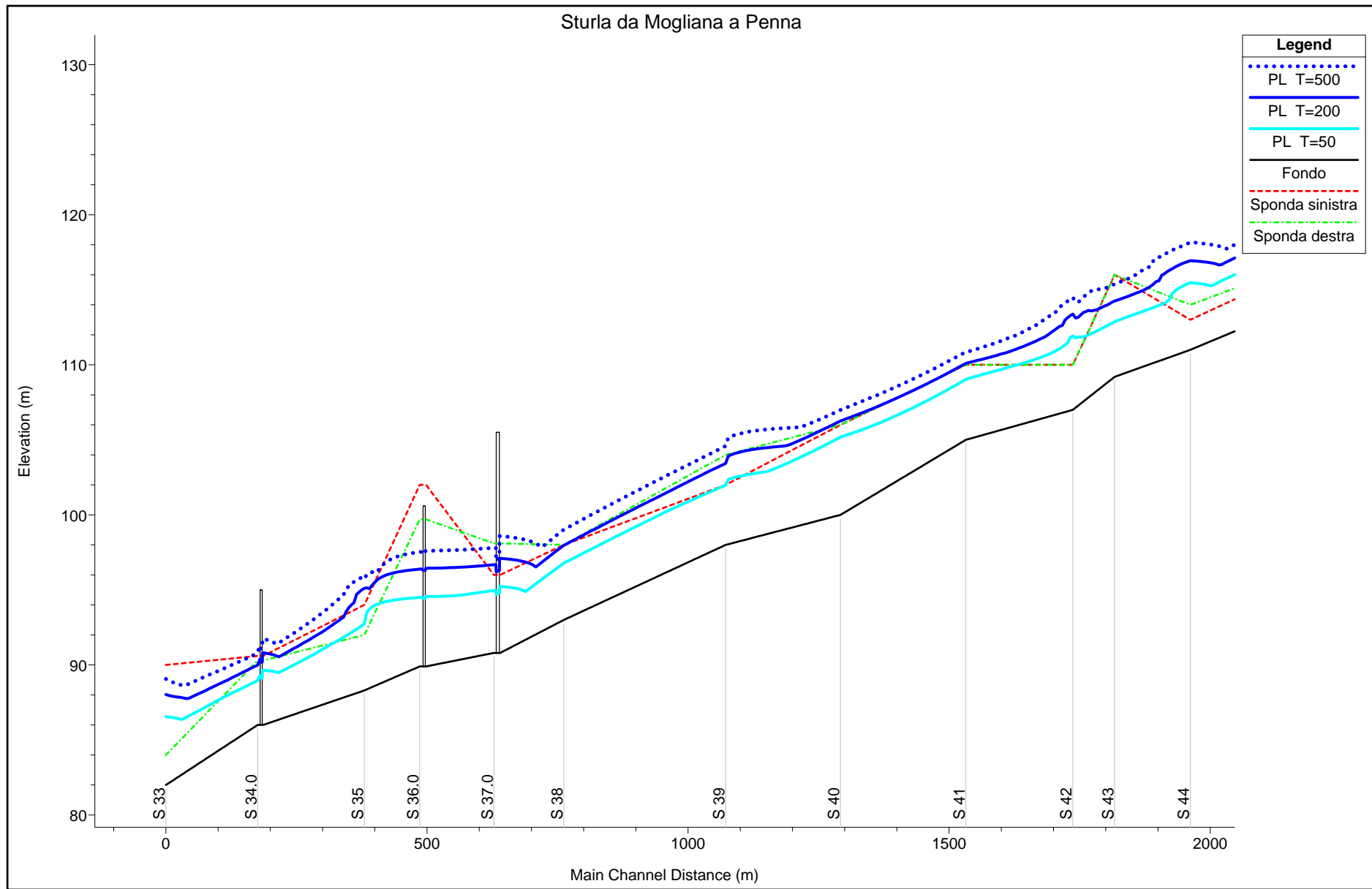
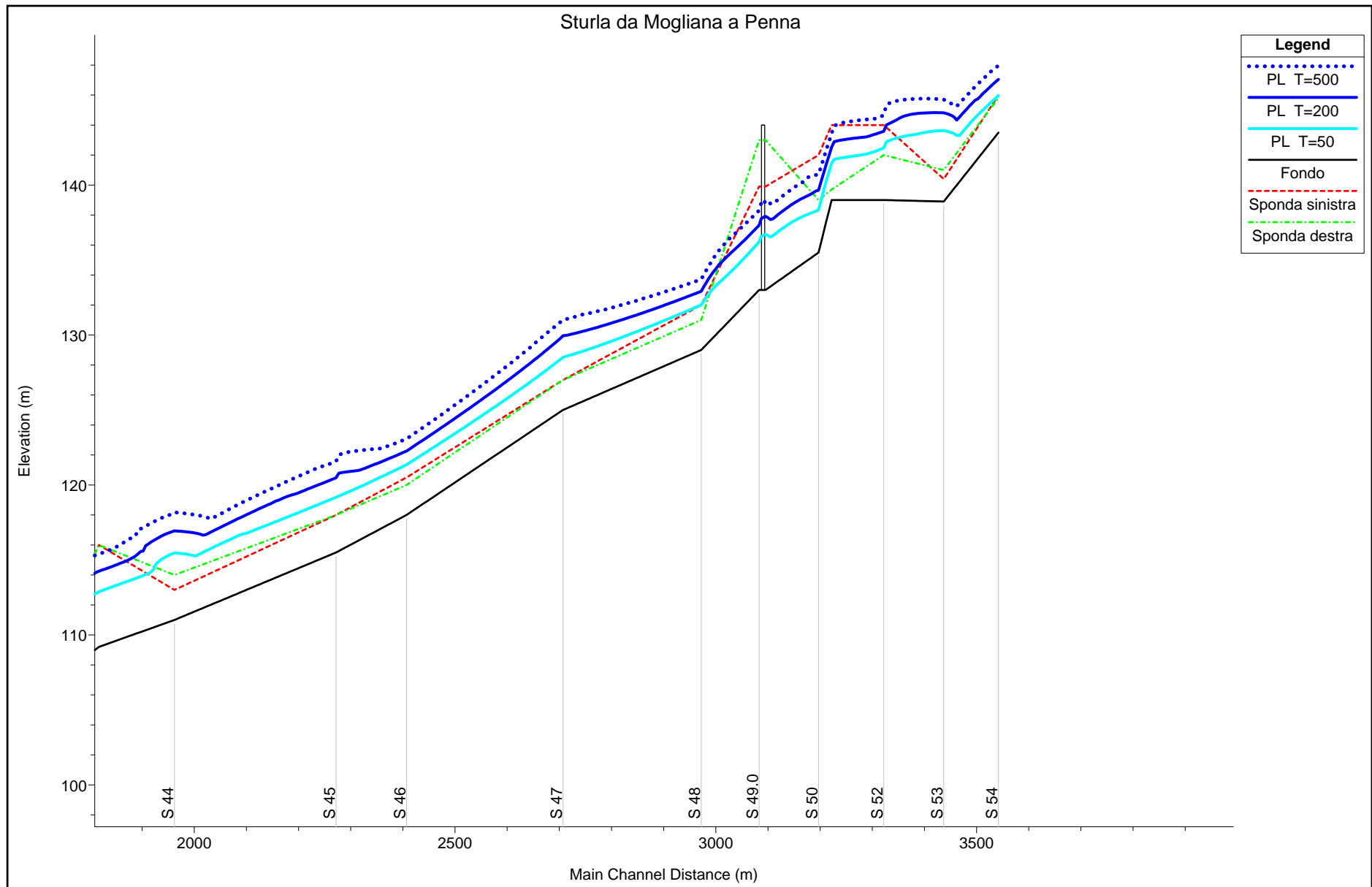


Torrente Sturla
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HEC-RAS Plan: stmgpn River: Sturla Reach: mgpn

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
mgpn	54	T=50	307.00	143.50	146.00	0.04	145.80	-0.16	145.96	145.96	147.07	0.009841	4.66	66.01	31.48	1.00
mgpn	54	T=200	545.00	143.50	146.00	-1.04	145.80	-1.24	147.04	147.04	148.56	0.008097	5.49	103.32	37.22	0.96
mgpn	54	T=500	794.00	143.50	146.00	-1.97	145.80	-2.17	147.97	147.97	149.82	0.007268	6.13	139.79	41.83	0.95
mgpn	53	T=50	307.00	138.90	140.40	-3.23	141.00	-2.63	143.63		144.04	0.001815	2.95	125.05	41.23	0.45
mgpn	53	T=200	545.00	138.90	140.40	-4.41	141.00	-3.81	144.81		145.49	0.002331	3.91	178.19	50.02	0.53
mgpn	53	T=500	794.00	138.90	140.40	-5.30	141.00	-4.70	145.70		146.62	0.002732	4.66	223.63	51.70	0.58
mgpn	52	T=50	307.00	139.00	144.00	1.52	142.00	-0.48	142.48	142.48	143.58	0.009745	4.66	66.16	31.06	1.00
mgpn	52	T=200	545.00	139.00	144.00	0.41	142.00	-1.59	143.59	143.59	145.02	0.008539	5.34	104.97	38.62	0.98
mgpn	52	T=500	794.00	139.00	144.00	-0.68	142.00	-2.68	144.68	144.67	146.17	0.006274	5.52	162.30	79.81	0.88
mgpn	51	T=50	307.00	139.00	144.00	2.54	139.70	-1.76	141.46	141.46	142.57	0.009671	4.80	68.03	31.04	1.00
mgpn	51	T=200	545.00	139.00	144.00	1.48	139.70	-2.82	142.52	142.52	144.11	0.008920	5.74	102.01	32.79	1.00
mgpn	51	T=500	794.00	139.00	144.00	0.54	139.70	-3.76	143.46	143.46	145.44	0.008534	6.44	133.49	34.57	1.01
mgpn	50	T=50	307.00	135.50	142.00	3.67	139.00	0.67	138.33	138.33	139.65	0.010321	5.07	60.50	23.29	1.00
mgpn	50	T=200	545.00	135.50	142.00	2.35	139.00	-0.65	139.65	139.65	141.40	0.008822	5.88	95.22	29.48	0.96
mgpn	50	T=500	794.00	135.50	142.00	1.30	139.00	-1.70	140.70	140.70	142.85	0.008367	6.57	126.86	30.70	0.96
mgpn	49.3	T=50	307.00	133.00	139.90	3.19	143.00	6.29	136.71		137.49	0.005924	3.93	78.13	28.52	0.76
mgpn	49.3	T=200	545.00	133.00	139.90	1.99	143.00	5.09	137.91		139.09	0.006037	4.80	113.44	30.08	0.79
mgpn	49.3	T=500	794.00	133.00	139.90	0.91	143.00	4.01	138.99		140.48	0.005994	5.41	146.74	31.71	0.80
mgpn	49.2	T=50	307.00	133.00	139.90	3.20	143.00	6.30	136.70	136.21	137.49	0.006000	3.95	77.80	28.51	0.76
mgpn	49.2	T=200	545.00	133.00	139.90	2.00	143.00	5.10	137.90	137.32	139.08	0.006104	4.82	113.02	30.06	0.79
mgpn	49.2	T=500	794.00	133.00	139.90	0.92	143.00	4.02	138.98	138.30	140.48	0.006048	5.43	146.29	31.69	0.81
mgpn	49.11		Bridge													
mgpn	49.1	T=50	307.00	133.00	139.90	3.33	143.00	6.43	136.57	136.21	137.44	0.006905	4.13	74.32	28.35	0.81
mgpn	49.1	T=200	545.00	133.00	139.90	2.14	143.00	5.24	137.76	137.32	139.04	0.006823	5.00	108.90	29.89	0.84
mgpn	49.1	T=500	794.00	133.00	139.90	1.10	143.00	4.20	138.80	138.30	140.42	0.006762	5.64	140.81	31.41	0.85
mgpn	49	T=50	307.00	133.00	139.90	3.69	143.00	6.79	136.21	136.21	137.38	0.010885	4.79	64.13	27.88	1.01
mgpn	49	T=200	545.00	133.00	139.90	2.58	143.00	5.68	137.32	137.32	138.97	0.010040	5.69	95.79	29.31	1.00
mgpn	49	T=500	794.00	133.00	139.90	1.60	143.00	4.70	138.30	138.30	140.35	0.009540	6.34	125.26	30.62	1.00
mgpn	48	T=50	307.00	129.00	132.00	0.00	131.00	-1.00	132.00	132.00	132.96	0.009236	4.38	73.07	41.01	0.97
mgpn	48	T=200	545.00	129.00	132.00	-0.91	131.00	-1.91	132.91	132.91	134.26	0.008189	5.24	112.02	44.43	0.97
mgpn	48	T=500	794.00	129.00	132.00	-1.71	131.00	-2.71	133.71	133.71	135.38	0.007551	5.89	148.69	47.42	0.96
mgpn	47	T=50	307.00	125.00	127.00	-1.51	127.00	-1.51	128.51	128.51	129.88	0.007830	5.26	63.37	26.63	0.94
mgpn	47	T=200	545.00	125.00	127.00	-2.95	127.00	-2.95	129.96	129.96	131.65	0.006297	6.04	108.33	35.90	0.89
mgpn	47	T=500	794.00	125.00	127.00	-4.00	127.00	-4.00	131.00	131.00	133.03	0.006015	6.76	147.95	39.46	0.90
mgpn	46	T=50	307.00	118.00	120.50	-0.85	120.00	-1.35	121.35	121.35	122.33	0.009792	4.40	71.38	37.83	1.00
mgpn	46	T=200	545.00	118.00	120.50	-1.76	120.00	-2.26	122.26	122.26	123.67	0.008619	5.31	106.36	39.12	1.00

HEC-RAS Plan: stmgpn River: Sturla Reach: mgpn (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
mgpn	46	T=500	794.00	118.00	120.50	-2.58	120.00	-3.08	123.08	123.08	124.87	0.007869	5.99	138.79	40.15	0.99
mgpn	45	T=50	307.00	115.50	118.00	-1.18	118.00	-1.18	119.18	119.18	120.50	0.008644	5.13	62.15	25.81	0.97
mgpn	45	T=200	545.00	115.50	118.00	-2.48	118.00	-2.48	120.48	120.48	122.27	0.007257	6.04	99.27	30.89	0.95
mgpn	45	T=500	794.00	115.50	118.00	-3.57	118.00	-3.57	121.57	121.57	123.74	0.006637	6.75	134.95	34.49	0.94
mgpn	44	T=50	307.00	111.00	113.00	-2.47	114.00	-1.47	115.47		116.01	0.002907	3.60	107.15	35.80	0.57
mgpn	44	T=200	545.00	111.00	113.00	-3.94	114.00	-2.94	116.94		117.70	0.002839	4.38	162.96	40.53	0.59
mgpn	44	T=500	794.00	111.00	113.00	-5.18	114.00	-4.18	118.18		119.12	0.002797	4.97	215.95	44.94	0.61
mgpn	43	T=50	307.00	109.20	116.00	3.13	116.00	3.13	112.87	112.87	114.28	0.010219	5.26	58.31	20.88	1.01
mgpn	43	T=200	545.00	109.20	116.00	1.75	116.00	1.75	114.25	114.25	116.14	0.009759	6.09	89.45	23.98	1.01
mgpn	43	T=500	794.00	109.20	116.00	0.62	116.00	0.62	115.38	115.38	117.72	0.009478	6.78	117.11	25.21	1.00
mgpn	42	T=50	307.00	107.00	110.00	-1.93	110.00	-1.93	111.93		112.79	0.004531	4.40	88.45	38.83	0.72
mgpn	42	T=200	545.00	107.00	110.00	-3.39	110.00	-3.39	113.39		114.36	0.003651	4.90	147.60	41.97	0.68
mgpn	42	T=500	794.00	107.00	110.00	-4.48	110.00	-4.48	114.48		115.65	0.003558	5.48	194.75	43.73	0.69
mgpn	41	T=50	307.00	105.00	110.00	0.97	110.00	0.97	109.03	109.03	110.09	0.010086	4.55	67.44	32.11	1.00
mgpn	41	T=200	545.00	105.00	110.00	-0.10	110.00	-0.10	110.10	110.10	111.41	0.009506	5.08	107.40	42.05	1.01
mgpn	41	T=500	794.00	105.00	110.00	-0.86	110.00	-0.86	110.86	110.86	112.51	0.008499	5.70	140.02	43.94	1.00
mgpn	40	T=50	307.00	100.00	106.00	0.81	106.00	0.81	105.19	105.19	106.25	0.010685	4.58	67.06	31.84	1.01
mgpn	40	T=200	545.00	100.00	106.00	-0.26	106.00	-0.26	106.26	106.26	107.56	0.009700	5.04	108.25	42.95	1.00
mgpn	40	T=500	794.00	100.00	106.00	-1.00	106.00	-1.00	107.00	107.00	108.65	0.008902	5.70	140.79	45.88	1.00
mgpn	39	T=50	307.00	98.00	102.00	0.02	104.00	2.02	101.98	101.98	103.39	0.010005	5.26	58.33	20.95	1.01
mgpn	39	T=200	545.00	98.00	102.00	-1.43	104.00	0.57	103.43	103.43	105.22	0.008551	5.95	93.51	27.77	0.98
mgpn	39	T=500	794.00	98.00	102.00	-2.59	104.00	-0.59	104.59	104.59	106.67	0.007396	6.45	130.46	37.62	0.95
mgpn	38	T=50	307.00	93.00	98.00	1.22	98.00	1.22	96.78	96.78	98.04	0.010049	4.96	61.95	25.04	1.01
mgpn	38	T=200	545.00	93.00	98.00	0.03	98.00	0.03	97.97	97.97	99.73	0.009481	5.88	92.68	26.76	1.01
mgpn	38	T=500	794.00	93.00	98.00	-1.02	98.00	-1.02	99.02	99.02	101.19	0.008290	6.55	123.95	33.45	0.98
mgpn	37.3	T=50	307.00	90.80	96.00	0.77	98.10	2.87	95.23		95.57	0.001760	2.58	118.86	33.08	0.43
mgpn	37.3	T=200	545.00	90.80	96.00	-1.11	98.10	0.99	97.11		97.56	0.001469	2.98	184.21	37.52	0.41
mgpn	37.3	T=500	794.00	90.80	96.00	-2.60	98.10	-0.50	98.60		99.16	0.001377	3.35	244.06	43.93	0.41
mgpn	37.2	T=50	307.00	90.80	96.00	0.77	98.10	2.87	95.23	93.60	95.57	0.001764	2.58	118.78	33.07	0.44
mgpn	37.2	T=200	545.00	90.80	96.00	-1.11	98.10	0.99	97.11	94.63	97.56	0.001471	2.98	184.14	37.51	0.41
mgpn	37.2	T=500	794.00	90.80	96.00	-2.59	98.10	-0.50	98.60	95.53	99.16	0.001379	3.35	243.98	43.92	0.41
mgpn	37.11		Bridge													
mgpn	37.1	T=50	307.00	90.80	96.00	1.03	98.10	3.13	94.97		95.37	0.002211	2.78	110.28	32.76	0.48
mgpn	37.1	T=200	545.00	90.80	96.00	-0.68	98.10	1.42	96.68		97.22	0.001914	3.24	168.56	36.18	0.47
mgpn	37.1	T=500	794.00	90.80	96.00	-1.82	98.10	0.28	97.82		98.55	0.002083	3.81	211.67	39.76	0.50

HEC-RAS Plan: stmgpn River: Sturla Reach: mgpn (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	LOB Elev (m)	L. Freeboard (m)	ROB Elev (m)	R. Freeboard (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
mgpn	37	T=50	307.00	90.80	96.00	1.04	98.10	3.14	94.96		95.36	0.002233	2.79	109.91	32.74	0.49
mgpn	37	T=200	545.00	90.80	96.00	-0.67	98.10	1.43	96.67		97.21	0.001926	3.25	168.21	36.15	0.47
mgpn	37	T=500	794.00	90.80	96.00	-1.81	98.10	0.29	97.81		98.55	0.002095	3.82	211.24	39.73	0.50
mgpn	36.3	T=50	307.00	89.90	102.00	7.44	99.70	5.14	94.56		94.95	0.002009	2.76	111.20	32.95	0.48
mgpn	36.3	T=200	545.00	89.90	102.00	5.55	99.70	3.25	96.45		96.92	0.001654	3.05	178.97	38.91	0.45
mgpn	36.3	T=500	794.00	89.90	102.00	4.39	99.70	2.09	97.61		98.23	0.001831	3.51	226.27	42.58	0.49
mgpn	36.2	T=50	307.00	89.90	102.00	7.44	99.70	5.14	94.56	93.04	94.95	0.002014	2.76	111.11	32.95	0.48
mgpn	36.2	T=200	545.00	89.90	102.00	5.56	99.70	3.26	96.44	94.17	96.92	0.001656	3.05	178.89	38.91	0.45
mgpn	36.2	T=500	794.00	89.90	102.00	4.40	99.70	2.10	97.60	95.13	98.23	0.001833	3.51	226.16	42.57	0.49
mgpn	36.11		Bridge													
mgpn	36.1	T=50	307.00	89.90	102.00	7.49	99.70	5.19	94.51		94.91	0.002096	2.80	109.56	32.80	0.49
mgpn	36.1	T=200	545.00	89.90	102.00	5.61	99.70	3.31	96.39		96.88	0.001708	3.08	176.92	38.75	0.46
mgpn	36.1	T=500	794.00	89.90	102.00	4.46	99.70	2.16	97.54		98.18	0.001898	3.56	223.31	42.36	0.49
mgpn	36	T=50	307.00	89.90	102.00	7.50	99.70	5.20	94.50		94.90	0.002115	2.81	109.21	32.76	0.49
mgpn	36	T=200	545.00	89.90	102.00	5.62	99.70	3.32	96.38		96.87	0.001717	3.09	176.59	38.72	0.46
mgpn	36	T=500	794.00	89.90	102.00	4.47	99.70	2.17	97.53		98.17	0.001908	3.56	222.90	42.33	0.50
mgpn	35	T=50	307.00	88.30	94.00	1.26	92.00	-0.74	92.74	92.74	94.46	0.010994	5.82	52.88	15.60	1.00
mgpn	35	T=200	545.00	88.30	94.00	-1.10	92.00	-3.11	95.10	95.10	96.36	0.004914	5.29	139.82	62.43	0.70
mgpn	35	T=500	794.00	88.30	94.00	-1.72	92.00	-3.72	95.72		97.37	0.006118	6.32	178.79	64.31	0.80
mgpn	34.3	T=50	307.00	86.00	90.60	0.95	90.30	0.65	89.65		90.19	0.004178	3.26	94.15	39.17	0.67
mgpn	34.3	T=200	545.00	86.00	90.60	-0.21	90.30	-0.51	90.81		91.54	0.003823	3.78	146.04	62.37	0.67
mgpn	34.3	T=500	794.00	86.00	90.60	-1.14	90.30	-1.44	91.74		92.60	0.003312	4.17	204.99	65.11	0.65
mgpn	34.2	T=50	307.00	86.00	90.60	0.96	90.30	0.66	89.64	88.96	90.19	0.004215	3.27	93.85	39.12	0.67
mgpn	34.2	T=200	545.00	86.00	90.60	-0.21	90.30	-0.51	90.81	89.99	91.54	0.003853	3.79	145.59	62.35	0.68
mgpn	34.2	T=500	794.00	86.00	90.60	-1.13	90.30	-1.43	91.73	90.85	92.60	0.003331	4.17	204.57	65.09	0.66
mgpn	34.11		Bridge													
mgpn	34.1	T=50	307.00	86.00	90.60	1.30	90.30	1.00	89.30	88.96	90.03	0.006323	3.79	80.99	36.72	0.81
mgpn	34.1	T=200	545.00	86.00	90.60	0.22	90.30	-0.08	90.38	89.99	91.36	0.006039	4.37	124.75	44.22	0.83
mgpn	34.1	T=500	794.00	86.00	90.60	-0.69	90.30	-0.99	91.29	90.85	92.42	0.004976	4.74	176.39	63.79	0.79
mgpn	34	T=50	307.00	86.00	90.60	1.64	90.30	1.34	88.96	88.96	89.97	0.009945	4.47	68.75	34.28	1.01
mgpn	34	T=200	545.00	86.00	90.60	0.61	90.30	0.31	89.99	89.99	91.29	0.009100	5.06	107.73	41.56	1.00
mgpn	34	T=500	794.00	86.00	90.60	-0.25	90.30	-0.55	90.85	90.85	92.36	0.007783	5.44	148.49	62.48	0.96
mgpn	33	T=50	307.00	82.00	90.00	3.45	84.00	-2.55	86.55	85.76	87.23	0.003730	3.79	92.01	34.68	0.64
mgpn	33	T=200	545.00	82.00	90.00	1.97	84.00	-4.03	88.03	87.02	88.89	0.003422	4.39	152.63	47.11	0.63
mgpn	33	T=500	794.00	82.00	90.00	0.93	84.00	-5.07	89.07	88.16	90.11	0.003566	4.95	206.25	55.77	0.65

