

Appendix C:  
Hydrology & Hydraulics

## Upper Fountain Creek Hydrology

# Upper Fountain Creek and Cheyenne Creek Flood Restoration Master Plan

## Upper Fountain Creek Hydrology Results

Upper Fountain Creek HEC-HMS Post Waldo Canyon Fire Model Results 2014													
Hydrologic Element	Drainage Area (mi <sup>2</sup> )	100-Yr 24 Hour SCS		100-Yr 2 Hour Type II		50-Yr 2 Hour Type II		10-Yr 2 Hour Type II		5-Yr 2 Hour Type II		2-Yr 2 Hour Type II	
		Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)
UF010	1.11	696.6	1.93	448.6	0.74	330.9	0.55	141.7	0.24	92.3	0.16	50.5	0.09
JUF010	1.11	696.6	1.93	448.6	0.74	330.9	0.55	141.7	0.24	92.3	0.16	50.5	0.09
RUF020	1.11	696.3	1.93	448.5	0.74	330.7	0.55	141.6	0.24	92.2	0.16	50.5	0.09
UF020	2.027	517.9	1.28	291.3	0.43	205.3	0.3	75.5	0.11	44.7	0.07	20.7	0.03
JUF020	3.137	1083.3	1.51	656.3	0.54	477.3	0.39	195.5	0.16	124.1	0.1	65	0.05
RUF030	3.137	1083	1.51	656.1	0.54	477.2	0.39	195.4	0.16	124	0.1	65	0.05
UF030	2.377	700	1.19	380.7	0.38	264.8	0.27	93	0.1	53.2	0.06	22.8	0.02
JUF030	5.514	1783	1.37	1036.7	0.47	742	0.34	288.5	0.13	177.2	0.08	87.8	0.04
RUF040	5.514	1782.5	1.37	1036.3	0.47	741.8	0.34	288.4	0.13	177.1	0.08	87.7	0.04
UF040	6.234	850.2	0.86	394.1	0.23	262.4	0.16	76.7	0.05	37.6	0.02	11	0.01
JUF040	11.748	2387.9	1.1	1298.1	0.35	914.9	0.24	337	0.09	199.9	0.05	93.5	0.02
RUF050	11.748	2386.4	1.1	1297.1	0.35	914.2	0.24	336.7	0.09	199.7	0.05	93.3	0.02
UF050	5.17	1141.3	0.86	585.7	0.26	389.7	0.17	114.5	0.05	57	0.03	18.1	0.01
JUF050	16.918	3358.4	1.03	1799.2	0.32	1244.9	0.22	432.8	0.08	248.4	0.04	109.9	0.02
UF060	6.157	760.6	0.79	324.7	0.19	212.1	0.13	56.8	0.03	25.7	0.02	5.8	0
North Catamount	6.157	30.5	0.25	17.8	0.14	12.3	0.09	3.3	0.02	1.5	0.01	0.3	0
JUF060	6.157	30.5	0.25	17.8	0.14	12.3	0.09	3.3	0.02	1.5	0.01	0.3	0
RUF070	6.157	30.5	0.25	17.8	0.14	12.3	0.09	3.3	0.02	1.5	0.01	0.3	0
UF080	5.909	1050.6	0.82	448.3	0.2	297	0.14	84.4	0.04	40.3	0.02	11.3	0.01
South Catamount	5.909	46.8	0.39	19.8	0.15	13.2	0.1	3.9	0.03	1.9	0.01	0.5	0
JUF080	5.909	46.8	0.39	19.8	0.15	13.2	0.1	3.9	0.03	1.9	0.01	0.5	0
RUF090	5.909	46.8	0.39	19.8	0.15	13.2	0.1	3.9	0.03	1.9	0.01	0.5	0
UF070	0.201	39.1	0.79	16.9	0.2	11	0.13	2.9	0.04	1.3	0.02	0.3	0
UF090	0.194	40.3	0.68	16.2	0.16	10.2	0.1	2.3	0.02	0.9	0.01	0.1	0
JUF090	12.461	87.3	0.33	37.7	0.14	25.3	0.09	7.1	0.03	3.3	0.01	0.8	0
RUF100	12.461	87.3	0.33	37.7	0.14	25.3	0.09	7.1	0.03	3.3	0.01	0.8	0
UF100	0.311	107.5	0.75	43.8	0.19	28	0.12	6.8	0.03	2.9	0.01	0.5	0
JUF100	12.772	131.9	0.34	52	0.14	32.8	0.09	8.4	0.03	3.8	0.01	0.8	0
RUF110	12.772	131.8	0.34	52	0.14	32.8	0.09	8.4	0.03	3.8	0.01	0.8	0
UF110	1.131	521.2	1.24	272	0.38	191.3	0.27	69.3	0.1	40.5	0.06	17.9	0.03
JUF110	30.821	3702	0.75	1966.4	0.25	1358	0.17	468.8	0.06	267.8	0.03	117.7	0.01
RUF130	30.821	3701.6	0.75	1966.1	0.25	1357.9	0.17	468.8	0.06	267.7	0.03	117.6	0.01
UF120	3.427	617.9	0.79	255.7	0.19	167.9	0.13	46.1	0.04	21.3	0.02	5.5	0
Crystal Creek	3.427	18.3	0.25	4.8	0.08	3.2	0.05	0.9	0.01	0.4	0.01	0.1	0
JUF120	3.427	18.3	0.25	4.8	0.08	3.2	0.05	0.9	0.01	0.4	0.01	0.1	0
RUF133	3.427	18.3	0.25	4.8	0.08	3.2	0.05	0.9	0.01	0.4	0.01	0.1	0
UF130	0.685	245.9	1.02	117.8	0.29	80.6	0.2	26.2	0.07	14	0.04	5.2	0.01
JUF125	34.933	3827.7	0.71	2026.6	0.23	1398.4	0.16	481.7	0.05	274.8	0.03	120.5	0.01
RUF136	34.933	3827.1	0.71	2025.9	0.23	1398.1	0.16	481.6	0.05	274.8	0.03	120.5	0.01
JUF130	34.933	3827.1	0.71	2025.9	0.23	1398.1	0.16	481.6	0.05	274.8	0.03	120.5	0.01

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		Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)
RUF140	34.933	3825	0.71	2024.7	0.23	1397.2	0.16	481.2	0.05	274.5	0.03	120.3	0.01
UF140	2.91	844	1.07	458.3	0.34	317.3	0.24	109.4	0.08	61.4	0.05	25.5	0.02
UF151	1.117	907.5	1.88	639.9	0.79	479.7	0.59	231.8	0.29	148.9	0.19	89.1	0.11
JUF140	38.96	4784	0.77	2542.9	0.26	1750.1	0.18	601.9	0.06	339.8	0.03	145.2	0.01
RUF150	38.96	4781.6	0.77	2541.5	0.26	1749	0.18	601.5	0.06	339.5	0.03	145	0.01
UF152	1.76	1300.3	1.86	938.9	0.8	704.2	0.6	315	0.27	220.9	0.19	132	0.12
UF150	1.155	1415.7	2.53	1063.3	1.15	791.8	0.86	384.6	0.43	269.3	0.3	164.7	0.19
UF161	0.356	427	1.73	297.8	0.74	221.3	0.55	99.1	0.25	66.1	0.17	38.2	0.1
JUF150	42.231	5613.6	0.87	3060.5	0.31	2165.2	0.22	943.9	0.08	631	0.05	368.5	0.02
RUF160	42.231	5609.9	0.87	3058.2	0.31	2162	0.22	941.3	0.08	628.5	0.05	367.1	0.02
UF160	1.1788	847.2	2.09	599.2	0.88	452.8	0.67	210.2	0.32	143.8	0.22	85.4	0.13
JUF160	43.4098	6060.9	0.9	3586.7	0.32	2612.9	0.23	1151.2	0.09	772.1	0.05	451.7	0.03
UF180	4.505	873.1	0.82	374.2	0.21	249.2	0.14	72.5	0.04	35.5	0.02	10.6	0.01
UF170	3.423	665.4	0.86	270.2	0.2	181.6	0.14	55.2	0.04	27.9	0.02	9	0.01
JUF180	7.928	1536.1	0.84	643.4	0.21	430.3	0.14	127.4	0.04	63.3	0.02	19.6	0.01
RUF190	7.928	1535.9	0.84	643.4	0.21	430.2	0.14	127.4	0.04	63.3	0.02	19.6	0.01
UF190	0.393	195.3	0.98	96.2	0.3	66.1	0.21	21.8	0.07	11.8	0.04	4.6	0.02
JUF190	51.7308	7634.9	0.89	4069.5	0.3	2905	0.21	1219.5	0.08	801.1	0.05	458.4	0.02
RUF200	51.7308	7634.3	0.89	4068.9	0.3	2904.6	0.21	1219.1	0.08	800.8	0.05	458.2	0.02
UF200	1.005	1135.1	2.02	789.2	0.86	593.9	0.65	273.4	0.31	184.4	0.21	107.6	0.13
UF201	0.778	685.6	1.62	490.9	0.7	363.2	0.52	159.1	0.23	106.3	0.16	61.1	0.09
JUF200	53.5138	7933.4	0.92	4523.8	0.32	3272.2	0.23	1395.8	0.09	917.5	0.05	520.9	0.03
UF210	3.462	726.9	0.9	296.6	0.22	202.2	0.15	64.7	0.05	34.1	0.03	12	0.01
Manitou Reservoir	3.462	9.8	0.14	4.5	0.08	3.1	0.05	1	0.02	0.6	0.01	0.2	0
JUF210	3.462	9.8	0.14	4.5	0.08	3.1	0.05	1	0.02	0.6	0.01	0.2	0
RUF220	3.462	9.8	0.14	4.5	0.08	3.1	0.05	1	0.02	0.6	0.01	0.2	0
UF230	4.197	960.5	0.94	385.8	0.22	266.8	0.15	89.4	0.05	48.5	0.03	18.1	0.01
UF220	1.927	424	0.82	184.3	0.21	124.2	0.14	37.7	0.05	18.9	0.02	5.9	0.01
JUF230	9.586	1375.7	0.63	566.6	0.17	388.7	0.12	126.4	0.04	67.1	0.02	24.1	0.01
RUF240	9.586	1375.5	0.63	566.6	0.17	388.6	0.12	126.4	0.04	67.1	0.02	24.1	0.01
UF240	0.573	304	1.07	170	0.36	118.7	0.26	41.9	0.1	23.9	0.06	10.3	0.03
JUF240	63.6728	9375.2	0.88	5034.6	0.3	3610.3	0.21	1493.5	0.08	965.7	0.05	535.9	0.02
RUF250	63.6728	9374.8	0.88	5033.9	0.3	3609.6	0.21	1492.8	0.08	964.9	0.05	535.4	0.02
UF250	2.189	1491.3	1.47	1069.1	0.63	775.9	0.46	316.6	0.19	201.1	0.13	106.2	0.07
JUF250	65.8618	9903.5	0.9	5619.4	0.31	4037.4	0.22	1665.4	0.08	1070.7	0.05	587.5	0.03
RUF260	65.8618	9902.6	0.9	5618.6	0.31	4036.3	0.22	1664.7	0.08	1070.5	0.05	587.3	0.03
UF261	1.759	1203.5	1.77	998.9	0.87	747.7	0.65	341.7	0.3	235	0.21	142	0.13
UF260	0.902	862.5	2.18	779.1	1.18	588.8	0.89	275.2	0.42	190.3	0.3	116.2	0.18
JUF260	68.5228	10990.5	0.94	6895.2	0.33	4967.2	0.24	2047.4	0.09	1316.6	0.06	719.8	0.03
RUF270	68.5228	10989.2	0.94	6893.7	0.33	4965.9	0.24	2046.8	0.09	1316.3	0.06	719.7	0.03

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		Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)
UF270	1.23	741.7	1.37	567.1	0.63	406.8	0.45	160.2	0.18	99.5	0.12	50.7	0.06
JUF270	69.7528	11329.3	0.95	7262.8	0.34	5224.3	0.24	2137.3	0.1	1370	0.06	745.3	0.03
UF280	2.168	594.2	0.82	204.4	0.17	140.6	0.12	45	0.04	23.2	0.02	7.4	0.01
Lake Moraine	2.168	124.6	0.8	28.9	0.16	17.5	0.11	3.8	0.03	1.5	0.02	0.3	0
JUF280	2.168	124.6	0.8	28.9	0.16	17.5	0.11	3.8	0.03	1.5	0.02	0.3	0
RUF290	2.168	124.6	0.8	28.9	0.16	17.5	0.11	3.8	0.03	1.5	0.02	0.3	0
UF290	2.283	561.5	0.79	185.1	0.15	126	0.11	38.6	0.03	19.1	0.02	5.5	0.01
JUF290	4.451	579	0.79	186.2	0.16	126.4	0.11	38.6	0.03	19.1	0.02	5.5	0.01
RUF300	4.451	578.8	0.79	186.2	0.16	126.4	0.11	38.6	0.03	19.1	0.02	5.5	0.01
UF310	3.405	744.2	0.75	277	0.16	189.7	0.11	59	0.04	29.4	0.02	8.8	0.01
Big Tooth	3.405	422.4	0.75	127.8	0.16	81.2	0.11	19.6	0.04	8.2	0.02	1.7	0.01
JUF310	3.405	422.4	0.75	127.8	0.16	81.2	0.11	19.6	0.04	8.2	0.02	1.7	0.01
RUF320	3.405	422.3	0.75	127.8	0.16	81.2	0.11	19.6	0.04	8.2	0.02	1.7	0.01
UF300	3.465	839.7	0.9	307.8	0.19	214.1	0.14	72.5	0.05	39.2	0.03	14.4	0.01
UF320	0.529	216.4	0.75	82.6	0.18	55.4	0.13	16.2	0.04	7.9	0.02	2.2	0.01
JUF320	11.85	1705.2	0.81	562.9	0.17	381.3	0.12	120.1	0.04	62.3	0.02	21.1	0.01
RUF330	11.85	1705.1	0.81	562.8	0.17	381.3	0.12	120.1	0.04	62.3	0.02	21.1	0.01
UF330	3.831	790.6	0.86	321.9	0.21	222.6	0.14	73.9	0.05	39.5	0.03	14	0.01
JUF330	15.681	2495	0.82	884.5	0.18	603.7	0.12	193.9	0.04	101.7	0.02	34.9	0.01
RUF340	15.681	2494.9	0.82	884.4	0.18	603.6	0.12	193.9	0.04	101.7	0.02	34.9	0.01
UF340	2.028	1333.8	1.24	1096.3	0.62	770.8	0.44	284.1	0.17	169.4	0.1	80.5	0.05
JUF340	87.4618	14002.5	0.93	8277	0.32	5903.2	0.23	2343.2	0.09	1476.3	0.05	784	0.03
RUF350	87.4618	14001	0.93	8275.9	0.32	5902.1	0.23	2343	0.09	1476.1	0.05	783.8	0.03
UF350	3.603	2760	2.46	2616.6	1.39	2000.2	1.07	958.7	0.52	669.8	0.36	413.9	0.23
JUF350	91.0648	16596.5	0.99	10887.7	0.36	7893.4	0.26	3275.3	0.1	2113.7	0.07	1155.2	0.04
RUF360	91.0648	16592.4	0.99	10882.5	0.36	7890.3	0.26	3273.7	0.1	2112.2	0.07	1154	0.04
UF360	0.843	1072.4	2.34	1075.3	1.42	811.6	1.08	374.7	0.51	257.6	0.35	155.7	0.22
JUF360	91.9078	16867.5	1	11242	0.37	8149.8	0.27	3376.8	0.11	2177.9	0.07	1189.6	0.04
UF380	2.471	1005.3	1.11	713.9	0.46	504.2	0.33	185.4	0.13	109.2	0.08	49.3	0.04
UF370	1.584	681.5	1.07	552.7	0.51	384.9	0.36	135.9	0.13	78.2	0.08	34.4	0.04
JUF380	4.055	1675.2	1.09	1257.4	0.48	882.2	0.34	318.9	0.13	185.9	0.08	83.1	0.04
RUF390	4.055	1674.4	1.09	1256.6	0.48	881.7	0.34	318.6	0.13	185.8	0.08	83	0.04
UF390	1.023	694.8	1.67	664.4	0.95	483.2	0.69	199.4	0.29	128.5	0.19	70.2	0.11
Sthrlnd	5.078	2298.2	1.21	1841	0.57	1297.5	0.41	475.4	0.16	280.6	0.1	129.2	0.05
JUF390	96.9858	18787	1.01	12971.2	0.38	9363.7	0.27	3812	0.11	2431.9	0.07	1305.8	0.04
RUF400	96.9858	18780.8	1.01	12963.4	0.38	9358.7	0.27	3808.5	0.11	2428.8	0.07	1303.3	0.04
UF400	3.188	1604.8	1.72	1524.6	0.97	1111.8	0.71	463.4	0.3	300	0.2	165.3	0.11
JUF400	100.1738	20383.6	1.04	14484.2	0.4	10469.9	0.29	4266.9	0.12	2719.6	0.07	1453.7	0.04
RUF410	100.1738	20359.7	1.04	14454.8	0.4	10446.2	0.29	4253.8	0.12	2708.6	0.07	1445.2	0.04
UF420	5.167	2623.7	2.41	2230.8	1.25	1707.3	0.96	821.3	0.46	573.9	0.33	352.9	0.2

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JUF420	5.167	2623.7	2.41	2230.8	1.25	1707.3	0.96	821.3	0.46	573.9	0.33	352.9	0.2
RUF430	5.167	2623.2	2.41	2230.3	1.25	1707	0.96	821.2	0.46	573.8	0.33	352.8	0.2
UF430	2.18	1317.3	2.16	1211.1	1.19	912.4	0.9	418.5	0.42	284.8	0.29	168	0.17
JUF430	7.347	3636.7	2.33	3129.5	1.23	2377	0.94	1118.4	0.45	772.8	0.31	467.8	0.19
RUF440	7.347	3636.2	2.33	3129.1	1.23	2376.8	0.94	1118.4	0.45	772.7	0.31	467.7	0.19
UF440	1.183	1289.6	2.59	1317.5	1.58	1010.5	1.22	487	0.6	339.8	0.42	208.9	0.26
JUF440	8.53	4008.9	2.37	3493.8	1.28	2653.6	0.98	1247.5	0.47	861	0.33	520.2	0.2
RUF450	8.53	4007.5	2.37	3492.4	1.28	2652.5	0.98	1247	0.47	860.7	0.33	520	0.2
UF450	1.502	1088	1.93	1080.1	1.14	799.2	0.85	346.3	0.37	228.5	0.25	129.2	0.14
JUF450	10.032	4419.5	2.3	3892.8	1.26	2939	0.96	1362.9	0.46	935.3	0.32	560.8	0.19
RUF460	10.032	4418.1	2.3	3892	1.26	2938.3	0.96	1362.5	0.46	934.9	0.32	560.5	0.19
UF460	0.963	831	2.59	883	1.64	677.3	1.26	326.5	0.62	228.3	0.43	141.2	0.27
CampCreek-Dummy	10.995	4838	2.33	4345.4	1.29	3260.1	0.99	1490.8	0.47	1018.3	0.33	607.1	0.2
UF410	3.188	2253.4	1.99	2194.8	1.27	1602.3	1	673	0.58	438.9	0.48	246	0.39
JUF410	114.3568	26366.1	1.19	20082.1	0.51	14568.2	0.38	5975.6	0.16	3829.4	0.11	2081.3	0.06
JUF460	114.3568	26366.1	1.19	20082.1	0.51	14568.2	0.38	5975.6	0.16	3829.4	0.11	2081.3	0.06
RUF470	114.3568	26345.9	1.19	20053.2	0.51	14545.2	0.38	5967.4	0.16	3823.2	0.11	2077.4	0.06
UF470	1.858	1452.9	2.46	1529.1	1.55	1164.7	1.18	551.7	0.57	382.8	0.4	234.2	0.24
JUF470	116.2148	27650.8	1.21	21459.5	0.53	15580.6	0.39	6383.2	0.17	4077.1	0.11	2227.3	0.07
RUF480	116.2148	27587.7	1.21	21371.8	0.53	15516.2	0.39	6362.8	0.17	4066.8	0.11	2216.5	0.07
UF480	2.453	1400.8	2.41	1470.3	1.53	1119.3	1.17	529.5	0.56	367.5	0.39	224.6	0.24
WFtn	118.6678	28984.9	1.23	22829.9	0.55	16634.4	0.4	6884.3	0.18	4417.4	0.12	2434.4	0.07

## Upper Fountain Creek Hydraulic Results

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	93886	2_Yr	8121.57		65.00		26.05		1.46	
Reach-1	93886	5_Yr	8121.90		124.10		34.14		1.84	
Reach-1	93886	10_Yr	8122.19		195.50	0.00	39.13		2.14	
Reach-1	93886	50_Yr	8123.07	0.52	476.01	0.77	41.39	0.50	2.64	0.58
Reach-1	93886	100_Yr	8123.37	1.20	653.42	1.68	42.15	0.76	3.49	0.86
Reach-1	93886	24hr_100_yr_SCS	8124.13	4.48	1073.07	5.74	44.09	1.22	4.60	1.33
Reach-1	93571	2_Yr	8114.36		65.00		49.95		0.51	
Reach-1	93571	5_Yr	8114.63		124.10		55.93		0.71	
Reach-1	93571	10_Yr	8114.85	0.01	195.49	0.00	59.80	0.03	0.94	
Reach-1	93571	50_Yr	8115.29	5.59	471.33	0.38	98.12	0.30	2.23	0.37
Reach-1	93571	100_Yr	8115.60	25.42	629.51	1.37	112.48	0.59	2.49	0.55
Reach-1	93571	24hr_100_yr_SCS	8116.16	113.51	964.17	5.62	151.53	1.03	2.97	0.44
Reach-1	93087	2_Yr	8102.97		65.00		19.58		1.69	
Reach-1	93087	5_Yr	8103.39		124.10		24.66		2.07	
Reach-1	93087	10_Yr	8103.79	1.23	193.44	0.83	53.87	0.30	2.15	0.22
Reach-1	93087	50_Yr	8104.67	44.90	394.22	38.17	128.22	0.72	2.25	0.65
Reach-1	93087	100_Yr	8104.92	79.95	504.04	72.31	143.41	0.90	2.77	0.99
Reach-1	93087	24hr_100_yr_SCS	8105.46	186.09	728.04	169.17	157.20	1.45	3.45	1.57
Reach-1	92231	2_Yr	8082.40		65.00		91.96		0.38	
Reach-1	92231	5_Yr	8082.57		124.10		99.24		0.56	
Reach-1	92231	10_Yr	8082.72	0.12	195.37	0.00	118.93	0.05	0.75	0.02
Reach-1	92231	50_Yr	8082.97	5.10	471.58	0.62	129.15	0.53	2.00	0.42
Reach-1	92231	100_Yr	8083.26	16.37	637.30	2.63	139.45	0.67	1.85	0.59
Reach-1	92231	24hr_100_yr_SCS	8083.57	43.20	1032.54	7.56	144.14	1.26	2.80	1.14
Reach-1	91503	2_Yr	8062.44		65.00		43.68		1.30	
Reach-1	91503	5_Yr	8062.67		124.10		46.95		1.66	
Reach-1	91503	10_Yr	8062.90		195.50		50.80		1.92	
Reach-1	91503	50_Yr	8063.54	1.20	471.98	4.12	63.99	0.53	2.70	0.73
Reach-1	91503	100_Yr	8063.90	4.30	642.21	9.78	77.22	0.75	2.92	0.67
Reach-1	91503	24hr_100_yr_SCS	8064.58	20.90	1002.58	59.82	115.22	0.90	3.30	1.02
Reach-1	90741	2_Yr	8039.96		65.00		33.12		0.24	
Reach-1	90741	5_Yr	8040.51		124.10		33.25		0.34	
Reach-1	90741	10_Yr	8041.07		195.50		33.40		0.42	
Reach-1	90741	50_Yr	8042.79	0.48	473.83	2.99	46.33	0.08	0.63	0.09
Reach-1	90741	100_Yr	8043.82	2.51	637.75	16.04	51.44	0.12	0.66	0.19
Reach-1	90741	24hr_100_yr_SCS	8046.19	152.50	863.91	66.89	177.28	0.14	0.48	0.13
Reach-1	90727		Bridge							
Reach-1	90713	2_Yr	8039.10		65.00		19.62		1.83	
Reach-1	90713	5_Yr	8039.48		124.10		19.70		2.46	
Reach-1	90713	10_Yr	8039.85		195.50		19.79		3.07	
Reach-1	90713	50_Yr	8041.06	0.14	473.14	4.01	24.07	0.30	4.36	1.00
Reach-1	90713	100_Yr	8041.66	0.42	644.10	11.77	25.09	0.42	4.99	1.60
Reach-1	90713	24hr_100_yr_SCS	8042.92	2.47	1042.15	38.68	30.38	0.48	6.09	2.48
Reach-1	90511	2_Yr	8033.58		65.00		26.27		0.44	
Reach-1	90511	5_Yr	8034.26		124.10		43.23		0.44	
Reach-1	90511	10_Yr	8034.94		195.50		47.01		0.36	
Reach-1	90511	50_Yr	8037.15	45.21	419.77	12.33	160.33	0.07	0.24	0.06
Reach-1	90511	100_Yr	8037.96	101.76	524.39	30.15	180.54	0.09	0.24	0.07
Reach-1	90511	24hr_100_yr_SCS	8038.41	196.77	823.74	62.79	188.67	0.21	0.48	0.16
Reach-1	90496		Bridge							
Reach-1	90480	2_Yr	8032.84		65.00		18.80		1.00	
Reach-1	90480	5_Yr	8033.27		124.10		20.39		1.50	
Reach-1	90480	10_Yr	8033.65	0.02	195.47	0.01	21.77	0.12	2.02	0.09
Reach-1	90480	50_Yr	8034.71	2.97	454.88	19.45	58.05	0.19	3.36	0.76
Reach-1	90480	100_Yr	8035.37	34.43	566.63	55.25	101.24	0.52	3.13	0.97
Reach-1	90480	24hr_100_yr_SCS	8035.96	124.61	832.44	126.24	125.26	1.09	4.60	1.73
Reach-1	89596	2_Yr	8008.64		65.00		44.86		1.21	
Reach-1	89596	5_Yr	8008.87		124.10		49.71		1.54	
Reach-1	89596	10_Yr	8009.09		195.50		55.86		1.78	
Reach-1	89596	50_Yr	8009.81	0.84	475.49	0.97	64.96	0.41	2.08	0.39
Reach-1	89596	100_Yr	8009.98	1.92	652.12	2.26	66.86	0.71	3.03	0.67
Reach-1	89596	24hr_100_yr_SCS	8010.60	8.87	1063.26	11.18	71.63	1.23	3.73	1.25



HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	89052	2_Yr	7993.35		65.00		55.53		0.55	
Reach-1	89052	5_Yr	7993.59	0.00	124.10		70.13		0.75	
Reach-1	89052	10_Yr	7993.77	0.14	195.22	0.14	81.16	0.15	0.99	0.11
Reach-1	89052	50_Yr	7994.16	2.78	469.10	5.42	117.00	0.77	2.08	0.64
Reach-1	89052	100_Yr	7994.44	6.15	635.41	14.73	119.21	0.86	2.05	0.94
Reach-1	89052	24hr_100_yr_SCS	7994.80	14.66	1033.57	35.07	121.80	1.35	2.96	1.67
Reach-1	88472	2_Yr	7976.39		65.00		57.37		1.11	
Reach-1	88472	5_Yr	7976.58		124.10		62.40		1.41	
Reach-1	88472	10_Yr	7976.77	0.15	195.35		75.33	0.12	1.66	
Reach-1	88472	50_Yr	7977.29	11.94	464.67	0.69	96.68	0.72	2.35	0.44
Reach-1	88472	100_Yr	7977.55	24.80	629.19	2.32	117.48	0.76	2.67	0.65
Reach-1	88472	24hr_100_yr_SCS	7978.19	103.71	968.15	11.44	189.07	0.78	2.65	0.92
Reach-1	87477	2_Yr	7947.90		65.00		17.98		0.46	
Reach-1	87477	5_Yr	7948.77		124.10		21.47		0.52	
Reach-1	87477	10_Yr	7949.73		178.03	17.47	152.71		0.41	0.06
Reach-1	87477	50_Yr	7949.83		419.04	58.26	156.07		2.09	0.38
Reach-1	87477	100_Yr	7950.29	14.89	476.36	165.06	317.70	0.19	1.85	0.45
Reach-1	87477	24hr_100_yr_SCS	7950.64	65.13	643.82	374.35	327.46	0.50	2.60	0.86
Reach-1	87452		Culvert							
Reach-1	87427	2_Yr	7945.96		65.00		53.79		1.41	
Reach-1	87427	5_Yr	7946.24		121.45	2.65	78.25		1.69	0.42
Reach-1	87427	10_Yr	7946.50		184.22	11.28	106.79		1.86	0.48
Reach-1	87427	50_Yr	7947.20	1.15	357.51	118.64	270.93	0.39	1.88	0.56
Reach-1	87427	100_Yr	7947.43	2.41	441.50	212.39	313.61	0.48	2.08	0.71
Reach-1	87427	24hr_100_yr_SCS	7947.79	7.01	616.22	460.07	355.78	0.33	2.69	1.15
Reach-1	87247	2_Yr	7938.50		65.00		19.79		0.14	
Reach-1	87247	5_Yr	7939.59		124.10		27.05		0.20	
Reach-1	87247	10_Yr	7940.74	0.00	195.49	0.01	173.09	0.00	0.17	0.01
Reach-1	87247	50_Yr	7942.72	1.15	253.51	222.64	404.50	0.01	0.08	0.03
Reach-1	87247	100_Yr	7942.94	2.65	328.12	325.54	432.74	0.01	0.12	0.05
Reach-1	87247	24hr_100_yr_SCS	7943.30	10.07	494.87	578.36	460.63	0.03	0.24	0.11
Reach-1	87246		Culvert							
Reach-1	87155	2_Yr	7926.11		65.00		19.27		1.85	
Reach-1	87155	5_Yr	7926.51		124.10		21.42		2.34	
Reach-1	87155	10_Yr	7926.89		195.50		23.48		2.75	
Reach-1	87155	50_Yr	7927.97	2.69	472.11	2.50	31.03	0.85	3.82	0.75
Reach-1	87155	100_Yr	7928.52	7.68	640.36	8.26	35.07	1.07	4.28	1.16
Reach-1	87155	24hr_100_yr_SCS	7929.65	33.60	1018.17	31.53	43.95	1.58	4.99	1.64
Reach-1	86965	2_Yr	7917.93		65.00	0.00	13.22		0.56	0.01
Reach-1	86965	5_Yr	7918.47	6.47	116.56	1.07	41.54	0.19	0.85	0.20
Reach-1	86965	10_Yr	7918.97	23.61	168.42	3.47	51.09	0.34	1.05	0.35
Reach-1	86965	50_Yr	7920.19	119.49	341.05	16.76	78.84	0.67	1.67	0.75
Reach-1	86965	100_Yr	7920.60	192.70	438.46	25.15	84.70	0.94	2.16	1.01
Reach-1	86965	24hr_100_yr_SCS	7921.64	416.99	620.06	46.26	89.90	1.39	2.55	1.25
Reach-1	86500	2_Yr	7911.57		87.80		8.58		2.15	
Reach-1	86500	5_Yr	7912.54	8.41	155.61	13.17	43.69	0.51	2.40	0.54
Reach-1	86500	10_Yr	7913.10	30.80	212.24	45.46	63.99	0.83	2.86	0.86
Reach-1	86500	50_Yr	7914.32	161.56	356.29	224.16	79.21	1.83	3.83	1.95
Reach-1	86500	100_Yr	7915.04	263.46	418.85	354.39	82.17	2.12	3.73	2.20
Reach-1	86500	24hr_100_yr_SCS	7916.30	514.31	589.10	679.59	98.13	2.96	4.45	2.46
Reach-1	86028	2_Yr	7902.05	0.62	87.06	0.13	17.79	0.13	1.71	0.18
Reach-1	86028	5_Yr	7902.71	17.40	157.44	2.36	27.44	0.84	3.02	0.69
Reach-1	86028	10_Yr	7903.42	59.49	219.69	9.32	37.28	1.33	3.49	1.09
Reach-1	86028	50_Yr	7905.02	288.04	401.35	52.60	146.41	2.69	4.88	2.02
Reach-1	86028	100_Yr	7905.55	438.69	513.45	84.56	153.10	3.73	6.37	2.77
Reach-1	86028	24hr_100_yr_SCS	7906.94	858.19	734.23	190.58	171.51	4.96	7.80	3.71
Reach-1	85084	2_Yr	7883.66		87.80		10.92		1.69	
Reach-1	85084	5_Yr	7884.51	0.10	155.89	21.21	34.23	0.17	1.79	0.59
Reach-1	85084	10_Yr	7885.10	0.49	227.35	60.66	39.91	0.31	2.22	0.96
Reach-1	85084	50_Yr	7886.44	3.57	481.33	257.10	71.57	0.78	4.09	1.59
Reach-1	85084	100_Yr	7887.37	6.95	583.19	446.56	90.50	0.80	3.75	1.67

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	85084	24hr_100_yr_SCS	7888.29	14.03	841.93	927.04	93.51	1.21	5.33	2.89
Reach-1	84440	2_Yr	7870.27		93.50		7.08		1.77	
Reach-1	84440	5_Yr	7871.62	0.24	199.66		15.68	0.20	2.52	
Reach-1	84440	10_Yr	7872.41	10.33	323.63	3.04	29.72	0.80	3.23	0.59
Reach-1	84440	50_Yr	7874.67	151.92	599.94	163.04	132.10	1.22	2.98	0.83
Reach-1	84440	100_Yr	7875.18	240.95	731.81	325.34	139.86	1.59	3.56	1.30
Reach-1	84440	24hr_100_yr_SCS	7876.18	523.07	1050.01	814.82	148.13	2.73	5.05	2.51
Reach-1	84314	2_Yr	7866.89		93.50		6.42		2.72	
Reach-1	84314	5_Yr	7868.75		199.90		10.09		2.39	
Reach-1	84314	10_Yr	7870.06	30.55	294.06	12.38	100.74	0.43	1.97	0.24
Reach-1	84314	50_Yr	7871.25	222.80	488.37	203.73	162.49	1.27	2.71	0.92
Reach-1	84314	100_Yr	7871.61	342.37	602.70	353.03	163.85	1.85	3.48	1.44
Reach-1	84314	24hr_100_yr_SCS	7872.55	700.78	839.63	847.49	167.51	2.95	4.51	2.55
Reach-1	83994	2_Yr	7860.53		93.50		7.59		1.38	
Reach-1	83994	5_Yr	7861.54		199.90		9.64		2.71	
Reach-1	83994	10_Yr	7862.46		337.00		12.21		3.87	
Reach-1	83994	50_Yr	7865.17	215.42	696.25	3.23	127.82	0.87	2.76	0.46
Reach-1	83994	100_Yr	7865.69	416.92	872.17	9.01	143.97	1.27	3.34	0.73
Reach-1	83994	24hr_100_yr_SCS	7866.69	1075.94	1277.95	34.02	162.50	2.31	4.64	1.35
Reach-1	83572	2_Yr	7850.89		93.50		7.26		2.94	
Reach-1	83572	5_Yr	7852.07	7.23	178.62	14.05	28.98	0.82	2.33	0.68
Reach-1	83572	10_Yr	7852.70	20.68	263.54	52.77	34.33	1.16	2.73	1.19
Reach-1	83572	50_Yr	7854.23	97.04	567.36	250.51	42.02	2.21	4.49	2.77
Reach-1	83572	100_Yr	7855.00	162.27	742.77	393.07	45.78	2.68	5.23	3.41
Reach-1	83572	24hr_100_yr_SCS	7856.67	381.83	1193.95	812.13	53.60	3.73	6.90	4.71
Reach-1	83445	2_Yr	7848.17		93.50		18.49		0.44	
Reach-1	83445	5_Yr	7849.08		199.90		18.77		0.80	
Reach-1	83445	10_Yr	7849.98		337.00		19.05		1.22	
Reach-1	83445	50_Yr	7853.09	50.43	820.12	44.35	101.79	0.27	1.79	0.32
Reach-1	83445	100_Yr	7853.65	143.90	1038.74	115.46	114.85	0.51	2.36	0.63
Reach-1	83445	24hr_100_yr_SCS	7855.98	758.91	1192.09	436.89	138.61	0.73	1.59	0.79
Reach-1	83423		Bridge							
Reach-1	83401	2_Yr	7846.95		93.50		18.45		0.70	
Reach-1	83401	5_Yr	7847.79		199.90		18.70		1.15	
Reach-1	83401	10_Yr	7848.60		337.00		18.94		1.69	
Reach-1	83401	50_Yr	7851.10	0.03	914.87		22.67	0.03	3.46	
Reach-1	83401	100_Yr	7852.36	91.65	1111.58	94.87	135.90	0.54	3.13	0.49
Reach-1	83401	24hr_100_yr_SCS	7853.53	422.58	1492.94	472.39	172.67	1.14	3.86	1.16
Reach-1	83180	2_Yr	7843.89		93.50		57.30		2.38	
Reach-1	83180	5_Yr	7844.78	0.22	199.35	0.34	71.77	0.11	3.00	0.21
Reach-1	83180	10_Yr	7845.45	21.60	307.26	8.14	89.74	0.76	3.79	0.68
Reach-1	83180	50_Yr	7846.41	160.71	677.45	76.73	98.82	3.50	9.29	2.69
Reach-1	83180	100_Yr	7847.08	291.28	852.01	154.81	104.83	4.42	10.00	3.34
Reach-1	83180	24hr_100_yr_SCS	7848.47	676.47	1298.25	413.18	119.72	6.29	12.30	4.48
Reach-1	82994	2_Yr	7837.27		93.50		8.28		2.72	
Reach-1	82994	5_Yr	7838.44		199.90		11.15		3.38	
Reach-1	82994	10_Yr	7839.56	1.10	335.90		26.35	0.24	3.43	
Reach-1	82994	50_Yr	7841.40	106.49	607.94	200.47	121.02	1.55	3.09	1.10
Reach-1	82994	100_Yr	7841.89	167.12	769.43	361.55	128.61	2.13	3.85	1.62
Reach-1	82994	24hr_100_yr_SCS	7842.94	338.40	1157.25	892.25	136.41	3.46	5.49	2.98
Reach-1	82880	2_Yr	7836.21	0.03	93.47		41.34	0.01	0.32	
Reach-1	82880	5_Yr	7837.48	21.26	178.64		70.94	0.16	0.38	
Reach-1	82880	10_Yr	7838.25	48.33	275.61	13.05	140.53	0.22	0.50	0.08
Reach-1	82880	50_Yr	7840.02	187.81	558.23	168.87	159.70	0.42	0.79	0.34
Reach-1	82880	100_Yr	7840.87	288.23	719.37	290.50	167.02	0.52	0.92	0.45
Reach-1	82880	24hr_100_yr_SCS	7842.90	603.28	1120.93	663.69	178.98	0.72	1.14	0.67
Reach-1	82852		Culvert							
Reach-1	82827	2_Yr	7834.26		93.50		47.95		2.99	
Reach-1	82827	5_Yr	7834.96		199.90		99.30		1.76	
Reach-1	82827	10_Yr	7835.31		337.00		103.15		2.16	
Reach-1	82827	50_Yr	7836.37	0.99	889.47	24.44	153.56	0.19	3.12	0.79

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	82827	100_Yr	7836.52	4.17	1248.75	45.18	162.60	0.47	5.26	1.54
Reach-1	82827	24hr_100_yr_SCS	7837.72	89.53	2082.96	215.41	172.90	1.97	5.41	2.69
Reach-1	82608	2_Yr	7826.18		93.50		10.59		1.53	
Reach-1	82608	5_Yr	7826.98		199.90		16.42		2.57	
Reach-1	82608	10_Yr	7827.67	0.95	334.96	1.09	26.04	0.36	3.21	0.49
Reach-1	82608	50_Yr	7829.64	55.59	809.11	50.20	46.55	1.91	4.48	1.62
Reach-1	82608	100_Yr	7830.96	115.71	986.32	196.08	113.53	1.74	3.56	1.00
Reach-1	82608	24hr_100_yr_SCS	7832.29	243.98	1477.08	666.84	129.21	2.55	4.86	2.06
Reach-1	82055	2_Yr	7815.89		93.50		37.76		0.78	
Reach-1	82055	5_Yr	7816.43		199.90		48.72		0.88	
Reach-1	82055	10_Yr	7817.04		337.00		55.58		0.83	
Reach-1	82055	50_Yr	7818.15	3.90	910.28	0.72	70.51	0.29	1.63	0.29
Reach-1	82055	100_Yr	7818.77	15.61	1280.03	2.47	79.15	0.48	1.94	0.45
Reach-1	82055	24hr_100_yr_SCS	7820.17	88.08	2287.38	12.43	98.90	0.87	2.63	0.78
Reach-1	81596	2_Yr	7806.15		93.50		6.93		2.00	
Reach-1	81596	5_Yr	7807.58		199.90		9.75		2.62	
Reach-1	81596	10_Yr	7808.30		337.00		11.76		4.34	
Reach-1	81596	50_Yr	7811.01	76.43	730.77	107.70	64.32	1.94	4.19	1.52
Reach-1	81596	100_Yr	7811.93	141.11	930.26	226.73	81.05	2.47	4.71	1.90
Reach-1	81596	24hr_100_yr_SCS	7813.65	327.90	1393.94	666.06	108.29	3.53	6.05	2.93
Reach-1	80994	2_Yr	7794.37		93.50		7.67		1.59	
Reach-1	80994	5_Yr	7795.87		199.13	0.77	86.05		1.93	0.05
Reach-1	80994	10_Yr	7796.53	9.36	259.94	67.69	121.44	0.37	1.89	0.56
Reach-1	80994	50_Yr	7797.56	80.42	473.52	360.96	143.86	1.21	3.24	1.72
Reach-1	80994	100_Yr	7797.99	143.38	589.84	564.88	146.08	1.81	4.00	2.41
Reach-1	80994	24hr_100_yr_SCS	7799.41	371.65	814.83	1201.42	153.45	2.50	4.07	3.12
Reach-1	80494	2_Yr	7781.54		93.50		7.26		3.23	
Reach-1	80494	5_Yr	7782.75		199.90		12.07		4.04	
Reach-1	80494	10_Yr	7783.70	0.72	336.17	0.11	19.28	0.50	4.44	0.32
Reach-1	80494	50_Yr	7786.18	102.32	782.72	29.86	51.30	1.87	4.91	1.67
Reach-1	80494	100_Yr	7787.05	211.35	1028.93	57.81	60.27	2.74	5.85	1.87
Reach-1	80494	24hr_100_yr_SCS	7788.79	543.95	1631.94	212.01	74.20	4.46	8.04	3.36
Reach-1	79994	2_Yr	7771.24		93.50		16.56		1.09	
Reach-1	79994	5_Yr	7772.15		199.90		18.39		1.51	
Reach-1	79994	10_Yr	7773.15		337.00		26.29		1.71	
Reach-1	79994	50_Yr	7774.56	12.78	889.13	12.99	88.85	0.42	3.65	0.59
Reach-1	79994	100_Yr	7775.34	88.70	1154.65	54.75	122.05	0.98	3.80	0.89
Reach-1	79994	24hr_100_yr_SCS	7776.61	346.78	1804.15	236.97	150.85	2.11	4.96	1.60
Reach-1	79494	2_Yr	7763.17		93.50		15.06		1.47	
Reach-1	79494	5_Yr	7763.94	0.17	199.65	0.08	26.61	0.11	2.22	0.09
Reach-1	79494	10_Yr	7764.53	9.36	320.93	6.71	56.77	0.51	3.01	0.55
Reach-1	79494	50_Yr	7766.12	173.12	639.18	102.60	119.33	1.26	3.66	1.40
Reach-1	79494	100_Yr	7766.65	309.17	815.62	173.32	128.29	1.79	4.47	1.92
Reach-1	79494	24hr_100_yr_SCS	7767.71	745.71	1254.61	387.57	137.98	3.28	6.48	3.18
Reach-1	78959	2_Yr	7748.88		93.50		16.15		2.34	
Reach-1	78959	5_Yr	7749.57		199.90		19.20		3.05	
Reach-1	78959	10_Yr	7750.27	0.41	336.52	0.07	22.95	0.40	3.52	0.30
Reach-1	78959	50_Yr	7752.48	31.58	871.19	12.13	64.64	0.81	4.41	0.74
Reach-1	78959	100_Yr	7753.44	109.91	1142.85	45.35	86.76	1.28	4.75	1.08
Reach-1	78959	24hr_100_yr_SCS	7755.35	505.19	1678.95	203.76	176.87	1.44	4.99	1.74
Reach-1	78812	2_Yr	7746.85		93.50		27.30		0.20	
Reach-1	78812	5_Yr	7747.74		199.90		36.04		0.71	
Reach-1	78812	10_Yr	7748.56	0.00	337.00	0.00	43.36		1.21	
Reach-1	78812	50_Yr	7750.90	5.11	902.42	7.37	64.41	0.68	1.76	0.87
Reach-1	78812	100_Yr	7752.11	10.80	1228.28	59.03	75.26	0.96	1.91	0.60
Reach-1	78812	24hr_100_yr_SCS	7754.85	70.61	2117.06	200.22	215.39	0.77	2.34	0.37
Reach-1	78785		Bridge							
Reach-1	78692	2_Yr	7745.71		93.50		16.78		1.44	
Reach-1	78692	5_Yr	7746.41		199.90		23.27		1.78	
Reach-1	78692	10_Yr	7747.03	0.01	336.97	0.02	30.10	0.09	2.02	0.07
Reach-1	78692	50_Yr	7748.65	9.67	877.36	27.87	59.59	0.80	2.81	0.80
Reach-1	78692	100_Yr	7749.42	24.45	1201.85	71.80	73.57	1.07	3.24	1.07

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	78692	24hr_100_yr_SCS	7751.19	97.37	2015.78	274.75	105.70	2.11	3.92	1.54
Reach-1	78531	2_Yr	7741.14		93.50		15.90		1.32	
Reach-1	78531	5_Yr	7741.54		199.90		17.09		3.26	
Reach-1	78531	10_Yr	7742.34	0.01	336.21	0.78	25.08	0.12	3.57	0.32
Reach-1	78531	50_Yr	7744.63	2.30	797.44	115.16	66.91	0.63	3.93	1.26
Reach-1	78531	100_Yr	7745.34	4.38	1066.53	227.19	80.79	0.76	5.01	1.77
Reach-1	78531	24hr_100_yr_SCS	7747.01	21.81	1678.70	687.40	97.67	1.37	6.54	3.02
Reach-1	78363	2_Yr	7736.94		93.50		14.06		2.29	
Reach-1	78363	5_Yr	7738.40		199.90		15.72		1.53	
Reach-1	78363	10_Yr	7739.13		337.00		16.39		2.38	
Reach-1	78363	50_Yr	7741.08	0.00	875.27	39.63	48.91		5.09	1.00
Reach-1	78363	100_Yr	7742.25	6.37	1115.31	176.42	72.67	0.65	4.94	1.60
Reach-1	78363	24hr_100_yr_SCS	7744.02	69.33	1694.19	624.38	100.38	1.54	6.17	2.77
Reach-1	78249	2_Yr	7736.44		93.50		13.17		0.34	
Reach-1	78249	5_Yr	7737.85	0.01	199.79	0.10	39.54	0.01	0.46	0.04
Reach-1	78249	10_Yr	7738.60	6.37	328.63	2.00	45.95	0.17	0.65	0.13
Reach-1	78249	50_Yr	7740.33	55.78	775.84	83.28	148.40	0.59	1.25	0.17
Reach-1	78249	100_Yr	7740.91	69.51	962.01	266.59	166.66	0.51	1.48	0.35
Reach-1	78249	24hr_100_yr_SCS	7741.98	141.51	1387.91	858.48	236.78	0.44	2.00	0.73
Reach-1	78215		Culvert							
Reach-1	78177	2_Yr	7730.95		93.50		8.37		3.16	
Reach-1	78177	5_Yr	7732.16		199.90		11.10		5.34	
Reach-1	78177	10_Yr	7733.33	0.01	336.95	0.04	15.40	0.21	7.29	0.16
Reach-1	78177	50_Yr	7735.70	58.21	722.65	134.04	51.21	2.43	8.43	3.39
Reach-1	78177	100_Yr	7737.24	161.04	846.69	290.38	63.99	2.53	6.40	3.17
Reach-1	78177	24hr_100_yr_SCS	7740.46	465.35	1161.00	761.54	131.38	1.45	4.90	2.91
Reach-1	78018	2_Yr	7727.37		93.50		14.41		1.37	
Reach-1	78018	5_Yr	7728.38		199.90		14.94		1.96	
Reach-1	78018	10_Yr	7729.42	0.00	337.00		15.52		2.53	
Reach-1	78018	50_Yr	7732.11	16.18	878.57	20.15	25.90	0.84	4.45	1.25
Reach-1	78018	100_Yr	7732.99	40.20	1214.01	43.89	30.27	1.42	6.20	2.00
Reach-1	78018	24hr_100_yr_SCS	7734.98	169.60	2072.75	145.56	43.33	2.85	10.05	3.84
Reach-1	77587	2_Yr	7719.11		93.50		14.41		1.68	
Reach-1	77587	5_Yr	7719.88		199.90		15.59		2.59	
Reach-1	77587	10_Yr	7720.65		337.00		16.70		3.41	
Reach-1	77587	50_Yr	7724.41	0.00	913.76	1.13	62.61	0.04	5.13	0.39
Reach-1	77587	100_Yr	7725.66	8.18	1270.77	19.15	246.47	0.75	5.32	0.23
Reach-1	77587	24hr_100_yr_SCS	7727.17	132.44	1663.65	591.80	470.49	0.99	5.11	1.47
Reach-1	77108	2_Yr	7704.89		93.50		13.95		2.54	
Reach-1	77108	5_Yr	7705.63		199.90		15.03		3.51	
Reach-1	77108	10_Yr	7706.39		337.00		15.71		4.40	
Reach-1	77108	50_Yr	7708.73		914.90		18.16		7.77	
Reach-1	77108	100_Yr	7710.08		1298.10		21.64		11.66	
Reach-1	77108	24hr_100_yr_SCS	7713.29		2387.90		32.53		16.59	
Reach-1	76746	2_Yr	7699.89		93.50		15.32		0.57	
Reach-1	76746	5_Yr	7701.13		199.90		16.89		0.84	
Reach-1	76746	10_Yr	7702.37	0.06	336.82	0.11	26.16	0.05	0.86	0.05
Reach-1	76746	50_Yr	7706.45	30.80	799.72	84.38	68.68	0.28	0.98	0.34
Reach-1	76746	100_Yr	7706.95	51.56	1106.19	140.35	74.08	0.49	1.62	0.59
Reach-1	76746	24hr_100_yr_SCS	7708.27	137.78	1973.76	276.36	297.54	1.26	3.70	0.53
Reach-1	76626	2_Yr	7699.21		93.50		19.75		0.71	
Reach-1	76626	5_Yr	7700.35		199.90		23.59		1.29	
Reach-1	76626	10_Yr	7701.69	0.01	336.96	0.03	28.33	0.04	1.58	0.05
Reach-1	76626	50_Yr	7706.18	76.28	812.15	26.48	191.42	0.20	1.31	0.11
Reach-1	76626	100_Yr	7706.55	150.57	1081.62	65.91	208.13	0.40	2.10	0.23
Reach-1	76626	24hr_100_yr_SCS	7707.84	481.78	1573.58	332.54	284.39	0.96	3.17	0.53
Reach-1	76601		Bridge							
Reach-1	76571	2_Yr	7697.79		117.70		17.00		3.12	
Reach-1	76571	5_Yr	7699.02		267.80		22.02		4.34	
Reach-1	76571	10_Yr	7700.21	0.21	468.29	0.31	26.36	0.40	4.87	0.47
Reach-1	76571	50_Yr	7703.29	29.67	1308.73	19.60	35.57	1.82	7.20	1.88

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	76571	100_Yr	7704.30	67.39	1862.00	37.01	39.11	2.83	10.17	2.77
Reach-1	76571	24hr_100_yr_SCS	7707.01	746.70	2494.77	460.53	310.63	1.83	8.53	1.37
Reach-1	76381	2_Yr	7694.19		117.70		14.52		0.98	
Reach-1	76381	5_Yr	7695.31		267.80		15.25		1.54	
Reach-1	76381	10_Yr	7696.46	0.01	468.79	0.00	16.21	0.05	2.06	
Reach-1	76381	50_Yr	7699.42	110.73	1241.18	6.09	61.40	0.93	3.65	0.74
Reach-1	76381	100_Yr	7700.79	315.57	1637.30	13.53	88.62	1.41	4.09	0.50
Reach-1	76381	24hr_100_yr_SCS	7703.54	948.86	2211.03	542.11	295.19	1.56	3.75	0.81
Reach-1	75833	2_Yr	7683.79		117.70		14.41		2.79	
Reach-1	75833	5_Yr	7684.73		267.80		15.49		3.96	
Reach-1	75833	10_Yr	7685.71		468.80		16.44		5.02	
Reach-1	75833	50_Yr	7688.47	255.77	935.08	167.15	139.82	1.71	4.20	1.21
Reach-1	75833	100_Yr	7689.06	429.90	1207.19	329.31	151.36	2.52	5.53	1.94
Reach-1	75833	24hr_100_yr_SCS	7690.73	995.66	1685.41	1020.93	243.43	3.61	6.16	2.18
Reach-1	75425	2_Yr	7674.18		117.70		32.76		0.34	
Reach-1	75425	5_Yr	7675.47	3.02	262.37	2.41	134.98	0.04	0.33	0.04
Reach-1	75425	10_Yr	7676.91	74.81	355.91	38.08	257.75	0.06	0.19	0.07
Reach-1	75425	50_Yr	7679.21	430.15	748.10	179.75	299.53	0.15	0.26	0.13
Reach-1	75425	100_Yr	7679.88	663.76	1022.57	280.07	310.25	0.23	0.38	0.19
Reach-1	75425	24hr_100_yr_SCS	7681.26	1348.24	1747.67	606.09	326.70	0.48	0.71	0.38
Reach-1	75251	2_Yr	7672.52		117.70		15.88		2.05	
Reach-1	75251	5_Yr	7674.12		267.80		18.91		2.80	
Reach-1	75251	10_Yr	7676.08		466.72	2.08	40.78		2.96	0.18
Reach-1	75251	50_Yr	7678.30	207.13	961.03	189.84	236.49	0.80	4.68	1.37
Reach-1	75251	100_Yr	7678.84	479.78	1172.15	314.48	254.02	1.39	5.73	1.84
Reach-1	75251	24hr_100_yr_SCS	7680.17	1437.35	1551.40	713.25	288.61	2.52	6.65	2.50
Reach-1	75225		Culvert							
Reach-1	75203	2_Yr	7671.86		117.70		14.53		3.59	
Reach-1	75203	5_Yr	7672.82		267.80		16.50		6.58	
Reach-1	75203	10_Yr	7673.79		468.80		18.49		9.71	
Reach-1	75203	50_Yr	7677.22	152.40	965.14	240.47	235.46	1.28	6.81	1.48
Reach-1	75203	100_Yr	7677.62	307.61	1211.39	447.40	264.94	2.10	9.11	2.33
Reach-1	75203	24hr_100_yr_SCS	7678.58	896.44	1619.08	1186.48	308.04	3.64	11.45	4.17
Reach-1	74994	2_Yr	7669.25		120.50		21.88		0.19	
Reach-1	74994	5_Yr	7670.85	13.44	259.67	1.68	67.16	0.07	0.31	0.05
Reach-1	74994	10_Yr	7672.12	62.66	407.06	11.89	85.14	0.16	0.42	0.10
Reach-1	74994	50_Yr	7675.12	314.40	885.96	197.74	270.02	0.41	0.72	0.14
Reach-1	74994	100_Yr	7676.40	445.45	1058.52	521.93	284.48	0.45	0.75	0.23
Reach-1	74994	24hr_100_yr_SCS	7677.32	822.28	1778.40	1226.42	293.38	1.07	1.71	0.63
Reach-1	74478	2_Yr	7661.52		120.50		25.79		1.33	
Reach-1	74478	5_Yr	7662.22		274.80		31.56		2.03	
Reach-1	74478	10_Yr	7662.83		481.60		34.49		2.84	
Reach-1	74478	50_Yr	7664.77	58.39	1281.46	58.24	44.25	0.75	4.01	0.83
Reach-1	74478	100_Yr	7665.36	149.84	1739.30	136.76	47.95	1.18	5.32	1.28
Reach-1	74478	24hr_100_yr_SCS	7668.96	983.95	1814.07	1029.08	149.94	0.45	1.45	0.23
Reach-1	74085	2_Yr	7654.94		120.50		53.71		0.68	
Reach-1	74085	5_Yr	7655.47		274.80		64.36		1.01	
Reach-1	74085	10_Yr	7655.96		481.60		71.37		1.32	
Reach-1	74085	50_Yr	7656.79	1.94	1391.18	4.98	85.68	0.66	3.83	0.65
Reach-1	74085	100_Yr	7657.43	8.91	1993.21	23.79	97.65	1.06	4.42	1.05
Reach-1	74085	24hr_100_yr_SCS	7658.92	54.30	3614.02	158.78	114.27	1.89	5.57	2.21
Reach-1	73456	2_Yr	7640.74		120.50		18.75		2.44	
Reach-1	73456	5_Yr	7641.57		274.80		23.45		3.23	
Reach-1	73456	10_Yr	7642.39		481.60		29.13		3.75	
Reach-1	73456	50_Yr	7644.91	5.84	1238.89	153.37	138.28	0.78	3.53	0.76
Reach-1	73456	100_Yr	7645.66	12.42	1609.06	404.42	148.01	1.04	4.14	1.30
Reach-1	73456	24hr_100_yr_SCS	7647.12	36.91	2540.19	1250.00	179.76	1.67	5.75	2.35
Reach-1	72890	2_Yr	7630.51		120.50		27.97		0.38	
Reach-1	72890	5_Yr	7631.67		274.80		42.55		0.53	
Reach-1	72890	10_Yr	7632.61	0.02	481.58		49.48	0.03	0.67	
Reach-1	72890	50_Yr	7635.37	7.76	1373.97	16.38	72.57	0.26	1.04	0.22
Reach-1	72890	100_Yr	7636.93	21.14	1940.61	64.16	83.29	0.34	1.14	0.34

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	72890	24hr_100_yr_SCS	7641.22	86.15	3352.45	388.50	181.99	0.40	1.10	0.28
Reach-1	72800	Bridge								
Reach-1	72734	2_Yr	7626.94		120.50		15.07		1.61	
Reach-1	72734	5_Yr	7628.20		274.80		21.44		1.94	
Reach-1	72734	10_Yr	7628.98		481.60		25.63		2.92	
Reach-1	72734	50_Yr	7631.05		1398.10		36.85		5.54	
Reach-1	72734	100_Yr	7632.57	69.87	1949.75	6.28	115.68	0.80	4.57	0.44
Reach-1	72734	24hr_100_yr_SCS	7635.16	571.78	3003.82	251.50	192.55	1.39	3.80	1.11
Reach-1	72559	2_Yr	7625.37		120.50		20.61		0.17	
Reach-1	72559	5_Yr	7626.71	56.03	217.25	1.52	169.66	0.06	0.24	0.03
Reach-1	72559	10_Yr	7627.62	177.89	295.78	7.94	175.03	0.11	0.29	0.08
Reach-1	72559	50_Yr	7630.11	774.58	573.63	49.89	188.55	0.28	0.45	0.19
Reach-1	72559	100_Yr	7631.27	1199.47	747.52	78.90	198.03	0.38	0.55	0.22
Reach-1	72559	24hr_100_yr_SCS	7634.19	2418.65	1183.32	225.13	227.21	0.54	0.72	0.30
Reach-1	72040	2_Yr	7613.34		120.50		18.34		2.47	
Reach-1	72040	5_Yr	7614.21		274.80		23.39		3.20	
Reach-1	72040	10_Yr	7615.02	0.01	481.59		30.17	0.10	3.72	
Reach-1	72040	50_Yr	7617.19	23.89	1313.00	61.21	62.04	1.48	4.98	1.40
Reach-1	72040	100_Yr	7618.53	62.79	1781.41	181.70	80.50	1.68	4.76	1.60
Reach-1	72040	24hr_100_yr_SCS	7620.39	171.49	3068.75	586.86	109.53	2.35	7.18	2.76
Reach-1	70551	2_Yr	7590.48		120.50		23.44		0.66	
Reach-1	70551	5_Yr	7591.61		274.80		34.69		0.91	
Reach-1	70551	10_Yr	7592.51	0.32	481.00	0.28	53.44	0.13	1.08	0.12
Reach-1	70551	50_Yr	7594.23	16.98	1356.73	24.39	102.15	0.54	2.24	0.35
Reach-1	70551	100_Yr	7594.29	25.63	1960.83	39.43	104.20	1.09	4.53	0.74
Reach-1	70551	24hr_100_yr_SCS	7596.26	134.57	3276.67	415.86	186.19	1.07	4.97	1.60
Reach-1	69169	2_Yr	7570.96		120.50		30.16		1.95	
Reach-1	69169	5_Yr	7571.56		274.80		35.41		2.65	
Reach-1	69169	10_Yr	7572.14	0.03	481.57	0.00	40.67	0.14	3.25	
Reach-1	69169	50_Yr	7573.88	24.13	1366.44	7.52	55.53	1.39	4.88	1.19
Reach-1	69169	100_Yr	7575.30	322.75	1675.82	27.34	296.28	0.61	3.23	0.78
Reach-1	69169	24hr_100_yr_SCS	7576.55	1320.16	2418.82	88.13	383.57	1.22	3.93	0.89
Reach-1	68642	2_Yr	7561.73		120.50		18.34		0.76	
Reach-1	68642	5_Yr	7563.10		274.80		19.99		1.09	
Reach-1	68642	10_Yr	7564.37	12.96	468.50	0.15	57.90	0.19	1.39	0.11
Reach-1	68642	50_Yr	7566.82	303.68	1085.34	9.08	179.92	1.09	2.52	0.27
Reach-1	68642	100_Yr	7567.87	616.34	1362.08	47.48	324.50	0.63	2.81	0.45
Reach-1	68642	24hr_100_yr_SCS	7569.27	1859.42	1782.20	185.48	366.83	1.17	3.26	0.72
Reach-1	68053	2_Yr	7556.52		145.20		20.27		1.05	
Reach-1	68053	5_Yr	7557.74		339.80		28.58		1.53	
Reach-1	68053	10_Yr	7558.47	4.32	590.84	6.74	70.75	0.37	2.37	0.26
Reach-1	68053	50_Yr	7560.37	98.94	1398.30	252.86	169.81	0.96	4.01	1.11
Reach-1	68053	100_Yr	7561.04	219.70	1837.11	486.08	208.04	1.47	5.07	1.53
Reach-1	68053	24hr_100_yr_SCS	7562.63	673.84	2706.61	1403.55	268.47	2.25	6.03	2.40
Reach-1	67460	2_Yr	7548.25		145.20		22.99		1.92	
Reach-1	67460	5_Yr	7549.56		339.80		29.93		2.44	
Reach-1	67460	10_Yr	7551.07	0.14	601.72	0.04	39.82	0.10	2.29	0.03
Reach-1	67460	50_Yr	7555.18	106.05	758.10	885.95	190.47	0.07	0.54	0.23
Reach-1	67460	100_Yr	7556.04	302.19	919.21	1321.49	215.42	0.11	0.61	0.28
Reach-1	67460	24hr_100_yr_SCS	7557.33	1001.43	1389.80	2392.77	239.67	0.29	0.99	0.45
Reach-1	67355	2_Yr	7546.51		145.20		20.99		1.54	
Reach-1	67355	5_Yr	7548.08		339.80		23.04		2.06	
Reach-1	67355	10_Yr	7549.83		601.90		33.39		2.30	
Reach-1	67355	50_Yr	7555.11	108.90	819.23	821.97	223.15	0.06	0.33	0.16
Reach-1	67355	100_Yr	7555.97	274.27	1053.87	1214.76	255.19	0.10	0.42	0.20
Reach-1	67355	24hr_100_yr_SCS	7557.24	795.27	1628.94	2359.79	292.57	0.22	0.72	0.36
Reach-1	67310	Culvert								
Reach-1	67264	2_Yr	7544.42		145.20		19.26		5.00	
Reach-1	67264	5_Yr	7545.75		339.80		20.51		4.94	
Reach-1	67264	10_Yr	7546.75		601.90		21.44		7.09	
Reach-1	67264	50_Yr	7549.49	47.97	1427.74	274.38	117.89	1.45	9.00	4.31

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	67264	100_Yr	7550.42	196.35	1843.82	502.73	134.81	3.28	10.22	6.04
Reach-1	67264	24hr_100_yr_SCS	7551.51	503.12	1322.17	2958.71	145.15	1.16	3.57	2.28
Reach-1	67154	2_Yr	7542.10		145.20		37.59		0.79	
Reach-1	67154	5_Yr	7542.38		339.80		40.23		2.93	
Reach-1	67154	10_Yr	7543.07		601.90	0.00	45.89		4.15	0.04
Reach-1	67154	50_Yr	7546.06	206.68	1444.35	99.07	128.09	0.63	3.06	0.92
Reach-1	67154	100_Yr	7546.83	515.29	1842.96	184.64	133.43	1.08	3.60	1.24
Reach-1	67154	24hr_100_yr_SCS	7548.55	1293.95	3000.44	489.61	249.67	1.16	5.24	1.95
Reach-1	65868	2_Yr	7521.73		145.20		19.21		2.63	
Reach-1	65868	5_Yr	7523.66		339.80		36.00		1.13	
Reach-1	65868	10_Yr	7524.71		601.90		43.50		1.34	
Reach-1	65868	50_Yr	7525.69	1.30	1748.53	0.27	48.00	0.65	5.45	0.37
Reach-1	65868	100_Yr	7526.76	9.91	2527.30	5.68	54.76	1.28	6.22	0.86
Reach-1	65868	24hr_100_yr_SCS	7529.41	78.28	4535.23	170.49	93.69	2.24	7.04	1.63
Reach-1	64226	2_Yr	7495.11	0.02	145.18		34.11	0.02	0.53	
Reach-1	64226	5_Yr	7494.34		339.80		24.82		5.11	
Reach-1	64226	10_Yr	7495.26	0.51	601.39		36.42	0.54	7.84	
Reach-1	64226	50_Yr	7498.16	791.18	933.35	25.57	189.19	1.26	2.62	0.62
Reach-1	64226	100_Yr	7498.94	1290.66	1197.89	54.35	236.51	1.70	3.09	0.38
Reach-1	64226	24hr_100_yr_SCS	7500.49	2599.13	1824.91	359.96	271.81	2.66	4.15	1.06
Reach-1	62377	2_Yr	7470.58		368.50		33.98		2.89	
Reach-1	62377	5_Yr	7472.69	0.28	628.06	2.66	55.42	0.12	1.28	0.14
Reach-1	62377	10_Yr	7473.52	2.35	920.86	20.69	71.07	0.28	1.67	0.31
Reach-1	62377	50_Yr	7474.39	12.86	2042.89	109.45	92.10	1.18	5.37	1.21
Reach-1	62377	100_Yr	7475.47	33.55	2721.91	305.04	106.58	1.63	6.14	1.88
Reach-1	62377	24hr_100_yr_SCS	7477.90	126.49	4360.71	1126.40	124.36	2.41	7.33	3.27
Reach-1	59891	2_Yr	7440.62	0.23	368.23	0.04	156.70	0.13	0.91	0.04
Reach-1	59891	5_Yr	7440.16	0.02	630.98		144.23	0.20	4.66	
Reach-1	59891	10_Yr	7440.73	0.82	942.71	0.37	160.51	0.82	5.28	0.32
Reach-1	59891	50_Yr	7441.44	2.77	827.95	1334.48	178.39	0.49	2.11	2.32
Reach-1	59891	100_Yr	7442.08	7.49	1201.17	1851.84	184.85	0.72	2.79	2.92
Reach-1	59891	24hr_100_yr_SCS	7443.43	35.23	2297.82	3280.56	209.85	1.33	4.80	4.41
Reach-1	58910	2_Yr	7424.49		368.50		228.32		1.92	
Reach-1	58910	5_Yr	7424.69		631.00		230.21		2.37	
Reach-1	58910	10_Yr	7425.08		943.90		234.72		1.66	
Reach-1	58910	50_Yr	7425.76	0.20	2165.00		243.21	0.22	2.59	
Reach-1	58910	100_Yr	7426.19	2.29	3056.78	1.43	260.41	0.55	3.00	0.25
Reach-1	58910	24hr_100_yr_SCS	7427.27	20.55	5552.59	40.46	278.21	1.14	3.70	1.06
Reach-1	58159	2_Yr	7414.42	0.17	368.13	0.21	113.32	0.06	0.48	0.07
Reach-1	58159	5_Yr	7414.94	1.85	627.33	1.83	120.43	0.15	0.68	0.16
Reach-1	58159	10_Yr	7415.23	4.66	934.82	4.41	124.33	0.28	1.11	0.30
Reach-1	58159	50_Yr	7416.76	41.83	2087.44	35.93	146.03	0.60	1.67	0.57
Reach-1	58159	100_Yr	7417.64	85.97	2899.05	75.49	159.18	0.78	1.99	0.71
Reach-1	58159	24hr_100_yr_SCS	7419.63	265.96	5094.59	253.05	191.89	1.18	2.69	1.00
Reach-1	57081	2_Yr	7402.33	0.50	367.89	0.11	27.79	0.31	3.58	0.29
Reach-1	57081	5_Yr	7403.31	18.87	608.58	3.54	56.47	0.64	3.89	0.80
Reach-1	57081	10_Yr	7404.54	147.24	776.39	20.27	169.70	0.58	2.84	0.56
Reach-1	57081	50_Yr	7405.81	750.79	1312.96	101.45	206.17	1.55	4.41	1.34
Reach-1	57081	100_Yr	7406.42	1248.24	1641.56	170.70	215.28	2.20	5.39	1.81
Reach-1	57081	24hr_100_yr_SCS	7407.67	2734.19	2483.09	396.32	233.10	3.93	7.98	3.00
Reach-1	56462	2_Yr	7394.84	0.95	367.49	0.06	60.67	0.01	0.11	0.01
Reach-1	56462	5_Yr	7395.43	11.11	619.53	0.36	183.22	0.02	0.23	0.02
Reach-1	56462	10_Yr	7395.84	46.15	896.85	0.90	222.67	0.05	0.42	0.05
Reach-1	56462	50_Yr	7396.68	304.91	1856.18	4.11	268.05	0.27	1.32	0.22
Reach-1	56462	100_Yr	7397.24	624.60	2428.07	7.83	270.27	0.51	1.89	0.35
Reach-1	56462	24hr_100_yr_SCS	7398.38	1715.79	3876.01	21.81	274.72	1.28	3.46	0.74
Reach-1	56380	2_Yr	7394.81	41.23	323.97	3.30	246.72	0.02	0.11	0.03
Reach-1	56380	5_Yr	7395.39	128.13	495.77	7.10	255.76	0.05	0.21	0.06
Reach-1	56380	10_Yr	7395.78	240.96	690.98	11.96	261.75	0.10	0.35	0.10
Reach-1	56380	50_Yr	7396.52	734.52	1401.56	29.11	273.37	0.40	1.11	0.26
Reach-1	56380	100_Yr	7397.02	1174.92	1839.15	46.44	280.20	0.65	1.64	0.37
Reach-1	56380	24hr_100_yr_SCS	7397.96	2504.19	2993.88	115.54	293.00	1.55	3.33	0.77

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	56352		Culvert							
Reach-1	56318	2_Yr	7389.13		368.50		33.77		1.63	
Reach-1	56318	5_Yr	7390.02		631.00		37.38		2.63	
Reach-1	56318	10_Yr	7390.64		943.90		41.35		4.17	
Reach-1	56318	50_Yr	7392.51	37.82	2105.94	21.45	87.94	0.53	4.22	0.93
Reach-1	56318	100_Yr	7393.52	207.30	2797.67	55.53	133.33	0.97	5.04	1.34
Reach-1	56318	24hr_100_yr_SCS	7395.78	1390.93	4030.76	191.91	255.26	1.50	5.24	1.84
Reach-1	56178	2_Yr	7386.52		368.50		28.24		3.38	
Reach-1	56178	5_Yr	7387.33		631.00		32.55		4.03	
Reach-1	56178	10_Yr	7388.23	0.33	937.14	6.43	77.99	0.26	3.99	0.31
Reach-1	56178	50_Yr	7390.27	35.86	1779.66	349.68	168.57	0.76	4.23	1.33
Reach-1	56178	100_Yr	7391.06	94.97	2269.90	695.63	196.98	0.88	4.87	1.96
Reach-1	56178	24hr_100_yr_SCS	7392.73	550.07	3391.66	1671.88	282.07	1.33	6.02	3.02
Reach-1	55795	2_Yr	7382.34	5.26	362.65	0.59	34.66	0.07	0.35	0.05
Reach-1	55795	5_Yr	7383.47	21.64	606.12	3.24	49.03	0.14	0.64	0.11
Reach-1	55795	10_Yr	7384.45	57.95	876.26	9.69	117.17	0.22	0.97	0.20
Reach-1	55795	50_Yr	7386.32	308.48	1811.96	44.75	256.61	0.69	2.49	0.59
Reach-1	55795	100_Yr	7387.25	576.02	2406.19	78.29	308.66	1.06	3.53	0.72
Reach-1	55795	24hr_100_yr_SCS	7387.77	981.40	3433.37	1198.83	338.75	2.04	6.41	1.51
Reach-1	55416	2_Yr	7380.46	3.44	360.75	4.31	55.22	1.04	4.79	0.89
Reach-1	55416	5_Yr	7380.97	17.80	584.43	28.77	61.94	1.90	5.64	1.56
Reach-1	55416	10_Yr	7381.46	41.56	822.40	79.94	68.41	2.41	6.28	2.05
Reach-1	55416	50_Yr	7382.88	208.72	1339.74	616.73	177.80	1.45	5.31	1.36
Reach-1	55416	100_Yr	7383.38	375.94	1625.72	1058.84	209.11	1.82	5.81	1.68
Reach-1	55416	24hr_100_yr_SCS	7385.44	823.55	1728.83	3061.22	316.15	0.59	2.57	1.19
Reach-1	55301	2_Yr	7375.44		368.50		33.59		0.23	
Reach-1	55301	5_Yr	7376.57		631.00		37.18		0.38	
Reach-1	55301	10_Yr	7377.57		943.90		41.22		0.55	
Reach-1	55301	50_Yr	7380.12		2165.20		73.37		1.10	
Reach-1	55301	100_Yr	7383.41	751.47	1958.36	350.67	304.49	0.07	0.31	0.09
Reach-1	55301	24hr_100_yr_SCS	7385.54	2378.58	2354.14	880.88	315.39	0.10	0.28	0.11
Reach-1	55270		Bridge							
Reach-1	55238	2_Yr	7375.36		368.50		40.27		0.30	
Reach-1	55238	5_Yr	7376.43		631.00		44.79		0.49	
Reach-1	55238	10_Yr	7377.34		943.90		49.10		0.72	
Reach-1	55238	50_Yr	7379.12		2165.20		59.22		1.99	
Reach-1	55238	100_Yr	7379.64		3060.50		61.55		3.40	
Reach-1	55238	24hr_100_yr_SCS	7381.46	74.03	5533.56	6.01	166.19	0.22	4.96	0.41
Reach-1	55103	2_Yr	7374.02		368.50		32.82		4.07	
Reach-1	55103	5_Yr	7374.70		631.00		39.96		5.26	
Reach-1	55103	10_Yr	7375.37		943.90		46.79		5.92	
Reach-1	55103	50_Yr	7377.47	208.65	1952.80	3.76	102.80	0.86	5.26	0.85
Reach-1	55103	100_Yr	7378.19	638.63	2411.23	10.64	122.08	1.30	5.54	1.15
Reach-1	55103	24hr_100_yr_SCS	7380.10	2171.72	3407.27	34.62	222.31	1.13	5.12	0.82
Reach-1	54860	2_Yr	7365.25		458.40		33.31		3.46	
Reach-1	54860	5_Yr	7366.14		801.10		40.46		4.06	
Reach-1	54860	10_Yr	7366.98		1219.50		47.15		4.55	
Reach-1	54860	50_Yr	7369.19	40.49	2864.44	0.07	72.61	0.88	5.81	0.20
Reach-1	54860	100_Yr	7370.76	424.64	3637.28	7.59	137.51	0.84	4.51	0.69
Reach-1	54860	24hr_100_yr_SCS	7372.74	2171.55	5414.02	49.34	224.65	1.21	5.07	1.20
Reach-1	54431	2_Yr	7343.38		458.40		19.87		4.42	
Reach-1	54431	5_Yr	7344.61		801.10		23.24		5.33	
Reach-1	54431	10_Yr	7345.80		1219.50		26.41		6.10	
Reach-1	54431	50_Yr	7349.42		2905.00		44.82		7.01	
Reach-1	54431	100_Yr	7350.87		4069.50		52.40		7.63	
Reach-1	54431	24hr_100_yr_SCS	7354.06		7634.90		62.45		9.34	
Reach-1	54183	2_Yr	7330.27		458.40		41.56		4.31	
Reach-1	54183	5_Yr	7331.21		801.10		46.96		4.90	
Reach-1	54183	10_Yr	7332.52		1219.50	0.00	70.93		4.14	0.07
Reach-1	54183	50_Yr	7335.25	29.82	2850.32	24.86	86.85	0.78	4.31	1.25
Reach-1	54183	100_Yr	7336.95	132.02	3871.85	65.63	96.68	1.00	4.17	1.46
Reach-1	54183	24hr_100_yr_SCS	7340.73	931.11	6481.72	222.07	137.99	1.12	4.28	1.75



HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	54054	2_Yr	7324.91		458.40		20.32		4.40	
Reach-1	54054	5_Yr	7326.16		801.10		23.50		5.18	
Reach-1	54054	10_Yr	7327.30		1219.50		26.89		6.10	
Reach-1	54054	50_Yr	7334.84	55.57	2416.43	433.01	176.58	0.35	1.21	0.24
Reach-1	54054	100_Yr	7336.79	109.02	2689.68	1270.80	187.93	0.33	0.96	0.33
Reach-1	54054	24hr_100_yr_SCS	7340.77	287.14	3669.59	3678.17	204.51	0.38	0.89	0.45
Reach-1	54000		Culvert							
Reach-1	53864	2_Yr	7321.53		458.40		30.29		3.99	
Reach-1	53864	5_Yr	7322.37		801.10		34.18		6.12	
Reach-1	53864	10_Yr	7323.12		1219.50		37.87		8.48	
Reach-1	53864	50_Yr	7325.45		2905.00		49.25		13.66	
Reach-1	53864	100_Yr	7326.95		4069.50		57.32		13.85	
Reach-1	53864	24hr_100_yr_SCS	7329.94	1.83	7628.73	4.34	75.80	1.20	16.58	1.14
Reach-1	53740	2_Yr	7316.41		458.40		43.04		5.90	
Reach-1	53740	5_Yr	7317.29		801.10		57.66		6.00	
Reach-1	53740	10_Yr	7318.06		1219.50		69.43		6.19	
Reach-1	53740	50_Yr	7320.22		2905.00		88.75		6.89	
Reach-1	53740	100_Yr	7321.88		4069.50		99.20		5.73	
Reach-1	53740	24hr_100_yr_SCS	7323.72		7634.90		106.83		9.61	
Reach-1	53352	2_Yr	7304.33		458.40		31.20		3.04	
Reach-1	53352	5_Yr	7305.48		801.10		37.08		4.03	
Reach-1	53352	10_Yr	7306.53		1219.50		42.88		4.92	
Reach-1	53352	50_Yr	7309.46		2905.00		72.61		6.83	
Reach-1	53352	100_Yr	7309.63		4069.50		75.01		12.42	
Reach-1	53352	24hr_100_yr_SCS	7312.91		7634.90		102.65		11.00	
Reach-1	52992	2_Yr	7292.42		458.40		33.09		6.80	
Reach-1	52992	5_Yr	7293.30		801.10		38.31		8.15	
Reach-1	52992	10_Yr	7294.14		1219.50		43.19		9.35	
Reach-1	52992	50_Yr	7296.62		2905.00		54.29		11.77	
Reach-1	52992	100_Yr	7299.47		4069.50		62.72		7.29	
Reach-1	52992	24hr_100_yr_SCS	7301.66		7634.90		69.19		13.28	
Reach-1	52885	2_Yr	7287.75		458.40		19.42		2.78	
Reach-1	52885	5_Yr	7289.02		801.10		23.16		3.32	
Reach-1	52885	10_Yr	7290.15		1219.50		25.83		3.94	
Reach-1	52885	50_Yr	7295.67	81.10	2795.15	28.75	52.08	0.84	2.45	0.39
Reach-1	52885	100_Yr	7298.88	219.39	3629.03	221.08	107.21	0.90	2.00	0.21
Reach-1	52885	24hr_100_yr_SCS	7301.40	442.69	5447.26	1744.95	193.92	1.42	2.88	0.54
Reach-1	52800		Culvert							
Reach-1	52761	2_Yr	7284.89		458.40		28.51		2.33	
Reach-1	52761	5_Yr	7286.16		801.10		33.95		2.22	
Reach-1	52761	10_Yr	7287.44		1219.50		37.81		2.18	
Reach-1	52761	50_Yr	7291.11	1.33	2899.89	3.78	47.87	0.17	2.38	0.21
Reach-1	52761	100_Yr	7293.16	22.66	3992.77	54.06	59.35	0.29	2.43	0.45
Reach-1	52761	24hr_100_yr_SCS	7295.71	821.69	6526.29	286.92	151.41	0.66	3.59	0.87
Reach-1	52673	2_Yr	7283.37		458.40		21.58		3.30	
Reach-1	52673	5_Yr	7284.94		801.10		25.48		4.34	
Reach-1	52673	10_Yr	7286.39		1219.50		29.41		5.26	
Reach-1	52673	50_Yr	7289.75	19.88	2867.32	17.80	40.81	1.04	8.66	1.04
Reach-1	52673	100_Yr	7289.86	31.90	4009.25	28.35	41.23	2.07	16.39	2.06
Reach-1	52673	24hr_100_yr_SCS	7293.58	2322.29	4544.96	767.65	198.63	1.95	8.58	1.36
Reach-1	52273	2_Yr	7271.13		458.40		21.92		8.20	
Reach-1	52273	5_Yr	7272.27		801.10		24.82		10.00	
Reach-1	52273	10_Yr	7273.39		1219.50		27.98		11.56	
Reach-1	52273	50_Yr	7276.59	2.23	2902.04	0.73	37.59	0.82	14.93	0.65
Reach-1	52273	100_Yr	7279.51	430.82	3575.72	62.96	122.90	0.98	9.01	1.36
Reach-1	52273	24hr_100_yr_SCS	7281.37	2730.54	4154.39	749.97	235.89	1.92	7.81	1.18
Reach-1	52187	2_Yr	7266.69		458.40		29.07		1.03	
Reach-1	52187	5_Yr	7268.30		801.10		31.15		1.31	
Reach-1	52187	10_Yr	7269.89		1219.50		34.36		1.56	
Reach-1	52187	50_Yr	7275.35	5.25	2894.35	5.41	51.85	0.14	1.72	0.14
Reach-1	52187	100_Yr	7277.66	157.94	3814.61	96.95	173.02	0.14	1.80	0.22

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	52187	24hr_100_yr_SCS	7279.98	1887.53	5104.75	642.62	220.89	0.52	2.12	0.52
Reach-1	52132		Culvert							
Reach-1	52083	2_Yr	7265.87		458.40		20.71		2.97	
Reach-1	52083	5_Yr	7267.02		801.10		23.18		4.21	
Reach-1	52083	10_Yr	7268.07		1219.50		25.36		5.51	
Reach-1	52083	50_Yr	7271.33		2905.00		33.66		8.10	
Reach-1	52083	100_Yr	7274.65	18.22	3361.52	689.75	159.61	0.23	3.83	0.66
Reach-1	52083	24hr_100_yr_SCS	7276.34	380.33	4412.91	2841.67	230.91	0.57	4.37	1.37
Reach-1	51980	2_Yr	7263.26		458.40		27.99		5.21	
Reach-1	51980	5_Yr	7264.40		801.10		33.37		6.25	
Reach-1	51980	10_Yr	7265.45		1219.50		38.28		7.18	
Reach-1	51980	50_Yr	7268.09		2905.00		48.29		10.77	
Reach-1	51980	100_Yr	7269.94		4069.50		54.71		10.49	
Reach-1	51980	24hr_100_yr_SCS	7273.20	1130.60	5635.50	868.80	233.20	1.32	7.65	1.23
Reach-1	51215	2_Yr	7240.54		458.40		22.74		4.20	
Reach-1	51215	5_Yr	7241.93		801.10		27.23		5.35	
Reach-1	51215	10_Yr	7243.28		1219.50		33.49		6.15	
Reach-1	51215	50_Yr	7246.87	2.30	2898.28	4.42	60.40	0.53	7.22	0.59
Reach-1	51215	100_Yr	7247.58	12.73	4032.37	24.40	63.52	1.24	10.51	1.38
Reach-1	51215	24hr_100_yr_SCS	7250.10	158.70	7156.30	319.90	84.87	3.27	14.80	2.09
Reach-1	50728	2_Yr	7227.89		458.40		35.17		3.76	
Reach-1	50728	5_Yr	7228.84		801.10		40.80		4.94	
Reach-1	50728	10_Yr	7229.71		1219.50		45.92		6.14	
Reach-1	50728	50_Yr	7231.55	27.61	2855.19	22.20	56.27	1.74	11.72	1.76
Reach-1	50728	100_Yr	7233.02	149.25	3783.55	136.70	74.98	2.71	11.26	1.66
Reach-1	50728	24hr_100_yr_SCS	7235.61	637.18	5782.14	1215.58	104.55	4.07	11.99	3.05
Reach-1	50174	2_Yr	7206.04		535.90		22.47		7.93	
Reach-1	50174	5_Yr	7207.52		965.70		27.82		9.12	
Reach-1	50174	10_Yr	7208.94		1493.50		33.00		9.86	
Reach-1	50174	50_Yr	7212.96	2.72	3297.97	309.61	98.81	0.62	8.92	1.41
Reach-1	50174	100_Yr	7213.79	14.87	4123.94	895.79	101.30	1.22	10.60	2.73
Reach-1	50174	24hr_100_yr_SCS	7215.85	111.30	6105.82	3158.08	106.52	2.74	13.18	5.51
Reach-1	49402	2_Yr	7180.13		535.90		31.64		3.91	
Reach-1	49402	5_Yr	7181.31		965.70		36.26		5.49	
Reach-1	49402	10_Yr	7182.34		1493.50		40.16		7.21	
Reach-1	49402	50_Yr	7184.97		3610.20	0.10	49.76		12.89	0.25
Reach-1	49402	100_Yr	7187.77	24.16	4918.05	92.40	116.45	1.20	9.43	1.29
Reach-1	49402	24hr_100_yr_SCS	7190.08	125.42	6651.44	2598.34	173.66	1.91	9.86	2.30
Reach-1	48536	2_Yr	7158.20		535.90		42.97		3.51	
Reach-1	48536	5_Yr	7159.36		965.70		53.25		4.12	
Reach-1	48536	10_Yr	7160.47		1493.50		63.11		4.54	
Reach-1	48536	50_Yr	7163.42		3610.30		84.04		5.74	
Reach-1	48536	100_Yr	7163.05		5034.60		81.29		13.13	
Reach-1	48536	24hr_100_yr_SCS	7165.80		9375.20		103.05		15.67	
Reach-1	47649	2_Yr	7131.87		535.90		24.60		5.39	
Reach-1	47649	5_Yr	7133.20		965.70		27.79		7.37	
Reach-1	47649	10_Yr	7134.43		1493.50		30.65		9.40	
Reach-1	47649	50_Yr	7137.85	0.65	3609.65		42.23	0.52	14.32	
Reach-1	47649	100_Yr	7141.15	485.16	4105.15	444.29	190.23	1.62	6.97	0.74
Reach-1	47649	24hr_100_yr_SCS	7142.55	1293.53	5672.54	2409.13	196.24	3.08	9.65	2.29
Reach-1	47070	2_Yr	7106.83		535.90		25.91		8.16	
Reach-1	47070	5_Yr	7108.05		965.70		31.03		9.84	
Reach-1	47070	10_Yr	7109.19		1493.50		33.91		11.39	
Reach-1	47070	50_Yr	7112.47		3610.30		42.38		15.50	
Reach-1	47070	100_Yr	7114.15	0.33	5034.25	0.02	49.67	0.23	17.16	0.17
Reach-1	47070	24hr_100_yr_SCS	7118.10	2359.02	6915.63	100.55	152.84	3.09	11.48	0.62
Reach-1	46549	2_Yr	7083.87		535.90		20.88		4.57	
Reach-1	46549	5_Yr	7085.30		965.70		25.07		5.51	
Reach-1	46549	10_Yr	7086.69		1493.50		29.59		6.17	
Reach-1	46549	50_Yr	7090.86		3571.45	38.85	70.53		6.54	0.47
Reach-1	46549	100_Yr	7092.86		4182.40	852.20	125.13		4.95	1.22
Reach-1	46549	24hr_100_yr_SCS	7094.89	2.30	6168.85	3204.05	154.73	0.33	6.29	2.40

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	45939	2_Yr	7044.09		535.90		29.42		2.18	
Reach-1	45939	5_Yr	7045.36		965.70		34.72		2.93	
Reach-1	45939	10_Yr	7046.11		1493.50		38.13		4.53	
Reach-1	45939	50_Yr	7048.82		3610.30		54.76		7.02	
Reach-1	45939	100_Yr	7050.21		5034.60		59.15		7.83	
Reach-1	45939	24hr_100_yr_SCS	7053.56		9375.20		70.13		9.60	
Reach-1	45245	2_Yr	7026.72		535.90		35.83		6.98	
Reach-1	45245	5_Yr	7027.67		965.70		39.42		8.74	
Reach-1	45245	10_Yr	7029.19		1493.50		44.53		7.15	
Reach-1	45245	50_Yr	7034.14	146.86	3450.54	12.90	137.52	0.36	4.70	0.55
Reach-1	45245	100_Yr	7035.77	1173.70	3812.87	48.03	142.63	0.89	3.66	0.61
Reach-1	45245	24hr_100_yr_SCS	7037.97	3753.18	5434.12	187.90	162.85	1.72	4.53	0.58
Reach-1	45214	2_Yr	7024.84		535.90		24.07		1.03	
Reach-1	45214	5_Yr	7026.87		965.70		28.20		1.13	
Reach-1	45214	10_Yr	7029.15		1493.50		37.09		1.08	
Reach-1	45214	50_Yr	7034.14	512.42	3083.11	14.77	189.93	0.17	0.95	0.04
Reach-1	45214	100_Yr	7035.80	1513.74	3392.34	128.52	208.40	0.25	0.80	0.12
Reach-1	45214	24hr_100_yr_SCS	7038.17	4026.82	4806.91	541.47	256.44	0.46	1.03	0.19
Reach-1	45190		Culvert							
Reach-1	45151	2_Yr	7024.13		535.90		32.98		1.31	
Reach-1	45151	5_Yr	7025.58		965.70		37.30		1.76	
Reach-1	45151	10_Yr	7026.89		1493.50		40.46		2.23	
Reach-1	45151	50_Yr	7029.28		3610.30		46.19		5.32	
Reach-1	45151	100_Yr	7031.25	422.42	4608.14	4.04	140.28	0.61	4.74	0.34
Reach-1	45151	24hr_100_yr_SCS	7033.29	3260.90	6066.01	48.29	213.86	1.31	4.93	0.71
Reach-1	45066	2_Yr	7023.68		535.90		41.12		0.92	
Reach-1	45066	5_Yr	7025.18		965.70		46.73		1.16	
Reach-1	45066	10_Yr	7026.53	0.71	1492.52	0.27	52.52	0.08	1.41	0.07
Reach-1	45066	50_Yr	7029.14	368.48	3208.22	33.60	166.93	0.32	2.51	0.45
Reach-1	45066	100_Yr	7030.31	1249.90	3712.72	71.97	221.96	0.47	2.42	0.51
Reach-1	45066	24hr_100_yr_SCS	7032.91	4757.82	4451.89	165.49	251.61	0.72	1.92	0.27
Reach-1	44726	2_Yr	7019.04		535.90		21.49		4.56	
Reach-1	44726	5_Yr	7020.49		965.70		28.60		5.27	
Reach-1	44726	10_Yr	7021.68		1491.39	2.11	32.02		6.13	0.84
Reach-1	44726	50_Yr	7025.41	597.63	2935.14	77.53	134.64	1.85	5.50	0.99
Reach-1	44726	100_Yr	7026.57	1142.22	3673.91	218.47	148.87	2.67	6.28	1.49
Reach-1	44726	24hr_100_yr_SCS	7028.88	2817.05	5707.04	851.11	158.32	4.92	8.97	3.31
Reach-1	44133	2_Yr	6998.37		535.90		21.22		4.61	
Reach-1	44133	5_Yr	6999.85		965.70		25.58		5.30	
Reach-1	44133	10_Yr	7001.19	18.51	1472.38	2.60	33.55	0.79	5.84	0.53
Reach-1	44133	50_Yr	7004.73	805.49	2683.53	121.28	74.58	1.56	5.41	1.32
Reach-1	44133	100_Yr	7005.73	1516.18	3303.27	215.15	77.21	2.29	6.30	1.67
Reach-1	44133	24hr_100_yr_SCS	7009.31	3915.59	4282.16	1177.45	158.64	2.58	4.97	0.86
Reach-1	43514	2_Yr	6981.36		535.90		21.71		3.99	
Reach-1	43514	5_Yr	6982.54		965.70		23.91		5.78	
Reach-1	43514	10_Yr	6983.88		1493.50		26.39		6.76	
Reach-1	43514	50_Yr	6989.06	234.65	3325.11	50.54	78.18	0.76	5.24	0.91
Reach-1	43514	100_Yr	6990.69	938.75	3777.19	318.66	135.81	1.36	4.54	0.57
Reach-1	43514	24hr_100_yr_SCS	6992.52	2343.26	5260.58	1771.35	140.63	2.50	6.04	1.66
Reach-1	42948	2_Yr	6965.40		587.50		27.70		4.31	
Reach-1	42948	5_Yr	6966.77		1070.70		35.50		4.80	
Reach-1	42948	10_Yr	6967.97		1665.40		42.65		5.37	
Reach-1	42948	50_Yr	6970.96	2.18	4029.65	5.57	60.94	0.51	7.08	0.50
Reach-1	42948	100_Yr	6972.86	55.65	5423.25	140.50	100.72	0.50	6.45	1.00
Reach-1	42948	24hr_100_yr_SCS	6975.74	1316.40	7370.18	1216.91	174.75	1.26	5.55	1.70
Reach-1	42215	2_Yr	6925.98		587.50		24.66		4.47	
Reach-1	42215	5_Yr	6927.41		1070.70		32.84		5.14	
Reach-1	42215	10_Yr	6928.65	5.67	1659.11	0.63	42.69	0.48	5.62	0.36
Reach-1	42215	50_Yr	6931.82	523.65	3457.14	56.61	78.63	1.70	6.42	1.38
Reach-1	42215	100_Yr	6933.66	1395.27	4092.30	131.84	130.23	1.39	5.32	1.36
Reach-1	42215	24hr_100_yr_SCS	6935.46	3867.14	5756.79	279.57	138.07	2.61	6.92	1.89

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	41585	2_Yr	6899.77		587.50		19.51		7.24	
Reach-1	41585	5_Yr	6901.25	286.13	784.57		57.30	1.68	5.13	
Reach-1	41585	10_Yr	6901.96	644.48	1020.92		61.14	2.73	6.06	
Reach-1	41585	50_Yr	6904.39	2329.41	1707.55	0.43	70.04	4.50	6.23	0.23
Reach-1	41585	100_Yr	6905.71	3406.76	2191.88	20.76	76.02	4.80	6.56	0.89
Reach-1	41585	24hr_100_yr_SCS	6908.80	6195.44	3396.25	311.82	99.22	5.06	7.10	1.50
Reach-1	40959	2_Yr	6849.71		587.50		26.94		6.13	
Reach-1	40959	5_Yr	6850.99		1070.70		30.90		7.50	
Reach-1	40959	10_Yr	6852.22		1665.40		34.15		8.78	
Reach-1	40959	50_Yr	6855.70		4037.40		42.47		12.09	
Reach-1	40959	100_Yr	6857.50		5619.40		46.82		13.41	
Reach-1	40959	24hr_100_yr_SCS	6862.07	310.62	9481.69	111.18	83.85	1.54	12.62	1.90
Reach-1	40756	2_Yr	6839.17		587.50		27.99		6.01	
Reach-1	40756	5_Yr	6841.49		1070.70		35.05		3.83	
Reach-1	40756	10_Yr	6843.30		1665.40		39.65		3.88	
Reach-1	40756	50_Yr	6846.26		4037.40		47.08		7.94	
Reach-1	40756	100_Yr	6846.78		5619.40		48.40		13.12	
Reach-1	40756	24hr_100_yr_SCS	6851.42	1100.55	8708.97	93.98	107.79	2.21	9.95	1.12
Reach-1	40668	2_Yr	6839.08		587.50		41.76		0.61	
Reach-1	40668	5_Yr	6841.60		1070.70		47.54		0.74	
Reach-1	40668	10_Yr	6843.46	85.15	1578.36	1.89	82.09	0.13	0.86	0.07
Reach-1	40668	50_Yr	6847.15	1091.99	2884.42	61.00	109.91	0.46	1.20	0.17
Reach-1	40668	100_Yr	6848.55	1810.10	3643.49	165.82	158.47	0.66	1.48	0.14
Reach-1	40668	24hr_100_yr_SCS	6851.26	3491.70	5103.58	1308.22	165.74	0.98	1.87	0.48
Reach-1	40620		Culvert							
Reach-1	40567	2_Yr	6830.47		587.50		31.09		4.01	
Reach-1	40567	5_Yr	6831.64		1070.70		34.34		5.18	
Reach-1	40567	10_Yr	6832.82		1665.40		39.26		6.27	
Reach-1	40567	50_Yr	6836.06	18.29	3907.49	111.62	53.14	0.99	7.81	2.70
Reach-1	40567	100_Yr	6838.15	219.52	5143.38	256.50	78.76	1.05	7.47	3.14
Reach-1	40567	24hr_100_yr_SCS	6841.84	2089.61	7230.79	583.11	154.14	1.39	6.77	3.17
Reach-1	40458	2_Yr	6820.79		587.50		28.47		8.11	
Reach-1	40458	5_Yr	6822.02		1070.70		32.93		10.02	
Reach-1	40458	10_Yr	6823.23		1665.40		36.93		11.52	
Reach-1	40458	50_Yr	6826.54		4037.40		46.07		15.66	
Reach-1	40458	100_Yr	6828.17	0.38	5619.02		50.08	0.47	17.70	
Reach-1	40458	24hr_100_yr_SCS	6831.71	109.16	9773.14	21.20	58.14	3.30	21.38	2.82
Reach-1	39940	2_Yr	6791.89		587.50		53.59		4.40	
Reach-1	39940	5_Yr	6792.74		1070.70		56.39		5.87	
Reach-1	39940	10_Yr	6793.62		1665.40		59.04		7.09	
Reach-1	39940	50_Yr	6795.67		4037.40		65.10		13.22	
Reach-1	39940	100_Yr	6796.98		5619.40		69.37		14.84	
Reach-1	39940	24hr_100_yr_SCS	6799.82		9903.50		77.86		18.33	
Reach-1	39545	2_Yr	6774.52		587.50		21.15		6.94	
Reach-1	39545	5_Yr	6776.03		1070.70		24.30		8.60	
Reach-1	39545	10_Yr	6777.49		1665.40		27.59		9.96	
Reach-1	39545	50_Yr	6783.22	930.73	3096.85	9.82	188.47	0.69	4.86	0.69
Reach-1	39545	100_Yr	6783.85	2008.24	3593.82	17.35	190.07	1.16	5.63	0.89
Reach-1	39545	24hr_100_yr_SCS	6785.08	5166.38	4693.64	43.49	193.77	2.27	7.36	1.36
Reach-1	39002	2_Yr	6734.18		587.50		37.66		5.34	
Reach-1	39002	5_Yr	6735.42		1070.70		42.31		5.52	
Reach-1	39002	10_Yr	6736.41		1665.40		45.43		6.80	
Reach-1	39002	50_Yr	6739.05	4.56	4031.11	1.73	51.80	0.88	10.90	0.96
Reach-1	39002	100_Yr	6740.56	46.46	5565.25	7.69	55.07	1.93	12.29	1.54
Reach-1	39002	24hr_100_yr_SCS	6743.94	409.95	9452.69	40.86	62.90	3.67	14.88	2.47
Reach-1	38562	2_Yr	6715.57		587.50		25.31		6.08	
Reach-1	38562	5_Yr	6716.46		1070.70		27.32		11.04	
Reach-1	38562	10_Yr	6717.79		1665.40		30.39		12.95	
Reach-1	38562	50_Yr	6721.67	31.02	4001.26	5.12	43.88	1.89	16.24	1.81
Reach-1	38562	100_Yr	6724.34	562.02	5004.87	52.51	83.35	2.06	12.48	2.62
Reach-1	38562	24hr_100_yr_SCS	6727.24	3347.07	6374.16	182.27	157.81	2.60	11.26	3.22
Reach-1	38155	2_Yr	6701.81		587.50	0.00	22.56		4.64	

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	38155	5_Yr	6703.75	101.44	965.14	4.12	59.06	0.57	3.57	0.71
Reach-1	38155	10_Yr	6704.75	411.32	1243.08	11.00	94.83	0.92	3.78	0.91
Reach-1	38155	50_Yr	6706.62	2153.30	1847.40	36.70	147.35	1.36	4.27	1.24
Reach-1	38155	100_Yr	6707.32	3407.27	2159.29	52.84	149.91	1.80	4.76	1.43
Reach-1	38155	24hr_100_yr_SCS	6708.93	6947.64	2852.36	103.50	155.68	2.65	5.47	1.78
Reach-1	37770	2_Yr	6669.36		587.50		38.41		5.79	
Reach-1	37770	5_Yr	6670.75		1070.70		50.24		5.55	
Reach-1	37770	10_Yr	6672.06		1665.40		59.29		5.49	
Reach-1	37770	50_Yr	6675.56		4037.40		70.68		6.27	
Reach-1	37770	100_Yr	6675.02		5619.40		69.57		14.87	
Reach-1	37770	24hr_100_yr_SCS	6677.81	13.04	9888.54	1.92	77.51	1.47	18.43	1.13
Reach-1	37403	2_Yr	6660.74		587.50		29.14		3.04	
Reach-1	37403	5_Yr	6662.19		1070.70		40.72		4.52	
Reach-1	37403	10_Yr	6663.51		1665.40	0.00	53.43		6.06	0.06
Reach-1	37403	50_Yr	6666.27	93.55	3915.75	28.11	157.81	0.88	12.37	2.09
Reach-1	37403	100_Yr	6667.04	2202.97	3373.91	42.52	185.01	1.71	7.40	1.47
Reach-1	37403	24hr_100_yr_SCS	6668.51	5592.29	4201.12	110.09	196.39	2.74	7.96	2.00
Reach-1	37142	2_Yr	6653.36		587.50		97.59		6.31	
Reach-1	37142	5_Yr	6654.26		1070.70		114.78		7.58	
Reach-1	37142	10_Yr	6655.06		1665.40		126.00		9.09	
Reach-1	37142	50_Yr	6657.44	0.69	4025.35	11.36	195.12	0.42	12.93	2.12
Reach-1	37142	100_Yr	6658.70	3.88	5567.46	48.06	205.64	0.75	14.80	3.22
Reach-1	37142	24hr_100_yr_SCS	6662.33	45.65	9461.66	396.20	298.61	1.43	14.94	2.58
Reach-1	37076	2_Yr	6644.43	125.78	461.72		83.22	2.03	4.79	
Reach-1	37076	5_Yr	6645.02	338.08	732.62		93.70	3.64	6.32	
Reach-1	37076	10_Yr	6645.66	584.45	1080.63	0.32	117.29	4.07	7.54	0.57
Reach-1	37076	50_Yr	6647.19	1846.95	2173.90	16.54	139.93	7.08	10.75	2.71
Reach-1	37076	100_Yr	6647.98	2737.54	2845.16	36.70	147.73	8.66	12.36	3.66
Reach-1	37076	24hr_100_yr_SCS	6649.81	5247.91	4538.36	117.23	176.20	11.34	15.25	5.43
Reach-1	36660	2_Yr	6625.60		587.50		22.98		4.49	
Reach-1	36660	5_Yr	6627.02		1070.70		26.05		5.63	
Reach-1	36660	10_Yr	6628.39		1665.40		28.96		6.68	
Reach-1	36660	50_Yr	6632.36	39.37	3996.03	1.99	40.42	1.10	8.68	0.72
Reach-1	36660	100_Yr	6635.24	1747.07	3862.55	9.78	180.93	0.81	3.97	0.54
Reach-1	36660	24hr_100_yr_SCS	6636.50	4605.59	5278.10	19.81	182.87	1.74	5.76	0.87
Reach-1	36429	2_Yr	6610.91		587.50		35.50		3.78	
Reach-1	36429	5_Yr	6611.95		1070.70		37.74		4.78	
Reach-1	36429	10_Yr	6612.97		1665.40		39.52		5.78	
Reach-1	36429	50_Yr	6616.13		4037.40		44.69		8.18	
Reach-1	36429	100_Yr	6617.80		5619.40		47.83		9.27	
Reach-1	36429	24hr_100_yr_SCS	6621.64	42.62	9858.37	2.52	63.84	0.94	10.65	0.78
Reach-1	36191	2_Yr	6601.46		587.50		23.92		4.52	
Reach-1	36191	5_Yr	6602.82		1070.68	0.02	27.30		5.63	0.16
Reach-1	36191	10_Yr	6604.13	3.39	1660.37	1.64	30.12	0.65	6.59	0.80
Reach-1	36191	50_Yr	6608.06	150.70	3847.41	39.28	38.37	2.13	8.99	2.11
Reach-1	36191	100_Yr	6610.00	352.61	5181.86	84.93	43.35	2.68	10.27	2.68
Reach-1	36191	24hr_100_yr_SCS	6615.00	2353.60	7305.61	244.29	87.37	2.33	8.39	2.32
Reach-1	35807	2_Yr	6579.38		587.50		18.57		20.88	
Reach-1	35807	5_Yr	6580.98	1.33	1069.19	0.19	22.35	2.99	25.90	1.41
Reach-1	35807	10_Yr	6583.21	174.21	1487.94	3.25	80.12	4.71	19.53	2.35
Reach-1	35807	50_Yr	6585.98	1157.31	2861.05	19.04	83.39	15.82	32.24	5.18
Reach-1	35807	100_Yr	6587.31	1893.68	3691.29	34.43	84.90	22.09	39.57	6.88
Reach-1	35807	24hr_100_yr_SCS	6590.22	4018.74	5790.59	94.17	88.07	36.25	55.80	10.98
Reach-1	35741	2_Yr	6542.04		587.50		10.30		69.52	
Reach-1	35741	5_Yr	6544.47		1070.70		11.77		88.53	
Reach-1	35741	10_Yr	6546.75	0.01	1665.27	0.11	13.13	1.49	106.21	3.49
Reach-1	35741	50_Yr	6553.44	23.53	3980.83	33.04	17.04	20.16	148.56	23.66
Reach-1	35741	100_Yr	6556.98	66.03	5467.17	86.20	19.03	27.68	169.55	31.54
Reach-1	35741	24hr_100_yr_SCS	6565.17	300.80	9264.22	338.49	24.93	42.59	205.45	45.39
Reach-1	35686	2_Yr	6539.88	1.86	585.00	0.64	38.29	0.74	3.39	0.43
Reach-1	35686	5_Yr	6541.07	5.34	1063.21	2.16	39.66	1.33	5.92	0.86
Reach-1	35686	10_Yr	6542.22	11.87	1648.69	4.84	40.68	2.11	8.80	1.34
Reach-1	35686	50_Yr	6545.95	50.81	3963.93	22.66	43.48	4.15	16.86	2.71

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	35686	100_Yr	6548.12	85.15	5493.73	40.52	45.15	4.96	20.42	3.33
Reach-1	35686	24hr_100_yr_SCS	6553.04	199.09	9596.95	107.47	48.71	6.54	28.04	4.67
Reach-1	35564	2_Yr	6538.99		587.50		104.86		0.94	
Reach-1	35564	5_Yr	6540.33	0.83	1056.52	13.35	124.51	0.15	1.20	0.35
Reach-1	35564	10_Yr	6541.72	7.98	1617.04	40.37	133.63	0.30	1.41	0.59
Reach-1	35564	50_Yr	6546.37	117.82	3747.60	171.98	157.94	0.64	1.77	0.93
Reach-1	35564	100_Yr	6548.99	253.39	5105.77	260.24	168.31	0.81	1.92	0.99
Reach-1	35564	24hr_100_yr_SCS	6554.90	734.03	8627.83	541.64	184.41	1.16	2.24	1.10
Reach-1	35389	2_Yr	6535.23	1.69	585.79	0.02	32.30	3.64	15.96	0.65
Reach-1	35389	5_Yr	6536.35	8.87	1060.26	1.57	34.93	5.98	20.36	3.27
Reach-1	35389	10_Yr	6537.50	23.46	1635.68	6.26	36.49	8.28	24.52	5.08
Reach-1	35389	50_Yr	6541.03	110.54	3883.11	43.75	42.28	12.36	35.98	8.72
Reach-1	35389	100_Yr	6542.96	196.87	5340.40	82.14	46.24	14.03	41.25	10.27
Reach-1	35389	24hr_100_yr_SCS	6547.44	559.50	9104.35	239.65	57.73	17.45	50.51	12.96
Reach-1	35192	2_Yr	6496.61		719.80		28.28		12.19	
Reach-1	35192	5_Yr	6498.01		1316.13	0.47	30.83		17.60	1.48
Reach-1	35192	10_Yr	6499.15	2.71	2042.12	2.57	34.89	2.75	24.87	3.08
Reach-1	35192	50_Yr	6503.25	154.06	4780.62	32.51	52.30	10.27	37.58	7.11
Reach-1	35192	100_Yr	6505.37	402.49	6426.71	66.00	58.86	14.89	42.69	8.71
Reach-1	35192	24hr_100_yr_SCS	6509.25	1127.11	9662.03	201.36	77.30	19.96	49.66	10.77
Reach-1	34539	2_Yr	6437.73		719.80		24.31		20.01	
Reach-1	34539	5_Yr	6439.29		1316.30	0.30	30.24		24.01	1.88
Reach-1	34539	10_Yr	6440.72	3.18	2039.51	4.71	38.05	2.55	27.96	4.70
Reach-1	34539	50_Yr	6445.21	284.97	4607.77	74.46	71.01	9.66	33.99	9.42
Reach-1	34539	100_Yr	6447.19	694.08	6057.21	143.91	82.65	13.51	38.16	11.40
Reach-1	34539	24hr_100_yr_SCS	6450.41	1772.50	8890.29	327.71	102.96	18.93	46.72	15.03
Reach-1	34422	2_Yr	6433.04	26.96	650.15	42.69	81.98	1.19	2.35	2.13
Reach-1	34422	5_Yr	6435.81	77.27	1159.01	80.32	106.49	1.84	2.74	2.57
Reach-1	34422	10_Yr	6439.83	126.62	1492.32	428.46	134.71	1.36	1.75	0.92
Reach-1	34422	50_Yr	6445.34	836.70	2934.78	1195.72	191.20	1.07	2.80	1.63
Reach-1	34422	100_Yr	6446.29	1166.01	4024.04	1705.15	217.93	1.56	4.65	2.73
Reach-1	34422	24hr_100_yr_SCS	6449.24	2448.13	5913.76	2628.61	244.81	2.75	7.10	3.88
Reach-1	34389		Bridge							
Reach-1	34363	2_Yr	6429.00	7.62	709.14	3.03	44.78	2.04	5.58	1.15
Reach-1	34363	5_Yr	6430.39	26.51	1282.76	7.34	46.17	4.69	8.68	1.77
Reach-1	34363	10_Yr	6431.64	85.76	1948.00	13.64	47.40	5.38	12.06	2.44
Reach-1	34363	50_Yr	6435.17	261.32	4186.12	519.76	249.31	7.99	19.85	3.01
Reach-1	34363	100_Yr	6436.69	362.22	4985.16	1547.82	261.83	7.85	20.15	5.17
Reach-1	34363	24hr_100_yr_SCS	6439.60	593.00	6258.27	4139.23	279.88	6.62	18.71	7.43
Reach-1	34144	2_Yr	6417.65		719.80		29.03		18.21	
Reach-1	34144	5_Yr	6419.11	9.58	1298.68	8.35	56.40	2.79	19.70	4.22
Reach-1	34144	10_Yr	6420.31	77.76	1932.05	37.59	64.39	7.35	22.32	7.16
Reach-1	34144	50_Yr	6423.46	481.84	4246.11	239.25	80.46	17.18	33.18	12.90
Reach-1	34144	100_Yr	6425.12	799.02	5641.74	454.45	87.84	20.95	37.67	15.82
Reach-1	34144	24hr_100_yr_SCS	6427.85	1500.82	8464.85	1024.83	96.69	27.57	47.35	22.53
Reach-1	33684	2_Yr	6400.82		719.76	0.04	29.65		2.47	0.09
Reach-1	33684	5_Yr	6401.85		1312.70	3.90	33.82		4.53	0.71
Reach-1	33684	10_Yr	6402.98	5.61	2008.51	33.28	60.09	0.68	6.20	0.97
Reach-1	33684	50_Yr	6406.63	277.37	3985.36	704.47	106.59	2.21	7.42	3.33
Reach-1	33684	100_Yr	6408.09	578.10	5123.67	1193.43	116.80	3.09	8.68	4.39
Reach-1	33684	24hr_100_yr_SCS	6410.52	1379.38	7314.96	2296.16	130.51	4.65	10.94	6.27
Reach-1	33354	2_Yr	6393.78		719.80		24.30		5.01	
Reach-1	33354	5_Yr	6395.73		1246.10	70.50	65.68		4.35	0.92
Reach-1	33354	10_Yr	6396.89	43.19	1717.51	286.70	93.49	0.81	4.72	1.78
Reach-1	33354	50_Yr	6399.30	459.14	3290.45	1217.62	106.87	2.86	7.31	4.14
Reach-1	33354	100_Yr	6400.44	810.53	4219.61	1865.06	110.68	3.92	8.75	5.41
Reach-1	33354	24hr_100_yr_SCS	6402.46	1666.86	6056.31	3267.33	117.31	5.70	11.19	7.56
Reach-1	33014	2_Yr	6387.21	0.27	715.03	4.49	34.71	0.06	0.82	0.17
Reach-1	33014	5_Yr	6390.79	13.28	1257.04	46.28	78.98	0.16	0.77	0.11
Reach-1	33014	10_Yr	6391.19	23.66	1925.95	97.79	90.97	0.36	1.64	0.25
Reach-1	33014	50_Yr	6393.26	92.12	4105.47	769.61	148.68	1.21	4.68	1.03
Reach-1	33014	100_Yr	6394.19	144.37	5256.14	1494.69	160.14	1.73	6.39	1.72

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	33014	24hr_100_yr_SCS	6396.23	275.45	7074.23	3640.82	178.29	2.29	8.10	2.90
Reach-1	32919	2_Yr	6385.88	7.05	705.70	7.04	28.74	0.49	2.80	0.48
Reach-1	32919	5_Yr	6390.64	151.64	822.28	342.68	160.19	0.36	0.97	0.28
Reach-1	32919	10_Yr	6390.90	243.01	1222.59	581.80	166.65	0.76	2.03	0.62
Reach-1	32919	50_Yr	6393.07	721.87	2061.05	2184.28	209.09	1.55	3.78	1.70
Reach-1	32919	100_Yr	6394.07	1077.20	2481.03	3336.97	223.73	1.97	4.62	2.34
Reach-1	32919	24hr_100_yr_SCS	6395.81	1977.70	3217.01	5795.80	243.22	2.88	5.93	3.46
Reach-1	32904		Bridge							
Reach-1	32883	2_Yr	6383.73		719.80		14.87		6.57	
Reach-1	32883	5_Yr	6386.15	4.27	1281.24	31.09	29.39	1.22	7.28	1.68
Reach-1	32883	10_Yr	6389.07	86.94	1538.31	422.15	149.68	0.81	4.47	1.21
Reach-1	32883	50_Yr	6391.38	590.91	2404.60	1971.69	209.81	2.12	6.59	2.87
Reach-1	32883	100_Yr	6392.26	970.71	2884.19	3040.30	220.23	2.90	8.02	4.04
Reach-1	32883	24hr_100_yr_SCS	6393.65	1853.40	3800.35	5336.75	237.37	4.45	10.94	6.47
Reach-1	32710	2_Yr	6381.75	76.17	563.91	79.72	146.17	0.79	1.53	0.78
Reach-1	32710	5_Yr	6383.95	574.24	601.23	141.13	217.60	0.26	0.85	0.33
Reach-1	32710	10_Yr	6384.61	1008.09	819.95	219.36	221.65	0.47	1.32	0.52
Reach-1	32710	50_Yr	6386.43	2917.74	1537.75	511.72	245.27	1.39	3.01	1.00
Reach-1	32710	100_Yr	6387.26	4200.86	1940.45	753.90	254.55	2.00	4.02	1.35
Reach-1	32710	24hr_100_yr_SCS	6388.80	6929.79	2670.35	1390.36	264.24	3.13	5.70	2.13
Reach-1	32683		Bridge							
Reach-1	32670	2_Yr	6380.73	52.85	604.61	62.34	75.15	0.37	2.59	0.98
Reach-1	32670	5_Yr	6382.01	361.53	822.71	132.36	192.34	0.55	2.86	1.41
Reach-1	32670	10_Yr	6382.73	812.55	1044.68	190.17	196.90	0.98	3.60	1.33
Reach-1	32670	50_Yr	6384.70	2783.78	1711.16	472.27	209.42	2.31	5.47	2.14
Reach-1	32670	100_Yr	6385.66	4175.42	2113.69	606.09	228.63	3.13	6.61	2.07
Reach-1	32670	24hr_100_yr_SCS	6387.35	6980.32	2792.56	1217.62	235.61	4.33	8.04	3.07
Reach-1	32669	2_Yr	6381.05	269.42	375.30	75.08	188.21	0.24	0.91	0.46
Reach-1	32669	5_Yr	6382.29	703.55	493.32	119.74	194.96	0.39	0.96	0.43
Reach-1	32669	10_Yr	6383.01	1194.87	668.07	184.45	198.89	0.64	1.39	0.63
Reach-1	32669	50_Yr	6384.97	3262.83	1264.88	439.48	212.72	1.61	2.87	1.21
Reach-1	32669	100_Yr	6385.93	4681.21	1620.40	593.60	229.83	2.23	3.73	1.33
Reach-1	32669	24hr_100_yr_SCS	6387.60	7565.24	2272.66	1152.59	238.68	3.32	5.16	2.09
Reach-1	32665		Bridge							
Reach-1	32662	2_Yr	6381.05	373.98	287.83	57.98	186.01	0.20	0.53	0.28
Reach-1	32662	5_Yr	6382.29	815.29	403.41	97.90	192.77	0.32	0.65	0.29
Reach-1	32662	10_Yr	6383.01	1330.42	561.92	155.06	196.70	0.53	0.98	0.45
Reach-1	32662	50_Yr	6384.94	3458.49	1117.81	390.90	209.86	1.40	2.25	0.97
Reach-1	32662	100_Yr	6385.88	4925.73	1463.11	506.36	231.17	2.01	3.08	1.02
Reach-1	32662	24hr_100_yr_SCS	6387.51	7878.77	2098.57	1013.17	249.03	3.08	4.48	1.58
Reach-1	32593	2_Yr	6381.01	297.24	349.03	73.53	166.99	0.10	0.26	0.08
Reach-1	32593	5_Yr	6382.22	627.22	523.29	166.09	186.55	0.18	0.40	0.12
Reach-1	32593	10_Yr	6382.91	1013.14	739.70	294.56	199.89	0.33	0.67	0.20
Reach-1	32593	50_Yr	6384.74	2587.35	1467.03	912.82	233.73	0.96	1.72	0.53
Reach-1	32593	100_Yr	6385.63	3619.82	1881.08	1394.30	242.86	1.37	2.35	0.79
Reach-1	32593	24hr_100_yr_SCS	6387.19	5778.31	2671.16	2541.03	250.23	2.20	3.56	1.40
Reach-1	32574		Bridge							
Reach-1	32557	2_Yr	6380.96	243.88	334.19	141.73	188.80	0.08	0.21	0.06
Reach-1	32557	5_Yr	6382.17	496.93	509.91	309.76	231.72	0.16	0.34	0.10
Reach-1	32557	10_Yr	6382.83	782.07	713.82	551.52	239.87	0.27	0.57	0.18
Reach-1	32557	50_Yr	6384.61	1911.97	1384.83	1670.40	264.75	0.78	1.43	0.55
Reach-1	32557	100_Yr	6385.51	2625.13	1750.31	2519.76	268.11	1.08	1.92	0.81
Reach-1	32557	24hr_100_yr_SCS	6387.06	4114.80	2452.12	4423.58	273.95	1.69	2.84	1.35
Reach-1	32535	2_Yr	6380.96	257.15	193.19	269.46	205.76	0.09	0.21	0.07
Reach-1	32535	5_Yr	6382.16	501.43	287.93	527.24	263.29	0.16	0.33	0.11
Reach-1	32535	10_Yr	6382.83	765.09	394.04	888.28	271.68	0.27	0.53	0.19
Reach-1	32535	50_Yr	6384.62	1751.51	730.04	2485.64	281.24	0.70	1.25	0.55
Reach-1	32535	100_Yr	6385.52	2375.76	916.27	3603.17	283.81	0.97	1.66	0.79
Reach-1	32535	24hr_100_yr_SCS	6387.08	3675.26	1272.56	6042.69	288.17	1.50	2.45	1.30

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	32493		Bridge							
Reach-1	32443	2_Yr	6377.01	65.19	499.85	154.76	46.27	1.58	5.37	2.56
Reach-1	32443	5_Yr	6378.95	271.63	624.89	420.08	186.51	1.39	3.70	0.71
Reach-1	32443	10_Yr	6379.55	407.54	779.81	860.05	199.84	1.90	4.68	1.15
Reach-1	32443	50_Yr	6381.07	839.26	1275.66	2852.28	238.60	2.97	8.01	2.78
Reach-1	32443	100_Yr	6381.77	1168.11	1533.71	4193.38	255.49	3.65	9.64	3.64
Reach-1	32443	24hr_100_yr_SCS	6382.95	1949.31	1966.88	7074.31	269.32	5.24	12.04	5.16
Reach-1	32281	2_Yr	6372.09	0.41	715.77	3.62	36.57	0.22	2.71	0.31
Reach-1	32281	5_Yr	6373.49	11.07	1195.85	109.67	135.84	0.71	3.44	0.47
Reach-1	32281	10_Yr	6374.50	30.49	1487.02	529.89	182.69	0.88	3.44	0.87
Reach-1	32281	50_Yr	6376.37	121.40	2490.00	2355.80	190.58	1.60	5.08	2.29
Reach-1	32281	100_Yr	6377.65	211.38	2931.61	3752.21	195.76	1.71	4.93	2.64
Reach-1	32281	24hr_100_yr_SCS	6379.99	451.31	3832.27	6706.93	204.60	1.93	4.93	3.13
Reach-1	31997	2_Yr	6365.78		719.80		24.31		4.99	
Reach-1	31997	5_Yr	6367.39		1314.80	1.80	31.97		5.85	0.64
Reach-1	31997	10_Yr	6369.42	1.16	1839.12	207.11	114.22	0.37	4.34	0.82
Reach-1	31997	50_Yr	6371.78	15.22	3372.91	1579.07	129.55	1.04	6.67	2.66
Reach-1	31997	100_Yr	6372.88	31.12	4260.77	2603.31	134.81	1.35	7.98	3.60
Reach-1	31997	24hr_100_yr_SCS	6374.66	88.89	6035.11	4866.50	142.57	2.16	10.67	5.43
Reach-1	31560	2_Yr	6355.83		719.77	0.03	29.42		2.30	0.09
Reach-1	31560	5_Yr	6356.84	0.00	1315.35	1.25	31.70		4.33	0.56
Reach-1	31560	10_Yr	6357.67	2.86	2039.38	5.17	37.67	0.64	7.00	1.22
Reach-1	31560	50_Yr	6361.82	216.00	3565.80	1185.40	215.07	1.66	5.53	1.75
Reach-1	31560	100_Yr	6362.80	366.33	4426.79	2102.09	222.49	2.20	6.77	2.64
Reach-1	31560	24hr_100_yr_SCS	6364.38	744.17	6080.62	4165.71	234.52	3.27	9.17	4.41
Reach-1	31469	2_Yr	6355.05	171.38	521.97	26.45	120.17	0.55	2.22	0.85
Reach-1	31469	5_Yr	6355.72	433.47	832.75	50.37	141.87	1.22	4.16	1.61
Reach-1	31469	10_Yr	6356.73	925.78	1048.18	73.44	250.79	1.46	4.42	1.47
Reach-1	31469	50_Yr	6358.82	2722.01	1579.14	666.06	319.32	2.55	5.20	1.25
Reach-1	31469	100_Yr	6359.78	3781.91	1865.79	1247.51	322.81	3.04	5.65	1.77
Reach-1	31469	24hr_100_yr_SCS	6361.35	5963.91	2454.43	2572.17	325.18	4.08	6.84	2.77
Reach-1	31443		Bridge							
Reach-1	31414	2_Yr	6353.24	177.36	542.35	0.09	114.79	0.48	2.31	0.04
Reach-1	31414	5_Yr	6354.93	648.24	654.99	13.37	248.92	0.51	1.67	0.10
Reach-1	31414	10_Yr	6355.25	1061.78	939.91	45.71	256.55	1.04	3.07	0.29
Reach-1	31414	50_Yr	6357.55	2961.83	1461.18	544.20	302.56	1.87	3.77	0.92
Reach-1	31414	100_Yr	6358.57	4121.99	1765.73	1007.48	309.76	2.34	4.30	1.30
Reach-1	31414	24hr_100_yr_SCS	6360.36	6506.58	2347.13	2136.79	322.54	3.00	5.21	2.03
Reach-1	31245	2_Yr	6349.78		719.80		24.31		4.99	
Reach-1	31245	5_Yr	6351.33		1316.60		31.07		6.08	
Reach-1	31245	10_Yr	6353.11	414.97	1613.68	18.75	185.05	1.04	3.63	0.40
Reach-1	31245	50_Yr	6354.88	1817.73	2845.85	303.62	240.37	2.69	5.71	1.36
Reach-1	31245	100_Yr	6355.69	2766.60	3497.77	630.82	250.83	3.51	6.68	2.07
Reach-1	31245	24hr_100_yr_SCS	6356.92	4791.97	4775.23	1423.30	254.54	5.35	8.88	3.60
Reach-1	31168	2_Yr	6349.05	56.51	618.75	44.55	61.99	0.68	1.89	0.64
Reach-1	31168	5_Yr	6350.94	234.96	937.36	144.28	140.33	0.45	1.85	0.79
Reach-1	31168	10_Yr	6352.48	658.09	1167.65	221.66	245.46	0.58	1.71	0.34
Reach-1	31168	50_Yr	6353.59	1833.55	2275.16	858.50	256.56	1.93	4.75	1.36
Reach-1	31168	100_Yr	6354.41	2651.26	2795.55	1448.39	265.37	2.53	5.83	2.01
Reach-1	31168	24hr_100_yr_SCS	6355.43	4389.34	3923.95	2677.21	276.56	4.15	9.08	3.67
Reach-1	31154		Bridge							
Reach-1	31136	2_Yr	6346.94	24.25	689.16	6.39	31.19	1.86	4.61	0.95
Reach-1	31136	5_Yr	6348.48	62.87	1209.51	44.22	44.17	2.04	5.69	1.69
Reach-1	31136	10_Yr	6350.06	364.33	1576.42	106.65	170.99	0.84	4.96	1.72
Reach-1	31136	50_Yr	6352.56	2080.55	2361.26	525.40	323.86	1.86	5.11	0.93
Reach-1	31136	100_Yr	6353.24	3030.75	2862.40	1002.06	332.66	2.54	6.33	1.48
Reach-1	31136	24hr_100_yr_SCS	6354.90	5132.78	3503.01	2354.71	344.34	3.11	6.51	2.20
Reach-1	30979	2_Yr	6342.46	21.90	666.64	31.26	31.02	0.78	2.32	0.78
Reach-1	30979	5_Yr	6348.83	349.83	845.17	121.60	301.90	0.12	0.59	0.10
Reach-1	30979	10_Yr	6349.43	651.74	1180.66	215.00	330.79	0.25	1.02	0.17
Reach-1	30979	50_Yr	6350.99	1987.01	2183.99	796.20	386.00	0.87	2.64	0.55



HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	30979	100_Yr	6351.79	2889.76	2665.00	1340.44	386.79	1.26	3.45	0.86
Reach-1	30979	24hr_100_yr_SCS	6354.49	4969.77	3080.74	2939.99	389.48	1.43	3.10	1.13
Reach-1	30961		Bridge							
Reach-1	30941	2_Yr	6340.90	44.60	644.07	31.13	27.91	1.91	4.69	1.68
Reach-1	30941	5_Yr	6342.93	139.00	1074.36	103.24	38.32	2.85	4.80	2.45
Reach-1	30941	10_Yr	6345.47	210.27	1558.03	279.09	123.18	0.54	4.33	1.59
Reach-1	30941	50_Yr	6348.35	2121.22	2300.65	545.33	288.06	1.25	4.74	0.69
Reach-1	30941	100_Yr	6350.58	3607.07	2058.75	1229.38	328.57	0.94	2.49	0.62
Reach-1	30941	24hr_100_yr_SCS	6354.31	6263.91	2140.64	2585.95	340.60	0.77	1.52	0.58
Reach-1	30790	2_Yr	6338.88	0.21	719.58	0.00	35.13	0.04	1.15	0.02
Reach-1	30790	5_Yr	6343.26	262.39	1042.49	11.72	113.12	0.17	0.51	0.06
Reach-1	30790	10_Yr	6345.95	658.45	1194.54	194.41	287.10	0.14	0.36	0.06
Reach-1	30790	50_Yr	6348.19	1845.38	2101.56	1020.27	323.39	0.36	0.74	0.21
Reach-1	30790	100_Yr	6350.57	2637.00	2260.94	1997.26	340.95	0.34	0.59	0.23
Reach-1	30790	24hr_100_yr_SCS	6354.27	4186.44	2762.90	4041.17	352.06	0.35	0.55	0.28
Reach-1	30687	2_Yr	6338.08	62.81	607.47	49.52	33.65	0.64	1.84	0.69
Reach-1	30687	5_Yr	6343.12	440.44	771.81	104.35	168.34	0.26	0.66	0.07
Reach-1	30687	10_Yr	6345.90	656.03	758.36	633.01	267.39	0.14	0.37	0.09
Reach-1	30687	50_Yr	6348.11	1458.85	1369.71	2138.65	281.81	0.34	0.84	0.28
Reach-1	30687	100_Yr	6350.49	1877.05	1517.64	3500.51	295.90	0.29	0.74	0.30
Reach-1	30687	24hr_100_yr_SCS	6354.19	2838.70	1909.78	6242.01	334.34	0.27	0.76	0.38
Reach-1	30667		Bridge							
Reach-1	30646	2_Yr	6336.30	35.27	659.42	25.11	26.04	1.78	4.97	1.51
Reach-1	30646	5_Yr	6342.11	395.35	769.97	151.28	117.14	0.34	0.80	0.31
Reach-1	30646	10_Yr	6345.76	593.15	768.46	685.79	241.00	0.12	0.38	0.10
Reach-1	30646	50_Yr	6347.89	1371.68	1440.01	2155.51	254.60	0.32	0.94	0.35
Reach-1	30646	100_Yr	6350.35	1872.04	1614.08	3409.08	265.93	0.31	0.84	0.37
Reach-1	30646	24hr_100_yr_SCS	6354.06	2994.58	2067.72	5928.21	330.04	0.28	0.89	0.46
Reach-1	30572	2_Yr	6334.66	105.45	636.23	42.32	37.72	1.06	1.92	0.60
Reach-1	30572	5_Yr	6342.05	341.00	971.03	164.27	144.42	0.26	0.61	0.10
Reach-1	30572	10_Yr	6345.67	524.91	1122.42	695.87	194.71	0.15	0.46	0.14
Reach-1	30572	50_Yr	6347.45	1310.54	2475.03	2117.63	224.40	0.47	1.76	0.63
Reach-1	30572	100_Yr	6349.89	1886.42	2962.81	3427.77	289.71	0.41	1.89	0.79
Reach-1	30572	24hr_100_yr_SCS	6353.54	3812.11	3973.32	6217.07	311.94	0.66	2.33	1.13
Reach-1	30552		Bridge							
Reach-1	30539	2_Yr	6333.39	158.40	587.27	38.34	46.71	0.88	1.59	0.50
Reach-1	30539	5_Yr	6336.83	368.56	949.24	158.50	66.41	0.70	1.35	0.58
Reach-1	30539	10_Yr	6339.93	672.48	1335.77	334.95	113.88	0.49	1.34	0.74
Reach-1	30539	50_Yr	6347.39	2189.50	1935.11	1778.59	263.40	0.33	0.92	0.33
Reach-1	30539	100_Yr	6349.88	3104.95	2345.61	2826.45	331.97	0.31	1.02	0.42
Reach-1	30539	24hr_100_yr_SCS	6353.53	5646.76	3247.71	5108.03	357.60	0.48	1.37	0.65
Reach-1	30534	2_Yr	6333.49	0.07	779.00	4.93	54.87	0.03	0.70	0.12
Reach-1	30534	5_Yr	6336.93	37.84	1350.63	87.83	98.77	0.15	0.55	0.24
Reach-1	30534	10_Yr	6340.02	141.07	1980.67	221.47	215.75	0.27	0.54	0.33
Reach-1	30534	50_Yr	6347.45	1741.91	2907.05	1254.24	331.69	0.14	0.35	0.16
Reach-1	30534	100_Yr	6349.93	2610.71	3711.06	1955.24	449.42	0.13	0.42	0.22
Reach-1	30534	24hr_100_yr_SCS	6353.60	5478.46	5198.35	3325.69	521.27	0.20	0.56	0.33
Reach-1	30439		Culvert							
Reach-1	30343	2_Yr	6330.24		778.20	5.80	48.50		3.68	0.92
Reach-1	30343	5_Yr	6335.06	34.12	1320.24	121.94	112.70	0.10	0.63	0.27
Reach-1	30343	10_Yr	6336.63	159.10	1945.08	239.02	152.29	0.18	0.83	0.36
Reach-1	30343	50_Yr	6337.67	613.30	4622.87	667.03	178.60	0.90	3.57	1.57
Reach-1	30343	100_Yr	6339.00	1295.84	5954.05	1027.11	201.70	1.34	4.34	1.92
Reach-1	30343	24hr_100_yr_SCS	6341.46	3414.42	9018.10	1569.98	300.85	2.36	6.12	1.51
Reach-1	30251	2_Yr	6330.14	13.77	754.68	15.55	45.32	0.12	0.56	0.16
Reach-1	30251	5_Yr	6335.02	259.75	1187.95	28.60	113.09	0.10	0.38	0.09
Reach-1	30251	10_Yr	6336.57	587.27	1715.18	40.75	139.55	0.17	0.60	0.13
Reach-1	30251	50_Yr	6337.31	1689.34	4116.94	96.92	152.36	0.92	3.02	0.61
Reach-1	30251	100_Yr	6338.46	2761.92	5390.27	124.80	183.76	1.29	4.29	0.82
Reach-1	30251	24hr_100_yr_SCS	6340.86	6157.76	7625.88	218.87	259.71	2.15	6.07	0.51

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	30172	2_Yr	6329.46	74.90	594.17	114.93	43.07	0.54	1.81	0.63
Reach-1	30172	5_Yr	6335.02	597.14	481.62	397.54	226.02	0.09	0.31	0.11
Reach-1	30172	10_Yr	6336.59	1085.20	619.95	638.05	278.15	0.13	0.39	0.14
Reach-1	30172	50_Yr	6337.49	2869.55	1398.54	1635.11	310.88	0.59	1.71	0.62
Reach-1	30172	100_Yr	6338.81	4272.29	1641.37	2363.34	337.57	0.74	1.94	0.76
Reach-1	30172	24hr_100_yr_SCS	6341.41	7590.41	2071.71	4340.38	400.87	0.95	2.19	0.85
Reach-1	30162	Bridge								
Reach-1	30152	2_Yr	6327.26	28.91	705.96	49.14	25.57	1.11	5.33	1.82
Reach-1	30152	5_Yr	6334.79	499.29	607.22	369.79	212.10	0.11	0.48	0.14
Reach-1	30152	10_Yr	6336.49	930.01	730.04	683.14	261.48	0.15	0.52	0.17
Reach-1	30152	50_Yr	6336.98	2410.04	1702.39	1790.76	278.96	0.76	2.62	0.82
Reach-1	30152	100_Yr	6338.44	3597.92	1953.04	2726.04	318.18	0.88	2.78	0.94
Reach-1	30152	24hr_100_yr_SCS	6341.11	6689.91	2444.24	4868.35	371.00	1.15	3.06	1.12
Reach-1	30085	2_Yr	6326.56	10.74	640.33	132.93	65.86	0.05	0.32	0.13
Reach-1	30085	5_Yr	6334.83	249.06	662.70	564.54	345.29	0.02	0.08	0.03
Reach-1	30085	10_Yr	6336.51	491.68	903.55	947.97	378.68	0.03	0.12	0.05
Reach-1	30085	50_Yr	6337.10	1323.60	2171.67	2407.93	398.47	0.18	0.67	0.25
Reach-1	30085	100_Yr	6338.52	2083.00	2717.70	3476.30	442.35	0.27	0.90	0.31
Reach-1	30085	24hr_100_yr_SCS	6341.16	3936.94	3775.69	6289.87	488.76	0.46	1.33	0.49
Reach-1	30084	2_Yr	6325.98	2.40	703.22	78.38	39.73	0.21	1.51	0.82
Reach-1	30084	5_Yr	6334.69	103.25	999.48	373.57	233.54	0.05	0.33	0.09
Reach-1	30084	10_Yr	6336.35	265.55	1328.92	748.73	294.48	0.08	0.45	0.13
Reach-1	30084	50_Yr	6335.55	545.74	3643.63	1713.83	264.92	0.66	3.84	1.11
Reach-1	30084	100_Yr	6336.41	948.89	4669.21	2658.91	296.36	1.04	5.55	1.64
Reach-1	30084	24hr_100_yr_SCS	6339.51	2639.14	5785.58	5577.78	361.97	1.31	5.62	2.17
Reach-1	30063	Bridge								
Reach-1	30036	2_Yr	6324.53	2.64	701.52	79.83	40.58	0.20	1.41	0.81
Reach-1	30036	5_Yr	6329.89	41.79	1060.41	374.10	165.83	0.09	0.68	0.18
Reach-1	30036	10_Yr	6331.17	114.39	1478.32	750.49	208.79	0.15	1.02	0.33
Reach-1	30036	50_Yr	6334.43	795.96	2656.58	2450.66	329.07	0.47	1.90	0.64
Reach-1	30036	100_Yr	6336.10	1413.94	3137.04	3726.03	356.69	0.65	2.09	0.77
Reach-1	30036	24hr_100_yr_SCS	6339.54	2881.00	4002.27	7119.23	410.36	0.78	2.22	1.00
Reach-1	29939	2_Yr	6324.18	13.78	746.34	23.87	42.38	0.45	1.18	0.33
Reach-1	29939	5_Yr	6329.88	48.08	934.07	494.15	167.03	0.25	0.35	0.12
Reach-1	29939	10_Yr	6331.17	179.82	1254.55	908.83	176.89	0.21	0.49	0.19
Reach-1	29939	50_Yr	6334.35	479.64	2587.71	2835.86	253.67	0.49	1.24	0.49
Reach-1	29939	100_Yr	6335.98	720.69	3226.69	4329.62	280.10	0.64	1.53	0.64
Reach-1	29939	24hr_100_yr_SCS	6339.39	1266.31	4313.32	8422.87	292.54	0.82	1.80	0.91
Reach-1	29893	Culvert								
Reach-1	29852	2_Yr	6322.94	14.11	689.03	80.85	79.57	0.50	2.42	1.37
Reach-1	29852	5_Yr	6328.81	123.74	589.36	763.20	160.31	0.13	0.27	0.14
Reach-1	29852	10_Yr	6330.06	211.61	863.63	1267.96	179.80	0.22	0.44	0.23
Reach-1	29852	50_Yr	6333.99	573.70	1698.34	3631.17	214.65	0.46	0.87	0.51
Reach-1	29852	100_Yr	6335.79	820.14	2190.56	5266.30	230.02	0.60	1.12	0.67
Reach-1	29852	24hr_100_yr_SCS	6339.17	1449.33	3338.66	9214.51	276.90	0.90	1.73	0.99
Reach-1	29783	2_Yr	6322.88	95.56	655.59	32.85	72.10	0.23	1.00	0.19
Reach-1	29783	5_Yr	6328.75	444.19	676.25	355.86	160.37	0.13	0.32	0.09
Reach-1	29783	10_Yr	6329.97	733.30	962.04	647.86	178.31	0.24	0.54	0.16
Reach-1	29783	50_Yr	6333.85	1863.95	1783.73	2255.52	214.85	0.56	1.12	0.40
Reach-1	29783	100_Yr	6335.62	2597.71	2240.30	3438.99	229.11	0.76	1.44	0.56
Reach-1	29783	24hr_100_yr_SCS	6338.95	4401.18	3278.51	6322.81	278.35	1.22	2.20	0.83
Reach-1	29769	Bridge								
Reach-1	29743	2_Yr	6321.53	11.76	754.13	18.11	60.32	0.19	1.61	0.25
Reach-1	29743	5_Yr	6323.61	293.83	1114.28	68.19	94.84	0.42	2.05	0.35
Reach-1	29743	10_Yr	6325.85	775.24	1365.78	202.19	139.79	0.56	1.93	0.35
Reach-1	29743	50_Yr	6330.33	2526.25	2214.09	1162.86	195.36	1.05	2.46	0.65
Reach-1	29743	100_Yr	6332.20	3585.85	2666.85	2024.30	202.23	1.30	2.79	0.88
Reach-1	29743	24hr_100_yr_SCS	6335.55	6301.09	3827.15	3874.26	253.82	2.02	3.91	1.17
Reach-1	29729	2_Yr	6320.41	1.47	782.36	0.17	24.52	0.20	4.55	0.20

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	29729	5_Yr	6323.27	366.30	1034.02	75.98	86.28	1.46	3.52	1.19
Reach-1	29729	10_Yr	6325.85	1020.81	1071.86	250.54	118.35	1.46	2.18	0.97
Reach-1	29729	50_Yr	6330.38	2986.40	1561.37	1355.43	209.75	1.82	2.23	1.17
Reach-1	29729	100_Yr	6332.28	4194.62	1764.46	2317.92	220.08	2.03	2.22	1.43
Reach-1	29729	24hr_100_yr_SCS	6335.69	7296.31	2340.29	4365.91	278.16	2.76	2.64	1.61
Reach-1	29610		Culvert							
Reach-1	29500	2_Yr	6317.28		784.00		12.89		5.56	
Reach-1	29500	5_Yr	6319.85	108.72	1341.89	25.69	160.66	3.12	6.88	1.60
Reach-1	29500	10_Yr	6321.49	1169.56	1093.04	80.60	171.10	1.55	2.98	1.23
Reach-1	29500	50_Yr	6323.94	3815.17	1784.03	303.99	191.27	3.66	4.73	1.93
Reach-1	29500	100_Yr	6325.20	5647.23	2157.64	472.13	227.85	4.76	5.50	1.71
Reach-1	29500	24hr_100_yr_SCS	6327.64	9501.35	2792.58	1708.57	340.04	6.24	6.27	2.04
Reach-1	29371	2_Yr	6315.98	4.64	774.61	4.75	21.84	0.29	2.72	0.30
Reach-1	29371	5_Yr	6318.51	48.32	1385.73	42.25	251.61	0.78	3.97	0.76
Reach-1	29371	10_Yr	6321.13	1135.20	1123.12	84.88	274.59	0.40	1.42	0.44
Reach-1	29371	50_Yr	6323.19	3640.45	2081.78	180.97	291.26	1.29	3.33	0.77
Reach-1	29371	100_Yr	6324.37	5481.78	2569.77	225.45	346.90	1.81	4.17	0.53
Reach-1	29371	24hr_100_yr_SCS	6326.73	9606.18	3524.26	872.05	419.44	2.67	5.55	0.98
Reach-1	29332		Bridge							
Reach-1	29296	2_Yr	6313.04	3.19	778.67	2.14	16.67	0.76	6.08	0.64
Reach-1	29296	5_Yr	6315.66	16.52	1443.62	16.15	28.78	0.85	7.16	0.96
Reach-1	29296	10_Yr	6318.98	690.41	1563.81	88.98	274.47	0.59	3.45	0.88
Reach-1	29296	50_Yr	6320.97	3029.03	2632.93	241.24	289.59	1.94	6.51	2.22
Reach-1	29296	100_Yr	6321.83	4699.84	3237.76	339.40	296.09	2.85	8.42	3.12
Reach-1	29296	24hr_100_yr_SCS	6323.30	8847.63	4574.42	580.45	309.35	5.16	13.15	4.18
Reach-1	29063	2_Yr	6308.52	1.10	782.66	0.24	32.64	0.40	3.39	0.22
Reach-1	29063	5_Yr	6309.79	17.43	1433.94	24.93	56.93	1.25	5.41	0.92
Reach-1	29063	10_Yr	6311.36	75.36	2105.25	162.59	84.42	1.83	5.90	1.62
Reach-1	29063	50_Yr	6315.01	403.45	4020.68	1479.07	182.12	2.38	7.31	2.78
Reach-1	29063	100_Yr	6316.44	730.18	5012.96	2533.86	206.29	2.94	8.29	3.57
Reach-1	29063	24hr_100_yr_SCS	6318.73	1653.38	7226.75	5122.37	237.25	4.73	11.20	5.36
Reach-1	28803	2_Yr	6302.35		783.98	0.02	32.36		4.47	0.12
Reach-1	28803	5_Yr	6303.88	36.26	1430.09	9.95	51.02	1.35	5.13	1.34
Reach-1	28803	10_Yr	6305.25	139.17	2171.91	32.12	58.35	2.28	6.09	2.00
Reach-1	28803	50_Yr	6309.66	699.27	4269.64	934.29	216.08	2.48	5.98	1.43
Reach-1	28803	100_Yr	6310.92	1085.37	5298.86	1892.77	227.91	3.04	6.97	2.20
Reach-1	28803	24hr_100_yr_SCS	6312.95	2109.18	7615.91	4277.40	242.51	4.82	9.75	3.85
Reach-1	28530	2_Yr	6298.00	0.01	781.86	2.13	34.94	0.02	1.48	0.24
Reach-1	28530	5_Yr	6300.43	113.87	1331.63	30.80	173.35	0.23	1.58	0.47
Reach-1	28530	10_Yr	6301.97	570.09	1709.66	63.45	180.34	0.51	1.63	0.60
Reach-1	28530	50_Yr	6304.91	2435.14	3125.70	342.35	302.70	1.39	2.72	0.42
Reach-1	28530	100_Yr	6306.09	3598.87	3888.25	789.89	306.86	1.88	3.34	0.78
Reach-1	28530	24hr_100_yr_SCS	6308.47	6374.60	5439.20	2188.70	314.94	2.78	4.36	1.49
Reach-1	28424	2_Yr	6297.77	114.54	627.53	41.93	40.29	0.60	0.86	0.32
Reach-1	28424	5_Yr	6300.38	530.18	860.64	85.47	223.10	0.20	0.78	0.30
Reach-1	28424	10_Yr	6301.90	1160.40	1107.44	75.36	283.06	0.32	0.92	0.12
Reach-1	28424	50_Yr	6304.84	3326.62	1882.43	694.16	384.98	0.72	1.54	0.33
Reach-1	28424	100_Yr	6306.02	4674.37	2322.23	1280.40	391.41	0.97	1.95	0.53
Reach-1	28424	24hr_100_yr_SCS	6308.40	7869.15	3214.33	2919.01	403.77	1.46	2.67	0.95
Reach-1	28397		Culvert							
Reach-1	28356	2_Yr	6294.69	67.93	697.34	18.73	35.44	2.00	4.68	1.58
Reach-1	28356	5_Yr	6296.25	188.40	1231.48	56.42	37.82	3.42	6.50	2.36
Reach-1	28356	10_Yr	6297.82	339.30	1881.13	122.77	102.03	4.56	8.34	3.14
Reach-1	28356	50_Yr	6301.68	2964.91	2747.37	190.92	329.56	1.94	6.32	0.89
Reach-1	28356	100_Yr	6302.69	4631.55	3250.63	394.83	395.19	2.54	7.17	0.96
Reach-1	28356	24hr_100_yr_SCS	6305.48	8468.34	3661.76	1872.40	474.21	2.55	5.54	1.33
Reach-1	28063	2_Yr	6291.67	0.90	781.70	1.40	36.17	0.09	1.06	0.16
Reach-1	28063	5_Yr	6294.39	39.27	1425.85	11.18	110.02	0.14	1.32	0.28
Reach-1	28063	10_Yr	6295.47	220.17	2099.06	23.96	152.15	0.38	2.13	0.45
Reach-1	28063	50_Yr	6300.43	2845.56	2947.85	109.80	380.28	0.57	1.51	0.24
Reach-1	28063	100_Yr	6302.18	4587.84	3416.45	272.71	439.20	0.69	1.54	0.25

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	28063	24hr_100_yr_SCS	6304.83	8468.72	4573.72	960.06	466.42	1.03	1.92	0.51
Reach-1	27888	2_Yr	6291.42	2.73	768.11	13.16	54.26	0.04	0.54	0.11
Reach-1	27888	5_Yr	6294.23	203.76	1227.80	44.74	285.79	0.08	0.70	0.22
Reach-1	27888	10_Yr	6295.31	621.11	1651.51	70.58	312.77	0.19	1.01	0.35
Reach-1	27888	50_Yr	6300.32	3334.00	2255.05	314.15	417.25	0.35	0.85	0.14
Reach-1	27888	100_Yr	6302.05	4890.63	2712.06	674.31	435.50	0.45	0.98	0.22
Reach-1	27888	24hr_100_yr_SCS	6304.64	8522.83	3826.68	1652.99	454.53	0.75	1.44	0.42
Reach-1	27859		Bridge							
Reach-1	27823	2_Yr	6288.33	1.67	1136.72	16.81	27.48	0.16	2.45	0.66
Reach-1	27823	5_Yr	6290.42	4.86	2069.02	39.83	31.82	0.26	4.06	1.09
Reach-1	27823	10_Yr	6292.20	22.30	3176.11	76.90	116.09	0.20	6.04	1.86
Reach-1	27823	50_Yr	6299.65	3529.55	4012.48	351.37	352.33	0.89	2.61	0.32
Reach-1	27823	100_Yr	6301.34	5196.76	4764.51	926.43	368.47	1.13	2.97	0.56
Reach-1	27823	24hr_100_yr_SCS	6303.89	8290.60	6041.15	2264.75	380.93	1.52	3.56	0.95
Reach-1	27590	2_Yr	6284.41		1155.13	0.07	29.74		5.60	0.31
Reach-1	27590	5_Yr	6286.30	1.06	2107.22	5.42	35.66	0.68	7.04	1.40
Reach-1	27590	10_Yr	6288.16	16.80	3234.09	24.41	42.69	1.72	8.32	2.21
Reach-1	27590	50_Yr	6294.47	747.85	6941.96	203.59	215.99	2.50	8.93	2.90
Reach-1	27590	100_Yr	6296.03	2219.43	8372.08	296.19	235.33	3.10	10.07	3.05
Reach-1	27590	24hr_100_yr_SCS	6299.64	5161.60	10402.77	1032.13	390.72	3.63	9.44	2.01
Reach-1	27234	2_Yr	6277.80	60.43	1086.77	8.00	60.16	0.43	1.22	0.27
Reach-1	27234	5_Yr	6279.81	257.07	1820.13	36.50	102.58	0.56	1.72	0.50
Reach-1	27234	10_Yr	6281.37	612.23	2580.65	82.42	119.53	0.82	2.27	0.73
Reach-1	27234	50_Yr	6284.96	2464.35	5107.48	321.57	198.41	1.50	4.18	1.50
Reach-1	27234	100_Yr	6286.31	3814.14	6569.28	504.28	214.10	2.12	5.50	2.07
Reach-1	27234	24hr_100_yr_SCS	6288.36	6587.76	9113.30	895.45	237.27	3.20	7.75	3.10
Reach-1	27099	2_Yr	6275.90		1148.30	6.90	40.56		3.95	0.55
Reach-1	27099	5_Yr	6277.60	66.70	1951.28	95.72	91.16	0.95	5.12	1.62
Reach-1	27099	10_Yr	6278.97	287.30	2737.57	250.43	106.57	1.73	6.16	2.62
Reach-1	27099	50_Yr	6282.55	1893.79	5088.12	911.48	201.91	2.64	8.27	4.45
Reach-1	27099	100_Yr	6284.14	3334.07	6240.38	1313.24	237.01	3.17	9.02	5.03
Reach-1	27099	24hr_100_yr_SCS	6285.96	6167.36	8391.49	2037.65	243.09	5.06	11.83	6.74
Reach-1	26960	2_Yr	6274.15	2.80	1149.22	3.18	64.99	0.12	2.98	0.52
Reach-1	26960	5_Yr	6275.78	285.76	1797.30	30.64	192.17	0.68	3.62	0.73
Reach-1	26960	10_Yr	6276.71	861.41	2333.09	80.80	210.65	1.28	4.41	1.19
Reach-1	26960	50_Yr	6278.84	3561.99	4000.29	331.13	267.51	2.89	7.09	2.77
Reach-1	26960	100_Yr	6279.80	5485.56	4894.26	507.88	281.88	3.82	8.46	3.64
Reach-1	26960	24hr_100_yr_SCS	6281.19	9293.20	6453.48	849.82	312.80	5.27	10.94	5.14
Reach-1	26504	2_Yr	6264.85	23.57	1114.64	16.99	34.00	2.61	8.35	1.54
Reach-1	26504	5_Yr	6267.35	580.31	1390.32	143.08	288.06	1.02	4.92	1.38
Reach-1	26504	10_Yr	6268.78	1491.28	1501.03	282.99	305.91	1.33	3.79	1.30
Reach-1	26504	50_Yr	6270.43	4386.66	2700.15	806.59	318.98	3.81	8.21	3.36
Reach-1	26504	100_Yr	6271.89	6546.63	3106.97	1234.11	327.33	4.31	8.02	3.71
Reach-1	26504	24hr_100_yr_SCS	6274.21	10649.49	3870.77	2076.24	340.02	5.09	8.21	4.24
Reach-1	26065	2_Yr	6263.90	493.97	559.41	101.82	264.56	0.13	0.32	0.17
Reach-1	26065	5_Yr	6264.62	987.40	938.45	187.84	284.42	0.32	0.73	0.40
Reach-1	26065	10_Yr	6268.59	2024.56	1036.50	214.24	388.12	0.20	0.34	0.10
Reach-1	26065	50_Yr	6268.37	4861.39	2545.79	486.22	386.11	1.22	2.17	0.58
Reach-1	26065	100_Yr	6269.82	6846.62	3129.12	911.96	395.94	1.50	2.50	0.83
Reach-1	26065	24hr_100_yr_SCS	6272.21	10639.36	4153.57	1803.58	415.22	1.94	2.98	1.17
Reach-1	25947	2_Yr	6263.84	380.92	399.96	374.32	372.80	0.10	0.24	0.11
Reach-1	25947	5_Yr	6264.50	720.57	657.58	735.55	391.02	0.23	0.52	0.26
Reach-1	25947	10_Yr	6268.57	1355.36	661.41	1258.53	453.22	0.11	0.20	0.13
Reach-1	25947	50_Yr	6268.20	3219.21	1639.69	3034.51	451.57	0.71	1.30	0.84
Reach-1	25947	100_Yr	6269.66	4668.58	2043.18	4175.94	458.14	0.90	1.52	1.04
Reach-1	25947	24hr_100_yr_SCS	6272.05	7504.49	2758.57	6333.45	466.75	1.20	1.86	1.35
Reach-1	25919		Bridge							
Reach-1	25887	2_Yr	6262.16	143.33	546.90	464.97	298.39	0.22	0.69	0.25
Reach-1	25887	5_Yr	6263.67	275.89	747.16	1090.65	319.77	0.26	0.75	0.37
Reach-1	25887	10_Yr	6268.51	568.63	747.75	1958.91	401.17	0.09	0.23	0.16
Reach-1	25887	50_Yr	6267.73	1305.84	1887.85	4699.71	387.33	0.64	1.70	1.15

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	25887	100_Yr	6269.20	1985.68	2390.65	6511.38	410.04	0.79	2.06	1.46
Reach-1	25887	24hr_100_yr_SCS	6271.58	3558.25	3246.70	9791.55	420.82	1.13	2.56	1.91
Reach-1	25755	2_Yr	6262.05	148.34	355.33	651.53	294.46	0.29	0.35	0.14
Reach-1	25755	5_Yr	6263.54	230.89	516.01	1366.81	321.62	0.43	0.49	0.25
Reach-1	25755	10_Yr	6268.48	453.44	518.78	2303.08	343.20	0.08	0.19	0.13
Reach-1	25755	50_Yr	6267.49	1075.99	1319.91	5497.51	340.34	0.62	1.44	0.95
Reach-1	25755	100_Yr	6268.92	1517.32	1687.84	7682.55	344.38	0.83	1.86	1.29
Reach-1	25755	24hr_100_yr_SCS	6271.25	2382.59	2344.32	11869.59	350.63	1.18	2.55	1.88
Reach-1	25727		Bridge							
Reach-1	25696	2_Yr	6258.60	211.57	783.45	160.18	81.56	4.11	5.99	3.48
Reach-1	25696	5_Yr	6261.07	380.50	1048.02	685.19	325.88	3.27	3.99	0.89
Reach-1	25696	10_Yr	6259.80	676.37	2091.09	507.84	117.51	19.20	25.10	8.76
Reach-1	25696	50_Yr	6264.01	1707.77	1887.14	4298.50	407.48	2.19	5.79	2.65
Reach-1	25696	100_Yr	6265.47	2627.89	2097.39	6162.42	415.35	2.33	5.23	2.78
Reach-1	25696	24hr_100_yr_SCS	6267.76	4419.39	2552.67	9624.44	425.64	2.65	5.08	3.12
Reach-1	25542	2_Yr	6258.19	477.69	570.54	106.96	219.39	0.24	0.78	0.19
Reach-1	25542	5_Yr	6259.13	999.48	885.12	229.10	244.31	0.55	1.51	0.36
Reach-1	25542	10_Yr	6260.37	1727.54	1171.29	376.48	398.87	0.83	2.02	0.36
Reach-1	25542	50_Yr	6263.45	3916.73	1773.32	2203.35	460.84	1.24	2.66	0.80
Reach-1	25542	100_Yr	6264.89	5205.58	2094.44	3587.69	486.71	1.40	2.98	1.08
Reach-1	25542	24hr_100_yr_SCS	6267.23	7764.71	2590.22	6241.57	518.09	1.63	3.31	1.46
Reach-1	25503		Bridge							
Reach-1	25477	2_Yr	6254.31	129.66	918.22	107.32	34.71	3.11	6.67	3.15
Reach-1	25477	5_Yr	6257.26	708.55	1228.07	177.09	182.07	1.15	4.43	1.06
Reach-1	25477	10_Yr	6258.27	1333.98	1609.90	331.42	208.98	1.84	5.86	1.39
Reach-1	25477	50_Yr	6262.27	3814.44	2239.05	1839.91	380.65	2.12	5.01	1.34
Reach-1	25477	100_Yr	6263.85	5086.72	2570.37	3230.61	403.11	2.23	5.10	1.72
Reach-1	25477	24hr_100_yr_SCS	6266.25	7391.73	3203.10	6001.67	448.36	2.38	5.62	2.38
Reach-1	25282	2_Yr	6252.09	45.37	1105.33	4.50	31.76	0.91	2.93	0.32
Reach-1	25282	5_Yr	6256.80	514.77	1521.38	77.55	232.37	0.41	1.55	0.24
Reach-1	25282	10_Yr	6257.09	847.28	2285.43	142.59	243.97	0.92	3.30	0.56
Reach-1	25282	50_Yr	6259.19	2454.96	4163.57	1274.86	279.51	2.63	7.39	1.64
Reach-1	25282	100_Yr	6260.37	3534.30	5053.34	2300.06	282.05	3.46	8.96	2.52
Reach-1	25282	24hr_100_yr_SCS	6262.30	5592.39	6531.99	4472.12	286.20	4.74	11.25	4.01
Reach-1	25238		Bridge							
Reach-1	25210	2_Yr	6249.65	22.45	1130.01	2.74	26.83	1.31	4.72	0.51
Reach-1	25210	5_Yr	6253.49	295.87	1798.92	18.91	189.90	0.48	3.10	0.47
Reach-1	25210	10_Yr	6254.70	901.53	2334.13	39.64	220.85	0.96	3.86	0.71
Reach-1	25210	50_Yr	6257.43	3382.59	3788.48	722.33	328.10	2.33	5.79	1.09
Reach-1	25210	100_Yr	6258.42	4886.79	4634.04	1366.87	329.57	3.22	7.27	1.77
Reach-1	25210	24hr_100_yr_SCS	6259.95	7769.88	6070.77	2755.85	331.85	4.80	9.75	3.05
Reach-1	25098	2_Yr	6250.16	203.14	937.25	14.81	199.07	0.17	0.57	0.18
Reach-1	25098	5_Yr	6252.17	682.79	1395.28	35.64	246.79	0.27	0.64	0.16
Reach-1	25098	10_Yr	6252.93	1186.83	2025.67	62.80	278.72	0.50	1.08	0.21
Reach-1	25098	50_Yr	6255.05	3477.59	4042.68	373.13	328.91	1.43	2.57	0.67
Reach-1	25098	100_Yr	6256.49	5113.31	5007.65	766.74	342.34	1.79	2.94	0.91
Reach-1	25098	24hr_100_yr_SCS	6259.06	8233.60	6604.18	1758.72	388.40	2.22	3.27	1.07
Reach-1	25008	2_Yr	6249.94	412.18	727.38	15.64	196.99	0.27	0.80	0.20
Reach-1	25008	5_Yr	6252.02	1059.23	1006.83	47.64	287.56	0.33	0.85	0.22
Reach-1	25008	10_Yr	6252.72	1798.36	1405.36	71.58	313.26	0.61	1.40	0.25
Reach-1	25008	50_Yr	6254.68	4868.72	2635.58	389.10	349.09	1.72	3.25	0.85
Reach-1	25008	100_Yr	6256.16	6993.75	3140.63	753.32	353.78	2.06	3.52	1.21
Reach-1	25008	24hr_100_yr_SCS	6258.79	11092.32	3979.92	1524.26	365.42	2.46	3.73	1.54
Reach-1	24989		Bridge							
Reach-1	24957	2_Yr	6247.63	203.14	948.62	3.44	129.47	0.79	3.14	0.46
Reach-1	24957	5_Yr	6249.02	710.55	1383.06	20.10	204.23	1.19	3.81	0.82
Reach-1	24957	10_Yr	6250.08	1456.47	1770.16	48.68	246.54	1.61	4.37	1.13
Reach-1	24957	50_Yr	6253.57	5028.15	2630.91	234.34	355.38	2.14	3.98	0.74
Reach-1	24957	100_Yr	6255.44	7234.71	2998.83	654.16	371.90	2.17	3.58	1.07
Reach-1	24957	24hr_100_yr_SCS	6258.28	11249.90	3769.31	1577.30	391.88	2.37	3.56	1.50

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	24787	2_Yr	6246.29	245.42	906.94	2.84	250.36	0.20	0.78	0.15
Reach-1	24787	5_Yr	6248.12	864.77	1240.02	8.91	265.78	0.35	0.80	0.19
Reach-1	24787	10_Yr	6249.28	1566.71	1692.01	16.58	280.76	0.54	1.08	0.24
Reach-1	24787	50_Yr	6253.22	4733.81	3075.77	83.82	344.34	0.97	1.55	0.28
Reach-1	24787	100_Yr	6255.04	6822.94	3857.48	207.28	381.37	1.20	1.79	0.35
Reach-1	24787	24hr_100_yr_SCS	6257.86	10752.76	5194.02	649.72	431.78	1.57	2.17	0.53
Reach-1	24690	2_Yr	6246.05	347.22	788.98	19.00	180.31	0.27	0.89	0.29
Reach-1	24690	5_Yr	6247.76	911.53	1172.39	29.77	190.56	0.49	1.19	0.33
Reach-1	24690	10_Yr	6248.66	1553.61	1680.94	40.74	206.32	0.87	1.94	0.36
Reach-1	24690	50_Yr	6252.28	4438.51	3173.10	281.80	272.80	1.72	3.31	0.68
Reach-1	24690	100_Yr	6253.95	6313.18	4006.03	568.50	301.49	2.18	4.01	0.90
Reach-1	24690	24hr_100_yr_SCS	6256.55	9792.36	5441.22	1362.92	353.37	2.92	5.10	1.25
Reach-1	24673		Bridge							
Reach-1	24654	2_Yr	6243.44	45.91	1095.19	14.11	34.85	1.74	4.69	1.36
Reach-1	24654	5_Yr	6245.68	578.33	1500.31	35.06	179.20	1.00	3.49	1.16
Reach-1	24654	10_Yr	6246.65	1200.34	2022.77	52.19	182.92	1.69	4.66	1.53
Reach-1	24654	50_Yr	6249.42	3976.28	3794.23	122.89	221.00	3.81	8.09	1.41
Reach-1	24654	100_Yr	6250.72	5843.10	4784.79	259.81	241.89	4.93	9.82	1.85
Reach-1	24654	24hr_100_yr_SCS	6252.83	9434.53	6456.28	705.69	275.54	6.62	12.22	2.63
Reach-1	24459	2_Yr	6239.22	4.96	1145.38	4.86	42.36	0.24	1.83	0.38
Reach-1	24459	5_Yr	6241.54	117.01	1967.75	28.94	130.39	0.39	2.44	0.51
Reach-1	24459	10_Yr	6243.20	525.27	2658.85	91.18	158.54	0.85	2.87	0.71
Reach-1	24459	50_Yr	6247.15	2541.94	4863.42	488.04	187.57	2.10	4.33	1.60
Reach-1	24459	100_Yr	6249.09	4060.83	6172.80	654.07	244.69	2.74	5.12	1.21
Reach-1	24459	24hr_100_yr_SCS	6251.44	6728.58	8365.49	1502.44	331.83	3.94	6.77	1.50
Reach-1	24295	2_Yr	6239.44	330.78	795.89	28.53	144.08	0.12	0.25	0.09
Reach-1	24295	5_Yr	6241.90	776.87	1270.91	65.92	165.62	0.21	0.38	0.12
Reach-1	24295	10_Yr	6243.55	1271.95	1802.90	200.46	320.68	0.33	0.57	0.09
Reach-1	24295	50_Yr	6247.61	3104.42	3239.62	1549.36	430.39	0.64	1.02	0.30
Reach-1	24295	100_Yr	6249.71	4167.35	3861.12	2859.23	436.11	0.73	1.12	0.42
Reach-1	24295	24hr_100_yr_SCS	6252.25	6200.00	5110.35	5286.15	460.11	1.03	1.48	0.63
Reach-1	24294	2_Yr	6236.99		1155.06	0.14	29.91		5.70	0.33
Reach-1	24294	5_Yr	6239.33	75.11	2022.23	16.36	96.92	0.81	5.44	1.31
Reach-1	24294	10_Yr	6242.37	797.53	2408.16	69.60	139.42	1.21	2.90	0.97
Reach-1	24294	50_Yr	6245.20	2811.98	4849.16	232.26	158.97	3.38	6.16	1.94
Reach-1	24294	100_Yr	6246.81	4210.45	6223.55	453.70	304.77	4.25	7.52	0.95
Reach-1	24294	24hr_100_yr_SCS	6250.26	6549.72	7412.50	2634.28	408.15	3.75	6.23	1.59
Reach-1	24191	2_Yr	6236.10	93.42	1061.04	0.73	72.26	1.26	1.87	0.19
Reach-1	24191	5_Yr	6238.42	213.99	1862.69	37.02	128.98	1.73	2.17	0.55
Reach-1	24191	10_Yr	6242.43	786.60	2092.34	396.36	224.31	0.51	0.93	0.27
Reach-1	24191	50_Yr	6245.36	2050.65	4259.50	1583.25	323.65	1.32	2.20	0.66
Reach-1	24191	100_Yr	6247.01	2501.39	5555.49	2830.82	392.79	1.36	2.88	0.94
Reach-1	24191	24hr_100_yr_SCS	6250.31	4076.64	6972.46	5547.40	503.20	1.41	2.88	1.03
Reach-1	24179		Bridge							
Reach-1	24168	2_Yr	6234.62	8.34	1118.94	27.92	58.46	0.92	3.15	1.11
Reach-1	24168	5_Yr	6236.54	35.10	1966.98	111.62	121.19	0.90	3.63	2.10
Reach-1	24168	10_Yr	6238.50	152.79	2541.66	580.85	215.01	0.52	2.99	1.07
Reach-1	24168	50_Yr	6244.42	1789.81	3881.47	2222.13	372.33	0.82	1.80	0.69
Reach-1	24168	100_Yr	6246.91	2665.97	4693.62	3528.12	452.38	0.83	1.77	0.69
Reach-1	24168	24hr_100_yr_SCS	6250.28	4421.61	5958.27	6216.61	550.52	0.96	1.82	0.73
Reach-1	24052	2_Yr	6234.53	4.01	628.56	522.63	174.37	0.06	0.63	0.43
Reach-1	24052	5_Yr	6236.71	118.53	1005.01	990.17	274.93	0.20	0.69	0.41
Reach-1	24052	10_Yr	6238.65	327.86	1295.57	1651.87	359.37	0.27	0.65	0.44
Reach-1	24052	50_Yr	6244.49	1284.50	2147.47	4461.43	507.53	0.34	0.56	0.33
Reach-1	24052	100_Yr	6246.97	1817.05	2673.97	6396.68	571.02	0.36	0.61	0.37
Reach-1	24052	24hr_100_yr_SCS	6250.33	2975.54	3616.73	10004.23	658.84	0.47	0.74	0.43
Reach-1	23988	2_Yr	6233.20	14.19	1107.30	33.71	158.91	0.61	2.69	0.88
Reach-1	23988	5_Yr	6236.53	80.31	1122.08	911.31	345.15	0.14	0.84	0.32
Reach-1	23988	10_Yr	6238.56	304.55	1317.31	1653.44	431.76	0.21	0.70	0.29
Reach-1	23988	50_Yr	6244.45	1248.58	1944.30	4700.53	563.83	0.26	0.53	0.27
Reach-1	23988	100_Yr	6246.94	1795.33	2371.90	6720.48	629.56	0.28	0.57	0.30

## HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	23988	24hr_100_yr_SCS	6250.30	2949.56	3135.83	10511.11	703.13	0.37	0.67	0.36
Reach-1	23975	Bridge								
Reach-1	23961	2_Yr	6232.87	57.23	992.36	105.61	158.97	0.52	1.34	0.23
Reach-1	23961	5_Yr	6236.35	110.62	1167.46	835.63	328.27	0.14	0.65	0.23
Reach-1	23961	10_Yr	6238.45	302.46	1422.23	1550.61	447.16	0.17	0.61	0.23
Reach-1	23961	50_Yr	6244.40	1232.92	2054.95	4605.53	587.26	0.22	0.49	0.23
Reach-1	23961	100_Yr	6246.89	1825.05	2472.06	6590.60	649.05	0.25	0.52	0.26
Reach-1	23961	24hr_100_yr_SCS	6250.25	2997.22	3244.33	10354.95	718.91	0.33	0.62	0.32
Reach-1	23731	2_Yr	6232.41		1108.70	46.50	306.84		0.65	0.20
Reach-1	23731	5_Yr	6236.13	15.16	1625.44	473.11	502.23	0.07	0.48	0.09
Reach-1	23731	10_Yr	6238.32	67.16	1771.09	1437.05	543.54	0.07	0.36	0.13
Reach-1	23731	50_Yr	6244.33	485.44	2553.64	4854.32	622.89	0.14	0.29	0.16
Reach-1	23731	100_Yr	6246.83	767.62	3174.50	6945.59	687.06	0.18	0.33	0.19
Reach-1	23731	24hr_100_yr_SCS	6250.18	1295.12	4326.01	10975.37	780.40	0.27	0.44	0.24
Reach-1	23682	Bridge								
Reach-1	23638	2_Yr	6232.09		1154.07	1.13	435.62		0.82	0.09
Reach-1	23638	5_Yr	6235.90	17.73	1332.29	763.68	696.46	0.07	0.35	0.08
Reach-1	23638	10_Yr	6238.02	49.71	1375.69	1849.91	736.15	0.07	0.23	0.09
Reach-1	23638	50_Yr	6244.10	186.93	1819.59	5886.88	893.34	0.07	0.15	0.08
Reach-1	23638	100_Yr	6246.72	277.89	2174.17	8435.64	941.40	0.07	0.16	0.09
Reach-1	23638	24hr_100_yr_SCS	6250.10	455.75	2894.96	13245.79	1068.92	0.09	0.20	0.12
Reach-1	23601	2_Yr	6232.12	79.45	945.65	280.70	372.50	0.15	0.39	0.14
Reach-1	23601	5_Yr	6235.72	168.31	1467.81	795.78	568.59	0.20	0.52	0.12
Reach-1	23601	10_Yr	6237.76	248.24	1884.18	1679.58	619.88	0.25	0.65	0.20
Reach-1	23601	50_Yr	6243.78	570.35	3094.66	5698.69	771.65	0.35	0.90	0.42
Reach-1	23601	100_Yr	6246.34	765.95	3844.22	8361.03	848.06	0.34	1.09	0.55
Reach-1	23601	24hr_100_yr_SCS	6249.63	1109.93	4982.19	12694.88	968.82	0.34	1.40	0.77
Reach-1	23473	Bridge								
Reach-1	23382	2_Yr	6222.27	32.83	1231.27	41.71	32.12	1.46	4.43	1.57
Reach-1	23382	5_Yr	6224.46	98.23	2211.73	121.94	38.38	2.31	6.56	2.46
Reach-1	23382	10_Yr	6226.87	215.27	3332.86	263.88	45.32	2.87	7.87	3.05
Reach-1	23382	50_Yr	6235.35	917.71	6736.11	1709.89	192.92	2.97	7.76	1.64
Reach-1	23382	100_Yr	6237.79	1311.29	8332.41	3327.50	225.59	3.41	8.90	2.48
Reach-1	23382	24hr_100_yr_SCS	6241.87	1844.03	9521.07	7421.90	435.11	2.97	7.68	1.71
Reach-1	23198	2_Yr	6219.26	1.58	1303.73	0.49	34.86	0.66	4.63	0.42
Reach-1	23198	5_Yr	6221.29	22.91	2390.28	18.71	46.06	1.51	5.71	1.11
Reach-1	23198	10_Yr	6223.20	77.69	3650.06	84.25	76.15	2.20	6.85	1.13
Reach-1	23198	50_Yr	6228.73	913.68	6814.88	1635.15	195.19	1.77	6.76	3.04
Reach-1	23198	100_Yr	6230.85	1908.76	8262.61	2799.83	368.34	2.25	7.03	1.52
Reach-1	23198	24hr_100_yr_SCS	6233.21	3454.60	9851.76	5480.65	588.81	2.72	7.17	1.54
Reach-1	22913	2_Yr	6216.38	509.28	677.22	119.30	245.45	0.07	0.14	0.07
Reach-1	22913	5_Yr	6218.35	1107.52	1084.37	240.01	277.54	0.12	0.23	0.13
Reach-1	22913	10_Yr	6219.79	1861.36	1560.31	390.34	284.53	0.21	0.37	0.22
Reach-1	22913	50_Yr	6223.39	5036.03	3297.01	1030.66	296.15	0.62	0.96	0.58
Reach-1	22913	100_Yr	6225.14	7153.50	4336.46	1481.24	301.03	0.88	1.32	0.81
Reach-1	22913	24hr_100_yr_SCS	6227.46	10561.44	5925.82	2299.74	495.46	1.29	1.88	0.35
Reach-1	22912	2_Yr	6214.05		1295.83	9.97	41.04		4.51	0.75
Reach-1	22912	5_Yr	6216.47	300.61	1990.48	140.82	195.30	0.79	3.51	1.32
Reach-1	22912	10_Yr	6217.59	852.48	2679.67	279.85	226.35	1.38	4.36	1.91
Reach-1	22912	50_Yr	6220.16	3645.26	4863.75	854.69	245.41	3.63	7.19	3.81
Reach-1	22912	100_Yr	6221.30	5590.23	6137.05	1243.92	261.37	4.69	8.92	4.94
Reach-1	22912	24hr_100_yr_SCS	6222.90	8902.16	7992.51	1892.33	282.32	6.09	11.05	6.38
Reach-1	22491	2_Yr	6203.41		1305.61	0.19	30.10		4.62	0.30
Reach-1	22491	5_Yr	6205.48	21.80	2405.18	4.92	48.61	0.87	5.86	0.91
Reach-1	22491	10_Yr	6208.51	795.97	2980.11	35.92	284.20	0.83	3.47	0.39
Reach-1	22491	50_Yr	6210.97	3680.40	5161.65	521.64	328.51	2.54	5.93	1.46
Reach-1	22491	100_Yr	6212.02	5620.52	6377.60	973.08	330.94	3.58	7.38	2.29
Reach-1	22491	24hr_100_yr_SCS	6213.39	8814.47	8187.89	1784.65	334.12	5.20	9.54	3.57
Reach-1	22086	2_Yr	6195.94	6.52	1254.05	45.23	61.84	0.69	3.93	1.03
Reach-1	22086	5_Yr	6197.68	65.36	2133.74	232.80	85.66	1.25	4.95	2.09

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	22086	10_Yr	6199.35	220.74	3067.84	523.43	120.95	1.48	5.66	2.74
Reach-1	22086	50_Yr	6203.51	2025.03	5366.20	1972.48	392.78	1.56	6.17	3.06
Reach-1	22086	100_Yr	6204.82	3647.05	6497.01	2827.15	477.53	1.94	7.05	3.79
Reach-1	22086	24hr_100_yr_SCS	6206.55	6958.21	7835.99	3992.80	559.13	2.47	7.65	4.29
Reach-1	21665	2_Yr	6194.59	278.13	921.65	253.93	241.91	0.08	0.28	0.16
Reach-1	21665	5_Yr	6197.44	883.73	1370.11	465.76	388.64	0.10	0.34	0.21
Reach-1	21665	10_Yr	6198.14	1527.89	2020.60	718.41	411.15	0.21	0.65	0.41
Reach-1	21665	50_Yr	6200.19	4597.34	4218.04	1654.53	477.53	0.75	2.05	1.34
Reach-1	21665	100_Yr	6201.06	6771.24	5491.95	2221.01	505.66	1.15	3.07	2.02
Reach-1	21665	24hr_100_yr_SCS	6202.20	10205.74	7177.72	3000.14	542.64	1.75	4.48	2.97
Reach-1	21554	2_Yr	6194.03	250.75	930.69	272.26	280.99	0.57	1.21	0.75
Reach-1	21554	5_Yr	6197.31	1384.37	962.54	372.69	443.44	0.20	0.69	0.34
Reach-1	21554	10_Yr	6197.91	2372.95	1379.73	514.22	467.41	0.40	1.27	0.55
Reach-1	21554	50_Yr	6199.77	6741.14	2649.31	1079.45	551.12	1.31	3.54	1.21
Reach-1	21554	100_Yr	6200.40	9511.39	3453.33	1519.47	605.84	2.02	5.49	1.85
Reach-1	21554	24hr_100_yr_SCS	6201.61	13983.73	4221.53	2178.34	662.14	2.74	6.99	2.33
Reach-1	21526		Bridge							
Reach-1	21484	2_Yr	6189.98	163.29	1126.81	163.60	68.67	1.60	4.98	2.39
Reach-1	21484	5_Yr	6192.18	535.90	1774.54	409.16	156.22	1.34	6.39	4.05
Reach-1	21484	10_Yr	6194.74	1796.39	1891.53	578.98	427.00	0.92	4.02	1.97
Reach-1	21484	50_Yr	6196.65	6152.12	3141.19	1176.60	475.19	2.57	7.76	3.87
Reach-1	21484	100_Yr	6197.47	9184.43	3855.15	1444.62	506.62	3.67	10.17	4.52
Reach-1	21484	24hr_100_yr_SCS	6198.65	13928.96	4674.17	1780.47	559.16	4.92	12.41	4.55
Reach-1	21274	2_Yr	6186.13	135.81	1287.26	30.64	127.56	0.79	3.20	0.95
Reach-1	21274	5_Yr	6187.74	562.84	2049.75	107.01	255.21	0.97	3.88	1.74
Reach-1	21274	10_Yr	6188.98	1419.54	2670.64	176.72	395.65	1.15	4.23	2.09
Reach-1	21274	50_Yr	6191.13	5669.87	4444.35	355.69	510.41	2.48	6.37	3.30
Reach-1	21274	100_Yr	6192.17	8635.36	5396.22	452.62	568.63	3.05	7.33	3.78
Reach-1	21274	24hr_100_yr_SCS	6193.12	13101.17	6703.81	578.63	579.04	4.27	9.23	4.72
Reach-1	20942	2_Yr	6181.85	286.54	1163.03	4.12	192.32	0.66	2.74	0.55
Reach-1	20942	5_Yr	6182.97	986.74	1718.13	14.74	287.29	1.05	3.48	0.90
Reach-1	20942	10_Yr	6183.93	2032.11	2204.43	30.36	360.01	1.35	3.93	1.14
Reach-1	20942	50_Yr	6185.66	6503.53	3880.78	85.59	396.27	3.26	6.97	1.85
Reach-1	20942	100_Yr	6186.54	9596.22	4753.41	134.57	413.73	4.22	8.22	2.03
Reach-1	20942	24hr_100_yr_SCS	6187.45	14138.25	6024.50	220.85	430.32	5.87	10.56	2.40
Reach-1	20414	2_Yr	6173.11	6.00	1444.18	3.52	301.96	0.41	2.53	0.42
Reach-1	20414	5_Yr	6173.93	899.13	1811.00	9.47	360.23	0.83	2.87	0.60
Reach-1	20414	10_Yr	6174.67	1844.21	2402.62	20.07	363.78	1.46	3.90	0.93
Reach-1	20414	50_Yr	6176.89	6157.96	4227.77	84.17	374.36	3.47	6.38	1.91
Reach-1	20414	100_Yr	6178.27	9211.93	5127.46	144.82	379.66	4.15	6.78	2.19
Reach-1	20414	24hr_100_yr_SCS	6179.95	13704.19	6428.48	250.93	385.84	5.10	7.57	2.62
Reach-1	20107	2_Yr	6168.13	1.39	1452.29	0.03	123.11	0.50	5.76	0.19
Reach-1	20107	5_Yr	6170.11	861.07	1856.58	1.95	317.18	1.07	3.73	0.46
Reach-1	20107	10_Yr	6171.45	2008.45	2252.92	5.53	363.25	1.35	3.45	0.55
Reach-1	20107	50_Yr	6174.98	6811.51	3631.02	27.37	484.50	1.83	3.61	0.75
Reach-1	20107	100_Yr	6176.47	10002.99	4436.71	44.50	522.98	2.16	3.99	0.88
Reach-1	20107	24hr_100_yr_SCS	6178.15	14700.10	5610.86	72.64	568.39	2.67	4.75	1.10
Reach-1	19713	2_Yr	6165.49	113.56	1325.64	14.50	143.73	0.17	0.99	0.25
Reach-1	19713	5_Yr	6166.23	335.92	2355.84	27.83	181.61	0.50	2.51	0.64
Reach-1	19713	10_Yr	6166.68	657.12	3565.84	43.93	202.33	1.10	5.10	1.28
Reach-1	19713	50_Yr	6170.14	4016.98	6358.77	94.15	378.84	2.26	7.51	1.09
Reach-1	19713	100_Yr	6171.51	6561.70	7727.33	195.17	458.07	2.80	8.67	1.30
Reach-1	19713	24hr_100_yr_SCS	6173.14	10561.96	9352.73	468.91	554.89	3.36	9.76	1.73
Reach-1	19558	2_Yr	6165.42	970.65	370.28	112.77	509.61	0.16	0.53	0.38
Reach-1	19558	5_Yr	6166.23	1999.46	543.20	176.94	514.47	0.34	0.93	0.69
Reach-1	19558	10_Yr	6166.87	3257.02	727.52	282.36	518.32	0.59	1.43	0.68
Reach-1	19558	50_Yr	6168.82	8661.77	1312.97	495.15	566.30	1.58	3.08	0.89
Reach-1	19558	100_Yr	6169.84	12152.11	1611.66	720.44	602.56	2.13	3.84	0.99
Reach-1	19558	24hr_100_yr_SCS	6171.21	17075.53	2060.73	1247.34	700.39	2.75	4.98	1.23
Reach-1	19477		Bridge							
Reach-1	19425	2_Yr	6163.00	488.21	718.10	247.38	520.91	0.35	2.64	1.98



HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	19425	5_Yr	6163.69	1376.65	983.60	359.35	540.86	0.83	4.05	3.14
Reach-1	19425	10_Yr	6164.26	2552.94	1241.75	472.21	545.78	1.44	5.54	4.40
Reach-1	19425	50_Yr	6166.52	7833.63	1695.55	940.72	581.26	2.58	6.09	2.32
Reach-1	19425	100_Yr	6167.72	11309.48	1943.80	1230.93	611.13	3.06	6.31	2.14
Reach-1	19425	24hr_100_yr_SCS	6169.32	16249.47	2250.64	1883.49	672.20	3.49	6.37	1.93
Reach-1	19276	2_Yr	6161.66	43.25	1090.22	320.22	438.13	0.04	0.61	0.17
Reach-1	19276	5_Yr	6162.63	297.52	1675.06	747.01	620.54	0.14	1.10	0.39
Reach-1	19276	10_Yr	6163.52	854.60	2167.25	1245.05	642.64	0.30	1.48	0.60
Reach-1	19276	50_Yr	6165.60	3610.26	3730.52	3129.13	656.73	0.95	2.82	1.42
Reach-1	19276	100_Yr	6166.61	5611.77	4558.41	4314.02	661.69	1.35	3.49	1.88
Reach-1	19276	24hr_100_yr_SCS	6168.22	8878.65	5488.22	6016.74	668.72	1.75	3.86	2.25
Reach-1	19259		Bridge							
Reach-1	19245	2_Yr	6158.33	12.59	1419.01	22.10	42.88	0.99	4.25	1.40
Reach-1	19245	5_Yr	6161.39	271.57	2014.22	433.82	485.65	0.34	2.51	0.58
Reach-1	19245	10_Yr	6162.33	814.07	2524.18	928.65	609.37	0.55	2.99	0.94
Reach-1	19245	50_Yr	6164.09	3556.38	4242.06	2671.47	659.38	1.66	5.43	2.33
Reach-1	19245	100_Yr	6165.69	6074.93	4587.41	3821.87	670.31	1.80	4.51	2.27
Reach-1	19245	24hr_100_yr_SCS	6167.54	9650.79	5297.09	5435.73	677.19	2.05	4.28	2.41
Reach-1	19123	2_Yr	6158.10	183.63	814.90	455.17	242.15	0.90	1.69	0.51
Reach-1	19123	5_Yr	6159.45	276.07	1235.18	1208.35	377.12	0.42	2.50	1.04
Reach-1	19123	10_Yr	6160.41	714.07	1589.94	1962.89	485.81	0.61	3.17	1.51
Reach-1	19123	50_Yr	6163.53	3666.52	2369.95	4433.44	628.61	1.12	3.49	2.08
Reach-1	19123	100_Yr	6165.36	6164.03	2648.34	5671.83	649.47	1.26	3.13	2.00
Reach-1	19123	24hr_100_yr_SCS	6167.20	9661.90	3188.51	7533.19	665.26	1.57	3.39	2.26
Reach-1	19116		Bridge							
Reach-1	19108	2_Yr	6157.93	183.96	819.07	450.67	231.77	0.91	1.75	0.54
Reach-1	19108	5_Yr	6159.40	286.91	1231.73	1200.96	371.49	0.42	2.45	1.03
Reach-1	19108	10_Yr	6160.30	681.60	1621.83	1963.47	498.89	0.59	3.31	1.58
Reach-1	19108	50_Yr	6163.43	3736.28	2373.12	4360.50	618.40	1.15	3.50	2.08
Reach-1	19108	100_Yr	6164.99	6085.81	2739.26	5659.14	641.65	1.38	3.50	2.21
Reach-1	19108	24hr_100_yr_SCS	6166.87	9618.47	3269.29	7495.85	660.13	1.68	3.68	2.43
Reach-1	18900	2_Yr	6154.82	26.57	1394.75	32.37	71.64	0.88	4.06	0.88
Reach-1	18900	5_Yr	6157.24	269.93	2092.62	357.05	274.03	0.80	3.27	0.79
Reach-1	18900	10_Yr	6158.74	800.30	2522.40	944.21	400.41	0.72	2.99	1.12
Reach-1	18900	50_Yr	6161.79	3343.20	4148.42	2978.28	420.48	1.69	3.90	2.08
Reach-1	18900	100_Yr	6163.24	5081.18	5095.33	4307.70	424.30	2.18	4.43	2.57
Reach-1	18900	24hr_100_yr_SCS	6164.80	7624.57	6526.77	6232.27	444.53	2.98	5.57	3.15
Reach-1	18778	2_Yr	6153.60	17.30	1352.32	84.08	78.75	0.31	1.65	0.52
Reach-1	18778	5_Yr	6156.90	361.98	1962.08	395.54	336.13	0.41	1.30	0.33
Reach-1	18778	10_Yr	6158.71	919.72	2412.33	934.85	431.08	0.34	1.31	0.48
Reach-1	18778	50_Yr	6161.43	3211.48	4424.59	2833.83	445.42	1.04	2.67	1.27
Reach-1	18778	100_Yr	6162.80	4847.16	5513.63	4123.41	469.93	1.46	3.34	1.55
Reach-1	18778	24hr_100_yr_SCS	6164.12	7408.06	7334.87	5640.66	508.04	2.25	4.88	2.19
Reach-1	18663	2_Yr	6153.41	122.27	1186.47	144.96	225.38	0.39	0.97	0.41
Reach-1	18663	5_Yr	6156.90	861.22	1503.06	355.33	373.82	0.22	0.61	0.38
Reach-1	18663	10_Yr	6158.65	1642.79	2058.99	565.12	457.45	0.32	0.80	0.55
Reach-1	18663	50_Yr	6161.30	4501.89	3867.82	2100.19	560.18	0.82	1.80	0.68
Reach-1	18663	100_Yr	6162.62	6613.10	4933.99	2937.11	631.18	1.16	2.40	0.83
Reach-1	18663	24hr_100_yr_SCS	6163.86	9847.85	6593.11	3942.65	778.27	1.83	3.60	0.98
Reach-1	18621		Bridge							
Reach-1	18578	2_Yr	6150.44	96.45	1332.56	24.69	118.20	1.20	3.65	0.69
Reach-1	18578	5_Yr	6152.32	543.99	1997.90	177.71	228.55	1.09	3.58	1.25
Reach-1	18578	10_Yr	6153.36	1180.62	2720.46	365.82	254.64	1.79	4.65	2.08
Reach-1	18578	50_Yr	6156.83	3928.28	5009.08	1532.53	388.25	2.73	6.39	2.46
Reach-1	18578	100_Yr	6159.06	6319.17	5831.01	2334.03	498.51	2.58	5.59	1.97
Reach-1	18578	24hr_100_yr_SCS	6161.27	9702.64	6848.27	3832.68	549.51	2.86	5.35	2.01
Reach-1	18354	2_Yr	6147.31	97.23	1264.07	92.41	136.24	1.38	3.10	0.71
Reach-1	18354	5_Yr	6148.76	244.85	2008.54	466.21	175.23	2.01	3.78	1.38
Reach-1	18354	10_Yr	6149.69	416.60	2882.03	968.28	188.51	2.98	5.36	2.32
Reach-1	18354	50_Yr	6152.71	1118.56	5843.28	3508.06	236.11	4.69	8.88	4.71
Reach-1	18354	100_Yr	6154.16	1513.82	7565.55	5404.83	265.39	4.76	10.64	6.01

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	18354	24hr_100_yr_SCS	6156.48	2303.04	9627.71	8452.85	330.27	3.82	10.94	6.75
Reach-1	17999	2_Yr	6141.70	28.02	1393.03	32.65	72.46	0.92	3.92	0.80
Reach-1	17999	5_Yr	6143.52	158.15	2351.63	209.82	128.33	0.94	4.83	1.79
Reach-1	17999	10_Yr	6145.34	665.79	3126.69	474.42	197.77	1.34	4.61	2.06
Reach-1	17999	50_Yr	6149.58	3425.95	5344.45	1699.50	297.92	2.33	4.93	1.85
Reach-1	17999	100_Yr	6151.09	5160.19	6650.21	2673.80	309.47	2.99	5.80	2.50
Reach-1	17999	24hr_100_yr_SCS	6153.09	7714.98	8411.73	4256.90	329.18	3.64	6.73	3.32
Reach-1	17499	2_Yr	6140.91	300.27	950.77	202.66	330.25	0.07	0.26	0.12
Reach-1	17499	5_Yr	6143.54	897.84	1399.44	422.32	434.18	0.14	0.34	0.18
Reach-1	17499	10_Yr	6145.61	1933.55	1718.55	614.80	443.55	0.14	0.37	0.21
Reach-1	17499	50_Yr	6149.80	5718.82	3286.72	1464.36	497.84	0.37	0.78	0.47
Reach-1	17499	100_Yr	6151.15	8091.91	4350.58	2041.71	558.18	0.53	1.17	0.71
Reach-1	17499	24hr_100_yr_SCS	6153.08	12025.40	5571.20	2786.99	561.38	0.78	1.57	0.96
Reach-1	17498	2_Yr	6138.12	7.24	1438.32	8.13	42.71	0.62	4.77	0.97
Reach-1	17498	5_Yr	6140.86	205.12	2396.83	117.66	113.49	1.30	4.39	0.93
Reach-1	17498	10_Yr	6142.48	466.40	3389.41	411.09	153.88	1.51	5.49	1.89
Reach-1	17498	50_Yr	6146.40	3070.55	5814.62	1584.73	429.91	2.53	6.90	3.51
Reach-1	17498	100_Yr	6147.76	5607.02	6756.47	2120.71	436.07	2.34	7.36	3.98
Reach-1	17498	24hr_100_yr_SCS	6149.10	9019.18	8418.15	2946.27	442.15	3.48	9.25	5.21
Reach-1	16972	2_Yr	6127.07	0.06	1398.56	55.08	42.68	0.11	4.57	2.01
Reach-1	16972	5_Yr	6128.92	0.30	2560.89	158.41	42.84	0.18	6.30	3.33
Reach-1	16972	10_Yr	6130.85	0.82	3980.09	285.99	43.01	0.25	7.79	4.18
Reach-1	16972	50_Yr	6136.96	2729.00	7214.95	525.95	279.10	2.06	6.60	2.10
Reach-1	16972	100_Yr	6138.51	4712.24	8985.55	786.41	305.40	2.77	7.99	2.71
Reach-1	16972	24hr_100_yr_SCS	6140.39	7840.67	11355.37	1187.56	321.84	3.82	9.76	3.51
Reach-1	16525	2_Yr	6118.40	14.80	1437.98	0.91	46.40	0.63	3.95	0.39
Reach-1	16525	5_Yr	6120.88	256.36	2438.43	24.82	108.53	1.30	4.25	1.01
Reach-1	16525	10_Yr	6122.65	847.60	3352.10	67.20	224.26	0.99	4.83	1.25
Reach-1	16525	50_Yr	6126.07	4572.58	5565.69	331.63	387.55	2.23	6.27	2.07
Reach-1	16525	100_Yr	6127.15	7039.50	6928.73	515.96	394.55	3.25	8.00	2.84
Reach-1	16525	24hr_100_yr_SCS	6128.50	10795.10	8765.90	822.60	411.80	4.59	10.24	3.94
Reach-1	16052	2_Yr	6112.13	0.87	1450.81	2.03	33.79	0.37	3.45	0.47
Reach-1	16052	5_Yr	6113.84	10.63	2690.41	18.56	39.13	1.16	5.89	1.31
Reach-1	16052	10_Yr	6117.39	216.08	3736.49	314.33	318.44	0.38	4.17	1.17
Reach-1	16052	50_Yr	6120.99	3321.45	5912.47	1235.98	570.36	1.37	5.14	2.14
Reach-1	16052	100_Yr	6122.02	5556.90	7193.09	1734.21	592.45	2.06	6.43	2.82
Reach-1	16052	24hr_100_yr_SCS	6123.23	8945.20	8961.61	2476.79	653.42	3.04	8.31	3.75
Reach-1	15688	2_Yr	6108.40	8.90	1428.45	16.35	45.60	0.64	2.83	0.67
Reach-1	15688	5_Yr	6111.77	63.09	2508.85	147.67	84.93	0.68	2.71	0.79
Reach-1	15688	10_Yr	6114.02	287.15	3708.67	271.08	342.85	0.47	3.43	0.49
Reach-1	15688	50_Yr	6116.99	2284.74	5840.80	2344.36	726.04	1.43	4.82	1.35
Reach-1	15688	100_Yr	6117.99	4038.91	6805.22	3640.07	745.43	1.44	5.55	1.83
Reach-1	15688	24hr_100_yr_SCS	6119.04	6538.89	8281.66	5563.04	777.71	2.08	7.00	2.63
Reach-1	15590	2_Yr	6108.31		1453.70		54.14		0.96	
Reach-1	15590	5_Yr	6112.09	66.92	2246.75	405.93	474.42	0.22	0.61	0.14
Reach-1	15590	10_Yr	6114.66	313.91	2603.74	1349.25	710.23	0.08	0.45	0.18
Reach-1	15590	50_Yr	6116.76	1605.09	5054.38	3810.43	811.67	0.31	1.14	0.58
Reach-1	15590	100_Yr	6117.53	2617.40	6483.65	5383.15	824.50	0.51	1.65	0.88
Reach-1	15590	24hr_100_yr_SCS	6118.63	4348.19	8312.82	7722.59	842.59	0.80	2.28	1.30
Reach-1	15524		Bridge							
Reach-1	15474	2_Yr	6105.56		1453.70		44.31		2.27	
Reach-1	15474	5_Yr	6109.62	16.15	2634.86	68.60	306.36	0.35	1.37	0.15
Reach-1	15474	10_Yr	6114.01	810.01	2339.08	1117.81	694.31	0.12	0.35	0.14
Reach-1	15474	50_Yr	6113.44	1874.42	6105.19	2490.29	666.84	0.91	2.68	0.95
Reach-1	15474	100_Yr	6115.10	3033.54	7135.76	4314.90	750.95	0.94	2.64	1.17
Reach-1	15474	24hr_100_yr_SCS	6116.87	5052.84	8573.94	6756.83	810.39	1.11	2.80	1.43
Reach-1	15383	2_Yr	6105.43	135.68	1228.71	89.31	86.54	0.53	1.04	0.52
Reach-1	15383	5_Yr	6109.60	380.46	1915.66	423.48	410.18	0.20	0.87	0.18
Reach-1	15383	10_Yr	6113.98	998.98	1766.06	1501.86	637.23	0.12	0.35	0.11
Reach-1	15383	50_Yr	6113.14	2435.67	4733.16	3301.07	613.49	1.01	2.84	0.82
Reach-1	15383	100_Yr	6114.63	3235.52	5719.45	5529.24	688.77	1.05	3.33	1.16
Reach-1	15383	24hr_100_yr_SCS	6116.16	4553.27	7107.20	8723.13	810.39	1.14	4.17	1.66

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	15359		Bridge							
Reach-1	15330	2_Yr	6104.83	108.77	1269.49	75.45	74.70	0.69	1.55	0.76
Reach-1	15330	5_Yr	6106.79	290.08	2251.79	177.73	286.64	1.48	2.59	1.44
Reach-1	15330	10_Yr	6108.54	536.97	2744.81	985.12	335.38	0.94	2.45	0.63
Reach-1	15330	50_Yr	6112.13	1681.88	4584.84	4203.18	673.43	0.92	3.35	1.07
Reach-1	15330	100_Yr	6113.99	2725.88	5103.35	6654.97	743.93	0.96	3.08	1.17
Reach-1	15330	24hr_100_yr_SCS	6115.46	3774.72	6359.06	10249.82	894.13	0.99	3.86	1.65
Reach-1	15118	2_Yr	6102.67		2081.30		43.20		2.87	
Reach-1	15118	5_Yr	6104.86	3.81	3451.94	373.64	308.74	0.40	3.45	0.60
Reach-1	15118	10_Yr	6105.99	17.38	4675.24	1282.98	324.39	0.78	4.48	1.32
Reach-1	15118	50_Yr	6109.21	144.37	8188.01	6235.82	474.15	1.76	6.35	2.68
Reach-1	15118	100_Yr	6110.37	227.50	10232.28	9622.32	506.44	2.05	7.92	3.66
Reach-1	15118	24hr_100_yr_SCS	6111.57	390.87	12220.01	13755.22	526.02	2.67	9.13	4.59
Reach-1	14846	2_Yr	6100.46	0.68	1821.21	259.41	363.34	0.23	2.52	0.39
Reach-1	14846	5_Yr	6102.27	6.82	2347.65	1474.93	379.16	0.38	2.18	0.82
Reach-1	14846	10_Yr	6103.63	18.31	3037.72	2919.57	391.10	0.53	2.47	1.17
Reach-1	14846	50_Yr	6107.23	94.48	5532.95	8940.78	529.13	1.03	3.68	1.91
Reach-1	14846	100_Yr	6108.58	150.96	6911.97	13019.17	538.54	1.32	4.51	2.56
Reach-1	14846	24hr_100_yr_SCS	6109.92	226.38	8409.79	17729.93	557.10	1.64	5.37	3.20
Reach-1	14417	2_Yr	6094.26	0.38	2080.17	0.75	45.30	0.24	3.67	0.26
Reach-1	14417	5_Yr	6095.77	11.41	3796.37	21.63	55.83	1.12	6.59	1.19
Reach-1	14417	10_Yr	6098.84	85.80	5241.39	648.42	187.11	1.27	5.07	1.21
Reach-1	14417	50_Yr	6103.24	1314.28	8623.18	4630.74	590.01	0.94	5.66	1.79
Reach-1	14417	100_Yr	6104.59	2847.78	10165.83	7068.49	649.89	1.49	6.35	2.22
Reach-1	14417	24hr_100_yr_SCS	6105.60	4657.60	11946.44	9762.06	681.64	2.16	7.55	2.79
Reach-1	13999	2_Yr	6088.01	98.04	1963.57	19.69	75.24	1.46	4.27	1.26
Reach-1	13999	5_Yr	6090.10	407.33	3340.79	81.28	120.89	1.46	5.01	1.81
Reach-1	13999	10_Yr	6092.02	1165.55	4640.67	169.38	257.83	1.47	5.27	1.88
Reach-1	13999	50_Yr	6096.21	5796.11	7703.88	1068.21	523.43	2.34	5.66	1.19
Reach-1	13999	100_Yr	6097.09	8457.27	9814.68	1810.15	528.78	3.54	7.86	2.03
Reach-1	13999	24hr_100_yr_SCS	6098.27	11715.64	11738.68	2911.78	536.06	4.57	9.23	2.89
Reach-1	13499	2_Yr	6082.33	13.75	1957.96	109.60	101.74	0.78	2.90	0.70
Reach-1	13499	5_Yr	6083.81	42.69	3309.81	476.90	146.08	1.40	4.57	1.32
Reach-1	13499	10_Yr	6085.67	96.51	4561.67	1317.42	275.35	1.64	4.86	1.19
Reach-1	13499	50_Yr	6089.42	308.42	8243.82	6015.97	414.83	2.58	6.75	2.33
Reach-1	13499	100_Yr	6091.13	442.44	10079.24	9560.42	447.03	2.89	7.42	3.00
Reach-1	13499	24hr_100_yr_SCS	6092.78	596.30	11973.97	13795.83	453.84	3.17	8.07	3.74
Reach-1	13000	2_Yr	6075.87	7.43	2008.22	65.65	60.30	0.95	4.17	1.54
Reach-1	13000	5_Yr	6079.40	51.14	3497.10	281.16	70.01	0.98	3.24	1.70
Reach-1	13000	10_Yr	6082.02	158.01	5276.98	540.61	277.32	0.17	3.82	2.07
Reach-1	13000	50_Yr	6086.77	4283.82	8611.89	1672.50	426.21	1.39	4.30	1.22
Reach-1	13000	100_Yr	6088.86	7235.25	10092.71	2754.14	447.98	1.73	4.38	1.50
Reach-1	13000	24hr_100_yr_SCS	6090.11	10258.63	12227.80	3879.66	462.95	2.35	5.47	1.99
Reach-1	12545	2_Yr	6074.99	102.84	1340.01	638.45	103.87	0.40	1.23	0.57
Reach-1	12545	5_Yr	6078.19	200.20	2373.98	1255.22	231.00	0.31	2.16	0.76
Reach-1	12545	10_Yr	6081.99	1153.20	2574.37	2248.03	549.14	0.29	1.48	0.47
Reach-1	12545	50_Yr	6086.46	4889.60	4126.62	5551.99	713.28	0.71	2.29	0.77
Reach-1	12545	100_Yr	6088.25	7742.39	5236.15	7103.56	911.59	1.06	3.09	0.81
Reach-1	12545	24hr_100_yr_SCS	6089.39	10147.88	6234.91	9983.32	971.31	1.37	3.94	1.11
Reach-1	12433	2_Yr	6074.94	73.56	1648.24	359.50	103.85	0.25	0.63	0.38
Reach-1	12433	5_Yr	6078.20	153.92	2874.85	800.63	354.05	0.26	1.01	0.71
Reach-1	12433	10_Yr	6081.64	457.94	4179.14	1338.51	555.75	0.50	1.26	0.96
Reach-1	12433	50_Yr	6085.80	1192.03	7283.39	6092.78	847.30	1.17	2.31	0.68
Reach-1	12433	100_Yr	6088.16	6136.55	7249.43	6696.12	1031.72	0.62	1.79	0.51
Reach-1	12433	24hr_100_yr_SCS	6089.27	8380.50	8660.26	9325.34	1106.71	0.86	2.30	0.66
Reach-1	12391		Bridge							
Reach-1	12345	2_Yr	6071.64	26.43	2002.44	52.43	48.89	1.41	5.06	2.10
Reach-1	12345	5_Yr	6075.22	158.78	3503.85	166.76	62.17	1.75	4.41	1.88
Reach-1	12345	10_Yr	6076.42	297.71	5383.05	294.84	66.27	3.17	7.69	3.28
Reach-1	12345	50_Yr	6083.33	1185.06	8003.63	5379.52	807.31	0.85	4.89	1.21
Reach-1	12345	100_Yr	6084.49	2036.42	9479.54	8566.14	871.80	1.12	5.87	1.72

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	12345	24hr_100_yr_SCS	6085.44	3258.41	11064.69	12043.00	890.58	1.61	7.09	2.29
Reach-1	12173	2_Yr	6068.84	267.28	1700.51	113.52	47.92	2.91	5.68	2.17
Reach-1	12173	5_Yr	6071.57	609.36	2944.93	275.11	64.84	4.16	8.07	2.61
Reach-1	12173	10_Yr	6075.63	1018.23	3742.55	1214.83	286.92	3.03	5.88	1.00
Reach-1	12173	50_Yr	6079.66	1433.48	6446.57	6688.15	577.92	1.92	9.68	3.19
Reach-1	12173	100_Yr	6081.86	2571.95	6704.99	10805.17	722.96	1.93	8.00	2.31
Reach-1	12173	24hr_100_yr_SCS	6082.82	3651.42	7817.06	14897.62	741.07	2.57	9.76	3.08
Reach-1	11773	2_Yr	6065.08	388.07	1523.48	169.75	61.37	2.04	4.23	2.02
Reach-1	11773	5_Yr	6068.21	932.69	2531.65	365.05	84.41	2.51	5.16	2.11
Reach-1	11773	10_Yr	6071.48	1561.22	3206.52	1207.86	525.85	2.16	4.42	0.52
Reach-1	11773	50_Yr	6074.21	3481.91	4931.04	6155.26	815.42	1.72	6.88	1.79
Reach-1	11773	100_Yr	6075.17	4884.89	5906.08	9291.13	825.62	2.45	8.65	2.61
Reach-1	11773	24hr_100_yr_SCS	6076.05	6518.04	6925.54	12922.52	833.49	3.30	10.61	3.56
Reach-1	11484	2_Yr	6060.43	140.37	1711.17	229.76	45.96	3.02	6.60	3.16
Reach-1	11484	5_Yr	6063.52	310.89	2946.60	571.92	59.83	3.56	8.19	3.81
Reach-1	11484	10_Yr	6067.31	448.54	3327.37	2199.70	542.95	2.05	4.90	0.77
Reach-1	11484	50_Yr	6070.24	785.80	4963.03	8819.37	750.19	2.86	6.94	1.81
Reach-1	11484	100_Yr	6071.14	984.86	5945.06	13152.18	754.06	3.61	8.80	2.63
Reach-1	11484	24hr_100_yr_SCS	6071.99	1196.67	6957.17	18212.27	757.93	4.38	10.79	3.57
Reach-1	10599	2_Yr	6047.60	68.49	1518.54	494.27	61.07	1.23	3.59	1.92
Reach-1	10599	5_Yr	6048.98	150.71	2679.59	999.10	67.82	2.70	7.71	4.12
Reach-1	10599	10_Yr	6053.76	321.59	3350.47	2303.54	463.23	1.71	4.61	0.80
Reach-1	10599	50_Yr	6056.55	659.86	5516.94	8391.40	501.39	3.09	8.21	2.42
Reach-1	10599	100_Yr	6057.89	862.12	6581.14	12638.84	546.96	3.71	9.78	3.12
Reach-1	10599	24hr_100_yr_SCS	6059.12	1077.35	7613.49	17675.26	719.11	4.29	11.25	3.14
Reach-1	10165	2_Yr	6045.87	615.04	1186.34	279.92	219.29	0.64	2.03	0.69
Reach-1	10165	5_Yr	6048.46	1653.22	1608.59	567.59	330.05	0.91	1.97	0.45
Reach-1	10165	10_Yr	6049.92	2791.50	2212.40	971.70	494.09	1.44	2.78	0.47
Reach-1	10165	50_Yr	6053.38	5755.44	3406.52	5406.24	794.35	2.21	3.70	0.85
Reach-1	10165	100_Yr	6054.91	7186.85	3909.19	8986.07	929.05	2.43	3.92	1.01
Reach-1	10165	24hr_100_yr_SCS	6056.62	8510.59	4289.06	13566.45	960.02	2.41	3.79	1.20
Reach-1	9717	2_Yr	6040.81	224.13	1273.55	583.62	69.75	3.91	6.86	4.78
Reach-1	9717	5_Yr	6042.87	467.27	2209.83	1152.30	83.67	4.92	9.49	6.43
Reach-1	9717	10_Yr	6046.94	1787.41	2678.03	1510.15	461.54	1.27	4.94	1.48
Reach-1	9717	50_Yr	6049.31	5903.82	4507.30	4157.08	523.37	3.41	8.99	3.08
Reach-1	9717	100_Yr	6050.30	8562.08	5510.39	6009.63	544.06	4.78	11.42	4.13
Reach-1	9717	24hr_100_yr_SCS	6053.90	12953.80	5613.37	7798.93	1016.15	3.71	7.11	1.59
Reach-1	9622	2_Yr	6041.11	16.16	1969.76	95.38	101.98	0.15	0.68	0.28
Reach-1	9622	5_Yr	6042.72	56.00	3540.76	232.64	125.54	0.28	1.44	0.63
Reach-1	9622	10_Yr	6044.43	196.00	5350.40	429.20	160.99	0.70	2.24	0.95
Reach-1	9622	50_Yr	6048.04	1952.51	11532.39	1083.30	516.25	1.27	5.48	0.99
Reach-1	9622	100_Yr	6049.53	3734.04	14112.52	2235.54	578.61	1.97	6.57	1.41
Reach-1	9622	24hr_100_yr_SCS	6053.58	7153.89	14124.73	5087.48	1043.58	1.69	3.94	0.76
Reach-1	9563		Bridge							
Reach-1	9538	2_Yr	6039.16	15.55	1975.23	90.52	100.65	0.18	0.85	0.34
Reach-1	9538	5_Yr	6042.46	125.28	3440.68	263.45	155.46	0.31	1.13	0.45
Reach-1	9538	10_Yr	6043.26	254.26	5247.34	474.00	174.58	0.72	2.23	0.99
Reach-1	9538	50_Yr	6045.73	1676.09	11948.06	944.06	490.10	1.47	7.44	1.29
Reach-1	9538	100_Yr	6047.07	3350.83	14804.98	1926.29	577.98	2.30	9.28	1.81
Reach-1	9538	24hr_100_yr_SCS	6048.36	5547.59	17656.61	3161.90	704.93	3.15	10.97	2.09
Reach-1	9296	2_Yr	6035.74	214.21	1316.79	550.31	65.70	3.81	6.53	4.43
Reach-1	9296	5_Yr	6037.93	403.40	2297.97	1128.03	102.91	4.08	9.07	6.28
Reach-1	9296	10_Yr	6041.37	1980.25	2552.41	1442.95	510.99	0.97	4.72	3.20
Reach-1	9296	50_Yr	6043.58	7655.62	4315.39	2597.19	522.82	2.96	8.81	5.84
Reach-1	9296	100_Yr	6044.60	11580.25	5255.03	3246.82	528.23	4.20	11.02	7.22
Reach-1	9296	24hr_100_yr_SCS	6045.55	16159.86	6251.19	3955.04	533.33	5.60	13.41	8.70
Reach-1	8963	2_Yr	6035.69	1661.68	524.97	40.65	614.65	0.06	0.13	0.04
Reach-1	8963	5_Yr	6037.18	3193.25	799.81	84.04	638.37	0.11	0.22	0.07
Reach-1	8963	10_Yr	6038.40	5103.59	1126.61	153.00	665.76	0.18	0.36	0.13
Reach-1	8963	50_Yr	6041.42	12921.60	2201.98	457.02	692.25	0.52	0.87	0.40
Reach-1	8963	100_Yr	6042.86	17981.80	2812.31	665.39	707.86	0.73	1.18	0.58
Reach-1	8963	24hr_100_yr_SCS	6044.02	23161.30	3569.69	919.80	763.36	0.99	1.65	0.86

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	8837		Bridge							
Reach-1	8738	2_Yr	6027.14	1538.57	658.21	30.52	483.10	1.73	4.41	1.96
Reach-1	8738	5_Yr	6028.09	3179.34	843.33	54.42	534.08	1.94	3.84	1.77
Reach-1	8738	10_Yr	6029.44	5311.84	983.62	87.75	573.93	1.59	2.63	1.24
Reach-1	8738	50_Yr	6033.31	13656.85	1616.05	307.70	738.63	1.35	1.99	0.76
Reach-1	8738	100_Yr	6034.99	18844.21	2019.49	595.80	750.90	1.53	2.10	0.79
Reach-1	8738	24hr_100_yr_SCS	6036.59	24267.42	2425.53	957.85	760.29	1.67	2.20	0.94
Reach-1	8072	2_Yr	6020.29	1231.41	837.94	157.95	146.14	1.63	1.71	0.61
Reach-1	8072	5_Yr	6022.59	2100.42	1468.25	508.43	181.41	2.03	2.35	0.94
Reach-1	8072	10_Yr	6024.88	3019.82	2239.38	1124.01	262.61	2.17	3.01	1.07
Reach-1	8072	50_Yr	6030.06	6349.95	4204.97	5025.68	534.32	1.47	4.06	1.86
Reach-1	8072	100_Yr	6031.89	9151.60	5029.69	7278.21	542.72	1.91	4.47	2.26
Reach-1	8072	24hr_100_yr_SCS	6033.67	12184.29	5791.95	9674.56	547.95	2.25	4.72	2.58
Reach-1	7500	2_Yr	6015.95	1219.92	907.19	100.20	99.19	2.90	3.05	1.68
Reach-1	7500	5_Yr	6017.72	2189.31	1674.45	213.35	110.33	4.24	4.91	2.58
Reach-1	7500	10_Yr	6019.46	3386.21	2623.26	373.73	125.50	5.36	6.88	3.46
Reach-1	7500	50_Yr	6024.74	9161.55	5456.90	962.15	332.13	3.97	9.32	1.98
Reach-1	7500	100_Yr	6027.33	12652.98	6454.95	2351.57	381.57	4.23	8.65	2.35
Reach-1	7500	24hr_100_yr_SCS	6029.61	16273.41	7374.43	4002.96	406.19	4.51	8.28	2.57
Reach-1	7000	2_Yr	6012.32	1671.81	441.77	113.71	165.73	1.60	1.31	0.87
Reach-1	7000	5_Yr	6014.82	2883.11	906.28	287.72	184.83	1.64	1.62	1.10
Reach-1	7000	10_Yr	6017.20	4482.68	1414.26	486.26	207.20	1.66	1.83	1.20
Reach-1	7000	50_Yr	6023.31	11194.43	3175.37	1210.80	344.85	1.67	2.60	1.53
Reach-1	7000	100_Yr	6025.80	15728.07	4179.93	1551.50	357.95	2.13	3.13	1.59
Reach-1	7000	24hr_100_yr_SCS	6028.03	20530.16	5191.38	1929.26	373.84	2.56	3.63	1.60
Reach-1	6472	2_Yr	6008.20	628.82	1485.08	113.40	77.56	1.88	2.98	1.31
Reach-1	6472	5_Yr	6010.43	1263.68	2565.66	247.76	92.89	2.93	4.73	1.86
Reach-1	6472	10_Yr	6012.60	2147.44	3756.35	479.41	114.90	3.51	6.25	2.35
Reach-1	6472	50_Yr	6017.90	6146.32	7462.26	1972.01	259.75	3.24	10.25	3.93
Reach-1	6472	100_Yr	6019.89	9114.35	9321.69	3023.46	279.42	4.61	12.33	4.69
Reach-1	6472	24hr_100_yr_SCS	6021.28	12260.14	11250.67	4139.99	292.52	6.25	15.21	5.62
Reach-1	6000	2_Yr	6003.37	241.80	1830.33	155.17	93.54	1.97	4.11	1.92
Reach-1	6000	5_Yr	6005.33	600.09	3101.48	375.53	118.17	2.74	5.41	2.36
Reach-1	6000	10_Yr	6006.87	1085.60	4581.13	716.47	137.87	3.80	7.38	3.20
Reach-1	6000	50_Yr	6011.35	3649.86	9474.64	2456.10	215.21	6.17	11.65	4.33
Reach-1	6000	100_Yr	6013.66	5423.16	11880.68	4155.66	266.88	5.93	12.49	4.80
Reach-1	6000	24hr_100_yr_SCS	6015.67	7532.71	13942.46	6175.64	375.36	4.26	12.86	5.30
Reach-1	5500	2_Yr	5997.83	113.25	2085.49	28.57	81.48	0.92	2.78	0.69
Reach-1	5500	5_Yr	5999.83	379.94	3505.45	191.71	162.57	1.37	3.76	0.77
Reach-1	5500	10_Yr	6001.60	812.64	4925.93	644.63	205.15	1.86	4.49	1.26
Reach-1	5500	50_Yr	6005.75	2881.11	9290.63	3408.85	262.53	3.40	6.68	2.66
Reach-1	5500	100_Yr	6007.54	4215.14	11755.88	5488.48	290.28	4.00	7.97	3.42
Reach-1	5500	24hr_100_yr_SCS	6009.68	6144.24	13568.80	7937.76	492.76	2.06	7.79	3.60
Reach-1	4500	2_Yr	5989.13	6.40	2120.03	100.87	52.01	0.54	2.23	1.15
Reach-1	4500	5_Yr	5991.73	23.26	3806.78	247.06	120.50	0.30	2.57	0.67
Reach-1	4500	10_Yr	5994.44	543.18	4672.77	1167.25	495.42	0.39	1.85	0.42
Reach-1	4500	50_Yr	5997.53	2735.03	8217.79	4627.78	614.90	1.18	3.06	0.99
Reach-1	4500	100_Yr	5998.85	4225.91	10190.81	7042.78	666.89	1.64	3.76	1.30
Reach-1	4500	24hr_100_yr_SCS	5999.98	5803.67	12117.63	9729.50	696.49	2.10	4.45	1.65
Reach-1	4000	2_Yr	5986.10	22.23	2195.90	9.17	108.05	0.27	1.55	0.09
Reach-1	4000	5_Yr	5988.54	167.81	3074.80	834.49	575.57	0.24	1.31	0.27
Reach-1	4000	10_Yr	5989.48	518.01	4004.86	1860.34	600.57	0.39	1.72	0.49
Reach-1	4000	50_Yr	5991.88	2064.16	6913.69	6602.74	713.72	0.95	2.96	1.19
Reach-1	4000	100_Yr	5992.88	3151.85	8529.14	9778.51	754.55	1.26	3.71	1.64
Reach-1	4000	24hr_100_yr_SCS	5993.87	4517.47	9967.04	13166.29	773.34	1.59	4.23	2.03
Reach-1	3536	2_Yr	5983.28	109.58	2085.30	32.42	345.06	0.76	2.01	0.45
Reach-1	3536	5_Yr	5984.47	171.44	2463.04	1442.62	543.63	0.56	1.68	0.60
Reach-1	3536	10_Yr	5986.99	937.52	2497.94	2947.74	716.51	0.24	0.76	0.41
Reach-1	3536	50_Yr	5990.10	3624.21	4529.62	7426.77	832.40	0.53	1.22	0.73
Reach-1	3536	100_Yr	5990.42	5133.79	6095.53	10230.18	844.42	0.93	2.07	1.24
Reach-1	3536	24hr_100_yr_SCS	5991.81	7297.58	7183.75	13169.47	890.86	1.09	2.22	1.32

HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

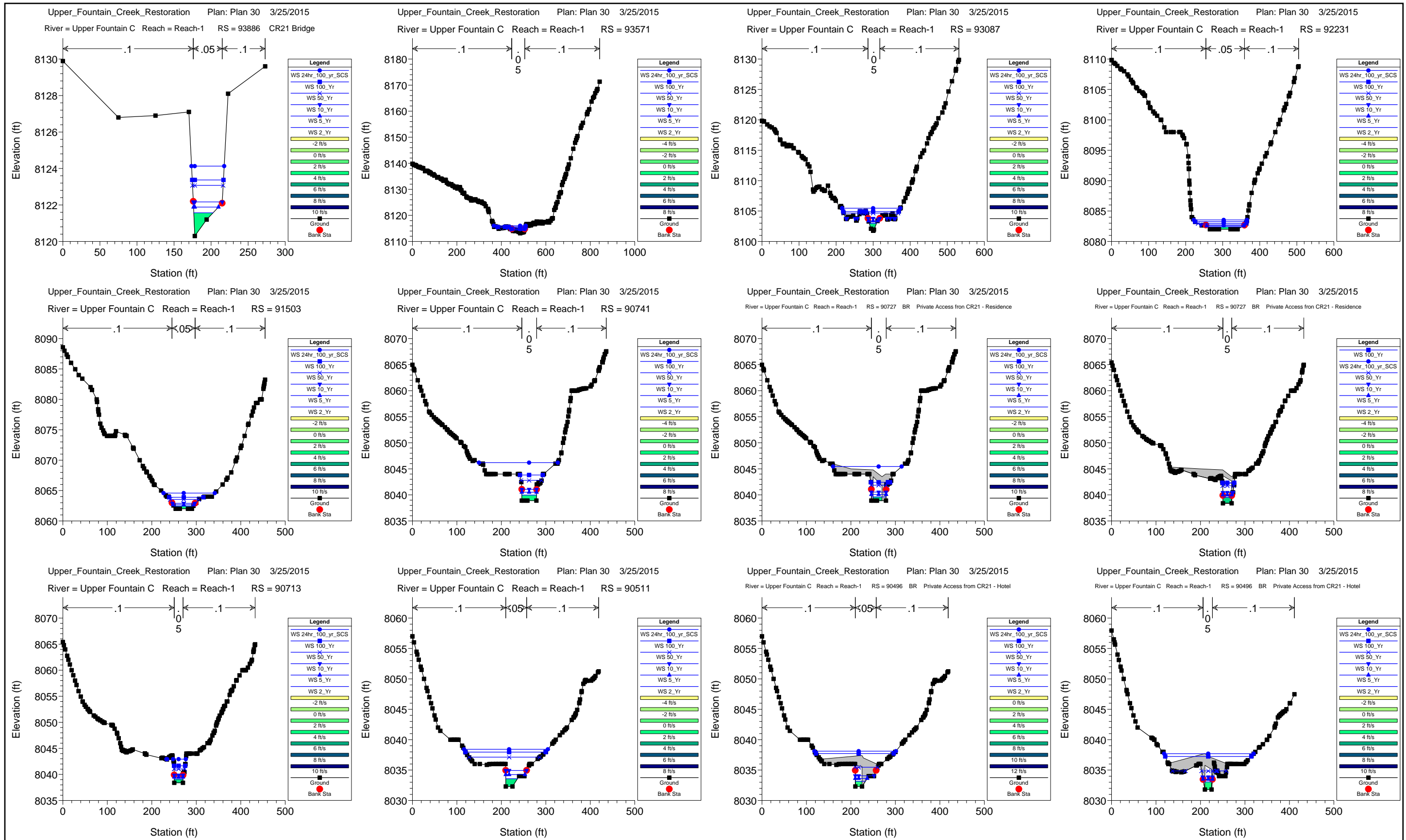
Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	3129	2_Yr	5977.15	76.80	2140.53	9.98	51.66	1.14	2.25	0.52
Reach-1	3129	5_Yr	5979.44	188.77	3857.32	31.01	60.64	1.32	2.90	0.71
Reach-1	3129	10_Yr	5981.81	382.57	5931.90	68.74	219.29	1.44	3.48	0.87
Reach-1	3129	50_Yr	5989.62	5258.87	6122.00	4199.73	930.88	0.34	0.90	0.37
Reach-1	3129	100_Yr	5988.93	6875.36	8980.75	5603.40	927.91	0.74	2.13	0.83
Reach-1	3129	24hr_100_yr_SCS	5990.55	9867.62	10070.78	7712.41	934.73	0.87	2.15	0.94
Reach-1	2787	2_Yr	5973.73	7.47	2217.21	2.62	41.97	0.44	1.84	0.25
Reach-1	2787	5_Yr	5975.66	20.98	4045.34	10.78	47.73	0.75	2.97	0.44
Reach-1	2787	10_Yr	5977.85	45.79	6292.37	45.04	54.97	1.00	3.87	0.77
Reach-1	2787	50_Yr	5985.15	168.42	11762.06	3650.12	739.67	0.96	3.54	1.29
Reach-1	2787	100_Yr	5986.75	4782.59	12001.14	4675.78	881.93	0.74	2.98	1.24
Reach-1	2787	24hr_100_yr_SCS	5987.89	7340.67	14082.28	6227.85	886.67	1.03	3.56	1.58
Reach-1	2449	2_Yr	5971.19	37.55	2163.09	26.65	53.29	0.93	2.25	0.77
Reach-1	2449	5_Yr	5973.45	112.21	3885.24	79.65	62.38	1.29	2.93	0.99
Reach-1	2449	10_Yr	5975.85	240.79	5951.73	190.68	74.30	1.54	3.47	1.17
Reach-1	2449	50_Yr	5984.11	3920.07	10103.03	1557.49	1017.95	0.48	2.29	0.47
Reach-1	2449	100_Yr	5985.56	7005.36	11862.62	2591.52	1074.59	0.71	2.63	0.57
Reach-1	2449	24hr_100_yr_SCS	5986.62	10125.97	13731.06	3793.77	1107.98	0.95	3.11	0.73
Reach-1	2308	2_Yr	5969.96	382.33	1376.69	468.27	100.86	0.76	1.11	0.71
Reach-1	2308	5_Yr	5973.83	785.29	2259.49	1032.32	122.23	0.78	1.04	0.72
Reach-1	2308	10_Yr	5976.14	1267.37	3373.08	1742.74	136.89	1.15	1.47	1.09
Reach-1	2308	50_Yr	5981.96	6967.50	5339.50	3273.60	1064.37	0.35	1.54	0.47
Reach-1	2308	100_Yr	5983.27	10861.17	6030.39	4567.94	1097.39	0.46	1.68	0.57
Reach-1	2308	24hr_100_yr_SCS	5984.31	14925.15	6814.48	5911.17	1144.87	0.58	1.91	0.63
Reach-1	2204		Bridge							
Reach-1	2145	2_Yr	5967.08	279.70	1627.69	319.91	94.33	1.49	1.97	1.29
Reach-1	2145	5_Yr	5969.84	558.70	2802.43	715.97	109.60	1.88	2.28	1.73
Reach-1	2145	10_Yr	5972.63	908.87	4249.41	1224.92	125.24	2.31	2.68	2.19
Reach-1	2145	50_Yr	5979.85	5487.63	7524.12	2568.86	986.64	0.59	2.62	0.76
Reach-1	2145	100_Yr	5981.60	9027.40	8518.43	3913.67	1116.45	0.70	2.71	0.91
Reach-1	2145	24hr_100_yr_SCS	5982.65	12706.65	9785.15	5159.00	1157.62	0.91	3.18	1.14
Reach-1	1926	2_Yr	5964.59	26.26	2158.36	42.68	64.25	0.77	3.11	0.68
Reach-1	1926	5_Yr	5967.05	110.96	3747.80	218.35	77.89	1.26	4.14	1.46
Reach-1	1926	10_Yr	5969.76	270.43	5584.63	528.15	96.62	1.38	4.75	1.99
Reach-1	1926	50_Yr	5976.38	2924.70	10919.93	1735.97	614.67	0.96	6.06	1.47
Reach-1	1926	100_Yr	5978.79	7392.22	12374.92	1692.35	934.72	1.22	5.76	0.92
Reach-1	1926	24hr_100_yr_SCS	5980.22	11589.74	13542.76	2518.31	1106.94	1.52	5.88	0.86
Reach-1	1632	2_Yr	5963.11	39.53	2014.30	173.47	73.44	0.72	2.00	0.91
Reach-1	1632	5_Yr	5965.66	101.99	3529.78	445.33	85.33	0.99	2.88	1.45
Reach-1	1632	10_Yr	5968.70	228.94	5285.44	868.82	104.58	1.06	3.31	1.70
Reach-1	1632	50_Yr	5974.40	2796.66	10110.27	2673.67	1120.03	0.74	4.98	0.49
Reach-1	1632	100_Yr	5976.41	5657.59	10723.26	5078.65	1961.21	0.84	4.37	0.49
Reach-1	1632	24hr_100_yr_SCS	5977.10	7764.49	12189.23	7697.08	2057.46	1.10	5.22	0.71
Reach-1	1432	2_Yr	5962.36	6.39	2024.73	196.18	73.79	0.27	1.53	0.81
Reach-1	1432	5_Yr	5964.85	50.55	3546.27	480.28	85.85	0.57	2.36	1.42
Reach-1	1432	10_Yr	5968.59	246.37	4384.98	1751.85	994.29	0.55	1.69	0.25
Reach-1	1432	50_Yr	5970.41	651.69	7861.91	7067.01	1483.10	1.67	4.06	0.88
Reach-1	1432	100_Yr	5971.27	853.68	9140.60	11465.21	1562.57	0.64	4.82	1.27
Reach-1	1432	24hr_100_yr_SCS	5974.03	2445.26	7659.26	17546.28	1906.91	0.41	2.35	0.85
Reach-1	1351		Bridge							
Reach-1	1286	2_Yr	5960.11	16.67	2089.46	121.17	136.77	0.61	3.06	1.10
Reach-1	1286	5_Yr	5961.92	62.13	3653.24	361.73	609.33	1.29	5.13	2.41
Reach-1	1286	10_Yr	5963.63	149.25	5525.56	708.38	712.66	1.89	7.46	3.91
Reach-1	1286	50_Yr	5967.68	329.31	3815.01	11436.28	1727.81	0.55	1.58	0.63
Reach-1	1286	100_Yr	5971.05	3032.96	3245.81	15180.74	1896.78	0.21	0.68	0.34
Reach-1	1286	24hr_100_yr_SCS	5973.84	5145.83	3370.47	19134.50	2279.26	0.17	0.52	0.27
Reach-1	868	2_Yr	5955.22	63.56	1854.97	308.77	95.52	1.51	4.35	2.07
Reach-1	868	5_Yr	5957.26	198.84	3069.02	809.25	191.18	1.37	5.21	2.94
Reach-1	868	10_Yr	5961.00	1248.11	3721.36	1413.72	1013.80	0.55	2.76	1.70
Reach-1	868	50_Yr	5967.45	4697.57	2652.83	8230.20	1956.77	0.16	0.46	0.19
Reach-1	868	100_Yr	5970.92	7243.54	2656.29	11559.67	2127.33	0.13	0.30	0.15
Reach-1	868	24hr_100_yr_SCS	5973.75	9849.66	2824.68	14976.46	2372.72	0.12	0.25	0.12

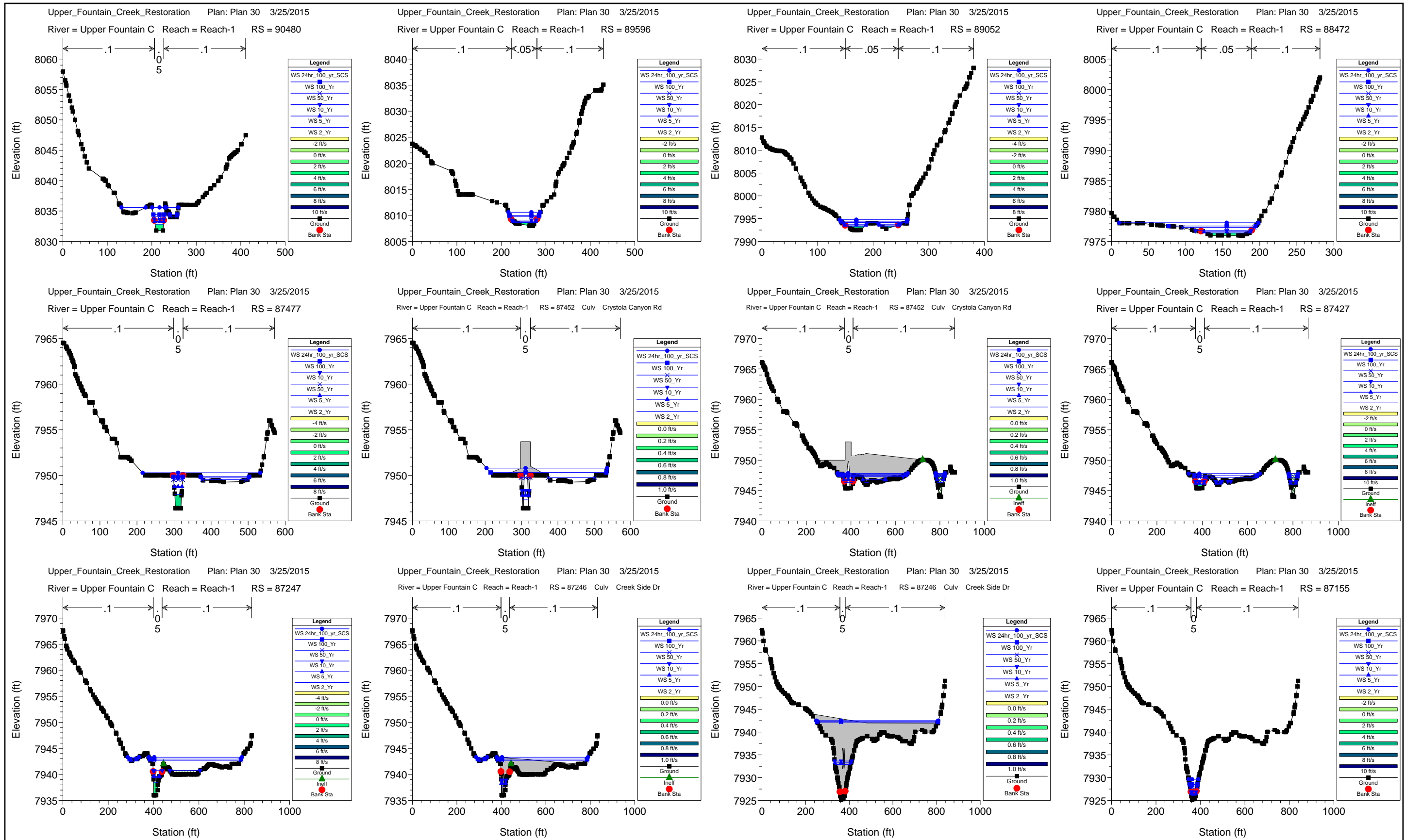
HEC-RAS Plan: Plan 20 River: Upper Fountain C Reach: Reach-1 (Continued)

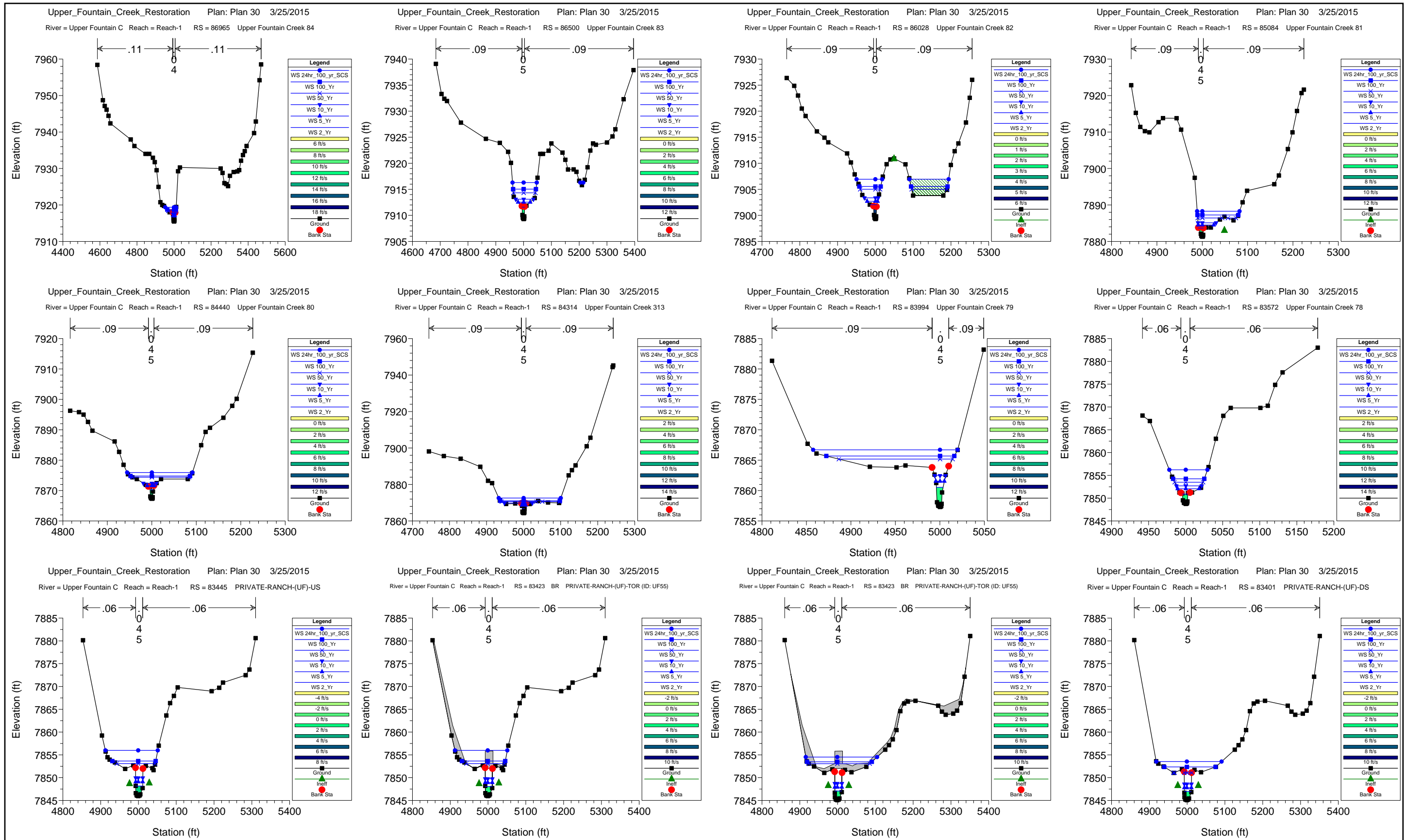
Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	559	2_Yr	5954.15		2227.30		73.08		0.70	
Reach-1	559	5_Yr	5956.65	1.43	4068.31	7.36	592.62	0.09	1.10	0.16
Reach-1	559	10_Yr	5960.65	580.16	5544.43	258.62	1627.15	0.23	0.86	0.13
Reach-1	559	50_Yr	5966.71	3068.38	9683.34	2828.87	2369.26	0.57	1.06	0.48
Reach-1	559	100_Yr	5970.24	4810.93	11820.64	4827.93	2522.61	0.66	1.06	0.58
Reach-1	559	24hr_100_yr_SCS	5973.03	6591.20	14185.21	6874.39	2777.01	0.78	1.16	0.71
Reach-1	408		Bridge							
Reach-1	310	2_Yr	5952.63		2227.30		71.14		0.97	
Reach-1	310	5_Yr	5955.83	1.08	4069.78	6.24	84.09	0.09	1.15	0.15
Reach-1	310	10_Yr	5959.95	230.15	6054.36	98.69	267.20	0.27	1.03	0.10
Reach-1	310	50_Yr	5965.36	1120.62	12426.62	2033.36	341.00	0.65	1.91	0.67
Reach-1	310	100_Yr	5968.99	2198.96	15254.48	4006.06	412.35	0.85	1.89	0.85
Reach-1	310	24hr_100_yr_SCS	5971.69	3277.58	18398.57	5974.65	465.43	1.08	2.09	1.03
Reach-1	293	2_Yr	5952.35	1.04	2106.57	119.69	69.27	0.09	1.34	0.73
Reach-1	293	5_Yr	5955.39	8.94	3808.77	259.39	90.26	0.17	1.74	0.73
Reach-1	293	10_Yr	5959.39	128.15	5776.70	478.35	148.35	0.30	1.73	0.58
Reach-1	293	50_Yr	5963.21	832.79	12741.71	2006.10	384.28	1.12	4.68	1.68
Reach-1	293	100_Yr	5967.23	2078.53	15500.58	3880.39	482.59	1.23	4.23	2.01
Reach-1	293	24hr_100_yr_SCS	5969.91	3628.96	18470.37	5551.47	541.69	1.67	4.55	2.41
Reach-1	257		Bridge							
Reach-1	227	2_Yr	5950.77	0.66	2098.38	128.26	67.12	0.15	2.96	1.61
Reach-1	227	5_Yr	5953.97	7.88	3765.86	303.37	79.36	0.32	3.14	1.51
Reach-1	227	10_Yr	5956.78	59.27	5701.82	622.11	106.69	0.49	3.70	1.78
Reach-1	227	50_Yr	5958.59	343.69	13491.45	1745.46	187.57	3.04	14.63	5.58
Reach-1	227	100_Yr	5962.68	754.20	17368.29	3337.01	446.56	2.29	12.86	4.70
Reach-1	227	24hr_100_yr_SCS	5965.45	1765.64	20356.64	5528.52	518.84	2.43	12.45	5.60
Reach-1	175	2_Yr	5950.52	29.74	2116.06	81.50	168.65	0.37	1.64	0.18
Reach-1	175	5_Yr	5953.98	127.12	3059.35	890.63	235.14	0.43	1.54	0.55
Reach-1	175	10_Yr	5957.00	561.36	3939.32	1882.52	558.13	0.35	1.50	0.73
Reach-1	175	50_Yr	5958.89	2078.10	8587.28	4915.22	659.11	1.72	5.41	2.91
Reach-1	175	100_Yr	5960.70	3590.87	10836.38	7032.25	703.60	2.60	6.79	3.93
Reach-1	175	24hr_100_yr_SCS	5962.57	5393.34	12961.85	9295.61	764.70	3.41	7.76	4.77
Reach-1	165		Bridge							
Reach-1	153	2_Yr	5948.38	9.95	2211.76	5.58	75.22	1.11	5.16	0.17
Reach-1	153	5_Yr	5950.93	42.72	3395.76	638.62	235.73	1.16	4.90	1.43
Reach-1	153	10_Yr	5953.15	222.74	4506.63	1653.83	489.22	0.59	4.84	1.98
Reach-1	153	50_Yr	5956.59	2333.37	8269.18	4978.05	705.74	2.83	8.24	4.53
Reach-1	153	100_Yr	5958.13	3951.26	10413.64	7094.61	741.95	4.18	10.18	6.03
Reach-1	153	24hr_100_yr_SCS	5959.53	5768.97	12552.99	9328.84	773.03	5.54	12.03	7.50
Reach-1	15	2_Yr	5943.27	257.90	1201.83	974.67	216.49	1.78	4.50	3.18
Reach-1	15	5_Yr	5944.36	695.13	1922.66	1799.62	229.81	3.10	6.00	4.43
Reach-1	15	10_Yr	5945.44	1297.83	2763.96	2822.51	243.78	4.33	7.45	5.56
Reach-1	15	50_Yr	5948.96	3761.94	5787.31	7085.15	446.73	4.01	10.37	6.97
Reach-1	15	100_Yr	5951.36	7025.05	7163.61	8641.24	754.17	3.84	9.19	3.71
Reach-1	15	24hr_100_yr_SCS	5952.10	9044.17	8351.30	11589.43	782.93	4.59	10.79	4.70

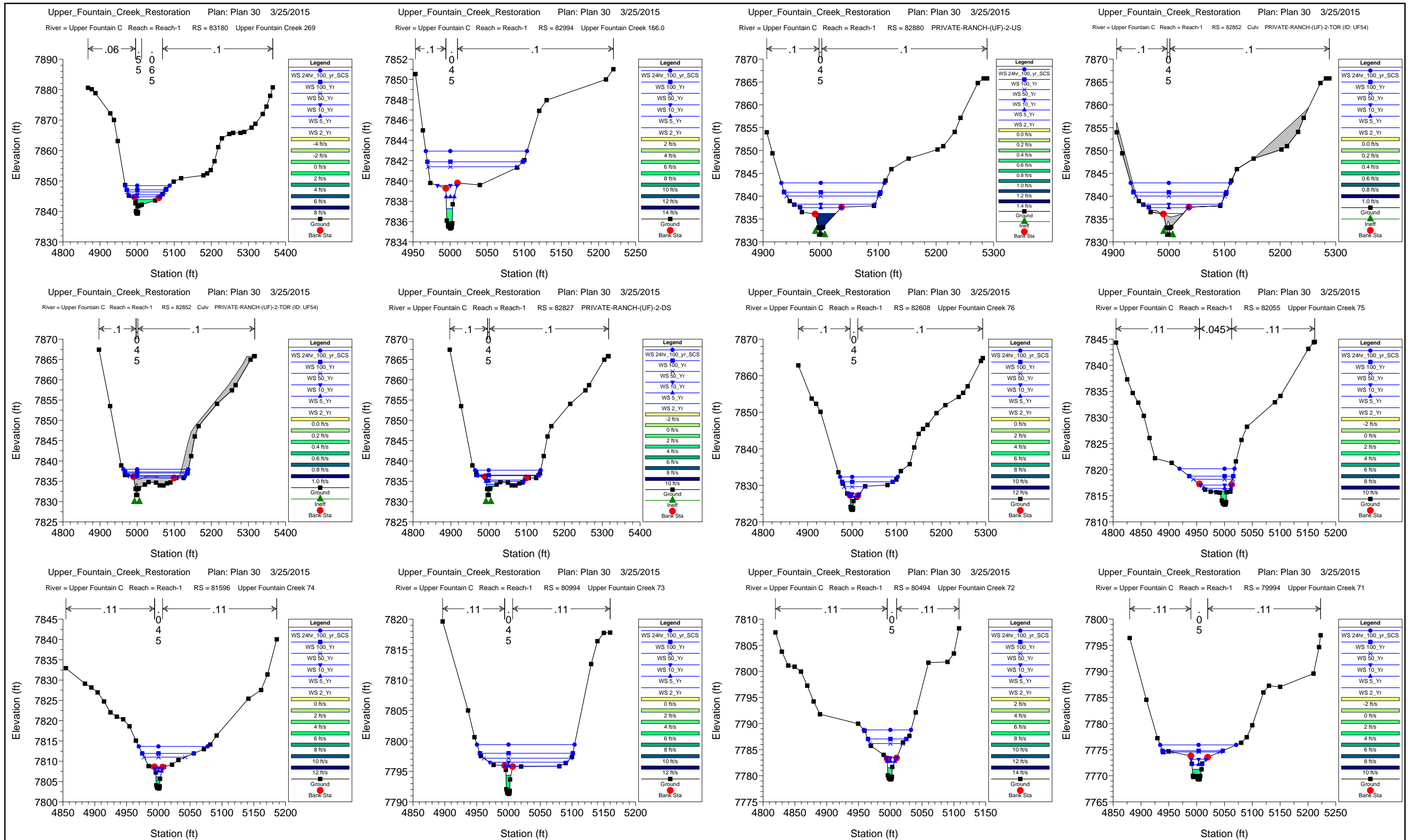
## Upper Fountain Creek Cross Section Diagrams

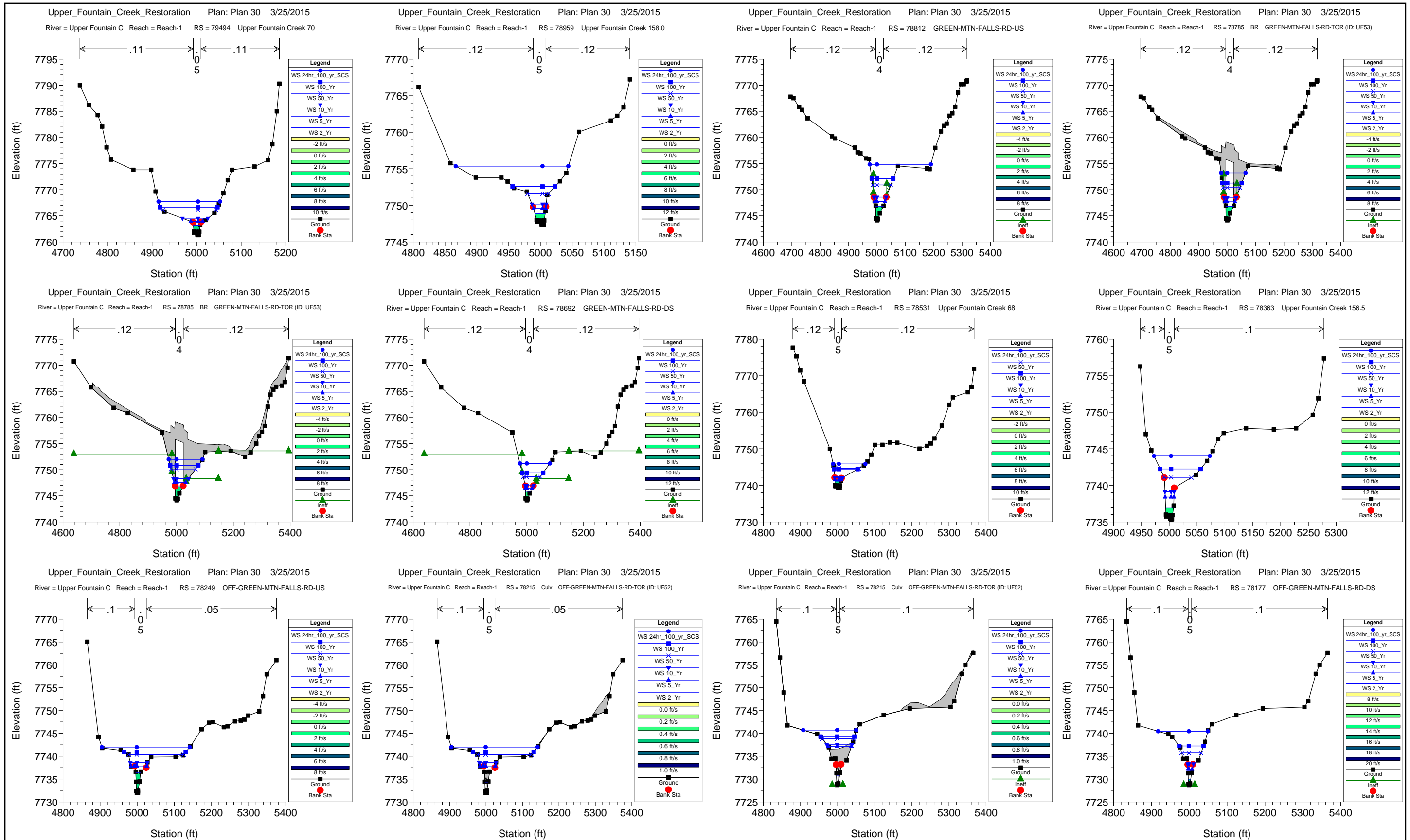


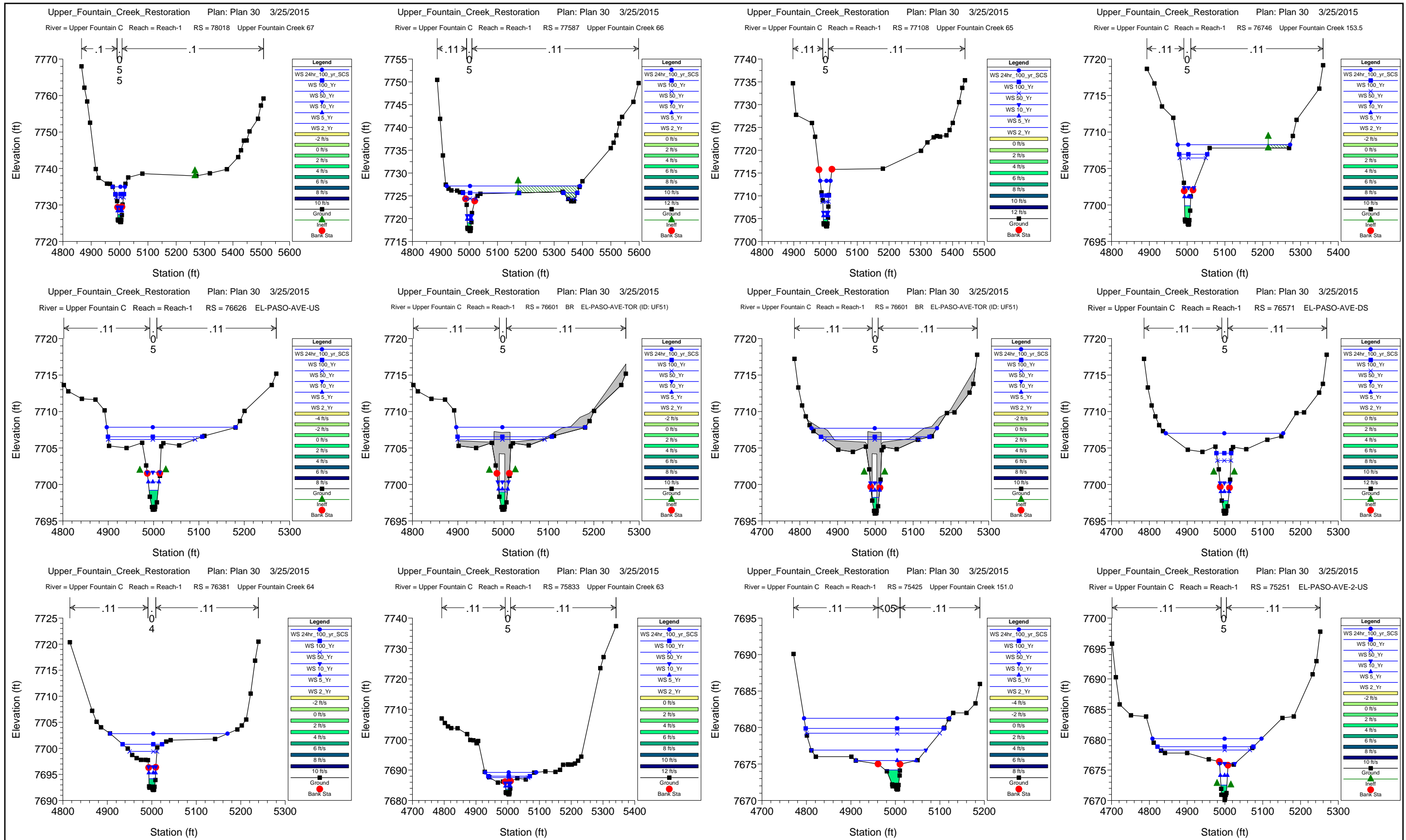


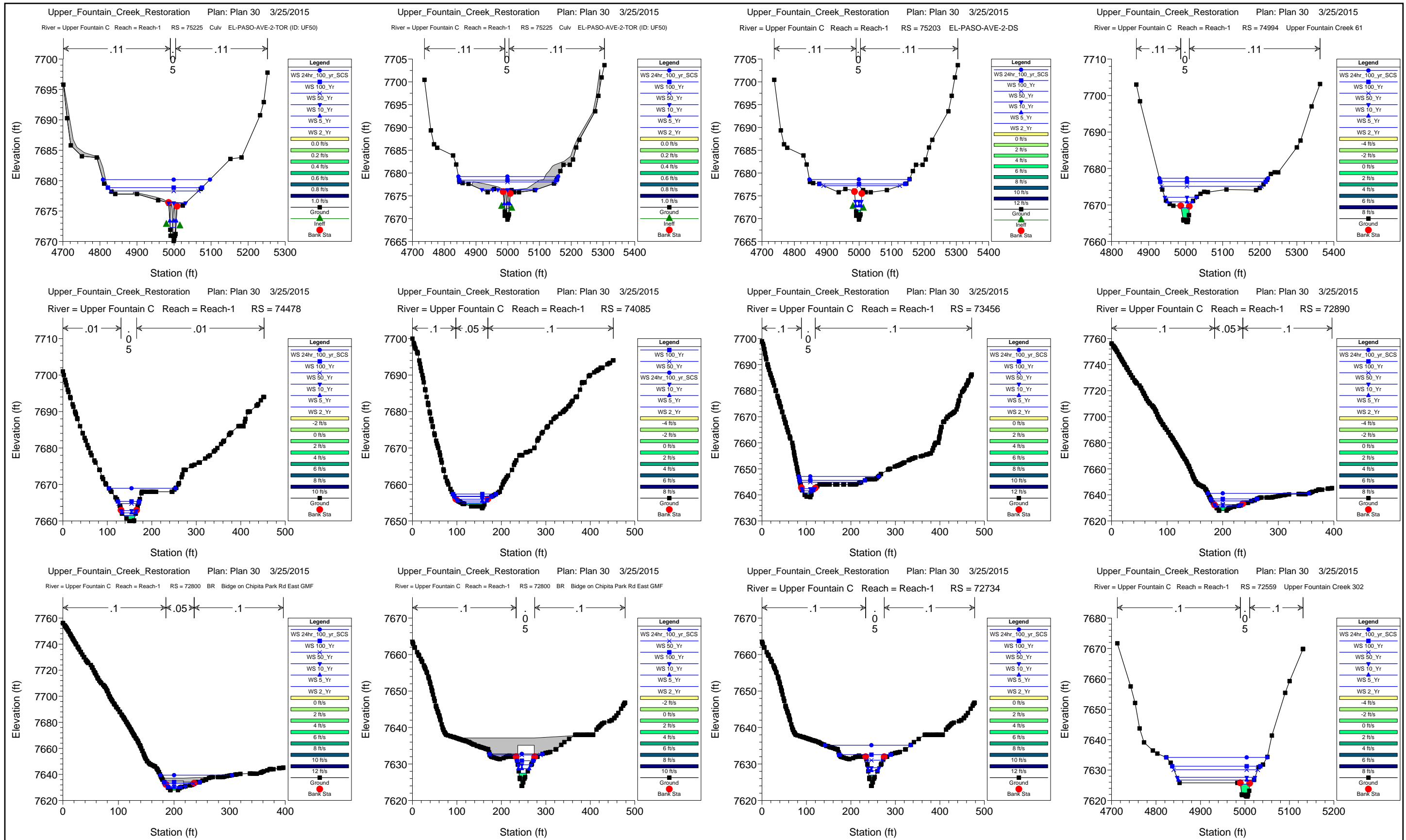


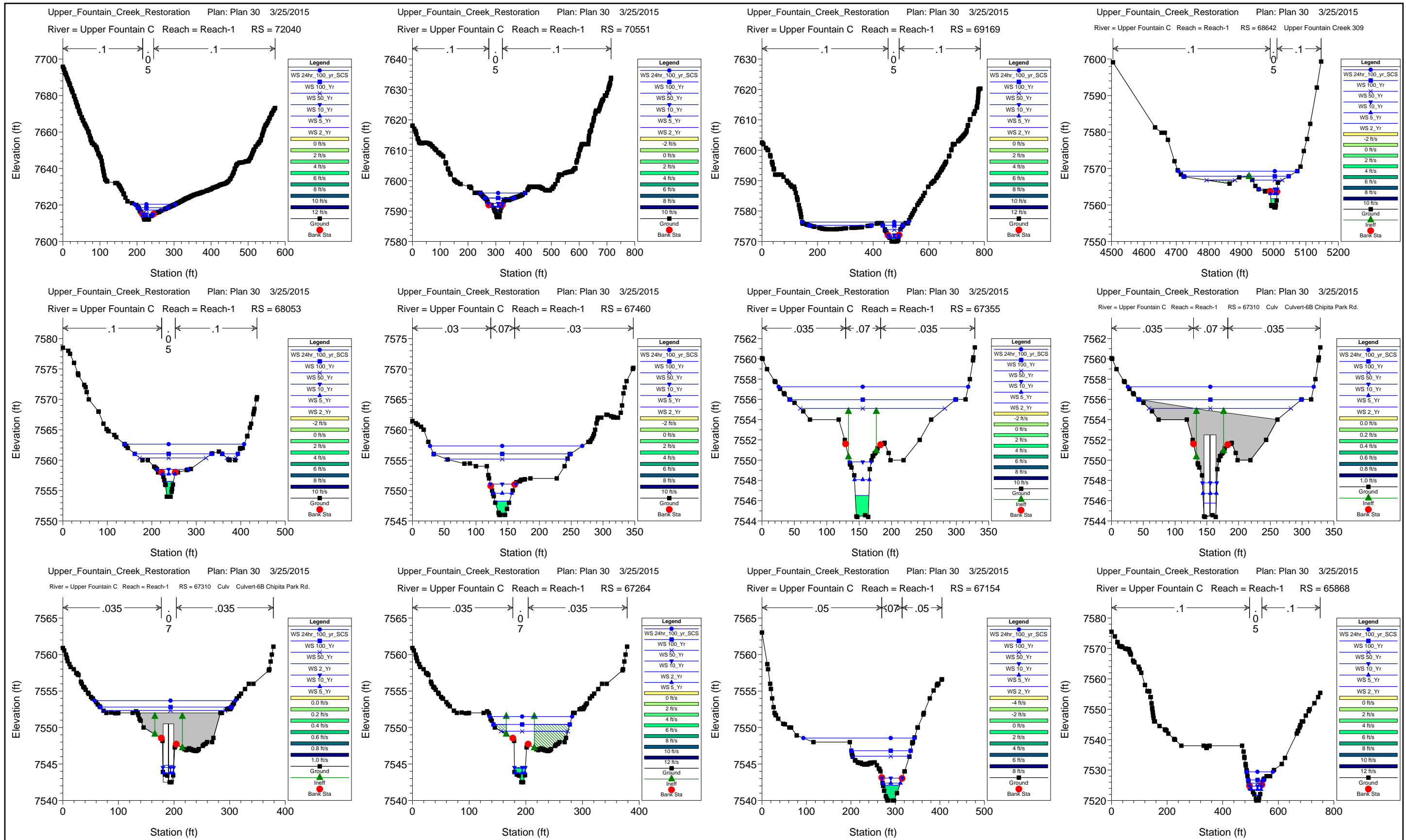




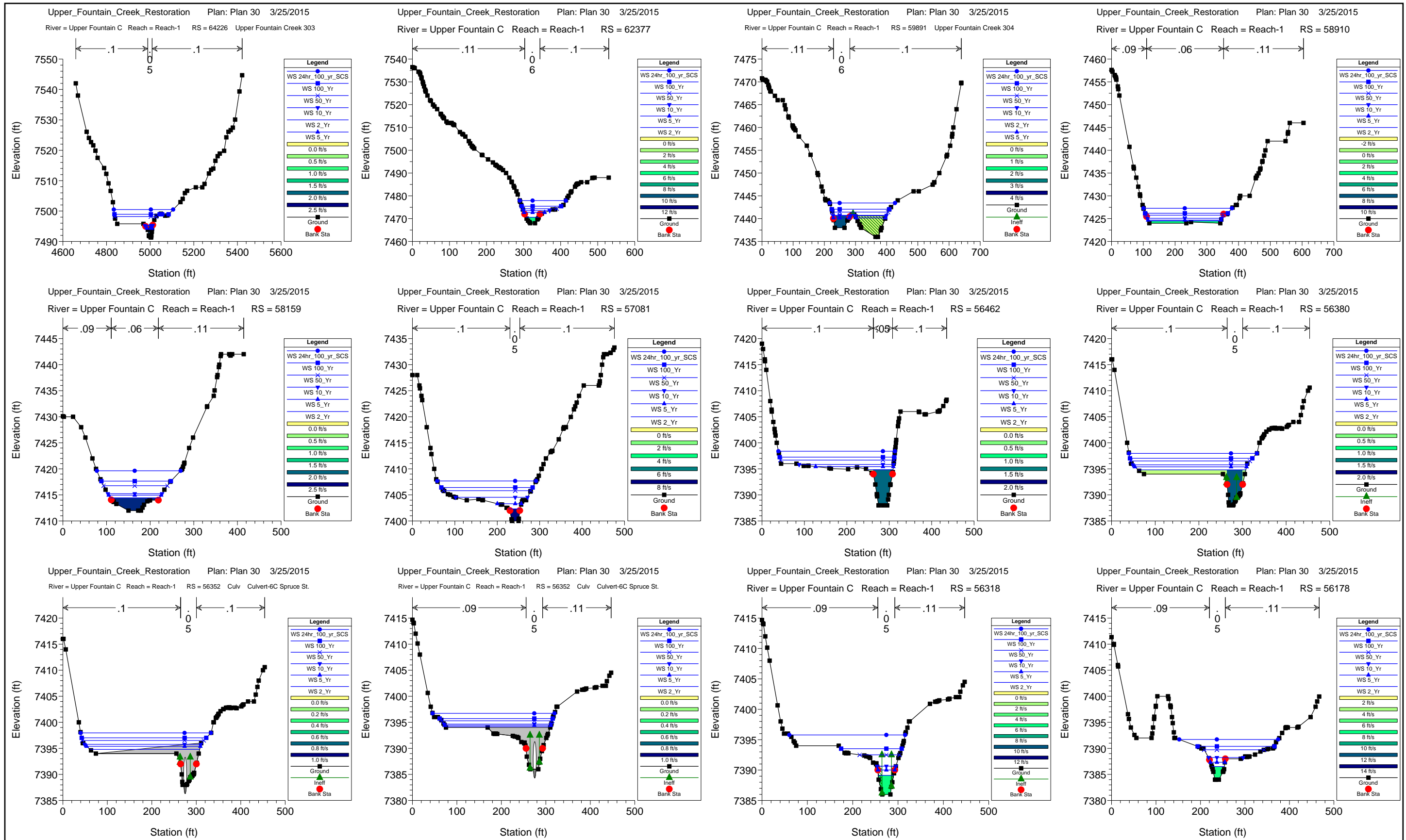


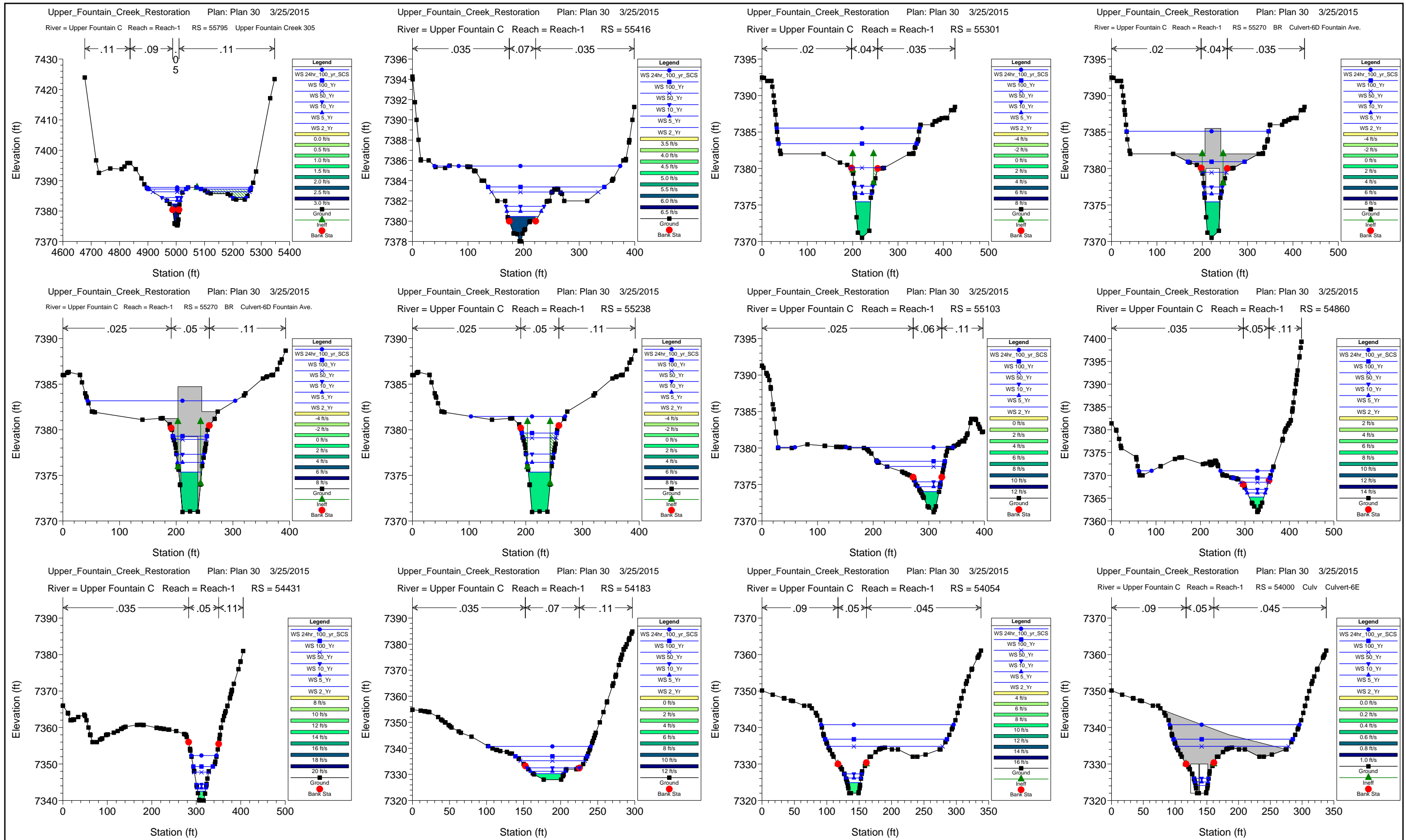


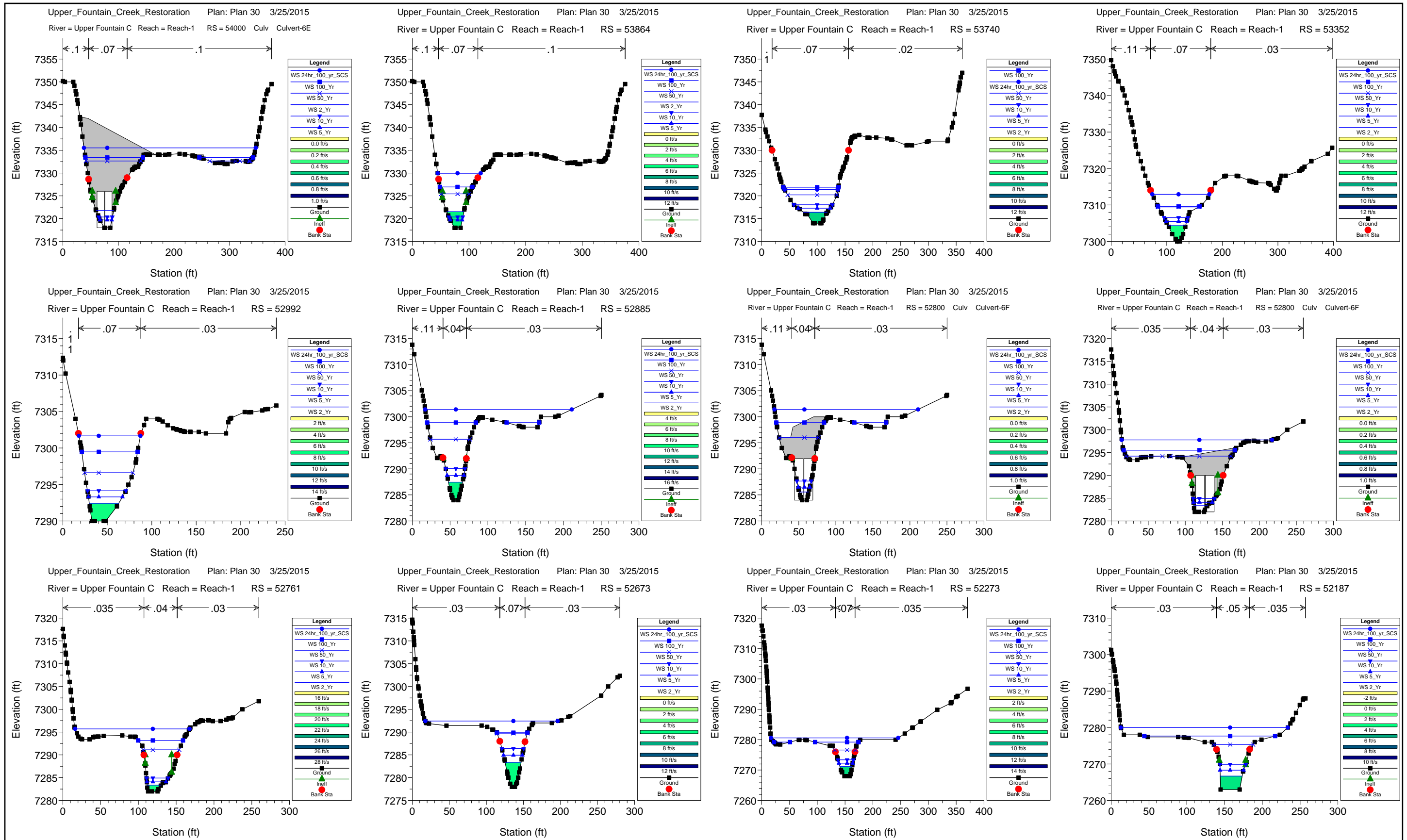


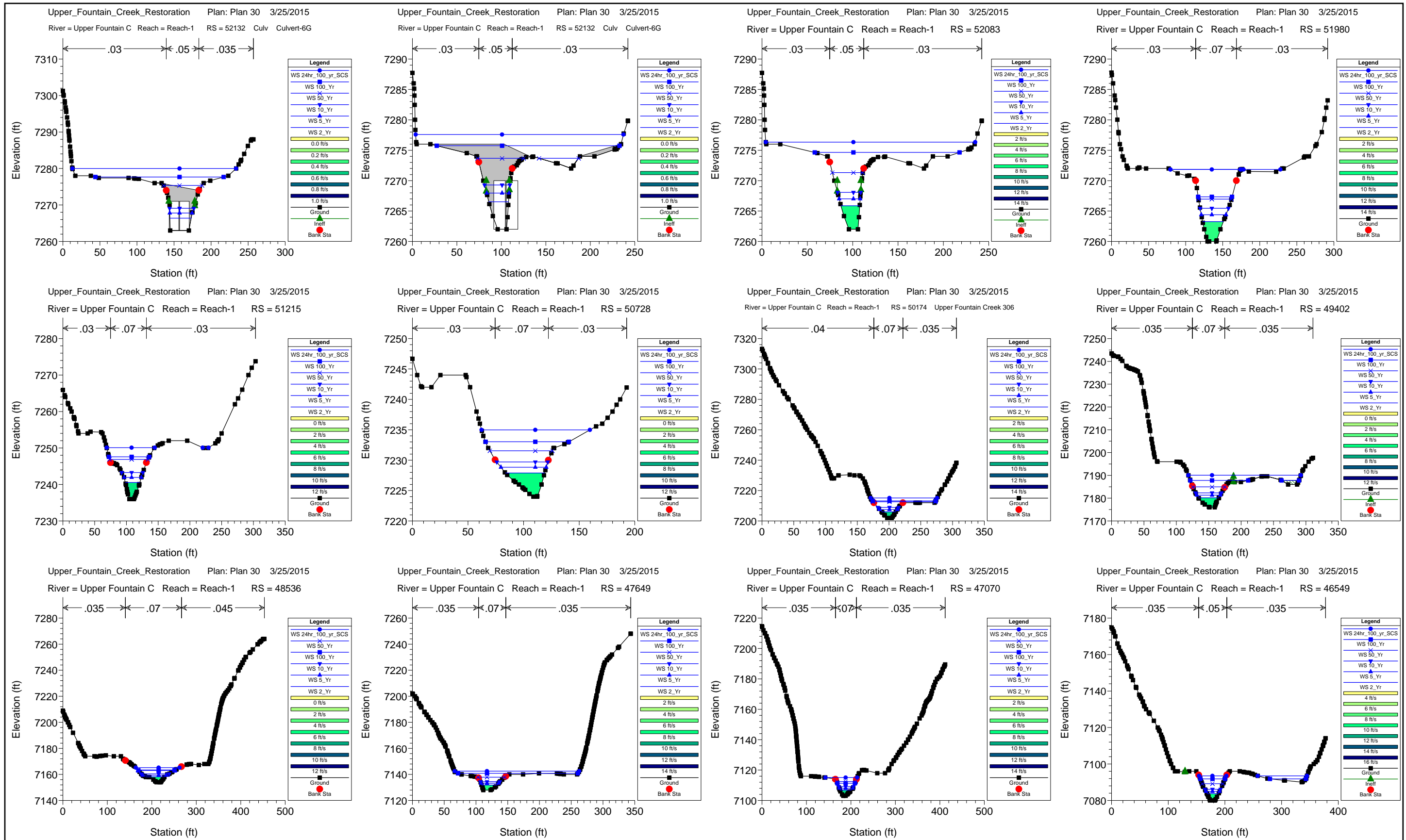


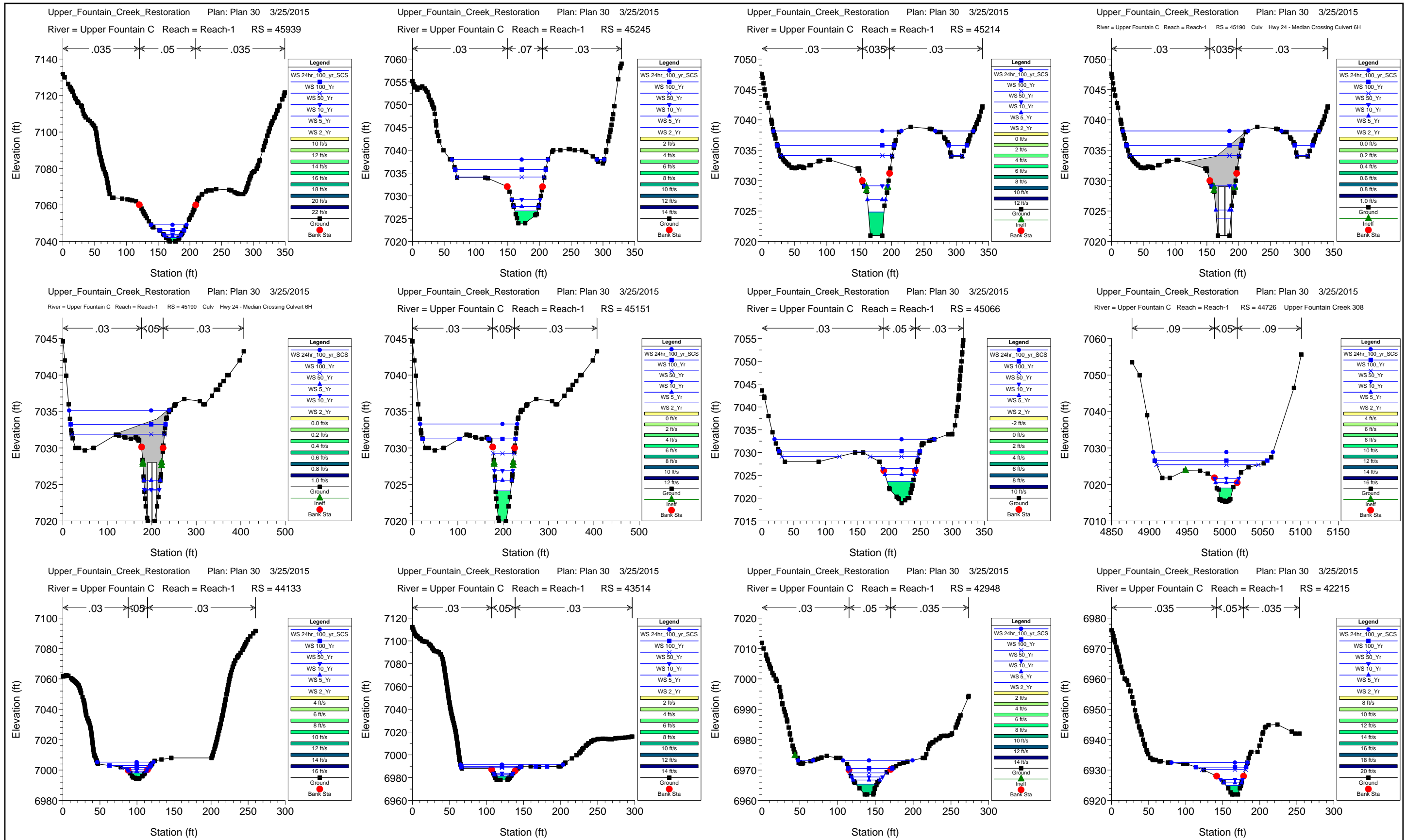


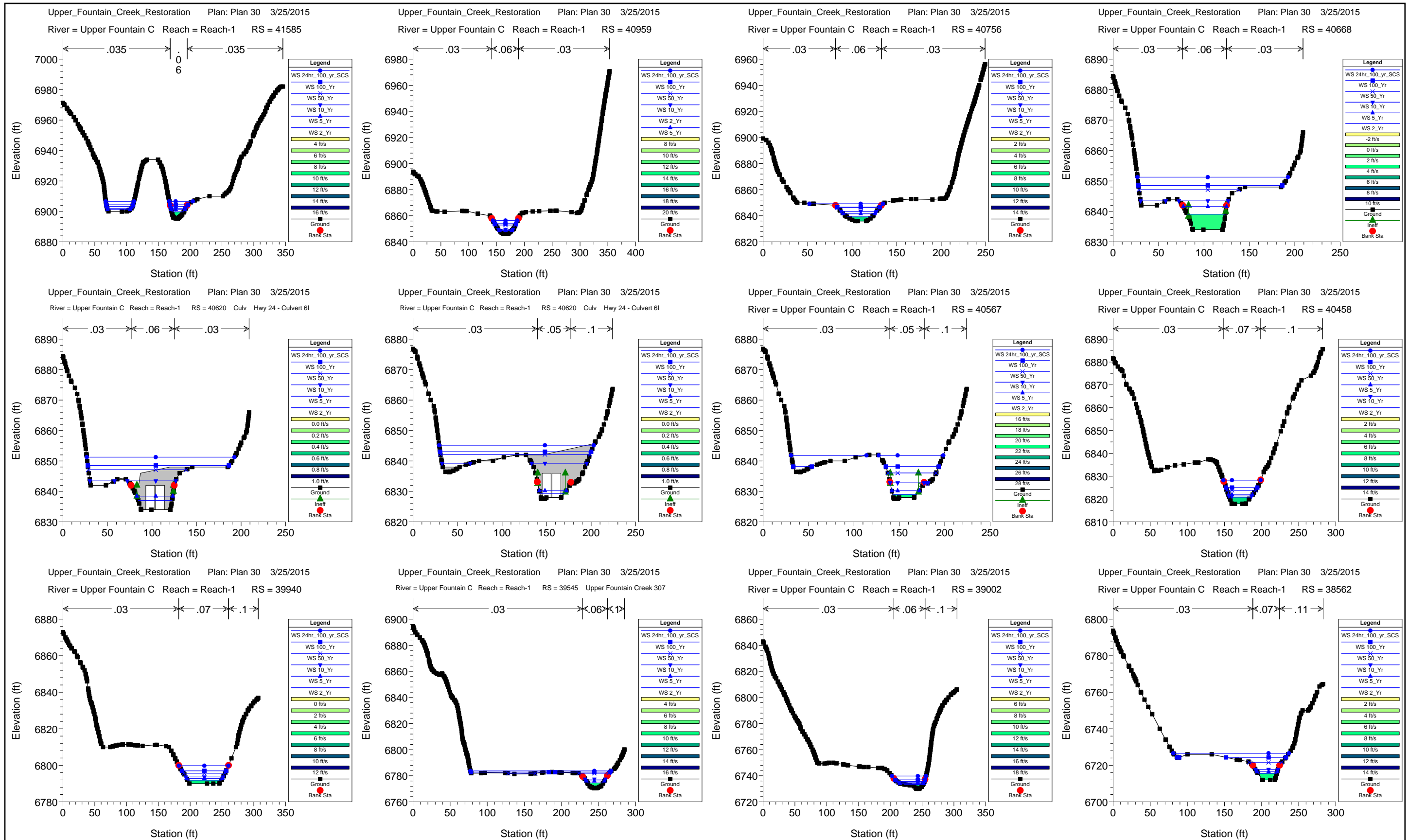


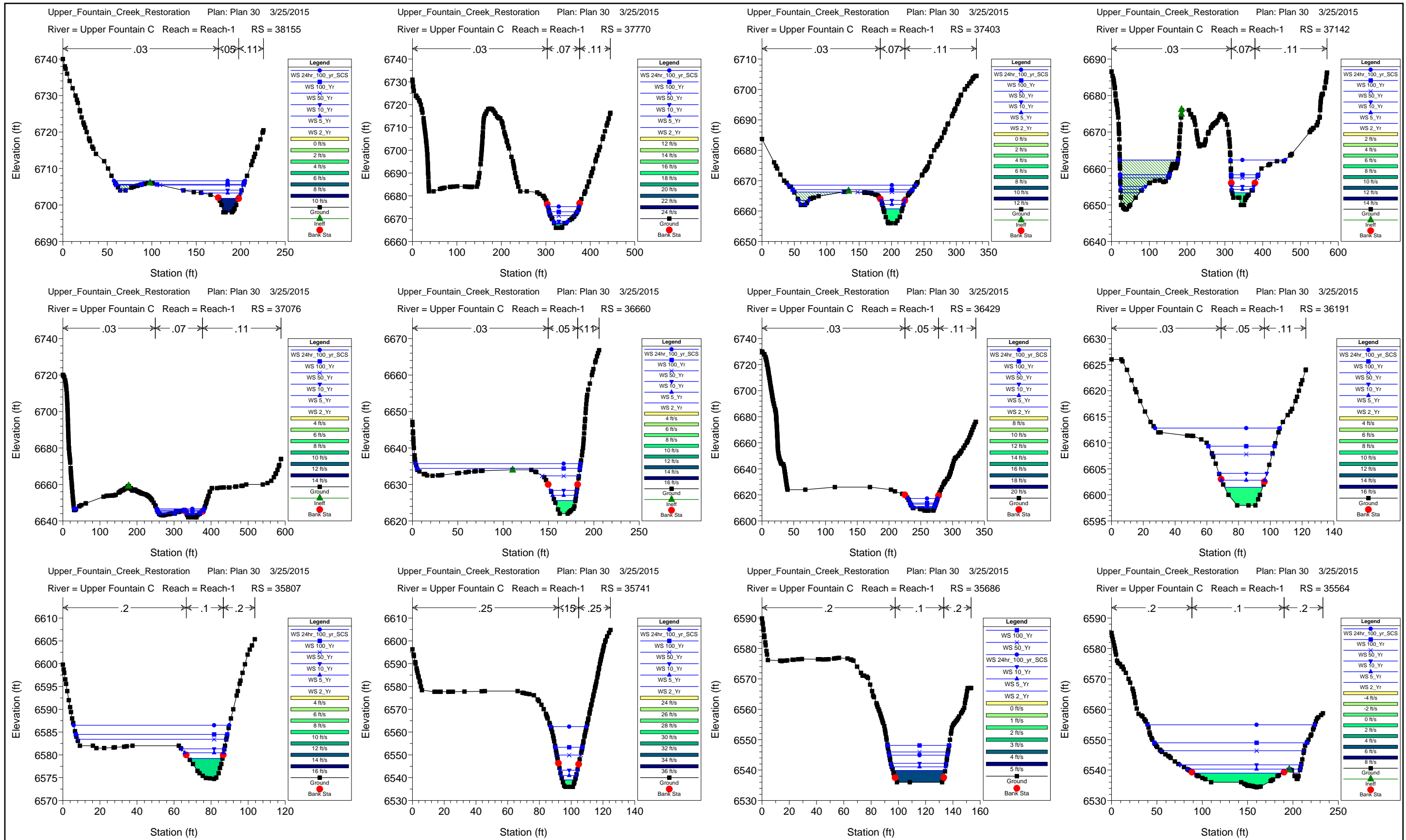


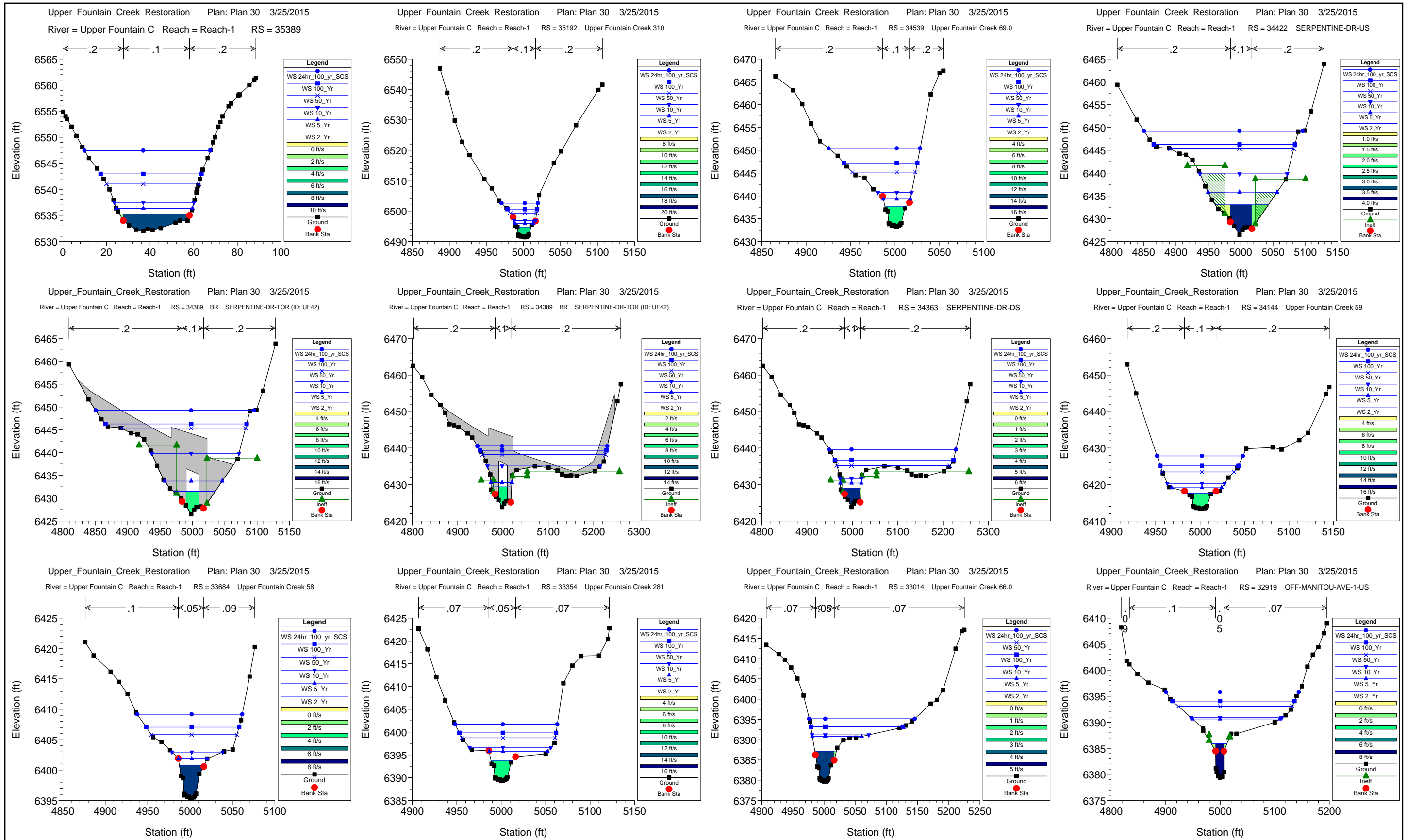




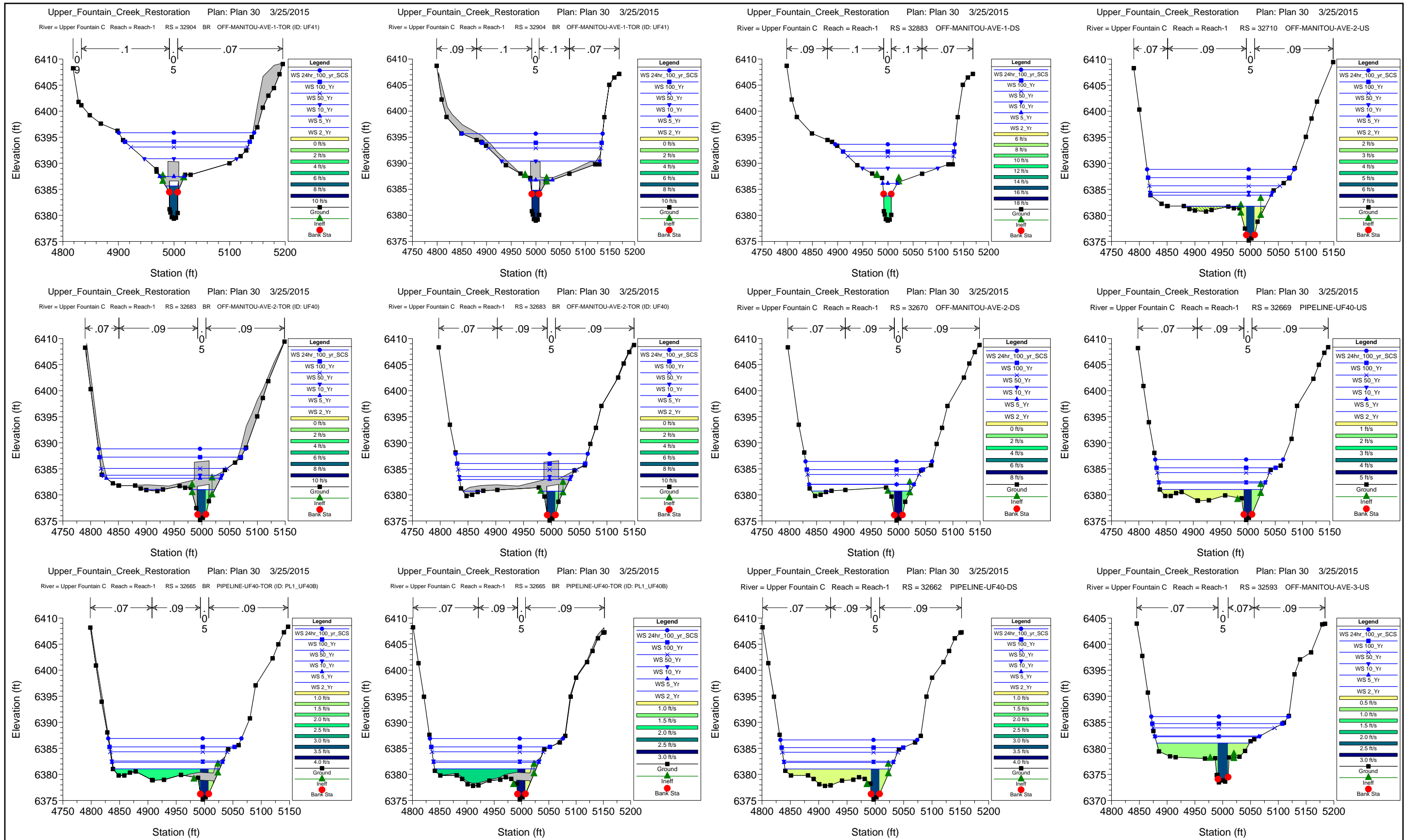


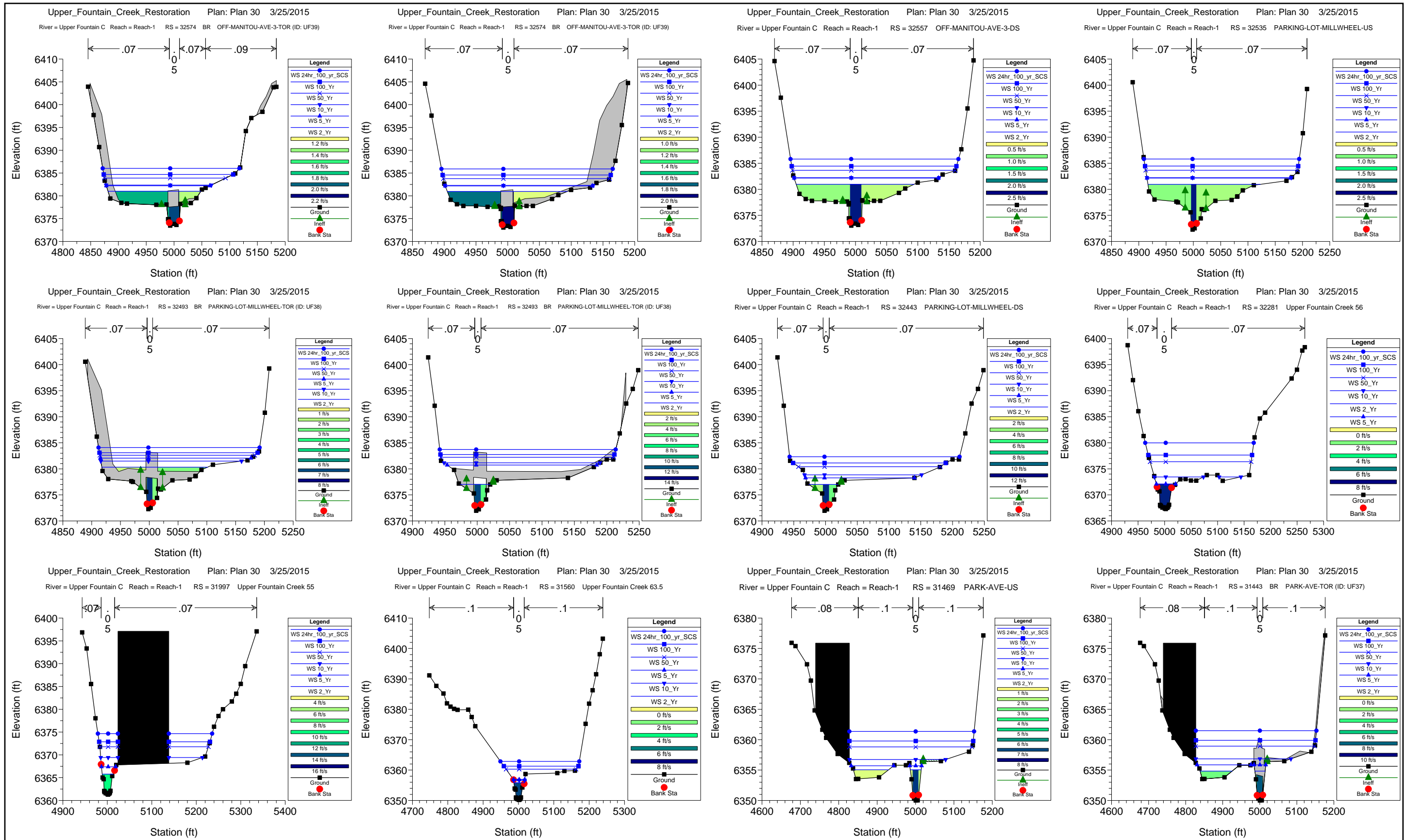


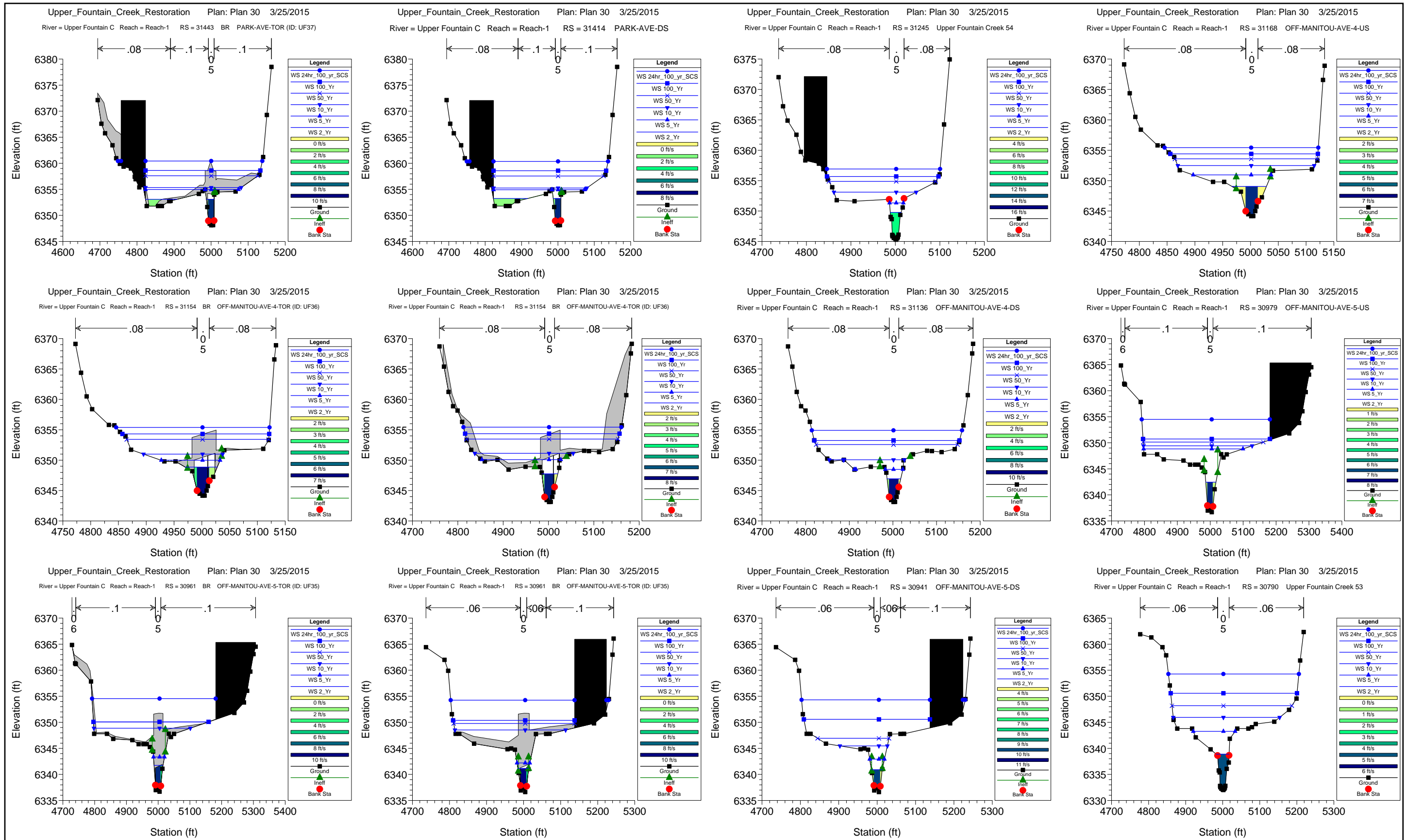


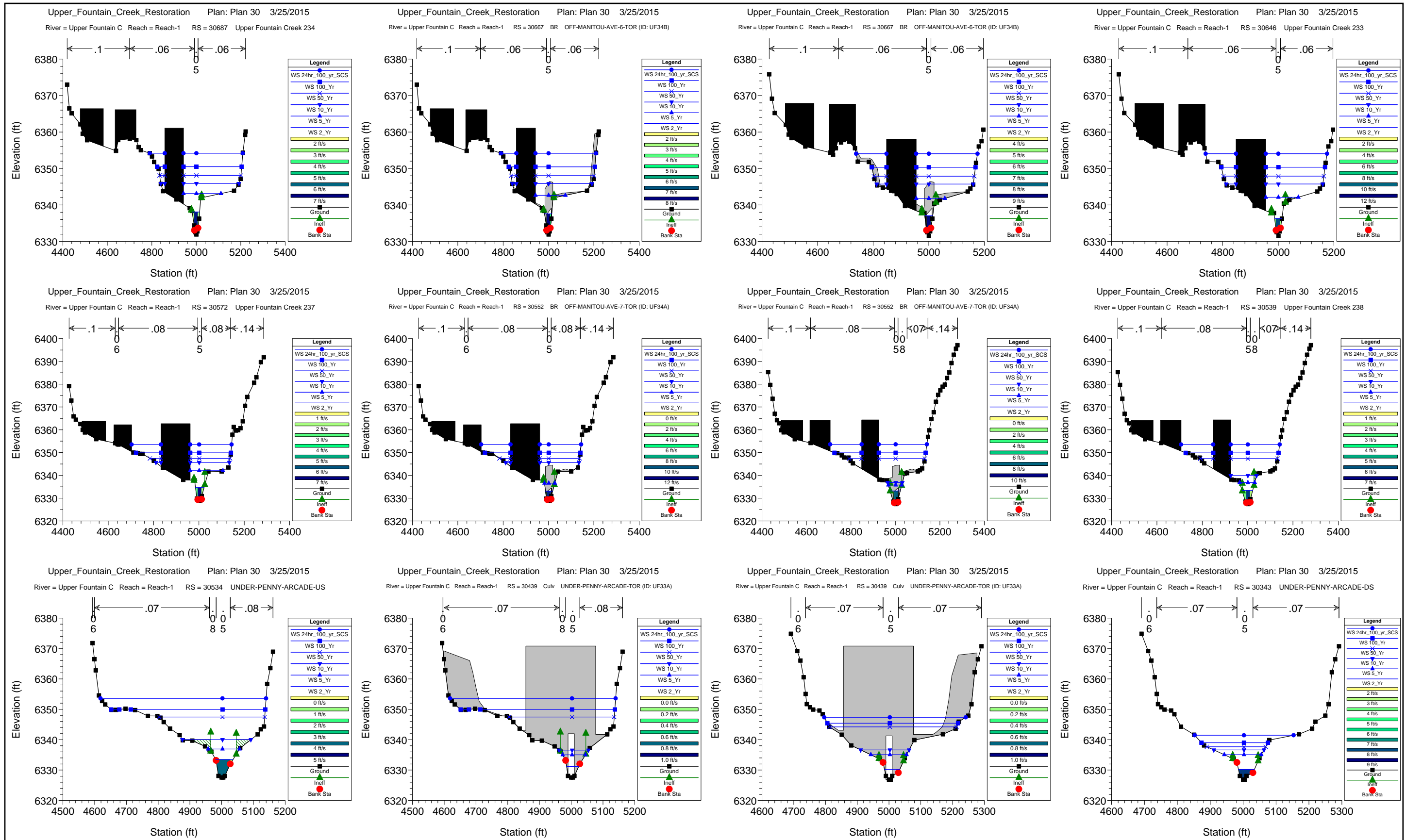


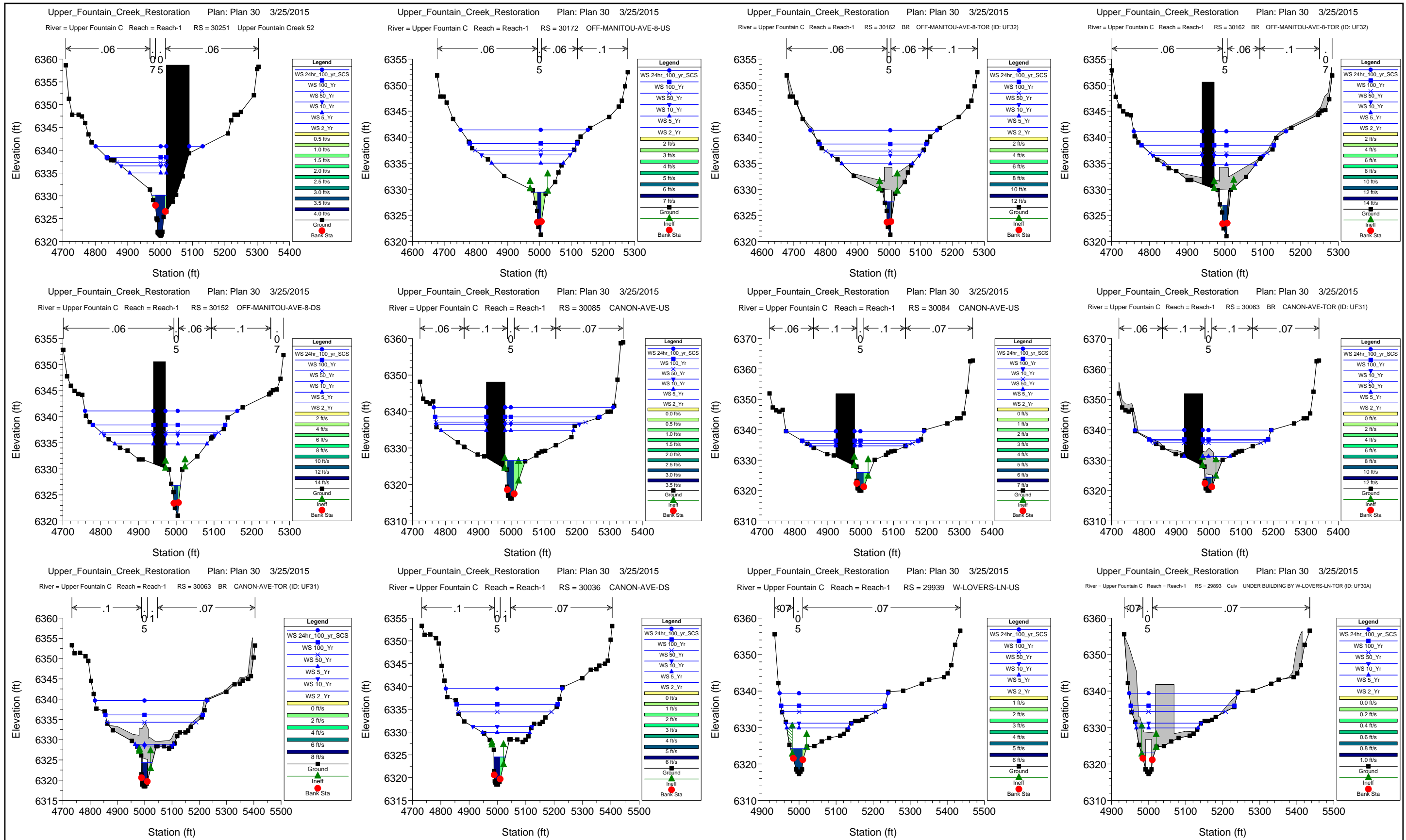


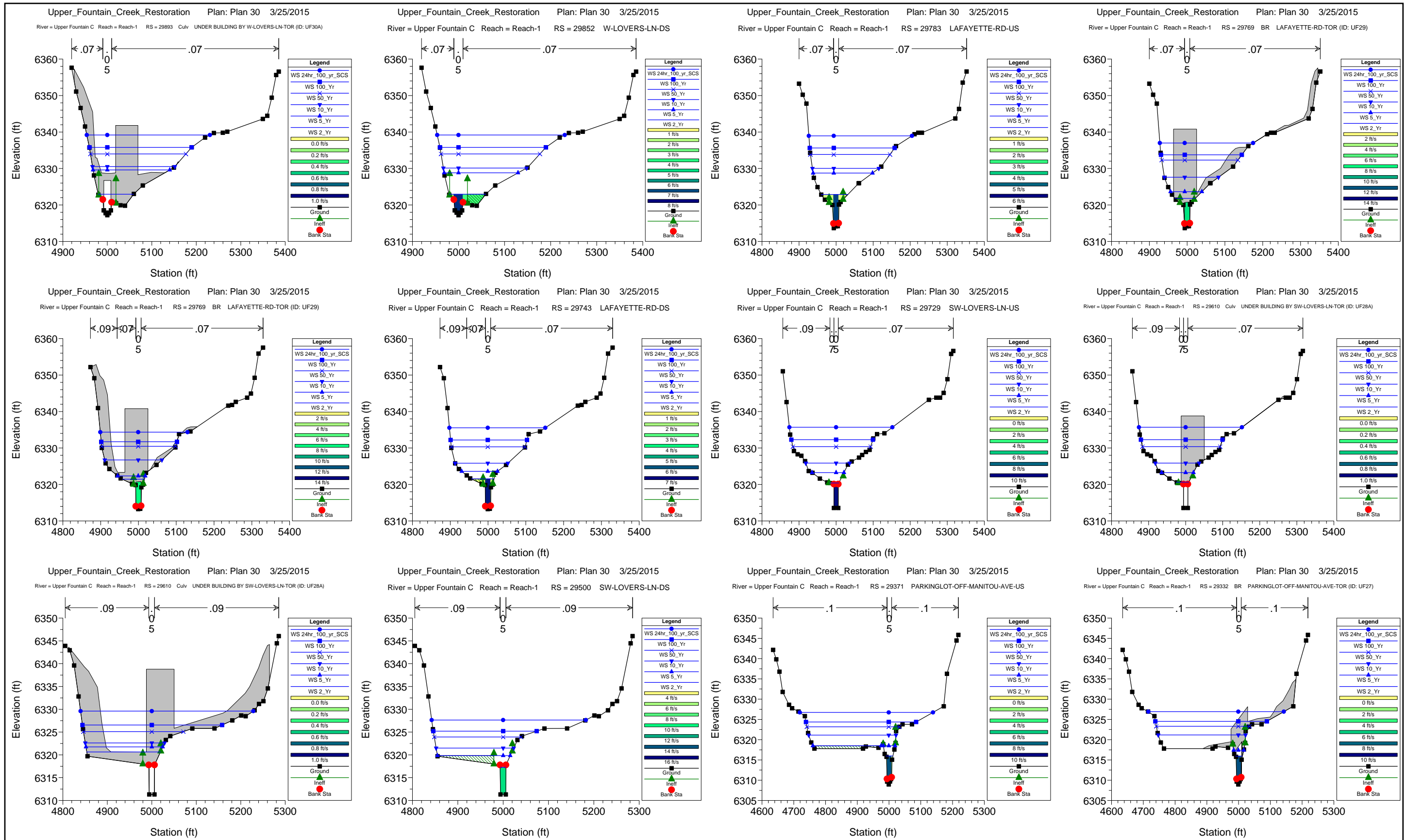


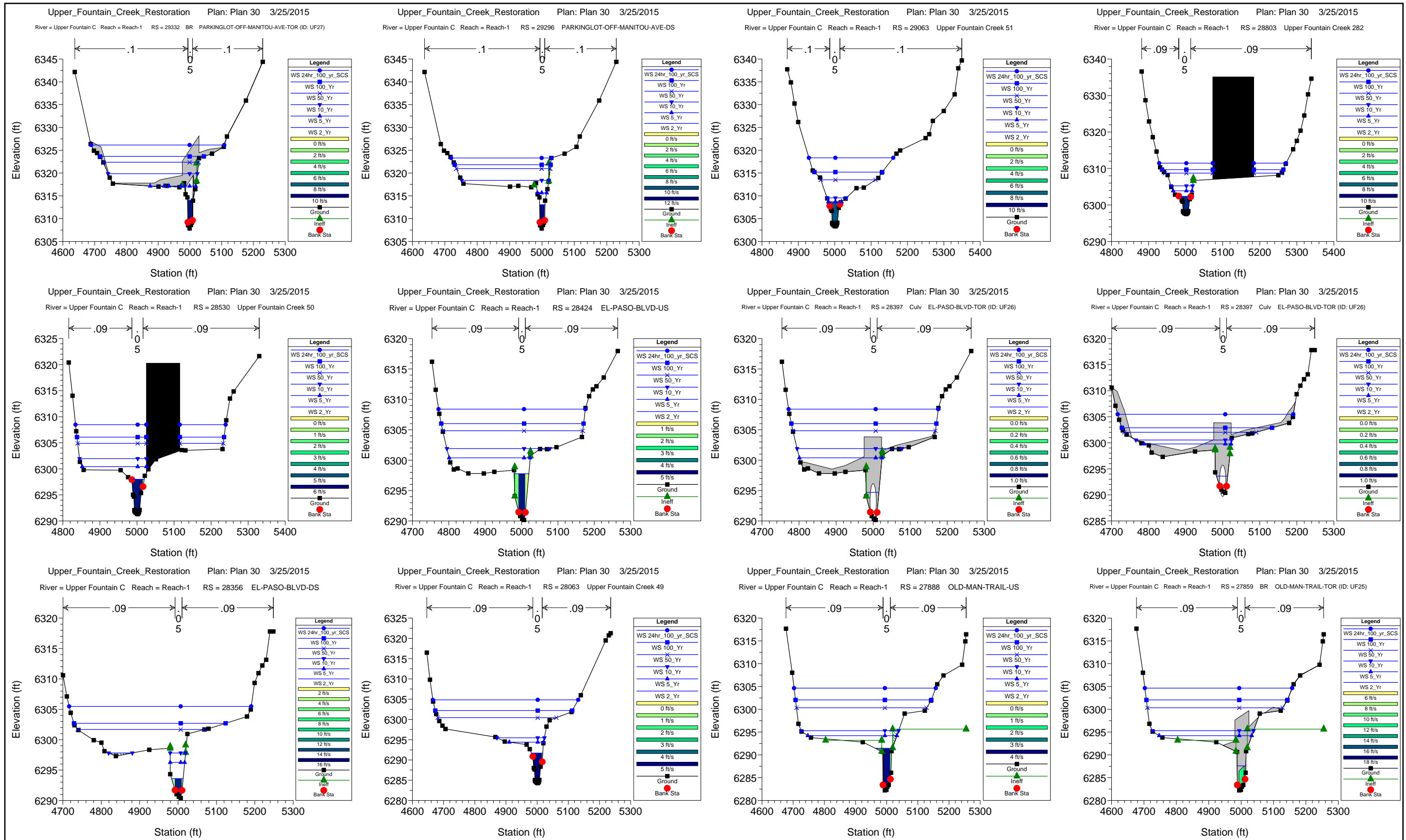


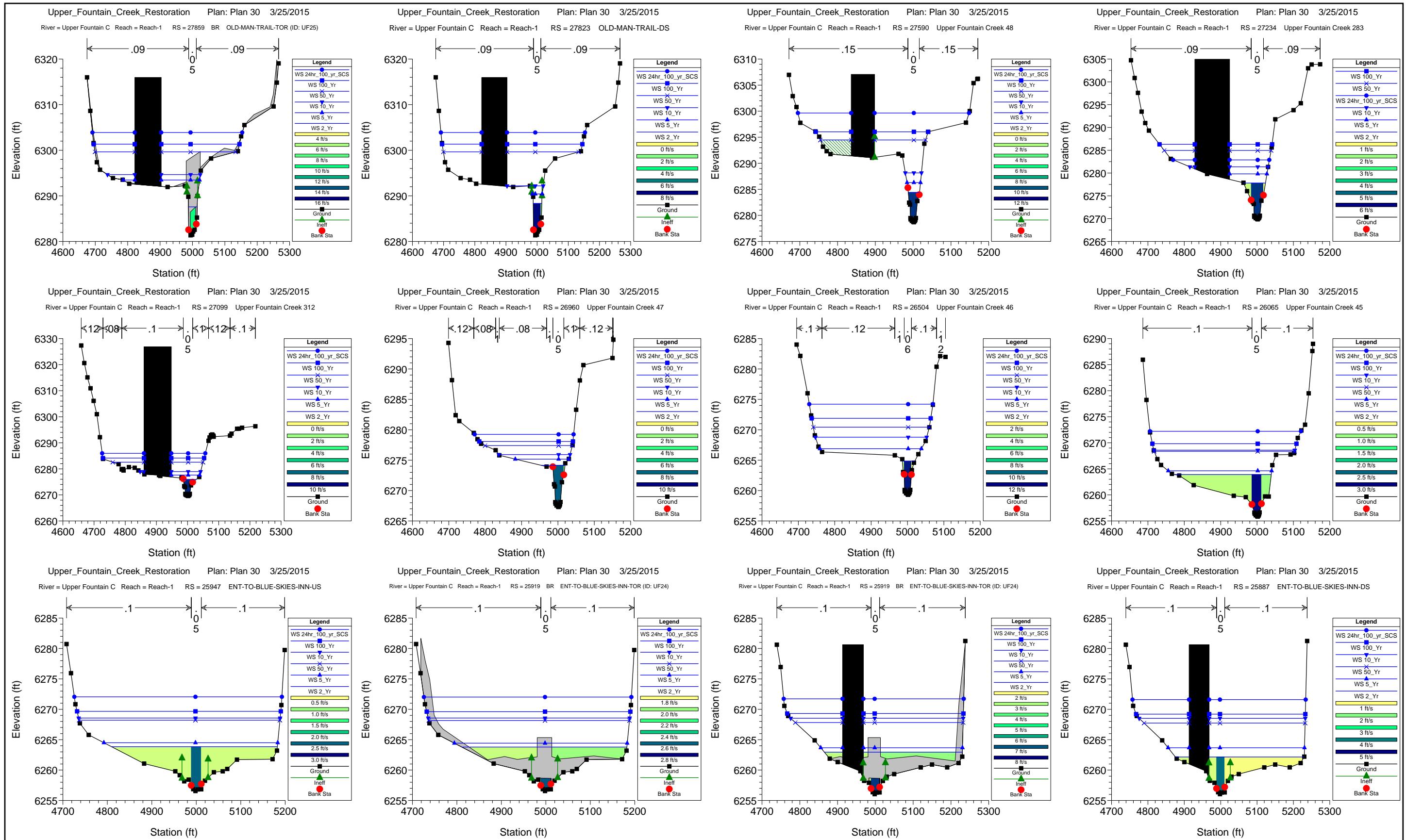




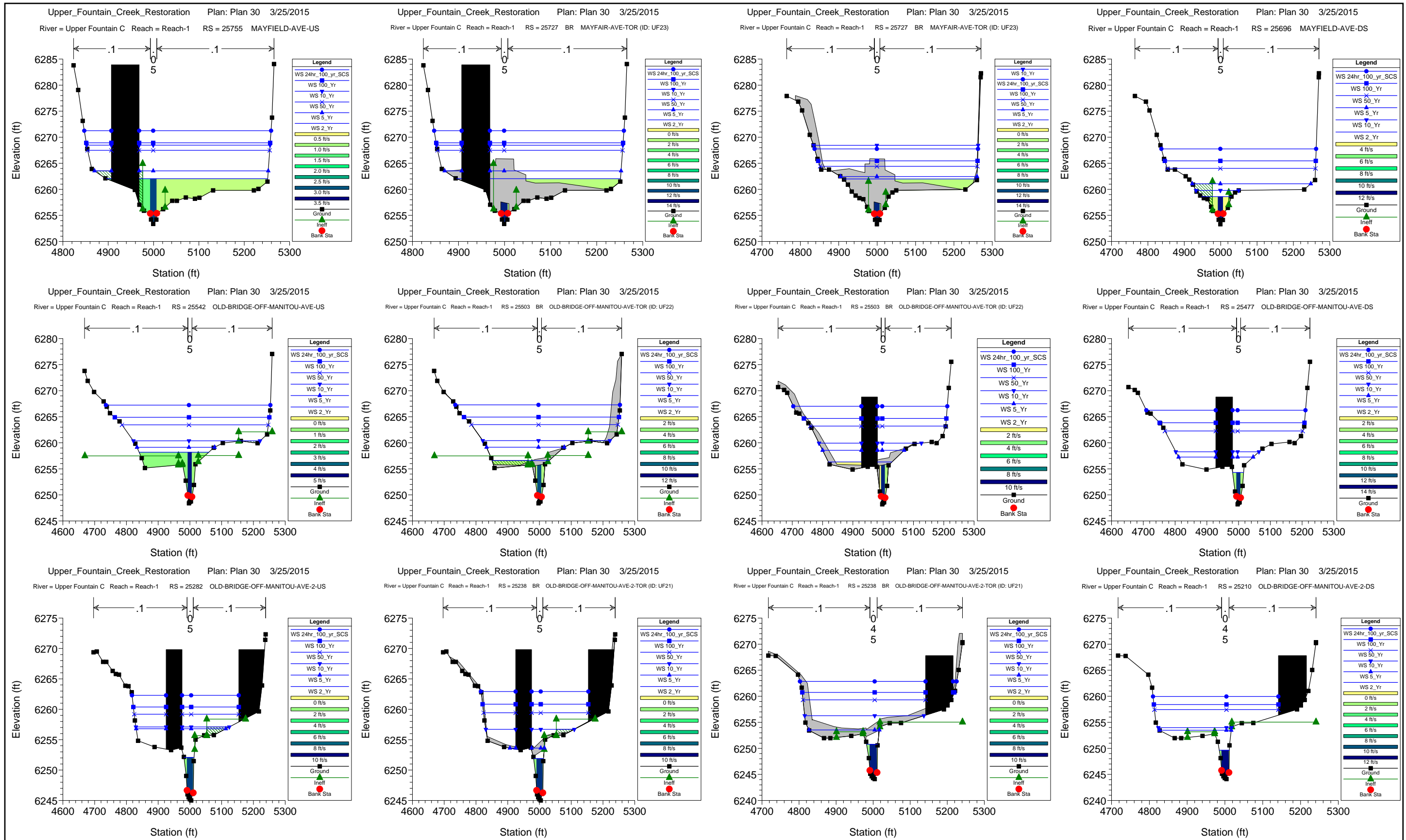


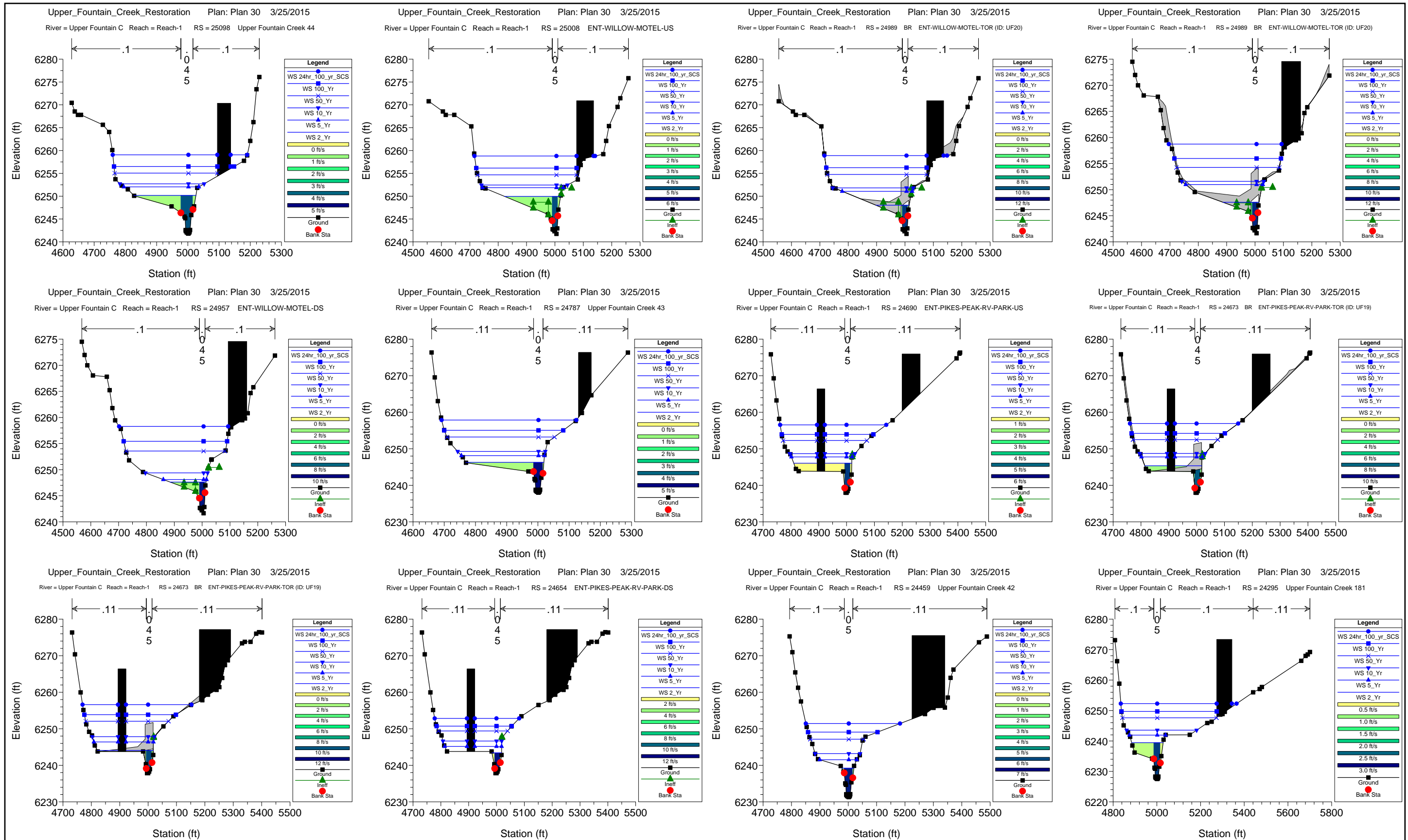


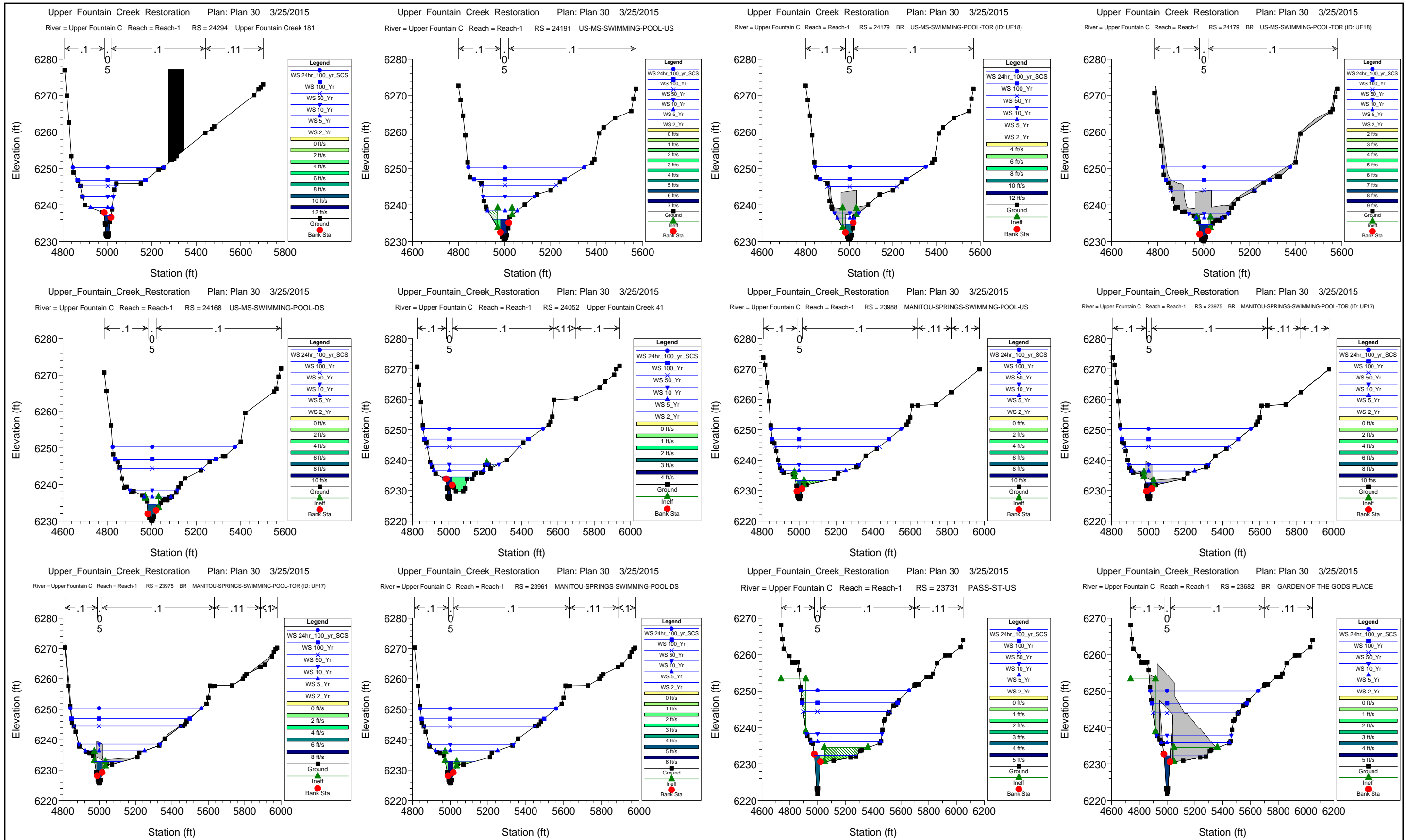


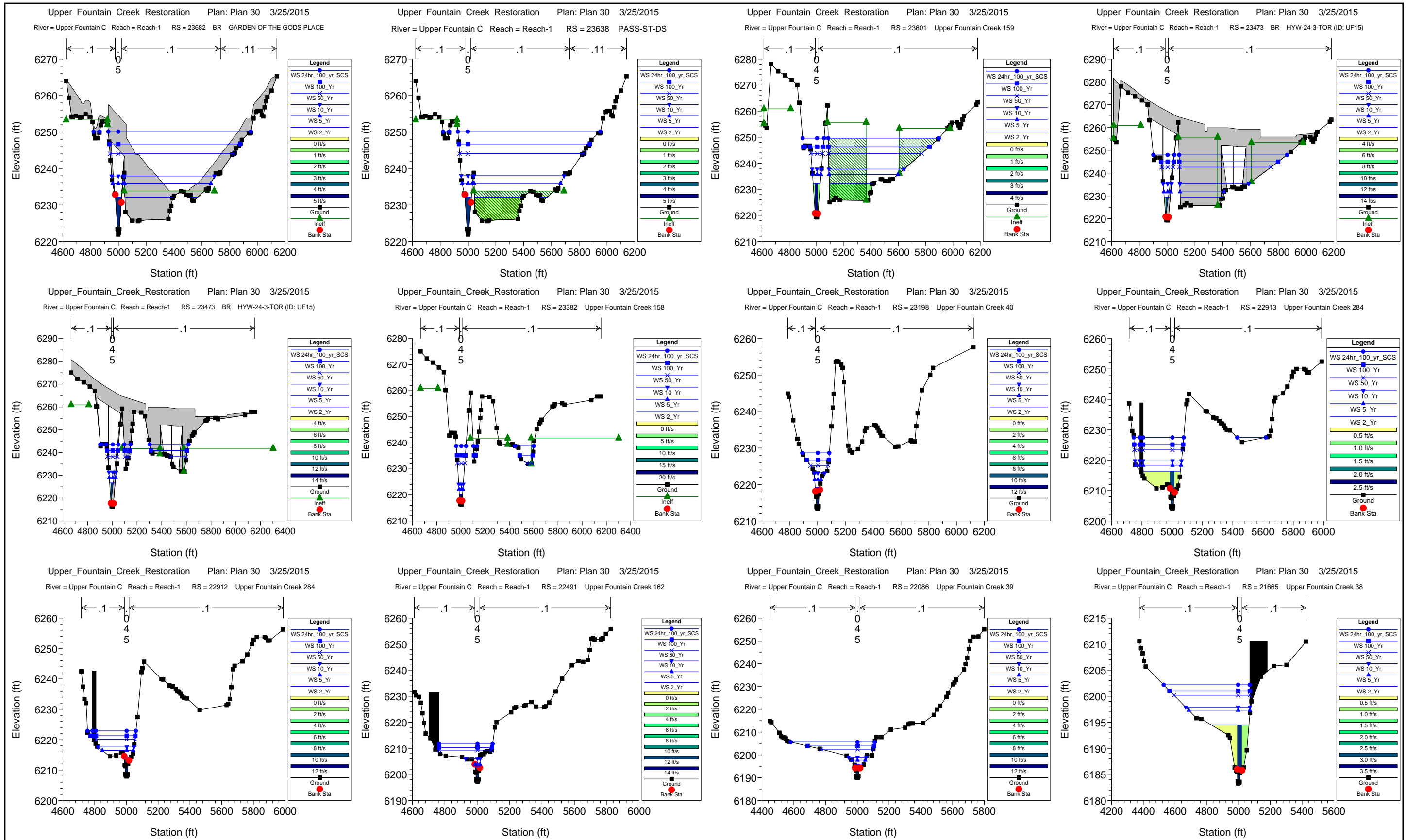


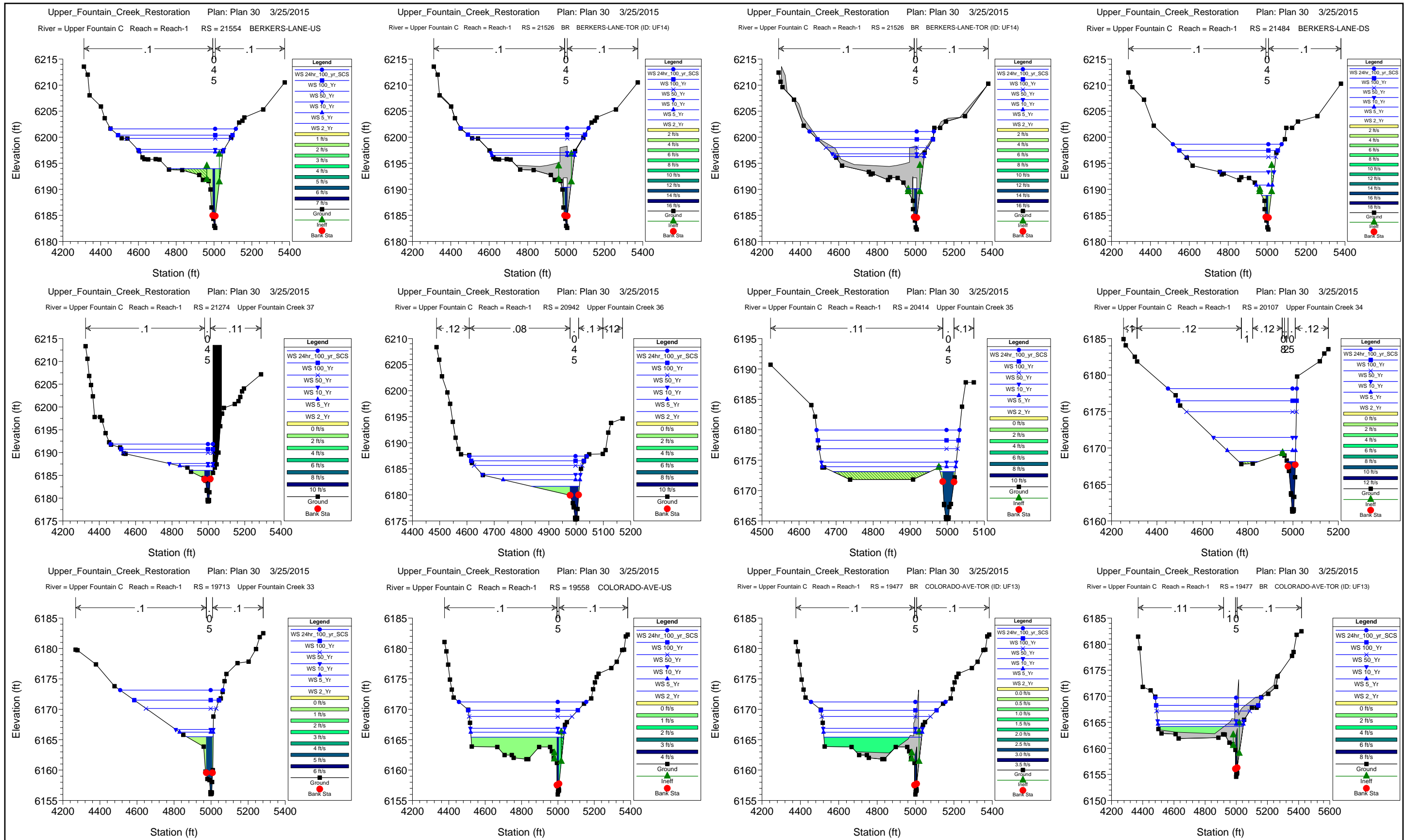


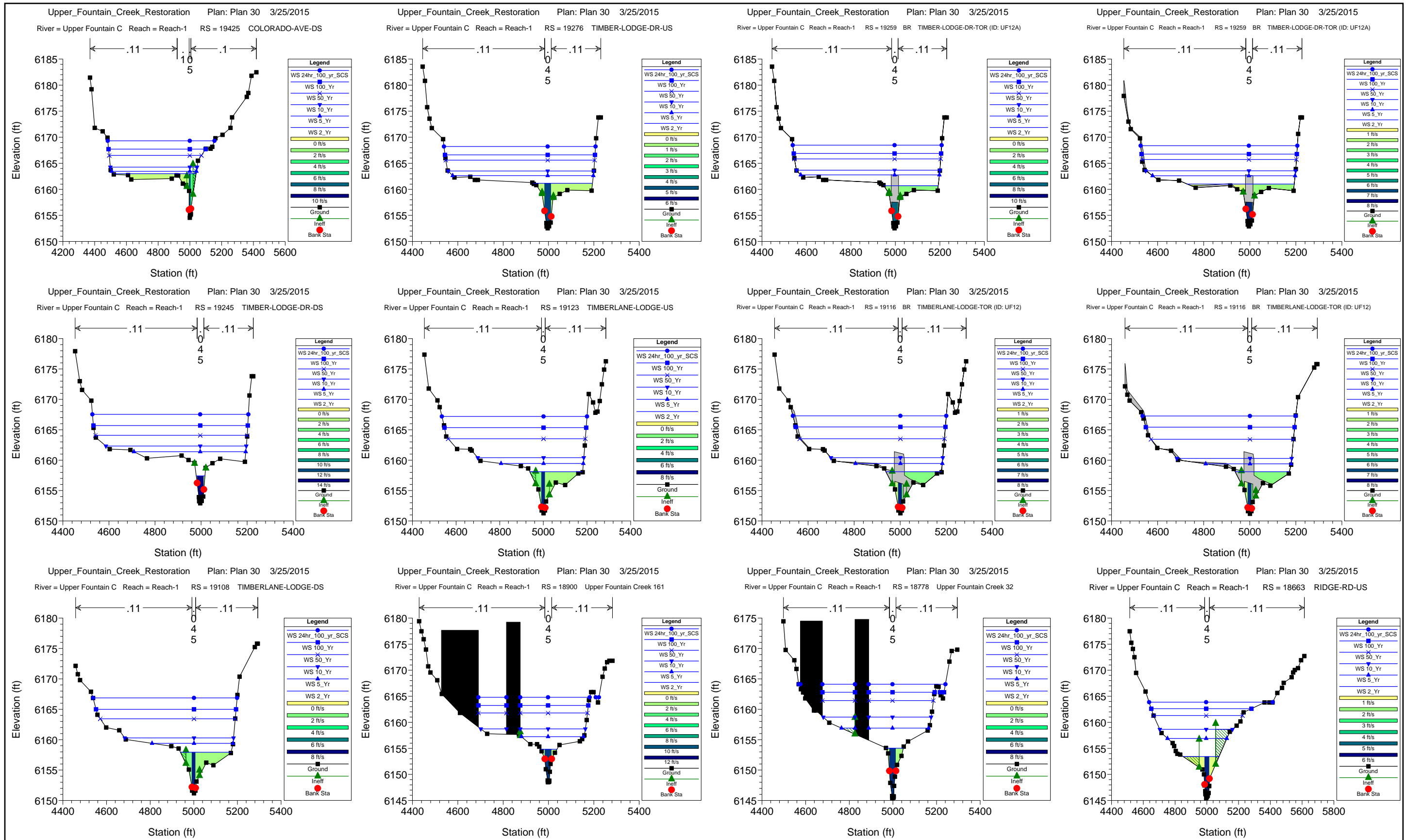


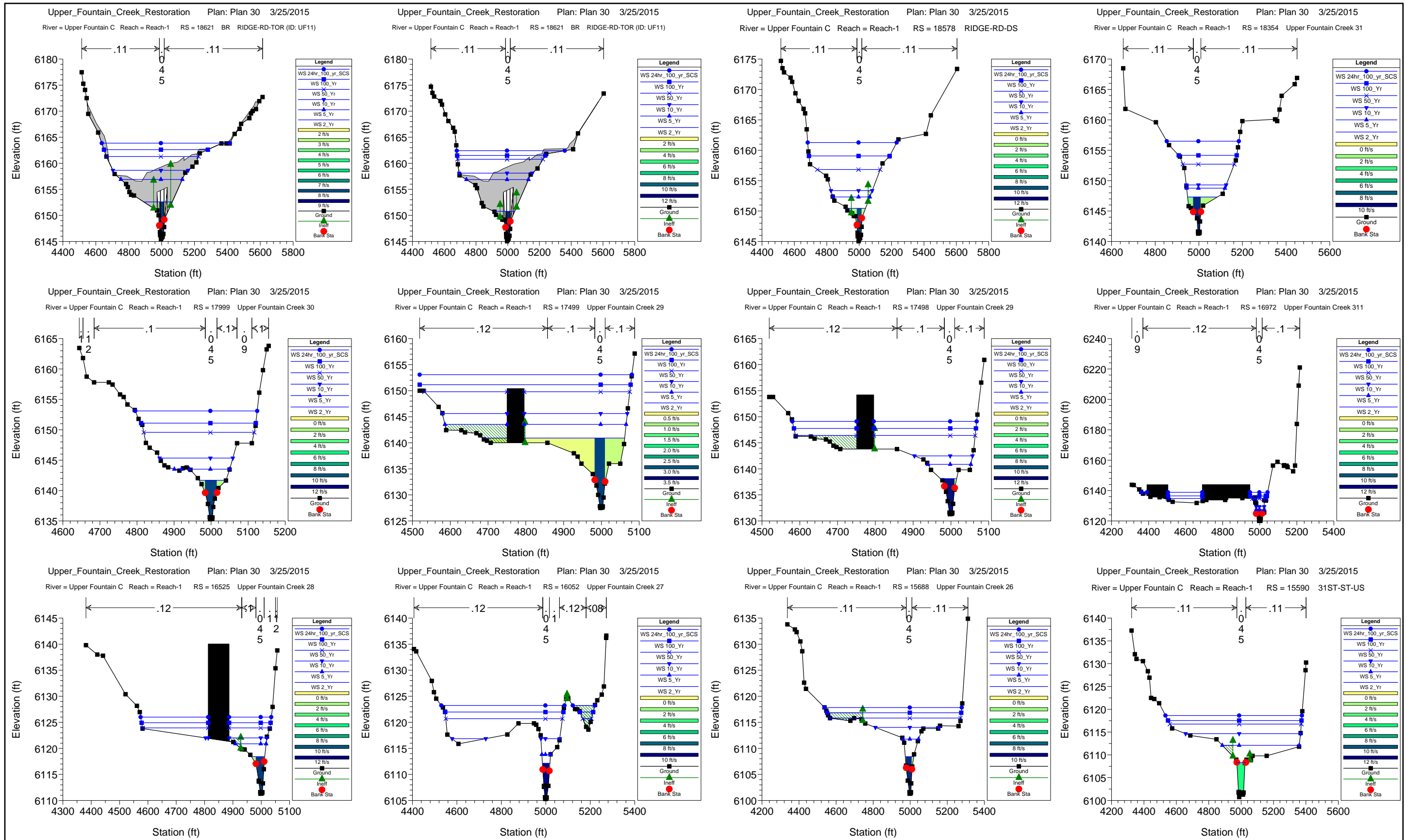


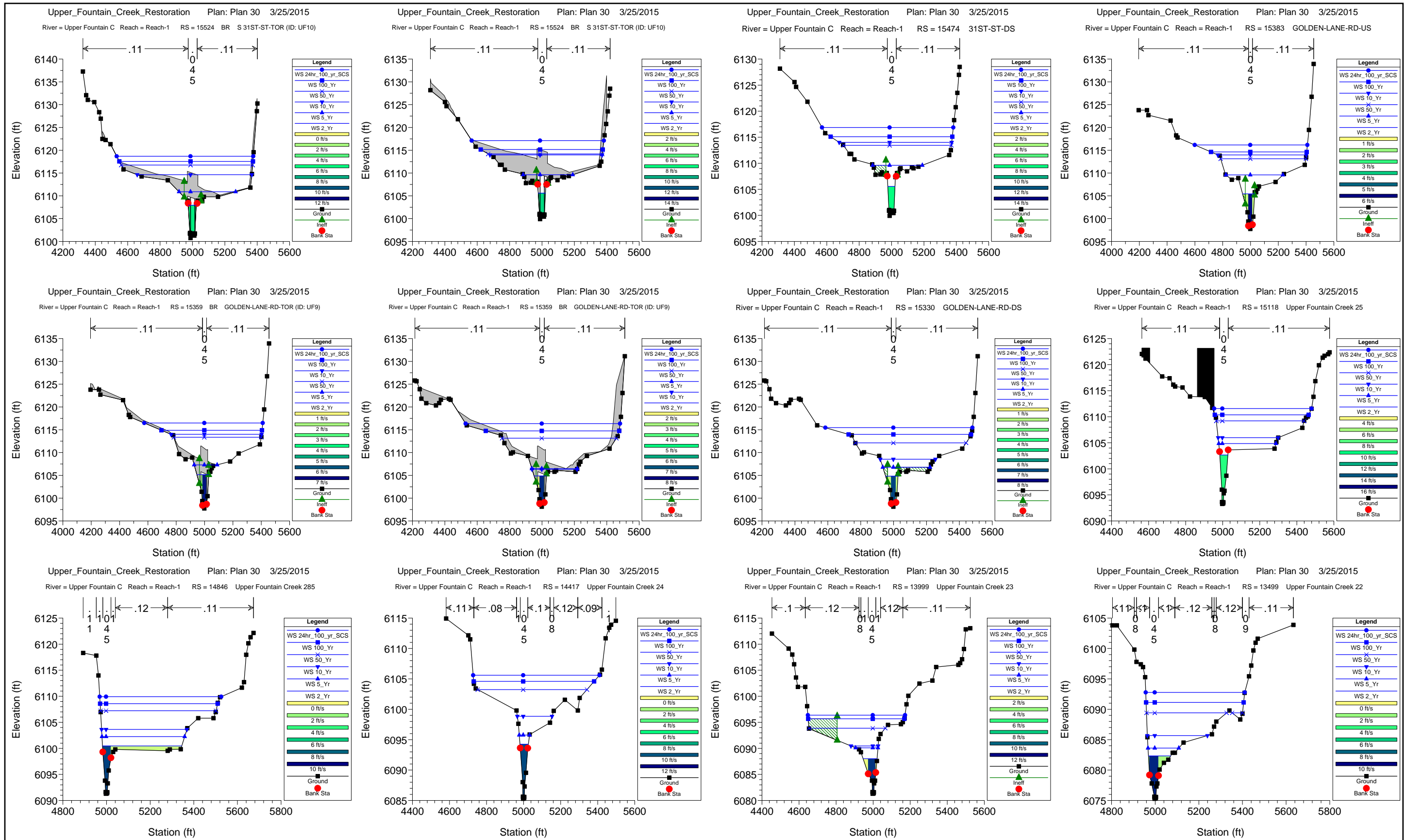




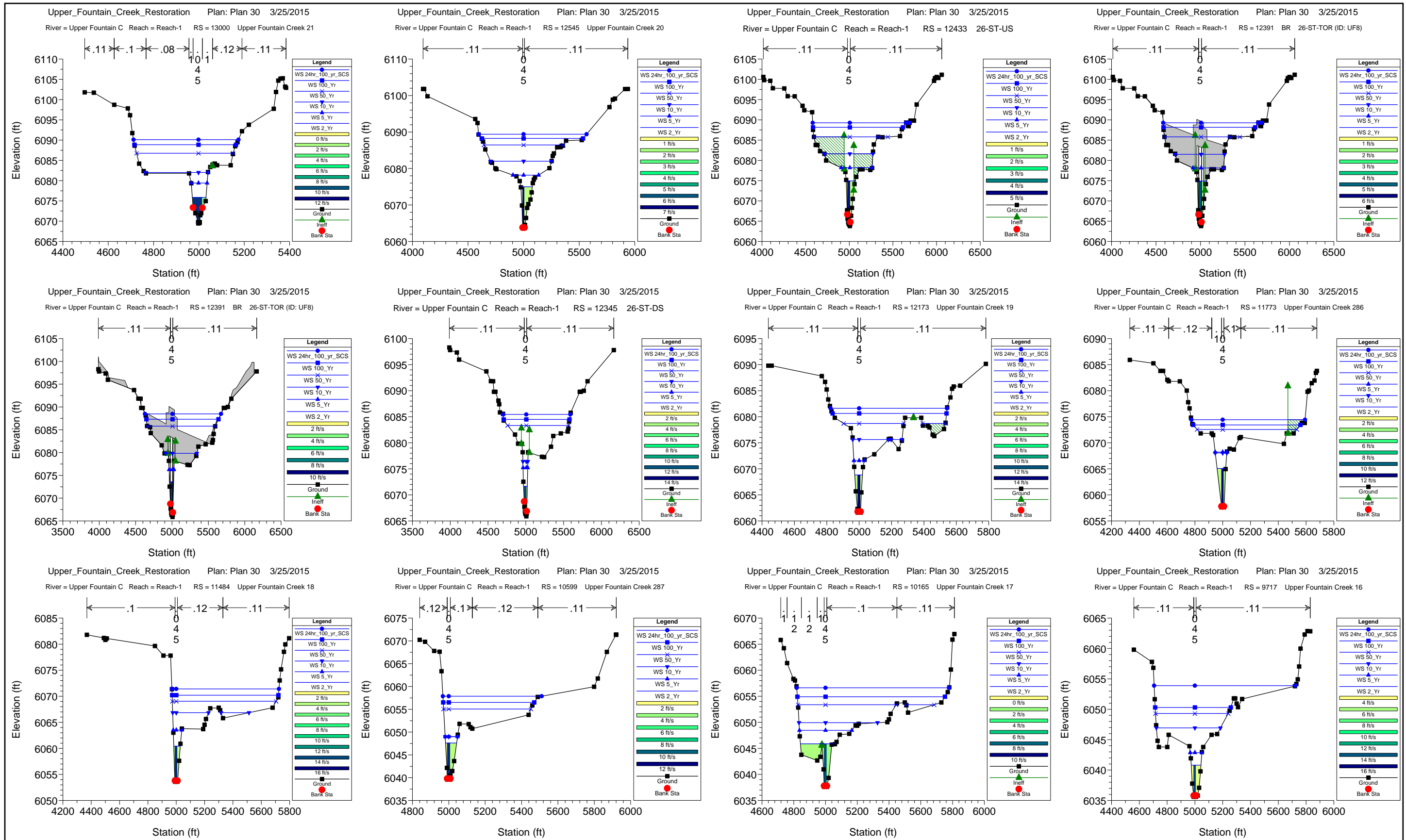


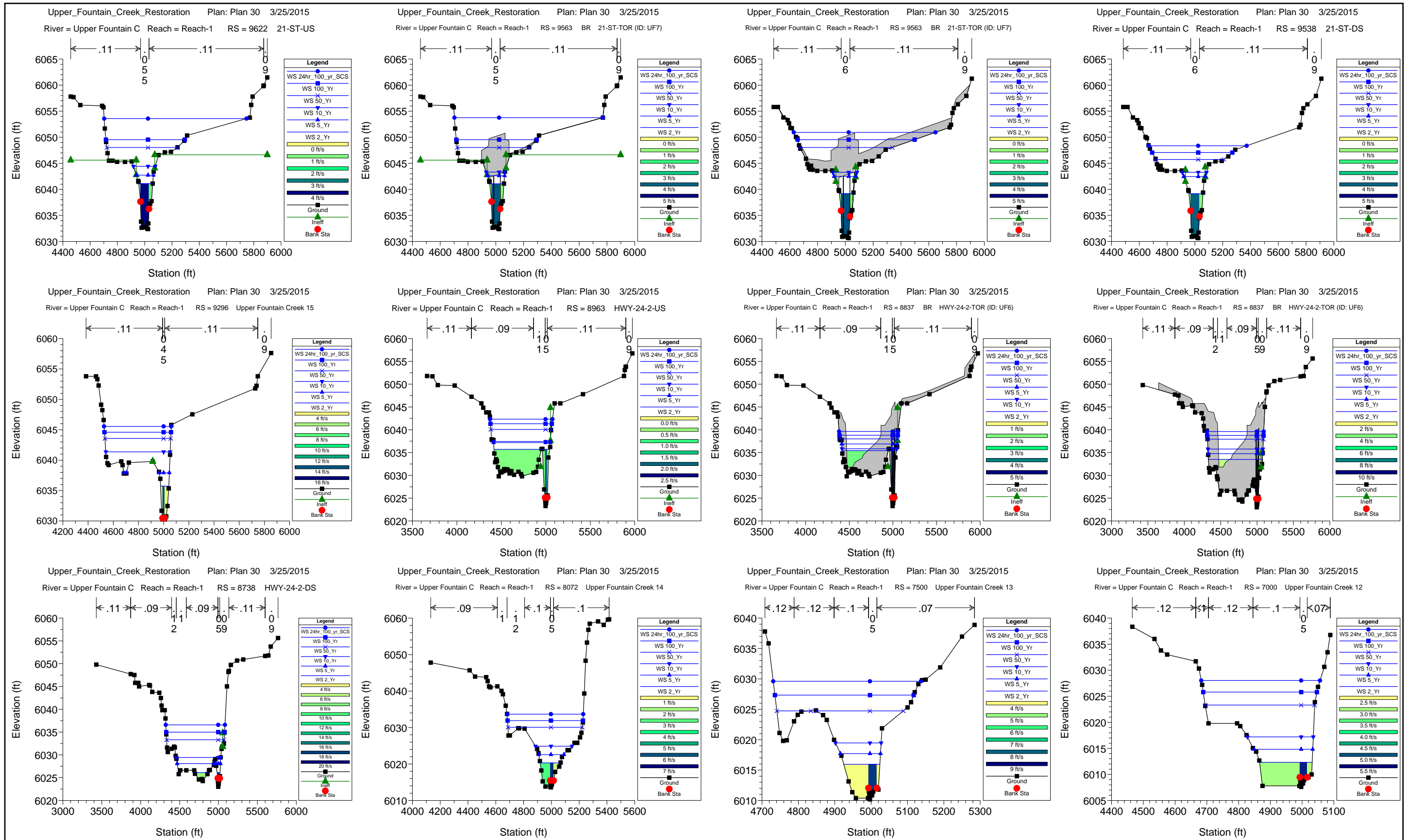


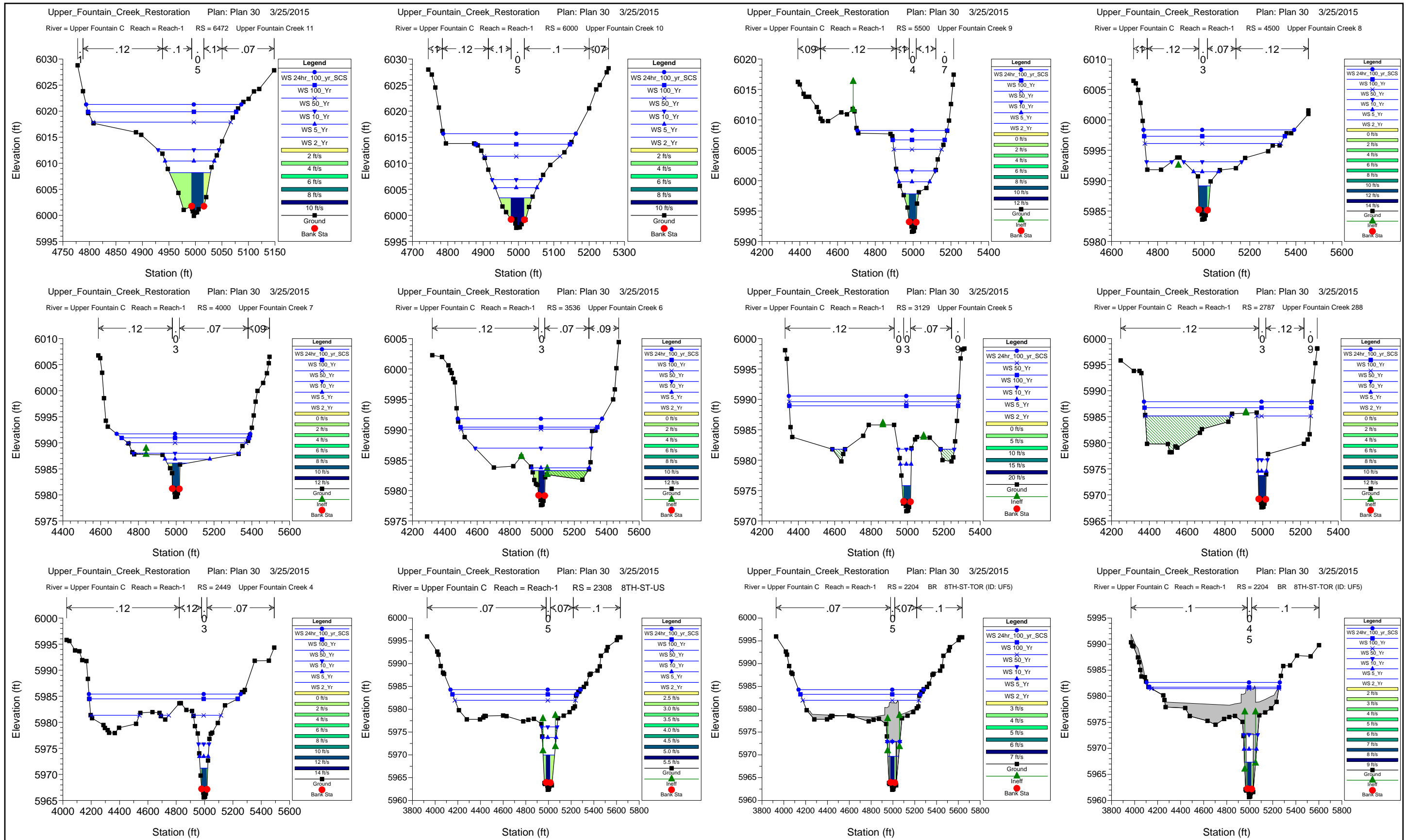


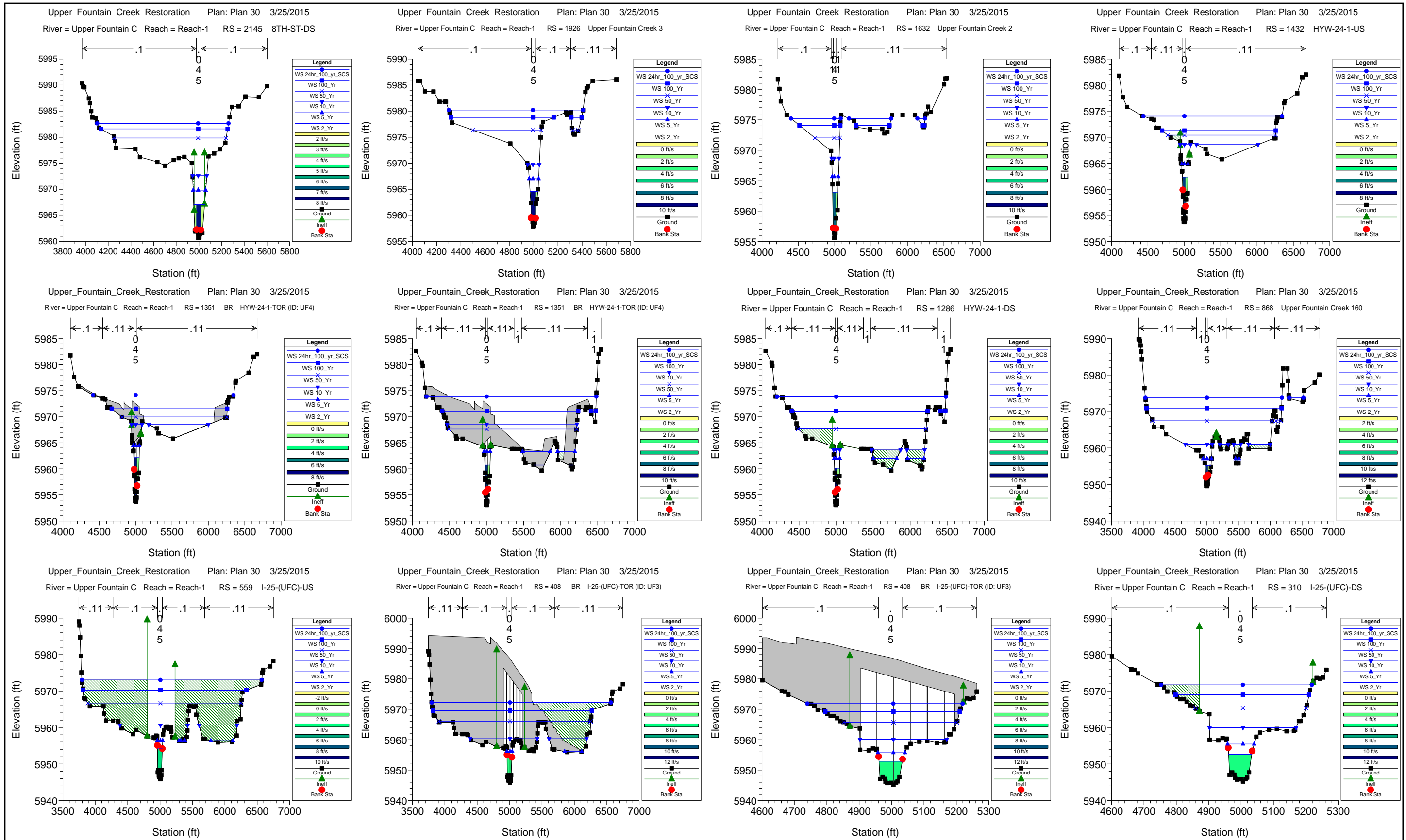


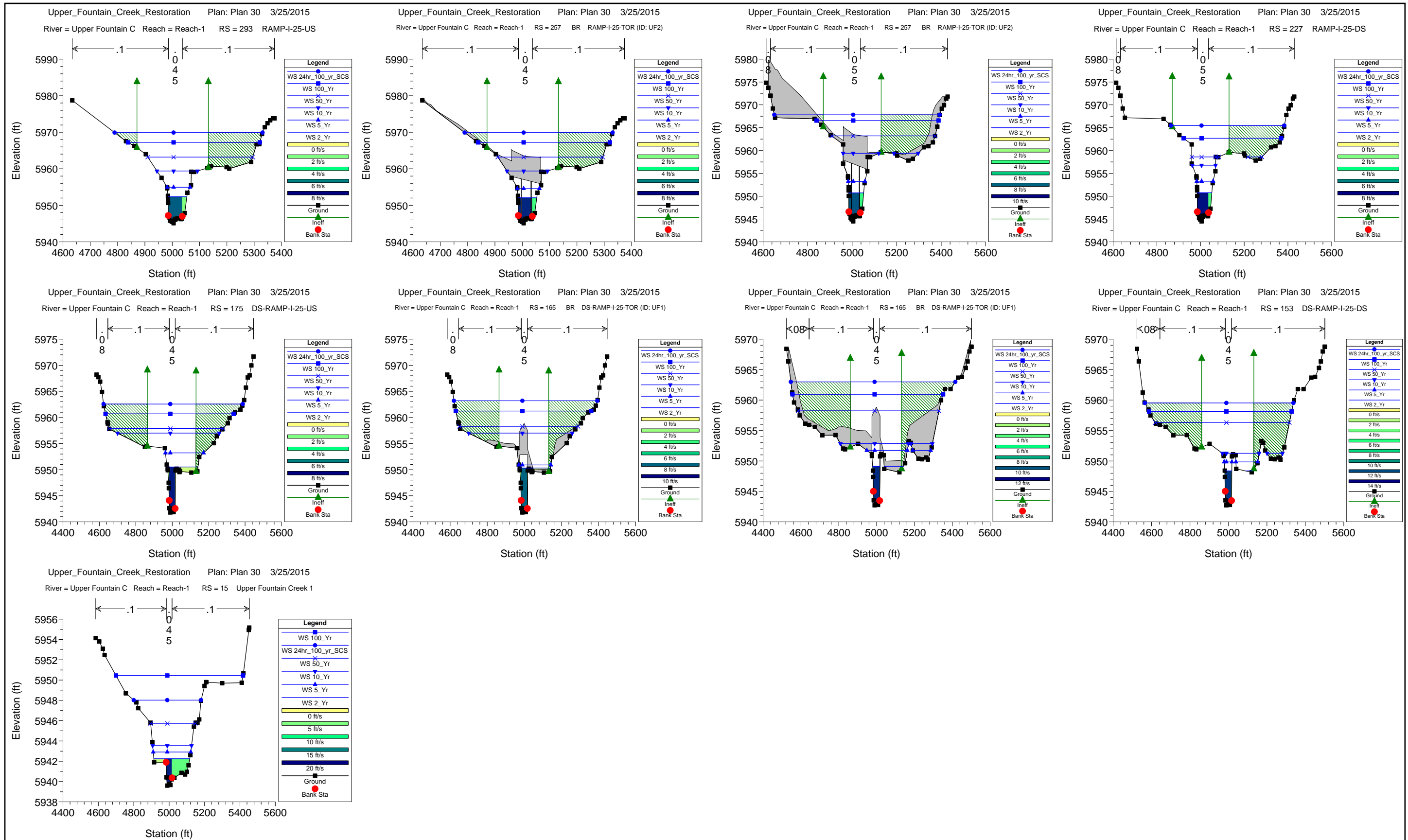












# Cheyenne Creek Hydrology

Upper Fountain Creek and Cheyenne Creek Flood Restoration Master Plan

Cheyenne Creek Hydrology Results

Cheyenne Creek HEC-HMS Model Results 2014																															
Hydrologic Element	Drainage Area (mi <sup>2</sup> )	100-Yr 24 Hour Type II		50-Yr 24 Hour Type II		10-Yr 24 Hour Type II		5-Yr 24 Hour Type II		2-Yr 24 Hour Type II		100-Yr 6 Hour Type II		50-Yr 6 Hour Type II		10-Yr 6 Hour Type II		5-Yr 6 Hour Type II		2-Yr 6 Hour Type II		100-Yr 2 Hour Type II		50-Yr 2 Hour Type II		10-Yr 2 Hour Type II		5-Yr 2 Hour Type II		2-Yr 2 Hour Type II	
		Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)	Discharge (cfs)	Volume (in)
1-A	2.02	1544.6	1.39	1087.5	0.99	419.9	0.4	261.8	0.26	139.9	0.15	646.6	0.43	441.8	0.3	148	0.11	83.4	0.07	36.5	0.04	189.8	0.2	136.9	0.14	51.9	0.05	29.6	0.03	10.6	0.01
1-B	1.27	1077.3	1.27	754.8	0.9	284.5	0.36	174.2	0.23	89.4	0.13	284.8	0.4	309.3	0.27	97.9	0.1	51.4	0.06	19.8	0.03	132.2	0.18	94.8	0.13	33.5	0.04	17.6	0.02	4.9	0.01
1-C	0.8	554.7	1.13	383.9	0.79	134.7	0.3	78	0.19	35.5	0.1	257.6	0.39	167.1	0.26	46.4	0.08	22.6	0.05	7.2	0.02	76.6	0.18	52.9	0.12	16.6	0.04	7.7	0.02	1.1	0
1-D	1.83	911.4	1.1	628	0.78	219.6	0.3	126.3	0.18	57.2	0.1	420.5	0.38	274.5	0.26	77.8	0.08	38.1	0.05	13	0.02	130.5	0.18	90.2	0.12	28.4	0.04	13.3	0.02	1.8	0
1-E	1.89	905.8	1.1	625.1	0.77	216.6	0.29	122	0.18	53.1	0.09	485.5	0.44	317.3	0.3	87.7	0.09	44	0.05	15.1	0.02	153.2	0.21	106.1	0.14	33.1	0.04	15.8	0.02	2.7	0.01
1-F	1.06	724.8	1.08	500.2	0.76	174.2	0.29	100.7	0.18	44.7	0.09	375.9	0.41	244.7	0.27	67.2	0.09	32	0.05	10	0.02	114.2	0.2	79.1	0.13	24.6	0.04	11.7	0.02	1.6	0
1-G	0.71	448.5	1.16	312.6	0.82	112.3	0.32	64.8	0.2	29.2	0.1	266.3	0.5	174.8	0.34	50.8	0.11	25.6	0.06	9.6	0.03	84	0.26	58.2	0.17	19.4	0.05	10.1	0.03	2.5	0.01
1-H	0.96	561	0.91	382.4	0.63	120.9	0.22	62.5	0.13	21.4	0.06	348.8	0.41	217	0.26	49.6	0.07	20.2	0.04	4.5	0.01	108.3	0.2	71.3	0.13	18.9	0.03	6.8	0.01	0.3	0
1-J	0.94	618.5	1.46	443.8	1.06	174.7	0.44	109.3	0.28	56.1	0.16	444.6	0.77	302.6	0.53	101.7	0.19	58.6	0.12	28	0.06	142.8	0.43	102	0.3	38.8	0.1	23.3	0.06	10.7	0.03
2-K	0.97	758.7	1.16	530.2	0.82	191.5	0.32	114.1	0.2	54.4	0.11	419.4	0.46	279	0.31	81.7	0.1	41.5	0.06	14.7	0.03	128.6	0.23	89.2	0.16	30	0.05	15.5	0.02	3.8	0.01
2-L	1.56	1039.8	1.15	725.9	0.81	261	0.31	152.9	0.2	70.9	0.11	576.1	0.47	380.1	0.32	110.3	0.1	56.5	0.06	20.2	0.03	179.3	0.23	125.9	0.16	42.1	0.05	21.1	0.02	5	0.01
2-M	1.71	903.4	1.07	623.9	0.75	215.5	0.28	122	0.18	51.2	0.09	541.3	0.47	350.5	0.32	96.2	0.1	47.3	0.06	16.1	0.02	174.8	0.24	119.6	0.16	37.4	0.05	17.8	0.02	3.3	0.01
2-N	0.6	410	1.12	286.2	0.79	101.1	0.3	58.4	0.19	25.3	0.1	263.6	0.52	172.1	0.35	48.5	0.11	24	0.06	8.1	0.03	82.5	0.27	56.9	0.18	18.2	0.05	9.2	0.03	2.1	0.01
2-O	1.24	963.9	1.14	673.6	0.8	245.5	0.31	144.3	0.19	66.2	0.1	611.1	0.52	402.1	0.35	118.8	0.11	59.5	0.06	21	0.03	190.4	0.27	132.8	0.18	44	0.06	22.9	0.03	6.1	0.01
2-P	1.68	1053.9	1.11	731.7	0.79	259.1	0.3	149.5	0.19	64.9	0.1	679.7	0.52	444.1	0.35	124.7	0.11	62.2	0.06	21.8	0.03	221.8	0.28	152.8	0.19	49.7	0.06	25.1	0.03	6.3	0.01
2-R	0.92	796.8	1.32	568.3	0.95	217	0.38	133.2	0.24	65.8	0.13	549.1	0.65	369.7	0.44	119.8	0.16	65.5	0.09	27.9	0.05	175.2	0.36	123.6	0.25	45.3	0.08	26.2	0.05	10.3	0.02
2-S	0.75	743.3	1.34	531.3	0.97	206.1	0.39	126.7	0.25	63.6	0.14	524.4	0.67	355.8	0.46	117.5	0.16	65.4	0.1	28.6	0.05	161.7	0.37	114.1	0.25	42.6	0.09	24.3	0.05	10.1	0.02
2-T	0.84	687.1	1.35	489.9	0.97	188.1	0.39	115.6	0.25	56.2	0.13	482.3	0.68	326.1	0.47	104.9	0.16	57.8	0.1	25.2	0.05	152.4	0.38	107.5	0.26	39.4	0.09	22.8	0.05	9.4	0.02
3-A	0.65	428.2	1.46	308.1	1.06	121.8	0.44	76.1	0.29	38.4	0.16	325.6	0.81	219.8	0.56	73.5	0.2	42.8	0.12	20.3	0.06	104.2	0.45	73.9	0.31	28	0.11	17	0.06	7.8	0.03
3-B	0.54	967	3.05	756.5	2.39	388.3	1.24	279.5	0.9	180.2	0.59	883.1	2.02	665.8	1.53	309.6	0.72	217.1	0.51	138.6	0.33	270.7	1.34	210.8	1.02	105.6	0.49	75.9	0.34	47.8	0.21
3-C	0.34	608.3	3.32	482.8	2.64	257.6	1.42	188.7	1.05	124.5	0.7	576.5	2.28	439.7	1.75	212.3	0.85	152.1	0.61	101.1	0.41	175.6	1.55	139.1	1.2	72.4	0.6	53.2	0.43	34.6	0.27
3-D	0.89	594.4	1.57	431.1	1.15	176.2	0.49	112.5	0.32	59.9	0.18	452.9	0.88	312.4	0.61	109.7	0.23	65.8	0.14	33	0.08	146.9	0.51	106.1	0.36	42	0.13	26.4	0.08	13	0.04
3-E	0.47	509.2	2.5	390.1	1.93	186.3	0.94	129.4	0.66	79.4	0.41	443.2	1.59	323.8	1.17	138.9	0.51	94.4	0.35	57.7	0.22	140.5	1.02	106.5	0.75	50	0.34	34.7	0.23	21.1	0.13
3-F	0.35	658.1	3.19	520.9	2.52	273.1	1.34	198.1	0.98	130.2	0.65	624.3	2.19	473.6	1.66	225.7	0.8	160.6	0.57	104.4	0.38	191.5	1.48	151.1	1.14	77.2	0.56	55.7	0.39	36.4	0.25
3-G	0.02	64.5	4	52.8	3.26	30.7	1.88	23.5	1.44	16.5	1.01	65	2.89	51.4	2.27	27.5	1.21	20.8	0.91	14.6	0.64	23.4	2.06	18.1	1.64	9	0.9	6.8	0.66	4.7	0.45
J1	3.29	2524.3	1.34	1774.3	0.96	676.4	0.39	418.3	0.25	219.5	0.14	1061.2	0.42	717.3	0.29	234.1	0.11	128.4	0.06	54.1	0.03	311.5	0.2	224.3	0.14	82.6	0.05	45.7	0.03	15.1	0.01
J10	3.84	2755.9	1.17	1923.7	0.83	688.4	0.32	399.6	0.2	176.6	0.11	1787.5	0.55	1169.8	0.37	336.6	0.12	168.5	0.07	60.5	0.03	562.7	0.3	387.6	0.2	123.5	0.06	61.2	0.03	15.8	0.01
J11	9.43	6094.5	1.15	4220.1	0.82	1473	0.32	844.7	0.2	369.9	0.1	3702.4	0.52	2408.3	0.35	671.6	0.12	330.5	0.07	115.2	0.03	1131.2	0.27	770.6	0.18	233.6	0.06	109.2	0.03	22.6	0.01
J12	21.75	12912.1	1.17	8913.7	0.83	3104	0.32	1789.7	0.2	823.1	0.11	6984.5	0.49	4518.8	0.33	1244.3	0.11	620	0.06	231.9	0.03	2051.3	0.25	1387.5	0.17	409.8	0.05	192.7	0.03	49	0.01
J12N	11.48	6740.8	1.18	4672.6	0.83	1669.2	0.32	980.7	0.2	467	0.11	3313.7	0.45	2171	0.3	627	0.1	321	0.06	122.1	0.03	969.4	0.22	667.6	0.15	209.4	0.05	102.8	0.02	29.9	0.01
J12S	10.27	6641.7	1.17	4593.6	0.83	1590.5	0.32	907.6	0.2	395.7	0.11	4062.2	0.54	2634.5	0.36	727.9	0.12	356.8	0.07	125.3	0.03	1226.3	0.28	830.8	0.19	248.4	0.06	116	0.03	26	0.01
J13	22.64	13474.9	1.18	9319.3	0.84	3255.4	0.33	1877.8	0.21	861.7	0.11	7409.3	0.5	4801.4	0.34	1321.9	0.12	658.8	0.07	247.8	0.03	2175	0.26	1469.6	0.17	430.5	0.06	201.1	0.03	45	0.01
J14	23.11	13897.6	1.21	9627	0.86	3369.9	0.34	1944.9	0.21	891.6	0.12	7747.7	0.53	5025.3	0.36	1383.1	0.12	690.8	0.07	261.8	0.04	2259.1	0.27	1525.9	0.19	445.7	0.06	207.5	0.03	46.3	0.01
J15	0.65	428.2	1.46	308.1	1.06	121.8	0.44	76.1	0.29	38.4	0.16	325.6	0.81	219.8	0.56	73.5	0.2	42.8	0.12	20.3	0.06	104.2	0.45	73.9	0.31	28	0.11	17	0.06	7.8	0.03
J16	1.19	1029.4	2.17	790.9	1.66	393.5	0.8	280.7	0.56	180.3	0.35	900.1	1.36	669.8	1	309.7	0.43	217.1	0.3	138.6	0.18	283.6	0.85	218.9	0.63	107.9	0.28	77.1	0.19	48.2	0.11
J19	24.99	15236.6	1.31	10588.7	0.94	3736	0.39	2170.1	0.25	1005	0.14	8801.2	0.61	5725.6	0.43	1606.3	0.16	818.3	0.1	319.5	0.05	2522.3	0.33	1709.9	0.23	510	0.08	239.3	0.05	94.4	0.02
J2	5.92	3871.1	1.24	2703.4	0.88	998.7	0.35	603	0.22	302.7	0.12	1676.2	0.4	1116.9	0.28	345.8	0.1	183.4	0.06	72.9	0.03	501	0.19	354.3	0.13	122.3	0.04	63.9	0.02	17.7	0.01
J20	25.01	15148.9	1.31	10519.8	0.94	3712.2	0.39	2163.1	0.25	1000.9	0.14	8748.6	0.61	5691.3	0.43	1602.9	0.16	817.3	0.1	318.8	0.05	2521	0.33	1708.9	0.23	510.3	0.09	239.2	0.05	94.9	0.02
J3	1.06	724.8	1.08	500.2	0.76	174.2	0.29	100.7	0.18	44.7	0.09	375.9	0.41	244.7	0.27	67.2	0.09	32	0.05	10	0.02	114.2	0.2	79.1	0.13	24.6	0.04	11.7	0.02	1.6	0

## Cheyenne Creek Hydraulic Results



Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
SouthCC	2686	2hr-2yr	6364.4		23		20.34		27.87	
SouthCC	2686	2hr-5yr	6365		109		29.06		48.06	
SouthCC	2686	2hr-10yr	6365.97		234		69.6		18.4	
SouthCC	2686	2hr-50yr	6367.55	2.09	762.73	5.19	81.91	4.35	21.95	6.21
SouthCC	2686	2hr-100yr	6368.35	9.14	1105.72	15.15	93.58	4.7	24.44	8.75
SouthCC	2686	6hr-2yr	6365.03		115		29.49		49.01	
SouthCC	2686	6hr-5yr	6366.3		329.92	0.08	72.15		19.17	2.05
SouthCC	2686	6hr-10yr	6367.29	1.07	670.6	3.32	79.64	3.77	21.76	5.76
SouthCC	2686	6hr-50yr	6370.63	113.81	2214.37	71.82	119.05	10.15	29.55	12.45
SouthCC	2686	6hr-100yr	6372.42	302.68	3245.9	151.42	129.15	14.84	33.41	14.85
SouthCC	2686	24hr-2yr	6366.42		369.79	0.21	73.1		19.49	2.75
SouthCC	2686	24hr-5yr	6367.72	3.01	835.11	6.87	83.4	4.73	22.67	6.81
SouthCC	2686	24hr-10yr	6369.05	27.02	1420.52	27.45	101.86	6.62	26.02	9.98
SouthCC	2686	24hr-50yr	6373.06	388.34	3644.38	187.28	132.07	16.39	34.81	15.59
SouthCC	2686	24hr-100yr	6375.1	719.54	5040.02	340.44	139.98	20.83	39.41	18.51
SouthCC	2529	2hr-2yr	6355.92		23		15.92		0.91	
SouthCC	2529	2hr-5yr	6357.88		109		25.16		2.1	
SouthCC	2529	2hr-10yr	6359.45	0.06	233.94		39.89	0.15	2.82	
SouthCC	2529	2hr-50yr	6362.24	18.89	688.49	62.62	124.89	1.83	5.2	1.13
SouthCC	2529	2hr-100yr	6363.31	35.67	915.78	178.56	134.35	2.41	6.17	1.99
SouthCC	2529	6hr-2yr	6357.98		115		25.59		2.15	
SouthCC	2529	6hr-5yr	6360.14	1.35	328.16	0.5	58.71	0.54	3.41	0.17
SouthCC	2529	6hr-10yr	6361.85	14.17	612.97	47.86	97.6	1.61	4.85	1.24
SouthCC	2529	6hr-50yr	6365.9	102.82	1612.04	685.14	152.08	3.9	9.03	4.25
SouthCC	2529	6hr-100yr	6367.79	179.95	2243.45	1276.61	158.97	5.09	11.4	6.22
SouthCC	2529	24hr-2yr	6360.39	2.37	365.5	2.12	68.48	0.7	3.62	0.3
SouthCC	2529	24hr-5yr	6362.49	22.26	737.83	84.91	127.13	1.96	5.4	1.33
SouthCC	2529	24hr-10yr	6364.14	52.87	1117.18	304.95	141.08	2.88	7.03	2.68
SouthCC	2529	24hr-50yr	6368.44	213.09	2484.66	1522.25	160.98	5.52	12.26	6.94
SouthCC	2529	24hr-100yr	6370.52	341.13	3325.09	2433.78	166.74	6.95	15.1	9.31
SouthCC	2404	2hr-2yr	6353.13		23		12.4		3.67	
SouthCC	2404	2hr-5yr	6355.01		109		19.06		5.03	
SouthCC	2404	2hr-10yr	6356.43	0.4	233.54	0.06	28.72	0.5	6.82	0.45
SouthCC	2404	2hr-50yr	6359.22	98.42	660.67	10.9	87.9	4.73	12.61	1.07
SouthCC	2404	2hr-100yr	6360.23	188.88	871.21	69.91	107.31	6.98	15.24	2.84
SouthCC	2404	6hr-2yr	6355.1		115		19.38		5.11	
SouthCC	2404	6hr-5yr	6357.15	5.51	323.78	0.71	39.65	1.29	8.19	1.17
SouthCC	2404	6hr-10yr	6358.88	73.34	593.6	8.06	61.73	3.95	11.67	2.12
SouthCC	2404	6hr-50yr	6362.46	491.79	1484.72	423.49	122.64	13.03	23.18	8.07
SouthCC	2404	6hr-100yr	6364.12	789.32	2018.17	892.52	128.63	17.39	29.09	12.65
SouthCC	2404	24hr-2yr	6357.4	9.48	359.31	1.21	44.04	1.54	8.68	1.42
SouthCC	2404	24hr-5yr	6359.46	118	709.3	17.7	97.37	5.28	13.24	1.37
SouthCC	2404	24hr-10yr	6360.95	271.92	1050.65	152.43	112.4	8.81	17.61	4.46
SouthCC	2404	24hr-50yr	6364.71	905.07	2217.81	1097.13	130.4	18.76	31.07	14.32
SouthCC	2404	24hr-100yr	6366.56	1323.22	2912.81	1863.97	136.64	23.22	37.81	19.69
SouthCC	2295	2hr-2yr	6349.49		23		14.83		1.45	
SouthCC	2295	2hr-5yr	6351.02		109		21.18		4.2	
SouthCC	2295	2hr-10yr	6352.2	0.01	233.98	0.01	26.23	0.23	6.78	0.23
SouthCC	2295	2hr-50yr	6354.43	10.27	691.39	68.34	109.67	2.33	15.59	3.01
SouthCC	2295	2hr-100yr	6355.25	37.08	896.13	196.79	129.58	3.3	18.51	5.63
SouthCC	2295	6hr-2yr	6351.1		115		21.49		4.34	
SouthCC	2295	6hr-5yr	6352.76	0.43	329.22	0.35	29.17	0.98	8.83	0.96
SouthCC	2295	6hr-10yr	6354.16	7.22	628.4	39.39	103.64	2.36	14.57	2.15
SouthCC	2295	6hr-50yr	6357.41	264.01	1422.06	713.93	154.88	7.7	22.6	10.53
SouthCC	2295	6hr-100yr	6358.97	555.48	1885.38	1259.15	163.26	11.4	26.36	14.01
SouthCC	2295	24hr-2yr	6352.97	0.84	368.49	0.67	30.28	1.28	9.64	1.26

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
SouthCC	2295	24hr-5yr	6354.62	13.16	738.16	93.68	116.24	2.25	16.3	3.63
SouthCC	2295	24hr-10yr	6355.94	81.61	1056.74	336.66	141.09	4.44	19.92	7.43
SouthCC	2295	24hr-50yr	6359.47	673.43	2067.5	1479.07	165.88	12.77	28.18	15.44
SouthCC	2295	24hr-100yr	6361.04	1110.42	2691.74	2297.85	173.59	16.98	34.1	20.25
SouthCC	2113	2hr-2yr	6341.05		23		11.93		7.95	
SouthCC	2113	2hr-5yr	6342.73		109		24.32		6.27	
SouthCC	2113	2hr-10yr	6343.96		234		32.08		7.12	
SouthCC	2113	2hr-50yr	6346.52	15.36	709.72	44.92	80.48	2.81	11.14	2.79
SouthCC	2113	2hr-100yr	6347.6	39.71	967.33	122.97	96.4	3.58	12.89	4.32
SouthCC	2113	6hr-2yr	6342.81		115		24.86		6.29	
SouthCC	2113	6hr-5yr	6344.56	0.35	327.52	2.12	44.15	0.81	8.05	1.21
SouthCC	2113	6hr-10yr	6346.19	11	636.32	27.67	76.26	2.63	10.57	2.19
SouthCC	2113	6hr-50yr	6349.79	215.33	1728.86	455.81	165.76	4.49	19.68	9.37
SouthCC	2113	6hr-100yr	6351.35	611.97	2351.24	736.79	212.11	8.27	24.13	8.91
SouthCC	2113	24hr-2yr	6344.79	0.85	365.17	3.98	46.94	1.1	8.4	1.54
SouthCC	2113	24hr-5yr	6346.76	19.44	765.72	59.84	83.61	2.97	11.56	3.21
SouthCC	2113	24hr-10yr	6348.38	62.15	1200.45	212.4	122.5	3.01	14.88	5.78
SouthCC	2113	24hr-50yr	6351.84	768.71	2550.07	901.22	215.83	9.4	25.28	9.85
SouthCC	2113	24hr-100yr	6353.38	1352.7	3216.36	1530.94	224.58	12.86	28.9	12.95
SouthCC	1935	2hr-2yr	6333.92		23		15.16		1.28	
SouthCC	1935	2hr-5yr	6335.52		109		22.6		3.56	
SouthCC	1935	2hr-10yr	6336.66	0.08	233.72	0.2	28.48	0.41	5.93	0.63
SouthCC	1935	2hr-50yr	6339.05	31.76	720.06	18.18	81.07	2.42	14.34	2.61
SouthCC	1935	2hr-100yr	6340.07	93.57	993.61	42.83	151.05	3.31	18.26	2.51
SouthCC	1935	6hr-2yr	6335.59		115		22.95		3.68	
SouthCC	1935	6hr-5yr	6337.25	0.93	327.93	1.14	31.74	1.08	7.68	1.29
SouthCC	1935	6hr-10yr	6338.74	19.54	643.97	11.49	70.63	1.96	13.16	2.21
SouthCC	1935	6hr-50yr	6342.03	501.93	1551.52	346.56	183.88	8.9	23.92	6.7
SouthCC	1935	6hr-100yr	6343.33	923.54	2022.18	754.29	187.44	13.09	29.03	10.86
SouthCC	1935	24hr-2yr	6337.47	1.59	366.64	1.77	32.98	1.35	8.37	1.54
SouthCC	1935	24hr-5yr	6339.28	43.4	776.84	24.75	88.17	2.76	15.18	2.97
SouthCC	1935	24hr-10yr	6340.69	197.65	1179.54	97.81	170.92	5.29	20.76	3.51
SouthCC	1935	24hr-50yr	6343.78	1095.31	2197.33	927.37	188.63	14.57	30.8	12.34
SouthCC	1935	24hr-100yr	6345.24	1724.45	2792.12	1583.43	192.09	19.23	36.33	17.11
SouthCC	1804	2hr-2yr	6328.69		23		19.52		5.55	
SouthCC	1804	2hr-5yr	6329.88		109		31.87		5.89	
SouthCC	1804	2hr-10yr	6330.81		234		38.14		7.34	
SouthCC	1804	2hr-50yr	6333.09	9.71	751.21	9.08	77.47	2.73	11.94	1.33
SouthCC	1804	2hr-100yr	6334.1	19.47	1053.37	57.16	142.53	1.89	14.11	2.45
SouthCC	1804	6hr-2yr	6329.93		115		32.35		5.96	
SouthCC	1804	6hr-5yr	6331.34	0.13	329.87	0	41.53	0.77	8.37	0.18
SouthCC	1804	6hr-10yr	6332.77	6.04	665.01	3.95	64.57	2.34	11.29	1
SouthCC	1804	6hr-50yr	6336.24	151.76	1819.11	429.13	213.6	3.37	18.7	7.29
SouthCC	1804	6hr-100yr	6337.68	505.48	2379.39	815.13	221.2	6.43	20.99	10
SouthCC	1804	24hr-2yr	6331.52	0.31	369.65	0.04	42.66	1.06	8.83	0.49
SouthCC	1804	24hr-5yr	6333.32	13.05	816.34	15.61	85.87	3.02	12.42	1.63
SouthCC	1804	24hr-10yr	6334.79	59.22	1271.37	144.42	150.48	3.31	15.32	4.03
SouthCC	1804	24hr-50yr	6338.17	662.93	2587.81	969.26	223.37	7.42	21.83	10.88
SouthCC	1804	24hr-100yr	6339.75	1270.87	3299.9	1529.23	229.12	10.44	24.55	13.62
SouthCC	1602	2hr-2yr	6321.41		23		19.39		1.03	
SouthCC	1602	2hr-5yr	6323		109		30.31		2.38	
SouthCC	1602	2hr-10yr	6324.21	0.01	233.9	0.09	38.66	0.12	3.45	0.27
SouthCC	1602	2hr-50yr	6326.79	13.75	736.54	19.71	110.04	0.96	7.43	1.14
SouthCC	1602	2hr-100yr	6327.71	58.94	1003.93	67.12	147.79	2.18	9.53	1.78
SouthCC	1602	6hr-2yr	6323.08		115		30.87		2.43	

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
SouthCC	1602	6hr-5yr	6324.82	0.24	328.81	0.95	42.22	0.48	4.3	0.66
SouthCC	1602	6hr-10yr	6326.48	6.2	657.9	10.91	96.91	0.65	6.82	0.89
SouthCC	1602	6hr-50yr	6329.66	269.41	1734.64	395.96	171.98	5.68	15.19	5.18
SouthCC	1602	6hr-100yr	6331.11	506.06	2372.02	821.92	185.51	8.01	19.44	8.21
SouthCC	1602	24hr-2yr	6325.06	0.46	367.89	1.65	43.59	0.61	4.6	0.81
SouthCC	1602	24hr-5yr	6327.01	21.73	795.32	27.96	117.72	1.24	7.88	1.31
SouthCC	1602	24hr-10yr	6328.35	111.08	1224.49	139.43	162.14	3.24	11.33	2.65
SouthCC	1602	24hr-50yr	6331.63	607.21	2608.18	1004.61	190.74	8.72	20.79	9.25
SouthCC	1602	24hr-100yr	6333.32	986.87	3405.88	1707.25	208.88	10.47	24.8	12.59
SouthCC	1366	2hr-2yr	6312.57		23		18.62		6.18	
SouthCC	1366	2hr-5yr	6313.64		109		23.3		9.44	
SouthCC	1366	2hr-10yr	6314.54		234		27.71		13.26	
SouthCC	1366	2hr-50yr	6316.82	8.43	760.18	1.39	67.59	2.21	20.39	2.34
SouthCC	1366	2hr-100yr	6317.82	77.84	1041.32	10.84	113.98	4.32	21.8	4.24
SouthCC	1366	6hr-2yr	6313.69		115		23.5		9.73	
SouthCC	1366	6hr-5yr	6315.1		330		30.74		14.88	
SouthCC	1366	6hr-10yr	6316.51	1.96	672.65	0.4	55.56	1.26	19.65	1.53
SouthCC	1366	6hr-50yr	6320.15	563.1	1735.22	101.68	149.11	10.63	23.58	5.72
SouthCC	1366	6hr-100yr	6321.81	1069.98	2329.52	300.5	155.76	13.89	25.87	9.63
SouthCC	1366	24hr-2yr	6315.29		370		31.79		15.67	
SouthCC	1366	24hr-5yr	6317.05	16.71	825.66	2.64	77.59	2.75	20.85	2.84
SouthCC	1366	24hr-10yr	6318.57	200	1250.43	24.57	124.59	6.78	22.23	4.45
SouthCC	1366	24hr-50yr	6322.37	1273.66	2560.11	386.24	158.11	15.01	26.96	10.87
SouthCC	1366	24hr-100yr	6324.13	2020.71	3368.65	710.64	165.33	18.68	31.05	14.65
SouthCC	1187	2hr-2yr	6305.06		23		24.84		1	
SouthCC	1187	2hr-5yr	6306.38		109		32.56		2.4	
SouthCC	1187	2hr-10yr	6307.6		234		36.91		3.38	
SouthCC	1187	2hr-50yr	6310.53	2.77	761.56	5.68	58.21	0.61	6.38	1.31
SouthCC	1187	2hr-100yr	6311.79	25.21	1086.95	17.84	88.85	1.2	8.04	1.87
SouthCC	1187	6hr-2yr	6306.45		115		32.79		2.46	
SouthCC	1187	6hr-5yr	6308.32	0.01	329.96	0.02	41.07	0.14	3.94	0.19
SouthCC	1187	6hr-10yr	6310.13	1.43	669.95	3.62	49.48	0.68	5.88	1.15
SouthCC	1187	6hr-50yr	6314.5	279.76	1987.02	133.22	178.11	3.99	12.24	2.25
SouthCC	1187	6hr-100yr	6316.14	582.39	2703.29	414.32	212.14	6.26	15.63	3.9
SouthCC	1187	24hr-2yr	6308.57	0.08	369.81	0.11	41.92	0.3	4.18	0.32
SouthCC	1187	24hr-5yr	6310.82	5.13	832.16	7.71	64.42	0.72	6.76	1.44
SouthCC	1187	24hr-10yr	6312.72	75.81	1362.91	36.28	127.51	1.88	9.35	1.62
SouthCC	1187	24hr-50yr	6316.69	710.26	2959.83	549.91	220.32	7.1	16.76	4.51
SouthCC	1187	24hr-100yr	6318.37	1174.28	3808.58	1117.15	243.48	9.72	20.27	6.49
SouthCC	965	2hr-2yr	6298.77		23		21.43		2.23	
SouthCC	965	2hr-5yr	6300.08		109		25.74		4.25	
SouthCC	965	2hr-10yr	6301.06	0	233.91	0.09	29.92		6.93	0.54
SouthCC	965	2hr-50yr	6303.07	27.3	730.31	12.39	63.52	3.42	17.52	4.96
SouthCC	965	2hr-100yr	6303.94	85.95	1016.19	27.86	75.67	5.99	22.62	7.31
SouthCC	965	6hr-2yr	6300.14		115		26.01		4.39	
SouthCC	965	6hr-5yr	6301.56	0.06	329.14	0.79	32.01	0.63	9.06	1.34
SouthCC	965	6hr-10yr	6302.8	16.1	649.88	9.02	59.79	2.61	15.99	4.26
SouthCC	965	6hr-50yr	6306.2	506.59	1813.27	80.14	153.43	10.61	32.01	5.9
SouthCC	965	6hr-100yr	6307.69	1070.59	2369.81	259.6	176.5	15.42	36.2	9.13
SouthCC	965	24hr-2yr	6301.74	0.13	368.55	1.32	32.76	0.87	9.94	1.67
SouthCC	965	24hr-5yr	6303.27	37.66	792.04	15.3	66.28	4.01	18.64	5.49
SouthCC	965	24hr-10yr	6304.69	161.54	1269.22	44.24	106.67	6.41	26.01	7.89
SouthCC	965	24hr-50yr	6308.19	1298.47	2572.43	349.09	182.17	16.97	37.69	10.37
SouthCC	965	24hr-100yr	6309.71	2123.63	3251.38	724.99	193.11	21.92	42.83	14.83
SouthCC	722	2hr-2yr	6292.91		23		28.57		0.78	

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
SouthCC	722	2hr-5yr	6294.09		95.84	13.16	210.93		1.61	0.3
SouthCC	722	2hr-10yr	6294.63	0	154.66	79.33	217.14	0.04	2.08	0.89
SouthCC	722	2hr-50yr	6295.98	4.09	369.32	396.59	231.79	0.76	3.49	2.27
SouthCC	722	2hr-100yr	6296.62	11.11	503.07	615.81	242.94	1.04	4.28	2.98
SouthCC	722	6hr-2yr	6294.12		99.06	15.94	211.38		1.64	0.33
SouthCC	722	6hr-5yr	6294.93	0.12	196.48	133.39	220.4	0.2	2.4	1.2
SouthCC	722	6hr-10yr	6295.79	2.78	333.2	339.02	229.6	0.65	3.26	2.07
SouthCC	722	6hr-50yr	6298.16	57.53	952.9	1389.56	274.87	2.07	7.11	5.27
SouthCC	722	6hr-100yr	6299.28	134.2	1373.14	2192.66	294.22	3	9.54	7.38
SouthCC	722	24hr-2yr	6295.05	0.25	213.17	156.59	221.62	0.27	2.52	1.32
SouthCC	722	24hr-5yr	6296.12	5.09	397.7	442.21	234.69	0.78	3.66	2.43
SouthCC	722	24hr-10yr	6297.11	20.96	631.05	822.99	253.81	1.37	5.12	3.64
SouthCC	722	24hr-50yr	6299.68	172.84	1535	2512.16	301.26	3.34	10.4	8.13
SouthCC	722	24hr-100yr	6300.96	347.55	2096.31	3656.14	331.13	4.25	13.11	10.55
SouthCC	491	2hr-2yr	6284.77		23		17.18		7.89	
SouthCC	491	2hr-5yr	6286.18		109		25.72		10.59	
SouthCC	491	2hr-10yr	6287.42	0.04	233.96	0	39.06	0.58	11.49	
SouthCC	491	2hr-50yr	6289.48	23.41	656.17	90.43	152.12	3.28	18.99	4.8
SouthCC	491	2hr-100yr	6290.28	81.77	840.13	208.1	344.23	3.29	20.8	4.09
SouthCC	491	6hr-2yr	6286.26		115		26.53		10.65	
SouthCC	491	6hr-5yr	6287.97	0.97	328.21	0.82	47.13	1.91	13.38	1.51
SouthCC	491	6hr-10yr	6289.2	16.21	596.61	62.18	129.71	3.68	18.42	4.27
SouthCC	491	6hr-50yr	6291.8	443.86	1176.16	779.98	380.54	7.54	22.08	7.94
SouthCC	491	6hr-100yr	6292.93	830.99	1444.1	1424.92	387.56	9.92	22.92	10.36
SouthCC	491	24hr-2yr	6288.17	1.72	365.39	2.9	82.42	1.85	14.07	1.01
SouthCC	491	24hr-5yr	6289.68	31	700.17	113.83	188.98	2.44	19.47	5.15
SouthCC	491	24hr-10yr	6290.78	175.93	942.53	356.54	365	4.85	21.07	5.29
SouthCC	491	24hr-50yr	6293.33	987.98	1547.2	1684.82	389.36	10.72	23.38	11.18
SouthCC	491	24hr-100yr	6294.61	1561.19	1908.49	2630.33	394.81	13.24	25.26	13.81
SouthCC	318	2hr-2yr	6277.81		23		15.84		1.24	
SouthCC	318	2hr-5yr	6279.66		109		24.73		2.58	
SouthCC	318	2hr-10yr	6281.14	0	232.89	1.11	61.8		3.58	0.21
SouthCC	318	2hr-50yr	6283.11	47.76	550.11	172.13	201.34	1.35	6.32	2.16
SouthCC	318	2hr-100yr	6283.79	109.24	704.34	316.42	220.17	2.04	7.7	3.22
SouthCC	318	6hr-2yr	6279.75		115		25.15		2.65	
SouthCC	318	6hr-5yr	6281.72	0.47	314.25	15.28	113.48	0.24	4.36	0.61
SouthCC	318	6hr-10yr	6282.9	34.23	504.92	135.85	196.11	1.13	5.87	1.85
SouthCC	318	6hr-50yr	6285.59	417.27	1137.63	845.1	284.19	3.94	10.64	5.85
SouthCC	318	6hr-100yr	6287.01	791.08	1517.51	1391.41	328.45	4.93	12.67	7.74
SouthCC	318	24hr-2yr	6281.91	1.25	343.27	25.49	133.54	0.28	4.62	0.77
SouthCC	318	24hr-5yr	6283.27	59.12	584.13	201.76	206.18	1.5	6.63	2.4
SouthCC	318	24hr-10yr	6284.35	183.05	833.42	458.53	255.58	2.65	8.69	4.07
SouthCC	318	24hr-50yr	6287.47	966.92	1654.53	1598.56	337.75	5.44	13.38	8.37
SouthCC	318	24hr-100yr	6288.93	1671.32	2110.28	2318.4	357.88	7.32	15.55	10.28
SouthCC	211	2hr-2yr	6275.12		23		18.98		2.53	
SouthCC	211	2hr-5yr	6276.72		109		24.27		5.64	
SouthCC	211	2hr-10yr	6278.06	0.12	233.55	0.34	82.2	0.7	8.43	0.15
SouthCC	211	2hr-50yr	6280.31	31.58	495.08	243.34	267.07	1.81	11.12	3.16
SouthCC	211	2hr-100yr	6281.09	88.07	578.1	463.82	275.81	2.95	11.13	4.17
SouthCC	211	6hr-2yr	6276.81		115		24.56		5.77	
SouthCC	211	6hr-5yr	6278.67	0.91	304.64	24.45	113.87	1.39	9.56	1.46
SouthCC	211	6hr-10yr	6280.07	18.69	470.89	185.42	264.32	1.38	11.16	2.79
SouthCC	211	6hr-50yr	6283.01	300.42	851.16	1248.42	308.95	4.59	12.96	6.84
SouthCC	211	6hr-100yr	6284.46	543.27	1110.94	2045.79	353.96	5.26	15.12	8.96
SouthCC	211	24hr-2yr	6278.88	1.41	329.69	38.9	125.24	1.63	9.96	1.78
SouthCC	211	24hr-5yr	6280.48	42.51	513.5	288.99	268.99	2.1	11.12	3.42

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
SouthCC	211	24hr-10yr	6281.67	145.01	657.71	672.28	280.94	3.77	11.71	5.04
SouthCC	211	24hr-50yr	6284.92	681.51	1201.66	2336.82	358.32	5.97	15.84	9.62
SouthCC	211	24hr-100yr	6286.39	1197.29	1507.18	3395.53	367.47	8.19	18.18	11.9
SouthCC	13	2hr-2yr	6267.37		26		18.13		2.15	
SouthCC	13	2hr-5yr	6268.77		115		27.14		4.09	
SouthCC	13	2hr-10yr	6269.97		250		32.89		5.77	
SouthCC	13	2hr-50yr	6273.03		830		61.22		8.2	
SouthCC	13	2hr-100yr	6274.19	0.06	1223.35	1.59	107.01	0.2	9.37	0.4
SouthCC	13	6hr-2yr	6268.88		125		27.74		4.24	
SouthCC	13	6hr-5yr	6270.75		360		38.52		6.54	
SouthCC	13	6hr-10yr	6272.64		730		56.54		7.97	
SouthCC	13	6hr-50yr	6276.3	71.29	2419.81	143.9	215.16	2.5	14.1	3.45
SouthCC	13	6hr-100yr	6277.7	270.84	3380.6	410.56	273.78	4.19	17.25	5.7
SouthCC	13	24hr-2yr	6270.97		395		40.38		6.72	
SouthCC	13	24hr-5yr	6273.31		910		64.31		8.42	
SouthCC	13	24hr-10yr	6274.85	3.89	1563.74	22.36	136.35	0.89	10.86	1.59
SouthCC	13	24hr-50yr	6278.14	376.29	3711	507.72	293.38	4.87	18.24	6.05
SouthCC	13	24hr-100yr	6279.52	854.62	4817.56	972.82	320.08	7.58	21.32	8.17
NorthCC	7757	2hr-2yr	6663.63		25		11.98		2.47	
NorthCC	7757	2hr-5yr	6665.12	0.64	92.27	0.1	15.38	1.16	5.76	0.54
NorthCC	7757	2hr-10yr	6666.36	4.94	182.31	0.75	18.3	2.72	9.4	1.3
NorthCC	7757	2hr-50yr	6669.24	48.65	534.65	7.7	30	6.86	22.73	4.06
NorthCC	7757	2hr-100yr	6670.42	95.66	743.44	14.9	75.83	5.43	30.38	3.74
NorthCC	7757	6hr-2yr	6665.33	1.03	105.82	0.15	15.87	1.42	6.35	0.67
NorthCC	7757	6hr-5yr	6667.28	12.64	270.47	1.9	20.51	4.17	12.74	1.99
NorthCC	7757	6hr-10yr	6669.03	42.26	501	6.74	28.67	6.5	21.47	3.78
NorthCC	7757	6hr-50yr	6672.79	568.16	1227.91	103.93	81.75	16.86	45.35	11.37
NorthCC	7757	6hr-100yr	6674.81	1111.21	1565.05	223.74	86.16	22.79	48.75	15.22
NorthCC	7757	24hr-2yr	6668.33	27.02	398.74	4.24	24.3	5.67	17.61	2.97
NorthCC	7757	24hr-5yr	6670.54	110.82	766.73	17.46	76.15	5.98	31.25	4.12
NorthCC	7757	24hr-10yr	6672.02	379.66	1068.99	66.35	80.12	13.2	41.19	8.94
NorthCC	7757	24hr-50yr	6676.96	1844.54	2000.71	404.76	90.99	29.13	54.97	19.52
NorthCC	7757	24hr-100yr	6679.49	2884.93	2570.78	684.29	97.23	35.81	62.44	24.06
NorthCC	7595	2hr-2yr	6652.81		25		19.69		9.21	
NorthCC	7595	2hr-5yr	6653.81		93		24.57		14.97	
NorthCC	7595	2hr-10yr	6654.71	0.22	187.78		27.45	2.49	19.94	
NorthCC	7595	2hr-50yr	6657.43	23.04	566.05	1.91	47.81	5.45	28.6	4.31
NorthCC	7595	2hr-100yr	6658.66	78.14	771.12	4.74	63.93	8.07	31.62	5.4
NorthCC	7595	6hr-2yr	6653.98		107		25.35		15.64	
NorthCC	7595	6hr-5yr	6655.44	1.82	283.14	0.05	29.53	5.03	23.46	1.36
NorthCC	7595	6hr-10yr	6657.2	17.52	530.94	1.54	45.13	4.95	28.08	4.08
NorthCC	7595	6hr-50yr	6661.91	459.44	1419.58	20.98	69.64	19.02	40.15	8.06
NorthCC	7595	6hr-100yr	6663.51	823.81	2037.06	39.14	72.24	30.06	57.35	11.92
NorthCC	7595	24hr-2yr	6656.45	7.54	421.84	0.62	32.31	7.47	26.46	3.2
NorthCC	7595	24hr-5yr	6658.82	91.15	798.63	5.22	64.23	8.72	31.93	5.52
NorthCC	7595	24hr-10yr	6660.86	311.07	1189.74	14.19	67.89	15.81	37.04	7.18
NorthCC	7595	24hr-50yr	6665.56	1367.95	2811.58	70.46	75.49	41.39	73.47	15.77
NorthCC	7595	24hr-100yr	6667.9	2157.96	3857.92	124.12	80.36	55.31	94.25	20.38
NorthCC	7419	2hr-2yr	6639.34		25		16.99		2.37	
NorthCC	7419	2hr-5yr	6640.56		93		21.87		4.68	
NorthCC	7419	2hr-10yr	6641.56	0.12	187.88	0	24.38	0.74	7.04	
NorthCC	7419	2hr-50yr	6643.7	4.76	582.14	4.09	29.83	3.73	17.61	3.74
NorthCC	7419	2hr-100yr	6644.62	11.51	832.02	10.47	55.19	5.59	24.01	5.94
NorthCC	7419	6hr-2yr	6640.74		107		22.31		5.06	
NorthCC	7419	6hr-5yr	6642.26	0.63	284.11	0.26	26.15	1.46	9.47	1.02

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	7419	6hr-10yr	6643.54	3.97	542.68	3.35	29.4	3.41	16.56	3.39
NorthCC	7419	6hr-50yr	6647.42	70.7	1771.39	57.91	81.38	11.98	43.5	13.23
NorthCC	7419	6hr-100yr	6648.84	626.53	2177.58	95.89	90.55	16.98	45.96	14.7
NorthCC	7419	24hr-2yr	6643.04	2.11	426.31	1.58	28.05	2.5	13.28	2.33
NorthCC	7419	24hr-5yr	6644.75	12.87	870.45	11.69	56.59	5.88	24.95	6.28
NorthCC	7419	24hr-10yr	6646.49	43.72	1434.54	36.75	73.85	10.19	37.29	10.84
NorthCC	7419	24hr-50yr	6650.73	1211.89	2866.33	171.78	95.52	24.03	53.23	17.87
NorthCC	7419	24hr-100yr	6652.98	2084.48	3756.53	298.99	101.09	31.42	61.08	21.42
NorthCC	7312	2hr-2yr	6626.39		25		18.81		43.44	
NorthCC	7312	2hr-5yr	6626.92		93		20.64		75.76	
NorthCC	7312	2hr-10yr	6627.45		188		22.45		99.58	
NorthCC	7312	2hr-50yr	6629.79	4.73	583.83	2.44	28.73	17.82	79.45	14.37
NorthCC	7312	2hr-100yr	6631.1	17.06	828.2	8.74	31.84	21.61	76.32	17.5
NorthCC	7312	6hr-2yr	6627.01		107		20.95		79.58	
NorthCC	7312	6hr-5yr	6628.01		285		24.31		99.32	
NorthCC	7312	6hr-10yr	6629.57	3.46	544.75	1.78	28.18	16.89	80.53	13.62
NorthCC	7312	6hr-50yr	6634.97	110.56	1733.85	55.59	65.38	15.37	84.67	23.6
NorthCC	7312	6hr-100yr	6637.26	442.96	2351.02	106.02	75.05	27.84	90.23	26.09
NorthCC	7312	24hr-2yr	6628.85	0.79	428.8	0.41	26.38	12.93	89.27	10.42
NorthCC	7312	24hr-5yr	6631.29	19.56	865.45	9.99	32.28	22.03	76.21	17.82
NorthCC	7312	24hr-10yr	6633.72	71.52	1408.43	35.06	38.04	27.06	80.37	21.59
NorthCC	7312	24hr-50yr	6639.68	982.09	3085.75	182.16	83.12	38.31	97.66	28.42
NorthCC	7312	24hr-100yr	6642.43	1803.09	4025.09	311.82	91.97	48.48	107.53	31.64
NorthCC	7004	2hr-2yr	6607.75		25		16.26		1.18	
NorthCC	7004	2hr-5yr	6609.52		93		23.38		2.18	
NorthCC	7004	2hr-10yr	6610.79	0.14	187.71	0.16	27.97	0.34	3.31	0.34
NorthCC	7004	2hr-50yr	6613.7	9.93	569.8	11.26	38.09	1.91	7.56	2.13
NorthCC	7004	2hr-100yr	6614.96	23.97	805.16	24.87	42.26	2.89	9.96	3.13
NorthCC	7004	6hr-2yr	6609.77		107		24.42		2.33	
NorthCC	7004	6hr-5yr	6611.68	1.06	282.69	1.25	31.1	0.77	4.47	0.78
NorthCC	7004	6hr-10yr	6613.47	8.24	532.25	9.52	37.3	1.76	7.16	1.97
NorthCC	7004	6hr-50yr	6618.2	179.38	1621.61	99.01	78.19	4.84	17.81	6.37
NorthCC	7004	6hr-100yr	6620.25	446.09	2270.69	183.22	83.98	8.56	23.44	8.73
NorthCC	7004	24hr-2yr	6612.77	4.2	420.69	5.11	34.88	1.3	5.93	1.45
NorthCC	7004	24hr-5yr	6615.13	26.6	841.1	27.3	42.81	3.04	10.32	3.28
NorthCC	7004	24hr-10yr	6617.28	94.62	1349.8	70.58	75.63	3.21	15.16	5.28
NorthCC	7004	24hr-50yr	6622.46	856.24	3078.99	314.78	90.28	12.77	29.89	11.55
NorthCC	7004	24hr-100yr	6625	1485.24	4132.06	522.7	97.56	17.69	37.51	14.9
NorthCC	6722	2hr-2yr	6594.13		25		9.92		59.22	
NorthCC	6722	2hr-5yr	6594.94		93		14.74		88.88	
NorthCC	6722	2hr-10yr	6595.73		188		19.61		92.27	
NorthCC	6722	2hr-50yr	6597.32	122.93	457.59	10.48	61.93	39.69	95	23.04
NorthCC	6722	2hr-100yr	6598.04	236.49	589.01	28.5	66.73	48.89	94.88	28.83
NorthCC	6722	6hr-2yr	6595.06		107		15.5		91.85	
NorthCC	6722	6hr-5yr	6596.35	12.16	272.49	0.35	53.81	12.94	85.44	7.68
NorthCC	6722	6hr-10yr	6597.21	106.18	435.39	8.43	61.14	37.39	94.38	21.7
NorthCC	6722	6hr-50yr	6600.43	709.98	1049.57	140.45	73.41	61.01	93.96	44.82
NorthCC	6722	6hr-100yr	6602.26	1177.07	1468.12	254.81	78.83	67.81	99.22	49.14
NorthCC	6722	24hr-2yr	6596.79	55.03	371.88	3.09	58.31	29.71	99.35	16.97
NorthCC	6722	24hr-5yr	6598.15	254.6	607.93	32.47	67.01	49.79	94.57	30.26
NorthCC	6722	24hr-10yr	6599.54	529.83	888.78	96.38	70.84	60.26	97.26	43.33
NorthCC	6722	24hr-50yr	6604.4	1817.71	2010.2	422.09	86.12	74.13	106.41	51.34
NorthCC	6722	24hr-100yr	6606.89	2713.05	2731.48	695.48	94.4	81.62	117.08	55.82
NorthCC	6431	2hr-2yr	6575.06		25		30.02		0.99	
NorthCC	6431	2hr-5yr	6576.12	0.02	92.98	0	34.81	0.17	2.13	

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	6431	2hr-10yr	6576.96	0.71	187.02	0.27	38.13	0.72	3.53	0.54
NorthCC	6431	2hr-50yr	6579.38	14.58	568.54	7.88	45.77	2.55	7.22	2.13
NorthCC	6431	2hr-100yr	6580.54	29.25	808.14	16.62	48.76	3.42	9.03	2.9
NorthCC	6431	6hr-2yr	6576.26	0.06	106.94	0.01	35.36	0.26	2.36	0.13
NorthCC	6431	6hr-5yr	6577.67	2.58	281.22	1.2	40.92	1.2	4.59	0.97
NorthCC	6431	6hr-10yr	6579.18	12.6	530.67	6.73	45.24	2.4	6.91	2
NorthCC	6431	6hr-50yr	6584.13	64.7	1764.59	70.72	97.33	2.04	14.9	5.24
NorthCC	6431	6hr-100yr	6586.15	296.97	2478.7	124.33	116.94	4.51	19.04	6.69
NorthCC	6431	24hr-2yr	6578.57	7.47	418.69	3.84	43.64	1.88	5.88	1.57
NorthCC	6431	24hr-5yr	6580.7	31.78	845.05	18.17	49.18	3.55	9.3	3.01
NorthCC	6431	24hr-10yr	6582.9	75.76	1392.45	46.79	56.22	4.71	12.7	4.4
NorthCC	6431	24hr-50yr	6588.11	712.78	3335.25	201.97	131.15	7.4	24.09	8.45
NorthCC	6431	24hr-100yr	6590.24	1391.53	4425.68	322.79	145.92	10.84	30.37	10.77
NorthCC	6219	2hr-2yr	6562.45		25		15.46		47.33	
NorthCC	6219	2hr-5yr	6563.17		93		17.53		64.26	
NorthCC	6219	2hr-10yr	6564.21		188	0	20.52		50.62	
NorthCC	6219	2hr-50yr	6566.37	6.28	579.64	5.08	26.81	17.66	79.72	16.7
NorthCC	6219	2hr-100yr	6567.42	19.47	819.52	15.01	30.54	25.69	92.96	22.56
NorthCC	6219	6hr-2yr	6563.35		107		18.07		58.71	
NorthCC	6219	6hr-5yr	6564.84	0.14	284.6	0.26	22.22	5.01	59.04	6.64
NorthCC	6219	6hr-10yr	6566.2	4.94	540.96	4.11	26.14	16.39	77.01	15.78
NorthCC	6219	6hr-50yr	6570.18	120.01	1683.36	96.63	64.22	26.71	142.01	43.68
NorthCC	6219	6hr-100yr	6571.98	446.54	2250.68	202.78	94.83	38.5	156.58	52.52
NorthCC	6219	24hr-2yr	6565.55	1.64	426.72	1.63	24.13	12.4	73.96	12.92
NorthCC	6219	24hr-5yr	6567.57	22.17	855.67	17.17	31.06	26.76	94.44	23.39
NorthCC	6219	24hr-10yr	6569.35	69.85	1384.3	60.84	47.26	27.14	124.86	36.43
NorthCC	6219	24hr-50yr	6573.9	1084.29	2802.59	363.12	113.03	50.98	158.76	58.75
NorthCC	6219	24hr-100yr	6576.04	2125.51	3421.5	593	124.49	63.47	159.05	63.66
NorthCC	6113	2hr-2yr	6557.77		25		20.14		0.89	
NorthCC	6113	2hr-5yr	6559.24	1.14	91.05	0.81	29.94	0.46	2	0.45
NorthCC	6113	2hr-10yr	6560.38	6.61	169.44	11.95	94.62	0.86	3.08	0.45
NorthCC	6113	2hr-50yr	6562.36	42.07	376.93	172	114.46	1.84	5.78	2.44
NorthCC	6113	2hr-100yr	6563.13	75.14	493.16	285.71	121.04	2.57	7.43	3.56
NorthCC	6113	6hr-2yr	6559.46	1.75	104.01	1.24	31.65	0.54	2.19	0.51
NorthCC	6113	6hr-5yr	6561.03	13.72	225.79	45.49	101.01	1.13	3.78	1.01
NorthCC	6113	6hr-10yr	6562.22	37.47	358.21	154.32	113.07	1.74	5.53	2.26
NorthCC	6113	6hr-50yr	6565.29	253.5	894.34	752.16	132.41	5.79	12.6	7.13
NorthCC	6113	6hr-100yr	6566.95	438.39	1237.34	1224.27	143.4	7.79	16.1	9.59
NorthCC	6113	24hr-2yr	6561.79	27.6	297.71	104.69	106.83	1.54	4.59	1.68
NorthCC	6113	24hr-5yr	6563.22	80.96	510.84	303.21	121.55	2.72	7.71	3.74
NorthCC	6113	24hr-10yr	6564.56	182.14	754.76	578.1	128.44	4.69	11	6.02
NorthCC	6113	24hr-50yr	6568.8	698.51	1666.44	1885.05	157.9	9.53	19.94	12.32
NorthCC	6113	24hr-100yr	6571.01	1121.15	2219.82	2799.03	175.95	11.57	24.08	15.02
NorthCC	5955	2hr-2yr	6551.51		25		10.41		58.04	
NorthCC	5955	2hr-5yr	6552.34		93		18.55		77.71	
NorthCC	5955	2hr-10yr	6552.9		188		22.79		99.58	
NorthCC	5955	2hr-50yr	6554.55	0.79	548.1	42.11	67.32	11.32	105.49	23.28
NorthCC	5955	2hr-100yr	6555.28	6.32	704.84	142.84	71.42	18.91	97.52	37.7
NorthCC	5955	6hr-2yr	6552.43		107		19.88		82.79	
NorthCC	5955	6hr-5yr	6553.35		285		25.55		113.7	
NorthCC	5955	6hr-10yr	6554.46	0.48	518.45	31.07	66.78	9.5	103.14	19.67
NorthCC	5955	6hr-50yr	6557.77	75.43	1233.04	591.53	83.05	28.35	80.66	48.91
NorthCC	5955	6hr-100yr	6559.44	173.11	1723.13	1003.76	89.65	35.25	87.42	57.01
NorthCC	5955	24hr-2yr	6553.87		429.62	0.38	28.71		132.31	16.3
NorthCC	5955	24hr-5yr	6555.42	7.96	724.64	162.4	72.19	19.33	93.75	38.35
NorthCC	5955	24hr-10yr	6557.02	45.41	1037.18	432.41	79.78	25.25	79	44.93

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	5955	24hr-50yr	6561.31	331.93	2346.77	1571.29	94.92	41.54	96.22	66.08
NorthCC	5955	24hr-100yr	6563.49	598.28	3193.72	2348.01	99.46	49.33	109.08	77.18
NorthCC	5769	2hr-2yr	6537.4		25		22.38		1.03	
NorthCC	5769	2hr-5yr	6538.71	0.19	92.65	0.15	29.26	0.33	2.19	0.32
NorthCC	5769	2hr-10yr	6539.81	2.4	183.69	1.91	34.71	0.88	3.42	0.86
NorthCC	5769	2hr-50yr	6542.46	29.67	540.5	20.83	49.91	2.76	7.63	2.17
NorthCC	5769	2hr-100yr	6543.52	55.67	759.06	39.27	63.83	3.9	10.3	2.42
NorthCC	5769	6hr-2yr	6538.9	0.36	106.35	0.29	30.19	0.42	2.39	0.41
NorthCC	5769	6hr-5yr	6540.61	6.65	273.09	5.26	38.53	1.39	4.6	1.35
NorthCC	5769	6hr-10yr	6542.26	25.91	503.77	20.32	46.71	2.55	7.17	2.41
NorthCC	5769	6hr-50yr	6546.33	174.71	1404.2	321.08	115.79	6.48	16.15	4.97
NorthCC	5769	6hr-100yr	6548.18	303.44	1893.38	703.18	124.56	8.14	19.7	7.83
NorthCC	5769	24hr-2yr	6541.61	16.14	401.09	12.77	43.33	2.03	6.01	1.97
NorthCC	5769	24hr-5yr	6543.68	60.22	791.53	43.25	66.73	4.05	10.64	2.44
NorthCC	5769	24hr-10yr	6545.48	129.73	1197.14	188.13	111.6	5.74	14.51	3.62
NorthCC	5769	24hr-50yr	6550.15	499.29	2495.35	1255.36	133.55	10.14	23.8	10.97
NorthCC	5769	24hr-100yr	6552.42	810.18	3266.35	2063.47	142	12.7	28.54	14.6
NorthCC	5551	2hr-2yr	6526.39		25		17.2		45.43	
NorthCC	5551	2hr-5yr	6526.96		93		20.74		74.68	
NorthCC	5551	2hr-10yr	6527.49		188		24.11		96.89	
NorthCC	5551	2hr-50yr	6529.01	1.35	481.18	108.48	61.16	15.13	87.11	39.29
NorthCC	5551	2hr-100yr	6529.93	5.89	624.92	223.19	64.3	17.62	71.42	41
NorthCC	5551	6hr-2yr	6527.05		107		21.32		78.56	
NorthCC	5551	6hr-5yr	6528.08	0	275.36	9.64	58.19		81.51	12.42
NorthCC	5551	6hr-10yr	6528.84	0.89	459.22	89.89	60.59	14.37	92.63	38.63
NorthCC	5551	6hr-50yr	6532.09	36.6	1220.06	643.34	72.42	28.36	88.32	58.66
NorthCC	5551	6hr-100yr	6533.64	81.82	1770.38	1047.8	80.39	36.58	105.51	69.01
NorthCC	5551	24hr-2yr	6528.48	0.22	383.07	46.72	59.31	9.84	94.84	30.21
NorthCC	5551	24hr-5yr	6530.03	6.67	649.26	239.07	64.65	18.2	72.18	42.03
NorthCC	5551	24hr-10yr	6531.41	23.25	1003.68	488.07	69.83	24.63	80.62	52.39
NorthCC	5551	24hr-50yr	6535.42	159.54	2449.8	1640.66	87.33	43.89	120.48	79.87
NorthCC	5551	24hr-100yr	6537.5	291.58	3350.74	2497.68	94.6	52.25	138.76	92.79
NorthCC	5388	2hr-2yr	6516.13	0	25	0	21.85	0.03	0.77	0.04
NorthCC	5388	2hr-5yr	6517.62	1.2	89.94	1.86	30.84	0.48	1.79	0.49
NorthCC	5388	2hr-10yr	6518.81	5.62	173.42	8.97	38.15	1	2.95	0.98
NorthCC	5388	2hr-50yr	6521.28	34.76	469.85	86.39	107.46	2.85	7.11	1.48
NorthCC	5388	2hr-100yr	6522.2	54.98	620.8	178.22	136.37	3.74	9.14	2.23
NorthCC	5388	6hr-2yr	6517.83	1.69	102.68	2.63	32.25	0.56	1.96	0.56
NorthCC	5388	6hr-5yr	6519.64	11.74	253.72	19.54	43.2	1.49	4.08	1.46
NorthCC	5388	6hr-10yr	6521.11	31.65	444.61	73.73	102.28	2.69	6.77	1.36
NorthCC	5388	6hr-50yr	6524.51	128.4	1030.45	741.15	145.02	5.69	13.38	5.5
NorthCC	5388	6hr-100yr	6526.18	203.72	1363.92	1332.37	151.56	6.98	16.21	7.82
NorthCC	5388	24hr-2yr	6520.55	22.53	364.73	42.75	84.75	2.19	5.66	0.98
NorthCC	5388	24hr-5yr	6522.32	57.79	638.81	198.4	136.68	3.83	9.33	2.38
NorthCC	5388	24hr-10yr	6523.75	100.82	892.13	522.05	142.07	5.12	12.14	4.45
NorthCC	5388	24hr-50yr	6527.98	313.87	1787.56	2148.57	159.71	8.61	19.82	10.52
NorthCC	5388	24hr-100yr	6530.06	480.29	2338.74	3320.97	169.15	10.54	24.1	13.69
NorthCC	5234	2hr-2yr	6512.07		25		10		10.55	
NorthCC	5234	2hr-5yr	6513.1	0.02	92.98		19.34	0.68	17.35	
NorthCC	5234	2hr-10yr	6513.95	7.14	180.86		34.05	5.92	18.92	
NorthCC	5234	2hr-50yr	6515.75	95.02	458.61	37.37	75.44	12.45	22.79	6.04
NorthCC	5234	2hr-100yr	6516.54	154.16	601.06	98.77	84.94	14.46	24.35	8.51
NorthCC	5234	6hr-2yr	6513.24	0.22	106.78		22.33	1.64	18.18	
NorthCC	5234	6hr-5yr	6514.49	23.16	259.6	2.25	51.3	7.39	20.64	3.1
NorthCC	5234	6hr-10yr	6515.61	85.29	434.39	30.33	72.69	12.03	22.57	5.74



Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	5234	6hr-50yr	6518.64	371.55	1115.39	413.06	95.82	20.03	33.16	17.43
NorthCC	5234	6hr-100yr	6520.05	572.87	1584.05	743.08	106.88	23.07	42.11	24.48
NorthCC	5234	24hr-2yr	6515.14	56.5	360.06	13.44	63.88	10.52	21.98	4.73
NorthCC	5234	24hr-5yr	6516.63	162.8	623.44	108.76	85.36	14.94	25	9.02
NorthCC	5234	24hr-10yr	6518	298.54	925.2	291.27	91.22	18.6	29.27	14.23
NorthCC	5234	24hr-50yr	6521.64	922.33	2136.09	1191.58	113.36	28.39	49.62	30.85
NorthCC	5234	24hr-100yr	6523.55	1444.77	2863.78	1831.46	120.49	34.19	57.86	37.5
NorthCC	5137	2hr-2yr	6505.21		25		18.28		2.17	
NorthCC	5137	2hr-5yr	6506.44	0.07	92.86	0.07	24.71	0.43	4.01	0.43
NorthCC	5137	2hr-10yr	6507.39	1.5	185.01	1.49	30.26	1.23	6.33	1.45
NorthCC	5137	2hr-50yr	6509.76	37.11	531.47	22.42	67.58	2.14	13.03	4.36
NorthCC	5137	2hr-100yr	6510.7	99.21	713.41	41.39	106.23	3.28	15.99	5.56
NorthCC	5137	6hr-2yr	6506.61	0.17	106.67	0.16	25.53	0.6	4.35	0.59
NorthCC	5137	6hr-5yr	6508.13	5.72	274.6	4.68	35.9	1.94	8.25	2.29
NorthCC	5137	6hr-10yr	6509.58	30.89	499.57	19.54	60.34	2.12	12.46	4.1
NorthCC	5137	6hr-50yr	6512.98	560.16	1214.6	125.24	130.3	8.98	22.35	6.3
NorthCC	5137	6hr-100yr	6514.7	1038.4	1577.14	284.46	136.8	11.83	24.54	9.12
NorthCC	5137	24hr-2yr	6508.99	17.79	400.37	11.84	39.98	3.47	10.65	3.31
NorthCC	5137	24hr-5yr	6510.84	116.8	733.84	44.36	106.99	3.56	16.07	5.61
NorthCC	5137	24hr-10yr	6512.24	383.28	1058.61	73.11	127.15	7.4	21.01	4.81
NorthCC	5137	24hr-50yr	6516.74	1687.33	2034.1	528.57	148.73	13.71	26.69	11.88
NorthCC	5137	24hr-100yr	6519.09	2682.05	2599.94	858.01	154.08	16.45	28.95	14.29
NorthCC	4969	2hr-2yr	6498.87		25		25.36		1.91	
NorthCC	4969	2hr-5yr	6499.77		93		30.08		4.28	
NorthCC	4969	2hr-10yr	6500.57	0.14	187.66	0.21	34.29	0.74	6.25	0.78
NorthCC	4969	2hr-50yr	6502.76	8.66	569.04	13.3	45.1	3.36	11.67	3.59
NorthCC	4969	2hr-100yr	6503.9	20.76	801.4	31.83	51.11	4.2	13.57	4.73
NorthCC	4969	6hr-2yr	6499.9		107		30.84		4.64	
NorthCC	4969	6hr-5yr	6501.2	0.98	282.55	1.47	37.46	1.54	7.96	1.62
NorthCC	4969	6hr-10yr	6502.57	7.3	531.66	11.04	44.07	3.23	11.3	3.37
NorthCC	4969	6hr-50yr	6507.13	233.16	1530.52	136.32	88.88	6.4	17	6.9
NorthCC	4969	6hr-100yr	6509.18	492.76	2146.59	260.65	95.87	9.45	20.52	8.79
NorthCC	4969	24hr-2yr	6501.98	3.76	420.68	5.56	41.35	2.57	10.03	2.64
NorthCC	4969	24hr-5yr	6504.09	12.58	846.43	35.99	76.31	1.43	14.01	4.96
NorthCC	4969	24hr-10yr	6506.17	140.4	1279.81	94.8	85.35	4.93	15.57	6.12
NorthCC	4969	24hr-50yr	6511.41	869.69	2947.54	432.77	107.74	12.79	24.99	9.9
NorthCC	4969	24hr-100yr	6513.95	1400.48	3965.19	774.33	117.95	16.27	29.9	12.46
NorthCC	4857	2hr-2yr	6491.15		25		10.44		7.99	
NorthCC	4857	2hr-5yr	6492.65		93		15.21		9.58	
NorthCC	4857	2hr-10yr	6493.93		188		18.78		11.57	
NorthCC	4857	2hr-50yr	6496.96	8.05	576.78	6.17	26.88	4.35	18.65	4.13
NorthCC	4857	2hr-100yr	6498.32	22.53	814.92	16.55	30.87	6.19	22.65	5.88
NorthCC	4857	6hr-2yr	6492.9		107		15.87		9.71	
NorthCC	4857	6hr-5yr	6494.8	0.26	284.54	0.2	21.02	1.42	13.83	1.32
NorthCC	4857	6hr-10yr	6496.72	6.39	538.68	4.94	26.19	4.02	18.01	3.82
NorthCC	4857	6hr-50yr	6501.63	206.7	1614.39	78.91	78.56	8.12	36.26	11.31
NorthCC	4857	6hr-100yr	6503.52	589.89	2166.41	143.7	83.55	15.02	44.14	14.34
NorthCC	4857	24hr-2yr	6495.93	2.6	425.38	2.02	23.99	3.04	16.16	2.83
NorthCC	4857	24hr-5yr	6498.5	25.27	851.24	18.49	31.48	6.44	23.28	6.13
NorthCC	4857	24hr-10yr	6500.72	85.48	1373.83	55.69	76.02	4.82	32.53	9.78
NorthCC	4857	24hr-50yr	6505.54	1171.49	2833.43	245.07	88.96	22.39	52.92	17.66
NorthCC	4857	24hr-100yr	6507.87	2045.45	3696.98	397.57	98.48	30.84	63.34	19.7
NorthCC	4629	2hr-2yr	6480.04		25		17.73		1.67	
NorthCC	4629	2hr-5yr	6481.29		93		22.79		3.84	
NorthCC	4629	2hr-10yr	6482.29	0.01	187.97	0.02	26.84	0.28	5.9	0.31

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	4629	2hr-50yr	6484.37	6.52	579.92	4.56	47.09	1.55	14.95	3.2
NorthCC	4629	2hr-100yr	6485.27	33.65	808.76	11.59	64.3	3.29	19.46	4.97
NorthCC	4629	6hr-2yr	6481.46		107		23.53		4.23	
NorthCC	4629	6hr-5yr	6482.96	0.37	284.25	0.38	28.87	1.02	8.1	1.05
NorthCC	4629	6hr-10yr	6484.21	4.47	541.82	3.71	44.16	1.23	14.14	2.92
NorthCC	4629	6hr-50yr	6487.69	339.51	1507.92	52.57	90.4	10.31	29.54	8.91
NorthCC	4629	6hr-100yr	6489.35	729.7	2062.37	107.93	95.11	16.03	35.79	11.6
NorthCC	4629	24hr-2yr	6483.69	1.8	426.39	1.8	31.21	2.08	11.53	2.13
NorthCC	4629	24hr-5yr	6485.39	39.93	842.18	12.89	66.9	3.52	20.05	5.21
NorthCC	4629	24hr-10yr	6486.94	202.79	1276.74	35.47	88.2	7.61	26.61	7.73
NorthCC	4629	24hr-50yr	6491.22	1293.15	2754.57	202.29	100.88	22.02	42.47	14.3
NorthCC	4629	24hr-100yr	6493.41	2103.52	3664.74	371.74	108.21	28.65	50.31	17.54
NorthCC	4437	2hr-2yr	6470.99		25		13.93		6.1	
NorthCC	4437	2hr-5yr	6472.33		93		20.65		7.08	
NorthCC	4437	2hr-10yr	6473.45	3.04	184.96		50.86	0.97	7.96	
NorthCC	4437	2hr-50yr	6475.32	170.02	418.85	2.13	102.62	4.4	10.15	2
NorthCC	4437	2hr-100yr	6476.11	305.66	543	5.34	105.85	5.91	11.39	2.7
NorthCC	4437	6hr-2yr	6472.56		107		21.88		7.01	
NorthCC	4437	6hr-5yr	6474.07	25.12	259.77	0.11	97.09	1.71	9.02	0.8
NorthCC	4437	6hr-10yr	6475.19	149.52	398.73	1.74	102.03	4.13	9.96	1.88
NorthCC	4437	6hr-50yr	6478.37	876.17	996.71	27.12	112.23	10.51	15.96	4.83
NorthCC	4437	6hr-100yr	6480.06	1441.38	1400.02	58.6	115.98	13.75	19.31	6.37
NorthCC	4437	24hr-2yr	6474.74	90.69	338.51	0.8	100.05	3.24	9.46	1.47
NorthCC	4437	24hr-5yr	6476.22	327.24	561.82	5.93	106.17	6.13	11.59	2.8
NorthCC	4437	24hr-10yr	6477.63	662.32	835.06	17.62	110.35	9	14.43	4.13
NorthCC	4437	24hr-50yr	6481.96	2211.36	1925.68	112.95	120.58	17.38	23.23	7.94
NorthCC	4437	24hr-100yr	6484.3	3288.76	2636.22	215.01	126.91	21.22	27.57	9.71
NorthCC	4126	2hr-2yr	6458.69		25		18.85		1.38	
NorthCC	4126	2hr-5yr	6459.99		93		25.96		3.02	
NorthCC	4126	2hr-10yr	6460.9	0.38	187.25	0.38	33.39	0.52	4.93	0.77
NorthCC	4126	2hr-50yr	6462.95	40.68	540.72	9.6	92.26	2.04	11.23	3.24
NorthCC	4126	2hr-100yr	6463.71	121.48	714.39	18.13	95.24	4.05	13.89	4.33
NorthCC	4126	6hr-2yr	6460.15		107	0	27.07		3.36	0.11
NorthCC	4126	6hr-5yr	6461.57	3.11	280.2	1.7	39.16	1.23	6.63	1.45
NorthCC	4126	6hr-10yr	6462.81	30.17	511.42	8.41	91.7	1.7	10.76	3.05
NorthCC	4126	6hr-50yr	6465.99	541.13	1293.82	65.05	101.07	9.94	20.47	7.41
NorthCC	4126	6hr-100yr	6467.59	979.77	1798.08	122.15	104.72	14.31	25.6	9.77
NorthCC	4126	24hr-2yr	6462.32	11.39	413.63	4.98	62.75	1.23	9.1	2.39
NorthCC	4126	24hr-5yr	6463.82	135.78	739.61	19.61	95.66	4.33	14.22	4.48
NorthCC	4126	24hr-10yr	6465.24	378.15	1090.93	45.91	99.31	8.03	18.35	6.42
NorthCC	4126	24hr-50yr	6469.41	1594.68	2441.22	214.1	108.6	19.12	31.28	12.37
NorthCC	4126	24hr-100yr	6471.36	2457.15	3321.95	360.9	112.49	25.78	39.9	16.22
NorthCC	3895	2hr-2yr	6450.47		25		54.52		2.1	
NorthCC	3895	2hr-5yr	6451.01		93		64.12		3.49	
NorthCC	3895	2hr-10yr	6451.52		188		68.5		4.71	
NorthCC	3895	2hr-50yr	6452.92	1.49	588	1.51	78.87	1.48	8.09	1.85
NorthCC	3895	2hr-100yr	6453.61	6.04	843.34	4.62	82.96	2.55	9.68	2.74
NorthCC	3895	6hr-2yr	6451.11		107		64.97		3.58	
NorthCC	3895	6hr-5yr	6451.92	0	284.99	0.01	71.71		5.76	0.24
NorthCC	3895	6hr-10yr	6452.8	1.07	547.76	1.17	78	1.32	7.81	1.69
NorthCC	3895	6hr-50yr	6455.56	42.08	1830.09	27.83	93.45	5.6	15.57	5.61
NorthCC	3895	6hr-100yr	6457.03	100.4	2738.09	61.51	100.32	8.12	19.65	7.36
NorthCC	3895	24hr-2yr	6452.44	0.27	429.33	0.4	75.3	0.85	6.93	1.12
NorthCC	3895	24hr-5yr	6453.71	6.96	882.81	5.22	83.51	2.7	9.93	2.87
NorthCC	3895	24hr-10yr	6454.93	26.01	1471.34	17.65	90.03	4.61	13.55	4.66
NorthCC	3895	24hr-50yr	6458.63	196.59	3931.48	121.93	107.07	11.01	24.65	9.59

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	3895	24hr-100yr	6460.96	370.86	5526.23	242.91	117.05	12.87	27.4	11
NorthCC	3705	2hr-2yr	6442.05		25		25.23		1.48	
NorthCC	3705	2hr-5yr	6443.13		92.99	0.01	42.7		2.5	0.09
NorthCC	3705	2hr-10yr	6443.85	0.22	186.05	1.73	54.39	0.48	3.83	0.76
NorthCC	3705	2hr-50yr	6445.65	25.89	532.75	32.36	75.66	2.66	7.42	3.38
NorthCC	3705	2hr-100yr	6446.52	49.84	744.59	59.57	112.96	2.07	9.05	4.53
NorthCC	3705	6hr-2yr	6443.24		106.95	0.05	44.37		2.8	0.19
NorthCC	3705	6hr-5yr	6444.41	2.95	274.81	7.24	67.97	0.84	4.83	1.53
NorthCC	3705	6hr-10yr	6445.5	22.12	499.33	28.55	74.67	2.48	7.13	3.18
NorthCC	3705	6hr-50yr	6448.93	344.62	1389.75	165.64	130.29	5.34	12.2	6.7
NorthCC	3705	6hr-100yr	6450.62	683.81	1944.06	272.14	134.72	7.71	14.57	8.11
NorthCC	3705	24hr-2yr	6445.04	12.17	399.76	18.08	71.65	1.85	6.21	2.53
NorthCC	3705	24hr-5yr	6446.64	57.75	773.6	63.65	114.83	2.21	9.25	4.67
NorthCC	3705	24hr-10yr	6448.13	220.02	1168.92	126.06	128.19	4.25	11.34	6.13
NorthCC	3705	24hr-50yr	6453.06	1200.94	2616.85	432.22	140.39	9.07	15	8.34
NorthCC	3705	24hr-100yr	6453.36	1760.84	3749.14	630.03	141.07	17.69	28.94	16.08
NorthCC	3441	2hr-2yr	6428.57		25		30.82		5.49	
NorthCC	3441	2hr-5yr	6429.48		93		41.87		9.78	
NorthCC	3441	2hr-10yr	6430.3	0.03	187.93	0.04	52.05	0.89	12.93	0.91
NorthCC	3441	2hr-50yr	6432.41	8.21	573.98	8.81	74.57	5.97	22.59	6.25
NorthCC	3441	2hr-100yr	6433.42	20.77	811.76	21.47	84.83	8.09	27.17	8.53
NorthCC	3441	6hr-2yr	6429.68		107		44.28		9.54	
NorthCC	3441	6hr-5yr	6430.87	0.58	283.78	0.64	59.16	2.55	16.55	2.62
NorthCC	3441	6hr-10yr	6432.24	6.76	535.98	7.26	72.8	5.62	21.8	5.83
NorthCC	3441	6hr-50yr	6436.13	96.43	1701.64	101.93	125.88	8.67	44.37	16.43
NorthCC	3441	6hr-100yr	6437.88	297.33	2405.47	197.2	149.29	15.66	55.41	21.74
NorthCC	3441	24hr-2yr	6431.67	3.2	423.37	3.43	67.24	4.43	19.49	4.53
NorthCC	3441	24hr-5yr	6433.56	23.19	847.98	23.82	86.29	8.39	27.82	8.85
NorthCC	3441	24hr-10yr	6435.28	69.05	1378.12	67.83	103.77	12.11	38	13.56
NorthCC	3441	24hr-50yr	6437.92	442.03	3517.66	290.31	149.83	33.38	117.22	46.04
NorthCC	3441	24hr-100yr	6439.43	2987.61	2863.82	288.58	161.31	28.9	55.32	22.34
NorthCC	3023	2hr-2yr	6405.75		25		41.86		1.18	
NorthCC	3023	2hr-5yr	6406.49		92.86	0.14	53.41		2.38	0.51
NorthCC	3023	2hr-10yr	6407.07	0.41	186.58	1.02	59.33	0.62	3.79	1.14
NorthCC	3023	2hr-50yr	6408.6	12.8	567.13	11.07	68.93	3.02	8.21	3.34
NorthCC	3023	2hr-100yr	6409.31	26.33	806.81	20.87	71.65	4.35	10.51	4.63
NorthCC	3023	6hr-2yr	6406.57	0	106.79	0.21	54.3		2.7	0.63
NorthCC	3023	6hr-5yr	6407.55	2.05	280.3	2.65	63.15	1.21	4.87	1.65
NorthCC	3023	6hr-10yr	6408.47	10.96	529.35	9.69	68.46	2.79	7.82	3.12
NorthCC	3023	6hr-50yr	6411.61	104.71	1722.03	73.26	80.18	8.01	16.62	7.69
NorthCC	3023	6hr-100yr	6413.28	198.45	2565.26	136.29	85.04	10.7	21.32	10.08
NorthCC	3023	24hr-2yr	6408.09	6.15	417.91	5.94	67	2.05	6.58	2.39
NorthCC	3023	24hr-5yr	6409.41	28.69	843.88	22.43	72.12	4.53	10.83	4.78
NorthCC	3023	24hr-10yr	6410.83	71.81	1391.65	51.54	77.81	6.83	14.79	6.71
NorthCC	3023	24hr-50yr	6415.16	343.35	3676.69	229.96	90.79	13.65	26.76	12.42
NorthCC	3023	24hr-100yr	6417.4	574.69	5186.88	378.43	97.97	17.12	33.03	14.7
NorthCC	2704	2hr-2yr	6390.58		25		32.37		2.98	
NorthCC	2704	2hr-5yr	6391.3		93		43.6		4.94	
NorthCC	2704	2hr-10yr	6391.96		188		53.68		6.09	
NorthCC	2704	2hr-50yr	6393.51	2.45	586.81	1.74	62.88	2.58	10.2	2.34
NorthCC	2704	2hr-100yr	6394.27	6.86	842.07	5.07	65.83	3.69	12.14	3.3
NorthCC	2704	6hr-2yr	6391.45		107		45.64		4.8	
NorthCC	2704	6hr-5yr	6392.39	0.08	284.87	0.05	58.42	0.8	7.53	0.71
NorthCC	2704	6hr-10yr	6393.38	1.96	546.67	1.37	62.36	2.4	9.86	2.16
NorthCC	2704	6hr-50yr	6396.41	36.42	1831.98	31.6	76.89	7.28	19.67	5.62

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	2704	6hr-100yr	6397.98	77.75	2737.28	84.97	85.61	9.88	25.07	7.92
NorthCC	2704	24hr-2yr	6392.96	0.82	428.64	0.54	60.72	1.8	8.85	1.59
NorthCC	2704	24hr-5yr	6394.38	7.71	881.57	5.72	66.23	3.85	12.43	3.43
NorthCC	2704	24hr-10yr	6395.74	23.89	1471.59	19.52	72.59	6.01	16.85	4.93
NorthCC	2704	24hr-50yr	6399.72	145.1	3908.09	196.82	92.16	12.58	31.14	11.65
NorthCC	2704	24hr-100yr	6401.68	256.08	5492.5	391.42	98.44	16	39.06	16.41
NorthCC	2348	2hr-2yr	6376.26		25		76.35		0.68	
NorthCC	2348	2hr-5yr	6376.81		93	0	81.87		1.53	
NorthCC	2348	2hr-10yr	6377.29	0.13	187.76	0.12	86.39	0.32	2.47	0.45
NorthCC	2348	2hr-50yr	6378.54	6.38	579.45	5.17	100.8	1.78	5.48	1.58
NorthCC	2348	2hr-100yr	6379.12	13.99	827.7	12.32	105.99	2.57	7.15	2.43
NorthCC	2348	6hr-2yr	6376.87		107	0	82.42		1.75	0.12
NorthCC	2348	6hr-5yr	6377.69	0.88	283.71	0.41	91.29	0.7	3.18	0.51
NorthCC	2348	6hr-10yr	6378.44	5.41	540.33	4.26	99.89	1.65	5.2	1.44
NorthCC	2348	6hr-50yr	6380.98	66.19	1772.69	61.12	121.45	4.83	11.48	4.85
NorthCC	2348	6hr-100yr	6382.3	131.01	2642.89	126.1	140.15	5.03	14.97	6.75
NorthCC	2348	24hr-2yr	6378.13	2.96	425.03	2.01	97.03	1.24	4.35	0.98
NorthCC	2348	24hr-5yr	6379.2	15.39	865.97	13.64	106.74	2.68	7.38	2.55
NorthCC	2348	24hr-10yr	6380.34	42.98	1432.17	39.85	116.47	4.11	10.24	4.12
NorthCC	2348	24hr-50yr	6383.73	262.05	3758.55	229.39	164.34	6.5	19.04	8.93
NorthCC	2348	24hr-100yr	6385.33	557.74	5186.65	395.61	172.62	9.9	23.53	11.68
NorthCC	1881	2hr-2yr	6350.71		25		12.91		15.5	
NorthCC	1881	2hr-5yr	6351.86		93		20.95		12.59	
NorthCC	1881	2hr-10yr	6352.77		188		27.89		14.12	
NorthCC	1881	2hr-50yr	6354.83	12.47	575.51	3.02	58.85	3.32	17.99	3.9
NorthCC	1881	2hr-100yr	6355.75	51.93	792.64	9.43	66.24	6.17	19.58	5.03
NorthCC	1881	6hr-2yr	6352.03		107		22.14		12.67	
NorthCC	1881	6hr-5yr	6353.41		284.97	0.03	34.75		15.5	0.92
NorthCC	1881	6hr-10yr	6354.68	8.13	539.5	2.36	57.1	2.73	17.69	3.72
NorthCC	1881	6hr-50yr	6358.27	223.88	1613.25	62.87	144.51	6.13	27.72	9.52
NorthCC	1881	6hr-100yr	6359.66	645.97	2134.89	119.14	159.19	10.39	31.53	11.81
NorthCC	1881	24hr-2yr	6354.16	1.6	427.59	0.82	45.24	1.82	16.66	2.77
NorthCC	1881	24hr-5yr	6355.88	59.36	824.92	10.72	66.92	6.56	19.84	5.2
NorthCC	1881	24hr-10yr	6357.42	183.65	1293.75	37.61	96.14	6.93	24.27	7.77
NorthCC	1881	24hr-50yr	6361.17	1302.11	2745.31	202.58	168.75	14.67	35.22	13.94
NorthCC	1881	24hr-100yr	6362.9	2281.25	3530.37	328.37	178.83	19.31	39.75	16.03
NorthCC	1472	2hr-2yr	6331.28		25		23.58		1.12	
NorthCC	1472	2hr-5yr	6332.44		93		30.61		2.53	
NorthCC	1472	2hr-10yr	6333.38	0.57	187.43	0	36	0.65	3.89	
NorthCC	1472	2hr-50yr	6335.56	17.81	568.03	5.16	49.52	2.64	8.77	2.1
NorthCC	1472	2hr-100yr	6336.51	37.57	803.59	12.84	63.76	2.58	11.56	3.31
NorthCC	1472	6hr-2yr	6332.6	0	107		31.51	0.07	2.77	
NorthCC	1472	6hr-5yr	6334.09	2.76	281.93	0.3	40.35	1.18	5.03	0.58
NorthCC	1472	6hr-10yr	6335.39	15.09	530.72	4.2	48.55	2.45	8.32	1.9
NorthCC	1472	6hr-50yr	6338.98	310.75	1536.38	52.86	160.57	4.37	18.37	6.31
NorthCC	1472	6hr-100yr	6340.32	767.73	2042.05	90.22	167.57	7.67	22.85	8.2
NorthCC	1472	24hr-2yr	6334.86	8.33	419.8	1.87	45.38	1.88	6.91	1.28
NorthCC	1472	24hr-5yr	6336.64	41.57	839.19	14.24	69.21	2.41	11.95	3.48
NorthCC	1472	24hr-10yr	6338.33	156.36	1319.71	38.94	156.73	2.88	16.46	5.48
NorthCC	1472	24hr-50yr	6341.72	1450.53	2655.76	143.71	172.37	11.63	28.15	10.4
NorthCC	1472	24hr-100yr	6343.34	2471.09	3443.77	225.14	178.19	16.39	34.34	12.98
NorthCC	935	2hr-2yr	6306.92		25		12.5		12.45	
NorthCC	935	2hr-5yr	6308.13		93		21.39		10.68	
NorthCC	935	2hr-10yr	6309.04		188		26.42		12.74	
NorthCC	935	2hr-50yr	6311.32	3.78	583.88	3.34	41.68	3.31	17.4	3.03

Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	935	2hr-100yr	6312.41	14.91	823.99	15.09	51.5	4.61	19.37	4.56
NorthCC	935	6hr-2yr	6308.3		107		22.31		10.89	
NorthCC	935	6hr-5yr	6309.69		285		30.06		14.84	
NorthCC	935	6hr-10yr	6311.14	2.67	545.06	2.27	40.28	2.97	17.02	2.67
NorthCC	935	6hr-50yr	6315.19	122.48	1659.5	118.02	93.34	8.06	27.61	7.39
NorthCC	935	6hr-100yr	6317.01	287.75	2291.45	320.79	122.03	9.54	32.08	11.08
NorthCC	935	24hr-2yr	6310.55	0.55	429.11	0.34	35.84	1.79	15.89	1.43
NorthCC	935	24hr-5yr	6312.56	17.26	860.1	17.64	53.26	4.73	19.67	4.73
NorthCC	935	24hr-10yr	6314.31	71.79	1370.47	72.74	75.85	7	25.03	7.05
NorthCC	935	24hr-50yr	6318.92	611.51	3002.79	635.7	177.31	9.53	36.02	14.43
NorthCC	935	24hr-100yr	6320.7	1312.51	3789.73	1037.76	190.96	14.33	40.92	17.55
NorthCC	523	2hr-2yr	6289.94		25		17.29		1.24	
NorthCC	523	2hr-5yr	6291.46		93		26.42		2.47	
NorthCC	523	2hr-10yr	6292.59	0.01	187.29	0.7	35.29	0.12	3.59	0.56
NorthCC	523	2hr-50yr	6294.97	13.69	554.18	23.13	52.27	2.21	7.88	2.72
NorthCC	523	2hr-100yr	6296.01	32.81	783.93	37.26	129.83	3.5	10.38	1.04
NorthCC	523	6hr-2yr	6291.68		107		27.83		2.64	
NorthCC	523	6hr-5yr	6293.39	0.98	280.07	3.94	42.2	0.63	4.58	1.12
NorthCC	523	6hr-10yr	6294.79	11.29	518.78	19.93	51.35	1.99	7.49	2.53
NorthCC	523	6hr-50yr	6298.14	106.06	1383.46	410.48	147.53	6.88	16.42	5.17
NorthCC	523	6hr-100yr	6299.46	176.37	1867.83	855.8	152.38	9.4	21.4	8.59
NorthCC	523	24hr-2yr	6294.22	5.24	413.15	11.6	48.4	1.32	6.25	1.92
NorthCC	523	24hr-5yr	6296.12	35.75	813.77	45.49	134.18	3.68	10.72	1.2
NorthCC	523	24hr-10yr	6297.51	79.27	1182.18	253.56	144.62	5.78	14.39	3.78
NorthCC	523	24hr-50yr	6300.91	216.74	2494.4	1538.86	207.67	5.18	27.62	13.02
NorthCC	523	24hr-100yr	6302.44	542.05	3181.03	2416.91	222.53	8.53	33.36	17.52
NorthCC	283	2hr-2yr	6280.98		25		11.99		8.42	
NorthCC	283	2hr-5yr	6282.32		93		18.12		9.59	
NorthCC	283	2hr-10yr	6283.4		188		24.66		11.3	
NorthCC	283	2hr-50yr	6285.17	125.57	461.09	4.34	114.35	5.19	14.41	3.06
NorthCC	283	2hr-100yr	6285.82	246.81	596.06	11.13	123.13	7.1	16	4
NorthCC	283	6hr-2yr	6282.52		107		19.31		9.79	
NorthCC	283	6hr-5yr	6284.09	4.82	279.98	0.2	103.32	0.93	12.83	1.36
NorthCC	283	6hr-10yr	6285.05	107.5	439	3.5	112.85	4.82	14.17	2.87
NorthCC	283	6hr-50yr	6287.7	746.53	1035	118.47	201.17	10.78	19.99	4.67
NorthCC	283	6hr-100yr	6288.92	1227.8	1343.52	328.68	205.24	13.38	21.78	7.82
NorthCC	283	24hr-2yr	6284.67	56.22	372.26	1.52	109.08	3.5	13.51	2.24
NorthCC	283	24hr-5yr	6285.93	267.34	615.38	12.28	124.94	7.31	16.09	3.96
NorthCC	283	24hr-10yr	6287.14	568.96	894.83	51.21	197.14	9.31	18.83	2.98
NorthCC	283	24hr-50yr	6290.31	1868.73	1732.02	649.25	209.05	16.1	23.96	10.86
NorthCC	283	24hr-100yr	6292.03	2759.43	2243.21	1137.37	213.38	18.82	26.23	13.87
NorthCC	221	2hr-2yr	6277.8		25		13.99		1.93	
NorthCC	221	2hr-5yr	6279.37		93		21.06		3.66	
NorthCC	221	2hr-10yr	6280.52	1.99	185.79	0.22	61.4	0.37	5.28	0.57
NorthCC	221	2hr-50yr	6282.51	166.98	415.24	8.78	146.55	2.54	8.18	1.9
NorthCC	221	2hr-100yr	6283.26	323.24	513.61	17.15	157.31	3.67	9.09	1.85
NorthCC	221	6hr-2yr	6279.6		107		22.1		3.88	
NorthCC	221	6hr-5yr	6281.21	26.49	257.02	1.48	83.9	1.31	6.27	1.13
NorthCC	221	6hr-10yr	6282.39	144.24	398.1	7.66	145.62	2.33	7.97	1.83
NorthCC	221	6hr-50yr	6285.26	942.38	840.01	117.61	217.43	6.8	12.18	2.57
NorthCC	221	6hr-100yr	6286.65	1487.23	1081.61	331.16	227.24	8.6	13.79	4.37
NorthCC	221	24hr-2yr	6281.9	84.13	341.43	4.44	133.27	1.71	7.49	1.66
NorthCC	221	24hr-5yr	6283.32	344.84	531.49	18.67	158.29	3.89	9.48	1.94
NorthCC	221	24hr-10yr	6284.59	721.94	738.92	54.14	207.3	6.01	11.6	1.79
NorthCC	221	24hr-50yr	6288.12	2197.11	1383.69	669.19	230.79	10.72	15.95	6.55
NorthCC	221	24hr-100yr	6290.02	3176.64	1765.2	1198.16	235.85	12.65	17.71	8.72

## Upper Cheyenne Creek HEC-RAS Results

River/Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
NorthCC	92	2hr-2yr	6273.23		30		17.48		3.13	
NorthCC	92	2hr-5yr	6274.46		105		22.79		5.61	
NorthCC	92	2hr-10yr	6275.54		210		27		7.62	
NorthCC	92	2hr-50yr	6277.72	116.69	553.31		77.89	5.32	11.89	
NorthCC	92	2hr-100yr	6278.54	216.25	741.69	12.06	137.12	7.62	13.91	1.14
NorthCC	92	6hr-2yr	6274.66		122		23.61		5.99	
NorthCC	92	6hr-5yr	6276.31	8.88	311.12		73.81	1.16	9.09	
NorthCC	92	6hr-10yr	6277.59	102.73	527.27		77.52	4.94	11.63	
NorthCC	92	6hr-50yr	6280.58	552.07	1348.88	269.06	141.43	13.04	19.92	7.17
NorthCC	92	6hr-100yr	6282.05	855.3	1870.17	589.53	141.43	16.67	24.25	11.33
NorthCC	92	24hr-2yr	6277	49.63	420.37		75.81	3.22	10.48	
NorthCC	92	24hr-5yr	6278.56	219.29	747.54	13.17	138.7	7.68	13.98	1.18
NorthCC	92	24hr-10yr	6279.83	415.99	1109.59	144.42	141.43	11.11	17.73	4.97
NorthCC	92	24hr-50yr	6283.54	1206.54	2466.51	1001.95	141.43	20.13	28.62	15.36
NorthCC	92	24hr-100yr	6285.51	1727.91	3353.18	1658.91	141.43	24.41	34.4	20.43

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	18092.75	2-Yr 2-Hr	49	6263	6263.9		6263.96	0.003255	1.91	25.65
Reach-1	18092.75	5-Yr 2-Hr	193	6263	6264.9		6265.1	0.004399	3.52	54.87
Reach-1	18092.75	10-Yr 2-Hr	410	6263	6265.94		6266.29	0.004851	4.76	86.05
Reach-1	18092.75	50-Yr 2-Hr	1388	6263	6269.2		6269.97	0.005485	7.03	197.31
Reach-1	18092.75	100-Yr 2-Hr	2051	6263	6271.73		6272.18	0.002307	5.71	509.95
Reach-1	18087.75	2-Yr 2-Hr	49	6263	6263.88	6263.46	6263.94	0.003505	1.95	25.07
Reach-1	18087.75	5-Yr 2-Hr	193	6263	6264.87	6264.13	6265.07	0.004643	3.58	53.94
Reach-1	18087.75	10-Yr 2-Hr	410	6263	6265.9	6264.86	6266.26	0.005079	4.84	84.78
Reach-1	18087.75	50-Yr 2-Hr	1388	6263	6269.15	6267.16	6269.93	0.005618	7.11	195.21
Reach-1	18087.75	100-Yr 2-Hr	2051	6263	6271.71	6268.4	6272.17	0.002345	5.75	505.23
Reach-1	18076		Bridge							
Reach-1	18063.63	2-Yr 2-Hr	49	6261.7	6262.39		6262.49	0.007902	2.51	19.51
Reach-1	18063.63	5-Yr 2-Hr	193	6261.7	6263.24		6263.55	0.00905	4.42	43.62
Reach-1	18063.63	10-Yr 2-Hr	410	6261.7	6264.14		6264.68	0.009411	5.92	69.31
Reach-1	18063.63	50-Yr 2-Hr	1388	6261.7	6266.96	6265.89	6268.26	0.009767	9.14	151.89
Reach-1	18063.63	100-Yr 2-Hr	2051	6261.7	6268.57	6267.13	6270.16	0.009298	10.11	203.77
Reach-1	18058.63	2-Yr 2-Hr	49	6261.7	6262.16	6262.15	6262.38	0.031015	3.81	12.86
Reach-1	18058.63	5-Yr 2-Hr	193	6261.7	6262.84	6262.84	6263.4	0.02447	6.03	32.02
Reach-1	18058.63	10-Yr 2-Hr	410	6261.7	6263.57	6263.57	6264.5	0.022028	7.74	52.94
Reach-1	18058.63	50-Yr 2-Hr	1388	6261.7	6265.89	6265.89	6267.96	0.019658	11.53	120.33
Reach-1	18058.63	100-Yr 2-Hr	2051	6261.7	6267.13	6267.13	6269.78	0.019378	13.08	156.86
Reach-1	17950	2-Yr 2-Hr	49	6259	6259.64	6259.58	6259.81	0.021732	3.33	14.72
Reach-1	17950	5-Yr 2-Hr	193	6259	6260.23	6260.22	6260.65	0.024018	5.19	37.18
Reach-1	17950	10-Yr 2-Hr	410	6259	6260.8	6260.8	6261.44	0.022332	6.42	63.9
Reach-1	17950	50-Yr 2-Hr	1388	6259	6262.36	6262.36	6263.53	0.017565	8.67	161.39
Reach-1	17950	100-Yr 2-Hr	2051	6259	6263.11	6263.11	6264.52	0.014865	9.6	225.14

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	17769.01	2-Yr 2-Hr	49	6254	6254.74	6254.74	6255.03	0.029003	4.28	11.45
Reach-1	17769.01	5-Yr 2-Hr	193	6254	6255.57	6255.57	6256.1	0.023571	5.89	32.77
Reach-1	17769.01	10-Yr 2-Hr	410	6254	6256.31	6256.31	6257.06	0.02096	6.94	59.04
Reach-1	17769.01	50-Yr 2-Hr	1388	6254	6258.17	6258.17	6259.44	0.017304	9.05	153.89
Reach-1	17769.01	100-Yr 2-Hr	2051	6254	6259.05	6259.05	6260.5	0.013585	9.76	226.35
Reach-1	17584.65	2-Yr 2-Hr	49	6246	6247.41	6247.41	6247.8	0.027484	5	9.81
Reach-1	17584.65	5-Yr 2-Hr	193	6246	6248.52	6248.52	6249.18	0.022461	6.53	29.55
Reach-1	17584.65	10-Yr 2-Hr	410	6246	6249.4	6249.4	6250.38	0.020006	7.92	51.74
Reach-1	17584.65	50-Yr 2-Hr	1388	6246	6251.85	6251.85	6253.56	0.016883	10.5	132.18
Reach-1	17584.65	100-Yr 2-Hr	2051	6246	6253.14	6253.14	6254.91	0.012734	10.8	209.2
Reach-1	17564.22	2-Yr 2-Hr	49	6245.5	6246.51		6246.67	0.009565	3.23	15.16
Reach-1	17564.22	5-Yr 2-Hr	193	6245.5	6247.6	6247.22	6248.01	0.010775	5.16	37.4
Reach-1	17564.22	10-Yr 2-Hr	410	6245.5	6248.49		6249.21	0.01275	6.77	60.53
Reach-1	17564.22	50-Yr 2-Hr	1388	6245.5	6250.64	6250.64	6252.28	0.016771	10.27	135.09
Reach-1	17564.22	100-Yr 2-Hr	2051	6245.5	6251.69	6251.69	6253.69	0.016122	11.32	181.12
Reach-1	17387.02	2-Yr 2-Hr	49	6242.3	6243.62	6243.62	6243.99	0.027245	4.83	10.15
Reach-1	17387.02	5-Yr 2-Hr	193	6242.3	6244.67	6244.67	6245.3	0.023011	6.37	30.3
Reach-1	17387.02	10-Yr 2-Hr	410	6242.3	6245.55	6245.55	6246.38	0.020403	7.33	55.93
Reach-1	17387.02	50-Yr 2-Hr	1388	6242.3	6247.44	6247.44	6248.3	0.018872	7.46	189.69
Reach-1	17387.02	100-Yr 2-Hr	2051	6242.3	6248.03	6248.03	6248.99	0.015739	8.01	277.23
Reach-1	17169.07	2-Yr 2-Hr	49	6234.3	6235.09	6235.09	6235.44	0.027746	4.69	10.45
Reach-1	17169.07	5-Yr 2-Hr	193	6234.3	6236.12	6236.12	6236.81	0.023521	6.67	28.95
Reach-1	17169.07	10-Yr 2-Hr	410	6234.3	6237.04	6237.04	6238.1	0.021115	8.27	49.61
Reach-1	17169.07	50-Yr 2-Hr	1388	6234.3	6239.71	6239.71	6241.67	0.01818	11.23	123.58
Reach-1	17169.07	100-Yr 2-Hr	2051	6234.3	6241.74	6241.74	6242.75	0.007519	8.76	345.36



Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	16934.46	2-Yr 2-Hr	49	6228.3	6228.98	6228.93	6229.21	0.021536	3.86	12.7
Reach-1	16934.46	5-Yr 2-Hr	193	6228.3	6229.76	6229.76	6230.35	0.023026	6.19	31.18
Reach-1	16934.46	10-Yr 2-Hr	410	6228.3	6230.58	6230.58	6231.43	0.020358	7.4	55.37
Reach-1	16934.46	50-Yr 2-Hr	1388	6228.3	6232.72	6232.72	6234.19	0.017204	9.74	142.55
Reach-1	16934.46	100-Yr 2-Hr	2051	6228.3	6233.67	6233.67	6235.42	0.016579	10.64	193.64
Reach-1	16687.09	2-Yr 2-Hr	49	6221.9	6222.96	6222.95	6223.29	0.02678	4.6	10.65
Reach-1	16687.09	5-Yr 2-Hr	193	6221.9	6223.93	6223.93	6224.52	0.022634	6.18	31.23
Reach-1	16687.09	10-Yr 2-Hr	410	6221.9	6224.75	6224.75	6225.51	0.021276	6.98	58.76
Reach-1	16687.09	50-Yr 2-Hr	1388	6221.9	6226.67	6226.67	6227.35	0.010287	7.19	277.26
Reach-1	16687.09	100-Yr 2-Hr	2051	6221.9	6227.1	6227.1	6227.91	0.010986	8.2	378.23
Reach-1	16486.37	2-Yr 2-Hr	49	6216	6217.5	6217.5	6217.93	0.026527	5.26	9.32
Reach-1	16486.37	5-Yr 2-Hr	193	6216	6218.66	6218.66	6219.31	0.023335	6.5	29.69
Reach-1	16486.37	10-Yr 2-Hr	410	6216	6219.55	6219.55	6220.5	0.020527	7.83	52.36
Reach-1	16486.37	50-Yr 2-Hr	1388	6216	6221.65	6221.65	6222.26	0.009798	7.52	315.96
Reach-1	16486.37	100-Yr 2-Hr	2051	6216	6221.98	6221.98	6222.74	0.013	8.78	406.1
Reach-1	16335.61	2-Yr 2-Hr	49	6211.7	6212.59	6212.59	6212.94	0.028332	4.78	10.26
Reach-1	16335.61	5-Yr 2-Hr	193	6211.7	6213.62	6213.62	6214.28	0.023141	6.54	29.5
Reach-1	16335.61	10-Yr 2-Hr	410	6211.7	6214.51	6214.51	6215.44	0.020796	7.72	53.11
Reach-1	16335.61	50-Yr 2-Hr	1388	6211.7	6216.93	6216.93	6218.4	0.015525	9.77	145.79
Reach-1	16335.61	100-Yr 2-Hr	2051	6211.7	6218.29	6218.29	6219.41	0.010008	8.9	298.58
Reach-1	16180.6	2-Yr 2-Hr	49	6207	6207.93		6208.08	0.008695	3.09	15.84
Reach-1	16180.6	5-Yr 2-Hr	193	6207	6209.05		6209.46	0.009537	5.15	37.46
Reach-1	16180.6	10-Yr 2-Hr	410	6207	6210.13		6210.83	0.010182	6.73	60.95
Reach-1	16180.6	50-Yr 2-Hr	1388	6207	6215.67		6215.77	0.000849	3.22	879.01
Reach-1	16180.6	100-Yr 2-Hr	2051	6207	6215.37		6215.69	0.00277	5.62	741.58
Reach-1	16175.6	2-Yr 2-Hr	49	6207	6207.82	6207.65	6208.02	0.013173	3.53	13.89



Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	15438.03	2-Yr 2-Hr	49	6185.7	6186.42	6186.42	6186.72	0.028163	4.41	11.11
Reach-1	15438.03	5-Yr 2-Hr	193	6185.7	6187.3	6187.3	6187.9	0.022807	6.21	31.13
Reach-1	15438.03	10-Yr 2-Hr	410	6185.7	6188.11	6188.11	6189	0.019368	7.58	54.8
Reach-1	15438.03	50-Yr 2-Hr	1388	6185.7	6190.41	6190.41	6191.73	0.015913	9.39	157.02
Reach-1	15438.03	100-Yr 2-Hr	2051	6185.7	6191.3	6191.3	6192.79	0.016562	10.07	216.75
Reach-1	15185.15	2-Yr 2-Hr	49	6181	6181.74		6181.85	0.007793	2.6	18.87
Reach-1	15185.15	5-Yr 2-Hr	193	6181	6182.72		6183	0.00734	4.23	45.61
Reach-1	15185.15	10-Yr 2-Hr	410	6181	6183.88		6184.29	0.005885	5.1	80.32
Reach-1	15185.15	50-Yr 2-Hr	1388	6181	6187.96		6188.13	0.001839	3.87	557.39
Reach-1	15185.15	100-Yr 2-Hr	2051	6181	6188.26		6188.53	0.002888	4.96	643.48
Reach-1	15180.15	2-Yr 2-Hr	49	6181	6181.66	6181.49	6181.79	0.011817	2.95	16.59
Reach-1	15180.15	5-Yr 2-Hr	193	6181	6182.66	6182.22	6182.96	0.008397	4.42	43.69
Reach-1	15180.15	10-Yr 2-Hr	410	6181	6183.83	6182.98	6184.26	0.006242	5.21	78.76
Reach-1	15180.15	50-Yr 2-Hr	1388	6181	6187.94	6185.35	6188.12	0.001872	3.9	553.08
Reach-1	15180.15	100-Yr 2-Hr	2051	6181	6188.23	6187.42	6188.51	0.002974	5.02	635.53
Reach-1	15155		Bridge							
Reach-1	15129.07	2-Yr 2-Hr	49	6180	6180.79		6180.89	0.010644	2.52	19.46
Reach-1	15129.07	5-Yr 2-Hr	193	6180	6181.69		6182.02	0.013651	4.57	42.26
Reach-1	15129.07	10-Yr 2-Hr	410	6180	6182.73		6183.28	0.013326	5.95	68.9
Reach-1	15129.07	50-Yr 2-Hr	1388	6180	6186	6185.53	6186.35	0.005468	5.78	447.25
Reach-1	15129.07	100-Yr 2-Hr	2051	6180	6186.52	6185.99	6186.93	0.006262	6.59	596.43
Reach-1	15124.07	2-Yr 2-Hr	49	6180	6180.67	6180.5	6180.8	0.018376	2.98	16.45
Reach-1	15124.07	5-Yr 2-Hr	193	6180	6181.38	6181.24	6181.87	0.026465	5.62	34.32
Reach-1	15124.07	10-Yr 2-Hr	410	6180	6182.03	6182.03	6183.04	0.03433	8.06	50.86
Reach-1	15124.07	50-Yr 2-Hr	1388	6180	6185.53	6185.53	6186.22	0.010026	7.48	328.8
Reach-1	15124.07	100-Yr 2-Hr	2051	6180	6185.99	6185.99	6186.78	0.012086	8.58	444.77

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	14935.01	2-Yr 2-Hr	49	6175.1	6175.38	6175.38	6175.52	0.047415	3.02	16.22
Reach-1	14935.01	5-Yr 2-Hr	193	6175.1	6175.79	6175.79	6176.13	0.034185	4.67	41.33
Reach-1	14935.01	10-Yr 2-Hr	410	6175.1	6176.3	6176.3	6176.75	0.028574	5.42	79.14
Reach-1	14935.01	50-Yr 2-Hr	1388	6175.1	6177.36	6177.36	6178	0.023205	6.78	253.52
Reach-1	14935.01	100-Yr 2-Hr	2051	6175.1	6177.86	6177.86	6178.48	0.018418	6.88	401.29
Reach-1	14727.88	2-Yr 2-Hr	49	6165.7	6166.65	6166.65	6167	0.027214	4.76	10.29
Reach-1	14727.88	5-Yr 2-Hr	193	6165.7	6167.7	6167.7	6168.29	0.022895	6.17	31.29
Reach-1	14727.88	10-Yr 2-Hr	410	6165.7	6168.56	6168.56	6169.18	0.022953	6.33	64.78
Reach-1	14727.88	50-Yr 2-Hr	1388	6165.7	6170.17	6170.17	6171.05	0.013175	7.74	225.15
Reach-1	14727.88	100-Yr 2-Hr	2051	6165.7	6170.85	6170.85	6171.73	0.010582	8.15	384.07
Reach-1	14496.58	2-Yr 2-Hr	49	6159.5	6160.48		6160.61	0.007557	2.96	16.56
Reach-1	14496.58	5-Yr 2-Hr	193	6159.5	6162.25		6162.47	0.003737	3.74	51.67
Reach-1	14496.58	10-Yr 2-Hr	410	6159.5	6163.61		6163.94	0.006019	4.64	88.32
Reach-1	14496.58	50-Yr 2-Hr	1388	6159.5	6166.84		6166.97	0.001242	2.91	545.59
Reach-1	14496.58	100-Yr 2-Hr	2051	6159.5	6167.62		6167.79	0.001307	3.43	781.25
Reach-1	14491.58	2-Yr 2-Hr	49	6159.5	6160.4	6160.15	6160.56	0.009992	3.23	15.15
Reach-1	14491.58	5-Yr 2-Hr	193	6159.5	6162.23	6161.09	6162.45	0.003848	3.78	51.12
Reach-1	14491.58	10-Yr 2-Hr	410	6159.5	6163.55	6162.07	6163.91	0.006345	4.75	86.24
Reach-1	14491.58	50-Yr 2-Hr	1388	6159.5	6166.83	6164.81	6166.96	0.001252	2.92	543.96
Reach-1	14491.58	100-Yr 2-Hr	2051	6159.5	6167.61	6165.35	6167.79	0.001319	3.44	777.5
Reach-1	14468		Bridge							
Reach-1	14445.08	2-Yr 2-Hr	49	6157.9	6158.83		6158.96	0.00816	2.92	16.76
Reach-1	14445.08	5-Yr 2-Hr	193	6157.9	6159.91		6160.24	0.008695	4.61	41.9
Reach-1	14445.08	10-Yr 2-Hr	410	6157.9	6160.94	6160.33	6161.42	0.008724	5.55	73.84
Reach-1	14445.08	50-Yr 2-Hr	1388	6157.9	6163.47	6162.86	6164.07	0.008171	6.2	225.2

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	14445.08	100-Yr 2-Hr	2051	6157.9	6164.37	6163.46	6165.03	0.00619	6.59	365.36
Reach-1	14440.08	2-Yr 2-Hr	49	6157.9	6158.54	6158.54	6158.84	0.028003	4.35	11.26
Reach-1	14440.08	5-Yr 2-Hr	193	6157.9	6159.43	6159.43	6160.08	0.022694	6.44	29.96
Reach-1	14440.08	10-Yr 2-Hr	410	6157.9	6160.33	6160.33	6161.23	0.020234	7.64	53.68
Reach-1	14440.08	50-Yr 2-Hr	1388	6157.9	6162.86	6162.86	6163.89	0.018857	8.13	170.77
Reach-1	14440.08	100-Yr 2-Hr	2051	6157.9	6163.46	6163.46	6164.78	0.018118	9.2	224.1
Reach-1	14212.58	2-Yr 2-Hr	49	6148	6150.07	6150.07	6150.48	0.029262	5.12	9.57
Reach-1	14212.58	5-Yr 2-Hr	193	6148	6151.23	6151.23	6151.97	0.023179	6.89	28.01
Reach-1	14212.58	10-Yr 2-Hr	410	6148	6152.25	6152.25	6153.24	0.020691	7.99	51.31
Reach-1	14212.58	50-Yr 2-Hr	1388	6148	6154.71	6154.71	6156.17	0.017575	9.7	143.16
Reach-1	14212.58	100-Yr 2-Hr	2051	6148	6155.8	6155.8	6157.34	0.015673	9.98	209.73
Reach-1	13921.3	2-Yr 2-Hr	49	6140	6141.47	6141.35	6141.62	0.01529	3.1	15.81
Reach-1	13921.3	5-Yr 2-Hr	193	6140	6142.44	6142.05	6142.69	0.008424	4.01	48.14
Reach-1	13921.3	10-Yr 2-Hr	410	6140	6143.27		6143.69	0.00791	5.21	78.75
Reach-1	13921.3	50-Yr 2-Hr	1388	6140	6145.24		6146.48	0.011106	8.92	155.61
Reach-1	13921.3	100-Yr 2-Hr	2051	6140	6146.12	6145.87	6147.84	0.014429	10.52	194.9
Reach-1	13688.78	2-Yr 2-Hr	49	6136.1	6137.73	6137.51	6138.04	0.015393	4.46	10.98
Reach-1	13688.78	5-Yr 2-Hr	193	6136.1	6138.92	6138.88	6139.68	0.021302	6.99	27.59
Reach-1	13688.78	10-Yr 2-Hr	410	6136.1	6140	6140	6140.8	0.021527	7.17	57.21
Reach-1	13688.78	50-Yr 2-Hr	1388	6136.1	6141.94	6141.94	6143.14	0.018988	8.8	157.7
Reach-1	13688.78	100-Yr 2-Hr	2051	6136.1	6142.75	6142.75	6144.15	0.01656	9.51	218.65
Reach-1	13375.96	2-Yr 2-Hr	49	6130.4	6131.33	6131.33	6131.74	0.027226	5.13	9.56
Reach-1	13375.96	5-Yr 2-Hr	193	6130.4	6132.75	6132.62	6133.37	0.018842	6.31	30.61
Reach-1	13375.96	10-Yr 2-Hr	410	6130.4	6134.3	6133.67	6134.72	0.010059	5.17	79.29
Reach-1	13375.96	50-Yr 2-Hr	1388	6130.4	6136.08	6135.68	6136.92	0.009143	7.53	210.49
Reach-1	13375.96	100-Yr 2-Hr	2051	6130.4	6136.73	6136.48	6137.84	0.00981	8.83	282.92

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	13219.67	2-Yr 2-Hr	49	6125.5	6128.42		6128.75	0.013051	4.61	10.63
Reach-1	13219.67	5-Yr 2-Hr	193	6125.5	6130.54		6131.1	0.011416	6.03	32.02
Reach-1	13219.67	10-Yr 2-Hr	410	6125.5	6132.2		6132.94	0.01262	6.9	59.42
Reach-1	13219.67	50-Yr 2-Hr	1388	6125.5	6135.03	6134.34	6135.61	0.006734	6.31	255.41
Reach-1	13219.67	100-Yr 2-Hr	2051	6125.5	6135.85	6135.08	6136.52	0.005963	6.91	376.35
Reach-1	13206.73	2-Yr 2-Hr	49	6125.3	6127.82	6127.76	6128.47	0.031066	6.48	7.56
Reach-1	13206.73	5-Yr 2-Hr	193	6125.3	6129.76	6129.76	6130.83	0.026875	8.33	23.16
Reach-1	13206.73	10-Yr 2-Hr	410	6125.3	6131.27	6131.27	6132.66	0.023414	9.45	43.37
Reach-1	13206.73	50-Yr 2-Hr	1388	6125.3	6134.33	6134.33	6135.43	0.016883	8.47	173.93
Reach-1	13206.73	100-Yr 2-Hr	2051	6125.3	6135.09	6135.09	6136.34	0.014089	9.22	263.47
Reach-1	13059.3	2-Yr 2-Hr	49	6122.9	6123.79	6123.79	6124.15	0.026837	4.78	10.24
Reach-1	13059.3	5-Yr 2-Hr	193	6122.9	6124.83	6124.83	6125.55	0.022175	6.78	28.46
Reach-1	13059.3	10-Yr 2-Hr	410	6122.9	6125.83	6125.83	6126.8	0.020139	7.87	52.06
Reach-1	13059.3	50-Yr 2-Hr	1388	6122.9	6128.22	6128.22	6129.7	0.01712	9.76	142.19
Reach-1	13059.3	100-Yr 2-Hr	2051	6122.9	6129.2	6129.2	6130.94	0.016571	10.59	193.75
Reach-1	12939.54	2-Yr 2-Hr	49	6119	6120.19		6120.24	0.001932	1.74	28.23
Reach-1	12939.54	5-Yr 2-Hr	193	6119	6121.82		6121.94	0.001802	2.79	69.29
Reach-1	12939.54	10-Yr 2-Hr	410	6119	6123.37		6123.58	0.001953	3.68	111.3
Reach-1	12939.54	50-Yr 2-Hr	1388	6119	6126.98		6127.42	0.003392	5.41	321.02
Reach-1	12939.54	100-Yr 2-Hr	2051	6119	6128.31		6128.62	0.002056	5.01	705.44
Reach-1	12934.54	2-Yr 2-Hr	45	6119	6120.19	6119.48	6120.23	0.001651	1.6	28.11
Reach-1	12934.54	5-Yr 2-Hr	201	6119	6121.79	6120.31	6121.92	0.002015	2.93	68.61
Reach-1	12934.54	10-Yr 2-Hr	431	6119	6123.32	6121.17	6123.56	0.002236	3.92	109.97
Reach-1	12934.54	50-Yr 2-Hr	1470	6119	6126.79	6123.8	6127.36	0.004544	6.08	277.49
Reach-1	12934.54	100-Yr 2-Hr	2175	6119	6128.22	6125.4	6128.6	0.002493	5.47	679.18

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	12903		Bridge							
Reach-1	12873.11	2-Yr 2-Hr	45	6114	6114.99		6115.05	0.002947	1.91	23.53
Reach-1	12873.11	5-Yr 2-Hr	201	6114	6116.5		6116.67	0.00276	3.23	62.28
Reach-1	12873.11	10-Yr 2-Hr	431	6114	6117.93		6118.21	0.00286	4.23	101.97
Reach-1	12873.11	50-Yr 2-Hr	1470	6114	6120.67		6121.63	0.005709	7.87	186.69
Reach-1	12873.11	100-Yr 2-Hr	2175	6114	6121.45		6123.07	0.008615	10.22	212.77
Reach-1	12868.11	2-Yr 2-Hr	45	6114	6114.97		6115.03	0.003142	1.95	23.07
Reach-1	12868.11	5-Yr 2-Hr	201	6114	6116.49		6116.65	0.002825	3.25	61.81
Reach-1	12868.11	10-Yr 2-Hr	431	6114	6117.91		6118.19	0.00291	4.25	101.38
Reach-1	12868.11	50-Yr 2-Hr	1470	6114	6120.62		6121.6	0.00585	7.94	185.11
Reach-1	12868.11	100-Yr 2-Hr	2175	6114	6121.32		6123.01	0.009132	10.43	208.45
Reach-1	12664.83	2-Yr 2-Hr	45	6112.3	6113.12	6113.12	6113.5	0.027817	4.92	9.15
Reach-1	12664.83	5-Yr 2-Hr	201	6112.3	6114.38	6114.38	6115.21	0.021903	7.32	27.46
Reach-1	12664.83	10-Yr 2-Hr	431	6112.3	6115.6	6115.6	6116.71	0.019756	8.46	50.92
Reach-1	12664.83	50-Yr 2-Hr	1470	6112.3	6118.16	6118.16	6119.68	0.014113	10.11	169.45
Reach-1	12664.83	100-Yr 2-Hr	2175	6112.3	6119.29	6119.29	6120.94	0.011257	10.81	263.94
Reach-1	12406.74	2-Yr 2-Hr	45	6105.8	6106.87	6106.77	6107.12	0.018476	3.99	11.28
Reach-1	12406.74	5-Yr 2-Hr	201	6105.8	6107.88	6107.85	6108.46	0.021748	6.12	32.87
Reach-1	12406.74	10-Yr 2-Hr	431	6105.8	6108.71	6108.71	6109.51	0.020972	7.17	60.1
Reach-1	12406.74	50-Yr 2-Hr	1470	6105.8	6110.71	6110.71	6111.91	0.018288	8.81	166.93
Reach-1	12406.74	100-Yr 2-Hr	2175	6105.8	6111.55	6111.55	6112.9	0.017204	9.33	233.18
Reach-1	12199.69	2-Yr 2-Hr	45	6101.3	6102.14	6102.14	6102.47	0.02769	4.6	9.77
Reach-1	12199.69	5-Yr 2-Hr	201	6101.3	6103.23	6103.23	6103.89	0.022221	6.52	30.82
Reach-1	12199.69	10-Yr 2-Hr	431	6101.3	6104.34	6104.34	6104.98	0.022352	6.4	67.34
Reach-1	12199.69	50-Yr 2-Hr	1470	6101.3	6105.84	6105.84	6106.73	0.019219	7.55	196.5
Reach-1	12199.69	100-Yr 2-Hr	2175	6101.3	6106.38	6106.38	6107.49	0.017398	8.51	271.79

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	11978.74	2-Yr 2-Hr	45	6096.6	6097.43	6097.21	6097.57	0.00979	2.92	15.39
Reach-1	11978.74	5-Yr 2-Hr	201	6096.6	6099.01		6099.14	0.004393	2.91	68.99
Reach-1	11978.74	10-Yr 2-Hr	431	6096.6	6100.2		6100.34	0.00265	3	143.67
Reach-1	11978.74	50-Yr 2-Hr	1470	6096.6	6101.37	6100.61	6101.88	0.006398	5.85	322.96
Reach-1	11978.74	100-Yr 2-Hr	2175	6096.6	6101.98	6101.53	6102.55	0.006379	6.51	488.72
Reach-1	11727.87	2-Yr 2-Hr	45	6091.8	6093.94	6093.64	6094.34	0.017304	5.12	8.79
Reach-1	11727.87	5-Yr 2-Hr	201	6091.8	6095.7	6095.7	6096.81	0.026517	8.44	23.81
Reach-1	11727.87	10-Yr 2-Hr	431	6091.8	6097.31	6097.31	6098.72	0.023461	9.55	45.13
Reach-1	11727.87	50-Yr 2-Hr	1470	6091.8	6099.52	6099.52	6100	0.008414	8.01	536.15
Reach-1	11727.87	100-Yr 2-Hr	2175	6091.8	6099.8	6099.8	6100.42	0.011254	9.62	673.37
Reach-1	11471.85	2-Yr 2-Hr	45	6087.6	6088.52	6088.52	6088.85	0.027011	4.61	9.76
Reach-1	11471.85	5-Yr 2-Hr	201	6087.6	6089.61	6089.61	6090.18	0.023529	6.02	33.38
Reach-1	11471.85	10-Yr 2-Hr	431	6087.6	6090.45	6090.45	6091	0.023892	5.97	72.17
Reach-1	11471.85	50-Yr 2-Hr	1470	6087.6	6091.78	6091.78	6092.58	0.016369	7.3	238.05
Reach-1	11471.85	100-Yr 2-Hr	2175	6087.6	6092.4	6092.4	6093.15	0.012087	7.42	418.5
Reach-1	11088.64	2-Yr 2-Hr	45	6076.6	6077.81	6077.81	6078.28	0.022186	5.53	8.14
Reach-1	11088.64	5-Yr 2-Hr	201	6076.6	6079.32	6079.32	6080.05	0.016348	6.85	29.33
Reach-1	11088.64	10-Yr 2-Hr	431	6076.6	6080.38	6080.38	6081.36	0.015625	7.95	54.19
Reach-1	11088.64	50-Yr 2-Hr	1470	6076.6	6082.86	6082.86	6084.17	0.013384	9.18	160.18
Reach-1	11088.64	100-Yr 2-Hr	2175	6076.6	6083.8	6083.8	6085.27	0.01244	9.75	223.19
Reach-1	10873.48	2-Yr 2-Hr	45	6071	6071.65		6071.75	0.00693	2.57	17.53
Reach-1	10873.48	5-Yr 2-Hr	201	6071	6072.64		6072.95	0.006628	4.48	44.86
Reach-1	10873.48	10-Yr 2-Hr	431	6071	6073.6		6074.16	0.006878	5.99	71.92
Reach-1	10873.48	50-Yr 2-Hr	1470	6071	6077.19		6078.18	0.006668	8	183.78
Reach-1	10873.48	100-Yr 2-Hr	2175	6071	6079.74		6079.91	0.001908	3.22	674.44



Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	10868.48	2-Yr 2-Hr	45	6071	6071.56	6071.44	6071.7	0.010999	2.96	15.23
Reach-1	10868.48	5-Yr 2-Hr	201	6071	6072.57	6072.19	6072.91	0.00761	4.68	42.96
Reach-1	10868.48	10-Yr 2-Hr	431	6071	6073.52	6072.97	6074.12	0.007596	6.19	69.67
Reach-1	10868.48	50-Yr 2-Hr	1470	6071	6077.11	6075.45	6078.14	0.006957	8.15	180.35
Reach-1	10868.48	100-Yr 2-Hr	2175	6071	6079.73	6078.5	6079.89	0.00194	3.24	670.82
Reach-1	10850		Bridge							
Reach-1	10832.54	2-Yr 2-Hr	45	6070	6070.78		6070.85	0.003742	2.12	21.19
Reach-1	10832.54	5-Yr 2-Hr	201	6070	6072.02		6072.22	0.003348	3.61	55.69
Reach-1	10832.54	10-Yr 2-Hr	431	6070	6072.94		6073.37	0.004646	5.27	81.71
Reach-1	10832.54	50-Yr 2-Hr	1470	6070	6075.27		6076.76	0.008525	9.78	150.31
Reach-1	10832.54	100-Yr 2-Hr	2175	6070	6077.11	6075.84	6078.78	0.007471	10.38	209.55
Reach-1	10827.54	2-Yr 2-Hr	45	6070	6070.75		6070.83	0.004235	2.21	20.4
Reach-1	10827.54	5-Yr 2-Hr	201	6070	6071.99		6072.2	0.00349	3.66	54.96
Reach-1	10827.54	10-Yr 2-Hr	431	6070	6072.9		6073.34	0.004856	5.35	80.55
Reach-1	10827.54	50-Yr 2-Hr	1470	6070	6074.74	6074.43	6076.6	0.01193	10.95	134.26
Reach-1	10827.54	100-Yr 2-Hr	2175	6070	6075.84	6075.84	6078.45	0.014152	12.97	167.72
Reach-1	10581.52	2-Yr 2-Hr	45	6067.7	6068.55	6068.51	6068.86	0.017892	4.48	10.05
Reach-1	10581.52	5-Yr 2-Hr	201	6067.7	6069.68	6069.68	6070.42	0.016823	6.92	29.06
Reach-1	10581.52	10-Yr 2-Hr	431	6067.7	6070.69	6070.69	6071.22	0.018576	5.85	73.69
Reach-1	10581.52	50-Yr 2-Hr	1470	6067.7	6071.94	6071.94	6072.8	0.015197	7.43	197.72
Reach-1	10581.52	100-Yr 2-Hr	2175	6067.7	6072.6	6072.6	6073.35	0.00939	7.25	415.1
Reach-1	10322.01	2-Yr 2-Hr	45	6062.8	6063.44	6063.42	6063.69	0.02215	4.02	11.2
Reach-1	10322.01	5-Yr 2-Hr	201	6062.8	6064.29	6064.29	6064.83	0.018186	5.89	34.11
Reach-1	10322.01	10-Yr 2-Hr	431	6062.8	6065.03	6065.03	6065.82	0.016385	7.13	60.47
Reach-1	10322.01	50-Yr 2-Hr	1470	6062.8	6066.96	6066.96	6068.06	0.014175	8.39	175.29
Reach-1	10322.01	100-Yr 2-Hr	2175	6062.8	6067.66	6067.66	6069	0.013426	9.26	234.92

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	10031.67	2-Yr 2-Hr	45	6056	6056.99	6056.99	6057.29	0.02194	4.43	10.16
Reach-1	10031.67	5-Yr 2-Hr	201	6056	6058.03	6058.03	6058.54	0.017915	5.72	35.15
Reach-1	10031.67	10-Yr 2-Hr	431	6056	6058.74	6058.74	6059.19	0.018901	5.4	79.84
Reach-1	10031.67	50-Yr 2-Hr	1470	6056	6059.87	6059.87	6060.64	0.015812	7.02	209.33
Reach-1	10031.67	100-Yr 2-Hr	2175	6056	6060.38	6060.38	6061.27	0.013146	7.62	301.06
Reach-1	9916.59	2-Yr 2-Hr	45	6053.4	6054.35		6054.38	0.00235	1.43	31.47
Reach-1	9916.59	5-Yr 2-Hr	201	6053.4	6055.21		6055.31	0.00233	2.51	80.05
Reach-1	9916.59	10-Yr 2-Hr	431	6053.4	6055.82		6056.03	0.00335	3.72	115.91
Reach-1	9916.59	50-Yr 2-Hr	1470	6053.4	6058.09		6058.18	0.001157	2.68	826.95
Reach-1	9916.59	100-Yr 2-Hr	2175	6053.4	6058.49		6058.61	0.001337	3.18	1040.19
Reach-1	9911.59	2-Yr 2-Hr	45	6053.4	6054.33	6053.85	6054.36	0.002545	1.47	30.71
Reach-1	9911.59	5-Yr 2-Hr	201	6053.4	6055.2	6054.52	6055.3	0.002418	2.54	79.12
Reach-1	9911.59	10-Yr 2-Hr	431	6053.4	6055.79	6055.02	6056.01	0.003485	3.77	114.45
Reach-1	9911.59	50-Yr 2-Hr	1470	6053.4	6058.08	6056.76	6058.17	0.001173	2.69	822.81
Reach-1	9911.59	100-Yr 2-Hr	2175	6053.4	6058.49	6057.36	6058.6	0.001355	3.19	1035.27
Reach-1	9895		Bridge							
Reach-1	9880.68	2-Yr 2-Hr	45	6053	6053.7		6053.8	0.008496	2.55	17.61
Reach-1	9880.68	5-Yr 2-Hr	201	6053	6054.63		6054.82	0.009033	3.54	56.84
Reach-1	9880.68	10-Yr 2-Hr	431	6053	6055.27		6055.6	0.00879	4.6	93.71
Reach-1	9880.68	50-Yr 2-Hr	1470	6053	6056.92		6057.15	0.006429	4.23	443.62
Reach-1	9880.68	100-Yr 2-Hr	2175	6053	6057.25		6057.56	0.007162	4.92	562.07
Reach-1	9875.68	2-Yr 2-Hr	45	6053	6053.58	6053.47	6053.73	0.015591	3.09	14.56
Reach-1	9875.68	5-Yr 2-Hr	201	6053	6054.4	6054.32	6054.72	0.020024	4.54	44.28
Reach-1	9875.68	10-Yr 2-Hr	431	6053	6054.84	6054.83	6055.45	0.022721	6.27	68.79
Reach-1	9875.68	50-Yr 2-Hr	1470	6053	6056.54	6056.54	6057.03	0.016685	5.93	310.39

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	9875.68	100-Yr 2-Hr	2175	6053	6056.84	6056.84	6057.42	0.016769	6.66	416.48
Reach-1	9712.84	2-Yr 2-Hr	45	6049.6	6050.01	6050.01	6050.19	0.032113	3.41	13.19
Reach-1	9712.84	5-Yr 2-Hr	201	6049.6	6050.62	6050.62	6051	0.025916	4.93	40.75
Reach-1	9712.84	10-Yr 2-Hr	431	6049.6	6051.14	6051.14	6051.69	0.023115	5.93	72.66
Reach-1	9712.84	50-Yr 2-Hr	1470	6049.6	6052.62	6052.62	6053.37	0.016457	7.04	228.67
Reach-1	9712.84	100-Yr 2-Hr	2175	6049.6	6053.13	6053.13	6053.97	0.016723	7.61	325.77
Reach-1	9498.46	2-Yr 2-Hr	45	6043	6043.8	6043.77	6044.09	0.019101	4.37	10.31
Reach-1	9498.46	5-Yr 2-Hr	201	6043	6044.88	6044.85	6045.47	0.016162	6.15	32.67
Reach-1	9498.46	10-Yr 2-Hr	431	6043	6045.73	6045.73	6046.58	0.015853	7.39	58.32
Reach-1	9498.46	50-Yr 2-Hr	1470	6043	6047.82	6047.82	6049.23	0.013708	9.54	154.14
Reach-1	9498.46	100-Yr 2-Hr	2175	6043	6049.16	6049.16	6050.13	0.010175	8.12	318.76
Reach-1	9230.33	2-Yr 2-Hr	45	6037.5	6038.58	6038.56	6039.01	0.018748	5.26	8.56
Reach-1	9230.33	5-Yr 2-Hr	201	6037.5	6040.28	6040.28	6040.97	0.017405	6.68	30.09
Reach-1	9230.33	10-Yr 2-Hr	431	6037.5	6041.26	6041.26	6042.06	0.016261	7.21	59.76
Reach-1	9230.33	50-Yr 2-Hr	1470	6037.5	6043.01	6043.01	6043.33	0.010839	5.15	338.45
Reach-1	9230.33	100-Yr 2-Hr	2175	6037.5	6043.01	6043.01	6043.72	0.023596	7.6	339.04
Reach-1	8934.62	2-Yr 2-Hr	45	6032	6032.93	6032.93	6033.29	0.019849	4.77	9.44
Reach-1	8934.62	5-Yr 2-Hr	201	6032	6034.16	6034.16	6034.86	0.01628	6.71	29.97
Reach-1	8934.62	10-Yr 2-Hr	431	6032	6035.15	6035.15	6036.15	0.014615	8.06	53.51
Reach-1	8934.62	50-Yr 2-Hr	1470	6032	6037.95	6037.95	6038.82	0.008634	8.09	271.51
Reach-1	8934.62	100-Yr 2-Hr	2175	6032	6038.71	6038.71	6039.46	0.0065	8.12	499.65
Reach-1	8667.97	2-Yr 2-Hr	45	6027.3	6028.15		6028.35	0.014093	3.66	12.29
Reach-1	8667.97	5-Yr 2-Hr	201	6027.3	6029.32	6029.12	6029.86	0.015483	5.93	33.92
Reach-1	8667.97	10-Yr 2-Hr	431	6027.3	6030.24	6030.12	6031.12	0.017192	7.52	57.29
Reach-1	8667.97	50-Yr 2-Hr	1470	6027.3	6033.02	6033.02	6034.05	0.019718	8.13	180.8
Reach-1	8667.97	100-Yr 2-Hr	2175	6027.3	6033.77	6033.77	6034.86	0.017813	8.4	267.13

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	8399.42	2-Yr 2-Hr	45	6021.4	6022.83	6022.83	6023.25	0.026712	5.16	8.72
Reach-1	8399.42	5-Yr 2-Hr	201	6021.4	6024.2	6024.2	6024.86	0.022727	6.5	30.92
Reach-1	8399.42	10-Yr 2-Hr	431	6021.4	6025.13	6025.13	6025.91	0.021752	7.06	61.03
Reach-1	8399.42	50-Yr 2-Hr	1470	6021.4	6027.07	6027.07	6027.96	0.011532	7.96	243.32
Reach-1	8399.42	100-Yr 2-Hr	2175	6021.4	6027.65	6027.65	6028.69	0.011464	8.97	342.82
Reach-1	8148.5	2-Yr 2-Hr	45	6015.7	6017.18	6017.07	6017.51	0.019592	4.64	9.71
Reach-1	8148.5	5-Yr 2-Hr	201	6015.7	6018.44	6018.44	6019.2	0.02224	7.03	28.6
Reach-1	8148.5	10-Yr 2-Hr	431	6015.7	6019.51	6019.51	6020.54	0.020062	8.16	52.85
Reach-1	8148.5	50-Yr 2-Hr	1470	6015.7	6021.95	6021.95	6022.99	0.013824	8.35	201.66
Reach-1	8148.5	100-Yr 2-Hr	2175	6015.7	6022.66	6022.66	6023.84	0.012216	9.17	298.55
Reach-1	7890.95	2-Yr 2-Hr	45	6011.2	6011.85	6011.85	6012.16	0.02193	4.46	10.08
Reach-1	7890.95	5-Yr 2-Hr	201	6011.2	6012.92	6012.92	6013.65	0.017274	6.83	29.43
Reach-1	7890.95	10-Yr 2-Hr	431	6011.2	6013.91	6013.91	6014.99	0.015828	8.32	51.82
Reach-1	7890.95	50-Yr 2-Hr	1470	6011.2	6016.34	6016.34	6017.57	0.013844	8.88	165.72
Reach-1	7890.95	100-Yr 2-Hr	2175	6011.2	6017.09	6017.09	6018.63	0.012864	9.96	220.77
Reach-1	7624	2-Yr 2-Hr	45	6006.5	6007.29	6007.2	6007.52	0.013802	3.82	11.77
Reach-1	7624	5-Yr 2-Hr	201	6006.5	6008.23	6008.23	6008.9	0.016977	6.6	30.47
Reach-1	7624	10-Yr 2-Hr	431	6006.5	6009.21	6009.21	6010.13	0.015322	7.68	56.1
Reach-1	7624	50-Yr 2-Hr	1470	6006.5	6011.38	6011.38	6012.62	0.01101	9.08	181.4
Reach-1	7624	100-Yr 2-Hr	2175	6006.5	6012.54	6012.54	6013.62	0.00673	8.84	351.05
Reach-1	7340.48	2-Yr 2-Hr	45	6001.8	6002.31	6002.31	6002.55	0.022868	3.91	11.5
Reach-1	7340.48	5-Yr 2-Hr	201	6001.8	6003.13	6003.13	6003.7	0.017528	6.06	33.17
Reach-1	7340.48	10-Yr 2-Hr	431	6001.8	6003.92	6003.92	6004.77	0.015513	7.39	58.33
Reach-1	7340.48	50-Yr 2-Hr	1470	6001.8	6006.28	6006.28	6007.3	0.014297	8.13	180.71
Reach-1	7340.48	100-Yr 2-Hr	2175	6001.8	6007.32	6007.32	6008.01	0.012171	6.8	358.75

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	7135.27	2-Yr 2-Hr	45	5997.6	5998.2		5998.28	0.006185	2.32	19.41
Reach-1	7135.27	5-Yr 2-Hr	201	5997.6	5999.12		5999.37	0.005585	3.98	50.47
Reach-1	7135.27	10-Yr 2-Hr	431	5997.6	6000.12		6000.52	0.004889	5.05	85.31
Reach-1	7135.27	50-Yr 2-Hr	1470	5997.6	6003.84		6004.28	0.003596	5.36	274.17
Reach-1	7135.27	100-Yr 2-Hr	2175	5997.6	6005.05		6005.22	0.001286	3.89	1150.54
Reach-1	7130.27	2-Yr 2-Hr	46	5997.6	5998.12	5998	5998.23	0.010611	2.76	16.68
Reach-1	7130.27	5-Yr 2-Hr	208	5997.6	5999	5998.68	5999.32	0.007836	4.48	46.38
Reach-1	7130.27	10-Yr 2-Hr	446	5997.6	5999.99	5999.4	6000.46	0.006237	5.53	80.67
Reach-1	7130.27	50-Yr 2-Hr	1526	5997.6	6003.73	6001.59	6004.24	0.004172	5.75	265.32
Reach-1	7130.27	100-Yr 2-Hr	2259	5997.6	6005.02	6003.11	6005.21	0.001461	4.13	1122.11
Reach-1	7107		Bridge							
Reach-1	7084.64	2-Yr 2-Hr	46	5996.6	5997.19		5997.28	0.006974	2.43	18.9
Reach-1	7084.64	5-Yr 2-Hr	208	5996.6	5998.01		5998.33	0.007955	4.53	45.87
Reach-1	7084.64	10-Yr 2-Hr	446	5996.6	5998.84		5999.42	0.008221	6.09	73.2
Reach-1	7084.64	50-Yr 2-Hr	1526	5996.6	6001.83	6000.72	6002.92	0.006895	8.36	182.47
Reach-1	7084.64	100-Yr 2-Hr	2259	5996.6	6004.73	6002.06	6004.82	0.001087	2.81	1375.11
Reach-1	7079.64	2-Yr 2-Hr	46	5996.6	5997.09	5997	5997.22	0.012553	2.91	15.81
Reach-1	7079.64	5-Yr 2-Hr	208	5996.6	5997.83	5997.69	5998.25	0.012548	5.22	39.83
Reach-1	7079.64	10-Yr 2-Hr	446	5996.6	5998.56	5998.41	5999.32	0.012593	6.97	64
Reach-1	7079.64	50-Yr 2-Hr	1526	5996.6	6000.72	6000.72	6002.63	0.013973	11.08	137.71
Reach-1	7079.64	100-Yr 2-Hr	2259	5996.6	6002.06	6002.06	6004.2	0.013248	11.72	192.72
Reach-1	6776.66	2-Yr 2-Hr	46	5991.3	5991.96	5991.96	5992.27	0.021689	4.48	10.27
Reach-1	6776.66	5-Yr 2-Hr	208	5991.3	5993.06	5993.06	5993.78	0.016863	6.77	30.73
Reach-1	6776.66	10-Yr 2-Hr	446	5991.3	5994.11	5994.11	5995.06	0.015417	7.81	57.1
Reach-1	6776.66	50-Yr 2-Hr	1526	5991.3	5996.06	5996.06	5996.55	0.012493	6.29	358.37
Reach-1	6776.66	100-Yr 2-Hr	2259	5991.3	5996.39	5996.39	5996.94	0.012756	6.9	499.28

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	6315.5	2-Yr 2-Hr	46	5979.3	5980.22	5980.22	5980.61	0.02699	4.95	9.28
Reach-1	6315.5	5-Yr 2-Hr	208	5979.3	5981.53	5981.53	5982.25	0.022265	6.8	30.59
Reach-1	6315.5	10-Yr 2-Hr	446	5979.3	5982.55	5982.55	5983.48	0.020263	7.71	57.83
Reach-1	6315.5	50-Yr 2-Hr	1526	5979.3	5984.86	5984.86	5986.38	0.017159	9.89	154.27
Reach-1	6315.5	100-Yr 2-Hr	2259	5979.3	5985.85	5985.85	5987.66	0.01656	10.8	209.17
Reach-1	6038.91	2-Yr 2-Hr	46	5974.5	5975.59		5975.63	0.001828	1.6	28.7
Reach-1	6038.91	5-Yr 2-Hr	208	5974.5	5977.23		5977.35	0.001902	2.83	73.46
Reach-1	6038.91	10-Yr 2-Hr	446	5974.5	5978.48		5978.74	0.002615	4.09	108.96
Reach-1	6038.91	50-Yr 2-Hr	1526	5974.5	5982.63	5979.13	5983.28	0.003438	6.46	250.81
Reach-1	6038.91	100-Yr 2-Hr	2259	5974.5	5984.52		5984.71	0.001202	4.42	1124.82
Reach-1	6033.91	2-Yr 2-Hr	46	5974.5	5975.58	5974.96	5975.62	0.001883	1.62	28.44
Reach-1	6033.91	5-Yr 2-Hr	208	5974.5	5977.22	5975.75	5977.34	0.001926	2.84	73.16
Reach-1	6033.91	10-Yr 2-Hr	446	5974.5	5978.46	5976.56	5978.73	0.002648	4.11	108.51
Reach-1	6033.91	50-Yr 2-Hr	1526	5974.5	5982.6	5979.13	5983.26	0.003497	6.5	239.19
Reach-1	6033.91	100-Yr 2-Hr	2259	5974.5	5984.51	5980.5	5984.7	0.001214	4.44	1119.65
Reach-1	6022		Bridge							
Reach-1	6011.27	2-Yr 2-Hr	46	5974.2	5975.44		5975.53	0.004273	2.47	18.59
Reach-1	6011.27	5-Yr 2-Hr	208	5974.2	5976.97		5977.22	0.005367	3.96	52.58
Reach-1	6011.27	10-Yr 2-Hr	446	5974.2	5978.09		5978.54	0.005917	5.36	83.14
Reach-1	6011.27	50-Yr 2-Hr	1526	5974.2	5980.79		5982.21	0.009965	9.55	159.86
Reach-1	6011.27	100-Yr 2-Hr	2259	5974.2	5981.55	5981.17	5983.89	0.015653	12.27	184.16
Reach-1	6006.27	2-Yr 2-Hr	46	5974.2	5975.41		5975.51	0.004674	2.55	18.05
Reach-1	6006.27	5-Yr 2-Hr	208	5974.2	5976.93		5977.18	0.005756	4.04	51.43
Reach-1	6006.27	10-Yr 2-Hr	446	5974.2	5978.04		5978.5	0.006212	5.45	81.83
Reach-1	6006.27	50-Yr 2-Hr	1526	5974.2	5980.63		5982.14	0.010884	9.85	154.92

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	6006.27	100-Yr 2-Hr	2259	5974.2	5981.38	5981.17	5983.87	0.01691	12.67	178.28
Reach-1	5765.4	2-Yr 2-Hr	46	5972.5	5973.22	5973.14	5973.46	0.019017	3.9	11.8
Reach-1	5765.4	5-Yr 2-Hr	208	5972.5	5974.46	5974.2	5975.02	0.014146	6	34.69
Reach-1	5765.4	10-Yr 2-Hr	446	5972.5	5975.78	5975.35	5976.42	0.01215	6.39	69.77
Reach-1	5765.4	50-Yr 2-Hr	1526	5972.5	5978.09	5977.97	5978.67	0.014246	6.27	299.85
Reach-1	5765.4	100-Yr 2-Hr	2259	5972.5	5978.48	5978.4	5979.2	0.014384	7.21	407.8
Reach-1	5302.31	2-Yr 2-Hr	46	5964.5	5965.58		5965.85	0.014368	4.14	11.12
Reach-1	5302.31	5-Yr 2-Hr	208	5964.5	5966.93	5966.78	5967.72	0.017546	7.11	29.26
Reach-1	5302.31	10-Yr 2-Hr	446	5964.5	5968.47	5968.4	5969.33	0.019822	7.44	59.98
Reach-1	5302.31	50-Yr 2-Hr	1526	5964.5	5970.46	5970.46	5971.71	0.016038	9.02	182.89
Reach-1	5302.31	100-Yr 2-Hr	2259	5964.5	5971.28	5971.28	5972.76	0.013911	9.98	267.16
Reach-1	4978.26	2-Yr 2-Hr	46	5958	5959.16	5959.16	5959.59	0.027128	5.27	8.74
Reach-1	4978.26	5-Yr 2-Hr	208	5958	5960.58	5960.58	5961.4	0.021736	7.28	28.56
Reach-1	4978.26	10-Yr 2-Hr	446	5958	5961.75	5961.75	5962.88	0.019807	8.53	52.3
Reach-1	4978.26	50-Yr 2-Hr	1526	5958	5964.6	5964.6	5965.82	0.017978	8.86	173
Reach-1	4978.26	100-Yr 2-Hr	2259	5958	5965.47	5965.47	5966.79	0.017112	9.26	252.61
Reach-1	4740.35	2-Yr 2-Hr	46	5953.8	5954.78		5954.88	0.004394	2.61	17.64
Reach-1	4740.35	5-Yr 2-Hr	208	5953.8	5956.39		5956.67	0.003739	4.25	48.93
Reach-1	4740.35	10-Yr 2-Hr	446	5953.8	5957.79		5958.3	0.004359	5.74	77.7
Reach-1	4740.35	50-Yr 2-Hr	1526	5953.8	5962.94		5963.15	0.002233	4.1	706.92
Reach-1	4740.35	100-Yr 2-Hr	2259	5953.8	5963.32		5963.58	0.002648	4.81	980.15
Reach-1	4737.35	2-Yr 2-Hr	46	5953.8	5954.76	5954.39	5954.87	0.004672	2.66	17.3
Reach-1	4737.35	5-Yr 2-Hr	208	5953.8	5956.38	5955.4	5956.66	0.00381	4.28	48.63
Reach-1	4737.35	10-Yr 2-Hr	446	5953.8	5957.77	5956.44	5958.29	0.004426	5.77	77.29
Reach-1	4737.35	50-Yr 2-Hr	1526	5953.8	5962.93	5959.67	5963.15	0.002276	4.13	698.66
Reach-1	4737.35	100-Yr 2-Hr	2259	5953.8	5963.3	5962.63	5963.58	0.002706	4.85	969.8

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	4723		Bridge							
Reach-1	4708.85	2-Yr 2-Hr	46	5953.5	5954.66		5954.74	0.002517	2.19	21.03
Reach-1	4708.85	5-Yr 2-Hr	208	5953.5	5956.2		5956.46	0.003396	4.11	50.64
Reach-1	4708.85	10-Yr 2-Hr	446	5953.5	5957.37		5957.92	0.004997	6	74.32
Reach-1	4708.85	50-Yr 2-Hr	1526	5953.5	5960.74	5959.48	5962.13	0.006845	9.49	165.25
Reach-1	4708.85	100-Yr 2-Hr	2259	5953.5	5962.29	5962.29	5963.12	0.003832	8.36	682.38
Reach-1	4703.85	2-Yr 2-Hr	46	5953.5	5954.64		5954.72	0.003474	2.23	20.67
Reach-1	4703.85	5-Yr 2-Hr	208	5953.5	5956.17		5956.44	0.004593	4.16	50.06
Reach-1	4703.85	10-Yr 2-Hr	446	5953.5	5957.31		5957.89	0.006815	6.09	73.23
Reach-1	4703.85	50-Yr 2-Hr	1526	5953.5	5959.48	5959.48	5961.81	0.019271	12.24	124.65
Reach-1	4703.85	100-Yr 2-Hr	2259	5953.5	5961.97	5961.97	5962.77	0.008806	7.93	515.46
Reach-1	4525	2-Yr 2-Hr	46	5952	5952.91	5952.91	5953.26	0.028462	4.74	9.7
Reach-1	4525	5-Yr 2-Hr	208	5952	5954.08	5954.08	5954.74	0.022787	6.53	31.87
Reach-1	4525	10-Yr 2-Hr	446	5952	5955.03	5955.03	5955.81	0.021647	7.1	62.78
Reach-1	4525	50-Yr 2-Hr	1526	5952	5957.83		5958.39	0.005122	6.28	324.16
Reach-1	4525	100-Yr 2-Hr	2259	5952	5958.47	5957.83	5959.19	0.005844	7.44	449.87
Reach-1	4283.95	2-Yr 2-Hr	46	5948.8	5949.9		5949.95	0.002493	1.87	24.61
Reach-1	4283.95	5-Yr 2-Hr	208	5948.8	5951.45		5951.63	0.002964	3.42	60.81
Reach-1	4283.95	10-Yr 2-Hr	446	5948.8	5952.85		5953.19	0.003617	4.67	95.57
Reach-1	4283.95	50-Yr 2-Hr	1526	5948.8	5957.46		5957.69	0.00156	4.33	679.08
Reach-1	4283.95	100-Yr 2-Hr	2259	5948.8	5958.05		5958.35	0.001998	5.22	911.07
Reach-1	4278.95	2-Yr 2-Hr	46	5948.8	5949.88	5949.31	5949.94	0.002605	1.89	24.28
Reach-1	4278.95	5-Yr 2-Hr	208	5948.8	5951.43	5950.18	5951.62	0.003027	3.44	60.39
Reach-1	4278.95	10-Yr 2-Hr	446	5948.8	5952.82	5951.11	5953.17	0.003684	4.7	94.96
Reach-1	4278.95	50-Yr 2-Hr	1526	5948.8	5957.45	5954.08	5957.68	0.001579	4.35	674.5



Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)	Shear LOB (lb/sq ft)	Shear Chan (lb/sq ft)	Shear ROB (lb/sq ft)
Reach-1	4278.95	100-Yr 2-Hr	2259	5948.8	5958.03	5955.67	5958.33	0.002031	5.26	903.41
Reach-1	4256		Bridge							
Reach-1	4224.6	2-Yr 2-Hr	46	5948.5	5949.8		5949.83	0.001043	1.53	30.06
Reach-1	4224.6	5-Yr 2-Hr	208	5948.5	5951.29		5951.43	0.001714	3.04	68.47
Reach-1	4224.6	10-Yr 2-Hr	446	5948.5	5952.6		5952.86	0.002189	4.12	108.19
Reach-1	4224.6	50-Yr 2-Hr	1526	5948.5	5954.97		5955.86	0.004805	7.59	201.15
Reach-1	4224.6	100-Yr 2-Hr	2259	5948.5	5955.73	5954.69	5957.13	0.007258	9.5	246.05
Reach-1	4219.6	2-Yr 2-Hr	46	5948.5	5949.79		5949.83	0.001059	1.54	29.92
Reach-1	4219.6	5-Yr 2-Hr	208	5948.5	5951.28		5951.42	0.001735	3.05	68.15
Reach-1	4219.6	10-Yr 2-Hr	446	5948.5	5952.58		5952.85	0.002219	4.14	107.66
Reach-1	4219.6	50-Yr 2-Hr	1526	5948.5	5954.93		5955.84	0.004923	7.65	199.38
Reach-1	4219.6	100-Yr 2-Hr	2259	5948.5	5955.41	5954.69	5957.03	0.008168	10.21	221.74
Reach-1	4173.32	2-Yr 2-Hr	46	5948.2	5949.27	5949.27	5949.61	0.021937	4.69	9.81
Reach-1	4173.32	5-Yr 2-Hr	208	5948.2	5950.36	5950.36	5951.07	0.018264	6.75	30.83
Reach-1	4173.32	10-Yr 2-Hr	446	5948.2	5951.32	5951.32	5952.39	0.015946	8.31	53.7
Reach-1	4173.32	50-Yr 2-Hr	1526	5948.2	5954.33	5954.33	5955.44	0.007577	9.06	250.35
Reach-1	4173.32	100-Yr 2-Hr	2259	5948.2	5955.19	5955.19	5956.3	0.006767	9.67	413.56
Reach-1	4105.15	2-Yr 2-Hr	46	5947.1	5948.62		5948.69	0.0034	2.12	21.7
Reach-1	4105.15	5-Yr 2-Hr	208	5947.1	5949.58		5949.9	0.006305	4.54	45.8
Reach-1	4105.15	10-Yr 2-Hr	446	5947.1	5950.73		5951.28	0.006208	5.94	75.04
Reach-1	4105.15	50-Yr 2-Hr	1526	5947.1	5953.27		5953.57	0.002869	5.85	617.72
Reach-1	4105.15	100-Yr 2-Hr	2259	5947.1	5953.68		5954.02	0.003394	6.68	803.6
Reach-1	4100.15	2-Yr 2-Hr	46	5947.1	5948.59	5947.87	5948.67	0.00371	2.18	21.12
Reach-1	4100.15	5-Yr 2-Hr	208	5947.1	5949.52	5949.03	5949.86	0.007019	4.7	44.28
Reach-1	4100.15	10-Yr 2-Hr	446	5947.1	5950.67	5949.89	5951.24	0.006613	6.07	73.51

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	4100.15	50-Yr 2-Hr	1526	5947.1	5952.99	5952.99	5953.49	0.004532	7.09	497.9
Reach-1	4100.15	100-Yr 2-Hr	2259	5947.1	5953.33	5953.33	5953.93	0.005705	8.31	644.96
Reach-1	4072		Bridge							
Reach-1	4044.76	2-Yr 2-Hr	46	5946	5946.94		5947.09	0.007764	3.12	14.75
Reach-1	4044.76	5-Yr 2-Hr	208	5946	5948.17	5947.73	5948.56	0.007897	4.99	41.69
Reach-1	4044.76	10-Yr 2-Hr	446	5946	5949.21	5948.64	5949.88	0.007887	6.57	67.88
Reach-1	4044.76	50-Yr 2-Hr	1526	5946	5951.91		5952.06	0.002178	4.26	736.73
Reach-1	4044.76	100-Yr 2-Hr	2259	5946	5952.38		5952.55	0.002356	4.8	965.21
Reach-1	4039.76	2-Yr 2-Hr	46	5946	5946.69	5946.69	5947	0.011538	4.46	10.32
Reach-1	4039.76	5-Yr 2-Hr	208	5946	5947.74	5947.74	5948.43	0.009273	6.67	31.19
Reach-1	4039.76	10-Yr 2-Hr	446	5946	5948.64	5948.64	5949.72	0.008485	8.35	53.41
Reach-1	4039.76	50-Yr 2-Hr	1526	5946	5951.33	5951.33	5951.92	0.004027	7.27	472.67
Reach-1	4039.76	100-Yr 2-Hr	2259	5946	5951.73	5951.73	5952.39	0.004459	8.26	650.64
Reach-1	3768.57	2-Yr 2-Hr	46	5942.3	5942.9	5942.9	5943.21	0.011693	4.41	10.43
Reach-1	3768.57	5-Yr 2-Hr	208	5942.3	5943.94	5943.94	5944.74	0.009283	7.19	28.94
Reach-1	3768.57	10-Yr 2-Hr	446	5942.3	5945.04	5945.04	5946.24	0.008391	8.79	50.74
Reach-1	3768.57	50-Yr 2-Hr	1526	5942.3	5947.16	5947.16	5947.7	0.003366	8.04	570.14
Reach-1	3768.57	100-Yr 2-Hr	2259	5942.3	5947.52	5947.52	5948.15	0.004038	9.3	730.95
Reach-1	3329.36	2-Yr 2-Hr	46	5933.7	5934.58		5934.72	0.003631	3.08	14.95
Reach-1	3329.36	5-Yr 2-Hr	208	5933.7	5935.82		5936.32	0.004548	5.73	36.31
Reach-1	3329.36	10-Yr 2-Hr	446	5933.7	5937.11		5938	0.004859	7.57	58.94
Reach-1	3329.36	50-Yr 2-Hr	1526	5933.7	5942.33		5942.56	0.001219	4.32	705.53
Reach-1	3329.36	100-Yr 2-Hr	2259	5933.7	5942.49		5942.89	0.0021	5.84	799.85
Reach-1	3324.36	2-Yr 2-Hr	46	5933.7	5934.55	5934.31	5934.7	0.004045	3.18	14.45
Reach-1	3324.36	5-Yr 2-Hr	208	5933.7	5935.76	5935.36	5936.3	0.004921	5.88	35.39

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	3324.36	10-Yr 2-Hr	446	5933.7	5937.04	5936.46	5937.97	0.005155	7.72	57.76
Reach-1	3324.36	50-Yr 2-Hr	1526	5933.7	5942.32	5941.53	5942.55	0.00124	4.34	699.1
Reach-1	3324.36	100-Yr 2-Hr	2259	5933.7	5942.47	5942.05	5942.88	0.00218	5.93	784.57
Reach-1	3296		Bridge							
Reach-1	3266.63	2-Yr 2-Hr	46	5933.4	5934.27	5933.93	5934.37	0.006135	2.52	18.28
Reach-1	3266.63	5-Yr 2-Hr	208	5933.4	5935.44	5934.82	5935.76	0.007267	4.55	45.74
Reach-1	3266.63	10-Yr 2-Hr	446	5933.4	5936.52	5935.8	5937.07	0.007942	5.97	74.67
Reach-1	3266.63	50-Yr 2-Hr	1526	5933.4	5939.58	5938.57	5940.62	0.009906	8.19	186.26
Reach-1	3266.63	100-Yr 2-Hr	2259	5933.4	5941.23	5940.78	5941.68	0.003861	6.06	609.11
Reach-1	3261.63	2-Yr 2-Hr	46	5933.4	5934.22	5933.93	5934.33	0.00759	2.69	17.1
Reach-1	3261.63	5-Yr 2-Hr	208	5933.4	5935.37	5934.82	5935.72	0.008189	4.73	43.94
Reach-1	3261.63	10-Yr 2-Hr	446	5933.4	5936.43	5935.8	5937.02	0.008755	6.18	72.2
Reach-1	3261.63	50-Yr 2-Hr	1526	5933.4	5939.19	5938.57	5940.49	0.012396	9.14	166.89
Reach-1	3261.63	100-Yr 2-Hr	2259	5933.4	5940.78	5940.78	5941.56	0.006887	7.56	450.03
Reach-1	2960.26	2-Yr 2-Hr	46	5929	5929.67	5929.67	5929.98	0.035779	4.46	10.31
Reach-1	2960.26	5-Yr 2-Hr	208	5929	5930.74	5930.74	5931.46	0.028014	6.79	30.63
Reach-1	2960.26	10-Yr 2-Hr	446	5929	5931.76	5931.76	5932.72	0.025402	7.88	56.58
Reach-1	2960.26	50-Yr 2-Hr	1526	5929	5934.22	5934.22	5935.58	0.022178	9.37	162.89
Reach-1	2960.26	100-Yr 2-Hr	2259	5929	5935.26	5935.26	5936.65	0.022033	9.46	238.74
Reach-1	2628.9	2-Yr 2-Hr	46	5923.5	5924.15		5924.24	0.009207	2.32	19.8
Reach-1	2628.9	5-Yr 2-Hr	208	5923.5	5925.08		5925.36	0.010141	4.26	48.85
Reach-1	2628.9	10-Yr 2-Hr	446	5923.5	5926.09		5926.55	0.009256	5.47	81.59
Reach-1	2628.9	50-Yr 2-Hr	1526	5923.5	5929.42		5930.33	0.007739	7.63	200.01
Reach-1	2628.9	100-Yr 2-Hr	2259	5923.5	5931.5		5932.43	0.006021	7.73	292.3
Reach-1	2623.9	2-Yr 2-Hr	46	5923.5	5924.04	5923.91	5924.16	0.017169	2.81	16.37



Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	1845.78	2-Yr 2-Hr	46	5911.1	5912.51		5912.55	0.00206	1.59	28.98
Reach-1	1845.78	5-Yr 2-Hr	208	5911.1	5913.9		5914.02	0.003108	2.85	73.1
Reach-1	1845.78	10-Yr 2-Hr	446	5911.1	5915.13		5915.33	0.003268	3.57	125.09
Reach-1	1845.78	50-Yr 2-Hr	1526	5911.1	5918.55		5918.91	0.002506	4.8	317.82
Reach-1	1845.78	100-Yr 2-Hr	2259	5911.1	5919.76		5920.29	0.002936	5.8	389.23
Reach-1	1840.78	2-Yr 2-Hr	46	5911.1	5912.39	5911.72	5912.44	0.002863	1.78	25.85
Reach-1	1840.78	5-Yr 2-Hr	208	5911.1	5913.7	5912.66	5913.85	0.004157	3.16	65.82
Reach-1	1840.78	10-Yr 2-Hr	446	5911.1	5914.92	5913.52	5915.15	0.004069	3.86	115.44
Reach-1	1840.78	50-Yr 2-Hr	1526	5911.1	5918.41	5915.73	5918.79	0.002726	4.93	309.36
Reach-1	1840.78	100-Yr 2-Hr	2259	5911.1	5919.59	5916.72	5920.14	0.003188	5.96	378.95
Reach-1	1818		Bridge							
Reach-1	1795.96	2-Yr 2-Hr	46	5910.5	5911.26	5911.26	5911.57	0.036854	4.48	10.28
Reach-1	1795.96	5-Yr 2-Hr	208	5910.5	5912.61		5913	0.015197	5.02	41.43
Reach-1	1795.96	10-Yr 2-Hr	446	5910.5	5914.1		5914.44	0.007284	4.68	95.33
Reach-1	1795.96	50-Yr 2-Hr	1526	5910.5	5918.07		5918.54	0.003222	5.51	277.05
Reach-1	1795.96	100-Yr 2-Hr	2259	5910.5	5919.04		5919.79	0.004439	6.98	323.85
Reach-1	1790.96	2-Yr 2-Hr	46	5910.5	5911.27		5911.38	0.009645	2.61	17.59
Reach-1	1790.96	5-Yr 2-Hr	208	5910.5	5912.63		5912.89	0.007108	4.08	50.93
Reach-1	1790.96	10-Yr 2-Hr	446	5910.5	5914.04		5914.4	0.006105	4.85	91.92
Reach-1	1790.96	50-Yr 2-Hr	1526	5910.5	5917.92		5918.49	0.004326	6.09	250.77
Reach-1	1790.96	100-Yr 2-Hr	2259	5910.5	5918.82		5919.72	0.005961	7.64	295.76
Reach-1	1586.96	2-Yr 2-Hr	46	5908.9	5909.92		5909.99	0.005012	2.23	20.65
Reach-1	1586.96	5-Yr 2-Hr	208	5908.9	5911.54		5911.73	0.004407	3.56	58.49
Reach-1	1586.96	10-Yr 2-Hr	446	5908.9	5913.05		5913.34	0.004219	4.37	102.04
Reach-1	1586.96	50-Yr 2-Hr	1526	5908.9	5917.05		5917.53	0.00463	5.59	273.22
Reach-1	1586.96	100-Yr 2-Hr	2259	5908.9	5917.13	5915.39	5918.15	0.009772	8.11	278.68

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	1454.13	2-Yr 2-Hr	46	5907.3	5908.16	5908.16	5908.56	0.034681	5.06	9.09
Reach-1	1454.13	5-Yr 2-Hr	208	5907.3	5909.54	5909.54	5910.45	0.028377	7.68	27.1
Reach-1	1454.13	10-Yr 2-Hr	446	5907.3	5910.81	5910.81	5912.11	0.025664	9.14	48.8
Reach-1	1454.13	50-Yr 2-Hr	1526	5907.3	5914.51	5914.51	5916.25	0.022068	10.59	144.06
Reach-1	1454.13	100-Yr 2-Hr	2259	5907.3	5916.55	5916.55	5916.9	0.006106	5.65	1016.47
Reach-1	1449.13	2-Yr 2-Hr	46	5907.3	5908.06	5907.79	5908.17	0.009385	2.57	17.92
Reach-1	1449.13	5-Yr 2-Hr	208	5907.3	5909.51	5908.64	5909.75	0.006361	4	52.04
Reach-1	1449.13	10-Yr 2-Hr	446	5907.3	5910.98	5909.52	5911.38	0.00598	5.11	87.24
Reach-1	1449.13	50-Yr 2-Hr	1526	5907.3	5914.08	5912.38	5915.37	0.012001	9.1	177.97
Reach-1	1449.13	100-Yr 2-Hr	2259	5907.3	5915.24	5915.24	5915.85	0.010391	7.36	561.91
Reach-1	1410		Culvert							
Reach-1	1371.69	2-Yr 2-Hr	46	5906.8	5907.91		5907.96	0.002617	1.72	26.77
Reach-1	1371.69	5-Yr 2-Hr	208	5906.8	5909.35		5909.52	0.003571	3.29	63.26
Reach-1	1371.69	10-Yr 2-Hr	446	5906.8	5910.65		5910.98	0.004322	4.55	98.02
Reach-1	1371.69	50-Yr 2-Hr	1526	5906.8	5915.16	5911.71	5915.25	0.001078	3.31	1341.31
Reach-1	1371.69	100-Yr 2-Hr	2259	5906.8	5915.1		5915.32	0.002598	5.1	1275.36
Reach-1	1366.69	2-Yr 2-Hr	46	5906.8	5907.55	5907.54	5907.85	0.033917	4.42	10.42
Reach-1	1366.69	5-Yr 2-Hr	208	5906.8	5908.58	5908.58	5909.31	0.028159	6.87	30.29
Reach-1	1366.69	10-Yr 2-Hr	446	5906.8	5909.6	5909.58	5910.7	0.024132	8.4	53.08
Reach-1	1366.69	50-Yr 2-Hr	1526	5906.8	5913.54	5912.46	5914.87	0.01137	9.26	165.6
Reach-1	1366.69	100-Yr 2-Hr	2259	5906.8	5914.76	5914.76	5915.23	0.00522	6.89	926.55
Reach-1	1129.77	2-Yr 2-Hr	46	5903.9	5904.84		5904.92	0.006006	2.32	19.8
Reach-1	1129.77	5-Yr 2-Hr	208	5903.9	5906.33		5906.55	0.005052	3.72	55.87
Reach-1	1129.77	10-Yr 2-Hr	446	5903.9	5907.64		5908	0.005314	4.87	91.51
Reach-1	1129.77	50-Yr 2-Hr	1526	5903.9	5908.99	5908.99	5911.03	0.021633	11.47	132.99

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	1129.77	100-Yr 2-Hr	2259	5903.9	5911.23	5911.23	5911.93	0.021839	6.81	359.67
Reach-1	875.97	2-Yr 2-Hr	46	5902.24	5903.42		5903.52	0.005067	2.61	17.6
Reach-1	875.97	5-Yr 2-Hr	208	5902.24	5904.85		5905.13	0.006215	4.2	49.53
Reach-1	875.97	10-Yr 2-Hr	446	5902.24	5905.65		5906.24	0.009154	6.14	72.59
Reach-1	875.97	50-Yr 2-Hr	1526	5902.24	5909.88		5909.91	0.000704	2.04	1679.13
Reach-1	875.97	100-Yr 2-Hr	2259	5902.24	5909.54		5909.71	0.00358	4.38	1192.27
Reach-1	870.97	2-Yr 2-Hr	46	5902.24	5903.38	5902.96	5903.49	0.005623	2.71	17
Reach-1	870.97	5-Yr 2-Hr	208	5902.24	5904.8	5904.11	5905.09	0.006768	4.32	48.15
Reach-1	870.97	10-Yr 2-Hr	446	5902.24	5905.51	5905.06	5906.17	0.010986	6.54	68.24
Reach-1	870.97	50-Yr 2-Hr	1526	5902.24	5909.88	5907.85	5909.91	0.000711	2.05	1673.43
Reach-1	870.97	100-Yr 2-Hr	2259	5902.24	5909.5	5909.37	5909.69	0.004033	4.62	1128.48
Reach-1	840		Bridge							
Reach-1	770.38	2-Yr 2-Hr	46	5901.74	5902.82		5902.92	0.005625	2.59	17.76
Reach-1	770.38	5-Yr 2-Hr	208	5901.74	5903.96	5903.47	5904.3	0.00894	4.69	44.35
Reach-1	770.38	10-Yr 2-Hr	446	5901.74	5905.16	5904.88	5905.32	0.003673	3.74	212.5
Reach-1	770.38	50-Yr 2-Hr	1526	5901.74	5906.83		5906.94	0.002013	3.74	767.03
Reach-1	770.38	100-Yr 2-Hr	2259	5901.74	5908.05		5908.1	0.000873	2.89	1481.38
Reach-1	765.38	2-Yr 2-Hr	46	5901.74	5902.78		5902.89	0.006392	2.71	16.98
Reach-1	765.38	5-Yr 2-Hr	208	5901.74	5903.47	5903.46	5904.14	0.022429	6.54	31.79
Reach-1	765.38	10-Yr 2-Hr	446	5901.74	5904.88	5904.88	5905.24	0.007935	5.2	138.83
Reach-1	765.38	50-Yr 2-Hr	1526	5901.74	5906.82		5906.93	0.002049	3.77	761.4
Reach-1	765.38	100-Yr 2-Hr	2259	5901.74	5908.04		5908.1	0.000878	2.89	1478.45
Reach-1	702.55	2-Yr 2-Hr	46	5901.24	5902.3		5902.42	0.008727	3.01	20.07
Reach-1	702.55	5-Yr 2-Hr	208	5901.24	5903.38		5903.43	0.002993	2	136.71
Reach-1	702.55	10-Yr 2-Hr	446	5901.24	5904.18		5904.23	0.001848	2.24	271.4

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	702.55	50-Yr 2-Hr	1526	5901.24	5906.79		5906.83	0.000632	2.27	1055.38
Reach-1	702.55	100-Yr 2-Hr	2259	5901.24	5908.01		5908.05	0.00045	2.19	1515.41
Reach-1	612.66	2-Yr 2-Hr	46	5900.64	5901.55		5901.66	0.008156	2.7	17.02
Reach-1	612.66	5-Yr 2-Hr	208	5900.64	5902.68		5902.95	0.007947	4.14	50.19
Reach-1	612.66	10-Yr 2-Hr	446	5900.64	5903.63		5903.91	0.005223	4.56	136.3
Reach-1	612.66	50-Yr 2-Hr	1526	5900.64	5906.63		5906.74	0.001395	3.5	818.2
Reach-1	612.66	100-Yr 2-Hr	2259	5900.64	5907.95		5908	0.000651	2.82	1494.48
Reach-1	607.66	2-Yr 2-Hr	46	5900.64	5901.45	5901.28	5901.6	0.012209	3.1	14.82
Reach-1	607.66	5-Yr 2-Hr	208	5900.64	5902.6	5902.19	5902.9	0.009714	4.41	47.16
Reach-1	607.66	10-Yr 2-Hr	446	5900.64	5903.56	5903.23	5903.87	0.005971	4.79	127.64
Reach-1	607.66	50-Yr 2-Hr	1526	5900.64	5906.63	5904.5	5906.73	0.001412	3.52	814
Reach-1	607.66	100-Yr 2-Hr	2259	5900.64	5907.94	5905.35	5908	0.000654	2.82	1492.36
Reach-1	576		Bridge							
Reach-1	544.19	2-Yr 2-Hr	46	5900.14	5901.12		5901.18	0.003382	1.96	23.51
Reach-1	544.19	5-Yr 2-Hr	208	5900.14	5902.22		5902.42	0.004937	3.63	57.33
Reach-1	544.19	10-Yr 2-Hr	446	5900.14	5903.14		5903.49	0.00564	4.81	96.63
Reach-1	544.19	50-Yr 2-Hr	1526	5900.14	5905.87		5906.35	0.003854	6.12	340.72
Reach-1	544.19	100-Yr 2-Hr	2259	5900.14	5907.57		5907.81	0.002225	4.75	757.22
Reach-1	539.19	2-Yr 2-Hr	46	5900.14	5901.1		5901.16	0.003625	2	22.99
Reach-1	539.19	5-Yr 2-Hr	208	5900.14	5902.18		5902.39	0.005247	3.7	56.15
Reach-1	539.19	10-Yr 2-Hr	446	5900.14	5903.09		5903.46	0.006028	4.92	94.15
Reach-1	539.19	50-Yr 2-Hr	1526	5900.14	5905.84		5906.33	0.003961	6.19	336.76
Reach-1	539.19	100-Yr 2-Hr	2259	5900.14	5907.56		5907.8	0.002256	4.78	752.45
Reach-1	482.9	2-Yr 2-Hr	46	5899.74	5900.97	5900.34	5901.01	0.001776	1.61	35.05
Reach-1	482.9	5-Yr 2-Hr	208	5899.74	5902.03	5901.17	5902.14	0.00265	2.87	91.07



Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	482.9	10-Yr 2-Hr	446	5899.74	5902.95	5901.77	5903.13	0.003153	3.79	147.5
Reach-1	482.9	50-Yr 2-Hr	1526	5899.74	5905.74	5903.49	5906.04	0.003022	4.93	375.59
Reach-1	482.9	100-Yr 2-Hr	2259	5899.74	5907.32	5904.54	5907.64	0.002252	5.22	539.44
Reach-1	432		Bridge							
Reach-1	382.01	2-Yr 2-Hr	46	5898.94	5899.47		5899.61	0.01611	3.03	15.2
Reach-1	382.01	5-Yr 2-Hr	208	5898.94	5900.39		5900.76	0.011828	4.9	42.48
Reach-1	382.01	10-Yr 2-Hr	446	5898.94	5901.32		5901.84	0.009781	5.93	83.6
Reach-1	382.01	50-Yr 2-Hr	1526	5898.94	5904.6		5905.09	0.004222	6.07	300.2
Reach-1	382.01	100-Yr 2-Hr	2259	5898.94	5906.47		5906.9	0.002879	5.8	467.48
Reach-1	331.6	2-Yr 2-Hr	46	5898.24	5898.94		5899.04	0.008174	2.54	18.11
Reach-1	331.6	5-Yr 2-Hr	208	5898.24	5899.91		5900.23	0.008804	4.49	46.3
Reach-1	331.6	10-Yr 2-Hr	446	5898.24	5900.84		5901.37	0.008935	5.82	76.6
Reach-1	331.6	50-Yr 2-Hr	1526	5898.24	5903.64		5904.65	0.007703	8.05	189.66
Reach-1	331.6	100-Yr 2-Hr	2259	5898.24	5905.59		5906.55	0.005261	7.85	287.67
Reach-1	326.6	2-Yr 2-Hr	46	5898.24	5898.84	5898.71	5898.97	0.013814	2.99	15.39
Reach-1	326.6	5-Yr 2-Hr	208	5898.24	5899.79	5899.5	5900.16	0.011311	4.87	42.69
Reach-1	326.6	10-Yr 2-Hr	446	5898.24	5900.71	5900.28	5901.3	0.010702	6.19	72.06
Reach-1	326.6	50-Yr 2-Hr	1526	5898.24	5903.55	5902.62	5904.6	0.008238	8.24	185.19
Reach-1	326.6	100-Yr 2-Hr	2259	5898.24	5905.55	5903.74	5906.52	0.005382	7.92	285.34
Reach-1	286		Bridge							
Reach-1	247.06	2-Yr 2-Hr	46	5897.04	5897.77		5897.83	0.004786	2.02	22.74
Reach-1	247.06	5-Yr 2-Hr	208	5897.04	5898.88		5899.08	0.004903	3.63	57.31
Reach-1	247.06	10-Yr 2-Hr	446	5897.04	5899.69		5900.14	0.007066	5.39	82.67
Reach-1	247.06	50-Yr 2-Hr	1526	5897.04	5902.3	5901.24	5903.61	0.009629	9.17	166.45
Reach-1	247.06	100-Yr 2-Hr	2259	5897.04	5903.82	5902.49	5905.52	0.009699	10.45	216.26

Lower Cheyenne Creek HEC-RAS Results										
Reach	River Sta	Profile	W.S. Elev	Q Left	Q Channel	Q Right	Top Width	Shear LOB	Shear Chan	Shear ROB
			(ft)	(cfs)	(cfs)	(cfs)	(ft)	(lb/sq ft)	(lb/sq ft)	(lb/sq ft)
Reach-1	242.06	2-Yr 2-Hr	46	5897.04	5897.74		5897.81	0.005627	2.13	21.64
Reach-1	242.06	5-Yr 2-Hr	208	5897.04	5898.84		5899.06	0.00522	3.7	56.19
Reach-1	242.06	10-Yr 2-Hr	446	5897.04	5899.63		5900.1	0.007608	5.52	80.75
Reach-1	242.06	50-Yr 2-Hr	1526	5897.04	5901.24	5901.24	5903.31	0.019415	11.56	132.02
Reach-1	242.06	100-Yr 2-Hr	2259	5897.04	5902.48	5902.48	5905.15	0.019028	13.11	172.3
Reach-1	133.28	2-Yr 2-Hr	95	5894.54	5896.6	5896.05	5896.91	0.008994	4.47	21.25
Reach-1	133.28	5-Yr 2-Hr	239	5894.54	5898.06	5897.34	5898.3	0.009008	3.92	60.9
Reach-1	133.28	10-Yr 2-Hr	510	5894.54	5898.8	5898.4	5899.12	0.009012	4.56	124.89
Reach-1	133.28	50-Yr 2-Hr	1709	5894.54	5899.9	5899.73	5900.41	0.009005	6.56	388.74
Reach-1	133.28	100-Yr 2-Hr	2521	5894.54	5900.37	5900.14	5900.96	0.009013	7.34	522.36

## Cheyenne Creek Cross Section Diagrams

