

HEC-RAS Plan: Plan 01 Locations: User Defined

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
NATOF	NATOF	14800	1%	255.00	126.38	130.12		130.39	0.003463	2.27	132.10	96.22	0.43
NATOF	NATOF	14800	10%	102.00	126.38	128.87		129.01	0.003871	1.65	61.91	39.93	0.42
NATOF	NATOF	14700	1%	255.00	126.08	129.34		129.72	0.005724	2.73	100.31	67.31	0.55
NATOF	NATOF	14700	10%	102.00	126.08	128.21		128.41	0.005738	1.95	52.21	35.02	0.51
NATOF	NATOF	14600	1%	255.00	125.69	128.82	127.93	129.18	0.004961	2.73	172.41	85.30	0.53
NATOF	NATOF	14600	10%	102.00	125.69	127.56	127.10	127.78	0.006693	2.10	72.77	73.16	0.55
NATOF	NATOF	14500	1%	255.00	123.66	127.51	127.30	128.39	0.013785	4.31	121.63	81.17	0.83
NATOF	NATOF	14500	10%	102.00	123.66	126.48	126.13	126.90	0.011193	2.88	48.57	38.48	0.70
NATOF	NATOF	14400	1%	255.00	123.79	127.42	126.34	127.75	0.004276	2.56	149.56	116.57	0.49
NATOF	NATOF	14400	10%	102.00	123.79	126.19	125.38	126.36	0.004332	1.84	55.49	33.16	0.45
NATOF	NATOF	14300	1%	255.00	123.37	126.61	125.74	126.94	0.005078	2.58	161.98	135.61	0.52
NATOF	NATOF	14300	10%	102.00	123.37	125.52	124.87	125.70	0.005055	1.86	54.72	35.76	0.48
NATOF	NATOF	14200	1%	255.00	122.04	125.41	124.61	125.84	0.006516	2.88	90.54	47.83	0.59
NATOF	NATOF	14200	10%	102.00	122.04	123.98	123.70	124.30	0.011509	2.53	40.38	30.91	0.71
NATOF	NATOF	14100	1%	255.00	119.35	124.79	123.58	125.27	0.005377	3.08	121.88	117.07	0.53
NATOF	NATOF	14100	10%	102.00	119.35	123.27		123.52	0.004991	2.22	45.96	20.92	0.48
NATOF	NATOF	14000	1%	255.00	120.15	123.87	123.08	124.43	0.007329	3.33	104.20	81.42	0.63
NATOF	NATOF	14000	10%	102.00	120.15	122.61		122.89	0.006186	2.34	43.66	22.80	0.54
NATOF	NATOF	13900	1%	255.00	119.60	122.59		123.08	0.009706	3.09	83.80	46.63	0.70
NATOF	NATOF	13900	10%	102.00	119.60	121.63		121.90	0.011485	2.31	44.11	38.79	0.69
NATOF	NATOF	13800	1%	255.00	118.68	121.90	121.03	122.34	0.006352	2.94	86.76	33.48	0.58
NATOF	NATOF	13800	10%	102.00	118.68	120.68	120.10	120.90	0.006244	2.12	48.12	30.08	0.53
NATOF	NATOF	13700	1%	255.00	117.51	121.08	120.28	121.55	0.006989	3.03	84.62	36.88	0.60
NATOF	NATOF	13700	10%	102.00	117.51	119.87	119.27	120.12	0.006472	2.19	46.60	28.29	0.54
NATOF	NATOF	13600	1%	255.00	117.07	120.22		120.70	0.008948	3.06	83.28	40.11	0.67
NATOF	NATOF	13600	10%	102.00	117.07	119.28		119.50	0.006862	2.10	48.53	33.34	0.56
NATOF	NATOF	13500	1%	255.00	116.85	119.69		119.90	0.003796	2.04	126.68	72.65	0.44
NATOF	NATOF	13500	10%	102.00	116.85	118.59		118.73	0.005494	1.63	62.68	54.13	0.48
NATOF	NATOF	13400	1%	255.00	115.01	118.09	118.09	119.09	0.019442	4.52	88.11	56.82	0.99
NATOF	NATOF	13400	10%	102.00	115.01	117.08	117.08	117.69	0.023018	3.46	34.83	42.33	0.99
NATOF	NATOF	13300	1%	255.00	113.71	118.01	116.83	118.23	0.003121	2.08	130.49	66.74	0.41
NATOF	NATOF	13300	10%	102.00	113.71	116.75	116.13	116.88	0.004431	1.60	63.58	46.46	0.44
NATOF	NATOF	13200	1%	255.00	113.31	116.75	115.77	117.12	0.004834	2.74	138.31	63.69	0.52
NATOF	NATOF	13200	10%	102.00	113.31	115.66	114.95	115.83	0.004044	1.81	76.51	54.64	0.44
NATOF	NATOF	13100	1%	255.00	113.12	115.95	115.40	116.40	0.007842	2.97	107.02	71.25	0.64
NATOF	NATOF	13100	10%	102.00	113.12	115.05	114.62	115.26	0.007248	2.02	52.18	47.90	0.56
NATOF	NATOF	13000	1%	255.00	112.77	115.63		115.85	0.003503	2.07	171.30	107.36	0.43
NATOF	NATOF	13000	10%	102.00	112.77	114.40		114.56	0.006945	1.78	66.92	66.83	0.54
NATOF	NATOF	12900	1%	255.00	110.52	114.71	113.96	115.30	0.007325	3.62	186.10	91.98	0.65
NATOF	NATOF	12900	10%	102.00	110.52	113.47	112.94	113.76	0.006600	2.47	88.25	68.86	0.57
NATOF	NATOF	12800	1%	255.00	110.07	113.42	112.35	113.69	0.004147	2.31	111.13	50.50	0.47
NATOF	NATOF	12800	10%	102.00	110.07	112.11	111.57	112.29	0.005871	1.86	54.74	40.20	0.51
NATOF	NATOF	12700	1%	255.00	109.10	112.00		112.67	0.013977	3.63	70.21	36.02	0.83
NATOF	NATOF	12700	10%	102.00	109.10	111.02		111.40	0.014825	2.74	37.17	30.62	0.79
NATOF	NATOF	12600	1%	255.00	108.49	111.83		112.07	0.003275	2.23	182.34	90.12	0.43
NATOF	NATOF	12600	10%	102.00	108.49	110.51		110.67	0.004878	1.76	73.50	78.21	0.47
NATOF	NATOF	12500	1%	255.00	107.68	111.42	109.62	111.52	0.001153	1.40	227.74	93.63	0.26
NATOF	NATOF	12500	10%	102.00	107.68	109.80	108.98	109.88	0.002376	1.23	83.16	58.65	0.33
NATOF	NATOF	12400	1%	255.00	105.44	110.37		111.11	0.009951	3.82	66.70	22.73	0.71
NATOF	NATOF	12400	10%	102.00	105.44	109.14		109.45	0.005542	2.43	41.92	18.19	0.51
NATOF	NATOF	12300	1%	255.00	105.13	109.71		110.17	0.006044	3.00	87.74	34.96	0.57
NATOF	NATOF	12300	10%	102.00	105.13	108.59		108.79	0.004791	1.98	51.56	29.02	0.47
NATOF	NATOF	12200	1%	255.00	105.26	109.39	107.96	109.56	0.002399	1.86	137.78	53.57	0.36
NATOF	NATOF	12200	10%	102.00	105.26	107.62	107.26	107.81	0.008286	1.97	51.71	44.85	0.59
NATOF	NATOF	12100	1%	255.00	103.76	108.12	107.80	109.22	0.015194	4.66	55.47	28.64	0.86
NATOF	NATOF	12100	10%	102.00	103.76	106.89	106.19	107.35	0.008919	2.99	34.17	15.12	0.63
NATOF	NATOF	12000	1%	255.00	103.25	107.48	106.84	108.16	0.008081	3.75	122.97	79.76	0.66
NATOF	NATOF	12000	10%	102.00	103.25	106.09	105.45	106.47	0.008104	2.70	37.74	18.92	0.61
NATOF	NATOF	11900	1%	255.00	103.04	106.29	106.19	107.28	0.018267	4.41	58.60	28.03	0.93
NATOF	NATOF	11900	10%	102.00	103.04	105.42	104.90	105.80	0.009538	2.73	37.35	20.76	0.65
NATOF	NATOF	11800	1%	255.00	102.49	105.65	105.00	106.04	0.007548	2.77	93.27	49.69	0.61
NATOF	NATOF	11800	10%	102.00	102.49	104.39	104.09	104.69	0.011264	2.44	41.84	33.00	0.69
NATOF	NATOF	11700	1%	255.00	101.01	105.52	103.49	105.63	0.001156	1.51	201.65	97.10	0.26

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River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
NATOF	NATOF	11700	10%	102.00	101.01	103.69	102.74	103.78	0.002319	1.32	78.85	54.49	0.33
NATOF	NATOF	11600	1%	255.00	100.18	105.39	103.03	105.54	0.001371	1.76	208.65	103.96	0.29
NATOF	NATOF	11600	10%	102.00	100.18	103.59	101.94	103.69	0.001726	1.35	75.67	35.22	0.29
NATOF	NATOF	11500	1%	255.00	99.87	103.52	102.98	104.15	0.010230	3.52	72.35	30.35	0.72
NATOF	NATOF	11500	10%	102.00	99.87	102.44	101.86	102.74	0.007476	2.40	42.55	25.13	0.59
NATOF	NATOF	11400	1%	255.00	99.73	102.77	102.22	103.22	0.007854	2.98	117.25	97.82	0.64
NATOF	NATOF	11400	10%	102.00	99.73	101.76		102.01	0.008563	2.20	46.44	35.34	0.61
NATOF	NATOF	11300	1%	255.00	99.15	101.92	101.47	102.45	0.009634	3.24	101.50	84.36	0.70
NATOF	NATOF	11300	10%	102.00	99.15	100.97		101.24	0.009964	2.33	44.79	42.00	0.66
NATOF	NATOF	11200	1%	255.00	96.95	101.25	99.90	101.51	0.002970	2.25	116.39	42.75	0.41
NATOF	NATOF	11200	10%	102.00	96.95	99.76	99.03	99.92	0.004379	1.77	57.57	36.45	0.45
NATOF	NATOF	11100	1%	255.00	97.25	101.10	99.59	101.31	0.002349	2.07	172.38	103.36	0.37
NATOF	NATOF	11100	10%	102.00	97.25	99.61	98.75	99.73	0.003196	1.59	70.87	52.49	0.39
NATOF	NATOF	11000	1%	255.00	96.72	100.01	99.71	100.90	0.011719	4.21	86.62	50.32	0.81
NATOF	NATOF	11000	10%	102.00	96.72	99.01	98.56	99.37	0.008466	2.66	44.97	31.89	0.64
NATOF	NATOF	10900	1%	255.00	96.02	99.60	98.94	100.23	0.009757	3.53	72.18	28.30	0.71
NATOF	NATOF	10900	10%	102.00	96.02	98.78	97.77	98.98	0.004045	2.01	50.76	24.15	0.44
NATOF	NATOF	10800	1%	255.00	97.34	98.92	98.92	99.55	0.028433	4.19	240.00	205.43	1.14
NATOF	NATOF	10800	10%	102.00	97.34	98.44	98.32	98.70	0.019750	2.63	145.28	188.90	0.88
NATOF	NATOF	10700	1%	255.00	94.61	97.86	96.67	98.01	0.002350	1.71	235.79	146.00	0.35
NATOF	NATOF	10700	10%	102.00	94.61	96.49	96.07	96.63	0.005978	1.63	62.64	57.15	0.50
NATOF	NATOF	10600	1%	255.00	92.92	95.98	95.98	97.08	0.019702	4.64	56.80	35.32	0.99
NATOF	NATOF	10600	10%	102.00	92.92	95.17	94.81	95.59	0.011510	2.88	35.46	21.84	0.72
NATOF	NATOF	10500	1%	255.00	92.74	95.61	94.90	95.94	0.007036	2.58	99.08	52.27	0.59
NATOF	NATOF	10500	10%	102.00	92.74	94.56	93.99	94.75	0.006388	1.96	51.95	37.65	0.53
NATOF	NATOF	10400	1%	255.00	91.82	95.17	94.17	95.41	0.003982	2.34	293.39	158.51	0.47
NATOF	NATOF	10400	10%	102.00	91.82	93.93	93.56	94.09	0.006416	1.90	121.08	117.26	0.53
NATOF	NATOF	10300	1%	255.00	89.69	93.56	93.56	94.74	0.017728	5.11	127.76	91.13	0.96
NATOF	NATOF	10300	10%	102.00	89.69	92.31	92.31	93.01	0.020634	3.81	48.71	44.91	0.94
NATOF	NATOF	10200	1%	255.00	89.48	92.50	92.50	93.42	0.024793	4.92	187.15	105.22	1.07
NATOF	NATOF	10200	10%	102.00	89.48	91.56	91.56	92.15	0.029012	3.79	74.08	63.24	1.08
NATOF	NATOF	10100	1%	255.00	88.56	91.59	91.11	92.11	0.010435	3.17	80.42	40.47	0.72
NATOF	NATOF	10100	10%	102.00	88.56	90.67	90.24	90.92	0.008118	2.19	46.60	34.04	0.60
NATOF	NATOF	10000	1%	255.00	87.93	90.83	90.38	91.33	0.009049	3.20	123.77	72.90	0.69
NATOF	NATOF	10000	10%	102.00	87.93	89.89	89.54	90.15	0.009167	2.28	58.40	62.78	0.64
NATOF	NATOF	9900	1%	255.00	86.48	89.54	88.92	89.85	0.006284	2.47	118.84	85.80	0.56
NATOF	NATOF	9900	10%	102.00	86.48	88.25	88.25	88.64	0.026698	2.78	36.69	46.48	1.00
NATOF	NATOF	9800	1%	255.00	84.72	89.09	87.95	89.49	0.004400	2.83	120.50	50.70	0.50
NATOF	NATOF	9800	10%	102.00	84.72	87.89	86.83	88.06	0.003422	1.83	63.34	44.56	0.41
NATOF	NATOF	9700	1%	255.00	85.46	88.44	88.09	89.05	0.011002	3.52	107.92	67.70	0.76
NATOF	NATOF	9700	10%	102.00	85.46	87.25	87.25	87.75	0.023601	3.15	36.77	48.78	0.98
NATOF	NATOF	9600	1%	255.00	85.27	88.24	87.38	88.54	0.004603	2.48	160.21	88.50	0.50
NATOF	NATOF	9600	10%	102.00	85.27	86.92	86.64	87.16	0.009974	2.19	54.88	66.44	0.65
NATOF	NATOF	9500	1%	255.00	83.80	86.90	86.90	88.01	0.016311	4.84	109.68	85.66	0.95
NATOF	NATOF	9500	10%	102.00	83.80	85.68	85.68	86.34	0.021651	3.68	44.60	42.04	0.99
NATOF	NATOF	9400	1%	255.00	80.91	87.19	83.44	87.28	0.000480	1.35	372.99	119.98	0.18
NATOF	NATOF	9400	10%	102.00	80.91	85.70	82.47	85.73	0.000228	0.76	213.53	98.22	0.12
NATOF	NATOF	9300	1%	255.00	82.48	86.25	85.88	87.06	0.011157	4.34	177.03	90.12	0.80
NATOF	NATOF	9300	10%	102.00	82.48	85.26	84.80	85.60	0.007461	2.73	94.06	78.56	0.61
NATOF	NATOF	9200	1%	255.00	81.89	85.25	84.08	85.44	0.002909	1.95	136.97	61.38	0.40
NATOF	NATOF	9200	10%	102.00	81.89	83.95	83.41	84.09	0.004993	1.62	62.85	51.46	0.46
NATOF	NATOF	9100	1%	255.00	80.18	84.61		85.06	0.006034	2.94	89.48	37.92	0.57
NATOF	NATOF	9100	10%	102.00	80.18	83.35		83.59	0.006381	2.17	47.00	28.42	0.54
NATOF	NATOF	9000	1%	255.00	80.68	84.10		84.41	0.004487	2.48	104.68	48.73	0.49
NATOF	NATOF	9000	10%	102.00	80.68	82.92		83.08	0.004321	1.77	57.48	35.82	0.45
NATOF	NATOF	8900	1%	255.00	80.16	83.51		83.96	0.006612	3.06	140.53	73.43	0.60
NATOF	NATOF	8900	10%	102.00	80.16	82.44		82.66	0.006469	2.13	67.97	56.96	0.55
NATOF	NATOF	8800	1%	255.00	79.63	83.05		83.42	0.004872	2.85	238.14	123.48	0.53
NATOF	NATOF	8800	10%	102.00	79.63	81.96		82.14	0.004099	1.93	109.05	112.60	0.45
NATOF	NATOF	8700	1%	255.00	78.63	81.37	81.37	82.28	0.020357	4.47	130.49	82.99	1.01
NATOF	NATOF	8700	10%	102.00	78.63	80.57	80.57	81.12	0.022572	3.33	39.27	49.77	0.98
NATOF	NATOF	8600	1%	255.00	77.36	81.16		81.44	0.003590	2.36	116.02	45.93	0.45
NATOF	NATOF	8600	10%	102.00	77.36	79.80		79.95	0.003969	1.75	58.81	38.53	0.43

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NATOF	NATOF	8500	1%	255.00	76.51	80.55	79.48	80.87	0.004510	2.51	101.62	39.61	0.49
NATOF	NATOF	8500	10%	102.00	76.51	79.07	78.52	79.30	0.007378	2.15	47.46	33.21	0.57
NATOF	NATOF	8400	1%	255.00	75.58	79.45	78.96	80.26	0.011403	3.99	65.59	26.45	0.76
NATOF	NATOF	8400	10%	102.00	75.58	78.24	77.65	78.61	0.008232	2.68	38.09	19.47	0.61
NATOF	NATOF	8300	1%	255.00	75.51	78.91	78.10	79.36	0.007004	2.98	85.56	34.44	0.60
NATOF	NATOF	8300	10%	102.00	75.51	77.55	77.13	77.84	0.008711	2.39	42.75	28.66	0.62
NATOF	NATOF	8200	1%	255.00	74.37	78.13		78.80	0.009364	3.64	70.46	29.76	0.70
NATOF	NATOF	8200	10%	102.00	74.37	76.97		77.26	0.006214	2.39	42.76	21.77	0.54
NATOF	NATOF	8100	1%	255.00	73.96	77.70	76.61	78.00	0.004193	2.46	113.44	52.34	0.48
NATOF	NATOF	8100	10%	102.00	73.96	76.49	75.69	76.65	0.004070	1.76	57.83	34.68	0.44
NATOF	NATOF	8000	1%	270.00	72.89	76.63	76.20	77.37	0.012211	3.83	70.52	30.55	0.79
NATOF	NATOF	8000	10%	107.00	72.89	75.38	75.02	75.79	0.011506	2.84	37.65	23.78	0.72
NATOF	NATOF	7900	1%	270.00	71.86	76.38	75.07	76.67	0.003227	2.42	111.77	40.68	0.47
NATOF	NATOF	7900	10%	107.00	71.86	74.84	74.10	75.03	0.003938	1.93	55.49	33.26	0.48
NATOF	NATOF	7800	1%	270.00	71.47	74.65	74.33	75.31	0.010516	3.60	76.21	43.84	0.80
NATOF	NATOF	7800	10%	107.00	71.47	73.61	73.34	73.97	0.009910	2.64	40.50	30.26	0.73
NATOF	NATOF	7700	1%	270.00	70.36	73.34	73.25	74.13	0.015016	3.94	68.59	38.66	0.94
NATOF	NATOF	7700	10%	107.00	70.36	72.58	72.30	72.91	0.009559	2.55	42.03	32.54	0.72
NATOF	NATOF	7600	1%	270.00	69.81	72.64	71.96	72.92	0.005364	2.84	141.19	93.26	0.59
NATOF	NATOF	7600	10%	107.00	69.81	71.54	71.54	72.17	0.018606	3.50	30.59	26.25	0.99
NATOF	NATOF	7500	1%	270.00	68.81	72.34	71.21	72.61	0.002706	2.36	130.45	58.26	0.44
NATOF	NATOF	7500	10%	107.00	68.81	71.12	70.36	71.26	0.002843	1.70	67.69	47.01	0.41
NATOF	NATOF	7400	1%	270.00	67.35	71.57	71.20	72.12	0.006658	3.45	93.88	51.44	0.66
NATOF	NATOF	7400	10%	107.00	67.35	70.45	69.81	70.78	0.006365	2.54	42.06	23.37	0.61
NATOF	NATOF	7300	1%	270.00	67.08	71.04	70.62	71.51	0.006365	3.12	98.65	59.99	0.64
NATOF	NATOF	7300	10%	107.00	67.08	69.74	69.27	70.11	0.008543	2.69	39.83	25.67	0.69
NATOF	NATOF	7200	1%	270.00	66.59	70.60	69.55	71.01	0.004402	2.82	96.45	40.89	0.54
NATOF	NATOF	7200	10%	107.00	66.59	69.22	68.51	69.44	0.004374	2.10	51.06	28.93	0.50
NATOF	NATOF	7100	1%	270.00	65.78	70.13	69.21	70.56	0.005079	2.92	93.02	43.79	0.58
NATOF	NATOF	7100	10%	107.00	65.78	68.74	68.04	69.00	0.005227	2.25	47.46	27.68	0.55
NATOF	NATOF	7000	1%	270.00	65.69	69.28	68.51	69.74	0.006270	3.00	89.95	39.33	0.63
NATOF	NATOF	7000	10%	107.00	65.69	68.09	67.51	68.33	0.005298	2.17	49.31	31.10	0.55
NATOF	NATOF	6900	1%	270.00	63.44	68.14	66.19	68.33	0.001693	1.91	141.00	44.49	0.34
NATOF	NATOF	6900	10%	107.00	63.44	66.37	65.28	66.49	0.002013	1.52	70.35	36.07	0.35
NATOF	NATOF	6800	1%	270.00	62.64	67.42	66.58	68.01	0.006834	3.42	79.04	29.19	0.66
NATOF	NATOF	6800	10%	107.00	62.64	65.82	65.10	66.19	0.006327	2.69	39.72	19.76	0.61
NATOF	NATOF	6700	1%	270.00	62.42	67.00	65.79	67.40	0.004453	2.79	96.68	35.27	0.54
NATOF	NATOF	6700	10%	107.00	62.42	65.32	64.38	65.59	0.004428	2.31	46.41	22.39	0.51
NATOF	NATOF	6600	1%	270.00	61.02	65.40	64.95	66.10	0.010316	3.72	72.65	32.47	0.79
NATOF	NATOF	6600	10%	107.00	61.02	64.09	63.47	64.49	0.008389	2.81	38.10	22.01	0.68
NATOF	NATOF	6500	1%	270.00	60.96	64.86	63.85	65.20	0.004075	2.57	107.87	50.83	0.52
NATOF	NATOF	6500	10%	107.00	60.96	63.56	62.85	63.76	0.004584	1.97	54.37	35.45	0.51
NATOF	NATOF	6400	1%	270.00	59.93	64.35	63.62	64.78	0.004730	2.99	102.43	54.05	0.57
NATOF	NATOF	6400	10%	107.00	59.93	62.98	62.32	63.27	0.005977	2.39	44.77	26.13	0.58
NATOF	NATOF	6300	1%	270.00	59.03	63.43	63.04	64.25	0.009752	4.63	91.02	56.62	0.81
NATOF	NATOF	6300	10%	107.00	59.03	62.48	61.92	62.79	0.005325	2.74	51.95	31.09	0.56
NATOF	NATOF	6200	1%	270.00	59.49	62.80	62.48	63.36	0.007252	3.56	111.02	103.33	0.70
NATOF	NATOF	6200	10%	107.00	59.49	61.78	61.42	62.11	0.007285	2.58	45.54	34.37	0.65
NATOF	NATOF	6100	1%	270.00	58.54	62.47	61.53	62.74	0.003296	2.84	155.77	97.48	0.49
NATOF	NATOF	6100	10%	107.00	58.54	61.30	60.69	61.46	0.003151	2.09	74.85	53.70	0.45
NATOF	NATOF	6000	1%	270.00	57.85	61.72	61.39	62.28	0.007977	3.45	97.74	90.93	0.71
NATOF	NATOF	6000	10%	107.00	57.85	60.67	60.36	61.01	0.009584	2.60	41.27	31.21	0.71
NATOF	NATOF	5900	1%	270.00	57.58	61.30	60.69	61.71	0.004829	2.98	112.36	69.61	0.58
NATOF	NATOF	5900	10%	107.00	57.58	60.11	59.66	60.38	0.006298	2.32	47.39	37.32	0.60
NATOF	NATOF	5800	1%	270.00	56.52	60.73	60.10	61.24	0.006892	3.18	85.50	40.95	0.66
NATOF	NATOF	5800	10%	107.00	56.52	59.68	58.96	59.92	0.005108	2.17	49.33	29.92	0.54
NATOF	NATOF	5700	1%	270.00	56.42	60.12	59.53	60.61	0.005956	3.12	93.74	48.30	0.63
NATOF	NATOF	5700	10%	107.00	56.42	59.05	58.51	59.30	0.006485	2.24	47.86	34.41	0.60
NATOF	NATOF	5600	1%	270.00	55.48	59.67	59.05	60.09	0.004781	3.05	112.83	61.34	0.57
NATOF	NATOF	5600	10%	107.00	55.48	58.48	57.96	58.75	0.005531	2.31	49.14	37.11	0.57
NATOF	NATOF	5500	1%	270.00	55.19	59.37	58.24	59.67	0.003062	2.42	121.33	66.64	0.46
NATOF	NATOF	5500	10%	107.00	55.19	58.07	57.33	58.23	0.003718	1.81	59.00	37.04	0.46

HEC-RAS Plan: Plan 01 Locations: User Defined (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
NATOF	NATOF	5400	1%	270.00	54.65	58.57	57.95	59.12	0.007431	3.26	82.92	38.21	0.69
NATOF	NATOF	5400	10%	107.00	54.65	57.49	56.86	57.74	0.005371	2.24	47.69	28.66	0.56
NATOF	NATOF	5300	1%	270.00	53.95	57.94	57.60	58.46	0.006802	3.34	100.54	61.05	0.67
NATOF	NATOF	5300	10%	107.00	53.95	56.93	56.42	57.24	0.007133	2.46	43.52	28.44	0.63
NATOF	NATOF	5200	1%	270.00	53.46	56.95	56.68	57.63	0.009912	3.83	92.50	74.60	0.80
NATOF	NATOF	5200	10%	107.00	53.46	56.35	55.71	56.62	0.005224	2.28	48.07	33.38	0.55
NATOF	NATOF	5100	1%	270.00	53.58	56.94	55.64	57.06	0.002052	1.94	232.54	138.21	0.37
NATOF	NATOF	5100	10%	107.00	53.58	55.80	55.35	55.87	0.002159	1.38	105.38	75.20	0.35
NATOF	NATOF	5000	1%	270.00	52.77	56.28	55.52	56.68	0.004743	2.85	107.10	74.68	0.57
NATOF	NATOF	5000	10%	107.00	52.77	55.37	54.56	55.53	0.003378	1.81	59.28	37.18	0.45
NATOF	NATOF	4900	1%	270.00	52.24	56.04	55.34	56.25	0.002838	2.37	182.59	132.84	0.45
NATOF	NATOF	4900	10%	107.00	52.24	54.96	54.30	55.19	0.004451	2.16	50.26	31.56	0.52
NATOF	NATOF	4800	1%	270.00	51.97	55.65	54.70	55.94	0.003455	2.43	124.40	81.79	0.48
NATOF	NATOF	4800	10%	107.00	51.97	54.54	53.78	54.69	0.003624	1.76	60.94	40.07	0.45
NATOF	NATOF	4700	1%	270.00	51.28	55.37	54.29	55.61	0.002851	2.23	148.55	126.96	0.44
NATOF	NATOF	4700	10%	107.00	51.28	54.20	53.32	54.35	0.003151	1.68	63.75	40.28	0.43
NATOF	NATOF	4600	1%	270.00	51.04	54.84	53.99	55.12	0.003506	2.53	152.43	137.60	0.49
NATOF	NATOF	4600	10%	107.00	51.04	53.66	52.89	53.88	0.004139	2.06	51.99	29.41	0.49
NATOF	NATOF	4500	1%	270.00	50.45	54.59	53.53	54.82	0.002566	2.50	191.88	196.52	0.43
NATOF	NATOF	4500	10%	107.00	50.45	53.41	52.60	53.56	0.002544	1.87	73.68	51.57	0.40
NATOF	NATOF	4400	1%	270.00	50.51	53.74	53.68	54.50	0.006961	3.95	76.11	48.95	0.86
NATOF	NATOF	4400	10%	107.00	50.51	52.85	52.64	53.26	0.007143	2.81	38.20	32.16	0.79
NATOF	NATOF	4300	1%	270.00	49.55	53.25	53.18	53.88	0.004910	3.75	93.45	71.19	0.73
NATOF	NATOF	4300	10%	107.00	49.55	52.48	51.86	52.77	0.003152	2.39	47.31	35.69	0.56
NATOF	NATOF	4200	1%	270.00	49.52	52.92	52.75	53.43	0.004627	3.56	119.41	135.80	0.71
NATOF	NATOF	4200	10%	107.00	49.52	52.16	51.72	52.46	0.003682	2.50	48.19	42.10	0.60
NATOF	NATOF	4100	1%	270.00	48.73	52.71	52.50	53.07	0.003346	3.10	137.87	126.87	0.60
NATOF	NATOF	4100	10%	107.00	48.73	51.71	51.30	52.10	0.004969	2.79	40.61	34.53	0.68
NATOF	NATOF	4000	1%	270.00	48.74	52.51	51.95	52.82	0.002699	2.69	141.07	125.56	0.54
NATOF	NATOF	4000	10%	107.00	48.74	51.25	50.85	51.60	0.005069	2.60	41.20	27.96	0.68
NATOF	NATOF	3900	1%	270.00	48.21	52.09	51.50	52.20	0.001116	1.96	254.47	211.10	0.36
NATOF	NATOF	3900	10%	107.00	48.21	50.79	50.39	51.16	0.004490	2.71	42.19	38.13	0.66
NATOF	NATOF	3800	1%	270.00	47.81	51.27	50.97	51.87	0.004786	3.64	94.63	68.78	0.73
NATOF	NATOF	3800	10%	107.00	47.81	50.61	50.01	50.81	0.002301	2.07	59.07	43.71	0.48
NATOF	NATOF	3700	1%	270.00	47.55	51.22	51.12	51.62	0.003607	3.12	135.27	164.14	0.62
NATOF	NATOF	3700	10%	107.00	47.55	50.22	49.63	50.55	0.003916	2.54	42.11	23.95	0.61
NATOF	NATOF	3600	1%	270.00	46.94	51.38	50.49	51.42	0.000411	1.17	374.58	221.61	0.22
NATOF	NATOF	3600	10%	107.00	46.94	49.78	49.36	50.17	0.005732	2.76	38.75	26.07	0.72
NATOF	NATOF	3500	1%	270.00	46.49	50.70	49.57	50.97	0.001664	2.42	137.42	77.26	0.44
NATOF	NATOF	3500	10%	107.00	46.49	49.47	48.43	49.64	0.001831	1.81	59.10	32.07	0.43
NATOF	NATOF	3400	1%	270.00	45.70	50.17	48.97	50.43	0.001646	2.60	155.85	100.18	0.44
NATOF	NATOF	3400	10%	107.00	45.70	49.21	48.09	49.32	0.000994	1.62	77.82	51.74	0.33
NATOF	NATOF	3300	1%	270.00	45.05	49.84	49.84	50.19	0.003232	3.17	160.48	205.42	0.59
NATOF	NATOF	3300	10%	107.00	45.05	48.58	48.14	49.11	0.006189	3.23	33.12	17.59	0.75
NATOF	NATOF	3200	1%	270.00	45.00	48.96	49.17	49.71	0.006230	4.04	89.30	105.50	0.82
NATOF	NATOF	3200	10%	107.00	45.00	48.31	47.59	48.60	0.003274	2.39	45.45	38.27	0.56
NATOF	NATOF	3100	1%	270.00	44.85	49.00	48.33	49.03	0.000524	1.18	392.52	384.60	0.24
NATOF	NATOF	3100	10%	107.00	44.85	48.41	47.45	48.43	0.000372	0.83	209.50	211.91	0.19
NATOF	NATOF	3000	1%	270.00	44.25	48.67	48.47	48.92	0.002614	2.72	170.47	169.78	0.53
NATOF	NATOF	3000	10%	107.00	44.25	47.83	47.19	48.15	0.003746	2.53	42.83	43.52	0.60
NATOF	NATOF	2900	1%	270.00	44.10	48.51	48.13	48.70	0.001857	2.45	191.06	164.36	0.46
NATOF	NATOF	2900	10%	107.00	44.10	47.55	46.91	47.83	0.003002	2.39	49.00	40.94	0.54
NATOF	NATOF	2800	1%	270.00	43.79	48.23	47.61	48.31	0.000807	1.68	314.55	296.04	0.30
NATOF	NATOF	2800	10%	107.00	43.79	47.53	46.65	47.59	0.000795	1.40	141.58	193.95	0.29
NATOF	NATOF	2700	1%	270.00	43.30	47.17	47.17	47.43	0.004847	3.02	165.24	213.44	0.68
NATOF	NATOF	2700	10%	107.00	43.30	46.82	46.47	47.29	0.006346	3.04	35.20	21.70	0.76
NATOF	NATOF	2600	1%	270.00	43.13	46.91	46.87	47.06	0.001962	2.28	209.28	194.85	0.46
NATOF	NATOF	2600	10%	107.00	43.13	46.29	45.71	46.55	0.002919	2.30	50.49	39.41	0.54
NATOF	NATOF	2500	1%	270.00	42.74	46.61	46.47	46.77	0.002029	2.40	236.85	303.55	0.47
NATOF	NATOF	2500	10%	107.00	42.74	45.92	45.31	46.24	0.003382	2.53	45.82	39.55	0.58
NATOF	NATOF	2400	1%	270.00	42.97	46.40	46.22	46.60	0.002554	2.62	189.21	215.08	0.53
NATOF	NATOF	2400	10%	107.00	42.97	45.72	45.31	45.97	0.003140	2.36	65.45	128.80	0.55
NATOF	NATOF	2300	1%	270.00	42.47	46.42	45.63	46.43	0.000295	0.97	534.96	400.00	0.18

HEC-RAS Plan: Plan 01 Locations: User Defined (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
NATOF	NATOF	2300	10%	107.00	42.47	45.48	44.79	45.59	0.001511	1.70	114.36	206.70	0.39
NATOF	NATOF	2200	1%	270.00	42.08	46.40	45.37	46.41	0.000130	0.65	698.64	400.00	0.12
NATOF	NATOF	2200	10%	107.00	42.08	45.42	44.52	45.46	0.000697	1.14	163.56	207.08	0.26
NATOF	NATOF	2100	1%	270.00	41.64	45.30	45.30	46.28	0.009179	4.41	62.35	34.84	0.97
NATOF	NATOF	2100	10%	107.00	41.64	45.18	44.10	45.36	0.001752	1.85	58.35	33.69	0.42
NATOF	NATOF	2000	1%	270.00	41.39	45.06	44.65	45.13	0.001196	1.71	302.26	315.00	0.36
NATOF	NATOF	2000	10%	107.00	41.39	44.68	43.97	44.72	0.000698	1.16	182.08	313.23	0.26
NATOF	NATOF	1900	1%	270.00	41.14	44.88	44.63	45.03	0.002183	2.26	212.87	217.07	0.48
NATOF	NATOF	1900	10%	107.00	41.14	44.48	43.76	44.56	0.001253	1.50	125.64	206.93	0.35
NATOF	NATOF	1800	1%	270.00	40.58	44.34	44.28	44.69	0.004704	3.18	142.53	172.06	0.69
NATOF	NATOF	1800	10%	107.00	40.58	44.24	43.24	44.31	0.000989	1.41	125.00	163.32	0.32
NATOF	NATOF	1700	1%	270.00	40.52	44.14	43.90	44.29	0.002365	2.31	209.95	213.45	0.49
NATOF	NATOF	1700	10%	107.00	40.52	43.69	43.15	44.04	0.004060	2.61	41.38	25.44	0.62
NATOF	NATOF	1600	1%	270.00	40.39	43.98	43.80	44.09	0.001535	2.08	242.04	216.14	0.41
NATOF	NATOF	1600	10%	107.00	40.39	43.20	42.73	43.61	0.004566	2.84	39.24	32.21	0.66
NATOF	NATOF	1500	1%	270.00	40.02	44.00	42.48	44.02	0.000184	0.81	575.00	400.00	0.15
NATOF	NATOF	1500	10%	107.00	40.02	43.27	41.78	43.28	0.000164	0.64	256.74	214.79	0.13
NATOF	NATOF	1400	1%	270.00	40.04	43.98	43.03	43.99	0.000174	0.76	640.96	400.00	0.14
NATOF	NATOF	1400	10%	107.00	40.04	43.21	42.49	43.25	0.000517	1.07	177.28	189.87	0.23
NATOF	NATOF	1300	1%	270.00	39.96	43.20	42.72	43.27	0.001282	1.87	319.26	388.18	0.37
NATOF	NATOF	1300	10%	107.00	39.96	42.94	42.34	42.96	0.000453	1.04	224.49	334.29	0.22
NATOF	NATOF	1200	1%	270.00	39.76	42.87	42.50	43.05	0.002952	2.59	187.54	278.34	0.56
NATOF	NATOF	1200	10%	107.00	39.76	41.82	41.95	42.31	0.013334	3.60	45.32	89.48	1.06
NATOF	NATOF	1100	1%	270.00	37.49	39.95	40.51	41.84	0.027467	6.09	44.32	29.47	1.59
NATOF	NATOF	1100	10%	107.00	37.49	39.09	39.51	40.47	0.042568	5.20	20.56	24.34	1.81
NATOF	NATOF	1000	1%	270.00	36.31	40.60	39.47	40.97	0.002683	2.72	99.48	37.67	0.53
NATOF	NATOF	1000	10%	107.00	36.31	39.07	38.45	39.31	0.003179	2.18	48.98	28.98	0.54
NATOF	NATOF	900	1%	270.00	35.47	40.35	38.96	40.64	0.001790	2.36	117.14	56.10	0.45
NATOF	NATOF	900	10%	107.00	35.47	38.63	37.72	38.84	0.002435	2.06	52.01	28.28	0.48
NATOF	NATOF	800	1%	270.00	34.53	40.24	38.63	40.48	0.001380	2.16	127.75	49.85	0.39
NATOF	NATOF	800	10%	107.00	34.53	38.42	37.15	38.60	0.002275	1.90	56.23	32.02	0.46
NATOF	NATOF	700	1%	270.00	34.49	39.87	38.61	40.30	0.002530	2.91	94.99	50.19	0.53
NATOF	NATOF	700	10%	107.00	34.49	38.08	37.23	38.37	0.003094	2.41	44.39	22.40	0.55
NATOF	NATOF	600	1%	270.00	34.34	38.79	38.79	40.05	0.003229	4.97	54.37	21.56	1.00
NATOF	NATOF	600	10%	107.00	34.34	37.32	37.32	38.15	0.003650	4.03	26.56	16.03	1.00
NATOF	NATOF	500	1%	270.00	34.30	36.65	37.48	39.34	0.012506	7.26	37.19	24.21	1.87
NATOF	NATOF	500	10%	107.00	34.30	35.88	36.35	37.44	0.014222	5.53	19.34	21.26	1.85
NATOF	NATOF	400	1%	270.00	34.13	37.49	37.18	38.28	0.002192	3.94	68.53	30.23	0.84
NATOF	NATOF	400	10%	107.00	34.13	36.29	35.98	36.73	0.001975	2.92	36.63	23.58	0.75
NATOF	NATOF	300	1%	270.00	33.99	37.09	36.99	38.03	0.002819	4.29	62.93	29.62	0.94
NATOF	NATOF	300	10%	107.00	33.99	35.88	35.83	36.49	0.003307	3.44	31.08	23.16	0.95
NATOF	NATOF	200	1%	270.00	33.64	36.62	36.66	37.71	0.003338	4.63	58.34	27.79	1.02
NATOF	NATOF	200	10%	107.00	33.64	35.49	35.49	36.15	0.003671	3.61	29.67	22.34	1.00
NATOF	NATOF	100	1%	270.00	33.04	36.86	35.90	37.38	0.001061	3.19	84.54	28.27	0.59
NATOF	NATOF	100	10%	107.00	33.04	35.38	34.71	35.67	0.001059	2.38	45.04	24.31	0.56