	14.77	0		877.6	14.44		
884.29	14.49			885.16	14.5			888.95	14.46		
899.46	15			904.53	15			909.9	15		
924.33	14.28			930.32	14.28			941.37	14.27		
947.33	14.28			952.66	14.36			967.81	14.37		
973.09	14.38			980.09	14.5			984.13	14.55		
988.76	14.6			998.68	14.49			1009.25	14.65		
1010.38	14.7			1012.88	14.71			1015.49	14.71		
1024.76	14.69			1027.72	14.7			1030.97	14.73		
1044.45	15			1054.58	15.15			1058.16	15.18		
1073.45	15.33			1083.51	15.51			1088.74	15.6		
1095.15	15.64			1099.37	15.68						

Downstream Bridge Cross Section Data num= 329

Station	Elev	Station	Elev	Station	Elev	Station	Elev	Station	Elev
0	33.56	.92	33.38	1.58	33.2	2.54	33	6.68	32.03
6.82	32	11.02	31.05	11.25	31	15.87	30.05	16	30.03
16.21	30	21.37	29.44	25.48	29	25.66	28.98	36.55	28
37.66	27.91	44.58	27	51.13	26.17	52.91	26	55.29	25.72
60.86	25	64.51	24.28	67.12	24.05	67.29	24.04	67.96	24
75.62	23.26	78.27	23	82.55	22.22	83.98	22	94.82	22.02
97.99	22.19	102.77	22	112.47	21.96	114.46	21	114.85	20.74
116.03	20	116.37	19.57	116.83	19	117.98	18.9	135.65	18
146.51	18.56	153.33	18.65	156.18	18.55	159.73	18.35	164.9	18
170.77	17.64	180.73	17	185.51	16.94	213.89	16	214.05	15.99
214.22	15.98	219.48	15.62	234.87	15	256.65	14.13	257.03	14.12
264.95	14.11	275	14.16	292.08	14.17	292.3	14.18	293.13	14.2
301.14	14.49	312.84	14.77	317.77	15	325.93	15.44	330.31	15.7

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334.67	16	338.24	16.55	341.01	17	345.72	17.75	347.31	18
348.1	18.14	352.5	19	352.58	19.03	355.51	20	357.02	20.57
358.12	21	360.41	21.99	360.43	22	362.36	22.86	362.68	23
363.11	23.2	365.05	24	366.08	24.43	367.45	25	369.1	25.71
369.78	26	370.51	26.33	372.01	27	373.76	27.77	374.28	28
374.76	28.22	376.48	29	378.11	29.8	378.56	30	378.91	30.16
380.67	31	381.94	31.58	382.91	32	384.27	32.65	384.96	33
385.22	33.26	386.11	34	386.12	34.02	386.34	34.27	386.93	34.96
386.97	35	387.11	35.19	387.68	36	387.92	36.32	388.46	37
388.71	37.43	389.06	38	389.08	38.04	389.1	38.06	389.13	38.11
389.14	38.12	389.48	38.64	389.7	38.97	389.72	39	390.04	38.78
391.1	38	395.88	38.35	398.16	39	400.63	39.4	403.44	40
410.73	40.94	411.27	41	429.19	41.32	431.66	41.41	439.19	41
440.52	40.89	445.82	40	450.44	39.38	453.27	39	455.21	38.87
458.08	38.71	462.26	38.34	466.25	38	470.7	37.51	475.08	37
479.84	36.01	479.9	36	479.94	35.97	480.06	35.83	480.78	35
481.24	34.53	481.76	34	482.27	33.53	482.82	33	485.93	32.21
486.94	32	488.61	31.56	490.24	31.18	490.71	31.06	491.04	31
494.52	30.26	496.15	30	501.16	29.19	502.64	29	505.05	28.46
506.55	28	507.38	27.74	509.53	27	512.87	26.16	513.36	26
515.24	25.73	520.24	25	521.6	24.88	522.62	24.81	533.03	24
534.35	23.94	538.78	23.75	549.67	23.27	552.41	23.16	555.73	23
561.76	22.95	564.32	22.8	571.87	22.36	577.96	22	583.49	21.61
590.54	21	594.84	20.85	595.85	20.84	603.02	20.63	608.6	20.49
611.51	20.44	622.76	20.47	628.7	20.44	631.69	20.42	642.14	20.33
651.05	20.23	653.35	20.19	664.03	20	687.57	19.16	690.08	19.14
692.02	19.15	696.96	19.16	698.98	19.17	699.82	19.18	708.29	19
717.41	18.6	722.81	18	725.46	17.72	728.4	17.37	731.17	17
734.06	16.67	738.85	16	741.14	15.62	745.45	15.14	746.85	15
748.34	14.85	750.92	14.64	751.94	14.54	754.67	14.27	756.56	14
759.48	13.52	762.78	13	767.12	12.48	770.19	12	771.37	11.9
776.57	11.88	786.76	11.96	799.69	11.92	800.41	11.9	801.56	11.85
812.57	11.79	813.13	11.77	818.1	11.73	830.98	11.54	834.07	11.35
837.67	11	839.42	11	839.42	12.56	840.42	12.56	840.42	4.61
846.42	3.07	851.22	3.3	859.02	3.44	864.92	2.6	870.42	2.53
870.42	17.53	871.42	17.53	871.42	15	873.68	15	896.69	15
904.29	15.3	908.32	15.86	908.57	15.88	909.81	16	910.25	16.05
910.44	16.06	913.55	16.21	916.03	16.27	921.74	16.29	924.3	16.32
928.97	16.34	931.16	16.32	935.97	16.46	939.42	16.5	940.69	16.48
945.4	16.15	946.33	16.09	947.15	16	952.38	16.88	952.57	17
952.76	17.1	954.36	18	955.13	18.44	956.11	19	957.56	19.81
958.14	20	960.59	20.5	961.25	20.58	962.38	20.7	963.57	20.75
968.5	21	969.56	21.05	969.93	21.07	970.92	21.12	978.77	21.53
984.51	21.9	985.25	21.94	986.12	22	991.21	22.28	993.37	22.4
997.61	22.37	1004.03	22.33	1010.59	22.3	1012.12	22.29	1014.65	22.27
1018.64	22.25	1019.39	22.23	1024.39	22.03	1024.56	22.02	1025.04	22
1029.44	21.83	1030.78	21.79	1034.85	21.64	1037.61	21.54	1042.29	21.4
1043.83	21.44	1044.68	21.51	1047.63	21.78	1048.57	21.86	1050	22
1052	22.19	1053.84	22.36	1056.62	22.52	1059.78	22.73	1060.93	22.8
1063.64	22.93	1063.85	22.94	1065.04	23	1066.75	23.08	1067.24	23.09
1071.52	23.3	1072.62	23.36	1075.83	23.52	1078.69	23.54	1081.01	23.64
1081.7	23.55	1082.61	23.41	1084.44	23.29	1086.55	23.05	1086.7	23.02
1086.77	23	1093.74	22.08	1094.19	22	1099.37	21.5		

Manning's Values num= 3
 Station Val Sta n Val
 0 .08 840.42 .03 870.42 .08

Bank Sta: Left Right Coeff Contr. Expan.
 840.42 870.42 .3 .5
 Ineffective Flow num= 2
 Station L Sta R Elev Permanent
 450 826.58 13.84 F

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0 450 22
 Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 200.49 246.57 25 641.32 675.34 37.5 409.22 459.76 55

Upstream Embankment side slope = 0 hori z. to 1.0 vertical
 Downstream Embankment side slope = 0 hori z. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow
 Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 11.39

Additional Bridge Parameters

Add Friction component to Momentum
 Do not add Weight component to Momentum
 Class B flow critical depth computations use critical depth
 inside the bridge at the upstream end
 Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 1200

INPUT

Description: DS face of Boston Post Road (HEC2-8.1)

Station Elevation Data num= 328

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	33.56	.92	33.38	1.58	33.2	2.54	33	6.68	32.03
6.82	32	11.02	31.05	11.25	31	15.87	30.05	16	30.03
16.21	30	21.37	29.44	25.48	29	25.66	28.98	36.55	28
37.66	27.91	44.58	27	51.13	26.17	52.91	26	55.29	25.72
60.86	25	64.51	24.28	67.12	24.05	67.29	24.04	67.96	24
75.62	23.26	78.27	23	82.55	22.22	83.98	22	94.82	22.02
97.99	22.19	102.77	22	112.47	21.96	114.46	21	114.85	20.74
116.03	20	116.37	19.57	116.83	19	117.98	18.9	135.65	18
146.51	18.56	153.33	18.65	156.18	18.55	159.73	18.35	164.9	18
170.77	17.64	180.73	17	185.51	16.94	213.89	16	214.05	15.99
214.22	15.98	219.48	15.62	234.87	15	256.65	14.13	257.03	14.12
264.95	14.11	275	14.16	292.08	14.17	292.3	14.18	293.13	14.2
301.14	14.49	312.84	14.77	317.77	15	325.93	15.44	330.31	15.7
334.67	16	338.24	16.55	341.01	17	345.72	17.75	347.31	18
348.1	18.14	352.5	19	352.58	19.03	355.51	20	357.02	20.57
358.12	21	360.41	21.99	360.43	22	362.36	22.86	362.68	23
363.11	23.2	365.05	24	366.08	24.43	367.45	25	369.1	25.71
369.78	26	370.51	26.33	372.01	27	373.76	27.77	374.28	28
374.76	28.22	376.48	29	378.11	29.8	378.56	30	378.91	30.16
380.67	31	381.94	31.58	382.91	32	384.27	32.65	384.96	33
385.22	33.26	386.11	34	386.12	34.02	386.34	34.27	386.93	34.96

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386.97	35	387.11	35.19	387.68	36	387.92	36.32	388.46	37
388.71	37.43	389.06	38	389.08	38.04	389.1	38.06	389.13	38.11
389.14	38.12	389.48	38.64	389.7	38.97	389.72	39	390.04	38.78
391.1	38	395.88	38.35	398.16	39	400.63	39.4	403.44	40
410.73	40.94	411.27	41	429.19	41.32	431.66	41.41	439.19	41
440.52	40.89	445.82	40	450.44	39.38	453.27	39	455.21	38.87
458.08	38.71	462.26	38.34	466.25	38	470.7	37.51	475.08	37
479.84	36.01	479.9	36	479.94	35.97	480.06	35.83	480.78	35
481.24	34.53	481.76	34	482.27	33.53	482.82	33	485.93	32.21
486.94	32	488.61	31.56	490.24	31.18	490.71	31.06	491.04	31
494.52	30.26	496.15	30	501.16	29.19	502.64	29	505.05	28.46
506.55	28	507.38	27.74	509.53	27	512.87	26.16	513.36	26
515.24	25.73	520.24	25	521.6	24.88	522.62	24.81	533.03	24
534.35	23.94	538.78	23.75	549.67	23.27	552.41	23.16	555.73	23
561.76	22.95	564.32	22.8	571.87	22.36	577.96	22	583.49	21.61
590.54	21	594.84	20.85	595.85	20.84	603.02	20.63	608.6	20.49
611.51	20.44	622.76	20.47	628.7	20.44	631.69	20.42	642.14	20.33
651.05	20.23	653.35	20.19	664.03	20	687.57	19.16	690.08	19.14
692.02	19.15	696.96	19.16	698.98	19.17	699.82	19.18	708.29	19
717.41	18.6	722.81	18	725.46	17.72	728.4	17.37	731.17	17
734.06	16.67	738.85	16	741.14	15.62	745.45	15.14	746.85	15
748.34	14.85	750.92	14.64	751.94	14.54	754.67	14.27	756.56	14
759.48	13.52	762.78	13	767.12	12.48	770.19	12	771.37	11.9
776.57	11.88	786.76	11.96	799.69	11.92	800.41	11.9	801.56	11.85
812.57	11.79	813.13	11.77	818.1	11.73	830.98	11.54	834.07	11.35
837.67	11	844.15	10.29	845.63	10.06	848.42	10.6	849.42	10.6
849.42	4.96	855.02	4.75	860.82	3.62	867.22	2.99	872.68	4.31
872.68	16.26	873.68	16.26	873.68	15	896.69	15	904.29	15.3
908.32	15.86	908.57	15.88	909.81	16	910.25	16.05	910.44	16.06
913.55	16.21	916.03	16.27	921.74	16.29	924.3	16.32	928.97	16.34
931.16	16.32	935.97	16.46	939.42	16.5	940.69	16.48	945.4	16.15
946.33	16.09	947.15	16	952.38	16.88	952.57	17	952.76	17.1
954.36	18	955.13	18.44	956.11	19	957.56	19.81	958.14	20
960.59	20.5	961.25	20.58	962.38	20.7	963.57	20.75	968.5	21
969.56	21.05	969.93	21.07	970.92	21.12	978.77	21.53	984.51	21.9
985.25	21.94	986.12	22	991.21	22.28	993.37	22.4	997.61	22.37
1004.03	22.33	1010.59	22.3	1012.12	22.29	1014.65	22.27	1018.64	22.25
1019.39	22.23	1024.39	22.03	1024.56	22.02	1025.04	22	1029.44	21.83
1030.78	21.79	1034.85	21.64	1037.61	21.54	1042.29	21.4	1043.83	21.44
1044.68	21.51	1047.63	21.78	1048.57	21.86	1050	22	1052	22.19
1053.84	22.36	1056.62	22.52	1059.78	22.73	1060.93	22.8	1063.64	22.93
1063.85	22.94	1065.04	23	1066.75	23.08	1067.24	23.09	1071.52	23.3
1072.62	23.36	1075.83	23.52	1078.69	23.54	1081.01	23.64	1081.7	23.55
1082.61	23.41	1084.44	23.29	1086.55	23.05	1086.7	23.02	1086.77	23
1093.74	22.08	1094.19	22	1099.37	21.5				

Manning's n Values num= 3
 Sta n Val Sta n Val
 0 .08 849.42 .03 872.68 .08

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 849.42 872.68 44.1 43.69 45.04 .3 .5

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 450 826.58 13.84 F
 0 450 22 F

Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev
 200.49 246.57 25 641.32 675.34 37.5 409.22 459.76 55

CROSS SECTION

StonyBrookDari en1-ex. txt

RIVER: StonyBrook
REACH: StonyBrook

RS: 1156

INPUT

Description: FEMA E - DS section of Boston Post Road (HEC2-8)

Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation
0	29.2	.97	29	3.01	28.65	7.04	28	9.06	27.74
14.45	27	19.44	26.35	20.11	26.29	22.17	26	27.76	25.28
29.86	25	31.27	24.8	37	24	42.52	23.33	45.11	23
55.61	22.06	56.24	22	76.72	21.94	77.19	22	80.85	21.63
84.47	21	84.71	20.64	85.21	20	85.59	19.46	85.93	19
88.08	18.16	88.22	18.11	89.31	18	114.33	18.27	117.42	18.67
119.99	19	123.15	18.77	128.83	18.32	133.25	18	137.81	17.68
149.15	17	170.08	16.3	175.02	16.17	177.87	16.1	181.06	16
193.76	15.38	201.72	15	207.96	14.71	216.97	14.3	223.31	14
240.53	13.52	245.2	13.4	256.82	13.47	274.53	13.89	277.5	14
284.1	14.36	294.48	15	301.01	15.62	304.47	16	314.6	16.86
316.07	17	317.23	17.27	320.45	18	321.77	18.3	324.92	19
325.58	19.16	326.73	19.43	329.22	20	331.19	20.72	331.95	21
333.26	21.61	334.11	22	334.87	22.34	336.39	23	337.51	23.54
338.6	24	339.85	24.56	340.88	25	342.93	25.84	343.34	26
344.45	26.42	345.56	26.83	346.03	27	348.32	27.88	348.74	28
350.51	28.54	351.99	29	352.25	29.07	352.64	29.17	355.73	30
357.96	30.59	358.84	30.82	359.51	31	362.04	31.69	363.3	32
366.51	32.84	367.12	33	367.72	33.28	369.3	34	370.12	34.33
371.7	35	372.2	35.22	374.01	36	374.81	36.35	376.25	37
377.63	37.63	378.42	38	378.93	38.85	379.01	39	380	39.82
380.16	40	380.97	40.07	385.64	40.45	390.31	41	393.03	41.32
396.1	41.69	397.87	41.9	398.8	42	420.72	41.95	420.87	41.44
421.02	41	423.35	40.46	424.98	40	427.13	39.83	432.94	39
434.19	38.79	439.34	38	441.2	37.7	442.59	37.45	444.85	37
448.36	36.33	450.05	36	452.72	35.21	453.37	35	453.75	34.88
456.56	34	457.78	33.61	459.78	33	461.18	32.77	465.6	32.52
468.61	32.24	472.06	32	475.4	31.97	475.5	31.96	475.6	31.95
477.46	31.73	482.64	31	485.48	30.49	487.86	30	489.9	29.55
492.39	29	494.31	28.58	496.72	28	498.07	27.67	500.58	27
501.24	26.66	502.63	26	503.61	25.38	504.18	25	504.66	24.79
506.41	24	519.05	23.1	519.76	23.06	520.76	23	521.77	22.9
530.56	22	540.32	21.03	540.63	21	556.5	20.1	558.37	20
562.11	19.8	566.86	19.73	573.23	19.54	578.5	19.48	581.08	19.41
583.71	19.4	589.13	19.54	598.7	19.01	598.88	19	603.52	18.66
604.86	18.59	607.94	18.46	612.78	18.28	614.05	18.24	619.1	18
621.86	17.87	623.77	17.78	629.99	17.53	636.92	17.29	639.44	17.16
645.53	17	646.91	16.94	647.97	16.97	650.64	16.69	654.11	16
655.3	15.7	657.88	15	661.09	14.16	661.71	14	663.05	13.71
666.36	13	667.16	12.82	671.15	12	672.85	11.67	676.31	11
684.52	10.38	687.84	10	695.33	9.58	696.44	9.57	707.86	9.6
716.86	9.71	719.73	9.74	721.42	9.75	722.54	9.8	736.48	9.54
754.22	9.43	766.54	9.02	767.24	9	767.41	8.94	767.47	8.52
776	5.11	781.31	4.33	786.59	3.72	791.31	4.22	794.76	4.64
794.85	4.64	794.85	10.25	795.35	10.25	797.32	10.29	797.66	11
798.65	11.54	799.5	12	800.3	12.4	800.57	12.54	801.55	13
801.89	13.17	803.49	14	810.33	14.3	827.73	15	829.06	15.6
831.54	15.93	831.91	16	832.82	16.37	834.39	17	835.53	17.46
836.93	18	837.24	18.11	839.65	19	842.07	19.82	842.6	20
844.99	20.72	845.4	20.85	845.87	21	846.17	21.1	849.03	22
890.91	22.77	891.08	23	891.38	23.4	891.82	24	892.25	24.58
892.56	25	893.27	25.98	893.29	26	893.3	26.02	894.07	27
894.48	27.51	894.85	28	895.36	28.52	896.34	29	900.87	29.75
901.78	29.86	902.12	29.88	904.23	30	914.83	30.97	915.47	31

Manning's n Values

num= 4

StonyBrookDari en1-ex. txt

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	
0	.12	468.61	.08	767.24	.03	794.85	.12	
Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	767.24	794.85		306.1	307.31	337.92	.3	.5
Ineffective Flow	num=		1					
Sta L	Sta R	El ev	Permanent					
0	530.56	22	F					
Blocked Obstructions	num=		3					
Sta L	Sta R	El ev	Sta L	Sta R	El ev	Sta L	Sta R	El ev
164.1	208.98	25	436.84	451.46	50.7	816.58	853.52	31

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 849

INPUT

Descripti on: FEMA D (HEC2-7)

Stati on	El evati on	Data	num=	176	Sta	El ev	Sta	El ev	Sta	El ev
0	32.92	3.73	32.25	4.9	32	6.1	31.78	10.46	31	31
12.31	30.69	16.48	30	18.95	29.59	22.75	29	26.65	28.34	28.34
28.71	28	29.53	27.87	34.83	27	35.68	26.87	40.94	26	26
41.86	25.86	47.2	25	49.19	24.71	53.85	24	58.76	23.26	23.26
60.47	23	61.57	22.82	67.1	22	67.9	21.88	73.86	21	21
74.54	20.91	81.07	20	81.82	19.91	85.85	19.4	88.32	19.17	19.17
88.98	19.09	90.4	19	97.84	18.74	98.99	18.71	100.97	18.59	18.59
101.86	18.56	103.15	18.66	103.48	18.69	104.74	19	106.34	19.37	19.37
107.86	20	109.93	19.45	110.47	19	110.54	18.93	111.64	18	18
111.8	17.99	124.22	17	137.51	17.61	138.48	18	163.42	17.59	17.59
165.29	17	170.59	16.81	187.45	16	200.75	15.61	203.91	15.52	15.52
214.23	15.1	214.95	15	215.81	14.91	216.28	14.87	219.45	14.62	14.62
220.93	14.47	226.45	14	228.22	13.9	229.75	13.86	248.48	13	13
266.24	12.77	267.57	12.69	271.03	12.47	274.71	12.2	277.37	12	12
284.72	11.02	284.82	11.01	284.99	11	291.1	10.88	292.66	11	11
295.29	11.21	296.6	11.37	297.12	11.41	298.63	11.49	302.51	11.86	11.86
304.42	12	311.74	12.21	315.64	12.29	328.84	13	341.44	12.76	12.76
353.29	12.19	359.4	12.29	367.87	12.41	378.54	12.61	394.58	13	13
400.12	13.36	403.99	13.61	409.89	14	413.16	14.62	414.6	14.71	14.71
416.92	15	420.28	15.31	424.36	15.69	425.93	15.85	427.66	16	16
430.04	16.22	437.26	17	437.32	17.01	443.66	17.84	446.57	17.97	17.97
446.91	18	449.17	18.27	451.53	18.47	461.65	18.86	463.92	19	19
479.33	19.14	483.44	19	498.54	18.61	499.2	18.63	503.14	18.44	18.44
505.78	18.31	509.55	18	510.94	17.45	511.85	17	512.73	16.6	16.6
514.05	16	515.99	15.12	516.18	15.03	516.25	15	517.11	14.64	14.64
518.63	14	518.75	13.96	520.68	13	522.21	12.66	525.23	12	12
528.36	11.59	532.67	11	536.87	10.46	540.33	10	544.11	9.57	9.57
546.82	9.35	550.39	8.11	554.24	4.68	559.24	3.59	564.99	4.37	4.37
571.89	4.01	574.87	4.04	576.49	4.36	576.49	7.52	576.76	7.52	7.52
577.43	8	579.04	8.74	579.51	8.95	579.6	9	579.61	8.99	8.99
579.68	9	596.2	9.07	599.3	9.41	602.79	9.72	603.98	9.85	9.85
605.64	10	608.89	10.3	610.54	10.43	613.7	10.65	614.63	10.69	10.69
615.35	10.72	618.25	10.74	623.39	10.73	627.57	10.82	629.56	11	11
631.16	11.16	632.7	11.37	636.86	12	642.69	12.87	643.5	13	13
644.73	13.15	651.7	14	656.04	14.54	659.37	15	661.3	15.52	15.52
662.49	15.76									

Manni ng' s	n Val	Sta	num=	3	Sta	n Val
0	.12	550.39	.035	579.04	.12	

StonyBrookDari en1-ex. txt

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.	
550.39	579.04	181.16	138.76	79.43	.1	.3		
Ineffective Flow	num=	1						
Sta L	Sta R	Elev	Permanent					
0	498.54	18.61	F					
Blocked Obstructions	num=	3						
Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
621.24	638.92	30.01	418.3	493.73	41	344.13	383.55	23.5

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 710

INPUT

Description: FEMA C - upstream section for Old Kings Highway (HEC2-7.1)

Station	Elevation	Data	num=	109						
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	
0	14.57	.77	14.52	2.04	14.49	4.87	14.32	11.03	14	
16.26	13.72	19.45	13.63	20.91	13.54	22.02	13.5	25.95	13	
27.63	12.76	31.58	12.35	33.14	12.19	34.77	12	36.72	11.73	
43.06	11	56.23	10.78	59.44	10.68	76.44	10	90.55	9.26	
96.49	9.05	97.46	9.02	97.73	9	112.64	8.38	115.1	8	
117.56	7.68	121.73	7	191.28	5.06	200.52	3.17	203.84	1.71	
212.14	1.24	222.3	1.09	233.83	2.48	243.48	2.53	243.48	6.4	
244.54	6.4	248.74	6.82	248.8	7	248.9	7.03	250.52	7.43	
250.83	7.5	252.53	7.93	252.67	7.96	252.73	7.98	252.89	8	
269.4	8.3	271.83	8.43	275.5	8.57	280.57	8.72	282.51	8.76	
285.98	8.87	289.58	9	311.64	9.28	320.14	9.23	323.4	9	
327.49	9.11	328.27	9.17	337.47	9.39	339.31	9.87	339.72	10	
341.58	10.58	342.72	10.93	342.96	11	344.08	11.17	348.34	12	
360.29	12.72	362.36	13	364.62	13.37	368.76	14	371.97	14.92	
372.12	14.95	372.77	15	378.92	15.99	379.12	16	380.17	16.08	
380.58	16.09	386.75	16.29	388.05	16.31	390.43	16.35	397.27	16.49	
400.71	16.55	403.85	16.46	406.25	16.4	410.49	16.28	412	16.25	
417.79	16.22	418.57	16.25	419.64	16.29	422.26	16.74	425.96	16.77	
426.92	16.8	430.52	16.78	431.21	16.77	437.4	16.65	440.95	16.73	
444.83	16.64	448.02	16.68	452.3	16.76	452.52	16.77	454.25	16.79	
457.32	16.78	459.51	16.76	463.94	16.72	465.46	16.69	470.64	16.7	
471.91	16.66	472.51	16.62	473.25	16.59	477.89	16.72			

Manning's n Values	num=	3
Sta n Val	Sta n Val	Sta n Val
0 .055	191.28	.03 243.48
		.12

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff	Contr.	Expan.
191.28	243.48	45.18	22.5	11.77	.3	.5	
Ineffective Flow	num=	1					
Sta L	Sta R	Elev	Permanent				
256.36	354.64	12.25	F	99			
Blocked Obstructions	num=	1					
Sta L	Sta R	Elev					
324.6	364.42	30.01					

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 687

INPUT

Description: US face of Old Kings Highway Bridge (HEC2-7.2)

StonyBrookDari en1-ex. txt

Station		Elevation		Data		num=	156				
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.07	1.95	15.05	7.23	15	8.81	14.9	9.08	14.89		
9.32	14.88	14.25	14.39	16.85	14.41	26.54	14.28	28.26	14.29		
29.2	14.3	30.2	14.31	36.83	14.33	38.94	14.35	42.2	14.36		
43.73	14.38	46.27	14.32	47.64	14.34	54.36	14.04	55.37	14		
60.46	13.67	63.15	13.5	65.84	13.33	66.83	13.23	68.86	13		
71.46	12.72	74.18	12.5	75.76	12.35	79.01	12.1	79.33	12.07		
80.29	12	82.96	11.79	83.63	11.74	84.79	11.6	85.32	11.61		
86.48	11.69	88.08	11.76	93.25	12	94.32	12.05	94.87	12.08		
98.28	12.25	100.59	12.36	103.34	12.49	105.61	12.6	110.43	12.83		
111.01	12.84	114.2	12.81	116.13	12.76	119.25	12.47	120.96	12		
127.16	11.75	135.42	11	138.24	10.95	142.11	10.78	156.14	10		
160.51	9.77	161.46	9.74	164.24	9.67	166.57	9.63	169.12	9.56		
171.05	9.43	176.3	9.39	186.73	9	195.99	8.54	198.15	8.5		
203.65	8.33	206.99	8.4	210.92	8.41	216.21	8.18	218.55	8.21		
220.05	8.24	222.95	8.17	223.12	8.16	224.88	8	226.94	7.94		
228.88	7.53	230.76	7.14	231.13	7.06	231.41	7	260	6.81		
260.75	6.81	260.75	.8	262.53	.8	266.27	.26	276.39	.57		
282.44	1.75	284.75	1.75	284.75	8.97	285.37	8.97	285.37	8.61		
290.25	8.61	291.75	8.85	293.59	9	300.76	8.72	301.17	8.65		
310.49	9	350.52	9.17	359.34	9.66	360.49	9.93	360.93	10		
366.83	9.82	372.11	10	385.46	10.67	386.4	11	392.52	10.95		
393.02	11	399.39	11.21	403.86	12	405.78	12.26	409.75	13		
414.31	13.88	415.03	14	415.54	14.13	419.56	15	419.7	15.07		
421.48	16	421.54	16.03	422.12	16.33	423.16	16.62	423.4	16.69		
423.57	16.74	424.34	16.91	424.44	16.94	424.74	17	425.35	17.16		
426.43	17.44	427.49	17.51	427.98	17.6	429.65	17.69	430.04	17.74		
430.32	17.78	430.52	17.81	432.65	17.89	432.85	17.91	435.48	18		
449.21	18.15	454.36	18.21	455.21	18.24	458.87	18.28	459.2	18.3		
459.87	18.29	462.9	18.33	464.67	18.27	468.45	18.3	472.93	18.34		
474.28	18	495.1	17.93	496.77	17.69	501.23	17	547.55	17.64		
554.1	18	559.45	18.21	568.75	18.34	571.14	18.4	575.46	18.52		
587.92	18.81										

Manning's n Values		num=	3		
Sta	n Val	Sta	n Val	Sta	n Val
0	.055	260.75	.03	284.75	.12

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	260.75	284.75		40.62	40.39		.3	.5
Ineffective Flow	num=		2					
Sta L	Sta R	Elev	Permanent					
287.75	587.92	8.8	F					
112.06	257.75	8.8	F					

BRI DGE

RIVER: StonyBrook
 REACH: StonyBrook RS: 667

INPUT
 Description: Old Kings Highway Bridge
 Distance from Upstream XS = 3
 Deck/Roadway Width = 32.7
 Weir Coefficient = 2.6
 Upstream Deck/Roadway Coordinates

num=		7								
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord	
156.14	10				260.75	8.8	0	260.75	8.8	6.92
284.75	8.92	6.91			284.75	8.92	0	350	9	
390	10									

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Upstream Bridge Cross Section Data

Station Elevation Data num= 156									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	15.07	1.95	15.05	7.23	15	8.81	14.9	9.08	14.89
9.32	14.88	14.25	14.39	16.85	14.41	26.54	14.28	28.26	14.29
29.2	14.3	30.2	14.31	36.83	14.33	38.94	14.35	42.2	14.36
43.73	14.38	46.27	14.32	47.64	14.34	54.36	14.04	55.37	14
60.46	13.67	63.15	13.5	65.84	13.33	66.83	13.23	68.86	13
71.46	12.72	74.18	12.5	75.76	12.35	79.01	12.1	79.33	12.07
80.29	12	82.96	11.79	83.63	11.74	84.79	11.6	85.32	11.61
86.48	11.69	88.08	11.76	93.25	12	94.32	12.05	94.87	12.08
98.28	12.25	100.59	12.36	103.34	12.49	105.61	12.6	110.43	12.83
111.01	12.84	114.2	12.81	116.13	12.76	119.25	12.47	120.96	12
127.16	11.75	135.42	11	138.24	10.95	142.11	10.78	156.14	10
160.51	9.77	161.46	9.74	164.24	9.67	166.57	9.63	169.12	9.56
171.05	9.43	176.3	9.39	186.73	9	195.99	8.54	198.15	8.5
203.65	8.33	206.99	8.4	210.92	8.41	216.21	8.18	218.55	8.21
220.05	8.24	222.95	8.17	223.12	8.16	224.88	8	226.94	7.94
228.88	7.53	230.76	7.14	231.13	7.06	231.41	7	260	6.81
260.75	6.81	260.75	.8	262.53	.8	266.27	.26	276.39	.57
282.44	1.75	284.75	1.75	284.75	8.97	285.37	8.97	285.37	8.61
290.25	8.61	291.75	8.85	293.59	9	300.76	8.72	301.17	8.65
310.49	9	350.52	9.17	359.34	9.66	360.49	9.93	360.93	10
366.83	9.82	372.11	10	385.46	10.67	386.4	11	392.52	10.95
393.02	11	399.39	11.21	403.86	12	405.78	12.26	409.75	13
414.31	13.88	415.03	14	415.54	14.13	419.56	15	419.7	15.07
421.48	16	421.54	16.03	422.12	16.33	423.16	16.62	423.4	16.69
423.57	16.74	424.34	16.91	424.44	16.94	424.74	17	425.35	17.16
426.43	17.44	427.49	17.51	427.98	17.6	429.65	17.69	430.04	17.74
430.32	17.78	430.52	17.81	432.65	17.89	432.85	17.91	435.48	18
449.21	18.15	454.36	18.21	455.21	18.24	458.87	18.28	459.2	18.3
459.87	18.29	462.9	18.33	464.67	18.27	468.45	18.3	472.93	18.34
474.28	18	495.1	17.93	496.77	17.69	501.23	17	547.55	17.64
554.1	18	559.45	18.21	568.75	18.34	571.14	18.4	575.46	18.52
587.92	18.81								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.055	260.75	.03	284.75	.12

Bank Sta:	Left	Right	Coeff	Contr.	Expan.
	260.75	284.75		.3	.5

Ineffective Flow num= 2				
Sta L	Sta R	Elev	Permanent	
287.75	587.92	8.8	F	
112.06	257.75	8.8	F	

Downstream Deck/Roadway Coordinates num= 7									
Sta	Hi	Cord	Lo	Cord	Sta	Hi	Cord	Lo	Cord
127.92		10			255.72		9.1		0
279.72		8.77		6.91	279.72		8.77		0
385		10			345		9		

Downstream Bridge Cross Section Data num= 141									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.91	4.4	13.79	9.22	13.68	16	13.51	22.02	13.32
25.48	13.21	26.36	13.15	40.83	13.01	40.87	13	42.74	12.94
47.01	12.71	48.91	12.66	51	12.65	52.31	12.61	68.51	12.29
72.52	12.18	73.31	12.17	74.84	12.15	76.07	12.17	76.73	12.18
82.35	12.08	84.79	12.06	86.2	12	100.66	11.45	102.17	11.36

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106.58	11.04	106.96	11.02	107.44	11	117.21	10.52	126.53	10.07
126.96	10.05	127.92	10.01	128.32	10	149.66	9.06	151.51	9
156.94	8.69	157.24	8.67	158.7	8.57	160.04	8.53	165	8.45
166.2	8.46	167.63	8.52	169.65	8.65	169.93	8.68	173.37	9
222.11	8.68	223.73	8.6	235.04	8.64	237.12	8.42	240.18	8.3
242.31	8.22	242.528	212193	245	8.12	248.32	8	248.41	7.98
248.44	7.97	248.55	7.93	249.98	7.46	250.6	7.06	250.69	7
251.25	6.68	254.22	6.35	254.97	6.35	255.72	6.35	255.72	.71
257.2	.71	263.98	.7	269.44	.14	273.19	.62	276.13	.77
279.72	.77	279.72	6.35	281.59	6.35	289.31	7	292.48	7.66
295.17	8	320.63	8.9	323.4	9	346.48	9.88	348.94	9.77
378.98	10	400.07	10.16	403.15	10.1	404.76	10.33	407.81	10.28
410.03	10.31	411.89	10.35	413.04	10.41	414.45	10.4	420.65	11
422.51	11.22	426.68	12	427.48	12.19	428.16	12.38	429.9	13
432.46	13.91	432.72	14	432.97	14.08	435.72	15	437.69	15.19
443.57	15.75	446.95	15.95	447.5	16	460.03	16.85	462.04	17
486.14	17.13	488.38	17.12	489.41	17.13	490.43	17.16	491.94	17.2
499.84	17.28	504.39	17.5	508.32	17.42	510.26	17.48	522.73	18
525.89	18.16	526.87	18.22	533.16	18.58	544.84	19	546.2	19.03
547.45	19.13	548.06	19.17	549.14	19.27	555.27	19.74	558.04	20
563.57	20.61	564.82	20.78	565.25	20.83	566.65	21	568.75	21.22
569.86	21.32	572.15	21.52	573.77	21.7	574.84	21.78	575.73	21.81
578.35	22	582.55	22.43	584.5	22.56	586.18	22.77	587.15	22.82
587.92	22.92								

Manning's n Values num= 4
 Sta n Val Sta n Val Sta n Val Sta n Val
 0 .055 255.72 .03 279.72 .05 426.68 .1

Bank Sta: Left Right Coeff Contr. Expan.
 255.72 279.72 .3 .5

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 284.41 587.92 7.84 F
 97.12 251.03 7.84 F

Blocked Obstructions num= 1
 Sta L Sta R Elev
 442.37 462.26 25

Upstream Embankment side slope = 0 hori z. to 1.0 vertical
 Downstream Embankment side slope = 0 hori z. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data

Energy
 Selected Low Flow Methods = Highest Energy Answer

High Flow Method

Pressure and Weir flow
 Submerged Inlet Cd =
 Submerged Inlet + Outlet Cd = .8
 Max Low Cord = 6.92

Additional Bridge Parameters

Add Friction component to Momentum
 Do not add Weight component to Momentum
 Class B flow critical depth computations use critical depth

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inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook RS: 647

INPUT

Description: DS Face of Old Kings Highway Bridge (HEC2-5.1)

Station Elevation Data num= 141									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	13.91	4.4	13.79	9.22	13.68	16	13.51	22.02	13.32
25.48	13.21	26.36	13.15	40.83	13.01	40.87	13	42.74	12.94
47.01	12.71	48.91	12.66	51	12.65	52.31	12.61	68.51	12.29
72.52	12.18	73.31	12.17	74.84	12.15	76.07	12.17	76.73	12.18
82.35	12.08	84.79	12.06	86.2	12	100.66	11.45	102.17	11.36
106.58	11.04	106.96	11.02	107.44	11	117.21	10.52	126.53	10.07
126.96	10.05	127.92	10.01	128.32	10	149.66	9.06	151.51	9
156.94	8.69	157.24	8.67	158.7	8.57	160.04	8.53	165	8.45
166.2	8.46	167.63	8.52	169.65	8.65	169.93	8.68	173.37	9
222.11	8.68	223.73	8.6	235.04	8.64	237.12	8.42	240.18	8.3
242.31	8.22	242.528	212193	245	8.12	248.32	8	248.41	7.98
248.44	7.97	248.55	7.93	249.98	7.46	250.6	7.06	250.69	7
251.25	6.68	254.22	6.35	254.97	6.35	255.72	6.35	255.72	.71
257.2	.71	263.98	.7	269.44	.14	273.19	.62	276.13	.77
279.72	.77	279.72	6.35	281.59	6.35	289.31	7	292.48	7.66
295.17	8	320.63	8.9	323.4	9	346.48	9.88	348.94	9.77
378.98	10	400.07	10.16	403.15	10.1	404.76	10.33	407.81	10.28
410.03	10.31	411.89	10.35	413.04	10.41	414.45	10.4	420.65	11
422.51	11.22	426.68	12	427.48	12.19	428.16	12.38	429.9	13
432.46	13.91	432.72	14	432.97	14.08	435.72	15	437.69	15.19
443.57	15.75	446.95	15.95	447.5	16	460.03	16.85	462.04	17
486.14	17.13	488.38	17.12	489.41	17.13	490.43	17.16	491.94	17.2
499.84	17.28	504.39	17.5	508.32	17.42	510.26	17.48	522.73	18
525.89	18.16	526.87	18.22	533.16	18.58	544.84	19	546.2	19.03
547.45	19.13	548.06	19.17	549.14	19.27	555.27	19.74	558.04	20
563.57	20.61	564.82	20.78	565.25	20.83	566.65	21	568.75	21.22
569.86	21.32	572.15	21.52	573.77	21.7	574.84	21.78	575.73	21.81
578.35	22	582.55	22.43	584.5	22.56	586.18	22.77	587.15	22.82
587.92	22.92								

Manning's n Values num= 4									
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.055	255.72	.03	279.72	.05	426.68	.1		

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
	255.72	279.72		40.38	15.09	17.76		.3	.5

Ineffective Flow num= 2									
Sta L	Sta R	Elev	Permanent						
284.41	587.92	7.84	F						
97.12	251.03	7.84	F						

Blocked Obstructions num= 1									
Sta L	Sta R	Elev							
442.37	462.26	25							

CROSS SECTION

RIVER: StonyBrook
REACH: StonyBrook RS: 632

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INPUT

Description: FEMA B - ds section of Old Kings Highway Bridge (HEC2-5)

Station Elevation Data		num= 122									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	27.51	.04	27.5	1.49	27.09	1.77	27.07	2.57			27
7.03	26.93	8.78	26.78	13.42	26.58	14.75	26.5	15.8			26.41
17.72	26.26	20.07	26	23	25.76	26.83	25	27.28			24.9
32.65	24	34.05	23.73	37.53	23	38.9	22.71	42.28			22
44.18	21.61	47.08	21	49.62	20.45	51.73	20	55.52			19.16
56.17	19	59.29	18.24	60.1	18	62.61	17.25	63.48			17
66.42	16.14	66.91	16	67.52	15.83	70.4	15	72.96			14.28
73.96	14	74.41	13.87	77.57	13	80.89	12.29	83.07			12
84.91	11.86	87.04	11.81	88.54	11.76	89.95	11.72	110.67			11
118.28	10.64	118.74	10	131.42	9.01	131.55	9	139.39			8.79
144.45	8.63	150.76	8.46	157.94	8.33	163.87	8.23	168.28			8.21
168.74	8.2	170.8	8.15	175.11	8	188.32	7.07	200.5			3.43
202.25	1.17	208.1	.9	218.83	3.14	225.92	2.78	231.04			2.03
234.61	3.41	243.7	7.8	243.85	8	252.74	8.2	256.27			8.3
259.6	8.38	262.33	8.43	266.28	8.49	274.52	8.63	280.11			8.73
282.81	8.78	290.13	9	300.44	9.82	302.13	10	344.9			9.58
349.69	9	358.95	9.34	368.05	10	372.5	10.69	374.56			11
379.66	11.91	380.17	12	382.34	12.75	383.23	13	385.5			13.71
386.48	14	388.73	14.7	389.78	15	393.88	15.4	395.63			15.57
400.99	16	406.21	16.58	411.9	17	435.68	17.67	439.07			17.7
439.63	17.69	442.67	17.73	445.76	17.78	451.91	17.93	454			18
460.22	18.56	466.4	18.97	466.83	19	470.65	19.19	474.13			19.38
478.18	19.61	479.67	19.7	483.07	19.87	486.18	20	490.9			20.37
498.54	21	505.68	21.72	508.64	22	514.21	22.55	518.5			23
519.99	23.13	520.42	23.18								

Manning's n Values

num= 5

Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.1	131.42	.04	188.32	.03	243.85	.05	380.17	.1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 188.32 243.85 60.06 58.16 45.68 .3 .5

Blocked Obstructions

num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
24.16	72.93	25.533	474.58	507.24	36.89

CROSS SECTION

RIVER: StonyBrook

REACH: StonyBrook

RS: 574

INPUT

Description: US end of island (HEC2-4)

Station Elevation Data num= 160

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	42	8.57	41.14	9.06	41	9.47	40.9	12.83	40
15.04	39.47	17.09	39	18.11	38.77	21.24	38	25.52	37
25.59	36.99	29.8	36	31.32	35.36	32.18	35	32.75	34.62
33.7	34	34.81	33.26	35.21	33	35.96	32.51	36.74	32
38.24	31.01	38.26	30.99	39.83	30	41.58	29.13	41.86	29
42.02	28.91	42.44	28.7	43.84	28	44.23	27.82	46.04	27
47.29	26.45	48.22	26	48.61	25.78	49.65	25.22	50.07	25
50.67	24.73	52.18	24	52.55	23.82	54.25	23	54.48	22.89
55.48	22.41	56.49	22	56.54	21.98	56.9	21.83	58.37	21.2
58.83	21	59.75	20.6	61.16	20	62.9	19.37	63.88	19
66.84	18.31	67.85	18.08	68.07	18	72.08	17.27	74.22	17
78.46	16.36	81.72	16	82.43	15.92	83.87	15.72	87.05	15.27
88.48	15	93.54	14.05	93.82	14	98.32	13.15	99.11	13

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101.48	12.55	103.91	12.09	104.39	12	108.5	11.22	109.64	11
113.24	10.31	114.89	10	118.37	9.4	120.47	9	128.23	8.31
132.06	8.07	133.25	8	149.99	7.52	155.34	7.44	156.11	7.43
159.93	7.34	181.69	7	187.13	6.3	188.37	1.35	190.58	1.08
194.33	1.5	199	1.57	201.43	1.81	203.13	5.82	204.41	5.64
208.79	6.8	216.49	6.76	222.74	3.22	227.93	1.11	232.12	1.62
237.14	2.37	239.47	3.28	243.14	5.18	247.28	5.2	249.48	5.37
257.18	6	257.33	6.04	257.93	6.18	259.14	6.51	261.5	7
262.75	7.25	264.44	7.48	267.22	7.91	267.7	8	276.9	8.63
280.5	9	282.17	9.32	286.31	10	308.6	10.77	315.61	11
319.65	10.65	324.57	10	327.03	9.56	330.36	9	335.69	8.04
336.3	8.05	342.88	9	343.43	9.08	349.93	10	355.51	10.89
356.22	11	361.16	11.82	362.17	12	362.84	12.13	367.43	13
368.91	13.3	372.39	14	375.03	14.54	376.95	14.89	377.74	15
381.54	15.34	388.06	16	395.84	16.82	397.38	17	405.83	17.67
409.16	18	419.46	18.73	422.58	18.97	422.83	18.99	423.09	19
434.08	19.57	437.08	19.73	441.34	20	447.85	20.59	452.54	21
454.4	21.31	458.09	22	459.18	22.19	463.51	23	465.64	23.38
469.04	24	469.79	24.12	472.36	24.56	474.18	24.87	474.47	24.92

Manning's n Values	num=	4	
Sta n Val Sta	n Val Sta	n Val Sta	n Val
0 .1 120.47	.04 181.69	.03 249.48	.04

Bank Sta: Left Right	Lengths: Left Channel Right	Coeff Contr.	Expan.
181.69 249.48	160.56 170.11 219.25	.1	.3
Blocked Obstructions	num=	1	
Sta L Sta R Elev			
90.23 106.86 20.91			

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 404

INPUT

Description: DS end of island (HEC2-3)

Station	Elevation	Data	num=	164
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev				
0 45 9.32 44.59 12.79 44 13.92 43.84 15.39 43.56				
15.91 43.43 17.17 43 18.32 42.51 19.75 42 22.3 41.02				
22.34 41 22.35 40.99 24.2 40 25.5 39.35 26.19 39				
26.71 38.75 28.18 38 28.49 37.84 30.12 37 30.6 36.75				
32.1 36 33.19 35.48 34.14 35 36.08 34.14 36.39 34				
37.63 33.28 38.11 33 39.74 32.06 39.83 32 40.03 31.87				
41.42 31 42.93 30.23 43.36 30 44.81 29.39 45.7 29				
46.96 28.4 47.79 28 47.98 27.91 49.12 27.38 49.92 27				
50.06 26.92 51.65 26 53.37 25.02 53.41 25 53.43 24.99				
55.21 24 55.28 23.96 56.99 23 57.35 22.82 59.01 22				
60.63 21.26 61.2 21 61.37 20.92 63.26 20 63.71 19.8				
65.48 19 66.53 18.49 67.56 18 68.15 17.74 69.77 17				
71.25 16.31 71.93 16 73.77 15.37 74.85 15 77.02 14.32				
78.03 14 79.31 13.61 81.28 13 83.93 12.2 84.58 12				
84.82 11.92 87.48 11.09 87.78 11 87.85 10.99 93.74 10				
97.71 9.6 103.9 9 107.95 8.6 114.17 8 120.53 7.56				
128.61 7.18 131.6 7 132.79 6.33 141.6 3.2 146.03 .45				
153.33 .23 158.92 1.09 162.77 3.34 164.62 4.46 180.23 4.05				
187.81 4.36 192.27 3.3 195.58 2.69 200.77 2.45 205 2.44				
207.57 3.36 208.61 4.45 209.75 4.65 210.43 4.7 212.23 4.77				
214.55 4.86 214.89 5 215.45 5.02 216.51 5.06 235.01 5.78				
239.93 6 241.78 6.86 241.91 7 242.27 7.36 242.9 8				
243.97 8.9 244.08 9 244.2 9.1 245.26 10 245.71 10.39				

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246.42	11	246.83	11.36	247.56	12	247.61	12.05	248.67	13
249.56	13.85	249.72	14	252.44	13.99	255.11	13	256.84	12.31
257.6	12	265.81	12.09	267.11	12	284.23	11.18	291.37	11.07
293.82	11	299.95	10.78	300.6	10.75	314.5	10.94	314.83	11
315.24	11.17	317.63	12	319.6	12.73	320.32	13	320.93	13.23
323.2	14	325.75	14.83	327	15	338.3	15.47	345.61	16
350.17	16.67	352.5	17	354.71	17.3	360.16	18	365.03	18.58
368.39	19	369.78	19.15	370.74	19.2	371.85	19.27	378.16	19.72
380.93	20	392.59	20.63	399.39	21	422.4	21.93	424.19	22
444.27	22.33	447	22.5	452.3	22.75	454.27	22.91		

Manning's n Values

num=	4
Sta n Val	Sta n Val
0 .06	131.6 .03
	212.23 .05
	380.93 .1

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

131.6	212.23	148.45	185.29	186.29	.1	.3
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Blocked Obstructions num= 1

Sta L	Sta R	El ev
396.52	439.69	35.64

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 218

INPUT

Description: (Approximately HEC2- 2)

Station Elevation Data num= 138

Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev	Sta	El ev
0	39.68	4.16	39.1	4.77	39.02	4.84	39	6.44	38.71
9.77	38	10.84	37.76	14.32	37	15	36.85	18.74	36
19.15	35.92	19.24	35.91	22.24	35.57	25.16	35.23	26.86	35
30.92	34.47	34.92	34	36.41	33.7	40.1	33	43.82	32.25
45.18	32	51.24	31.08	51.76	31	54.4	30.58	57.58	30
60.91	29.32	62.46	29	66.4	28.4	69.46	28	72.22	27.62
74	27.35	76.28	27.15	77.56	27	78.38	26.75	80.54	26
81.33	25.75	83.36	25	83.64	24.91	86.29	24	86.64	23.88
89.04	23	90.52	22.11	90.71	22	92.24	21.13	92.48	21
92.51	20.98	95.35	20.84	105.9	12.23	109.65	3.34	117.78	.62
125.56	.07	136.14	.58	140.61	3.46	149.97	3.45	154.9	7.17
157.58	7.19	159.2	7.08	159.25	8	160.43	8.59	161.23	9
162.49	9.66	163.11	10	163.41	10.18	165.11	11	165.73	11.37
167.06	12	168.38	12.61	169.04	13	170.47	13.68	171.01	14
171.66	14.36	173.06	15	173.66	15.27	175.32	16	176.28	16.44
177.39	17	179.12	17.86	179.48	18	179.74	18.1	181.93	19
184.61	19.97	184.69	20	187.01	20.91	187.28	21	187.9	21.21
190.21	22	191.14	22.31	193.25	23	196.26	23.63	197.67	23.88
198.81	24	221.94	24.95	222.52	25	229.04	25.79	230.72	26
236.19	26.85	237.12	27	240.19	27.49	242.89	27.9	243.54	28
269.3	27.42	270.59	27	271.5	26.77	275.67	26	277.58	25.77
279.08	25.67	284.76	25.31	286.06	25.35	286.54	25.36	293.47	26
302.86	26.89	303.72	26.94	304.39	27	311.28	27.48	315.67	28
321.8	28.49	324.22	29	326.58	29.52	331.83	30	342.69	29.56
343.46	29	344.79	28.42	345.69	28	346.29	27.7	347.94	27
349.45	26.42	350.25	26	351.85	25.22	352.29	25	352.83	24.73
354.59	24	355.64	23.53	357.27	23	357.96	22.81	359.71	22.44
363.84	22	366.54	21.71	370.29	21.42				

Manning's n Values

num=	4
Sta n Val	Sta n Val
0 .06	105.9 .03
	160.43 .06
	240.19 .1

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Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 105.9 160.43 205.09 218.43 218.54 .3 .5
 Blocked Obstructions num= 1
 Sta L Sta R Elev
 270.8 332.69 53.97

CROSS SECTION

RIVER: StonyBrook
 REACH: StonyBrook RS: 0

INPUT

Description: FEMA A - Confluence with Goodwiv es River (HEC2-1.00)

Station	Elevation	Data	num=	70	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	16.4	2.38	16	3.83	15.77	9.09	15	13.39	13.39	14.41		
16.49	14	18.75	13.89	31.26	13	34.48	12.73	36.11	36.11	12.72		
52.74	12	55	11.53	75	11.69	92.8	8.94	102.75	102.75	4.01		
129.17	3.7	161.45	3.84	180.55	3.5	196.65	.77	214.55	214.55	.83		
223.65	.72	234.35	2.61	246.45	3.57	257.75	4.48	260.05	260.05	7.96		
261.27	9	262.55	9.38	264.59	10	265.76	10.35	267.87	267.87	11		
268.84	11.29	271.13	12	273.94	12.88	274.34	13	275.02	275.02	13.21		
276.5	13.65	277.33	13.88	277.68	14	280.42	14.91	280.66	280.66	15		
280.97	15.13	283.22	16	284.11	16.47	285.38	17	287.23	287.23	17.8		
287.87	18	288.43	18.18	291.07	19	293.92	19.91	294.11	294.11	19.97		
294.2	20	294.57	20.09	298.63	21	299.79	21.26	302.67	302.67	21.76		
304.25	22	306.57	22.39	310	23	312.88	23.58	314.94	314.94	24		
315.56	24.08	317.98	24.47	321.16	24.94	321.45	25	331.08	331.08	25.71		
334.2	26	338.54	26.68	340.71	27	344.6	27.65	346.96	346.96	28		

Manning's n Values	num=	3
Sta n Val	Sta n Val	Sta n Val
0 .04	92.8 .03	261.27 .05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 92.8 261.27 0 0 1.3 .1 .3

SUMMARY OF MANNING' S N VALUES

River: StonyBrook

Reach	River Sta.	n1	n2	n3	n4	n5
n6	n7					
StonyBrook	14464	.04	.03	.04	.06	.04
StonyBrook	14368	.04	.03	.04	.06	.04
StonyBrook	14237	.04	.03	.04	.1	.04
StonyBrook	14202	.05	.03	.05		
StonyBrook	14188	.05	.045	.06		
StonyBrook	14164	Mul t	Open			
StonyBrook	14135	.1	.035	.05		

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StonyBrook	14092		. 1	. 035	. 05	. 1	
StonyBrook	13938		. 06	. 1	. 06	. 035	. 06
. 1	. 06						
StonyBrook	13611		. 06	. 035	. 08	. 1	
StonyBrook	13602	Inl Struct					
StonyBrook	13592		. 1	. 06	. 04	. 08	
StonyBrook	12955		. 1	. 04	. 08		
StonyBrook	12171		. 1	. 08	. 04	. 06	. 04
. 1							
StonyBrook	11548		. 05	. 1	. 035	. 1	. 04
StonyBrook	11454		. 045	. 1	. 035	. 1	. 04
. 1							
StonyBrook	10727		. 04	. 08	. 035	. 08	. 04
StonyBrook	10699		. 06	. 035	. 08		
StonyBrook	10667	Bri dge					
StonyBrook	10637		. 06	. 035	. 08		
StonyBrook	10603		. 06	. 035	. 08	. 1	. 08
StonyBrook	10374		. 05	. 03	. 04	. 1	
StonyBrook	10145		. 1	. 07	. 045	. 08	. 1
StonyBrook	9719		. 1	. 06	. 045	. 12	
StonyBrook	9698		. 06	. 04	. 08		
StonyBrook	9666	Bri dge					
StonyBrook	9638		. 06	. 04	. 03	. 06	
StonyBrook	9605		. 04	. 04	. 03	. 06	
StonyBrook	9457		. 08	. 04	. 03	. 06	. 1
StonyBrook	9445	Inl Struct					
StonyBrook	9428		. 08	. 035	. 08	. 1	
StonyBrook	8754		. 1	. 08	. 035	. 06	
StonyBrook	8699		. 08	. 04	. 05		
StonyBrook	8686	Bri dge					
StonyBrook	8668		. 1	. 06	. 035	. 05	
StonyBrook	8613		. 1	. 06	. 035	. 04	. 1
StonyBrook	8597	Inl Struct					
StonyBrook	8587		. 1	. 06	. 04	. 04	. 1

StonyBrookDari en1-ex. txt						
StonyBrook	8530	. 1	. 06	. 04	. 06	
StonyBrook	8292	. 08	. 035	. 08		
StonyBrook	8282	Inl Struct				
StonyBrook	8266	. 08	. 045	. 08		
StonyBrook	8122	. 1	. 06	. 035	. 06	. 1
StonyBrook	8094	Inl Struct				
StonyBrook	8082	. 1	. 08	. 045	. 06	. 1
StonyBrook	8056	. 1	. 08	. 035	. 06	
StonyBrook	7650	. 1	. 035	. 06		
StonyBrook	7450	. 1	. 06	. 035	. 06	. 1
StonyBrook	7015	. 06	. 035	. 06	. 1	
StonyBrook	6766	. 06	. 035	. 06	. 1	. 07
StonyBrook	6349	. 08	. 035	. 04	. 12	
StonyBrook	6286	. 06	. 035	. 06		
StonyBrook	6255	Bri dge				
StonyBrook	6226	. 06	. 035	. 06		
StonyBrook	6177	. 12	. 035	. 12		
StonyBrook	5927	. 08	. 035	. 08		
StonyBrook	5733	. 08	. 035	. 08	. 04	
StonyBrook	5703	. 08	. 04	. 08		
StonyBrook	5662	Bri dge				
StonyBrook	5614	. 08	. 04	. 08		
StonyBrook	5586	. 08	. 045	. 08		
StonyBrook	5299	. 08	. 045	. 08		
StonyBrook	5199	. 08	. 045	. 08		
StonyBrook	5048	. 08	. 05	. 08		
StonyBrook	4989	. 08	. 05	. 08		
StonyBrook	4922	. 08	. 05	. 08		
StonyBrook	4879	. 08	. 05	. 08		
StonyBrook	4774	. 08	. 05	. 08		
StonyBrook	4688	. 08	. 05	. 08		
StonyBrook	4678	. 08	. 05	. 08		

StonyBrookDari en1-ex. txt

StonyBrook	4672	.08	.05	.08	
StonyBrook	4443	Cul vert			
StonyBrook	4327	.08	.04	.08	
StonyBrook	4288	.08	.035	.08	
StonyBrook	4229	.1	.05	.035	.08
StonyBrook	3952	.07	.035	.07	
StonyBrook	3698	.07	.035	.07	
StonyBrook	3588	.12	.03	.1	
StonyBrook	3567	.05	.03	.05	
StonyBrook	3541	Bri dge			
StonyBrook	3514	.05	.03	.05	
StonyBrook	3482	.08	.03	.06	
StonyBrook	3409	.08	.03	.06	.12
StonyBrook	3266	.08	.03	.06	.12
StonyBrook	3008	.08	.03	.06	.12
StonyBrook	2576	.08	.03	.12	
StonyBrook	2444	.08	.03	.04	.1
StonyBrook	2212	.1	.04	.03	.04
StonyBrook	2060	.1	.04	.03	.04
StonyBrook	2001	.1	.04	.03	.04
StonyBrook	1966	Bri dge			
StonyBrook	1934	.1	.04	.03	.04
StonyBrook	1887	.1	.03	.12	
StonyBrook	1684	.1	.03	.055	.1
StonyBrook	1432	.12	.03	.055	.1
StonyBrook	1408	.12	.03	.055	
StonyBrook	1395	Bri dge			
StonyBrook	1384	.12	.03	.1	
StonyBrook	1346	.12	.03	.1	
StonyBrook	1290	.12	.03	.1	
StonyBrook	1246	Bri dge			

StonyBrook		StonyBrookDari en1-ex. txt				
StonyBrook	1200	.08	.03	.08		
StonyBrook	1156	.12	.08	.03	.12	
StonyBrook	849	.12	.035	.12		
StonyBrook	710	.055	.03	.12		
StonyBrook	687	.055	.03	.12		
StonyBrook	667					
StonyBrook	647	.055	.03	.05	.1	
StonyBrook	632	.1	.04	.03	.05	.1
StonyBrook	574	.1	.04	.03	.04	
StonyBrook	404	.06	.03	.05	.1	
StonyBrook	218	.06	.03	.06	.1	
StonyBrook	0	.04	.03	.05		

SUMMARY OF REACH LENGTHS

Ri ver: StonyBrook

Reach	Ri ver Sta.	Left	Channel	Ri ght
StonyBrook	14464	96.8	96.51	96.65
StonyBrook	14368	132.25	130.44	130.44
StonyBrook	14237	36.94	35.02	34.45
StonyBrook	14202	13.54	13.8	13.6
StonyBrook	14188	58.27	53.08	54.47
StonyBrook	14164			
		Mul t Open		
StonyBrook	14135	46.09	42.77	44.77
StonyBrook	14092	151.94	154.82	162.96
StonyBrook	13938	393.57	326.64	281.51
StonyBrook	13611	24.85	19.07	116
StonyBrook	13602			
		Inl Struct		
StonyBrook	13592	474.04	636.59	643.47
StonyBrook	12955	444.56	784.29	637.88
StonyBrook	12171	569.11	623.22	506.18
StonyBrook	11548	119.07	93.36	73.34
StonyBrook	11454	655.45	727.91	660.69
StonyBrook	10727	23.85	27.25	24.9
StonyBrook	10699	61.32	62.69	68.11
StonyBrook	10667			
		Bri dge		
StonyBrook	10637	30.85	33.15	39.98
StonyBrook	10603	223.44	229.05	230.9
StonyBrook	10374	177.28	229.85	225.6
StonyBrook	10145	351.34	425.17	529.49
StonyBrook	9719	22.88	21.12	22.9
StonyBrook	9698	79.91	60.32	66.06
StonyBrook	9666			
		Bri dge		
StonyBrook	9638	26.85	32.87	27.55
StonyBrook	9605	177.61	147.87	138.82

StonyBrookDari en1-ex. txt			
StonyBrook	9457	55.22	27.05
StonyBrook	9445	Inl Struct	
StonyBrook	9428	627.51	550.01
StonyBrook	8754	69.84	40.65
StonyBrook	8699	31.75	30.69
StonyBrook	8686	Bridge	
StonyBrook	8668	62.46	41.83
StonyBrook	8613	36.3	20.3
StonyBrook	8597	Inl Struct	
StonyBrook	8587	28.01	79.11
StonyBrook	8530	244.89	208.02
StonyBrook	8292	22.08	28.95
StonyBrook	8282	Inl Struct	
StonyBrook	8266	140.88	137.39
StonyBrook	8122	37.19	37.14
StonyBrook	8094	Inl Struct	
StonyBrook	8082	27.99	24.67
StonyBrook	8056	380.81	375.83
StonyBrook	7650	224.92	169.2
StonyBrook	7450	212.7	468.45
StonyBrook	7015	37.3	282.69
StonyBrook	6766	227.67	120.84
StonyBrook	6349	40.12	51.88
StonyBrook	6286	71.29	60.15
StonyBrook	6255	Bridge	
StonyBrook	6226	44.24	39.06
StonyBrook	6177	243.99	200.14
StonyBrook	5927	153.32	214.29
StonyBrook	5733	35.49	32.13
StonyBrook	5703	90.66	90.89
StonyBrook	5662	Bridge	
StonyBrook	5614	38.96	20.98
StonyBrook	5586	338.32	216.02
StonyBrook	5299	78.09	105.09
StonyBrook	5199	145.48	132.43
StonyBrook	5048	41.19	69.14
StonyBrook	4989	31.75	78.88
StonyBrook	4922	34.58	46.15
StonyBrook	4879	112.16	93.01
StonyBrook	4774	51.83	71.28
StonyBrook	4688	55.64	14.05
StonyBrook	4678	21.49	8.33
StonyBrook	4672	339.07	348.11
StonyBrook	4443	Cul vert	
StonyBrook	4327	42.9	31.59
StonyBrook	4288	57.29	58.68
StonyBrook	4229	323.33	243.77
StonyBrook	3952	186.06	260.47
StonyBrook	3698	111.32	101.43
StonyBrook	3588	21.52	43.6
StonyBrook	3567	50.69	54.85
StonyBrook	3541	Bridge	
StonyBrook	3514	37.66	20.07
StonyBrook	3482	74	51.99
StonyBrook	3409	147.62	152.13
StonyBrook	3266	256.22	253.92
StonyBrook	3008	432.66	522.32
StonyBrook	2576	93.04	139.01
StonyBrook	2444	394.33	204.35
StonyBrook	2212	117.61	154.04
StonyBrook	2060	71.53	31.11
StonyBrook	2001	59.6	72.34
StonyBrook	1966	Bridge	

StonyBrookDari en1-ex. txt				
StonyBrook	1934	35.27	46.75	68.88
StonyBrook	1887	165.09	202.94	220.68
StonyBrook	1684	249.31	252.55	261.15
StonyBrook	1432	24.2	23.59	38.17
StonyBrook	1408	17.51	24.21	29.13
StonyBrook	1395	Bri dge		
StonyBrook	1384	27.1	37.87	64.75
StonyBrook	1346	42.58	56.04	86.85
StonyBrook	1290	92.1	90.34	90.75
StonyBrook	1246	Bri dge		
StonyBrook	1200	44.1	43.69	45.04
StonyBrook	1156	306.1	307.31	337.92
StonyBrook	849	181.16	138.76	79.43
StonyBrook	710	45.18	22.5	11.77
StonyBrook	687	40.62	40.39	41.72
StonyBrook	667	Bri dge		
StonyBrook	647	40.38	15.09	17.76
StonyBrook	632	60.06	58.16	45.68
StonyBrook	574	160.56	170.11	219.25
StonyBrook	404	148.45	185.29	186.29
StonyBrook	218	205.09	218.43	218.54
StonyBrook	0	0	0	1.3

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
 River: StonyBrook

Reach	Ri ver Sta.	Contr.	Expan.
StonyBrook	14464	.1	.3
StonyBrook	14368	.1	.3
StonyBrook	14237	.1	.3
StonyBrook	14202	.3	.5
StonyBrook	14188	.3	.5
StonyBrook	14164	Mul t Open	
StonyBrook	14135	.3	.5
StonyBrook	14092	.3	.5
StonyBrook	13938	.1	.3
StonyBrook	13611	.3	.5
StonyBrook	13602	Inl Struct	
StonyBrook	13592	.3	.5
StonyBrook	12955	.1	.3
StonyBrook	12171	.1	.3
StonyBrook	11548	.1	.3
StonyBrook	11454	.1	.3
StonyBrook	10727	.3	.5
StonyBrook	10699	.3	.5
StonyBrook	10667	Bri dge	
StonyBrook	10637	.3	.5
StonyBrook	10603	.3	.5
StonyBrook	10374	.1	.3
StonyBrook	10145	.1	.3
StonyBrook	9719	.3	.5
StonyBrook	9698	.3	.5
StonyBrook	9666	Bri dge	
StonyBrook	9638	.3	.5
StonyBrook	9605	.3	.5
StonyBrook	9457	.3	.5
StonyBrook	9445	Inl Struct	
StonyBrook	9428	.3	.5

StonyBrookDari en1-ex. txt

StonyBrook	8754	.3	.5
StonyBrook	8699	.3	.5
StonyBrook	8686	Bri dge	
StonyBrook	8668	.3	.5
StonyBrook	8613	.3	.5
StonyBrook	8597	Inl Struct	
StonyBrook	8587	.1	.3
StonyBrook	8530	.1	.3
StonyBrook	8292	.1	.3
StonyBrook	8282	Inl Struct	
StonyBrook	8266	.1	.3
StonyBrook	8122	.3	.5
StonyBrook	8094	Inl Struct	
StonyBrook	8082	.3	.5
StonyBrook	8056	.3	.5
StonyBrook	7650	.1	.3
StonyBrook	7450	.1	.3
StonyBrook	7015	.1	.3
StonyBrook	6766	.1	.3
StonyBrook	6349	.3	.5
StonyBrook	6286	.3	.5
StonyBrook	6255	Bri dge	
StonyBrook	6226	.3	.5
StonyBrook	6177	.3	.5
StonyBrook	5927	.1	.3
StonyBrook	5733	.3	.5
StonyBrook	5703	.5	.7
StonyBrook	5662	Bri dge	
StonyBrook	5614	.5	.7
StonyBrook	5586	.3	.5
StonyBrook	5299	.1	.3
StonyBrook	5199	.1	.3
StonyBrook	5048	.1	.3
StonyBrook	4989	.1	.3
StonyBrook	4922	.1	.3
StonyBrook	4879	.1	.3
StonyBrook	4774	.1	.3
StonyBrook	4688	.1	.3
StonyBrook	4678	.3	.5
StonyBrook	4672	.5	.7
StonyBrook	4443	Cul vert	
StonyBrook	4327	.5	.7
StonyBrook	4288	.3	.5
StonyBrook	4229	.1	.3
StonyBrook	3952	.1	.3
StonyBrook	3698	.1	.3
StonyBrook	3588	.3	.5
StonyBrook	3567	.3	.5
StonyBrook	3541	Bri dge	
StonyBrook	3514	.3	.5
StonyBrook	3482	.3	.5
StonyBrook	3409	.1	.3
StonyBrook	3266	.1	.3
StonyBrook	3008	.1	.3
StonyBrook	2576	.3	.5
StonyBrook	2444	.3	.5
StonyBrook	2212	.3	.5
StonyBrook	2060	.3	.5
StonyBrook	2001	.3	.5
StonyBrook	1966	Bri dge	
StonyBrook	1934	.3	.5
StonyBrook	1887	.3	.5
StonyBrook	1684	.1	.3

StonyBrookDari en1-ex. txt			
StonyBrook	1432	.3	.5
StonyBrook	1408	.3	.5
StonyBrook	1395	Bri dge	
StonyBrook	1384	.3	.5
StonyBrook	1346	.3	.5
StonyBrook	1290	.3	.5
StonyBrook	1246	Bri dge	
StonyBrook	1200	.3	.5
StonyBrook	1156	.3	.5
StonyBrook	849	.1	.3
StonyBrook	710	.3	.5
StonyBrook	687	.3	.5
StonyBrook	667	Bri dge	
StonyBrook	647	.3	.5
StonyBrook	632	.3	.5
StonyBrook	574	.1	.3
StonyBrook	404	.1	.3
StonyBrook	218	.3	.5
StonyBrook	0	.1	.3

Existing Conditions Model Output

StonyBrookDari en1. rep

HEC-RAS Version 4.1.0 Jan 2010
 U. S. Army Corps of Engineers
 Hydrologic Engineering Center
 609 Second Street
 Davis, California

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X      X  XXXXXX   XXXX      XXXX      XX      XXXX
X      X  X        X      X      X      X      X
X      X  X        X      X      X      X      X
XXXXXXXX XXXX      X      XXX XXXXXX XXXXX XXXX
X      X  X        X      X      X      X      X
X      X  X        X      X      X      X      X
X      X  XXXXXX   XXXX      X      X      X      X
    
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PROJECT DATA

Project Title: StonyBrookDari en1
 Project File : StonyBrookDari en1. prj
 Run Date and Time: 5/11/2011 10:31:51 AM

Project in English units

Project Description:
 Stony Brook, Darien, CT

Profile Output Table - Standard Table 1

Reach E. G. Slope (ft/ft)	River Vel Chnl (ft/s)	Sta Flow Area (sq ft)	Profile Top Width (ft)	Q Total Froude # (cfs)	Min Ch El (ft)	W. S. Elev (ft)	Crit W. S. (ft)	E. G. Elev (ft)
StonyBrook 0.009399	14464 8.94	100-yr 87.23	42.47	765.00 0.96	108.99	113.43	113.43	114.67
StonyBrook 0.009399	14464 8.94	100-yr 87.23	42.47 (encr)	765.00 0.96	108.99	113.43	113.43	114.67
StonyBrook 0.005960	14464 5.25	2-yr 33.16	19.73	174.00 0.71	108.99	111.41		111.84
StonyBrook 0.005243	14464 6.02	10-yr 65.42	28.56	394.00 0.70	108.99	112.78	112.16	113.34
StonyBrook	14464	50-yr		630.00	108.99	113.06	112.97	114.19

StonyBrookDari en1. rep

0.009739	8.56	73.65	31.21	0.97				
StonyBrook	14464	500-yr		988.00	108.99	114.43	114.43	115.09
0.003981	7.10	208.68	188.97	0.66				
StonyBrook	14368	100-yr		765.00	108.38	113.17	113.17	113.66
0.003390	6.52	242.37	285.48	0.60				
StonyBrook	14368	100-yr (encl)		765.00	108.38	113.19	113.19	113.84
0.004030	7.13	163.27	130.00	0.66				
StonyBrook	14368	2-yr		174.00	108.38	110.94		111.31
0.004761	4.87	35.71	19.91	0.64				
StonyBrook	14368	10-yr		394.00	108.38	111.48	111.48	112.57
0.011225	8.38	46.99	21.88	1.01				
StonyBrook	14368	50-yr		630.00	108.38	112.84	112.84	113.45
0.004147	6.78	160.13	208.68	0.66				
StonyBrook	14368	500-yr		988.00	108.38	113.40	113.40	113.91
0.003577	6.98	313.40	318.96	0.62				
StonyBrook	14237	100-yr		765.00	107.57	111.08	111.08	111.49
0.006269	6.87	208.86	223.59	0.77				
StonyBrook	14237	100-yr (encl)		765.00	107.57	111.57	111.57	112.24
0.006637	7.70	148.27	110.60	0.79				
StonyBrook	14237	2-yr		174.00	107.57	109.58	109.58	110.32
0.012780	6.88	25.30	17.81	1.02				
StonyBrook	14237	10-yr		394.00	107.57	110.59	110.59	110.97
0.005496	5.88	113.59	159.06	0.71				
StonyBrook	14237	50-yr		630.00	107.57	110.91	110.91	111.33
0.006206	6.67	173.27	208.46	0.76				
StonyBrook	14237	500-yr		988.00	107.57	111.65		111.85
0.002765	5.24	347.29	263.37	0.53				
StonyBrook	14202	100-yr		765.00	107.35	109.18	108.99	109.45
0.013091	6.51	207.12	221.59	1.02				
StonyBrook	14202	100-yr (encl)		765.00	107.35	109.48	109.48	110.12
0.019648	8.71	133.35	98.84	1.27				
StonyBrook	14202	2-yr		174.00	107.35	108.47	108.47	108.63
0.015123	5.06	72.85	177.08	1.01				
StonyBrook	14202	10-yr		394.00	107.35	108.79	108.69	108.98
0.013532	5.67	130.07	184.29	1.00				
StonyBrook	14202	50-yr		630.00	107.35	109.04	108.90	109.29
0.013332	6.26	177.80	195.90	1.01				
StonyBrook	14202	500-yr		988.00	107.35	111.76		111.78
0.000226	1.50	1197.58	566.57	0.15				
StonyBrook	14188	100-yr		765.00	103.46	109.12	108.67	109.32

StonyBrookDari en1. rep

0.004293	4.76	309.37	238.73	0.38				
StonyBrook	14188		100-yr (encr)	765.00	103.46	109.43	108.75	109.58
0.003178	4.20	325.54	184.06	0.33				
StonyBrook	14188		2-yr	174.00	103.46	108.47	105.47	108.51
0.000728	1.85	172.66	196.47	0.16				
StonyBrook	14188		10-yr	394.00	103.46	108.77	106.72	108.88
0.002102	3.24	234.26	206.99	0.27				
StonyBrook	14188		50-yr	630.00	103.46	109.00	107.64	109.17
0.003568	4.30	281.15	209.78	0.35				
StonyBrook	14188		500-yr	988.00	103.46	107.80	107.80	110.85
0.054749	15.01	79.89	27.68	1.38				

StonyBrook 14164

Mul t Open

StonyBrook	14135		100-yr	765.00	106.46	108.44		108.59
0.012826	4.85	261.28	365.19	0.84				
StonyBrook	14135		100-yr (encr)	765.00	106.46	109.38		109.43
0.002055	2.73	433.10	306.60	0.36				
StonyBrook	14135		2-yr	174.00	106.46	107.60		107.68
0.006885	2.27	77.30	91.58	0.55				
StonyBrook	14135		10-yr	394.00	106.46	107.99		108.14
0.016206	4.06	128.47	195.89	0.88				
StonyBrook	14135		50-yr	630.00	106.46	108.30		108.46
0.015522	4.93	210.81	339.90	0.90				
StonyBrook	14135		500-yr	988.00	106.46	108.64		108.79
0.010444	4.81	342.40	423.99	0.77				

StonyBrook	14092		100-yr	765.00	106.74	108.30		108.33
0.002280	2.19	507.46	502.95	0.36				
StonyBrook	14092		100-yr (encr)	765.00	106.74	109.26		109.33
0.002358	3.03	380.93	248.12	0.39				
StonyBrook	14092		2-yr	174.00	106.74	107.49		107.50
0.001849	1.13	190.73	313.09	0.28				
StonyBrook	14092		10-yr	394.00	106.74	107.82		107.85
0.002485	1.76	305.47	370.41	0.35				
StonyBrook	14092		50-yr	630.00	106.74	108.14		108.18
0.002344	2.06	434.82	449.66	0.36				
StonyBrook	14092		500-yr	988.00	106.74	108.51		108.55
0.002271	2.38	620.62	554.47	0.37				

StonyBrook	13938		100-yr	765.00	105.32	107.82		107.88
0.003300	3.54	456.51	398.77	0.46				
StonyBrook	13938		100-yr (encr)	765.00	105.32	108.64		108.81

StonyBrookDari en1. rep								
0.004294	4.74	313.68	181.42	0.54				
StonyBrook	13938		2-yr	174.00	105.32	106.67	106.67	106.84
0.011660	4.63	87.43	217.66	0.80				
StonyBrook	13938		10-yr	394.00	105.32	107.33		107.38
0.003327	3.14	277.02	341.36	0.45				
StonyBrook	13938		50-yr	630.00	105.32	107.67		107.73
0.003221	3.38	399.37	380.62	0.45				
StonyBrook	13938		500-yr	988.00	105.32	108.01		108.09
0.003560	3.84	537.08	430.91	0.48				

StonyBrook	13611		100-yr	765.00	102.99	106.12	106.07	106.51
0.006289	5.88	298.04	377.39	0.67				
StonyBrook	13611		100-yr (encl)	765.00	102.99	107.04	106.08	107.45
0.004236	5.38	217.49	231.20	0.56				
StonyBrook	13611		2-yr	174.00	102.99	105.42	104.44	105.52
0.001685	2.52	103.14	205.57	0.33				
StonyBrook	13611		10-yr	394.00	102.99	105.50	105.46	105.90
0.007197	5.33	119.20	221.09	0.69				
StonyBrook	13611		50-yr	630.00	102.99	105.92	105.80	106.32
0.006777	5.80	225.47	314.77	0.69				
StonyBrook	13611		500-yr	988.00	102.99	106.44	106.29	106.72
0.005842	5.51	424.56	433.68	0.64				

StonyBrook 13602

Inl Struct

StonyBrook	13592		100-yr	765.00	100.75	106.12		106.31
0.003368	4.55	428.58	432.55	0.44				
StonyBrook	13592		100-yr (encl)	765.00	100.75	107.03		107.32
0.003039	4.90	298.84	216.67	0.42				
StonyBrook	13592		2-yr	174.00	100.75	104.63		104.79
0.002998	3.22	53.98	25.11	0.39				
StonyBrook	13592		10-yr	394.00	100.75	105.49		105.71
0.003616	4.14	194.83	320.30	0.44				
StonyBrook	13592		50-yr	630.00	100.75	105.91		106.11
0.003522	4.47	344.12	392.32	0.44				
StonyBrook	13592		500-yr	988.00	100.75	106.43		106.61
0.003108	4.64	577.77	515.95	0.43				

StonyBrook	12955		100-yr	765.00	100.17	105.05		105.11
0.001115	2.49	617.11	411.65	0.26				
StonyBrook	12955		100-yr (encl)	765.00	100.17	105.84		105.99
0.001394	3.20	256.87	75.39	0.29				
StonyBrook	12955		2-yr	174.00	100.17	103.43		103.49

StonyBrookDari en1. rep

0.001381	1.97	108.57	154.45	0.26				
StonyBrook	12955		10-yr	394.00	100.17	104.26		104.32
0.001321	2.20	321.37	347.04	0.26				
StonyBrook	12955		50-yr	630.00	100.17	104.78		104.84
0.001190	2.41	510.36	387.90	0.26				
StonyBrook	12955		500-yr	988.00	100.17	105.45		105.51
0.001013	2.59	805.27	519.83	0.25				
StonyBrook	12171		100-yr	1350.00	98.45	103.68		103.88
0.002225	3.95	492.23	239.16	0.37				
StonyBrook	12171		100-yr (encr)	1350.00	98.45	104.01		104.33
0.002780	4.52	298.57	77.45	0.41				
StonyBrook	12171		2-yr	310.00	98.45	101.01		101.23
0.005038	3.80	81.50	44.53	0.50				
StonyBrook	12171		10-yr	713.00	98.45	102.58		102.75
0.002802	3.46	261.26	178.16	0.39				
StonyBrook	12171		50-yr	1115.00	98.45	103.33		103.52
0.002348	3.79	410.48	229.23	0.37				
StonyBrook	12171		500-yr	1745.00	98.45	104.10		104.33
0.002303	4.33	594.29	245.95	0.38				
StonyBrook	11548		100-yr	1350.00	94.31	101.91	101.28	102.41
0.002547	6.69	576.49	353.68	0.48				
StonyBrook	11548		100-yr (encr)	1350.00	94.31	102.04		102.62
0.002703	6.99	420.35	165.39	0.50				
StonyBrook	11548		2-yr	310.00	94.31	99.68		99.86
0.001214	3.39	104.07	58.26	0.31				
StonyBrook	11548		10-yr	713.00	94.31	101.08	98.94	101.41
0.001716	4.97	313.01	279.49	0.39				
StonyBrook	11548		50-yr	1115.00	94.31	101.67	100.45	102.10
0.002230	6.09	493.83	332.30	0.45				
StonyBrook	11548		500-yr	1745.00	94.31	103.04		103.29
0.001343	5.45	1017.25	423.14	0.36				
StonyBrook	11454		100-yr	1350.00	95.25	101.44		102.05
0.004826	8.34	523.20	299.32	0.63				
StonyBrook	11454		100-yr (encr)	1350.00	95.25	101.52		102.21
0.006150	8.60	409.71	186.42	0.65				
StonyBrook	11454		2-yr	310.00	95.25	99.08	98.17	99.62
0.005235	5.94	61.19	42.10	0.60				
StonyBrook	11454		10-yr	713.00	95.25	100.46	100.42	101.11
0.004951	7.40	255.47	249.98	0.62				
StonyBrook	11454		50-yr	1115.00	95.25	100.95	100.95	101.73
0.006024	8.76	384.98	272.61	0.69				
StonyBrook	11454		500-yr	1745.00	95.25	102.92		103.13

								StonyBrookDari en1. rep	
0.001632	5.70	1030.04	382.99		0.38				
StonyBrook	10727		100-yr	1350.00	93.38	101.34		101.38	
0.000277	2.43	1497.81	492.51	0.16					
StonyBrook	10727		100-yr (encr)	1350.00	93.38	101.35		101.40	
0.000339	2.54	1267.13	367.02	0.17					
StonyBrook	10727		2-yr	310.00	93.38	96.75		96.98	
0.002511	3.83	80.92	31.65	0.42					
StonyBrook	10727		10-yr	713.00	93.38	98.54	96.68	98.85	
0.002030	4.65	255.92	308.46	0.41					
StonyBrook	10727		50-yr	1115.00	93.38	100.41		100.48	
0.000463	2.86	1050.62	471.57	0.21					
StonyBrook	10727		500-yr	1745.00	93.38	102.81		102.83	
0.000153	2.06	2294.64	617.39	0.13					
StonyBrook	10699		100-yr	1350.00	93.10	100.90	97.94	101.27	
0.001376	4.91	278.79	453.16	0.36					
StonyBrook	10699		100-yr (encr)	1350.00	93.10	100.92	97.94	101.29	
0.001357	4.89	279.98	99.51	0.36					
StonyBrook	10699		2-yr	310.00	93.10	96.68	95.47	96.90	
0.002739	3.73	83.11	37.13	0.44					
StonyBrook	10699		10-yr	713.00	93.10	98.48	96.70	98.79	
0.002176	4.49	158.84	127.44	0.42					
StonyBrook	10699		50-yr	1115.00	93.10	100.01	97.53	100.37	
0.001661	4.82	232.75	433.58	0.39					
StonyBrook	10699		500-yr	1745.00	93.10	102.32	98.56	102.71	
0.001078	5.05	352.90	514.95	0.33					
StonyBrook	10667								Bridge
StonyBrook	10637		100-yr	1350.00	92.87	98.29	98.23	99.97	
0.012478	10.41	129.71	37.28	0.98					
StonyBrook	10637		100-yr (encr)	1350.00	92.87	99.19	98.24	100.22	
0.006460	8.13	166.27	44.71	0.72					
StonyBrook	10637		2-yr	310.00	92.87	96.30	95.26	96.62	
0.003634	4.55	68.20	27.15	0.51					
StonyBrook	10637		10-yr	713.00	92.87	97.47	96.59	98.23	
0.006052	6.99	101.95	30.72	0.68					
StonyBrook	10637		50-yr	1115.00	92.87	98.20	97.63	99.40	
0.009076	8.82	126.48	36.72	0.84					
StonyBrook	10637		500-yr	1745.00	92.87	99.01	99.01	100.89	
0.012523	11.01	158.55	42.41	1.00					

StonyBrookDari en1. rep

StonyBrook	10603	100-yr		1350.00	92.54	98.46	98.46	99.25
0.005524	7.96	344.67	266.04	0.67				
StonyBrook	10603	100-yr	(encr)	1350.00	92.54	98.60	98.12	99.90
0.007497	9.32	164.97	49.39	0.77				
StonyBrook	10603	2-yr		310.00	92.54	96.20		96.50
0.003138	4.41	70.32	25.69	0.47				
StonyBrook	10603	10-yr		713.00	92.54	97.02	96.35	97.95
0.007670	7.74	92.42	50.20	0.75				
StonyBrook	10603	50-yr		1115.00	92.54	98.17	98.17	98.96
0.005591	7.65	268.76	254.20	0.67				
StonyBrook	10603	500-yr		1745.00	92.54	98.80	98.80	99.67
0.005964	8.69	437.49	279.71	0.70				
StonyBrook	10374	100-yr		1350.00	91.49	98.11		98.19
0.000277	2.32	646.71	272.43	0.19				
StonyBrook	10374	100-yr	(encr)	1350.00	91.49	99.11		99.17
0.000156	1.94	695.43	120.36	0.14				
StonyBrook	10374	2-yr		310.00	91.49	96.30		96.31
0.000062	0.86	362.33	110.20	0.08				
StonyBrook	10374	10-yr		713.00	91.49	97.37		97.40
0.000138	1.47	490.53	162.00	0.13				
StonyBrook	10374	50-yr		1115.00	91.49	97.97		98.03
0.000209	1.98	612.28	233.22	0.16				
StonyBrook	10374	500-yr		1745.00	91.49	98.50		98.61
0.000346	2.74	763.36	316.73	0.21				
StonyBrook	10145	100-yr		1350.00	91.69	97.89		98.04
0.002925	4.34	758.54	531.21	0.39				
StonyBrook	10145	100-yr	(encr)	1350.00	91.69	98.76		99.05
0.003473	5.14	382.17	103.03	0.41				
StonyBrook	10145	2-yr		310.00	91.69	96.07	94.90	96.25
0.004556	3.66	121.14	134.48	0.44				
StonyBrook	10145	10-yr		713.00	91.69	97.19	96.40	97.31
0.002638	3.62	435.46	392.94	0.35				
StonyBrook	10145	50-yr		1115.00	91.69	97.81		97.92
0.002278	3.78	713.56	510.71	0.34				
StonyBrook	10145	500-yr		1745.00	91.69	98.32		98.45
0.002595	4.38	1024.84	664.72	0.37				
StonyBrook	9719	100-yr		1350.00	89.21	95.85		96.32
0.004882	6.21	438.38	269.80	0.51				
StonyBrook	9719	100-yr	(encr)	1350.00	89.21	96.70		97.29
0.004346	6.33	257.20	58.01	0.48				
StonyBrook	9719	2-yr		310.00	89.21	92.28		92.88

StonyBrookDari en1. rep

0.015754	6.23	49.73	25.81	0.79				
StonyBrook	9719		10-yr	713.00	89.21	93.29	93.29	94.56
0.023622	9.05	78.75	31.48	1.01				
StonyBrook	9719		50-yr	1115.00	89.21	94.72	94.54	95.79
0.013028	8.43	171.16	135.66	0.79				
StonyBrook	9719		500-yr	1745.00	89.21	96.55		96.97
0.004040	6.19	681.78	428.55	0.47				

	StonyBrook	9698		100-yr	1350.00	87.12	95.93	91.41	96.16
0.001069	4.03	510.00	260.15	0.25					
StonyBrook	9698		100-yr (encl)	1350.00	87.12	96.85	91.41	97.07	
0.000846	3.86	388.20	56.68	0.23					
StonyBrook	9698		2-yr	310.00	87.12	92.53	89.18	92.58	
0.000420	1.81	171.34	38.07	0.15					
StonyBrook	9698		10-yr	713.00	87.12	93.42	90.25	93.61	
0.001279	3.47	205.31	38.07	0.26					
StonyBrook	9698		50-yr	1115.00	87.12	95.06	91.01	95.32	
0.001330	4.16	270.75	137.75	0.28					
StonyBrook	9698		500-yr	1745.00	87.12	96.59	92.05	96.84	
0.001127	4.37	707.55	333.02	0.26					

StonyBrook 9666

Bridge

	StonyBrook	9638		100-yr	1350.00	87.78	93.99	92.47	94.68
0.002726	6.68	202.22	51.44	0.56					
StonyBrook	9638		100-yr (encl)	1350.00	87.78	94.98	92.47	95.40	
0.001536	5.23	257.97	55.01	0.43					
StonyBrook	9638		2-yr	310.00	87.78	92.40	89.92	92.48	
0.000534	2.37	130.68	42.00	0.24					
StonyBrook	9638		10-yr	713.00	87.78	92.81	91.09	93.16	
0.001968	4.80	148.39	44.43	0.46					
StonyBrook	9638		50-yr	1115.00	87.78	93.60	92.02	94.17	
0.002492	6.05	184.36	49.16	0.53					
StonyBrook	9638		500-yr	1745.00	87.78	94.52	93.11	95.43	
0.003109	7.70	226.75	185.35	0.62					

	StonyBrook	9605		100-yr	1350.00	87.70	94.16		94.42
0.000920	4.37	453.14	319.26	0.34					
StonyBrook	9605		100-yr (encl)	1350.00	87.70	95.01		95.30	
0.000834	4.29	314.69	53.12	0.31					
StonyBrook	9605		2-yr	310.00	87.70	92.41		92.45	
0.000235	1.69	208.35	86.23	0.16					
StonyBrook	9605		10-yr	713.00	87.70	92.86		93.03	

StonyBrookDari en1. rep

0.000813	3.37	250.64	105.70	0.31				
StonyBrook	9605		50-yr	1115.00	87.70	93.73		93.96
0.000902	4.08	363.38	152.26	0.33				
StonyBrook	9605		500-yr	1745.00	87.70	94.79		95.06
0.000872	4.60	703.99	460.98	0.34				
StonyBrook	9457		100-yr	1350.00	88.64	94.15	91.89	94.24
0.000459	2.84	865.95	391.98	0.24				
StonyBrook	9457		100-yr (encr)	1350.00	88.64	94.98	91.88	95.14
0.000480	3.26	451.54	94.00	0.25				
StonyBrook	9457		2-yr	310.00	88.64	92.38	90.41	92.41
0.000250	1.49	263.69	227.92	0.16				
StonyBrook	9457		10-yr	713.00	88.64	92.78	91.10	92.89
0.000737	2.81	367.26	292.00	0.28				
StonyBrook	9457		50-yr	1115.00	88.64	93.69	91.63	93.79
0.000524	2.82	691.69	376.25	0.25				
StonyBrook	9457		500-yr	1745.00	88.64	94.80	92.51	94.88
0.000404	2.92	1125.20	410.23	0.23				

StonyBrook 9445

Inl Struct

StonyBrook	9428		100-yr	1350.00	88.12	94.14		94.22
0.000839	3.50	1032.91	410.24	0.27				
StonyBrook	9428		100-yr (encr)	1350.00	88.12	94.78		95.04
0.001549	5.14	488.97	120.00	0.38				
StonyBrook	9428		2-yr	310.00	88.12	91.48		91.63
0.002182	3.50	173.00	213.06	0.39				
StonyBrook	9428		10-yr	713.00	88.12	92.65		92.75
0.001383	3.58	498.79	311.75	0.33				
StonyBrook	9428		50-yr	1115.00	88.12	93.69		93.77
0.000921	3.45	854.50	376.97	0.28				
StonyBrook	9428		500-yr	1745.00	88.12	94.79		94.86
0.000742	3.56	1303.25	423.30	0.26				

StonyBrook	8754		100-yr	1350.00	85.30	92.46	91.12	93.12
0.002918	7.17	302.90	276.93	0.52				
StonyBrook	8754		100-yr (encr)	1350.00	85.30	93.46	91.00	93.93
0.001682	6.04	319.75	65.00	0.41				
StonyBrook	8754		2-yr	310.00	85.30	88.62	88.08	89.12
0.007004	5.72	54.21	25.07	0.69				
StonyBrook	8754		10-yr	713.00	85.30	90.92	89.47	91.39
0.002822	5.76	163.91	120.33	0.49				
StonyBrook	8754		50-yr	1115.00	85.30	92.23	90.59	92.74

StonyBrookDari en1. rep								
0.002327	6.24	278.88	242.68	0.46				
StonyBrook	8754		500-yr	1745.00	85.30	92.23	91.79	93.48
0.005733	9.79	278.10	241.71	0.72				
StonyBrook	8699		100-yr	1350.00	83.29	92.42	88.90	92.88
0.002162	5.49	281.97	334.97	0.38				
StonyBrook	8699		100-yr (encr)	1350.00	83.29	93.42	88.90	93.78
0.001592	4.82	279.84	37.67	0.31				
StonyBrook	8699		2-yr	310.00	83.29	88.69	86.03	88.81
0.000974	2.79	111.06	30.48	0.25				
StonyBrook	8699		10-yr	713.00	83.29	90.93	87.37	91.19
0.001147	4.09	174.30	189.97	0.29				
StonyBrook	8699		50-yr	1115.00	83.29	92.21	88.41	92.55
0.001678	4.73	256.98	310.09	0.33				
StonyBrook	8699		500-yr	1745.00	83.29	92.15	89.68	93.00
0.004257	7.48	251.01	294.13	0.53				
StonyBrook	8686							
Bri dge								
StonyBrook	8668		100-yr	1350.00	83.00	90.27	89.84	91.70
0.006867	9.86	148.13	241.10	0.76				
StonyBrook	8668		100-yr (encr)	1350.00	83.00	90.97	89.59	92.30
0.006635	9.27	145.63	24.61	0.67				
StonyBrook	8668		2-yr	310.00	83.00	88.54	86.55	88.74
0.001568	3.60	87.03	99.41	0.34				
StonyBrook	8668		10-yr	713.00	83.00	89.66	88.01	90.21
0.003085	6.08	124.94	210.40	0.50				
StonyBrook	8668		50-yr	1115.00	83.00	90.16	89.20	91.20
0.005072	8.36	144.08	237.79	0.65				
StonyBrook	8668		500-yr	1745.00	83.00	90.75	90.75	92.48
0.007720	11.09	191.55	257.25	0.82				
StonyBrook	8613		100-yr	1350.00	83.83	90.40	89.15	91.03
0.003836	6.64	246.87	251.89	0.54				
StonyBrook	8613		100-yr (encr)	1350.00	83.83	91.14	89.03	91.67
0.002776	5.98	250.69	60.11	0.45				
StonyBrook	8613		2-yr	310.00	83.83	88.51	86.45	88.63
0.001084	2.78	113.30	129.81	0.28				
StonyBrook	8613		10-yr	713.00	83.83	89.65	87.65	89.94
0.002117	4.39	177.75	196.71	0.39				
StonyBrook	8613		50-yr	1115.00	83.83	90.23	88.64	90.71
0.003038	5.76	228.14	235.83	0.48				
StonyBrook	8613		500-yr	1745.00	83.83	90.53	89.85	91.50

				StonyBrookDari en1. rep				
0.005714	8.26	263.25	267.79	0.67				
StonyBrook	8597	Inl Struct						
0.008273	8.11	189.54	252.29	1350.00	84.18	89.23	88.57	90.23
0.009117	8.31	162.46	41.72	1350.00	84.18	89.24	88.54	90.31
0.011147	5.38	57.57	35.06	310.00	84.18	86.59	86.25	87.04
0.009667	6.80	104.91	114.58	713.00	84.18	87.85	87.32	88.56
0.008877	7.75	148.49	194.85	1115.00	84.18	88.78	88.14	89.71
0.009599	9.27	231.40	276.67	1745.00	84.18	89.59	89.57	90.85
0.013921	9.64	148.04	174.30	1350.00	83.39	88.16	88.16	89.59
0.014679	9.71	139.04	41.17	1350.00	83.39	88.16	88.01	89.63
0.014739	6.17	50.25	30.74	310.00	83.39	85.72	85.54	86.31
0.013755	7.91	90.14	35.61	713.00	83.39	86.92	86.68	87.89
0.014377	9.05	123.80	119.01	1115.00	83.39	87.78	87.60	89.05
0.010680	9.67	217.41	220.65	1745.00	83.39	88.92	88.92	90.29
0.006311	7.52	238.95	154.13	1350.00	81.42	86.44	85.98	87.23
0.006315	7.52	238.89	97.74	1350.00	81.42	86.44	85.98	87.22
0.001998	3.18	103.39	90.04	310.00	81.42	85.00	83.78	85.16
0.003927	5.24	170.22	106.19	713.00	81.42	85.73	84.79	86.13
0.005520	6.77	216.03	142.99	1115.00	81.42	86.21	85.65	86.85
0.007935	8.81	267.23	167.79	1745.00	81.42	86.73	86.45	87.79

StonyBrookDari en1. rep

StonyBrook 8282		Inl Struct							
0.013912	StonyBrook 8266	8.88	197.33	100-yr 136.39	1350.00	80.59	85.19	85.19	86.31
0.013702	StonyBrook 8266	8.83	198.54	100-yr (encr) 102.00	1350.00	80.59	85.20	85.20	86.30
0.027045	StonyBrook 8266	6.75	45.91	2-yr 32.49	310.00	80.59	82.70	82.70	83.41
0.023404	StonyBrook 8266	8.47	84.21	10-yr 37.73	713.00	80.59	83.80	83.80	84.91
0.014832	StonyBrook 8266	8.52	160.23	50-yr 97.94	1115.00	80.59	84.82	84.82	85.89
0.013870	StonyBrook 8266	9.63	246.31	500-yr 163.35	1745.00	80.59	85.66	85.66	86.91
0.001588	StonyBrook 8122	4.57	403.66	100-yr 234.85	1350.00	77.15	83.73	81.54	84.03
0.001155	StonyBrook 8122	4.16	384.51	100-yr (encr) 107.31	1350.00	77.15	84.20	81.54	84.45
0.000286	StonyBrook 8122	1.58	204.93	2-yr 86.81	310.00	77.15	82.40	79.29	82.44
0.000717	StonyBrook 8122	2.85	294.26	10-yr 191.07	713.00	77.15	83.20	80.50	83.32
0.001231	StonyBrook 8122	3.94	371.57	50-yr 210.61	1115.00	77.15	83.59	81.22	83.82
0.002283	StonyBrook 8122	5.62	446.18	500-yr 263.56	1745.00	77.15	83.90	82.10	84.35
StonyBrook 8094		Inl Struct							
0.007668	StonyBrook 8082	7.91	362.36	100-yr 290.46	1350.00	76.47	82.88	82.88	83.57
0.005786	StonyBrook 8082	7.39	296.96	100-yr (encr) 119.96	1350.00	76.47	83.47	82.81	84.10
0.003442	StonyBrook 8082	3.95	85.69	2-yr 35.97	310.00	76.47	81.07	79.53	81.30
0.006148	StonyBrook 8082	6.30	166.62	10-yr 186.33	713.00	76.47	82.08	81.00	82.62
0.008761	StonyBrook 8082	8.02	257.67	50-yr 244.29	1115.00	76.47	82.50	82.48	83.29
	StonyBrook 8082			500-yr	1745.00	76.47	83.22	83.22	83.91

StonyBrookDari en1. rep

0.007898	8.39	465.04	301.82	0.64				
StonyBrook	8056		100-yr	1350.00	77.14	82.61	82.61	83.28
0.005802	8.24	413.25	283.78	0.70				
StonyBrook	8056		100-yr (encr)	1350.00	77.14	82.71	82.71	83.79
0.008629	9.57	251.54	112.33	0.81				
StonyBrook	8056		2-yr	310.00	77.14	79.99	79.99	80.93
0.015587	7.77	39.89	21.35	1.00				
StonyBrook	8056		10-yr	713.00	77.14	81.80	81.80	82.44
0.005689	7.09	200.43	204.55	0.67				
StonyBrook	8056		50-yr	1115.00	77.14	82.41	82.41	83.03
0.005344	7.66	358.43	278.90	0.67				
StonyBrook	8056		500-yr	1745.00	77.14	82.90	82.90	83.64
0.006402	9.04	496.69	291.34	0.75				
StonyBrook	7650		100-yr	1350.00	70.55	77.59		77.88
0.002570	5.31	701.75	576.03	0.46				
StonyBrook	7650		100-yr (encr)	1350.00	70.55	78.30		79.04
0.003886	7.00	222.66	79.90	0.56				
StonyBrook	7650		2-yr	310.00	70.55	74.54		74.96
0.005116	5.22	59.44	24.26	0.59				
StonyBrook	7650		10-yr	713.00	70.55	75.59	75.18	76.60
0.010172	8.08	90.46	62.50	0.85				
StonyBrook	7650		50-yr	1115.00	70.55	77.25		77.59
0.003009	5.43	514.71	517.45	0.49				
StonyBrook	7650		500-yr	1745.00	70.55	78.02		78.28
0.002331	5.40	959.35	625.34	0.44				
StonyBrook	7450		100-yr	1350.00	70.51	77.57		77.63
0.000423	2.76	1191.77	470.97	0.20				
StonyBrook	7450		100-yr (encr)	1350.00	70.51	78.55		78.64
0.000465	2.99	731.28	167.19	0.20				
StonyBrook	7450		2-yr	310.00	70.51	74.02		74.23
0.002373	3.61	85.85	37.01	0.41				
StonyBrook	7450		10-yr	713.00	70.51	75.44		75.66
0.001739	4.16	313.80	317.84	0.38				
StonyBrook	7450		50-yr	1115.00	70.51	77.28		77.33
0.000389	2.56	1054.71	453.79	0.19				
StonyBrook	7450		500-yr	1745.00	70.51	77.96		78.03
0.000498	3.13	1380.34	513.30	0.22				
StonyBrook	7015		100-yr	1350.00	69.44	77.56		77.57
0.000074	1.25	2567.53	888.10	0.09				
StonyBrook	7015		100-yr (encr)	1350.00	69.44	78.55		78.56

StonyBrookDari en1. rep

0.000075	1.38	1744.46	311.97	0.09				
StonyBrook	7015			310.00	69.44	72.94		73.14
0.002620	3.67	91.09	107.69	0.43				
StonyBrook	7015			713.00	69.44	75.43		75.45
0.000187	1.53	1010.61	523.82	0.13				
StonyBrook	7015			1115.00	69.44	77.26		77.27
0.000065	1.14	2308.08	873.98	0.08				
StonyBrook	7015			1745.00	69.44	77.94		77.95
0.000091	1.44	2912.68	905.39	0.10				
StonyBrook	6766			1350.00	68.05	77.55		77.56
0.000048	1.13	2910.25	711.89	0.07				
StonyBrook	6766			1350.00	68.05	78.54		78.55
0.000049	1.22	2171.50	349.35	0.07				
StonyBrook	6766			310.00	68.05	72.46		72.65
0.001667	3.70	146.53	257.27	0.34				
StonyBrook	6766			713.00	68.05	75.42		75.43
0.000079	1.20	1520.97	609.54	0.08				
StonyBrook	6766			1115.00	68.05	77.26		77.26
0.000040	1.01	2704.25	694.31	0.06				
StonyBrook	6766			1745.00	68.05	77.93		77.94
0.000064	1.33	3186.79	735.00	0.08				
StonyBrook	6349			1350.00	67.10	77.52		77.54
0.000087	1.57	1818.01	553.68	0.10				
StonyBrook	6349			1350.00	67.10	78.50		78.53
0.000093	1.74	1142.04	180.40	0.10				
StonyBrook	6349			310.00	67.10	71.76		71.94
0.001855	3.50	97.36	63.68	0.37				
StonyBrook	6349			713.00	67.10	75.38		75.40
0.000128	1.56	785.55	349.46	0.11				
StonyBrook	6349			1115.00	67.10	77.24		77.25
0.000072	1.39	1661.22	534.35	0.09				
StonyBrook	6349			1745.00	67.10	77.90		77.92
0.000115	1.85	2031.87	588.11	0.11				
StonyBrook	6286			1350.00	67.32	77.50	72.71	77.53
0.000163	2.16	1602.50	563.57	0.13				
StonyBrook	6286			1350.00	67.32	78.45	72.71	78.52
0.000205	2.60	904.13	162.00	0.15				
StonyBrook	6286			310.00	67.32	71.63	69.79	71.82
0.001704	3.54	87.75	33.32	0.35				
StonyBrook	6286			713.00	67.32	75.23	71.21	75.36
0.000493	3.09	428.33	395.84	0.21				
StonyBrook	6286			1115.00	67.32	77.21	72.21	77.24

								StonyBrookDari en1. rep	
0.000158	2.30	1914.48	327.44		0.12				
StonyBrook	5733		100-yr	1350.00	62.59	77.25		77.26	
0.000039	1.42	2313.69	330.08	0.07					
StonyBrook	5733		100-yr (encr)	1350.00	62.59	77.48		77.50	
0.000048	1.60	1664.61	162.00	0.08					
StonyBrook	5733		2-yr	310.00	62.59	67.37		67.49	
0.000864	2.76	118.69	65.63	0.26					
StonyBrook	5733		10-yr	713.00	62.59	73.85		73.87	
0.000042	1.21	1325.21	257.84	0.07					
StonyBrook	5733		50-yr	1115.00	62.59	77.00		77.01	
0.000029	1.21	2230.93	326.39	0.06					
StonyBrook	5733		500-yr	1745.00	62.59	77.54		77.56	
0.000058	1.77	2409.10	334.23	0.08					
StonyBrook	5703		100-yr	1350.00	61.98	77.22	67.27	77.26	
0.000087	1.90	1861.82	446.70	0.09					
StonyBrook	5703		100-yr (encr)	1350.00	61.98	77.47	67.27	77.50	
0.000069	1.71	1795.67	315.01	0.08					
StonyBrook	5703		2-yr	310.00	61.98	67.36	64.34	67.46	
0.000777	2.57	123.48	31.81	0.22					
StonyBrook	5703		10-yr	713.00	61.98	73.78	65.70	73.85	
0.000168	2.19	367.47	215.67	0.12					
StonyBrook	5703		50-yr	1115.00	61.98	76.98	66.73	77.00	
0.000061	1.58	1754.58	423.59	0.07					
StonyBrook	5703		500-yr	1745.00	61.98	77.50	68.08	77.55	
0.000128	2.34	1987.68	461.59	0.11					
StonyBrook	5662								Bri dge
StonyBrook	5614		100-yr	1350.00	56.48	65.51	61.40	65.95	
0.001357	5.35	252.18	45.09	0.33					
StonyBrook	5614		100-yr (encr)	1350.00	56.48	66.39	61.39	66.75	
0.000954	4.82	280.30	46.85	0.29					
StonyBrook	5614		2-yr	310.00	56.48	63.14	58.91	63.19	
0.000233	1.75	177.01	40.38	0.13					
StonyBrook	5614		10-yr	713.00	56.48	64.68	60.06	64.83	
0.000547	3.16	225.83	43.44	0.21					
StonyBrook	5614		50-yr	1115.00	56.48	65.31	60.93	65.63	
0.001008	4.54	245.81	44.69	0.29					
StonyBrook	5614		500-yr	1745.00	56.48	65.66	62.10	66.37	
0.002132	6.79	256.86	45.38	0.42					

StonyBrookDari en1. rep

StonyBrook	5586		100-yr	1350.00	59.19	64.97	64.73	65.72
0.010817	7.41	254.40	155.45	0.71				
StonyBrook	5586		100-yr (encl)	1350.00	59.19	65.83		66.53
0.006858	6.70	201.63	49.11	0.58				
StonyBrook	5586		2-yr	310.00	59.19	62.60		62.99
0.011050	5.03	61.57	33.99	0.66				
StonyBrook	5586		10-yr	713.00	59.19	63.99	63.23	64.57
0.009949	6.18	123.65	109.75	0.66				
StonyBrook	5586		50-yr	1115.00	59.19	64.66	64.40	65.37
0.010757	7.03	209.01	142.16	0.71				
StonyBrook	5586		500-yr	1745.00	59.19	65.46	65.12	66.23
0.010208	7.76	341.35	204.64	0.70				
StonyBrook	5299		100-yr	1350.00	56.93	63.60		63.95
0.003492	5.99	475.44	217.93	0.44				
StonyBrook	5299		100-yr (encl)	1350.00	56.93	63.70		64.51
0.007291	7.96	232.71	62.36	0.57				
StonyBrook	5299		2-yr	310.00	56.93	60.87		61.15
0.003990	4.23	78.97	35.83	0.42				
StonyBrook	5299		10-yr	713.00	56.93	62.16		62.60
0.004799	5.82	207.08	149.00	0.49				
StonyBrook	5299		50-yr	1115.00	56.93	63.12		63.50
0.003950	6.02	374.63	198.43	0.46				
StonyBrook	5299		500-yr	1745.00	56.93	64.31		64.62
0.003016	6.01	641.37	249.22	0.41				
StonyBrook	5199		100-yr	1350.00	56.30	63.47	61.00	63.67
0.001691	4.30	530.32	168.29	0.31				
StonyBrook	5199		100-yr (encl)	1350.00	56.30	63.50	61.12	63.94
0.003156	5.58	284.16	55.51	0.40				
StonyBrook	5199		2-yr	310.00	56.30	60.80	58.45	60.89
0.001250	2.49	150.90	90.51	0.24				
StonyBrook	5199		10-yr	713.00	56.30	62.10	59.70	62.26
0.001632	3.55	310.53	149.82	0.29				
StonyBrook	5199		50-yr	1115.00	56.30	63.01	60.86	63.20
0.001691	4.07	453.73	163.53	0.31				
StonyBrook	5199		500-yr	1745.00	56.30	64.15	61.87	64.38
0.001701	4.63	647.31	175.07	0.32				
StonyBrook	5048		100-yr	1350.00	55.25	62.51	61.69	63.12
0.011462	6.98	252.23	88.83	0.60				
StonyBrook	5048		100-yr (encl)	1350.00	55.25	62.51	61.69	63.12
0.011462	6.98	252.23	88.83	0.60				
StonyBrook	5048		2-yr	310.00	55.25	59.62	59.62	60.29

StonyBrookDari en1. rep

0.042628	6.57	48.70	41.07	0.96				
StonyBrook	5048		10-yr	713.00	55.25	61.02	60.72	61.64
0.018629	6.69	130.56	73.59	0.71				
StonyBrook	5048		50-yr	1115.00	55.25	62.05	61.38	62.63
0.012624	6.78	211.52	84.51	0.61				
StonyBrook	5048		500-yr	1745.00	55.25	63.17	62.17	63.83
0.010685	7.41	312.29	94.77	0.59				
StonyBrook	4989		100-yr	1350.00	53.75	60.82	60.82	62.26
0.014638	10.83	195.41	77.14	0.77				
StonyBrook	4989		100-yr (encr)	1350.00	53.75	60.82	60.82	62.26
0.014638	10.83	195.41	77.14	0.77				
StonyBrook	4989		2-yr	310.00	53.75	57.38	56.98	58.21
0.020026	7.32	43.28	20.76	0.79				
StonyBrook	4989		10-yr	713.00	53.75	58.84	58.84	60.35
0.021792	10.19	83.82	34.89	0.88				
StonyBrook	4989		50-yr	1115.00	53.75	60.29	60.29	61.71
0.015382	10.46	157.30	67.16	0.78				
StonyBrook	4989		500-yr	1745.00	53.75	61.50	61.50	63.00
0.014313	11.49	251.26	86.07	0.77				
StonyBrook	4922		100-yr	1350.00	52.06	58.36	58.36	59.84
0.027732	9.76	138.33	47.27	1.01				
StonyBrook	4922		100-yr (encr)	1350.00	52.06	58.36	58.36	59.84
0.027732	9.76	138.33	47.27	1.01				
StonyBrook	4922		2-yr	310.00	52.06	55.67	55.67	56.49
0.033869	7.26	42.72	26.28	1.00				
StonyBrook	4922		10-yr	713.00	52.06	56.99	56.99	58.17
0.029875	8.72	81.77	34.71	1.00				
StonyBrook	4922		50-yr	1115.00	52.06	57.92	57.92	59.30
0.028843	9.44	118.11	43.62	1.01				
StonyBrook	4922		500-yr	1745.00	52.06	59.01	59.01	60.64
0.026550	10.24	170.37	52.60	1.00				
StonyBrook	4879		100-yr	1350.00	50.98	55.89	55.89	57.55
0.027066	10.33	130.69	39.75	1.00				
StonyBrook	4879		100-yr (encr)	1350.00	50.98	55.89	55.89	57.55
0.027066	10.33	130.69	39.75	1.00				
StonyBrook	4879		2-yr	310.00	50.98	53.16	53.16	53.99
0.034179	7.29	42.54	26.28	1.01				
StonyBrook	4879		10-yr	713.00	50.98	54.45	54.45	55.70
0.029455	8.97	79.46	31.79	1.00				
StonyBrook	4879		50-yr	1115.00	50.98	55.40	55.40	56.94
0.027726	9.97	111.79	36.42	1.00				
StonyBrook	4879		500-yr	1745.00	50.98	56.63	56.63	58.43

StonyBrookDari en1. rep

0.026203	10.76	162.17	45.44	1.00				
StonyBrook	4774		100-yr	1350.00	36.99	41.96	41.96	43.54
0.027552	10.09	133.74	42.98	1.01				
StonyBrook	4774		100-yr (encr)	1350.00	36.99	41.96	41.96	43.54
0.027552	10.09	133.74	42.98	1.01				
StonyBrook	4774		2-yr	310.00	36.99	39.69	39.69	40.38
0.034752	6.66	46.52	33.94	1.00				
StonyBrook	4774		10-yr	713.00	36.99	40.74	40.74	41.85
0.030028	8.46	84.33	38.12	1.00				
StonyBrook	4774		50-yr	1115.00	36.99	41.56	41.56	42.97
0.027876	9.54	116.89	41.39	1.00				
StonyBrook	4774		500-yr	1745.00	36.99	42.62	42.62	44.40
0.026053	10.70	163.10	45.88	1.00				
StonyBrook	4688		100-yr	2380.00	24.83	39.04		39.23
0.000613	3.77	878.08	135.75	0.19				
StonyBrook	4688		100-yr (encr)	2380.00	24.83	40.01		40.23
0.000745	3.87	684.51	57.23	0.19				
StonyBrook	4688		2-yr	570.00	24.83	27.75	27.75	28.81
0.030927	8.26	68.99	32.89	1.01				
StonyBrook	4688		10-yr	1243.00	24.83	32.96		33.27
0.002103	4.50	285.85	56.58	0.31				
StonyBrook	4688		50-yr	1930.00	24.83	38.68		38.82
0.000457	3.20	830.00	132.88	0.16				
StonyBrook	4688		500-yr	3041.00	24.83	39.43		39.71
0.000875	4.60	932.02	139.04	0.22				
StonyBrook	4678		100-yr	2380.00	19.71	39.17		39.17
0.000007	0.54	8516.85	717.86	0.02				
StonyBrook	4678		100-yr (encr)	2380.00	19.71	40.15		40.17
0.000065	1.34	2297.59	130.52	0.05				
StonyBrook	4678		2-yr	570.00	19.71	25.35		25.41
0.000680	2.18	455.44	353.55	0.17				
StonyBrook	4678		10-yr	1243.00	19.71	33.17		33.17
0.000015	0.61	4376.96	656.87	0.03				
StonyBrook	4678		50-yr	1930.00	19.71	38.78		38.78
0.000005	0.46	8234.74	716.12	0.02				
StonyBrook	4678		500-yr	3041.00	19.71	39.62		39.63
0.000010	0.67	8842.74	719.93	0.03				
StonyBrook	4672		100-yr	2380.00	19.37	39.15	25.28	39.17
0.000049	1.35	3404.19	510.25	0.06				
StonyBrook	4672		100-yr (encr)	2380.00	19.37	40.14	25.28	40.17

StonyBrookDari en1. rep

0.000051	1.42	2358.12	171.00	0.06				
StonyBrook	4672		2-yr	570.00	19.37	25.24	22.06	25.38
0.001387	2.93	194.35	57.08	0.24				
StonyBrook	4672		10-yr	1243.00	19.37	33.06	23.42	33.15
0.000234	2.35	529.42	227.14	0.12				
StonyBrook	4672		50-yr	1930.00	19.37	38.76	24.61	38.77
0.000036	1.13	3209.98	489.73	0.05				
StonyBrook	4672		500-yr	3041.00	19.37	39.59	26.10	39.62
0.000070	1.63	3633.84	524.49	0.07				

StonyBrook 4443

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StonyBrook	4327		100-yr	2380.00	12.42	21.17	19.10	22.41
0.004721	8.94	266.22	45.42	0.59				
StonyBrook	4327		100-yr (encl)	2380.00	12.42	21.73	19.09	22.79
0.003652	8.28	287.53	61.96	0.53				
StonyBrook	4327		2-yr	570.00	12.42	19.26	15.85	19.40
0.000773	2.93	194.36	41.95	0.23				
StonyBrook	4327		10-yr	1243.00	12.42	20.40	17.30	20.83
0.001890	5.24	237.28	43.17	0.37				
StonyBrook	4327		50-yr	1930.00	12.42	20.79	18.45	21.70
0.003723	7.66	252.10	43.52	0.52				
StonyBrook	4327		500-yr	3041.00	12.42	21.64	19.98	23.42
0.006198	10.70	284.21	60.15	0.69				

StonyBrook	4288		100-yr	2380.00	15.01	21.07	20.72	21.97
0.005599	8.82	519.30	236.75	0.71				
StonyBrook	4288		100-yr (encl)	2380.00	15.01	21.72		22.35
0.003572	7.44	557.18	164.24	0.56				
StonyBrook	4288		2-yr	570.00	15.01	17.82	17.82	18.86
0.014721	8.21	69.46	33.63	1.01				
StonyBrook	4288		10-yr	1243.00	15.01	19.76	19.47	20.53
0.006249	7.53	250.25	154.41	0.71				
StonyBrook	4288		50-yr	1930.00	15.01	20.65	20.30	21.45
0.005389	8.14	424.27	218.77	0.69				
StonyBrook	4288		500-yr	3041.00	15.01	21.70		22.58
0.005011	9.06	671.85	247.17	0.69				

StonyBrook	4229		100-yr	2380.00	13.30	21.25		21.49
0.001447	4.93	953.43	291.16	0.37				
StonyBrook	4229		100-yr (encl)	2380.00	13.30	21.77		22.05
0.001375	5.03	788.04	180.90	0.36				
StonyBrook	4229		2-yr	570.00	13.30	17.66		17.99

StonyBrookDari en1. rep

0.002826	4.60	124.04	41.36	0.47				
StonyBrook	4229		10-yr	1243.00	13.30	19.91		20.10
0.001239	3.99	584.43	260.98	0.33				
StonyBrook	4229		50-yr	1930.00	13.30	20.80		21.02
0.001353	4.58	824.76	281.20	0.35				
StonyBrook	4229		500-yr	3041.00	13.30	21.85		22.12
0.001526	5.33	1131.67	300.17	0.38				
StonyBrook	3952		100-yr	2380.00	11.50	21.06		21.19
0.000787	4.01	1118.78	273.94	0.27				
StonyBrook	3952		100-yr (encr)	2380.00	11.50	21.67		21.77
0.000587	3.57	1165.92	202.00	0.23				
StonyBrook	3952		2-yr	570.00	11.50	17.31		17.45
0.001222	3.41	298.30	177.89	0.31				
StonyBrook	3952		10-yr	1243.00	11.50	19.79		19.86
0.000519	2.87	816.06	224.57	0.21				
StonyBrook	3952		50-yr	1930.00	11.50	20.64		20.74
0.000677	3.57	1009.22	239.94	0.25				
StonyBrook	3952		500-yr	3041.00	11.50	21.59		21.77
0.001021	4.80	1270.74	287.40	0.31				
StonyBrook	3698		100-yr	2380.00	9.70	20.90		21.00
0.000633	3.92	1403.44	337.03	0.24				
StonyBrook	3698		100-yr (encr)	2380.00	9.70	21.52		21.63
0.000568	3.89	1249.90	225.07	0.23				
StonyBrook	3698		2-yr	570.00	9.70	16.70		17.01
0.002325	4.75	196.71	171.71	0.41				
StonyBrook	3698		10-yr	1243.00	9.70	19.67		19.74
0.000456	2.99	992.22	331.95	0.20				
StonyBrook	3698		50-yr	1930.00	9.70	20.49		20.58
0.000558	3.56	1267.55	335.66	0.22				
StonyBrook	3698		500-yr	3041.00	9.70	21.42		21.54
0.000734	4.39	1578.45	338.56	0.26				
StonyBrook	3588		100-yr	2380.00	8.97	19.76	19.76	20.76
0.005083	9.84	706.38	356.78	0.66				
StonyBrook	3588		100-yr (encr)	2380.00	8.97	20.76		21.45
0.003218	8.30	745.35	241.31	0.52				
StonyBrook	3588		2-yr	570.00	8.97	15.87		16.64
0.004070	7.02	81.16	16.17	0.55				
StonyBrook	3588		10-yr	1243.00	8.97	18.81	16.66	19.56
0.003553	7.61	380.74	301.76	0.54				
StonyBrook	3588		50-yr	1930.00	8.97	19.38	19.38	20.36
0.004895	9.29	571.35	349.97	0.64				
StonyBrook	3588		500-yr	3041.00	8.97	20.15	20.15	21.27

StonyBrookDari en1. rep

StonyBrook	3409		100-yr	2380.00	9.80	18.24		18.54
0.000911	5.09	816.13	242.87	0.34				
StonyBrook	3409		100-yr (encr)	2380.00	9.80	19.07		19.36
0.000743	4.89	686.93	119.05	0.31				
StonyBrook	3409		2-yr	570.00	9.80	14.46		14.67
0.001130	3.65	161.64	73.41	0.35				
StonyBrook	3409		10-yr	1243.00	9.80	15.80		16.20
0.001600	5.30	307.17	130.17	0.43				
StonyBrook	3409		50-yr	1930.00	9.80	17.39		17.72
0.001095	5.19	612.78	230.99	0.37				
StonyBrook	3409		500-yr	3041.00	9.80	20.22		20.39
0.000483	4.23	1341.28	306.86	0.26				
StonyBrook	3266		100-yr	2380.00	8.80	18.20	14.62	18.41
0.000584	4.27	1075.25	375.30	0.27				
StonyBrook	3266		100-yr (encr)	2380.00	8.80	19.05	14.62	19.25
0.000450	3.99	861.56	146.55	0.24				
StonyBrook	3266		2-yr	570.00	8.80	14.41	11.32	14.53
0.000580	2.79	206.73	66.63	0.25				
StonyBrook	3266		10-yr	1243.00	8.80	15.74	12.79	15.99
0.000882	4.15	427.39	220.81	0.32				
StonyBrook	3266		50-yr	1930.00	8.80	17.35	14.05	17.57
0.000647	4.19	835.38	352.06	0.29				
StonyBrook	3266		500-yr	3041.00	8.80	20.18	15.77	20.33
0.000354	3.80	1652.39	412.85	0.22				
StonyBrook	3008		100-yr	2380.00	7.75	18.22	14.71	18.28
0.000206	2.90	1851.67	626.72	0.17				
StonyBrook	3008		100-yr (encr)	2380.00	7.75	19.02	14.48	19.13
0.000312	3.39	1198.21	175.18	0.19				
StonyBrook	3008		2-yr	570.00	7.75	14.33	10.50	14.41
0.000296	2.45	436.36	467.23	0.18				
StonyBrook	3008		10-yr	1243.00	7.75	15.71	12.12	15.81
0.000355	3.11	904.58	541.26	0.21				
StonyBrook	3008		50-yr	1930.00	7.75	17.36	14.00	17.43
0.000232	2.89	1515.70	598.20	0.17				
StonyBrook	3008		500-yr	3041.00	7.75	20.20	15.11	20.24
0.000122	2.53	2663.62	695.43	0.13				
StonyBrook	2576		100-yr	2741.00	5.91	17.48	13.27	18.04
0.000974	6.48	827.98	526.24	0.36				
StonyBrook	2576		100-yr (encr)	2741.00	5.91	18.46	13.27	18.89
0.000673	5.74	871.52	185.00	0.31				
StonyBrook	2576		2-yr	679.00	5.91	14.16	9.36	14.28

StonyBrookDari en1. rep

0.000297	2.74	291.35	223.84	0.19				
StonyBrook	2576		10-yr	1462.00	5.91	15.17	11.16	15.54
0.000829	5.02	374.98	262.62	0.32				
StonyBrook	2576		50-yr	2248.00	5.91	16.64	12.51	17.18
0.000987	6.16	597.81	436.18	0.36				
StonyBrook	2576		500-yr	3507.00	5.91	19.80	14.26	20.11
0.000510	5.39	1829.74	870.96	0.27				
StonyBrook	2444		100-yr	2741.00	2.54	17.74	7.27	17.76
0.000037	1.39	3609.10	727.24	0.08				
StonyBrook	2444		100-yr (encr)	2741.00	2.54	18.64	7.27	18.68
0.000039	1.50	2372.15	332.66	0.08				
StonyBrook	2444		2-yr	679.00	2.54	14.21	5.27	14.22
0.000011	0.62	1378.25	384.41	0.04				
StonyBrook	2444		10-yr	1462.00	2.54	15.33	6.19	15.35
0.000033	1.12	1949.42	626.62	0.07				
StonyBrook	2444		50-yr	2248.00	2.54	16.88	6.89	16.91
0.000037	1.31	3005.59	690.94	0.08				
StonyBrook	2444		500-yr	3507.00	2.54	19.94	7.83	19.95
0.000025	1.31	5273.19	877.99	0.07				
StonyBrook	2212		100-yr	2741.00	4.65	17.73		17.74
0.000041	1.31	3760.46	773.92	0.06				
StonyBrook	2212		100-yr (encr)	2741.00	4.65	18.64		18.66
0.000045	1.20	2730.45	325.56	0.06				
StonyBrook	2212		2-yr	679.00	4.65	14.21		14.21
0.000027	0.86	1537.45	499.31	0.05				
StonyBrook	2212		10-yr	1462.00	4.65	15.32		15.33
0.000053	1.28	2127.00	564.91	0.07				
StonyBrook	2212		50-yr	2248.00	4.65	16.88		16.89
0.000047	1.33	3112.85	723.74	0.07				
StonyBrook	2212		500-yr	3507.00	4.65	19.93		19.94
0.000021	1.04	5507.13	809.45	0.05				
StonyBrook	2060		100-yr	2741.00	5.53	17.72	12.23	17.73
0.000059	1.57	3148.22	618.09	0.08				
StonyBrook	2060		100-yr (encr)	2741.00	5.53	18.62	12.27	18.65
0.000064	1.42	2296.00	276.13	0.07				
StonyBrook	2060		2-yr	679.00	5.53	14.20	9.32	14.21
0.000039	1.01	1291.18	424.56	0.06				
StonyBrook	2060		10-yr	1462.00	5.53	15.31	11.53	15.32
0.000075	1.53	1788.52	482.11	0.09				
StonyBrook	2060		50-yr	2248.00	5.53	16.87	12.01	16.88
0.000067	1.60	2629.76	591.35	0.08				
StonyBrook	2060		500-yr	3507.00	5.53	19.93	12.57	19.94

StonyBrookDari en1. rep

StonyBrook	1684		100-yr	2741.00	4.21	17.11	14.18	17.25
0.000846	5.06	1282.31	365.23	0.25				
StonyBrook	1684		100-yr (encr)	2741.00	4.21	17.76	14.21	17.96
0.000985	5.65	932.86	133.79	0.28				
StonyBrook	1684		2-yr	679.00	4.21	10.67	10.67	12.59
0.011712	11.54	76.88	33.62	0.84				
StonyBrook	1684		10-yr	1462.00	4.21	14.22	13.30	14.49
0.001909	6.37	597.60	215.62	0.36				
StonyBrook	1684		50-yr	2248.00	4.21	16.20	13.88	16.35
0.000975	5.17	1049.37	247.90	0.27				
StonyBrook	1684		500-yr	3507.00	4.21	19.57	14.57	19.65
0.000407	3.96	1992.29	737.33	0.18				

StonyBrook	1432		100-yr	2741.00	3.40	17.09	11.91	17.13
0.000176	2.71	2085.62	451.64	0.15				
StonyBrook	1432		100-yr (encr)	2741.00	3.40	17.76	11.89	17.82
0.000214	2.76	1616.78	198.58	0.14				
StonyBrook	1432		2-yr	679.00	3.40	11.49	7.93	11.58
0.000604	3.10	426.78	217.86	0.24				
StonyBrook	1432		10-yr	1462.00	3.40	14.24	11.02	14.29
0.000250	2.64	1152.97	318.73	0.16				
StonyBrook	1432		50-yr	2248.00	3.40	16.18	11.61	16.23
0.000184	2.62	1785.56	402.79	0.15				
StonyBrook	1432		500-yr	3507.00	3.40	19.55	12.32	19.59
0.000106	2.42	3093.60	661.31	0.12				

StonyBrook	1408		100-yr	2741.00	3.38	17.07	12.71	17.13
0.000234	3.01	1944.61	461.01	0.15				
StonyBrook	1408		100-yr (encr)	2741.00	3.38	17.68	13.14	17.79
0.000451	3.82	1162.76	154.43	0.19				
StonyBrook	1408		2-yr	679.00	3.38	11.16	8.30	11.49
0.001540	5.01	231.53	182.75	0.36				
StonyBrook	1408		10-yr	1462.00	3.38	14.19	11.61	14.27
0.000406	3.31	962.30	331.29	0.19				
StonyBrook	1408		50-yr	2248.00	3.38	16.16	12.41	16.22
0.000257	3.00	1629.61	428.92	0.16				
StonyBrook	1408		500-yr	3507.00	3.38	19.54	13.10	19.58
0.000162	2.84	3130.38	800.55	0.13				

StonyBrook 1395

Bridge

StonyBrook	1384		100-yr	2741.00	3.01	16.73	14.00	17.03
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StonyBrookDari en1. rep

0.001062	6.19	1460.32	551.62	0.32				
StonyBrook	1384		100-yr (encr)	2741.00	3.01	17.26	14.33	17.66
0.001470	6.65	960.37	154.30	0.34				
StonyBrook	1384		2-yr	679.00	3.01	10.23	8.24	11.02
0.003787	7.15	95.00	17.98	0.55				
StonyBrook	1384		10-yr	1462.00	3.01	13.77	11.89	14.25
0.001759	6.56	578.44	229.64	0.39				
StonyBrook	1384		50-yr	2248.00	3.01	15.79	13.56	16.11
0.001170	6.14	1121.73	421.03	0.33				
StonyBrook	1384		500-yr	3507.00	3.01	19.43	14.61	19.54
0.000426	4.50	3031.57	850.99	0.21				

StonyBrook	1346		100-yr	2741.00	3.15	15.35	14.25	16.65
0.003399	9.80	590.41	380.20	0.62				
StonyBrook	1346		100-yr (encr)	2741.00	3.15	15.51	13.83	17.17
0.003865	10.59	313.94	50.40	0.66				
StonyBrook	1346		2-yr	679.00	3.15	10.01	8.15	10.85
0.004364	7.38	92.00	20.41	0.61				
StonyBrook	1346		10-yr	1462.00	3.15	12.67	11.20	13.91
0.004812	9.01	185.77	82.22	0.68				
StonyBrook	1346		50-yr	2248.00	3.15	14.89	13.61	15.85
0.002728	8.44	481.44	151.63	0.55				
StonyBrook	1346		500-yr	3507.00	3.15	19.28	15.00	19.49
0.000521	5.02	2349.99	724.11	0.26				

StonyBrook	1290		100-yr	2741.00	3.37	14.74	12.15	16.35
0.003903	10.21	282.63	201.14	0.61				
StonyBrook	1290		100-yr (encr)	2741.00	3.37	15.54	12.15	16.76
0.002778	9.03	407.57	131.18	0.52				
StonyBrook	1290		2-yr	679.00	3.37	10.09	7.44	10.49
0.001624	5.07	133.95	25.03	0.39				
StonyBrook	1290		10-yr	1462.00	3.37	12.70	9.45	13.50
0.002469	7.14	204.72	29.94	0.48				
StonyBrook	1290		50-yr	2248.00	3.37	14.44	11.13	15.62
0.002930	8.68	267.44	138.15	0.53				
StonyBrook	1290		500-yr	3507.00	3.37	19.13	13.48	19.43
0.000657	5.44	2150.83	819.57	0.27				

StonyBrook 1246

Bridge

StonyBrook	1200		100-yr	2741.00	2.99	14.73	12.04	15.73
0.002738	8.85	525.66	187.65	0.48				
StonyBrook	1200		100-yr (encr)	2741.00	2.99	14.74	12.04	15.91

StonyBrookDari en1. rep

0.003045	9.34	434.31	79.13	0.50				
StonyBrook	1200		2-yr	679.00	2.99	9.86	6.96	10.25
0.001566	4.96	136.91	23.26	0.36				
StonyBrook	1200		10-yr	1462.00	2.99	12.12	8.95	13.00
0.002645	7.57	216.39	103.28	0.47				
StonyBrook	1200		50-yr	2248.00	2.99	13.95	10.70	14.88
0.002610	8.33	432.09	115.80	0.46				
StonyBrook	1200		500-yr	3507.00	2.99	16.01	13.93	16.97
0.002608	9.12	721.52	258.32	0.46				
StonyBrook	1156		100-yr	2741.00	3.72	14.92	11.94	15.39
0.001161	6.68	820.01	242.57	0.38				
StonyBrook	1156		100-yr (encr)	2741.00	3.72	15.01	11.94	15.47
0.001305	6.54	751.56	116.89	0.37				
StonyBrook	1156		2-yr	679.00	3.72	9.73	7.64	10.16
0.001943	5.29	142.02	93.88	0.43				
StonyBrook	1156		10-yr	1462.00	3.72	12.26	10.14	12.69
0.001365	5.87	443.63	130.16	0.39				
StonyBrook	1156		50-yr	2248.00	3.72	14.12	11.40	14.56
0.001139	6.25	697.44	204.10	0.37				
StonyBrook	1156		500-yr	3507.00	3.72	16.16	12.66	16.67
0.001118	7.10	1019.78	260.67	0.38				
StonyBrook	849		100-yr	2741.00	3.59	11.67	11.67	14.05
0.008663	12.86	314.66	114.05	0.86				
StonyBrook	849		100-yr (encr)	2741.00	3.59	11.67	11.67	14.05
0.008663	12.86	314.66	114.05	0.86				
StonyBrook	849		2-yr	679.00	3.59	7.14	7.14	8.56
0.015324	9.56	71.02	25.01	1.00				
StonyBrook	849		10-yr	1462.00	3.59	9.17	9.17	11.25
0.012773	11.58	130.14	49.76	0.97				
StonyBrook	849		50-yr	2248.00	3.59	10.65	10.65	13.14
0.010751	12.89	224.05	78.29	0.94				
StonyBrook	849		500-yr	3507.00	3.59	12.64	12.64	15.29
0.008375	13.82	409.43	155.38	0.87				
StonyBrook	710		100-yr	2741.00	1.09	11.99	6.86	12.17
0.000324	3.86	1179.88	289.78	0.22				
StonyBrook	710		100-yr (encr)	2741.00	1.09	11.99	6.86	12.17
0.000320	3.84	1090.58	232.22	0.22				
StonyBrook	710		2-yr	679.00	1.09	6.40	3.79	6.54
0.000615	3.03	251.04	100.14	0.26				
StonyBrook	710		10-yr	1462.00	1.09	9.46	5.10	9.59
0.000328	3.18	675.65	237.84	0.21				
StonyBrook	710		50-yr	2248.00	1.09	11.63	6.24	11.76

StonyBrookDari en1. rep								
0.000260	3.37	1098.77	286.97	0.19				
StonyBrook	710		500-yr	3507.00	1.09	12.49	7.64	12.70
0.000392	4.39	1540.29	294.36	0.24				
StonyBrook	687		100-yr	2741.00	0.26	11.52	9.26	12.04
0.001537	7.03	848.98	271.38	0.38				
StonyBrook	687		100-yr (encr)	2741.00	0.26	11.52	9.26	12.04
0.001537	7.03	848.98	271.38	0.38				
StonyBrook	687		2-yr	679.00	0.26	5.95	3.70	6.41
0.002128	5.47	124.13	24.00	0.42				
StonyBrook	687		10-yr	1462.00	0.26	8.32	5.65	9.32
0.003136	8.03	185.46	71.70	0.52				
StonyBrook	687		50-yr	2248.00	0.26	11.24	7.33	11.66
0.001227	6.18	774.32	266.76	0.34				
StonyBrook	687		500-yr	3507.00	0.26	11.78	10.46	12.52
0.002145	8.45	922.56	281.81	0.45				
StonyBrook	667							
Bri dge								
StonyBrook	647		100-yr	2741.00	0.14	9.77	9.77	11.21
0.003898	10.48	440.02	209.98	0.61				
StonyBrook	647		100-yr (encr)	2741.00	0.14	9.77	9.77	11.21
0.003898	10.48	440.02	209.98	0.61				
StonyBrook	647		2-yr	679.00	0.14	5.87	3.52	6.32
0.002059	5.36	126.58	24.00	0.41				
StonyBrook	647		10-yr	1462.00	0.14	7.12	5.46	8.45
0.004819	9.28	162.79	39.37	0.64				
StonyBrook	647		50-yr	2248.00	0.14	8.03	7.34	10.31
0.007051	12.26	203.68	48.74	0.79				
StonyBrook	647		500-yr	3507.00	0.14	10.77	10.77	11.90
0.003145	10.08	714.01	306.01	0.56				
StonyBrook	632		100-yr	2741.00	0.90	9.50		10.31
0.002245	7.51	461.93	186.91	0.54				
StonyBrook	632		100-yr (encr)	2741.00	0.90	9.50		10.31
0.002251	7.52	457.47	171.27	0.54				
StonyBrook	632		2-yr	679.00	0.90	5.89		6.24
0.002295	4.77	142.48	47.46	0.48				
StonyBrook	632		10-yr	1462.00	0.90	7.38		8.07
0.003048	6.67	219.96	58.93	0.59				
StonyBrook	632		50-yr	2248.00	0.90	8.66		9.54
0.002804	7.60	325.82	133.04	0.59				
StonyBrook	632		500-yr	3507.00	0.90	10.72		11.35

StonyBrookDari en1. rep

0.001530	7.01	751.94	256.24	0.46				
StonyBrook	574		100-yr	2741.00	1.08	9.56		10.03
0.001695	5.95	585.79	185.98	0.44				
StonyBrook	574		100-yr (encr)	2741.00	1.08	9.55		10.03
0.001729	6.00	569.25	166.10	0.45				
StonyBrook	574		2-yr	679.00	1.08	5.70		6.08
0.003008	4.96	137.35	51.50	0.52				
StonyBrook	574		10-yr	1462.00	1.08	7.21		7.83
0.004021	6.39	238.92	94.52	0.62				
StonyBrook	574		50-yr	2248.00	1.08	8.68		9.23
0.002367	6.27	431.54	161.76	0.51				
StonyBrook	574		500-yr	3507.00	1.08	10.76		11.16
0.001209	5.71	833.38	233.72	0.39				
StonyBrook	404		100-yr	2741.00	0.23	9.45		9.78
0.000881	4.86	670.25	145.33	0.34				
StonyBrook	404		100-yr (encr)	2741.00	0.23	9.45		9.78
0.000881	4.86	670.25	145.33	0.34				
StonyBrook	404		2-yr	679.00	0.23	5.41		5.63
0.001884	3.72	185.66	90.22	0.43				
StonyBrook	404		10-yr	1462.00	0.23	7.05		7.35
0.001419	4.47	357.84	111.26	0.40				
StonyBrook	404		50-yr	2248.00	0.23	8.59		8.91
0.001014	4.72	549.24	135.50	0.36				
StonyBrook	404		500-yr	3507.00	0.23	10.63		10.98
0.000766	5.08	848.72	155.98	0.33				
StonyBrook	218		100-yr	2741.00	0.07	6.81	6.81	9.20
0.008896	12.41	220.80	46.23	1.00				
StonyBrook	218		100-yr (encr)	2741.00	0.07	6.81	6.81	9.20
0.008896	12.41	220.80	46.23	1.00				
StonyBrook	218		2-yr	679.00	0.07	4.77		5.19
0.002709	5.21	130.35	42.67	0.53				
StonyBrook	218		10-yr	1462.00	0.07	5.51		6.77
0.006391	9.00	162.47	43.97	0.82				
StonyBrook	218		50-yr	2248.00	0.07	6.18	6.18	8.30
0.009104	11.71	192.01	45.13	1.00				
StonyBrook	218		500-yr	3507.00	0.07	7.77	7.77	10.42
0.008910	13.05	268.73	51.46	1.01				
StonyBrook	0		100-yr	2741.00	0.72	6.41	5.03	6.79
0.002000	4.98	550.28	161.12	0.47				
StonyBrook	0		100-yr (encr)	2741.00	0.72	6.41	5.03	6.79

StonyBrookDarien1.rep								
0.002000	4.98	550.25	161.11	0.48				
StonyBrook	0	2-yr		679.00	0.72	4.41	3.06	4.54
0.002000	2.91	233.65	154.94	0.42				
StonyBrook	0	10-yr		1462.00	0.72	5.30	4.30	5.54
0.002001	3.91	373.81	158.15	0.45				
StonyBrook	0	50-yr		2248.00	0.72	6.01	4.76	6.34
0.002001	4.62	486.83	160.06	0.47				
StonyBrook	0	500-yr		3507.00	0.72	6.97	5.42	7.43
0.002002	5.47	640.80	162.61	0.49				