

**RIO GRANDE CANALIZATION PROJECT  
WATER BUDGET STUDY  
Final Report**

**Appendix C - HEC-RAS Surface Area, Precipitation Information,  
Effluent Data, Stormwater, and Ungaged Return Flow Data  
Summary**

**Table C-0: HEC-RAS river stations and nam**

<b>River Station</b>
564639.1
557650
551580
529425.1
465831.6
456697.7
445614.3
433295.3
432974.1
416998.4
390139.4
327958
317830.3
323782.3
323743.3
271117.4
241626.1
234094.6
223852.5
207691
197199.5
193214.3
171432.4
147029.4
127319.9
110995.7
101319
101239.2
83252.67
67144.1
56439.19
41537.7
14113.75
8799.985
1104.7
0.457

## es of key locations on the RGCP

Name
Caballo Dam
Percha Diversion Dam (Ogee Spillway)
Arrey Hwy Bridge #28
Garfield Bridge #27
Salem Bridge #26
Hatch Bridge (US85/NM187) - #25
HWY 26 Hatch Bridge #24
ATSF RAILROAD Bridge #23
Rincon Bridge #22
New Rincon Bridge #21
Tonuco Bridge #20
Leasburg Diversion Dam
Leasburg River Cable
New Leasburg Bridge #19a
Old Leasburg Bridge #19
Shalem Bridge #18
Picacho Bridge #17
I - 10 Bridge #16
Mesillia Bridge #15
Mesilla Diversion Dam
Mesilla Dam Metering Station
Santo Tomas Bridge #13
Mesquite Bridge #12
Vado Bridge #11
Berino Bridge #10
Old Anthony Bridge #9
Anthony Metering Station
New Anthony Bridge #8
Vinton Bridge #7
Canutillo Bridge - #6
Borderland Bridge - #5
Country Club Bridge #4
Anapra Bridge #3
Courchesne Bridge #2
Brick Plant Bridge #1
American Dam

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	564639.1	Max WS	2420.76	4142.57	4150.68		4150.76	0.000226	2.15	1124.16	179.35	0.15	3218.65	2920.18	179.35	179.35
Reach	562627.5	Max WS	2420.47	4142.96	4149.98		4150.09	0.000439	2.74	882.04	161.46	0.21	3210.78	2912.31	161.46	161.46
Reach	562501.6	Max WS	2420.76	4142.8	4149.91		4150.04	0.000469	2.8	865.17	161.54	0.21	3210.31	2911.85	161.54	161.54
Reach	562297.7	Max WS	2420.45	4142.56	4149.67		4149.9	0.000945	3.77	642.37	129.47	0.3	3209.63	2911.16	129.47	129.47
Reach	562071.9	Max WS	2420.56	4142.28	4149.43		4149.67	0.001073	3.91	618.44	129.71	0.32	3208.96	2910.49	129.71	129.71
Reach	561531.8	Max WS	2420.58	4141.62	4149.14		4149.24	0.000489	2.56	946.05	247.95	0.21	3206.65	2908.39	208.7	247.95
Reach	560204.4	Max WS	2419.48	4139.99	4148.63		4148.69	0.000341	2	1212.48	301.61	0.17	3198.25	2900.72	295.17	301.61
Reach	560034.2	Max WS	2419.77	4140.23	4148.48		4148.6	0.000914	2.83	853.57	258.37	0.27	3197.15	2899.64	258.37	258.37
Reach	559813.7	Max WS	2419.67	4140.53	4148.33		4148.44	0.000716	2.65	914.01	255.88	0.25	3195.85	2898.33	255.88	255.88
Reach	559613.3	Max WS	2419.88	4140.81	4148.19		4148.29	0.000718	2.61	928.66	338.2	0.25	3194.48	2897.13	267	338.2
Reach	559366.4	Max WS	2418.92	4141.16	4148.12		4148.17	0.000285	1.92	1262.53	387.2	0.16	3192.42	2895.56	288.22	387.2
Reach	559015	Max WS	2419.43	4141.64	4148.01		4148.06	0.000357	1.85	1305.26	458.8	0.17	3188.99	2892.9	370.6	458.8
Reach	558800.4	Max WS	2371.94	4141.95	4147.87		4147.95	0.000698	2.3	1029.48	348.31	0.24	3187.02	2891.13	348.31	348.31
Reach	558695.7	Max WS	2371.95	4141.32	4147.84		4147.9	0.000371	1.89	1255.52	356.28	0.18	3186.17	2890.28	356.28	356.28
Reach	558159.4	Max WS	2372.37	4137.89	4147.77		4147.78	0.000026	0.76	3139.15	475.66	0.05	3181.05	2885.16	475.66	475.66
Reach	557855	Max WS	2371.17	4135.93	4147.77		4147.77	0.00001	0.53	4452.14	577.95	0.03	3177.37	2881.48	577.95	577.95
Reach	557766.4	Max WS	2371.09	4135.36	4147.74		4147.78	0.000095	1.77	1645.69	329.5	0.1	3176.46	2880.76	134.93	329.5
Reach	557694.8	Max WS	2235.14	4134.92	4147.76	4137.35	4147.77	0.000009	0.57	3892.52	395.45	0.03	3175.85	2880.32	393.99	395.45
Reach	557650	Inl Struct														
Reach	557644	Max WS	2235.89	4134.6	4138.26		4138.6	0.006701	4.67	478.81	306.94	0.66	3175.44	2879.91	306.94	306.94
Reach	557567.9	Max WS	2235.8	4134.09	4138.2		4138.29	0.000957	2.29	975.7	422.18	0.27	3174.81	2879.28	422.18	422.18
Reach	557430.4	Max WS	2236	4133.14	4137.93		4138.13	0.001858	3.65	612.8	317.65	0.38	3173.64	2878.11	317.65	317.65
Reach	557123.2	Max WS	2235.5	4131.3	4136.77		4137.11	0.004254	4.67	479.2	218.64	0.56	3171.75	2876.22	218.64	218.64
Reach	556706.3	Max WS	2235.91	4128.64	4135.03		4135.51	0.003667	5.51	405.68	127.51	0.54	3170.09	2874.56	127.51	127.51
Reach	556229.8	Max WS	2235.72	4125.6	4134.4		4134.5	0.000371	2.57	871.12	154.36	0.19	3168.55	2873.02	154.36	154.36
Reach	555398.3	Max WS	2234.94	4125.25	4133.93		4134.09	0.00063	3.17	705.25	135.15	0.24	3165.79	2870.26	135.15	135.15
Reach	554898.5	Max WS	2235.08	4125.04	4132.81		4133.13	0.00333	4.55	491.31	190.57	0.5	3163.92	2868.39	190.57	190.57
Reach	554396.7	Max WS	2235.18	4124.83	4131.89		4132.09	0.00093	3.6	620.07	131.07	0.29	3162.07	2866.53	131.07	131.07
Reach	553839.6	Max WS	2234.81	4124.6	4131.47		4131.64	0.000695	3.31	674.63	130.7	0.26	3160.39	2864.86	130.7	130.7
Reach	553399.2	Max WS	2234.81	4124.38	4131.13		4131.31	0.000797	3.48	642.58	128.08	0.27	3159.08	2863.55	128.08	128.08
Reach	552887.7	Max WS	2234.59	4124.12	4130.76		4130.93	0.000723	3.25	687.43	141.29	0.26	3157.5	2861.97	141.29	141.29
Reach	552383	Max WS	2234.74	4123.86	4130.4		4130.56	0.000747	3.19	700.46	152.32	0.26	3155.8	2860.27	152.32	152.32
Reach	551819.7	Max WS	2234.28	4123.58	4130.04		4130.18	0.000608	2.98	748.67	154.37	0.24	3153.82	2858.29	154.37	154.37
Reach	551614.9	Max WS	2234.08	4123.48	4129.87	4126.85	4130.03	0.000785	3.28	681.76	148.02	0.27	3153.11	2857.58	148.02	148.02
Reach	551580	Bridge														
Reach	551545.1	Max WS	2234.41	4123.44	4129.8		4129.97	0.000774	3.32	673.66	141.39	0.27	3152.88	2857.35	141.39	141.39
Reach	551007.1	Max WS	2234.4	4123.17	4129.52		4129.66	0.000406	2.91	767.6	151.77	0.23	3151.07	2855.54	151.77	151.77
Reach	550513.2	Max WS	2233.88	4122.92	4129.35		4129.46	0.000376	2.71	825.5	172.94	0.22	3149.23	2853.7	172.94	172.94
Reach	548904.1	Max WS	2233.25	4122.11	4128.18		4128.41	0.00096	3.78	590.8	151.28	0.34	3143.24	2847.71	151.28	151.28
Reach	548404.8	Max WS	2233.21	4121.86	4127.96		4128.07	0.000369	2.67	836.1	175.96	0.22	3141.36	2845.83	175.96	175.96
Reach	547904	Max WS	2233.19	4121.61	4127.7		4127.86	0.000511	3.2	697.74	142.25	0.25	3139.53	2844	142.25	142.25
Reach	547574	Max WS	2232.71	4121.44	4127.59		4127.71	0.000408	2.7	826.03	185.06	0.23	3138.29	2842.76	185.06	185.06
Reach	546903.2	Max WS	2232.89	4120.96	4127.43		4127.5	0.000203	2.19	1019.72	183.93	0.16	3135.45	2839.92	183.93	183.93
Reach	546402.4	Max WS	2232.61	4120.9	4127.36		4127.41	0.000147	1.92	1165.7	200.17	0.14	3133.24	2837.71	200.17	200.17
Reach	545896.6	Max WS	2232.18	4120.99	4127.28		4127.34	0.000162	1.86	1198.34	233.11	0.14	3130.73	2835.2	233.11	233.11
Reach	545401.1	Max WS	2232.33	4121	4127.18		4127.25	0.000189	2.13	1049.52	185.78	0.16	3128.35	2832.82	185.78	185.78
Reach	544908.2	Max WS	2231.87	4121.01	4127.09		4127.15	0.000202	2.11	1055.56	199.88	0.16	3126.16	2830.63	199.88	199.88
Reach	544407.1	Max WS	2232.3	4121.02	4127.05		4127.08	0.000094	1.47	1523.64	283.77	0.11	3123.38	2827.85	283.77	283.77
Reach	543622.5	Max WS	2231.52	4121.55	4126.46		4126.68	0.001029	3.79	588.84	157.89	0.35	3119.4	2823.87	157.89	157.89
Reach	543406.4	Max WS	2231.22	4121.1	4126.45		4126.52	0.000346	2.17	1042.32	349.65	0.2	3118.15	2822.78	281.5	349.65
Reach	542906.1	Max WS	2231.02	4120.09	4125.9		4126.18	0.001131	4.2	531.62	130.95	0.37	3115.38	2820.42	130.95	130.95
Reach	542410.4	Max WS	2231.02	4119.08	4125.57		4125.74	0.000631	3.31	674.85	154.55	0.28	3113.76	2818.79	154.55	154.55
Reach	541588.8	Max WS	2230.71	4117.42	4125.24		4125.33	0.000356	2.46	906.47	165.42	0.19	3110.74	2815.77	165.42	165.42
Reach	540916.4	Max WS	2230.64	4116.91	4124.92		4125.05	0.000489	2.86	778.77	144.62	0.22	3108.35	2813.38	144.62	144.62
Reach	540415	Max WS	2230.42	4116.54	4124.79		4124.87	0.000236	2.21	1008.73	159.14	0.15	3106.6	2811.63	159.14	159.14
Reach	539915.7	Max WS	2229.89	4116.16	4124.67		4124.75	0.000261	2.28	979	159.98	0.16	3104.77	2809.8	159.98	159.98
Reach	539415	Max WS	2229.82	4115.78	4124.57		4124.64	0.000186	1.98	1132.81	211.62	0.14	3102.64	2807.88	174.35	211.62
Reach	538914.6	Max WS	2229.41	4115.41	4124.49		4124.54	0.000197	1.87	1196.4	235.08	0.14	3100.08	2805.66	211.74	235.08
Reach	538422.4	Max WS	2229.27	4115.03	4124.36		4124.44	0.00023	2.23	998.24	246.66	0.15	3097.4	2803.61	151.34	246.66

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	537808.4	Max WS	2229.06	4114.57	4124.28		4124.33	0.000131	1.77	1279.34	234.42	0.12	3094	2801.29	178	234.42
Reach	537421.2	Max WS	2229.12	4116.44	4123.97		4124.1	0.001023	2.99	745.57	154.77	0.24	3092.28	2799.81	154.77	154.77
Reach	536423.8	Max WS	2228.78	4117.3	4122.05		4122.31	0.002582	4.09	544.39	141.75	0.37	3088.88	2796.42	141.75	141.75
Reach	535925.9	Max WS	2229.01	4113.92	4121.34		4121.46	0.00085	2.76	808.02	163.62	0.22	3087.14	2794.67	163.62	163.62
Reach	535429.3	Max WS	2228.62	4113.95	4120.59		4120.85	0.001635	4.07	547.7	120.93	0.34	3085.52	2793.05	120.93	120.93
Reach	534874.3	Max WS	2228.43	4113.56	4120.05		4120.21	0.000672	3.23	689.84	154.26	0.25	3083.76	2791.42	135.08	154.26
Reach	533941.8	Max WS	2227.8	4111.25	4119.54		4119.64	0.000552	2.56	871.81	209.36	0.22	3079.87	2787.73	209.36	209.36
Reach	533431.3	Max WS	2227.88	4109.99	4119.02		4119.26	0.000975	3.94	564.77	106.62	0.3	3078.02	2785.88	106.62	106.62
Reach	533131.3	Max WS	2228.06	4109.25	4118.9		4119.05	0.000453	3.05	729.86	112.55	0.21	3077.27	2785.13	112.55	112.55
Reach	532410.5	Max WS	2227.75	4109.64	4118.64		4118.75	0.000359	2.69	828.5	132.89	0.19	3075.24	2783.1	132.89	132.89
Reach	531937.2	Max WS	2227.73	4109.89	4118.52		4118.61	0.000268	2.4	927.42	140.2	0.16	3073.75	2781.61	140.2	140.2
Reach	531437	Max WS	2227.19	4110.16	4118.4		4118.48	0.000221	2.32	962.59	165.05	0.16	3072	2779.93	152.31	165.05
Reach	530936.5	Max WS	2227.13	4110.44	4118.3		4118.38	0.000216	2.18	1021.76	176.66	0.16	3070.04	2778.04	176.66	176.66
Reach	530436	Max WS	2227.04	4110.71	4118.19		4118.27	0.000224	2.21	1008.93	177.4	0.16	3068	2776.02	175.72	177.4
Reach	529843.5	Max WS	2226.52	4111.03	4118.05		4118.13	0.000235	2.27	983.3	172.51	0.17	3065.62	2773.68	168.51	172.51
Reach	529653.8	Max WS	2226.8	4111	4118.01		4118.09	0.000268	2.19	1018.76	180.14	0.16	3064.86	2772.92	180.14	180.14
Reach	529480.9	Max WS	2226.66	4110.98	4117.9	4114.24	4118.02	0.000485	2.77	803.23	155.78	0.22	3064.19	2772.25	155.78	155.78
Reach	529425.1	Bridge														
Reach	529369.2	Max WS	2226.73	4110.97	4117.86		4117.96	0.000408	2.59	859.49	161.71	0.2	3063.79	2771.85	161.71	161.71
Reach	528852.2	Max WS	2226.23	4110.9	4117.53		4117.68	0.000689	3.18	701.01	144.38	0.25	3061.97	2770.03	144.38	144.38
Reach	528432.6	Max WS	2226.04	4110.84	4117.27		4117.41	0.000603	2.97	750.38	154.95	0.24	3060.53	2768.59	154.95	154.95
Reach	528335.9	Max WS	2226.22	4110.83	4117.21		4117.35	0.000612	3	742.55	152.48	0.24	3060.19	2768.25	152.48	152.48
Reach	528087.4	Max WS	2226.2	4108.75	4116.96		4117.09	0.000427	2.9	767.17	124.84	0.21	3058.61	2766.67	124.84	124.84
Reach	527842.3	Max WS	2225.94	4108.99	4116.79		4116.92	0.000464	2.99	743.9	122.87	0.21	3057.51	2765.58	122.87	122.87
Reach	527832.5	Max WS	2226.14	4109.33	4116.75		4116.92	0.000984	3.3	674.97	171.65	0.29	3057.48	2765.55	171.65	171.65
Reach	527727.4	Max WS	2225.78	4109.17	4116.54		4116.69	0.000764	3.17	702.6	508.01	0.26	3055.53	2764.57	156.52	508.01
Reach	527574.7	Max WS	2225.88	4108.91	4115.85		4116.16	0.003485	4.43	502.62	144.28	0.42	3053.65	2763.67	144.28	144.28
Reach	527466.2	Max WS	2225.89	4108.52	4115.41		4115.56	0.001233	3.11	716.08	161.65	0.26	3052.76	2762.78	161.65	161.65
Reach	527320.4	Max WS	2225.87	4108.02	4115.25		4115.36	0.000415	2.6	857.17	161.78	0.2	3051.83	2761.86	161.78	161.78
Reach	527217.8	Max WS	2225.52	4107.85	4115.01		4115.15	0.00063	3.1	717.04	137.76	0.24	3050.49	2760.51	137.76	137.76
Reach	526929.8	Max WS	2225.55	4107.41	4114.9		4115.01	0.000398	2.56	869.22	162.24	0.19	3049.5	2759.52	162.24	162.24
Reach	526691.8	Max WS	2225.57	4107.05	4114.79		4114.91	0.000435	2.76	806.7	143.65	0.21	3048.66	2758.69	143.65	143.65
Reach	525928	Max WS	2225.18	4106.68	4114.34		4114.5	0.000629	3.26	683.11	123.85	0.24	3046.32	2756.34	123.85	123.85
Reach	525683.9	Max WS	2225.21	4106.56	4114.22		4114.36	0.000553	3	740.77	138.19	0.23	3045.58	2755.61	138.19	138.19
Reach	524917.9	Max WS	2225.06	4106.19	4113.71		4113.87	0.00072	3.23	688.89	140.98	0.26	3043.13	2753.15	140.98	140.98
Reach	523921	Max WS	2224.8	4105.72	4113.15		4113.28	0.000478	2.91	765.48	134.43	0.21	3039.98	2750	134.43	134.43
Reach	522929.5	Max WS	2224.38	4105.24	4112.58		4112.74	0.000625	3.14	709.44	172.03	0.24	3036.51	2746.9	137.86	172.03
Reach	522426	Max WS	2224.58	4105	4112.3		4112.44	0.000569	2.99	743.78	143.11	0.23	3034.71	2745.28	143.11	143.11
Reach	521924.3	Max WS	2223.97	4104.76	4112.03		4112.16	0.000533	2.87	776.05	152.33	0.22	3033.01	2743.58	152.33	152.33
Reach	521598.7	Max WS	2224.06	4104.6	4111.89		4112	0.000473	2.69	827.88	300.23	0.21	3031.3	2742.4	163.85	300.23
Reach	520924.7	Max WS	2223.82	4102.43	4111.62		4111.71	0.000376	2.5	890.06	164.11	0.19	3027.71	2739.86	164.11	164.11
Reach	520422.2	Max WS	2223.49	4100.83	4111.45		4111.54	0.00033	2.41	924.12	163.39	0.18	3025.82	2737.97	163.39	163.39
Reach	519919.9	Max WS	2223.65	4099.2	4111.3		4111.38	0.000295	2.28	973.51	170.36	0.17	3023.89	2736.04	170.36	170.36
Reach	519550.8	Max WS	2223.35	4098.02	4111.15		4111.25	0.000409	2.58	861.18	129.26	0.18	3022.63	2734.78	129.26	129.26
Reach	519312.7	Max WS	2223.34	4102.37	4110.91		4111.09	0.000992	3.39	656.79	129.26	0.26	3021.92	2734.07	129.26	129.26
Reach	519291.3	Max WS	2223.41	4101.99	4110.9		4111.06	0.001115	3.24	686.48	131.71	0.25	3021.85	2734	131.71	131.71
Reach	519030	Max WS	2223.14	4102.91	4110.35		4110.61	0.002464	4.09	551.25	174.5	0.36	3020.92	2733.21	134.72	174.5
Reach	518915	Max WS	2223.05	4103.03	4109.96		4110.28	0.003151	4.51	493.38	127.44	0.4	3020.51	2732.86	127.44	127.44
Reach	518772.4	Max WS	2223.21	4103.16	4109.47		4109.79	0.003597	4.53	490.57	139.07	0.43	3020.08	2732.42	139.07	139.07
Reach	518509.7	Max WS	2223.21	4101.48	4108.79		4109.04	0.002199	3.97	559.31	132.47	0.34	3019.26	2731.6	132.47	132.47
Reach	518415.3	Max WS	2223.01	4101.39	4108.59		4108.85	0.001828	4.09	542.91	127.64	0.35	3018.98	2731.32	127.64	127.64
Reach	517917	Max WS	2222.75	4100.86	4107.83		4108.05	0.001439	3.75	593.49	133.49	0.31	3017.48	2729.83	133.49	133.49
Reach	517406.1	Max WS	2222.72	4100.32	4106.96		4107.29	0.001537	4.6	482.93	101.99	0.37	3016.1	2728.45	101.99	101.99
Reach	516902	Max WS	2222.78	4099.78	4106.55		4106.71	0.000752	3.27	680.06	141.71	0.26	3014.69	2727.04	141.71	141.71
Reach	516800.1	Max WS	2222.81	4099.68	4106.44		4106.63	0.000877	3.48	637.95	135.35	0.28	3014.37	2726.71	135.35	135.35
Reach	516402.8	Max WS	2222.64	4099.52	4106.12		4106.29	0.000837	3.39	655.94	139.66	0.28	3013.11	2725.46	139.66	139.66
Reach	515903.7	Max WS	2222.6	4099.33	4105.81		4105.95	0.000558	2.99	743.02	143.48	0.23	3011.49	2723.84	143.48	143.48
Reach	515402	Max WS	2222.43	4099.13	4105.51		4105.65	0.000639	3.01	738.43	154.65	0.24	3009.77	2722.12	154.65	154.65
Reach	514903.5	Max WS	2222.19	4098.94	4105.22		4105.36	0.000519	2.95	753.49	140.02	0.22	3008.09	2720.43	140.02	140.02

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	514405.9	Max WS	2222.01	4098.74	4104.93		4105.08	0.000623	3.08	721.23	142.63	0.24	3006.47	2718.82	142.63	142.63
Reach	513903.9	Max WS	2222.01	4098.55	4104.66		4104.78	0.000561	2.72	815.47	196.96	0.24	3004.52	2716.86	196.96	196.96
Reach	513407.6	Max WS	2221.77	4098.35	4104.4		4104.51	0.000532	2.71	820.86	176.71	0.22	3002.39	2714.73	176.71	176.71
Reach	512905.1	Max WS	2221.16	4098.16	4104.04		4104.19	0.00075	3.12	711.48	166.19	0.27	3000.41	2712.76	166.19	166.19
Reach	512404.5	Max WS	2221.05	4097.96	4103.72		4103.87	0.000537	3.1	717.22	143.32	0.24	2998.63	2710.98	143.32	143.32
Reach	511904.7	Max WS	2221.36	4097.77	4103.42		4103.58	0.000629	3.17	700.92	153.8	0.26	2996.93	2709.27	153.8	153.8
Reach	511526.8	Max WS	2221.23	4097.62	4103.28		4103.35	0.000546	2.18	1017.43	212	0.18	2995.34	2707.69	212	212
Reach	510890.5	Max WS	2220.95	4096.57	4101.63		4101.93	0.004042	4.39	505.46	165.07	0.44	2992.59	2704.93	165.07	165.07
Reach	510378.7	Max WS	2221.12	4095.74	4100.42		4100.55	0.001543	2.84	781.87	348.85	0.33	2989.57	2701.91	348.85	348.85
Reach	509363.4	Max WS	2220.64	4094.07	4099.07		4099.26	0.001223	3.53	628.89	169.88	0.32	2983.52	2695.87	169.88	169.88
Reach	508864.6	Max WS	2220.87	4093.26	4098.56		4098.73	0.000959	3.32	669.02	164.43	0.29	2981.61	2693.95	164.43	164.43
Reach	508086.7	Max WS	2220.04	4091.98	4097.86		4098.03	0.000833	3.34	664.24	145.64	0.28	2978.84	2691.19	145.64	145.64
Reach	507871.3	Max WS	2220.42	4091.8	4097.65		4097.84	0.000943	3.57	621.95	134.7	0.29	2978.15	2690.49	134.7	134.7
Reach	506878.6	Max WS	2220.26	4091.01	4096.86		4097.01	0.000733	3.09	717.63	163.77	0.26	2974.74	2687.09	163.77	163.77
Reach	506380.1	Max WS	2219.95	4090.6	4096.53		4096.67	0.000663	2.97	747.55	164.33	0.25	2972.87	2685.21	164.33	164.33
Reach	505878.3	Max WS	2220.02	4090.2	4096.1		4096.28	0.000945	3.4	653.35	152.94	0.29	2971.04	2683.39	152.94	152.94
Reach	505375.3	Max WS	2219.99	4089.79	4095.52		4095.71	0.001372	3.47	639.14	192.19	0.34	2969.05	2681.39	192.19	192.19
Reach	504874.8	Max WS	2219.81	4089.39	4095.06		4095.2	0.000665	3	739.94	160.91	0.25	2967.02	2679.37	160.91	160.91
Reach	504374.8	Max WS	2219.65	4088.99	4094.78		4094.9	0.000576	2.77	802.03	176.32	0.23	2965.08	2677.43	176.32	176.32
Reach	503881.3	Max WS	2219.39	4088.59	4094.43		4094.58	0.00073	3.13	709.5	155.16	0.26	2963.21	2675.55	155.16	155.16
Reach	503377.3	Max WS	2219.27	4088.18	4094.04		4094.21	0.000755	3.26	680.71	143.01	0.26	2961.48	2673.83	143.01	143.01
Reach	502872	Max WS	2219.09	4087.78	4093.64		4093.82	0.000784	3.38	656.51	133.46	0.27	2959.88	2672.22	133.46	133.46
Reach	502371.2	Max WS	2218.94	4087.38	4093.35		4093.48	0.000578	2.87	773.05	162.43	0.23	2958.18	2670.52	162.43	162.43
Reach	502066.2	Max WS	2218.96	4087.13	4093.15		4093.29	0.000662	3.06	725.22	152.32	0.25	2957.07	2669.42	152.32	152.32
Reach	501875.3	Max WS	2218.98	4087.03	4093.01		4093.17	0.000681	3.21	692.24	137.75	0.25	2956.44	2668.79	137.75	137.75
Reach	501366.2	Max WS	2218.66	4086.76	4092.64		4092.79	0.000812	3.11	712.59	170.6	0.27	2954.64	2666.98	170.6	170.6
Reach	501121.2	Max WS	2218.56	4086.64	4092.48		4092.62	0.000645	2.98	743.89	159.81	0.24	2953.71	2666.05	159.81	159.81
Reach	500372.4	Max WS	2218.44	4086.25	4092.05		4092.17	0.000571	2.7	821.47	187.48	0.23	2950.72	2663.07	187.48	187.48
Reach	499878.1	Max WS	2218.36	4085.99	4091.77		4091.89	0.00055	2.78	799.38	169.48	0.23	2948.7	2661.04	169.48	169.48
Reach	499371.4	Max WS	2218.24	4085.72	4091.48		4091.6	0.000621	2.8	792.97	182.24	0.24	2946.65	2659	182.24	182.24
Reach	498880.1	Max WS	2218.02	4085.46	4091.2		4091.31	0.00055	2.72	814.46	178.09	0.22	2944.62	2656.97	178.09	178.09
Reach	498380	Max WS	2217.87	4085.2	4090.91		4091.02	0.00062	2.75	807.32	190.61	0.24	2942.5	2654.85	190.61	190.61
Reach	497878.4	Max WS	2217.77	4084.94	4090.61		4090.73	0.000589	2.69	823.75	194.35	0.23	2940.29	2652.64	192.67	194.35
Reach	497361.1	Max WS	2217.46	4084.67	4090.29		4090.41	0.000652	2.79	794.3	189.9	0.24	2938	2650.37	189.9	189.9
Reach	496330.4	Max WS	2217.41	4084.13	4089.13		4089.36	0.00143	3.86	573.76	213.17	0.37	2933.21	2646.07	173.79	213.17
Reach	496100.8	Max WS	2217.3	4084.01	4088.97		4089.12	0.000728	3.1	715.85	181.58	0.27	2932.17	2645.13	181.58	181.58
Reach	495329.5	Max WS	2217.16	4082.97	4088.54		4088.66	0.000474	2.75	806.93	216.55	0.23	2928.65	2641.95	178.21	216.55
Reach	494829.3	Max WS	2217.22	4082.92	4088.3		4088.42	0.000486	2.77	799.42	177.67	0.23	2926.39	2639.9	177.67	177.67
Reach	494334.2	Max WS	2217.25	4082.49	4088.12		4088.21	0.000355	2.49	889.12	182.2	0.2	2924.34	2637.86	182.2	182.2
Reach	493838.8	Max WS	2217.01	4082.06	4087.62		4087.85	0.001161	3.85	575.75	165.67	0.36	2922.36	2635.88	165.67	165.67
Reach	493337.3	Max WS	2216.85	4081.63	4087		4087.26	0.001122	4.11	539.8	148.2	0.38	2920.56	2634.07	148.2	148.2
Reach	492837	Max WS	2216.62	4081.2	4086.51		4086.69	0.001097	3.38	656.36	178.74	0.31	2918.68	2632.2	178.74	178.74
Reach	492490	Max WS	2216.71	4080.9	4086.24		4086.37	0.000738	2.87	772.79	194.74	0.25	2917.19	2630.71	194.74	194.74
Reach	491833.1	Max WS	2216.52	4079.99	4085.35		4085.56	0.001793	3.67	603.27	204.5	0.38	2914.18	2627.7	204.5	204.5
Reach	491268.7	Max WS	2216.2	4079.39	4084.71		4084.84	0.000778	2.94	753.22	190.48	0.26	2911.62	2625.14	190.48	190.48
Reach	490812.4	Max WS	2216.11	4078.81	4084.34		4084.48	0.000837	3	738.75	191.29	0.27	2909.62	2623.14	191.29	191.29
Reach	490293.7	Max WS	2216.1	4078.18	4083.85		4084.03	0.000887	3.44	643.38	161.37	0.3	2907.52	2621.04	161.37	161.37
Reach	489795.6	Max WS	2216.03	4077.56	4083.47		4083.61	0.000832	2.98	742.58	192.39	0.27	2905.5	2619.02	192.39	192.39
Reach	489428.5	Max WS	2215.84	4077.11	4083.13		4083.28	0.000981	3.18	696.72	185.49	0.29	2903.91	2617.43	185.49	185.49
Reach	488691.9	Max WS	2215.74	4077.61	4082.53		4082.69	0.000929	3.19	694.15	176.96	0.28	2901.27	2614.79	176.96	176.96
Reach	488294.4	Max WS	2215.75	4077.17	4082.22		4082.35	0.000819	2.87	773.27	211.13	0.26	2899.5	2613.02	211.13	211.13
Reach	487788.3	Max WS	2215.49	4076.62	4081.8		4081.94	0.000803	2.98	743.63	188.71	0.26	2897.18	2610.7	188.71	188.71
Reach	487288.5	Max WS	2215.41	4076.05	4081.51		4081.62	0.000513	2.63	841.3	183.54	0.22	2895.04	2608.56	183.54	183.54
Reach	486788.3	Max WS	2215.27	4075.33	4081.24		4081.36	0.000553	2.78	797.14	175.22	0.23	2892.98	2606.5	175.22	175.22
Reach	485787.9	Max WS	2214.9	4074.4	4080.66		4080.8	0.000598	2.92	757.78	154.82	0.23	2889.19	2602.71	154.82	154.82
Reach	485291.1	Max WS	2214.64	4073.84	4080.32		4080.47	0.000702	3.13	707.4	149.35	0.25	2887.46	2600.98	149.35	149.35
Reach	484794	Max WS	2214.64	4073.3	4080		4080.15	0.000614	3.12	709.38	135.83	0.24	2885.83	2599.35	135.83	135.83
Reach	484299.5	Max WS	2214.53	4072.75	4079.77		4079.88	0.000495	2.67	828.48	170.55	0.21	2884.09	2597.61	170.55	170.55
Reach	483801.6	Max WS	2214.27	4072.2	4079.54		4079.65	0.000431	2.63	842.83	159.96	0.2	2882.21	2595.72	159.96	159.96

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	482861.6	Max WS	2213.93	4071.16	4079.26		4079.32	0.000272	2.03	1090.62	216.35	0.16	2878.15	2591.66	216.35	216.35
Reach	482305.4	Max WS	2213.67	4071.07	4079.04		4079.12	0.000439	2.32	952.24	245.65	0.21	2875.2	2588.71	245.65	245.65
Reach	481803.7	Max WS	2213.7	4070.98	4078.83		4078.92	0.000364	2.38	928.88	205.94	0.2	2872.59	2586.11	205.94	205.94
Reach	481299.2	Max WS	2213.39	4070.9	4078.71		4078.77	0.000247	2.01	1103.03	222.38	0.15	2870.12	2583.71	208.28	222.38
Reach	480798.5	Max WS	2213.28	4070.82	4078.58		4078.65	0.000243	2.07	1095.89	356.48	0.15	2866.78	2581.43	189.35	356.48
Reach	479773.6	Max WS	2212.65	4070.65	4078.15		4078.28	0.000484	2.96	819.28	307.66	0.22	2859	2577.7	127.82	307.66
Reach	479017.8	Max WS	2212.39	4070.52	4077.98		4078.02	0.000156	1.69	1486.5	507.21	0.12	2852.11	2574.68	220.33	507.21
Reach	478262.9	Max WS	2211.83	4069.98	4077.88		4077.91	0.000128	1.49	1606.88	456.06	0.11	2843.88	2570.47	264.76	456.06
Reach	477760.7	Max WS	2211.66	4069.63	4077.83		4077.86	0.000095	1.42	1826.05	445.22	0.1	2838.7	2567.61	232.47	445.22
Reach	477226.1	Max WS	2211.56	4069.25	4072.3	4072.5	4073.38	0.021611	8.34	265.07	170.54	1.18	2834.92	2565.14	170.54	170.54
Reach	476757.3	Max WS	2211.56	4064.51	4068.18		4068.35	0.00175	3.29	671.57	265.03	0.36	2832.58	2562.79	265.03	265.03
Reach	476438.1	Max WS	2211.5	4061.29	4067.93		4068.02	0.000403	2.37	933.45	198.81	0.19	2830.88	2561.09	198.81	198.81
Reach	475650.7	Max WS	2211.33	4061.13	4067.44		4067.59	0.000693	3.11	711.37	161.52	0.26	2827.62	2557.83	161.52	161.52
Reach	475270.6	Max WS	2211.33	4061.06	4067.2		4067.33	0.000699	2.92	756.04	177.13	0.25	2826.14	2556.36	177.13	177.13
Reach	474611.1	Max WS	2210.93	4060.93	4066.83		4066.93	0.000529	2.59	852.87	194.1	0.22	2823.33	2553.55	194.1	194.1
Reach	474271.4	Max WS	2210.88	4060.58	4066.64		4066.75	0.000544	2.61	847.18	195.77	0.22	2821.81	2552.03	195.77	195.77
Reach	473769.3	Max WS	2210.69	4060.08	4066.39		4066.5	0.000481	2.62	844.22	179.96	0.21	2819.65	2549.86	179.96	179.96
Reach	473267.9	Max WS	2210.46	4059.56	4066.13		4066.23	0.000567	2.58	856.62	207.93	0.22	2817.42	2547.63	207.93	207.93
Reach	472766	Max WS	2210.37	4059.05	4065.86		4065.96	0.000538	2.5	883.52	215.62	0.22	2814.98	2545.19	215.62	215.62
Reach	472317.8	Max WS	2210.21	4058.59	4065.63		4065.73	0.000523	2.53	872.9	204.59	0.22	2812.81	2543.03	204.59	204.59
Reach	471755.5	Max WS	2210.07	4058.51	4065.31		4065.42	0.000566	2.69	820.77	185.86	0.23	2810.29	2540.51	185.86	185.86
Reach	471255.3	Max WS	2209.86	4058.43	4065.06		4065.16	0.000494	2.48	890.86	206.32	0.21	2808.04	2538.26	206.32	206.32
Reach	470755.3	Max WS	2209.87	4058.36	4064.79		4064.89	0.000583	2.52	876.14	224.39	0.22	2805.57	2535.78	224.39	224.39
Reach	470255.4	Max WS	2209.57	4058.29	4064.59		4064.66	0.000364	2.09	1055.22	251.37	0.18	2802.84	2533.05	251.37	251.37
Reach	469755	Max WS	2209.45	4058.21	4064.33		4064.42	0.0006	2.45	903.05	246.47	0.23	2799.98	2530.19	246.47	246.47
Reach	469255	Max WS	2209.23	4058.14	4064.02		4064.13	0.00058	2.63	838.81	201.24	0.23	2797.41	2527.62	201.24	201.24
Reach	468754.7	Max WS	2209.06	4058.07	4063.77		4063.86	0.000497	2.49	885.83	204.19	0.21	2795.08	2525.3	204.19	204.19
Reach	468254.7	Max WS	2208.92	4057.99	4063.55		4063.64	0.000424	2.32	951.77	217.93	0.2	2792.66	2522.87	217.93	217.93
Reach	467754.7	Max WS	2208.73	4057.92	4063.3		4063.4	0.000519	2.58	857.58	220.46	0.22	2790.14	2520.36	220.46	220.46
Reach	467254.6	Max WS	2208.68	4057.85	4063.08		4063.16	0.000447	2.25	983.49	246.22	0.2	2787.46	2517.68	246.22	246.22
Reach	466754.5	Max WS	2208.49	4057.55	4062.88		4062.94	0.00044	2.05	1079.04	307.7	0.19	2784.28	2514.5	307.7	307.7
Reach	466254.4	Max WS	2208.35	4056.92	4062.71		4062.76	0.000292	1.85	1194.23	292.1	0.16	2780.84	2511.06	292.1	292.1
Reach	466119.4	Max WS	2208.14	4056.79	4062.67		4062.72	0.000282	1.86	1184.5	279.25	0.16	2779.96	2510.17	279.25	279.25
Reach	465884.8	Max WS	2207.96	4056.82	4062.58	4059.2	4062.65	0.000368	2.03	1085.42	273.96	0.18	2778.47	2508.68	273.96	273.96
Reach	465831.6	Bridge														
Reach	465778.3	Max WS	2207.89	4056.76	4062.53		4062.59	0.00042	2.09	1055.15	281.44	0.19	2777.81	2508.02	281.44	281.44
Reach	464850.4	Max WS	2207.75	4056.59	4061.66		4061.79	0.001418	2.85	775.4	323.33	0.32	2771.37	2501.58	323.33	323.33
Reach	464205	Max WS	2207.3	4056.27	4061.14		4061.21	0.000459	2.12	1041.76	291.62	0.2	2766.81	2497.03	291.62	291.62
Reach	463699	Max WS	2207.46	4056.02	4060.79		4060.89	0.000792	2.48	890.65	295.9	0.25	2763.4	2493.61	295.9	295.9
Reach	463203.5	Max WS	2207.09	4055.68	4060.47		4060.54	0.000553	2.11	1047.9	340	0.21	2759.78	2490	340	340
Reach	462719.8	Max WS	2206.89	4055.35	4060.07		4060.18	0.000982	2.68	823.51	285.34	0.28	2756.31	2486.52	285.34	285.34
Reach	462215.1	Max WS	2206.6	4055	4059.74		4059.81	0.000522	2.06	1071.09	343.94	0.21	2752.67	2482.88	343.94	343.94
Reach	461714.9	Max WS	2206.58	4054.65	4059.45		4059.52	0.000655	2.15	1024.43	364.99	0.23	2748.6	2478.81	364.99	364.99
Reach	461214.6	Max WS	2206.17	4054.31	4059.21		4059.26	0.0004	1.89	1164.36	347.08	0.18	2744.51	2474.72	347.08	347.08
Reach	460712.7	Max WS	2206.2	4053.97	4059.02		4059.07	0.000364	1.83	1204.25	358.01	0.18	2740.44	2470.66	358.01	358.01
Reach	460212	Max WS	2205.91	4053.62	4058.82		4058.88	0.000427	1.93	1144.47	349.85	0.19	2736.38	2466.59	349.85	349.85
Reach	459711.8	Max WS	2205.7	4053.28	4058.64		4058.69	0.000324	1.78	1240.27	347.92	0.17	2732.37	2462.58	347.92	347.92
Reach	459200.4	Max WS	2205.51	4052.93	4058.49		4058.54	0.000295	1.7	1298.05	362.96	0.16	2728.2	2458.41	362.96	362.96
Reach	458710.4	Max WS	2205.32	4052.59	4058.33		4058.38	0.000357	1.77	1245.86	377.11	0.17	2724.03	2454.25	377.11	377.11
Reach	458197.4	Max WS	2205.06	4052.24	4058.05		4058.13	0.00063	2.22	993.11	327.16	0.22	2719.89	2450.1	327.16	327.16
Reach	457685.1	Max WS	2204.72	4051.89	4057.72		4057.8	0.000684	2.3	959.73	319.77	0.23	2716.08	2446.3	319.77	319.77
Reach	457221	Max WS	2204.61	4051.57	4057.5		4057.56	0.000378	1.88	1175.49	340.14	0.18	2712.57	2442.78	340.14	340.14
Reach	456765.8	Max WS	2204.14	4051.42	4057.35	4054.43	4057.4	0.000313	1.77	1246.4	340.26	0.16	2709.01	2439.23	340.26	340.26
Reach	456697.7	Bridge														
Reach	456629.6	Max WS	2204.35	4051.38	4057.3		4057.35	0.00034	1.77	1242.51	383.39	0.17	2707.93	2438.16	361.66	383.39
Reach	455424.2	Max WS	2203.94	4050.98	4056.74		4056.84	0.00053	2.53	882.07	218.68	0.22	2699.6	2430.31	205.95	218.68
Reach	454174.4	Max WS	2203.39	4050.03	4055.85		4055.98	0.000858	2.87	768.23	214.97	0.27	2693.38	2424.27	214.97	214.97
Reach	453676.6	Max WS	2203.31	4049.65	4055.55		4055.64	0.000527	2.31	952.48	258.19	0.21	2690.68	2421.56	258.19	258.19
Reach	452841.8	Max WS	2202.95	4049.01	4054.82		4054.97	0.001103	3.11	709.17	214.76	0.3	2686.15	2417.03	214.76	214.76

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	451862.5	Max WS	2202.85	4048.26	4053.96		4054.06	0.000781	2.54	867.74	274.46	0.25	2680.65	2411.53	274.46	274.46
Reach	451162	Max WS	2202.57	4047.93	4053.52		4053.6	0.000529	2.35	938.48	250.13	0.21	2676.43	2407.31	250.13	250.13
Reach	450661	Max WS	2202.39	4047.69	4053.25		4053.34	0.000515	2.4	917.26	231.84	0.21	2673.66	2404.54	231.84	231.84
Reach	450160.5	Max WS	2202.18	4047.45	4052.93		4053.04	0.000691	2.69	819.21	216.25	0.24	2671.08	2401.97	216.25	216.25
Reach	449659.8	Max WS	2202.1	4047.22	4052.57		4052.68	0.000775	2.62	840.59	253.15	0.25	2668.39	2399.27	253.15	253.15
Reach	449159.6	Max WS	2201.9	4046.98	4052.25		4052.33	0.000599	2.35	938.9	275.14	0.22	2665.35	2396.24	275.14	275.14
Reach	448572.3	Max WS	2201.79	4046.7	4051.77		4051.88	0.000945	2.71	811.24	268.35	0.28	2661.69	2392.57	268.35	268.35
Reach	448155.2	Max WS	2201.65	4046.02	4051.33		4051.47	0.001032	2.98	737.68	225.78	0.29	2659.32	2390.21	225.78	225.78
Reach	447654.5	Max WS	2201.63	4045.2	4050.82		4050.96	0.001012	2.97	741.63	225.56	0.29	2656.73	2387.61	225.56	225.56
Reach	447152.2	Max WS	2201.33	4044.39	4050.37		4050.5	0.000967	2.83	777.29	244.98	0.28	2654.02	2384.9	244.98	244.98
Reach	446656.3	Max WS	2201.3	4043.57	4050.01		4050.12	0.000609	2.68	821.06	197.08	0.23	2651.5	2382.39	197.08	197.08
Reach	445906.5	Max WS	2200.89	4042.35	4049.65		4049.73	0.000391	2.28	964.5	212.22	0.19	2647.98	2378.86	212.22	212.22
Reach	445728	Max WS	2201.05	4042.3	4049.58	4046.5	4049.66	0.000399	2.28	981.35	261.57	0.19	2646.99	2377.99	213.52	261.57
Reach	445614.3	Bridge														
Reach	445500.5	Max WS	2200.8	4042.24	4049.19		4049.4	0.001836	3.72	591.99	200.3	0.38	2645.79	2376.91	200.3	200.3
Reach	444895.1	Max WS	2200.72	4042.07	4048.34		4048.5	0.001182	3.18	691.74	211.88	0.31	2642.92	2374.05	211.88	211.88
Reach	444155	Max WS	2200.51	4041.86	4047.77		4047.86	0.000568	2.42	909.36	243.89	0.22	2639.05	2370.18	243.89	243.89
Reach	443647.8	Max WS	2200.14	4041.72	4047.47		4047.56	0.000627	2.45	896.37	252.49	0.23	2636.16	2367.29	252.49	252.49
Reach	443140	Max WS	2200.26	4041.58	4047.23		4047.29	0.00045	2.11	1041.36	287.76	0.2	2633.01	2364.14	287.76	287.76
Reach	442783.7	Max WS	2200.09	4041.48	4047.06		4047.14	0.000429	2.2	998.99	269.41	0.2	2630.73	2361.86	269.41	269.41
Reach	442137.5	Max WS	2199.77	4041.06	4046.81		4046.88	0.000396	2.13	1032.41	256.01	0.19	2626.83	2357.96	256.01	256.01
Reach	441637.4	Max WS	2199.59	4040.74	4046.61		4046.68	0.0004	2.15	1022.74	251.87	0.19	2623.92	2355.05	251.87	251.87
Reach	441139.6	Max WS	2199.41	4040.42	4046.39		4046.47	0.000468	2.18	1008.51	273.32	0.2	2620.92	2352.04	273.32	273.32
Reach	440639.2	Max WS	2199.24	4040.1	4046.17		4046.25	0.000437	2.17	1012.45	261.79	0.19	2617.84	2348.97	261.79	261.79
Reach	440140.2	Max WS	2199.18	4039.77	4045.96		4046.03	0.00043	2.23	986.49	242.48	0.19	2614.96	2346.08	242.48	242.48
Reach	439640	Max WS	2198.83	4039.45	4045.74		4045.81	0.000458	2.16	1017.94	275.29	0.2	2611.98	2343.11	275.29	275.29
Reach	439140	Max WS	2198.78	4039.12	4045.5		4045.58	0.000494	2.22	991.04	271.6	0.2	2608.84	2339.97	271.6	271.6
Reach	438639.6	Max WS	2198.49	4038.8	4045.09		4045.22	0.00098	2.79	788.18	256.5	0.28	2605.81	2336.94	256.5	256.5
Reach	438137.8	Max WS	2198.34	4038.47	4044.55		4044.71	0.001062	3.21	684.84	191.51	0.3	2603.23	2334.36	191.51	191.51
Reach	437636.7	Max WS	2198.28	4038.15	4044.29		4044.35	0.000387	1.94	1132.51	317.75	0.18	2600.3	2331.43	317.75	317.75
Reach	437135.2	Max WS	2197.95	4037.82	4044.08		4044.15	0.00044	2.11	1041.71	283.69	0.19	2596.84	2327.97	283.69	283.69
Reach	436633.7	Max WS	2197.82	4037.5	4043.86		4043.93	0.000443	2.03	1082.88	314.92	0.19	2593.39	2324.52	314.92	314.92
Reach	436294	Max WS	2197.83	4037.28	4043.39		4043.54	0.001936	3.17	692.27	310.62	0.37	2590.95	2322.08	310.62	310.62
Reach	435633.6	Max WS	2197.48	4036.91	4042.66		4042.74	0.00059	2.26	974.28	300.19	0.22	2586.32	2317.45	300.19	300.19
Reach	435133.4	Max WS	2197.21	4036.62	4042.42		4042.48	0.000461	2.06	1067.07	313.41	0.2	2582.8	2313.93	313.41	313.41
Reach	434633.2	Max WS	2197.07	4036.34	4042.28		4042.31	0.000207	1.59	1383.31	328.84	0.14	2579.11	2310.24	328.84	328.84
Reach	434118.9	Max WS	2197.04	4036.04	4041.94		4042.08	0.000752	2.93	749.51	186.76	0.26	2576.07	2307.2	186.76	186.76
Reach	433704.5	Max WS	2196.79	4035.81	4040.13		4040.82	0.005798	6.68	328.82	109.54	0.68	2574.66	2305.79	109.54	109.54
Reach	433356.2	Max WS	2196.6	4034.07	4038.84	4037.57	4039.27	0.003174	5.26	417.46	126.74	0.51	2573.72	2304.84	126.74	126.74
Reach	433295.3	Bridge														
Reach	433232.2	Max WS	2196.78	4033.35	4037.82		4038.33	0.004413	5.75	382.3	130.62	0.59	2573.36	2304.49	130.62	130.62
Reach	433027.3	Max WS	2196.71	4032.33	4036.99	4035.93	4037.48	0.00394	5.63	389.97	126.09	0.56	2572.76	2303.89	126.09	126.09
Reach	432974.1	Bridge														
Reach	432920.8	Max WS	2196.72	4031.82	4035.68		4036.57	0.011372	7.56	290.43	134.09	0.91	2572.44	2303.57	134.09	134.09
Reach	432626.8	Max WS	2196.69	4029.17	4034.56		4034.61	0.00022	1.76	1251.46	277.14	0.14	2571.06	2302.18	277.14	277.14
Reach	432068.7	Max WS	2196.46	4027.33	4034.28		4034.38	0.000647	2.45	896.46	260.23	0.23	2567.61	2298.74	260.23	260.23
Reach	431795.4	Max WS	2196.44	4025.99	4034.06		4034.17	0.000921	2.71	809.7	261.51	0.27	2565.98	2297.1	261.51	261.51
Reach	431099.5	Max WS	2196.03	4025.67	4033.58		4033.66	0.000602	2.36	930.13	269.68	0.22	2561.73	2292.86	269.68	269.68
Reach	430594.6	Max WS	2195.91	4025.45	4033.32		4033.4	0.000479	2.25	974.1	255.05	0.2	2558.69	2289.82	255.05	255.05
Reach	430078.9	Max WS	2195.68	4025.21	4033.06		4033.14	0.000567	2.35	935.65	261.96	0.22	2555.63	2286.76	261.96	261.96
Reach	429585.9	Max WS	2195.51	4024.99	4032.85		4032.92	0.000386	2.13	1032.59	251.12	0.18	2552.73	2283.86	251.12	251.12
Reach	429093.4	Max WS	2195.35	4024.77	4032.6		4032.69	0.000572	2.32	945.01	270.56	0.22	2549.78	2280.91	270.56	270.56
Reach	428598.9	Max WS	2195.32	4024.55	4032.32		4032.4	0.000702	2.34	939.56	308.88	0.24	2546.49	2277.62	308.88	308.88
Reach	428082.9	Max WS	2195.04	4024.31	4032.07		4032.14	0.000491	2.1	1043.03	308.73	0.2	2542.83	2273.96	308.73	308.73
Reach	427370	Max WS	2194.72	4023.99	4031.59		4031.68	0.000878	2.4	916.16	344.69	0.26	2537.49	2268.61	344.69	344.69
Reach	426550.7	Max WS	2194.52	4023.5	4030.98		4031.07	0.000619	2.52	871.1	233.84	0.23	2532.04	2263.17	233.84	233.84
Reach	426062.2	Max WS	2194.34	4023.2	4030.73		4030.81	0.000425	2.31	949.44	217.29	0.19	2529.52	2260.64	217.29	217.29
Reach	425563.2	Max WS	2194.13	4022.9	4030.46		4030.53	0.000695	2.24	977.55	341.02	0.23	2526.32	2257.44	341.02	341.02
Reach	425024.9	Max WS	2193.98	4022.58	4029.98		4030.08	0.001103	2.54	863.37	378.72	0.29	2521.87	2253.15	353.33	378.72



**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	423810.3	Max WS	2193.57	4021.85	4029.02		4029.12	0.000563	2.55	861.47	211.43	0.22	2513.65	2245.28	211.43	211.43
Reach	423584	Max WS	2193.56	4022.91	4028.8		4028.93	0.001334	2.9	755.79	292.75	0.32	2512.34	2243.97	292.75	292.75
Reach	423565.8	Max WS	2193.46	4023	4028.78		4028.91	0.001536	2.94	747.32	316.3	0.34	2512.21	2243.84	316.3	316.3
Reach	423306.1	Max WS	2193.41	4021.98	4028.47		4028.61	0.000915	3.03	723.28	196.91	0.28	2510.68	2242.31	196.91	196.91
Reach	423053.1	Max WS	2193.24	4018.88	4028.4		4028.46	0.000258	1.96	1117.01	225	0.16	2509.45	2241.09	225	225
Reach	423002.7	Max WS	2193.31	4018.88	4028.39		4028.45	0.000267	1.99	1102.13	222.99	0.16	2509.19	2240.83	222.99	222.99
Reach	422800.5	Max WS	2193.24	4018.89	4028.28		4028.38	0.000421	2.53	868.47	171.54	0.2	2508.28	2239.91	171.54	171.54
Reach	422499	Max WS	2193.08	4019.03	4028.17		4028.26	0.000406	2.38	921.71	194.44	0.19	2507.01	2238.65	194.44	194.44
Reach	421995.6	Max WS	2192.9	4019.26	4027.94		4028.04	0.000474	2.56	857.5	182.18	0.21	2504.84	2236.47	182.18	182.18
Reach	421495.4	Max WS	2192.73	4019.48	4027.75		4027.84	0.000363	2.35	931.37	183.92	0.18	2502.73	2234.37	183.92	183.92
Reach	420995.2	Max WS	2192.61	4019.71	4027.58		4027.66	0.000345	2.31	947.62	185.35	0.18	2500.61	2232.25	185.35	185.35
Reach	420495	Max WS	2192.41	4019.94	4027.39		4027.48	0.000364	2.43	901.26	169.87	0.19	2498.57	2230.21	169.87	169.87
Reach	419954.8	Max WS	2192.11	4020.18	4027.23		4027.3	0.000302	2.22	989.03	187.42	0.17	2496.36	2227.99	187.42	187.42
Reach	419495	Max WS	2192.04	4019.94	4027.08		4027.16	0.000336	2.28	959.89	188.5	0.18	2494.37	2226.01	188.5	188.5
Reach	418994.9	Max WS	2191.86	4019.67	4026.92		4027	0.000309	2.24	977.73	184.67	0.17	2492.23	2223.87	184.67	184.67
Reach	418494.8	Max WS	2191.88	4019.41	4026.79		4026.86	0.000245	2.06	1066.56	192.37	0.15	2490.07	2221.7	192.37	192.37
Reach	417994.7	Max WS	2191.46	4019.15	4026.66		4026.73	0.000277	2.07	1058.43	208.22	0.16	2487.77	2219.4	208.22	208.22
Reach	417393.7	Max WS	2191.24	4018.82	4026.24		4026.35	0.001019	2.69	813.9	287.53	0.28	2484.35	2215.98	287.53	287.53
Reach	417250.5	Max WS	2191.17	4018.75	4026.13		4026.22	0.000835	2.48	884.83	305.51	0.26	2483.37	2215.01	305.51	305.51
Reach	417054.9	Max WS	2191.12	4018.64	4026.02	4022.14	4026.09	0.000574	2.18	1006.1	317.59	0.22	2481.97	2213.61	317.59	317.59
Reach	416998.4	Bridge														
Reach	416941.9	Max WS	2191.25	4018.58	4025.94		4026.02	0.000517	2.29	957.15	258.67	0.21	2481.24	2212.88	258.67	258.67
Reach	416308	Max WS	2191.04	4018.24	4025.62		4025.68	0.000611	2.06	1064.41	384.02	0.22	2476.56	2208.2	384.02	384.02
Reach	415926.2	Max WS	2190.87	4018.11	4025.34		4025.42	0.000807	2.29	955.14	360.9	0.25	2473.3	2204.93	360.9	360.9
Reach	415054.5	Max WS	2190.57	4017.82	4024.11		4024.34	0.001717	3.87	566.66	171.91	0.38	2467.97	2199.6	171.91	171.91
Reach	414599	Max WS	2190.45	4017.67	4023.49		4023.66	0.001263	3.23	678.81	213.66	0.32	2465.95	2197.59	213.66	213.66
Reach	414051.4	Max WS	2190.31	4015.81	4022.98		4023.1	0.000669	2.79	785.53	191.54	0.24	2463.4	2195.04	191.54	191.54
Reach	413553.8	Max WS	2190.11	4014.11	4022.69		4022.78	0.000548	2.42	904.15	233.68	0.22	2460.98	2192.61	233.68	233.68
Reach	413035.8	Max WS	2189.97	4012.35	4022.31		4022.39	0.000959	2.27	962.65	286.31	0.22	2457.88	2189.52	286.31	286.31
Reach	412782.9	Max WS	2189.94	4014.14	4022.08		4022.16	0.000858	2.25	973.17	271.2	0.21	2456.27	2187.9	271.2	271.2
Reach	412531.3	Max WS	2189.84	4014.89	4021.77		4021.91	0.001102	3.02	726.32	176.43	0.26	2454.97	2186.63	170.67	176.43
Reach	412284.1	Max WS	2189.75	4012.48	4021.6		4021.71	0.000517	2.66	823.38	175.79	0.22	2453.97	2185.64	175.79	175.79
Reach	412033.6	Max WS	2189.57	4012.57	4021.54		4021.61	0.000332	2.13	1027.29	221.07	0.17	2452.83	2184.5	221.07	221.07
Reach	411504.9	Max WS	2189.54	4013.17	4021.24		4021.37	0.000586	2.8	782.25	169.54	0.23	2450.46	2182.13	169.54	169.54
Reach	410919.2	Max WS	2189.27	4013.12	4020.99		4021.08	0.000368	2.43	902.25	172.3	0.19	2448.16	2179.83	172.3	172.3
Reach	410375.8	Max WS	2189.08	4013.08	4020.77		4020.84	0.000568	2.15	1018.14	322.38	0.21	2445.08	2176.75	322.38	322.38
Reach	409873.6	Max WS	2188.74	4013.04	4020.4		4020.5	0.000907	2.52	868.16	309.86	0.27	2441.43	2173.1	309.86	309.86
Reach	409372.7	Max WS	2188.76	4013	4020.08		4020.18	0.000426	2.54	861.63	171.07	0.2	2438.67	2170.34	171.07	171.07
Reach	408868.5	Max WS	2188.46	4012.97	4019.93		4019.98	0.00034	1.84	1190.63	328.49	0.17	2435.78	2167.45	328.49	328.49
Reach	408364.7	Max WS	2188.16	4012.93	4019.73		4019.8	0.000429	2.1	1039.68	274.9	0.19	2432.29	2163.96	274.9	274.9
Reach	407862.4	Max WS	2188.22	4012.89	4019.56		4019.62	0.000285	1.97	1110.75	240.73	0.16	2429.31	2160.98	240.73	240.73
Reach	407355.8	Max WS	2187.87	4012.85	4019.31		4019.4	0.000663	2.33	939.48	297.31	0.23	2426.18	2157.86	297.31	297.31
Reach	406854.3	Max WS	2187.73	4012.81	4019.07		4019.13	0.000467	2.07	1056.92	306.14	0.2	2422.71	2154.38	306.14	306.14
Reach	406346.8	Max WS	2187.44	4012.77	4018.88		4018.93	0.000332	1.93	1132.73	284.79	0.17	2419.27	2150.94	284.79	284.79
Reach	405853.9	Max WS	2187.31	4012.34	4018.54		4018.64	0.000897	2.53	863.83	304.17	0.26	2415.94	2147.61	304.17	304.17
Reach	405353.8	Max WS	2187.07	4011.9	4018.29		4018.34	0.000302	1.86	1174.82	290.34	0.16	2412.52	2144.19	290.34	290.34
Reach	404853.2	Max WS	2186.95	4011.46	4018.07		4018.15	0.000491	2.22	985.73	265.96	0.2	2409.33	2141	265.96	265.96
Reach	404353.7	Max WS	2186.86	4011.02	4017.94		4017.98	0.000184	1.59	1371.4	293.12	0.13	2406.12	2137.79	293.12	293.12
Reach	403856.6	Max WS	2186.63	4010.59	4017.62		4017.73	0.000899	2.61	837.83	281.63	0.27	2402.84	2134.51	281.63	281.63
Reach	403366.4	Max WS	2186.54	4010.16	4017.17		4017.3	0.001035	2.82	776.55	257.64	0.29	2399.81	2131.48	257.64	257.64
Reach	402867.7	Max WS	2186.41	4009.72	4016.71		4016.82	0.000891	2.73	800.93	249.05	0.27	2396.91	2128.58	249.05	249.05
Reach	402367	Max WS	2186	4009.27	4016.37		4016.43	0.000643	2.01	1085.26	287.21	0.18	2393.82	2125.49	287.21	287.21
Reach	401866.8	Max WS	2185.95	4008.84	4016.12		4016.17	0.000441	1.66	1316.25	349.37	0.15	2390.17	2121.84	349.37	349.37
Reach	401195.1	Max WS	2185.59	4008.25	4015.8		4015.85	0.000488	1.93	1129.69	258.16	0.16	2385.49	2117.16	258.16	258.16
Reach	400857.9	Max WS	2185.57	4008.22	4015.5		4015.6	0.001013	2.55	855.53	222.29	0.23	2383.63	2115.3	222.29	222.29
Reach	400376.8	Max WS	2185.39	4008.19	4015.09		4015.2	0.000672	2.67	831.46	305.53	0.24	2380.53	2112.89	305.53	305.53
Reach	399679.5	Max WS	2185.09	4008.13	4014.56		4014.68	0.000833	2.74	798.36	235.72	0.26	2376.19	2109.29	235.72	235.72
Reach	398658	Max WS	2184.74	4008.06	4013.65		4013.78	0.000913	2.89	757.19	222.19	0.28	2370.82	2103.92	222.19	222.19
Reach	397844.8	Max WS	2184.46	4008	4013.18		4013.25	0.000395	2.02	1083.71	290.46	0.18	2366.04	2099.14	290.46	290.46

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	396867.3	Max WS	2184.15	4007.93	4012.81		4012.87	0.000395	2	1092.13	303.04	0.18	2359.38	2092.48	303.04	303.04
Reach	396366.4	Max WS	2183.98	4007.89	4012.48		4012.58	0.00075	2.56	853.77	262.02	0.25	2356.13	2089.23	262.02	262.02
Reach	395630.2	Max WS	2183.77	4007.84	4012.11		4012.16	0.000402	1.79	1222.17	400.09	0.18	2350.53	2083.63	400.09	400.09
Reach	394856.7	Max WS	2183.37	4006.42	4011.67		4011.74	0.00066	2.18	1003.52	351.16	0.23	2343.86	2076.96	351.16	351.16
Reach	394355.5	Max WS	2183.22	4005.48	4011.35		4011.43	0.000553	2.2	994.57	299.83	0.21	2340.12	2073.22	299.83	299.83
Reach	393850	Max WS	2183.24	4004.56	4011.05		4011.13	0.000612	2.31	943.18	286.62	0.22	2336.72	2069.81	286.62	286.62
Reach	393345.9	Max WS	2183.09	4003.62	4009.01		4009.64	0.005815	6.39	341.49	121.18	0.67	2334.36	2067.45	121.18	121.18
Reach	392845.1	Max WS	2182.87	4002	4007.81		4007.95	0.000692	3.02	721.87	158.67	0.25	2332.75	2065.85	158.67	158.67
Reach	392345.7	Max WS	2182.82	4001.78	4007.49		4007.62	0.000645	2.95	740.05	161.08	0.24	2330.91	2064.01	161.08	161.08
Reach	391844	Max WS	2182.65	4000.86	4007.16		4007.29	0.000676	2.89	755.43	175.66	0.25	2328.97	2062.07	175.66	175.66
Reach	391341.1	Max WS	2182.56	3999.92	4006.85		4006.98	0.00059	2.88	756.64	158.51	0.23	2327.05	2060.14	158.51	158.51
Reach	390841.2	Max WS	2182.29	3999	4006.6		4006.71	0.000507	2.65	822.28	174.13	0.22	2325.14	2058.24	174.13	174.13
Reach	390451.5	Max WS	2182.29	3998.28	4006.39		4006.51	0.000526	2.73	798.23	165.77	0.22	2323.62	2056.72	165.77	165.77
Reach	390310.7	Max WS	2182.22	3998.24	4006.25		4006.42	0.000765	3.31	658.46	134.91	0.26	2323.13	2056.23	134.91	134.91
Reach	390175.1	Max WS	2182.14	3998.2	4006.07	4003.17	4006.3	0.001006	3.82	571.19	115.56	0.3	2322.74	2055.84	115.56	115.56
Reach	390139.4	Bridge														
Reach	390103.7	Max WS	2182.19	3998.18	4006.09		4006.29	0.000893	3.59	608.28	123.89	0.29	2322.55	2055.65	123.89	123.89
Reach	389683.8	Max WS	2182.06	3998.06	4005.59		4005.84	0.001251	4.01	543.54	120.92	0.33	2321.37	2054.47	120.92	120.92
Reach	389349.5	Max WS	2182.16	3997.96	4005.37		4005.52	0.000642	3.07	710.48	144.09	0.24	2320.35	2053.45	144.09	144.09
Reach	388838.1	Max WS	2182.04	3997.81	4005		4005.16	0.000754	3.23	675.23	142.94	0.26	2318.67	2051.77	142.94	142.94
Reach	388337.6	Max WS	2181.87	3997.66	4004.7		4004.84	0.000544	2.99	729.01	134.65	0.23	2317.07	2050.17	134.65	134.65
Reach	387630.2	Max WS	2181.74	3997.46	4004.35		4004.48	0.000503	2.85	765.98	145.68	0.22	2314.8	2047.91	144.03	145.68
Reach	386835.1	Max WS	2181.26	3997.23	4003.93		4004.06	0.000552	2.89	755.12	149.47	0.23	2312.1	2045.23	149.47	149.47
Reach	386454.9	Max WS	2181.24	3997.12	4003.78		4003.87	0.000433	2.41	906.22	198.43	0.2	2310.59	2043.71	198.43	198.43
Reach	385837.1	Max WS	2180.93	3996.94	4003.46		4003.57	0.000538	2.74	796.63	168.1	0.22	2307.99	2041.11	168.1	168.1
Reach	385336.9	Max WS	2180.91	3996.79	4003.15		4003.28	0.000635	2.98	731.77	153.82	0.24	2306.14	2039.27	153.82	153.82
Reach	384836.9	Max WS	2180.83	3996.65	4002.77		4002.93	0.000804	3.2	681.61	153.96	0.27	2304.37	2037.5	153.96	153.96
Reach	384336.5	Max WS	2180.57	3996.5	4002.46		4002.58	0.000603	2.8	777.97	173.33	0.23	2302.49	2035.62	173.33	173.33
Reach	383837.9	Max WS	2180.4	3996.36	4002.19		4002.29	0.000577	2.46	884.68	232.74	0.22	2300.17	2033.29	232.74	232.74
Reach	383193.4	Max WS	2180.27	3996.17	4001.96		4002.01	0.000291	1.73	1263.36	339.74	0.16	2295.93	2029.06	339.74	339.74
Reach	382831.5	Max WS	2180.19	3995.86	4001.68		4001.79	0.000961	2.73	798.52	264.91	0.28	2293.42	2026.55	264.91	264.91
Reach	382331.5	Max WS	2180.03	3995.44	4001.36		4001.44	0.000451	2.28	954.45	233.63	0.2	2290.56	2023.69	233.63	233.63
Reach	381829.6	Max WS	2179.81	3995.02	4001.04		4001.16	0.000691	2.79	781.26	195.41	0.25	2288.09	2021.22	195.41	195.41
Reach	381328.9	Max WS	2179.74	3994.59	4000.76		4000.86	0.000522	2.56	851.79	195.59	0.22	2285.84	2018.97	195.59	195.59
Reach	380827.9	Max WS	2179.56	3994.16	4000.48		4000.58	0.000607	2.61	835.84	210.12	0.23	2283.51	2016.63	210.12	210.12
Reach	380331.7	Max WS	2179.18	3993.74	4000.23		4000.32	0.000439	2.42	901.91	197.9	0.2	2281.18	2014.31	197.9	197.9
Reach	379830.9	Max WS	2179.22	3993.32	3999.99		4000.09	0.000493	2.53	860.05	209.35	0.21	2278.84	2011.97	209.35	209.35
Reach	379330.6	Max WS	2179.18	3992.89	3999.7		3999.82	0.00062	2.75	793.55	185.66	0.23	2276.57	2009.7	185.66	185.66
Reach	379102.3	Max WS	2179	3992.7	3999.61		3999.7	0.000398	2.37	920.53	193.79	0.19	2275.58	2008.71	193.79	193.79
Reach	378830.5	Max WS	2179.08	3992.55	3999.44		3999.56	0.000643	2.76	788.61	386.53	0.24	2273.77	2007.52	187.76	386.53
Reach	378330.5	Max WS	2178.74	3992.29	3999.19		3999.28	0.00048	2.42	900.24	251.39	0.21	2270.11	2005.23	211.16	251.39
Reach	377830.4	Max WS	2178.53	3992.03	3998.97		3999.06	0.000432	2.35	928.34	210.32	0.2	2267.45	2002.81	210.32	210.32
Reach	377330.4	Max WS	2178.48	3991.76	3998.77		3998.85	0.00039	2.28	955.02	209.51	0.19	2265.04	2000.4	209.51	209.51
Reach	376830.4	Max WS	2178.21	3991.5	3998.19		3998.38	0.001591	3.48	626.51	210.19	0.35	2262.63	1997.99	210.19	210.19
Reach	376330	Max WS	2178.13	3991.24	3997.78		3997.86	0.000519	2.35	926.32	241.18	0.21	2260.04	1995.4	241.18	241.18
Reach	375830.3	Max WS	2177.86	3990.97	3997.4		3997.52	0.000858	2.8	778.16	228.07	0.27	2257.35	1992.71	228.07	228.07
Reach	375324.5	Max WS	2177.71	3990.71	3997.06		3997.15	0.000607	2.47	880.45	1292.98	0.23	2248.7	1989.99	239.54	1292.98
Reach	374826.1	Max WS	2177.61	3990.44	3996.78		3996.85	0.000592	2.1	1038.92	837.7	0.22	2235.79	1986.58	356.47	837.7
Reach	374327.4	Max WS	2177.42	3990.18	3996.56		3996.61	0.000378	1.78	1224.29	403.52	0.18	2228.54	1982.34	383.86	403.52
Reach	373844	Max WS	2177.28	3989.93	3996.31		3996.39	0.000543	2.16	1010.3	495.81	0.21	2223.35	1978.48	311.42	495.81
Reach	373343.4	Max WS	2177.09	3989.67	3996.03		3996.11	0.000555	2.37	920.46	353.84	0.22	2218.41	1975.25	251.34	353.84
Reach	372843.2	Max WS	2176.96	3989.4	3995.59		3995.72	0.001032	2.93	742.66	272.96	0.29	2214.8	1972.47	233.13	272.96
Reach	372339.6	Max WS	2176.77	3989.13	3995.17		3995.28	0.000759	2.64	825.44	304.95	0.25	2211.48	1969.73	241.03	304.95
Reach	371836.6	Max WS	2176.66	3988.87	3994.93		3994.99	0.00041	1.97	1102.81	371.31	0.19	2207.61	1966.52	314.79	371.31
Reach	371335.2	Max WS	2176.16	3988.61	3994.78		3994.82	0.000304	1.55	1401.19	457.54	0.16	2202.83	1962.08	457.54	457.54
Reach	370850.8	Max WS	2175.84	3988.35	3994.57		3994.65	0.000405	2.28	955.93	616.53	0.19	2197.12	1958.32	217.06	616.53
Reach	370379.4	Max WS	2176.04	3988.1	3994.31		3994.42	0.000596	2.62	831.24	877.3	0.23	2188.89	1956.04	204.66	877.3
Reach	369851.8	Max WS	2175.87	3987.74	3993.85		3994	0.000992	3.1	701.89	479.9	0.29	2181.03	1953.61	196.45	479.9
Reach	369351.6	Max WS	2175.65	3987.41	3993.38		3993.52	0.000989	3.02	719.39	354.14	0.29	2176.24	1951.29	208.51	354.14

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	368851.5	Max WS	2175.54	3987.07	3992.92		3993.05	0.000938	2.84	766.88	383.38	0.28	2172.01	1948.74	235.69	383.38
Reach	368351.4	Max WS	2175.33	3986.73	3992.57		3992.66	0.000646	2.41	903.75	311.28	0.23	2168.06	1945.84	268.33	311.28
Reach	367851.4	Max WS	2175.16	3986.39	3992.29		3992.37	0.000536	2.18	997.12	298.81	0.21	2164.55	1942.59	298.81	298.81
Reach	367351.9	Max WS	2174.99	3986.06	3991.99		3992.07	0.00067	2.3	946.94	310.09	0.23	2161.06	1939.1	310.09	310.09
Reach	366850.5	Max WS	2174.81	3985.72	3991.66		3991.75	0.000627	2.51	866.25	235.22	0.23	2157.92	1935.96	235.22	235.22
Reach	366341.9	Max WS	2174.62	3985.38	3991.27		3991.4	0.000786	2.86	760.34	201.42	0.26	2155.37	1933.41	201.42	201.42
Reach	365837.6	Max WS	2174.5	3985.04	3991.02		3991.08	0.000514	2.02	1076.75	353.51	0.2	2152.16	1930.2	353.51	353.51
Reach	365337.2	Max WS	2174.33	3984.7	3990.8		3990.86	0.000383	1.92	1131.36	318.18	0.18	2148.3	1926.34	318.18	318.18
Reach	364838.8	Max WS	2174.04	3984.36	3990.64		3990.69	0.000322	1.8	1204.81	327.43	0.17	2144.61	1922.65	327.43	327.43
Reach	364349.5	Max WS	2173.97	3984.03	3990.3		3990.44	0.000721	3	724.92	166.93	0.25	2141.83	1919.87	166.93	166.93
Reach	363853	Max WS	2173.74	3983.7	3990.03		3990.13	0.000547	2.53	859.69	208.77	0.22	2139.69	1917.73	208.77	208.77
Reach	363352.1	Max WS	2173.53	3983.36	3989.84		3989.9	0.000355	2.01	1083.44	270.34	0.18	2136.94	1914.98	270.34	270.34
Reach	363170.9	Max WS	2173.52	3983.24	3989.75		3989.83	0.000493	2.22	980.94	268.95	0.2	2135.82	1913.85	268.95	268.95
Reach	362948	Max WS	2173.45	3983.09	3989.66		3989.73	0.000416	2.11	1030	267.64	0.19	2134.44	1912.48	267.64	267.64
Reach	362599	Max WS	2173.39	3982.85	3989.51		3989.58	0.000423	2.12	1024.89	267.04	0.19	2132.3	1910.34	267.04	267.04
Reach	362452.3	Max WS	2173.2	3982.75	3989.43		3989.51	0.000525	2.27	958.24	265.97	0.21	2131.4	1909.44	265.97	265.97
Reach	361733.3	Max WS	2173.05	3982.26	3989.07		3989.15	0.000489	2.36	931	280.37	0.21	2126.84	1905.36	228.95	280.37
Reach	361325	Max WS	2173.05	3981.99	3988.92		3988.99	0.000315	2.12	1023.08	213.45	0.17	2124.52	1903.28	213.45	213.45
Reach	360680.3	Max WS	2172.55	3981.55	3988.46		3988.63	0.000811	3.31	655.4	141.78	0.27	2121.89	1900.66	141.78	141.78
Reach	360287.2	Max WS	2172.42	3981.29	3988.32		3988.4	0.000357	2.26	960.21	199.86	0.18	2120.35	1899.11	199.86	199.86
Reach	359912.1	Max WS	2172.57	3981.03	3988.2		3988.27	0.000337	2.12	1022.96	224.88	0.18	2118.52	1897.28	224.88	224.88
Reach	358807.7	Max WS	2172.11	3980.29	3987.06		3987.37	0.001368	4.46	487.06	118.27	0.39	2114.17	1892.93	118.27	118.27
Reach	358307.2	Max WS	2171.97	3979.95	3986.74		3986.88	0.000583	2.98	729.32	144.21	0.23	2112.66	1891.43	144.21	144.21
Reach	357323.3	Max WS	2171.73	3979.28	3986.16		3986.31	0.000578	3.04	713.75	135.07	0.23	2109.51	1888.27	135.07	135.07
Reach	356830.6	Max WS	2171.78	3978.95	3985.79		3985.96	0.000835	3.34	649.89	141.82	0.28	2107.94	1886.71	141.82	141.82
Reach	356332.1	Max WS	2171.43	3978.61	3985.47		3985.61	0.00061	2.9	747.6	159.6	0.24	2106.22	1884.98	159.6	159.6
Reach	355836.6	Max WS	2171.42	3978.27	3985.09		3985.26	0.000791	3.29	660.01	263.03	0.27	2103.83	1883.27	141.1	263.03
Reach	355332.1	Max WS	2171.17	3977.93	3984.63		3984.8	0.001033	3.33	651.07	167.64	0.3	2101.33	1881.48	167.64	167.64
Reach	354853.8	Max WS	2171.04	3977.61	3984.35		3984.44	0.000506	2.43	895.19	217.66	0.21	2099.21	1879.37	217.66	217.66
Reach	354329.2	Max WS	2170.94	3977.23	3984.02		3984.14	0.00066	2.71	801.73	239.02	0.24	2096.45	1876.84	202.12	239.02
Reach	353830.6	Max WS	2170.67	3976.86	3983.57		3983.73	0.000972	3.24	669.67	555.78	0.29	2091.94	1874.7	171.75	555.78
Reach	353335.6	Max WS	2170.67	3976.49	3983.02		3983.2	0.001175	3.42	634.81	541.14	0.31	2085.84	1872.74	173.29	541.14
Reach	352835.5	Max WS	2170.49	3976.12	3982.7		3982.78	0.000498	2.3	942	246.01	0.21	2081.33	1870.33	246.01	246.01
Reach	352325.3	Max WS	2170.29	3975.75	3982.43		3982.52	0.000517	2.38	910.69	816.56	0.21	2074.9	1867.54	231.53	816.56
Reach	351806.3	Max WS	2170.16	3975.37	3982.1		3982.22	0.000667	2.81	772.23	306.41	0.24	2067.75	1865.06	185.11	306.41
Reach	349969.8	Max WS	2169.41	3974.01	3981.2		3981.26	0.00039	1.96	1105.24	399.5	0.18	2052.84	1854.72	305.38	399.5
Reach	349315.9	Max WS	2169.18	3973.53	3980.94		3981.01	0.000383	2.01	1076.67	466.99	0.18	2046.5	1850.31	281.74	466.99
Reach	348816	Max WS	2169.09	3973.16	3980.67		3980.78	0.000554	2.62	827.93	201.9	0.22	2042.66	1847.53	201.9	201.9
Reach	347697.5	Max WS	2168.66	3972.34	3979.76		3979.95	0.000929	3.52	616.54	459.78	0.29	2034.67	1843.22	134.05	459.78
Reach	347308	Max WS	2168.54	3972.13	3979.47		3979.62	0.000787	3.09	702.08	365.8	0.26	2031.15	1841.88	164.85	365.8
Reach	346807.6	Max WS	2168.57	3971.85	3979.24		3979.32	0.000429	2.18	993.54	366.45	0.19	2026.92	1839.49	251.29	366.45
Reach	346307.2	Max WS	2168.38	3971.58	3979.02		3979.1	0.000455	2.19	993.4	305.83	0.2	2023.05	1836.55	260.73	305.83
Reach	345798.6	Max WS	2168.02	3971.3	3978.63		3978.77	0.000858	2.95	736.1	400.91	0.27	2018.94	1833.87	198.89	400.91
Reach	345303.2	Max WS	2168.09	3971.04	3978.38		3978.46	0.000407	2.13	1015.77	563.6	0.19	2013.77	1831.29	254.73	563.6
Reach	344808	Max WS	2167.83	3970.76	3977.99		3978.14	0.000876	3.18	682.01	482.51	0.28	2008.97	1828.9	166.36	482.51
Reach	344302.1	Max WS	2167.81	3970.49	3977.74		3977.82	0.000418	2.24	965.65	478.56	0.19	2004.15	1826.6	228.51	478.56
Reach	343804	Max WS	2167.54	3970.22	3977.45		3977.56	0.000617	2.66	816.57	477.72	0.23	1998.91	1824.14	201.63	477.72
Reach	343302.3	Max WS	2167.24	3969.95	3977.2		3977.28	0.000527	2.32	938.47	581.08	0.21	1993.11	1821.54	251.32	581.08
Reach	342803.5	Max WS	2167.08	3969.67	3976.73		3976.91	0.000983	3.48	623.53	558.51	0.3	1987.23	1819.27	145.06	558.51
Reach	342312.1	Max WS	2166.96	3969.41	3976.49		3976.57	0.000429	2.21	981.3	559.34	0.19	1981.23	1817.07	243.61	559.34
Reach	341824.8	Max WS	2166.77	3969.14	3976.04		3976.2	0.001113	3.23	671.72	456.72	0.31	1976.06	1814.63	193.52	456.72
Reach	341187.8	Max WS	2166.6	3968.79	3975.59		3975.68	0.000534	2.46	879.6	505.03	0.22	1969.07	1811.62	218.21	505.03
Reach	340325.9	Max WS	2166.42	3967.83	3975.02		3975.11	0.000809	2.44	888.7	492.94	0.25	1959.28	1806.42	307.3	492.94
Reach	339824.9	Max WS	2166.13	3967.26	3974.74		3974.81	0.000425	2.12	1023.41	269.39	0.19	1954.9	1803.1	269.39	269.39
Reach	339321.3	Max WS	2165.87	3966.7	3974.56		3974.61	0.000349	1.83	1183.46	375.06	0.17	1951.18	1799.62	334	375.06
Reach	338515.6	Max WS	2165.61	3965.8	3973.71		3974.01	0.00128	4.42	491.41	303.94	0.34	1945.02	1795.64	95.41	303.94
Reach	338066.2	Max WS	2165.63	3965.66	3973.37		3973.53	0.000866	3.25	666.01	351.02	0.28	1941.66	1794.35	155.34	351.02
Reach	336814.3	Max WS	2165.05	3965.26	3972.35		3972.5	0.000771	3.08	704.05	407.19	0.26	1930.86	1789.77	163.53	407.19
Reach	336313.8	Max WS	2165.09	3965.1	3972.12		3972.19	0.000451	2.13	1017.88	465.64	0.24	1925.97	1787.23	277.59	465.64

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	335817.2	Max WS	2164.98	3964.95	3971.96		3972.01	0.000286	1.79	1207.22	472.72	0.16	1920.83	1783.93	302.63	472.72
Reach	334814.4	Max WS	2164.61	3964.63	3971.56		3971.65	0.000456	2.33	929.84	392.22	0.2	1910.84	1777.87	223.27	392.22
Reach	334311.5	Max WS	2164.44	3964.47	3971.1		3971.29	0.000988	3.5	617.7	243.3	0.3	1907.19	1775.76	142.2	243.3
Reach	333942.1	Max WS	2164.16	3964.35	3970.37		3970.7	0.002257	4.62	467.96	155.99	0.43	1905.49	1774.6	132.47	155.99
Reach	332809.3	Max WS	2163.94	3963.51	3968.79		3968.93	0.000924	3.01	719.08	205.7	0.28	1900.79	1770.28	199.55	205.7
Reach	332309.3	Max WS	2163.67	3963.14	3968.42		3968.54	0.000646	2.77	780.32	186.87	0.24	1898.54	1768.06	186.87	186.87
Reach	331309.9	Max WS	2163.3	3962.4	3967.98		3968.04	0.000365	1.94	1114.49	328.01	0.18	1892.63	1762.49	298.74	328.01
Reach	331062	Max WS	2163.35	3962.21	3967.88		3967.94	0.000406	1.92	1127.15	397.87	0.18	1890.56	1760.7	332.52	397.87
Reach	330771.5	Max WS	2163.22	3962	3967.63		3967.75	0.000911	2.86	755.06	246.2	0.27	1888.39	1758.84	223.28	246.2
Reach	330352.2	Max WS	2163.02	3961.69	3967.28		3967.39	0.000833	2.73	790.95	406.73	0.26	1885.24	1756.64	235.02	406.73
Reach	330112.3	Max WS	2162.97	3961.51	3967.1		3967.21	0.000674	2.66	812.23	213.58	0.24	1883.51	1755.4	213.58	213.58
Reach	329968.8	Max WS	2163.01	3961.41	3967.05		3967.13	0.000505	2.26	956.15	258.55	0.21	1882.73	1754.63	258.55	258.55
Reach	329748.5	Max WS	2162.76	3961.25	3967		3967.04	0.000277	1.69	1280.84	357.05	0.15	1881.18	1753.1	344.56	357.05
Reach	329659.9	Max WS	2162.61	3961.18	3966.96		3967.01	0.000352	1.86	1164.38	327.25	0.17	1880.47	1752.42	324.44	327.25
Reach	329404.9	Max WS	2162.87	3960.99	3966.84		3966.91	0.000521	2.09	1032.91	323.11	0.21	1878.57	1750.52	323.11	323.11
Reach	329161.2	Max WS	2162.61	3960.81	3966.72		3966.79	0.000459	2.16	1001.44	271.29	0.2	1876.91	1748.86	270.97	271.29
Reach	328976.1	Max WS	2162.76	3961.05	3966.66		3966.71	0.000355	1.94	1117.26	294.32	0.18	1875.71	1747.66	294.32	294.32
Reach	328688.3	Max WS	2162.47	3961.43	3966.58		3966.63	0.000263	1.7	1279.62	356.17	0.15	1873.55	1745.61	327.05	356.17
Reach	328427	Max WS	2162.55	3960.66	3966.53		3966.57	0.000218	1.52	1421.97	374.31	0.14	1871.35	1743.51	374.31	374.31
Reach	328366.8	Max WS	2162.54	3960.56	3966.51		3966.55	0.000249	1.55	1392.92	392.25	0.15	1870.82	1742.98	392.25	392.25
Reach	328267.3	Max WS	2162.09	3960.24	3966.48		3966.52	0.000362	1.7	1271.88	522.08	0.17	1869.8	1742.06	413.08	522.08
Reach	328179	Max WS	2161.45	3959.84	3966.45		3966.49	0.000469	1.55	1400.68	614.11	0.15	1868.7	1741.2	431.66	614.11
Reach	328017	Max WS	2161.97	3958.5	3966.4		3966.43	0.000214	1.49	1518.27	587.51	0.14	1866.81	1739.69	382.67	587.51
Reach	327958.8	Max WS	1837.93	3957.55	3966.42	3960	3966.42	0.000031	0.63	2926.43	654.88	0.05	1866.02	1738.99	654.88	654.88
Reach	327958	Inl Struct														
Reach	327950.9	Max WS	1838.22	3956.2	3957.87		3958.07	0.000461	3.54	519.27	547.74	0.53	1865.91	1738.88	547.74	547.74
Reach	327904	Max WS	1838	3954.92	3957.88		3957.94	0.000762	1.92	954.94	570.95	0.23	1865.31	1738.28	570.95	570.95
Reach	327831	Max WS	1837.81	3954.73	3957.83		3957.89	0.000633	1.84	998.05	490.48	0.22	1864.42	1737.39	490.48	490.48
Reach	327618.1	Max WS	1837.37	3954.13	3957.65		3957.74	0.00076	2.35	781.28	273.55	0.25	1862.55	1735.53	273.55	273.55
Reach	327454.4	Max WS	1837.41	3953.84	3957.44		3957.58	0.001181	3.01	610.03	204.12	0.31	1861.65	1734.63	204.12	204.12
Reach	327228.8	Max WS	1837.08	3953.02	3957.25		3957.37	0.000743	2.72	676.55	185.82	0.25	1860.64	1733.62	185.82	185.82
Reach	327020	Max WS	1836.94	3952.85	3957.06		3957.2	0.00085	3.01	610.74	159.41	0.27	1859.81	1732.79	159.41	159.41
Reach	326814.4	Max WS	1836.71	3952.49	3956.9		3957.04	0.000793	2.95	621.95	158.33	0.26	1859.07	1732.04	158.33	158.33
Reach	326618.7	Max WS	1836.57	3951.8	3956.65		3956.85	0.001175	3.58	513.6	131.32	0.32	1858.41	1731.39	131.32	131.32
Reach	326420.2	Max WS	1836.29	3951.61	3956.57		3956.66	0.000675	2.49	736.11	214.28	0.24	1857.63	1730.6	214.28	214.28
Reach	326220.3	Max WS	1836.22	3951.43	3956.38		3956.5	0.001035	2.74	669.76	233.14	0.29	1856.6	1729.58	233.14	233.14
Reach	325846.4	Max WS	1835.61	3951.08	3956.02		3956.15	0.000875	2.9	633.89	178.86	0.27	1854.83	1727.81	178.86	178.86
Reach	325344.7	Max WS	1835.13	3950.61	3955.51		3955.66	0.001125	3.07	598.16	187.03	0.3	1852.72	1725.7	187.03	187.03
Reach	324848.2	Max WS	1834.82	3950.15	3955.14		3955.2	0.000719	2.2	918	327.52	0.24	1849.8	1723.18	254.44	327.52
Reach	324209.1	Max WS	1833.8	3949.55	3954.54		3954.64	0.00113	2.48	738.21	380.37	0.29	1844.64	1718.97	319.63	380.37
Reach	323860.9	Max WS	1833.36	3949.23	3954.35	3952.1	3954.39	0.000311	1.61	1142.27	375.19	0.16	1841.75	1716.2	375.19	375.19
Reach	323782.3	Bridge														
Reach	323764.3	Max WS	1833.09	3949.14	3954.29		3954.35	0.000638	2.07	883.49	324.95	0.22	1840.97	1715.42	324.95	324.95
Reach	323763.3	Max WS	1833.2	3949.14	3954.29	3952.42	3954.35	0.000639	2.08	883.1	324.94	0.22	1840.96	1715.41	324.94	324.94
Reach	323743.3	Bridge														
Reach	323667.7	Max WS	1833.19	3949.04	3954.18		3954.26	0.000723	2.3	796.91	276.44	0.24	1840.36	1714.81	276.44	276.44
Reach	323496.3	Max WS	1832.9	3948.88	3954.06		3954.14	0.000691	2.33	785.47	257.12	0.24	1839.31	1713.76	257.12	257.12
Reach	322951	Max WS	1832.1	3948.09	3953.78		3953.84	0.000431	1.94	943.49	286.41	0.19	1835.91	1710.36	286.41	286.41
Reach	322326.7	Max WS	1831.3	3947.17	3953.52		3953.58	0.000393	1.96	936.22	260.99	0.18	1831.99	1706.44	260.99	260.99
Reach	321268.5	Max WS	1830.05	3945.62	3952.8		3952.97	0.000789	3.28	558.23	119.44	0.27	1827.37	1701.81	119.44	119.44
Reach	320324.4	Max WS	1829.27	3945.23	3951.44		3951.72	0.001945	4.31	424.49	119.59	0.4	1824.78	1699.22	119.59	119.59
Reach	319827.1	Max WS	1828.83	3945.02	3951.01		3951.1	0.000584	2.46	743.8	200.8	0.22	1822.95	1697.4	200.8	200.8
Reach	319326.6	Max WS	1828.28	3944.81	3950.71		3950.81	0.000586	2.54	721.2	183.61	0.23	1820.74	1695.19	183.61	183.61
Reach	318326.5	Max WS	1827.18	3944.39	3950.19		3950.28	0.000493	2.36	773.68	192.45	0.21	1816.42	1690.87	192.45	192.45
Reach	317830.3	Max WS	1826.51	3944.18	3949.85		3949.97	0.000778	2.74	667.33	187.11	0.26	1814.26	1688.71	187.11	187.11
Reach	317332.5	Max WS	1826.09	3943.97	3949.32		3949.49	0.001185	3.28	557.33	163.93	0.31	1812.25	1686.7	163.93	163.93
Reach	316830.9	Max WS	1825.5	3943.76	3948.96		3949.03	0.000638	2.23	818.23	270.25	0.23	1809.75	1684.2	270.25	270.25
Reach	316329.6	Max WS	1824.87	3943.55	3948.69		3948.76	0.000476	2.1	871.04	254.06	0.2	1806.74	1681.19	254.06	254.06
Reach	315829.5	Max WS	1824.38	3943.34	3948.36		3948.46	0.000745	2.6	702.3	206.58	0.25	1804.09	1678.54	206.58	206.58

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	315332	Max WS	1823.68	3943.13	3947.91		3948.05	0.000944	2.94	619.94	180.8	0.28	1801.88	1676.33	180.8	180.8
Reach	314831.6	Max WS	1823.18	3942.92	3947.49		3947.6	0.00087	2.66	684.74	218.4	0.26	1799.59	1674.04	218.4	218.4
Reach	314331.4	Max WS	1822.7	3942.71	3947.03		3947.14	0.000997	2.63	691.88	249.3	0.28	1796.9	1671.35	249.3	249.3
Reach	313805.6	Max WS	1822.22	3942.49	3946.55		3946.64	0.000943	2.4	760.61	303.31	0.27	1793.57	1668.02	303.31	303.31
Reach	313330.3	Max WS	1821.53	3941.96	3946.13		3946.23	0.000854	2.53	718.64	244.2	0.26	1790.58	1665.03	244.2	244.2
Reach	312579.9	Max WS	1820.87	3941.09	3945.51		3945.61	0.000821	2.56	711.54	231.29	0.26	1786.48	1660.93	231.29	231.29
Reach	311329.9	Max WS	1819.4	3939.68	3944.54		3944.64	0.000758	2.48	732.82	234.79	0.25	1779.8	1654.25	234.79	234.79
Reach	310828.6	Max WS	1819	3939.11	3944.18		3944.28	0.000691	2.54	715.47	205.59	0.24	1777.26	1651.71	205.59	205.59
Reach	310336.4	Max WS	1818.19	3938.55	3943.89		3943.98	0.000569	2.38	763.95	209.32	0.22	1774.92	1649.37	209.32	209.32
Reach	309836.1	Max WS	1817.67	3937.98	3943.54		3943.66	0.000715	2.74	664.55	174.94	0.25	1772.71	1647.16	174.94	174.94
Reach	309336	Max WS	1817.23	3937.42	3943.27		3943.35	0.000529	2.28	796.23	220.01	0.21	1770.45	1644.89	220.01	220.01
Reach	308835.7	Max WS	1816.61	3936.85	3943.03		3943.1	0.000468	2.22	819.04	215.45	0.2	1767.95	1642.39	215.45	215.45
Reach	308177.5	Max WS	1815.86	3936.1	3942.22		3942.48	0.001485	4.11	441.41	108.01	0.36	1765.5	1639.95	108.01	108.01
Reach	307835.2	Max WS	1815.48	3936	3941.91		3942.07	0.000948	3.2	567.75	146.01	0.29	1764.5	1638.95	146.01	146.01
Reach	307335.4	Max WS	1815.22	3935.85	3941.49		3941.62	0.000881	2.81	646.97	191.95	0.27	1762.56	1637.01	191.95	191.95
Reach	306835.3	Max WS	1814.5	3935.7	3940.99		3941.11	0.001191	2.81	644.93	240.34	0.3	1760.08	1634.53	240.34	240.34
Reach	306335.5	Max WS	1814.11	3935.55	3940.58		3940.65	0.000673	2.24	808.35	275.21	0.23	1757.12	1631.57	275.21	275.21
Reach	305835.4	Max WS	1813.45	3935.4	3940.26		3940.34	0.000643	2.18	830.73	285.51	0.23	1753.91	1628.35	285.51	285.51
Reach	305335.4	Max WS	1812.9	3935.25	3939.94		3940.01	0.000696	2.15	841.95	313.92	0.23	1750.47	1624.91	313.92	313.92
Reach	304835.3	Max WS	1812.13	3935.1	3939.61		3939.68	0.000651	2.06	880.31	333.56	0.22	1746.75	1621.2	333.56	333.56
Reach	304335.2	Max WS	1811.43	3934.95	3939.23		3939.31	0.000845	2.24	809.04	329.12	0.25	1742.95	1617.39	329.12	329.12
Reach	303835.2	Max WS	1810.78	3934.79	3938.87		3938.93	0.000729	2.08	869.39	352.6	0.23	1739.03	1613.48	352.6	352.6
Reach	303335.2	Max WS	1810.14	3934.64	3938.54		3938.6	0.00066	2.02	894.65	352.24	0.22	1734.99	1609.44	352.24	352.24
Reach	302961.1	Max WS	1809.73	3934.53	3938.3		3938.36	0.000676	1.97	920.65	385.86	0.22	1731.82	1606.27	385.86	385.86
Reach	302335.6	Max WS	1808.87	3933.96	3937.86		3937.94	0.000693	2.29	789.6	266.98	0.23	1727.13	1601.58	266.98	266.98
Reach	301853.2	Max WS	1808.27	3933.53	3937.34		3937.47	0.001313	2.93	616.88	232.73	0.32	1724.36	1598.81	232.73	232.73
Reach	300848.8	Max WS	1807.14	3932.62	3936.37		3936.44	0.000803	2.15	840.43	350.03	0.24	1717.64	1592.09	350.03	350.03
Reach	300348.8	Max WS	1806.42	3932.17	3936.01		3936.08	0.000704	2.07	872.23	347.75	0.23	1713.64	1588.08	347.75	347.75
Reach	299847.9	Max WS	1805.94	3931.71	3935.64		3935.72	0.000809	2.15	840.39	351.83	0.25	1709.62	1584.07	351.83	351.83
Reach	299349.8	Max WS	1805.18	3931.26	3935.22		3935.3	0.000938	2.29	789.96	336.81	0.26	1705.68	1580.13	336.81	336.81
Reach	298848.9	Max WS	1804.74	3930.81	3934.77		3934.85	0.000965	2.24	805.11	360.46	0.26	1701.67	1576.12	360.46	360.46
Reach	298347.9	Max WS	1803.8	3930.36	3934.43		3934.48	0.000573	1.84	977.84	397.79	0.21	1697.31	1571.76	397.79	397.79
Reach	297847.1	Max WS	1803.26	3929.9	3933.96		3934.06	0.001211	2.5	722.47	327.33	0.3	1693.14	1567.59	327.33	327.33
Reach	297345.4	Max WS	1802.7	3929.44	3933.51		3933.58	0.000793	2.13	847.63	355.08	0.24	1689.21	1563.66	355.08	355.08
Reach	296845.2	Max WS	1802.02	3928.99	3933.16		3933.23	0.000658	2.04	882.34	341.73	0.22	1685.21	1559.66	341.73	341.73
Reach	296344.2	Max WS	1801.3	3928.54	3932.69		3932.8	0.001143	2.63	683.76	272.92	0.29	1681.68	1556.13	272.92	272.92
Reach	295840.6	Max WS	1800.8	3928.08	3932.27		3932.34	0.000747	2.08	866.15	358.66	0.24	1678.03	1552.48	358.66	358.66
Reach	295323.6	Max WS	1800.01	3927.61	3931.91		3931.98	0.000699	1.99	903.98	380.52	0.23	1673.64	1548.09	380.52	380.52
Reach	294568.2	Max WS	1799.29	3926.94	3931.29		3931.37	0.000949	2.27	793.5	345.66	0.26	1667.35	1541.79	345.66	345.66
Reach	294296.5	Max WS	1798.74	3926.68	3931.08		3931.15	0.000678	2.04	883.83	351.7	0.23	1665.17	1539.62	351.7	351.7
Reach	293800.6	Max WS	1797.94	3926.24	3930.67		3930.75	0.000953	2.27	793.08	346.44	0.26	1661.2	1535.65	346.44	346.44
Reach	293312.3	Max WS	1797.48	3925.79	3930.32		3930.37	0.000586	1.87	960.89	388.64	0.21	1657.08	1531.53	388.64	388.64
Reach	292812.2	Max WS	1796.87	3925.34	3929.97		3930.05	0.000706	2.23	806.78	288.58	0.23	1653.19	1527.64	288.58	288.58
Reach	292293.8	Max WS	1796.24	3924.87	3929.6		3929.69	0.000705	2.35	763.96	251.66	0.24	1649.97	1524.42	251.66	251.66
Reach	291463.6	Max WS	1795.17	3924.12	3928.98		3929.08	0.00078	2.42	742.7	252.62	0.25	1645.17	1519.62	252.62	252.62
Reach	290812.3	Max WS	1794.36	3923.6	3928.52		3928.61	0.000669	2.45	732.44	217.52	0.24	1641.65	1516.1	217.52	217.52
Reach	290312.1	Max WS	1793.91	3923.19	3928.1		3928.21	0.000974	2.7	664.46	225.67	0.28	1639.11	1513.56	225.67	225.67
Reach	289827.3	Max WS	1793.24	3922.8	3927.67		3927.77	0.000896	2.42	739.83	278.56	0.26	1636.3	1510.75	278.56	278.56
Reach	289312.5	Max WS	1792.76	3922.39	3927.12		3927.23	0.001239	2.61	687.52	296.51	0.3	1632.91	1507.35	296.51	296.51
Reach	288817.6	Max WS	1792.24	3921.98	3926.75		3926.81	0.000488	2.08	862.38	258.54	0.2	1629.75	1504.2	258.54	258.54
Reach	288317.4	Max WS	1791.5	3921.58	3926.41		3926.51	0.000728	2.58	693.59	202.49	0.25	1627.11	1501.55	202.49	202.49
Reach	287812.8	Max WS	1791.07	3921.17	3926.06		3926.16	0.000707	2.47	726.39	222.41	0.24	1624.64	1499.09	222.41	222.41
Reach	287477.2	Max WS	1790.69	3920.9	3925.88		3925.96	0.000525	2.27	787.28	217.93	0.21	1622.95	1497.4	217.93	217.93
Reach	286567.3	Max WS	1789.51	3919.95	3925.29		3925.39	0.00073	2.65	676.48	271.61	0.25	1617.83	1493.13	271.61	271.61
Reach	285817.4	Max WS	1788.85	3919.18	3924.78		3924.88	0.000649	2.56	698.66	224.86	0.23	1613.56	1489.86	224.86	224.86
Reach	285317.6	Max WS	1788.43	3918.66	3924.38		3924.5	0.000886	2.78	642.81	219.58	0.27	1611.01	1487.67	219.58	219.58
Reach	284816.8	Max WS	1787.93	3918.14	3924.06		3924.15	0.000564	2.36	758.05	208.53	0.22	1608.54	1485.36	208.53	208.53
Reach	284317.2	Max WS	1787.34	3917.62	3923.57		3923.73	0.001145	3.2	559.41	165.52	0.31	1606.4	1483.21	165.52	165.52
Reach	283819.6	Max WS	1787.01	3917.1	3923.22		3923.3	0.000634	2.27	787.47	251.48	0.23	1604.01	1480.83	251.48	251.48

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	283320.3	Max WS	1786.38	3916.58	3922.71		3922.85	0.001235	2.97	601.02	211.4	0.31	1601.36	1478.18	211.4	211.4
Reach	282822.3	Max WS	1786.06	3916.06	3922.35		3922.42	0.00053	2.15	831.22	252.54	0.21	1598.71	1475.53	252.54	252.54
Reach	282322.7	Max WS	1785.43	3915.54	3922.13		3922.18	0.000442	1.79	997.31	347.68	0.19	1595.27	1472.08	347.68	347.68
Reach	281816.4	Max WS	1784.73	3915.02	3921.48		3921.64	0.00179	3.24	551.43	225.11	0.36	1591.94	1468.76	225.11	225.11
Reach	281321	Max WS	1784.2	3914.5	3920.97		3921.05	0.000645	2.26	788.63	256.13	0.23	1589.2	1466.02	256.13	256.13
Reach	280972.4	Max WS	1783.77	3914.14	3920.73		3920.81	0.000768	2.21	805.33	308.5	0.24	1586.94	1463.76	308.5	308.5
Reach	280822.3	Max WS	1783.58	3914.1	3920.62		3920.69	0.000786	2.2	811.87	320.75	0.24	1585.86	1462.68	320.75	320.75
Reach	280322.4	Max WS	1783.1	3913.97	3920.24		3920.31	0.000758	2.13	835.6	335.23	0.24	1582.1	1458.91	335.23	335.23
Reach	279818.1	Max WS	1782.18	3913.84	3919.91		3919.98	0.000617	2.02	880.68	347.32	0.22	1578.14	1455.07	328.19	347.32
Reach	279310.1	Max WS	1781.59	3913.7	3919.57		3919.65	0.00072	2.29	777.64	269.95	0.24	1574.53	1451.58	269.95	269.95
Reach	278806.9	Max WS	1781.06	3913.57	3919.24		3919.31	0.000641	2.17	820.55	283.13	0.22	1571.33	1448.39	283.13	283.13
Reach	278305.5	Max WS	1780.47	3913.44	3918.92		3918.99	0.000647	2.19	814.61	280.28	0.23	1568.09	1445.15	280.28	280.28
Reach	277799.9	Max WS	1779.72	3913.31	3918.6		3918.68	0.000588	2.3	772.52	227.81	0.22	1565.14	1442.2	227.81	227.81
Reach	277236.1	Max WS	1779.16	3913.16	3918.26		3918.34	0.000631	2.37	750.16	223.86	0.23	1562.22	1439.27	223.86	223.86
Reach	276795.2	Max WS	1778.64	3912.88	3918.02		3918.09	0.000558	2.16	823.55	258.27	0.21	1559.78	1436.83	258.27	258.27
Reach	276280.2	Max WS	1777.98	3912.55	3917.73		3917.8	0.000568	2.22	801.42	243.94	0.22	1556.81	1433.87	243.94	243.94
Reach	275276.4	Max WS	1776.68	3911.92	3917.25		3917.32	0.000418	2.09	848.36	223.64	0.19	1551.42	1428.48	223.64	223.64
Reach	274764.5	Max WS	1775.98	3911.6	3917.04		3917.11	0.000409	2.17	819.15	201.3	0.19	1548.93	1425.98	201.3	201.3
Reach	274255.3	Max WS	1775.27	3911.28	3916.85		3916.92	0.000326	2.09	847.52	185.4	0.17	1546.67	1423.72	185.4	185.4
Reach	273755.2	Max WS	1774.62	3910.97	3916.65		3916.74	0.000414	2.37	749.23	162.25	0.19	1544.67	1421.73	162.25	162.25
Reach	273446.5	Max WS	1774.37	3910.77	3916.51		3916.6	0.000474	2.42	734.39	171.05	0.21	1543.49	1420.54	171.05	171.05
Reach	272753.7	Max WS	1773.77	3909.49	3915.5		3915.78	0.002252	4.2	422.8	137.99	0.42	1541.03	1418.09	137.99	137.99
Reach	271772.7	Max WS	1772.7	3907.7	3914.46		3914.53	0.000536	2.23	793.47	228.49	0.21	1536.9	1413.96	228.49	228.49
Reach	271451.9	Max WS	1808.26	3907.74	3913.99		3914.15	0.001876	3.23	559.01	237.08	0.37	1535.19	1412.25	237.08	237.08
Reach	271158.6	Max WS	1807.93	3907.78	3913.74	3911.43	3913.81	0.00046	2.04	886.88	262.45	0.2	1533.51	1410.56	262.45	262.45
Reach	271117.4	Bridge														
Reach	271076.1	Max WS	1807.8	3907.8	3913.69		3913.76	0.000516	2.12	852.6	258.31	0.21	1533.03	1410.08	258.31	258.31
Reach	270237.1	Max WS	1806.92	3907.91	3913.2		3913.27	0.000652	2.21	817.71	278.59	0.23	1527.86	1404.91	278.59	278.59
Reach	269664.8	Max WS	1806.02	3907.99	3912.85		3912.91	0.000625	2.06	877.77	322.66	0.22	1523.91	1400.96	322.66	322.66
Reach	269223.7	Max WS	1805.37	3907.63	3912.34		3912.45	0.001519	2.64	684.76	338.2	0.33	1520.56	1397.62	338.2	338.2
Reach	268721.9	Max WS	1805.1	3907.21	3911.79		3911.87	0.000837	2.23	809.6	328.87	0.25	1516.72	1393.77	328.87	328.87
Reach	268221.6	Max WS	1804.44	3906.8	3911.43		3911.5	0.000657	2.12	852.98	312.33	0.23	1513.04	1390.09	312.33	312.33
Reach	267719.8	Max WS	1803.79	3906.39	3911.09		3911.16	0.000715	2.11	856.49	336.87	0.23	1509.3	1386.35	336.87	336.87
Reach	267215.9	Max WS	1803.06	3905.97	3910.71		3910.79	0.000783	2.21	814.3	317.33	0.24	1505.51	1382.57	317.33	317.33
Reach	266710.5	Max WS	1802.3	3905.56	3910.34		3910.41	0.000742	2.19	821.66	311.88	0.24	1501.86	1378.92	311.88	311.88
Reach	266212.3	Max WS	1801.85	3905.14	3910.01		3910.08	0.000608	2.17	828.44	281.48	0.22	1498.47	1375.53	281.48	281.48
Reach	265713.4	Max WS	1801.13	3904.73	3909.66		3909.74	0.000751	2.37	759.9	258.88	0.24	1495.38	1372.43	258.88	258.88
Reach	265214.1	Max WS	1800.56	3904.32	3909.27		3909.36	0.000807	2.39	752.4	267.04	0.25	1492.36	1369.42	267.04	267.04
Reach	264474.8	Max WS	1799.57	3903.71	3908.74		3908.82	0.000658	2.24	803.07	329.67	0.23	1487.29	1364.86	269.76	329.67
Reach	263717.8	Max WS	1798.89	3902.81	3907.95		3908.07	0.001359	2.7	667.18	292.57	0.31	1481.86	1359.98	292.57	292.57
Reach	263218.8	Max WS	1798.19	3902.21	3907.51		3907.58	0.000618	2.12	846.35	293.39	0.22	1478.51	1356.62	293.39	293.39
Reach	262719.4	Max WS	1797.6	3901.62	3907.21		3907.29	0.000571	2.26	794.31	235.67	0.22	1475.47	1353.59	235.67	235.67
Reach	262220.6	Max WS	1797.05	3901.03	3906.82		3906.93	0.000872	2.66	675.46	215.9	0.27	1472.89	1351	215.9	215.9
Reach	261720.5	Max WS	1796.5	3900.43	3906.48		3906.56	0.000598	2.37	759.09	217.3	0.22	1470.4	1348.51	217.3	217.3
Reach	261220.4	Max WS	1795.93	3899.84	3906.11		3906.21	0.000801	2.57	699.06	220.46	0.25	1467.89	1346	220.46	220.46
Reach	260720.3	Max WS	1795.48	3899.24	3905.7		3905.81	0.000822	2.63	682.52	211.44	0.26	1465.41	1343.52	211.44	211.44
Reach	260117.9	Max WS	1794.67	3898.52	3905.17		3905.29	0.00093	2.7	664.91	217.72	0.27	1462.44	1340.55	217.72	217.72
Reach	259721.5	Max WS	1794.43	3898.22	3904.91		3904.99	0.000579	2.32	771.83	221.67	0.22	1460.44	1338.56	221.67	221.67
Reach	259224.3	Max WS	1793.95	3897.84	3904.63		3904.71	0.000543	2.23	803.14	232.48	0.21	1457.85	1335.96	232.48	232.48
Reach	258724.3	Max WS	1793.11	3897.46	3904.24		3904.34	0.000968	2.51	714.08	269.22	0.27	1454.97	1333.08	269.22	269.22
Reach	258224.3	Max WS	1792.49	3897.08	3903.78		3903.88	0.000898	2.54	705.19	246.6	0.26	1452.01	1330.12	246.6	246.6
Reach	257724.3	Max WS	1791.98	3896.7	3903.4		3903.48	0.000721	2.31	775.53	265.36	0.24	1449.07	1327.19	265.36	265.36
Reach	257224.2	Max WS	1791.49	3896.32	3903.07		3903.15	0.000619	2.22	806.71	261.59	0.22	1446.05	1324.16	261.59	261.59
Reach	256724.1	Max WS	1790.7	3895.94	3902.79		3902.86	0.000526	2.07	866.51	276.8	0.21	1442.96	1321.07	276.8	276.8
Reach	256384.2	Max WS	1790.31	3895.68	3902.5		3902.6	0.001016	2.51	714.67	279.78	0.28	1440.79	1318.9	279.78	279.78
Reach	255726.8	Max WS	1789.69	3895.28	3901.97		3902.04	0.000698	2.06	867.09	344.19	0.23	1436.08	1314.19	344.19	344.19
Reach	255241.5	Max WS	1788.95	3894.99	3901.53		3901.63	0.00101	2.48	720.16	285.13	0.28	1432.57	1310.68	285.13	285.13
Reach	254747.1	Max WS	1788.49	3894.69	3901.11		3901.19	0.00079	2.22	804.42	313.48	0.24	1429.17	1307.29	313.48	313.48
Reach	254247.2	Max WS	1787.77	3894.38	3900.79		3900.86	0.000552	2.09	854.71	278.65	0.21	1425.78	1303.89	278.65	278.65

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	253742.7	Max WS	1787.09	3894.08	3900.49		3900.57	0.000588	2.29	780.06	231.84	0.22	1422.82	1300.93	231.84	231.84
Reach	253249.4	Max WS	1786.46	3893.78	3900.23		3900.31	0.000483	2.2	812.52	221.25	0.2	1420.25	1298.37	221.25	221.25
Reach	252749.3	Max WS	1785.98	3893.47	3899.98		3900.06	0.000515	2.25	792.65	218.13	0.21	1417.73	1295.85	218.13	218.13
Reach	252246.7	Max WS	1785.23	3893.17	3899.66		3899.75	0.000719	2.5	714.96	216.88	0.24	1415.22	1293.34	216.88	216.88
Reach	251746.7	Max WS	1784.79	3892.87	3899.34		3899.42	0.000621	2.32	770.64	234.33	0.23	1412.63	1290.75	234.33	234.33
Reach	251254.4	Max WS	1784.24	3892.57	3898.95		3899.05	0.00089	2.56	696.53	239	0.26	1409.96	1288.07	239	239
Reach	250750	Max WS	1783.66	3892.26	3898.53		3898.62	0.000816	2.52	709.08	233.65	0.25	1407.22	1285.34	233.65	233.65
Reach	250252.9	Max WS	1783.18	3891.96	3898.21		3898.29	0.000551	2.28	783.55	223.69	0.21	1404.61	1282.73	223.69	223.69
Reach	249780.8	Max WS	1782.46	3891.67	3897.92		3898.01	0.000622	2.42	735.69	208.91	0.23	1402.27	1280.38	208.91	208.91
Reach	249149.1	Max WS	1781.7	3891.29	3897.52		3897.61	0.000647	2.39	745.41	227.37	0.23	1399.1	1277.25	222.56	227.37
Reach	248768.4	Max WS	1781.35	3891.14	3897.27		3897.36	0.000693	2.44	731.49	224.65	0.24	1397.13	1275.3	224.65	224.65
Reach	248259.3	Max WS	1780.77	3890.93	3896.91		3897	0.00071	2.42	734.68	230.72	0.24	1394.47	1272.64	230.72	230.72
Reach	247762.4	Max WS	1780.29	3890.73	3896.59		3896.67	0.000636	2.33	765.01	235.67	0.23	1391.81	1269.98	235.67	235.67
Reach	247262.4	Max WS	1779.59	3890.53	3896.2		3896.3	0.000873	2.56	695.62	235.76	0.26	1389.1	1267.27	235.76	235.76
Reach	246759.9	Max WS	1778.96	3890.33	3895.77		3895.86	0.000876	2.44	730.13	267.44	0.26	1386.2	1264.37	267.44	267.44
Reach	246247.8	Max WS	1778.43	3890.12	3895.44		3895.5	0.000568	1.97	902.5	329.59	0.21	1382.69	1260.86	329.59	329.59
Reach	245740.4	Max WS	1777.71	3889.92	3895.14		3895.2	0.0006	1.98	897.67	339.27	0.21	1378.8	1256.96	339.27	339.27
Reach	245234.4	Max WS	1777.05	3889.71	3894.79		3894.86	0.000781	2.16	823.26	333.09	0.24	1374.89	1253.06	333.09	333.09
Reach	244738	Max WS	1776.43	3889.51	3894.45		3894.51	0.000633	2.03	876.83	332.83	0.22	1371.1	1249.27	332.83	332.83
Reach	244238.3	Max WS	1775.48	3889.31	3894.15		3894.21	0.000597	1.96	906.94	347.46	0.21	1367.19	1245.36	347.46	347.46
Reach	243741.5	Max WS	1775.02	3889.11	3893.7		3893.79	0.001119	2.37	748.65	345.2	0.28	1363.24	1241.41	345.2	345.2
Reach	243238.4	Max WS	1774.38	3888.91	3893.22		3893.29	0.000863	2.15	826.65	363.78	0.25	1359.15	1237.32	363.78	363.78
Reach	242597.6	Max WS	1773.56	3888.64	3892.65		3892.72	0.000973	2.09	847.15	423.54	0.26	1353.36	1231.53	423.54	423.54
Reach	242084	Max WS	1773.01	3888.22	3892.28		3892.33	0.000587	1.81	977.99	415.63	0.21	1348.41	1226.58	415.63	415.63
Reach	241716.3	Max WS	1772.58	3887.92	3891.98	3890.71	3892.05	0.000972	2.12	836.74	411.3	0.26	1344.92	1223.09	411.3	411.3
Reach	241626.1	Bridge														
Reach	241535.9	Max WS	1771.99	3887.77	3891.81		3891.88	0.000795	2.03	873.48	417.41	0.24	1343.22	1221.44	393.84	417.41
Reach	240745.5	Max WS	1771.11	3887.13	3891.22		3891.28	0.000741	2	885.51	386.4	0.23	1335.94	1214.36	386.4	386.4
Reach	240227.5	Max WS	1770.57	3887.07	3890.87		3890.92	0.000689	1.78	993.92	489.41	0.22	1330.73	1209.15	489.41	489.41
Reach	239736.5	Max WS	1769.65	3886.3	3890.57		3890.62	0.000558	1.8	982.39	455.13	0.2	1325.41	1204.11	405.17	455.13
Reach	239234.9	Max WS	1768.97	3885.89	3890.32		3890.37	0.000448	1.74	1017.09	423.78	0.19	1320.38	1199.62	375.46	423.78
Reach	238735.1	Max WS	1768.17	3885.49	3889.92		3890.01	0.001028	2.38	742.84	335.58	0.27	1316.05	1195.63	318.64	335.58
Reach	238194.9	Max WS	1767.44	3885.04	3889.32		3889.42	0.001163	2.53	697.58	298.91	0.29	1312.12	1191.81	298.91	298.91
Reach	237725.7	Max WS	1766.93	3884.66	3888.94		3889.01	0.00064	2.11	835.56	300.15	0.22	1308.89	1188.58	300.15	300.15
Reach	237226.8	Max WS	1766.33	3884.25	3888.65		3888.71	0.000555	2.01	877.58	305.36	0.21	1305.42	1185.11	305.36	305.36
Reach	236716.6	Max WS	1765.81	3883.83	3888.37		3888.44	0.000532	1.99	887.07	303.73	0.21	1301.86	1181.55	303.73	303.73
Reach	236225.7	Max WS	1765.04	3883.4	3888.1		3888.17	0.000577	2.06	856.86	295.81	0.21	1298.48	1178.17	295.81	295.81
Reach	235729.4	Max WS	1764.33	3883.02	3887.81		3887.88	0.000579	2.08	849.09	295.68	0.21	1295.11	1174.83	290.03	295.68
Reach	235217.5	Max WS	1763.54	3882.61	3887.47		3887.55	0.000716	2.25	782.29	277.24	0.24	1291.74	1171.5	277.24	277.24
Reach	234609	Max WS	1763.11	3882.11	3886.92		3887.02	0.001043	2.53	697.72	291.7	0.28	1287.77	1167.63	276.83	291.7
Reach	234260.6	Max WS	1762.52	3881.82	3886.69	3884.68	3886.75	0.000501	1.97	894.61	297.7	0.2	1285.42	1165.33	297.7	297.7
Reach	234094.6	Bridge														
Reach	233928.5	Max WS	1762.07	3881.55	3886.49		3886.56	0.000566	2.07	852.46	289.04	0.21	1283.21	1163.12	289.04	289.04
Reach	233781	Max WS	1761.87	3881.43	3886.41		3886.48	0.000568	2.11	836.41	276	0.21	1282.25	1162.16	276	276
Reach	233097.2	Max WS	1761.1	3880.93	3885.89		3885.98	0.000919	2.46	716.43	269.66	0.27	1277.97	1157.88	269.66	269.66
Reach	232226.1	Max WS	1760.21	3880.3	3885.17		3885.25	0.000774	2.32	758.23	272.92	0.25	1272.55	1152.45	272.92	272.92
Reach	231716.6	Max WS	1759.64	3880.52	3884.72		3884.81	0.000963	2.48	708.4	271.71	0.27	1269.36	1149.27	271.71	271.71
Reach	231227.4	Max WS	1758.8	3879.57	3884.35		3884.42	0.000637	2.18	806.57	275.75	0.22	1266.29	1146.19	275.75	275.75
Reach	230728.1	Max WS	1758.36	3879.2	3884.05		3884.11	0.00062	2.09	842.72	302.05	0.22	1262.98	1142.88	302.05	302.05
Reach	230226.4	Max WS	1757.68	3878.83	3883.78		3883.84	0.000491	1.96	898.34	296.99	0.2	1259.53	1139.43	296.99	296.99
Reach	229726.5	Max WS	1756.89	3878.46	3883.5		3883.56	0.000615	2.09	838.84	296.75	0.22	1256.12	1136.03	296.75	296.75
Reach	229220.6	Max WS	1756.38	3878.1	3883.15		3883.22	0.000747	2.19	803.75	308.71	0.24	1252.6	1132.51	308.71	308.71
Reach	228721.9	Max WS	1755.79	3877.73	3882.82		3882.88	0.000626	2.07	846.41	307.18	0.22	1249.08	1128.98	307.18	307.18
Reach	228119.7	Max WS	1754.93	3877.29	3882.32		3882.41	0.000978	2.35	746.69	314.53	0.27	1244.78	1124.69	314.53	314.53
Reach	227729	Max WS	1754.65	3877.01	3882.02		3882.09	0.000672	2.1	836.65	315.6	0.23	1241.95	1121.86	315.6	315.6
Reach	227231.1	Max WS	1753.96	3876.64	3881.7		3881.76	0.000649	2.07	845.88	316.14	0.22	1238.34	1118.25	316.14	316.14
Reach	226712	Max WS	1753.19	3876.26	3881.39		3881.45	0.000555	1.97	888.16	342.11	0.21	1234.43	1114.47	317.46	342.11
Reach	226212.5	Max WS	1752.47	3875.9	3881.09		3881.16	0.000636	2.06	851.88	317.08	0.22	1230.66	1110.84	317.08	317.08
Reach	225699.5	Max WS	1751.67	3875.53	3880.73		3880.8	0.000775	2.14	819.6	334.55	0.24	1226.82	1107	334.55	334.55

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	225194.5	Max WS	1751.24	3875.15	3880.38		3880.44	0.000665	2.02	867.59	343.86	0.22	1222.89	1103.07	343.86	343.86
Reach	224683.2	Max WS	1750.65	3874.78	3879.94		3880.02	0.000997	2.3	761.47	336.34	0.27	1218.89	1099.07	336.34	336.34
Reach	224216.6	Max WS	1749.92	3874.44	3879.56		3879.63	0.000698	2.13	820.22	429.19	0.23	1214.77	1095.61	310.28	429.19
Reach	224134.9	Max WS	1749.78	3874.38	3879.5		3879.57	0.000764	2.16	808.39	462.63	0.24	1213.89	1095.02	320.64	462.63
Reach	223902.6	Max WS	1749.53	3873.99	3879.33	3877.59	3879.4	0.000698	2.13	819.56	309.42	0.23	1211.79	1093.34	309.42	309.42
Reach	223852.5	Bridge														
Reach	223802.4	Max WS	1749.58	3873.83	3879.24		3879.32	0.000829	2.33	750.37	282.29	0.25	1211.12	1092.67	282.29	282.29
Reach	223052.1	Max WS	1748.58	3872.55	3878.59		3878.67	0.000912	2.31	757.56	319.85	0.26	1205.94	1087.56	310.51	319.85
Reach	222811.8	Max WS	1748.28	3872.38	3878.44		3878.5	0.000547	1.98	881.6	325.24	0.21	1204.16	1085.86	308.84	325.24
Reach	222178.7	Max WS	1747.4	3871.94	3878.04		3878.11	0.000695	2.14	816.07	305.21	0.23	1199.58	1081.39	305.21	305.21
Reach	221674.9	Max WS	1747.01	3871.58	3877.76		3877.82	0.000475	1.93	905.48	298.38	0.2	1196.09	1077.9	298.14	298.38
Reach	221188.6	Max WS	1746.04	3871.24	3877.53		3877.59	0.0005	1.92	910.34	313.97	0.2	1192.67	1074.49	313.97	313.97
Reach	220684.7	Max WS	1745.41	3870.89	3877.28		3877.33	0.000517	1.77	988.03	395.95	0.2	1188.57	1070.38	395.95	395.95
Reach	220198.6	Max WS	1744.53	3870.54	3876.94		3877.01	0.000817	2.15	809.87	338.97	0.25	1184.47	1066.28	338.97	338.97
Reach	219716.3	Max WS	1744.14	3870.21	3876.66		3876.71	0.000446	1.85	940.83	328.74	0.19	1180.78	1062.67	313.53	328.74
Reach	219221.9	Max WS	1743.2	3869.86	3876.44		3876.5	0.000423	1.83	952.7	406.11	0.18	1176.62	1059.13	310.4	406.11
Reach	218337	Max WS	1742.1	3869.24	3875.81		3875.89	0.000954	2.34	745.73	405.16	0.27	1168.36	1052.83	309.68	405.16
Reach	217711.2	Max WS	1741.28	3868.66	3875.17		3875.25	0.00112	2.19	795.6	974.16	0.28	1158.4	1047.64	412.86	974.16
Reach	216707.7	Max WS	1740.07	3867.73	3874.4		3874.44	0.000513	1.67	1042.49	684.22	0.19	1138.96	1037.67	452.38	684.22
Reach	216207.7	Max WS	1739.13	3867.27	3874.16		3874.2	0.000478	1.62	1073.3	796.82	0.19	1130.46	1032.43	461.93	796.82
Reach	215708	Max WS	1738.42	3866.8	3873.84		3873.9	0.000743	2.06	842.31	466.93	0.23	1123.2	1027.77	350.29	466.93
Reach	215077.2	Max WS	1737.55	3866.22	3873.44		3873.49	0.000601	1.82	955.28	416.5	0.21	1116.79	1022.27	409.49	416.5
Reach	214708	Max WS	1736.99	3866.05	3873.24		3873.29	0.0005	1.77	979.6	381.35	0.19	1113.41	1018.91	381.35	381.35
Reach	214206.3	Max WS	1736.28	3865.82	3872.95		3873.01	0.000654	2.06	844.59	320.33	0.22	1109.37	1014.87	320.33	320.33
Reach	213708.1	Max WS	1735.48	3865.58	3872.64		3872.7	0.000622	2.08	836.23	301.67	0.22	1105.81	1011.32	301.67	301.67
Reach	213198	Max WS	1734.84	3865.35	3872.23		3872.35	0.000825	2.7	643.13	192.5	0.26	1102.92	1008.42	192.5	192.5
Reach	212707.4	Max WS	1734.43	3865.12	3871.98		3872.03	0.000487	1.85	939.97	335.82	0.19	1099.94	1005.45	335.82	335.82
Reach	212207.2	Max WS	1733.68	3864.89	3871.64		3871.72	0.000792	2.28	759.27	284.09	0.25	1096.38	1001.89	284.09	284.09
Reach	211376.3	Max WS	1732.68	3864.5	3870.95		3871.02	0.000921	2.2	788.73	351.05	0.26	1090.33	995.83	351.05	351.05
Reach	210707.1	Max WS	1732	3864.19	3870.35		3870.44	0.00086	2.36	734.68	278.69	0.26	1085.49	990.99	278.69	278.69
Reach	210208.8	Max WS	1731.49	3863.96	3869.9		3870	0.000966	2.53	685.66	256.1	0.27	1082.43	987.93	256.1	256.1
Reach	209949.4	Max WS	1731.08	3863.84	3869.75		3869.81	0.000494	2.01	863.15	275.65	0.2	1080.85	986.35	275.65	275.65
Reach	209702.9	Max WS	1730.86	3863.73	3869.42		3869.57	0.001587	3.15	549.98	213.52	0.35	1079.46	984.97	213.52	213.52
Reach	209202.9	Max WS	1730.32	3863.5	3868.68		3868.84	0.001399	3.24	533.47	180.29	0.33	1077.2	982.71	180.29	180.29
Reach	209008.5	Max WS	1730.13	3863.41	3868.49		3868.61	0.000999	2.81	615.24	200.47	0.28	1076.35	981.86	200.47	200.47
Reach	208872.9	Max WS	1730.29	3863.34	3868.32		3868.46	0.001275	2.97	582.1	209.19	0.31	1075.72	981.22	209.19	209.19
Reach	208652.1	Max WS	1729.98	3863.24	3867.78		3867.99	0.00301	3.72	465.61	229.66	0.46	1074.6	980.11	229.66	229.66
Reach	208475.9	Max WS	1729.98	3862.89	3866.99		3867.36	0.004472	4.87	354.96	156.16	0.57	1073.82	979.33	156.16	156.16
Reach	208197.9	Max WS	1729.61	3862.3	3866.45		3866.57	0.000975	2.79	619.19	199.88	0.28	1072.69	978.19	199.88	199.88
Reach	208126.7	Max WS	1729.54	3862.01	3866.38		3866.51	0.000849	2.87	601.82	166.33	0.27	1072.39	977.89	166.33	166.33
Reach	207941.9	Max WS	1729.62	3861.36	3864.26	3864.31	3865.3	0.016279	8.2	210.96	111.66	1.05	1071.8	977.3	111.66	111.66
Reach	207806.7	Max WS	1729.45	3860.56	3862.8	3862.73	3863.39	0.014464	6.17	280.15	209.81	0.94	1071.3	976.8	209.81	209.81
Reach	207725.6	Max WS	1729.3	3857.81	3862.51		3862.66	0.002321	3.09	559.51	296.33	0.4	1070.83	976.33	296.33	296.33
Reach	207690.8	Max WS	1729.41	3856.84	3862.49	3861.31	3862.6	0.001385	2.64	654.68	362.18	0.32	1070.57	976.09	308.97	362.18
Reach	207666	Inl Struct														
Reach	207640.7	Max WS	1729.17	3858.34	3862.37		3862.52	0.002096	3.03	570.18	314.5	0.38	1070.18	975.74	305.97	314.5
Reach	207558.9	Max WS	1735.43	3858.63	3862.19		3862.32	0.002147	2.89	462.37	309.62	0.38	1069.59	975.21	257.19	309.62
Reach	207374	Max WS	1735.34	3859.71	3861.83		3861.95	0.002007	2.78	480.95	281.21	0.37	1068.34	974.09	271.8	281.21
Reach	207145.7	Max WS	1735.16	3858.82	3861.22		3861.4	0.00322	3.41	391.3	231.47	0.46	1066.99	972.77	231.47	231.47
Reach	206866.8	Max WS	1734.89	3858	3860.58		3860.71	0.001934	2.93	454.97	230.25	0.37	1065.52	971.29	230.25	230.25
Reach	206603.1	Max WS	1734.86	3857.65	3860.24		3860.32	0.0011	2.31	578.06	273.85	0.28	1063.99	969.76	273.85	273.85
Reach	206371.5	Max WS	1734.52	3857.05	3859.82		3859.95	0.002186	2.87	465.07	265.9	0.38	1062.55	968.33	265.9	265.9
Reach	206133.1	Max WS	1734.38	3854.01	3859.54		3859.61	0.000805	2.09	639.25	277.9	0.24	1061.07	966.84	277.9	277.9
Reach	205708.6	Max WS	1734.07	3853.71	3859.2		3859.27	0.00083	2.12	628.21	272.01	0.25	1058.39	964.16	272.01	272.01
Reach	205203.7	Max WS	1733.53	3853.34	3858.82		3858.88	0.000735	1.99	669.86	291.88	0.23	1055.12	960.89	291.88	291.88
Reach	204703.8	Max WS	1732.86	3852.98	3858.5		3858.55	0.000639	1.86	716.98	312.17	0.22	1051.65	957.43	312.17	312.17
Reach	204203.7	Max WS	1732.38	3852.62	3858.12		3858.19	0.000822	2.1	634.1	276.73	0.24	1048.27	954.05	276.73	276.73
Reach	203703.6	Max WS	1731.98	3852.27	3857.74		3857.81	0.000728	2.06	645.41	264.07	0.23	1045.17	950.94	264.07	264.07
Reach	203203.3	Max WS	1731.51	3851.91	3857.33		3857.41	0.000887	2.32	575.08	230.05	0.26	1042.33	948.1	230.05	230.05



**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	202699.8	Max WS	1330.99	3851.54	3856.92		3857	0.000786	2.23	596.94	230.09	0.24	1039.67	945.45	230.09	230.09
Reach	202198.4	Max WS	1330.48	3851.18	3856.58		3856.65	0.000634	2.06	646.29	239.5	0.22	1036.97	942.74	239.5	239.5
Reach	201697.9	Max WS	1330.09	3850.82	3856.26		3856.34	0.000625	2.15	617.21	210.79	0.22	1034.38	940.16	210.79	210.79
Reach	201198.4	Max WS	1329.69	3850.46	3855.85		3855.95	0.000946	2.54	523.01	189.84	0.27	1032.08	937.86	189.84	189.84
Reach	200698.6	Max WS	1329.14	3850.11	3855.46		3855.54	0.000706	2.33	571.24	190.21	0.24	1029.9	935.68	190.21	190.21
Reach	200199	Max WS	1328.81	3850.98	3855.08		3855.17	0.000782	2.37	559.6	195.69	0.25	1027.69	933.46	195.69	195.69
Reach	199700.7	Max WS	1328.36	3849.39	3854.75		3854.83	0.000622	2.24	592.61	189.57	0.22	1025.49	931.26	189.57	189.57
Reach	198700.6	Max WS	1327.42	3848.67	3854.15		3854.23	0.000591	2.27	583.89	175.73	0.22	1021.29	927.07	175.73	175.73
Reach	198200.4	Max WS	1326.91	3848.31	3853.81		3853.91	0.000706	2.42	547.38	170.52	0.24	1019.31	925.08	170.52	170.52
Reach	197699.6	Max WS	1326.59	3847.95	3853.52		3853.6	0.000532	2.29	579.11	158.51	0.21	1017.42	923.19	158.51	158.51
Reach	197199.5	Max WS	1326.24	3847.59	3853.18		3853.27	0.000761	2.53	524.3	162.38	0.25	1015.57	921.35	162.38	162.38
Reach	196699.4	Max WS	1325.81	3847.23	3852.84		3852.94	0.000603	2.48	535.45	143.12	0.23	1013.82	919.59	143.12	143.12
Reach	196359.8	Max WS	1325.49	3846.99	3852.52		3852.66	0.001051	2.94	451.31	141.81	0.29	1012.71	918.48	141.81	141.81
Reach	195699	Max WS	1324.98	3847.05	3851.96		3852.07	0.000738	2.71	488.17	132.57	0.25	1010.63	916.4	132.57	132.57
Reach	195196.7	Max WS	1324.59	3847.1	3851.68		3851.74	0.000583	2.08	637.68	218.61	0.21	1008.6	914.38	218.61	218.61
Reach	194695.5	Max WS	1324.01	3847.15	3851.37		3851.44	0.000659	2.1	630.56	233.95	0.23	1006	911.77	233.95	233.95
Reach	194195.5	Max WS	1323.5	3847.2	3851.02		3851.09	0.000719	2.14	619.64	238.88	0.23	1003.29	909.06	238.88	238.88
Reach	193902.1	Max WS	1323.25	3847.23	3850.79		3850.87	0.000816	2.23	592.44	235.15	0.25	1001.69	907.46	235.15	235.15
Reach	193558.3	Max WS	1322.89	3846.93	3850.54		3850.61	0.000707	2.12	624.7	241.09	0.23	999.81	905.58	241.09	241.09
Reach	193308.1	Max WS	1322.81	3846.69	3850.35	3848.77	3850.43	0.000767	2.18	606.44	238.24	0.24	998.43	904.21	238.24	238.24
Reach	193214.3	Bridge														
Reach	193120.4	Max WS	1322.66	3846.75	3850.24		3850.3	0.000548	1.95	678.32	245.75	0.21	997.4	903.18	245.75	245.75
Reach	192536.8	Max WS	1322.06	3845.31	3849.94		3850	0.000494	2	661.79	212.19	0.2	994.34	900.11	212.19	212.19
Reach	192420.2	Max WS	1322.08	3845.34	3849.85		3849.93	0.000709	2.24	588.98	208.13	0.24	993.77	899.55	208.13	208.13
Reach	191707.4	Max WS	1321.24	3845.08	3849.25		3849.35	0.000935	2.58	512.99	181.5	0.27	990.59	896.36	181.5	181.5
Reach	191208.2	Max WS	1320.85	3844.29	3848.77		3848.88	0.000963	2.67	494.97	169.57	0.28	988.57	894.35	169.57	169.57
Reach	190705.6	Max WS	1320.45	3843.7	3848.3		3848.41	0.000949	2.7	488.24	161.75	0.27	986.66	892.44	161.75	161.75
Reach	190205.9	Max WS	1320.08	3843.6	3847.93		3848.02	0.000634	2.42	545.46	157.25	0.23	984.83	890.61	157.25	157.25
Reach	189710.7	Max WS	1319.69	3843.29	3847.58		3847.68	0.000764	2.57	513.1	155.81	0.25	983.05	888.83	155.81	155.81
Reach	188722.6	Max WS	1318.93	3842.33	3846.91		3847	0.00064	2.44	540.5	155.41	0.23	979.52	885.3	155.41	155.41
Reach	188220.5	Max WS	1318.38	3841.85	3846.52		3846.63	0.000845	2.63	502.18	158.72	0.26	977.71	883.49	158.72	158.72
Reach	187717.2	Max WS	1317.98	3841.36	3846.13		3846.23	0.000753	2.58	510.87	152.86	0.25	975.91	881.69	152.86	152.86
Reach	187219.6	Max WS	1317.73	3840.88	3845.81		3845.9	0.000613	2.38	554.32	160.16	0.23	974.12	879.9	160.16	160.16
Reach	186724.5	Max WS	1317.16	3840.39	3845.47		3845.57	0.000721	2.53	521.41	155.67	0.24	972.33	878.1	155.67	155.67
Reach	186218.2	Max WS	1316.75	3839.91	3845.16		3845.25	0.000575	2.36	557.02	154.44	0.22	970.53	876.3	154.44	154.44
Reach	185715.4	Max WS	1316.44	3839.42	3844.9		3844.98	0.000504	2.24	586.42	158.95	0.21	968.72	874.49	158.95	158.95
Reach	185226.3	Max WS	1315.88	3838.95	3844.61		3844.7	0.000638	2.4	547.9	160.69	0.23	966.92	872.7	160.69	160.69
Reach	184751.5	Max WS	1315.59	3838.48	3844.27		3844.37	0.000782	2.56	514.84	160.43	0.25	965.17	870.95	160.43	160.43
Reach	184226.3	Max WS	1315.14	3838.19	3843.87		3843.97	0.000756	2.49	527.43	165.69	0.25	963.21	868.98	165.69	165.69
Reach	183726.1	Max WS	1314.82	3837.91	3843.45		3843.56	0.000888	2.67	491.56	157.09	0.27	961.35	867.13	157.09	157.09
Reach	183225.7	Max WS	1314.34	3837.63	3843.04		3843.15	0.000777	2.58	509.05	155.23	0.25	959.56	865.33	155.23	155.23
Reach	182725.7	Max WS	1313.98	3837.35	3842.67		3842.77	0.000739	2.57	510.82	151.35	0.25	957.8	863.58	151.35	151.35
Reach	182225.6	Max WS	1313.67	3837.08	3842.18		3842.3	0.00118	2.8	469.37	174.13	0.3	955.93	861.71	174.13	174.13
Reach	181726.6	Max WS	1313.1	3836.8	3841.77		3841.85	0.000673	2.26	582.2	196.52	0.23	953.81	859.58	196.52	196.52
Reach	181231.1	Max WS	1312.74	3836.53	3841.43		3841.51	0.000715	2.27	577.71	201.92	0.24	951.54	857.32	201.92	201.92
Reach	180731	Max WS	1312.26	3836.25	3841.13		3841.2	0.000547	2.08	630.59	205.93	0.21	949.2	854.98	205.93	205.93
Reach	180230.9	Max WS	1311.69	3835.97	3840.82		3840.9	0.000667	2.24	585.95	198.36	0.23	946.88	852.66	198.36	198.36
Reach	179730.1	Max WS	1311.34	3835.69	3840.45		3840.54	0.000796	2.33	563.25	205.34	0.25	944.56	850.34	205.34	205.34
Reach	179229.9	Max WS	1310.96	3835.42	3840.1		3840.18	0.000646	2.27	576.48	185.63	0.23	942.32	848.09	185.63	185.63
Reach	178729.2	Max WS	1310.55	3835.14	3839.68		3839.79	0.000927	2.64	496.71	168.1	0.27	940.28	846.06	168.1	168.1
Reach	178229.1	Max WS	1310.09	3834.86	3839.32		3839.4	0.000664	2.32	564.55	180.9	0.23	938.28	844.05	180.9	180.9
Reach	177729	Max WS	1309.72	3834.58	3839.03		3839.1	0.000549	2.14	611.38	191.64	0.21	936.14	841.92	191.64	191.64
Reach	177179.9	Max WS	1309.09	3834.09	3838.64		3838.73	0.000842	2.44	536.03	189.02	0.26	933.74	839.52	189.02	189.02
Reach	176727.8	Max WS	1308.83	3834.03	3838.26		3838.35	0.000846	2.52	519.77	176.27	0.26	931.85	837.62	176.27	176.27
Reach	176227.7	Max WS	1308.37	3833.43	3837.7		3837.84	0.001258	2.96	441.69	157.84	0.31	929.93	835.7	157.84	157.84
Reach	175727.1	Max WS	1307.94	3832.42	3837.32		3837.4	0.000543	2.21	592.82	175.49	0.21	928.01	833.79	175.49	175.49
Reach	175226.9	Max WS	1307.42	3831.89	3836.97		3837.06	0.000814	2.31	565.35	211.18	0.25	925.79	831.57	211.18	211.18
Reach	174726.7	Max WS	1307.13	3831.96	3836.62		3836.69	0.000674	2.09	625.44	236.95	0.23	923.22	828.99	236.95	236.95
Reach	174098.6	Max WS	1306.55	3832.57	3836.13		3836.21	0.000901	2.23	585.54	250.97	0.26	919.7	825.48	250.97	250.97

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	173726.1	Max WS	1306.22	3832.06	3835.73		3835.83	0.001157	2.52	519.23	224.27	0.29	917.67	823.45	224.27	224.27
Reach	173228.2	Max WS	1305.8	3831.38	3835.22		3835.3	0.000986	2.38	548.89	228.26	0.27	915.09	820.86	228.26	228.26
Reach	172728.9	Max WS	1305.47	3830.69	3834.8		3834.86	0.000807	2.06	634.79	282.9	0.24	912.16	817.93	282.9	282.9
Reach	172228.7	Max WS	1304.76	3830.01	3834.43		3834.49	0.000721	2.05	636.98	262.3	0.23	909.03	814.8	262.3	262.3
Reach	171765.6	Max WS	1304.43	3829.36	3834.09		3834.15	0.000754	2.11	617.67	250.25	0.24	906.3	812.07	250.25	250.25
Reach	171655.1	Max WS	1304.26	3829.21	3834.02		3834.08	0.000675	1.96	666.54	279.43	0.22	905.63	811.4	279.43	279.43
Reach	171493.7	Max WS	1304.17	3829.01	3833.85	3832.38	3833.94	0.001104	2.35	556.07	257.42	0.28	904.63	810.41	257.42	257.42
Reach	171432.4	Bridge														
Reach	171371.1	Max WS	1304.07	3828.86	3833.71		3833.8	0.000992	2.39	546.27	226.88	0.27	903.96	809.74	226.88	226.88
Reach	170719.2	Max WS	1303.47	3828.04	3833.14		3833.21	0.000873	2.18	597.31	257.85	0.25	900.34	806.11	257.85	257.85
Reach	170534.3	Max WS	1303.31	3827.81	3832.99		3833.07	0.000762	2.15	605.46	240.77	0.24	899.28	805.05	240.77	240.77
Reach	169695.8	Max WS	1302.6	3826.76	3832.37		3832.45	0.000726	2.36	551.61	182.78	0.24	895.2	800.98	182.78	182.78
Reach	169320.2	Max WS	1302.29	3826.29	3832.08		3832.18	0.000785	2.44	533.76	179.13	0.25	893.64	799.42	179.13	179.13
Reach	168700.8	Max WS	1301.74	3825.83	3831.66		3831.74	0.000637	2.31	563.11	175.35	0.23	891.12	796.9	175.35	175.35
Reach	168200.5	Max WS	1301.37	3825.46	3831.36		3831.44	0.000596	2.27	572.3	172.93	0.22	889.12	794.9	172.93	172.93
Reach	167704.1	Max WS	1300.79	3825.08	3831.07		3831.15	0.000559	2.24	581.69	171.83	0.21	887.16	792.93	171.83	171.83
Reach	167203.8	Max WS	1300.49	3824.71	3830.67		3830.78	0.000954	2.71	480.02	158.43	0.27	885.26	791.03	158.43	158.43
Reach	166704.3	Max WS	1300.13	3824.34	3830.32		3830.4	0.000611	2.16	601.91	201.54	0.22	883.2	788.97	201.54	201.54
Reach	165690.5	Max WS	1298.97	3823.58	3829.61		3829.69	0.000809	2.19	592.94	239.32	0.25	878.07	783.84	239.32	239.32
Reach	164967.4	Max WS	1298.33	3823.04	3829.17		3829.23	0.000473	1.99	652.2	202.81	0.2	874.4	780.17	202.81	202.81
Reach	164026.9	Max WS	1297.64	3823.04	3828.63		3828.72	0.000622	2.36	549.11	161.78	0.23	870.46	776.23	161.78	161.78
Reach	163700.9	Max WS	1297.24	3823.17	3828.35		3828.46	0.000991	2.68	484.62	168.37	0.28	869.23	775	168.37	168.37
Reach	163198.2	Max WS	1296.87	3823.38	3827.91		3828.01	0.000835	2.48	521.92	179.28	0.26	867.22	772.99	179.28	179.28
Reach	162704.9	Max WS	1296.39	3823.58	3827.58		3827.66	0.000601	2.21	586.37	187.35	0.22	865.14	770.92	187.35	187.35
Reach	161899.9	Max WS	1295.73	3823.79	3827.19		3827.23	0.000465	1.73	750.3	287.65	0.19	860.75	766.53	287.65	287.65
Reach	161178.6	Max WS	1294.82	3823.25	3826.76		3826.82	0.00068	2.07	626.52	243.66	0.23	856.36	762.13	243.66	243.66
Reach	160736.2	Max WS	1294.47	3822.15	3826.35		3826.45	0.001021	2.6	498.27	185.98	0.28	854.17	759.95	185.98	185.98
Reach	159845.3	Max WS	1293.76	3822.02	3825.66		3825.72	0.000647	2.04	633.09	241.53	0.22	849.8	755.58	241.53	241.53
Reach	159665.6	Max WS	1293.52	3821.85	3825.55		3825.61	0.000612	2.03	637.51	235.88	0.22	848.82	754.59	235.88	235.88
Reach	159166.2	Max WS	1293.14	3821.4	3825.27		3825.33	0.000502	1.97	656.71	218.42	0.2	846.21	751.99	218.42	218.42
Reach	158662.3	Max WS	1292.62	3820.94	3825.01		3825.08	0.000529	2.05	629.34	204.5	0.21	843.77	749.54	204.5	204.5
Reach	158164.7	Max WS	1292.21	3820.48	3824.69		3824.78	0.000702	2.34	552.14	182.06	0.24	841.56	747.33	182.06	182.06
Reach	157668.7	Max WS	1291.71	3820.02	3824.32		3824.41	0.000781	2.47	522.18	171.03	0.25	839.55	745.32	171.03	171.03
Reach	157166.3	Max WS	1291.21	3819.56	3823.87		3823.99	0.000914	2.7	478.35	154.39	0.27	837.67	743.45	154.39	154.39
Reach	156666.2	Max WS	1290.81	3819.1	3823.43		3823.54	0.000889	2.69	479.71	152.66	0.27	835.91	741.68	152.66	152.66
Reach	155878	Max WS	1290.3	3818.38	3822.75		3822.84	0.000894	2.41	535.04	202.4	0.26	832.7	738.47	202.4	202.4
Reach	155164.5	Max WS	1289.74	3817.86	3822.05		3822.13	0.001105	2.32	555.55	260.42	0.28	828.91	734.68	260.42	260.42
Reach	154661.2	Max WS	1289.2	3817.49	3821.58		3821.64	0.000861	2	645.29	315.53	0.25	825.58	731.35	315.53	315.53
Reach	154261.4	Max WS	1288.85	3817.2	3821.29		3821.34	0.000653	1.8	714.82	331.77	0.22	822.61	728.38	331.77	331.77
Reach	153653.5	Max WS	1288.14	3816.56	3820.78		3820.86	0.00098	2.2	586.42	274.52	0.26	818.38	724.15	274.52	274.52
Reach	153151.7	Max WS	1287.73	3816.04	3820.35		3820.43	0.000789	2.14	601.64	248.24	0.24	815.37	721.14	248.24	248.24
Reach	152651.6	Max WS	1287.16	3815.52	3819.94		3820.01	0.000899	2.24	574.47	243.7	0.26	812.54	718.32	243.7	243.7
Reach	152151.6	Max WS	1286.84	3815	3819.54		3819.61	0.000755	2.15	597.84	235.95	0.24	809.79	715.56	235.95	235.95
Reach	151651.6	Max WS	1286.35	3814.48	3819.12		3819.2	0.000913	2.31	556.44	227.63	0.26	807.13	712.9	227.63	227.63
Reach	151151.3	Max WS	1286.02	3813.96	3818.78		3818.84	0.000545	1.92	670.59	246.9	0.21	804.41	710.18	246.9	246.9
Reach	150648.1	Max WS	1285.37	3813.43	3818.49		3818.55	0.00062	2	642.28	244.37	0.22	801.57	707.34	244.37	244.37
Reach	150143.4	Max WS	1284.92	3812.91	3818.21		3818.27	0.000502	1.9	675.37	235.72	0.2	798.79	704.56	235.72	235.72
Reach	149643.6	Max WS	1284.31	3812.39	3817.97		3818.03	0.000485	1.98	648.56	208.1	0.2	796.24	702.01	208.1	208.1
Reach	149196.8	Max WS	1283.92	3811.92	3817.71		3817.79	0.000585	2.2	583.37	182.76	0.22	794.24	700.01	182.76	182.76
Reach	148643.3	Max WS	1283.41	3812.19	3817.29		3817.4	0.000855	2.56	502.24	167.65	0.26	792.01	697.78	167.65	167.65
Reach	148143.3	Max WS	1283.13	3812.44	3816.95		3817.03	0.000622	2.22	577.41	187.6	0.22	789.97	695.74	187.6	187.6
Reach	147643.3	Max WS	1282.69	3812.69	3816.54		3816.64	0.000967	2.48	516.95	198.91	0.27	787.75	693.53	198.91	198.91
Reach	147258.8	Max WS	1282.28	3812.79	3816.03		3816.15	0.001582	2.8	457.81	212.93	0.34	785.93	691.71	212.93	212.93
Reach	147086.9	Max WS	1282.29	3811.45	3815.88	3814.32	3815.95	0.000807	2.24	573.64	225.29	0.25	785.07	690.84	225.29	225.29
Reach	147029.4	Bridge														
Reach	146971.8	Max WS	1282.23	3811.96	3815.76		3815.84	0.000838	2.27	565.73	224.17	0.25	784.49	690.26	224.17	224.17
Reach	146503.3	Max WS	1281.71	3810.46	3815.35		3815.43	0.000948	2.17	591.07	274.4	0.26	781.81	687.58	274.4	274.4
Reach	146319.1	Max WS	1281.52	3810.36	3815.23		3815.29	0.000594	1.93	665.52	259.83	0.21	780.68	686.45	259.83	259.83
Reach	145644.9	Max WS	1280.89	3809.99	3814.83		3814.89	0.000604	2.02	632.76	231.65	0.22	776.88	682.65	231.65	231.65

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	145147.7	Max WS	1280.38	3809.72	3814.51		3814.58	0.000652	2.12	602.62	217.41	0.22	774.31	680.09	217.41	217.41
Reach	144648.7	Max WS	1280	3809.45	3814.21		3814.27	0.000616	2.05	625.53	228.7	0.22	771.76	677.53	228.7	228.7
Reach	144148.3	Max WS	1279.49	3809.17	3813.9		3813.97	0.0006	2.12	604.72	205.77	0.22	769.26	675.04	205.77	205.77
Reach	143643.9	Max WS	1279.07	3808.9	3813.66		3813.72	0.00041	1.91	670.71	200.76	0.18	766.91	672.68	200.76	200.76
Reach	142987.9	Max WS	1278.42	3808.54	3813.22		3813.32	0.000816	2.51	509.26	168.85	0.25	764.13	669.9	168.85	168.85
Reach	142347.6	Max WS	1277.85	3808.19	3812.7		3812.8	0.000809	2.57	498.04	185.96	0.25	761.52	667.5	185.96	185.96
Reach	141638.1	Max WS	1276.95	3807.65	3812.15		3812.24	0.000786	2.5	510.27	203.24	0.25	758.35	664.87	164.83	203.24
Reach	141138.7	Max WS	1346.51	3807.27	3811.77		3811.86	0.000715	2.48	542.45	166.07	0.24	756.23	662.97	166.07	166.07
Reach	140639	Max WS	1346.03	3806.89	3811.49		3811.56	0.000516	2.07	651.65	205.99	0.2	754.09	660.83	205.99	205.99
Reach	140137.3	Max WS	1345.38	3806.52	3811.15		3811.23	0.000806	2.36	570.52	207.01	0.25	751.71	658.46	207.01	207.01
Reach	139637	Max WS	1344.95	3806.14	3810.83		3810.9	0.000571	2.14	628.86	202.82	0.21	749.36	656.1	202.82	202.82
Reach	139135.7	Max WS	1344.67	3805.76	3810.5		3810.58	0.000714	2.22	605.91	219.2	0.24	746.93	653.67	219.2	219.2
Reach	138638.5	Max WS	1344.27	3805.38	3809.96		3810.08	0.001304	2.78	484.28	196.61	0.31	744.56	651.3	196.61	196.61
Reach	138142.7	Max WS	1343.88	3805	3809.47		3809.55	0.00083	2.29	586.4	226.62	0.25	742.15	648.89	226.62	226.62
Reach	137271.6	Max WS	1342.94	3804.34	3808.84		3808.91	0.000634	2.12	633.05	223.89	0.22	737.64	644.39	223.89	223.89
Reach	136647.1	Max WS	1342.47	3803.84	3808.51		3808.57	0.000475	1.93	693.9	227.05	0.2	734.41	641.16	227.05	227.05
Reach	136147	Max WS	1341.76	3803.44	3808.19		3808.27	0.000726	2.25	596.89	214.67	0.24	731.88	638.62	214.67	214.67
Reach	135646.9	Max WS	1341.27	3803.03	3807.76		3807.85	0.000967	2.39	561.36	228.08	0.27	729.34	636.08	228.08	228.08
Reach	135144.9	Max WS	1341.03	3802.63	3807.35		3807.43	0.000729	2.22	603.61	221.12	0.24	726.75	633.49	221.12	221.12
Reach	134636.8	Max WS	1340.38	3802.22	3806.92		3807	0.000941	2.37	565.89	227.9	0.26	724.13	630.87	227.9	227.9
Reach	134133.5	Max WS	1339.94	3801.82	3806.58		3806.63	0.000545	1.9	705.13	263.37	0.2	721.29	628.03	263.37	263.37
Reach	133630.3	Max WS	1339.51	3801.41	3806.24		3806.32	0.000703	2.28	587.38	201.18	0.24	718.61	625.35	201.18	201.18
Reach	133132.6	Max WS	1339.08	3801.01	3805.79		3805.9	0.001023	2.6	515.71	192.17	0.28	716.36	623.1	192.17	192.17
Reach	132636	Max WS	1338.63	3800.61	3805.4		3805.48	0.000678	2.33	574.53	185.32	0.23	714.21	620.95	185.32	185.32
Reach	132134.6	Max WS	1338.26	3800.21	3805.07		3805.15	0.000628	2.28	587.68	185.39	0.23	712.07	618.82	185.39	185.39
Reach	131632.1	Max WS	1337.72	3799.81	3804.83		3804.89	0.00043	1.9	703.22	218.17	0.19	709.75	616.49	218.17	218.17
Reach	131133.2	Max WS	1337.33	3799.41	3804.61		3804.67	0.000451	2.06	647.88	183.97	0.19	707.44	614.19	183.97	183.97
Reach	130633.1	Max WS	1336.61	3799	3804.35		3804.43	0.000537	2.21	605.41	177.68	0.21	705.37	612.11	177.68	177.68
Reach	130133	Max WS	1336.26	3798.59	3804.07		3804.15	0.000573	2.29	584.21	170.02	0.22	703.37	610.11	170.02	170.02
Reach	129632.8	Max WS	1335.69	3798.19	3803.69		3803.81	0.000834	2.68	497.75	150.59	0.26	701.53	608.27	150.59	150.59
Reach	129132.8	Max WS	1335.38	3797.79	3803.28		3803.39	0.000848	2.73	489	146.83	0.26	699.82	606.57	146.83	146.83
Reach	128632.7	Max WS	1334.95	3797.39	3802.95		3803.04	0.000569	2.4	555.83	148.93	0.22	698.13	604.87	148.93	148.93
Reach	128132.7	Max WS	1334.64	3796.99	3802.67		3802.76	0.000577	2.42	551.14	147.58	0.22	696.42	603.17	147.58	147.58
Reach	127762.7	Max WS	1334.14	3796.69	3802.43		3802.53	0.000705	2.55	524.13	151.7	0.24	695.15	601.9	151.7	151.7
Reach	127602.4	Max WS	1334.15	3796.56	3802.34		3802.43	0.000558	2.34	569.07	155.74	0.22	694.59	601.33	155.74	155.74
Reach	127529.3	Max WS	1334.17	3796.53	3802.28		3802.38	0.000709	2.6	513.86	144.61	0.24	694.34	601.08	144.61	144.61
Reach	127367.6	Max WS	1333.94	3796.45	3802.2	3799.68	3802.28	0.000526	2.29	583.71	160.01	0.21	693.77	600.51	160.01	160.01
Reach	127319.9	Bridge														
Reach	127272.1	Max WS	1333.84	3796.41	3802.08		3802.2	0.000849	2.77	481.92	141.22	0.26	693.45	600.19	141.22	141.22
Reach	126883.8	Max WS	1333.42	3796.23	3801.83		3801.92	0.000624	2.41	553.32	158.72	0.23	692.11	598.85	158.72	158.72
Reach	126128.6	Max WS	1332.73	3795.85	3801.25		3801.34	0.000912	2.42	550.37	209.12	0.26	688.92	595.67	209.12	209.12
Reach	125628.5	Max WS	1332.49	3795.61	3800.84		3800.92	0.000791	2.28	583.35	218.06	0.25	686.47	593.21	218.06	218.06
Reach	125128.5	Max WS	1332	3795.36	3800.48		3800.55	0.000688	2.17	613.44	222.94	0.23	683.94	590.68	222.94	222.94
Reach	124628.8	Max WS	1331.44	3795.11	3800.17		3800.23	0.000599	2.07	642.59	225.68	0.22	681.37	588.11	225.68	225.68
Reach	124128.7	Max WS	1331.01	3794.87	3799.89		3799.95	0.000535	1.99	670.12	230.41	0.21	678.75	585.49	230.41	230.41
Reach	123628.7	Max WS	1330.61	3794.62	3799.56		3799.63	0.000755	2.2	604.01	230.1	0.24	676.1	582.85	230.1	230.1
Reach	123128.6	Max WS	1330.03	3794.37	3799.14		3799.22	0.00091	2.32	573.25	232.41	0.26	673.45	580.19	232.41	232.41
Reach	122628	Max WS	1329.66	3794.13	3798.77		3798.84	0.000646	2.1	634.24	231.54	0.22	670.78	577.53	231.27	231.54
Reach	122109.7	Max WS	1329.04	3793.87	3798.31		3798.39	0.001101	2.3	577.4	273.54	0.28	667.78	574.53	273.54	273.54
Reach	121627.1	Max WS	1328.77	3793.35	3797.88		3797.96	0.000754	2.16	616.21	242.32	0.24	664.92	571.67	242.32	242.32
Reach	121126.7	Max WS	1328.19	3792.82	3797.47		3797.55	0.000889	2.27	584.58	240.52	0.26	662.15	568.89	240.52	240.52
Reach	120625.8	Max WS	1327.73	3792.28	3797.05		3797.12	0.000845	2.11	630.12	280.36	0.25	659.15	565.9	280.36	280.36
Reach	120125.5	Max WS	1327.14	3791.74	3796.65		3796.72	0.000775	2.13	623.3	255.23	0.24	656.08	562.82	255.23	255.23
Reach	119624.7	Max WS	1326.79	3791.2	3796.28		3796.35	0.000705	2.09	634.58	248.91	0.23	653.18	559.93	248.91	248.91
Reach	119124.3	Max WS	1326.19	3790.66	3795.99		3796.05	0.000519	1.85	716.27	267.64	0.2	650.21	556.96	267.64	267.64
Reach	118623.8	Max WS	1325.75	3790.12	3795.6		3795.68	0.000946	2.37	558.51	225.29	0.27	647.38	554.13	225.29	225.29
Reach	118123.5	Max WS	1325.28	3789.59	3795.17		3795.26	0.000784	2.35	565.04	201.29	0.25	644.93	551.68	201.29	201.29
Reach	117623.3	Max WS	1324.85	3789.05	3794.83		3794.91	0.000632	2.21	599.52	198.45	0.22	642.64	549.38	198.45	198.45
Reach	117122.3	Max WS	1324.38	3788.51	3794.53		3794.6	0.000586	2.12	625.72	208.86	0.22	640.29	547.04	208.86	208.86

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	116622.1	Max WS	1323.71	3787.98	3794.22		3794.29	0.000661	2.21	599.52	205.16	0.23	637.92	544.66	205.16	205.16
Reach	115991.3	Max WS	1323.35	3787.3	3793.59		3793.7	0.00124	2.66	496.79	206.14	0.3	634.94	541.69	206.14	206.14
Reach	115894.8	Max WS	1323.26	3787.24	3793.5		3793.59	0.000966	2.47	534.78	205.41	0.27	634.48	541.23	205.41	205.41
Reach	115121.7	Max WS	1322.52	3786.75	3792.89		3792.96	0.000681	2.23	592.84	204.46	0.23	630.85	537.59	204.46	204.46
Reach	114621.6	Max WS	1322.24	3786.43	3792.59		3792.65	0.000566	2.06	642.25	217.42	0.21	628.42	535.17	217.42	217.42
Reach	114117.6	Max WS	1321.62	3786.11	3792.36		3792.41	0.000405	1.78	741.27	242.51	0.18	625.76	532.51	242.51	242.51
Reach	113617.2	Max WS	1321.11	3785.79	3792.09		3792.15	0.000638	2.09	631.83	228.4	0.22	623.06	529.8	228.4	228.4
Reach	113117	Max WS	1320.41	3785.47	3791.69		3791.77	0.000942	2.21	598.38	268.13	0.26	620.21	526.95	268.13	268.13
Reach	112616.7	Max WS	1320.15	3785.15	3791.31		3791.37	0.000654	2.05	645.12	246.38	0.22	617.25	524	246.38	246.38
Reach	112116.5	Max WS	1319.65	3784.84	3791.02		3791.08	0.000512	1.97	671.06	226.23	0.2	614.54	521.29	226.23	226.23
Reach	111616.5	Max WS	1319.21	3784.52	3790.74		3790.8	0.000629	2.04	647.72	241.34	0.22	611.86	518.6	241.34	241.34
Reach	111274.4	Max WS	1318.72	3784.3	3790.5		3790.57	0.000721	2.18	604.81	225.49	0.23	610.02	516.77	225.49	225.49
Reach	111049.1	Max WS	1318.47	3784.16	3790.35	3788.22	3790.42	0.000627	2.1	628.01	223.34	0.22	608.86	515.61	223.34	223.34
Reach	110995.7	Bridge														
Reach	110942.2	Max WS	1318.38	3784.09	3790.29		3790.35	0.000533	1.95	674.8	236.96	0.2	608.31	515.05	236.96	236.96
Reach	110300.1	Max WS	1317.86	3783.69	3789.95		3790.02	0.000509	2.04	646.27	205.51	0.2	605.05	511.79	205.51	205.51
Reach	109615.7	Max WS	1317.73	3783.25	3789.39		3789.49	0.001036	2.65	498.14	181.94	0.28	602	508.75	181.94	181.94
Reach	109115.5	Max WS	1317.75	3782.93	3789.02		3789.08	0.000621	2.08	633.65	226.94	0.22	599.66	506.4	226.94	226.94
Reach	108615.4	Max WS	1317.78	3782.61	3788.72		3788.79	0.00058	2.02	653.93	233.71	0.21	597.01	503.76	233.71	233.71
Reach	108115.2	Max WS	1317.57	3782.3	3788.4		3788.47	0.000675	2.14	616.13	225.35	0.23	594.38	501.12	225.35	225.35
Reach	107667.9	Max WS	1317.84	3782.01	3788.15		3788.21	0.000513	1.91	688.87	242.28	0.2	591.97	498.72	242.28	242.28
Reach	107114.6	Max WS	1317.73	3781.89	3787.82		3787.9	0.000624	2.17	606.76	204.35	0.22	589.14	495.88	204.35	204.35
Reach	106611	Max WS	1317.71	3781.78	3787.49		3787.55	0.000746	2	659.45	288.74	0.23	586.29	493.03	288.74	288.74
Reach	106104.1	Max WS	1317.62	3781.67	3787.17		3787.23	0.000554	1.84	715.88	284.14	0.2	582.95	489.7	284.14	284.14
Reach	105597.9	Max WS	1317.67	3781.56	3786.9		3786.95	0.000566	1.8	733.36	306.29	0.2	579.52	486.27	306.29	306.29
Reach	105094	Max WS	1317.82	3781.45	3786.54		3786.61	0.000779	2.08	633.36	268.93	0.24	576.2	482.94	268.93	268.93
Reach	104593.9	Max WS	1317.82	3781.34	3786.15		3786.22	0.000773	2.18	604.69	239.02	0.24	573.28	480.03	239.02	239.02
Reach	104092.9	Max WS	1317.81	3781.24	3785.79		3785.85	0.000751	2.01	656.33	286.92	0.23	570.26	477	286.92	286.92
Reach	103590.3	Max WS	1317.66	3781.13	3785.46		3785.51	0.000605	1.86	706.67	294.69	0.21	566.9	473.65	294.69	294.69
Reach	103091.6	Max WS	1317.83	3781.02	3785.13		3785.19	0.000717	1.95	676.12	298.78	0.23	563.5	470.25	298.78	298.78
Reach	102589.6	Max WS	1317.89	3780.75	3784.76		3784.83	0.00075	2.06	640.31	269.82	0.24	560.23	466.97	269.82	269.82
Reach	102089.3	Max WS	1317.68	3780.48	3784.37		3784.44	0.000838	2.17	608.41	257.51	0.25	557.2	463.95	257.51	257.51
Reach	101526.1	Max WS	1317.7	3780.18	3783.95		3784.01	0.000707	2.03	650.45	268.12	0.23	553.8	460.55	268.12	268.12
Reach	101318.5	Max WS	1317.57	3779.74	3783.77	3782.28	3783.85	0.000848	2.23	589.59	240.62	0.25	552.59	459.34	240.62	240.62
Reach	101239.2	Bridge														
Reach	101159.9	Max WS	1317.53	3779.4	3783.59		3783.69	0.000993	2.57	513.45	191.5	0.28	551.82	458.57	191.5	191.5
Reach	100987.1	Max WS	1317.36	3779.04	3783.43		3783.52	0.000944	2.41	547.66	216.18	0.27	551.01	457.76	216.18	216.18
Reach	100487.1	Max WS	1316.96	3778.29	3783		3783.08	0.000848	2.24	587.37	237.95	0.25	548.41	455.15	237.95	237.95
Reach	100097.7	Max WS	1316.62	3777.71	3782.73		3782.8	0.000617	2.01	655.03	246.05	0.22	546.24	452.99	246.05	246.05
Reach	99102.92	Max WS	1315.56	3776.24	3782.09		3782.16	0.00069	2.11	624.26	237.17	0.23	540.73	447.47	237.17	237.17
Reach	98397.79	Max WS	1314.93	3775.18	3781.7		3781.75	0.000465	1.81	726.9	258.69	0.19	536.71	443.46	258.69	258.69
Reach	97599.79	Max WS	1314.16	3774.81	3781.24		3781.31	0.000643	2.22	590.85	195.55	0.23	532.55	439.3	195.55	195.55
Reach	97100.05	Max WS	1313.66	3774.58	3780.92		3781	0.000612	2.35	560.11	164.63	0.22	530.49	437.23	164.63	164.63
Reach	96599.19	Max WS	1313.06	3774.34	3780.7		3780.76	0.000381	1.83	715.96	244.19	0.18	528.13	435.05	244.19	244.19
Reach	96098.89	Max WS	1312.56	3774.11	3780.52		3780.57	0.000353	1.81	724.25	249	0.17	525.3	432.63	208.1	249
Reach	95598.66	Max WS	1312.02	3773.88	3780.32		3780.39	0.000394	2.09	628.04	219.5	0.18	522.61	430.53	157.8	219.5
Reach	95098.65	Max WS	1311.61	3773.65	3780.11		3780.18	0.000436	2.14	615.66	185.75	0.19	520.29	428.7	160.3	185.75
Reach	94598.6	Max WS	1311.07	3773.42	3779.84		3779.93	0.000592	2.31	567.82	221.17	0.22	517.95	426.83	166.48	221.17
Reach	94098.58	Max WS	1310.75	3773.19	3779.26		3779.41	0.001486	3.11	421.87	180.19	0.34	515.65	424.96	159.41	180.19
Reach	93598.54	Max WS	1310.3	3772.95	3778.82		3778.9	0.000567	2.19	597.08	183.95	0.21	513.56	422.99	183.95	183.95
Reach	93098.47	Max WS	1309.9	3772.72	3778.59		3778.65	0.000443	2.02	649.99	241.19	0.19	511.12	420.84	190.15	241.19
Reach	92598.44	Max WS	1309.35	3772.49	3778.31		3778.39	0.000613	2.18	601.37	199.11	0.22	508.59	418.6	199.11	199.11
Reach	92098.42	Max WS	1308.85	3772.26	3777.95		3778.04	0.000801	2.34	559.27	244.46	0.25	506.04	416.3	203.11	244.46
Reach	91598.41	Max WS	1308.51	3772.03	3777.62		3777.69	0.000593	2.1	623.52	241.79	0.22	503.25	413.91	213.19	241.79
Reach	91098.32	Max WS	1308.07	3771.79	3777.33		3777.4	0.000568	2.1	623.08	265.84	0.21	500.34	411.51	204.94	265.84
Reach	90598.18	Max WS	1307.43	3771.56	3777.09		3777.15	0.000416	1.95	669.66	373.67	0.19	496.66	409.21	195.48	373.67
Reach	90098.16	Max WS	1307.1	3771.33	3776.8		3776.88	0.000669	2.29	569.81	245.02	0.23	493.11	407.02	186.39	245.02
Reach	89597.96	Max WS	1306.6	3771.1	3776.46		3776.54	0.00072	2.27	574.59	262.52	0.24	490.2	404.79	201.3	262.52
Reach	89097.95	Max WS	1306.05	3770.87	3776.16		3776.22	0.000554	1.99	656.5	342.68	0.21	486.71	402.31	231.62	342.68

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	88571.59	Max WS	1305.66	3770.62	3775.84		3775.91	0.000645	2.24	588.97	251.5	0.23	483.04	399.75	191.66	251.5
Reach	88097.79	Max WS	1305.09	3770.36	3775.6		3775.66	0.000447	1.97	661.15	205.54	0.19	480.57	397.62	199.85	205.54
Reach	87597.67	Max WS	1304.53	3770.08	3775.3		3775.38	0.000658	2.27	575.08	218.82	0.23	478.14	395.4	187.25	218.82
Reach	87097.31	Max WS	1303.9	3769.8	3775.05		3775.11	0.000439	1.88	692.4	331.93	0.19	475	393.04	222.27	331.93
Reach	86597.07	Max WS	1303.4	3769.52	3774.9		3774.94	0.00025	1.53	850.71	434.49	0.14	470.6	390.37	244.21	434.49
Reach	86587.75	Max WS	1302.97	3769.52	3774.82		3774.85	0.000229	1.36	961	424.97	0.14	466.94	387.99	310.97	424.97
Reach	86225.89	Max WS	1305.32	3769.32	3774.67		3774.73	0.000437	1.94	672.86	423.85	0.19	463.45	385.85	205.58	423.85
Reach	85707.33	Max WS	1304.08	3769.03	3774.15		3774.21	0.000575	2.01	649.21	288.74	0.21	454.99	380.65	231.36	288.74
Reach	85088.39	Max WS	1303.45	3768.3	3773.84		3773.9	0.000442	1.96	666.11	277.14	0.19	451	377.57	202.26	277.14
Reach	84585.41	Max WS	1302.98	3767.7	3773.63		3773.69	0.000387	1.91	683.09	367.33	0.18	447.31	375.28	194.54	367.33
Reach	83844.49	Max WS	1301.35	3766.83	3773.09		3773.15	0.000338	2	651.84	322.54	0.17	435.69	369.28	158.59	322.54
Reach	83483.49	Max WS	1301.05	3766.94	3772.93		3773.01	0.000462	2.28	571.01	356.59	0.2	432.89	368.03	142.2	356.59
Reach	83334.16	Max WS	1301.01	3766.98	3772.75	3770.47	3772.89	0.001135	3.06	425.47	134.13	0.3	432.04	367.56	134.13	134.13
Reach	83252.67	Bridge														
Reach	83171.17	Max WS	1300.82	3767.03	3772.56		3772.69	0.00086	2.83	460.21	131.88	0.27	431.56	367.07	131.88	131.88
Reach	82715.43	Max WS	1300.3	3767.17	3772.33		3772.39	0.000448	1.99	654.7	196.38	0.19	429.84	365.36	196.38	196.38
Reach	82573.04	Max WS	1300.24	3766.96	3772.28		3772.33	0.000407	1.88	691.76	210.14	0.18	429.17	364.69	210.14	210.14
Reach	82079.64	Max WS	1299.83	3766.21	3772.05		3772.11	0.000482	2.06	630.75	189.78	0.2	426.91	362.43	189.78	189.78
Reach	81333.37	Max WS	1299.15	3765.09	3771.57		3771.67	0.000719	2.48	524.76	160.75	0.24	423.91	359.42	160.75	160.75
Reach	80570.53	Max WS	1298.56	3764.99	3771.13		3771.22	0.000462	2.4	541.66	123.54	0.2	421.42	356.93	123.54	123.54
Reach	79999.5	Max WS	1297.93	3764.91	3770.86		3770.95	0.000504	2.43	533.28	127.46	0.21	419.77	355.29	127.46	127.46
Reach	79570.01	Max WS	1297.69	3764.58	3770.63		3770.73	0.000543	2.48	524.2	129.51	0.22	418.51	354.02	129.51	129.51
Reach	79070.22	Max WS	1297.23	3764.21	3770.34		3770.44	0.000634	2.51	515.98	140.24	0.23	416.96	352.47	140.24	140.24
Reach	78570.19	Max WS	1296.92	3763.83	3769.86		3770.02	0.001083	3.19	406.59	114.99	0.3	415.49	351.01	114.99	114.99
Reach	78069.79	Max WS	1296.53	3763.45	3769.52		3769.62	0.000571	2.48	523.15	133.78	0.22	414.06	349.58	133.78	133.78
Reach	77569.62	Max WS	1296.07	3763.07	3769.19		3769.3	0.000751	2.63	493.1	142.25	0.25	412.48	348	142.25	142.25
Reach	77069.48	Max WS	1295.66	3762.69	3768.94		3769	0.000445	2.06	630.28	178.53	0.19	410.64	346.15	178.53	178.53
Reach	76569.1	Max WS	1295.31	3762.31	3768.59		3768.71	0.000734	2.74	473.58	126.55	0.25	408.89	344.4	126.55	126.55
Reach	76070.04	Max WS	1294.93	3761.93	3768.32		3768.41	0.000466	2.38	544.8	127.39	0.2	407.43	342.95	127.39	127.39
Reach	75573.02	Max WS	1294.5	3761.56	3768.05		3768.14	0.000649	2.41	537.9	159.6	0.23	405.79	341.31	159.6	159.6
Reach	75071.41	Max WS	1294.22	3761.18	3767.67		3767.8	0.000736	2.79	464.22	121.19	0.25	404.18	339.69	121.19	121.19
Reach	74568.89	Max WS	1293.69	3760.79	3767.34		3767.45	0.000633	2.71	477.11	114.87	0.23	402.82	338.33	114.87	114.87
Reach	74068.85	Max WS	1293.27	3760.41	3767.04		3767.14	0.000621	2.62	493.64	123.67	0.23	401.45	336.96	123.67	123.67
Reach	73568.81	Max WS	1292.89	3760.03	3766.74		3766.84	0.000582	2.55	506.54	124.81	0.22	400.02	335.54	124.81	124.81
Reach	73066.93	Max WS	1292.57	3759.65	3766.49		3766.57	0.00054	2.21	583.82	170	0.21	398.32	333.84	170	170
Reach	72566.33	Max WS	1292.15	3759.28	3766.12		3766.22	0.000847	2.54	508.6	169.41	0.26	396.37	331.89	169.41	169.41
Reach	72068.24	Max WS	1291.79	3758.9	3765.81		3765.88	0.000559	2.15	600.23	187.33	0.21	394.33	329.85	187.33	187.33
Reach	71396.71	Max WS	1291.05	3758.39	3765.53		3765.59	0.000333	1.92	671.3	167.99	0.17	391.59	327.11	167.99	167.99
Reach	71071.02	Max WS	1290.67	3758.37	3765.38		3765.44	0.000569	2.09	618.31	212.22	0.21	390.17	325.71	205.56	212.22
Reach	70569.14	Max WS	1290.17	3758.35	3765.08		3765.16	0.000539	2.22	580.13	223.85	0.21	387.66	323.57	166.77	223.85
Reach	70068.76	Max WS	1289.74	3758.33	3764.84		3764.9	0.000441	1.97	654.26	343.91	0.19	384.4	321.48	196.31	343.91
Reach	69568.57	Max WS	1289.21	3758.3	3764.63		3764.69	0.000409	1.95	661.45	190.22	0.18	381.33	319.26	190.22	190.22
Reach	69068.25	Max WS	1288.75	3758.28	3764.26		3764.37	0.000893	2.65	486.48	165.9	0.27	379.29	317.26	158.78	165.9
Reach	68567.54	Max WS	1288.3	3758.26	3763.93		3763.99	0.000594	2.02	638.38	245.9	0.21	376.92	315	234.25	245.9
Reach	68067.29	Max WS	1287.83	3758.23	3763.64		3763.72	0.000526	2.19	589.24	184.91	0.21	374.45	312.67	171.99	184.91
Reach	67662.6	Max WS	1287.46	3757.87	3763.43		3763.49	0.000582	2.07	623.31	215.61	0.21	372.59	310.87	214.76	215.61
Reach	67447.48	Max WS	1287.28	3758.2	3763.3		3763.36	0.000644	2.05	626.45	235.31	0.22	371.47	309.76	235.31	235.31
Reach	67372.87	Max WS	1287.28	3758.2	3763.24		3763.31	0.000735	2.13	604.97	237.71	0.24	371.07	309.36	237.71	237.71
Reach	67209.85	Max WS	1287.07	3758.34	3763.16	3761.15	3763.21	0.000551	1.95	694.72	362.31	0.21	369.95	308.47	233.48	362.31
Reach	67144.1	Bridge														
Reach	67078.35	Max WS	1286.89	3758.06	3763.04		3763.11	0.000701	2.15	598.07	224.05	0.23	369.14	307.81	224.05	224.05
Reach	66391.76	Max WS	1286.23	3756.92	3762.68		3762.73	0.000449	1.8	712.7	248.16	0.19	365.42	304.09	248.16	248.16
Reach	66080.41	Max WS	1285.88	3757.57	3762.51		3762.58	0.00054	1.99	644.69	222.25	0.21	363.74	302.41	221.15	222.25
Reach	65560.57	Max WS	1285.39	3757.31	3762.21		3762.28	0.000607	2.12	604.94	211.56	0.22	361.15	299.86	206.82	211.56
Reach	65060.01	Max WS	1284.85	3757.02	3761.9		3761.97	0.000683	2.11	609.46	481.76	0.23	357.17	297.34	230.28	481.76
Reach	64559.85	Max WS	1284.41	3756.82	3761.59		3761.65	0.00062	1.95	657.15	702.44	0.22	350.37	294.52	261.88	702.44
Reach	64059.8	Max WS	1283.88	3756.57	3761.26		3761.32	0.000684	2.09	615.37	261.73	0.23	344.84	291.66	236.59	261.73
Reach	63560.57	Max WS	1283.42	3756.33	3760.95		3761.01	0.000578	1.98	647.42	384.1	0.21	341.14	288.95	236.76	384.1
Reach	63059.78	Max WS	1282.89	3756.86	3760.66		3760.72	0.000616	1.98	648.65	354.36	0.22	336.89	286.14	250.77	354.36

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	62559.74	Max WS	1282.53	3755.84	3760.33		3760.39	0.000687	1.98	647.15	270.21	0.23	333.3	283.15	270.21	270.21
Reach	62059.72	Max WS	1281.93	3756.07	3759.98		3760.04	0.000726	1.97	651.09	317.65	0.23	329.93	279.96	286.69	317.65
Reach	61434.37	Max WS	1281.23	3755.28	3759.53		3759.59	0.000758	2	640.12	430.95	0.23	324.57	275.87	282.62	430.95
Reach	61059.89	Max WS	1280.9	3754.95	3759.27		3759.33	0.000665	1.92	666.92	291.65	0.22	321.46	273.44	283.6	291.65
Reach	60559.84	Max WS	1280.24	3754.51	3758.91		3758.97	0.00077	2.04	628.68	277.45	0.24	318.19	270.23	274.46	277.45
Reach	60059.77	Max WS	1279.85	3754.08	3758.59		3758.65	0.000557	1.82	701.58	305.87	0.2	314.85	267.03	283.57	305.87
Reach	59559.73	Max WS	1279.25	3753.64	3758.31		3758.36	0.000573	1.9	674.59	262.79	0.21	311.58	263.89	262.79	262.79
Reach	59067.97	Max WS	1278.77	3753.21	3758.06		3758.11	0.000466	1.82	703.26	273.38	0.19	308.56	261.01	248.69	273.38
Reach	58559.05	Max WS	1278.18	3752.77	3757.75		3757.82	0.000695	2.11	605.48	279.94	0.23	305.33	258.2	231.49	279.94
Reach	58059.03	Max WS	1277.8	3752.33	3757.38		3757.45	0.0008	2.19	582.39	275.88	0.24	302.14	255.54	232.79	275.88
Reach	57552.35	Max WS	1277.36	3751.89	3757.13		3757.17	0.000314	1.6	797.91	254.35	0.16	299.06	252.7	254.35	254.35
Reach	57058.79	Max WS	1276.58	3752.45	3756.97		3757.01	0.000344	1.66	766.84	246.44	0.17	296.22	249.87	246.44	246.44
Reach	56681.78	Max WS	1276.37	3751.98	3756.45		3756.6	0.001895	3.11	409.91	239.63	0.37	294.13	248	185.2	239.63
Reach	56626.25	Max WS	1276.33	3751.99	3756.38		3756.51	0.001478	2.88	442.42	186.85	0.33	293.86	247.76	186.85	186.85
Reach	56501.95	Max WS	1276.13	3751.85	3756.31	3754.2	3756.38	0.000601	2.25	567.39	176.2	0.22	293.34	247.24	176.2	176.2
Reach	56439.19	Bridge														
Reach	56376.43	Max WS	1276.11	3751.69	3756.2		3756.28	0.000749	2.33	547.68	190.7	0.24	292.83	246.73	190.7	190.7
Reach	56023.49	Max WS	1275.86	3751.27	3755.79		3755.92	0.001316	2.95	432.36	160.55	0.32	291.41	245.31	160.55	160.55
Reach	55801.92	Max WS	1275.59	3751	3755.61		3755.7	0.000686	2.38	535.64	167.61	0.23	290.58	244.48	167.61	167.61
Reach	55061.99	Max WS	1275	3750.12	3755.18		3755.25	0.00055	2.14	596.62	186.88	0.21	287.57	241.46	186.88	186.88
Reach	54563.55	Max WS	1274.47	3749.52	3754.94		3755	0.000468	1.96	650.56	205.88	0.19	285.32	239.22	205.88	205.88
Reach	53970.07	Max WS	1273.85	3748.82	3754.67		3754.73	0.000448	1.91	665.36	209.95	0.19	282.49	236.38	209.95	209.95
Reach	53859.9	Max WS	1273.95	3748.75	3754.63		3754.68	0.000396	1.87	680.75	203.43	0.18	281.96	235.86	203.43	203.43
Reach	53663.41	Max WS	1273.62	3748.63	3754.48		3754.57	0.000743	2.36	538.69	182.21	0.24	281.09	234.99	182.21	182.21
Reach	53568.19	Max WS	1273.53	3748.57	3754.44		3754.51	0.000595	2.08	611.78	211.43	0.22	280.66	234.56	211.43	211.43
Reach	52953.63	Max WS	1273.06	3748.19	3754.08		3754.15	0.000611	2.12	599.5	205.55	0.22	277.72	231.62	205.55	205.55
Reach	52563.09	Max WS	1272.68	3747.95	3753.91		3753.96	0.000332	1.76	723.41	207.42	0.17	275.87	229.77	207.42	207.42
Reach	52062.43	Max WS	1271.91	3747.64	3753.69		3753.75	0.000522	2.04	622.56	200.81	0.2	273.52	227.42	200.64	200.81
Reach	51484.51	Max WS	1271.3	3747.28	3753.48		3753.52	0.000286	1.59	799.44	238.89	0.15	270.61	224.51	238.89	238.89
Reach	51066.2	Max WS	1271.02	3747.58	3753.34		3753.38	0.000368	1.67	759.84	255.52	0.17	268.23	222.13	255.52	255.52
Reach	50565.93	Max WS	1270.32	3747.23	3753.12		3753.18	0.000459	1.91	664.42	215.16	0.19	265.53	219.43	215.16	215.16
Reach	50067.73	Max WS	1269.87	3746.88	3752.68		3752.8	0.001062	2.73	465.93	166.41	0.29	263.35	217.25	166.41	166.41
Reach	49571.52	Max WS	1269.63	3746.18	3752.25		3752.35	0.000745	2.54	499.2	150.69	0.25	261.54	215.44	150.69	150.69
Reach	49071.06	Max WS	1269.17	3745.9	3751.94		3752.03	0.000574	2.31	548.91	185.63	0.22	259.61	213.68	157.12	185.63
Reach	48508.94	Max WS	1268.73	3745.58	3751.63		3751.71	0.000562	2.26	560.21	162.91	0.21	257.36	211.61	162.49	162.91
Reach	48071.04	Max WS	1268.23	3745.56	3751.43		3751.49	0.000433	2.06	623.41	209.72	0.19	255.49	209.96	167.15	209.72
Reach	47570.99	Max WS	1267.71	3744.89	3751.18		3751.25	0.000547	2.19	587.88	253.36	0.21	252.83	208	173.61	253.36
Reach	47070.94	Max WS	1267.28	3744.94	3750.84		3750.93	0.000751	2.35	538.87	184.89	0.24	250.32	205.94	184.89	184.89
Reach	46570.91	Max WS	1266.97	3744.15	3750.48		3750.56	0.000731	2.31	549.34	190.1	0.24	248.16	203.79	190.1	190.1
Reach	46070.9	Max WS	1266.41	3743.78	3750.16		3750.23	0.000619	2.16	585.26	196.59	0.22	245.94	201.57	196.59	196.59
Reach	45605.45	Max WS	1266.03	3743.43	3749.97		3750.02	0.0003	1.71	739.71	204.6	0.16	243.8	199.43	204.6	204.6
Reach	45073.73	Max WS	1265.27	3743.04	3749.83		3749.87	0.000243	1.6	789.35	205.32	0.14	241.3	196.93	205.32	205.32
Reach	44573.69	Max WS	1264.93	3742.67	3749.64		3749.7	0.000481	1.95	648.93	210.54	0.2	238.91	194.54	210.54	210.54
Reach	44073.67	Max WS	1264.24	3743.32	3749.35		3749.42	0.000616	2.09	603.6	221.36	0.22	236.43	192.11	212.12	221.36
Reach	43573.84	Max WS	1263.94	3743.04	3749.01		3749.09	0.000717	2.25	561.2	197.89	0.24	234.03	189.76	197.89	197.89
Reach	43074.62	Max WS	1263.39	3742.76	3748.61		3748.7	0.000854	2.47	511.09	178.74	0.26	231.87	187.6	178.74	178.74
Reach	42575.42	Max WS	1263.04	3741.74	3748.22		3748.31	0.000731	2.4	527.12	171.92	0.24	229.86	185.6	171.44	171.92
Reach	42075.24	Max WS	1262.62	3741.56	3747.78		3747.88	0.000997	2.55	496.12	186.32	0.27	227.8	183.54	186.32	186.32
Reach	41937.29	Max WS	1262.46	3740.72	3747.71		3747.78	0.000551	2.06	614.3	202.94	0.21	227.19	182.93	202.94	202.94
Reach	41637.93	Max WS	1262.19	3741.95	3747.57	3745.38	3747.62	0.000498	1.82	692.35	256	0.2	225.61	181.35	256	256
Reach	41537.7	Bridge														
Reach	41437.47	Max WS	1262	3741.84	3747.45		3747.51	0.000497	1.96	642.26	212.09	0.2	224.55	180.28	212.09	212.09
Reach	41074.16	Max WS	1261.76	3741.61	3747.27		3747.33	0.000527	1.89	667.86	243.67	0.2	222.64	178.38	243.67	243.67
Reach	40757.17	Max WS	1261.49	3740.25	3747.1		3747.16	0.000521	1.97	639.73	215.09	0.2	220.98	176.71	215.09	215.09
Reach	40063.99	Max WS	1260.75	3741.05	3746.76		3746.83	0.000453	2.2	572.62	146.37	0.2	218.1	173.84	146.37	146.37
Reach	39562.96	Max WS	1260.18	3740.76	3746.53		3746.61	0.000461	2.22	567.3	270.83	0.2	215.7	172.17	144.65	270.83
Reach	39059.27	Max WS	1259.74	3739.58	3746.3		3746.37	0.000477	2.13	591.49	281	0.2	212.47	170.37	166.08	281
Reach	38595.38	Max WS	1259.33	3739.39	3746.06		3746.14	0.000541	2.19	574.37	267.73	0.21	209.53	168.58	169.84	267.73
Reach	38058.01	Max WS	1258.74	3739.59	3745.78		3745.85	0.000526	2.17	580.54	437.42	0.21	205.18	166.47	171.53	437.42

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	37557.67	Max WS	1258.39	3739.35	3745.57		3745.63	0.000386	1.85	680.43	257.85	0.18	201.21	164.32	203.27	257.85
Reach	37056.8	Max WS	1258.45	3739.33	3745.37		3745.43	0.000391	2.03	620.72	432	0.18	197.22	162.22	162.16	432
Reach	36548.74	Max WS	1257.79	3739.31	3745.13		3745.2	0.000561	2.21	571.05	319.77	0.21	192.84	160.28	171.22	319.77
Reach	36036	Max WS	1257.49	3739.29	3744.85		3744.91	0.000616	1.99	633.97	279.92	0.22	189.29	157.87	238.55	279.92
Reach	35538.6	Max WS	1256.86	3739.27	3744.58		3744.64	0.000474	1.95	644.96	280.23	0.19	186.14	155.32	207.25	280.23
Reach	35038.72	Max WS	1256.23	3739.25	3744.37		3744.42	0.00045	1.75	717.79	276.68	0.19	182.95	152.62	263.12	276.68
Reach	34422.02	Max WS	1255.73	3739.01	3743.98		3744.07	0.000733	2.35	535.73	191.05	0.24	179.64	149.48	180.56	191.05
Reach	34039.61	Max WS	1255.47	3738.92	3743.75		3743.81	0.000666	2.07	607.72	254.17	0.23	177.69	147.68	229.82	254.17
Reach	33538.5	Max WS	1254.84	3738.32	3743.33		3743.43	0.000962	2.48	505.69	192.54	0.27	175.12	145.25	192.54	192.54
Reach	33037.78	Max WS	1254.46	3738.02	3743		3743.07	0.000516	2.06	608.13	192.01	0.2	172.91	143.04	192.01	192.01
Reach	32534.94	Max WS	1254.03	3737.71	3742.75		3742.82	0.000489	2.1	597.6	176.22	0.2	170.79	140.91	176.22	176.22
Reach	32032.27	Max WS	1253.56	3737.32	3742.51		3742.58	0.000496	2.1	597.23	177.24	0.2	168.75	138.87	177.24	177.24
Reach	31531.32	Max WS	1253.1	3736.92	3742.23		3742.32	0.000572	2.3	545.22	195.71	0.22	166.61	136.95	157.14	195.71
Reach	31028.18	Max WS	1252.67	3736.52	3741.92		3742.02	0.000632	2.49	503.45	138.44	0.23	164.68	135.24	138.44	138.44
Reach	30526.8	Max WS	1252.32	3736.11	3741.61		3741.71	0.000608	2.46	508.63	137.99	0.23	163.09	133.65	137.99	137.99
Reach	30026.84	Max WS	1251.81	3735.71	3741.28		3741.38	0.000697	2.47	506.33	151.3	0.24	161.43	131.99	151.3	151.3
Reach	29526.78	Max WS	1251.47	3735.27	3740.94		3741.02	0.000738	2.29	545.88	224.64	0.24	159.27	130.02	192.29	224.64
Reach	29042.83	Max WS	1251.02	3734.93	3740.58		3740.67	0.000763	2.32	539.05	268.66	0.24	156.53	127.9	190.51	268.66
Reach	28025.74	Max WS	1250.17	3734.12	3739.96		3740.03	0.00052	2.04	613.42	400.23	0.2	148.71	123.36	197.86	400.23
Reach	27525.4	Max WS	1249.79	3733.72	3739.72		3739.78	0.000471	2.03	615.26	186.25	0.2	145.35	121.17	184.13	186.25
Reach	27024.86	Max WS	1249.18	3733.32	3739.5		3739.56	0.00045	1.97	634.8	215.83	0.19	143.04	119	193.09	215.83
Reach	26452.27	Max WS	1248.61	3732.87	3739.13		3739.21	0.00084	2.27	549.52	221.91	0.25	140.15	116.32	215.23	221.91
Reach	26030.24	Max WS	1248.21	3732.63	3738.89		3738.94	0.00046	1.88	663.27	261.59	0.19	137.8	114.21	219.6	261.59
Reach	25532.12	Max WS	1247.73	3732.34	3738.67		3738.72	0.000451	1.85	673.21	313.83	0.19	134.5	111.67	225.49	313.83
Reach	25031.04	Max WS	1247.04	3732.05	3738.48		3738.52	0.000347	1.69	739.63	289.85	0.17	131.04	109.03	232.98	289.85
Reach	24531.21	Max WS	1246.56	3731.76	3738.24		3738.3	0.00055	1.92	647.84	342.65	0.21	127.4	106.33	238.09	342.65
Reach	24030.88	Max WS	1246.1	3731.47	3737.94		3738.01	0.00064	2.02	615.8	396.87	0.22	123.16	103.61	234.37	396.87
Reach	23529	Max WS	1245.72	3731.18	3737.69		3737.74	0.00045	1.78	698.07	301.35	0.19	119.15	100.84	247.04	301.35
Reach	23026.31	Max WS	1245.07	3730.89	3737.41		3737.48	0.0006	2.02	615.25	329.63	0.21	115.51	98.13	222.61	329.63
Reach	22519.07	Max WS	1244.66	3730.6	3737.07		3737.16	0.000647	2.36	526.45	258.8	0.23	112.12	95.91	159.28	258.8
Reach	21736.95	Max WS	1244.03	3730.14	3736.56		3736.64	0.000696	2.29	543.17	197.22	0.23	108.07	92.83	182.83	197.22
Reach	20979.95	Max WS	1243.3	3729.71	3736.18		3736.24	0.000367	1.89	656.81	180.95	0.18	104.79	89.67	180.95	180.95
Reach	20475.78	Max WS	1242.75	3729.41	3735.95		3736.02	0.000497	2.12	584.84	178.03	0.2	102.71	87.64	170.09	178.03
Reach	19974.55	Max WS	1242.3	3729.12	3735.74		3735.8	0.000393	2	621.36	165.62	0.18	100.74	85.71	165.62	165.62
Reach	19475.68	Max WS	1241.73	3728.83	3735.55		3735.61	0.000396	1.96	634.15	224.88	0.18	98.5	83.75	176.7	224.88
Reach	18975.25	Max WS	1241.33	3728.54	3735.34		3735.41	0.000416	2.06	601.26	199.66	0.19	96.06	81.82	159.87	199.66
Reach	18475.32	Max WS	1240.93	3728.25	3735.04		3735.13	0.000697	2.43	509.77	239.53	0.24	93.54	80.01	155.27	239.53
Reach	17977.1	Max WS	1240.45	3727.97	3734.74		3734.82	0.000577	2.26	547.88	255.91	0.22	90.72	78.18	164.84	255.91
Reach	17479.34	Max WS	1239.92	3727.68	3734.49		3734.56	0.000505	2.06	605.41	311.53	0.2	87.48	76.17	186.67	311.53
Reach	16981.38	Max WS	1239.55	3727.39	3734.25		3734.32	0.00048	2.07	598.46	182.02	0.2	84.65	74.09	176.7	182.02
Reach	16480.56	Max WS	1239.1	3727.1	3734.04		3734.1	0.000418	1.99	623.54	491.64	0.19	80.79	72.06	176.96	491.64
Reach	15980.05	Max WS	1238.51	3726.81	3733.86		3733.91	0.000348	1.83	675.45	322.16	0.17	76.12	69.96	187.93	322.16
Reach	15480.5	Max WS	1237.96	3726.53	3733.64		3733.71	0.000484	2.11	587.57	230.39	0.2	72.95	67.91	170.14	230.39
Reach	14980.33	Max WS	1237.43	3726.24	3733.4		3733.47	0.00051	2.09	595.87	239.93	0.2	70.25	65.9	180.14	239.93
Reach	14453.17	Max WS	1237	3725.93	3733.14		3733.21	0.000503	2.05	603.46	187.54	0.2	67.66	63.67	187.54	187.54
Reach	14233.31	Max WS	1236.9	3726.02	3733.06	3730.2	3733.12	0.000331	1.82	684.16	236.56	0.17	66.59	62.74	184.55	236.56
Reach	14113.75	Bridge														
Reach	13994.19	Max WS	1236.51	3726.11	3732.96		3733.02	0.000477	1.93	639.86	295.79	0.19	65.27	61.67	208.66	295.79
Reach	13454.06	Max WS	1236.02	3726.32	3732.64		3732.71	0.000685	2.04	605.86	240.46	0.23	61.91	58.89	240.46	240.46
Reach	12981.36	Max WS	1235.45	3726.5	3732.36		3732.42	0.000558	1.96	630.2	300.41	0.21	58.97	56.35	227.46	300.41
Reach	12480.48	Max WS	1235.05	3726.7	3732.15		3732.19	0.000392	1.59	775.64	302.45	0.17	55.5	53.35	294.42	302.45
Reach	11984.84	Max WS	1234.48	3726.89	3731.97		3732.01	0.000348	1.53	807.66	339.17	0.16	51.86	49.97	298.36	339.17
Reach	11247.49	Max WS	1233.46	3727.18	3731.71		3731.75	0.000355	1.75	705.24	224.65	0.17	47.1	45.63	214.56	224.65
Reach	10483.52	Max WS	1232.79	3726.39	3731.4		3731.46	0.000428	1.96	627.93	185.78	0.19	43.5	42.12	185.78	185.78
Reach	9694.32	Max WS	1231.99	3725.57	3730.87		3730.99	0.000754	2.85	434.84	134.87	0.25	40.62	39.44	110.42	134.87
Reach	9006.36	Max WS	1231.65	3726.28	3730.44		3730.52	0.000619	2.25	546.54	173.54	0.22	38.19	37.2	173.54	173.54
Reach	8955.18	Max WS	1231.67	3726.33	3730.42		3730.49	0.000556	2.2	560.91	170.47	0.21	37.99	36.99	170.47	170.47
Reach	8864.62	Max WS	1231.33	3726.25	3730.3	3728.6	3730.42	0.001089	2.85	431.44	146.25	0.29	37.66	36.66	146.25	146.25
Reach	8799.985	Bridge														

**Table C-1: HEC-RAS Surface Area Output Summary Table**

Updated 3/24/13 - 2010-2012 HEC-RAS with inflows from Caballo Reservoir, diversions, and returns.

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl	SA Total (acres)	SA Chan (acres)	Top W Chnl (ft)	Top Width (ft)
Reach	8735.35	Max WS	1231.32	3726.13	3730.3		3730.41	0.000873	2.67	461.18	146.11	0.26	37.24	36.24	146.11	146.11
Reach	8271.23	Max WS	1231.15	3725.71	3729.96		3730.05	0.000712	2.47	499.14	152.52	0.24	35.65	34.65	152.52	152.52
Reach	7506.28	Max WS	1230.42	3725.01	3729.42		3729.51	0.000704	2.39	514.59	163.71	0.24	32.87	31.88	163.71	163.71
Reach	7006.25	Max WS	1230.1	3724.55	3729.11		3729.19	0.000603	2.26	547.7	228.16	0.22	30.62	29.98	167.32	228.16
Reach	6508.84	Max WS	1229.59	3724.1	3728.88		3728.94	0.000425	1.89	650.45	207.49	0.19	28.13	27.87	202	207.49
Reach	6008.68	Max WS	1229.14	3723.64	3728.66		3728.72	0.00048	1.97	624.47	200.09	0.2	25.79	25.56	200.09	200.09
Reach	5513.21	Max WS	1228.59	3723.2	3728.44		3728.5	0.000419	1.9	645.53	196.27	0.18	23.53	23.31	196.27	196.27
Reach	5017.46	Max WS	1228.16	3722.74	3728.22		3728.28	0.000469	2.04	601.2	178.68	0.2	21.4	21.17	178.68	178.68
Reach	4517.17	Max WS	1227.7	3722.29	3727.99		3728.06	0.000444	1.99	616.8	182.56	0.19	19.32	19.1	182.56	182.56
Reach	4259.25	Max WS	1227.31	3722.05	3727.84		3727.92	0.000626	2.2	557.94	184.43	0.22	18.24	18.01	184.43	184.43
Reach	3500.11	Max WS	1226.87	3721.47	3727.38		3727.47	0.000582	2.34	524.97	150.1	0.22	15.32	15.1	150.1	150.1
Reach	3004.52	Max WS	1226.28	3721.09	3727.2		3727.24	0.000325	1.69	726.76	219.2	0.16	13.22	13	219.2	219.2
Reach	2506.14	Max WS	1225.72	3720.71	3726.96		3727.03	0.000546	2.08	588.65	211.97	0.21	10.76	10.53	211.97	211.97
Reach	1928.29	Max WS	1225.16	3720.27	3726.61		3726.7	0.000635	2.38	515.61	152.64	0.23	8.34	8.11	152.64	152.64
Reach	1838.16	Max WS	1225.23	3720.2	3726.56		3726.64	0.000647	2.27	538.78	173.03	0.23	8	7.77	173.03	173.03
Reach	1784.62	Max WS	1225.24	3720.31	3726.48		3726.6	0.000916	2.73	449.15	142.15	0.27	7.81	7.58	142.15	142.15
Reach	1733.54	Max WS	1225.15	3720.45	3726.42		3726.55	0.001045	2.87	426.2	137.61	0.29	7.64	7.42	137.61	137.61
Reach	1553.96	Max WS	1225.04	3720.86	3726.16		3726.34	0.001379	3.32	368.55	118.11	0.33	7.11	6.89	118.11	118.11
Reach	1420.77	Max WS	1224.95	3721.16	3725.98		3726.15	0.001422	3.26	375.95	126.38	0.33	6.74	6.51	126.38	126.38
Reach	1239.92	Max WS	1224.79	3721.18	3725.83		3725.94	0.000881	2.65	461.71	148.95	0.27	6.17	5.94	148.95	148.95
Reach	1122.11	Max WS	1224.83	3721.19	3725.71	3723.78	3725.84	0.000935	2.79	439.02	137.55	0.28	5.78	5.56	137.55	137.55
Reach	1104.7	Bridge														
Reach	1087.34	Max WS	1224.7	3721.2	3725.67		3725.8	0.000946	2.82	434.97	135.11	0.28	5.68	5.45	135.11	135.11
Reach	963.17	Max WS	1224.59	3721.21	3725.58		3725.68	0.000962	2.61	469.99	167.05	0.27	5.25	5.02	167.05	167.05
Reach	845.43	Max WS	1224.48	3721.22	3725.51		3725.58	0.000725	2.2	556.33	205.98	0.24	4.74	4.52	205.98	205.98
Reach	702.58	Max WS	1224.31	3721.01	3725.36		3725.45	0.00112	2.43	504.45	223.54	0.28	4.04	3.81	223.54	223.54
Reach	418.27	Max WS	1224.18	3720.58	3724.93		3725.06	0.001744	2.84	430.41	210.08	0.35	2.62	2.4	210.08	210.08
Reach	0.457	Max WS	1224.01	3722.28	3723.45	3723.11	3723.66	0.005968	3.63	337.54	336.29	0.59			289.61	336.29



**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	564639.1	Max WS	2920.18	179.35	2011.6	360780.5
Segment 1	562627.5	Max WS	2912.31	161.46	125.9	20327.8
Segment 1	562501.6	Max WS	2911.85	161.54	203.9	32938.0
Segment 1	562297.7	Max WS	2911.16	129.47	225.8	29234.3
Segment 1	562071.9	Max WS	2910.49	129.71	540.1	70056.4
Segment 1	561531.8	Max WS	2908.39	247.95	1327.4	329128.8
Segment 1	560204.4	Max WS	2900.72	301.61	170.2	51334.0
Segment 1	560034.2	Max WS	2899.64	258.37	220.5	56970.6
Segment 1	559813.7	Max WS	2898.33	255.88	200.4	51278.4
Segment 1	559613.3	Max WS	2897.13	338.2	246.9	83501.6
Segment 1	559366.4	Max WS	2895.56	387.2	351.4	136062.1
Segment 1	559015	Max WS	2892.9	458.8	214.6	98458.5
Segment 1	558800.4	Max WS	2891.13	348.31	104.7	36468.1
Segment 1	558695.7	Max WS	2890.28	356.28	536.3	191073.0
Segment 1	558159.4	Max WS	2885.16	475.66	304.4	144790.9
Segment 1	557855	Max WS	2881.48	577.95	88.4	51090.8
Segment 1	557766.6	Max WS	2880.76	329.5	71.8	23658.1
Segment 1	557694.8	Max WS	2880.32	395.45	44.8	17716.2
Segment 1	557650					
Segment 1	557644	Max WS	2879.91	306.94	76.1	23358.1
Segment 1	557567.9	Max WS	2879.28	422.18	137.5	58049.8
Segment 1	557430.4	Max WS	2878.11	317.65	307.2	97582.1
Segment 1	557123.2	Max WS	2876.22	218.64	416.9	91151.0
Segment 1	556706.3	Max WS	2874.56	127.51	476.5	60758.5
Segment 1	556229.8	Max WS	2873.02	154.36	831.5	128350.3
Segment 1	555398.3	Max WS	2870.26	135.15	499.8	67548.0
Segment 1	554898.5	Max WS	2868.39	190.57	501.8	95628.0
Segment 1	554396.7	Max WS	2866.53	131.07	557.1	73019.1
Segment 1	553839.6	Max WS	2864.86	130.7	440.4	57560.3
Segment 1	553399.2	Max WS	2863.55	128.08	511.5	65512.9
Segment 1	552887.7	Max WS	2861.97	141.29	504.7	71309.1
Segment 1	552383	Max WS	2860.27	152.32	563.3	85801.9
Segment 1	551819.7	Max WS	2858.29	154.37	204.8	31615.0

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	551614.9	Max WS	2857.58	148.02	34.9	5165.9
Segment 1	551580		0	0	34.9	0.0
Segment 1	551545.1	Max WS	2857.35	141.39	538	76067.8
Segment 1	551007.1	Max WS	2855.54	151.77	493.9	74959.2
Segment 1	550513.2	Max WS	2853.7	172.94	1609.1	278277.8
Segment 1	548904.1	Max WS	2847.71	151.28	499.3	75534.1
Segment 1	548404.8	Max WS	2845.83	175.96	500.8	88120.8
Segment 1	547904	Max WS	2844	142.25	330	46942.5
Segment 1	547574	Max WS	2842.76	185.06	670.8	124138.2
Segment 1	546903.2	Max WS	2839.92	183.93	500.8	92112.1
Segment 1	546402.4	Max WS	2837.71	200.17	505.8	101246.0
Segment 1	545896.6	Max WS	2835.2	233.11	495.5	115506.0
Segment 1	545401.1	Max WS	2832.82	185.78	492.9	91571.0
Segment 1	544908.2	Max WS	2830.63	199.88	501.1	100159.9
Segment 1	544407.1	Max WS	2827.85	283.77	784.6	222645.9
Segment 1	543622.5	Max WS	2823.87	157.89	216.1	34120.0
Segment 1	543406.4	Max WS	2822.78	349.65	500.3	174929.9
Segment 1	542906.1	Max WS	2820.42	130.95	495.7	64911.9
Segment 1	542410.4	Max WS	2818.79	154.55	822.1	127055.6
Segment 1	541588.3	Max WS	2815.77	165.42	671.9	111145.7
Segment 1	540916.4	Max WS	2813.38	144.62	501.4	72512.5
Segment 1	540415	Max WS	2811.63	159.14	499.3	79458.6
Segment 1	539915.7	Max WS	2809.8	159.98	500.7	80102.0
Segment 1	539415	Max WS	2807.88	211.62	500.4	105894.6
Segment 1	538914.6	Max WS	2805.66	235.08	492.2	115706.4
Segment 1	538422.4	Max WS	2803.61	246.66	614	151449.2
Segment 1	537808.4	Max WS	2801.29	234.42	387.2	90767.4
Segment 1	537421.2	Max WS	2799.81	154.77	997.4	154367.6
Segment 1	536423.8	Max WS	2796.42	141.75	497.9	70577.3
Segment 1	535925.9	Max WS	2794.67	163.62	496.6	81253.7
Segment 1	535429.3	Max WS	2793.05	120.93	555	67116.2
Segment 1	534874.3	Max WS	2791.42	154.26	932.5	143847.5
Segment 1	533941.8	Max WS	2787.73	209.36	510.5	106878.3

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	533431.3	Max WS	2785.88	106.62	300	31986.0
Segment 1	533131.3	Max WS	2785.13	112.55	720.8	81126.0
Segment 1	532410.5	Max WS	2783.1	132.89	473.3	62896.8
Segment 1	531937.2	Max WS	2781.61	140.2	500.2	70128.0
Segment 1	531437	Max WS	2779.93	165.05	500.5	82607.5
Segment 1	530936.5	Max WS	2778.04	176.66	500.5	88418.3
Segment 1	530436	Max WS	2776.02	177.4	592.5	105109.5
Segment 1	529843.5	Max WS	2773.68	172.51	189.7	32725.1
Segment 1	529653.8	Max WS	2772.92	180.14	172.9	31146.2
Segment 1	529480.9	Max WS	2772.25	155.78	55.8	8692.5
Segment 1	529425.1				55.9	0.0
Segment 1	529369.2	Max WS	2771.85	161.71	517	83604.1
Segment 1	528852.2	Max WS	2770.03	144.38	419.6	60581.8
Segment 1	528432.6	Max WS	2768.59	154.95	96.7	14983.7
Segment 1	528335.9	Max WS	2768.25	152.48	248.5	37891.3
Segment 1	528087.4	Max WS	2766.67	124.84	245.1	30598.3
Segment 1	527842.3	Max WS	2765.58	122.87	9.8	1204.1
Segment 1	527832.5	Max WS	2765.55	171.65	105.1	18040.4
Segment 1	527727.4	Max WS	2764.57	508.01	152.7	77573.1
Segment 1	527574.7	Max WS	2763.67	144.28	108.5	15654.4
Segment 1	527466.2	Max WS	2762.78	161.65	145.8	23568.6
Segment 1	527320.4	Max WS	2761.86	161.78	102.6	16598.6
Segment 1	527217.8	Max WS	2760.51	137.76	288	39674.9
Segment 1	526929.8	Max WS	2759.52	162.24	238	38613.1
Segment 1	526691.8	Max WS	2758.69	143.65	763.8	109719.9
Segment 1	525928	Max WS	2756.34	123.85	244.1	30231.8
Segment 1	525683.9	Max WS	2755.61	138.19	766	105853.5
Segment 1	524917.9	Max WS	2753.15	140.98	996.9	140543.0
Segment 1	523921	Max WS	2750	134.43	991.5	133287.3
Segment 1	522929.5	Max WS	2746.9	172.03	503.5	86617.1
Segment 1	522426	Max WS	2745.28	143.11	501.7	71798.3
Segment 1	521924.3	Max WS	2743.58	152.33	325.6	49598.6
Segment 1	521598.7	Max WS	2742.4	300.23	674	202355.0

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	520924.7	Max WS	2739.86	164.11	502.5	82465.3
Segment 1	520422.2	Max WS	2737.97	163.39	502.3	82070.8
Segment 1	519919.9	Max WS	2736.04	170.36	369.1	62879.9
Segment 1	519550.8	Max WS	2734.78	129.26	238.1	30776.8
Segment 1	519312.7	Max WS	2734.07	129.26	21.4	2766.2
Segment 1	519291.3	Max WS	2734	131.71	261.3	34415.8
Segment 1	519030	Max WS	2733.21	174.5	115	20067.5
Segment 1	518915	Max WS	2732.86	127.44	142.6	18172.9
Segment 1	518772.4	Max WS	2732.42	139.07	262.7	36533.7
Segment 1	518509.7	Max WS	2731.6	132.47	94.4	12505.2
Segment 1	518415.3	Max WS	2731.32	127.64	498.3	63603.0
Segment 1	517917	Max WS	2729.83	133.49	510.9	68200.0
Segment 1	517406.1	Max WS	2728.45	101.99	504.1	51413.2
Segment 1	516902	Max WS	2727.04	141.71	101.9	14440.2
Segment 1	516800.1	Max WS	2726.71	135.35	397.3	53774.6
Segment 1	516402.8	Max WS	2725.46	139.66	499.1	69704.3
Segment 1	515903.7	Max WS	2723.84	143.48	501.7	71983.9
Segment 1	515402	Max WS	2722.12	154.65	498.5	77093.0
Segment 1	514903.5	Max WS	2720.43	140.02	497.6	69674.0
Segment 1	514405.9	Max WS	2718.82	142.63	502	71600.3
Segment 1	513903.9	Max WS	2716.86	196.96	496.3	97751.2
Segment 1	513407.6	Max WS	2714.73	176.71	502.5	88796.8
Segment 1	512905.1	Max WS	2712.76	166.19	500.6	83194.7
Segment 1	512404.5	Max WS	2710.98	143.32	499.8	71631.3
Segment 1	511904.7	Max WS	2709.27	153.8	377.9	58121.0
Segment 1	511526.8	Max WS	2707.69	212	636.3	134895.6
Segment 1	510890.5	Max WS	2704.93	165.07	511.8	84482.8
Segment 1	510378.7	Max WS	2701.91	348.85	1015.3	354187.4
Segment 1	509363.4	Max WS	2695.87	169.88	498.8	84736.1
Segment 1	508864.6	Max WS	2693.95	164.43	777.9	127910.1
Segment 1	508086.7	Max WS	2691.19	145.64	215.4	31370.9
Segment 1	507871.3	Max WS	2690.49	134.7	992.7	133716.7
Segment 1	506878.6	Max WS	2687.09	163.77	498.5	81639.3

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	506380.1	Max WS	2685.21	164.33	501.8	82460.8
Segment 1	505878.3	Max WS	2683.39	152.94	503	76928.8
Segment 1	505375.3	Max WS	2681.39	192.19	500.5	96191.1
Segment 1	504874.8	Max WS	2679.37	160.91	500	80455.0
Segment 1	504374.8	Max WS	2677.43	176.32	493.5	87013.9
Segment 1	503881.3	Max WS	2675.55	155.16	504	78200.6
Segment 1	503377.3	Max WS	2673.83	143.01	505.3	72263.0
Segment 1	502872	Max WS	2672.22	133.46	500.8	66836.8
Segment 1	502371.2	Max WS	2670.52	162.43	305	49541.2
Segment 1	502066.2	Max WS	2669.42	152.32	190.9	29077.9
Segment 1	501875.3	Max WS	2668.79	137.75	509.1	70128.5
Segment 1	501366.2	Max WS	2666.98	170.6	245	41797.0
Segment 1	501121.2	Max WS	2666.05	159.81	748.8	119665.7
Segment 1	500372.4	Max WS	2663.07	187.48	494.3	92671.4
Segment 1	499878.1	Max WS	2661.04	169.48	506.7	85875.5
Segment 1	499371.4	Max WS	2659	182.24	491.3	89534.5
Segment 1	498880.1	Max WS	2656.97	178.09	500.1	89062.8
Segment 1	498380	Max WS	2654.85	190.61	501.6	95610.0
Segment 1	497878.4	Max WS	2652.64	194.35	517.3	100537.3
Segment 1	497361.1	Max WS	2650.37	189.9	1030.7	195729.9
Segment 1	496330.4	Max WS	2646.07	213.17	229.6	48943.8
Segment 1	496100.8	Max WS	2645.13	181.58	771.3	140052.7
Segment 1	495329.5	Max WS	2641.95	216.55	500.2	108318.3
Segment 1	494829.3	Max WS	2639.9	177.67	495.1	87964.4
Segment 1	494334.2	Max WS	2637.86	182.2	495.4	90261.9
Segment 1	493838.8	Max WS	2635.88	165.67	501.5	83083.5
Segment 1	493337.3	Max WS	2634.07	148.2	500.3	74144.5
Segment 1	492837	Max WS	2632.2	178.74	347	62022.8
Segment 1	492490	Max WS	2630.71	194.74	656.9	127924.7
Segment 1	491833.1	Max WS	2627.7	204.5	564.4	115419.8
Segment 1	491268.7	Max WS	2625.14	190.48	456.3	86916.0
Segment 1	490812.4	Max WS	2623.14	191.29	518.7	99222.1
Segment 1	490293.7	Max WS	2621.04	161.37	498.1	80378.4

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	489795.6	Max WS	2619.02	192.39	367.1	70626.4
Segment 1	489428.5	Max WS	2617.43	185.49	736.6	136631.9
Segment 1	488691.9	Max WS	2614.79	176.96	397.5	70341.6
Segment 1	488294.4	Max WS	2613.02	211.13	506.1	106852.9
Segment 1	487788.3	Max WS	2610.7	188.71	499.8	94317.3
Segment 1	487288.5	Max WS	2608.56	183.54	500.2	91806.7
Segment 1	486788.3	Max WS	2606.5	175.22	1000.4	175290.1
Segment 1	485787.9	Max WS	2602.71	154.82	496.7	76899.1
Segment 1	485291.2	Max WS	2600.98	149.35	497.2	74256.8
Segment 1	484794	Max WS	2599.35	135.83	494.5	67167.9
Segment 1	484299.5	Max WS	2597.61	170.55	497.9	84916.8
Segment 1	483801.6	Max WS	2595.72	159.96	940	150362.4
Segment 1	482861.6	Max WS	2591.66	216.35	556.2	120333.9
Segment 1	482305.4	Max WS	2588.71	245.65	501.7	123242.6
Segment 1	481803.7	Max WS	2586.11	205.94	504.5	103896.7
Segment 1	481299.2	Max WS	2583.71	222.38	500.7	111345.7
Segment 1	480798.5	Max WS	2581.43	356.48	1024.9	365356.4
Segment 1	479773.6	Max WS	2577.7	307.66	755.8	232529.4
Segment 1	479017.8	Max WS	2574.68	507.21	754.9	382892.8
Segment 1	478262.9	Max WS	2570.47	456.06	502.2	229033.3
Segment 1	477760.7	Max WS	2567.61	445.22	534.6	238014.6
Segment 1	477226.1	Max WS	2565.14	170.54	468.8	79949.2
Segment 1	476757.3	Max WS	2562.79	265.03	319.2	84597.6
Segment 1	476438.1	Max WS	2561.09	198.81	787.4	156543.0
Segment 1	475650.7	Max WS	2557.83	161.52	380.1	61393.8
Segment 1	475270.6	Max WS	2556.36	177.13	659.5	116817.2
Segment 1	474611.1	Max WS	2553.55	194.1	339.7	65935.8
Segment 1	474271.4	Max WS	2552.03	195.77	502.1	98296.1
Segment 1	473769.3	Max WS	2549.86	179.96	501.4	90231.9
Segment 1	473267.9	Max WS	2547.63	207.93	501.9	104360.1
Segment 1	472766	Max WS	2545.19	215.62	448.2	96640.9
Segment 1	472317.8	Max WS	2543.03	204.59	562.3	115041.0
Segment 1	471755.5	Max WS	2540.51	185.86	500.2	92967.2

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	471255.3	Max WS	2538.26	206.32	500	103160.0
Segment 1	470755.3	Max WS	2535.78	224.39	499.9	112172.6
Segment 1	470255.4	Max WS	2533.05	251.37	500.4	125785.5
Segment 1	469755	Max WS	2530.19	246.47	500	123235.0
Segment 1	469255	Max WS	2527.62	201.24	500.3	100680.4
Segment 1	468754.7	Max WS	2525.3	204.19	500	102095.0
Segment 1	468254.7	Max WS	2522.87	217.93	500	108965.0
Segment 1	467754.7	Max WS	2520.36	220.46	500.1	110252.0
Segment 1	467254.6	Max WS	2517.68	246.22	500.1	123134.6
Segment 1	466754.5	Max WS	2514.5	307.7	500.1	153880.8
Segment 1	466254.4	Max WS	2511.06	292.1	135	39433.5
Segment 1	466119.4	Max WS	2510.17	279.25	234.6	65512.1
Segment 1	465884.8	Max WS	2508.68	273.96	53.2	14574.7
Segment 1	465831.6		0	0	53.3	0.0
Segment 1	465778.3	Max WS	2508.02	281.44	927.9	261148.2
Segment 1	464850.4	Max WS	2501.58	323.33	645.4	208677.2
Segment 1	464205	Max WS	2497.03	291.62	506	147559.7
Segment 1	463699	Max WS	2493.61	295.9	495.5	146618.5
Segment 1	463203.5	Max WS	2490	340	483.7	164458.0
Segment 1	462719.8	Max WS	2486.52	285.34	504.7	144011.1
Segment 1	462215.1	Max WS	2482.88	343.94	500.2	172038.8
Segment 1	461714.9	Max WS	2478.81	364.99	500.3	182604.5
Segment 1	461214.6	Max WS	2474.72	347.08	501.9	174199.5
Segment 1	460712.7	Max WS	2470.66	358.01	500.7	179255.6
Segment 1	460212	Max WS	2466.59	349.85	500.2	174995.0
Segment 1	459711.8	Max WS	2462.58	347.92	511.4	177926.3
Segment 1	459200.4	Max WS	2458.41	362.96	490	177850.4
Segment 1	458710.4	Max WS	2454.25	377.11	513	193457.4
Segment 1	458197.4	Max WS	2450.1	327.16	512.3	167604.1
Segment 1	457685.1	Max WS	2446.3	319.77	464.1	148405.3
Segment 1	457221	Max WS	2442.78	340.14	455.2	154831.7
Segment 1	456765.8	Max WS	2439.23	340.26	68.1	23171.7
Segment 1	456697.7		0	0	68.1	0.0

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	456629.6	Max WS	2438.16	383.39	1205.4	462138.3
Segment 1	455424.2	Max WS	2430.31	218.68	1249.8	273306.3
Segment 1	454174.4	Max WS	2424.27	214.97	497.8	107012.1
Segment 1	453676.6	Max WS	2421.56	258.19	834.8	215537.0
Segment 1	452841.8	Max WS	2417.03	214.76	979.3	210314.5
Segment 1	451862.5	Max WS	2411.53	274.46	700.5	192259.2
Segment 1	451162	Max WS	2407.31	250.13	501	125315.1
Segment 1	450661	Max WS	2404.54	231.84	500.5	116035.9
Segment 1	450160.5	Max WS	2401.97	216.25	500.7	108276.4
Segment 1	449659.8	Max WS	2399.27	253.15	500.2	126625.6
Segment 1	449159.6	Max WS	2396.24	275.14	587.3	161589.7
Segment 1	448572.3	Max WS	2392.57	268.35	417.1	111928.8
Segment 1	448155.2	Max WS	2390.21	225.78	500.7	113048.0
Segment 1	447654.5	Max WS	2387.61	225.56	502.3	113298.8
Segment 1	447152.2	Max WS	2384.9	244.98	495.9	121485.6
Segment 1	446656.3	Max WS	2382.39	197.08	749.8	147770.6
Segment 1	445906.5	Max WS	2378.86	212.22	178.5	37881.3
Segment 1	445728	Max WS	2377.99	261.57	113.7	29740.5
Segment 1	445614.3		0	0	113.8	0.0
Segment 1	445500.5	Max WS	2376.91	200.3	605.4	121261.6
Segment 1	444895.1	Max WS	2374.05	211.88	740.1	156812.4
Segment 1	444155	Max WS	2370.18	243.89	507.2	123701.0
Segment 1	443647.8	Max WS	2367.29	252.49	507.8	128214.4
Segment 1	443140	Max WS	2364.14	287.76	356.3	102528.9
Segment 1	442783.7	Max WS	2361.86	269.41	646.2	174092.7
Segment 1	442137.5	Max WS	2357.96	256.01	500.1	128030.6
Segment 1	441637.4	Max WS	2355.05	251.87	497.8	125380.9
Segment 1	441139.6	Max WS	2352.04	273.32	500.4	136769.3
Segment 1	440639.2	Max WS	2348.97	261.79	499	130633.2
Segment 1	440140.2	Max WS	2346.08	242.48	500.2	121288.5
Segment 1	439640	Max WS	2343.11	275.29	500	137645.0
Segment 1	439140	Max WS	2339.97	271.6	500.4	135908.6
Segment 1	438639.6	Max WS	2336.94	256.5	501.8	128711.7



**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	438137.8	Max WS	2334.36	191.51	501.1	95965.7
Segment 1	437636.7	Max WS	2331.43	317.75	501.5	159351.6
Segment 1	437135.2	Max WS	2327.97	283.69	501.5	142270.5
Segment 1	436633.7	Max WS	2324.52	314.92	339.7	106978.3
Segment 1	436294	Max WS	2322.08	310.62	660.4	205133.4
Segment 1	435633.6	Max WS	2317.45	300.19	500.2	150155.0
Segment 1	435133.4	Max WS	2313.93	313.41	500.2	156767.7
Segment 1	434633.2	Max WS	2310.24	328.84	514.3	169122.4
Segment 1	434118.9	Max WS	2307.2	186.76	414.4	77393.3
Segment 1	433704.5	Max WS	2305.79	109.54	348.3	38152.8
Segment 1	433356.2	Max WS	2304.84	126.74	60.9	7718.5
Segment 1	433295.3		0	0	63.1	0.0
Segment 1	433232.2	Max WS	2304.49	130.62	204.9	26764.0
Segment 1	433027.3	Max WS	2303.89	126.09	53.2	6708.0
Segment 1	432974.1		0	0	53.3	0.0
Segment 1	432920.8	Max WS	2303.57	134.09	294	39422.5
Segment 1	432626.8	Max WS	2302.18	277.14	558.1	154671.8
Segment 1	432068.7	Max WS	2298.74	260.23	273.3	71120.9
Segment 1	431795.4	Max WS	2297.1	261.51	695.9	181984.8
Segment 1	431099.5	Max WS	2292.86	269.68	504.9	136161.4
Segment 1	430594.6	Max WS	2289.82	255.05	515.7	131529.3
Segment 1	430078.9	Max WS	2286.76	261.96	493	129146.3
Segment 1	429585.9	Max WS	2283.86	251.12	492.5	123676.6
Segment 1	429093.4	Max WS	2280.91	270.56	494.5	133791.9
Segment 1	428598.9	Max WS	2277.62	308.88	516	159382.1
Segment 1	428082.9	Max WS	2273.96	308.73	712.9	220093.6
Segment 1	427370	Max WS	2268.61	344.69	819.3	282404.5
Segment 1	426550.7	Max WS	2263.17	233.84	488.5	114230.8
Segment 1	426062.2	Max WS	2260.64	217.29	499	108427.7
Segment 1	425563.2	Max WS	2257.44	341.02	538.3	183571.1
Segment 1	425024.9	Max WS	2253.15	378.72	1214.6	459993.3
Segment 1	423810.3	Max WS	2245.28	211.43	226.3	47846.6
Segment 1	423584	Max WS	2243.97	292.75	18.2	5328.1

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	423565.8	Max WS	2243.84	316.3	259.7	82143.1
Segment 1	423306.1	Max WS	2242.31	196.91	253	49818.2
Segment 1	423053.1	Max WS	2241.09	225	50.4	11340.0
Segment 1	423002.7	Max WS	2240.83	222.99	202.2	45088.6
Segment 1	422800.5	Max WS	2239.91	171.54	301.5	51719.3
Segment 1	422499	Max WS	2238.65	194.44	503.4	97881.1
Segment 1	421995.6	Max WS	2236.47	182.18	500.2	91126.4
Segment 1	421495.4	Max WS	2234.37	183.92	500.2	91996.8
Segment 1	420995.2	Max WS	2232.25	185.35	500.2	92712.1
Segment 1	420495	Max WS	2230.21	169.87	540.2	91763.8
Segment 1	419954.8	Max WS	2227.99	187.42	459.8	86175.7
Segment 1	419495	Max WS	2226.01	188.5	500.1	94268.8
Segment 1	418994.9	Max WS	2223.87	184.67	500.1	92353.5
Segment 1	418494.8	Max WS	2221.7	192.37	500.1	96204.2
Segment 1	417994.7	Max WS	2219.4	208.22	601	125140.2
Segment 1	417393.7	Max WS	2215.98	287.53	143.2	41174.3
Segment 1	417250.5	Max WS	2215.01	305.51	195.6	59757.8
Segment 1	417054.9	Max WS	2213.61	317.59	56.5	17943.8
Segment 1	416998.4		0	0	56.5	0.0
Segment 1	416941.9	Max WS	2212.88	258.67	633.9	163970.9
Segment 1	416308	Max WS	2208.2	384.02	381.8	146618.8
Segment 1	415926.2	Max WS	2204.93	360.9	871.7	314596.5
Segment 1	415054.5	Max WS	2199.6	171.91	455.5	78305.0
Segment 1	414599	Max WS	2197.59	213.66	547.6	117000.2
Segment 1	414051.4	Max WS	2195.04	191.54	497.6	95310.3
Segment 1	413553.8	Max WS	2192.61	233.68	518	121046.2
Segment 1	413035.8	Max WS	2189.52	286.31	252.9	72407.8
Segment 1	412782.9	Max WS	2187.9	271.2	251.6	68233.9
Segment 1	412531.3	Max WS	2186.63	176.43	247.2	43613.5
Segment 1	412284.1	Max WS	2185.64	175.79	250.5	44035.4
Segment 1	412033.6	Max WS	2184.5	221.07	528.7	116879.7
Segment 1	411504.9	Max WS	2182.13	169.54	585.7	99299.6
Segment 1	410919.2	Max WS	2179.83	172.3	543.4	93627.8

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	410375.8	Max WS	2176.75	322.38	502.2	161899.2
Segment 1	409873.6	Max WS	2173.1	309.86	500.9	155208.9
Segment 1	409372.7	Max WS	2170.34	171.07	504.2	86253.5
Segment 1	408868.5	Max WS	2167.45	328.49	503.8	165493.3
Segment 1	408364.7	Max WS	2163.96	274.9	502.3	138082.3
Segment 1	407862.4	Max WS	2160.98	240.73	506.6	121953.8
Segment 1	407355.8	Max WS	2157.86	297.31	501.5	149101.0
Segment 1	406854.3	Max WS	2154.38	306.14	507.5	155366.1
Segment 1	406346.8	Max WS	2150.94	284.79	492.9	140373.0
Segment 1	405853.9	Max WS	2147.61	304.17	500.1	152115.4
Segment 1	405353.8	Max WS	2144.19	290.34	500.6	145344.2
Segment 1	404853.2	Max WS	2141	265.96	499.5	132847.0
Segment 1	404353.7	Max WS	2137.79	293.12	497.4	145797.9
Segment 1	403856.3	Max WS	2134.51	281.63	489.9	137970.5
Segment 1	403366.4	Max WS	2131.48	257.64	498.7	128485.1
Segment 1	402867.7	Max WS	2128.58	249.05	500.7	124699.3
Segment 1	402367	Max WS	2125.49	287.21	500.2	143662.4
Segment 1	401866.8	Max WS	2121.84	349.37	671.7	234671.8
Segment 1	401195.1	Max WS	2117.16	258.16	337.2	87051.6
Segment 1	400857.9	Max WS	2115.3	222.29	481.1	106943.7
Segment 1	400376.8	Max WS	2112.89	305.53	697.3	213046.1
Segment 1	399679.5	Max WS	2109.29	235.72	1021.5	240788.0
Segment 1	398658	Max WS	2103.92	222.19	813.2	180684.9
Segment 1	397844.8	Max WS	2099.14	290.46	977.5	283924.7
Segment 1	396867.3	Max WS	2092.48	303.04	500.9	151792.7
Segment 1	396366.4	Max WS	2089.23	262.02	736.2	192899.1
Segment 1	395630.2	Max WS	2083.63	400.09	773.5	309469.6
Segment 1	394856.7	Max WS	2076.96	351.16	501.2	176001.4
Segment 1	394355.5	Max WS	2073.22	299.83	505.5	151564.1
Segment 1	393850	Max WS	2069.81	286.62	504.1	144485.1
Segment 1	393345.9	Max WS	2067.45	121.18	500.8	60686.9
Segment 1	392845.1	Max WS	2065.85	158.67	499.4	79239.8
Segment 1	392345.7	Max WS	2064.01	161.08	501.7	80813.8

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	391844	Max WS	2062.07	175.66	502.9	88339.4
Segment 1	391341.1	Max WS	2060.14	158.51	499.9	79239.1
Segment 1	390841.2	Max WS	2058.24	174.13	389.7	67858.5
Segment 1	390451.5	Max WS	2056.72	165.77	140.8	23340.4
Segment 1	390310.7	Max WS	2056.23	134.91	135.6	18293.8
Segment 1	390175.1	Max WS	2055.84	115.56	35.7	4125.5
Segment 1	390139.4		0	0	35.7	0.0
Segment 1	390103.7	Max WS	2055.65	123.89	419.9	52021.4
Segment 1	389683.8	Max WS	2054.47	120.92	334.3	40423.6
Segment 1	389349.5	Max WS	2053.45	144.09	511.4	73687.6
Segment 1	388838.1	Max WS	2051.77	142.94	500.5	71541.5
Segment 1	388337.6	Max WS	2050.17	134.65	707.4	95251.4
Segment 1	387630.2	Max WS	2047.91	145.68	795.1	115830.2
Segment 1	386835.1	Max WS	2045.23	149.47	380.2	56828.5
Segment 1	386454.9	Max WS	2043.71	198.43	617.8	122590.1
Segment 1	385837.1	Max WS	2041.11	168.1	500.2	84083.6
Segment 1	385336.9	Max WS	2039.27	153.82	500	76910.0
Segment 1	384836.9	Max WS	2037.5	153.96	500.4	77041.6
Segment 1	384336.5	Max WS	2035.62	173.33	498.6	86422.3
Segment 1	383837.9	Max WS	2033.29	232.74	644.5	150000.9
Segment 1	383193.4	Max WS	2029.06	339.74	361.9	122951.9
Segment 1	382831.5	Max WS	2026.55	264.91	500	132455.0
Segment 1	382331.5	Max WS	2023.69	233.63	501.9	117258.9
Segment 1	381829.6	Max WS	2021.22	195.41	500.7	97841.8
Segment 1	381328.9	Max WS	2018.97	195.59	501	97990.6
Segment 1	380827.9	Max WS	2016.63	210.12	496.2	104261.5
Segment 1	380331.7	Max WS	2014.31	197.9	500.8	99108.3
Segment 1	379830.9	Max WS	2011.97	209.35	500.3	104737.8
Segment 1	379330.6	Max WS	2009.7	185.66	228.3	42386.2
Segment 1	379102.3	Max WS	2008.71	193.79	271.8	52672.1
Segment 1	378830.5	Max WS	2007.52	386.53	500	193265.0
Segment 1	378330.5	Max WS	2005.23	251.39	500.1	125720.1
Segment 1	377830.4	Max WS	2002.81	210.32	500	105160.0

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	377330.4	Max WS	2000.4	209.51	500	104755.0
Segment 1	376830.4	Max WS	1997.99	210.19	500.4	105179.1
Segment 1	376330	Max WS	1995.4	241.18	499.7	120517.6
Segment 1	375830.3	Max WS	1992.71	228.07	505.8	115357.8
Segment 1	375324.5	Max WS	1989.99	1292.98	498.4	644421.2
Segment 1	374826.1	Max WS	1986.58	837.7	498.7	417761.0
Segment 1	374327.4	Max WS	1982.34	403.52	483.4	195061.6
Segment 1	373844	Max WS	1978.48	495.81	500.6	248202.5
Segment 1	373343.4	Max WS	1975.25	353.84	500.2	176990.8
Segment 1	372843.2	Max WS	1972.47	272.96	503.6	137462.7
Segment 1	372339.6	Max WS	1969.73	304.95	503	153389.9
Segment 1	371836.6	Max WS	1966.52	371.31	501.4	186174.8
Segment 1	371335.2	Max WS	1962.08	457.54	484.4	221632.4
Segment 1	370850.8	Max WS	1958.32	616.53	471.4	290632.2
Segment 1	370379.4	Max WS	1956.04	877.3	527.6	462863.5
Segment 1	369851.8	Max WS	1953.61	479.9	500.2	240046.0
Segment 1	369351.6	Max WS	1951.29	354.14	500.1	177105.4
Segment 1	368851.5	Max WS	1948.74	383.38	500.1	191728.3
Segment 1	368351.4	Max WS	1945.84	311.28	500	155640.0
Segment 1	367851.4	Max WS	1942.59	298.81	499.5	149255.6
Segment 1	367351.9	Max WS	1939.1	310.09	501.4	155479.1
Segment 1	366850.5	Max WS	1935.96	235.22	508.6	119632.9
Segment 1	366341.9	Max WS	1933.41	201.42	504.3	101576.1
Segment 1	365837.6	Max WS	1930.2	353.51	500.4	176896.4
Segment 1	365337.2	Max WS	1926.34	318.18	498.4	158580.9
Segment 1	364838.8	Max WS	1922.65	327.43	489.3	160211.5
Segment 1	364349.5	Max WS	1919.87	166.93	496.5	82880.7
Segment 1	363853	Max WS	1917.73	208.77	500.9	104572.9
Segment 1	363352.1	Max WS	1914.98	270.34	181.2	48985.6
Segment 1	363170.9	Max WS	1913.85	268.95	222.9	59949.0
Segment 1	362948	Max WS	1912.48	267.64	349	93406.4
Segment 1	362599	Max WS	1910.34	267.04	146.7	39174.8
Segment 1	362452.3	Max WS	1909.44	265.97	719	191232.4

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	361733.3	Max WS	1905.36	280.37	408.3	114475.1
Segment 1	361325	Max WS	1903.28	213.45	644.7	137611.2
Segment 1	360680.3	Max WS	1900.66	141.78	393.1	55733.7
Segment 1	360287.2	Max WS	1899.11	199.86	375.1	74967.5
Segment 1	359912.1	Max WS	1897.28	224.88	1104.4	248357.5
Segment 1	358807.7	Max WS	1892.93	118.27	500.5	59194.1
Segment 1	358307.2	Max WS	1891.43	144.21	983.9	141888.2
Segment 1	357323.3	Max WS	1888.27	135.07	492.7	66549.0
Segment 1	356830.6	Max WS	1886.71	141.82	498.5	70697.3
Segment 1	356332.1	Max WS	1884.98	159.6	495.5	79081.8
Segment 1	355836.6	Max WS	1883.27	263.03	504.5	132698.6
Segment 1	355332.1	Max WS	1881.48	167.64	478.3	80182.2
Segment 1	354853.8	Max WS	1879.37	217.66	524.6	114184.4
Segment 1	354329.2	Max WS	1876.84	239.02	498.6	119175.4
Segment 1	353830.6	Max WS	1874.7	555.78	495	275111.1
Segment 1	353335.6	Max WS	1872.74	541.14	500.1	270624.1
Segment 1	352835.5	Max WS	1870.33	246.01	510.2	125514.3
Segment 1	352325.3	Max WS	1867.54	816.56	519	423794.6
Segment 1	351806.3	Max WS	1865.06	306.41	1836.5	562722.0
Segment 1	349969.8	Max WS	1854.72	399.5	653.9	261233.0
Segment 1	349315.9	Max WS	1850.31	466.99	499.9	233448.3
Segment 1	348816	Max WS	1847.53	201.9	1118.5	225825.2
Segment 1	347697.5	Max WS	1843.22	459.78	389.5	179084.3
Segment 1	347308	Max WS	1841.88	365.8	500.4	183046.3
Segment 1	346807.6	Max WS	1839.49	366.45	500.4	183371.6
Segment 1	346307.2	Max WS	1836.55	305.83	508.6	155545.1
Segment 1	345798.6	Max WS	1833.87	400.91	495.4	198610.8
Segment 1	345303.2	Max WS	1831.29	563.6	495.2	279094.7
Segment 1	344808	Max WS	1828.9	482.51	505.9	244101.8
Segment 1	344302.1	Max WS	1826.6	478.56	498.1	238370.7
Segment 1	343804	Max WS	1824.14	477.72	501.7	239672.1
Segment 1	343302.3	Max WS	1821.54	581.08	498.8	289842.7
Segment 1	342803.5	Max WS	1819.27	558.51	491.4	274451.8

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	342312.1	Max WS	1817.07	559.34	487.3	272566.4
Segment 1	341824.8	Max WS	1814.63	456.72	637	290930.6
Segment 1	341187.8	Max WS	1811.62	505.03	861.9	435285.4
Segment 1	340325.9	Max WS	1806.42	492.94	501	246962.9
Segment 1	339824.9	Max WS	1803.1	269.39	503.6	135664.8
Segment 1	339321.3	Max WS	1799.62	375.06	805.9	302260.9
Segment 1	338515.4	Max WS	1795.64	303.94	449.2	136529.8
Segment 1	338066.2	Max WS	1794.35	351.02	1251.9	439441.9
Segment 1	336814.3	Max WS	1789.77	407.19	500.5	203798.6
Segment 1	336313.8	Max WS	1787.23	465.64	496.6	231236.8
Segment 1	335817.2	Max WS	1783.93	472.72	1002.8	474043.6
Segment 1	334814.4	Max WS	1777.87	392.22	502.9	197247.4
Segment 1	334311.5	Max WS	1775.76	243.3	369.4	89875.0
Segment 1	333942.1	Max WS	1774.6	155.99	1132.8	176705.5
Segment 1	332809.3	Max WS	1770.28	205.7	500	102850.0
Segment 1	332309.3	Max WS	1768.06	186.87	999.4	186757.9
Segment 1	331309.9	Max WS	1762.49	328.01	247.9	81313.7
Segment 1	331062	Max WS	1760.7	397.87	290.5	115581.2
Segment 1	330771.5	Max WS	1758.84	246.2	419.3	103231.7
Segment 1	330352.2	Max WS	1756.64	406.73	239.9	97574.5
Segment 1	330112.3	Max WS	1755.4	213.58	143.5	30648.7
Segment 1	329968.8	Max WS	1754.63	258.55	220.3	56958.6
Segment 1	329748.5	Max WS	1753.1	357.05	88.6	31634.6
Segment 1	329659.9	Max WS	1752.42	327.25	255	83448.8
Segment 1	329404.9	Max WS	1750.52	323.11	243.7	78741.9
Segment 1	329161.2	Max WS	1748.86	271.29	185.1	50215.8
Segment 1	328976.1	Max WS	1747.66	294.32	287.8	84705.3
Segment 1	328688.3	Max WS	1745.61	356.17	261.3	93067.2
Segment 1	328427	Max WS	1743.51	374.31	60.2	22533.5
Segment 1	328366.8	Max WS	1742.98	392.25	99.5	39028.9
Segment 1	328267.3	Max WS	1742.06	522.08	88.3	46099.7
Segment 1	328179	Max WS	1741.2	614.11	162	99485.8
Segment 1	328017	Max WS	1739.69	587.51	58.2	34193.1

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 1	327958.8	Max WS	1738.99	654.88	0.8	523.9

Segment 2	327958				7.1	0.0
Segment 2	327950.9	Max WS	1749.95	581.3	46.9	27263.0
Segment 2	327904	Max WS	1749.33	574.44	73	41934.1
Segment 2	327831	Max WS	1748.43	493.47	212.9	105059.8
Segment 2	327618.1	Max WS	1746.55	276.1	163.7	45197.6
Segment 2	327454.4	Max WS	1745.65	205.31	226	46400.1
Segment 2	327228.4	Max WS	1744.63	186.85	208.4	38939.5
Segment 2	327020	Max WS	1743.8	160.47	205.6	32992.6
Segment 2	326814.4	Max WS	1743.05	159.23	195.7	31161.3
Segment 2	326618.7	Max WS	1742.39	132.35	198.5	26271.5
Segment 2	326420.2	Max WS	1741.6	215.6	199.9	43098.4
Segment 2	326220.3	Max WS	1740.56	234.38	373.9	87634.7
Segment 2	325846.4	Max WS	1738.79	198.85	501.7	99763.0
Segment 2	325344.7	Max WS	1736.67	188.07	496.5	93376.8
Segment 2	324848.2	Max WS	1734.13	330.47	639.1	211203.4
Segment 2	324209.1	Max WS	1729.9	383.22	348.2	133437.2
Segment 2	323860.9	Max WS	1727.11	376.8	78.6	29616.5
Segment 2	323782.3				18	0.0
Segment 2	323764.3	Max WS	1726.32	345.29	1	345.3
Segment 2	323763.3	Max WS	1726.31	345.23	20	6904.6
Segment 2	323743.3				75.6	0.0
Segment 2	323667.7	Max WS	1725.7	278.03	171.4	47654.3
Segment 2	323496.3	Max WS	1724.65	258.07	545.3	140725.6
Segment 2	322951	Max WS	1721.23	287.48	624.3	179473.8
Segment 2	322326.7	Max WS	1717.29	262.55	1058.2	277830.4
Segment 2	321268.5	Max WS	1712.64	120.62	944.1	113877.3
Segment 2	320324.4	Max WS	1710	122.62	497.3	60978.9
Segment 2	319827.1	Max WS	1708.12	205.83	500.5	103017.9
Segment 2	319326.6	Max WS	1705.88	184.82	1000.1	184838.5



**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 2	318326.5	Max WS	1701.53	194.05	496.2	96287.6
Segment 2	317830.3	Max WS	1699.35	188.06	497.8	93616.3
Segment 2	317332.5	Max WS	1697.34	165.26	501.6	82894.4
Segment 2	316830.9	Max WS	1694.82	271.39	501.3	136047.8
Segment 2	316329.6	Max WS	1691.79	255.7	500.1	127875.6
Segment 2	315829.5	Max WS	1689.13	207.54	497.5	103251.2
Segment 2	315332	Max WS	1686.9	182.13	500.4	91137.9
Segment 2	314831.6	Max WS	1684.6	219.4	500.2	109743.9
Segment 2	314331.4	Max WS	1681.9	250.67	525.8	131802.3
Segment 2	313805.6	Max WS	1678.55	304.43	475.3	144695.6
Segment 2	313330.3	Max WS	1675.55	245.28	750.4	184058.1
Segment 2	312579.9	Max WS	1671.43	233.35	1250	291687.5
Segment 2	311329.9	Max WS	1664.69	236.09	501.3	118351.9
Segment 2	310828.6	Max WS	1662.14	206.63	492.2	101703.3
Segment 2	310336.4	Max WS	1659.79	210.52	500.3	105323.2
Segment 2	309836.1	Max WS	1657.57	175.9	500.1	87967.6
Segment 2	309336	Max WS	1655.29	221.05	500.3	110591.3
Segment 2	308835.7	Max WS	1652.77	217.02	658.2	142842.6
Segment 2	308177.5	Max WS	1650.3	110.77	342.3	37916.6
Segment 2	307835.2	Max WS	1649.28	147.72	499.8	73830.5
Segment 2	307335.4	Max WS	1647.33	192.74	500.1	96389.3
Segment 2	306835.3	Max WS	1644.84	241.41	499.8	120656.7
Segment 2	306335.5	Max WS	1641.87	275.91	500.1	137982.6
Segment 2	305835.4	Max WS	1638.63	287.88	500	143940.0
Segment 2	305335.4	Max WS	1635.17	315.06	500.1	157561.5
Segment 2	304835.3	Max WS	1631.44	334.28	500.1	167173.4
Segment 2	304335.2	Max WS	1627.63	330.09	500	165045.0
Segment 2	303835.2	Max WS	1623.71	353.26	500	176630.0
Segment 2	303335.2	Max WS	1619.65	353.22	374.1	132139.6
Segment 2	302961.1	Max WS	1616.48	386.75	625.5	241912.1
Segment 2	302335.6	Max WS	1611.77	268.82	482.4	129678.8
Segment 2	301853.2	Max WS	1608.99	233.77	1004.9	234915.5
Segment 2	300848.3	Max WS	1602.25	350.59	500.2	175365.1

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 2	300348.1	Max WS	1598.23	348.49	500.2	174314.7
Segment 2	299847.9	Max WS	1594.21	352.42	498.1	175540.4
Segment 2	299349.8	Max WS	1590.26	337.6	500.9	169103.8
Segment 2	298848.9	Max WS	1586.23	363.12	501	181923.1
Segment 2	298347.9	Max WS	1581.85	399.02	500.8	199829.2
Segment 2	297847.1	Max WS	1577.67	329.07	501.7	165094.4
Segment 2	297345.4	Max WS	1573.72	356.99	500.2	178566.4
Segment 2	296845.2	Max WS	1569.7	343.15	501	171918.2
Segment 2	296344.2	Max WS	1566.15	273.64	503.6	137805.1
Segment 2	295840.6	Max WS	1562.49	359.18	517	185696.1
Segment 2	295323.6	Max WS	1558.1	381.12	755.4	287898.0
Segment 2	294568.2	Max WS	1551.79	346.56	271.7	94160.4
Segment 2	294296.5	Max WS	1549.61	353.23	495.9	175166.8
Segment 2	293800.6	Max WS	1545.62	347.47	488.3	169669.6
Segment 2	293312.3	Max WS	1541.49	389.61	500.1	194844.0
Segment 2	292812.2	Max WS	1537.59	289.57	518.4	150113.1
Segment 2	292293.8	Max WS	1534.36	253.24	830.2	210239.8
Segment 2	291463.6	Max WS	1529.52	254.02	651.3	165443.2
Segment 2	290812.3	Max WS	1525.99	218.63	500.2	109358.7
Segment 2	290312.1	Max WS	1523.43	226.56	484.8	109836.3
Segment 2	289827.3	Max WS	1520.62	279.75	514.8	144015.3
Segment 2	289312.5	Max WS	1517.2	297.75	494.9	147356.5
Segment 2	288817.6	Max WS	1514.04	259.46	500.2	129781.9
Segment 2	288317.4	Max WS	1511.38	203.7	504.6	102787.0
Segment 2	287812.8	Max WS	1508.9	223.64	335.6	75053.6
Segment 2	287477.2	Max WS	1507.2	219.38	909.9	199613.9
Segment 2	286567.3	Max WS	1502.91	357.41	749.9	268021.8
Segment 2	285817.4	Max WS	1499.62	237.45	500.1	118748.7
Segment 2	285317.3	Max WS	1497.41	223.96	500.5	112092.0
Segment 2	284816.8	Max WS	1495.09	209.88	499.6	104856.0
Segment 2	284317.2	Max WS	1492.93	166.41	497.6	82805.6
Segment 2	283819.6	Max WS	1490.53	253.02	499.3	126332.9
Segment 2	283320.3	Max WS	1487.82	219.32	498	109221.4

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 2	282822.3	Max WS	1485.12	253.67	499.6	126733.5
Segment 2	282322.7	Max WS	1481.67	348.58	506.3	176486.1
Segment 2	281816.4	Max WS	1478.31	229.09	495.4	113491.2
Segment 2	281321	Max WS	1475.54	258.46	348.6	90099.2
Segment 2	280972.4	Max WS	1473.27	309.21	150.1	46412.4
Segment 2	280822.3	Max WS	1472.18	321.93	499.9	160932.8
Segment 2	280322.4	Max WS	1468.39	338.81	504.3	170861.9
Segment 2	279818.1	Max WS	1464.52	350.51	508	178059.1
Segment 2	279310.1	Max WS	1461.01	272.02	503.2	136880.5
Segment 2	278806.9	Max WS	1457.8	284.25	501.4	142523.0
Segment 2	278305.5	Max WS	1454.54	281.49	505.6	142321.3
Segment 2	277799.9	Max WS	1451.57	229.47	563.8	129375.2
Segment 2	277236.1	Max WS	1448.62	227.02	440.9	100093.1
Segment 2	276795.2	Max WS	1446.15	261.01	515	134420.2
Segment 2	276280.2	Max WS	1443.16	245.28	1003.8	246212.1
Segment 2	275276.4	Max WS	1437.74	225.33	511.9	115346.4
Segment 2	274764.5	Max WS	1435.22	202.61	509.2	103169.0
Segment 2	274255.3	Max WS	1432.94	187.24	500.1	93638.7
Segment 2	273755.2	Max WS	1430.93	163.96	308.7	50614.5
Segment 2	273446.5	Max WS	1429.73	174.14	692.8	120644.2
Segment 2	272753.7	Max WS	1427.23	139.83	981	137173.2
Segment 2	271772.7	Max WS	1422.98	237.36	320.8	76145.1
Segment 2	271451.9	Max WS	1421.2	246.27	293.3	72231.0
Segment 2	271158.6	Max WS	1419.49	264.04	41.2	10878.4
Segment 2	271117.4				41.3	0.0
Segment 2	271076.1	Max WS	1419	259.25	839	217510.8
Segment 2	270237.1	Max WS	1413.81	279.56	572.3	159992.2
Segment 2	269664.8	Max WS	1409.85	323.34	441.1	142625.3
Segment 2	269223.7	Max WS	1406.5	339.09	501.8	170155.4
Segment 2	268721.9	Max WS	1402.65	329.62	500.3	164908.9
Segment 2	268221.6	Max WS	1398.96	313.14	501.8	157133.7
Segment 2	267719.8	Max WS	1395.2	338.16	503.9	170398.8
Segment 2	267215.9	Max WS	1391.41	318.09	505.4	160762.7

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 2	266710.5	Max WS	1387.75	312.89	498.2	155881.8
Segment 2	266212.3	Max WS	1384.35	282.31	498.9	140844.5
Segment 2	265713.4	Max WS	1381.24	259.75	499.3	129693.2
Segment 2	265214.1	Max WS	1378.21	268.46	739.3	198472.5
Segment 2	264474.8	Max WS	1373.64	331.36	757	250839.5
Segment 2	263717.8	Max WS	1368.74	293.47	499	146441.5
Segment 2	263218.8	Max WS	1365.37	294.54	499.4	147093.3
Segment 2	262719.4	Max WS	1362.32	237.02	498.8	118225.6
Segment 2	262220.6	Max WS	1359.72	216.91	500.1	108476.7
Segment 2	261720.5	Max WS	1357.23	218.24	500.1	109141.8
Segment 2	261220.4	Max WS	1354.7	221.64	500.1	110842.2
Segment 2	260720.3	Max WS	1352.21	212.35	602.4	127919.6
Segment 2	260117.9	Max WS	1349.23	218.85	396.4	86752.1
Segment 2	259721.5	Max WS	1347.22	222.89	497.2	110820.9
Segment 2	259224.3	Max WS	1344.62	233.06	500	116530.0
Segment 2	258724.3	Max WS	1341.73	270.05	500	135025.0
Segment 2	258224.3	Max WS	1338.75	248.78	500	124390.0
Segment 2	257724.3	Max WS	1335.8	266.27	500.1	133161.6
Segment 2	257224.2	Max WS	1332.76	262.42	500.1	131236.2
Segment 2	256724.1	Max WS	1329.66	277.47	339.9	94312.1
Segment 2	256384.2	Max WS	1327.48	280.75	657.4	184565.1
Segment 2	255726.8	Max WS	1322.76	345.51	485.3	167676.0
Segment 2	255241.5	Max WS	1319.24	286.44	494.4	141615.9
Segment 2	254747.1	Max WS	1315.83	314.66	499.9	157298.5
Segment 2	254247.2	Max WS	1312.41	280.82	504.5	141673.7
Segment 2	253742.7	Max WS	1309.43	233.23	493.3	115052.4
Segment 2	253249.4	Max WS	1306.85	222.12	500.1	111082.2
Segment 2	252749.3	Max WS	1304.32	218.89	502.6	110014.1
Segment 2	252246.7	Max WS	1301.8	218.13	500	109065.0
Segment 2	251746.7	Max WS	1299.2	235.15	492.3	115764.3
Segment 2	251254.4	Max WS	1296.51	240.24	504.4	121177.1
Segment 2	250750	Max WS	1293.76	234.59	497.1	116614.7
Segment 2	250252.9	Max WS	1291.15	224.42	472.1	105948.7

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 2	249780.8	Max WS	1288.79	209.77	631.7	132511.7
Segment 2	249149.1	Max WS	1285.65	244.52	380.7	93088.8
Segment 2	248768.4	Max WS	1283.69	226.1	509.1	115107.5
Segment 2	248259.3	Max WS	1281.01	231.8	496.9	115181.4
Segment 2	247762.4	Max WS	1278.34	236.64	500	118320.0
Segment 2	247262.4	Max WS	1275.63	236.51	502.5	118846.3
Segment 2	246759.9	Max WS	1272.71	268.95	512.1	137729.3
Segment 2	246247.8	Max WS	1269.19	330.83	507.4	167863.1
Segment 2	245740.4	Max WS	1265.28	340.44	506	172262.6
Segment 2	245234.4	Max WS	1261.36	334.17	496.4	165882.0
Segment 2	244738	Max WS	1257.55	333.56	499.7	166679.9
Segment 2	244238.3	Max WS	1253.64	348.3	496.8	173035.4
Segment 2	243741.5	Max WS	1249.68	346.48	503.1	174314.1
Segment 2	243238.4	Max WS	1245.57	364.46	640.8	233546.0
Segment 2	242597.6	Max WS	1239.77	424.26	513.6	217899.9
Segment 2	242084	Max WS	1234.82	416.37	367.7	153099.2
Segment 2	241716.3	Max WS	1231.32	412.1	90.2	37171.4
Segment 2	241626.1				90.2	0.0
Segment 2	241535.9	Max WS	1229.67	430.58	790	340158.2
Segment 2	240745.9	Max WS	1222.57	387.21	518.4	200729.7
Segment 2	240227.5	Max WS	1217.35	490.59	491	240879.7
Segment 2	239736.5	Max WS	1212.29	496.15	501.6	248868.8
Segment 2	239234.9	Max WS	1207.79	437.65	499.8	218737.5
Segment 2	238735.1	Max WS	1203.79	357.48	540.2	193110.7
Segment 2	238194.9	Max WS	1199.95	299.71	469.2	140623.9
Segment 2	237725.7	Max WS	1196.71	311.79	498.9	155552.0
Segment 2	237226.8	Max WS	1193.23	306.45	510.2	156350.8
Segment 2	236716.6	Max WS	1189.65	305.04	490.9	149744.1
Segment 2	236225.7	Max WS	1186.26	296.67	496.3	147237.3
Segment 2	235729.4	Max WS	1182.92	316.78	511.9	162159.7
Segment 2	235217.5	Max WS	1179.57	295.95	608.5	180085.6
Segment 2	234609	Max WS	1175.69	312.1	348.4	108735.6
Segment 2	234260.6	Max WS	1173.38	298.96	166	49627.4

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 2	234094.6				166.1	0.0
Segment 2	233928.5	Max WS	1171.15	291.57	147.5	43006.6
Segment 2	233781	Max WS	1170.19	319.5	683.8	218474.1
Segment 2	233097.2	Max WS	1165.87	273.8	871.1	238507.2
Segment 2	232226.1	Max WS	1160.39	274.25	509.5	139730.4
Segment 2	231716.6	Max WS	1157.19	278.43	489.2	136208.0
Segment 2	231227.4	Max WS	1154.1	276.98	499.3	138296.1
Segment 2	230728.1	Max WS	1150.78	303.36	501.7	152195.7
Segment 2	230226.4	Max WS	1147.31	298.15	499.9	149045.2
Segment 2	229726.5	Max WS	1143.89	297.8	505.9	150657.0
Segment 2	229220.6	Max WS	1140.36	309.87	498.7	154532.2
Segment 2	228721.9	Max WS	1136.83	308.22	602.2	185610.1
Segment 2	228119.7	Max WS	1132.51	315.62	390.7	123312.7
Segment 2	227729	Max WS	1129.68	316.68	497.9	157675.0
Segment 2	227231.1	Max WS	1126.06	317.23	519.1	164674.1
Segment 2	226712	Max WS	1122.27	364.89	499.5	182262.6
Segment 2	226212.5	Max WS	1118.62	342.07	513	175481.9
Segment 2	225699.5	Max WS	1114.77	344.41	505	173927.1
Segment 2	225194.5	Max WS	1110.82	354.74	511.3	181378.6
Segment 2	224683.2	Max WS	1106.82	337.47	466.6	157463.5
Segment 2	224216.6	Max WS	1103.34	495.17	81.7	40455.4
Segment 2	224134.9	Max WS	1102.75	578.89	232.3	134476.1
Segment 2	223902.6	Max WS	1101.06	310.43	50.1	15552.5
Segment 2	223852.5				50.1	0.0
Segment 2	223802.4	Max WS	1100.39	283.59	750.3	212777.6
Segment 2	223052.1	Max WS	1095.26	464.76	240.3	111681.8
Segment 2	222811.8	Max WS	1093.55	431.64	633.1	273271.3
Segment 2	222178.7	Max WS	1089.07	306.19	503.8	154258.5
Segment 2	221674.9	Max WS	1085.57	323.97	486.3	157546.6
Segment 2	221188.6	Max WS	1082.13	315.06	503.9	158758.7
Segment 2	220684.7	Max WS	1078.01	397.59	486.1	193268.5
Segment 2	220198.6	Max WS	1073.9	365.52	482.3	176290.3
Segment 2	219716.3	Max WS	1070.27	432.11	494.4	213635.2

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 2	219221.9	Max WS	1066.72	466.78	884.9	413053.6
Segment 2	218337	Max WS	1060.4	582.09	625.8	364271.9
Segment 2	217711.2	Max WS	1055.2	1054.43	1003.5	1058120.5
Segment 2	216707.7	Max WS	1045.21	712.56	500	356280.0
Segment 2	216207.7	Max WS	1039.95	815.51	499.7	407510.3
Segment 2	215708	Max WS	1035.28	499.62	630.8	315160.3
Segment 2	215077.2	Max WS	1029.77	428.43	369.2	158176.4
Segment 2	214708	Max WS	1026.4	384.35	501.7	192828.4
Segment 2	214206.3	Max WS	1022.34	321.37	498.2	160106.5
Segment 2	213708.1	Max WS	1018.77	303.06	510.1	154590.9
Segment 2	213198	Max WS	1015.86	193.55	490.6	94955.6
Segment 2	212707.4	Max WS	1012.87	336.82	500.2	168477.4
Segment 2	212207.2	Max WS	1009.3	285.53	830.9	237246.9
Segment 2	211376.3	Max WS	1003.22	352.04	669.2	235585.2
Segment 2	210707.1	Max WS	998.36	279.88	498.5	139520.2
Segment 2	210208.6	Max WS	995.29	258.17	259.2	66917.7
Segment 2	209949.4	Max WS	993.69	276.85	246.5	68243.5
Segment 2	209702.9	Max WS	992.3	214.69	500	107345.0
Segment 2	209202.9	Max WS	990.03	181.19	194.4	35223.3
Segment 2	209008.5	Max WS	989.18	201.53	135.6	27327.5
Segment 2	208872.9	Max WS	988.54	210.3	220.8	46434.2
Segment 2	208652.1	Max WS	987.42	231.17	176.2	40732.2
Segment 2	208475.9	Max WS	986.53	206.39	278	57376.4
Segment 2	208197.9	Max WS	985.17	219.8	71.2	15649.8
Segment 2	208126.7	Max WS	984.83	193.4	184.8	35740.3
Segment 2	207941.9	Max WS	984.18	114.02	135.2	15415.5
Segment 2	207806.7	Max WS	983.62	250.12	81.1	20284.7
Segment 2	207725.6	Max WS	983.11	297.41	34.8	10349.9
Segment 2	207690.8	Max WS	982.86	368.71	24.8	9144.0
Segment 2	207666				25.3	0.0

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 3	207640.7	Max WS	982.51	322.12	81.8	26349.4
Segment 3	207558.9	Max WS	981.98	313.06	184.9	57884.8
Segment 3	207374	Max WS	980.84	286.81	228.3	65478.7
Segment 3	207145.7	Max WS	979.52	233.46	278.9	65112.0
Segment 3	206866.8	Max WS	978.03	231.72	263.7	61104.6
Segment 3	206603.1	Max WS	976.49	274.36	231.6	63541.8
Segment 3	206371.5	Max WS	975.06	266.49	238.4	63531.2
Segment 3	206133.1	Max WS	973.56	278.84	424.5	118367.6
Segment 3	205708.6	Max WS	970.88	272.56	504.9	137615.5
Segment 3	205203.7	Max WS	967.6	292.48	499.9	146210.8
Segment 3	204703.8	Max WS	964.13	312.99	500.1	156526.3
Segment 3	204203.7	Max WS	960.74	277.67	500.1	138862.8
Segment 3	203703.6	Max WS	957.62	264.89	500.3	132524.5
Segment 3	203203.3	Max WS	954.77	231.27	503.5	116444.4
Segment 3	202699.8	Max WS	952.1	231.03	501.4	115838.4
Segment 3	202198.4	Max WS	949.39	240.36	500.5	120300.2
Segment 3	201697.9	Max WS	946.79	211.74	499.5	105764.1
Segment 3	201198.4	Max WS	944.49	190.53	499.8	95226.9
Segment 3	200698.6	Max WS	942.3	191.01	499.6	95428.6
Segment 3	200199	Max WS	940.08	196.43	498.3	97881.1
Segment 3	199700.7	Max WS	937.86	190.39	1000.1	190409.0
Segment 3	198700.6	Max WS	933.65	176.41	500.2	88240.3
Segment 3	198200.4	Max WS	931.66	171.12	500.8	85696.9
Segment 3	197699.6	Max WS	929.76	159.38	500.1	79705.9
Segment 3	197199.5	Max WS	927.91	163.21	500.1	81621.3
Segment 3	196699.4	Max WS	926.14	143.92	339.6	48875.2
Segment 3	196359.8	Max WS	925.03	142.35	660.8	94064.9
Segment 3	195699	Max WS	922.94	133.31	502.3	66961.6
Segment 3	195196.7	Max WS	920.9	219.58	501.2	110053.5
Segment 3	194695.5	Max WS	918.29	235.03	500	117515.0
Segment 3	194195.5	Max WS	915.56	239.6	293.4	70298.6
Segment 3	193902.1	Max WS	913.96	235.85	343.8	81085.2
Segment 3	193558.3	Max WS	912.08	241.86	250.2	60513.4



**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 3	193308.1	Max WS	910.69	239.56	93.8	22470.7
Segment 3	193214.3				93.9	0.0
Segment 3	193120.4	Max WS	909.66	247.86	583.6	144651.1
Segment 3	192536.8	Max WS	906.57	212.82	116.6	24814.8
Segment 3	192420.2	Max WS	906.01	209	712.8	148975.2
Segment 3	191707.4	Max WS	902.8	182.44	499.2	91074.0
Segment 3	191208.2	Max WS	900.78	170.5	502.6	85693.3
Segment 3	190705.6	Max WS	898.86	162.71	499.7	81306.2
Segment 3	190205.9	Max WS	897.02	158.14	495.2	78310.9
Segment 3	189710.7	Max WS	895.23	156.81	988.1	154944.0
Segment 3	188722.6	Max WS	891.68	156.34	502.1	78498.3
Segment 3	188220.5	Max WS	889.86	159.5	503.3	80276.3
Segment 3	187717.2	Max WS	888.04	154.15	497.6	76705.0
Segment 3	187219.6	Max WS	886.24	160.96	495.1	79691.3
Segment 3	186724.5	Max WS	884.44	156.75	506.3	79362.5
Segment 3	186218.2	Max WS	882.63	155.26	502.8	78064.7
Segment 3	185715.4	Max WS	880.81	159.73	489.1	78123.9
Segment 3	185226.3	Max WS	879.01	161.35	474.8	76609.0
Segment 3	184751.5	Max WS	877.25	161.51	525.2	84825.1
Segment 3	184226.3	Max WS	875.27	166.85	500.2	83458.4
Segment 3	183726.1	Max WS	873.4	158.12	500.4	79123.2
Segment 3	183225.7	Max WS	871.6	156.12	500	78060.0
Segment 3	182725.7	Max WS	869.83	152.29	500.1	76160.2
Segment 3	182225.6	Max WS	867.95	175.24	499	87444.8
Segment 3	181726.6	Max WS	865.81	197.34	495.5	97782.0
Segment 3	181231.1	Max WS	863.53	203.51	500.1	101775.4
Segment 3	180731	Max WS	861.17	207.09	500.1	103565.7
Segment 3	180230.9	Max WS	858.84	199.71	500.8	100014.8
Segment 3	179730.1	Max WS	856.5	206.36	500.2	103221.3
Segment 3	179229.9	Max WS	854.25	186.33	500.7	93295.4
Segment 3	178729.2	Max WS	852.21	169.13	500.1	84581.9
Segment 3	178229.1	Max WS	850.19	181.96	500.1	90998.2
Segment 3	177729	Max WS	848.04	192.74	549.1	105833.5

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 3	177179.9	Max WS	845.63	189.72	452.1	85772.4
Segment 3	176727.8	Max WS	843.73	177.15	500.1	88592.7
Segment 3	176227.7	Max WS	841.8	158.66	500.6	79425.2
Segment 3	175727.1	Max WS	839.87	176.26	500.2	88165.3
Segment 3	175226.9	Max WS	837.65	211.95	500.2	106017.4
Segment 3	174726.7	Max WS	835.06	237.82	628.1	149374.7
Segment 3	174098.6	Max WS	831.53	251.69	372.5	93754.5
Segment 3	173726.1	Max WS	829.5	225.11	497.9	112082.3
Segment 3	173228.2	Max WS	826.9	229.09	499.3	114384.6
Segment 3	172728.9	Max WS	823.96	283.61	500.2	141861.7
Segment 3	172228.7	Max WS	820.82	263.22	463.1	121897.2
Segment 3	171765.6	Max WS	818.08	252.77	110.5	27931.1
Segment 3	171655.1	Max WS	817.4	282.18	161.4	45543.9
Segment 3	171493.7	Max WS	816.4	259.03	61.3	15878.5
Segment 3	171432.4				61.3	0.0
Segment 3	171371.1	Max WS	815.72	230.32	651.9	150145.6
Segment 3	170719.2	Max WS	812.06	259.23	184.9	47931.6
Segment 3	170534.3	Max WS	810.99	241.87	838.5	202808.0
Segment 3	169695.8	Max WS	806.9	183.59	375.6	68956.4
Segment 3	169320.2	Max WS	805.33	180.31	619.4	111684.0
Segment 3	168700.8	Max WS	802.79	176.27	500.3	88187.9
Segment 3	168200.5	Max WS	800.78	173.91	496.4	86328.9
Segment 3	167704.1	Max WS	798.81	172.93	500.3	86516.9
Segment 3	167203.8	Max WS	796.9	159.29	499.5	79565.4
Segment 3	166704.3	Max WS	794.82	202.94	1013.8	205740.6
Segment 3	165690.5	Max WS	789.63	242.9	723.1	175641.0
Segment 3	164967.4	Max WS	785.93	203.89	940.5	191758.5
Segment 3	164026.9	Max WS	781.97	162.58	326	53001.1
Segment 3	163700.9	Max WS	780.73	169.35	502.7	85132.2
Segment 3	163198.2	Max WS	778.71	180.21	493.3	88897.6
Segment 3	162704.9	Max WS	776.62	188.16	805	151468.8
Segment 3	161899.9	Max WS	772.22	288.69	721.3	208232.1
Segment 3	161178.6	Max WS	767.55	275.56	442.4	121907.7

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 3	160736.2	Max WS	765.19	188.42	890.9	167863.4
Segment 3	159845.3	Max WS	760.78	242.78	179.7	43627.6
Segment 3	159665.6	Max WS	759.79	236.95	499.4	118332.8
Segment 3	159166.2	Max WS	757.18	219.32	503.9	110515.3
Segment 3	158662.3	Max WS	754.72	205.68	497.6	102346.4
Segment 3	158164.7	Max WS	752.5	183.18	496	90857.3
Segment 3	157668.7	Max WS	750.48	171.85	502.4	86337.4
Segment 3	157166.3	Max WS	748.59	155.21	500.1	77620.5
Segment 3	156666.2	Max WS	746.82	153.74	788.2	121177.9
Segment 3	155878	Max WS	743.59	203.18	713.5	144968.9
Segment 3	155164.5	Max WS	739.78	262.17	503.3	131950.2
Segment 3	154661.2	Max WS	736.43	316.15	399.8	126396.8
Segment 3	154261.4	Max WS	733.46	332.6	607.9	202187.5
Segment 3	153653.5	Max WS	729.13	287.55	501.8	144292.6
Segment 3	153151.7	Max WS	726.04	249.23	500.1	124639.9
Segment 3	152651.6	Max WS	723.2	244.79	500	122395.0
Segment 3	152151.6	Max WS	720.44	236.67	500	118335.0
Segment 3	151651.6	Max WS	717.77	228.62	500.3	114378.6
Segment 3	151151.3	Max WS	715.03	248.39	503.2	124989.8
Segment 3	150648.1	Max WS	712.18	245.64	504.7	123974.5
Segment 3	150143.4	Max WS	709.38	236.64	499.8	118272.7
Segment 3	149643.6	Max WS	706.83	209.07	446.8	93412.5
Segment 3	149196.8	Max WS	704.81	183.8	553.5	101733.3
Segment 3	148643.3	Max WS	702.57	168.69	500	84345.0
Segment 3	148143.3	Max WS	700.52	188.28	500	94140.0
Segment 3	147643.3	Max WS	698.29	199.94	385	76976.9
Segment 3	147258.3	Max WS	696.47	213.7	171.4	36628.2
Segment 3	147086.9	Max WS	695.6	226.09	57.5	13000.2
Segment 3	147029.4				57.6	0.0
Segment 3	146971.8	Max WS	695.02	225.24	468.5	105524.9
Segment 3	146503.3	Max WS	692.33	275.32	184.2	50713.9
Segment 3	146319.1	Max WS	691.19	261.05	674.2	175999.9
Segment 3	145644.9	Max WS	687.37	232.74	497.2	115718.3

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 3	145147.7	Max WS	684.8	218.69	499	109126.3
Segment 3	144648.7	Max WS	682.23	229.74	500.4	114961.9
Segment 3	144148.3	Max WS	679.72	207.01	504.4	104415.8
Segment 3	143643.9	Max WS	677.35	201.72	656	132328.3
Segment 3	142987.9	Max WS	674.55	170.05	640.3	108883.0
Segment 3	142347.6	Max WS	672.13	187.85	709.5	133279.6
Segment 3	141638.1	Max WS	669.49	205.2	499.4	102476.9
Segment 3	141138.7	Max WS	667.58	167.71	499.7	83804.7
Segment 3	140639	Max WS	665.43	206.82	501.7	103761.6
Segment 3	140137.3	Max WS	663.04	207.97	500.3	104047.4
Segment 3	139637	Max WS	660.68	203.52	501.3	102024.6
Segment 3	139135.7	Max WS	658.24	219.96	497.2	109364.1
Segment 3	138638.5	Max WS	655.86	197.51	495.8	97925.5
Segment 3	138142.7	Max WS	653.44	227.38	871.1	198070.7
Segment 3	137271.6	Max WS	648.93	224.39	624.5	140131.6
Segment 3	136647.1	Max WS	645.68	227.89	500.1	113967.8
Segment 3	136147	Max WS	643.14	215.51	500.1	107776.6
Segment 3	135646.9	Max WS	640.59	228.68	502	114797.4
Segment 3	135144.9	Max WS	637.99	221.75	508.1	112671.2
Segment 3	134636.8	Max WS	635.37	228.32	503.3	114913.5
Segment 3	134133.5	Max WS	632.52	264.25	503.2	132970.6
Segment 3	133630.3	Max WS	629.83	202	497.7	100535.4
Segment 3	133132.6	Max WS	627.57	192.78	496.6	95734.5
Segment 3	132636	Max WS	625.42	186.02	501.4	93270.4
Segment 3	132134.6	Max WS	623.27	186.28	502.5	93605.7
Segment 3	131632.1	Max WS	620.94	218.91	498.9	109214.2
Segment 3	131133.2	Max WS	618.62	184.93	500.1	92483.5
Segment 3	130633.1	Max WS	616.54	178.61	500.1	89322.9
Segment 3	130133	Max WS	614.53	171.02	500.2	85544.2
Segment 3	129632.8	Max WS	612.68	151.48	500	75740.0
Segment 3	129132.8	Max WS	610.95	148.65	500.1	74339.9
Segment 3	128632.7	Max WS	609.24	149.69	500	74845.0
Segment 3	128132.7	Max WS	607.53	148.27	370	54859.9

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 3	127762.7	Max WS	606.25	152.56	160.3	24455.4
Segment 3	127602.4	Max WS	605.69	156.35	73.1	11429.2
Segment 3	127529.3	Max WS	605.43	145.42	161.7	23514.4
Segment 3	127367.6	Max WS	604.86	161.42	47.7	7699.7
Segment 3	127319.9				47.8	0.0
Segment 3	127272.1	Max WS	604.54	142.61	388.3	55375.5
Segment 3	126883.8	Max WS	603.19	159.32	755.2	120318.5
Segment 3	126128.6	Max WS	599.99	209.68	500.1	104861.0
Segment 3	125628.5	Max WS	597.53	219.17	500	109585.0
Segment 3	125128.5	Max WS	594.99	224.02	499.7	111942.8
Segment 3	124628.8	Max WS	592.4	226.58	500.1	113312.7
Segment 3	124128.7	Max WS	589.78	231.1	500	115550.0
Segment 3	123628.7	Max WS	587.13	230.72	500.1	115383.1
Segment 3	123128.6	Max WS	584.46	233.29	500.6	116785.0
Segment 3	122628	Max WS	581.78	236.1	518.3	122370.6
Segment 3	122109.7	Max WS	578.76	274.02	482.6	132242.1
Segment 3	121627.1	Max WS	575.9	242.9	500.4	121547.2
Segment 3	121126.7	Max WS	573.12	241.26	500.9	120847.1
Segment 3	120625.8	Max WS	570.12	281.09	500.3	140629.3
Segment 3	120125.5	Max WS	567.03	255.91	500.8	128159.7
Segment 3	119624.7	Max WS	564.13	249.67	500.4	124934.9
Segment 3	119124.3	Max WS	561.15	268.17	500.5	134219.1
Segment 3	118623.8	Max WS	558.31	226.28	500.3	113207.9
Segment 3	118123.5	Max WS	555.85	202	500.2	101040.4
Segment 3	117623.3	Max WS	553.55	199.11	501	99754.1
Segment 3	117122.3	Max WS	551.2	209.55	500.2	104816.9
Segment 3	116622.1	Max WS	548.81	205.93	630.8	129900.6
Segment 3	115991.3	Max WS	545.82	207.01	96.5	19976.5
Segment 3	115894.8	Max WS	545.36	206.36	773.1	159536.9
Segment 3	115121.7	Max WS	541.71	205.2	500.1	102620.5
Segment 3	114621.6	Max WS	539.28	218.04	504	109892.2
Segment 3	114117.6	Max WS	536.62	243.09	500.4	121642.2
Segment 3	113617.2	Max WS	533.89	230.61	500.2	115351.1

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 3	113117	Max WS	531.03	268.89	500.3	134525.7
Segment 3	112616.7	Max WS	528.06	247.09	500.2	123594.4
Segment 3	112116.5	Max WS	525.34	227.48	500	113740.0
Segment 3	111616.5	Max WS	522.64	241.9	342.1	82754.0
Segment 3	111274.4	Max WS	520.8	226.79	225.3	51095.8
Segment 3	111049.1	Max WS	519.64	224.27	53.4	11976.0
Segment 3	110995.7				53.5	0.0
Segment 3	110942.2	Max WS	519.08	238.12	642.1	152896.9
Segment 3	110300.1	Max WS	515.8	206.64	684.4	141424.4
Segment 3	109615.7	Max WS	512.74	182.89	500.2	91481.6
Segment 3	109115.5	Max WS	510.38	228	500.1	114022.8
Segment 3	108615.4	Max WS	507.73	234.65	500.2	117371.9
Segment 3	108115.2	Max WS	505.08	226.15	447.3	101156.9
Segment 3	107667.9	Max WS	502.67	242.9	553.3	134396.6
Segment 3	107114.6	Max WS	499.83	205.12	503.6	103298.4
Segment 3	106611	Max WS	496.97	289.6	506.9	146798.2
Segment 3	106104.1	Max WS	493.63	285.09	506.2	144312.6
Segment 3	105597.9	Max WS	490.18	307.07	503.9	154732.6
Segment 3	105094	Max WS	486.8	277.76	500.1	138907.8
Segment 3	104593.9	Max WS	483.83	239.89	501	120184.9
Segment 3	104092.9	Max WS	480.8	287.44	502.6	144467.3
Segment 3	103590.3	Max WS	477.43	296.2	498.7	147714.9
Segment 3	103091.6	Max WS	474.02	299.32	502	150258.6
Segment 3	102589.6	Max WS	470.74	270.73	500.3	135446.2
Segment 3	102089.3	Max WS	467.7	258.08	563.2	145350.7
Segment 3	101526.1	Max WS	464.3	268.54	207.6	55748.9
Segment 3	101318.5	Max WS	463.08	241.5	79.3	19151.0
Segment 4	101239.2				79.3	0.0
Segment 4	101159.9	Max WS	462.31	192.65	172.8	33289.9
Segment 4	100987.1	Max WS	461.5	216.96	500	108480.0

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 4	100487.1	Max WS	458.88	238.68	389.4	92942.0
Segment 4	100097.7	Max WS	456.71	246.98	994.78	245690.8
Segment 4	99102.92	Max WS	451.17	238.29	705.13	168025.4
Segment 4	98397.79	Max WS	447.14	261.6	798	208756.8
Segment 4	97599.79	Max WS	442.96	196.47	499.74	98183.9
Segment 4	97100.05	Max WS	440.89	172.82	500.86	86558.6
Segment 4	96599.19	Max WS	438.69	266.88	500.3	133520.1
Segment 4	96098.89	Max WS	436.26	280.29	500.23	140209.5
Segment 4	95598.66	Max WS	434.14	237.58	500.01	118792.4
Segment 4	95098.65	Max WS	432.3	275.7	500.05	137863.8
Segment 4	94598.6	Max WS	430.41	276.08	500.02	138045.5
Segment 4	94098.58	Max WS	428.51	215.83	500.04	107923.6
Segment 4	93598.54	Max WS	426.51	193.49	500.07	96758.5
Segment 4	93098.47	Max WS	424.35	284.64	500.03	142328.5
Segment 4	92598.44	Max WS	422.11	206.09	500.02	103049.1
Segment 4	92098.42	Max WS	419.79	258.62	500.01	129312.6
Segment 4	91598.41	Max WS	417.38	257.68	500.09	128863.2
Segment 4	91098.32	Max WS	414.97	410.15	500.14	205132.4
Segment 4	90598.18	Max WS	412.66	511.12	500.02	255570.2
Segment 4	90098.16	Max WS	410.46	417.32	500.2	208743.5
Segment 4	89597.96	Max WS	408.22	329.1	500.01	164553.3
Segment 4	89097.95	Max WS	405.72	486.83	526.36	256247.8
Segment 4	88571.59	Max WS	403.14	445.82	473.8	211229.5
Segment 4	88097.79	Max WS	401	305.26	500.12	152666.6
Segment 4	87597.67	Max WS	398.77	323.08	500.36	161656.3
Segment 4	87097.31	Max WS	396.41	349.91	500.24	175039.0
Segment 4	86597.07	Max WS	393.71	489.56	9.32	4562.7
Segment 4	86587.75	Max WS	391.32	456.31	361.86	165120.3
Segment 4	86225.89	Max WS	389.15	506.05	518.56	262417.3
Segment 4	85707.33	Max WS	383.92	411.45	618.94	254662.9
Segment 4	85088.39	Max WS	380.82	384.69	502.98	193491.4
Segment 4	84585.41	Max WS	378.52	413.17	740.92	306125.9
Segment 4	83844.49	Max WS	372.48	414.33	361	149573.1

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 4	83483.49	Max WS	371.23	386.22	149.33	57674.2
Segment 4	83334.16	Max WS	370.75	182.1	81.49	14839.3
Segment 4	83252.67				81.5	0.0
Segment 4	83171.17	Max WS	370.26	148.98	455.74	67896.1
Segment 4	82715.43	Max WS	368.52	197.59	142.39	28134.8
Segment 4	82573.04	Max WS	367.85	216.08	493.4	106613.9
Segment 4	82079.64	Max WS	365.57	192.16	746.27	143403.2
Segment 4	81333.37	Max WS	362.53	162.33	762.84	123831.8
Segment 4	80570.53	Max WS	360.01	125.35	571.03	71578.6
Segment 4	79999.5	Max WS	358.35	128.74	429.49	55292.5
Segment 4	79570.01	Max WS	357.07	130.96	499.79	65452.5
Segment 4	79070.22	Max WS	355.5	141.81	500.03	70909.3
Segment 4	78570.19	Max WS	354.02	116.87	500.4	58481.7
Segment 4	78069.79	Max WS	352.56	136.13	500.17	68088.1
Segment 4	77569.62	Max WS	350.96	143.76	500.14	71900.1
Segment 4	77069.48	Max WS	349.09	180.43	500.38	90283.6
Segment 4	76569.1	Max WS	347.32	128.33	499.06	64044.4
Segment 4	76070.04	Max WS	345.85	128.62	497.02	63926.7
Segment 4	75573.02	Max WS	344.19	161.59	501.61	81055.2
Segment 4	75071.41	Max WS	342.55	123.79	502.52	62207.0
Segment 4	74568.89	Max WS	341.17	115.97	500.04	57989.6
Segment 4	74068.85	Max WS	339.79	124.78	500.04	62395.0
Segment 4	73568.81	Max WS	338.35	125.86	501.88	63166.6
Segment 4	73066.93	Max WS	336.64	170.89	500.6	85547.5
Segment 4	72566.33	Max WS	334.67	170.91	498.09	85128.6
Segment 4	72068.24	Max WS	332.62	188.73	671.53	126737.9
Segment 4	71396.71	Max WS	329.86	169.65	325.69	55253.3
Segment 4	71071.02	Max WS	328.44	286.69	501.88	143884.0
Segment 4	70569.14	Max WS	326.2	357.36	500.38	178815.8
Segment 4	70068.76	Max WS	324.03	431.2	500.19	215681.9
Segment 4	69568.57	Max WS	321.79	250.03	500.32	125095.0
Segment 4	69068.25	Max WS	319.69	250.5	500.71	125427.9
Segment 4	68567.54	Max WS	317.33	270.51	500.25	135322.6



**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 4	68067.29	Max WS	314.98	226.97	404.69	91852.5
Segment 4	67662.6	Max WS	313.17	225.12	215.12	48427.8
Segment 4	67447.48	Max WS	312.05	244.28	74.61	18225.7
Segment 4	67372.87	Max WS	311.64	239.26	163.02	39004.2
Segment 4	67209.85	Max WS	310.76	364.77	65.75	23983.6
Segment 4	67144.1				65.75	0.0
Segment 4	67078.35	Max WS	310.09	226.46	686.59	155485.2
Segment 4	66391.76	Max WS	306.34	249.44	311.35	77663.1
Segment 4	66080.41	Max WS	304.65	232.44	519.84	120831.6
Segment 4	65560.57	Max WS	302.08	242.03	500.56	121150.5
Segment 4	65060.01	Max WS	299.55	612.84	500.16	306518.1
Segment 4	64559.85	Max WS	296.71	834.96	500.05	417521.7
Segment 4	64059.8	Max WS	293.83	296.31	499.23	147926.8
Segment 4	63560.57	Max WS	291.1	413.37	500.79	207011.6
Segment 4	63059.78	Max WS	288.28	411.74	500.04	205886.5
Segment 4	62559.74	Max WS	285.28	271.43	500.02	135720.4
Segment 4	62059.72	Max WS	282.07	380.96	625.35	238233.3
Segment 4	61434.37	Max WS	277.97	468.31	374.48	175372.7
Segment 4	61059.89	Max WS	275.52	319.34	500.05	159686.0
Segment 4	60559.84	Max WS	272.3	283.84	500.07	141939.9
Segment 4	60059.77	Max WS	269.08	321.46	500.04	160742.9
Segment 4	59559.73	Max WS	265.92	265.4	491.76	130513.1
Segment 4	59067.97	Max WS	263	287.3	508.92	146212.7
Segment 4	58559.05	Max WS	260.17	291.58	500.02	145795.8
Segment 4	58059.03	Max WS	257.49	281.65	506.68	142706.4
Segment 4	57552.35	Max WS	254.64	255.31	493.56	126010.8
Segment 4	57058.79	Max WS	251.8	247.2	377.01	93196.9
Segment 4	56681.78	Max WS	249.92	254.24	55.53	14117.9
Segment 4	56626.25	Max WS	249.68	189.33	124.3	23533.7
Segment 4	56501.95	Max WS	249.15	177.61	62.76	11146.8
Segment 4	56439.19				62.76	0.0
Segment 4	56376.43	Max WS	248.64	192.74	352.94	68025.7
Segment 4	56023.49	Max WS	247.2	161.41	221.57	35763.6

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 4	55801.92	Max WS	246.36	168.65	739.93	124789.2
Segment 4	55061.99	Max WS	243.33	188.71	498.44	94060.6
Segment 4	54563.55	Max WS	241.06	207.27	593.48	123010.6
Segment 4	53970.07	Max WS	238.22	210.75	110.17	23218.3
Segment 4	53859.9	Max WS	237.69	204.55	196.49	40192.0
Segment 4	53663.41	Max WS	236.8	190.37	95.22	18127.0
Segment 4	53568.19	Max WS	236.36	212.85	614.56	130809.1
Segment 4	52953.63	Max WS	233.4	206.62	390.54	80693.4
Segment 4	52563.09	Max WS	231.54	209.14	500.66	104708.0
Segment 4	52062.43	Max WS	229.17	209.42	577.92	121028.0
Segment 4	51484.51	Max WS	226.24	239.95	418.31	100373.5
Segment 4	51066.2	Max WS	223.86	256.86	500.27	128499.4
Segment 4	50565.93	Max WS	221.14	222.87	498.2	111033.8
Segment 4	50067.73	Max WS	218.94	168.15	496.21	83437.7
Segment 4	49571.52	Max WS	217.11	157.33	500.46	78737.4
Segment 4	49071.06	Max WS	215.33	201.17	562.12	113081.7
Segment 4	48508.94	Max WS	213.25	220	437.9	96338.0
Segment 4	48071.04	Max WS	211.58	240.73	500.05	120377.0
Segment 4	47570.99	Max WS	209.61	392.61	500.05	196324.6
Segment 4	47070.94	Max WS	207.54	191.41	500.03	95710.7
Segment 4	46570.91	Max WS	205.37	238.88	500.01	119442.4
Segment 4	46070.9	Max WS	203.13	205.99	465.45	95878.0
Segment 4	45605.45	Max WS	200.97	218.76	531.72	116319.1
Segment 4	45073.73	Max WS	198.45	232.37	500.04	116194.3
Segment 4	44573.69	Max WS	196.05	251.88	500.02	125945.0
Segment 4	44073.67	Max WS	193.61	310.87	499.83	155382.2
Segment 4	43573.84	Max WS	191.23	282.45	499.22	141004.7
Segment 4	43074.62	Max WS	189.06	187.91	499.2	93804.7
Segment 4	42575.42	Max WS	187.04	236.01	500.18	118047.5
Segment 4	42075.24	Max WS	184.97	192.05	137.95	26493.3
Segment 4	41937.29	Max WS	184.35	208.28	299.36	62350.7
Segment 4	41637.93	Max WS	182.76	257.87	100.23	25846.3
Segment 4	41537.7				100.23	0.0

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 4	41437.47	Max WS	181.69	223.59	363.31	81232.5
Segment 4	41074.16	Max WS	179.78	265.04	316.99	84015.0
Segment 4	40757.17	Max WS	178.1	232.38	693.18	161081.2
Segment 4	40063.99	Max WS	175.19	147.56	501.03	73932.0
Segment 4	39562.96	Max WS	173.5	358.38	503.69	180512.4
Segment 4	39059.27	Max WS	171.7	535.41	463.89	248371.3
Segment 4	38595.38	Max WS	169.89	371.57	537.37	199670.6
Segment 4	38058.01	Max WS	167.77	596.87	500.34	298637.9
Segment 4	37557.67	Max WS	165.59	393.3	500.87	196992.2
Segment 4	37056.8	Max WS	163.48	699.55	508.06	355413.4
Segment 4	36548.74	Max WS	161.52	536.06	512.74	274859.4
Segment 4	36036	Max WS	159.09	448.3	497.4	222984.4
Segment 4	35538.6	Max WS	156.52	386.33	499.88	193118.6
Segment 4	35038.72	Max WS	153.79	408.76	616.7	252082.3
Segment 4	34422.02	Max WS	150.63	293.3	382.41	112160.9
Segment 4	34039.61	Max WS	148.82	361.75	501.11	181276.5
Segment 4	33538.5	Max WS	146.37	260.63	500.72	130502.7
Segment 4	33037.78	Max WS	144.14	196.87	502.84	98994.1
Segment 4	32534.94	Max WS	142	177.68	502.67	89314.4
Segment 4	32032.27	Max WS	139.94	188.17	500.95	94263.8
Segment 4	31531.32	Max WS	138.01	198.97	503.14	100109.8
Segment 4	31028.18	Max WS	136.29	139.59	501.38	69987.6
Segment 4	30526.8	Max WS	134.68	247.06	499.96	123520.1
Segment 4	30026.84	Max WS	133	152.59	500.06	76304.2
Segment 4	29526.78	Max WS	131.02	275.04	483.95	133105.6
Segment 4	29042.83	Max WS	128.88	462.2	1017.09	470099.0
Segment 4	28025.74	Max WS	124.32	515.55	500.34	257950.3
Segment 4	27525.4	Max WS	122.11	219.85	500.54	110043.7
Segment 4	27024.86	Max WS	119.93	279.65	572.59	160124.8
Segment 4	26452.27	Max WS	117.23	249.89	422.03	105461.1
Segment 4	26030.24	Max WS	115.12	329.39	498.12	164075.7
Segment 4	25532.12	Max WS	112.56	367.8	501.08	184297.2
Segment 4	25031.04	Max WS	109.91	349.72	499.83	174800.5

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 4	24531.21	Max WS	107.2	409.48	500.33	204875.1
Segment 4	24030.88	Max WS	104.47	431.4	501.88	216511.0
Segment 4	23529	Max WS	101.68	380.92	502.69	191484.7
Segment 4	23026.31	Max WS	98.95	428.28	507.24	217240.7
Segment 4	22519.07	Max WS	96.71	386.68	782.12	302430.2
Segment 4	21736.95	Max WS	93.61	328.53	757	248697.2
Segment 4	20979.95	Max WS	90.42	208.69	504.17	105215.2
Segment 4	20475.78	Max WS	88.37	252.87	501.23	126746.0
Segment 4	19974.55	Max WS	86.42	319.93	498.87	159603.5
Segment 4	19475.68	Max WS	84.44	326.24	500.43	163260.3
Segment 4	18975.25	Max WS	82.48	337.91	499.93	168931.3
Segment 4	18475.32	Max WS	80.65	384.51	498.22	191570.6
Segment 4	17977.1	Max WS	78.8	357.26	497.76	177829.7
Segment 4	17479.34	Max WS	76.77	670.84	497.96	334051.5
Segment 4	16981.38	Max WS	74.66	343.33	500.82	171946.5
Segment 4	16480.56	Max WS	72.61	755.31	500.51	378040.2
Segment 4	15980.05	Max WS	70.49	805.41	499.55	402342.6
Segment 4	15480.5	Max WS	68.42	481.17	500.17	240666.8
Segment 4	14980.33	Max WS	66.4	298.72	527.16	157473.2
Segment 4	14453.17	Max WS	64.15	323.94	219.86	71221.4
Segment 4	14233.31	Max WS	63.2	484.56	119.56	57934.0
Segment 4	14113.75				119.56	0.0
Segment 4	13994.19	Max WS	62.13	468.94	540.13	253288.6
Segment 4	13454.06	Max WS	59.33	254.07	472.7	120098.9
Segment 4	12981.36	Max WS	56.77	416.15	500.88	208441.2
Segment 4	12480.48	Max WS	53.75	361.9	495.64	179372.1
Segment 4	11984.84	Max WS	50.36	343.01	737.35	252918.4
Segment 4	11247.49	Max WS	46	270.99	763.97	207028.2
Segment 4	10483.52	Max WS	42.46	187.66	789.2	148101.3
Segment 4	9694.32	Max WS	39.74	150.78	687.96	103730.6
Segment 4	9006.36	Max WS	37.46	179.08	51.18	9165.3
Segment 4	8955.18	Max WS	37.25	172.28	90.56	15601.7
Segment 4	8864.62	Max WS	36.92	148.22	64.635	9580.2

**Table C-2: RGCP Maximum Surface Area Calculations**

Surface areas were used to estimate Precipitation (Pc) on the channel

Segment	HEC RAS River Sta	HEC RAS Profile	HEC RAS SA Chan (acres)	HEC RAS Top Width (ft)	Distance Between Cross Sections (ft)	Average Maximum Area (sq. ft.)
Segment 4	8799.985				64.635	0.0
Segment 4	8735.35	Max WS	36.49	147.25	464.12	68341.7
Segment 4	8271.23	Max WS	34.89	153.49	764.95	117412.2
Segment 4	7506.28	Max WS	32.1	164.81	500.03	82409.9
Segment 4	7006.25	Max WS	30.18	307.27	497.41	152839.2
Segment 4	6508.84	Max WS	28.06	212.13	500.16	106098.9
Segment 4	6008.68	Max WS	25.73	229.5	495.47	113710.4
Segment 4	5513.21	Max WS	23.47	197.41	495.75	97866.0
Segment 4	5017.46	Max WS	21.32	198.05	500.29	99082.4
Segment 4	4517.17	Max WS	19.23	183.61	257.92	47356.7
Segment 4	4259.25	Max WS	18.14	185.72	759.14	140987.5
Segment 4	3500.11	Max WS	15.19	153.09	495.59	75869.9
Segment 4	3004.52	Max WS	13.06	220.51	498.38	109897.8
Segment 4	2506.14	Max WS	10.58	212.61	577.85	122856.7
Segment 4	1928.29	Max WS	8.16	153.65	90.13	13848.5
Segment 4	1838.16	Max WS	7.82	174.34	53.54	9334.2
Segment 4	1784.62	Max WS	7.62	143.39	51.08	7324.4
Segment 4	1733.54	Max WS	7.45	139.08	179.58	24976.0
Segment 4	1553.96	Max WS	6.92	119.31	133.19	15890.9
Segment 4	1420.77	Max WS	6.55	127.15	180.85	22995.1
Segment 4	1239.92	Max WS	5.97	150.45	117.81	17724.5
Segment 4	1122.11	Max WS	5.58	138.86	17.41	2417.6
Segment 4	1104.7				17.36	0.0
Segment 4	1087.34	Max WS	5.47	136.13	124.17	16903.3
Segment 4	963.17	Max WS	5.04	168.06	117.74	19787.4
Segment 4	845.43	Max WS	4.53	206.72	142.85	29530.0
Segment 4	702.58	Max WS	3.83	224.16	284.31	63730.9
Segment 4	418.27	Max WS	2.4	211.19	417.813	88237.9
Segment 4	0.457	Max WS		337.44	0.457	154.2

**Table C-3: Average Historical Daily Precipitation along the RGCP (inches)**

Rainfall depths were used to estimate Precipitation (Pc) on the channel

Location	Period of Record	Location	Period of Record
Caballo	11/01/38 - 12/31/05	Las Cruces	04/01/59 - 12/31/05
Hatch	02/01/31 - 02/29/00	El Paso	07/01/47 - 08/31/12

	Segment 1			Segment 2 & 3	Segment 4
	Caballo Dam	Hatch	Average	Las Cruces	El Paso
1/1	0.006	0.013	0.010	0.021	0.006
1/2	0.007	0.023	0.015	0.018	0.016
1/3	0.010	0.016	0.013	0.008	0.010
1/4	0.016	0.008	0.012	0.019	0.011
1/5	0.011	0.018	0.015	0.007	0.006
1/6	0.019	0.015	0.017	0.024	0.016
1/7	0.010	0.017	0.014	0.028	0.010
1/8	0.029	0.016	0.023	0.018	0.015
1/9	0.016	0.012	0.014	0.017	0.008
1/10	0.010	0.008	0.009	0.013	0.011
1/11	0.013	0.017	0.015	0.030	0.016
1/12	0.023	0.024	0.024	0.010	0.016
1/13	0.007	0.015	0.011	0.032	0.014
1/14	0.023	0.015	0.019	0.004	0.010
1/15	0.011	0.009	0.010	0.016	0.008
1/16	0.006	0.001	0.004	0.003	0.006
1/17	0.011	0.030	0.021	0.006	0.026
1/18	0.027	0.020	0.024	0.024	0.030
1/19	0.009	0.006	0.008	0.017	0.017
1/20	0.008	0.014	0.011	0.020	0.014
1/21	0.015	0.021	0.018	0.015	0.014
1/22	0.011	0.010	0.011	0.018	0.009
1/23	0.003	0.005	0.004	0.002	0.012
1/24	0.006	0.008	0.007	0.019	0.014
1/25	0.020	0.016	0.018	0.017	0.016
1/26	0.008	0.016	0.012	0.007	0.017
1/27	0.015	0.013	0.014	0.014	0.006
1/28	0.027	0.021	0.024	0.009	0.010
1/29	0.011	0.025	0.018	0.005	0.003
1/30	0.016	0.018	0.017	0.010	0.010
1/31	0.014	0.035	0.025	0.017	0.019
2/1	0.013	0.009	0.011	0.009	0.006
2/2	0.017	0.011	0.014	0.004	0.024
2/3	0.011	0.008	0.010	0.015	0.023
2/4	0.014	0.008	0.011	0.017	0.028
2/5	0.024	0.003	0.014	0.023	0.035
2/6	0.006	0.007	0.007	0.015	0.006
2/7	0.006	0.003	0.005	0.016	0.009
2/8	0.003	0.030	0.017	0.013	0.023
2/9	0.019	0.020	0.020	0.021	0.009
2/10	0.015	0.009	0.012	0.005	0.024
2/11	0.007	0.013	0.010	0.008	0.019
2/12	0.022	0.016	0.019	0.046	0.021
2/13	0.008	0.014	0.011	0.012	0.018
2/14	0.016	0.016	0.016	0.023	0.017
2/15	0.004	0.009	0.007	0.009	0.017
2/16	0.001	0.012	0.007	0.015	0.018
2/17	0.023	0.028	0.026	0.019	0.007
2/18	0.012	0.003	0.008	0.005	0.010
2/19	0.010	0.007	0.009	0.009	0.005
2/20	0.003	0.015	0.009	0.012	0.032
2/21	0.032	0.019	0.026	0.033	0.013

**Table C-3: Average Historical Daily Precipitation along the RGCP (inches)**

Rainfall depths were used to estimate Precipitation (Pc) on the channel

Location	Period of Record	Location	Period of Record
Caballo	11/01/38 - 12/31/05	Las Cruces	04/01/59 - 12/31/05
Hatch	02/01/31 - 02/29/00	El Paso	07/01/47 - 08/31/12

Segment 1				Segment 2 & 3	Segment 4
	Caballo Dam	Hatch	Average	Las Cruces	El Paso
2/22	0.010	0.013	0.012	0.013	0.010
2/23	0.049	0.017	0.033	0.002	0.009
2/24	0.011	0.010	0.011	0.039	0.011
2/25	0.030	0.020	0.025	0.008	0.011
2/26	0.007	0.024	0.016	0.006	0.005
2/27	0.014	0.000	0.007	0.001	0.006
2/28	0.017	0.020	0.019	0.003	0.017
3/1	0.017	0.014	0.016	0.024	0.018
3/2	0.005	0.011	0.008	0.016	0.011
3/3	0.006	0.010	0.008	0.018	0.007
3/4	0.016	0.017	0.017	0.012	0.002
3/5	0.005	0.001	0.003	0.003	0.010
3/6	0.010	0.009	0.010	0.003	0.014
3/7	0.006	0.012	0.009	0.009	0.005
3/8	0.010	0.009	0.010	0.006	0.008
3/9	0.002	0.009	0.006	0.002	0.005
3/10	0.009	0.011	0.010	0.013	0.023
3/11	0.015	0.007	0.011	0.017	0.017
3/12	0.014	0.010	0.012	0.016	0.022
3/13	0.004	0.007	0.006	0.006	0.002
3/14	0.005	0.010	0.008	0.006	0.012
3/15	0.007	0.005	0.006	0.013	0.013
3/16	0.007	0.000	0.004	0.000	0.002
3/17	0.008	0.003	0.006	0.001	0.010
3/18	0.007	0.014	0.011	0.013	0.008
3/19	0.009	0.005	0.007	0.004	0.010
3/20	0.016	0.006	0.011	0.012	0.014
3/21	0.007	0.005	0.006	0.000	0.002
3/22	0.031	0.006	0.019	0.005	0.006
3/23	0.006	0.003	0.005	0.001	0.002
3/24	0.003	0.001	0.002	0.002	0.006
3/25	0.003	0.011	0.007	0.000	0.003
3/26	0.014	0.026	0.020	0.001	0.011
3/27	0.018	0.007	0.013	0.022	0.010
3/28	0.000	0.002	0.001	0.010	0.004
3/29	0.004	0.011	0.008	0.004	0.003
3/30	0.004	0.001	0.003	0.000	0.005
3/31	0.001	0.000	0.001	0.002	0.001
4/1	0.001	0.000	0.001	0.002	0.004
4/2	0.010	0.003	0.007	0.011	0.004
4/3	0.009	0.002	0.006	0.009	0.001
4/4	0.010	0.005	0.008	0.011	0.006
4/5	0.015	0.007	0.011	0.016	0.017
4/6	0.010	0.003	0.007	0.018	0.011
4/7	0.007	0.017	0.012	0.003	0.005
4/8	0.003	0.008	0.006	0.001	0.000
4/9	0.001	0.000	0.001	0.000	0.000
4/10	0.000	0.003	0.002	0.000	0.008
4/11	0.013	0.010	0.012	0.014	0.019
4/12	0.016	0.015	0.016	0.016	0.006
4/13	0.001	0.001	0.001	0.003	0.004
4/14	0.002	0.004	0.003	0.002	0.012

**Table C-3: Average Historical Daily Precipitation along the RGCP (inches)**

Rainfall depths were used to estimate Precipitation (Pc) on the channel

Location	Period of Record	Location	Period of Record
Caballo	11/01/38 - 12/31/05	Las Cruces	04/01/59 - 12/31/05
Hatch	02/01/31 - 02/29/00	El Paso	07/01/47 - 08/31/12

Segment 1				Segment 2 & 3	Segment 4
	Caballo Dam	Hatch	Average	Las Cruces	El Paso
4/15	0.007	0.011	0.009	0.020	0.004
4/16	0.004	0.003	0.004	0.005	0.001
4/17	0.014	0.033	0.024	0.003	0.003
4/18	0.002	0.004	0.003	0.003	0.001
4/19	0.003	0.002	0.003	0.003	0.004
4/20	0.005	0.011	0.008	0.001	0.004
4/21	0.000	0.002	0.001	0.001	0.011
4/22	0.002	0.004	0.003	0.015	0.009
4/23	0.020	0.026	0.023	0.011	0.020
4/24	0.016	0.002	0.009	0.010	0.023
4/25	0.003	0.000	0.002	0.006	0.002
4/26	0.014	0.020	0.017	0.005	0.004
4/27	0.010	0.016	0.013	0.011	0.001
4/28	0.005	0.009	0.007	0.001	0.007
4/29	0.010	0.011	0.011	0.002	0.004
4/30	0.001	0.025	0.013	0.006	0.003
5/1	0.000	0.008	0.004	0.001	0.011
5/2	0.009	0.013	0.011	0.026	0.009
5/3	0.012	0.033	0.023	0.020	0.003
5/4	0.006	0.019	0.013	0.004	0.008
5/5	0.008	0.009	0.009	0.007	0.005
5/6	0.009	0.005	0.007	0.006	0.016
5/7	0.017	0.012	0.015	0.017	0.002
5/8	0.005	0.001	0.003	0.000	0.009
5/9	0.009	0.007	0.008	0.000	0.011
5/10	0.004	0.002	0.003	0.000	0.008
5/11	0.019	0.000	0.010	0.009	0.003
5/12	0.001	0.006	0.004	0.000	0.002
5/13	0.008	0.004	0.006	0.002	0.004
5/14	0.016	0.009	0.013	0.015	0.014
5/15	0.006	0.004	0.005	0.017	0.015
5/16	0.016	0.013	0.015	0.026	0.013
5/17	0.015	0.017	0.016	0.006	0.028
5/18	0.023	0.024	0.024	0.008	0.018
5/19	0.008	0.005	0.007	0.000	0.010
5/20	0.014	0.006	0.010	0.006	0.022
5/21	0.005	0.004	0.005	0.023	0.008
5/22	0.007	0.020	0.014	0.003	0.028
5/23	0.016	0.014	0.015	0.019	0.020
5/24	0.013	0.016	0.015	0.004	0.007
5/25	0.015	0.022	0.019	0.024	0.002
5/26	0.008	0.001	0.005	0.003	0.010
5/27	0.038	0.015	0.027	0.013	0.024
5/28	0.016	0.016	0.016	0.015	0.003
5/29	0.002	0.012	0.007	0.007	0.007
5/30	0.008	0.011	0.010	0.000	0.009
5/31	0.010	0.004	0.007	0.017	0.009
6/1	0.005	0.018	0.012	0.009	0.022
6/2	0.018	0.006	0.012	0.006	0.023
6/3	0.024	0.019	0.022	0.015	0.011
6/4	0.015	0.022	0.019	0.006	0.010
6/5	0.001	0.000	0.001	0.004	0.008



**Table C-3: Average Historical Daily Precipitation along the RGCP (inches)**

Rainfall depths were used to estimate Precipitation (Pc) on the channel

Location	Period of Record	Location	Period of Record
Caballo	11/01/38 - 12/31/05	Las Cruces	04/01/59 - 12/31/05
Hatch	02/01/31 - 02/29/00	El Paso	07/01/47 - 08/31/12

Segment 1				Segment 2 & 3	Segment 4
	Caballo Dam	Hatch	Average	Las Cruces	El Paso
6/6	0.009	0.006	0.008	0.016	0.006
6/7	0.021	0.044	0.033	0.037	0.014
6/8	0.010	0.000	0.005	0.017	0.017
6/9	0.015	0.001	0.008	0.005	0.011
6/10	0.006	0.007	0.007	0.051	0.031
6/11	0.035	0.005	0.020	0.010	0.012
6/12	0.008	0.020	0.014	0.014	0.017
6/13	0.004	0.011	0.008	0.003	0.021
6/14	0.005	0.013	0.009	0.028	0.018
6/15	0.006	0.004	0.005	0.047	0.020
6/16	0.023	0.005	0.014	0.027	0.029
6/17	0.018	0.024	0.021	0.037	0.032
6/18	0.049	0.040	0.045	0.067	0.020
6/19	0.009	0.005	0.007	0.020	0.016
6/20	0.020	0.059	0.040	0.022	0.032
6/21	0.015	0.015	0.015	0.010	0.014
6/22	0.026	0.023	0.025	0.006	0.009
6/23	0.012	0.046	0.029	0.022	0.020
6/24	0.035	0.019	0.027	0.026	0.015
6/25	0.018	0.016	0.017	0.015	0.028
6/26	0.048	0.008	0.028	0.013	0.025
6/27	0.035	0.034	0.035	0.055	0.049
6/28	0.055	0.010	0.033	0.039	0.077
6/29	0.099	0.053	0.076	0.070	0.069
6/30	0.029	0.027	0.028	0.042	0.033
7/1	0.052	0.047	0.050	0.022	0.070
7/2	0.062	0.058	0.060	0.072	0.036
7/3	0.012	0.064	0.038	0.018	0.027
7/4	0.038	0.047	0.043	0.031	0.081
7/5	0.103	0.062	0.083	0.073	0.052
7/6	0.051	0.040	0.046	0.019	0.069
7/7	0.069	0.070	0.070	0.027	0.041
7/8	0.074	0.041	0.058	0.032	0.066
7/9	0.060	0.043	0.052	0.092	0.048
7/10	0.033	0.049	0.041	0.071	0.044
7/11	0.035	0.053	0.044	0.044	0.039
7/12	0.066	0.028	0.047	0.026	0.044
7/13	0.071	0.048	0.060	0.031	0.051
7/14	0.022	0.056	0.039	0.024	0.061
7/15	0.104	0.140	0.122	0.051	0.061
7/16	0.029	0.031	0.030	0.029	0.035
7/17	0.026	0.042	0.034	0.096	0.050
7/18	0.056	0.060	0.058	0.028	0.040
7/19	0.047	0.065	0.056	0.040	0.033
7/20	0.056	0.068	0.062	0.038	0.053
7/21	0.056	0.092	0.074	0.074	0.045
7/22	0.078	0.061	0.070	0.031	0.052
7/23	0.053	0.060	0.057	0.070	0.055
7/24	0.052	0.084	0.068	0.023	0.057
7/25	0.060	0.050	0.055	0.030	0.025
7/26	0.033	0.083	0.058	0.070	0.084
7/27	0.063	0.039	0.051	0.029	0.058

**Table C-3: Average Historical Daily Precipitation along the RGCP (inches)**

Rainfall depths were used to estimate Precipitation (Pc) on the channel

Location	Period of Record	Location	Period of Record
Caballo	11/01/38 - 12/31/05	Las Cruces	04/01/59 - 12/31/05
Hatch	02/01/31 - 02/29/00	El Paso	07/01/47 - 08/31/12

Segment 1				Segment 2 & 3	Segment 4
	Caballo Dam	Hatch	Average	Las Cruces	El Paso
7/28	0.065	0.041	0.053	0.048	0.063
7/29	0.033	0.102	0.068	0.102	0.059
7/30	0.103	0.052	0.078	0.043	0.052
7/31	0.045	0.075	0.060	0.018	0.039
8/1	0.074	0.054	0.064	0.102	0.075
8/2	0.103	0.052	0.078	0.098	0.060
8/3	0.089	0.068	0.079	0.071	0.032
8/4	0.049	0.072	0.061	0.028	0.058
8/5	0.034	0.083	0.059	0.062	0.042
8/6	0.057	0.039	0.048	0.055	0.052
8/7	0.073	0.048	0.061	0.070	0.056
8/8	0.029	0.071	0.050	0.021	0.047
8/9	0.072	0.067	0.070	0.075	0.036
8/10	0.055	0.075	0.065	0.053	0.063
8/11	0.095	0.061	0.078	0.075	0.059
8/12	0.081	0.072	0.077	0.097	0.098
8/13	0.078	0.104	0.091	0.064	0.071
8/14	0.089	0.045	0.067	0.158	0.068
8/15	0.067	0.067	0.067	0.100	0.039
8/16	0.083	0.085	0.084	0.038	0.062
8/17	0.033	0.026	0.030	0.066	0.057
8/18	0.059	0.090	0.075	0.048	0.050
8/19	0.048	0.058	0.053	0.050	0.091
8/20	0.041	0.083	0.062	0.122	0.035
8/21	0.108	0.102	0.105	0.026	0.027
8/22	0.047	0.055	0.051	0.104	0.032
8/23	0.135	0.132	0.134	0.073	0.070
8/24	0.094	0.084	0.089	0.054	0.042
8/25	0.054	0.037	0.046	0.086	0.018
8/26	0.053	0.045	0.049	0.041	0.045
8/27	0.034	0.048	0.041	0.086	0.017
8/28	0.020	0.018	0.019	0.042	0.022
8/29	0.036	0.082	0.059	0.018	0.041
8/30	0.068	0.062	0.065	0.072	0.024
8/31	0.029	0.062	0.046	0.056	0.054
9/1	0.053	0.040	0.047	0.013	0.041
9/2	0.033	0.067	0.050	0.071	0.062
9/3	0.032	0.037	0.035	0.041	0.039
9/4	0.033	0.045	0.039	0.071	0.045
9/5	0.048	0.097	0.073	0.060	0.097
9/6	0.035	0.047	0.041	0.078	0.066
9/7	0.038	0.067	0.053	0.083	0.054
9/8	0.014	0.035	0.025	0.030	0.046
9/9	0.040	0.037	0.039	0.031	0.014
9/10	0.061	0.031	0.046	0.036	0.066
9/11	0.045	0.038	0.042	0.047	0.089
9/12	0.100	0.095	0.098	0.086	0.054
9/13	0.084	0.076	0.080	0.044	0.035
9/14	0.077	0.047	0.062	0.049	0.040
9/15	0.077	0.057	0.067	0.031	0.034
9/16	0.047	0.004	0.026	0.054	0.036
9/17	0.027	0.035	0.031	0.023	0.029

**Table C-3: Average Historical Daily Precipitation along the RGCP (inches)**

Rainfall depths were used to estimate Precipitation (Pc) on the channel

Location	Period of Record	Location	Period of Record
Caballo	11/01/38 - 12/31/05	Las Cruces	04/01/59 - 12/31/05
Hatch	02/01/31 - 02/29/00	El Paso	07/01/47 - 08/31/12

Segment 1				Segment 2 & 3	Segment 4
	Caballo Dam	Hatch	Average	Las Cruces	El Paso
9/18	0.035	0.020	0.028	0.045	0.037
9/19	0.064	0.061	0.063	0.044	0.040
9/20	0.017	0.014	0.016	0.048	0.062
9/21	0.061	0.037	0.049	0.007	0.034
9/22	0.040	0.064	0.052	0.054	0.071
9/23	0.100	0.029	0.065	0.056	0.072
9/24	0.055	0.088	0.072	0.020	0.043
9/25	0.068	0.104	0.086	0.054	0.059
9/26	0.053	0.034	0.044	0.018	0.010
9/27	0.031	0.020	0.026	0.005	0.046
9/28	0.022	0.022	0.022	0.003	0.017
9/29	0.062	0.058	0.060	0.023	0.003
9/30	0.033	0.034	0.034	0.024	0.055
10/1	0.017	0.024	0.021	0.038	0.022
10/2	0.025	0.042	0.034	0.010	0.022
10/3	0.026	0.025	0.026	0.028	0.034
10/4	0.023	0.042	0.033	0.029	0.037
10/5	0.043	0.031	0.037	0.026	0.021
10/6	0.023	0.034	0.029	0.006	0.004
10/7	0.034	0.057	0.046	0.008	0.009
10/8	0.019	0.016	0.018	0.016	0.010
10/9	0.026	0.034	0.030	0.018	0.012
10/10	0.027	0.024	0.026	0.012	0.015
10/11	0.047	0.056	0.052	0.040	0.023
10/12	0.049	0.043	0.046	0.009	0.010
10/13	0.023	0.026	0.025	0.025	0.029
10/14	0.024	0.046	0.035	0.017	0.017
10/15	0.026	0.023	0.025	0.031	0.017
10/16	0.017	0.056	0.037	0.008	0.021
10/17	0.017	0.012	0.015	0.074	0.026
10/18	0.013	0.021	0.017	0.021	0.022
10/19	0.049	0.043	0.046	0.047	0.014
10/20	0.013	0.028	0.021	0.056	0.019
10/21	0.023	0.031	0.027	0.042	0.026
10/22	0.025	0.050	0.038	0.039	0.036
10/23	0.060	0.051	0.056	0.039	0.034
10/24	0.036	0.011	0.024	0.041	0.021
10/25	0.020	0.024	0.022	0.023	0.027
10/26	0.035	0.010	0.023	0.041	0.021
10/27	0.049	0.040	0.045	0.032	0.025
10/28	0.042	0.024	0.033	0.047	0.029
10/29	0.018	0.008	0.013	0.021	0.022
10/30	0.026	0.023	0.025	0.017	0.016
10/31	0.050	0.029	0.040	0.010	0.015
11/1	0.019	0.025	0.022	0.027	0.004
11/2	0.015	0.028	0.022	0.008	0.013
11/3	0.035	0.020	0.028	0.028	0.019
11/4	0.030	0.009	0.020	0.008	0.009
11/5	0.014	0.000	0.007	0.035	0.001
11/6	0.007	0.000	0.004	0.006	0.014
11/7	0.018	0.004	0.011	0.022	0.014
11/8	0.018	0.019	0.019	0.020	0.017

**Table C-3: Average Historical Daily Precipitation along the RGCP (inches)**

Rainfall depths were used to estimate Precipitation (Pc) on the channel

Location	Period of Record	Location	Period of Record
Caballo	11/01/38 - 12/31/05	Las Cruces	04/01/59 - 12/31/05
Hatch	02/01/31 - 02/29/00	El Paso	07/01/47 - 08/31/12

Segment 1				Segment 2 & 3	Segment 4
	Caballo Dam	Hatch	Average	Las Cruces	El Paso
11/9	0.006	0.002	0.004	0.012	0.004
11/10	0.004	0.012	0.008	0.003	0.007
11/11	0.010	0.008	0.009	0.018	0.015
11/12	0.038	0.029	0.034	0.011	0.016
11/13	0.016	0.008	0.012	0.016	0.033
11/14	0.036	0.008	0.022	0.073	0.031
11/15	0.015	0.010	0.013	0.014	0.027
11/16	0.025	0.013	0.019	0.023	0.011
11/17	0.010	0.019	0.015	0.003	0.005
11/18	0.007	0.013	0.010	0.003	0.009
11/19	0.008	0.006	0.007	0.011	0.001
11/20	0.000	0.005	0.003	0.001	0.005
11/21	0.001	0.002	0.002	0.002	0.009
11/22	0.001	0.018	0.010	0.005	0.012
11/23	0.018	0.000	0.009	0.005	0.006
11/24	0.024	0.029	0.027	0.015	0.019
11/25	0.019	0.024	0.022	0.001	0.008
11/26	0.008	0.016	0.012	0.010	0.022
11/27	0.009	0.011	0.010	0.033	0.016
11/28	0.007	0.033	0.020	0.021	0.013
11/29	0.020	0.016	0.018	0.016	0.013
11/30	0.014	0.005	0.010	0.007	0.017
12/1	0.030	0.004	0.017	0.020	0.026
12/2	0.007	0.033	0.020	0.003	0.019
12/3	0.008	0.005	0.007	0.031	0.024
12/4	0.015	0.026	0.021	0.013	0.018
12/5	0.009	0.034	0.022	0.034	0.014
12/6	0.025	0.015	0.020	0.013	0.002
12/7	0.026	0.003	0.015	0.014	0.025
12/8	0.008	0.021	0.015	0.027	0.025
12/9	0.059	0.047	0.053	0.025	0.030
12/10	0.017	0.008	0.013	0.023	0.019
12/11	0.015	0.037	0.026	0.026	0.018
12/12	0.017	0.015	0.016	0.010	0.004
12/13	0.023	0.024	0.024	0.024	0.040
12/14	0.020	0.023	0.022	0.027	0.028
12/15	0.024	0.049	0.037	0.047	0.004
12/16	0.021	0.022	0.022	0.007	0.008
12/17	0.020	0.010	0.015	0.023	0.012
12/18	0.027	0.018	0.023	0.033	0.027
12/19	0.022	0.025	0.024	0.016	0.009
12/20	0.025	0.054	0.040	0.028	0.009
12/21	0.018	0.016	0.017	0.003	0.027
12/22	0.010	0.019	0.015	0.033	0.020
12/23	0.032	0.014	0.023	0.015	0.031
12/24	0.007	0.005	0.006	0.018	0.011
12/25	0.028	0.015	0.022	0.018	0.029
12/26	0.033	0.040	0.037	0.042	0.028
12/27	0.016	0.029	0.023	0.029	0.004
12/28	0.019	0.025	0.022	0.015	0.012
12/29	0.017	0.027	0.022	0.036	0.025
12/30	0.015	0.009	0.012	0.030	0.012

**Table C-3: Average Historical Daily Precipitation along the RGCP (inches)**

Rainfall depths were used to estimate Precipitation (Pc) on the channel

Location	Period of Record		Location	Period of Record	
Caballo	11/01/38 - 12/31/05		Las Cruces	04/01/59 - 12/31/05	
Hatch	02/01/31 - 02/29/00		El Paso	07/01/47 - 08/31/12	

Segment 1				Segment 2 & 3	Segment 4
	Caballo Dam	Hatch	Average	Las Cruces	El Paso
12/31	0.007	0.008	0.008	0.004	0.017
Summation Total (inches)	9.497	9.635	9.566	9.133	8.492

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
1/1/2010	0.5	0.7	0.5	0.2
1/2/2010	0.9	0.6	0.4	0.4
1/3/2010	0.7	0.3	0.2	0.3
1/4/2010	0.7	0.6	0.4	0.3
1/5/2010	0.8	0.2	0.2	0.2
1/6/2010	1.0	0.8	0.5	0.4
1/7/2010	0.8	1.0	0.6	0.3
1/8/2010	1.3	0.6	0.4	0.4
1/9/2010	0.8	0.6	0.4	0.2
1/10/2010	0.5	0.4	0.3	0.3
1/11/2010	0.9	1.0	0.7	0.4
1/12/2010	1.3	0.3	0.2	0.4
1/13/2010	0.6	1.1	0.7	0.4
1/14/2010	1.1	0.1	0.1	0.3
1/15/2010	0.6	0.5	0.3	0.2
1/16/2010	0.2	0.1	0.1	0.2
1/17/2010	1.2	0.2	0.1	0.7
1/18/2010	1.3	0.8	0.5	0.8
1/19/2010	0.4	0.6	0.4	0.5
1/20/2010	0.6	0.7	0.4	0.4
1/21/2010	1.0	0.5	0.3	0.4
1/22/2010	0.6	0.6	0.4	0.2
1/23/2010	0.2	0.1	0.0	0.3
1/24/2010	0.4	0.6	0.4	0.4
1/25/2010	1.0	0.6	0.4	0.4
1/26/2010	0.7	0.2	0.2	0.5
1/27/2010	0.8	0.5	0.3	0.2
1/28/2010	1.4	0.3	0.2	0.3
1/29/2010	1.0	0.2	0.1	0.1
1/30/2010	1.0	0.3	0.2	0.3
1/31/2010	1.4	0.6	0.4	0.5
2/1/2010	0.6	0.3	0.2	0.2
2/2/2010	0.8	0.1	0.1	0.7
2/3/2010	0.5	0.5	0.3	0.6
2/4/2010	0.6	0.6	0.4	0.8
2/5/2010	0.8	0.8	0.5	1.0
2/6/2010	0.4	0.5	0.3	0.2
2/7/2010	0.3	0.5	0.3	0.2
2/8/2010	0.9	0.4	0.3	0.6
2/9/2010	1.1	0.7	0.5	0.2
2/10/2010	0.7	0.2	0.1	0.7
2/11/2010	0.6	0.3	0.2	0.5

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
2/12/2010	1.1	1.6	1.0	0.6
2/13/2010	0.6	0.4	0.3	0.5
2/14/2010	0.9	0.8	0.5	0.5
2/15/2010	0.4	0.3	0.2	0.5
2/16/2010	0.4	0.5	0.3	0.5
2/17/2010	1.4	0.6	0.4	0.2
2/18/2010	0.4	0.2	0.1	0.3
2/19/2010	0.5	0.3	0.2	0.1
2/20/2010	0.5	0.4	0.3	0.9
2/21/2010	1.4	1.1	0.7	0.4
2/22/2010	0.7	0.4	0.3	0.3
2/23/2010	1.9	0.1	0.0	0.2
2/24/2010	0.6	1.3	0.9	0.3
2/25/2010	1.4	0.3	0.2	0.3
2/26/2010	0.9	0.2	0.1	0.1
2/27/2010	0.4	0.0	0.0	0.2
2/28/2010	1.0	0.1	0.1	0.5
3/1/2010	0.9	0.8	0.5	0.5
3/2/2010	0.5	0.5	0.3	0.3
3/3/2010	0.5	0.6	0.4	0.2
3/4/2010	0.9	0.4	0.3	0.1
3/5/2010	0.2	0.1	0.1	0.3
3/6/2010	0.5	0.1	0.1	0.4
3/7/2010	0.5	0.3	0.2	0.1
3/8/2010	0.5	0.2	0.1	0.2
3/9/2010	0.3	0.1	0.0	0.1
3/10/2010	0.6	0.4	0.3	0.6
3/11/2010	0.6	0.6	0.4	0.5
3/12/2010	0.7	0.5	0.3	0.6
3/13/2010	0.3	0.2	0.1	0.1
3/14/2010	0.4	0.2	0.1	0.3
3/15/2010	0.3	0.4	0.3	0.4
3/16/2010	0.2	0.0	0.0	0.1
3/17/2010	0.3	0.0	0.0	0.3
3/18/2010	0.6	0.4	0.3	0.2
3/19/2010	0.4	0.1	0.1	0.3
3/20/2010	0.6	0.4	0.3	0.4
3/21/2010	0.3	0.0	0.0	0.1
3/22/2010	1.0	0.2	0.1	0.2
3/23/2010	0.3	0.0	0.0	0.1
3/24/2010	0.1	0.1	0.0	0.2
3/25/2010	0.4	0.0	0.0	0.1

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
3/26/2010	1.1	0.0	0.0	0.3
3/27/2010	0.7	0.8	0.5	0.3
3/28/2010	0.1	0.3	0.2	0.1
3/29/2010	0.4	0.1	0.1	0.1
3/30/2010	0.1	0.0	0.0	0.1
3/31/2010	0.0	0.1	0.0	0.0
4/1/2010	0.0	0.1	0.0	0.1
4/2/2010	0.4	0.4	0.2	0.1
4/3/2010	0.3	0.3	0.2	0.0
4/4/2010	0.4	0.4	0.2	0.2
4/5/2010	0.6	0.5	0.3	0.5
4/6/2010	0.4	0.6	0.4	0.3
4/7/2010	0.7	0.1	0.1	0.1
4/8/2010	0.3	0.0	0.0	0.0
4/9/2010	0.0	0.0	0.0	0.0
4/10/2010	0.1	0.0	0.0	0.2
4/11/2010	0.7	0.5	0.3	0.5
4/12/2010	0.9	0.5	0.3	0.2
4/13/2010	0.1	0.1	0.1	0.1
4/14/2010	0.2	0.1	0.0	0.3
4/15/2010	0.5	0.7	0.4	0.1
4/16/2010	0.2	0.2	0.1	0.0
4/17/2010	1.3	0.1	0.1	0.1
4/18/2010	0.2	0.1	0.1	0.0
4/19/2010	0.1	0.1	0.1	0.1
4/20/2010	0.5	0.0	0.0	0.1
4/21/2010	0.1	0.0	0.0	0.3
4/22/2010	0.2	0.5	0.3	0.2
4/23/2010	1.3	0.4	0.2	0.6
4/24/2010	0.5	0.3	0.2	0.6
4/25/2010	0.1	0.2	0.1	0.1
4/26/2010	1.0	0.2	0.1	0.1
4/27/2010	0.7	0.4	0.2	0.0
4/28/2010	0.4	0.0	0.0	0.2
4/29/2010	0.6	0.1	0.0	0.1
4/30/2010	0.7	0.2	0.1	0.1
5/1/2010	0.2	0.0	0.0	0.3
5/2/2010	0.6	0.9	0.6	0.2
5/3/2010	1.3	0.7	0.4	0.1
5/4/2010	0.7	0.1	0.1	0.2
5/5/2010	0.5	0.2	0.2	0.1
5/6/2010	0.4	0.2	0.1	0.4



**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
5/7/2010	0.8	0.6	0.4	0.1
5/8/2010	0.2	0.0	0.0	0.2
5/9/2010	0.5	0.0	0.0	0.3
5/10/2010	0.2	0.0	0.0	0.2
5/11/2010	0.5	0.3	0.2	0.1
5/12/2010	0.2	0.0	0.0	0.1
5/13/2010	0.3	0.1	0.0	0.1
5/14/2010	0.7	0.5	0.3	0.4
5/15/2010	0.3	0.6	0.4	0.4
5/16/2010	0.8	0.9	0.6	0.4
5/17/2010	0.9	0.2	0.1	0.8
5/18/2010	1.3	0.3	0.2	0.5
5/19/2010	0.4	0.0	0.0	0.3
5/20/2010	0.6	0.2	0.1	0.6
5/21/2010	0.3	0.8	0.5	0.2
5/22/2010	0.8	0.1	0.1	0.8
5/23/2010	0.9	0.6	0.4	0.6
5/24/2010	0.8	0.1	0.1	0.2
5/25/2010	1.0	0.8	0.5	0.1
5/26/2010	0.3	0.1	0.1	0.3
5/27/2010	1.5	0.4	0.3	0.7
5/28/2010	0.9	0.5	0.3	0.1
5/29/2010	0.4	0.2	0.2	0.2
5/30/2010	0.5	0.0	0.0	0.2
5/31/2010	0.4	0.6	0.4	0.2
6/1/2010	0.7	0.3	0.2	0.6
6/2/2010	0.7	0.2	0.1	0.6
6/3/2010	1.2	0.5	0.3	0.3
6/4/2010	1.0	0.2	0.1	0.3
6/5/2010	0.0	0.1	0.1	0.2
6/6/2010	0.4	0.5	0.3	0.2
6/7/2010	1.8	1.3	0.8	0.4
6/8/2010	0.3	0.6	0.4	0.5
6/9/2010	0.5	0.2	0.1	0.3
6/10/2010	0.4	1.7	1.1	0.9
6/11/2010	1.1	0.3	0.2	0.3
6/12/2010	0.8	0.5	0.3	0.5
6/13/2010	0.4	0.1	0.1	0.6
6/14/2010	0.5	1.0	0.6	0.5
6/15/2010	0.3	1.6	1.0	0.6
6/16/2010	0.8	0.9	0.6	0.8
6/17/2010	1.2	1.3	0.8	0.9

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
6/18/2010	2.5	2.3	1.5	0.6
6/19/2010	0.4	0.7	0.4	0.4
6/20/2010	2.2	0.8	0.5	0.9
6/21/2010	0.9	0.3	0.2	0.4
6/22/2010	1.4	0.2	0.1	0.2
6/23/2010	1.6	0.8	0.5	0.6
6/24/2010	1.5	0.9	0.6	0.4
6/25/2010	1.0	0.5	0.3	0.8
6/26/2010	1.6	0.4	0.3	0.7
6/27/2010	2.0	1.9	1.2	1.4
6/28/2010	1.8	1.3	0.9	2.1
6/29/2010	4.3	2.4	1.5	1.9
6/30/2010	1.6	1.4	0.9	0.9
7/1/2010	2.8	0.8	0.5	1.9
7/2/2010	3.4	2.5	1.6	1.0
7/3/2010	2.2	0.6	0.4	0.7
7/4/2010	2.4	1.1	0.7	2.2
7/5/2010	4.7	2.5	1.6	1.4
7/6/2010	2.6	0.6	0.4	1.9
7/7/2010	3.9	0.9	0.6	1.1
7/8/2010	3.3	1.1	0.7	1.8
7/9/2010	2.9	3.1	2.0	1.3
7/10/2010	2.3	2.4	1.5	1.2
7/11/2010	2.5	1.5	1.0	1.1
7/12/2010	2.7	0.9	0.6	1.2
7/13/2010	3.4	1.1	0.7	1.4
7/14/2010	2.2	0.8	0.5	1.7
7/15/2010	6.9	1.7	1.1	1.7
7/16/2010	1.7	1.0	0.6	1.0
7/17/2010	1.9	3.3	2.1	1.4
7/18/2010	3.3	1.0	0.6	1.1
7/19/2010	3.2	1.4	0.9	0.9
7/20/2010	3.5	1.3	0.8	1.5
7/21/2010	4.2	2.5	1.6	1.2
7/22/2010	3.9	1.1	0.7	1.4
7/23/2010	3.2	2.4	1.5	1.5
7/24/2010	3.9	0.8	0.5	1.6
7/25/2010	3.1	1.0	0.7	0.7
7/26/2010	3.3	2.4	1.5	2.3
7/27/2010	2.9	1.0	0.6	1.6
7/28/2010	3.0	1.6	1.0	1.7
7/29/2010	3.8	3.5	2.2	1.6

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
7/30/2010	4.4	1.5	0.9	1.4
7/31/2010	3.4	0.6	0.4	1.1
8/1/2010	3.6	3.5	2.2	2.1
8/2/2010	4.4	3.3	2.1	1.7
8/3/2010	4.5	2.4	1.5	0.9
8/4/2010	3.4	1.0	0.6	1.6
8/5/2010	3.3	2.1	1.4	1.2
8/6/2010	2.7	1.9	1.2	1.4
8/7/2010	3.4	2.4	1.5	1.5
8/8/2010	2.8	0.7	0.5	1.3
8/9/2010	3.9	2.6	1.6	1.0
8/10/2010	3.7	1.8	1.2	1.7
8/11/2010	4.4	2.6	1.6	1.6
8/12/2010	4.3	3.3	2.1	2.7
8/13/2010	5.2	2.2	1.4	2.0
8/14/2010	3.8	5.4	3.4	1.9
8/15/2010	3.8	3.4	2.2	1.1
8/16/2010	4.8	1.3	0.8	1.7
8/17/2010	1.7	2.3	1.4	1.6
8/18/2010	4.2	1.6	1.0	1.4
8/19/2010	3.0	1.7	1.1	2.5
8/20/2010	3.5	4.2	2.7	1.0
8/21/2010	6.0	0.9	0.6	0.7
8/22/2010	2.9	3.6	2.3	0.9
8/23/2010	7.6	2.5	1.6	1.9
8/24/2010	5.0	1.8	1.2	1.2
8/25/2010	2.6	2.9	1.9	0.5
8/26/2010	2.8	1.4	0.9	1.2
8/27/2010	2.3	2.9	1.9	0.5
8/28/2010	1.1	1.4	0.9	0.6
8/29/2010	3.3	0.6	0.4	1.1
8/30/2010	3.7	2.5	1.6	0.7
8/31/2010	2.6	1.9	1.2	1.5
9/1/2010	2.6	0.4	0.3	1.1
9/2/2010	2.8	2.4	1.5	1.7
9/3/2010	2.0	1.4	0.9	1.1
9/4/2010	2.2	2.4	1.5	1.2
9/5/2010	4.1	2.1	1.3	2.7
9/6/2010	2.3	2.7	1.7	1.8
9/7/2010	3.0	2.8	1.8	1.5
9/8/2010	1.4	1.0	0.7	1.3
9/9/2010	2.2	1.1	0.7	0.4

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
9/10/2010	2.6	1.2	0.8	1.8
9/11/2010	2.4	1.6	1.0	2.5
9/12/2010	5.5	2.9	1.9	1.5
9/13/2010	4.5	1.5	1.0	1.0
9/14/2010	3.5	1.7	1.1	1.1
9/15/2010	3.8	1.1	0.7	0.9
9/16/2010	1.4	1.8	1.2	1.0
9/17/2010	1.8	0.8	0.5	0.8
9/18/2010	1.6	1.5	1.0	1.0
9/19/2010	3.5	1.5	1.0	1.1
9/20/2010	0.9	1.6	1.0	1.7
9/21/2010	2.8	0.2	0.2	0.9
9/22/2010	2.9	1.8	1.2	2.0
9/23/2010	3.7	1.9	1.2	2.0
9/24/2010	4.1	0.7	0.4	1.2
9/25/2010	4.9	1.8	1.2	1.6
9/26/2010	2.5	0.6	0.4	0.3
9/27/2010	1.4	0.2	0.1	1.3
9/28/2010	1.2	0.1	0.1	0.5
9/29/2010	3.4	0.8	0.5	0.1
9/30/2010	1.9	0.8	0.5	1.5
10/1/2010	1.2	1.3	0.8	0.6
10/2/2010	1.9	0.3	0.2	0.6
10/3/2010	1.4	1.0	0.6	0.9
10/4/2010	1.8	1.0	0.6	1.0
10/5/2010	2.1	0.9	0.6	0.6
10/6/2010	1.6	0.2	0.1	0.1
10/7/2010	2.6	0.3	0.2	0.2
10/8/2010	1.0	0.5	0.3	0.3
10/9/2010	1.7	0.6	0.4	0.3
10/10/2010	1.4	0.4	0.3	0.4
10/11/2010	2.9	1.4	0.9	0.6
10/12/2010	2.6	0.3	0.2	0.3
10/13/2010	1.4	0.9	0.5	0.8
10/14/2010	2.0	0.6	0.4	0.5
10/15/2010	1.4	1.1	0.7	0.5
10/16/2010	2.1	0.3	0.2	0.6
10/17/2010	0.8	2.5	1.6	0.7
10/18/2010	1.0	0.7	0.5	0.6
10/19/2010	2.6	1.6	1.0	0.4
10/20/2010	1.2	1.9	1.2	0.5
10/21/2010	1.5	1.4	0.9	0.7

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
10/22/2010	2.1	1.3	0.9	1.0
10/23/2010	3.1	1.3	0.9	0.9
10/24/2010	1.3	1.4	0.9	0.6
10/25/2010	1.2	0.8	0.5	0.7
10/26/2010	1.3	1.4	0.9	0.6
10/27/2010	2.5	1.1	0.7	0.7
10/28/2010	1.9	1.6	1.0	0.8
10/29/2010	0.7	0.7	0.5	0.6
10/30/2010	1.4	0.6	0.4	0.4
10/31/2010	2.2	0.3	0.2	0.4
11/1/2010	1.2	0.9	0.6	0.1
11/2/2010	1.2	0.3	0.2	0.4
11/3/2010	1.6	1.0	0.6	0.5
11/4/2010	1.1	0.3	0.2	0.2
11/5/2010	0.4	1.2	0.8	0.0
11/6/2010	0.2	0.2	0.1	0.4
11/7/2010	0.6	0.8	0.5	0.4
11/8/2010	1.0	0.7	0.4	0.5
11/9/2010	0.2	0.4	0.3	0.1
11/10/2010	0.5	0.1	0.1	0.2
11/11/2010	0.5	0.6	0.4	0.4
11/12/2010	1.9	0.4	0.2	0.4
11/13/2010	0.7	0.5	0.3	0.9
11/14/2010	1.2	2.5	1.6	0.9
11/15/2010	0.7	0.5	0.3	0.7
11/16/2010	1.1	0.8	0.5	0.3
11/17/2010	0.8	0.1	0.1	0.1
11/18/2010	0.6	0.1	0.1	0.2
11/19/2010	0.4	0.4	0.2	0.0
11/20/2010	0.1	0.0	0.0	0.1
11/21/2010	0.1	0.1	0.0	0.2
11/22/2010	0.5	0.2	0.1	0.3
11/23/2010	0.5	0.2	0.1	0.2
11/24/2010	1.5	0.5	0.3	0.5
11/25/2010	1.2	0.0	0.0	0.2
11/26/2010	0.7	0.3	0.2	0.6
11/27/2010	0.6	1.1	0.7	0.4
11/28/2010	1.1	0.7	0.5	0.4
11/29/2010	1.0	0.5	0.3	0.4
11/30/2010	0.5	0.2	0.2	0.5
12/1/2010	1.0	0.7	0.4	0.7
12/2/2010	1.1	0.1	0.1	0.5

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
12/3/2010	0.4	1.1	0.7	0.7
12/4/2010	1.2	0.4	0.3	0.5
12/5/2010	1.2	1.2	0.7	0.4
12/6/2010	1.1	0.4	0.3	0.1
12/7/2010	0.8	0.5	0.3	0.7
12/8/2010	0.8	0.9	0.6	0.7
12/9/2010	3.0	0.9	0.5	0.8
12/10/2010	0.7	0.8	0.5	0.5
12/11/2010	1.5	0.9	0.6	0.5
12/12/2010	0.9	0.3	0.2	0.1
12/13/2010	1.3	0.8	0.5	1.1
12/14/2010	1.2	0.9	0.6	0.8
12/15/2010	2.1	1.6	1.0	0.1
12/16/2010	1.2	0.2	0.2	0.2
12/17/2010	0.9	0.8	0.5	0.3
12/18/2010	1.3	1.1	0.7	0.7
12/19/2010	1.3	0.5	0.3	0.2
12/20/2010	2.2	1.0	0.6	0.2
12/21/2010	1.0	0.1	0.1	0.7
12/22/2010	0.8	1.1	0.7	0.6
12/23/2010	1.3	0.5	0.3	0.9
12/24/2010	0.3	0.6	0.4	0.3
12/25/2010	1.2	0.6	0.4	0.8
12/26/2010	2.1	1.4	0.9	0.8
12/27/2010	1.3	1.0	0.6	0.1
12/28/2010	1.2	0.5	0.3	0.3
12/29/2010	1.2	1.2	0.8	0.7
12/30/2010	0.7	1.0	0.7	0.3
12/31/2010	0.4	0.1	0.1	0.5
1/1/2011	0.5	0.7	0.5	0.2
1/2/2011	0.9	0.6	0.4	0.4
1/3/2011	0.7	0.3	0.2	0.3
1/4/2011	0.7	0.6	0.4	0.3
1/5/2011	0.8	0.2	0.2	0.2
1/6/2011	1.0	0.8	0.5	0.4
1/7/2011	0.8	1.0	0.6	0.3
1/8/2011	1.3	0.6	0.4	0.4
1/9/2011	0.8	0.6	0.4	0.2
1/10/2011	0.5	0.4	0.3	0.3
1/11/2011	0.9	1.0	0.7	0.4
1/12/2011	1.3	0.3	0.2	0.4
1/13/2011	0.6	1.1	0.7	0.4

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
1/14/2011	1.1	0.1	0.1	0.3
1/15/2011	0.6	0.5	0.3	0.2
1/16/2011	0.2	0.1	0.1	0.2
1/17/2011	1.2	0.2	0.1	0.7
1/18/2011	1.3	0.8	0.5	0.8
1/19/2011	0.4	0.6	0.4	0.5
1/20/2011	0.6	0.7	0.4	0.4
1/21/2011	1.0	0.5	0.3	0.4
1/22/2011	0.6	0.6	0.4	0.2
1/23/2011	0.2	0.1	0.0	0.3
1/24/2011	0.4	0.6	0.4	0.4
1/25/2011	1.0	0.6	0.4	0.4
1/26/2011	0.7	0.2	0.2	0.5
1/27/2011	0.8	0.5	0.3	0.2
1/28/2011	1.4	0.3	0.2	0.3
1/29/2011	1.0	0.2	0.1	0.1
1/30/2011	1.0	0.3	0.2	0.3
1/31/2011	1.4	0.6	0.4	0.5
2/1/2011	0.6	0.3	0.2	0.2
2/2/2011	0.8	0.1	0.1	0.7
2/3/2011	0.5	0.5	0.3	0.6
2/4/2011	0.6	0.6	0.4	0.8
2/5/2011	0.8	0.8	0.5	1.0
2/6/2011	0.4	0.5	0.3	0.2
2/7/2011	0.3	0.5	0.3	0.2
2/8/2011	0.9	0.4	0.3	0.6
2/9/2011	1.1	0.7	0.5	0.2
2/10/2011	0.7	0.2	0.1	0.7
2/11/2011	0.6	0.3	0.2	0.5
2/12/2011	1.1	1.6	1.0	0.6
2/13/2011	0.6	0.4	0.3	0.5
2/14/2011	0.9	0.8	0.5	0.5
2/15/2011	0.4	0.3	0.2	0.5
2/16/2011	0.4	0.5	0.3	0.5
2/17/2011	1.4	0.6	0.4	0.2
2/18/2011	0.4	0.2	0.1	0.3
2/19/2011	0.5	0.3	0.2	0.1
2/20/2011	0.5	0.4	0.3	0.9
2/21/2011	1.4	1.1	0.7	0.4
2/22/2011	0.7	0.4	0.3	0.3
2/23/2011	1.9	0.1	0.0	0.2
2/24/2011	0.6	1.3	0.9	0.3

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
2/25/2011	1.4	0.3	0.2	0.3
2/26/2011	0.9	0.2	0.1	0.1
2/27/2011	0.4	0.0	0.0	0.2
2/28/2011	1.0	0.1	0.1	0.5
3/1/2011	0.9	0.8	0.5	0.5
3/2/2011	0.5	0.5	0.3	0.3
3/3/2011	0.5	0.6	0.4	0.2
3/4/2011	0.9	0.4	0.3	0.1
3/5/2011	0.2	0.1	0.1	0.3
3/6/2011	0.5	0.1	0.1	0.4
3/7/2011	0.5	0.3	0.2	0.1
3/8/2011	0.5	0.2	0.1	0.2
3/9/2011	0.3	0.1	0.0	0.1
3/10/2011	0.6	0.4	0.3	0.6
3/11/2011	0.6	0.6	0.4	0.5
3/12/2011	0.7	0.5	0.3	0.6
3/13/2011	0.3	0.2	0.1	0.1
3/14/2011	0.4	0.2	0.1	0.3
3/15/2011	0.3	0.4	0.3	0.4
3/16/2011	0.2	0.0	0.0	0.1
3/17/2011	0.3	0.0	0.0	0.3
3/18/2011	0.6	0.4	0.3	0.2
3/19/2011	0.4	0.1	0.1	0.3
3/20/2011	0.6	0.4	0.3	0.4
3/21/2011	0.3	0.0	0.0	0.1
3/22/2011	1.0	0.2	0.1	0.2
3/23/2011	0.3	0.0	0.0	0.1
3/24/2011	0.1	0.1	0.0	0.2
3/25/2011	0.4	0.0	0.0	0.1
3/26/2011	1.1	0.0	0.0	0.3
3/27/2011	0.7	0.8	0.5	0.3
3/28/2011	0.1	0.3	0.2	0.1
3/29/2011	0.4	0.1	0.1	0.1
3/30/2011	0.1	0.0	0.0	0.1
3/31/2011	0.0	0.1	0.0	0.0
4/1/2011	0.0	0.1	0.0	0.1
4/2/2011	0.4	0.4	0.2	0.1
4/3/2011	0.3	0.3	0.2	0.0
4/4/2011	0.4	0.4	0.2	0.2
4/5/2011	0.6	0.5	0.3	0.5
4/6/2011	0.4	0.6	0.4	0.3
4/7/2011	0.7	0.1	0.1	0.1



**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
4/8/2011	0.3	0.0	0.0	0.0
4/9/2011	0.0	0.0	0.0	0.0
4/10/2011	0.1	0.0	0.0	0.2
4/11/2011	0.7	0.5	0.3	0.5
4/12/2011	0.9	0.5	0.3	0.2
4/13/2011	0.1	0.1	0.1	0.1
4/14/2011	0.2	0.1	0.0	0.3
4/15/2011	0.5	0.7	0.4	0.1
4/16/2011	0.2	0.2	0.1	0.0
4/17/2011	1.3	0.1	0.1	0.1
4/18/2011	0.2	0.1	0.1	0.0
4/19/2011	0.1	0.1	0.1	0.1
4/20/2011	0.5	0.0	0.0	0.1
4/21/2011	0.1	0.0	0.0	0.3
4/22/2011	0.2	0.5	0.3	0.2
4/23/2011	1.3	0.4	0.2	0.6
4/24/2011	0.5	0.3	0.2	0.6
4/25/2011	0.1	0.2	0.1	0.1
4/26/2011	1.0	0.2	0.1	0.1
4/27/2011	0.7	0.4	0.2	0.0
4/28/2011	0.4	0.0	0.0	0.2
4/29/2011	0.6	0.1	0.0	0.1
4/30/2011	0.7	0.2	0.1	0.1
5/1/2011	0.2	0.0	0.0	0.3
5/2/2011	0.6	0.9	0.6	0.2
5/3/2011	1.3	0.7	0.4	0.1
5/4/2011	0.7	0.1	0.1	0.2
5/5/2011	0.5	0.2	0.2	0.1
5/6/2011	0.4	0.2	0.1	0.4
5/7/2011	0.8	0.6	0.4	0.1
5/8/2011	0.2	0.0	0.0	0.2
5/9/2011	0.5	0.0	0.0	0.3
5/10/2011	0.2	0.0	0.0	0.2
5/11/2011	0.5	0.3	0.2	0.1
5/12/2011	0.2	0.0	0.0	0.1
5/13/2011	0.3	0.1	0.0	0.1
5/14/2011	0.7	0.5	0.3	0.4
5/15/2011	0.3	0.6	0.4	0.4
5/16/2011	0.8	0.9	0.6	0.4
5/17/2011	0.9	0.2	0.1	0.8
5/18/2011	1.3	0.3	0.2	0.5
5/19/2011	0.4	0.0	0.0	0.3

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
5/20/2011	0.6	0.2	0.1	0.6
5/21/2011	0.3	0.8	0.5	0.2
5/22/2011	0.8	0.1	0.1	0.8
5/23/2011	0.9	0.6	0.4	0.6
5/24/2011	0.8	0.1	0.1	0.2
5/25/2011	1.0	0.8	0.5	0.1
5/26/2011	0.3	0.1	0.1	0.3
5/27/2011	1.5	0.4	0.3	0.7
5/28/2011	0.9	0.5	0.3	0.1
5/29/2011	0.4	0.2	0.2	0.2
5/30/2011	0.5	0.0	0.0	0.2
5/31/2011	0.4	0.6	0.4	0.2
6/1/2011	0.7	0.3	0.2	0.6
6/2/2011	0.7	0.2	0.1	0.6
6/3/2011	1.2	0.5	0.3	0.3
6/4/2011	1.0	0.2	0.1	0.3
6/5/2011	0.0	0.1	0.1	0.2
6/6/2011	0.4	0.5	0.3	0.2
6/7/2011	1.8	1.3	0.8	0.4
6/8/2011	0.3	0.6	0.4	0.5
6/9/2011	0.5	0.2	0.1	0.3
6/10/2011	0.4	1.7	1.1	0.9
6/11/2011	1.1	0.3	0.2	0.3
6/12/2011	0.8	0.5	0.3	0.5
6/13/2011	0.4	0.1	0.1	0.6
6/14/2011	0.5	1.0	0.6	0.5
6/15/2011	0.3	1.6	1.0	0.6
6/16/2011	0.8	0.9	0.6	0.8
6/17/2011	1.2	1.3	0.8	0.9
6/18/2011	2.5	2.3	1.5	0.6
6/19/2011	0.4	0.7	0.4	0.4
6/20/2011	2.2	0.8	0.5	0.9
6/21/2011	0.9	0.3	0.2	0.4
6/22/2011	1.4	0.2	0.1	0.2
6/23/2011	1.6	0.8	0.5	0.6
6/24/2011	1.5	0.9	0.6	0.4
6/25/2011	1.0	0.5	0.3	0.8
6/26/2011	1.6	0.4	0.3	0.7
6/27/2011	2.0	1.9	1.2	1.4
6/28/2011	1.8	1.3	0.9	2.1
6/29/2011	4.3	2.4	1.5	1.9
6/30/2011	1.6	1.4	0.9	0.9

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
7/1/2011	2.8	0.8	0.5	1.9
7/2/2011	3.4	2.5	1.6	1.0
7/3/2011	2.2	0.6	0.4	0.7
7/4/2011	2.4	1.1	0.7	2.2
7/5/2011	4.7	2.5	1.6	1.4
7/6/2011	2.6	0.6	0.4	1.9
7/7/2011	3.9	0.9	0.6	1.1
7/8/2011	3.3	1.1	0.7	1.8
7/9/2011	2.9	3.1	2.0	1.3
7/10/2011	2.3	2.4	1.5	1.2
7/11/2011	2.5	1.5	1.0	1.1
7/12/2011	2.7	0.9	0.6	1.2
7/13/2011	3.4	1.1	0.7	1.4
7/14/2011	2.2	0.8	0.5	1.7
7/15/2011	6.9	1.7	1.1	1.7
7/16/2011	1.7	1.0	0.6	1.0
7/17/2011	1.9	3.3	2.1	1.4
7/18/2011	3.3	1.0	0.6	1.1
7/19/2011	3.2	1.4	0.9	0.9
7/20/2011	3.5	1.3	0.8	1.5
7/21/2011	4.2	2.5	1.6	1.2
7/22/2011	3.9	1.1	0.7	1.4
7/23/2011	3.2	2.4	1.5	1.5
7/24/2011	3.9	0.8	0.5	1.6
7/25/2011	3.1	1.0	0.7	0.7
7/26/2011	3.3	2.4	1.5	2.3
7/27/2011	2.9	1.0	0.6	1.6
7/28/2011	3.0	1.6	1.0	1.7
7/29/2011	3.8	3.5	2.2	1.6
7/30/2011	4.4	1.5	0.9	1.4
7/31/2011	3.4	0.6	0.4	1.1
8/1/2011	3.6	3.5	2.2	2.1
8/2/2011	4.4	3.3	2.1	1.7
8/3/2011	4.5	2.4	1.5	0.9
8/4/2011	3.4	1.0	0.6	1.6
8/5/2011	3.3	2.1	1.4	1.2
8/6/2011	2.7	1.9	1.2	1.4
8/7/2011	3.4	2.4	1.5	1.5
8/8/2011	2.8	0.7	0.5	1.3
8/9/2011	3.9	2.6	1.6	1.0
8/10/2011	3.7	1.8	1.2	1.7
8/11/2011	4.4	2.6	1.6	1.6

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
8/12/2011	4.3	3.3	2.1	2.7
8/13/2011	5.2	2.2	1.4	2.0
8/14/2011	3.8	5.4	3.4	1.9
8/15/2011	3.8	3.4	2.2	1.1
8/16/2011	4.8	1.3	0.8	1.7
8/17/2011	1.7	2.3	1.4	1.6
8/18/2011	4.2	1.6	1.0	1.4
8/19/2011	3.0	1.7	1.1	2.5
8/20/2011	3.5	4.2	2.7	1.0
8/21/2011	6.0	0.9	0.6	0.7
8/22/2011	2.9	3.6	2.3	0.9
8/23/2011	7.6	2.5	1.6	1.9
8/24/2011	5.0	1.8	1.2	1.2
8/25/2011	2.6	2.9	1.9	0.5
8/26/2011	2.8	1.4	0.9	1.2
8/27/2011	2.3	2.9	1.9	0.5
8/28/2011	1.1	1.4	0.9	0.6
8/29/2011	3.3	0.6	0.4	1.1
8/30/2011	3.7	2.5	1.6	0.7
8/31/2011	2.6	1.9	1.2	1.5
9/1/2011	2.6	0.4	0.3	1.1
9/2/2011	2.8	2.4	1.5	1.7
9/3/2011	2.0	1.4	0.9	1.1
9/4/2011	2.2	2.4	1.5	1.2
9/5/2011	4.1	2.1	1.3	2.7
9/6/2011	2.3	2.7	1.7	1.8
9/7/2011	3.0	2.8	1.8	1.5
9/8/2011	1.4	1.0	0.7	1.3
9/9/2011	2.2	1.1	0.7	0.4
9/10/2011	2.6	1.2	0.8	1.8
9/11/2011	2.4	1.6	1.0	2.5
9/12/2011	5.5	2.9	1.9	1.5
9/13/2011	4.5	1.5	1.0	1.0
9/14/2011	3.5	1.7	1.1	1.1
9/15/2011	3.8	1.1	0.7	0.9
9/16/2011	1.4	1.8	1.2	1.0
9/17/2011	1.8	0.8	0.5	0.8
9/18/2011	1.6	1.5	1.0	1.0
9/19/2011	3.5	1.5	1.0	1.1
9/20/2011	0.9	1.6	1.0	1.7
9/21/2011	2.8	0.2	0.2	0.9
9/22/2011	2.9	1.8	1.2	2.0

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
9/23/2011	3.7	1.9	1.2	2.0
9/24/2011	4.1	0.7	0.4	1.2
9/25/2011	4.9	1.8	1.2	1.6
9/26/2011	2.5	0.6	0.4	0.3
9/27/2011	1.4	0.2	0.1	1.3
9/28/2011	1.2	0.1	0.1	0.5
9/29/2011	3.4	0.8	0.5	0.1
9/30/2011	1.9	0.8	0.5	1.5
10/1/2011	1.2	1.3	0.8	0.6
10/2/2011	1.9	0.3	0.2	0.6
10/3/2011	1.4	1.0	0.6	0.9
10/4/2011	1.8	1.0	0.6	1.0
10/5/2011	2.1	0.9	0.6	0.6
10/6/2011	1.6	0.2	0.1	0.1
10/7/2011	2.6	0.3	0.2	0.2
10/8/2011	1.0	0.5	0.3	0.3
10/9/2011	1.7	0.6	0.4	0.3
10/10/2011	1.4	0.4	0.3	0.4
10/11/2011	2.9	1.4	0.9	0.6
10/12/2011	2.6	0.3	0.2	0.3
10/13/2011	1.4	0.9	0.5	0.8
10/14/2011	2.0	0.6	0.4	0.5
10/15/2011	1.4	1.1	0.7	0.5
10/16/2011	2.1	0.3	0.2	0.6
10/17/2011	0.8	2.5	1.6	0.7
10/18/2011	1.0	0.7	0.5	0.6
10/19/2011	2.6	1.6	1.0	0.4
10/20/2011	1.2	1.9	1.2	0.5
10/21/2011	1.5	1.4	0.9	0.7
10/22/2011	2.1	1.3	0.9	1.0
10/23/2011	3.1	1.3	0.9	0.9
10/24/2011	1.3	1.4	0.9	0.6
10/25/2011	1.2	0.8	0.5	0.7
10/26/2011	1.3	1.4	0.9	0.6
10/27/2011	2.5	1.1	0.7	0.7
10/28/2011	1.9	1.6	1.0	0.8
10/29/2011	0.7	0.7	0.5	0.6
10/30/2011	1.4	0.6	0.4	0.4
10/31/2011	2.2	0.3	0.2	0.4
11/1/2011	1.2	0.9	0.6	0.1
11/2/2011	1.2	0.3	0.2	0.4
11/3/2011	1.6	1.0	0.6	0.5

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
11/4/2011	1.1	0.3	0.2	0.2
11/5/2011	0.4	1.2	0.8	0.0
11/6/2011	0.2	0.2	0.1	0.4
11/7/2011	0.6	0.8	0.5	0.4
11/8/2011	1.0	0.7	0.4	0.5
11/9/2011	0.2	0.4	0.3	0.1
11/10/2011	0.5	0.1	0.1	0.2
11/11/2011	0.5	0.6	0.4	0.4
11/12/2011	1.9	0.4	0.2	0.4
11/13/2011	0.7	0.5	0.3	0.9
11/14/2011	1.2	2.5	1.6	0.9
11/15/2011	0.7	0.5	0.3	0.7
11/16/2011	1.1	0.8	0.5	0.3
11/17/2011	0.8	0.1	0.1	0.1
11/18/2011	0.6	0.1	0.1	0.2
11/19/2011	0.4	0.4	0.2	0.0
11/20/2011	0.1	0.0	0.0	0.1
11/21/2011	0.1	0.1	0.0	0.2
11/22/2011	0.5	0.2	0.1	0.3
11/23/2011	0.5	0.2	0.1	0.2
11/24/2011	1.5	0.5	0.3	0.5
11/25/2011	1.2	0.0	0.0	0.2
11/26/2011	0.7	0.3	0.2	0.6
11/27/2011	0.6	1.1	0.7	0.4
11/28/2011	1.1	0.7	0.5	0.4
11/29/2011	1.0	0.5	0.3	0.4
11/30/2011	0.5	0.2	0.2	0.5
12/1/2011	1.0	0.7	0.4	0.7
12/2/2011	1.1	0.1	0.1	0.5
12/3/2011	0.4	1.1	0.7	0.7
12/4/2011	1.2	0.4	0.3	0.5
12/5/2011	1.2	1.2	0.7	0.4
12/6/2011	1.1	0.4	0.3	0.1
12/7/2011	0.8	0.5	0.3	0.7
12/8/2011	0.8	0.9	0.6	0.7
12/9/2011	3.0	0.9	0.5	0.8
12/10/2011	0.7	0.8	0.5	0.5
12/11/2011	1.5	0.9	0.6	0.5
12/12/2011	0.9	0.3	0.2	0.1
12/13/2011	1.3	0.8	0.5	1.1
12/14/2011	1.2	0.9	0.6	0.8
12/15/2011	2.1	1.6	1.0	0.1

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
12/16/2011	1.2	0.2	0.2	0.2
12/17/2011	0.9	0.8	0.5	0.3
12/18/2011	1.3	1.1	0.7	0.7
12/19/2011	1.3	0.5	0.3	0.2
12/20/2011	2.2	1.0	0.6	0.2
12/21/2011	1.0	0.1	0.1	0.7
12/22/2011	0.8	1.1	0.7	0.6
12/23/2011	1.3	0.5	0.3	0.9
12/24/2011	0.3	0.6	0.4	0.3
12/25/2011	1.2	0.6	0.4	0.8
12/26/2011	2.1	1.4	0.9	0.8
12/27/2011	1.3	1.0	0.6	0.1
12/28/2011	1.2	0.5	0.3	0.3
12/29/2011	1.2	1.2	0.8	0.7
12/30/2011	0.7	1.0	0.7	0.3
12/31/2011	0.4	0.1	0.1	0.5
1/1/2012	0.5	0.7	0.5	0.2
1/2/2012	0.9	0.6	0.4	0.4
1/3/2012	0.7	0.3	0.2	0.3
1/4/2012	0.7	0.6	0.4	0.3
1/5/2012	0.8	0.2	0.2	0.2
1/6/2012	1.0	0.8	0.5	0.4
1/7/2012	0.8	1.0	0.6	0.3
1/8/2012	1.3	0.6	0.4	0.4
1/9/2012	0.8	0.6	0.4	0.2
1/10/2012	0.5	0.4	0.3	0.3
1/11/2012	0.9	1.0	0.7	0.4
1/12/2012	1.3	0.3	0.2	0.4
1/13/2012	0.6	1.1	0.7	0.4
1/14/2012	1.1	0.1	0.1	0.3
1/15/2012	0.6	0.5	0.3	0.2
1/16/2012	0.2	0.1	0.1	0.2
1/17/2012	1.2	0.2	0.1	0.7
1/18/2012	1.3	0.8	0.5	0.8
1/19/2012	0.4	0.6	0.4	0.5
1/20/2012	0.6	0.7	0.4	0.4
1/21/2012	1.0	0.5	0.3	0.4
1/22/2012	0.6	0.6	0.4	0.2
1/23/2012	0.2	0.1	0.0	0.3
1/24/2012	0.4	0.6	0.4	0.4
1/25/2012	1.0	0.6	0.4	0.4
1/26/2012	0.7	0.2	0.2	0.5

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
1/27/2012	0.8	0.5	0.3	0.2
1/28/2012	1.4	0.3	0.2	0.3
1/29/2012	1.0	0.2	0.1	0.1
1/30/2012	1.0	0.3	0.2	0.3
1/31/2012	1.4	0.6	0.4	0.5
2/1/2012	0.6	0.3	0.2	0.2
2/2/2012	0.8	0.1	0.1	0.7
2/3/2012	0.5	0.5	0.3	0.6
2/4/2012	0.6	0.6	0.4	0.8
2/5/2012	0.8	0.8	0.5	1.0
2/6/2012	0.4	0.5	0.3	0.2
2/7/2012	0.3	0.5	0.3	0.2
2/8/2012	0.9	0.4	0.3	0.6
2/9/2012	1.1	0.7	0.5	0.2
2/10/2012	0.7	0.2	0.1	0.7
2/11/2012	0.6	0.3	0.2	0.5
2/12/2012	1.1	1.6	1.0	0.6
2/13/2012	0.6	0.4	0.3	0.5
2/14/2012	0.9	0.8	0.5	0.5
2/15/2012	0.4	0.3	0.2	0.5
2/16/2012	0.4	0.5	0.3	0.5
2/17/2012	1.4	0.6	0.4	0.2
2/18/2012	0.4	0.2	0.1	0.3
2/19/2012	0.5	0.3	0.2	0.1
2/20/2012	0.5	0.4	0.3	0.9
2/21/2012	1.4	1.1	0.7	0.4
2/22/2012	0.7	0.4	0.3	0.3
2/23/2012	1.9	0.1	0.0	0.2
2/24/2012	0.6	1.3	0.9	0.3
2/25/2012	1.4	0.3	0.2	0.3
2/26/2012	0.9	0.2	0.1	0.1
2/27/2012	0.4	0.0	0.0	0.2
2/28/2012	1.0	0.1	0.1	0.5
2/29/2012	0.0	0.0	0.0	0.0
3/1/2012	0.9	0.8	0.5	0.5
3/2/2012	0.5	0.5	0.3	0.3
3/3/2012	0.5	0.6	0.4	0.2
3/4/2012	0.9	0.4	0.3	0.1
3/5/2012	0.2	0.1	0.1	0.3
3/6/2012	0.5	0.1	0.1	0.4
3/7/2012	0.5	0.3	0.2	0.1
3/8/2012	0.5	0.2	0.1	0.2



**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
3/9/2012	0.3	0.1	0.0	0.1
3/10/2012	0.6	0.4	0.3	0.6
3/11/2012	0.6	0.6	0.4	0.5
3/12/2012	0.7	0.5	0.3	0.6
3/13/2012	0.3	0.2	0.1	0.1
3/14/2012	0.4	0.2	0.1	0.3
3/15/2012	0.3	0.4	0.3	0.4
3/16/2012	0.2	0.0	0.0	0.1
3/17/2012	0.3	0.0	0.0	0.3
3/18/2012	0.6	0.4	0.3	0.2
3/19/2012	0.4	0.1	0.1	0.3
3/20/2012	0.6	0.4	0.3	0.4
3/21/2012	0.3	0.0	0.0	0.1
3/22/2012	1.0	0.2	0.1	0.2
3/23/2012	0.3	0.0	0.0	0.1
3/24/2012	0.1	0.1	0.0	0.2
3/25/2012	0.4	0.0	0.0	0.1
3/26/2012	1.1	0.0	0.0	0.3
3/27/2012	0.7	0.8	0.5	0.3
3/28/2012	0.1	0.3	0.2	0.1
3/29/2012	0.4	0.1	0.1	0.1
3/30/2012	0.1	0.0	0.0	0.1
3/31/2012	0.0	0.1	0.0	0.0
4/1/2012	0.0	0.1	0.0	0.1
4/2/2012	0.4	0.4	0.2	0.1
4/3/2012	0.3	0.3	0.2	0.0
4/4/2012	0.4	0.4	0.2	0.2
4/5/2012	0.6	0.5	0.3	0.5
4/6/2012	0.4	0.6	0.4	0.3
4/7/2012	0.7	0.1	0.1	0.1
4/8/2012	0.3	0.0	0.0	0.0
4/9/2012	0.0	0.0	0.0	0.0
4/10/2012	0.1	0.0	0.0	0.2
4/11/2012	0.7	0.5	0.3	0.5
4/12/2012	0.9	0.5	0.3	0.2
4/13/2012	0.1	0.1	0.1	0.1
4/14/2012	0.2	0.1	0.0	0.3
4/15/2012	0.5	0.7	0.4	0.1
4/16/2012	0.2	0.2	0.1	0.0
4/17/2012	1.3	0.1	0.1	0.1
4/18/2012	0.2	0.1	0.1	0.0
4/19/2012	0.1	0.1	0.1	0.1

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
4/20/2012	0.5	0.0	0.0	0.1
4/21/2012	0.1	0.0	0.0	0.3
4/22/2012	0.2	0.5	0.3	0.2
4/23/2012	1.3	0.4	0.2	0.6
4/24/2012	0.5	0.3	0.2	0.6
4/25/2012	0.1	0.2	0.1	0.1
4/26/2012	1.0	0.2	0.1	0.1
4/27/2012	0.7	0.4	0.2	0.0
4/28/2012	0.4	0.0	0.0	0.2
4/29/2012	0.6	0.1	0.0	0.1
4/30/2012	0.7	0.2	0.1	0.1
5/1/2012	0.2	0.0	0.0	0.3
5/2/2012	0.6	0.9	0.6	0.2
5/3/2012	1.3	0.7	0.4	0.1
5/4/2012	0.7	0.1	0.1	0.2
5/5/2012	0.5	0.2	0.2	0.1
5/6/2012	0.4	0.2	0.1	0.4
5/7/2012	0.8	0.6	0.4	0.1
5/8/2012	0.2	0.0	0.0	0.2
5/9/2012	0.5	0.0	0.0	0.3
5/10/2012	0.2	0.0	0.0	0.2
5/11/2012	0.5	0.3	0.2	0.1
5/12/2012	0.2	0.0	0.0	0.1
5/13/2012	0.3	0.1	0.0	0.1
5/14/2012	0.7	0.5	0.3	0.4
5/15/2012	0.3	0.6	0.4	0.4
5/16/2012	0.8	0.9	0.6	0.4
5/17/2012	0.9	0.2	0.1	0.8
5/18/2012	1.3	0.3	0.2	0.5
5/19/2012	0.4	0.0	0.0	0.3
5/20/2012	0.6	0.2	0.1	0.6
5/21/2012	0.3	0.8	0.5	0.2
5/22/2012	0.8	0.1	0.1	0.8
5/23/2012	0.9	0.6	0.4	0.6
5/24/2012	0.8	0.1	0.1	0.2
5/25/2012	1.0	0.8	0.5	0.1
5/26/2012	0.3	0.1	0.1	0.3
5/27/2012	1.5	0.4	0.3	0.7
5/28/2012	0.9	0.5	0.3	0.1
5/29/2012	0.4	0.2	0.2	0.2
5/30/2012	0.5	0.0	0.0	0.2
5/31/2012	0.4	0.6	0.4	0.2

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
6/1/2012	0.7	0.3	0.2	0.6
6/2/2012	0.7	0.2	0.1	0.6
6/3/2012	1.2	0.5	0.3	0.3
6/4/2012	1.0	0.2	0.1	0.3
6/5/2012	0.0	0.1	0.1	0.2
6/6/2012	0.4	0.5	0.3	0.2
6/7/2012	1.8	1.3	0.8	0.4
6/8/2012	0.3	0.6	0.4	0.5
6/9/2012	0.5	0.2	0.1	0.3
6/10/2012	0.4	1.7	1.1	0.9
6/11/2012	1.1	0.3	0.2	0.3
6/12/2012	0.8	0.5	0.3	0.5
6/13/2012	0.4	0.1	0.1	0.6
6/14/2012	0.5	1.0	0.6	0.5
6/15/2012	0.3	1.6	1.0	0.6
6/16/2012	0.8	0.9	0.6	0.8
6/17/2012	1.2	1.3	0.8	0.9
6/18/2012	2.5	2.3	1.5	0.6
6/19/2012	0.4	0.7	0.4	0.4
6/20/2012	2.2	0.8	0.5	0.9
6/21/2012	0.9	0.3	0.2	0.4
6/22/2012	1.4	0.2	0.1	0.2
6/23/2012	1.6	0.8	0.5	0.6
6/24/2012	1.5	0.9	0.6	0.4
6/25/2012	1.0	0.5	0.3	0.8
6/26/2012	1.6	0.4	0.3	0.7
6/27/2012	2.0	1.9	1.2	1.4
6/28/2012	1.8	1.3	0.9	2.1
6/29/2012	4.3	2.4	1.5	1.9
6/30/2012	1.6	1.4	0.9	0.9
7/1/2012	2.8	0.8	0.5	1.9
7/2/2012	3.4	2.5	1.6	1.0
7/3/2012	2.2	0.6	0.4	0.7
7/4/2012	2.4	1.1	0.7	2.2
7/5/2012	4.7	2.5	1.6	1.4
7/6/2012	2.6	0.6	0.4	1.9
7/7/2012	3.9	0.9	0.6	1.1
7/8/2012	3.3	1.1	0.7	1.8
7/9/2012	2.9	3.1	2.0	1.3
7/10/2012	2.3	2.4	1.5	1.2
7/11/2012	2.5	1.5	1.0	1.1
7/12/2012	2.7	0.9	0.6	1.2

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
7/13/2012	3.4	1.1	0.7	1.4
7/14/2012	2.2	0.8	0.5	1.7
7/15/2012	6.9	1.7	1.1	1.7
7/16/2012	1.7	1.0	0.6	1.0
7/17/2012	1.9	3.3	2.1	1.4
7/18/2012	3.3	1.0	0.6	1.1
7/19/2012	3.2	1.4	0.9	0.9
7/20/2012	3.5	1.3	0.8	1.5
7/21/2012	4.2	2.5	1.6	1.2
7/22/2012	3.9	1.1	0.7	1.4
7/23/2012	3.2	2.4	1.5	1.5
7/24/2012	3.9	0.8	0.5	1.6
7/25/2012	3.1	1.0	0.7	0.7
7/26/2012	3.3	2.4	1.5	2.3
7/27/2012	2.9	1.0	0.6	1.6
7/28/2012	3.0	1.6	1.0	1.7
7/29/2012	3.8	3.5	2.2	1.6
7/30/2012	4.4	1.5	0.9	1.4
7/31/2012	3.4	0.6	0.4	1.1
8/1/2012	3.6	3.5	2.2	2.1
8/2/2012	4.4	3.3	2.1	1.7
8/3/2012	4.5	2.4	1.5	0.9
8/4/2012	3.4	1.0	0.6	1.6
8/5/2012	3.3	2.1	1.4	1.2
8/6/2012	2.7	1.9	1.2	1.4
8/7/2012	3.4	2.4	1.5	1.5
8/8/2012	2.8	0.7	0.5	1.3
8/9/2012	3.9	2.6	1.6	1.0
8/10/2012	3.7	1.8	1.2	1.7
8/11/2012	4.4	2.6	1.6	1.6
8/12/2012	4.3	3.3	2.1	2.7
8/13/2012	5.2	2.2	1.4	2.0
8/14/2012	3.8	5.4	3.4	1.9
8/15/2012	3.8	3.4	2.2	1.1
8/16/2012	4.8	1.3	0.8	1.7
8/17/2012	1.7	2.3	1.4	1.6
8/18/2012	4.2	1.6	1.0	1.4
8/19/2012	3.0	1.7	1.1	2.5
8/20/2012	3.5	4.2	2.7	1.0
8/21/2012	6.0	0.9	0.6	0.7
8/22/2012	2.9	3.6	2.3	0.9
8/23/2012	7.6	2.5	1.6	1.9

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
8/24/2012	5.0	1.8	1.2	1.2
8/25/2012	2.6	2.9	1.9	0.5
8/26/2012	2.8	1.4	0.9	1.2
8/27/2012	2.3	2.9	1.9	0.5
8/28/2012	1.1	1.4	0.9	0.6
8/29/2012	3.3	0.6	0.4	1.1
8/30/2012	3.7	2.5	1.6	0.7
8/31/2012	2.6	1.9	1.2	1.5
9/1/2012	2.6	0.4	0.3	1.1
9/2/2012	2.8	2.4	1.5	1.7
9/3/2012	2.0	1.4	0.9	1.1
9/4/2012	2.2	2.4	1.5	1.2
9/5/2012	4.1	2.1	1.3	2.7
9/6/2012	2.3	2.7	1.7	1.8
9/7/2012	3.0	2.8	1.8	1.5
9/8/2012	1.4	1.0	0.7	1.3
9/9/2012	2.2	1.1	0.7	0.4
9/10/2012	2.6	1.2	0.8	1.8
9/11/2012	2.4	1.6	1.0	2.5
9/12/2012	5.5	2.9	1.9	1.5
9/13/2012	4.5	1.5	1.0	1.0
9/14/2012	3.5	1.7	1.1	1.1
9/15/2012	3.8	1.1	0.7	0.9
9/16/2012	1.4	1.8	1.2	1.0
9/17/2012	1.8	0.8	0.5	0.8
9/18/2012	1.6	1.5	1.0	1.0
9/19/2012	3.5	1.5	1.0	1.1
9/20/2012	0.9	1.6	1.0	1.7
9/21/2012	2.8	0.2	0.2	0.9
9/22/2012	2.9	1.8	1.2	2.0
9/23/2012	3.7	1.9	1.2	2.0
9/24/2012	4.1	0.7	0.4	1.2
9/25/2012	4.9	1.8	1.2	1.6
9/26/2012	2.5	0.6	0.4	0.3
9/27/2012	1.4	0.2	0.1	1.3
9/28/2012	1.2	0.1	0.1	0.5
9/29/2012	3.4	0.8	0.5	0.1
9/30/2012	1.9	0.8	0.5	1.5
10/1/2012	1.2	1.3	0.8	0.6
10/2/2012	1.9	0.3	0.2	0.6
10/3/2012	1.4	1.0	0.6	0.9
10/4/2012	1.8	1.0	0.6	1.0

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
10/5/2012	2.1	0.9	0.6	0.6
10/6/2012	1.6	0.2	0.1	0.1
10/7/2012	2.6	0.3	0.2	0.2
10/8/2012	1.0	0.5	0.3	0.3
10/9/2012	1.7	0.6	0.4	0.3
10/10/2012	1.4	0.4	0.3	0.4
10/11/2012	2.9	1.4	0.9	0.6
10/12/2012	2.6	0.3	0.2	0.3
10/13/2012	1.4	0.9	0.5	0.8
10/14/2012	2.0	0.6	0.4	0.5
10/15/2012	1.4	1.1	0.7	0.5
10/16/2012	2.1	0.3	0.2	0.6
10/17/2012	0.8	2.5	1.6	0.7
10/18/2012	1.0	0.7	0.5	0.6
10/19/2012	2.6	1.6	1.0	0.4
10/20/2012	1.2	1.9	1.2	0.5
10/21/2012	1.5	1.4	0.9	0.7
10/22/2012	2.1	1.3	0.9	1.0
10/23/2012	3.1	1.3	0.9	0.9
10/24/2012	1.3	1.4	0.9	0.6
10/25/2012	1.2	0.8	0.5	0.7
10/26/2012	1.3	1.4	0.9	0.6
10/27/2012	2.5	1.1	0.7	0.7
10/28/2012	1.9	1.6	1.0	0.8
10/29/2012	0.7	0.7	0.5	0.6
10/30/2012	1.4	0.6	0.4	0.4
10/31/2012	2.2	0.3	0.2	0.4
11/1/2012	1.2	0.9	0.6	0.1
11/2/2012	1.2	0.3	0.2	0.4
11/3/2012	1.6	1.0	0.6	0.5
11/4/2012	1.1	0.3	0.2	0.2
11/5/2012	0.4	1.2	0.8	0.0
11/6/2012	0.2	0.2	0.1	0.4
11/7/2012	0.6	0.8	0.5	0.4
11/8/2012	1.0	0.7	0.4	0.5
11/9/2012	0.2	0.4	0.3	0.1
11/10/2012	0.5	0.1	0.1	0.2
11/11/2012	0.5	0.6	0.4	0.4
11/12/2012	1.9	0.4	0.2	0.4
11/13/2012	0.7	0.5	0.3	0.9
11/14/2012	1.2	2.5	1.6	0.9
11/15/2012	0.7	0.5	0.3	0.7

**Table C-4: Flow from Precipitation on River Channel Based on Average Daily Historical Rainfall(cfs)**

Input to the precipitation (Pc) parameter

Segment	HEC-RAS Surface Area (ft <sup>2</sup> )	HEC-RAS Surface Area (acres)
1	58,779,349	1349.4
2	35,440,714	813.6
3	22,613,890	519.1
4	28,605,189	656.7

River Channel Flow from Precipitation				
Date	Segment 1	Segment 2	Segment 3	Segment 4
11/16/2012	1.1	0.8	0.5	0.3
11/17/2012	0.8	0.1	0.1	0.1
11/18/2012	0.6	0.1	0.1	0.2
11/19/2012	0.4	0.4	0.2	0.0
11/20/2012	0.1	0.0	0.0	0.1
11/21/2012	0.1	0.1	0.0	0.2
11/22/2012	0.5	0.2	0.1	0.3
11/23/2012	0.5	0.2	0.1	0.2
11/24/2012	1.5	0.5	0.3	0.5
11/25/2012	1.2	0.0	0.0	0.2
11/26/2012	0.7	0.3	0.2	0.6
11/27/2012	0.6	1.1	0.7	0.4
11/28/2012	1.1	0.7	0.5	0.4
11/29/2012	1.0	0.5	0.3	0.4
11/30/2012	0.5	0.2	0.2	0.5

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
1/1/2010	0.9	0.0	0.0	0.5	0.0	5.8	0.0	0.0	22.4	0.0	0.0	0.0	1.5	0.0	87.2	0.0	16.6	0.0	0.0
1/2/2010	0.9	0.0	1.5	0.5	0.1	5.8	0.0	0.0	22.4	0.0	0.0	0.0	1.5	0.0	90.6	0.0	16.6	0.0	0.0
1/3/2010	1.1	0.0	2.6	0.5	1.0	5.9	0.0	5.6	22.4	0.0	0.0	0.0	1.5	0.0	89.9	0.0	16.6	5.0	0.0
1/4/2010	1.1	0.0	3.3	0.5	1.6	5.8	0.0	14.2	22.4	0.0	0.0	10.6	1.5	0.0	91.1	65.7	16.6	69.1	0.0
1/5/2010	1.1	0.0	3.3	0.5	1.7	5.9	0.0	14.6	22.4	0.0	0.0	11.9	1.5	0.0	91.2	95.5	16.6	104.4	0.0
1/6/2010	1.1	0.0	3.3	0.5	1.6	5.9	0.0	14.5	22.4	0.0	0.0	12.1	1.5	0.0	92.4	95.9	16.6	104.9	0.0
1/7/2010	1.1	0.0	3.3	0.5	1.7	5.8	0.0	14.5	22.4	0.0	0.0	12.1	1.5	0.0	92.5	96.4	16.6	105.5	0.0
1/8/2010	1.0	0.0	3.3	0.5	1.8	5.7	0.0	14.5	22.4	0.0	0.0	12.1	1.5	0.0	92.7	96.4	16.6	105.6	0.0
1/9/2010	1.0	0.0	3.3	0.5	1.8	5.7	0.0	14.4	22.4	0.0	0.0	12.1	1.5	0.0	93.6	97.0	16.6	106.2	0.0
1/10/2010	1.0	0.0	3.3	0.5	1.8	5.8	0.0	14.4	22.4	0.0	0.0	11.9	1.5	0.0	93.7	97.4	16.6	106.5	0.0
1/11/2010	1.1	0.0	3.3	0.5	1.7	5.8	0.0	14.4	22.4	0.0	0.0	12.0	1.5	0.0	91.0	95.6	16.6	104.9	0.0
1/12/2010	1.1	0.0	3.3	0.5	1.7	6.0	0.0	14.5	22.4	0.0	0.0	12.0	1.5	0.0	89.3	93.7	16.6	103.0	0.0
1/13/2010	1.1	0.0	3.3	0.5	1.6	6.2	0.0	14.7	22.4	0.0	0.0	12.1	1.5	0.0	90.8	94.4	16.6	103.5	0.0
1/14/2010	1.1	0.0	3.3	0.5	1.7	6.3	0.0	14.8	22.4	0.0	0.0	12.3	1.5	0.0	92.8	96.3	16.6	105.4	0.0
1/15/2010	1.0	0.0	3.3	0.5	1.8	6.2	0.0	14.9	22.4	0.0	0.0	12.4	1.5	0.0	92.4	96.6	16.6	105.8	0.0
1/16/2010	1.0	0.0	3.3	0.5	1.8	6.2	0.0	14.8	22.4	0.0	0.0	12.4	1.5	0.0	92.0	96.3	16.6	105.5	0.0
1/17/2010	1.0	0.0	3.3	0.5	1.8	6.2	0.0	14.8	22.4	0.0	0.0	12.3	1.5	0.0	92.5	96.6	16.6	105.7	0.0
1/18/2010	1.0	0.0	3.3	0.5	1.8	6.1	0.0	14.8	22.4	0.0	0.0	12.4	1.5	0.0	91.9	96.3	16.6	105.5	0.0
1/19/2010	1.0	0.0	3.2	0.5	1.8	6.2	0.0	14.7	22.4	0.0	0.0	12.3	1.5	0.0	83.5	90.1	16.6	99.7	0.0
1/20/2010	1.0	0.0	3.3	0.5	1.8	6.2	0.0	14.7	22.4	0.0	0.0	12.3	1.5	0.0	90.7	93.1	16.6	101.9	0.0
1/21/2010	1.1	0.0	3.2	0.5	1.6	6.1	0.0	14.7	22.4	0.0	0.0	12.4	1.5	0.0	93.6	97.0	16.6	106.0	0.0
1/22/2010	1.1	0.0	3.3	0.5	1.7	6.4	0.0	14.7	22.4	0.0	0.0	12.4	1.5	0.0	94.5	98.2	16.6	107.4	0.0
1/23/2010	1.1	0.0	3.3	0.5	1.7	6.4	0.0	14.9	22.4	0.0	0.0	12.4	1.5	0.0	100.0	102.3	16.6	111.1	0.0
1/24/2010	1.1	0.0	3.2	0.5	1.6	6.0	0.0	14.8	22.4	0.0	0.0	12.5	1.5	0.0	95.3	100.5	16.6	109.8	0.0
1/25/2010	1.1	0.0	3.2	0.5	1.6	5.4	0.0	14.4	22.4	0.0	0.0	12.4	1.5	0.0	94.8	99.2	16.6	108.3	0.0
1/26/2010	0.9	0.0	3.2	0.5	1.8	5.0	0.0	13.9	22.4	0.0	0.0	11.9	1.5	0.0	93.9	98.2	16.6	107.4	0.0
1/27/2010	46.1	0.0	3.3	0.5	0.0	5.1	0.0	13.6	22.4	0.0	0.0	11.5	1.5	0.0	94.5	98.0	16.6	107.2	0.0
1/28/2010	88.9	0.0	3.3	0.5	0.0	5.7	0.0	13.9	22.4	0.0	0.0	11.4	1.5	0.0	98.1	100.2	16.6	109.2	0.0
1/29/2010	88.7	0.0	3.1	0.5	0.0	5.4	0.0	14.2	22.4	0.0	0.0	11.7	1.5	0.0	98.8	101.7	16.6	110.8	0.0
1/30/2010	89.2	0.0	5.1	0.5	0.0	5.1	0.0	13.8	22.4	0.0	0.0	11.8	1.5	0.0	14.9	41.2	16.6	55.2	11.9
1/31/2010	89.5	0.0	6.5	0.5	0.0	5.2	0.0	14.8	22.4	0.0	0.0	11.4	1.5	0.0	14.4	20.8	16.6	30.5	0.0
2/1/2010	89.8	0.0	6.6	0.5	0.0	5.2	0.0	16.5	22.4	0.0	0.0	13.1	1.5	0.0	14.3	19.9	16.6	29.7	0.0
2/2/2010	90.1	0.0	6.7	0.5	0.0	5.2	0.0	16.7	22.4	0.0	0.0	14.0	1.5	0.0	14.1	21.9	16.6	31.5	0.0
2/3/2010	52.8	0.0	6.7	0.5	0.0	5.3	0.0	16.8	22.4	0.0	0.0	14.1	1.5	0.0	14.7	22.5	16.6	32.2	0.0
2/4/2010	0.8	0.0	6.5	0.5	5.3	5.5	0.0	17.0	22.4	0.0	0.0	14.3	1.5	0.0	16.3	24.0	16.6	33.6	0.0
2/5/2010	0.8	0.0	1.9	0.5	0.5	5.3	0.0	16.9	22.4	0.0	0.0	14.4	1.5	0.0	16.7	24.8	16.6	34.4	0.0
2/6/2010	0.9	0.0	3.1	0.5	1.7	5.2	0.0	12.9	22.4	0.0	0.0	13.8	1.5	0.0	16.7	25.2	16.6	34.8	0.0
2/7/2010	0.9	0.0	3.2	0.5	1.8	5.2	0.0	13.8	22.4	0.0	0.0	11.0	1.5	0.0	17.1	24.2	16.6	34.1	0.0
2/8/2010	0.9	0.0	3.3	0.5	1.9	5.2	0.0	13.9	22.4	0.0	0.0	11.5	1.5	0.0	99.0	82.5	16.6	87.3	0.0
2/9/2010	0.9	0.0	3.2	0.5	1.9	5.1	0.0	13.9	22.4	0.0	0.0	11.6	1.5	0.0	88.6	94.7	16.6	104.4	0.0
2/10/2010	1.2	0.0	3.3	0.5	1.6	3.1	0.0	13.4	22.4	0.0	0.0	11.6	1.5	0.0	87.7	91.5	16.6	100.8	0.0
2/11/2010	1.5	0.0	3.3	0.5	1.3	3.3	0.0	12.1	22.4	0.0	0.0	10.7	1.5	0.0	90.0	92.6	16.6	101.7	0.0
2/12/2010	1.8	0.0	3.3	0.5	0.9	3.4	0.0	12.3	22.4	0.0	0.0	10.0	1.5	0.0	88.2	91.0	16.6	100.4	0.0
2/13/2010	2.1	0.0	3.2	0.5	0.6	4.5	0.0	12.7	22.4	0.0	0.0	10.1	1.5	0.0	90.8	92.3	16.6	101.3	0.0
2/14/2010	2.5	0.0	3.2	0.5	0.2	5.0	0.0	13.6	22.4	0.0	0.0	10.6	1.5	0.0	92.0	93.8	16.6	103.0	0.0
2/15/2010	2.8	0.0	3.3	0.5	0.0	0.0	0.0	12.5	22.4	0.0	0.0	11.3	1.5	0.0	0.0	29.7	16.6	44.5	16.5
2/16/2010	3.1	0.0	3.2	0.5	0.0	5.1	0.0	10.5	22.4	0.0	0.0	9.3	1.5	0.0	94.1	72.5	16.6	77.2	0.0
2/17/2010	3.4	0.0	3.2	0.5	0.0	4.5	0.0	13.8	22.4	0.0	0.0	9.5	1.5	0.0	94.2	95.0	16.6	104.2	0.0
2/18/2010	3.7	0.0	3.2	0.5	0.0	4.4	0.0	13.5	22.4	0.0	7.1	15.1	1.5	0.0	91.1	94.3	16.6	103.5	0.0
2/19/2010	4.1	0.0	3.3	0.5	0.0	6.1	0.0	13.9	22.4	0.0	7.3	17.9	1.5	0.0	76.0	87.9	16.6	97.7	0.0
2/20/2010	4.4	0.0	3.2	0.5	0.0	6.8	0.0	15.2	22.4	0.0	7.2	18.6	1.5	0.0	88.5	94.4	16.6	102.9	0.0
2/21/2010	4.7	0.0	3.3	0.5	0.0	6.7	0.0	15.6	22.4	0.0	7.0	19.4	1.5	0.0	90.2	99.8	16.6	108.8	0.0
2/22/2010	5.0	0.0	3.2	0.5	0.0	6.7	0.0	15.5	22.4	0.0	6.9	19.6	1.5	0.0	92.7	102.6	16.6	111.6	0.0
2/23/2010	5.4	0.0	3.2	0.5	0.0	6.7	0.0	15.6	22.4	0.0	7.0	19.6	1.5	0.0	93.3	104.2	16.6	113.3	0.0
2/24/2010	11.5	0.0	3.2	0.5	0.0	6.3	0.0	15.5	22.4	0.0	6.8	19.5	1.5	0.0	95.2	105.3	16.6	114.3	0.0



Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
2/25/2010	10.6	0.0	3.3	0.5	0.0	6.5	0.0	15.3	22.4	0.0	6.9	19.4	1.5	0.0	98.5	108.1	16.6	117.0	0.0
2/26/2010	124.7	0.0	3.2	0.5	0.0	6.4	0.0	15.4	22.4	0.0	6.7	19.2	1.5	0.0	99.6	109.6	16.6	118.6	0.0
2/27/2010	95.2	0.0	3.3	0.5	0.0	6.5	0.0	15.5	22.4	0.0	6.7	19.2	1.5	0.0	100.7	110.5	16.6	119.5	0.0
2/28/2010	95.5	0.0	9.8	0.5	0.0	6.6	0.0	15.5	22.4	0.0	6.9	19.4	1.5	0.0	103.6	112.9	16.6	121.8	0.0
3/1/2010	97.0	0.0	253.5	0.5	156.0	6.3	0.0	229.6	22.4	0.0	6.6	209.3	1.5	0.0	103.0	286.2	16.6	283.4	0.0
3/2/2010	98.3	0.0	252.8	0.5	153.9	5.9	0.0	229.0	22.4	0.0	6.4	214.7	1.5	0.0	102.6	285.9	16.6	282.9	0.0
3/3/2010	98.7	0.0	253.0	0.5	153.8	5.9	0.0	228.0	22.4	0.0	6.5	212.6	1.5	0.0	102.6	290.6	16.6	287.6	0.0
3/4/2010	297.5	0.0	253.2	0.5	0.0	5.9	0.0	228.2	22.4	0.0	6.4	212.2	1.5	0.0	101.8	287.9	16.6	285.0	0.0
3/5/2010	349.8	0.0	255.8	0.5	0.0	5.9	0.0	228.3	22.4	0.0	6.5	212.3	1.5	0.0	101.2	287.0	16.6	284.1	0.0
3/6/2010	452.9	0.0	332.6	0.5	0.0	5.8	0.0	230.9	22.4	0.0	6.6	212.5	1.5	0.0	100.7	286.7	16.6	283.9	0.0
3/7/2010	453.1	0.0	397.7	0.5	0.0	6.0	0.0	300.5	22.4	0.0	7.1	230.4	1.5	0.0	101.2	287.2	16.6	284.2	0.0
3/8/2010	551.7	0.0	423.2	0.5	0.0	6.1	0.0	369.9	22.4	0.0	8.6	295.3	1.5	0.0	101.7	323.4	16.6	315.9	0.0
3/9/2010	687.4	0.0	499.9	0.5	0.0	6.0	0.0	384.1	22.4	0.0	9.0	353.5	1.5	0.0	101.3	384.8	16.6	377.4	0.0
3/10/2010	731.7	0.0	634.9	0.5	0.0	6.1	93.0	396.7	22.4	0.0	11.6	362.1	1.5	0.0	102.5	418.1	16.6	413.7	0.0
3/11/2010	731.5	0.0	688.0	0.5	0.0	6.1	139.0	461.4	22.4	0.0	13.4	417.3	1.5	0.0	92.3	421.4	16.6	417.0	0.0
3/12/2010	764.9	0.0	691.8	0.5	0.0	6.0	140.0	484.7	22.4	0.0	15.5	454.5	1.5	0.0	93.3	484.4	16.6	479.8	0.0
3/13/2010	892.2	0.0	724.9	0.5	0.0	6.1	142.0	493.3	22.4	0.0	16.4	459.9	1.5	0.0	96.8	509.4	16.6	505.0	0.0
3/14/2010	891.3	0.0	842.3	0.5	0.0	6.2	140.0	562.1	22.4	0.0	23.4	492.9	1.5	0.0	99.7	522.2	16.6	516.7	0.0
3/15/2010	948.6	84.0	843.3	0.5	0.0	6.2	144.0	624.4	22.4	0.0	27.2	602.3	1.5	0.0	100.6	604.4	16.6	594.9	0.0
3/16/2010	1259.7	165.0	831.9	0.5	0.0	6.1	148.0	607.6	22.4	0.0	28.7	599.7	1.5	0.0	99.5	647.9	16.6	643.3	0.0
3/17/2010	1325.0	154.0	1044.9	0.5	0.0	6.3	149.0	706.1	22.4	0.0	41.3	607.4	1.5	0.0	98.4	634.5	16.6	630.1	0.0
3/18/2010	1220.2	142.0	1106.2	0.5	27.4	6.6	148.0	846.3	22.4	0.0	50.9	810.5	1.5	0.0	100.1	782.2	16.6	769.8	0.0
3/19/2010	1135.3	142.0	1020.8	0.5	27.0	6.1	149.0	822.3	22.4	0.0	49.9	843.5	1.5	0.0	99.8	884.7	16.6	877.5	0.0
3/20/2010	1197.7	142.0	950.6	0.5	0.0	5.4	148.0	745.0	22.4	0.0	38.0	759.2	1.5	0.0	91.5	820.1	16.6	817.1	0.0
3/21/2010	1316.3	140.0	1013.3	0.5	0.0	5.1	148.0	742.3	22.4	0.0	37.9	706.6	1.5	0.0	88.3	742.3	16.6	739.3	0.0
3/22/2010	1313.5	146.0	1119.0	0.5	0.0	5.5	212.0	771.7	22.4	0.0	45.8	741.9	1.5	0.0	88.2	757.3	16.6	751.7	0.0
3/23/2010	1524.5	152.0	1136.2	0.5	0.0	5.8	255.0	767.8	22.4	0.0	45.0	776.2	1.5	0.0	83.7	795.4	16.6	788.4	0.0
3/24/2010	1877.8	262.0	1259.7	0.5	0.0	5.7	298.0	795.9	22.4	0.0	48.9	795.9	1.5	0.0	72.7	769.9	16.6	758.2	0.0
3/25/2010	1792.0	320.0	1483.1	0.5	10.6	5.6	457.0	864.4	22.4	0.0	58.8	813.8	1.5	0.0	79.8	801.2	16.6	795.8	0.0
3/26/2010	1701.1	303.0	1396.9	0.5	0.0	5.6	517.0	805.9	22.4	0.0	54.0	853.8	1.5	0.0	83.4	904.8	16.6	897.9	0.0
3/27/2010	1702.9	280.0	1328.3	0.5	0.0	5.6	505.0	735.8	22.4	0.0	40.1	750.7	1.5	0.0	89.2	803.4	16.6	800.0	0.0
3/28/2010	1823.4	280.0	1372.2	0.5	0.0	0.0	510.0	724.1	22.4	0.0	0.0	671.8	1.5	0.0	0.0	649.1	16.6	650.1	0.0
3/29/2010	1943.8	302.0	1488.8	0.5	0.0	6.6	505.0	822.0	22.4	0.0	58.7	766.8	1.5	0.0	96.4	766.8	16.6	712.2	0.0
3/30/2010	1978.7	341.0	1542.8	0.5	0.0	6.6	500.0	909.5	22.4	0.0	59.6	885.7	1.5	0.0	103.7	886.9	16.6	877.6	0.0
3/31/2010	1998.7	396.0	1542.4	0.5	0.0	6.8	548.0	883.5	22.4	0.0	59.8	897.3	1.5	0.0	89.9	930.1	16.6	924.7	0.0
4/1/2010	1985.1	437.0	1508.6	0.5	0.0	6.9	610.0	801.9	22.4	0.0	56.0	833.9	1.5	0.0	85.3	882.7	16.6	879.3	0.0
4/2/2010	1887.1	451.0	1451.2	0.5	14.6	7.0	682.0	689.5	22.4	0.0	46.5	729.6	1.5	0.0	99.2	809.2	16.6	806.2	0.0
4/3/2010	1821.3	402.0	1382.4	0.5	0.0	7.4	647.0	649.3	22.4	0.0	40.6	656.6	1.5	0.0	102.4	717.1	16.6	712.9	0.0
4/4/2010	1823.8	373.0	1363.1	0.5	0.0	10.2	608.0	652.2	22.4	0.0	40.2	637.5	1.5	0.0	123.3	697.7	16.6	692.7	0.0
4/5/2010	1936.0	384.0	1401.1	0.5	0.0	8.8	600.0	672.1	22.4	0.0	44.1	652.8	1.5	0.0	117.0	702.8	16.6	697.9	0.0
4/6/2010	2036.0	411.0	1479.5	0.5	0.0	14.3	627.0	714.5	22.4	0.0	46.1	687.8	1.5	0.0	113.8	724.1	16.6	718.5	0.0
4/7/2010	2153.9	469.0	1556.9	0.5	0.0	10.1	668.0	748.5	22.4	0.0	54.2	734.8	1.5	0.0	110.0	734.8	16.6	761.9	0.0
4/8/2010	2166.7	510.0	1590.2	0.5	0.0	10.2	699.0	770.4	22.4	0.0	55.4	766.2	1.5	0.0	110.1	804.4	16.6	797.7	0.0
4/9/2010	1954.1	476.7	1541.1	0.5	63.1	11.1	772.0	693.9	22.4	0.0	54.4	731.6	1.5	0.0	100.8	801.9	16.6	798.2	0.0
4/10/2010	1837.6	406.0	1419.2	0.5	0.0	12.7	785.0	574.4	22.4	0.0	40.0	623.3	1.5	7.4	105.6	725.0	16.6	722.2	0.0
4/11/2010	1840.8	394.0	1366.6	0.5	0.0	13.2	720.0	558.4	22.4	0.0	34.9	547.9	1.5	0.0	115.0	618.8	16.6	616.0	0.0
4/12/2010	1785.7	404.0	1374.4	0.5	0.0	14.1	719.0	558.5	22.4	0.0	38.3	542.1	1.5	0.0	105.5	599.9	16.6	596.5	0.0
4/13/2010	1739.7	430.0	1295.6	0.5	0.0	17.5	672.0	560.4	22.4	0.0	36.5	563.1	1.5	0.0	113.6	615.0	16.6	608.6	0.0
4/14/2010	1718.8	462.0	1238.2	0.5	0.0	16.6	582.0	585.4	22.4	0.0	38.0	563.2	1.5	0.0	121.7	618.0	16.6	613.0	0.0
4/15/2010	1668.3	502.0	1171.1	0.5	4.3	15.3	537.0	575.2	22.4	0.0	42.1	577.5	1.5	0.0	122.9	647.5	16.6	642.4	0.0
4/16/2010	1416.3	474.0	1064.7	0.5	121.9	15.2	542.0	497.8	22.4	0.0	36.6	530.8	1.5	0.0	112.9	624.9	16.6	622.2	0.0
4/17/2010	1227.7	446.0	868.6	0.5	86.4	15.4	593.0	306.3	22.4	0.0	37.5	420.4	1.5	75.1	104.0	548.3	16.6	546.9	5.9
4/18/2010	1232.2	381.0	765.8	0.5	0.0	19.5	479.0	266.8	22.4	0.0	30.1	277.9	1.5	0.0	110.6	421.6	16.6	422.8	17.6
4/19/2010	1070.9	330.0	803.4	0.5	62.0	18.0	496.0	229.6	22.4	0.0	16.9	241.6	1.5	0.0	100.1	339.3	16.6	337.3	0.0
4/20/2010	1028.7	307.0	703.7	0.5	0.0	17.9	463.0	237.7	22.4	0.0	20.8	241.9	1.5	0.0	57.4	270.5	16.6	272.0	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
4/21/2010	1062.8	308.9	680.7	0.5	0.0	18.3	429.0	206.6	22.4	0.0	19.9	222.5	1.5	0.0	29.6	259.1	16.6	256.9	0.0
4/22/2010	1007.9	308.0	707.9	0.5	7.5	20.1	441.0	198.7	22.4	0.0	18.3	203.1	1.5	0.0	23.7	215.0	16.6	214.8	0.0
4/23/2010	959.6	305.0	653.1	0.5	0.0	19.6	411.0	223.0	22.4	0.0	18.0	203.0	1.5	0.0	23.7	198.7	16.6	197.5	0.0
4/24/2010	937.4	243.0	663.3	0.5	0.0	18.7	371.0	228.4	22.4	0.0	17.3	215.6	1.5	0.0	37.8	223.2	16.6	217.6	0.0
4/25/2010	938.3	222.0	670.8	0.5	0.0	18.4	329.0	281.2	22.4	0.0	17.1	234.0	1.5	0.0	30.6	221.1	16.6	219.5	0.0
4/26/2010	973.9	269.0	675.8	0.5	0.0	34.3	331.0	297.5	22.4	0.0	18.8	276.4	1.5	0.0	52.4	265.0	16.6	258.5	0.0
4/27/2010	1035.2	294.1	665.7	0.5	0.0	28.4	331.0	298.4	22.4	0.0	17.5	293.3	1.5	0.0	39.4	292.4	16.6	289.1	0.0
4/28/2010	1152.3	331.0	691.0	0.5	0.0	21.1	339.0	286.6	22.4	0.0	17.6	279.3	1.5	0.0	29.9	292.7	16.6	290.5	0.0
4/29/2010	1277.4	385.0	737.8	0.5	0.0	25.9	338.0	319.2	22.4	0.0	17.9	281.9	1.5	0.0	25.3	271.7	16.6	269.5	0.0
4/30/2010	1189.0	342.0	827.4	0.5	0.0	25.2	412.0	318.1	22.4	0.0	19.0	303.1	1.5	0.0	24.7	285.1	16.6	280.5	0.0
5/1/2010	1081.2	309.0	794.3	0.5	21.6	26.1	385.0	372.0	22.4	0.0	21.3	349.5	1.5	0.0	22.3	291.7	16.6	288.7	0.0
5/2/2010	1081.1	306.0	726.1	0.5	0.0	25.7	378.0	332.3	22.4	0.0	19.8	349.7	1.5	0.0	22.3	343.2	16.6	339.4	0.0
5/3/2010	1138.5	324.6	726.1	0.5	0.0	27.5	367.0	306.6	22.4	0.0	19.6	300.9	1.5	0.0	33.8	331.6	16.6	329.6	0.0
5/4/2010	1220.7	336.0	771.1	0.5	0.0	22.5	375.0	315.2	22.4	0.0	20.2	296.0	1.5	0.0	47.1	306.6	16.6	303.4	0.0
5/5/2010	1292.9	337.9	838.3	0.5	0.0	22.4	358.0	381.3	22.4	0.0	21.4	325.6	1.5	0.0	66.7	325.9	16.6	321.2	0.0
5/6/2010	1283.2	336.0	904.1	0.5	0.0	23.5	393.0	417.6	22.4	0.0	23.2	385.8	1.5	0.0	35.8	354.6	16.6	349.1	0.0
5/7/2010	1269.0	343.8	893.0	0.5	0.0	21.5	444.0	393.1	22.4	0.0	23.3	408.8	1.5	0.0	55.9	410.4	16.6	404.5	0.0
5/8/2010	1296.2	350.0	864.6	0.5	0.0	24.9	453.0	362.7	22.4	0.0	21.9	368.9	1.5	0.0	46.5	396.4	16.6	394.9	0.0
5/9/2010	1294.6	356.0	882.3	0.5	0.0	23.5	462.0	350.0	22.4	0.0	20.5	337.2	1.5	0.0	43.0	364.2	16.6	362.2	0.0
5/10/2010	1344.3	386.0	891.1	0.5	0.0	25.6	461.0	362.6	22.4	0.0	20.4	344.5	1.5	0.0	36.4	337.0	16.6	333.9	0.0
5/11/2010	1425.5	418.0	898.1	0.5	0.0	25.4	471.0	360.0	22.4	0.0	20.6	350.6	1.5	0.0	29.3	342.1	16.6	338.7	0.0
5/12/2010	1600.2	435.0	960.7	0.5	0.0	26.8	487.0	372.4	22.4	0.0	20.7	344.3	1.5	0.0	30.4	341.9	16.6	338.8	0.0
5/13/2010	1669.8	463.1	1088.9	0.5	0.0	24.6	501.0	459.6	22.4	0.0	27.4	387.4	1.5	0.0	27.2	343.3	16.6	338.7	0.0
5/14/2010	1610.4	467.0	1133.8	0.5	0.0	25.2	593.0	456.3	22.4	0.0	32.9	463.1	1.5	0.0	27.5	425.3	16.6	416.1	0.0
5/15/2010	1524.5	404.0	1068.0	0.5	0.0	25.5	539.0	480.4	22.4	0.0	31.4	477.6	1.5	0.0	29.2	436.0	16.6	432.4	0.0
5/16/2010	1469.8	355.0	1079.7	0.5	0.0	24.9	457.0	539.9	22.4	0.0	34.5	488.6	1.5	0.0	34.2	460.4	16.6	456.4	0.0
5/17/2010	1511.9	394.0	1066.2	0.5	0.0	25.9	444.0	554.1	22.4	0.0	36.0	545.5	1.5	0.0	29.2	513.6	16.6	507.1	0.0
5/18/2010	1439.3	452.0	1021.7	0.5	33.9	25.4	459.0	520.5	22.4	0.0	34.9	532.1	1.5	0.0	30.0	522.5	16.6	518.8	0.0
5/19/2010	1502.4	503.7	918.6	0.5	0.0	25.4	462.0	436.5	22.4	0.0	36.1	483.2	1.5	9.2	25.6	489.9	16.6	487.2	0.0
5/20/2010	1590.0	543.3	941.8	0.5	0.0	24.4	518.0	348.1	22.4	0.0	23.6	367.5	1.5	0.0	31.6	424.4	16.6	424.2	8.5
5/21/2010	1535.9	500.2	981.4	0.5	0.0	24.1	590.0	311.9	22.4	0.0	24.9	323.1	1.5	0.0	29.3	342.0	16.6	340.5	0.0
5/22/2010	1464.2	420.0	1009.8	0.5	0.0	24.6	553.0	372.1	22.4	0.0	23.9	327.9	1.5	0.0	33.1	313.7	16.6	311.6	0.0
5/23/2010	1462.0	407.0	996.5	0.5	0.0	25.4	472.0	457.3	22.4	0.0	25.7	408.7	1.5	0.0	42.1	347.7	16.6	340.7	0.0
5/24/2010	1539.6	423.0	1008.0	0.5	0.0	25.5	498.0	434.1	22.4	0.0	22.9	430.3	1.5	0.0	40.7	435.9	16.6	430.5	0.0
5/25/2010	1640.2	445.0	1066.4	0.5	0.0	25.6	493.0	471.8	22.4	0.0	21.9	427.6	1.5	0.0	34.5	414.6	16.6	411.7	0.0
5/26/2010	1646.9	459.1	1121.3	0.5	0.0	28.2	534.0	495.6	22.4	0.0	31.0	473.1	1.5	0.0	32.9	442.0	16.6	436.0	0.0
5/27/2010	1561.1	437.0	1133.8	0.5	9.2	25.4	518.0	539.5	22.4	0.0	31.1	511.5	1.5	0.0	38.5	476.5	16.6	470.8	0.0
5/28/2010	1424.4	399.5	1051.9	0.5	26.5	24.7	518.0	501.0	22.4	0.0	33.0	524.0	1.5	0.0	31.0	511.8	16.6	506.8	0.0
5/29/2010	1363.2	344.0	975.4	0.5	0.0	24.6	488.0	450.8	22.4	0.0	25.9	462.0	1.5	0.0	31.9	474.2	16.6	472.4	0.0
5/30/2010	1363.1	357.0	953.3	0.5	0.0	25.6	479.0	419.2	22.4	0.0	25.1	413.9	1.5	0.0	35.5	430.1	16.6	427.8	0.0
5/31/2010	1411.0	422.0	954.2	0.5	0.0	25.2	486.0	404.3	22.4	0.0	24.3	396.5	1.5	0.0	34.8	402.3	16.6	399.0	0.0
6/1/2010	1501.5	480.0	932.4	0.5	0.0	25.4	498.0	379.3	22.4	0.0	23.2	387.2	1.5	0.0	31.4	384.0	16.6	380.7	0.0
6/2/2010	1703.2	459.9	997.3	0.5	0.0	26.0	532.0	358.5	22.4	0.0	20.3	346.7	1.5	0.0	39.6	372.5	16.6	370.1	0.0
6/3/2010	1818.4	507.0	1139.2	0.5	0.0	24.5	517.0	487.3	22.4	0.0	26.4	386.2	1.5	0.0	32.5	343.0	16.6	339.7	0.0
6/4/2010	1876.6	484.6	1240.2	0.5	0.0	25.3	596.0	524.0	22.4	0.0	32.3	502.1	1.5	0.0	32.0	456.8	16.6	446.5	0.0
6/5/2010	1920.8	433.0	1344.8	0.5	0.0	25.7	614.0	601.0	22.4	0.0	31.4	551.4	1.5	0.0	30.8	498.0	16.6	492.3	0.0
6/6/2010	1914.8	440.0	1410.3	0.5	0.0	25.9	588.0	711.1	22.4	0.0	52.2	669.3	1.5	0.0	35.8	587.9	16.6	578.3	0.0
6/7/2010	2066.6	469.0	14																

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
6/15/2010	2212.1	483.0	1588.2	0.5	0.0	29.1	550.0	932.9	22.4	0.0	69.7	935.1	1.5	0.0	31.1	879.2	16.6	871.7	0.0
6/16/2010	2139.8	496.4	1622.0	0.5	0.0	28.7	553.0	970.3	22.4	0.0	71.1	960.3	1.5	0.0	30.0	903.5	16.6	897.1	0.0
6/17/2010	2246.9	491.1	1584.1	0.5	0.0	27.6	565.0	919.6	22.4	0.0	74.7	958.2	1.5	0.0	35.6	942.9	16.6	937.4	0.0
6/18/2010	2138.7	481.0	1660.5	0.5	2.3	27.5	638.0	915.5	22.4	0.0	72.4	914.0	1.5	0.0	27.7	868.4	16.6	864.2	0.0
6/19/2010	2090.4	433.0	1609.7	0.5	0.0	27.4	661.0	864.4	22.4	0.0	66.9	900.4	1.5	0.0	30.5	887.9	16.6	882.9	0.0
6/20/2010	2094.1	419.0	1597.1	0.5	0.0	27.6	689.0	812.8	22.4	0.0	61.8	835.0	1.5	0.0	34.2	818.4	16.6	814.4	0.0
6/21/2010	2190.5	487.0	1605.2	0.5	0.0	29.0	697.0	806.2	22.4	0.0	61.4	812.2	1.5	0.0	37.6	784.9	16.6	779.7	0.0
6/22/2010	2277.6	530.0	1624.8	0.5	0.0	28.4	725.0	792.1	22.4	0.0	60.1	802.3	1.5	0.0	35.2	778.1	16.6	773.2	0.0
6/23/2010	2278.8	514.1	1668.2	0.5	0.0	29.3	729.0	825.1	22.4	0.0	59.3	812.2	1.5	0.0	31.7	765.1	16.6	759.4	0.0
6/24/2010	2274.8	528.0	1663.1	0.5	0.0	30.9	753.0	816.8	22.4	0.0	59.1	828.3	1.5	0.0	31.1	797.0	16.6	791.2	0.0
6/25/2010	2360.7	532.3	1675.5	0.5	0.0	30.5	756.0	807.6	22.4	0.0	61.7	814.5	1.5	0.0	26.8	779.3	16.6	774.3	0.0
6/26/2010	2420.8	530.0	1754.7	0.5	0.0	30.9	724.0	898.2	22.4	0.0	68.1	866.2	1.5	0.0	28.1	787.6	16.6	780.1	0.0
6/27/2010	2416.6	544.0	1799.3	0.5	0.0	32.4	708.0	978.5	22.4	0.0	78.1	967.3	1.5	0.0	32.7	895.2	16.6	886.7	0.0
6/28/2010	2372.9	458.0	1807.1	0.5	0.0	33.2	703.0	992.6	22.4	0.0	77.1	1004.1	1.5	0.0	31.5	959.5	16.6	953.2	0.0
6/29/2010	2083.6	436.0	1780.9	0.5	132.8	36.6	693.0	1030.4	22.4	0.0	82.9	1033.5	1.5	0.0	47.3	985.2	16.6	977.4	0.0
6/30/2010	1734.2	405.0	1545.5	0.5	215.7	35.2	748.0	812.2	22.4	0.0	70.4	916.5	1.5	32.5	39.8	976.0	16.6	975.3	2.4
7/1/2010	1636.9	355.0	1304.4	0.5	21.9	34.4	644.0	663.9	22.4	0.0	47.9	719.8	1.5	6.5	42.2	762.8	16.6	761.5	0.0
7/2/2010	1383.9	324.0	1204.6	0.5	144.2	34.1	547.0	634.6	22.4	0.0	45.0	624.7	1.5	0.0	49.0	628.8	16.6	627.8	0.0
7/3/2010	1191.5	294.0	992.5	0.5	94.5	35.2	441.0	581.6	22.4	0.0	45.7	619.7	1.5	0.0	38.6	618.1	16.6	613.1	0.0
7/4/2010	1331.9	276.0	880.9	0.5	0.0	35.0	312.0	553.9	22.4	0.0	34.2	545.8	1.5	0.0	44.6	560.6	16.6	558.4	0.0
7/5/2010	1562.9	264.0	1042.4	0.5	0.0	34.6	313.0	585.9	22.4	0.0	33.1	513.9	1.5	0.0	44.0	531.6	16.6	529.3	0.0
7/6/2010	1722.8	294.0	1228.0	0.5	0.0	33.8	336.0	745.3	22.4	0.0	47.4	672.8	1.5	0.0	34.9	577.9	16.6	568.6	0.0
7/7/2010	1997.9	375.1	1381.7	0.5	0.0	33.0	409.0	828.2	22.4	0.0	53.2	798.6	1.5	0.0	33.2	735.8	16.6	727.3	0.0
7/8/2010	2111.8	413.0	1535.6	0.5	0.0	31.9	449.0	941.5	22.4	0.0	65.7	905.3	1.5	0.0	32.2	817.9	16.6	808.8	0.0
7/9/2010	2081.5	409.0	1601.8	0.5	0.0	32.9	644.0	857.6	22.4	0.0	63.4	901.1	1.5	0.0	30.7	896.9	16.6	892.8	0.0
7/10/2010	2101.9	417.0	1582.5	0.5	0.0	34.0	690.0	809.2	22.4	0.0	56.9	835.2	1.5	0.0	40.2	827.8	16.6	822.5	0.0
7/11/2010	1853.5	318.0	1606.4	0.5	70.4	36.6	653.0	872.1	22.4	0.0	65.5	843.6	1.5	0.0	35.3	785.9	16.6	779.7	0.0
7/12/2010	1631.3	251.0	1454.6	0.5	73.8	38.4	595.0	836.9	22.4	0.0	115.9	916.8	1.5	0.0	59.7	916.8	16.6	895.0	0.0
7/13/2010	1681.0	255.0	1320.3	0.5	0.0	38.5	549.0	736.0	22.4	0.0	53.2	786.9	1.5	0.0	49.2	829.8	16.6	828.5	0.0
7/14/2010	1777.7	275.2	1354.5	0.5	0.0	37.9	490.0	769.3	22.4	0.0	65.1	747.2	1.5	0.0	37.0	704.0	16.6	700.6	0.0
7/15/2010	1909.2	317.0	1408.8	0.5	0.0	36.6	564.0	744.4	22.4	0.0	58.6	762.1	1.5	0.0	34.5	744.8	16.6	740.7	0.0
7/16/2010	1911.1	400.3	1489.9	0.5	0.0	36.2	681.0	717.7	22.4	0.0	59.5	725.9	1.5	0.0	33.0	709.9	16.6	706.6	0.0
7/17/2010	1909.6	398.0	1471.8	0.5	0.0	35.9	707.0	688.8	22.4	0.0	49.9	707.3	1.5	0.0	37.7	702.8	16.6	697.2	0.0
7/18/2010	1907.6	380.0	1452.4	0.5	0.0	35.2	659.0	714.6	22.4	0.0	54.5	708.8	1.5	0.0	35.1	668.9	16.6	663.2	0.0
7/19/2010	2019.6	512.0	1457.9	0.5	0.0	35.0	666.0	711.5	22.4	0.0	51.5	710.4	1.5	0.0	36.9	689.3	16.6	684.8	0.0
7/20/2010	2103.8	523.0	1457.8	0.5	0.0	35.3	654.0	714.1	22.4	0.0	52.0	714.8	1.5	0.0	39.4	692.2	16.6	686.8	0.0
7/21/2010	2141.3	510.0	1521.1	0.5	0.0	36.5	637.0	774.6	22.4	0.0	59.9	749.0	1.5	0.0	48.9	707.2	16.6	700.7	0.0
7/22/2010	2097.0	456.1	1561.5	0.5	0.0	36.7	734.0	733.6	22.4	0.0	60.2	760.4	1.5	0.0	41.2	755.3	16.6	751.1	0.0
7/23/2010	1994.2	400.0	1564.2	0.5	0.0	34.7	795.0	690.6	22.4	0.0	63.4	721.5	1.5	0.0	44.6	719.1	16.6	714.5	0.0
7/24/2010	1574.4	322.0	1506.4	0.5	253.5	34.2	731.0	738.5	22.4	0.0	93.9	753.5	1.5	0.0	54.2	714.3	16.6	706.5	0.0
7/25/2010	1770.5	195.0	1249.3	0.5	0.0	34.4	616.0	612.8	22.4	0.0	73.8	724.3	1.5	36.2	54.7	769.4	16.6	764.2	0.0
7/26/2010	1247.7	124.0	1490.7	0.5	366.5	39.9	558.0	822.1	22.4	0.0	136.2	724.4	1.5	0.0	51.3	627.7	16.6	626.5	0.0
7/27/2010	1164.4	100.0	1088.3	0.5	23.4	45.3	425.0	751.5	22.4	20.4	137.6	925.7	1.5	35.1	49.2	959.6	16.6	950.1	0.0
7/28/2010	1345.3	112.0	1016.9	0.5	0.0	43.9	402.0	584.6	22.4	0.0	60.3	640.9	1.5	0.0	51.1	729.8	16.6	734.4	25.9
7/29/2010	1330.9	111.0	1172.4	0.5	0.0	36.3	432.0	620.0	22.4	0.0	67.0	582.6	1.5	0.0	50.0	585.6	16.6	583.9	0.0
7/30/2010	1243.3	108.0	1153.4	0.5	17.6	35.5	455.0	649.0	22.4	0.0	75.2	686.5	1.5	0.0	46.5	655.0	16.6	645.5	0.0
7/31/2010	1352.6	104.0	1097.0	0.5	0.0	35.7	483.0	569.9	22.4	0.0	60.5	627.7	1.5	0.0	46.9	651.8	16.6	648.7	0.0
8/1/2010	1353.7	104.0	1190.8	0.5	0.0	37.9	492.0	599.2	22.4	0.0	60.9	574.6	1.5	0.0	40.0	564.2	16.6	562.4	0.0
8/2/2010	1410.8	102.0	1198.7	0.5	0.0	38.8	478.0	649.1	22.4	0.0	59.6	654.9	1.5	0.0	42.8	615.7	16.6	607.3	0.0
8/3/2010	1557.0	190.0	1221.3	0.5	0.0	36.7	503.0	640.8	22.4	0.0	51.8	650.6	1.5	0.0	47.7	644.3	16.6	640.0	0.0
8/4/2010	1765.2	310.0	1300.4	0.5	0.0	36.3	560.0	635.4	22.4	0.0	47.0	628.8	1.5	0.0	41.5	623.3	16.6	620.1	0.0
8/5/2010	1867.5	396.0	1345.0	0.5	0.0	34.8	597.0	658.5	22.4	0.0	51.3	657.5	1.5	0.0	48.0	631.9	16.6	625.6	0.0
8/6/2010	1923.9	444.0	1368.6	0.5	0.0	32.9	670.0	615.3	22.4	0.0	43.2	632.4	1.5	0.0	41.8	639.0	16.6	635.5	0.0
8/7/2010	1971.7	435.0	1419.8	0.5	0.0	32.4	672.0	644.0	22.4	0.0	42.2	620.0	1.5	0.0	44.6	600.5	16.6	595.6	0.0
8/8/2010	1966.6	419.0	1472.9	0.5	0.0	38.5	659.0	715.2	22.4	0.0	54.0	686.5	1.5	0.0	42.6	637.6	16.6	630.4	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
8/9/2010	2110.1	502.9	1483.5	0.5	0.0	39.0	667.0	729.6	22.4	0.0	54.2	733.8	1.5	0.0	45.3	711.8	16.6	705.3	0.0
8/10/2010	2175.5	528.6	1559.9	0.5	0.0	46.7	692.0	764.7	22.4	0.0	57.3	744.0	1.5	0.0	55.0	722.4	16.6	716.9	0.0
8/11/2010	2127.4	519.0	1571.9	0.5	0.0	40.4	697.0	794.7	22.4	0.0	65.3	800.7	1.5	0.0	54.4	776.1	16.6	768.7	0.0
8/12/2010	2119.9	529.3	1527.4	0.5	0.0	36.2	725.0	735.2	22.4	0.0	58.6	771.3	1.5	0.0	50.7	783.0	16.6	778.8	0.0
8/13/2010	2058.7	526.0	1516.1	0.5	0.0	33.9	741.0	699.6	22.4	0.0	59.3	715.4	1.5	0.0	46.8	714.7	16.6	711.4	0.0
8/14/2010	1998.5	407.0	1481.4	0.5	0.0	34.0	738.0	664.2	22.4	0.0	62.2	694.3	1.5	0.0	48.3	694.5	16.6	689.7	0.0
8/15/2010	1992.6	395.0	1526.9	0.5	0.0	35.7	674.0	750.7	22.4	0.0	56.5	711.2	1.5	0.0	47.6	665.7	16.6	660.0	0.0
8/16/2010	2039.0	403.0	1532.5	0.5	0.0	33.1	655.0	784.2	22.4	0.0	62.6	785.3	1.5	0.0	55.0	761.6	16.6	754.2	0.0
8/17/2010	2083.3	416.0	1561.1	0.5	0.0	31.9	683.0	777.7	22.4	0.0	61.7	785.7	1.5	0.0	52.4	775.9	16.6	771.1	0.0
8/18/2010	2077.5	437.8	1575.4	0.5	0.0	33.3	727.0	759.3	22.4	0.0	65.2	777.9	1.5	0.0	49.2	768.6	16.6	763.5	0.0
8/19/2010	1980.4	377.0	1556.8	0.5	0.0	36.5	720.0	758.4	22.4	0.0	69.1	775.1	1.5	0.0	50.6	760.6	16.6	754.9	0.0
8/20/2010	2028.1	425.0	1526.0	0.5	0.0	38.3	680.0	770.0	22.4	0.0	64.1	778.4	1.5	0.0	50.8	762.2	16.6	756.2	0.0
8/21/2010	2107.0	433.0	1539.2	0.5	0.0	37.0	664.0	777.5	22.4	0.0	59.4	777.3	1.5	0.0	57.9	769.0	16.6	763.7	0.0
8/22/2010	2099.1	424.0	1604.9	0.5	0.0	37.1	658.0	839.1	22.4	0.0	69.7	820.8	1.5	0.0	49.9	778.0	16.6	771.5	0.0
8/23/2010	1978.6	432.0	1586.7	0.5	39.6	37.6	1586.7	864.1	22.4	0.0	69.7	873.0	1.5	0.0	76.4	869.7	16.6	862.0	0.0
8/24/2010	1719.2	243.0	1550.6	0.5	73.8	37.8	642.0	838.1	22.4	0.0	69.0	854.9	1.5	0.0	72.4	876.0	16.6	871.4	0.0
8/25/2010	1522.2	191.0	1426.5	0.5	94.7	47.4	584.0	821.1	22.4	0.0	126.3	897.9	1.5	0.0	96.6	902.4	16.6	893.5	0.0
8/26/2010	1518.8	308.0	1220.6	0.5	9.3	38.2	538.0	698.3	22.4	0.0	66.6	783.7	1.5	17.3	65.9	850.1	16.6	848.7	0.0
8/27/2010	1588.5	314.0	1162.1	0.5	0.0	37.4	506.0	606.5	22.4	0.0	53.2	631.1	1.5	0.0	49.3	674.2	16.6	675.0	0.0
8/28/2010	1609.6	303.0	1208.0	0.5	0.0	35.1	532.0	590.0	22.4	0.0	49.2	587.5	1.5	0.0	48.9	595.9	16.6	593.7	0.0
8/29/2010	1542.6	267.0	1257.8	0.5	0.0	40.9	605.0	574.0	22.4	0.0	51.9	583.0	1.5	0.0	47.1	586.4	16.6	582.3	0.0
8/30/2010	1447.1	282.0	1210.9	0.5	45.3	45.7	609.0	568.7	22.4	0.0	44.7	583.9	1.5	0.0	51.1	579.9	16.6	574.1	0.0
8/31/2010	1280.2	307.0	1069.7	0.5	96.0	40.8	627.0	458.2	22.4	0.0	42.6	525.0	1.5	22.8	51.1	561.1	16.6	558.1	0.0
9/1/2010	1262.0	338.0	907.1	0.5	0.0	38.2	673.0	268.1	22.4	0.0	38.0	383.0	1.5	75.5	51.1	468.3	16.6	468.4	17.7
9/2/2010	1293.9	385.0	833.3	0.5	0.0	36.7	683.0	145.4	22.4	0.0	31.4	237.0	1.5	58.7	53.1	347.2	16.6	349.2	42.4
9/3/2010	1424.0	472.0	845.2	0.5	0.0	36.6	670.0	128.5	22.4	0.0	30.0	152.5	1.5	0.0	60.5	248.8	16.6	249.4	19.9
9/4/2010	1638.7	498.0	916.7	0.5	0.0	37.3	631.0	190.2	22.4	0.0	31.0	150.6	1.5	0.0	58.9	187.7	16.6	187.1	0.0
9/5/2010	1624.3	489.0	1080.7	0.5	0.0	40.6	582.0	370.2	22.4	0.0	33.5	219.9	1.5	0.0	59.9	219.5	16.6	194.0	0.0
9/6/2010	1609.6	482.0	1080.4	0.5	0.0	39.4	593.0	433.0	22.4	0.0	31.8	432.2	1.5	0.0	55.8	311.0	16.6	294.0	0.0
9/7/2010	1657.8	482.0	1073.1	0.5	0.0	36.4	626.0	390.8	22.4	0.0	29.2	410.9	1.5	0.0	50.8	434.5	16.6	431.4	0.0
9/8/2010	1625.7	482.9	1109.4	0.5	0.0	36.7	673.0	367.0	22.4	0.0	28.9	365.3	1.5	0.0	48.9	399.2	16.6	397.4	0.0
9/9/2010	1310.4	458.0	1061.1	0.5	208.1	37.6	672.0	370.5	22.4	0.0	28.8	372.1	1.5	0.0	49.3	373.7	16.6	370.2	0.0
9/10/2010	950.8	253.0	924.9	0.5	226.6	39.0	924.9	362.7	22.4	0.0	28.3	375.8	1.5	0.0	50.9	378.5	16.6	375.4	0.0
9/11/2010	787.5	78.0	727.8	0.5	17.7	39.8	365.0	411.9	22.4	0.0	29.7	392.3	1.5	0.0	46.9	372.5	16.6	370.4	0.0
9/12/2010	610.9	22.0	672.9	0.5	83.5	41.8	253.0	408.0	22.4	0.0	29.8	386.5	1.5	0.0	46.0	408.4	16.6	404.2	0.0
9/13/2010	523.6	0.0	570.2	0.5	46.1	41.3	174.0	431.2	22.4	0.0	33.6	426.2	1.5	0.0	46.4	400.7	16.6	394.2	0.0
9/14/2010	493.3	0.0	503.6	0.5	9.8	35.7	164.0	355.0	22.4	0.0	28.9	389.3	1.5	3.9	45.0	429.1	16.6	426.1	0.0
9/15/2010	470.0	0.0	469.4	0.5	0.0	34.7	162.0	306.8	22.4	0.0	29.6	332.5	1.5	0.0	43.9	368.7	16.6	367.5	0.0
9/16/2010	408.7	0.0	445.1	0.5	35.9	35.0	176.0	268.4	22.4	0.0	26.2	291.4	1.5	0.0	42.0	327.6	16.6	326.3	0.0
9/17/2010	381.2	0.0	402.5	0.5	20.8	36.9	186.0	236.3	22.4	0.0	25.1	257.8	1.5	0.0	41.0	290.9	16.6	289.7	0.0
9/18/2010	403.9	0.0	377.8	0.5	0.0	34.4	186.0	197.1	22.4	0.0	24.2	229.8	1.5	7.1	39.9	263.2	16.6	261.5	0.0
9/19/2010	404.9	0.0	388.2	0.5	0.0	32.5	144.0	221.4	22.4	0.0	23.1	201.8	1.5	0.0	38.9	236.5	16.6	235.4	0.0
9/20/2010	484.5	0.0	386.5	0.5	0.0	31.8	128.0	239.6	22.4	0.0	22.6	227.2	1.5	0.0	38.5	218.5	16.6	215.6	0.0
9/21/2010	564.1	0.0	436.2	0.5	0.0	33.0	169.0	212.8	22.4	0.0	24.0	235.7	1.5	0.0	40.0	243.7	16.6	240.0	0.0
9/22/2010	562.2	0.0	516.5	0.5	0.0	32.0	204.0	233.9	22.4	0.0	23.2	214.4	1.5	0.0	39.8	243.5	16.6	242.0	0.0
9/23/2010	402.9	0.0	528.0	0.5	124.6	33.5	204.0	297.5	22.4	0.0	23.7	252.1	1.5	0.0	38.6	229.3	16.6	226.3	0.0
9/24/2010	279.6	0.0	416.2	0.5	136.0	34.1	154.0	325.2	22.4	6.4	22.7	308.3	1.5	0.0	31.1	278.3	16.6	271.8	0.0
9/25/2010	278.9	0.0	339.3	0.5	59.8	33.3	130.0	249.6	22.4	0.0	22.0	290.3	1.5	17.2	25.8	311.1	16.6	307.0	0.0
9/26/2010	278.0	0.0	307.4	0.5	29.0	32.1	131.0	196.7	22.4	0.0	21.3	235.7	1.5	16.3	27.5	267.8	16.6	267.8	0.0
9/27/2010	277.0	0.0	307.0	0.5	29.4	30.7	128.0	172.4	22.4	0.0	20.9	190.4	1.5	0.0	36.1	235.7	16.6	234.5	0.0
9/28/2010	347.7	0.0	306.6	0.5	0.0	30.0	130.0	169.2	22.4	0.0	20.7	175.9	1.5	0.0	25.0	188.8	16.6	189.3	0.0
9/29/2010	467.2	0.0	325.1	0.5	0.0	29.7	133.0	165.2	22.4	0.0	21.0	172.9	1.5	0.0	29.0	182.3	16.6	180.0	0.0
9/30/2010	422.4	0.0	407.2	0.5	0.0	29.2	144.0	174.0	22.4	0.0	21.2	169.0	1.5	0.0	35.9	185.8	16.6	183.5	0.0
10/1/2010	403.7	0.0	415.3	0.5	11.0	29.0	0.0	394.7	22.4	0.0	20.7	199.9	1.5	0.0	33.5	182.4	16.6	180.3	0.0
10/2/2010	483.3	0.0	389.4	0.5	0.0	28.3	0.0	379.7	22.4	0.0	20.3	381.5	1.5	0.0	39.1	292.1	16.6	268.1	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
10/3/2010	481.2	0.0	433.9	0.5	0.0	28.0	0.0	367.2	22.4	0.0	19.9	359.3	1.5	0.0	39.9	372.5	16.6	370.5	0.0
10/4/2010	476.2	0.0	450.3	0.5	0.0	28.0	0.0	422.0	22.4	0.0	19.1	372.7	1.5	0.0	37.7	356.2	16.6	353.3	0.0
10/5/2010	390.7	0.0	446.1	0.5	54.9	27.7	0.0	422.3	22.4	0.0	19.6	406.8	1.5	0.0	34.5	392.2	16.6	386.5	0.0
10/6/2010	299.3	0.0	394.8	0.5	95.0	27.1	0.0	412.8	22.4	0.0	19.9	403.9	1.5	0.0	20.7	388.2	16.6	385.2	0.0
10/7/2010	195.1	0.0	341.8	0.5	146.2	27.3	0.0	364.1	22.4	0.0	18.6	371.7	1.5	0.0	20.2	379.1	16.6	376.4	0.0
10/8/2010	78.4	0.0	52.2	0.5	0.0	27.2	0.0	113.4	22.4	11.6	17.9	144.5	1.5	11.8	18.4	166.7	16.6	177.1	0.0
10/9/2010	78.4	0.0	23.0	0.5	0.0	27.5	0.0	76.3	22.4	3.3	17.3	105.6	1.5	10.6	17.1	133.5	16.6	144.2	4.8
10/10/2010	78.5	0.0	6.7	0.5	0.0	26.7	0.0	51.1	22.4	0.0	16.8	77.7	1.5	8.3	16.3	98.0	16.6	108.9	0.0
10/11/2010	78.5	0.0	4.4	0.5	0.0	25.6	0.0	35.9	22.4	0.0	16.0	55.3	1.5	2.0	15.8	75.6	16.6	86.1	0.0
10/12/2010	78.6	0.0	4.3	0.5	0.0	23.7	0.0	32.6	22.4	0.0	15.0	45.2	1.5	0.0	14.9	57.4	16.6	67.5	0.0
10/13/2010	78.6	0.0	4.3	0.5	0.0	21.9	0.0	30.8	22.4	0.0	14.0	42.1	1.5	0.0	14.4	49.9	16.6	59.6	0.0
10/14/2010	78.7	0.0	4.4	0.5	0.0	20.9	0.0	29.3	22.4	0.0	17.7	42.2	1.5	0.0	13.6	46.7	16.6	56.4	0.0
10/15/2010	78.7	0.0	4.3	0.5	0.0	20.2	0.0	28.5	22.4	0.0	31.4	50.8	1.5	0.0	13.2	47.2	16.6	56.6	0.0
10/16/2010	78.8	0.0	4.3	0.5	0.0	20.8	0.0	28.4	22.4	0.0	47.7	65.8	1.5	0.0	12.9	56.8	16.6	65.6	0.0
10/17/2010	78.8	0.0	4.4	0.5	0.0	20.2	0.0	28.5	22.4	0.0	51.9	73.4	1.5	0.0	12.5	70.3	16.6	79.1	0.0
10/18/2010	78.9	0.0	4.3	0.5	0.0	17.4	0.0	27.2	22.4	0.0	61.9	81.3	1.5	0.0	17.9	79.3	16.6	88.0	0.0
10/19/2010	79.0	0.0	4.4	0.5	0.0	15.1	0.0	24.9	22.4	0.0	71.4	88.9	1.5	0.0	23.1	92.4	16.6	100.9	0.0
10/20/2010	79.0	0.0	4.4	0.5	0.0	14.5	0.0	23.4	22.4	0.0	78.9	94.8	1.5	0.0	23.5	100.4	16.6	109.2	0.0
10/21/2010	80.0	0.0	4.5	0.5	0.0	14.2	0.0	23.0	22.4	0.0	84.6	99.8	1.5	0.0	22.4	104.9	16.6	113.7	0.0
10/22/2010	80.0	0.0	4.4	0.5	0.0	14.1	0.0	22.8	22.4	0.0	87.2	102.8	1.5	0.0	22.2	108.8	16.6	117.7	0.0
10/23/2010	80.0	0.0	4.6	0.5	0.0	13.7	0.0	22.7	22.4	0.0	89.8	105.2	1.5	0.0	21.7	110.5	16.6	119.5	0.0
10/24/2010	80.0	0.0	4.7	0.5	0.0	12.4	0.0	22.2	22.4	0.0	94.9	109.2	1.5	0.0	21.2	112.3	16.6	121.2	0.0
10/25/2010	80.0	0.0	4.6	0.5	0.0	12.0	0.0	21.3	22.4	0.0	98.9	112.9	1.5	0.0	20.7	116.0	16.6	124.8	0.0
10/26/2010	77.8	0.0	4.7	0.5	0.0	11.6	0.0	21.0	22.4	0.0	101.3	115.0	1.5	0.0	20.1	118.2	16.6	127.2	0.0
10/27/2010	77.9	0.0	4.7	0.5	0.0	11.2	0.0	20.5	22.4	0.0	106.1	118.7	1.5	0.0	19.5	119.5	16.6	128.3	0.0
10/28/2010	77.9	0.0	4.3	0.5	0.0	10.9	0.0	20.1	22.4	0.0	110.0	122.3	1.5	0.0	18.9	122.7	16.6	131.5	0.0
10/29/2010	78.0	0.0	4.2	0.5	0.0	10.9	0.0	19.7	22.4	0.0	116.2	127.4	1.5	0.0	18.4	125.5	16.6	134.4	0.0
10/30/2010	77.9	0.0	4.2	0.5	0.0	10.6	0.0	19.6	22.4	0.0	122.5	133.1	1.5	0.0	18.7	130.5	16.6	139.2	0.0
10/31/2010	78.0	0.0	4.2	0.5	0.0	10.4	0.0	19.4	22.4	0.0	126.9	137.7	1.5	0.0	18.1	135.4	16.6	144.1	0.0
11/1/2010	78.1	0.0	4.3	0.5	0.0	10.3	0.0	19.2	22.4	0.0	140.8	148.6	1.5	0.0	17.2	138.8	16.6	147.5	0.0
11/2/2010	78.1	0.0	4.2	0.5	0.0	9.6	0.0	18.9	22.4	0.0	146.7	156.2	1.5	0.0	17.5	150.2	16.6	158.5	0.0
11/3/2010	78.2	0.0	4.2	0.5	0.0	9.3	0.0	18.4	22.4	0.0	147.2	157.8	1.5	0.0	16.1	154.5	16.6	163.3	0.0
11/4/2010	78.2	0.0	4.2	0.5	0.0	10.3	0.0	18.5	22.4	0.0	156.0	163.9	1.5	0.0	18.1	163.3	16.6	164.9	0.0
11/5/2010	78.2	0.0	4.3	0.5	0.0	11.3	0.0	19.4	22.4	0.0	159.5	169.2	1.5	0.0	17.0	163.1	16.6	171.6	0.0
11/6/2010	78.3	0.0	4.3	0.5	0.0	12.5	0.0	20.4	22.4	0.0	160.3	171.4	1.5	0.0	16.8	166.4	16.6	175.0	0.0
11/7/2010	78.3	0.0	4.3	0.5	0.0	11.5	0.0	21.0	22.4	0.0	161.3	173.4	1.5	0.0	16.5	167.8	16.6	176.5	0.0
11/8/2010	78.3	0.0	4.3	0.5	0.0	11.3	0.0	20.2	22.4	0.0	168.0	178.3	1.5	0.0	16.1	178.3	16.6	178.2	0.0
11/9/2010	78.3	0.0	4.3	0.5	0.0	11.4	0.0	20.1	22.4	0.0	177.0	186.1	1.5	0.0	16.2	175.3	16.6	183.6	0.0
11/10/2010	78.4	0.0	4.3	0.5	0.0	16.1	0.0	21.3	22.4	0.0	181.7	191.7	1.5	0.0	14.8	181.6	16.6	190.1	0.0
11/11/2010	78.4	0.0	4.3	0.5	0.0	16.4	0.0	24.3	22.4	0.0	185.5	198.1	1.5	0.0	15.3	186.2	16.6	194.5	0.0
11/12/2010	78.5	0.0	4.3	0.5	0.0	17.2	0.0	24.8	22.4	0.0	188.6	202.9	1.5	0.0	14.9	192.5	16.6	200.8	0.0
11/13/2010	78.5	0.0	4.3	0.5	0.0	22.3	0.0	27.0	22.4	0.0	191.4	206.2	1.5	0.0	14.4	195.4	16.6	203.7	0.0
11/14/2010	78.5	0.0	4.4	0.5	0.0	27.4	0.0	31.6	22.4	0.0	195.1	213.0	1.5	0.0	14.3	199.0	16.6	207.3	0.0
11/15/2010	79.0	0.0	4.4	0.5	0.0	36.7	0.0	37.5	22.4	0.0	197.6	220.0	1.5	0.0	14.0	205.8	16.6	213.9	0.0
11/16/2010	79.4	0.0	4.4	0.5	0.0	45.3	0.0	45.9	22.4	0.0	194.7	225.7	1.5	0.0	11.8	210.9	16.6	219.2	0.0
11/17/2010	79.3	0.0	4.5	0.5	0.0	45.0	0.0	50.8	22.4	0.0	192.7	230.9	1.5	0.0	17.4	219.4	16.6	227.4	0.0
11/18/2010	79.4	0.0	4.5	0.5	0.0	45.2	0.0	50.6	22.4	0.0	190.0	229.8	1.5	0.0	11.3	218.8	16.6	227.5	0.0
11/19/2010	79.5	0.0	4.5	0.5	0.0	49.3	0.0	52.0	22.4	0.0	191.3	230.3	1.5	0.0	11.6	216.0	16.6	224.3	0.0
11/20/2010	79.4	0.0	4.5	0.5	0.0	55.6	0.0	56.2	22.4	0.0	195.0	235.9	1.5	0.0	11.4	218.1	16.6	226.3	0.0
11/21/2010	79.6	0.0	4.6	0.5	0.0	61.0	0.0	61.7	22.4	0.0	193.6	240.4	1.5	0.0	11.0	223.5	16.6	231.8	0.0
11/22/2010	79.7	0.0	4.6	0.5	0.0	60.8	0.0	65.0	22.4	0.0	193.3	244.5	1.5	0.0	10.8	227.1	16.6	235.3	0.0
11/23/2010	79.8	0.0	4.6	0.5	0.0	64.0	0.0	65.7	22.4	0.0	194.5	246.6	1.5	0.0	10.6	230.4	16.6	238.6	0.0
11/24/2010	79.8	0.0	4.7	0.5	0.0	63.3	0.0	67.5	22.4	0.0	196.3	250.0	1.5	0.0	10.5	231.9	16.6	240.1	0.0
11/25/2010	79.8	0.0	4.7	0.5	0.0	63.3	0.0	67.2	22.4	0.0	194.3	249.3	1.5	0.0	10.0	234.1	16.6	242.5	0.0
11/26/2010	79.7	0.0	4.7	0.5	0.0	64.3	0.0	67.3	22.4	0.0	194.7	249.0	1.5	0.0	9.5	232.0	16.6	240.3	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
11/27/2010	79.7	0.0	4.7	0.5	0.0	65.6	0.0	68.2	22.4	0.0	194.8	249.6	1.5	0.0	9.8	232.5	16.6	240.8	0.0
11/28/2010	79.7	0.0	4.6	0.5	0.0	61.1	0.0	67.9	22.4	0.0	195.1	250.9	1.5	0.0	10.0	233.6	16.6	241.8	0.0
11/29/2010	79.8	0.0	4.7	0.5	0.0	60.9	0.0	64.8	22.4	0.0	194.9	248.5	1.5	0.0	10.4	234.3	16.6	242.7	0.0
11/30/2010	79.8	0.0	4.6	0.5	0.0	59.9	0.0	64.3	22.4	0.0	191.9	244.7	1.5	0.0	10.0	230.4	16.6	238.9	0.0
12/1/2010	79.9	0.0	4.6	0.5	0.0	49.8	0.0	61.0	22.4	0.0	192.2	243.7	1.5	0.0	8.8	226.9	16.6	235.3	0.0
12/2/2010	80.2	0.0	4.7	0.5	0.0	48.1	0.0	53.9	22.4	0.0	181.1	53.9	1.5	0.0	9.0	223.4	16.6	232.4	0.0
12/3/2010	80.2	0.0	4.7	0.5	0.0	50.4	0.0	53.5	22.4	0.0	176.2	219.2	1.5	0.0	9.1	208.0	16.6	216.8	0.0
12/4/2010	80.2	0.0	4.8	0.5	0.0	56.2	0.0	56.4	22.4	0.0	185.1	225.8	1.5	0.0	8.9	204.1	16.6	212.3	0.0
12/5/2010	80.3	0.0	4.7	0.5	0.0	58.7	0.0	60.9	22.4	0.0	184.7	231.5	1.5	0.0	8.8	212.7	16.6	221.0	0.0
12/6/2010	80.4	0.0	4.8	0.5	0.0	27.2	0.0	53.6	22.4	0.0	184.2	233.9	1.5	0.0	8.5	216.2	16.6	224.6	0.0
12/7/2010	80.2	0.0	4.8	0.5	0.0	5.0	0.0	25.7	22.4	0.0	68.7	132.9	1.5	37.1	8.6	198.2	16.6	211.2	52.9
12/8/2010	80.2	0.0	4.8	0.5	0.0	5.0	0.0	13.2	22.4	0.0	5.0	45.5	1.5	25.8	8.6	94.4	16.6	108.9	38.2
12/9/2010	80.2	0.0	4.8	0.5	0.0	5.3	0.0	13.2	22.4	0.0	5.0	15.5	1.5	0.0	8.6	33.7	16.6	46.7	6.0
12/10/2010	80.3	0.0	4.8	0.5	0.0	6.4	0.0	13.5	22.4	0.0	5.0	15.4	1.5	0.0	8.6	18.4	16.6	28.2	0.0
12/11/2010	80.4	0.0	4.8	0.5	0.0	5.5	0.0	14.0	22.4	0.0	5.0	15.9	1.5	0.0	8.4	18.3	16.6	28.0	0.0
12/12/2010	80.5	0.0	4.8	0.5	0.0	5.5	0.0	13.3	22.4	0.0	4.8	15.9	1.5	0.0	8.4	18.7	16.6	28.4	0.0
12/13/2010	80.6	0.0	4.8	0.5	0.0	7.3	0.0	13.8	22.4	0.0	4.9	15.5	1.5	0.0	8.0	18.2	16.6	28.0	0.0
12/14/2010	80.6	0.0	4.8	0.5	0.0	6.8	0.0	14.8	22.4	0.0	5.2	16.3	1.5	0.0	8.3	18.1	16.6	27.7	0.0
12/15/2010	80.7	0.0	4.8	0.5	0.0	10.3	0.0	15.4	22.4	0.0	6.9	17.8	1.5	0.0	9.6	19.3	16.6	28.9	0.0
12/16/2010	80.7	0.0	4.8	0.5	0.0	11.6	0.0	18.0	22.4	0.0	8.0	20.5	1.5	0.0	9.5	21.0	16.6	30.7	0.0
12/17/2010	80.6	0.0	4.8	0.5	0.0	10.2	0.0	18.4	22.4	0.0	7.0	22.3	1.5	0.0	9.2	24.1	16.6	33.6	0.0
12/18/2010	80.7	0.0	4.8	0.5	0.0	10.9	0.0	17.6	22.4	0.0	6.8	21.7	1.5	0.0	8.9	24.7	16.6	34.4	0.0
12/19/2010	67.2	0.0	4.8	0.5	0.0	16.3	0.0	19.5	22.4	0.0	8.8	22.4	1.5	0.0	9.0	23.9	16.6	33.7	0.0
12/20/2010	80.7	0.0	4.8	0.5	0.0	24.5	0.0	25.8	22.4	0.0	8.8	25.6	1.5	0.0	8.8	25.2	16.6	34.8	0.0
12/21/2010	80.7	0.0	2.5	0.5	0.0	30.6	0.0	32.4	22.4	0.0	8.3	31.5	1.5	0.0	8.7	28.3	16.6	37.7	0.0
12/22/2010	80.9	0.0	4.4	0.5	0.0	34.1	0.0	35.2	22.4	0.0	8.2	36.7	1.5	0.0	8.6	33.9	16.6	43.2	0.0
12/23/2010	81.0	0.0	4.9	0.5	0.0	35.1	0.0	39.2	22.4	0.0	8.7	39.3	1.5	0.0	8.1	37.7	16.6	47.1	0.0
12/24/2010	81.0	0.0	4.8	0.5	0.0	35.5	0.0	40.3	22.4	0.0	8.8	42.9	1.5	0.0	7.8	39.8	16.6	49.2	0.0
12/25/2010	81.1	0.0	4.9	0.5	0.0	39.3	0.0	41.8	22.4	0.0	9.1	43.8	1.5	0.0	7.3	42.0	16.6	51.5	0.0
12/26/2010	81.1	0.0	4.9	0.5	0.0	41.5	0.0	44.7	22.4	0.0	9.6	46.2	1.5	0.0	6.8	42.2	16.6	51.8	0.0
12/27/2010	81.1	0.0	4.9	0.5	0.0	44.9	0.0	47.1	22.4	0.0	10.2	49.2	1.5	0.0	6.9	45.0	16.6	54.3	0.0
12/28/2010	81.1	0.0	4.9	0.5	0.0	46.4	0.0	49.6	22.4	0.0	10.5	52.1	1.5	0.0	7.6	47.9	16.6	57.2	0.0
12/29/2010	81.1	0.0	5.0	0.5	0.0	47.3	0.0	50.8	22.4	0.0	10.1	53.8	1.5	0.0	6.6	50.1	16.6	59.5	0.0
12/30/2010	81.2	0.0	4.9	0.5	0.0	48.2	0.0	51.6	22.4	0.0	10.8	55.0	1.5	0.0	6.3	50.7	16.6	60.2	0.0
12/31/2010	81.1	0.0	4.9	0.5	0.0	50.0	0.0	52.7	22.4	0.0	11.5	56.3	1.5	0.0	6.4	51.9	16.6	61.4	0.0
1/1/2011	81.2	0.0	4.9	0.5	0.0	51.1	0.0	54.0	22.4	0.0	12.1	58.2	1.5	0.0	6.4	53.3	16.6	62.6	0.0
1/2/2011	81.3	0.0	4.9	0.5	0.0	53.3	0.0	55.3	22.4	0.0	12.7	59.8	1.5	0.0	6.0	54.9	16.6	64.2	0.0
1/3/2011	81.3	0.0	4.9	0.5	0.0	55.7	0.0	57.4	22.4	0.0	13.0	61.6	1.5	0.0	6.6	56.3	16.6	65.6	0.0
1/4/2011	81.4	0.0	5.0	0.5	0.0	55.8	0.0	58.9	22.4	0.0	13.2	63.9	1.5	0.0	6.3	58.2	16.6	67.5	0.0
1/5/2011	81.4	0.0	5.0	0.5	0.0	55.5	0.0	58.9	22.4	0.0	13.1	64.7	1.5	0.0	6.2	60.0	16.6	69.3	0.0
1/6/2011	88.4	0.0	5.0	0.5	0.0	54.7	0.0	58.5	22.4	0.0	13.2	64.6	1.5	0.0	6.0	60.2	16.6	69.7	0.0
1/7/2011	108.6	0.0	5.1	0.5	0.0	55.0	0.0	58.0	22.4	0.0	14.7	65.0	1.5	0.0	5.8	59.9	16.6	69.3	0.0
1/8/2011	108.6	0.0	6.4	0.5	0.0	55.9	0.0	58.5	22.4	0.0	14.9	65.6	1.5	0.0	6.0	60.5	16.6	69.8	0.0
1/9/2011	108.6	0.0	9.5	0.5	0.0	56.0	0.0	60.1	22.4	0.0	14.0	65.8	1.5	0.0	6.1	60.9	16.6	70.4	0.0
1/10/2011	109.3	0.0	10.0	0.5	0.0	56.5	0.0	62.8	22.4	0.0	13.2	66.8	1.5	0.0	6.8	61.8	16.6	71.1	0.0
1/11/2011	110.3	0.0	10.0	0.5	0.0	57.3	0.0	64.0	22.4	0.0	13.1	68.9	1.5	0.0	6.0	62.6	16.6	71.9	0.0
1/12/2011	109.5	0.0	10.1	0.5	0.0	57.4	0.0	64.6	22.4	0.0	13.7	69.9	1.5	0.0	5.7	63.9	16.6	73.3	0.0
1/13/2011	107.9	0.0	10.2	0.5	0.0	58.2	0.0	65.0	22.4	0.0	14.8	71.1	1.5	0.0	7.4	65.9	16.6	75.2	0.0
1/14/2011	108.1	0.0	10.2	0.5	0.0	58.5	0.0	65.7	22.4	0.0	15.2	72.3	1.5	0.0	8.5	68.4	16.6	77.6	0.0
1/15/2011	108.1	0.0	9.9	0.5	0.0	58.3	0.0	65.7	22.4	0.0	15.4	72.9	1.5	0.0	8.1	69.3	16.6	78.6	0.0
1/16/2011	108.3	0.0	9.9	0.5	0.0	58.3	0.0	65.4	22.4	0.0	15.0	72.6	1.5	0.0	8.1	69.6	16.6	78.9	0.0
1/17/2011	108.3	0.0	9.9	0.5	0.0	0.0	0.0	47.9	22.4	15.6	0.0	62.2	1.5	12.8	2.8	66.4	16.6	76.3	0.0
1/18/2011	108.3	0.0	9.9	0.5	0.0	35.0	0.0	21.9	22.4	0.0	14.4	37.3	1.5	0.0	5.9	53.5	16.6	63.5	3.6
1/19/2011	60.5	0.0	9.9	0.5	0.0	14.0	0.0	36.7	22.4	0.0	13.7	39.6	1.5	0.0	5.5	30.5	16.6	41.4	0.0
1/20/2011	42.4	0.0	9.6	0.5	0.0	8.6	0.0	22.7	22.4	0.0	12.9	40.5	1.5	3.4	5.4	41.7	16.6	50.1	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
1/21/2011	0.0	0.0	2.7	0.5	2.2	6.7	0.0	18.9	22.4	0.0	13.9	31.0	1.5	0.0	5.3	34.6	16.6	45.1	0.0
1/22/2011	0.0	0.0	2.9	0.5	2.4	9.8	0.0	12.9	22.4	0.0	15.0	28.4	1.5	0.0	5.2	28.6	16.6	38.4	0.0
1/23/2011	0.0	0.0	3.1	0.5	2.6	12.4	0.0	15.4	22.4	0.0	17.4	25.7	1.5	0.0	5.1	25.8	16.6	35.7	0.0
1/24/2011	0.0	0.0	3.2	0.5	2.7	17.6	0.0	18.5	22.4	0.0	18.6	30.0	1.5	0.0	4.6	24.7	16.6	34.1	0.0
1/25/2011	0.0	0.0	3.2	0.5	2.7	18.8	0.0	22.2	22.4	0.0	19.6	34.3	1.5	0.0	4.2	28.0	16.6	37.4	0.0
1/26/2011	21.9	0.0	3.2	0.5	0.0	13.7	0.0	21.6	22.4	0.0	22.0	38.9	1.5	0.0	4.1	32.1	16.6	41.4	0.0
1/27/2011	138.0	0.0	3.2	0.5	0.0	5.4	0.0	16.1	22.4	0.0	17.0	35.2	1.5	0.6	4.7	36.0	16.6	45.4	0.0
1/28/2011	92.5	0.0	3.2	0.5	0.0	4.5	0.0	10.6	22.4	0.0	18.5	28.5	1.5	0.0	5.2	31.1	16.6	41.2	0.0
1/29/2011	92.5	0.0	11.8	0.5	0.0	7.1	0.0	10.6	22.4	0.0	18.7	25.6	1.5	0.0	5.4	26.2	16.6	36.1	0.0
1/30/2011	92.5	0.0	8.3	0.5	0.0	9.3	0.0	19.4	22.4	0.0	20.7	27.2	1.5	0.0	5.2	24.2	16.6	33.9	0.0
1/31/2011	92.6	0.0	7.0	0.5	0.0	12.5	0.0	19.9	22.4	0.0	22.3	37.9	1.5	0.0	5.2	26.9	16.6	36.1	0.0
2/1/2011	92.6	0.0	7.1	0.5	0.0	13.9	0.0	20.9	22.4	0.0	22.8	37.9	1.5	0.0	5.1	35.7	16.6	45.1	0.0
2/2/2011	92.7	0.0	7.1	0.5	0.0	13.7	0.0	21.7	22.4	0.0	14.8	34.6	1.5	0.0	4.7	35.1	16.6	44.7	0.0
2/3/2011	92.5	0.0	7.1	0.5	0.0	13.0	0.0	21.6	22.4	0.0	15.3	32.4	1.5	0.0	4.9	30.7	16.6	40.6	0.0
2/4/2011	92.3	0.0	7.1	0.5	0.0	13.7	0.0	21.2	22.4	0.0	16.2	32.7	1.5	0.0	5.4	30.3	16.6	39.9	0.0
2/5/2011	92.3	0.0	7.1	0.5	0.0	14.3	0.0	21.8	22.4	0.0	19.8	35.1	1.5	0.0	5.0	30.8	16.6	40.5	0.0
2/6/2011	92.3	0.0	7.1	0.5	0.0	14.8	0.0	22.3	22.4	0.0	24.1	39.5	1.5	0.0	5.1	33.5	16.6	42.9	0.0
2/7/2011	92.4	0.0	7.1	0.5	0.0	15.2	0.0	22.8	22.4	0.0	22.1	40.4	1.5	0.0	5.2	37.6	16.6	46.9	0.0
2/8/2011	133.9	0.0	7.1	0.5	0.0	17.8	0.0	23.9	22.4	0.0	21.8	39.8	1.5	0.0	4.8	37.4	16.6	47.1	0.0
2/9/2011	90.2	0.0	7.4	0.5	0.0	18.9	0.0	25.7	22.4	0.0	20.4	40.4	1.5	0.0	4.4	36.4	16.6	46.0	0.0
2/10/2011	132.0	0.0	12.9	0.5	0.0	13.4	0.0	24.9	22.4	0.0	19.1	40.5	1.5	0.0	4.2	36.7	16.6	46.4	0.0
2/11/2011	85.0	0.0	8.2	0.5	0.0	7.1	0.0	24.1	22.4	0.0	18.8	38.7	1.5	0.0	4.2	36.6	16.6	46.3	0.0
2/12/2011	85.0	0.0	12.5	0.5	0.0	5.9	0.0	16.6	22.4	0.0	18.5	36.4	1.5	0.0	4.1	35.0	16.6	44.6	0.0
2/13/2011	85.0	0.0	7.0	0.5	0.0	7.4	0.0	19.4	22.4	0.0	19.1	31.0	1.5	0.0	4.2	31.7	16.6	41.7	0.0
2/14/2011	85.0	0.0	5.7	0.5	0.0	7.2	0.0	16.1	22.4	0.0	20.7	35.1	1.5	0.0	4.2	28.7	16.6	38.2	0.0
2/15/2011	80.8	0.0	5.7	0.5	0.0	7.7	0.0	14.6	22.4	0.0	21.1	32.1	1.5	0.0	4.1	31.7	16.6	41.3	0.0
2/16/2011	0.0	0.0	5.6	0.5	5.1	8.3	0.0	15.1	22.4	0.0	20.9	31.5	1.5	0.0	4.4	29.0	16.6	38.7	0.0
2/17/2011	0.0	0.0	4.6	0.5	4.1	8.4	0.0	15.5	22.4	0.0	21.0	32.0	1.5	0.0	4.3	32.8	16.6	38.4	0.0
2/18/2011	0.0	0.0	3.0	0.5	2.5	7.0	0.0	14.2	22.4	0.0	21.2	32.4	1.5	0.0	3.9	28.9	16.6	38.6	0.0
2/19/2011	0.0	0.0	3.1	0.5	2.6	6.6	0.0	11.8	22.4	0.0	21.6	30.6	1.5	0.0	3.8	28.9	16.6	38.6	0.0
2/20/2011	0.0	0.0	3.2	0.5	2.7	7.0	0.0	11.9	22.4	0.0	21.2	29.3	1.5	0.0	3.6	26.7	16.6	36.5	0.0
2/21/2011	0.0	0.0	3.1	0.5	2.6	6.6	0.0	12.1	22.4	0.0	23.5	30.6	1.5	0.0	3.5	26.0	16.6	35.6	0.0
2/22/2011	0.0	0.0	3.1	0.5	2.6	4.8	0.0	11.3	22.4	0.0	24.0	31.7	1.5	0.0	5.9	28.2	16.6	37.6	0.0
2/23/2011	0.0	0.0	3.1	0.5	2.6	4.2	0.0	10.0	22.4	0.0	35.9	38.0	1.5	0.0	7.5	30.8	16.6	40.3	0.0
2/24/2011	0.0	0.0	3.1	0.5	2.6	4.8	0.0	9.8	22.4	0.0	38.6	42.9	1.5	0.0	4.9	37.5	16.6	46.7	0.0
2/25/2011	0.0	0.0	3.1	0.5	2.6	5.1	0.0	10.2	22.4	0.0	37.1	43.1	1.5	0.0	4.5	39.6	16.6	49.1	0.0
2/26/2011	0.0	0.0	3.1	0.5	2.6	4.9	0.0	10.4	22.4	0.0	35.1	41.7	1.5	0.0	4.5	39.0	16.6	48.6	0.0
2/27/2011	0.0	0.0	3.1	0.5	2.6	5.2	0.0	10.3	22.4	0.0	36.2	41.7	1.5	0.0	4.6	37.7	16.6	47.4	0.0
2/28/2011	0.0	0.0	3.1	0.5	2.6	5.8	0.0	10.7	22.4	0.0	34.2	41.0	1.5	0.0	4.4	38.0	16.6	47.5	0.0
3/1/2011	0.0	0.0	3.1	0.5	2.6	5.7	0.0	11.0	22.4	0.0	33.4	40.1	1.5	0.0	4.3	36.7	16.6	46.5	0.0
3/2/2011	0.0	0.0	3.2	0.5	2.6	5.8	0.0	11.0	22.4	0.0	32.7	39.7	1.5	0.0	4.1	36.1	16.6	45.7	0.0
3/3/2011	0.0	0.0	3.1	0.5	2.5	6.3	0.0	11.2	22.4	0.0	30.7	38.1	1.5	0.0	4.1	35.4	16.6	45.1	0.0
3/4/2011	0.0	0.0	3.2	0.5	2.6	7.2	0.0	11.7	22.4	0.0	28.6	36.4	1.5	0.0	4.3	34.0	16.6	43.8	0.0
3/5/2011	0.0	0.0	3.1	0.5	2.6	6.8	0.0	12.2	22.4	0.0	27.4	35.5	1.5	0.0	3.8	32.5	16.6	42.2	0.0
3/6/2011	0.0	0.0	3.1	0.5	2.6	5.6	0.0	11.6	22.4	0.0	25.8	34.3	1.5	0.0	3.7	31.5	16.6	41.2	0.0
3/7/2011	11.9	0.0	3.1	0.5	0.0	5.1	0.0	10.7	22.4	0.0	35.1	38.4	1.5	0.0	4.1	30.4	16.6	40.1	0.0
3/8/2011	11.9	0.0	3.1	0.5	0.0	4.6	0.0	10.3	22.4	0.0	37.0	42.4	1.5	0.0	3.9	36.0	16.6	45.3	0.0
3/9/2011	12.0	0.0	3.1	0.5	0.0	3.7	0.0	9.8	22.4	0.0	33.0	40.4	1.5	0.0	4.0	38.2	16.6	47.8	0.0
3/10/2011	12.1	0.0	3.1	0.5	0.0	3.1	0.0	9.0	22.4	0.0	31.1	37.2	1.5	0.0	4.1	35.5	16.6	45.3	0.0
3/11/2011	303.3	0.0	248.1	0.5	0.0	2.8	0.0	217.6	22.4	0.0	27.3	223.7	1.5	0.0	4.2	226.1	16.6	203.8	0.0
3/12/2011	423.6	0.0	248.1	0.5	0.0	3.1	0.0	217.5	22.4	0.0	22.4	219.0	1.5	0.0	4.2	202.6	16.6	200.5	0.0
3/13/2011	424.5	0.0	363.2	0.5	0.0	3.1	0.0	217.8	22.4	0.0	16.8	213.9	1.5	0.0	4.3	198.5	16.6	196.3	0.0
3/14/2011	425.2	0.0	399.6	0.5	0.0	2.1	0.0	326.7	22.4	0.0	13.4	216.3	1.5	0.0	4.3	193.9	16.6	191.8	0.0
3/15/2011	604.1	0.0	400.2	0.5	0.0	1.6	0.0	350.2	22.4	0.0	7.4	325.2	1.5	0.0	4.3	231.9	16.6	218.2	0.0
3/16/2011	853.4	0.0	541.0	0.5	0.0	1.7	0.0	353.9	22.4	0.0	9.1	326.4	1.5	0.0	4.3	295.5	16.6	292.4	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
3/17/2011	916.1	0.0	801.7	0.5	0.0	1.6	0.0	569.5	22.4	0.0	14.7	408.3	1.5	0.0	4.1	297.3	16.6	294.0	0.0
3/18/2011	1176.1	0.0	883.6	0.5	0.0	1.8	0.0	752.5	22.4	0.0	22.0	691.4	1.5	0.0	4.3	520.4	16.6	502.8	0.0
3/19/2011	1290.8	0.0	1130.4	0.5	0.0	1.8	0.0	915.8	22.4	0.0	34.6	795.2	1.5	0.0	4.5	680.4	16.6	673.1	0.0
3/20/2011	1283.9	0.0	1230.0	0.5	0.0	1.7	0.0	1085.8	22.4	0.0	58.0	1037.7	1.5	0.0	4.3	899.7	16.6	886.5	0.0
3/21/2011	1364.4	0.0	1235.3	0.5	0.0	1.8	0.0	1118.3	22.4	0.0	60.6	1110.7	1.5	0.0	4.1	1027.7	16.6	1019.4	0.0
3/22/2011	1475.4	0.0	1318.3	0.5	0.0	1.9	0.0	1166.2	22.4	0.0	60.5	1131.6	1.5	0.0	3.9	1035.2	16.6	1028.4	0.0
3/23/2011	1500.1	0.0	1414.2	0.5	0.0	1.8	0.0	1261.5	22.4	0.0	62.0	1217.1	1.5	0.0	3.7	1099.9	16.6	1091.2	0.0
3/24/2011	1501.5	0.0	1435.5	0.5	0.0	1.7	0.0	1307.9	22.4	0.0	59.8	1284.6	1.5	0.0	3.7	1189.1	16.6	1180.6	0.0
3/25/2011	1516.9	0.0	1439.0	0.5	0.0	1.8	0.0	1315.5	22.4	0.0	63.5	1301.1	1.5	0.0	3.5	1213.9	16.6	1206.5	0.0
3/26/2011	1520.0	0.0	1263.8	0.5	0.0	1.9	0.0	1326.0	22.4	37.9	66.1	1310.4	1.5	0.0	3.3	1220.1	16.6	1212.9	0.0
3/27/2011	1540.0	0.0	411.9	0.5	0.0	2.0	0.0	717.5	22.4	281.2	82.8	989.5	1.5	187.8	3.4	1180.0	16.6	1184.2	174.7
3/28/2011	1560.0	0.0	254.7	0.5	0.0	2.1	0.0	330.0	22.4	50.8	85.2	498.7	1.5	82.0	5.2	608.2	16.6	617.5	97.0
3/29/2011	1580.0	0.0	248.1	0.5	0.0	2.2	0.0	224.7	22.4	0.0	83.8	329.1	1.5	19.1	5.8	370.3	16.6	372.9	21.4
3/30/2011	1593.5	0.0	248.1	0.5	0.0	2.3	0.0	216.8	22.4	0.0	68.8	266.8	1.5	0.0	5.3	276.0	16.6	277.2	0.0
3/31/2011	1394.2	0.0	1487.1	0.5	92.3	2.3	0.0	216.9	22.4	0.0	74.7	216.2	1.5	0.0	5.7	240.0	16.6	237.9	0.0
4/1/2011	1088.0	0.0	1292.5	0.5	204.0	2.4	225.0	1056.5	22.4	0.0	74.5	1185.4	1.5	52.9	5.8	243.5	16.6	240.6	0.0
4/2/2011	967.7	0.0	1029.8	0.5	61.6	2.4	238.0	803.9	22.4	0.0	49.5	891.6	1.5	36.8	5.0	920.7	16.6	921.0	7.7
4/3/2011	974.0	0.0	921.6	0.5	0.0	2.1	227.0	650.8	22.4	0.0	41.2	681.2	1.5	0.0	4.5	691.1	16.6	692.4	0.0
4/4/2011	1061.4	0.0	931.0	0.5	0.0	2.1	186.0	644.6	22.4	0.0	43.3	621.6	1.5	0.0	4.1	581.3	16.6	578.7	0.0
4/5/2011	1169.5	0.0	1016.7	0.5	0.0	2.2	162.0	716.2	22.4	0.0	44.8	667.9	1.5	0.0	4.0	592.2	16.6	586.5	0.0
4/6/2011	1217.4	0.0	1117.9	0.5	0.0	2.1	162.0	810.8	22.4	0.0	53.4	767.6	1.5	0.0	3.8	670.9	16.6	663.0	0.0
4/7/2011	1085.0	0.0	1144.8	0.5	59.3	2.0	207.0	835.5	22.4	0.0	54.1	830.8	1.5	0.0	3.9	760.5	16.6	753.6	0.0
4/8/2011	998.9	0.0	1027.1	0.5	27.7	1.6	198.0	785.2	22.4	0.0	52.9	819.0	1.5	0.0	4.2	776.3	16.6	770.3	0.0
4/9/2011	892.5	0.0	942.0	0.5	49.1	1.1	196.0	695.2	22.4	0.0	44.9	717.9	1.5	0.0	4.9	699.8	16.6	698.0	0.0
4/10/2011	836.7	0.0	845.4	0.5	8.3	1.3	70.0	730.6	22.4	0.0	47.2	711.3	1.5	0.0	4.4	638.2	16.6	632.3	0.0
4/11/2011	839.5	0.0	793.7	0.5	0.0	1.4	0.0	733.0	22.4	0.0	50.9	722.2	1.5	0.0	4.1	667.6	16.6	663.0	0.0
4/12/2011	773.7	0.0	791.1	0.5	16.9	1.4	0.0	710.7	22.4	0.0	50.7	709.4	1.5	0.0	4.0	667.5	16.6	663.7	0.0
4/13/2011	723.5	0.0	732.9	0.5	8.9	1.4	0.0	687.5	22.4	0.0	51.4	705.6	1.5	0.0	4.5	654.0	16.6	649.0	0.0
4/14/2011	727.4	0.0	685.7	0.5	0.0	1.3	0.0	636.5	22.4	0.0	48.6	653.4	1.5	0.0	4.5	623.1	16.6	620.3	0.0
4/15/2011	728.8	0.0	685.7	0.5	0.0	1.4	0.0	609.3	22.4	0.0	47.9	612.2	1.5	0.0	4.4	578.4	16.6	575.3	0.0
4/16/2011	842.9	0.0	689.9	0.5	0.0	1.6	0.0	612.1	22.4	0.0	47.1	610.5	1.5	0.0	4.0	559.3	16.6	554.8	0.0
4/17/2011	1004.7	0.0	801.3	0.5	0.0	1.6	0.0	652.4	22.4	0.0	47.6	615.3	1.5	0.0	3.7	561.0	16.6	556.5	0.0
4/18/2011	1046.8	0.0	954.6	0.5	0.0	1.7	118.0	677.6	22.4	0.0	51.1	660.4	1.5	0.0	3.7	602.3	16.6	597.2	0.0
4/19/2011	1085.5	0.0	997.5	0.5	0.0	2.0	151.0	734.2	22.4	0.0	51.6	728.8	1.5	0.0	2.8	639.8	16.6	631.4	0.0
4/20/2011	1042.9	0.0	1028.2	0.5	0.0	1.9	153.0	767.7	22.4	0.0	53.7	753.5	1.5	0.0	1.0	679.2	16.6	673.2	0.0
4/21/2011	924.7	0.0	982.5	0.5	57.2	1.7	155.0	759.0	22.4	0.0	55.5	773.5	1.5	0.0	1.0	711.5	16.6	705.4	0.0
4/22/2011	787.3	0.0	871.2	0.5	83.4	1.4	153.0	686.5	22.4	0.0	50.6	722.6	1.5	0.0	1.0	689.4	16.6	685.6	0.0
4/23/2011	794.2	0.0	751.2	0.5	0.0	0.4	151.0	580.4	22.4	0.0	42.1	620.8	1.5	0.0	2.0	610.5	16.6	609.2	0.0
4/24/2011	873.1	0.0	752.8	0.5	0.0	0.2	146.0	521.2	22.4	0.0	39.0	522.8	1.5	0.0	3.4	516.1	16.6	515.2	0.0
4/25/2011	875.6	0.0	824.2	0.5	0.0	0.2	155.0	547.0	22.4	0.0	41.3	519.8	1.5	0.0	2.0	471.4	16.6	467.3	0.0
4/26/2011	1014.5	0.0	836.7	0.5	0.0	0.2	151.0	591.7	22.4	0.0	42.7	582.4	1.5	0.0	2.7	502.2	16.6	495.4	0.0
4/27/2011	834.6	0.0	947.0	0.5	112.0	0.2	145.0	664.0	22.4	0.0	41.8	602.8	1.5	0.0	2.1	537.5	16.6	532.8	0.0
4/28/2011	779.4	0.0	793.4	0.5	13.5	0.2	186.0	603.4	22.4	0.0	46.0	670.4	1.5	19.6	1.4	617.6	16.6	609.7	0.0
4/29/2011	619.7	0.0	734.4	0.5	114.2	0.2	189.0	498.3	22.4	0.0	43.0	526.4	1.5	0.0	0.9	532.4	16.6	533.0	0.0
4/30/2011	510.4	0.0	599.8	0.5	88.8	0.8	166.0	442.5	22.4	0.0	33.9	476.6	1.5	0.0	1.1	450.8	16.6	448.6	0.0
5/1/2011	470.3	0.0	497.0	0.5	26.2	0.9	0.0	487.1	22.4	0.0	29.5	448.4	1.5	0.0	1.2	400.4	16.6	399.9	0.0
5/2/2011	452.4	0.0	446.7	0.5	0.0	1.0	0.0	419.0	22.4	0.0	27.5	443.8	1.5	0.0	1.2	426.9	16.6	421.5	0.0
5/3/2011	401.2	0.0	425.4	0.5	23.6	0.9	0.0	384.9	22.4	0.0	26.9	392.7	1.5	0.0	1.0	375.6	16.6	374.4	0.0
5/4/2011	381.1	0.0	394.0	0.5	12.4	0.6	0.0	367.8	22.4	0.0	27.2	369.5	1.5	0.0	0.9	343.6	16.6	341.5	0.0
5/5/2011	401.2	0.0	374.4	0.5	0.0	0.8	0.0	340.3	22.4	0.0	28.3	350.2	1.5	0.0	1.0	328.8	16.6	326.2	0.0
5/6/2011	405.7	0.0	376.3	0.5	0.0	0.7	0.0	325.6	22.4	0.0	23.5	325.4	1.5	0.0	1.0	308.9	16.6	306.9	0.0
5/7/2011	505.2	0.0	384.5	0.5	0.0	0.6	0.0	329.7	22.4	0.0	19.3	312.9	1.5	0.0	1.2	288.8	16.6	286.5	0.0
5/8/2011	713.0	0.0	451.5	0.5	0.0	0.6	0.0	336.4	22.4	0.0	15.5	318.4	1.5	0.0	1.1	282.3	16.6	279.2	0.0
5/9/2011	711.8	0.0	652.3	0.5	0.0	0.6	0.0	432.6	22.4	0.0	12.3	339.9	1.5	0.0	1.0	286.4	16.6	283.5	0.0
5/10/2011	800.4	0.0	672.8	0.5	0.0	0.6	0.0	597.3	22.4	0.0	10.6	534.7	1.5	0.0	1.0	341.5	16.6	330.6	0.0



Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
5/11/2011	853.3	0.0	753.6	0.5	0.0	0.1	0.0	625.1	22.4	0.0	9.9	562.1	1.5	0.0	1.0	510.7	16.6	506.4	0.0
5/12/2011	769.9	0.0	801.5	0.5	31.2	0.4	0.0	695.8	22.4	0.0	15.0	638.0	1.5	0.0	0.9	546.2	16.6	538.7	0.0
5/13/2011	710.4	0.0	730.0	0.5	19.0	0.1	0.0	691.6	22.4	0.0	18.6	680.6	1.5	0.0	0.9	613.1	16.6	606.7	0.0
5/14/2011	709.6	0.0	673.9	0.5	0.0	0.4	0.0	629.1	22.4	0.0	14.3	616.5	1.5	0.0	0.9	590.9	16.6	588.6	0.0
5/15/2011	709.0	0.0	668.7	0.5	0.0	0.8	0.0	595.4	22.4	0.0	11.2	565.8	1.5	0.0	0.9	536.6	16.6	533.9	0.0
5/16/2011	771.0	0.0	669.4	0.5	0.0	0.9	0.0	594.8	22.4	0.0	10.8	559.4	1.5	0.0	0.9	509.6	16.6	505.5	0.0
5/17/2011	878.4	0.0	727.3	0.5	0.0	0.8	0.0	614.1	22.4	0.0	9.5	559.1	1.5	0.0	0.9	508.5	16.6	504.4	0.0
5/18/2011	936.0	0.0	831.3	0.5	0.0	0.9	0.0	690.2	22.4	0.0	10.6	611.9	1.5	0.0	0.9	531.1	16.6	524.8	0.0
5/19/2011	853.0	0.0	880.8	0.5	27.3	0.9	0.0	772.5	22.4	0.0	15.3	711.2	1.5	0.0	0.9	613.4	16.6	605.1	0.0
5/20/2011	794.0	0.0	807.1	0.5	12.6	1.0	0.0	761.4	22.4	0.0	17.5	748.5	1.5	0.0	1.5	684.2	16.6	677.5	0.0
5/21/2011	671.1	0.0	749.2	0.5	77.6	1.4	0.0	700.6	22.4	0.0	12.3	681.4	1.5	0.0	0.9	651.0	16.6	648.4	0.0
5/22/2011	603.8	0.0	642.6	0.5	38.3	1.3	0.0	630.9	22.4	0.0	13.4	630.8	1.5	0.0	1.0	598.5	16.6	595.2	0.0
5/23/2011	603.1	0.0	575.4	0.5	0.0	1.2	0.0	545.4	22.4	0.0	17.2	545.2	1.5	0.0	1.0	534.4	16.6	533.0	0.0
5/24/2011	575.8	0.0	565.9	0.5	0.0	0.7	0.0	501.4	22.4	0.0	15.0	487.4	1.5	0.0	1.0	468.8	16.6	466.7	0.0
5/25/2011	543.6	0.0	543.6	0.5	0.0	0.6	0.0	495.1	22.4	0.0	14.9	473.6	1.5	0.0	1.0	430.2	16.6	426.7	0.0
5/26/2011	543.5	0.0	514.3	0.5	0.0	0.5	0.0	471.5	22.4	0.0	13.9	456.6	1.5	0.0	1.0	424.2	16.6	421.2	0.0
5/27/2011	598.2	0.0	508.9	0.5	0.0	0.5	0.0	448.5	22.4	0.0	12.0	431.4	1.5	0.0	1.0	403.2	16.6	400.5	0.0
5/28/2011	710.0	0.0	554.5	0.5	0.0	0.5	0.0	454.1	22.4	0.0	11.2	420.5	1.5	0.0	1.0	382.0	16.6	379.0	0.0
5/29/2011	811.7	0.0	661.2	0.5	0.0	0.7	0.0	520.8	22.4	0.0	14.3	454.3	1.5	0.0	1.0	383.5	16.6	378.9	0.0
5/30/2011	887.5	0.0	764.6	0.5	0.0	0.9	0.0	628.2	22.4	0.0	17.0	625.5	1.5	0.0	0.9	448.4	16.6	440.4	0.0
5/31/2011	1386.2	0.0	869.6	0.5	0.0	0.9	0.0	717.3	22.4	0.0	16.7	651.9	1.5	0.0	0.9	556.7	16.6	548.4	0.0
6/1/2011	1659.3	219.0	1256.6	0.5	0.0	1.0	161.0	842.7	22.4	0.0	25.8	697.0	1.5	0.0	0.9	619.8	16.6	616.9	0.0
6/2/2011	1584.1	286.0	1297.2	0.5	0.0	1.2	433.0	762.4	22.4	0.0	37.9	815.4	1.5	13.6	0.9	787.1	16.6	779.2	0.0
6/3/2011	1574.6	283.0	1237.2	0.5	0.0	1.4	455.0	696.2	22.4	0.0	32.8	696.9	1.5	0.0	0.9	709.2	16.6	674.8	0.0
6/4/2011	1619.3	286.0	1234.0	0.5	0.0	1.2	459.0	665.1	22.4	0.0	26.6	647.9	1.5	0.0	0.9	607.8	16.6	605.2	0.0
6/5/2011	1617.9	285.0	1269.2	0.5	0.0	1.0	515.0	634.7	22.4	0.0	28.3	620.2	1.5	0.0	5.0	583.4	16.6	580.3	0.0
6/6/2011	1613.9	340.0	1260.4	0.5	0.0	1.3	504.0	655.1	22.4	0.0	25.1	626.8	1.5	0.0	6.7	568.4	16.6	562.8	0.0
6/7/2011	1687.4	373.0	1220.5	0.5	0.0	1.5	495.0	629.4	22.4	0.0	29.6	625.1	1.5	0.0	2.9	581.4	16.6	576.7	0.0
6/8/2011	1771.2	349.0	1266.8	0.5	0.0	1.6	480.0	651.3	22.4	0.0	31.5	613.4	1.5	0.0	5.3	557.4	16.6	553.6	0.0
6/9/2011	1706.8	356.0	1324.5	0.5	0.0	1.5	494.0	707.6	22.4	0.0	39.6	668.7	1.5	0.0	2.8	588.7	16.6	582.9	0.0
6/10/2011	1664.1	350.0	1268.7	0.5	0.0	1.7	493.0	688.5	22.4	0.0	36.3	694.2	1.5	0.0	2.8	647.4	16.6	641.2	0.0
6/11/2011	1698.2	331.0	1255.9	0.5	0.0	1.8	495.0	652.0	22.4	0.0	26.8	640.4	1.5	0.0	0.9	605.7	16.6	603.1	0.0
6/12/2011	1696.5	324.0	1302.9	0.5	0.0	2.0	501.0	675.2	22.4	0.0	30.2	636.1	1.5	0.0	1.1	573.3	16.6	569.2	0.0
6/13/2011	1771.8	343.0	1319.2	0.5	0.0	2.1	504.0	693.2	22.4	0.0	32.8	671.7	1.5	0.0	0.7	606.8	16.6	600.8	0.0
6/14/2011	1823.8	400.0	1354.2	0.5	0.0	2.1	494.0	735.6	22.4	0.0	32.8	696.2	1.5	0.0	0.5	620.3	16.6	614.8	0.0
6/15/2011	1820.9	411.0	1351.9	0.5	0.0	2.1	526.0	715.9	22.4	0.0	37.3	711.7	1.5	0.0	0.8	659.5	16.6	654.4	0.0
6/16/2011	1764.3	398.0	1344.4	0.5	0.0	2.1	542.0	696.6	22.4	0.0	36.7	687.9	1.5	0.0	0.8	638.3	16.6	634.1	0.0
6/17/2011	1637.5	395.0	1280.6	0.5	37.5	2.2	508.0	694.3	22.4	0.0	35.7	684.9	1.5	0.0	1.3	627.1	16.6	621.6	0.0
6/18/2011	1577.3	366.0	1173.2	0.5	0.0	2.3	501.0	610.7	22.4	0.0	31.3	634.1	1.5	0.0	0.9	613.4	16.6	610.3	0.0
6/19/2011	1576.1	350.0	1152.3	0.5	0.0	2.1	457.0	597.5	22.4	0.0	27.5	571.1	1.5	0.0	0.9	533.1	16.6	531.2	0.0
6/20/2011	1753.5	375.0	1185.1	0.5	0.0	2.4	447.0	609.8	22.4	0.0	30.0	582.2	1.5	0.0	0.9	527.2	16.6	522.9	0.0
6/21/2011	1843.5	389.0	1325.9	0.5	0.0	2.5	462.0	698.4	22.4	0.0	32.0	625.4	1.5	0.0	0.9	541.7	16.6	536.8	0.0
6/22/2011	1916.4	387.0	1397.1	0.5	0.0	3.0	526.0	728.3	22.4	0.0	45.6	717.1	1.5	0.0	0.9	641.5	16.6	633.8	0.0
6/23/2011	1923.5	418.0	1427.0	0.5	0.0	3.4	581.0	726.0	22.4	0.0	40.4	720.4	1.5	0.0	1.2	661.6	16.6	656.5	0.0
6/24/2011	1863.1	413.0	1400.5	0.5	0.0	3.5	589.0	711.1	22.4	0.0	39.4	708.9	1.5	0.0	2.0	656.7	16.6	651.6	0.0
6/25/2011	1861.4	404.0	1382.1	0.5	0.0	3.7	601.0	673.5	22.4	0.0	31.8	668.3	1.5	0.0	3.5	634.0	16.6	630.5	0.0
6/26/2011	1859.5	366.0	1410.3	0.5	0.0	3.7	557.0	723.8	22.4	0.0	38.7	681.6	1.5	0.0	2.9	605.1	16.6	599.6	0.0
6/27/2011	1857.3	373.0	1435.4	0.5	0.0	3.7	538.0	773.6	22.4	0.0	43.2	742.6	1.5	0.0	1.7	662.4	16.6	655.9	0.0
6/28/2011	1896.0	390.0	1421.3	0.5	0.0	3.7	503.0	803.5	22.4	0.0	43.2	784.8	1.5	0.0	2.4	712.2	16.6	705.4	0.0
6/29/2011	2044.4	418.0	1456.3	0.5	0.0	3.8	537.0	780.7	22.4	0.0	40.9	771.7	1.5	0.0	2.6	720.9	16.6	717.0	0.0
6/30/2011	2130.8	500.0	1530.9	0.5	0.0	4.0	574.0	813.7	22.4	0.0	43.4	783.0	1.5	0.0	0.8	704.8	16.6	699.5	0.0
7/1/2011	2125.3	502.0	1549.2	0.5	0.0	4.2	621.0	803.7	22.4	0.0	44.5	800.0	1.5	0.0	1.2	743.0	16.6	737.5	0.0
7/2/2011	2120.1	509.0	1544.0	0.5	0.0	4.3	641.0	785.9	22.4	0.0	45.0	783.1	1.5	0.0	0.7	727.2	16.6	722.2	0.0
7/3/2011	2115.8	518.0	1530.4	0.5	0.0	4.5	648.0	768.2	22.4	0.0	42.9	763.6	1.5	0.0	0.9	709.1	16.6	704.5	0.0
7/4/2011	1945.0	451.0	1505.3	0.5	10.8	4.9	647.0	758.1	22.4	0.0	43.0	749.6	1.5	0.0	9.3	698.7	16.6	693.7	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
7/5/2011	1779.2	315.0	1449.8	0.5	0.0	5.3	659.0	696.5	22.4	0.0	40.4	710.6	1.5	0.0	8.9	686.7	16.6	683.1	0.0
7/6/2011	1356.4	213.0	1358.6	0.5	214.6	5.3	643.0	664.6	22.4	0.0	34.4	661.9	1.5	0.0	2.0	621.1	16.6	618.0	0.0
7/7/2011	1043.7	58.0	1194.6	0.5	208.4	5.5	446.0	705.7	22.4	0.0	36.0	670.8	1.5	0.0	3.5	608.2	16.6	600.9	0.0
7/8/2011	983.6	0.0	990.4	0.5	6.3	5.2	241.0	734.5	22.4	0.0	42.7	723.6	1.5	0.0	2.7	644.8	16.6	638.0	0.0
7/9/2011	918.2	0.0	930.0	0.5	11.2	5.4	251.0	621.1	22.4	0.0	38.0	637.2	1.5	0.0	2.0	638.1	16.6	638.6	0.0
7/10/2011	921.7	0.0	872.4	0.5	0.0	5.4	246.0	570.4	22.4	0.0	28.9	576.3	1.5	0.0	1.1	549.4	16.6	546.9	0.0
7/11/2011	925.2	0.0	873.9	0.5	0.0	5.4	225.0	563.6	22.4	0.0	26.7	537.2	1.5	0.0	0.9	499.9	16.6	497.2	0.0
7/12/2011	928.2	0.0	877.2	0.5	0.0	5.1	192.0	598.7	22.4	0.0	30.0	566.8	1.5	0.0	0.9	499.3	16.6	494.0	0.0
7/13/2011	932.0	0.0	880.1	0.5	0.0	4.4	188.0	606.5	22.4	0.0	32.9	589.0	1.5	0.0	0.9	532.7	16.6	527.7	0.0
7/14/2011	850.2	0.0	878.4	0.5	27.7	4.5	182.0	615.4	22.4	0.0	34.0	597.4	1.5	0.0	0.7	540.8	16.6	536.1	0.0
7/15/2011	853.1	0.0	807.5	0.5	0.0	4.5	182.0	581.2	22.4	0.0	31.1	593.2	1.5	0.0	2.7	549.4	16.6	544.9	0.0
7/16/2011	920.0	0.0	810.7	0.5	0.0	4.2	182.0	544.7	22.4	0.0	22.8	527.4	1.5	0.0	2.4	508.5	16.6	506.8	0.0
7/17/2011	919.5	0.0	870.3	0.5	0.0	4.2	170.0	586.5	22.4	0.0	25.1	535.8	1.5	0.0	1.9	477.6	16.6	473.2	0.0
7/18/2011	1000.6	0.0	876.7	0.5	0.0	5.4	137.0	649.9	22.4	0.0	29.9	615.3	1.5	0.0	1.2	525.3	16.6	517.9	0.0
7/19/2011	1113.4	0.0	957.6	0.5	0.0	8.2	103.0	724.2	22.4	0.0	34.2	663.1	1.5	0.0	5.2	585.7	16.6	579.7	0.0
7/20/2011	1110.7	0.0	1057.4	0.5	0.0	8.8	119.0	804.5	22.4	0.0	43.7	757.6	1.5	0.0	10.5	671.8	16.6	664.3	0.0
7/21/2011	1042.0	0.0	1050.9	0.5	8.5	11.3	149.0	820.1	22.4	0.0	40.3	813.9	1.5	0.0	8.3	751.3	16.6	744.0	0.0
7/22/2011	989.7	0.0	987.3	0.5	0.0	13.1	153.0	780.6	22.4	0.0	42.6	789.4	1.5	0.0	10.3	746.8	16.6	741.7	0.0
7/23/2011	1016.1	0.0	942.7	0.5	0.0	12.7	153.0	727.3	22.4	0.0	35.0	728.1	1.5	0.0	9.1	700.0	16.6	696.9	0.0
7/24/2011	1014.4	0.0	964.6	0.5	0.0	12.2	194.0	680.2	22.4	0.0	35.1	671.4	1.5	0.0	6.3	643.8	16.6	641.5	0.0
7/25/2011	1012.1	0.0	963.4	0.5	0.0	12.1	205.0	677.6	22.4	0.0	33.4	664.8	1.5	0.0	6.4	613.6	16.6	608.7	0.0
7/26/2011	1047.9	0.0	964.3	0.5	0.0	11.7	207.0	673.1	22.4	0.0	32.9	657.1	1.5	0.0	7.3	609.2	16.6	604.6	0.0
7/27/2011	1076.8	0.0	997.7	0.5	0.0	11.5	203.0	693.7	22.4	0.0	34.6	662.8	1.5	0.0	6.7	606.0	16.6	601.2	0.0
7/28/2011	840.5	0.0	1004.3	0.5	163.3	11.2	211.0	715.1	22.4	0.0	34.5	690.2	1.5	0.0	6.9	629.9	16.6	624.3	0.0
7/29/2011	903.3	0.0	806.4	0.5	0.0	11.0	194.0	630.7	22.4	0.0	33.3	680.3	1.5	14.9	7.2	650.4	16.6	644.7	0.0
7/30/2011	925.4	0.0	855.4	0.5	0.0	11.2	239.0	513.5	22.4	0.0	17.4	498.8	1.5	0.0	7.5	540.1	16.6	542.2	19.2
7/31/2011	918.3	0.0	876.2	0.5	0.0	11.4	303.0	491.0	22.4	0.0	16.2	483.6	1.5	0.0	7.3	448.5	16.6	444.4	0.0
8/1/2011	976.5	0.0	874.3	0.5	0.0	11.5	0.0	782.9	22.4	0.0	15.7	628.7	1.5	0.0	7.0	434.2	16.6	428.9	0.0
8/2/2011	948.8	0.0	923.5	0.5	0.0	11.3	0.0	820.1	22.4	0.0	16.8	760.9	1.5	0.0	8.8	700.8	16.6	695.2	0.0
8/3/2011	867.8	0.0	895.1	0.5	26.8	10.7	0.0	831.4	22.4	0.0	26.6	807.1	1.5	0.0	12.6	743.4	16.6	736.1	0.0
8/4/2011	859.7	0.0	823.9	0.5	0.0	10.3	0.0	782.1	22.4	0.0	25.9	777.6	1.5	0.0	8.0	739.1	16.6	734.7	0.0
8/5/2011	880.3	0.0	815.1	0.5	0.0	10.0	0.0	742.3	22.4	0.0	24.5	717.3	1.5	0.0	6.8	684.2	16.6	681.3	0.0
8/6/2011	915.5	0.0	834.9	0.5	0.0	9.8	0.0	747.0	22.4	0.0	28.4	714.5	1.5	0.0	6.7	660.1	16.6	655.2	0.0
8/7/2011	905.1	0.0	866.1	0.5	0.0	9.5	0.0	772.3	22.4	0.0	27.9	733.6	1.5	0.0	6.7	671.0	16.6	665.5	0.0
8/8/2011	894.7	0.0	857.2	0.5	0.0	9.3	0.0	783.3	22.4	0.0	27.7	758.2	1.5	0.0	6.6	696.1	16.6	690.2	0.0
8/9/2011	883.9	0.0	847.2	0.5	0.0	9.3	0.0	773.8	22.4	0.0	25.5	747.9	1.5	0.0	7.2	697.7	16.6	693.0	0.0
8/10/2011	902.1	0.0	838.4	0.5	0.0	9.3	0.0	764.4	22.4	0.0	24.9	738.1	1.5	0.0	6.2	687.1	16.6	682.5	0.0
8/11/2011	930.2	0.0	855.9	0.5	0.0	9.6	0.0	767.7	22.4	0.0	22.7	730.3	1.5	0.0	6.3	677.3	16.6	672.6	0.0
8/12/2011	945.8	0.0	882.2	0.5	0.0	9.7	0.0	789.1	22.4	0.0	22.6	746.7	1.5	0.0	6.9	684.5	16.6	679.0	0.0
8/13/2011	961.9	0.0	897.8	0.5	0.0	9.3	0.0	808.8	22.4	0.0	25.0	771.5	1.5	0.0	7.1	706.8	16.6	700.8	0.0
8/14/2011	952.7	0.0	911.5	0.5	0.0	8.5	0.0	822.5	22.4	0.0	27.9	787.7	1.5	0.0	7.2	724.9	16.6	719.2	0.0
8/15/2011	944.1	0.0	903.3	0.5	0.0	8.9	0.0	824.9	22.4	0.0	31.4	800.9	1.5	0.0	7.4	740.5	16.6	734.8	0.0
8/16/2011	952.1	0.0	896.3	0.5	0.0	8.3	0.0	816.7	22.4	0.0	30.7	793.3	1.5	0.0	7.7	740.2	16.6	735.1	0.0
8/17/2011	967.5	0.0	904.0	0.5	0.0	8.4	0.0	816.7	22.4	0.0	25.5	783.7	1.5	0.0	6.9	729.8	16.6	725.1	0.0
8/18/2011	963.5	0.0	917.4	0.5	0.0	8.0	0.0	827.3	22.4	0.0	29.4	793.7	1.5	0.0	7.3	731.9	16.6	726.4	0.0
8/19/2011	960.7	0.0	914.1	0.5	0.0	8.0	0.0	831.9	22.4	0.0	25.8	801.6	1.5	0.0	7.8	743.9	16.6	738.3	0.0
8/20/2011	957.3	0.0	911.3	0.5	0.0	8.0	0.0	828.7	22.4	0.0	29.9	801.3	1.5	0.0	8.4	744.7	16.6	739.5	0.0
8/21/2011	953.4	0.0	908.0	0.5	0.0	8.0	0.0	825.9	22.4	0.0	24.3	794.9	1.5	0.0	8.1	741.9	16.6	736.9	0.0
8/22/2011	949.6	0.0	904.2	0.5	0.0	8.3	0.0	822.7	22.4	0.0	26.9	793.2	1.5	0.0	8.3	737.6	16.6	732.3	0.0
8/23/2011	955.7	0.0	901.3	0.5	0.0	8.0	0.0	819.2	22.4	0.0	27.7	790.9	1.5	0.0	8.5	736.6	16.6	731.3	0.0
8/24/2011	1022.5	0.0	911.1	0.5	0.0	8.0	0.0	820.4	22.4	0.0	26.2	787.9	1.5	0.0	8.4	733.0	16.6	727.9	0.0
8/25/2011	1053.2	0.0	972.7	0.5	0.0	8.0	0.0	856.2	22.4	0.0	26.9	802.2	1.5	0.0	12.3	738.2	16.6	732.7	0.0
8/26/2011	1000.9	0.0	996.1	0.5	0.0	8.0	0.0	899.2	22.4	0.0	33.7	861.6	1.5	0.0	8.2	785.0	16.6	777.7	0.0
8/27/2011	954.7	0.0	947.8	0.5	0.0	8.0	0.0	884.7	22.4	0.0	34.0	874.3	1.5	0.0	8.9	819.4	16.6	813.3	0.0
8/28/2011	950.1	0.0	906.4	0.5	0.0	8.0	0.0	841.4	22.4	0.0	28.1	826.7	1.5	0.0	8.3	786.6	16.6	782.6	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
8/29/2011	945.6	0.0	901.1	0.5	0.0	8.0	0.0	819.9	22.4	0.0	26.9	791.7	1.5	0.0	8.4	746.1	16.6	741.9	0.0
8/30/2011	798.8	0.0	887.3	0.5	87.9	8.0	0.0	815.9	22.4	0.0	26.2	786.6	1.5	0.0	8.6	733.3	16.6	728.2	0.0
8/31/2011	704.0	0.0	759.1	0.5	54.6	8.0	0.0	749.8	22.4	0.0	25.1	763.8	1.5	0.0	10.1	729.9	16.6	724.8	0.0
9/1/2011	871.1	0.0	673.8	0.5	0.0	3.8	0.0	647.0	22.4	0.0	16.8	649.6	1.5	0.0	9.1	647.0	16.6	645.9	0.0
9/2/2011	969.4	0.0	824.2	0.5	0.0	0.0	0.0	647.4	22.4	0.0	26.5	582.1	1.5	0.0	8.8	562.2	16.6	559.9	0.0
9/3/2011	974.7	0.0	918.0	0.5	0.0	0.0	0.0	784.3	22.4	0.0	40.3	729.8	1.5	0.0	8.7	609.0	16.6	598.3	0.0
9/4/2011	977.3	0.0	925.1	0.5	0.0	0.0	0.0	830.3	22.4	0.0	43.1	812.6	1.5	0.0	8.6	734.2	16.6	726.3	0.0
9/5/2011	985.4	0.0	928.1	0.5	0.0	0.0	0.0	833.8	22.4	0.0	41.6	816.8	1.5	0.0	8.5	759.3	16.6	753.9	0.0
9/6/2011	993.3	0.0	935.9	0.5	0.0	0.0	0.0	838.8	22.4	0.0	52.8	828.9	1.5	0.0	8.4	765.8	16.6	760.0	0.0
9/7/2011	1000.1	0.0	943.4	0.5	0.0	0.0	0.0	846.1	22.4	0.0	41.3	828.3	1.5	0.0	8.5	772.6	16.6	767.2	0.0
9/8/2011	1004.9	0.0	950.0	0.5	0.0	0.0	0.0	852.8	22.4	0.0	39.7	831.8	1.5	0.0	8.5	772.5	16.6	767.0	0.0
9/9/2011	992.7	0.0	953.2	0.5	0.0	0.0	0.0	858.0	22.4	0.0	40.8	838.1	1.5	0.0	8.4	777.9	16.6	772.3	0.0
9/10/2011	405.6	0.0	903.0	0.5	497.0	0.0	0.0	853.8	22.4	0.0	42.7	841.1	1.5	0.0	8.4	783.5	16.6	777.9	0.0
9/11/2011	0.0	0.0	485.8	0.5	485.3	0.0	0.0	646.6	22.4	138.3	42.0	763.6	1.5	73.6	8.3	775.2	16.6	770.9	0.0
9/12/2011	0.0	0.0	296.7	0.5	296.2	0.0	0.0	362.8	22.4	43.6	11.5	457.8	1.5	82.0	8.2	543.6	16.6	548.4	65.8
9/13/2011	0.0	0.0	5.2	0.5	4.7	0.0	0.0	50.2	22.4	22.5	1.8	103.3	1.5	49.9	8.2	174.6	16.6	189.5	61.4
9/14/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	8.7	22.4	0.0	0.0	29.0	1.5	18.8	0.0	67.1	16.6	81.0	35.4
9/15/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.6	22.4	0.0	0.4	4.6	1.5	0.0	8.8	21.8	16.6	33.0	3.1
9/16/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.6	22.4	0.0	0.4	3.3	1.5	0.0	9.8	8.8	16.6	18.8	0.0
9/17/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.5	22.4	0.0	0.3	3.2	1.5	0.0	8.4	7.6	16.6	17.5	0.0
9/18/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.6	22.4	0.0	0.3	3.2	1.5	0.0	8.4	7.2	16.6	17.0	0.0
9/19/2011	0.0	0.0	3.1	0.5	2.6	1.7	0.0	5.9	22.4	0.0	0.3	3.2	1.5	0.0	8.6	7.3	16.6	17.1	0.0
9/20/2011	0.0	0.0	3.1	0.5	2.6	3.4	0.0	7.5	22.4	0.0	0.3	3.7	1.5	0.0	8.7	7.4	16.6	17.3	0.0
9/21/2011	0.0	0.0	3.1	0.5	2.5	2.5	0.0	8.3	22.4	0.0	0.3	5.2	1.5	0.0	8.5	8.1	16.6	17.8	0.0
9/22/2011	0.0	0.0	3.0	0.5	2.5	1.1	0.0	7.4	22.4	0.0	0.3	5.5	1.5	0.0	8.3	9.2	16.6	19.0	0.0
9/23/2011	0.0	0.0	3.1	0.5	2.6	0.2	0.0	6.4	22.4	0.0	0.3	4.7	1.5	0.0	8.5	9.2	16.6	19.1	0.0
9/24/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.6	22.4	0.0	0.3	3.7	1.5	0.0	8.5	8.4	16.6	18.3	0.0
9/25/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.5	22.4	0.0	0.3	3.2	1.5	0.0	8.7	7.8	16.6	17.6	0.0
9/26/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.8	7.5	16.6	17.3	0.0
9/27/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.8	7.5	16.6	17.3	0.0
9/28/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.7	7.3	16.6	17.2	0.0
9/29/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.6	7.3	16.6	17.1	0.0
9/30/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.7	7.3	16.6	17.1	0.0
10/1/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.6	7.3	16.6	17.2	0.0
10/2/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.6	7.3	16.6	17.1	0.0
10/3/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.9	7.5	16.6	17.3	0.0
10/4/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.8	7.5	16.6	17.3	0.0
10/5/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.4	7.3	16.6	17.0	0.0
10/6/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.4	7.1	16.6	16.9	0.0
10/7/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.3	3.1	1.5	0.0	8.4	7.1	16.6	16.9	0.0
10/8/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.3	7.1	16.6	16.9	0.0
10/9/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.5	7.1	16.6	17.0	0.0
10/10/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.4	7.1	16.6	17.0	0.0
10/11/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.4	7.1	16.6	17.0	0.0
10/12/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.5	7.1	16.6	17.0	0.0
10/13/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.4	7.2	16.6	17.0	0.0
10/14/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.4	7.1	16.6	17.0	0.0
10/15/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.4	7.2	16.6	17.0	0.0
10/16/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.7	7.3	16.6	17.2	0.0
10/17/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.7	7.4	16.6	17.2	0.0
10/18/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.9	7.5	16.6	17.3	0.0
10/19/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.9	7.7	16.6	17.4	0.0
10/20/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.9	7.6	16.6	17.4	0.0
10/21/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	9.0	7.6	16.6	17.4	0.0
10/22/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	9.0	7.7	16.6	17.5	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
10/23/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	9.9	8.4	16.6	18.1	0.0
10/24/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	9.9	8.6	16.6	18.4	0.0
10/25/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	10.2	8.8	16.6	18.5	0.0
10/26/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	9.2	8.1	16.6	18.0	0.0
10/27/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	9.0	7.7	16.6	17.6	0.0
10/28/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	9.1	7.7	16.6	17.5	0.0
10/29/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.9	7.7	16.6	17.4	0.0
10/30/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.8	7.6	16.6	17.4	0.0
10/31/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.9	7.7	16.6	17.4	0.0
11/1/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.8	7.6	16.6	17.4	0.0
11/2/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.8	7.6	16.6	17.4	0.0
11/3/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.9	7.7	16.6	17.5	0.0
11/4/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.5	22.4	0.0	0.4	3.3	1.5	0.0	9.4	8.1	16.6	17.9	0.0
11/5/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.5	22.4	0.0	0.4	3.3	1.5	0.0	9.9	8.6	16.6	18.4	0.0
11/6/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.6	22.4	0.0	0.4	3.4	1.5	0.0	9.4	8.4	16.6	18.3	0.0
11/7/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.6	22.4	0.0	0.4	3.4	1.5	0.0	9.5	8.4	16.6	18.2	0.0
11/8/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.7	22.4	0.0	0.4	3.4	1.5	0.0	9.5	8.4	16.6	18.3	0.0
11/9/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.7	22.4	0.0	0.4	3.5	1.5	0.0	9.6	8.7	16.6	18.4	0.0
11/10/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.7	22.4	0.0	0.5	3.6	1.5	0.0	9.4	8.5	16.6	18.4	0.0
11/11/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.8	22.4	0.0	0.4	3.6	1.5	0.0	9.6	8.7	16.6	18.4	0.0
11/12/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.9	22.4	0.0	0.4	3.6	1.5	0.0	9.7	8.8	16.6	18.7	0.0
11/13/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.9	22.4	0.0	0.4	3.7	1.5	0.0	9.7	8.9	16.6	18.7	0.0
11/14/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	6.0	22.4	0.0	0.4	3.8	1.5	0.0	9.7	8.9	16.6	18.8	0.0
11/15/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	6.0	22.4	0.0	0.4	3.8	1.5	0.0	9.7	9.0	16.6	18.8	0.0
11/16/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.9	22.4	0.0	0.4	3.9	1.5	0.0	9.7	9.0	16.6	18.8	0.0
11/17/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.9	22.4	0.0	0.4	3.9	1.5	0.0	9.7	9.0	16.6	18.8	0.0
11/18/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	6.0	22.4	0.0	0.4	3.8	1.5	0.0	9.8	9.1	16.6	18.9	0.0
11/19/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.9	22.4	0.0	0.4	3.8	1.5	0.0	9.7	9.0	16.6	18.9	0.0
11/20/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	6.0	22.4	0.0	0.4	3.8	1.5	0.0	9.8	9.1	16.6	18.9	0.0
11/21/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.9	22.4	0.0	0.4	3.8	1.5	0.0	9.9	9.3	16.6	19.0	0.0
11/22/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.4	3.8	1.5	0.0	10.0	9.3	16.6	19.1	0.0
11/23/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.5	3.8	1.5	0.0	10.2	9.5	16.6	19.2	0.0
11/24/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.4	3.9	1.5	0.0	10.1	9.4	16.6	19.3	0.0
11/25/2011	0.0	0.0	3.0	0.5	2.5	0.0	0.0	6.0	22.4	0.0	0.4	3.9	1.5	0.0	10.1	9.4	16.6	19.3	0.0
11/26/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.8	9.3	16.6	19.1	0.0
11/27/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.7	9.2	16.6	18.9	0.0
11/28/2011	0.0	0.0	3.1	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.5	8.9	16.6	18.8	0.0
11/29/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.4	8.8	16.6	18.7	0.0
11/30/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.4	8.8	16.6	18.6	0.0
12/1/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.5	8.9	16.6	18.7	0.0
12/2/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.7	9.1	16.6	18.8	0.0
12/3/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.8	9.2	16.6	19.0	0.0
12/4/2011	0.0	0.0	3.1	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.9	9.3	16.6	19.1	0.0
12/5/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	9.8	9.3	16.6	19.1	0.0
12/6/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.0	3.7	1.5	0.0	0.0	2.0	16.6	12.5	0.0
12/7/2011	0.0	0.0	3.0	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.6	3.8	1.5	0.0	9.7	6.4	16.6	15.7	0.0
12/8/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.6	4.0	1.5	0.0	9.7	9.1	16.6	18.9	0.0
12/9/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.1	22.4	0.0	0.6	4.1	1.5	0.0	9.8	9.3	16.6	19.1	0.0
12/10/2011	0.0	0.0	3.1	0.5	2.5	0.0	0.0	6.0	22.4	0.0	0.6	3.9	1.5	0.0	9.9	9.4	16.6	19.2	0.0
12/11/2011	0.0	0.0	3.0	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	10.1	9.5	16.6	19.3	0.0
12/12/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	8.9	8.6	16.6	18.5	0.0
12/13/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	7.7	7.5	16.6	17.4	0.0
12/14/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	4.5	4.8	16.6	14.9	0.0
12/15/2011	0.0	0.0	3.1	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	4.3	3.9	16.6	13.8	0.0
12/16/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	7.0	5.9	16.6	15.6	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
12/17/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	9.8	8.6	16.6	18.3	0.0
12/18/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	9.9	9.3	16.6	19.1	0.0
12/19/2011	0.0	0.0	3.1	0.5	2.6	0.0	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	10.3	9.6	16.6	19.5	0.0
12/20/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	10.0	9.4	16.6	19.3	0.0
12/21/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	10.0	9.5	16.6	19.2	0.0
12/22/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.1	22.4	0.0	0.5	3.9	1.5	0.0	9.9	9.4	16.6	19.2	0.0
12/23/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	10.0	9.4	16.6	19.2	0.0
12/24/2011	0.0	0.0	3.0	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	10.1	9.6	16.6	19.3	0.0
12/25/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.6	3.9	1.5	0.0	10.0	9.5	16.6	19.3	0.0
12/26/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.6	4.0	1.5	0.0	10.1	9.5	16.6	19.3	0.0
12/27/2011	0.0	0.0	3.0	0.5	2.5	0.2	0.0	6.0	22.4	0.0	0.6	4.0	1.5	0.0	10.1	9.6	16.6	19.4	0.0
12/28/2011	0.0	0.0	3.1	0.5	2.6	0.4	0.0	6.1	22.4	0.0	0.6	4.0	1.5	0.0	10.2	9.6	16.6	19.5	0.0
12/29/2011	0.0	0.0	3.1	0.5	2.6	0.5	0.0	6.3	22.4	0.0	0.5	4.1	1.5	0.0	10.2	9.7	16.6	19.5	0.0
12/30/2011	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.3	22.4	0.0	0.5	4.3	1.5	0.0	10.1	9.7	16.6	19.5	0.0
12/31/2011	0.0	0.0	3.1	0.5	2.6	0.2	0.0	6.1	22.4	0.0	0.5	4.2	1.5	0.0	9.7	9.5	16.6	19.3	0.0
1/1/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.1	22.4	0.0	0.5	4.0	1.5	0.0	9.9	9.4	16.6	19.2	0.0
1/2/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	4.0	1.5	0.0	9.9	9.3	16.6	19.2	0.0
1/3/2012	0.0	0.0	3.1	0.5	2.6	0.2	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	10.0	9.4	16.6	19.2	0.0
1/4/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.1	22.4	0.0	0.5	4.0	1.5	0.0	10.1	9.5	16.6	19.3	0.0
1/5/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	4.0	1.5	0.0	10.0	9.5	16.6	19.2	0.0
1/6/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.9	1.5	0.0	10.0	9.5	16.6	19.3	0.0
1/7/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.9	1.5	0.0	10.0	9.4	16.6	19.2	0.0
1/8/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.9	1.5	0.0	10.0	9.4	16.6	19.1	0.0
1/9/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.9	9.3	16.6	19.1	0.0
1/10/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.9	1.5	0.0	9.7	9.2	16.6	19.0	0.0
1/11/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.5	3.9	1.5	0.0	9.8	9.1	16.6	19.0	0.0
1/12/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.9	1.5	0.0	9.8	9.2	16.6	19.0	0.0
1/13/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.9	1.5	0.0	9.6	9.1	16.6	18.8	0.0
1/14/2012	0.0	0.0	3.1	0.5	2.6	0.5	0.0	6.1	22.4	0.0	0.5	3.9	1.5	0.0	9.3	8.8	16.6	18.6	0.0
1/15/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.2	22.4	0.0	0.5	4.0	1.5	0.0	9.3	8.7	16.6	18.6	0.0
1/16/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	4.1	1.5	0.0	9.2	8.8	16.6	18.6	0.0
1/17/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.8	1.5	0.0	9.1	8.6	16.6	18.5	0.0
1/18/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.9	1.5	0.0	9.3	8.6	16.6	18.4	0.0
1/19/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.8	1.5	0.0	9.4	8.7	16.6	18.5	0.0
1/20/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.9	22.4	0.0	0.5	3.8	1.5	0.0	9.4	8.7	16.6	18.5	0.0
1/21/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.8	1.5	0.0	9.6	8.8	16.6	18.7	0.0
1/22/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.8	1.5	0.0	9.6	8.9	16.6	18.7	0.0
1/23/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.8	1.5	0.0	9.5	8.9	16.6	18.6	0.0
1/24/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.8	1.5	0.0	9.7	8.9	16.6	18.7	0.0
1/25/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.9	22.4	0.0	0.5	3.8	1.5	0.0	9.4	8.9	16.6	18.7	0.0
1/26/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.8	1.5	0.0	9.6	8.8	16.6	18.7	0.0
1/27/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.9	22.4	0.0	0.5	3.8	1.5	0.0	9.6	8.9	16.6	18.7	0.0
1/28/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.5	3.7	1.5	0.0	9.4	8.8	16.6	18.6	0.0
1/29/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.8	22.4	0.0	0.5	3.8	1.5	0.0	9.4	8.6	16.6	18.5	0.0
1/30/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.3	8.6	16.6	18.4	0.0
1/31/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.8	1.5	0.0	9.6	8.8	16.6	18.6	0.0
2/1/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.8	1.5	0.0	9.1	8.4	16.6	18.4	0.0
2/2/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.1	8.4	16.6	18.2	0.0
2/3/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.8	1.5	0.0	9.2	8.4	16.6	18.2	0.0
2/4/2012	0.0	0.0	3.2	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.2	8.5	16.6	18.3	0.0
2/5/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.4	8.6	16.6	18.4	0.0
2/6/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.3	8.6	16.6	18.4	0.0
2/7/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.1	8.4	16.6	18.2	0.0
2/8/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.1	8.3	16.6	18.2	0.0
2/9/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.2	8.4	16.6	18.2	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
2/10/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.8	22.4	0.0	0.5	3.7	1.5	0.0	9.2	8.3	16.6	18.2	0.0
2/11/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.8	22.4	0.0	0.5	3.6	1.5	0.0	9.2	8.4	16.6	18.2	0.0
2/12/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.7	22.4	0.0	0.5	3.6	1.5	0.0	9.2	8.3	16.6	18.2	0.0
2/13/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.7	22.4	0.0	0.5	3.6	1.5	0.0	9.2	8.3	16.6	18.2	0.0
2/14/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.7	22.4	0.0	0.5	3.6	1.5	0.0	9.3	8.4	16.6	18.2	0.0
2/15/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.7	22.4	0.0	0.5	3.7	1.5	0.0	9.3	8.4	16.6	18.2	0.0
2/16/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.7	22.4	0.0	0.5	3.7	1.5	0.0	9.3	8.4	16.6	18.2	0.0
2/17/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.7	22.4	0.0	0.5	3.6	1.5	0.0	9.4	8.5	16.6	18.3	0.0
2/18/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.7	22.4	0.0	0.5	3.6	1.5	0.0	9.2	8.4	16.6	18.2	0.0
2/19/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.6	22.4	0.0	0.5	3.5	1.5	0.0	9.1	8.2	16.6	18.0	0.0
2/20/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.6	22.4	0.0	0.5	3.5	1.5	0.0	9.1	8.2	16.6	18.0	0.0
2/21/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.6	22.4	0.0	0.5	3.4	1.5	0.0	9.2	8.2	16.6	18.0	0.0
2/22/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.5	3.5	1.5	0.0	9.1	8.2	16.6	18.0	0.0
2/23/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.6	22.4	0.0	0.5	3.4	1.5	0.0	9.1	8.1	16.6	17.9	0.0
2/24/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.5	3.4	1.5	0.0	8.9	7.9	16.6	17.8	0.0
2/25/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.5	3.4	1.5	0.0	8.8	7.8	16.6	17.6	0.0
2/26/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.6	22.4	0.0	0.5	3.4	1.5	0.0	8.7	7.7	16.6	17.5	0.0
2/27/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.4	3.4	1.5	0.0	8.7	7.7	16.6	17.5	0.0
2/28/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.4	3.3	1.5	0.0	8.7	7.7	16.6	17.5	0.0
2/29/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.3	1.5	0.0	8.6	7.5	16.6	17.4	0.0
3/1/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.3	1.5	0.0	8.7	7.5	16.6	17.3	0.0
3/2/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.3	1.5	0.0	8.7	7.6	16.6	17.4	0.0
3/3/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.5	3.2	1.5	0.0	8.6	7.4	16.6	17.3	0.0
3/4/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.2	1.5	0.0	8.5	7.3	16.6	17.2	0.0
3/5/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.5	3.3	1.5	0.0	8.7	7.5	16.6	17.3	0.0
3/6/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.7	7.6	16.6	17.4	0.0
3/7/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.8	7.6	16.6	17.4	0.0
3/8/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.5	3.2	1.5	0.0	8.8	7.6	16.6	17.4	0.0
3/9/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.5	3.2	1.5	0.0	8.7	7.5	16.6	17.4	0.0
3/10/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.5	3.2	1.5	0.0	8.9	7.6	16.6	17.5	0.0
3/11/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.2	1.5	0.0	8.8	7.6	16.6	17.4	0.0
3/12/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.5	3.2	1.5	0.0	8.8	7.5	16.6	17.4	0.0
3/13/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.8	7.6	16.6	17.5	0.0
3/14/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.7	7.5	16.6	17.4	0.0
3/15/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.7	7.5	16.6	17.3	0.0
3/16/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.6	7.4	16.6	17.3	0.0
3/17/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.4	3.2	1.5	0.0	8.8	7.6	16.6	17.4	0.0
3/18/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	9.0	7.7	16.6	17.5	0.0
3/19/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.4	3.1	1.5	0.0	9.2	7.9	16.6	17.7	0.0
3/20/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.2	1.5	0.0	9.1	7.9	16.6	17.7	0.0
3/21/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.2	1.5	0.0	8.9	7.7	16.6	17.6	0.0
3/22/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.4	3.2	1.5	0.0	8.8	7.6	16.6	17.5	0.0
3/23/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.8	7.5	16.6	17.4	0.0
3/24/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.4	3.2	1.5	0.0	8.8	7.6	16.6	17.4	0.0
3/25/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.4	3.2	1.5	0.0	9.0	7.7	16.6	17.5	0.0
3/26/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.4	3.1	1.5	0.0	8.9	7.7	16.6	17.5	0.0
3/27/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.4	3.1	1.5	0.0	8.9	7.6	16.6	17.5	0.0
3/28/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.9	7.7	16.6	17.5	0.0
3/29/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.9	7.6	16.6	17.5	0.0
3/30/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.4	3.1	1.5	0.0	8.8	7.6	16.6	17.4	0.0
3/31/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.4	3.2	1.5	0.0	8.9	7.6	16.6	17.4	0.0
4/1/2012	438.0	0.0	248.1	0.5	0.0	0.1	0.0	214.4	22.4	0.0	0.4	193.1	1.5	0.0	9.0	180.6	16.6	178.5	0.0
4/2/2012	1170.0	0.0	248.5	0.5	0.0	0.1	0.0	214.5	22.4	0.0	0.4	193.2	1.5	0.0	9.3	181.0	16.6	178.7	0.0
4/3/2012	1170.0	0.0	1104.1	0.5	0.0	0.1	0.0	223.1	22.4	0.0	0.4	193.1	1.5	0.0	9.3	181.1	16.6	178.9	0.0
4/4/2012	1280.0	0.0	1126.3	0.5	0.0	0.1	0.0	1010.1	22.4	0.0	0.4	944.8	1.5	0.0	9.5	181.4	16.6	179.1	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
4/5/2012	1460.0	0.0	1242.7	0.5	0.0	0.1	0.0	1075.8	22.4	0.0	2.2	976.7	1.5	0.0	9.8	886.8	16.6	880.3	0.0
4/6/2012	1440.0	0.0	1392.2	0.5	0.0	0.1	0.0	1225.9	22.4	0.0	31.2	1125.7	1.5	0.0	9.9	988.1	16.6	977.9	0.0
4/7/2012	1390.0	0.0	1369.9	0.5	0.0	0.1	0.0	1262.8	22.4	0.0	43.1	1235.0	1.5	0.0	10.0	1151.2	16.6	1142.0	0.0
4/8/2012	1390.0	0.0	1328.4	0.5	0.0	0.1	0.0	1225.3	22.4	0.0	45.6	1211.0	1.5	0.0	10.2	1151.9	16.6	1145.8	0.0
4/9/2012	1380.0	0.0	1326.8	0.5	0.0	0.1	0.0	1211.4	22.4	0.0	51.2	1188.9	1.5	0.0	9.4	1116.8	16.6	1110.6	0.0
4/10/2012	1370.0	0.0	1317.1	0.5	0.0	0.1	0.0	1205.1	22.4	0.0	56.3	1190.5	1.5	0.0	8.2	1117.2	16.6	1110.5	0.0
4/11/2012	1370.0	0.0	1308.8	0.5	0.0	0.1	0.0	1195.8	22.4	0.0	55.8	1182.2	1.5	0.0	8.2	1111.8	16.6	1105.3	0.0
4/12/2012	1370.0	0.0	1308.6	0.5	0.0	0.1	108.0	1089.6	22.4	0.0	54.5	1109.5	1.5	0.0	8.1	1078.3	16.6	1074.6	0.0
4/13/2012	1170.0	0.0	1282.1	0.5	111.6	0.1	129.6	1064.9	22.4	0.0	49.3	1054.3	1.5	0.0	8.2	995.4	16.6	989.9	0.0
4/14/2012	960.0	0.0	1095.7	0.5	135.2	0.1	111.2	962.8	22.4	0.0	50.1	999.7	1.5	0.0	8.3	975.0	16.6	970.2	0.0
4/15/2012	950.0	0.0	914.8	0.5	0.0	0.1	119.4	784.0	22.4	0.0	25.6	822.1	1.5	11.0	8.0	832.9	16.6	832.3	0.0
4/16/2012	950.0	0.0	901.5	0.5	0.0	0.1	101.7	712.7	22.4	0.0	21.4	681.5	1.5	0.0	8.0	669.0	16.6	668.6	0.0
4/17/2012	950.0	0.0	901.1	0.5	0.0	0.1	96.0	714.5	22.4	0.0	25.6	684.9	1.5	0.0	8.2	633.2	16.6	628.3	0.0
4/18/2012	950.0	0.0	901.1	0.5	0.0	0.1	120.0	692.0	22.4	0.0	25.7	675.3	1.5	0.0	8.2	634.7	16.6	630.5	0.0
4/19/2012	913.0	0.0	898.5	0.5	0.0	0.1	130.0	681.4	22.4	0.0	24.5	659.1	1.5	0.0	8.4	614.8	16.6	610.6	0.0
4/20/2012	827.0	0.0	861.1	0.5	33.5	0.1	119.0	674.3	22.4	0.0	24.3	656.0	1.5	0.0	8.5	607.6	16.6	602.8	0.0
4/21/2012	796.0	0.0	784.0	0.5	0.0	0.1	118.0	622.8	22.4	0.0	21.3	623.3	1.5	0.0	8.4	594.7	16.6	591.1	0.0
4/22/2012	796.0	0.0	753.7	0.5	0.0	0.1	118.0	570.6	22.4	0.0	16.8	555.5	1.5	0.0	8.7	542.1	16.6	540.1	0.0
4/23/2012	800.0	0.0	752.2	0.5	0.0	0.1	119.0	553.3	22.4	0.0	14.9	526.6	1.5	0.0	9.5	498.5	16.6	495.2	0.0
4/24/2012	809.0	0.0	756.0	0.5	0.0	0.1	118.0	555.7	22.4	0.0	14.9	524.2	1.5	0.0	10.7	485.2	16.6	481.1	0.0
4/25/2012	872.0	0.0	766.4	0.5	0.0	0.1	142.0	538.4	22.4	0.0	13.7	515.6	1.5	0.0	8.9	484.8	16.6	481.0	0.0
4/26/2012	922.0	0.0	826.1	0.5	0.0	0.1	157.0	552.9	22.4	0.0	13.0	505.6	1.5	0.0	9.0	469.0	16.6	465.4	0.0
4/27/2012	1013.0	50.0	875.0	0.5	0.0	0.1	157.0	605.9	22.4	0.0	17.4	556.0	1.5	0.0	10.7	486.0	16.6	480.0	0.0
4/28/2012	921.0	101.0	902.4	0.5	81.8	0.1	157.0	647.5	22.4	0.0	18.5	601.7	1.5	0.0	12.1	540.7	16.6	534.9	0.0
4/29/2012	808.0	100.0	777.1	0.5	68.6	0.1	94.0	661.7	22.4	0.0	14.7	647.1	1.5	0.0	9.9	582.7	16.6	575.4	0.0
4/30/2012	807.0	101.0	675.3	0.5	0.0	0.1	94.0	560.7	22.4	0.0	17.0	570.1	1.5	0.0	9.8	569.0	16.6	567.4	0.0
5/1/2012	813.0	101.0	665.5	0.5	0.0	0.1	0.0	587.9	22.4	0.0	15.2	529.2	1.5	0.0	9.3	491.0	16.6	488.0	0.0
5/2/2012	830.0	131.9	670.0	0.5	0.0	0.1	0.0	592.9	22.4	0.0	14.1	592.9	1.5	0.0	9.3	516.8	16.6	511.5	0.0
5/3/2012	837.0	150.2	658.2	0.5	0.0	0.1	0.0	591.9	22.4	0.0	13.8	562.6	1.5	0.0	9.5	519.0	16.6	514.5	0.0
5/4/2012	460.0	150.2	643.0	0.5	332.7	0.1	0.0	580.7	22.4	0.0	13.8	552.7	1.5	0.0	9.5	516.4	16.6	512.7	0.0
5/5/2012	160.0	150.2	397.7	0.5	387.4	0.1	0.0	499.9	22.4	79.7	13.8	539.1	1.5	23.9	9.3	506.4	16.6	502.6	0.0
5/6/2012	155.0	155.4	282.7	0.5	282.6	0.1	0.0	332.0	22.4	26.8	3.0	375.2	1.5	38.7	9.0	435.3	16.6	437.5	36.7
5/7/2012	151.0	155.4	248.9	0.5	252.8	0.1	0.0	243.3	22.4	0.0	0.1	264.6	1.5	19.7	8.8	308.9	16.6	310.6	20.6
5/8/2012	95.0	73.0	455.4	0.5	432.9	0.1	0.0	341.0	22.4	0.0	0.4	211.1	1.5	0.0	9.0	232.1	16.6	232.0	0.0
5/9/2012	0.0	0.0	416.8	0.5	416.3	0.1	0.0	364.8	22.4	0.0	0.4	363.9	1.5	0.0	9.4	193.5	16.6	192.3	0.0
5/10/2012	0.0	0.0	247.8	0.5	247.3	0.1	0.0	288.6	22.4	18.3	0.4	330.8	1.5	40.3	9.4	325.2	16.6	324.6	0.0
5/11/2012	0.0	0.0	248.1	0.5	247.6	0.1	0.0	214.3	22.4	0.0	0.4	211.1	1.5	0.0	9.2	297.1	16.6	297.2	60.4
5/12/2012	0.0	0.0	248.1	0.5	247.5	0.1	0.0	214.4	22.4	0.0	0.4	193.0	1.5	0.0	9.1	187.9	16.6	188.6	0.0
5/13/2012	0.0	0.0	248.1	0.5	247.6	0.1	0.0	214.4	22.4	0.0	0.4	193.2	1.5	0.0	9.1	180.7	16.6	178.6	0.0
5/14/2012	0.0	0.0	248.1	0.5	247.6	0.1	0.0	214.4	22.4	0.0	0.4	193.2	1.5	0.0	9.1	180.8	16.6	178.6	0.0
5/15/2012	0.0	0.0	248.1	0.5	247.5	0.1	0.0	214.4	22.4	0.0	0.4	193.1	1.5	0.0	8.8	180.7	16.6	178.5	0.0
5/16/2012	109.0	77.0	248.0	0.5	215.5	0.1	0.0	214.5	22.4	0.0	0.4	193.2	1.5	0.0	8.6	180.4	16.6	178.2	0.0
5/17/2012	226.0	151.0	248.0	0.5	172.5	0.1	0.0	214.5	22.4	0.0	0.4	193.1	1.5	0.0	8.5	180.3	16.6	178.1	0.0
5/18/2012	153.0	148.9	442.9	0.5	438.3	0.1	0.0	339.6	22.4	0.0	0.4	193.2	1.5	0.0	8.4	180.2	16.6	178.0	0.0
5/19/2012	145.0	149.0	378.5	0.5	381.9	0.1	0.0	349.1	22.4	0.0	0.4	362.1	1.5	11.1	8.4	180.3	16.6	178.0	0.0
5/20/2012	144.0	149.0	251.1	0.5	255.5	0.1	0.0	283.1	22.4	9.5	0.4	301.5	1.5	16.5	8.4	318.4	16.6	318.4	0.0
5/21/2012	160.0	147.0	248.0	0.5	234.5	0.1	0.0	217.7	22.4	0.0	0.4	216.8	1.5	0.0	8.3	272.4	16.6	271.1	29.3
5/22/2012	222.0	191.0	248.2	0.5	216.6	0.1	0.0	214.3	22.4	0.0	0.4	194.7	1.5	0.0	8.4	193.9	16.6	193.8	0.0
5/23/2012	223.0	211.0	248.1	0.5	235.6	0.1	0.0	214.5	22.4	0.0	0.4	193.1	1.5	0.0	8.5	180.7	16.6	178.8	0.0
5/24/2012	226.0	218.0	357.7	0.5	349.2	0.1	0.0	253.0	22.4	0.0	0.4	193.1	1.5	0.0	8.6	180.3	16.6	178.1	0.0
5/25/2012	221.0	218.0	248.1	0.5	244.6	0.1	0.0	272.1	22.4	1.5	0.4	279.3	1.5	5.4	8.5	180.3	16.6	178.1	0.0
5/26/2012	215.0	218.0	247.8	0.5	250.3	0.1	0.0	214.5	22.4	0.0	0.4	208.6	1.5	0.0	8.6	257.8	16.6	255.5	21.6
5/27/2012	215.0	218.0	248.0	0.5	250.5	0.1	0.0	214.1	22.4	0.0	0.4	192.9	1.5	0.0	8.8	186.2	16.6	186.5	0.0
5/28/2012	215.0	218.0	248.2	0.5	250.6	0.1	0.0	214.4	22.4	0.0	0.4	193.0	1.5	0.0	9.0	180.2	16.6	178.1	0.0
5/29/2012	1044.0	223.0	248.1	0.5	0.0	0.1	0.0	214.5	22.4	0.0	0.4	193.2	1.5	0.0	8.6	180.3	16.6	178.2	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
5/30/2012	1273.0	223.0	709.6	0.5	0.0	0.1	0.0	214.5	22.4	0.0	0.4	193.2	1.5	0.0	8.5	180.3	16.6	178.1	0.0
5/31/2012	1145.0	192.0	987.8	0.5	34.2	0.1	66.0	743.0	22.4	0.0	0.4	184.7	1.5	0.0	8.4	180.2	16.6	178.0	0.0
6/1/2012	1303.0	192.0	887.7	0.5	0.0	0.1	469.5	398.2	22.4	0.0	0.4	558.9	1.5	158.9	8.4	622.7	16.6	617.2	33.2
6/2/2012	1509.0	312.0	931.1	0.5	0.0	0.1	500.0	318.1	22.4	0.0	0.4	296.0	1.5	0.0	8.3	378.7	16.6	384.8	63.9
6/3/2012	1507.0	353.3	1096.2	0.5	0.0	0.1	545.0	389.3	22.4	0.0	0.4	286.8	1.5	0.0	8.3	265.8	16.6	263.6	0.0
6/4/2012	1526.0	253.7	1108.1	0.5	0.0	0.1	1108.1	482.8	22.4	0.0	0.4	424.6	1.5	0.0	8.5	286.5	16.6	278.1	0.0
6/5/2012	1706.0	260.0	1152.3	0.5	0.0	0.1	639.0	386.7	22.4	0.0	0.4	401.5	1.5	13.0	8.4	404.6	16.6	400.3	0.0
6/6/2012	1838.0	338.0	1334.8	0.5	0.0	0.1	702.0	436.6	22.4	0.0	0.6	346.6	1.5	0.0	8.3	341.8	16.6	341.8	0.0
6/7/2012	1848.0	347.4	1508.0	0.5	6.8	0.1	704.0	628.8	22.4	0.0	7.3	499.9	1.5	0.0	9.7	352.1	16.6	342.9	0.0
6/8/2012	1997.0	424.5	1435.8	0.5	0.0	0.1	692.0	650.1	22.4	0.0	10.2	636.9	1.5	0.0	10.4	570.7	16.6	559.6	0.0
6/9/2012	2094.0	474.2	1470.0	0.5	0.0	0.1	686.0	645.7	22.4	0.0	5.6	588.9	1.5	0.0	9.6	556.7	16.6	554.3	0.0
6/10/2012	2089.0	399.9	1607.5	0.5	0.0	0.1	657.0	773.0	22.4	0.0	19.4	667.2	1.5	0.0	8.6	569.5	16.6	562.7	0.0
6/11/2012	2009.0	339.5	1656.7	0.5	0.0	0.1	645.0	870.4	22.4	0.0	30.6	813.6	1.5	0.0	9.6	718.9	16.6	709.3	0.0
6/12/2012	1960.0	356.2	1581.7	0.5	0.0	0.1	493.0	980.6	22.4	0.0	34.8	927.5	1.5	0.0	8.5	826.1	16.6	815.5	0.0
6/13/2012	1860.0	411.7	1513.0	0.5	64.1	0.1	543.0	880.6	22.4	0.0	37.8	893.9	1.5	0.0	8.6	867.4	16.6	864.3	0.0
6/14/2012	1710.0	389.1	1416.4	0.5	95.0	0.1	546.0	796.4	22.4	0.0	37.3	807.0	1.5	0.0	8.9	782.3	16.6	779.1	0.0
6/15/2012	1699.0	313.7	1256.9	0.5	0.0	0.1	547.0	658.3	22.4	0.0	24.2	697.7	1.5	13.7	9.0	701.0	16.6	699.2	0.0
6/16/2012	1744.0	330.5	1228.0	0.5	0.0	0.1	610.0	518.4	22.4	0.0	17.4	536.2	1.5	0.0	9.1	559.3	16.6	560.4	0.0
6/17/2012	1747.0	334.4	1258.8	0.5	0.0	0.1	610.0	522.3	22.4	0.0	21.4	490.4	1.5	0.0	9.3	456.4	16.6	454.8	0.0
6/18/2012	1660.0	319.1	1330.6	0.5	0.0	0.1	585.0	616.2	22.4	0.0	16.6	533.1	1.5	0.0	10.3	463.2	16.6	458.4	0.0
6/19/2012	1650.0	301.7	1265.5	0.5	0.0	0.1	521.0	649.5	22.4	0.0	16.0	622.1	1.5	0.0	9.1	557.8	16.6	548.4	0.0
6/20/2012	1670.0	347.6	1282.2	0.5	0.0	0.1	532.0	631.9	22.4	0.0	15.3	597.4	1.5	0.0	8.5	562.2	16.6	559.8	0.0
6/21/2012	1695.0	355.8	1320.8	0.5	0.0	0.1	517.0	672.8	22.4	0.0	17.2	619.2	1.5	0.0	8.5	557.0	16.6	551.8	0.0
6/22/2012	1700.0	370.2	1325.0	0.5	0.0	0.1	1325.0	679.3	22.4	0.0	15.0	646.6	1.5	0.0	8.5	595.2	16.6	589.9	0.0
6/23/2012	1689.0	367.1	1295.9	0.5	0.0	0.1	569.0	628.2	22.4	0.0	16.4	619.0	1.5	0.0	8.4	593.4	16.6	589.5	0.0
6/24/2012	1691.0	398.9	1237.2	0.5	0.0	0.1	595.5	558.2	22.4	0.0	14.3	563.0	1.5	0.0	8.4	544.8	16.6	542.1	0.0
6/25/2012	1733.0	417.0	1212.5	0.5	0.0	0.1	600.0	513.9	22.4	0.0	14.8	500.3	1.5	0.0	8.4	484.1	16.6	482.3	0.0
6/26/2012	1767.0	394.9	1273.9	0.5	0.0	0.1	603.0	533.0	22.4	0.0	13.8	479.1	1.5	0.0	8.3	474.5	16.6	444.7	0.0
6/27/2012	1684.0	382.4	1306.4	0.5	4.3	0.1	632.0	558.7	22.4	0.0	15.9	521.7	1.5	0.0	8.4	465.1	16.6	459.4	0.0
6/28/2012	1593.0	379.6	1237.2	0.5	23.3	0.1	616.0	544.2	22.4	0.0	15.0	534.5	1.5	0.0	8.9	491.4	16.6	486.0	0.0
6/29/2012	1624.0	376.8	1162.2	0.5	0.0	0.1	631.0	453.8	22.4	0.0	7.9	467.9	1.5	4.7	8.5	471.2	16.6	469.3	0.0
6/30/2012	1652.0	376.4	1186.3	0.5	0.0	0.1	634.0	436.4	22.4	0.0	4.3	395.0	1.5	0.0	8.3	395.0	16.6	394.1	0.0
7/1/2012	1659.0	366.7	1208.4	0.5	0.0	0.1	1208.4	480.3	22.4	0.0	8.9	426.3	1.5	0.0	8.2	369.0	16.6	364.5	0.0
7/2/2012	1662.0	375.5	1215.2	0.5	0.0	0.1	581.0	522.7	22.4	0.0	10.1	473.4	1.5	0.0	8.1	411.6	16.6	406.1	0.0
7/3/2012	1566.0	328.5	1212.6	0.5	0.0	0.1	562.0	549.9	22.4	0.0	12.6	505.7	1.5	0.0	7.9	451.9	16.6	446.8	0.0
7/4/2012	1507.0	273.0	1152.5	0.5	0.0	0.1	519.0	553.4	22.4	0.0	16.6	531.2	1.5	0.0	8.0	480.2	16.6	474.7	0.0
7/5/2012	1413.0	269.0	1094.4	0.5	0.0	0.1	1094.4	556.5	22.4	0.0	18.4	528.9	1.5	0.0	8.3	485.1	16.6	481.2	0.0
7/6/2012	1337.0	292.6	1024.1	0.5	0.0	0.1	415.0	543.2	22.4	0.0	22.3	529.5	1.5	0.0	8.5	489.8	16.6	485.8	0.0
7/7/2012	1231.0	313.1	956.4	0.5	38.0	2.3	366.0	533.0	22.4	0.0	17.3	509.9	1.5	0.0	8.6	479.4	16.6	476.0	0.0
7/8/2012	1118.0	209.7	849.4	0.5	0.0	4.7	322.0	496.9	22.4	0.0	34.1	506.9	1.5	0.0	8.7	471.6	16.6	467.2	0.0
7/9/2012	1125.0	191.4	767.8	0.5	0.0	5.1	263.0	464.8	22.4	0.0	27.0	463.9	1.5	0.0	9.0	449.4	16.6	447.3	0.0
7/10/2012	975.0	185.3	776.2	0.5	0.0	4.9	266.0	430.0	22.4	0.0	19.6	414.9	1.5	0.0	8.8	415.1	16.6	412.7	0.0
7/11/2012	853.0	163.3	754.7	0.5	64.5	2.0	257.0	435.3	22.4	0.0	16.9	417.2	1.5	0.0	8.8	378.2	16.6	374.7	0.0
7/12/2012	889.0	161.1	659.3	0.5	0.0	5.1	258.0	384.7	22.4	0.0	6.6	397.0	1.5	4.3	8.8	380.7	16.6	377.9	0.0
7/13/2012	954.0	168.1	678.7	0.5	0.0	5.3	267.0	329.3	22.4	0.0	3.7	317.4	1.5	0.0	8.8	343.3	16.6	342.9	0.1
7/14/2012	1009.0	181.3	720.5	0.5	0.0	5.5	268.0	357.4	22.4	0.0	3.3	308.9	1.5	0.0	8.8	281.2	16.6	279.7	0.0
7/15/2012	1052.0	180.5	780.9	0.5	0.0	5.7	326.0	350.3	22.4	0.0	1.6	322.7	1.5	0.0	8.8	292.5	16.6	287.9	0.0
7/16/2012	1414.0	384.8	831.3	0.5	0.0	5.5	326.0	397.0	22.4	0.0	3.3	341.1	1.5	0.0	8.8	295.2	16.6	292.3	0.0
7/17/2012	1755.0	376.9	1014.5	0.5	0.0	3.4	402.0	420.3	22.4	0.0	5.1	357.9	1.5	0.0	8.3	326.3	16.6	321.1	0.0
7/18/2012	1901.0	385.7	1327.6	0.5	0.0	4.4	552.0	548.8	22.4	0.0	18.4	427.7	1.5	0.0	7.9	345.5	16.6	338.5	0.0
7/19/2012	1953.0	382.7	1452.9	0.5	0.0	5.2	609.0	686.2	22.4	0.0	28.0	631.6	1.5	0.0	7.9	501.8	16.6	485.8	0.0
7/20/2012	1949.0	390.2	1477.3	0.5	0.0	5.9	727.0	634.0	22.4	0.0	22.0	642.1	1.5	0.0	7.8	614.9	16.6	610.0	0.0
7/21/2012	1933.0	441.0	1441.1	0.5	0.0	6.2	744.0	603.2	22.4	0.0	18.4	593.5	1.5	0.0	8.5	558.1	16.6	554.3	0.0
7/22/2012	1923.0	434.1	1422.9	0.5	0.0	6.5	772.0	546.1	22.4	0.0	17.6	538.5	1.5	0.0	8.8	525.3	16.6	522.9	0.0
7/23/2012	1941.0	437.2	1421.4	0.5	0.0	6.8	759.0	549.6	22.4	0.0	18.1	519.3	1.5	0.0	8.6	479.4	16.6	476.3	0.0



Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
7/24/2012	1962.0	437.2	1432.9	0.5	0.0	7.0	684.0	627.7	22.4	0.0	20.8	565.9	1.5	0.0	8.7	486.3	16.6	480.9	0.0
7/25/2012	1923.0	441.3	1450.7	0.5	0.0	7.2	643.0	691.0	22.4	0.0	31.9	643.1	1.5	0.0	8.6	566.3	16.6	559.5	0.0
7/26/2012	1857.0	506.4	1393.3	0.5	42.2	7.4	639.0	675.6	22.4	0.0	31.3	670.4	1.5	0.0	8.7	627.2	16.6	621.8	0.0
7/27/2012	1829.0	505.0	1280.9	0.5	0.0	7.5	621.0	594.7	22.4	0.0	28.3	616.4	1.5	0.0	8.6	601.4	16.6	598.1	0.0
7/28/2012	1783.0	480.8	1255.4	0.5	0.0	7.6	631.0	533.3	22.4	0.0	24.6	529.9	1.5	0.0	8.7	520.8	16.6	520.1	0.0
7/29/2012	1747.0	436.6	1238.4	0.5	0.0	7.6	636.0	506.4	22.4	0.0	23.3	499.0	1.5	0.0	8.5	473.2	16.6	470.3	0.0
7/30/2012	1796.0	456.7	1248.4	0.5	0.0	7.6	633.0	508.1	22.4	0.0	19.2	481.5	1.5	0.0	9.0	448.8	16.6	445.9	0.0
7/31/2012	1891.0	485.3	1276.6	0.5	0.0	7.5	629.0	528.8	22.4	0.0	16.4	491.9	1.5	0.0	8.7	446.7	16.6	442.6	0.0
8/1/2012	1900.0	459.4	1348.9	0.5	0.0	6.9	660.1	576.3	22.4	0.0	19.2	520.7	1.5	0.0	8.8	463.9	16.6	459.2	0.0
8/2/2012	1792.0	475.1	1344.3	0.5	26.8	7.2	644.6	607.4	22.4	0.0	25.3	579.9	1.5	0.0	8.7	515.4	16.6	508.7	0.0
8/3/2012	1703.0	477.1	1239.0	0.5	12.6	7.9	657.7	525.4	22.4	0.0	17.9	547.1	1.5	2.4	8.9	538.5	16.6	534.5	0.0
8/4/2012	1675.0	452.2	1178.1	0.5	0.0	8.0	664.6	439.3	22.4	0.0	9.1	445.2	1.5	0.0	10.4	459.0	16.6	458.6	0.0
8/5/2012	1665.0	431.8	1176.1	0.5	0.0	7.9	683.3	397.2	22.4	0.0	7.4	381.5	1.5	0.0	9.8	385.5	16.6	384.3	0.0
8/6/2012	1707.0	432.3	1177.3	0.5	0.0	7.9	680.2	407.7	22.4	0.0	6.5	372.9	1.5	0.0	9.9	344.9	16.6	342.5	0.0
8/7/2012	1797.0	426.8	1223.5	0.5	0.0	8.0	652.6	463.9	22.4	0.0	6.6	395.8	1.5	0.0	9.5	347.4	16.6	343.7	0.0
8/8/2012	1864.0	435.0	1309.7	0.5	0.0	8.1	643.3	547.5	22.4	0.0	14.4	472.6	1.5	0.0	9.4	393.0	16.6	385.9	0.0
8/9/2012	1888.0	465.4	1331.2	0.5	0.0	8.1	650.4	570.5	22.4	0.0	19.5	544.6	1.5	0.0	9.2	481.2	16.6	474.2	0.0
8/10/2012	1954.0	501.2	1328.9	0.5	0.0	57.9	701.4	556.7	22.4	0.0	13.2	531.0	1.5	0.0	9.4	499.9	16.6	496.7	0.0
8/11/2012	2035.0	482.1	1409.2	0.5	0.0	42.2	704.3	607.9	22.4	0.0	9.7	543.4	1.5	0.0	9.7	486.6	16.6	482.1	0.0
8/12/2012	2014.0	424.7	1483.4	0.5	0.0	100.5	686.0	729.7	22.4	0.0	21.9	643.1	1.5	0.0	11.6	541.0	16.6	533.7	0.0
8/13/2012	2006.0	444.3	1508.1	0.5	0.0	97.0	710.1	767.4	22.4	0.0	21.7	731.8	1.5	0.0	9.4	668.2	16.6	660.3	0.0
8/14/2012	1363.0	281.6	1423.8	0.5	341.8	82.4	731.1	736.1	22.4	0.0	20.9	720.0	1.5	0.0	9.4	682.7	16.6	678.0	0.0
8/15/2012	992.0	133.5	1119.7	0.5	260.7	119.2	570.3	673.0	22.4	0.0	19.5	677.9	1.5	0.0	9.3	660.3	16.6	654.6	0.0
8/16/2012	950.0	5.8	934.3	0.5	0.0	9.1	934.3	742.0	22.4	0.0	31.1	742.3	1.5	0.0	9.8	610.5	16.6	603.0	0.0
8/17/2012	950.0	5.8	896.4	0.5	0.0	9.3	186.7	645.4	22.4	0.0	34.3	638.8	1.5	0.0	9.5	639.1	16.6	640.5	0.0
8/18/2012	950.0	5.8	895.4	0.5	0.0	9.4	191.7	623.4	22.4	0.0	30.9	609.3	1.5	0.0	11.0	579.6	16.6	576.3	0.0
8/19/2012	950.0	5.8	895.4	0.5	0.0	9.3	197.2	617.9	22.4	0.0	29.4	601.8	1.5	0.0	10.6	561.5	16.6	557.3	0.0
8/20/2012	945.0	5.8	895.1	0.5	0.0	9.2	200.4	614.7	22.4	0.0	31.1	598.8	1.5	0.0	11.1	556.9	16.6	552.5	0.0
8/21/2012	945.0	5.8	890.6	0.5	0.0	9.3	165.6	645.1	22.4	0.0	31.5	615.4	1.5	0.0	10.8	558.1	16.6	552.8	0.0
8/22/2012	941.0	5.8	890.3	0.5	0.0	9.0	141.1	667.7	22.4	0.0	32.8	640.7	1.5	0.0	10.1	585.8	16.6	580.5	0.0
8/23/2012	853.0	5.8	881.0	0.5	33.2	8.6	161.0	647.7	22.4	0.0	29.3	637.2	1.5	0.0	9.8	600.8	16.6	596.6	0.0
8/24/2012	740.0	5.8	798.9	0.5	64.2	8.2	161.3	605.3	22.4	0.0	32.7	618.4	1.5	0.0	9.9	582.1	16.6	577.7	0.0
8/25/2012	745.0	5.8	699.7	0.5	0.0	8.7	161.4	523.3	22.4	0.0	25.0	523.5	1.5	0.0	10.0	542.5	16.6	535.6	0.0
8/26/2012	745.0	5.8	696.8	0.5	0.0	8.7	147.2	479.0	22.4	0.0	16.3	461.0	1.5	0.0	9.9	463.5	16.6	462.6	0.0
8/27/2012	745.0	5.8	697.1	0.5	0.0	8.6	146.1	483.5	22.4	0.0	17.4	458.8	1.5	0.0	10.0	420.0	16.6	415.8	0.0
8/28/2012	715.0	5.8	696.3	0.5	0.0	8.5	180.5	451.2	22.4	0.0	14.8	443.2	1.5	0.0	9.9	424.1	16.6	420.7	0.0
8/29/2012	695.0	5.8	669.9	0.5	0.0	8.4	188.4	432.5	22.4	0.0	14.2	421.2	1.5	0.0	9.8	396.7	16.6	394.0	0.0
8/30/2012	703.0	5.8	650.7	0.5	0.0	8.3	202.6	395.4	22.4	0.0	10.5	388.9	1.5	0.0	9.7	380.4	16.6	378.1	0.0
8/31/2012	707.0	5.8	656.0	0.5	0.0	8.1	205.2	382.3	22.4	0.0	8.7	359.9	1.5	0.0	9.9	347.5	16.6	345.3	0.0
9/1/2012	711.0	5.8	660.2	0.5	0.0	7.9	202.0	391.0	22.4	0.0	8.7	360.3	1.5	0.0	11.1	330.6	16.6	327.5	0.0
9/2/2012	715.0	5.8	664.0	0.5	0.0	7.9	199.7	396.8	22.4	0.0	8.4	366.7	1.5	0.0	12.0	337.2	16.6	333.6	0.0
9/3/2012	627.0	5.8	666.1	0.5	44.3	7.9	198.6	401.4	22.4	0.0	8.4	371.7	1.5	0.0	11.2	341.9	16.6	338.4	0.0
9/4/2012	559.0	5.8	592.9	0.5	39.2	7.9	168.3	408.6	22.4	0.0	8.6	386.9	1.5	0.0	11.5	346.3	16.6	342.8	0.0
9/5/2012	559.0	5.8	528.6	0.5	0.0	7.8	53.0	450.2	22.4	0.0	10.4	397.4	1.5	0.0	12.7	359.3	16.6	356.5	0.0
9/6/2012	555.0	5.8	517.8	0.5	0.0	7.2	2.8	458.3	22.4	0.0	12.5	424.8	1.5	0.0	11.7	386.4	16.6	380.6	0.0
9/7/2012	551.0	5.8	514.7	0.5	0.0	6.7	12.1	450.0	22.4	0.0	11.9	428.2	1.5	0.0	11.3	397.8	16.6	393.3	0.0
9/8/2012	544.0	5.8	510.8	0.5	0.0	7.1	124.5	341.7	22.4	0.0	16.9	382.1	1.5	22.1	12.9	394.9	16.6	391.6	0.0
9/9/2012	537.0	5.8	504.6	0.5	0.0	7.1	207.1	255.8	22.4	0.0	21.9	298.3	1.5	19.0	10.9	328.8	16.6	328.8	3.0
9/10/2012	529.0	5.8	498.0	0.5	0.0	7.0	318.4	140.3	22.4	0.0	14.2	225.9	1.5	69.9	10.6	260.4	16.6	260.6	7.4
9/11/2012	522.0	5.8	490.6	0.5	0.0	6.4	340.6	113.3	22.4	0.0	12.3	129.1	1.5	2.1	10.5	129.0	16.6	197.6	41.4
9/12/2012	512.0	5.8	483.8	0.5	0.0	5.3	149.1	271.7	22.4	0.0	10.3	124.9	1.5	0.0	10.4	120.7	16.6	120.8	0.0
9/13/2012	269.0	5.8	474.3	0.5	210.6	4.3	0.0	418.5	22.4	0.0	8.6	311.0	1.5	0.0	10.3	150.5	16.6	138.7	0.0
9/14/2012	0.0	5.8	357.2	0.5	362.5	4.9	0.0	402.8	22.4	18.3	8.3	393.7	1.5	0.0	10.2	328.5	16.6	317.6	0.0
9/15/2012	0.0	0.0	3.1	0.5	2.6	5.5	0.0	5.6	22.4	0.0	4.1	4.6	1.5	0.0	10.3	21.8	16.6	33.0	1.5
9/16/2012	0.0	0.0	3.0	0.5	2.5	5.5	0.0	5.6	22.4	0.0	1.2	3.3	1.5	0.0	10.6	8.8	16.6	18.8	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

	Segment 1					Segment 2					Segment 3				Segment 4				
Date	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
9/17/2012	0.0	0.0	3.1	0.5	2.6	5.3	0.0	5.5	22.4	0.0	0.4	3.2	1.5	0.0	10.4	7.6	16.6	17.5	0.0
9/18/2012	0.0	0.0	3.1	0.5	2.5	4.5	0.0	5.6	22.4	0.0	0.3	3.2	1.5	0.0	10.4	7.2	16.6	17.0	0.0
9/19/2012	0.0	0.0	3.1	0.5	2.6	2.3	0.0	5.9	22.4	0.0	0.6	3.2	1.5	0.0	10.2	7.3	16.6	17.1	0.0
9/20/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	7.5	22.4	0.0	0.6	3.7	1.5	0.0	10.0	7.4	16.6	17.3	0.0
9/21/2012	0.0	0.0	3.1	0.5	2.5	0.0	0.0	8.3	22.4	0.0	0.6	5.2	1.5	0.0	10.2	8.1	16.6	17.8	0.0
9/22/2012	0.0	0.0	3.0	0.5	2.5	0.0	0.0	7.4	22.4	0.0	0.6	5.5	1.5	0.0	10.0	9.2	16.6	19.0	0.0
9/23/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.4	22.4	0.0	0.6	4.7	1.5	0.0	10.0	9.2	16.6	19.1	0.0
9/24/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.6	22.4	0.0	0.5	3.7	1.5	0.0	10.1	8.4	16.6	18.3	0.0
9/25/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.6	3.2	1.5	0.0	9.9	7.8	16.6	17.6	0.0
9/26/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.8	7.5	16.6	17.3	0.0
9/27/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.9	7.5	16.6	17.3	0.0
9/28/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.9	7.3	16.6	17.2	0.0
9/29/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.9	7.3	16.6	17.1	0.0
9/30/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	10.0	7.3	16.6	17.1	0.0
10/1/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.7	7.3	16.6	17.2	0.0
10/2/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.6	7.3	16.6	17.1	0.0
10/3/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.6	3.1	1.5	0.0	9.6	7.5	16.6	17.3	0.0
10/4/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.6	3.1	1.5	0.0	9.5	7.5	16.6	17.3	0.0
10/5/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.5	7.3	16.6	17.0	0.0
10/6/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	7.1	16.6	16.9	0.0
10/7/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	7.1	16.6	16.9	0.0
10/8/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	7.1	16.6	16.9	0.0
10/9/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.6	3.1	1.5	0.0	9.4	7.1	16.6	17.0	0.0
10/10/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.6	7.1	16.6	17.0	0.0
10/11/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	7.1	16.6	17.0	0.0
10/12/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.6	7.1	16.6	17.0	0.0
10/13/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.5	7.2	16.6	17.0	0.0
10/14/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	7.1	16.6	17.0	0.0
10/15/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	7.2	16.6	17.0	0.0
10/16/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.5	7.3	16.6	17.2	0.0
10/17/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.5	7.4	16.6	17.2	0.0
10/18/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.6	3.1	1.5	0.0	9.5	7.5	16.6	17.3	0.0
10/19/2012	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.0	3.1	1.5	0.0	0.0	7.7	16.6	17.4	0.0
10/20/2012	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.4	22.4	0.0	0.0	3.1	1.5	0.0	0.0	7.6	16.6	17.4	0.0
10/21/2012	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.4	22.4	0.0	0.0	3.1	1.5	0.0	0.0	7.6	16.6	17.4	0.0
10/22/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.5	7.7	16.6	17.5	0.0
10/23/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.3	8.4	16.6	18.1	0.0
10/24/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.6	3.1	1.5	0.0	9.6	8.6	16.6	18.4	0.0
10/25/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	8.8	16.6	18.5	0.0
10/26/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.5	8.1	16.6	18.0	0.0
10/27/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	7.7	16.6	17.6	0.0
10/28/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.4	22.4	0.0	0.5	3.1	1.5	0.0	9.4	7.7	16.6	17.5	0.0
10/29/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.5	3.2	1.5	0.0	9.4	7.7	16.6	17.4	0.0
10/30/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.6	3.1	1.5	0.0	9.4	7.6	16.6	17.4	0.0
10/31/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.6	3.1	1.5	0.0	9.4	7.7	16.6	17.4	0.0
11/1/2012	0.0	0.0	3.1	0.5	2.5	25.9	0.0	5.4	22.4	0.0	0.0	3.2	1.5	0.0	14.3	7.6	16.6	17.4	0.0
11/2/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.0	3.2	1.5	0.0	14.4	7.6	16.6	17.4	0.0
11/3/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.4	22.4	0.0	0.0	3.2	1.5	0.0	14.5	7.7	16.6	17.5	0.0
11/4/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.5	22.4	0.0	0.0	3.3	1.5	0.0	14.4	8.1	16.6	17.9	0.0
11/5/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.5	22.4	0.0	0.0	3.3	1.5	0.0	14.3	8.6	16.6	18.4	0.0
11/6/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.6	22.4	0.0	0.0	3.4	1.5	0.0	14.2	8.4	16.6	18.3	0.0
11/7/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.6	22.4	0.0	0.0	3.4	1.5	0.0	14.1	8.4	16.6	18.2	0.0
11/8/2012	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.7	22.4	0.0	0.0	3.4	1.5	0.0	13.7	8.4	16.6	18.3	0.0
11/9/2012	0.0	0.0	3.0	0.5	2.5	0.0	0.0	5.7	22.4	0.0	0.0	3.5	1.5	0.0	13.6	8.7	16.6	18.4	0.0
11/10/2012	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.7	22.4	0.0	0.0	3.6	1.5	0.0	13.6	8.5	16.6	18.4	0.0

Table C-5: Stormwater/Ungaged Return Flow Analysis Based on HEC-RAS Results

Computed as difference between surface water inflows and outflows for periods when outflows exceed inflows, otherwise assumed negligible.  
Input to channel inflow (Qcin) parameter.

(Units = CFS)

Date	Segment 1					Segment 2					Segment 3				Segment 4				
	Caballo (CFS)	Sum of Diversions in Segment 1 (CFS)	Leasburg (CFS)	WWTP Inflow to Segment 1 (CFS)	Total Segment 1 Stormwater Inflow (CFS)	La Mesa Drain (CFS)	Sum of Diversions in Segment 2 (CFS)	Below Mesilla (CFS)	WWTP Inflow to Segment 2 (CFS)	Total Segment 2 Stormwater Inflow (CFS)	Del Rio Drain (CFS)	Anthony (CFS)	WWTP Inflow to Segment 3 (CFS)	Total Segment 3 Stormwater Inflow (CFS)	Sum of East, Nemexas, and West Drain (CFS)	El Paso (CFS)	WWTP Inflow to Segment 4 (CFS)	American (CFS)	Total Segment 4 Stormwater Inflow (CFS)
11/11/2012	0.0	0.0	3.1	0.5	2.6	0.0	0.0	5.8	22.4	0.0	0.0	3.6	1.5	0.0	13.6	8.7	16.6	18.4	0.0
11/12/2012	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.9	22.4	0.0	0.0	3.6	1.5	0.0	13.0	8.8	16.6	18.7	0.0
11/13/2012	0.0	0.0	3.1	0.5	2.5	0.0	0.0	5.9	22.4	0.0	0.0	3.7	1.5	0.0	13.0	8.9	16.6	18.7	0.0
11/14/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.0	3.8	1.5	0.0	13.1	8.9	16.6	18.8	0.0
11/15/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.0	3.8	1.5	0.0	13.3	9.0	16.6	18.8	0.0
11/16/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.0	3.9	1.5	0.0	13.5	9.0	16.6	18.8	0.0
11/17/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.0	3.9	1.5	0.0	13.6	9.0	16.6	18.8	0.0
11/18/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.0	3.8	1.5	0.0	13.9	9.1	16.6	18.9	0.0
11/19/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	5.9	22.4	0.0	0.0	3.8	1.5	0.0	13.9	9.0	16.6	18.9	0.0
11/20/2012	0.0	0.0	3.0	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.0	3.8	1.5	0.0	13.0	9.1	16.6	18.9	0.0
11/21/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	5.9	22.4	0.0	0.0	3.8	1.5	0.0	13.5	9.3	16.6	19.0	0.0
11/22/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.0	3.8	1.5	0.0	13.5	9.3	16.6	19.1	0.0
11/23/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.0	3.8	1.5	0.0	12.7	9.5	16.6	19.2	0.0
11/24/2012	0.0	0.0	3.1	0.5	2.6	0.2	0.0	6.0	22.4	0.0	0.0	3.9	1.5	0.0	12.5	9.4	16.6	19.3	0.0
11/25/2012	0.0	0.0	3.0	0.5	2.5	0.2	0.0	6.0	22.4	0.0	0.0	3.9	1.5	0.0	12.1	9.4	16.6	19.3	0.0
11/26/2012	0.0	0.0	3.1	0.5	2.5	0.1	0.0	6.0	22.4	0.0	0.0	3.9	1.5	0.0	12.3	9.3	16.6	19.1	0.0
11/27/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.0	3.9	1.5	0.0	11.9	9.2	16.6	18.9	0.0
11/28/2012	0.0	0.0	3.1	0.5	2.5	0.2	0.0	6.0	22.4	0.0	0.0	3.9	1.5	0.0	15.1	8.9	16.6	18.8	0.0
11/29/2012	0.0	0.0	3.1	0.5	2.6	0.1	0.0	6.0	22.4	0.0	0.0	3.9	1.5	0.0	19.0	8.8	16.6	18.7	0.0
11/30/2012	0.0	0.0	3.1	0.5	2.6	0.2	0.0	6.0	22.4	0.0	0.0	3.9	1.5	0.0	17.4	8.8	16.6	18.6	0.0

**Table C-6: Doña Ana County Effluent Discharges**

Input to the effluent (Qeff) parameter

Location	RGCP Water Budget Study Segment	Average Daily Discharge (gpd)*	Average Daily Discharge (cfs)	Comment
<b>Northwest WWTP (Salem)</b> <sup>(2)</sup>	Segment 1	<b>35000</b>	<b>0.05</b>	
<b>South Central Regional WWTP (La Mesa)</b> <sup>(2)</sup>	Segment 3	<b>320000</b>	<b>0.50</b>	
<b>Sunland Park WWTP</b> <sup>(2)</sup>	Segment 4	<b>1700000</b>	<b>2.63</b>	
Rincon WWTP	Segment 4	N/A	N/A	Kurt states that this location can discharge into River, but currently flows to Sunland Park WWTP

Note 1) Contacted Sue Padilla and Kurt Moffatt (Chief Operator/Engineer)

Location	RGCP Water Budget Study Segment	NPDES Effluent Limit (MGD) <sup>(1)</sup>	Average Daily Discharge (cfs)	Location
<b>Village of Hatch WWTP</b>	<b>1</b>	<b>0.30</b>	<b>0.46</b>	<b>Latitude 32-40-05 N; Longitude 107-08-17 W</b>
<b>Las Cruces</b>	<b>2</b>	<b>13.50</b>	<b>20.89</b>	<b>Latitude 32-17-33 N; Longitude 106-49-27 W</b>
Gadsden Central and High School WTP	3	0.09	<b>0.14</b>	Latitude 31-59-56.03 N; Longitude 106-38-6.52 W
Sunland Park	4	2.00	3.09	Latitude 31-47-54 N; Longitude 106-33-24 W
<b>Santa Teresa</b>	<b>3</b>	<b>0.53</b>	<b>0.82</b>	<b>Latitude 32-01-23 N; Longitude 106-38-54 W</b>
Salem WTP	1	0.20	0.31	Latitude 32-41-36 N; Longitude 107-12-30 W
La Mesa	3	1.05	1.62	Latitude 32-05-22 N; Longitude 106-39-36 W
<b>East Mesa Water Reclamation Facility</b>	<b>2</b>	<b>1.00</b>	<b>1.55</b>	<b>Latitude 32-19-40 N; Longitude 106-43-26 W</b>
<b>NW El Paso WWTP</b> <sup>(2)</sup>	<b>4</b>	<b>9.05</b>	<b>14.0</b>	<b>North of Executive Center Drive at I-10, El Paso County, TX</b>

**Bolded** values are used in the Water Budget Analysis

Note 1) Unless otherwise noted, data was downloaded from NMED, Surface Water Quality Bureau, Point Source Regulation Section Website

Note 2) Per Comment from EBID and EPCWID, email dated 3/1/2013

Input to the WBS (cfs)

Segment 1	0.52
Segment 2	22.43
Segment 3	1.45
Segment 4	16.63