

APPENDIX C

HECR-RAS Model Runs – Various Return Periods

Existing Condition with Starting Water Elevation Condition

Existing 2 year with Starting Water Elevation Condition

HEC-RAS Plan: E2MnHtTc River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	3.56	92.75	93.93		93.94	0.26	35.29		0.09
Carp	44890	Max WS	3.55	92.63	93.91		93.91	0.4	51.53		0.14
Carp	44751	Max WS	3.52	92.38	93.86		93.87	0.3	15.61		0.09
Carp	44548	Max WS	4.5	92.43	93.83		93.83	0.2	96.13		0.06
Carp	44325	Max WS	4.6	92.11	93.78		93.79	0.58	45.97		0.16
Carp	44324	Hazeldean Cul Culvert									
Carp	44302	Max WS	4.53	92.6	93.74		93.76	0.65	68.93		0.2
Carp	44215	Max WS	4.51	92.7	93.74		93.74	0.24	85.1		0.08
Carp	44153	Max WS	4.51	92	93.73		93.73	0.21	93.55		0.06
Carp	43966	Max WS	4.5	91.99	93.72		93.72	0.12	118.64		0.03
Carp	43764	Max WS	4.86	92.3	93.72		93.72	0.12	134.4		0.03
Carp	43582	Max WS	4.92	92.34	93.71		93.71	0.14	129.01		0.04
Carp	43375	Max WS	4.98	91.62	93.66		93.67	0.54	8.48		0.13
Carp	43370	Maple Grove C Culvert									
Carp	43364	Max WS	4.98	91.01	93.66		93.67	0.45	49.5		0.1
Carp	43223	Max WS	4.98	91.91	93.65		93.65	0.19	108.54		0.05
Carp	43173	Max WS	4.98	92.2	93.65		93.65	0.14	146.96		0.04
Carp	43072	Max WS	9.32	92.12	93.63		93.63	0.3	114.44		0.09
Carp	42890	Max WS	9.54	91.68	93.59	92.34	93.6	0.35	69.34		0.09
Carp	42885	Palladium Driv Bridge									
Carp	42855	Max WS	9.54	91.57	93.58		93.59	0.34	139.05		0.09
Carp	42686	Max WS	9.55	91.9	93.56		93.57	0.23	113.05		0.06
Carp	42558	Max WS	9.55	91.83	93.54		93.54	0.31	60.94		0.1
Carp	42410	Max WS	9.88	91.81	93.51		93.51	0.29	81.6		0.08
Carp	42212	Max WS	9.89	91.76	93.49		93.49	0.13	117.09		0.03
Carp	42182	Max WS	9.89	91.51	93.48	92.48	93.49	0.62	54.99		0.16
Carp	42172	Highway 417 S Bridge									
Carp	42154	Max WS	9.89	91.24	93.46		93.48	0.58	52.59		0.15
Carp	42134	Max WS	9.89	91.88	93.45		93.47	0.68	50.55		0.19
Carp	42124	Max WS	9.89	91.36	93.44	92.39	93.46	0.61	49.7		0.16
Carp	42119	Highway 417 N Bridge									
Carp	42097	Max WS	9.89	91.68	93.42		93.44	0.66	18.33		0.18
Carp	42075	Max WS	9.9	91.46	93.43		93.43	0.24	96.12		0.06
Carp	42002	Max WS	9.9	91.4	93.42		93.42	0.2	98.19		0.05
Carp	41896	Max WS	9.94	91.77	93.41		93.41	0.2	98.03		0.05
Carp	41743	Max WS	9.95	91.43	93.4		93.4	0.19	145.34		0.05
Carp	41671	Max WS	9.95	91.18	93.38		93.4	0.67	106.8		0.17
Carp	41357	Max WS	11.74	91.46	93.04		93.04	0.36	287.06		0.11
Carp	41117	Max WS	11.63	91.45	92.93		92.93	0.39	360.76		0.13
Carp	40910	Max WS	11.5	91.38	92.87		92.87	0.25	310.21		0.08
Carp	40703	Max WS	11.48	91.65	92.82		92.82	0.32	292.94		0.12
Carp	40505	Max WS	11.65	91.07	92.77		92.77	0.26	220.21		0.09
Carp	40298	Max WS	11.62	91.02	92.73		92.73	0.23	299.48		0.07
Carp	40092	Max WS	11.74	91.22	92.68		92.69	0.39	166.32		0.13
Carp	40071	Max WS	11.89	91.13	92.65		92.69	0.87	161.34		0.25
Carp	40070	Richardson Sic Culvert									

Carp	40050	Max WS	11.88	91.04	92.65	92.69	0.82	173.04	0.23	
Carp	39892	Max WS	12	91.02	92.63	92.64	0.36	82.55	0.11	
Carp	39695	Max WS	12.12	91.29	92.55	92.57	0.58	71.73	0.2	
Carp	39202	Max WS	12.04	90.57	92.36	92.37	0.5	83.63	0.12	
Carp	38697	Max WS	11.96	90.07	92.27	92.27	0.19	288.08	0.05	
Carp	38236	Max WS	11.98	90.16	92.22	92.23	0.46	248.91	0.11	
Carp	37894	Max WS	16.23	90.03	92.16	92.16	0.38	291.66	0.09	
Carp	37380.3	Max WS	16.06	89.67	92.11	90.68	92.14	0.72	280.66	0.16
Carp	37370	Bridge								
Carp	37355.3	Max WS	15.93	89.66	92.09	92.12	0.72	266.05	0.16	
Carp	37101	Max WS	15.93	89.48	92.09	92.09	0.18	276.61	0.04	
Carp	36580	Max WS	15.89	89.1	92.08	92.08	0.17	375.04	0.03	
Carp	35288	Max WS	15.89	89.05	92.04	92.05	0.31	178.1	0.06	
Carp	35073	Max WS	15.89	89.27	92.03	92.04	0.27	113.51	0.06	
Carp	34555	Max WS	15.88	89.06	92.01	92.01	0.36	113.56	0.07	
Carp	33472	Max WS	15.93	88.54	91.98	91.98	0.17	210.33	0.03	
Carp	33201	Max WS	16.27	89.15	91.97	89.9	91.98	0.37	257.45	0.08
Carp	33197	Bridge								
Carp	33181.1	Max WS	16.27	89.16	91.97	91.98	0.37	256.69	0.08	
Carp	32609	Max WS	16.27	89.56	91.96	91.97	0.15	295.67	0.03	
Carp	32096	Max WS	16.26	88.9	91.96	91.96	0.12	329.66	0.02	
Carp	31662	Max WS	16.21	88.74	91.95	89.52	91.96	0.3	139.03	0.06
Carp	31658	Bridge								
Carp	31642.1	Max WS	16.07	88.75	91.95	91.96	0.31	135.16	0.06	
Carp	31414	Max WS	-51.4	88.89	91.95	90.72	91.96	-0.58	171.25	0.11

Existing 5 year with Starting Water Elevation Condition

HEC-RAS Plan: E5MnHtTc River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m ³ /s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	5.26	92.75	94.18		94.18	0.27	59.26		0.08
Carp	44890	Max WS	5.23	92.63	94.16		94.17	0.33	94.94		0.1
Carp	44751	Max WS	5.2	92.38	94.13		94.14	0.34	90.6		0.09
Carp	44548	Max WS	6.8	92.43	94.1		94.1	0.18	109.98		0.05
Carp	44325	Max WS	6.99	92.11	94.06		94.08	0.73	92.63		0.18
Carp	44324	Hazeldean Cul									
Carp	44302	Max WS	6.88	92.6	93.97		94	0.82	86.92		0.23
Carp	44215	Max WS	6.88	92.7	93.97		93.97	0.23	102.49		0.07
Carp	44153	Max WS	6.88	92	93.97		93.97	0.21	109.51		0.05
Carp	43966	Max WS	6.86	91.99	93.96		93.96	0.13	140.13		0.03
Carp	43764	Max WS	7.38	92.3	93.96		93.96	0.13	175.36		0.03
Carp	43582	Max WS	7.46	92.34	93.95		93.95	0.14	153.83		0.04
Carp	43375	Max WS	7.53	91.62	93.88		93.91	0.72	8.62		0.17
Carp	43370	Maple Grove C									
Carp	43364	Max WS	7.53	91.01	93.89		93.91	0.61	102.2		0.13
Carp	43223	Max WS	7.52	91.91	93.88		93.88	0.19	145.97		0.05
Carp	43173	Max WS	7.52	92.2	93.88		93.88	0.14	164.35		0.04
Carp	43072	Max WS	14.84	92.12	93.86		93.86	0.33	160.86		0.09
Carp	42890	Max WS	15.15	91.68	93.81	92.46	93.82	0.48	79.66		0.12
Carp	42885	Palladium Driv									
Carp	42855	Max WS	15.13	91.57	93.8		93.81	0.48	153.83		0.11
Carp	42686	Max WS	15.14	91.9	93.78		93.78	0.28	119		0.07

Carp	42558	Max WS	15.15	91.83	93.75	93.75	0.37	89.27	0.11	
Carp	42410	Max WS	15.5	91.81	93.71	93.72	0.36	90.77	0.09	
Carp	42212	Max WS	15.51	91.76	93.7	93.7	0.17	129.08	0.04	
Carp	42182	Max WS	15.51	91.51	93.67	92.66	93.7	0.83	89.18	0.21
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	15.51	91.24	93.65	93.68	0.79	84.89	0.19	
Carp	42134	Max WS	15.51	91.88	93.63	93.66	0.9	81.7	0.24	
Carp	42124	Max WS	15.51	91.36	93.62	92.58	93.65	0.83	79.94	0.2
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	15.52	91.68	93.58	93.62	0.91	23.67	0.23	
Carp	42075	Max WS	15.52	91.46	93.59	93.6	0.37	160.27	0.09	
Carp	42002	Max WS	15.52	91.4	93.59	93.59	0.26	111.83	0.06	
Carp	41896	Max WS	15.58	91.77	93.57	93.57	0.25	100.48	0.06	
Carp	41743	Max WS	15.59	91.43	93.56	93.56	0.23	160.08	0.06	
Carp	41671	Max WS	15.59	91.18	93.54	93.55	0.72	115.53	0.17	
Carp	41357	Max WS	18.76	91.46	93.16	93.16	0.39	315.35	0.11	
Carp	41117	Max WS	18.41	91.45	93.07	93.07	0.35	403.8	0.11	
Carp	40910	Max WS	18.33	91.38	93.03	93.03	0.25	344.86	0.08	
Carp	40703	Max WS	18.32	91.65	93	93	0.29	320.24	0.09	
Carp	40505	Max WS	18.59	91.07	92.96	92.96	0.27	257.53	0.08	
Carp	40298	Max WS	18.57	91.02	92.93	92.93	0.24	363.5	0.06	
Carp	40092	Max WS	18.7	91.22	92.89	92.89	0.39	186.7	0.11	
Carp	40071	Max WS	18.84	91.13	92.84	92.91	1.2	197.41	0.32	
Carp	40070	Richardson Sic Culvert								
Carp	40050	Max WS	18.84	91.04	92.84	92.91	1.14	203.81	0.3	
Carp	39892	Max WS	18.96	91.02	92.83	92.84	0.43	148.59	0.12	
Carp	39695	Max WS	19.07	91.29	92.75	92.77	0.64	148.57	0.2	
Carp	39202	Max WS	18.88	90.57	92.54	92.56	0.68	296.69	0.16	
Carp	38697	Max WS	18.78	90.07	92.46	92.46	0.2	343.44	0.05	
Carp	38236	Max WS	18.81	90.16	92.42	92.42	0.43	306.49	0.1	
Carp	37894	Max WS	25.37	90.03	92.37	92.37	0.38	325.29	0.09	
Carp	37380.3	Max WS	25.09	89.67	92.31	90.91	92.36	1.02	304.62	0.22
Carp	37370	Bridge								
Carp	37355.3	Max WS	24.75	89.66	92.27	92.32	1.03	293.85	0.22	
Carp	37101	Max WS	24.82	89.48	92.28	92.28	0.22	298.29	0.05	
Carp	36580	Max WS	24.78	89.1	92.26	92.26	0.2	385.45	0.04	
Carp	35288	Max WS	24.71	89.05	92.21	92.21	0.4	222.88	0.08	
Carp	35073	Max WS	24.71	89.27	92.19	92.2	0.38	136.08	0.08	
Carp	34555	Max WS	24.7	89.06	92.15	92.16	0.5	127.05	0.1	
Carp	33472	Max WS	24.75	88.54	92.1	92.1	0.24	224.35	0.04	
Carp	33201	Max WS	25.17	89.15	92.09	90.09	92.1	0.54	274.73	0.11
Carp	33197	Bridge								
Carp	33181.1	Max WS	25.17	89.16	92.08	92.09	0.55	274.16	0.11	
Carp	32609	Max WS	25.18	89.56	92.07	92.07	0.2	310.27	0.04	
Carp	32096	Max WS	25.16	88.9	92.06	92.06	0.17	342.58	0.03	
Carp	31662	Max WS	25.02	88.74	92.05	89.71	92.06	0.45	140.27	0.08
Carp	31658	Bridge								
Carp	31642.1	Max WS	24.71	88.75	92.05	92.05	0.46	136.43	0.08	
Carp	31414	Max WS	-56.01	88.89	92.04	90.77	92.05	-0.59	178.55	0.11

Existing 25 year with Starting Water Elevation Condition

HEC-RAS Plan: E25MnHtTc River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	7.43	92.75	94.5		94.5	0.22	156.94		0.06
Carp	44890	Max WS	7.39	92.63	94.49		94.5	0.23	138.96		0.06
Carp	44751	Max WS	7.39	92.38	94.48		94.48	0.27	126.22		0.06
Carp	44548	Max WS	9.97	92.43	94.47		94.47	0.16	121.47		0.04
Carp	44325	Max WS	10.22	92.11	94.44		94.47	0.86	174.04		0.19
Carp	44324	Hazeldean Cul Culvert									
Carp	44302	Max WS	10.17	92.6	94.25		94.3	1.01	106.37		0.25
Carp	44215	Max WS	10.17	92.7	94.26		94.26	0.22	120.26		0.06
Carp	44153	Max WS	10.16	92	94.26		94.26	0.21	127.02		0.05
Carp	43966	Max WS	10.16	91.99	94.25		94.25	0.13	196.48		0.03
Carp	43764	Max WS	10.95	92.3	94.25		94.25	0.13	211.5		0.03
Carp	43582	Max WS	11.05	92.34	94.24		94.24	0.15	192.85		0.04
Carp	43375	Max WS	11.05	91.62	94.17		94.21	0.91	60.91		0.2
Carp	43370	Maple Grove C Culvert									
Carp	43364	Max WS	11.05	91.01	94.17		94.21	0.8	205.21		0.16
Carp	43223	Max WS	11.09	91.91	94.18		94.18	0.18	185.34		0.04
Carp	43173	Max WS	11.02	92.2	94.18		94.18	0.14	226.15		0.03
Carp	43072	Max WS	23.86	92.12	94.16		94.16	0.35	246.15		0.08
Carp	42890	Max WS	24.37	91.68	94.1	92.64	94.12	0.66	92.93		0.15
Carp	42885	Palladium Driv Bridge									
Carp	42855	Max WS	24.34	91.57	94.08		94.1	0.66	170.78		0.15
Carp	42686	Max WS	24.35	91.9	94.06		94.06	0.33	131.16		0.08
Carp	42558	Max WS	24.36	91.83	94.03		94.03	0.46	134.38		0.12
Carp	42410	Max WS	24.94	91.81	93.99		93.99	0.45	124.94		0.1
Carp	42212	Max WS	24.94	91.76	93.96		93.97	0.22	145.9		0.05
Carp	42182	Max WS	24.95	91.51	93.93	92.9	93.98	1.12	160.53		0.26
Carp	42172	Highway 417 S Bridge									
Carp	42154	Max WS	24.95	91.24	93.89		93.94	1.09	151.6		0.25
Carp	42134	Max WS	24.95	91.88	93.86		93.92	1.19	143.86		0.29
Carp	42124	Max WS	24.95	91.36	93.85	92.84	93.9	1.15	138.07		0.26
Carp	42119	Highway 417 N Bridge									
Carp	42097	Max WS	24.94	91.68	93.78		93.86	1.26	79.92		0.3
Carp	42075	Max WS	24.94	91.46	93.81		93.82	0.4	172.22		0.09
Carp	42002	Max WS	24.94	91.4	93.8		93.81	0.33	125.04		0.08
Carp	41896	Max WS	25.04	91.77	93.78		93.79	0.33	103.68		0.08
Carp	41743	Max WS	25.02	91.43	93.77		93.77	0.3	180.55		0.07
Carp	41671	Max WS	25.02	91.18	93.74		93.76	0.77	184.67		0.18
Carp	41357	Max WS	30.95	91.46	93.35		93.35	0.41	442.2		0.11
Carp	41117	Max WS	30.51	91.45	93.29		93.29	0.31	446.17		0.09
Carp	40910	Max WS	30.55	91.38	93.26		93.26	0.26	375.93		0.07
Carp	40703	Max WS	30.59	91.65	93.23		93.23	0.28	351.71		0.08
Carp	40505	Max WS	31.13	91.07	93.19		93.2	0.3	300.38		0.08
Carp	40298	Max WS	31.08	91.02	93.17		93.17	0.25	388.91		0.06
Carp	40092	Max WS	31.19	91.22	93.13		93.14	0.44	242.49		0.12
Carp	40071	Max WS	31.33	91.13	93.05		93.2	1.73	221.65		0.44
Carp	40070	Richardson Sic Culvert									
Carp	40050	Max WS	31.33	91.04	93.05		93.19	1.66	221.75		0.41
Carp	39892	Max WS	31.5	91.02	93.06		93.07	0.51	190.9		0.14

Carp	39695	Max WS	31.5	91.29	92.99	93	0.65	191.02	0.18	
Carp	39202	Max WS	30.87	90.57	92.82	92.83	0.53	330.17	0.12	
Carp	38697	Max WS	30.67	90.07	92.78	92.78	0.2	404.42	0.04	
Carp	38236	Max WS	30.75	90.16	92.75	92.75	0.35	357.79	0.07	
Carp	37894	Max WS	42.38	90.03	92.72	92.72	0.35	363.08	0.08	
Carp	37380.3	Max WS	42.02	89.67	92.66	91.27	92.77	1.47	384.37	0.3
Carp	37370	Bridge								
Carp	37355.3	Max WS	40.96	89.66	92.57	92.68	1.48	366.51	0.3	
Carp	37101	Max WS	41.31	89.48	92.59	92.59	0.27	351.25	0.05	
Carp	36580	Max WS	41.14	89.1	92.58	92.58	0.22	401.9	0.04	
Carp	35288	Max WS	41.06	89.05	92.52	92.52	0.46	309.14	0.09	
Carp	35073	Max WS	41.05	89.27	92.5	92.5	0.5	179.21	0.1	
Carp	34555	Max WS	41.04	89.06	92.43	92.44	0.65	145.31	0.12	
Carp	33472	Max WS	41.08	88.54	92.35	92.35	0.34	253.97	0.06	
Carp	33201	Max WS	41.79	89.15	92.32	90.37	92.36	0.82	310.74	0.16
Carp	33197	Bridge								
Carp	33181.1	Max WS	41.79	89.16	92.31	92.34	0.82	308.97	0.16	
Carp	32609	Max WS	41.77	89.56	92.3	92.3	0.26	344.08	0.05	
Carp	32096	Max WS	41.75	88.9	92.29	92.29	0.22	367.16	0.04	
Carp	31662	Max WS	41.36	88.74	92.26	90.02	92.28	0.69	143.11	0.12
Carp	31658	Bridge								
Carp	31642.1	Max WS	40.34	88.75	92.26	92.28	0.69	139.34	0.12	
Carp	31414	Max WS	-67.12	88.89	92.25	90.85	92.26	-0.59	197.43	0.11

Existing 100 year with Starting Water Elevation Condition

HEC-RAS Plan: E100MnHtTc River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	9.28	92.75	94.79		94.79	0.17	170.18		0.04
Carp	44890	Max WS	9.27	92.63	94.79		94.79	0.18	203.35		0.05
Carp	44751	Max WS	9.26	92.38	94.78		94.78	0.21	182.45		0.05
Carp	44548	Max WS	12.66	92.43	94.77		94.77	0.15	129.2		0.03
Carp	44325	Max WS	12.96	92.11	94.75		94.79	0.94	251.2		0.2
Carp	44324	Hazeldean Cul									
Carp	44302	Max WS	12.96	92.6	94.43		94.5	1.16	122.16		0.27
Carp	44215	Max WS	12.96	92.7	94.45		94.45	0.23	133.72		0.05
Carp	44153	Max WS	12.95	92	94.45		94.45	0.21	134.38		0.05
Carp	43966	Max WS	12.95	91.99	94.44		94.44	0.14	225.89		0.03
Carp	43764	Max WS	13.98	92.3	94.44		94.44	0.13	226.59		0.03
Carp	43582	Max WS	14.12	92.34	94.43		94.43	0.15	212.56		0.03
Carp	43375	Max WS	14	91.62	94.37		94.43	1.05	146.01		0.22
Carp	43370	Maple Grove C									
Carp	43364	Max WS	14	91.01	94.36		94.41	0.94	239		0.18
Carp	43223	Max WS	13.98	91.91	94.37		94.37	0.18	203.87		0.04
Carp	43173	Max WS	13.98	92.2	94.37		94.37	0.15	297.6		0.03
Carp	43072	Max WS	31.67	92.12	94.36		94.36	0.35	284.13		0.08
Carp	42890	Max WS	32.3	91.68	94.29	92.76	94.32	0.81	138.52		0.17
Carp	42885	Palladium Driv									
Carp	42855	Max WS	32.3	91.57	94.26		94.29	0.81	173.87		0.17
Carp	42686	Max WS	32.3	91.9	94.25		94.25	0.37	139.63		0.08
Carp	42558	Max WS	32.29	91.83	94.21		94.22	0.48	147.55		0.12
Carp	42410	Max WS	33.06	91.81	94.17		94.17	0.51	154.9		0.11

Carp	42212	Max WS	33.07	91.76	94.14		94.14	0.26	164.8	0.06
Carp	42182	Max WS	33.07	91.51	94.09	93.12	94.17	1.34	209.94	0.3
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	33.07	91.24	94.04		94.12	1.32	181.88	0.29
Carp	42134	Max WS	33.06	91.88	94.01		94.1	1.41	176.5	0.33
Carp	42124	Max WS	33.06	91.36	93.99	93.06	94.07	1.39	171.51	0.31
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	33.05	91.68	93.9		94.01	1.55	102.23	0.36
Carp	42075	Max WS	33.07	91.46	93.94		93.95	0.44	183.88	0.1
Carp	42002	Max WS	33.07	91.4	93.93		93.93	0.39	132.03	0.09
Carp	41896	Max WS	33.18	91.77	93.91		93.91	0.39	105.53	0.09
Carp	41743	Max WS	33.19	91.43	93.88		93.89	0.35	193.88	0.08
Carp	41671	Max WS	33.16	91.18	93.86		93.87	0.87	252.9	0.2
Carp	41357	Max WS	40.84	91.46	93.5		93.51	0.38	513.96	0.1
Carp	41117	Max WS	40.45	91.45	93.46		93.46	0.28	455.82	0.07
Carp	40910	Max WS	40.63	91.38	93.44		93.44	0.25	401.06	0.07
Carp	40703	Max WS	40.65	91.65	93.42		93.42	0.27	376.39	0.08
Carp	40505	Max WS	41.21	91.07	93.39		93.39	0.3	324.53	0.08
Carp	40298	Max WS	41.11	91.02	93.37		93.37	0.24	406.74	0.06
Carp	40092	Max WS	41.17	91.22	93.34		93.34	0.43	282.31	0.11
Carp	40071	Max WS	40.85	91.13	93.24		93.45	2.01	232.75	0.48
Carp	40070	Richardson Sic Culvert								
Carp	40050	Max WS	40.71	91.04	93.23		93.43	1.94	223.76	0.45
Carp	39892	Max WS	41.21	91.02	93.26		93.27	0.51	248.77	0.13
Carp	39695	Max WS	40.9	91.29	93.21		93.22	0.58	225.07	0.15
Carp	39202	Max WS	40.28	90.57	93.12		93.13	0.39	366.06	0.08
Carp	38697	Max WS	40.14	90.07	93.1		93.1	0.17	448.85	0.04
Carp	38236	Max WS	40.22	90.16	93.09		93.09	0.27	393.85	0.05
Carp	37894	Max WS	56.78	90.03	93.07		93.07	0.32	397.58	0.06
Carp	37380.3	Max WS	56.63	89.67	93.01	91.51	93.16	1.74	444.82	0.33
Carp	37370	Bridge								
Carp	37355.3	Max WS	55.45	89.66	92.83		93	1.82	419.47	0.35
Carp	37101	Max WS	55.82	89.48	92.86		92.86	0.29	421.26	0.05
Carp	36580	Max WS	55.71	89.1	92.84		92.85	0.23	411.6	0.04
Carp	35288	Max WS	55.59	89.05	92.8		92.8	0.44	341.98	0.08
Carp	35073	Max WS	55.59	89.27	92.77		92.78	0.57	253.35	0.1
Carp	34555	Max WS	55.57	89.06	92.7		92.71	0.73	190.73	0.13
Carp	33472	Max WS	55.62	88.54	92.62		92.62	0.37	279.76	0.06
Carp	33201	Max WS	56.61	89.15	92.58	90.57	92.63	1	361.09	0.18
Carp	33197	Bridge								
Carp	33181.1	Max WS	56.61	89.16	92.56		92.61	1.01	359.85	0.19
Carp	32609	Max WS	56.61	89.56	92.56		92.56	0.28	378.56	0.05
Carp	32096	Max WS	56.56	88.9	92.55		92.55	0.24	390.4	0.04
Carp	31662	Max WS	55.54	88.74	92.51	90.26	92.54	0.85	152.47	0.14
Carp	31658	Bridge								
Carp	31642.1	Max WS	50.3	88.75	92.51		92.53	0.78	207.07	0.13
Carp	31414	Max WS	-82.69	88.89	92.5	90.94	92.51	-0.61	247.33	0.11

Existing Condition with Normal Depth Condition

Existing 2 year with Normal Depth Condition

HEC-RAS Plan: E2MnHtTcND River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	3.55	92.75	93.93		93.93	0.26	35.16		0.09
Carp	44890	Max WS	3.54	92.63	93.9		93.91	0.4	50.19		0.15
Carp	44751	Max WS	3.51	92.38	93.86		93.87	0.3	15.6		0.09
Carp	44548	Max WS	4.47	92.43	93.82		93.82	0.2	96.02		0.06
Carp	44325	Max WS	4.59	92.11	93.77		93.79	0.58	45.89		0.16
Carp	44324	Hazeldean Cul Culvert									
Carp	44302	Max WS	4.5	92.6	93.74		93.76	0.65	68.83		0.19
Carp	44215	Max WS	4.5	92.7	93.73		93.74	0.24	84.99		0.08
Carp	44153	Max WS	4.5	92	93.73		93.73	0.21	93.44		0.06
Carp	43966	Max WS	4.48	91.99	93.72		93.72	0.12	118.46		0.03
Carp	43764	Max WS	4.85	92.3	93.71		93.71	0.12	134.17		0.03
Carp	43582	Max WS	4.9	92.34	93.71		93.71	0.14	128.85		0.04
Carp	43375	Max WS	4.96	91.62	93.66		93.67	0.54	8.48		0.13
Carp	43370	Maple Grove C Culvert									
Carp	43364	Max WS	4.96	91.01	93.66		93.67	0.45	49.14		0.1
Carp	43223	Max WS	4.96	91.91	93.65		93.65	0.19	108.32		0.05
Carp	43173	Max WS	4.95	92.2	93.64		93.64	0.14	146.87		0.04
Carp	43072	Max WS	9.29	92.12	93.63		93.63	0.3	114.27		0.09
Carp	42890	Max WS	9.52	91.68	93.59	92.33	93.6	0.35	69.29		0.09
Carp	42885	Palladium Driv Bridge									
Carp	42855	Max WS	9.51	91.57	93.58		93.59	0.34	138.97		0.09
Carp	42686	Max WS	9.52	91.9	93.56		93.56	0.23	113		0.06
Carp	42558	Max WS	9.53	91.83	93.53		93.54	0.31	60.87		0.1
Carp	42410	Max WS	9.84	91.81	93.5		93.51	0.29	81.55		0.08
Carp	42212	Max WS	9.86	91.76	93.49		93.49	0.13	117.04		0.03
Carp	42182	Max WS	9.86	91.51	93.48	92.48	93.49	0.62	54.84		0.16
Carp	42172	Highway 417 S Bridge									
Carp	42154	Max WS	9.86	91.24	93.46		93.48	0.58	52.39		0.15
Carp	42134	Max WS	9.86	91.88	93.45		93.47	0.68	50.35		0.19
Carp	42124	Max WS	9.86	91.36	93.44	92.39	93.46	0.61	49.55		0.16
Carp	42119	Highway 417 N Bridge									
Carp	42097	Max WS	9.86	91.68	93.42		93.44	0.66	18.32		0.18
Carp	42075	Max WS	9.87	91.46	93.42		93.43	0.24	96.08		0.06
Carp	42002	Max WS	9.87	91.4	93.42		93.42	0.2	98.11		0.05
Carp	41896	Max WS	9.91	91.77	93.41		93.41	0.2	98.01		0.05
Carp	41743	Max WS	9.92	91.43	93.4		93.4	0.18	145.29		0.05
Carp	41671	Max WS	9.92	91.18	93.38		93.39	0.67	106.76		0.17
Carp	41357	Max WS	11.72	91.46	93.04		93.04	0.36	286.8		0.11
Carp	41117	Max WS	11.6	91.45	92.93		92.93	0.4	359.67		0.13
Carp	40910	Max WS	11.48	91.38	92.87		92.87	0.25	308.38		0.08
Carp	40703	Max WS	11.46	91.65	92.82		92.82	0.33	292.3		0.12
Carp	40505	Max WS	11.61	91.07	92.76		92.76	0.27	219.23		0.09
Carp	40298	Max WS	11.59	91.02	92.72		92.72	0.24	296.93		0.07
Carp	40092	Max WS	11.71	91.22	92.67		92.68	0.4	165.11		0.13
Carp	40071	Max WS	11.85	91.13	92.64		92.68	0.88	159.31		0.26
Carp	40070	Richardson Sic Culvert									

Carp	40050	Max WS	11.85	91.04	92.64		92.68	0.83	170.11	0.24
Carp	39892	Max WS	11.96	91.02	92.62		92.62	0.36	77.57	0.11
Carp	39695	Max WS	12.09	91.29	92.53		92.54	0.6	64.22	0.21
Carp	39202	Max WS	12.01	90.57	92.31		92.32	0.53	66.41	0.13
Carp	38697	Max WS	11.93	90.07	92.18		92.18	0.23	272.71	0.06
Carp	38236	Max WS	11.92	90.16	92.08		92.1	0.65	194.55	0.17
Carp	37894	Max WS	16.1	90.03	91.9		91.91	0.56	121.91	0.15
Carp	37380.3	Max WS	15.51	89.67	91.76	90.66	91.8	0.84	228.85	0.21
Carp	37370		Bridge							
Carp	37355.3	Max WS	15.27	89.66	91.72		91.76	0.85	223.44	0.22
Carp	37101	Max WS	15.12	89.48	91.71		91.71	0.33	240.42	0.08
Carp	36580	Max WS	14.87	89.1	91.66		91.66	0.37	313.7	0.08
Carp	35288	Max WS	14.65	89.05	91.44		91.46	0.58	79.14	0.13
Carp	35073	Max WS	14.63	89.27	91.41		91.41	0.43	66.89	0.1
Carp	34555	Max WS	14.6	89.06	91.32		91.33	0.53	30.12	0.12
Carp	33472	Max WS	14.61	88.54	91.22		91.23	0.27	69.58	0.05
Carp	33201	Max WS	14.83	89.15	91.19	89.86	91.2	0.51	23.6	0.13
Carp	33197		Bridge							
Carp	33181.1	Max WS	14.83	89.16	91.17		91.19	0.52	24.32	0.13
Carp	32609	Max WS	14.8	89.56	91.03		91.04	0.52	90.06	0.14
Carp	32096	Max WS	14.79	88.9	90.87		90.89	0.57	130.28	0.15
Carp	31662	Max WS	14.85	88.74	90.76	89.49	90.77	0.53	76.78	0.13
Carp	31658		Bridge							
Carp	31642.1	Max WS	14.85	88.75	90.75		90.77	0.56	75.58	0.13
Carp	31414	Max WS	15.9	88.89	90.6	89.84	90.64	0.94	66.69	0.26

Existing 5 year with Normal Depth Condition

HEC-RAS Plan: E5MnHtTcND River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m ³ /s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	5.26	92.75	94.18		94.18	0.27	59.26		0.08
Carp	44890	Max WS	5.23	92.63	94.16		94.17	0.33	94.94		0.1
Carp	44751	Max WS	5.2	92.38	94.13		94.14	0.34	90.6		0.09
Carp	44548	Max WS	6.8	92.43	94.1		94.1	0.18	109.98		0.05
Carp	44325	Max WS	6.98	92.11	94.06		94.08	0.73	92.63		0.18
Carp	44324		Hazeldean Cul								
Carp	44302	Max WS	6.88	92.6	93.97		94	0.82	86.92		0.23
Carp	44215	Max WS	6.88	92.7	93.97		93.97	0.23	102.49		0.07
Carp	44153	Max WS	6.88	92	93.97		93.97	0.21	109.51		0.05
Carp	43966	Max WS	6.86	91.99	93.96		93.96	0.13	140.13		0.03
Carp	43764	Max WS	7.38	92.3	93.96		93.96	0.13	175.36		0.03
Carp	43582	Max WS	7.46	92.34	93.95		93.95	0.14	153.83		0.04
Carp	43375	Max WS	7.53	91.62	93.88		93.91	0.72	8.62		0.17
Carp	43370		Maple Grove C								
Carp	43364	Max WS	7.53	91.01	93.89		93.91	0.61	102.2		0.13
Carp	43223	Max WS	7.52	91.91	93.88		93.88	0.19	145.97		0.05
Carp	43173	Max WS	7.52	92.2	93.88		93.88	0.14	164.35		0.04
Carp	43072	Max WS	14.84	92.12	93.86		93.86	0.33	160.86		0.09
Carp	42890	Max WS	15.15	91.68	93.81	92.47	93.82	0.48	79.66		0.12
Carp	42885		Palladium Driv								
Carp	42855	Max WS	15.13	91.57	93.8		93.81	0.48	153.81		0.11
Carp	42686	Max WS	15.14	91.9	93.78		93.78	0.28	119		0.07

Carp	42558	Max WS	15.15	91.83	93.75	93.75	0.37	89.27	0.11	
Carp	42410	Max WS	15.5	91.81	93.71	93.72	0.36	90.77	0.09	
Carp	42212	Max WS	15.51	91.76	93.7	93.7	0.17	129.08	0.04	
Carp	42182	Max WS	15.51	91.51	93.67	92.66	93.7	0.83	89.18	0.21
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	15.51	91.24	93.65	93.68	0.79	84.89	0.19	
Carp	42134	Max WS	15.51	91.88	93.63	93.66	0.9	81.7	0.24	
Carp	42124	Max WS	15.51	91.36	93.62	92.58	93.65	0.83	79.94	0.2
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	15.52	91.68	93.58	93.62	0.91	23.67	0.23	
Carp	42075	Max WS	15.52	91.46	93.59	93.6	0.37	160.27	0.09	
Carp	42002	Max WS	15.52	91.4	93.59	93.59	0.26	111.83	0.06	
Carp	41896	Max WS	15.58	91.77	93.57	93.57	0.25	100.48	0.06	
Carp	41743	Max WS	15.59	91.43	93.56	93.56	0.23	160.08	0.06	
Carp	41671	Max WS	15.59	91.18	93.54	93.55	0.72	115.53	0.17	
Carp	41357	Max WS	18.77	91.46	93.16	93.16	0.39	315.08	0.11	
Carp	41117	Max WS	18.47	91.45	93.07	93.07	0.35	403.03	0.11	
Carp	40910	Max WS	18.34	91.38	93.03	93.03	0.25	344.35	0.08	
Carp	40703	Max WS	18.33	91.65	92.99	92.99	0.29	319.25	0.1	
Carp	40505	Max WS	18.64	91.07	92.95	92.95	0.27	256.97	0.08	
Carp	40298	Max WS	18.59	91.02	92.92	92.92	0.24	362.73	0.07	
Carp	40092	Max WS	18.72	91.22	92.88	92.88	0.4	185.76	0.12	
Carp	40071	Max WS	18.89	91.13	92.83	92.9	1.21	195.12	0.33	
Carp	40070	Richardson Sic Culvert								
Carp	40050	Max WS	18.89	91.04	92.83	92.9	1.15	202.84	0.3	
Carp	39892	Max WS	19.01	91.02	92.82	92.83	0.44	146.61	0.13	
Carp	39695	Max WS	19.11	91.29	92.73	92.75	0.67	143.36	0.21	
Carp	39202	Max WS	18.98	90.57	92.48	92.51	0.76	207.93	0.18	
Carp	38697	Max WS	18.91	90.07	92.36	92.36	0.24	311.23	0.06	
Carp	38236	Max WS	18.94	90.16	92.28	92.3	0.61	267.92	0.15	
Carp	37894	Max WS	25.24	90.03	92.16	92.17	0.59	291.56	0.15	
Carp	37380.3	Max WS	24.17	89.67	92.03	90.9	92.1	1.13	270.68	0.26
Carp	37370	Bridge								
Carp	37355.3	Max WS	23.41	89.66	91.97	92.04	1.13	249.77	0.26	
Carp	37101	Max WS	23.51	89.48	91.98	91.98	0.32	263.46	0.07	
Carp	36580	Max WS	23.15	89.1	91.94	91.94	0.31	360.1	0.07	
Carp	35288	Max WS	22.86	89.05	91.77	91.78	0.63	130.32	0.13	
Carp	35073	Max WS	22.83	89.27	91.73	91.74	0.51	87.57	0.11	
Carp	34555	Max WS	22.76	89.06	91.61	91.63	0.68	64.05	0.15	
Carp	33472	Max WS	22.73	88.54	91.48	91.49	0.36	137.2	0.07	
Carp	33201	Max WS	22.97	89.15	91.43	90.04	91.45	0.68	122.75	0.16
Carp	33197	Bridge								
Carp	33181.1	Max WS	22.97	89.16	91.41	91.44	0.69	122.17	0.16	
Carp	32609	Max WS	22.93	89.56	91.25	91.26	0.6	155.59	0.15	
Carp	32096	Max WS	22.91	88.9	91.1	91.11	0.58	171.04	0.14	
Carp	31662	Max WS	22.97	88.74	90.98	89.67	91	0.71	90.46	0.16
Carp	31658	Bridge								
Carp	31642.1	Max WS	22.97	88.75	90.97	90.99	0.74	90.3	0.17	
Carp	31414	Max WS	24.55	88.89	90.81	90.07	90.85	1.04	86.31	0.27

Existing 25 year with Normal Depth Condition

HEC-RAS Plan: E25MnHtTcND River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	7.43	92.75	94.5		94.5	0.22	156.92		0.06
Carp	44890	Max WS	7.39	92.63	94.49		94.49	0.23	138.88		0.06
Carp	44751	Max WS	7.39	92.38	94.48		94.48	0.27	126.19		0.06
Carp	44548	Max WS	9.93	92.43	94.46		94.47	0.16	121.45		0.04
Carp	44325	Max WS	10.22	92.11	94.44		94.47	0.86	173.99		0.19
Carp	44324	Hazeldean Cul Culvert									
Carp	44302	Max WS	10.16	92.6	94.25		94.3	1.01	106.37		0.25
Carp	44215	Max WS	10.16	92.7	94.26		94.26	0.22	120.24		0.06
Carp	44153	Max WS	10.16	92	94.26		94.26	0.21	127.02		0.05
Carp	43966	Max WS	10.15	91.99	94.25		94.25	0.13	196.43		0.03
Carp	43764	Max WS	10.94	92.3	94.25		94.25	0.13	211.5		0.03
Carp	43582	Max WS	11.04	92.34	94.24		94.24	0.15	192.82		0.04
Carp	43375	Max WS	11.04	91.62	94.17		94.21	0.91	60.91		0.2
Carp	43370	Maple Grove C Culvert									
Carp	43364	Max WS	11.04	91.01	94.17		94.21	0.79	205.16		0.16
Carp	43223	Max WS	11.02	91.91	94.18		94.18	0.18	185.34		0.04
Carp	43173	Max WS	11.02	92.2	94.18		94.18	0.14	226.15		0.03
Carp	43072	Max WS	23.86	92.12	94.16		94.16	0.35	246.15		0.08
Carp	42890	Max WS	24.36	91.68	94.1	92.64	94.12	0.66	92.93		0.15
Carp	42885	Palladium Driv Bridge									
Carp	42855	Max WS	24.34	91.57	94.08		94.1	0.66	170.78		0.15
Carp	42686	Max WS	24.35	91.9	94.06		94.06	0.33	131.16		0.08
Carp	42558	Max WS	24.36	91.83	94.03		94.03	0.46	134.35		0.12
Carp	42410	Max WS	24.94	91.81	93.99		93.99	0.45	124.94		0.1
Carp	42212	Max WS	24.95	91.76	93.96		93.97	0.22	145.9		0.05
Carp	42182	Max WS	24.95	91.51	93.93	92.9	93.98	1.12	160.47		0.26
Carp	42172	Highway 417 S Bridge									
Carp	42154	Max WS	24.95	91.24	93.89		93.94	1.09	151.6		0.25
Carp	42134	Max WS	24.95	91.88	93.86		93.92	1.19	143.76		0.29
Carp	42124	Max WS	24.94	91.36	93.85	92.84	93.9	1.15	137.97		0.26
Carp	42119	Highway 417 N Bridge									
Carp	42097	Max WS	24.94	91.68	93.78		93.86	1.26	79.86		0.3
Carp	42075	Max WS	24.94	91.46	93.81		93.82	0.4	172.21		0.09
Carp	42002	Max WS	24.95	91.4	93.8		93.81	0.33	125.02		0.08
Carp	41896	Max WS	25.05	91.77	93.78		93.79	0.33	103.67		0.08
Carp	41743	Max WS	25.03	91.43	93.77		93.77	0.3	180.51		0.07
Carp	41671	Max WS	25.03	91.18	93.74		93.76	0.77	184.55		0.18
Carp	41357	Max WS	31.06	91.46	93.34		93.35	0.41	439.89		0.11
Carp	41117	Max WS	30.64	91.45	93.28		93.28	0.32	445.26		0.09
Carp	40910	Max WS	30.67	91.38	93.25		93.25	0.26	374.54		0.07
Carp	40703	Max WS	30.71	91.65	93.22		93.22	0.29	350.86		0.09
Carp	40505	Max WS	31.29	91.07	93.18		93.18	0.31	297.95		0.09
Carp	40298	Max WS	31.25	91.02	93.15		93.15	0.26	387.23		0.07
Carp	40092	Max WS	31.39	91.22	93.11		93.12	0.46	239.76		0.12
Carp	40071	Max WS	31.63	91.13	93.02		93.18	1.77	220.09		0.45
Carp	40070	Richardson Sic Culvert									
Carp	40050	Max WS	31.58	91.04	93.03		93.18	1.69	220.84		0.42
Carp	39892	Max WS	31.74	91.02	93.04		93.05	0.54	186.38		0.14

Carp	39695	Max WS	31.78	91.29	92.95	92.97	0.71	185.2	0.2	
Carp	39202	Max WS	31.19	90.57	92.71	92.72	0.7	317.11	0.16	
Carp	38697	Max WS	30.83	90.07	92.62	92.62	0.25	384.01	0.06	
Carp	38236	Max WS	30.82	90.16	92.57	92.58	0.49	338.79	0.11	
Carp	37894	Max WS	41.43	90.03	92.5	92.51	0.48	347.41	0.11	
Carp	37380.3	Max WS	40.26	89.67	92.4	91.24	92.53	1.57	324.53	0.33
Carp	37370	Bridge								
Carp	37355.3	Max WS	38.17	89.66	92.3	92.42	1.56	298.36	0.34	
Carp	37101	Max WS	38.66	89.48	92.32	92.32	0.32	303.02	0.07	
Carp	36580	Max WS	38.26	89.1	92.29	92.29	0.29	386.87	0.06	
Carp	35288	Max WS	37.81	89.05	92.15	92.17	0.66	207.84	0.13	
Carp	35073	Max WS	37.77	89.27	92.11	92.12	0.62	124.12	0.13	
Carp	34555	Max WS	37.65	89.06	91.97	92	0.88	97.91	0.17	
Carp	33472	Max WS	37.57	88.54	91.78	91.79	0.48	186.61	0.09	
Carp	33201	Max WS	37.94	89.15	91.71	90.31	91.76	0.98	206.55	0.21
Carp	33197	Bridge								
Carp	33181.1	Max WS	37.91	89.16	91.68	91.73	1	199.56	0.22	
Carp	32609	Max WS	37.85	89.56	91.53	91.54	0.65	235.4	0.15	
Carp	32096	Max WS	37.83	88.9	91.4	91.41	0.6	236.09	0.14	
Carp	31662	Max WS	37.85	88.74	91.26	89.95	91.29	0.99	130.37	0.21
Carp	31658	Bridge								
Carp	31642.1	Max WS	37.85	88.75	91.24	91.28	1.03	126	0.22	
Carp	31414	Max WS	40.73	88.89	91.08	90.56	91.12	1.15	104.38	0.27

Existing 100 year with Normal Depth Condition

HEC-RAS Plan: E100MnHtTcND River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	9.28	92.75	94.79		94.79	0.17	170.15		0.04
Carp	44890	Max WS	9.27	92.63	94.78		94.79	0.18	203.19		0.05
Carp	44751	Max WS	9.26	92.38	94.78		94.78	0.21	182.36		0.05
Carp	44548	Max WS	12.66	92.43	94.77		94.77	0.15	129.18		0.03
Carp	44325	Max WS	12.96	92.11	94.75		94.79	0.94	251.17		0.2
Carp	44324	Hazeldean Cul									
Carp	44302	Max WS	12.96	92.6	94.43		94.5	1.16	122.13		0.27
Carp	44215	Max WS	12.95	92.7	94.45		94.45	0.23	133.7		0.05
Carp	44153	Max WS	12.95	92	94.45		94.45	0.21	134.37		0.05
Carp	43966	Max WS	12.94	91.99	94.44		94.44	0.14	225.85		0.03
Carp	43764	Max WS	13.98	92.3	94.44		94.44	0.13	226.59		0.03
Carp	43582	Max WS	14.11	92.34	94.43		94.43	0.15	212.53		0.03
Carp	43375	Max WS	14	91.62	94.37		94.43	1.05	145.94		0.22
Carp	43370	Maple Grove C									
Carp	43364	Max WS	14	91.01	94.36		94.41	0.93	238.95		0.18
Carp	43223	Max WS	13.98	91.91	94.37		94.37	0.18	203.85		0.04
Carp	43173	Max WS	13.98	92.2	94.37		94.37	0.15	297.56		0.03
Carp	43072	Max WS	31.67	92.12	94.36		94.36	0.35	284.13		0.08
Carp	42890	Max WS	32.3	91.68	94.29	92.76	94.32	0.81	138.49		0.17
Carp	42885	Palladium Driv									
Carp	42855	Max WS	32.3	91.57	94.26		94.29	0.81	173.87		0.17
Carp	42686	Max WS	32.31	91.9	94.25		94.25	0.37	139.62		0.08
Carp	42558	Max WS	32.31	91.83	94.21		94.22	0.48	147.5		0.12
Carp	42410	Max WS	33.08	91.81	94.17		94.17	0.51	154.69		0.11

Carp	42212	Max WS	33.09	91.76	94.14		94.14	0.26	164.73	0.06
Carp	42182	Max WS	33.09	91.51	94.09	93.12	94.17	1.35	209.78	0.3
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	33.08	91.24	94.04		94.12	1.32	181.72	0.29
Carp	42134	Max WS	33.08	91.88	94.01		94.1	1.41	176.33	0.33
Carp	42124	Max WS	33.08	91.36	93.98	93.06	94.07	1.4	171.34	0.31
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	33.06	91.68	93.9		94.01	1.55	101.99	0.36
Carp	42075	Max WS	33.07	91.46	93.94		93.95	0.44	183.79	0.1
Carp	42002	Max WS	33.07	91.4	93.93		93.93	0.39	131.96	0.09
Carp	41896	Max WS	33.2	91.77	93.9		93.91	0.39	105.51	0.09
Carp	41743	Max WS	33.18	91.43	93.88		93.88	0.35	193.71	0.08
Carp	41671	Max WS	33.13	91.18	93.86		93.87	0.88	251.15	0.2
Carp	41357	Max WS	41.54	91.46	93.48		93.48	0.41	502.64	0.11
Carp	41117	Max WS	41.23	91.45	93.43		93.43	0.31	454.18	0.08
Carp	40910	Max WS	41.41	91.38	93.4		93.4	0.27	395.95	0.07
Carp	40703	Max WS	41.47	91.65	93.37		93.38	0.3	372.72	0.08
Carp	40505	Max WS	42.21	91.07	93.34		93.34	0.33	320.12	0.09
Carp	40298	Max WS	42.21	91.02	93.31		93.31	0.27	402.91	0.07
Carp	40092	Max WS	42.3	91.22	93.27		93.28	0.48	265.07	0.12
Carp	40071	Max WS	42.4	91.13	93.15		93.4	2.2	229.99	0.54
Carp	40070	Richardson Sic Culvert								
Carp	40050	Max WS	42.31	91.04	93.15		93.38	2.11	222.87	0.51
Carp	39892	Max WS	42.6	91.02	93.18		93.2	0.59	216.02	0.15
Carp	39695	Max WS	42.44	91.29	93.1		93.11	0.72	208.66	0.19
Carp	39202	Max WS	41.23	90.57	92.91		92.92	0.59	341.02	0.13
Carp	38697	Max WS	40.84	90.07	92.86		92.86	0.23	415.18	0.05
Carp	38236	Max WS	40.85	90.16	92.83		92.83	0.4	365.67	0.08
Carp	37894	Max WS	56.32	90.03	92.78		92.78	0.43	367.55	0.09
Carp	37380.3	Max WS	55.35	89.67	92.68	91.49	92.87	1.92	389.36	0.38
Carp	37370	Bridge								
Carp	37355.3	Max WS	52.05	89.66	92.52		92.71	1.93	355.95	0.4
Carp	37101	Max WS	52.72	89.48	92.55		92.56	0.35	341.79	0.07
Carp	36580	Max WS	52.37	89.1	92.53		92.53	0.3	400.14	0.06
Carp	35288	Max WS	51.87	89.05	92.41		92.42	0.67	284.04	0.13
Carp	35073	Max WS	51.82	89.27	92.37		92.38	0.7	160.59	0.14
Carp	34555	Max WS	51.68	89.06	92.21		92.24	1	130.93	0.19
Carp	33472	Max WS	51.51	88.54	91.99		92	0.55	211.61	0.1
Carp	33201	Max WS	52.08	89.15	91.9	90.52	91.98	1.22	245	0.25
Carp	33197	Bridge								
Carp	33181.1	Max WS	52.05	89.16	91.85		91.93	1.25	236.36	0.26
Carp	32609	Max WS	51.99	89.56	91.73		91.74	0.66	264.74	0.15
Carp	32096	Max WS	51.96	88.9	91.61		91.62	0.6	271.76	0.13
Carp	31662	Max WS	51.96	88.74	91.45	90.22	91.51	1.22	132.76	0.24
Carp	31658	Bridge								
Carp	31642.1	Max WS	51.93	88.75	91.43		91.5	1.27	128.4	0.26
Carp	31414	Max WS	56.17	88.89	91.27	90.77	91.32	1.24	115.58	0.28

Future Condition with Starting Water Elevation Condition

Future 2 year with Starting Water Elevation Condition

HEC-RAS Plan: F2w3.8nHFFTC River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	3.59	92.75	93.92		93.92	0.26	34.35		0.1
Carp	44890	Max WS	3.59	92.63	93.89		93.89	0.41	36.16		0.16
Carp	44751	Max WS	3.58	92.38	93.83		93.83	0.28	15.31		0.1
Carp	44548	Max WS	5.15	92.43	93.75		93.75	0.24	91.46		0.08
Carp	44325	Max WS	5.2	92.12	93.67	92.88	93.67	0.38	41.7		0.11
Carp	44324	Hazeldean Cul Bridge									
Carp	44302	Max WS	5.08	92.45	93.61		93.62	0.57	45.49		0.22
Carp	44267.4	Max WS	5.05	92.44	93.59		93.6	0.47	80.56		0.18
Carp	44218	Max WS	5.02	92.43	93.58		93.59	0.22	147.57		0.08
Carp	44193	Max WS	5.02	92.41	93.58		93.58	0.17	141.06		0.06
Carp	44153	Max WS	5.02	92.4	93.58		93.58	0.13	129.08		0.05
Carp	44093	Max WS	5.01	92.4	93.58		93.58	0.11	116.89		0.05
Carp	44068	Max WS	4.99	92.39	93.58		93.58	0.1	142.31		0.04
Carp	44044.2	Max WS	4.99	92.38	93.58		93.58	0.12	143.03		0.05
Carp	44020.4	Max WS	4.99	92.35	93.58		93.58	0.11	138.94		0.04
Carp	44013.6	Max WS	4.99	92.35	93.58		93.58	0.09	130.76		0.04
Carp	43993.2	Max WS	4.99	92.34	93.58		93.58	0.11	142.06		0.05
Carp	43966	Max WS	4.99	92.33	93.57		93.58	0.14	115.92		0.06
Carp	43954	Max WS	5.31	92.33	93.57		93.57	0.1	141.2		0.04
Carp	43946	Max WS	5.31	92.32	93.57		93.57	0.12	144.09		0.04
Carp	43938	Max WS	5.31	92.31	93.57		93.57	0.09	146.17		0.03
Carp	43852	Max WS	5.3	92.2	93.57		93.57	0.31	138.19		0.11
Carp	43822	Max WS	5.3	92.22	93.57		93.57	0.14	126.96		0.05
Carp	43813	Max WS	5.3	92.22	93.57		93.57	0.24	93.59		0.09
Carp	43799.6	Max WS	5.3	92.22	93.56		93.57	0.21	99.96		0.08
Carp	43764	Max WS	5.3	92.21	93.56		93.56	0.15	153.23		0.06
Carp	43745.8	Max WS	5.36	92.21	93.56		93.56	0.15	153.22		0.06
Carp	43645.7	Max WS	5.35	92.2	93.56		93.56	0.14	127.74		0.05
Carp	43582	Max WS	5.34	92.17	93.56		93.56	0.13	133.29		0.04
Carp	43572.4	Max WS	5.35	92.17	93.56		93.56	0.15	105.22		0.05
Carp	43524.2	Max WS	5.67	92.15	93.55		93.56	0.19	98.7		0.06
Carp	43519.4	Max WS	5.67	92.15	93.55		93.55	0.19	95.35		0.06
Carp	43375	Max WS	5.66	92.09	93.53	92.71	93.54	0.47	71.24		0.17
Carp	43370	Maple Gr. Upg Bridge									
Carp	43364	Max WS	5.66	92.08	93.51		93.52	0.51	21.26		0.18
Carp	43223	Max WS	5.66	92.01	93.49		93.49	0.08	116.26		0.03
Carp	43215.2	Max WS	5.66	92.01	93.49		93.49	0.08	116.76		0.03
Carp	43199.8	Max WS	5.66	92.01	93.49		93.49	0.08	133.9		0.03
Carp	43196	Max WS	5.66	92.01	93.49		93.49	0.08	133.75		0.03
Carp	43180.6	Max WS	5.66	92.01	93.49		93.49	0.08	143.01		0.03
Carp	43173	Max WS	5.66	92.01	93.49		93.49	0.08	241.51		0.03
Carp	43163.8	Max WS	9.09	92.01	93.49		93.49	0.17	173.82		0.06
Carp	43136.4	Max WS	9.09	92.01	93.49		93.49	0.16	103.11		0.06
Carp	43131.8	Max WS	9.09	92.01	93.49		93.49	0.16	102.94		0.07
Carp	43113.6	Max WS	9.09	92	93.49		93.49	0.16	104.93		0.07
Carp	43100	Max WS	9.09	92	93.49		93.49	0.16	109.22		0.07

Carp	43072 Max WS	9.09	92	93.47		93.49	0.61	104.44	0.28
Carp	43028.3 Max WS	9.09	91.96	93.41		93.43	0.67	94.84	0.28
Carp	43018.6 Max WS	9.09	91.96	93.4		93.42	0.68	92.86	0.28
Carp	42975 Max WS	9.09	91.92	93.34		93.37	0.78	84.27	0.3
Carp	42970.1 Max WS	9.08	91.92	93.33		93.37	0.92	107.56	0.27
Carp	42951.2 Max WS	9.34	91.91	93.32		93.35	0.71	106.02	0.23
Carp	42918.2 Max WS	9.33	91.91	93.3		93.32	0.66	90.86	0.25
Carp	42913.5 Max WS	9.33	91.91	93.3		93.32	0.67	85.9	0.27
Carp	42904.1 Max WS	9.33	91.9	93.28		93.31	0.71	80.06	0.29
Carp	42890 Max WS	9.32	91.9	93.26		93.29	0.74	71.34	0.31
Carp	42889 Max WS	9.33	91.8	93.27	92.52	93.29	0.72	162.67	0.2
Carp	42885 Palladium Driv Bridge								
Carp	42855 Max WS	9.32	91.85	93.24		93.26	0.63	202.71	0.23
Carp	42716 Max WS	9.32	91.75	93.22		93.23	0.31	121.62	0.12
Carp	42700.9 Max WS	9.32	91.74	93.22		93.22	0.31	113.44	0.12
Carp	42686 Max WS	9.32	91.73	93.21		93.22	0.32	101.4	0.12
Carp	42558 Max WS	9.33	91.71	93.18		93.18	0.41	64.32	0.17
Carp	42548.4 Max WS	9.63	91.7	93.17		93.18	0.37	63.76	0.15
Carp	42410 Max WS	9.63	91.6	93.13		93.15	0.7	65.01	0.19
Carp	42391.5 Max WS	9.63	91.59	93.12		93.14	0.69	62.31	0.19
Carp	42212 Max WS	9.62	91.52	93.06		93.07	0.5	77.37	0.14
Carp	42182 Max WS	9.61	91.51	93.01	92.47	93.05	0.87	17.47	0.34
Carp	42172 Highway 417 S Bridge								
Carp	42154 Max WS	9.61	91.24	92.98		93.01	0.82	15.96	0.3
Carp	42134 Max WS	9.61	91.51	92.98		93	0.58	20.93	0.2
Carp	42124 Max WS	9.59	91.36	92.95	92.38	92.99	0.9	14.93	0.33
Carp	42119 Highway 417 N Bridge								
Carp	42097 Max WS	9.59	91.49	92.94		92.96	0.68	15.39	0.22
Carp	42075 Max WS	9.59	91.48	92.94		92.94	0.16	103.57	0.05
Carp	42036 Max WS	9.59	91.47	92.93		92.94	0.34	136.81	0.15
Carp	42002 Max WS	9.58	91.46	92.92		92.93	0.35	132.08	0.13
Carp	41997.6 Max WS	9.59	91.46	92.92		92.93	0.39	128.32	0.14
Carp	41970.1 Max WS	9.59	91.44	92.92		92.92	0.15	130.32	0.06
Carp	41948.9 Max WS	9.74	91.44	92.92		92.92	0.24	108.41	0.09
Carp	41896 Max WS	9.74	91.42	92.9		92.91	0.57	115.23	0.15
Carp	41845.2 Max WS	9.73	91.4	92.89		92.9	0.5	86.54	0.17
Carp	41836 Max WS	9.73	91.4	92.89		92.89	0.33	116.43	0.11
Carp	41776 Max WS	9.72	91.38	92.87		92.88	0.51	119.4	0.16
Carp	41769 Max WS	9.72	91.38	92.87		92.88	0.4	105.95	0.13
Carp	41744 Max WS	9.73	91.36	92.87		92.87	0.21	116.92	0.1
Carp	41743 Max WS	9.73	91.36	92.86	92.08	92.88	0.61	108.8	0.21
Carp	41738 Fut Transitway Bridge								
Carp	41725.5 Max WS	9.73	91.35	92.86		92.87	0.34	142.46	0.1
Carp	41671 Max WS	9.73	91.35	92.86		92.87	0.4	85.13	0.14
Carp	41608 Max WS	11.11	91.32	92.85	91.91	92.86	0.33	106.4	0.1
Carp	41602 Future Campe Bridge								
Carp	41572 Max WS	11.11	91.31	92.84		92.85	0.33	110.1	0.1
Carp	41374.8 Max WS	10.93	91.26	92.74		92.81	1.2	16.98	0.37
Carp	41357 Max WS	10.7	91.26	92.69		92.77	1.22	13.18	0.48
Carp	41349.4 Max WS	10.63	91.25	92.68		92.74	1.15	157.08	0.47
Carp	41338 Max WS	10.59	91.24	92.67		92.67	0.08	196.41	0.03
Carp	41320 Max WS	10.59	91.24	92.67		92.67	0.1	233.93	0.03

Carp	41198	Max WS	10.6	91.21	92.67	92.67	0.11	197.97	0.04	
Carp	41180	Max WS	10.6	91.21	92.67	92.67	0.09	210.73	0.03	
Carp	41125.4	Max WS	10.56	91.21	92.67	92.67	0.52	194.79	0.14	
Carp	41117	Max WS	10.56	91.2	92.66	92.67	0.38	190.02	0.15	
Carp	41071	Max WS	10.49	91.18	92.65	92.65	0.41	181.85	0.16	
Carp	40965.2	Max WS	10.69	91.14	92.64	92.64	0.1	170.62	0.04	
Carp	40956	Max WS	10.69	91.14	92.63	92.65	0.47	169.74	0.18	
Carp	40919.2	Max WS	10.66	91.12	92.63	92.64	0.3	150.17	0.1	
Carp	40910	Max WS	10.69	91.12	92.63	92.63	0.07	200.33	0.02	
Carp	40703	Max WS	10.67	91.05	92.63	92.63	0.07	155.07	0.02	
Carp	40688.5	Max WS	10.82	91.04	92.63	92.63	0.39	132.71	0.13	
Carp	40640.2	Max WS	10.83	91.03	92.62	92.62	0.31	247.88	0.1	
Carp	40505	Max WS	10.8	91	92.61	92.61	0.2	251.6	0.07	
Carp	40423.5	Max WS	10.78	90.97	92.61	92.61	0.17	293.88	0.05	
Carp	40415	Max WS	10.78	90.96	92.61	92.61	0.16	278.74	0.05	
Carp	40348.1	Max WS	10.78	90.95	92.61	92.61	0.13	285.36	0.04	
Carp	40339.7	Max WS	10.78	90.95	92.61	92.61	0.05	283.88	0.02	
Carp	40298	Max WS	10.79	90.93	92.61	92.61	0.05	277.79	0.02	
Carp	40262.9	Max WS	11.22	90.92	92.61	92.61	0.07	265.97	0.02	
Carp	40113.9	Max WS	11.21	90.88	92.6	92.6	0.31	174.29	0.09	
Carp	40092	Max WS	11.21	90.87	92.59	92.6	0.32	163.77	0.09	
Carp	40077.6	Max WS	11.34	91.07	92.58	92.59	0.59	164.29	0.18	
Carp	40071.5	Max WS	11.33	91.15	92.54	92.58	0.91	180.91	0.28	
Carp	40070	Richardson Sic Culvert								
Carp	40050	Max WS	11.33	91.15	92.55	92.58	0.79	150.18	0.23	
Carp	40035.1	Max WS	11.33	91.13	92.56	92.57	0.46	145.3	0.15	
Carp	39892	Max WS	11.32	90.99	92.52	92.53	0.35	45.84	0.11	
Carp	39695	Max WS	11.31	90.78	92.47	92.48	0.4	51.6	0.14	
Carp	39400	Max WS	11.29	90.66	92.38	92.39	0.46	67.88	0.13	
Carp	39202	Max WS	11.27	90.57	92.34	92.35	0.43	219.36	0.12	
Carp	39102	Max WS	11.27	90.47	92.31	92.32	0.5	292.91	0.14	
Carp	39002	Max WS	11.25	90.37	92.29	92.3	0.51	215.66	0.14	
Carp	38902	Max WS	11.25	90.27	92.27	92.27	0.41	249.09	0.11	
Carp	38697	Max WS	11.24	90.07	92.25	92.25	0.18	286.27	0.05	
Carp	38692.5	Max WS	11.27	90.07	92.25	92.25	0.18	285.29	0.05	
Carp	38236	Max WS	11.25	90.16	92.21	92.21	0.45	244.72	0.11	
Carp	37894	Max WS	15.59	90.03	92.15	92.16	0.37	290.82	0.09	
Carp	37869.5	Max WS	15.59	90.01	92.15	92.16	0.36	290.05	0.09	
Carp	37390.4	Max WS	15.5	89.68	92.12	92.12	0.22	283.62	0.05	
Carp	37380.4	Max WS	15.47	89.67	92.11	90.65	92.13	0.69	280.36	0.16
Carp	37370	Huntmar Bridge								
Carp	37355.4	Max WS	15.37	89.66	92.09	92.12	0.7	265.91	0.16	
Carp	37101	Max WS	15.37	89.48	92.09	92.09	0.17	277.47	0.04	
Carp	36580	Max WS	15.36	89.1	92.08	92.08	0.16	374.92	0.03	
Carp	35288	Max WS	15.34	89.05	92.04	92.05	0.3	178.34	0.06	
Carp	35073	Max WS	15.34	89.27	92.03	92.04	0.27	113.71	0.05	
Carp	34555	Max WS	15.34	89.06	92.01	92.02	0.35	114.27	0.07	
Carp	33472	Max WS	15.39	88.54	91.99	91.99	0.17	210.95	0.03	
Carp	33201	Max WS	15.73	89.15	91.98	89.88	91.98	0.36	258.1	0.07
Carp	33197	March Road Bridge								
Carp	33181	Max WS	15.73	89.16	91.97	91.98	0.36	257.38	0.07	
Carp	32609	Max WS	15.73	89.56	91.97	91.97	0.14	295.79	0.03	

Carp	32096	Max WS	15.71	88.9	91.96		91.96	0.12	329.85	0.02
Carp	31662	Max WS	15.6	88.74	91.95	89.54	91.96	0.32	139.03	0.06
Carp	31658	Carp Road	Bridge							
Carp	31642	Max WS	15.58	88.74	91.95		91.96	0.32	139.02	0.06
Carp	31414	Max WS	-50.75	88.89	91.95	90.72	91.96	-0.57	171.25	0.11

Future 5 year with Starting Water Elevation Condition

HEC-RAS Plan: F5w3.8nHFETc River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	5.36	92.75	94.11		94.12	0.28	50.74		0.1
Carp	44890	Max WS	5.36	92.63	94.08		94.09	0.38	82.05		0.14
Carp	44751	Max WS	5.35	92.38	94.03		94.03	0.33	44.53		0.11
Carp	44548	Max WS	7.86	92.43	93.94		93.94	0.25	103.22		0.08
Carp	44325	Max WS	8.01	92.12	93.85	93.04	93.85	0.46	51.4		0.13
Carp	44324	Hazeldean Cul		Bridge							
Carp	44302	Max WS	7.96	92.45	93.75		93.77	0.7	78.08		0.24
Carp	44267.4	Max WS	7.96	92.44	93.74		93.75	0.51	96.79		0.18
Carp	44218	Max WS	7.96	92.43	93.73		93.73	0.24	151.15		0.08
Carp	44193	Max WS	7.96	92.41	93.73		93.73	0.19	143.28		0.06
Carp	44153	Max WS	7.96	92.4	93.73		93.73	0.15	131.38		0.05
Carp	44093	Max WS	7.96	92.4	93.72		93.72	0.14	118.53		0.05
Carp	44068	Max WS	7.95	92.39	93.72		93.72	0.13	144.24		0.04
Carp	44044.2	Max WS	7.94	92.38	93.72		93.72	0.14	144.68		0.05
Carp	44020.4	Max WS	7.94	92.35	93.72		93.72	0.13	140.96		0.05
Carp	44013.6	Max WS	7.94	92.35	93.72		93.72	0.11	133.56		0.04
Carp	43993.2	Max WS	7.94	92.34	93.72		93.72	0.14	143.21		0.05
Carp	43966	Max WS	7.94	92.33	93.72		93.72	0.16	126.49		0.06
Carp	43954	Max WS	8.47	92.33	93.72		93.72	0.12	143.89		0.04
Carp	43946	Max WS	8.47	92.32	93.72		93.72	0.14	146.19		0.05
Carp	43938	Max WS	8.47	92.31	93.72		93.72	0.11	146.89		0.04
Carp	43852	Max WS	8.46	92.2	93.71		93.71	0.19	145.21		0.06
Carp	43822	Max WS	8.46	92.22	93.71		93.71	0.17	132.88		0.06
Carp	43813	Max WS	8.46	92.22	93.71		93.71	0.29	120.12		0.1
Carp	43799.6	Max WS	8.46	92.22	93.71		93.71	0.26	123.21		0.09
Carp	43764	Max WS	8.46	92.21	93.71		93.71	0.18	160.93		0.07
Carp	43745.8	Max WS	8.58	92.21	93.71		93.71	0.18	160.76		0.07
Carp	43645.7	Max WS	8.58	92.2	93.7		93.7	0.17	131.34		0.06
Carp	43582	Max WS	8.58	92.17	93.7		93.7	0.16	135.89		0.05
Carp	43572.4	Max WS	8.58	92.17	93.7		93.7	0.19	112.23		0.06
Carp	43524.2	Max WS	8.86	92.15	93.7		93.7	0.23	104.24		0.07
Carp	43519.4	Max WS	8.86	92.15	93.7		93.7	0.23	96.32		0.07
Carp	43375	Max WS	8.86	92.09	93.66	93	93.68	0.63	72.69		0.2
Carp	43370	Maple Gr. Upg		Bridge							
Carp	43364	Max WS	8.85	92.08	93.63		93.65	0.68	22.71		0.24
Carp	43223	Max WS	8.85	92.01	93.61		93.61	0.1	116.86		0.04
Carp	43215.2	Max WS	8.85	92.01	93.61		93.61	0.1	117.36		0.04
Carp	43199.8	Max WS	8.85	92.01	93.61		93.61	0.11	144.85		0.04
Carp	43196	Max WS	8.85	92.01	93.61		93.61	0.11	156.41		0.04
Carp	43180.6	Max WS	8.85	92.01	93.61		93.61	0.11	162.84		0.04
Carp	43173	Max WS	8.85	92.01	93.61		93.61	0.1	248.99		0.03
Carp	43163.8	Max WS	14.92	92.01	93.61		93.61	0.23	192.97		0.08

Carp	43136.4	Max WS	14.92	92.01	93.61	93.61	0.23	155.04	0.09	
Carp	43131.8	Max WS	14.92	92.01	93.61	93.61	0.23	109.62	0.09	
Carp	43113.6	Max WS	14.92	92	93.6	93.61	0.23	110.44	0.09	
Carp	43100	Max WS	14.92	92	93.6	93.6	0.22	114.13	0.09	
Carp	43072	Max WS	14.92	92	93.6	93.6	0.17	115.86	0.07	
Carp	43028.3	Max WS	14.94	91.96	93.59	93.59	0.19	107.76	0.07	
Carp	43018.6	Max WS	14.94	91.96	93.59	93.59	0.19	105.02	0.07	
Carp	42975	Max WS	14.93	91.92	93.52	93.57	0.98	89.88	0.37	
Carp	42970.1	Max WS	14.93	91.92	93.55	93.61	1.19	114.84	0.32	
Carp	42951.2	Max WS	15.21	91.91	93.53	93.57	0.91	113.12	0.26	
Carp	42918.2	Max WS	15.2	91.91	93.53	93.56	0.77	103.63	0.26	
Carp	42913.5	Max WS	15.2	91.91	93.53	93.56	0.77	101.81	0.27	
Carp	42904.1	Max WS	15.2	91.9	93.53	93.56	0.79	97.23	0.29	
Carp	42890	Max WS	15.18	91.9	93.49	93.52	0.84	78.7	0.33	
Carp	42889	Max WS	15.18	91.8	93.49	92.87	93.52	0.89	258.61	0.24
Carp	42885	Palladium Driv Bridge								
Carp	42855	Max WS	15.15	91.85	93.46	93.49	0.8	206.8	0.26	
Carp	42716	Max WS	15.16	91.75	93.45	93.45	0.33	139.17	0.11	
Carp	42700.9	Max WS	15.16	91.74	93.45	93.45	0.34	129.17	0.11	
Carp	42686	Max WS	15.16	91.73	93.45	93.45	0.35	115.6	0.12	
Carp	42558	Max WS	15.17	91.71	93.41	93.42	0.47	75.27	0.17	
Carp	42548.4	Max WS	15.6	91.7	93.41	93.42	0.42	75.3	0.14	
Carp	42410	Max WS	15.59	91.6	93.37	93.39	0.79	71.54	0.2	
Carp	42391.5	Max WS	15.59	91.59	93.36	93.38	0.79	68.27	0.2	
Carp	42212	Max WS	15.6	91.52	93.3	93.31	0.58	80.88	0.14	
Carp	42182	Max WS	15.6	91.51	93.24	92.68	93.29	1.07	28.59	0.36
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	15.6	91.24	93.2	93.25	1.03	23.47	0.34	
Carp	42134	Max WS	15.6	91.51	93.2	93.23	0.74	25.27	0.24	
Carp	42124	Max WS	15.6	91.36	93.16	92.6	93.22	1.12	21.81	0.38
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	15.6	91.49	93.14	93.18	0.92	17.73	0.27	
Carp	42075	Max WS	15.42	91.48	93.16	93.16	0.19	104.66	0.06	
Carp	42036	Max WS	15.42	91.47	93.15	93.16	0.39	149.4	0.14	
Carp	42002	Max WS	15.42	91.46	93.15	93.15	0.16	135.11	0.05	
Carp	41997.6	Max WS	15.45	91.46	93.15	93.15	0.2	146.81	0.07	
Carp	41970.1	Max WS	15.45	91.44	93.15	93.15	0.17	142.84	0.06	
Carp	41948.9	Max WS	15.55	91.44	93.15	93.15	0.26	127.64	0.09	
Carp	41896	Max WS	15.56	91.42	93.14	93.15	0.28	132.2	0.07	
Carp	41845.2	Max WS	15.56	91.4	93.14	93.14	0.24	98.18	0.07	
Carp	41836	Max WS	15.56	91.4	93.14	93.14	0.34	121.13	0.1	
Carp	41776	Max WS	15.57	91.38	93.13	93.13	0.48	140.11	0.13	
Carp	41769	Max WS	15.57	91.38	93.13	93.13	0.41	122.54	0.12	
Carp	41744	Max WS	15.71	91.36	93.13	93.13	0.21	129.39	0.08	
Carp	41743	Max WS	15.68	91.36	93.11	92.45	93.14	0.75	113.54	0.23
Carp	41738	Fut Transitway Bridge								
Carp	41725.5	Max WS	15.71	91.35	93.12	93.13	0.46	155.55	0.12	
Carp	41671	Max WS	15.71	91.35	93.12	93.12	0.42	99.55	0.13	
Carp	41608	Max WS	18.63	91.32	93.1	92.01	93.11	0.46	107.95	0.12
Carp	41602	Future Campe Bridge								
Carp	41572	Max WS	18.59	91.31	93.09	93.1	0.46	110.1	0.12	
Carp	41374.8	Max WS	18.24	91.26	92.96	93.08	1.61	36.76	0.45	

Carp	41357 Max WS	17.71	91.26	92.89	93.01	1.48	17.99	0.58	
Carp	41349.4 Max WS	17.51	91.25	92.88	92.96	1.3	176.9	0.63	
Carp	41338 Max WS	17.62	91.24	92.88	92.89	0.1	203.03	0.04	
Carp	41320 Max WS	17.62	91.24	92.88	92.88	0.12	241.15	0.03	
Carp	41198 Max WS	17.62	91.21	92.88	92.88	0.14	204.23	0.04	
Carp	41180 Max WS	17.62	91.21	92.88	92.88	0.11	212.19	0.03	
Carp	41125.4 Max WS	17.53	91.21	92.88	92.88	0.17	198.51	0.04	
Carp	41117 Max WS	17.53	91.2	92.88	92.88	0.38	193.55	0.14	
Carp	41071 Max WS	17.54	91.18	92.88	92.88	0.12	197.44	0.04	
Carp	40965.2 Max WS	17.82	91.14	92.88	92.88	0.13	174.55	0.04	
Carp	40956 Max WS	17.82	91.14	92.88	92.88	0.18	171.12	0.06	
Carp	40919.2 Max WS	17.82	91.12	92.87	92.87	0.32	184.76	0.1	
Carp	40910 Max WS	17.82	91.12	92.87	92.87	0.09	204.81	0.03	
Carp	40703 Max WS	17.82	91.05	92.87	92.87	0.11	197.21	0.03	
Carp	40688.5 Max WS	18.03	91.04	92.87	92.87	0.43	183.05	0.12	
Carp	40640.2 Max WS	18.03	91.03	92.86	92.86	0.3	277.65	0.09	
Carp	40505 Max WS	18.03	91	92.85	92.86	0.22	253.34	0.06	
Carp	40423.5 Max WS	17.98	90.97	92.85	92.85	0.19	300.2	0.05	
Carp	40415 Max WS	17.98	90.96	92.85	92.85	0.17	308.57	0.05	
Carp	40348.1 Max WS	17.98	90.95	92.85	92.85	0.14	309.35	0.04	
Carp	40339.7 Max WS	17.98	90.95	92.85	92.85	0.07	308.36	0.02	
Carp	40298 Max WS	17.98	90.93	92.85	92.85	0.07	314.16	0.02	
Carp	40262.9 Max WS	18.41	90.92	92.85	92.85	0.09	288.67	0.02	
Carp	40113.9 Max WS	18.41	90.88	92.84	92.84	0.4	196.81	0.11	
Carp	40092 Max WS	18.41	90.87	92.84	92.84	0.41	184.45	0.11	
Carp	40077.6 Max WS	18.58	91.07	92.81	92.84	0.78	194.08	0.22	
Carp	40071.5 Max WS	18.52	91.15	92.75	92.82	1.24	190.11	0.35	
Carp	40070 Richardson Sic Culvert								
Carp	40050 Max WS	18.52	91.15	92.76	92.82	1.09	185.63	0.29	
Carp	40035.1 Max WS	18.55	91.13	92.79	92.79	0.46	183.63	0.13	
Carp	39892 Max WS	18.52	90.99	92.74	92.75	0.45	112.82	0.13	
Carp	39695 Max WS	18.47	90.78	92.68	92.69	0.49	127.55	0.16	
Carp	39400 Max WS	18.35	90.66	92.58	92.59	0.58	164.8	0.16	
Carp	39202 Max WS	18.26	90.57	92.52	92.53	0.5	315.42	0.13	
Carp	39102 Max WS	18.23	90.47	92.5	92.51	0.5	368.17	0.13	
Carp	39002 Max WS	18.2	90.37	92.48	92.49	0.49	276.44	0.13	
Carp	38902 Max WS	18.17	90.27	92.47	92.47	0.38	289.32	0.1	
Carp	38697 Max WS	18.16	90.07	92.45	92.45	0.2	341.5	0.05	
Carp	38692.5 Max WS	18.22	90.07	92.45	92.45	0.18	338.5	0.05	
Carp	38236 Max WS	18.21	90.16	92.42	92.42	0.42	306.75	0.1	
Carp	37894 Max WS	25.2	90.03	92.37	92.38	0.37	326.33	0.09	
Carp	37869.5 Max WS	25.14	90.01	92.37	92.37	0.37	326.06	0.09	
Carp	37390.4 Max WS	24.99	89.68	92.34	92.34	0.26	314.88	0.06	
Carp	37380.4 Max WS	24.89	89.67	92.32	90.91	92.37	1.01	305.69	0.22
Carp	37370 Huntmar Bridge								
Carp	37355.4 Max WS	24.59	89.66	92.28	92.33	1.01	295.42	0.22	
Carp	37101 Max WS	24.59	89.48	92.28	92.28	0.21	302.77	0.04	
Carp	36580 Max WS	24.49	89.1	92.27	92.27	0.19	385.88	0.04	
Carp	35288 Max WS	24.45	89.05	92.22	92.22	0.39	225.59	0.08	
Carp	35073 Max WS	24.44	89.27	92.2	92.21	0.38	137.64	0.07	
Carp	34555 Max WS	24.43	89.06	92.16	92.17	0.49	127.91	0.09	
Carp	33472 Max WS	24.48	88.54	92.12	92.12	0.24	226.14	0.04	

Carp	33201	Max WS	24.94	89.15	92.1	90.08	92.11	0.54	276.29	0.11
Carp	33197	March Road	Bridge							
Carp	33181	Max WS	24.94	89.16	92.09		92.1	0.54	275.72	0.11
Carp	32609	Max WS	24.94	89.56	92.07		92.07	0.2	310.76	0.04
Carp	32096	Max WS	24.92	88.9	92.06		92.06	0.17	342.94	0.03
Carp	31662	Max WS	24.76	88.74	92.05	89.75	92.06	0.49	140.28	0.09
Carp	31658	Carp Road	Bridge							
Carp	31642	Max WS	24.54	88.74	92.05		92.05	0.49	140.26	0.09
Carp	31414	Max WS	-54.99	88.89	92.04	90.76	92.05	-0.58	178.55	0.11

Future 25 year with Starting Water Elevation Condition

HEC-RAS Plan: F25w3.8nHFTc River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	7.81	92.75	94.3		94.3	0.3	129.72		0.1
Carp	44890	Max WS	7.81	92.63	94.28		94.28	0.34	112.49		0.12
Carp	44751	Max WS	7.8	92.38	94.23		94.24	0.34	102.2		0.11
Carp	44548	Max WS	11.63	92.43	94.16		94.16	0.24	111.49		0.07
Carp	44325	Max WS	11.8	92.12	94.08	93.17	94.09	0.53	97.51		0.13
Carp	44324	Hazeldean Cul	Bridge								
Carp	44302	Max WS	11.74	92.45	93.94		93.96	0.79	92.38		0.25
Carp	44267.4	Max WS	11.74	92.44	93.94		93.94	0.49	111.46		0.15
Carp	44218	Max WS	11.74	92.43	93.93		93.93	0.24	156.18		0.08
Carp	44193	Max WS	11.74	92.41	93.93		93.93	0.19	147.13		0.06
Carp	44153	Max WS	11.74	92.4	93.93		93.93	0.16	134.6		0.05
Carp	44093	Max WS	11.73	92.4	93.93		93.93	0.15	120.84		0.05
Carp	44068	Max WS	11.73	92.39	93.93		93.93	0.14	146.96		0.04
Carp	44044.2	Max WS	11.73	92.38	93.93		93.93	0.15	147.02		0.05
Carp	44020.4	Max WS	11.73	92.35	93.92		93.93	0.15	144.32		0.05
Carp	44013.6	Max WS	11.73	92.35	93.92		93.92	0.12	138.35		0.04
Carp	43993.2	Max WS	11.73	92.34	93.92		93.92	0.15	145.01		0.05
Carp	43966	Max WS	11.72	92.33	93.92		93.92	0.18	142.41		0.06
Carp	43954	Max WS	12.46	92.33	93.92		93.92	0.13	144.91		0.04
Carp	43946	Max WS	12.46	92.32	93.92		93.92	0.15	147.21		0.04
Carp	43938	Max WS	12.46	92.31	93.92		93.92	0.12	147.91		0.04
Carp	43852	Max WS	12.46	92.2	93.92		93.92	0.2	150.73		0.06
Carp	43822	Max WS	12.45	92.22	93.92		93.92	0.19	156.66		0.06
Carp	43813	Max WS	12.45	92.22	93.91		93.92	0.3	144.02		0.09
Carp	43799.6	Max WS	12.44	92.22	93.91		93.92	0.27	153.73		0.09
Carp	43764	Max WS	12.44	92.21	93.91		93.91	0.2	209.75		0.06
Carp	43745.8	Max WS	12.61	92.21	93.91		93.91	0.2	210.37		0.06
Carp	43645.7	Max WS	12.61	92.2	93.91		93.91	0.19	138.64		0.06
Carp	43582	Max WS	12.61	92.17	93.9		93.91	0.18	139.88		0.05
Carp	43572.4	Max WS	12.61	92.17	93.9		93.91	0.22	126.79		0.06
Carp	43524.2	Max WS	12.69	92.15	93.9		93.9	0.25	112.28		0.07
Carp	43519.4	Max WS	12.7	92.15	93.9		93.9	0.25	97.72		0.07
Carp	43375	Max WS	12.68	92.09	93.87	93.13	93.89	0.73	74.9		0.22
Carp	43370	Maple Gr. Upg	Bridge								
Carp	43364	Max WS	12.67	92.08	93.83		93.86	0.78	79.59		0.25
Carp	43223	Max WS	12.66	92.01	93.82		93.83	0.12	117.92		0.04
Carp	43215.2	Max WS	12.66	92.01	93.82		93.83	0.12	118.42		0.04
Carp	43199.8	Max WS	12.66	92.01	93.82		93.82	0.12	158.95		0.04

Carp	43196	Max WS	12.66	92.01	93.82	93.82	0.13	183.21	0.04	
Carp	43180.6	Max WS	12.66	92.01	93.82	93.82	0.13	216.05	0.04	
Carp	43173	Max WS	12.66	92.01	93.82	93.82	0.11	266.14	0.03	
Carp	43163.8	Max WS	23.47	92.01	93.82	93.82	0.3	211.64	0.09	
Carp	43136.4	Max WS	23.47	92.01	93.82	93.82	0.29	217.55	0.1	
Carp	43131.8	Max WS	23.47	92.01	93.82	93.82	0.29	213.44	0.1	
Carp	43113.6	Max WS	23.47	92	93.82	93.82	0.29	150.48	0.1	
Carp	43100	Max WS	23.47	92	93.81	93.82	0.28	123.85	0.1	
Carp	43072	Max WS	23.46	92	93.81	93.81	0.22	134.42	0.08	
Carp	43028.3	Max WS	23.49	91.96	93.8	93.81	0.24	123.84	0.09	
Carp	43018.6	Max WS	23.49	91.96	93.8	93.8	0.24	120.71	0.09	
Carp	42975	Max WS	23.48	91.92	93.8	93.8	0.27	107.62	0.09	
Carp	42970.1	Max WS	23.48	91.92	93.8	93.8	0.36	119.91	0.09	
Carp	42951.2	Max WS	23.83	91.91	93.8	93.8	0.32	120.13	0.08	
Carp	42918.2	Max WS	23.83	91.91	93.79	93.8	0.3	119.32	0.09	
Carp	42913.5	Max WS	23.83	91.91	93.79	93.79	0.3	119.31	0.09	
Carp	42904.1	Max WS	23.81	91.9	93.79	93.79	0.3	119.1	0.09	
Carp	42890	Max WS	23.81	91.9	93.77	93.8	0.8	114.81	0.27	
Carp	42889	Max WS	23.81	91.8	93.76	93.06	93.8	1.09	264.47	0.26
Carp	42885	Palladium Driv Bridge								
Carp	42855	Max WS	23.81	91.85	93.71	93.76	0.99	213.87	0.29	
Carp	42716	Max WS	23.81	91.75	93.71	93.72	0.36	151.78	0.1	
Carp	42700.9	Max WS	23.81	91.74	93.71	93.72	0.37	144.76	0.11	
Carp	42686	Max WS	23.81	91.73	93.71	93.71	0.4	133.81	0.12	
Carp	42558	Max WS	23.81	91.71	93.68	93.69	0.45	88.41	0.14	
Carp	42548.4	Max WS	24.52	91.7	93.68	93.69	0.47	83.73	0.14	
Carp	42410	Max WS	24.53	91.6	93.63	93.66	0.89	78.47	0.21	
Carp	42391.5	Max WS	24.53	91.59	93.63	93.65	0.89	74.21	0.21	
Carp	42212	Max WS	24.52	91.52	93.56	93.57	0.67	84.04	0.16	
Carp	42182	Max WS	24.47	91.51	93.48	92.91	93.57	1.32	65.39	0.39
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	24.44	91.24	93.44	93.52	1.28	48.94	0.37	
Carp	42134	Max WS	24.47	91.51	93.46	93.5	0.9	52.44	0.27	
Carp	42124	Max WS	24.41	91.36	93.39	92.84	93.49	1.37	42.53	0.42
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	24.41	91.49	93.38	93.45	1.19	20.42	0.33	
Carp	42075	Max WS	24.41	91.48	93.4	93.4	0.24	105.13	0.07	
Carp	42036	Max WS	24.41	91.47	93.4	93.4	0.2	151.6	0.06	
Carp	42002	Max WS	24.41	91.46	93.4	93.4	0.21	149.03	0.06	
Carp	41997.6	Max WS	24.47	91.46	93.4	93.4	0.23	151.11	0.07	
Carp	41970.1	Max WS	24.47	91.44	93.4	93.4	0.21	149.16	0.06	
Carp	41948.9	Max WS	24.5	91.44	93.4	93.4	0.29	182.13	0.08	
Carp	41896	Max WS	24.5	91.42	93.39	93.39	0.31	184.24	0.07	
Carp	41845.2	Max WS	24.5	91.4	93.39	93.39	0.29	149.49	0.08	
Carp	41836	Max WS	24.5	91.4	93.39	93.39	0.39	125.79	0.11	
Carp	41776	Max WS	24.51	91.38	93.38	93.38	0.5	148.97	0.13	
Carp	41769	Max WS	24.51	91.38	93.38	93.38	0.46	140.22	0.12	
Carp	41744	Max WS	24.53	91.36	93.38	93.38	0.24	150.11	0.08	
Carp	41743	Max WS	24.5	91.36	93.35	92.59	93.39	0.96	125.26	0.26
Carp	41738	Fut Transitway Bridge								
Carp	41725.5	Max WS	24.53	91.35	93.36	93.38	0.62	177.43	0.15	
Carp	41671	Max WS	24.51	91.35	93.36	93.37	0.47	101.2	0.13	

Carp	41608	Max WS	30.14	91.32	93.34	92.15	93.36	0.64	109.46	0.16
Carp	41602	Future Campe Bridge								
Carp	41572	Max WS	30.02	91.31	93.31		93.33	0.65	110.1	0.16
Carp	41374.8	Max WS	29.23	91.26	93.17		93.32	1.9	94.1	0.5
Carp	41357	Max WS	28.72	91.26	93.14		93.25	1.51	148.01	0.59
Carp	41349.4	Max WS	29.17	91.25	93.17		93.17	0.11	269.13	0.05
Carp	41338	Max WS	29.17	91.24	93.17		93.17	0.11	218.68	0.04
Carp	41320	Max WS	29.17	91.24	93.17		93.17	0.14	250.06	0.04
Carp	41198	Max WS	29.18	91.21	93.17		93.17	0.17	235.94	0.04
Carp	41180	Max WS	29.18	91.21	93.17		93.17	0.14	214.19	0.04
Carp	41125.4	Max WS	29.18	91.21	93.17		93.17	0.19	199.71	0.05
Carp	41117	Max WS	29.18	91.2	93.17		93.17	0.39	194.77	0.12
Carp	41071	Max WS	29.24	91.18	93.17		93.17	0.15	265.62	0.04
Carp	40965.2	Max WS	29.21	91.14	93.16		93.17	0.16	180.18	0.04
Carp	40956	Max WS	29.21	91.14	93.16		93.16	0.23	175.89	0.06
Carp	40919.2	Max WS	29.22	91.12	93.16		93.16	0.35	187.25	0.09
Carp	40910	Max WS	29.22	91.12	93.16		93.16	0.12	206.89	0.03
Carp	40703	Max WS	29.23	91.05	93.16		93.16	0.14	199.57	0.04
Carp	40688.5	Max WS	29.8	91.04	93.15		93.16	0.45	188.66	0.12
Carp	40640.2	Max WS	29.8	91.03	93.15		93.15	0.31	313.2	0.08
Carp	40505	Max WS	29.72	91	93.14		93.15	0.25	255.41	0.06
Carp	40423.5	Max WS	29.73	90.97	93.14		93.14	0.21	300.2	0.05
Carp	40415	Max WS	29.73	90.96	93.14		93.14	0.19	368.79	0.05
Carp	40348.1	Max WS	29.73	90.95	93.14		93.14	0.17	341.55	0.04
Carp	40339.7	Max WS	29.73	90.95	93.14		93.14	0.09	338.87	0.02
Carp	40298	Max WS	29.74	90.93	93.14		93.14	0.1	381.38	0.03
Carp	40262.9	Max WS	30.16	90.92	93.14		93.14	0.13	357.44	0.03
Carp	40113.9	Max WS	30.16	90.88	93.13		93.14	0.54	280.4	0.13
Carp	40092	Max WS	30.16	90.87	93.12		93.14	0.54	275.03	0.13
Carp	40077.6	Max WS	30.48	91.07	93.08		93.13	1.04	264.74	0.26
Carp	40071.5	Max WS	30.07	91.15	92.96		93.11	1.72	201.2	0.45
Carp	40070	Richardson Sic Culvert								
Carp	40050	Max WS	30.21	91.15	92.99		93.11	1.54	197.99	0.38
Carp	40035.1	Max WS	30.33	91.13	93.04		93.04	0.47	233.4	0.12
Carp	39892	Max WS	30.27	90.99	93		93.01	0.51	184.46	0.14
Carp	39695	Max WS	30.1	90.78	92.94		92.95	0.51	196.11	0.15
Carp	39400	Max WS	29.69	90.66	92.86		92.87	0.56	279.01	0.14
Carp	39202	Max WS	29.54	90.57	92.83		92.83	0.38	345.8	0.09
Carp	39102	Max WS	29.48	90.47	92.82		92.82	0.34	459.55	0.08
Carp	39002	Max WS	29.47	90.37	92.81		92.81	0.37	425.71	0.09
Carp	38902	Max WS	29.42	90.27	92.8		92.8	0.3	371.9	0.07
Carp	38697	Max WS	29.42	90.07	92.8		92.8	0.18	407.04	0.04
Carp	38692.5	Max WS	29.59	90.07	92.79		92.8	0.16	397.52	0.04
Carp	38236	Max WS	29.57	90.16	92.78		92.78	0.32	360.21	0.07
Carp	37894	Max WS	42.46	90.03	92.74		92.74	0.34	364.77	0.07
Carp	37869.5	Max WS	42.46	90.01	92.74		92.74	0.34	366.88	0.07
Carp	37390.4	Max WS	42.31	89.68	92.72		92.72	0.28	396.88	0.06
Carp	37380.4	Max WS	42.14	89.67	92.68	91.26	92.79	1.46	389.61	0.29
Carp	37370	Huntmar Bridge								
Carp	37355.4	Max WS	41.18	89.66	92.6		92.71	1.48	372.14	0.3
Carp	37101	Max WS	41.41	89.48	92.61		92.61	0.27	362.03	0.05
Carp	36580	Max WS	41.32	89.1	92.6		92.6	0.22	402.72	0.04

Carp	43364 Max WS	16.16	92.08	94.02	94.06	0.84	103.15	0.24	
Carp	43223 Max WS	16.16	92.01	94.02	94.03	0.13	118.92	0.04	
Carp	43215.2 Max WS	16.16	92.01	94.02	94.03	0.13	119.42	0.04	
Carp	43199.8 Max WS	16.16	92.01	94.02	94.02	0.13	173.97	0.04	
Carp	43196 Max WS	16.16	92.01	94.02	94.02	0.14	208.96	0.04	
Carp	43180.6 Max WS	16.16	92.01	94.02	94.02	0.14	236.67	0.04	
Carp	43173 Max WS	16.16	92.01	94.02	94.02	0.12	291.19	0.03	
Carp	43163.8 Max WS	30.97	92.01	94.02	94.02	0.31	215.61	0.09	
Carp	43136.4 Max WS	30.97	92.01	94.02	94.02	0.31	225.21	0.09	
Carp	43131.8 Max WS	30.97	92.01	94.02	94.02	0.31	217.16	0.09	
Carp	43113.6 Max WS	30.97	92	94.02	94.02	0.31	223.06	0.1	
Carp	43100 Max WS	30.97	92	94.01	94.02	0.3	231.37	0.1	
Carp	43072 Max WS	30.96	92	94.01	94.01	0.24	252.64	0.08	
Carp	43028.3 Max WS	30.99	91.96	94.01	94.01	0.26	233.61	0.09	
Carp	43018.6 Max WS	30.99	91.96	94	94.01	0.27	227.59	0.09	
Carp	42975 Max WS	30.98	91.92	94	94	0.3	202.94	0.09	
Carp	42970.1 Max WS	30.98	91.92	94	94	0.38	210.33	0.09	
Carp	42951.2 Max WS	31.35	91.91	94	94	0.35	205.5	0.09	
Carp	42918.2 Max WS	31.35	91.91	93.99	94	0.34	218.62	0.09	
Carp	42913.5 Max WS	31.35	91.91	93.99	94	0.34	221.09	0.09	
Carp	42904.1 Max WS	31.34	91.9	93.99	94	0.35	182.42	0.1	
Carp	42890 Max WS	31.33	91.9	93.98	94	0.72	149.32	0.22	
Carp	42889 Max WS	31.33	91.8	93.95	93.18	94.01	1.23	268.31	0.28
Carp	42885 Palladium Driv Bridge								
Carp	42855 Max WS	31.29	91.85	93.9	93.96	1.12	218.97	0.3	
Carp	42716 Max WS	31.31	91.75	93.91	93.91	0.38	159.44	0.1	
Carp	42700.9 Max WS	31.31	91.74	93.91	93.91	0.4	152.31	0.11	
Carp	42686 Max WS	31.31	91.73	93.9	93.91	0.42	138.04	0.11	
Carp	42558 Max WS	31.31	91.71	93.88	93.89	0.49	114.19	0.14	
Carp	42548.4 Max WS	32.18	91.7	93.87	93.88	0.51	115.99	0.14	
Carp	42410 Max WS	32.16	91.6	93.83	93.85	0.95	83	0.21	
Carp	42391.5 Max WS	32.16	91.59	93.82	93.84	0.96	79.77	0.21	
Carp	42212 Max WS	32.1	91.52	93.76	93.77	0.73	85.5	0.16	
Carp	42182 Max WS	31.99	91.51	93.67	93.07	93.78	1.49	97.1	0.41
Carp	42172 Highway 417 S Bridge								
Carp	42154 Max WS	31.88	91.24	93.62	93.73	1.45	79.88	0.4	
Carp	42134 Max WS	31.98	91.51	93.66	93.71	0.99	86.87	0.27	
Carp	42124 Max WS	31.7	91.36	93.57	93.02	93.69	1.53	71.69	0.43
Carp	42119 Highway 417 N Bridge								
Carp	42097 Max WS	31.6	91.49	93.55	93.65	1.36	46.67	0.35	
Carp	42075 Max WS	31.77	91.48	93.59	93.59	0.26	105.3	0.07	
Carp	42036 Max WS	31.77	91.47	93.59	93.59	0.22	153.68	0.06	
Carp	42002 Max WS	31.74	91.46	93.59	93.59	0.23	161.41	0.06	
Carp	41997.6 Max WS	31.81	91.46	93.59	93.59	0.25	154.9	0.07	
Carp	41970.1 Max WS	31.83	91.44	93.59	93.59	0.22	149.78	0.06	
Carp	41948.9 Max WS	31.84	91.44	93.59	93.59	0.28	186.78	0.08	
Carp	41896 Max WS	31.83	91.42	93.58	93.59	0.31	187.23	0.07	
Carp	41845.2 Max WS	31.82	91.4	93.58	93.58	0.31	153.1	0.08	
Carp	41836 Max WS	31.82	91.4	93.58	93.58	0.42	129.79	0.11	
Carp	41776 Max WS	31.8	91.38	93.57	93.58	0.5	152.15	0.12	
Carp	41769 Max WS	31.81	91.38	93.57	93.57	0.47	151.51	0.12	
Carp	41744 Max WS	31.83	91.36	93.57	93.57	0.26	155.62	0.08	

Carp	41743 Max WS	31.72	91.36	93.54	92.69	93.59	1.08	163.2	0.28
Carp	41738 Fut Transitway Bridge								
Carp	41725.5 Max WS	31.79	91.35	93.55		93.58	0.72	192.48	0.17
Carp	41671 Max WS	31.79	91.35	93.56		93.57	0.49	102.48	0.13
Carp	41608 Max WS	39.19	91.32	93.53	92.25	93.56	0.75	110.1	0.17
Carp	41602 Future Campe Bridge								
Carp	41572 Max WS	38.72	91.31	93.49		93.52	0.75	110.1	0.18
Carp	41374.8 Max WS	37.39	91.26	93.41		93.49	1.59	110.6	0.39
Carp	41357 Max WS	37.44	91.26	93.41		93.43	0.9	264.46	0.32
Carp	41349.4 Max WS	37.7	91.25	93.42		93.42	0.13	331.76	0.05
Carp	41338 Max WS	37.7	91.24	93.42		93.42	0.13	302.97	0.04
Carp	41320 Max WS	37.66	91.24	93.42		93.42	0.15	314.41	0.03
Carp	41198 Max WS	37.64	91.21	93.42		93.42	0.18	247.34	0.04
Carp	41180 Max WS	37.67	91.21	93.41		93.42	0.15	216.36	0.04
Carp	41125.4 Max WS	37.64	91.21	93.41		93.41	0.22	342.1	0.05
Carp	41117 Max WS	37.62	91.2	93.41		93.42	0.46	342.48	0.13
Carp	41071 Max WS	37.94	91.18	93.41		93.41	0.16	353.98	0.04
Carp	40965.2 Max WS	37.92	91.14	93.41		93.41	0.18	336.87	0.05
Carp	40956 Max WS	37.93	91.14	93.41		93.41	0.25	180.1	0.06
Carp	40919.2 Max WS	37.92	91.12	93.41		93.41	0.35	191.47	0.09
Carp	40910 Max WS	37.89	91.12	93.41		93.41	0.13	208.2	0.03
Carp	40703 Max WS	37.91	91.05	93.4		93.41	0.16	200.76	0.04
Carp	40688.5 Max WS	38.53	91.04	93.4		93.41	0.43	190.56	0.11
Carp	40640.2 Max WS	38.51	91.03	93.4		93.4	0.29	319.12	0.07
Carp	40505 Max WS	38.49	91	93.39		93.4	0.25	257.5	0.06
Carp	40423.5 Max WS	38.45	90.97	93.39		93.39	0.21	300.2	0.05
Carp	40415 Max WS	38.47	90.96	93.39		93.39	0.19	372.21	0.04
Carp	40348.1 Max WS	38.47	90.95	93.39		93.39	0.17	346.32	0.04
Carp	40339.7 Max WS	38.47	90.95	93.39		93.39	0.1	343.66	0.02
Carp	40298 Max WS	38.48	90.93	93.39		93.39	0.11	404.33	0.03
Carp	40262.9 Max WS	38.9	90.92	93.39		93.39	0.13	382.4	0.03
Carp	40113.9 Max WS	38.85	90.88	93.39		93.39	0.25	306.12	0.06
Carp	40092 Max WS	38.86	90.87	93.38		93.39	0.34	300.96	0.07
Carp	40077.6 Max WS	39.04	91.07	93.33		93.39	1.13	289.73	0.27
Carp	40071.5 Max WS	37.34	91.15	93.19		93.36	1.84	220.76	0.45
Carp	40070 Richardson Sic Culvert								
Carp	40050 Max WS	38.01	91.15	93.22		93.37	1.7	200.02	0.4
Carp	40035.1 Max WS	38.6	91.13	93.27		93.27	0.41	256.97	0.1
Carp	39892 Max WS	38.39	90.99	93.25		93.25	0.46	210.58	0.11
Carp	39695 Max WS	38.11	90.78	93.22		93.22	0.42	223.42	0.11
Carp	39400 Max WS	37.79	90.66	93.18		93.18	0.4	332.46	0.09
Carp	39202 Max WS	37.69	90.57	93.16		93.17	0.27	379.48	0.06
Carp	39102 Max WS	37.69	90.47	93.16		93.16	0.24	519.38	0.05
Carp	39002 Max WS	37.66	90.37	93.16		93.16	0.25	485.6	0.05
Carp	38902 Max WS	37.66	90.27	93.15		93.16	0.23	419.84	0.05
Carp	38697 Max WS	37.66	90.07	93.15		93.15	0.16	455.34	0.03
Carp	38692.5 Max WS	37.88	90.07	93.15		93.15	0.14	445	0.03
Carp	38236 Max WS	37.86	90.16	93.14		93.14	0.24	400.34	0.05
Carp	37894 Max WS	56.09	90.03	93.12		93.12	0.3	403.5	0.06
Carp	37869.5 Max WS	56.09	90.01	93.12		93.12	0.3	406.42	0.06
Carp	37390.4 Max WS	56.06	89.68	93.1		93.11	0.25	458.58	0.05
Carp	37380.4 Max WS	56.03	89.67	93.07	91.49	93.21	1.68	454.26	0.31

Carp	37370	Huntmar	Bridge							
Carp	37355.4	Max WS	54.82	89.66	92.86	93.02	1.78	423.9	0.34	
Carp	37101	Max WS	55.07	89.48	92.88	92.88	0.28	428.69	0.05	
Carp	36580	Max WS	54.97	89.1	92.87	92.87	0.22	412.44	0.04	
Carp	35288	Max WS	54.89	89.05	92.83	92.83	0.42	345.34	0.07	
Carp	35073	Max WS	54.89	89.27	92.8	92.81	0.55	265.13	0.1	
Carp	34555	Max WS	54.88	89.06	92.73	92.75	0.7	198.26	0.12	
Carp	33472	Max WS	54.92	88.54	92.66	92.66	0.35	282.96	0.06	
Carp	33201	Max WS	56.09	89.15	92.6	90.56	92.65	0.98	367.06	0.18
Carp	33197	March Road	Bridge							
Carp	33181	Max WS	56.09	89.16	92.58	92.63	0.99	365.79	0.18	
Carp	32609	Max WS	56.07	89.56	92.57	92.57	0.29	379.41	0.05	
Carp	32096	Max WS	56.05	88.9	92.56	92.56	0.23	390.48	0.04	
Carp	31662	Max WS	55.24	88.74	92.51	90.29	92.54	0.92	154.1	0.15
Carp	31658	Carp Road	Bridge							
Carp	31642	Max WS	52.71	88.74	92.51	92.53	0.88	151	0.15	
Carp	31414	Max WS	-81.21	88.89	92.5	90.95	92.51	-0.6	247.33	0.11

Future Condition with Normal Depth Condition

Future 2 year with Normal Depth Condition

HEC-RAS Plan: F2w3.8nHFFTC River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	3.59	92.75	93.92		93.92	0.26	34.35		0.1
Carp	44890	Max WS	3.59	92.63	93.89		93.89	0.41	35.94		0.16
Carp	44751	Max WS	3.58	92.38	93.83		93.83	0.28	15.31		0.1
Carp	44548	Max WS	5.15	92.43	93.75		93.75	0.24	91.46		0.08
Carp	44325	Max WS	5.2	92.12	93.67	92.88	93.67	0.38	41.7		0.11
Carp	44324	Hazeldean Cul Bridge									
Carp	44302	Max WS	5.08	92.45	93.61		93.62	0.57	45.38		0.22
Carp	44267.4	Max WS	5.05	92.44	93.59		93.6	0.47	80.56		0.18
Carp	44218	Max WS	5.02	92.43	93.58		93.59	0.22	147.56		0.08
Carp	44193	Max WS	5.02	92.41	93.58		93.58	0.17	141.06		0.06
Carp	44153	Max WS	5.02	92.4	93.58		93.58	0.13	129.08		0.05
Carp	44093	Max WS	5.01	92.4	93.58		93.58	0.11	116.89		0.05
Carp	44068	Max WS	4.99	92.39	93.58		93.58	0.1	142.31		0.04
Carp	44044.2	Max WS	4.99	92.38	93.58		93.58	0.12	143.02		0.05
Carp	44020.4	Max WS	4.99	92.35	93.58		93.58	0.11	138.94		0.04
Carp	44013.6	Max WS	4.99	92.35	93.58		93.58	0.09	130.76		0.04
Carp	43993.2	Max WS	4.99	92.34	93.58		93.58	0.11	142.05		0.05
Carp	43966	Max WS	4.99	92.33	93.57		93.58	0.14	115.9		0.06
Carp	43954	Max WS	5.31	92.33	93.57		93.57	0.1	141.2		0.04
Carp	43946	Max WS	5.31	92.32	93.57		93.57	0.12	144.08		0.04
Carp	43938	Max WS	5.31	92.31	93.57		93.57	0.09	146.17		0.03
Carp	43852	Max WS	5.3	92.2	93.57		93.57	0.31	138.19		0.11
Carp	43822	Max WS	5.3	92.22	93.57		93.57	0.14	126.95		0.05
Carp	43813	Max WS	5.3	92.22	93.57		93.57	0.24	93.59		0.09
Carp	43799.6	Max WS	5.3	92.22	93.56		93.57	0.21	99.96		0.08
Carp	43764	Max WS	5.3	92.21	93.56		93.56	0.15	153.21		0.06
Carp	43745.8	Max WS	5.36	92.21	93.56		93.56	0.15	153.21		0.06
Carp	43645.7	Max WS	5.35	92.2	93.56		93.56	0.14	127.73		0.05
Carp	43582	Max WS	5.35	92.17	93.56		93.56	0.13	133.29		0.04
Carp	43572.4	Max WS	5.35	92.17	93.56		93.56	0.15	105.21		0.05
Carp	43524.2	Max WS	5.67	92.15	93.55		93.55	0.19	98.69		0.06
Carp	43519.4	Max WS	5.67	92.15	93.55		93.55	0.19	95.35		0.06
Carp	43375	Max WS	5.66	92.09	93.53	92.71	93.54	0.47	71.24		0.17
Carp	43370	Maple Gr. Upg Bridge									
Carp	43364	Max WS	5.66	92.08	93.51		93.52	0.51	21.25		0.18
Carp	43223	Max WS	5.65	92.01	93.49		93.49	0.08	116.26		0.03
Carp	43215.2	Max WS	5.66	92.01	93.49		93.49	0.08	116.76		0.03
Carp	43199.8	Max WS	5.66	92.01	93.49		93.49	0.08	133.9		0.03
Carp	43196	Max WS	5.66	92.01	93.49		93.49	0.08	133.75		0.03
Carp	43180.6	Max WS	5.66	92.01	93.49		93.49	0.08	142.97		0.03
Carp	43173	Max WS	5.65	92.01	93.49		93.49	0.07	241.42		0.03
Carp	43163.8	Max WS	9.1	92.01	93.49		93.49	0.17	173.82		0.06
Carp	43136.4	Max WS	9.09	92.01	93.49		93.49	0.16	103.09		0.06
Carp	43131.8	Max WS	9.09	92.01	93.49		93.49	0.16	102.94		0.07
Carp	43113.6	Max WS	9.09	92	93.49		93.49	0.16	104.93		0.07
Carp	43100	Max WS	9.09	92	93.49		93.49	0.16	109.22		0.07

Carp	43072 Max WS	9.09	92	93.47		93.49	0.61	104.42	0.28
Carp	43028.3 Max WS	9.09	91.96	93.41		93.43	0.67	94.83	0.28
Carp	43018.6 Max WS	9.09	91.96	93.4		93.42	0.68	92.85	0.28
Carp	42975 Max WS	9.09	91.92	93.34		93.37	0.78	84.26	0.3
Carp	42970.1 Max WS	9.09	91.92	93.33		93.37	0.92	107.54	0.27
Carp	42951.2 Max WS	9.35	91.91	93.32		93.35	0.71	106	0.23
Carp	42918.2 Max WS	9.35	91.91	93.3		93.32	0.66	90.82	0.25
Carp	42913.5 Max WS	9.34	91.91	93.3		93.32	0.67	85.88	0.27
Carp	42904.1 Max WS	9.34	91.9	93.28		93.31	0.71	80.04	0.29
Carp	42890 Max WS	9.34	91.9	93.26		93.29	0.75	71.32	0.31
Carp	42889 Max WS	9.34	91.8	93.27	92.52	93.29	0.72	162.55	0.2
Carp	42885 Palladium Driv Bridge								
Carp	42855 Max WS	9.32	91.85	93.24		93.26	0.63	202.7	0.24
Carp	42716 Max WS	9.33	91.75	93.22		93.22	0.31	121.57	0.12
Carp	42700.9 Max WS	9.33	91.74	93.22		93.22	0.31	113.39	0.12
Carp	42686 Max WS	9.33	91.73	93.21		93.22	0.32	101.34	0.12
Carp	42558 Max WS	9.33	91.71	93.17		93.18	0.41	64.26	0.17
Carp	42548.4 Max WS	9.63	91.7	93.17		93.18	0.37	63.7	0.15
Carp	42410 Max WS	9.63	91.6	93.13		93.15	0.71	64.97	0.19
Carp	42391.5 Max WS	9.63	91.59	93.12		93.14	0.7	62.27	0.19
Carp	42212 Max WS	9.63	91.52	93.06		93.07	0.5	77.31	0.14
Carp	42182 Max WS	9.61	91.51	93.01	92.47	93.05	0.88	17.37	0.34
Carp	42172 Highway 417 S Bridge								
Carp	42154 Max WS	9.6	91.24	92.98		93.01	0.82	15.86	0.3
Carp	42134 Max WS	9.6	91.51	92.98		92.99	0.59	20.88	0.2
Carp	42124 Max WS	9.59	91.36	92.94	92.37	92.99	0.9	14.81	0.33
Carp	42119 Highway 417 N Bridge								
Carp	42097 Max WS	9.59	91.49	92.93		92.96	0.69	15.35	0.22
Carp	42075 Max WS	9.59	91.48	92.94		92.94	0.16	103.55	0.05
Carp	42036 Max WS	9.58	91.47	92.93		92.93	0.34	136.57	0.15
Carp	42002 Max WS	9.58	91.46	92.92		92.92	0.35	131.92	0.13
Carp	41997.6 Max WS	9.6	91.46	92.92		92.93	0.39	127.73	0.14
Carp	41970.1 Max WS	9.6	91.44	92.92		92.92	0.15	130.07	0.06
Carp	41948.9 Max WS	9.74	91.44	92.91		92.91	0.24	107.44	0.09
Carp	41896 Max WS	9.73	91.42	92.9		92.91	0.57	114.83	0.16
Carp	41845.2 Max WS	9.73	91.4	92.88		92.89	0.5	86.45	0.17
Carp	41836 Max WS	9.73	91.4	92.88		92.89	0.33	116.34	0.11
Carp	41776 Max WS	9.72	91.38	92.87		92.88	0.51	118.96	0.16
Carp	41769 Max WS	9.72	91.38	92.87		92.87	0.4	105.6	0.13
Carp	41744 Max WS	9.73	91.36	92.87		92.87	0.21	116.62	0.1
Carp	41743 Max WS	9.73	91.36	92.85	92.08	92.87	0.62	108.69	0.21
Carp	41738 Fut Transitway Bridge								
Carp	41725.5 Max WS	9.73	91.35	92.86		92.86	0.34	142.15	0.1
Carp	41671 Max WS	9.73	91.35	92.85		92.86	0.4	84.58	0.14
Carp	41608 Max WS	11.13	91.32	92.84	91.91	92.85	0.34	106.37	0.1
Carp	41602 Future Campe Bridge								
Carp	41572 Max WS	11.11	91.31	92.83		92.84	0.34	110.1	0.1
Carp	41374.8 Max WS	10.99	91.26	92.73		92.8	1.22	16.73	0.38
Carp	41357 Max WS	10.72	91.26	92.68		92.76	1.25	12.85	0.49
Carp	41349.4 Max WS	10.65	91.25	92.66		92.73	1.18	156.43	0.48
Carp	41338 Max WS	10.6	91.24	92.66		92.66	0.08	195.98	0.04
Carp	41320 Max WS	10.6	91.24	92.66		92.66	0.1	233.39	0.03

Carp	41198	Max WS	10.61	91.21	92.66	92.66	0.11	197.51	0.04	
Carp	41180	Max WS	10.61	91.21	92.66	92.66	0.09	210.63	0.03	
Carp	41125.4	Max WS	10.62	91.21	92.65	92.66	0.54	193.79	0.15	
Carp	41117	Max WS	10.58	91.2	92.65	92.66	0.4	189.09	0.16	
Carp	41071	Max WS	10.5	91.18	92.63	92.64	0.43	181.5	0.17	
Carp	40965.2	Max WS	10.7	91.14	92.62	92.62	0.11	170.42	0.04	
Carp	40956	Max WS	10.66	91.14	92.62	92.63	0.48	169.64	0.18	
Carp	40919.2	Max WS	10.67	91.12	92.61	92.62	0.31	145.33	0.1	
Carp	40910	Max WS	10.67	91.12	92.62	92.62	0.07	197.31	0.02	
Carp	40703	Max WS	10.68	91.05	92.61	92.61	0.07	154.85	0.02	
Carp	40688.5	Max WS	10.83	91.04	92.61	92.62	0.4	129.08	0.13	
Carp	40640.2	Max WS	10.8	91.03	92.6	92.61	0.32	244.45	0.11	
Carp	40505	Max WS	10.78	91	92.59	92.59	0.21	251.46	0.07	
Carp	40423.5	Max WS	10.78	90.97	92.59	92.59	0.18	292.01	0.05	
Carp	40415	Max WS	10.78	90.96	92.59	92.59	0.16	276.62	0.05	
Carp	40348.1	Max WS	10.78	90.95	92.59	92.59	0.13	282.65	0.04	
Carp	40339.7	Max WS	10.78	90.95	92.59	92.59	0.05	280.52	0.02	
Carp	40298	Max WS	10.78	90.93	92.59	92.59	0.05	274.72	0.02	
Carp	40262.9	Max WS	11.21	90.92	92.59	92.59	0.07	263.54	0.02	
Carp	40113.9	Max WS	11.2	90.88	92.57	92.58	0.32	172.35	0.09	
Carp	40092	Max WS	11.2	90.87	92.57	92.58	0.33	161.34	0.09	
Carp	40077.6	Max WS	11.32	91.07	92.55	92.57	0.61	160.69	0.19	
Carp	40071.5	Max WS	11.32	91.15	92.52	92.56	0.93	175.39	0.29	
Carp	40070	Richardson Sic Culvert								
Carp	40050	Max WS	11.31	91.15	92.53	92.56	0.8	142.23	0.24	
Carp	40035.1	Max WS	11.32	91.13	92.54	92.55	0.49	138.91	0.16	
Carp	39892	Max WS	11.31	90.99	92.49	92.5	0.36	43.9	0.12	
Carp	39695	Max WS	11.3	90.78	92.43	92.44	0.42	49.05	0.15	
Carp	39400	Max WS	11.29	90.66	92.33	92.35	0.49	57.99	0.14	
Carp	39202	Max WS	11.28	90.57	92.28	92.29	0.47	64.92	0.13	
Carp	39102	Max WS	11.28	90.47	92.25	92.26	0.56	82.85	0.16	
Carp	39002	Max WS	11.27	90.37	92.2	92.22	0.62	154.96	0.17	
Carp	38902	Max WS	11.27	90.27	92.17	92.18	0.54	206.71	0.15	
Carp	38697	Max WS	11.26	90.07	92.14	92.14	0.23	261.88	0.06	
Carp	38692.5	Max WS	11.3	90.07	92.14	92.14	0.23	261.1	0.07	
Carp	38236	Max WS	11.21	90.16	92.05	92.07	0.64	150.85	0.16	
Carp	37894	Max WS	15.54	90.03	91.89	91.9	0.55	117.86	0.15	
Carp	37869.5	Max WS	15.54	90.01	91.88	91.9	0.54	120.15	0.15	
Carp	37390.4	Max WS	15.17	89.68	91.77	91.78	0.43	229.79	0.11	
Carp	37380.4	Max WS	15.09	89.67	91.75	91.75	0.83	227.64	0.21	
Carp	37370	Huntmar Bridge								
Carp	37355.4	Max WS	14.86	89.66	91.72	91.75	0.83	222.77	0.21	
Carp	37101	Max WS	14.74	89.48	91.7	91.7	0.33	239.6	0.08	
Carp	36580	Max WS	14.54	89.1	91.65	91.65	0.37	312.18	0.08	
Carp	35288	Max WS	14.37	89.05	91.43	91.45	0.57	77.42	0.13	
Carp	35073	Max WS	14.36	89.27	91.4	91.41	0.42	66.43	0.1	
Carp	34555	Max WS	14.33	89.06	91.31	91.32	0.52	29.87	0.12	
Carp	33472	Max WS	14.35	88.54	91.22	91.22	0.27	68.7	0.05	
Carp	33201	Max WS	14.57	89.15	91.18	89.85	91.2	0.5	22.5	0.13
Carp	33197	March Road Bridge								
Carp	33181	Max WS	14.57	89.16	91.17	91.19	0.51	23.27	0.13	
Carp	32609	Max WS	14.56	89.56	91.03	91.04	0.51	90.24	0.14	

Carp	32096	Max WS	14.55	88.9	90.88		90.89	0.55	131.04	0.15
Carp	31662	Max WS	14.61	88.74	90.76	89.52	90.77	0.59	75.41	0.14
Carp	31658	Carp Road Bridge								
Carp	31642	Max WS	14.6	88.74	90.75		90.76	0.6	72.74	0.14
Carp	31414	Max WS	15.69	88.89	90.59	89.83	90.63	0.94	64.27	0.26

Future 5 year with Normal Depth Condition

HEC-RAS Plan: F5w3.8nHFETc River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	5.36	92.75	94.11		94.12	0.28	50.71		0.1
Carp	44890	Max WS	5.36	92.63	94.08		94.09	0.38	82.05		0.14
Carp	44751	Max WS	5.36	92.38	94.03		94.03	0.33	44.44		0.11
Carp	44548	Max WS	7.87	92.43	93.94		93.94	0.25	103.22		0.08
Carp	44325	Max WS	8.01	92.12	93.85	93.04	93.85	0.46	51.38		0.13
Carp	44324	Hazeldean Cul Bridge									
Carp	44302	Max WS	7.96	92.45	93.75		93.77	0.7	78.06		0.24
Carp	44267.4	Max WS	7.96	92.44	93.74		93.75	0.51	96.75		0.18
Carp	44218	Max WS	7.94	92.43	93.73		93.73	0.24	151.15		0.08
Carp	44193	Max WS	7.94	92.41	93.73		93.73	0.19	143.28		0.06
Carp	44153	Max WS	7.94	92.4	93.73		93.73	0.15	131.37		0.05
Carp	44093	Max WS	7.94	92.4	93.72		93.72	0.14	118.52		0.05
Carp	44068	Max WS	7.94	92.39	93.72		93.72	0.12	144.23		0.04
Carp	44044.2	Max WS	7.94	92.38	93.72		93.72	0.14	144.68		0.05
Carp	44020.4	Max WS	7.94	92.35	93.72		93.72	0.13	140.96		0.05
Carp	44013.6	Max WS	7.94	92.35	93.72		93.72	0.11	133.55		0.04
Carp	43993.2	Max WS	7.94	92.34	93.72		93.72	0.14	143.2		0.05
Carp	43966	Max WS	7.94	92.33	93.72		93.72	0.16	126.47		0.06
Carp	43954	Max WS	8.46	92.33	93.72		93.72	0.12	143.89		0.04
Carp	43946	Max WS	8.46	92.32	93.72		93.72	0.14	146.19		0.05
Carp	43938	Max WS	8.46	92.31	93.72		93.72	0.11	146.89		0.04
Carp	43852	Max WS	8.46	92.2	93.71		93.71	0.19	145.2		0.06
Carp	43822	Max WS	8.46	92.22	93.71		93.71	0.17	132.87		0.06
Carp	43813	Max WS	8.46	92.22	93.71		93.71	0.29	120.03		0.1
Carp	43799.6	Max WS	8.46	92.22	93.71		93.71	0.26	123.15		0.09
Carp	43764	Max WS	8.46	92.21	93.71		93.71	0.18	160.92		0.07
Carp	43745.8	Max WS	8.57	92.21	93.71		93.71	0.18	160.73		0.07
Carp	43645.7	Max WS	8.57	92.2	93.7		93.7	0.17	131.33		0.06
Carp	43582	Max WS	8.57	92.17	93.7		93.7	0.16	135.89		0.05
Carp	43572.4	Max WS	8.57	92.17	93.7		93.7	0.19	112.21		0.06
Carp	43524.2	Max WS	8.85	92.15	93.7		93.7	0.23	104.22		0.07
Carp	43519.4	Max WS	8.85	92.15	93.7		93.7	0.23	96.31		0.07
Carp	43375	Max WS	8.85	92.09	93.66	93	93.68	0.63	72.68		0.2
Carp	43370	Maple Gr. Upg Bridge									
Carp	43364	Max WS	8.84	92.08	93.63		93.65	0.68	22.71		0.24
Carp	43223	Max WS	8.84	92.01	93.61		93.61	0.1	116.86		0.04
Carp	43215.2	Max WS	8.84	92.01	93.61		93.61	0.1	117.36		0.04
Carp	43199.8	Max WS	8.84	92.01	93.61		93.61	0.11	144.82		0.04
Carp	43196	Max WS	8.84	92.01	93.61		93.61	0.11	156.41		0.04
Carp	43180.6	Max WS	8.84	92.01	93.61		93.61	0.11	162.84		0.04
Carp	43173	Max WS	8.84	92.01	93.61		93.61	0.1	248.99		0.03
Carp	43163.8	Max WS	14.9	92.01	93.61		93.61	0.23	192.97		0.08

Carp	43136.4	Max WS	14.9	92.01	93.61	93.61	0.23	154.84	0.09	
Carp	43131.8	Max WS	14.9	92.01	93.61	93.61	0.23	109.62	0.09	
Carp	43113.6	Max WS	14.9	92	93.6	93.61	0.23	110.43	0.09	
Carp	43100	Max WS	14.9	92	93.6	93.6	0.22	114.11	0.09	
Carp	43072	Max WS	14.9	92	93.6	93.6	0.17	115.83	0.07	
Carp	43028.3	Max WS	14.92	91.96	93.59	93.59	0.19	107.73	0.07	
Carp	43018.6	Max WS	14.92	91.96	93.59	93.59	0.19	105.02	0.07	
Carp	42975	Max WS	14.91	91.92	93.52	93.57	0.98	89.88	0.37	
Carp	42970.1	Max WS	14.91	91.92	93.55	93.61	1.19	114.84	0.32	
Carp	42951.2	Max WS	15.2	91.91	93.53	93.56	0.91	113.11	0.26	
Carp	42918.2	Max WS	15.2	91.91	93.53	93.56	0.77	103.6	0.26	
Carp	42913.5	Max WS	15.2	91.91	93.53	93.56	0.78	101.77	0.27	
Carp	42904.1	Max WS	15.2	91.9	93.52	93.56	0.79	97.18	0.29	
Carp	42890	Max WS	15.18	91.9	93.49	93.52	0.85	78.67	0.33	
Carp	42889	Max WS	15.18	91.8	93.49	92.87	93.52	0.89	258.47	0.24
Carp	42885	Palladium Driv Bridge								
Carp	42855	Max WS	15.15	91.85	93.46	93.49	0.8	206.79	0.26	
Carp	42716	Max WS	15.16	91.75	93.45	93.45	0.33	139.12	0.11	
Carp	42700.9	Max WS	15.16	91.74	93.45	93.45	0.34	129.09	0.11	
Carp	42686	Max WS	15.16	91.73	93.44	93.45	0.35	115.52	0.12	
Carp	42558	Max WS	15.16	91.71	93.41	93.42	0.47	75.23	0.17	
Carp	42548.4	Max WS	15.57	91.7	93.41	93.42	0.41	75.27	0.14	
Carp	42410	Max WS	15.56	91.6	93.37	93.39	0.79	71.52	0.2	
Carp	42391.5	Max WS	15.56	91.59	93.36	93.38	0.79	68.25	0.2	
Carp	42212	Max WS	15.57	91.52	93.3	93.31	0.58	80.87	0.14	
Carp	42182	Max WS	15.56	91.51	93.24	92.67	93.29	1.07	28.52	0.36
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	15.56	91.24	93.2	93.25	1.02	23.42	0.34	
Carp	42134	Max WS	15.56	91.51	93.2	93.23	0.74	25.23	0.24	
Carp	42124	Max WS	15.56	91.36	93.16	92.59	93.22	1.11	21.79	0.38
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	15.56	91.49	93.14	93.18	0.92	17.72	0.27	
Carp	42075	Max WS	15.38	91.48	93.15	93.15	0.19	104.64	0.06	
Carp	42036	Max WS	15.38	91.47	93.15	93.15	0.39	149.33	0.14	
Carp	42002	Max WS	15.39	91.46	93.15	93.15	0.16	135.09	0.05	
Carp	41997.6	Max WS	15.41	91.46	93.15	93.15	0.22	146.76	0.07	
Carp	41970.1	Max WS	15.41	91.44	93.15	93.15	0.17	142.7	0.06	
Carp	41948.9	Max WS	15.56	91.44	93.14	93.15	0.27	127.54	0.09	
Carp	41896	Max WS	15.56	91.42	93.14	93.14	0.28	132.17	0.07	
Carp	41845.2	Max WS	15.56	91.4	93.14	93.14	0.24	97.87	0.07	
Carp	41836	Max WS	15.56	91.4	93.14	93.14	0.34	121.05	0.1	
Carp	41776	Max WS	15.56	91.38	93.12	93.13	0.48	139.76	0.13	
Carp	41769	Max WS	15.56	91.38	93.12	93.13	0.41	122.26	0.12	
Carp	41744	Max WS	15.71	91.36	93.12	93.13	0.21	129.21	0.08	
Carp	41743	Max WS	15.68	91.36	93.11	92.45	93.13	0.76	113.47	0.23
Carp	41738	Fut Transitway Bridge								
Carp	41725.5	Max WS	15.68	91.35	93.11	93.12	0.46	155.34	0.12	
Carp	41671	Max WS	15.68	91.35	93.11	93.12	0.42	99.52	0.13	
Carp	41608	Max WS	18.63	91.32	93.1	92.01	93.11	0.46	107.92	0.12
Carp	41602	Future Campe Bridge								
Carp	41572	Max WS	18.59	91.31	93.08	93.09	0.46	110.1	0.12	
Carp	41374.8	Max WS	18.24	91.26	92.95	93.07	1.63	34.22	0.46	

Carp	41357 Max WS	17.72	91.26	92.88	93	1.51	17.69	0.59	
Carp	41349.4 Max WS	17.54	91.25	92.86	92.96	1.34	175.35	0.65	
Carp	41338 Max WS	17.63	91.24	92.87	92.87	0.1	202.62	0.04	
Carp	41320 Max WS	17.64	91.24	92.87	92.87	0.12	240.82	0.03	
Carp	41198 Max WS	17.55	91.21	92.87	92.87	0.14	204.03	0.04	
Carp	41180 Max WS	17.55	91.21	92.87	92.87	0.12	212.1	0.04	
Carp	41125.4 Max WS	17.55	91.21	92.87	92.87	0.17	198.41	0.04	
Carp	41117 Max WS	17.55	91.2	92.86	92.87	0.39	193.49	0.14	
Carp	41071 Max WS	17.56	91.18	92.86	92.87	0.12	197.3	0.04	
Carp	40965.2 Max WS	17.83	91.14	92.86	92.86	0.13	174.29	0.04	
Carp	40956 Max WS	17.83	91.14	92.86	92.86	0.18	171.04	0.06	
Carp	40919.2 Max WS	17.76	91.12	92.86	92.86	0.33	184.64	0.1	
Carp	40910 Max WS	17.83	91.12	92.86	92.86	0.09	204.71	0.03	
Carp	40703 Max WS	17.77	91.05	92.86	92.86	0.12	197.1	0.03	
Carp	40688.5 Max WS	18.05	91.04	92.85	92.86	0.44	181.55	0.13	
Carp	40640.2 Max WS	18.05	91.03	92.85	92.85	0.31	276.11	0.09	
Carp	40505 Max WS	17.99	91	92.84	92.84	0.22	253.23	0.06	
Carp	40423.5 Max WS	17.99	90.97	92.84	92.84	0.19	300.2	0.05	
Carp	40415 Max WS	17.99	90.96	92.84	92.84	0.18	306.71	0.05	
Carp	40348.1 Max WS	17.99	90.95	92.83	92.84	0.15	308.32	0.04	
Carp	40339.7 Max WS	17.99	90.95	92.84	92.84	0.07	307.38	0.02	
Carp	40298 Max WS	17.99	90.93	92.83	92.83	0.07	311.18	0.02	
Carp	40262.9 Max WS	18.42	90.92	92.83	92.83	0.09	286.82	0.02	
Carp	40113.9 Max WS	18.41	90.88	92.82	92.83	0.41	195.05	0.11	
Carp	40092 Max WS	18.41	90.87	92.82	92.83	0.42	183.11	0.11	
Carp	40077.6 Max WS	18.59	91.07	92.79	92.82	0.79	193.16	0.22	
Carp	40071.5 Max WS	18.53	91.15	92.73	92.81	1.26	188.86	0.36	
Carp	40070 Richardson Sic Culvert								
Carp	40050 Max WS	18.53	91.15	92.74	92.81	1.11	183.84	0.3	
Carp	40035.1 Max WS	18.56	91.13	92.77	92.78	0.47	182.01	0.14	
Carp	39892 Max WS	18.53	90.99	92.72	92.73	0.46	106.93	0.13	
Carp	39695 Max WS	18.49	90.78	92.65	92.67	0.51	114.16	0.17	
Carp	39400 Max WS	18.43	90.66	92.53	92.55	0.61	138.36	0.17	
Carp	39202 Max WS	18.38	90.57	92.46	92.47	0.58	268.08	0.15	
Carp	39102 Max WS	18.35	90.47	92.43	92.45	0.59	320.49	0.15	
Carp	39002 Max WS	18.33	90.37	92.4	92.41	0.6	236.6	0.16	
Carp	38902 Max WS	18.31	90.27	92.37	92.38	0.48	261.26	0.13	
Carp	38697 Max WS	18.29	90.07	92.35	92.35	0.24	307.37	0.06	
Carp	38692.5 Max WS	18.37	90.07	92.35	92.35	0.23	307.25	0.06	
Carp	38236 Max WS	18.35	90.16	92.28	92.29	0.61	265.25	0.15	
Carp	37894 Max WS	25.08	90.03	92.16	92.17	0.58	291.76	0.15	
Carp	37869.5 Max WS	25.08	90.01	92.15	92.16	0.58	290.3	0.14	
Carp	37390.4 Max WS	24.38	89.68	92.07	92.07	0.39	275.36	0.09	
Carp	37380.4 Max WS	24.16	89.67	92.04	90.89	92.1	1.12	270.98	0.26
Carp	37370 Huntmar Bridge								
Carp	37355.4 Max WS	23.34	89.66	91.98	92.04	1.12	250.06	0.26	
Carp	37101 Max WS	23.35	89.48	91.97	91.98	0.31	263.33	0.07	
Carp	36580 Max WS	23.07	89.1	91.94	91.94	0.31	359.96	0.07	
Carp	35288 Max WS	22.71	89.05	91.77	91.78	0.62	130.65	0.13	
Carp	35073 Max WS	22.68	89.27	91.73	91.74	0.5	87.81	0.11	
Carp	34555 Max WS	22.63	89.06	91.62	91.64	0.7	66.69	0.15	
Carp	33472 Max WS	22.63	88.54	91.49	91.5	0.36	139.61	0.07	

Carp	33201	Max WS	22.89	89.15	91.44	90.04	91.46	0.68	127.19	0.16
Carp	33197	March Road	Bridge							
Carp	33181	Max WS	22.88	89.16	91.42		91.45	0.69	126.23	0.16
Carp	32609	Max WS	22.85	89.56	91.26		91.27	0.59	157.93	0.15
Carp	32096	Max WS	22.84	88.9	91.12		91.13	0.56	174.27	0.14
Carp	31662	Max WS	22.88	88.74	90.99	89.71	91.01	0.79	91.02	0.17
Carp	31658	Carp Road	Bridge							
Carp	31642	Max WS	22.88	88.74	90.98		91	0.79	90.44	0.17
Carp	31414	Max WS	24.6	88.89	90.81	90.06	90.85	1.05	86.22	0.27

Future 25 year with Normal Depth Condition

HEC-RAS Plan: F25w3.8nHFTc River: Carp River Reach: Carp Profile: Max WS

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	Vel Chnl (m/s)	Top Width (m)	Froude #	Chl
Carp	44953	Max WS	7.81	92.75	94.3		94.3	0.3	129.54		0.1
Carp	44890	Max WS	7.81	92.63	94.28		94.28	0.34	112.49		0.12
Carp	44751	Max WS	7.8	92.38	94.23		94.24	0.34	102.2		0.11
Carp	44548	Max WS	11.63	92.43	94.16		94.16	0.24	111.48		0.07
Carp	44325	Max WS	11.81	92.12	94.08	93.17	94.09	0.53	97.46		0.13
Carp	44324	Hazeldean Cul	Bridge								
Carp	44302	Max WS	11.75	92.45	93.94		93.96	0.79	92.36		0.25
Carp	44267.4	Max WS	11.75	92.44	93.94		93.94	0.49	111.44		0.15
Carp	44218	Max WS	11.74	92.43	93.93		93.93	0.24	156.17		0.08
Carp	44193	Max WS	11.74	92.41	93.93		93.93	0.19	147.13		0.06
Carp	44153	Max WS	11.74	92.4	93.93		93.93	0.16	134.59		0.05
Carp	44093	Max WS	11.74	92.4	93.93		93.93	0.15	120.83		0.05
Carp	44068	Max WS	11.74	92.39	93.93		93.93	0.14	146.95		0.04
Carp	44044.2	Max WS	11.73	92.38	93.92		93.93	0.15	147.02		0.05
Carp	44020.4	Max WS	11.73	92.35	93.92		93.92	0.15	144.32		0.05
Carp	44013.6	Max WS	11.73	92.35	93.92		93.92	0.12	138.34		0.04
Carp	43993.2	Max WS	11.73	92.34	93.92		93.92	0.15	145		0.05
Carp	43966	Max WS	11.73	92.33	93.92		93.92	0.18	142.41		0.06
Carp	43954	Max WS	12.47	92.33	93.92		93.92	0.13	144.91		0.04
Carp	43946	Max WS	12.47	92.32	93.92		93.92	0.15	147.21		0.04
Carp	43938	Max WS	12.47	92.31	93.92		93.92	0.12	147.91		0.04
Carp	43852	Max WS	12.46	92.2	93.92		93.92	0.2	150.72		0.06
Carp	43822	Max WS	12.46	92.22	93.92		93.92	0.19	156.65		0.06
Carp	43813	Max WS	12.46	92.22	93.91		93.92	0.3	144.01		0.09
Carp	43799.6	Max WS	12.46	92.22	93.91		93.92	0.27	153.68		0.09
Carp	43764	Max WS	12.46	92.21	93.91		93.91	0.2	209.71		0.06
Carp	43745.8	Max WS	12.62	92.21	93.91		93.91	0.2	210.33		0.06
Carp	43645.7	Max WS	12.62	92.2	93.91		93.91	0.19	138.62		0.06
Carp	43582	Max WS	12.61	92.17	93.9		93.91	0.18	139.87		0.05
Carp	43572.4	Max WS	12.61	92.17	93.9		93.91	0.22	126.77		0.06
Carp	43524.2	Max WS	12.7	92.15	93.9		93.9	0.25	112.23		0.07
Carp	43519.4	Max WS	12.7	92.15	93.9		93.9	0.25	97.71		0.07
Carp	43375	Max WS	12.7	92.09	93.87	93.13	93.89	0.74	74.9		0.22
Carp	43370	Maple Gr. Upg	Bridge								
Carp	43364	Max WS	12.68	92.08	93.83		93.86	0.78	79.48		0.25
Carp	43223	Max WS	12.68	92.01	93.82		93.82	0.12	117.92		0.04
Carp	43215.2	Max WS	12.68	92.01	93.82		93.82	0.12	118.42		0.04
Carp	43199.8	Max WS	12.67	92.01	93.82		93.82	0.12	158.92		0.04

Carp	43196	Max WS	12.67	92.01	93.82	93.82	0.13	183.17	0.04	
Carp	43180.6	Max WS	12.67	92.01	93.82	93.82	0.13	215.97	0.04	
Carp	43173	Max WS	12.67	92.01	93.82	93.82	0.11	266.07	0.03	
Carp	43163.8	Max WS	23.49	92.01	93.82	93.82	0.3	211.62	0.09	
Carp	43136.4	Max WS	23.48	92.01	93.82	93.82	0.29	217.38	0.1	
Carp	43131.8	Max WS	23.48	92.01	93.82	93.82	0.29	213.42	0.1	
Carp	43113.6	Max WS	23.48	92	93.81	93.82	0.29	147.27	0.1	
Carp	43100	Max WS	23.48	92	93.81	93.81	0.28	123.72	0.1	
Carp	43072	Max WS	23.48	92	93.81	93.81	0.22	134.36	0.08	
Carp	43028.3	Max WS	23.51	91.96	93.8	93.81	0.24	123.77	0.09	
Carp	43018.6	Max WS	23.51	91.96	93.8	93.8	0.24	120.66	0.09	
Carp	42975	Max WS	23.5	91.92	93.8	93.8	0.27	107.56	0.09	
Carp	42970.1	Max WS	23.5	91.92	93.8	93.8	0.36	119.89	0.09	
Carp	42951.2	Max WS	23.85	91.91	93.79	93.8	0.32	120.11	0.09	
Carp	42918.2	Max WS	23.85	91.91	93.79	93.79	0.3	119.28	0.09	
Carp	42913.5	Max WS	23.85	91.91	93.79	93.79	0.3	119.28	0.09	
Carp	42904.1	Max WS	23.85	91.9	93.79	93.79	0.3	119.05	0.09	
Carp	42890	Max WS	23.85	91.9	93.77	93.8	0.81	114.59	0.27	
Carp	42889	Max WS	23.85	91.8	93.76	93.06	93.8	1.09	264.45	0.27
Carp	42885	Palladium Driv Bridge								
Carp	42855	Max WS	23.83	91.85	93.71	93.76	0.99	213.72	0.29	
Carp	42716	Max WS	23.83	91.75	93.71	93.72	0.36	151.73	0.11	
Carp	42700.9	Max WS	23.83	91.74	93.71	93.72	0.37	144.71	0.11	
Carp	42686	Max WS	23.83	91.73	93.71	93.71	0.4	133.77	0.12	
Carp	42558	Max WS	23.84	91.71	93.68	93.69	0.45	88.21	0.14	
Carp	42548.4	Max WS	24.58	91.7	93.68	93.69	0.47	83.69	0.14	
Carp	42410	Max WS	24.56	91.6	93.63	93.66	0.89	78.43	0.21	
Carp	42391.5	Max WS	24.56	91.59	93.62	93.65	0.9	74.15	0.21	
Carp	42212	Max WS	24.55	91.52	93.56	93.57	0.67	84.01	0.16	
Carp	42182	Max WS	24.54	91.51	93.48	92.91	93.57	1.33	64.71	0.4
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	24.51	91.24	93.44	93.52	1.29	48.29	0.38	
Carp	42134	Max WS	24.54	91.51	93.46	93.5	0.91	51.7	0.27	
Carp	42124	Max WS	24.48	91.36	93.39	92.84	93.49	1.38	41.71	0.42
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	24.49	91.49	93.37	93.44	1.2	20.34	0.33	
Carp	42075	Max WS	24.52	91.48	93.4	93.4	0.24	105.13	0.07	
Carp	42036	Max WS	24.52	91.47	93.39	93.4	0.2	151.53	0.07	
Carp	42002	Max WS	24.52	91.46	93.39	93.39	0.21	148.63	0.06	
Carp	41997.6	Max WS	24.55	91.46	93.39	93.39	0.23	151	0.07	
Carp	41970.1	Max WS	24.55	91.44	93.39	93.39	0.21	149.14	0.06	
Carp	41948.9	Max WS	24.58	91.44	93.39	93.39	0.29	181.92	0.08	
Carp	41896	Max WS	24.58	91.42	93.39	93.39	0.31	184.11	0.07	
Carp	41845.2	Max WS	24.59	91.4	93.38	93.39	0.29	149.34	0.08	
Carp	41836	Max WS	24.59	91.4	93.38	93.39	0.39	125.67	0.11	
Carp	41776	Max WS	24.59	91.38	93.37	93.38	0.51	148.77	0.13	
Carp	41769	Max WS	24.59	91.38	93.37	93.38	0.46	139.67	0.12	
Carp	41744	Max WS	24.62	91.36	93.37	93.37	0.25	149.63	0.08	
Carp	41743	Max WS	24.62	91.36	93.35	92.59	93.39	0.97	124.86	0.26
Carp	41738	Fut Transitway Bridge								
Carp	41725.5	Max WS	24.62	91.35	93.36	93.38	0.62	176.47	0.15	
Carp	41671	Max WS	24.62	91.35	93.36	93.37	0.47	101.15	0.13	

Carp	41608	Max WS	30.27	91.32	93.33	92.15	93.36	0.65	109.41	0.16
Carp	41602	Future Campe Bridge								
Carp	41572	Max WS	30.22	91.31	93.3		93.32	0.65	110.1	0.16
Carp	41374.8	Max WS	29.53	91.26	93.15		93.32	1.99	93.53	0.53
Carp	41357	Max WS	29.07	91.26	93.12		93.24	1.63	128.13	0.64
Carp	41349.4	Max WS	29.49	91.25	93.15		93.15	0.12	258.19	0.05
Carp	41338	Max WS	29.49	91.24	93.15		93.15	0.11	217.68	0.04
Carp	41320	Max WS	29.49	91.24	93.15		93.15	0.15	249.03	0.04
Carp	41198	Max WS	29.49	91.21	93.15		93.15	0.17	232.32	0.05
Carp	41180	Max WS	29.39	91.21	93.15		93.15	0.15	214.04	0.04
Carp	41125.4	Max WS	29.39	91.21	93.15		93.15	0.2	199.62	0.05
Carp	41117	Max WS	29.39	91.2	93.14		93.15	0.41	194.67	0.13
Carp	41071	Max WS	29.45	91.18	93.14		93.15	0.15	246.03	0.05
Carp	40965.2	Max WS	29.51	91.14	93.14		93.14	0.17	179.74	0.05
Carp	40956	Max WS	29.51	91.14	93.14		93.14	0.23	175.51	0.07
Carp	40919.2	Max WS	29.52	91.12	93.14		93.14	0.36	187.06	0.1
Carp	40910	Max WS	29.52	91.12	93.14		93.14	0.12	206.7	0.03
Carp	40703	Max WS	29.52	91.05	93.14		93.14	0.15	199.38	0.04
Carp	40688.5	Max WS	30.12	91.04	93.13		93.14	0.47	188.51	0.12
Carp	40640.2	Max WS	30.12	91.03	93.13		93.13	0.32	312.61	0.09
Carp	40505	Max WS	30.05	91	93.12		93.12	0.25	255.24	0.07
Carp	40423.5	Max WS	30.06	90.97	93.12		93.12	0.22	300.2	0.06
Carp	40415	Max WS	30.06	90.96	93.12		93.12	0.2	368.35	0.05
Carp	40348.1	Max WS	30.06	90.95	93.12		93.12	0.17	341.08	0.04
Carp	40339.7	Max WS	30.06	90.95	93.12		93.12	0.1	338.39	0.02
Carp	40298	Max WS	30.06	90.93	93.12		93.12	0.11	379.09	0.03
Carp	40262.9	Max WS	30.49	90.92	93.12		93.12	0.13	354.94	0.03
Carp	40113.9	Max WS	30.48	90.88	93.1		93.12	0.57	277.78	0.14
Carp	40092	Max WS	30.47	90.87	93.1		93.11	0.56	272.38	0.13
Carp	40077.6	Max WS	30.83	91.07	93.05		93.1	1.07	261.79	0.27
Carp	40071.5	Max WS	30.63	91.15	92.92		93.08	1.8	199.24	0.48
Carp	40070	Richardson Sic Culvert								
Carp	40050	Max WS	30.68	91.15	92.95		93.08	1.6	196.28	0.4
Carp	40035.1	Max WS	30.76	91.13	93		93.01	0.51	230.05	0.14
Carp	39892	Max WS	30.72	90.99	92.95		92.97	0.56	182.39	0.15
Carp	39695	Max WS	30.6	90.78	92.88		92.9	0.57	190.38	0.17
Carp	39400	Max WS	30.29	90.66	92.77		92.78	0.7	249.96	0.18
Carp	39202	Max WS	30.03	90.57	92.7		92.71	0.51	333.28	0.12
Carp	39102	Max WS	29.97	90.47	92.69		92.69	0.47	435.4	0.11
Carp	39002	Max WS	29.91	90.37	92.66		92.67	0.55	392.73	0.13
Carp	38902	Max WS	29.85	90.27	92.65		92.65	0.41	336.44	0.1
Carp	38697	Max WS	29.79	90.07	92.63		92.63	0.23	385.71	0.06
Carp	38692.5	Max WS	29.96	90.07	92.63		92.63	0.21	378.94	0.06
Carp	38236	Max WS	29.91	90.16	92.59		92.6	0.46	340.89	0.1
Carp	37894	Max WS	41.88	90.03	92.53		92.53	0.47	349.12	0.11
Carp	37869.5	Max WS	41.88	90.01	92.52		92.53	0.47	350.66	0.11
Carp	37390.4	Max WS	41.37	89.68	92.47		92.48	0.37	348.29	0.08
Carp	37380.4	Max WS	40.87	89.67	92.43	91.24	92.55	1.57	332.36	0.33
Carp	37370	Huntmar Bridge								
Carp	37355.4	Max WS	38.93	89.66	92.33		92.45	1.57	302.77	0.34
Carp	37101	Max WS	39.11	89.48	92.34		92.34	0.32	309.95	0.07
Carp	36580	Max WS	38.72	89.1	92.31		92.31	0.29	388.19	0.06

Carp	43364	Max WS	16.2	92.08	94.02	94.05	0.84	103.13	0.24	
Carp	43223	Max WS	16.2	92.01	94.02	94.02	0.13	118.9	0.04	
Carp	43215.2	Max WS	16.2	92.01	94.02	94.02	0.13	119.4	0.04	
Carp	43199.8	Max WS	16.2	92.01	94.02	94.02	0.13	173.6	0.04	
Carp	43196	Max WS	16.2	92.01	94.02	94.02	0.14	208.36	0.04	
Carp	43180.6	Max WS	16.2	92.01	94.02	94.02	0.14	236.36	0.04	
Carp	43173	Max WS	16.2	92.01	94.02	94.02	0.12	290.73	0.03	
Carp	43163.8	Max WS	31.09	92.01	94.02	94.02	0.32	215.53	0.09	
Carp	43136.4	Max WS	31.09	92.01	94.02	94.02	0.31	225.15	0.09	
Carp	43131.8	Max WS	31.09	92.01	94.01	94.02	0.31	217.1	0.09	
Carp	43113.6	Max WS	31.08	92	94.01	94.01	0.31	223	0.1	
Carp	43100	Max WS	31.08	92	94.01	94.01	0.3	231.31	0.1	
Carp	43072	Max WS	31.08	92	94.01	94.01	0.24	252.31	0.08	
Carp	43028.3	Max WS	31.11	91.96	94	94	0.27	233.21	0.09	
Carp	43018.6	Max WS	31.11	91.96	94	94	0.27	227.28	0.09	
Carp	42975	Max WS	31.11	91.92	94	94	0.3	202.37	0.09	
Carp	42970.1	Max WS	31.11	91.92	94	94	0.38	210.25	0.09	
Carp	42951.2	Max WS	31.48	91.91	93.99	94	0.35	205.15	0.09	
Carp	42918.2	Max WS	31.48	91.91	93.99	93.99	0.34	217.93	0.09	
Carp	42913.5	Max WS	31.49	91.91	93.99	93.99	0.35	185.8	0.1	
Carp	42904.1	Max WS	31.48	91.9	93.99	93.99	0.35	145.36	0.1	
Carp	42890	Max WS	31.48	91.9	93.97	93.99	0.73	148.6	0.22	
Carp	42889	Max WS	31.47	91.8	93.95	93.18	94	1.24	268.26	0.29
Carp	42885	Palladium Driv Bridge								
Carp	42855	Max WS	31.45	91.85	93.89	93.96	1.13	218.96	0.31	
Carp	42716	Max WS	31.47	91.75	93.9	93.91	0.39	159.19	0.1	
Carp	42700.9	Max WS	31.47	91.74	93.9	93.9	0.4	152.06	0.11	
Carp	42686	Max WS	31.47	91.73	93.9	93.9	0.43	137.94	0.12	
Carp	42558	Max WS	31.48	91.71	93.87	93.88	0.49	113.32	0.14	
Carp	42548.4	Max WS	32.39	91.7	93.86	93.88	0.52	114.84	0.14	
Carp	42410	Max WS	32.39	91.6	93.82	93.84	0.96	82.93	0.21	
Carp	42391.5	Max WS	32.38	91.59	93.81	93.84	0.98	79.5	0.22	
Carp	42212	Max WS	32.38	91.52	93.74	93.76	0.74	85.44	0.16	
Carp	42182	Max WS	32.34	91.51	93.65	93.07	93.77	1.53	93.85	0.42
Carp	42172	Highway 417 S Bridge								
Carp	42154	Max WS	32.3	91.24	93.6	93.71	1.49	76.09	0.41	
Carp	42134	Max WS	32.34	91.51	93.64	93.69	1.01	83.29	0.28	
Carp	42124	Max WS	32.24	91.36	93.55	93.03	93.68	1.59	67.02	0.45
Carp	42119	Highway 417 N Bridge								
Carp	42097	Max WS	32.2	91.49	93.53	93.63	1.41	41.59	0.37	
Carp	42075	Max WS	32.25	91.48	93.57	93.57	0.27	105.27	0.07	
Carp	42036	Max WS	32.25	91.47	93.56	93.57	0.23	153.39	0.07	
Carp	42002	Max WS	32.26	91.46	93.56	93.56	0.24	159.68	0.07	
Carp	41997.6	Max WS	32.33	91.46	93.56	93.56	0.26	154.14	0.07	
Carp	41970.1	Max WS	32.32	91.44	93.56	93.56	0.23	149.69	0.07	
Carp	41948.9	Max WS	32.35	91.44	93.56	93.56	0.3	186.48	0.08	
Carp	41896	Max WS	32.35	91.42	93.56	93.56	0.33	186.97	0.07	
Carp	41845.2	Max WS	32.35	91.4	93.55	93.56	0.33	152.87	0.08	
Carp	41836	Max WS	32.35	91.4	93.55	93.55	0.43	129.05	0.11	
Carp	41776	Max WS	32.35	91.38	93.54	93.55	0.53	151.67	0.13	
Carp	41769	Max WS	32.35	91.38	93.54	93.55	0.5	150.92	0.13	
Carp	41744	Max WS	32.38	91.36	93.54	93.54	0.27	154.77	0.08	

Carp	41743 Max WS	32.36	91.36	93.51	92.7	93.56	1.13	163.04	0.29
Carp	41738 Fut Transitway Bridge								
Carp	41725.5 Max WS	32.37	91.35	93.52		93.55	0.75	191.39	0.17
Carp	41671 Max WS	32.37	91.35	93.53		93.54	0.52	102.27	0.14
Carp	41608 Max WS	40.14	91.32	93.5	92.26	93.53	0.78	110.1	0.18
Carp	41602 Future Campe Bridge								
Carp	41572 Max WS	39.9	91.31	93.45		93.48	0.79	110.1	0.19
Carp	41374.8 Max WS	38.87	91.26	93.33		93.45	1.88	110.6	0.47
Carp	41357 Max WS	38.9	91.26	93.33		93.38	1.15	241.14	0.42
Carp	41349.4 Max WS	39.14	91.25	93.35		93.35	0.14	328.19	0.05
Carp	41338 Max WS	39.15	91.24	93.35		93.35	0.13	287.34	0.05
Carp	41320 Max WS	39.13	91.24	93.35		93.35	0.17	288.82	0.04
Carp	41198 Max WS	39.11	91.21	93.35		93.35	0.2	247.13	0.05
Carp	41180 Max WS	39.1	91.21	93.35		93.35	0.16	215.41	0.04
Carp	41125.4 Max WS	39.12	91.21	93.34		93.35	0.22	213.65	0.05
Carp	41117 Max WS	39.06	91.2	93.34		93.35	0.4	195.65	0.11
Carp	41071 Max WS	39.37	91.18	93.34		93.34	0.18	352.86	0.05
Carp	40965.2 Max WS	39.39	91.14	93.34		93.34	0.21	336.23	0.05
Carp	40956 Max WS	39.38	91.14	93.34		93.34	0.27	178.88	0.07
Carp	40919.2 Max WS	39.4	91.12	93.33		93.34	0.39	188.83	0.1
Carp	40910 Max WS	39.41	91.12	93.34		93.34	0.14	208.2	0.04
Carp	40703 Max WS	39.39	91.05	93.33		93.33	0.17	200.44	0.04
Carp	40688.5 Max WS	40.14	91.04	93.33		93.33	0.49	190	0.12
Carp	40640.2 Max WS	40.11	91.03	93.33		93.33	0.33	317.35	0.08
Carp	40505 Max WS	40.11	91	93.32		93.32	0.28	256.65	0.07
Carp	40423.5 Max WS	40.1	90.97	93.31		93.32	0.24	300.2	0.06
Carp	40415 Max WS	40.1	90.96	93.31		93.32	0.21	371.45	0.05
Carp	40348.1 Max WS	40.11	90.95	93.31		93.31	0.19	344.86	0.04
Carp	40339.7 Max WS	40.1	90.95	93.31		93.31	0.11	342.19	0.03
Carp	40298 Max WS	40.11	90.93	93.31		93.31	0.12	397.25	0.03
Carp	40262.9 Max WS	40.54	90.92	93.31		93.31	0.15	374.69	0.03
Carp	40113.9 Max WS	40.52	90.88	93.31		93.31	0.29	298.28	0.07
Carp	40092 Max WS	40.52	90.87	93.3		93.32	0.65	292.67	0.15
Carp	40077.6 Max WS	40.9	91.07	93.23		93.3	1.26	280.1	0.3
Carp	40071.5 Max WS	39.44	91.15	93.04		93.27	2.14	205.77	0.55
Carp	40070 Richardson Sic Culvert								
Carp	40050 Max WS	40.36	91.15	93.09		93.28	1.94	199.56	0.47
Carp	40035.1 Max WS	40.7	91.13	93.16		93.16	0.51	245.55	0.13
Carp	39892 Max WS	40.52	90.99	93.11		93.13	0.58	190.34	0.15
Carp	39695 Max WS	40.26	90.78	93.05		93.06	0.57	207.11	0.16
Carp	39400 Max WS	39.6	90.66	92.96		92.97	0.62	296.96	0.15
Carp	39202 Max WS	39.33	90.57	92.92		92.93	0.42	355.5	0.09
Carp	39102 Max WS	39.26	90.47	92.92		92.92	0.37	476.78	0.08
Carp	39002 Max WS	39.2	90.37	92.91		92.91	0.4	442.06	0.09
Carp	38902 Max WS	39.17	90.27	92.9		92.9	0.34	385.8	0.08
Carp	38697 Max WS	39.13	90.07	92.89		92.89	0.22	419.13	0.05
Carp	38692.5 Max WS	39.34	90.07	92.89		92.89	0.19	408.08	0.05
Carp	38236 Max WS	39.31	90.16	92.86		92.86	0.37	369.29	0.08
Carp	37894 Max WS	56.72	90.03	92.81		92.82	0.42	370.06	0.09
Carp	37869.5 Max WS	56.67	90.01	92.81		92.82	0.41	372.29	0.09
Carp	37390.4 Max WS	56.39	89.68	92.78		92.78	0.35	409.14	0.07
Carp	37380.4 Max WS	55.97	89.67	92.72	91.49	92.91	1.91	397.57	0.38

Carp	37370	Huntmar	Bridge							
Carp	37355.4	Max WS	52.87	89.66	92.57		92.75	1.92	364.94	0.39
Carp	37101	Max WS	53.44	89.48	92.59		92.59	0.35	355.38	0.07
Carp	36580	Max WS	53.03	89.1	92.56		92.56	0.29	401.34	0.05
Carp	35288	Max WS	52.61	89.05	92.46		92.47	0.64	295.32	0.12
Carp	35073	Max WS	52.55	89.27	92.41		92.43	0.69	167.17	0.13
Carp	34555	Max WS	52.41	89.06	92.26		92.3	0.96	134.76	0.18
Carp	33472	Max WS	52.3	88.54	92.08		92.08	0.53	221.36	0.09
Carp	33201	Max WS	53.01	89.15	91.97	90.52	92.04	1.21	256.6	0.25
Carp	33197	March Road	Bridge							
Carp	33181	Max WS	52.99	89.16	91.92		92	1.24	248.44	0.26
Carp	32609	Max WS	52.93	89.56	91.76		91.77	0.62	268.77	0.14
Carp	32096	Max WS	52.91	88.9	91.65		91.66	0.58	279.43	0.13
Carp	31662	Max WS	52.87	88.74	91.48	90.27	91.54	1.36	133.11	0.27
Carp	31658	Carp Road	Bridge							
Carp	31642	Max WS	52.84	88.74	91.46		91.52	1.37	132.87	0.27
Carp	31414	Max WS	57.71	88.89	91.29	90.79	91.33	1.25	116.52	0.28