

APPENDIX D – SURFACE WATER AND SEDIMENT CHEMISTRY DATA, BOULDER-ELKHORN TMDL PLANNING AREA

This appendix contains two data tables. **Table D-1** contains surface water flow and chemistry data for streams in the Boulder-Elkhorn. **Table D-2** contains stream channel sediment metals concentration data and the corresponding ratio of each measured concentration to the recommended PEL concentration.

Table D-1. Surface Water Quality Data for the Boulder-Elkhorn TMDL Planning Area

Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
Basin Creek	6031600	Basin Creek at Basin MT	4/26/2001	33	24	7.3	20.3	12	0.7	14.3	675	--	2.6	--	103
Basin Creek	6031600	Basin Creek at Basin MT	5/17/2001	15	126	7.3	--	8	0.46	9.7	--	--	2.92	--	67
Basin Creek	6031600	Basin Creek at Basin MT	8/9/2001	36	5.8	7.8	--	9	0.33	5.2	--	--	< 1	--	45
Basin Creek	6031600	Basin Creek at Basin MT	9/25/2001	42	2.9	7.7	--	6	0.27	3.4	--	--	< 1	--	43
Basin Creek	6031600	Basin Creek at Basin MT	5/22/2002	15	113	7.6	--	12	0.63	12.8	--	--	6.49	--	83
Basin Creek	6031600	Basin Creek at Basin MT	6/11/2002	18	72	7.6	48.1	6	0.38	8.9	200	--	1.49	--	57
Basin Creek	6031600	Basin Creek at Basin MT	2/20/2003	39	4.2	7.8	--	4	0.33	2.9	--	--	0.29	--	74
Basin Creek	6031600	Basin Creek at Basin MT	5/13/2003	21	62	8	--	7	0.37	8	--	--	1.42	--	69
Basin Creek	6031600	Basin Creek at Basin MT	6/4/2003	15	106	7.5	--	10	0.36	10.9	--	--	3.74	--	54
Basin Creek	6031600	Basin Creek at Basin MT	8/20/2003	43	2.7	7.2	--	8	0.24	3.3	--	--	0.24	--	32
Basin Creek	6031600	Basin Creek at Basin MT	3/22/2004	38	7.5	7.5	--	4	0.54	5.2	--	--	0.44	--	89
Basin Creek	6031600	Basin Creek at Basin MT	5/24/2004	17	67	7.2	--	5	0.37	9.3	--	--	1.61	--	57
Basin Creek	6031600	Basin Creek at Basin MT	7/29/2004	34	4.7	7.8	--	7	0.27	4	--	--	0.26	--	41
Basin Creek	6031600	Basin Creek at Basin MT	9/22/2004	35	7	7.7	--	5	0.39	5.1	--	--	0.41	--	68
Basin Creek	6031600	Basin Creek at Basin MT	5/2/2005	28	24	7.7	--	6	0.33	7.2	--	--	1.21	--	62
Basin Creek	6031600	Basin Creek at Basin MT	5/23/2005	15	131	7.4	--	7	0.38	9.2	--	--	3.28	--	48
Basin Creek	6031600	Basin Creek at Basin MT	8/3/2005	31	7.3	7.8	--	7	0.23	4.8	--	--	0.3	--	37
Basin Creek	6031600	Basin Creek at Basin MT	9/21/2005	40	4.8	8	--	5.4	0.22	3	--	--	0.17	--	35
Basin Creek	6031600	Basin Creek at Basin MT	2/8/2006	40	3.5	7.7	--	3.6	0.3	3.2	--	--	< 0.06	--	71
Basin Creek	6031600	Basin Creek at Basin MT	5/17/2006	13	247	7.3	--	38.2	0.73	16.2	--	--	14.6	--	87
Basin Creek	6031600	Basin Creek at Basin MT	7/25/2006	32	4.8	8	--	8.3	0.19	4.9	--	--	0.25	--	19
Basin Creek	6031600	Basin Creek at Basin MT	9/14/2006	44	1.8	7.5	--	5.5	0.23	3.1	--	--	0.16	--	34
Basin Creek	6031600	Basin Creek at Basin MT	3/6/2007	38	3.5	7.5	--	3.1	0.25	2.5	--	--	0.24	--	63
Basin Creek	6031600	Basin Creek at Basin MT	5/8/2007	17	78	7.4	--	5.1	0.33	7.3	--	--	1.62	--	48.2
Basin Creek	6031600	Basin Creek at Basin MT	7/11/2007	29	7.9	7.8	--	6.4	0.2	4.5	--	--	0.39	--	32.2
Basin Creek	6031600	Basin Creek at Basin MT	8/30/2007	42	2.2	7.8	--	5.1	0.22	2.5	--	--	0.12	--	33.5
Basin Creek	6031600	Basin Creek at Basin MT	4/22/2008	35	6.4	7.4	--	4	0.26	3.9	--	--	0.55	--	61.2
Basin Creek	6031600	Basin Creek at Basin MT	6/4/2008	13	203	6.8	--	5.8	0.34	8.4	--	--	2.61	--	45.4
Basin Creek	6031600	Basin Creek at Basin MT	7/17/2008	24	15	7.6	--	6.3	0.37	9.1	--	--	0.61	--	63.1
Basin Creek	6031600	Basin Creek at Basin MT	8/26/2008	35	3.1	8.1	--	6.2	0.24	3.7	--	--	0.24	--	31.9
Basin Creek	6031600	Basin Creek at Basin MT	4/23/2009	25.1	--	7.3	--	--	0.35	19.4	--	--	4.75	0.377	87.2
Basin Creek	6031600	Basin Creek at Basin MT	5/22/2009	14.6	--	7.8	--	--	0.27	11.4	--	--	8.2	0.374	63.2
Basin Creek	6031600	Basin Creek at Basin MT	6/18/2009	16.9	--	7.5	--	--	0.3	10.6	--	--	1.89	0.374	52.5
Basin Creek	6031600	Basin Creek at Basin MT	8/17/2009	28.9	--	7.1	--	--	0.35	8.1	--	--	0.6	0.480	54
Basin Creek	6031600	Basin Creek at Basin MT	3/9/2010	35	--	7.4	--	--	0.25	--	--	--	0.31	0.667	53.4
Basin Creek	6031600	Basin Creek at Basin MT	6/1/2010	14.3	--	6.8	--	--	0.21	9.2	--	--	4.65	0.374	48.5
Basin Creek	6031600	Basin Creek at Basin MT	7/20/2010	27.7	--	--	--	--	0.29	7.8	--	--	0.61	0.446	49.2
Basin Creek	6031600	Basin Creek at Basin MT	8/25/2010	29.2	--	7.5	--	--	0.24	7.1	--	--	0.53	0.488	47.8
Basin Creek	462347112180401	D/S of Buckeye Mine	4/26/2001	28	0.82	7.3	62.7	--	0.65	9.4	807	--	8.84	--	120
Basin Creek	462347112180401	D/S of Buckeye Mine	8/8/2001	34	0.94	7.3	--	--	0.34	4.8	--	--	3.1	--	53
Basin Creek	462347112180401	D/S of Buckeye Mine	9/25/2001	36	0.38	7.8	--	--	0.33	3	--	--	3.51	--	55

Table D-1. Surface Water Quality Data for the Boulder-Elkhorn TMDL Planning Area

Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
Basin Creek	462347112180401	D/S of Buckeye Mine	11/15/2001	34	0.52	7.5	34.5	--	0.47	4.2	360	--	< 1	--	87
Basin Creek	462347112180401	D/S of Buckeye Mine	6/11/2002	20	2.8	7.1	119	--	0.61	7.8	209	--	3.24	--	95
Basin Creek	462347112180401	D/S of Buckeye Mine	6/17/2002	18	9.3	7.4	--	--	0.4	5.6	--	--	2.74	--	62
Basin Creek	462347112180401	D/S of Buckeye Mine	3/24/2003	43	0.48	6.8	--	--	0.24	3	--	--	1.02	--	52
Basin Creek	462347112180401	D/S of Buckeye Mine	5/14/2003	35	1.9	--	--	--	0.97	12	--	--	5.18	--	192
Basin Creek	462347112180401	D/S of Buckeye Mine	6/3/2003	17	11	7.5	--	--	0.32	5.2	--	--	4.32	--	54
Basin Creek	462347112180401	D/S of Buckeye Mine	8/21/2003	41	0.35	7.3	--	--	0.14	2.2	--	--	1.45	--	22
Basin Creek	462347112180401	D/S of Buckeye Mine	3/30/2004	36	0.7	7.4	--	--	0.64	5.9	--	--	1.85	--	114
Basin Creek	462347112180401	D/S of Buckeye Mine	5/24/2004	19	5.2	7.4	--	--	0.63	7.4	--	--	2.3	--	87
Basin Creek	462347112180401	D/S of Buckeye Mine	7/29/2004	31	0.75	7.1	--	--	0.22	2.3	--	--	1.19	--	38
Basin Creek	462347112180401	D/S of Buckeye Mine	9/22/2004	31	0.92	7.3	--	--	0.28	3.2	--	--	0.57	--	53
Basin Creek	462347112180401	D/S of Buckeye Mine	5/4/2005	34	2.4	7.6	--	--	0.75	8.4	--	--	3.42	--	128
Basin Creek	462347112180401	D/S of Buckeye Mine	5/24/2005	18	10	6.8	--	--	0.29	4.6	--	--	3.23	--	45
Basin Creek	462347112180401	D/S of Buckeye Mine	8/3/2005	29	0.76	7.6	--	--	0.1	1.6	--	--	0.58	--	30
Basin Creek	462347112180401	D/S of Buckeye Mine	9/21/2005	35	0.89	7.4	--	--	0.13	1.7	--	--	2.15	--	24
Basin Creek	462347112180401	D/S of Buckeye Mine	2/9/2006	35	E 0.3	7.6	--	--	0.2	2.9	--	--	6.37	--	46
Basin Creek	462347112180401	D/S of Buckeye Mine	5/18/2006	14	18	7.3	--	--	0.36	9.2	--	--	6.74	--	54
Basin Creek	462347112180401	D/S of Buckeye Mine	7/25/2006	33	0.62	7.5	--	--	0.14	2	--	--	0.57	--	25
Basin Creek	462347112180401	D/S of Buckeye Mine	9/8/2006	37	0.31	7.1	--	--	0.14	1.5	--	--	0.73	--	22
Basin Creek	462347112180401	D/S of Buckeye Mine	3/6/2007	35	0.43	6.8	--	--	0.21	2.2	--	--	0.57	--	49
Basin Creek	462347112180401	D/S of Buckeye Mine	5/9/2007	18	7.7	7.8	--	--	0.38	6.3	--	--	3.25	--	63.4
Basin Creek	462347112180401	D/S of Buckeye Mine	7/11/2007	29	0.68	7.4	--	--	0.14	1.9	--	--	0.35	--	33.3
Basin Creek	462347112180401	D/S of Buckeye Mine	8/29/2007	38	0.33	7.5	--	--	0.11	0.7	--	--	0.52	--	22.8
Basin Creek	BE-01	U/S Buckeye Mine	6/10/2009	18.0	7.72	6.07	--	< 3.0	< 0.08	2.0	130	< 0.05	< 0.5	< 0.5	10
Basin Creek	BE-01	U/S Buckeye Mine	6/12/2009	--	6.83	7.25	--	--	--	--	--	--	--	--	--
Basin Creek	BE-01	U/S Buckeye Mine	8/20/2009	28.0	1.32	6.4	--	< 3.0	< 0.08	1.0	50	< 0.05	< 0.5	< 0.5	< 10
Basin Creek	BE-02	1000 ft U/S Grub Gulch	6/10/2009	17.0	10.96	6.50	--	9.0	0.28	5.0	170	< 0.05	1.4	< 0.5	50
Basin Creek	BE-02	1000 ft U/S Grub Gulch	8/20/2009	29.0	1.6	6.71	--	8.0	0.14	2.0	160	< 0.05	< 0.5	< 0.5	30
Basin Creek	BE-03	D/S Grub Gulch	6/10/2009	15.0	18.56	6.15	--	8.0	0.2	6.0	250	< 0.05	1.9	< 0.5	40
Basin Creek	BE-03	D/S Grub Gulch	8/20/2009	29.0	3.31	7.33	--	13.0	0.12	4.0	490	< 0.05	2.1	< 0.5	40
Basin Creek	BE-04	D/S Clear Cr	6/10/2009	15.0	26.14	6.14	--	7.0	0.19	6.0	240	< 0.05	1.8	< 0.5	40
Basin Creek	BE-04	D/S Clear Cr	6/12/2009	--	25.14	7.52	--	--	--	--	--	--	--	--	--
Basin Creek	BE-04	D/S Clear Cr	8/20/2009	27.0	3.62	7.31	--	12.0	0.12	4.0	450	< 0.05	2.1	< 0.5	30
Basin Creek	BE-05	U/S Joe Bowers Cr	6/10/2009	12.0	31.44	5.59	--	5.0	0.14	5.0	190	< 0.05	1.2	< 0.5	30
Basin Creek	BE-05	U/S Joe Bowers Cr	8/20/2009	23.0	4.21	7.51	--	9.0	< 0.08	3.0	240	< 0.05	1.0	< 0.5	20
Basin Creek	BE-06	D/S Joe Bowers Cr	6/10/2009	11.0	36.55	5.81	--	5.0	0.13	5.0	190	< 0.05	1	< 0.5	20
Basin Creek	BE-06	D/S Joe Bowers Cr	8/20/2009	21.0	5.09	7.37	--	8.0	< 0.08	3.0	230	< 0.05	0.9	< 0.5	20
Basin Creek	BE-07	Jack Creek confluence	6/10/2009	13.0	60.50	5.92	--	5.0	0.2	6.0	220	< 0.05	1.4	< 0.5	30
Basin Creek	BE-07	Jack Creek confluence	6/12/2009	--	65.43	7.22	--	--	--	--	--	--	--	--	--
Basin Creek	BE-07	Jack Creek confluence	8/20/2009	27.0	8.29	7.36	--	7.0	0.82	14.0	250	< 0.05	0.7	< 0.5	100
Basin Creek	BE-08	U/S town of Basin	6/10/2009	15.0	492.7	6.54	--	6.0	0.3	9.0	330	< 0.05	1.9	< 0.5	40
Basin Creek	BE-08	U/S town of Basin	6/12/2009	--	217.4	7.21	--	--	--	--	--	--	--	--	--
Basin Creek	BE-08	U/S town of Basin	8/20/2009	31.0	13.57	7.45	--	6.0	0.29	7.0	130	< 0.05	< 0.5	< 0.5	50
Basin Creek	BE-09	At Canyon Campground	6/10/2009	14.0	105.13	6.32	--	5.0	0.28	8.0	320	< 0.05	1.7	< 0.5	40
Basin Creek	BE-09	At Canyon Campground	8/20/2009	28.0	8.3	7.49	--	7.0	0.40	8.0	220	< 0.05	0.5	< 0.5	50
Basin Creek	M07BASNC02 (BE-01)	U/S Buckeye Mine	6/6/2010	16	12.2	--	80	< 3.0	< 0.08	3	270	--	< 0.5	< 0.5	< 10
Basin Creek	M07BASNC02 (BE-01)	U/S Buckeye Mine	7/15/2010	22	1.84	--	< 30	< 3.0	< 0.08	2	60	--	< 0.5	< 0.5	< 10

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Basin Creek	M07BASNC03 (BE-02)	1000 ft U/S Grub Gulch	6/6/2010	16	17.24	--	100	10	0.25	5	270	--	2	< 0.5	40
Basin Creek	M07BASNC03 (BE-02)	1000 ft U/S Grub Gulch	7/14/2010	25	2.41	--	30	7	0.15	3	120	--	0.7	< 0.5	30
Basin Creek	M07BASNC04 (BE-03)	D/S Grub Gulch	6/6/2010	14	41.05	--	120	10	0.19	6	290	--	3.3	< 0.5	40
Basin Creek	M07BASNC04 (BE-03)	D/S Grub Gulch	7/14/2010	24	3.2	--	30	17	0.1	3	270	--	1.1	< 0.5	30
Basin Creek	M07BASNC05 (BE-04)	D/S Clear Cr	6/6/2010	15	75.64	--	170	9	0.2	7	280	--	3.1	< 0.5	40
Basin Creek	M07BASNC05 (BE-04)	D/S Clear Cr	7/14/2010	20	4.39	--	60	13	0.11	3	230	--	1	< 0.5	30
Basin Creek	M07BASNC06 (BE-06)	D/S Joe Bowers Cr	6/6/2010	10	C 331.4	--	150	6	0.12	5	220	--	1.8	< 0.5	20
Basin Creek	M07BASNC06 (BE-06)	D/S Joe Bowers Cr	7/14/2010	16	7.81	--	60	7	< 0.08	3	170	--	0.6	< 0.5	20
Basin Creek	M07BASNC07 (BE-07)	Jack Creek confluence	6/8/2010	11	C 167.3	--	130	6	0.09	5	210	--	1.8	< 0.5	20
Basin Creek	M07BASNC07 (BE-07)	Jack Creek confluence	7/14/2010	19	16.86	--	40	6	0.09	3	110	--	0.6	< 0.5	20
Big Limber Gulch	BE-11	Abv Waldy/Redwing Complex	06/11/09	24.0	0.218	7.25	--	< 3	< 0.08	1	160	--	< 0.5	< 0.5	< 10
Big Limber Gulch	BE-11	Abv Waldy/Redwing Complex	08/24/09	61.0	0.03	7.99	--	4	< 0.08	1	90	< 0.005	< 0.5	< 0.5	< 10
Big Limber Gulch	BE-12	Abv Minneapolis Placer	06/11/09	56.0	0.405	7.39	--	< 3	< 0.08	1	220	< 0.005	< 0.5	< 0.5	< 10
Big Limber Gulch	BE-12	Abv Minneapolis Placer	08/21/09	116.0	0.057	6.5	--	3	0.18	4	570	--	1.0	< 0.5	20
Big Limber Gulch	BE-13	At mouth	06/11/09	81.0	0.491	7.78	--	< 3	< 0.08	1	180	--	< 0.5	< 0.5	< 10
Big Limber Gulch	BE-13	At mouth	08/24/09	137.0	0.063	8.02	--	3	< 0.08	1	300	< 0.005	0.7	< 0.5	< 10
Big Limber Gulch	M07BLMBG01	Abv Waldy/Redwing Complex	6/4/2010	40	0.45	--	110	8	0.22	11	2740	< 0.005	8.4	< 0.5	40
Big Limber Gulch	M07BLMBG01	Abv Waldy/Redwing Complex	6/14/2010	--	--	--	--	--	--	--	--	--	--	--	--
Big Limber Gulch	M07BLMBG01	Abv Waldy/Redwing Complex	7/9/2010	45	0.12	--	< 30	< 3	< 0.08	1	140	< 0.005	ND	< 0.5	< 10
Big Limber Gulch	M07BLMBG02	Abv Minneapolis Placer	6/4/2010	66	0.54	--	< 30	< 3	< 0.08	2	390	--	0.7	< 0.5	< 10
Big Limber Gulch	M07BLMBG02	Abv Minneapolis Placer	6/14/2010	--	--	--	--	--	--	--	--	--	--	--	--
Big Limber Gulch	M07BLMBG02	Abv Minneapolis Placer	7/9/2010	87	0.31	--	< 30	< 3	< 0.08	2	460	< 0.005	0.9	< 0.5	< 10
Big Limber Gulch	M07BLMBG03	At mouth	6/4/2010	95	0.53	--	< 30	4	< 0.08	3	690	--	1.9	< 0.5	< 10
Big Limber Gulch	M07BLMBG03	At mouth	6/14/2010	--	--	--	--	--	--	--	--	--	--	--	--
Big Limber Gulch	M07BLMBG03	At mouth	7/8/2010	103	0.37	--	< 30	3	< 0.08	2	290	< 0.005	0.9	< 0.5	ND
Big Limber Gulch	M07BLMBG03	At mouth	7/8/2010	--	--	--	--	--	--	--	--	< 0.005	--	--	--
Bison Creek	M07BISNC09	upper Elk Park ditch	7/19/2010	265	0	--	< 30	87	< 0.08	6	4080	--	1.2	< 0.5	< 10
Bison Creek	M07BISNC09	upper Elk Park ditch	8/19/2010	228	0	--	< 30	73	< 0.08	8	2990	--	1.3	< 0.5	< 10
Bison Creek	M07BISNC09	upper Elk Park ditch	9/30/2010	183	0	--	< 30	31	< 0.08	7	3880	--	1.1	< 0.5	10
Bison Creek	BE-18	D/S Res. Subdivision	6/9/2009	39.0	18.55	6.49	--	6.0	< 0.08	8.0	490	< 0.05	< 0.5	< 0.5	20
Bison Creek	BE-18	D/S Res. Subdivision	8/18/2009	39.0	3.67	7.06	--	9.0	< 0.08	5.0	1040	< 0.05	< 0.5	< 0.5	10
Bison Creek	BE-17	North end of Elk Park	6/9/2009	32.0	133.1	6.46	--	5.0	< 0.08	7.0	550	< 0.05	< 0.5	< 0.5	10
Bison Creek	BE-17	North end of Elk Park	8/18/2009	35.0	12.91	6.76	--	5.0	< 0.08	3.0	840	< 0.05	< 0.5	< 0.5	10
Bison Creek	BE-15	Bison Creek mouth	6/9/2009	37.0	330.5	6.66	--	6.0	< 0.08	8.0	1370	< 0.05	0.9	< 0.5	10
Bison Creek	BE-15	Bison Creek mouth	8/18/2009	48.0	28.62	7.12	--	4.0	< 0.08	3.0	710	< 0.05	< 0.5	< 0.5	10
Bison Creek	M07BISNC02 (BE-15)	Bison Creek mouth	6/9/2010	41	352.9	--	50	7	< 0.08	9	1450	--	1.1	< 0.5	20
Bison Creek	M07BISNC02 (BE-15)	Bison Creek mouth	7/18/2010	49	28.67	--	< 30	5	< 0.08	4	540	--	< 0.5	< 0.5	< 10
Upper Boulder River	BE-28	U/S of Powderhorn Mine	6/9/2009	34	14.1	6.79	--	4	< 0.08	3.0	320	< 0.05	< 0.5	0.1	< 10
Upper Boulder River	BE-28	U/S of Powderhorn Mine	8/18/2009	52	1.98	8.15	--	4	< 0.08	3.0	250	< 0.05	< 0.5	< 0.5	< 10
Upper Boulder River	M07TMDL_BE-30	D/S Lowland Cr mouth	6/9/2009	34	14.1	6.79	--	4	< 0.08	3.0	320	< 0.05	< 0.5	0.1	< 10
Upper Boulder River	M07TMDL_BE-30	D/S Lowland Cr mouth	8/18/2009	52	1.98	8.15	--	4	< 0.08	1.0	250	< 0.05	< 0.5	< 0.5	< 10
Upper Boulder River	M07TMDL_BE-29	D/S of Little Cottonwood Cr	6/9/2009	23	436.3	6.74	--	4	< 0.08	3.0	490	< 0.05	0.6	< 0.1	< 10
Upper Boulder River	M07TMDL_BE-29	D/S of Little Cottonwood Cr	8/20/2009	44	21.3	7.66	--	4	< 0.08	1.0	280	< 0.05	< 0.5	< 0.5	< 10
Upper Boulder River	M07TMDL_BE-31	U/S bison Cr mouth	6/9/2009	20	92.94	6.83	--	< 3	< 0.08	2.0	260	< 0.05	< 0.5	0.3	< 10
Upper Boulder River	M07TMDL_BE-31	U/S bison Cr mouth	8/20/2009	39	7.87	7.74	--	< 3	< 0.08	< 1	190	< 0.05	< 0.5	< 0.5	< 10
Upper Boulder River	BE-20	D/S of Red Rock Cr	6/9/2009	24	433.7	6.9	--	4	< 0.08	3.0	530	< 0.05	0.8	0.2	< 10
Upper Boulder River	BE-20	D/S of Red Rock Cr	8/20/2009	45	22	7.55	--	4	< 0.08	1.0	250	< 0.05	< 0.5	< 0.5	< 10

Table D-1. Surface Water Quality Data for the Boulder-Elkhorn TMDL Planning Area

Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
Upper Boulder River	BE-20	D/S of Red Rock Cr	6/8/2010	28	952.81		110	5	< 0.08	6.0	850	--	1	< 0.5	< 10
Upper Boulder River	BE-20	D/S of Red Rock Cr	8/18/2010	51	50.66	8.5	< 30	5	< 0.08	2.0	360	--	< 0.5	< 0.5	< 10
Upper Boulder River	BE-21	1 mile U/S of Basin Cr	6/9/2009	28	799	6.91	--	4	< 0.08	5.0	830	< 0.05	0.9	< 0.1	< 10
Upper Boulder River	BE-21	1 mile U/S of Basin Cr	8/18/2009	46	60.81	7.42	--	4	< 0.08	3.0	460	< 0.05	< 0.5	< 0.5	< 10
Upper Boulder River	6031450	1 mile U/S of Basin Cr	6/9/2009	27	871.9	7.03	--	4	< 0.08	5.0	810	< 0.05	0.8	< 0.1	< 10
Upper Boulder River	6031450	1 mile U/S of Basin Cr	8/18/2009	46	67.98	7.42	--	4	< 0.08	2.0	410	< 0.05	< 0.5	< 0.5	< 10
Upper Boulder River	6031450	1 mile U/S of Basin Cr	8/9/2001	49.5	--	--	--	--	< 0.04	2.2	--	--	< 1	--	4
Upper Boulder River	6031450	1 mile U/S of Basin Cr	9/25/2001	55.9	--	--	--	--	< 0.04	2.6	--	--	< 1	--	6
Upper Boulder River	6031450	1 mile U/S of Basin Cr	5/23/2002	25.2	--	--	--	--	< 0.04	4.1	--	--	< 1	--	7
Upper Boulder River	6031450	1 mile U/S of Basin Cr	6/13/2002	29.1	--	--	17	--	< 0.04	3.8	462	--	< 1	< 0.05	9
Upper Boulder River	6031450	1 mile U/S of Basin Cr	2/20/2003	54.5	--	--	--	--	< 0.04	3.4	--	--	0.19	--	7
Upper Boulder River	6031450	1 mile U/S of Basin Cr	5/12/2003	44.4	--	--	--	--	< 0.04	5.8	--	--	1.19	--	12
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	4/27/01	30	607	7.4	11.7	17	0.95	32	5140	0.028	10	0.27	117
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/16/01	21	781	6.9	--	7	0.48	15.2	--	--	3.64	--	57
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	8/9/01	53	28	8.3	--	8	0.55	10.6	--	--	< 1	--	58
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	9/26/01	64	14	8.2	--	7	0.97	9.5	--	--	< 1	--	133
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/22/02	21	397	7.7	--	8	0.59	16.7	--	--	4.38	--	81
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	6/13/02	25	404	7.5	45.7	7	0.48	13.7	384	E 0.01	2.19	0.04	67
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	2/21/03	59	18	8.1	--	4	0.76	10.6	--	--	0.55	--	135
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/13/03	39	332	7.7	--	5	0.32	9.7	--	--	1.14	--	50
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	6/5/03	22	497	7.8	--	7	0.43	17.9	--	--	4.23	--	52
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	8/20/03	63	12	7.7	--	9	0.38	10.1	--	--	0.34	--	37
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	3/22/04	55	61	7.8	--	7	0.55	11.7	--	--	1.8	--	96
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/24/04	28	329	7.5	--	5	0.35	9.6	--	--	1.66	--	55
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	7/29/04	59	23	8.6	--	7	0.42	8.2	--	--	0.22	--	47
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	9/22/04	48	105	8.1	--	4	0.53	7.4	--	--	0.72	--	71
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/2/05	43	82	7.7	--	4	0.32	8	--	--	0.76	--	62
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/23/05	22	703	7.5	--	8	0.38	15.7	--	--	4.41	--	53
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	8/4/05	55	32	7.9	--	5	0.45	7.5	--	--	0.32	--	77
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	9/22/05	61	27	7.6	--	5	0.55	6.1	--	--	0.39	--	99
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	2/8/06	62	29	7.4	--	3.7	0.48	6.1	--	--	0.35	--	97
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/18/06	18	970	7.6	--	12.9	0.53	17.6	--	--	7.13	--	63
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	7/25/06	56	26	8.1	--	6.4	0.4	8.8	--	--	0.19	--	52
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	9/14/06	75	11	8.1	--	6.8	0.37	6.4	--	--	0.25	--	49
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	3/6/07	55	24	7.5	--	4.2	0.4	8.3	--	--	0.66	--	85
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/8/07	26	205	7.8	--	4.9	0.29	8.9	--	--	1.99	--	54
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	7/11/07	48	33	8.4	--	7.1	0.28	8.1	--	--	0.43	--	35.9
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	8/30/07	66	10	8.7	--	7.8	0.29	7.4	--	--	0.34	--	35.4
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	4/22/08	52	56	7.8	--	4.6	0.31	9.6	--	--	1.07	--	58.6
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	6/4/08	20	851	7.7	--	7.5	0.43	12.8	--	--	4.54	--	63.8
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	7/17/08	40	89	8	--	5.8	0.29	8.7	--	--	0.5	--	41.2
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	8/26/08	53	24	8.8	--	7.7	0.27	8.5	--	--	0.3	--	37.1
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	4/24/09	32.1	--	--	--	--	0.140	11.9	--	--	3.40	--	46.4
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	5/21/09	22.6	--	--	--	--	0.230	17.7	--	--	9.88	--	73.8
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	6/18/09	25.7	--	--	--	--	0.160	9	--	--	2.31	--	36.4
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	8/17/09	47.1	--	--	--	--	0.230	6	--	--	0.64	--	37.9
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	3/11/10	60	--	--	--	--	0.320	6	--	--	0.32	--	70.8

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Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	6/1/10	23.2	--	--	--	--	0.200	13.3	--	--	6.41	--	56.8
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	7/20/10	44.9	--	--	--	--	0.190	7	--	--	0.44	--	34.8
Boulder River, (Basin Cr. To Boulder)	6032400	D/S of Little Galena Gulch	8/25/10	51.2	--	--	--	--	0.190	6.9	--	--	0.50	--	34.1
Boulder River, (Basin Cr. To Boulder)	BE-22	U/S of Cataract Cr.	6/9/09	24.0	1338.7	7.2	--	4.0	< 0.08	6.0	680	< 0.05	1.2	< 0.1	20
Boulder River, (Basin Cr. To Boulder)	BE-22	U/S of Cataract Cr.	8/18/09	44.0	75.27	7.86	--	5.0	0.11	7.0	350	< 0.05	< 0.5	< 0.1	20
Boulder River, (Basin Cr. To Boulder)	BE-23	D/S of Cataract Cr.	6/9/09	23.0	1165.1	6.98	--	5.0	0.23	9.0	570	< 0.05	2.5	< 0.1	30
Boulder River, (Basin Cr. To Boulder)	BE-23	D/S of Cataract Cr.	8/18/09	44.0	83.78	7.82	--	5.0	0.25	8.0	310	< 0.05	< 0.5	< 0.1	30
Boulder River, (Basin Cr. To Boulder)	BE-24	D/S of High Ore Cr.	6/9/09	24.0	1341.6	7.12	--	5.0	0.2	8.0	560	< 0.05	1.5	< 0.1	30
Boulder River, (Basin Cr. To Boulder)	BE-24	D/S of High Ore Cr.	8/18/09	46.0	84.03	8.13	--	6.0	0.23	8.0	270	< 0.05	< 0.5	< 0.1	30
Boulder River, (Basin Cr. To Boulder)	BE-32	D/S of Little Galena Gulch	6/11/09	26.0	721.5	7.28	--	6.0	0.25	9.0	610	< 0.05	1.8	< 0.1	40
Boulder River, (Basin Cr. To Boulder)	BE-32	D/S of Little Galena Gulch	8/19/09	47.0	74.98	6.73	--	5.0	0.26	8.0	250	< 0.05	0.5	< 0.1	50
Boulder River, (Boulder to Cottonwood Cr.)	BE-25	D/S of Boulder WWTP	8/19/2009	25.0	1183.8	7.02	--	6.0	0.26	13.0	630	< 0.05	3	< 0.1	50
Boulder River, (Boulder to Cottonwood Cr.)	BE-25	D/S of Boulder WWTP	6/9/2009	49.0	70.63	7.62	--	6.0	0.32	8.0	200	< 0.05	< 0.5	< 0.5	60
Boulder River, (Boulder to Cottonwood Cr.)	BE-26	D/S Little Boulder River	8/19/2009	30.0	1257.7	7.34	--	8.0	0.25	13.0	810	< 0.05	3.2	< 0.1	50
Boulder River, (Boulder to Cottonwood Cr.)	BE-26	D/S Little Boulder River	6/9/2009	< 1.0	96.47	7.69	--	6.0	0.25	8.0	320	< 0.05	< 0.5	< 0.1	60
Boulder River, (Boulder to Cottonwood Cr.)	BE-34	D/S Elkhorn Cr.	6/10/2009	32.0	2085.9	6.65	--	11.0	0.36	18.0	910	< 0.05	6.3	0.2	80
Boulder River, (Boulder to Cottonwood Cr.)	BE-34	D/S Elkhorn Cr.	8/21/2009	57.0	78.42	7.59	--	10.0	0.30	9.0	300	< 0.05	0.7	< 0.5	70
Boulder River, (Boulder to Cottonwood Cr.)	M07BOLDR03	D/S of Elkhorn Drive Bridge	6/1/2010	51	1241.1	--	90	30	1.05	69	3010	--	31.2	< 0.5	220
Boulder River, (Boulder to Cottonwood Cr.)	M07BOLDR03	D/S of Elkhorn Drive Bridge	8/1/2010	119	74.46	8.6	< 30	16	0.17	10	200	--	1.5	< 0.5	20
Boulder River, (Cottonwood to mouth)	BE-33	U/S of Golden Sunlight	6/10/2009	57.0	1011.9	7.16	--	15.0	0.37	27.0	1200	< 0.05	7	< 0.5	90
Boulder River, (Cottonwood to mouth)	BE-33	U/S of Golden Sunlight	8/21/2009	117.0	90.23	7.85	--	10.0	0.12	7.0	200	< 0.05	1.2	< 0.5	20
Boulder River, (Cottonwood to mouth)	BE-27	At mouth	6/1/2010	66	1931.3	--	70	14	0.47	33	1540	--	10.3	< 0.5	100
Boulder River, (Cottonwood to mouth)	BE-27	At mouth	8/1/2010	136	112.2	8.6	< 30	13	0.14	9	210	--	1.6	< 0.5	20
Boulder River, (Cottonwood to mouth)	BE-27	At mouth	9/2/2010	141	82.6	8.6	< 30	9	< 0.08	6	115	--	0.9	< 0.5	10
Boulder River, (Cottonwood to mouth)	BE-27	At mouth	6/10/2009	60.0	1355.9	6.92	--	17.0	0.36	28.0	1450	< 0.05	7.3	< 0.5	90
Boulder River, (Cottonwood to mouth)	BE-27	At mouth	8/21/2009	119.0	89.88	7.75	--	10.0	0.12	7.0	220	< 0.05	1.3	< 0.5	20
Cataract Creek	6031960	At mouth	4/27/2001	40	22	7.7	29.4	12	4.02	103	572	--	6.71	0.15	376
Cataract Creek	6031960	At mouth	5/17/2001	23	60	7.2	--	9	1.47	32.6	--	--	3.3	--	145
Cataract Creek	6031960	At mouth	8/9/2001	56	3.9	7.9	--	5	4.03	17.1	--	--	< 1	--	286
Cataract Creek	6031960	At mouth	9/26/2001	65	2.2	8.2	--	4	4.73	13.5	--	--	< 1	--	381
Cataract Creek	6031960	At mouth	5/23/2002	25	52	7	--	8	1.76	37.5	--	--	4.28	--	186
Cataract Creek	6031960	At mouth	6/12/2002	19	87	7.8	57.9	7	1.31	30.7	327	--	2.76	0.04	139
Cataract Creek	6031960	At mouth	2/20/2003	58	2.3	7.5	--	3	3.07	10.2	--	--	0.39	--	307
Cataract Creek	6031960	At mouth	5/13/2003	33	46	7.7	--	4	1.34	22	--	--	1.65	--	148
Cataract Creek	6031960	At mouth	6/4/2003	20	68	7.3	--	11	1.05	26.9	--	--	6.21	--	118
Cataract Creek	6031960	At mouth	8/20/2003	68	2	8.2	--	5	1.89	8.6	--	--	0.14	--	129
Cataract Creek	6031960	At mouth	3/22/2004	57	4.6	7.6	--	4	2.29	11.2	--	--	0.39	--	228
Cataract Creek	6031960	At mouth	5/24/2004	22	45	7.4	--	4	1.11	18.7	--	--	2	--	128
Cataract Creek	6031960	At mouth	7/29/2004	56	3.8	8	--	5	2.51	10.8	--	--	0.41	--	212
Cataract Creek	6031960	At mouth	9/22/2004	47	8.3	7.8	--	3	3.13	21.6	--	--	1.05	--	286
Cataract Creek	6031960	At mouth	5/2/2005	44	7.4	7.8	--	4	1.49	15.9	--	--	2.23	--	167
Cataract Creek	6031960	At mouth	5/23/2005	19	118	7.6	--	11	0.98	25.9	--	--	7.57	--	102
Cataract Creek	6031960	At mouth	8/3/2005	53	5.1	7.8	--	5	1.9	12.1	--	--	0.76	--	177
Cataract Creek	6031960	At mouth	9/22/2005	66	3.3	7.8	--	3.9	2.66	8.6	--	--	0.29	--	245
Cataract Creek	6031960	At mouth	2/8/2006	59	3.9	7.8	--	3	2.07	10	--	--	0.22	--	220
Cataract Creek	6031960	At mouth	5/17/2006	18	119	7.5	--	30.6	1.62	49.6	--	--	19.7	--	157
Cataract Creek	6031960	At mouth	7/25/2006	58	3.4	8	--	5.5	1.64	9.2	--	--	0.32	--	134

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Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
Cataract Creek	6031960	At mouth	9/15/2006	72	2	7.9	--	4.3	1.73	5.7	--	--	0.27	--	155
Cataract Creek	6031960	At mouth	3/6/2007	58	3	7.6	--	3.7	1.45	6.4	--	--	0.68	--	165
Cataract Creek	6031960	At mouth	5/8/2007	23	51	7.6	--	5.7	0.89	18.6	--	--	3.97	--	104
Cataract Creek	6031960	At mouth	7/12/2007	49	5	7.4	--	4.9	1.65	10.5	--	--	0.58	--	148
Cataract Creek	6031960	At mouth	8/30/2007	66	1.2	8.1	--	4.6	1.33	4.7	--	--	0.14	--	105
Cataract Creek	6031960	At mouth	4/22/2008	56	7.7	7.7	--	4.2	1.61	16.4	--	--	1.84	--	179
Cataract Creek	6031960	At mouth	6/4/2008	18	155	7.1	--	10.4	0.96	24.6	--	--	7.99	--	120
Cataract Creek	6031960	At mouth	7/17/2008	37	13	7.8	--	5.2	1.46	14.9	--	--	0.88	--	155
Cataract Creek	6031960	At mouth	8/27/2008	58	3.2	8	--	5.5	1.81	7.9	--	--	0.44	--	183
Cataract Creek	6031960	At mouth	4/23/2009	31.2	--	--	--	11.2	1.37	35.7	--	--	10.30	--	192
Cataract Creek	6031960	At mouth	5/22/2009	20.6	--	--	--	12.7	0.79	30.3	--	--	9.76	--	129
Cataract Creek	6031960	At mouth	6/18/2009	22	--	--	--	6.7	0.62	17.3	--	--	3.61	--	82.9
Cataract Creek	6031960	At mouth	8/17/2009	45.4	--	--	--	5.5	1.26	11.5	--	--	1.45	--	131
Cataract Creek	6031960	At mouth	3/9/2010	55.6	--	--	--	4.3	1.35	6	--	--	0.85	--	154
Cataract Creek	6031960	At mouth	6/1/2010	19.2	--	--	--	11.6	0.64	24.2	--	--	8.96	--	102
Cataract Creek	6031960	At mouth	7/20/2010	45.6	--	--	--	4.5	1	10.3	--	--	0.55	--	104
Cataract Creek	6031960	At mouth	8/25/2010	48.3	--	--	--	4.8	1.01	9.7	--	--	1.05	--	109
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	5/17/01	21	62	7.2	--	3	0.2	8.1	--	--	1.57	--	44
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	8/9/01	46	3	8	--	3	0.15	4.3	--	--	< 1	--	25
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	9/26/01	53	1.4		--	3	0.22	3.6	--	--	< 1	--	45
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	11/15/01	47	2.6	7.4	2.4	2	0.23	3.5	74	--	< 1	< 0.05	59
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	5/23/02	21	47	7.4	--	4	0.27	9.2	--	--	3.51	--	56
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	6/12/02	18	74	7.6	58.6	3	0.19	7	234	--	1.3	E 0.04	43
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	3/25/03	52	3.2	7.8	--	E 2	0.32	7.4	--	--	0.5	--	64
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	5/4/05	36	16	7.8	--	2	0.2	6.8	--	--	1.05	--	44
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	5/24/05	19	85	7.6	--	4	0.25	9.1	--	--	2.58	--	49
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	8/4/05	48	3.5	7.9	--	3	0.2	4.3	--	--	0.33	--	42
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	9/22/05	53	2.8	7.6	--	2.6	0.24	3.7	--	--	0.2	--	53
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	2/10/06	52	3.6	7.9	--	2.8	0.44	7.8	--	--	0.8	--	78
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	5/17/06	17	110	7.5	--	5.6	0.32	12	--	--	4.27	--	56
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	7/26/06	50	2.3	7.7	--	3.5	0.21	4.7	--	--	0.4	--	41
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	9/15/06	61	1.6	7.7	--	3	0.28	3.7	--	--	0.19	--	58
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	4/3/07	45	3.8	7.5	--	2	0.24	7.1	--	--	0.39	--	59
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	5/10/07	19	52	6.2	--	3	0.2	8.5	--	--	1.53	--	48.4
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	7/12/07	43	3.6	7.8	--	3	0.22	5.1	--	--	0.25	--	44.1
Cataract Creek	461905112144201	U/S Uncle Sam Gulch	8/31/07	59	1.1	8.1	--	2.9	0.22	2.6	--	--	0.08	--	40
Cataract Creek	BE-35	U/S Nellie Grant Cr.	6/11/2009	12.0	2.99	6.39	--	< 3.0	0.72	15.0	100	< 0.05	0.9	< 0.5	170
Cataract Creek	BE-35	U/S Nellie Grant Cr.	8/19/2009	26.0	0.194	6.95	--	< 3.0	0.79	10.0	110	< 0.05	< 0.5	< 0.5	190
Cataract Creek	BE-35	U/S Nellie Grant Cr.	7/13/10	--	0.26	--	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-35	U/S Nellie Grant Cr.	9/27/10	--	0.3	8	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-36	D/S Nellie Grant Cr.	6/11/09	14.0	14.38	6.46	--	< 3.0	0.19	5.0	180		< 0.5	< 0.5	40
Cataract Creek	BE-36	D/S Nellie Grant Cr.	8/19/2009	27.0	1.49	6.84	--	< 3.0	0.15	3.0	210	< 0.05	< 0.5	< 0.5	30
Cataract Creek	BE-36	D/S Nellie Grant Cr.	7/13/10	--	2.43	--	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-36	D/S Nellie Grant Cr.	9/27/10	--	1.46	8	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-37	D/S Rocker Creek	6/11/09	15.0	40.61	6.72	--	< 3.0	< 0.08	8.0	210	< 0.05	< 0.5	< 0.5	20
Cataract Creek	BE-37	D/S Rocker Creek	8/19/2009	28.0	3.61	6.86	--	< 3.0	< 0.08	3.0	180	< 0.05	< 0.5	< 0.5	< 10
Cataract Creek	BE-37	D/S Rocker Creek	6/4/10	13.0	303.3	--	130	< 3	< 0.08	7.0	320		0.6	< 0.5	30

Table D-1. Surface Water Quality Data for the Boulder-Elkhorn TMDL Planning Area

Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
Cataract Creek	BE-37	D/S Rocker Creek	7/13/10	23.0	7.3	--	30	<3	< 0.08	5.0	180		< 0.5	< 0.5	10
Cataract Creek	BE-37	D/S Rocker Creek	9/27/10	--	4.76	8.2	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-38	U/S of Hoodoo Cr.	6/11/09	16.0	26.13	6.44	--	< 3.0	< 0.08	7.0	270	< 0.05	0.5	< 0.5	20
Cataract Creek	BE-38	U/S of Hoodoo Cr.	8/19/2009	30.0	3.81	7.53	--	< 3.0	< 0.08	3.0	350	< 0.05	0.5	< 0.5	10
Cataract Creek	BE-38	U/S of Hoodoo Cr.	7/13/10	--	10.14	--	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-38	U/S of Hoodoo Cr.	9/26/10	--	6.56	8.3	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-39	D/S of Hoodoo Cr.	6/11/09	18.0	62.71	6.58	--	< 3.0	0.13	7.0	230	< 0.05	0.7	< 0.5	20
Cataract Creek	BE-39	D/S of Hoodoo Cr.	8/19/2009	33.0	5.83	7.35	--	< 3.0	0.27	6.0	150	< 0.05	< 0.5	< 0.5	40
Cataract Creek	BE-39	D/S of Hoodoo Cr.	7/8/10	--	18.95	7.9	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-39	D/S of Hoodoo Cr.	9/13/10	--	8.31	7.9	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-40	D/S Cataract Tailings	6/11/09	19.0	154.6	6.35	--	3.0	< 0.08	8.0	260	< 0.05	1.5	< 0.5	40
Cataract Creek	BE-40	D/S Cataract Tailings	8/20/2009	38.0	6.5	7.41	--	< 3.0	0.20	6.0	150	< 0.05	< 0.5	< 0.5	40
Cataract Creek	BE-40	D/S Cataract Tailings	7/8/10	--	23.43	--	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-40	D/S Cataract Tailings	9/13/10	--	10.17	8.1	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-41	D/S Morning Glory Tailings	6/11/09	20.0	264.5	6.77	--	7.0	0.61	18.0	280	< 0.05	3.9	< 0.5	90
Cataract Creek	BE-41	D/S Morning Glory Tailings	8/20/2009	40.0	9	7.14	--	4.0	1.58	13.0	130	< 0.05	0.9	< 0.5	180
Cataract Creek	BE-41	D/S Morning Glory Tailings	7/8/10	--	28.67	--	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-41	D/S Morning Glory Tailings	9/12/10	--	12.52	8.1	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-41	D/S Morning Glory Tailings	8/12/11	43.9	9.48	--	20	4	1.75	13	110		0.5		177.6
Cataract Creek	BE-42	U/S of Big Limber Gulch	6/11/09	21.0	101.1	6.88	--	7.0	0.67	21.0	300	< 0.05	4.1	< 0.5	100
Cataract Creek	BE-42	U/S of Big Limber Gulch	8/19/2009	46.0	5.73	7.84	--	4.0	1.30	12.0	100	< 0.05	0.7	< 0.5	140
Cataract Creek	BE-42	U/S of Big Limber Gulch	7/8/10	--	32.2	--	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-42	U/S of Big Limber Gulch	9/12/10	--	14.63	8.2	--	--	--	--	--	--	--	--	--
Cataract Creek	BE-42	U/S of Big Limber Gulch	8/12/11	55.8	9.19	--	10	4	1.33	10	80	< 0.05	0.5		134.7
Upper Elkhorn Creek	BE-48	D/S of Queens Gulch	6/10/2009	37.0	16.68	6.97	--	< 3.0	0.4	2.0	140	< 0.05	3.7	< 0.5	20
Upper Elkhorn Creek	BE-48	D/S of Queens Gulch	8/21/2009	62.0	3.65	8.04	--	3.0	0.72	3.0	230		6.2	< 0.5	40
Upper Elkhorn Creek	BE-48	D/S of Queens Gulch	6/2/2010	38	22.96	--	< 30	3	0.56	5	250		9.5	< 0.5	50
Upper Elkhorn Creek	BE-48	D/S of Queens Gulch	7/2/2010	39	26.25	--	< 30	< 3	0.56	4	210		6	< 0.5	30
Upper Elkhorn Creek	BE-48	D/S of Queens Gulch	9/2/2010	61	7.5	8.2	< 30	< 3	0.72	2	210		4.8	< 0.5	30
Upper Elkhorn Creek	BE-47	D/S of Slaughterhouse gulch	6/2/2010	133	0.74	--	< 30	14	0.26	35	1710	--	10.7	< 0.5	50
Upper Elkhorn Creek	BE-47	D/S of Slaughterhouse gulch	7/3/2010	102	1.16	--	< 30	14	0.17	21	1010	--	6.2	< 0.5	20
Upper Elkhorn Creek	BE-47	D/S of Slaughterhouse gulch	9/3/2010	105	0.55	8.5	< 30	8	0.1	14	760	< 0.05	3.4	< 0.5	20
Upper Elkhorn Creek	BE-47	D/S of Slaughterhouse gulch	6/10/2009	109.0	0.62	7.42	--	9.0	0.11	14.0	1170	< 0.05	3.5	< 0.5	10
Upper Elkhorn Creek	BE-47	D/S of Slaughterhouse gulch	8/21/2009	108.0	0.253	8.39	--	8.0	< 0.08	11.0	670	--	4.7	< 0.5	10
Upper Elkhorn Creek	BE-46	Headwaters	7/3/2010	35	0.1		< 30	4	< 0.08	< 1	< 50		< 0.5	< 0.5	< 10
Upper Elkhorn Creek	BE-46	Headwaters	9/3/2010	< 1	0		< 30	< 3	< 0.08	< 1	< 50	< 0.05	< 0.5	< 0.5	< 10
Lower Elkhorn Creek	BE-50	End of flowing segment	6/10/2009	95.0	1.01	6.90		6.0	0.24	2.00	70	< 0.05	76.5	< 0.5	10
Lower Elkhorn Creek	M07ELKHC06	2.3 mi D/S Wood Gulch	6/2/2010	89	7.89	--	< 30	8	0.21	3.00	510	--	70.4	< 0.5	20
Lower Elkhorn Creek	M07ELKHC06	2.3 mi D/S Wood Gulch	7/1/2010	62	10.9	--	< 30	5	0.31	2.00	80	--	44.4	< 0.5	< 10
Lower Elkhorn Creek	M07ELKHC06	2.3 mi D/S Wood Gulch	8/3/2010	152	0.08	--	< 30	10	0.10	2.00	200	--	139.1	< 0.5	< 10
Lower Elkhorn Creek	M07ELKHC05	1.3 mi D/S Wood Gulch	6/2/2010	65	6.58	--	< 30	5	0.19	4.00	170	--	47.2	< 0.5	20
Lower Elkhorn Creek	M07ELKHC05	1.3 mi D/S Wood Gulch	7/1/2010	57	10.52	--	< 30	4	0.25	3.00	110	--	39.9	< 0.5	20
Lower Elkhorn Creek	BE-49	0.14 mi D/S Wood Gulch	6/10/2009	43.0	3.80	7.05		< 3.0	0.55	3.00	140	< 0.05	27.9	< 0.5	40
Lower Elkhorn Creek	BE-49	0.14 mi D/S Wood Gulch	8/21/2009	68.0	3.37	8.11		6.0	0.63	3.00	270	< 0.05	50.0	< 0.5	40
Lower Elkhorn Creek	BE-49	0.14 mi D/S Wood Gulch	6/2/2010	46	6.93		< 30	4	0.90	6.00	320	--	30.4	< 0.5	70
Lower Elkhorn Creek	BE-49	0.14 mi D/S Wood Gulch	7/2/2010	49	10.91		< 30	4	0.74	5.00	210	--	32.9	< 0.5	60
Lower Elkhorn Creek	BE-49	0.14 mi D/S Wood Gulch	8/3/2010	138	0.01	8.1	< 30	11	1.39	3.00	540	--	123.0	< 0.5	50

Table D-1. Surface Water Quality Data for the Boulder-Elkhorn TMDL Planning Area

Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
High Ore Creek	BE-53	High Ore Cr U/S of Comet Mine	6/11/09	31.0	2.09	7.26		< 3.0	< 0.08	< 1.0	210	< 0.05	< 0.5	< 0.5	< 10
High Ore Creek	BE-53	High Ore Cr U/S of Comet Mine	8/19/09	53.0	0.38	7.89		< 3.0	< 0.08	1.0	740	< 0.05	1.9	< 0.5	< 10
High Ore Creek	BE-55	D/S of Comet Mine	6/11/09	60.0	2.36	7.39		10.0	1.91	2.0	200	< 0.05	1.8	< 0.5	710
High Ore Creek	BE-55	D/S of Comet Mine	8/19/09	135.0	0.43	7.72		11.0	3.35	2.0	190	< 0.05	1.8	< 0.5	1270
High Ore Creek	BE-56	U/S of Bishop Cr.	6/11/09	64.0	2.79	7.7		15.0	1.72	4.0	240	< 0.05	5.8	< 0.5	630
High Ore Creek	BE-56	U/S of Bishop Cr.	8/19/09	124.0	0.535	7.9		16.0	2.17	3.0	180	< 0.05	2.8	< 0.5	730
High Ore Creek	BE-57	At mouth	6/11/09	69.0	5.36	7.74		25.0	1.53	6.0	330	< 0.05	10.3	--	480
High Ore Creek	BE-57	At mouth	8/24/09	130.0	0.84	7.87		23.0	2.30	4.0	190	< 0.05	3.7	--	660
High Ore Creek	BE-57	At mouth	6/14/10	--	--	--	--	--	--	--	--	--	--	< 0.5	--
High Ore Creek	BE-57	At mouth	7/8/10	--	2.97	--	--	--	--	--	--	--	--	< 0.5	--
High Ore Creek	6032300	At mouth	4/6/01	160	1.5	8.1	1000	88	6.3	18.9	1660	--	64.9	--	1800
High Ore Creek	6032300	At mouth	9/25/01	190	0.41	8.3	--	33	3.58	4.5	--	--	3.46	--	607
High Ore Creek	6032300	At mouth	11/15/01	170	0.44	7.9	21	24	4.17	3.2	65	--	3.71	--	1180
High Ore Creek	6032300	At mouth	5/22/02	110	7.1	8.2	--	52	3.84	15.6	--	--	48.1	--	944
High Ore Creek	6032300	At mouth	6/12/02	98	4	8.2	278	49	4.12	11.9	736	--	36.8	--	973
High Ore Creek	6032300	At mouth	8/9/02	170	1.3	8.3	--	33	3.31	8	--	--	17.6	--	844
Jack Creek	462047112201901	At mouth	4/26/2001	33	6.7	7.3	39.2	32	4.61	170	2500	--	12.1	--	514
Jack Creek	462047112201901	At mouth	5/16/2001	22	18	7.2	--	13	1.8	32.3	--	--	4.14	--	215
Jack Creek	462047112201901	At mouth	8/8/2001	36	1.7	7.7	--	13	2.53	23.7	--	--	1.47	--	256
Jack Creek	462047112201901	At mouth	9/25/2001	42	0.98	7.5	--	7	4.43	32.6	--	--	< 1	--	537
Jack Creek	462047112201901	At mouth	5/22/2002	21	17	8.1	--	21	2.09	43.4	--	--	8.78	--	217
Jack Creek	462047112201901	At mouth	6/11/2002	21	13	7.1	73.6	11	1.61	28.7	363	--	2.74	--	190
Jack Creek	462047112201901	At mouth	4/23/2003	34	14	7.5	--	65	3.61	133	--	--	26.4	--	409
Jack Creek	462047112201901	At mouth	5/13/2003	26	11	7.7	--	8	1.36	22.1	--	--	1.77	--	173
Jack Creek	462047112201901	At mouth	6/4/2003	18	22	7.7	--	21	1.01	26.7	--	--	7.17	--	123
Jack Creek	462047112201901	At mouth	8/20/2003	44	1.3	7.9	--	8	3.3	22.9	--	--	0.62	--	391
Jack Creek	462047112201901	At mouth	3/22/2004	39	1.4	7.9	--	5	2.85	36.9	--	--	1.18	--	379
Jack Creek	462047112201901	At mouth	5/24/2004	24	12	7.4	--	7	1.41	24.3	--	--	1.87	--	174
Jack Creek	462047112201901	At mouth	7/29/2004	37	1.4	7.5	--	8	2.68	23.2	--	--	0.64	--	339
Jack Creek	462047112201901	At mouth	9/22/2004	40	2.1	7.5	--	5	3.81	34.8	--	--	0.81	--	473
Jack Creek	462047112201901	At mouth	5/2/2005	35	4.9	7.6	--	11	2.04	33.2	--	--	4.34	--	261
Jack Creek	462047112201901	At mouth	5/24/2005	20	22	7.4	--	13	0.96	21	--	--	4.26	--	109
Jack Creek	462047112201901	At mouth	8/3/2005	36	2.3	7.4	--	7	3.56	40.5	--	--	1.09	--	434
Jack Creek	462047112201901	At mouth	9/21/2005	40	1.8	7.6	--	4.7	3.54	27	--	--	0.32	--	423
Jack Creek	462047112201901	At mouth	2/8/2006	39	1.4	7.7	--	3.9	2.79	26.2	--	--	0.55	--	363
Jack Creek	462047112201901	At mouth	5/17/2006	19	36	7.7	--	20.3	1.15	32.9	--	--	7.69	--	125
Jack Creek	462047112201901	At mouth	7/26/2006	38	1.5	7.3	--	6.9	2.42	22.7	--	--	0.55	--	270
Jack Creek	462047112201901	At mouth	9/14/2006	40	0.97	6.6	--	5.3	2.33	18.4	--	--	0.31	--	302
Jack Creek	462047112201901	At mouth	3/6/2007	41	1	7	--	3.3	2.06	13.2	--	--	0.43	--	293
Jack Creek	462047112201901	At mouth	5/9/2007	25	12	7.6	--	5.8	0.94	19.2	--	--	1.75	--	131
Jack Creek	462047112201901	At mouth	7/11/2007	31	2.9	7.6	--	6.7	2.06	27	--	--	0.76	--	261
Jack Creek	462047112201901	At mouth	8/30/2007	40	0.91	7.9	--	4.7	2.27	14.9	--	--	0.27	--	295
Jack Creek	462047112201901	At mouth	4/22/2008	40	1.2	7.4	--	3.8	1.7	15	--	--	0.51	--	260
Jack Creek	462047112201901	At mouth	6/4/2008	17	36	7.3	--	12.3	0.92	27.4	--	--	4.16	--	109
Jack Creek	462047112201901	At mouth	7/17/2008	26	5.5	7.3	--	12.9	3.12	49.2	--	--	1.17	--	406
Jack Creek	462047112201901	At mouth	8/26/2008	35	1.8	7.5	--	5.6	3.13	27.9	--	--	0.53	--	390
Jack Creek	462047112201901	At mouth	4/22/2009	24.2	--	--	--	--	1.16	137	--	--	20.1	--	359

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Jack Creek	462047112201901	At mouth	5/22/2009	18.3	--	--	--	--	0.57	18.7	--	--	5.21	--	92.1
Jack Creek	462047112201901	At mouth	6/18/2009	18.3	--	--	--	--	1.11	25.6	--	--	2.3	--	144
Jack Creek	462047112201901	At mouth	8/17/2009	31.1	--	--	--	--	2.08	34.5	--	--	1.04	--	271
Jack Creek	462047112201901	At mouth	3/9/2010	34.5	--	--	--	--	1.48	9.4	--	--	0.39	--	221
Jack Creek	462047112201901	At mouth	6/2/2010	19.4	--	--	--	--	0.55	25.1	--	--	8.47	--	95.2
Jack Creek	462047112201901	At mouth	7/20/2010	27.5	--	--	--	--	2.09	31.8	--	--	1.02	--	271
Jack Creek	462047112201901	At mouth	8/25/2010	31.6	--	--	--	--	1.96	28.2	--	--	0.98	--	283
Jack Creek	462155112181501	U/S of Jill Creek	3/24/2003	44	0.39	7.8	--	4	0.24	3.2	--	--	E 0.04	--	40
Jack Creek	462155112181501	U/S of Jill Creek	5/13/2003	45	2	7.6	--	4	0.1	3.5	--	--	0.28	--	19
Jack Creek	462155112181501	U/S of Jill Creek	6/3/2003	20	11	7.4	--	8	0.1	6.4	--	--	2.05	--	21
Jack Creek	462155112181501	U/S of Jill Creek	8/21/2003	48	0.25	7.2	--	6	0.08	1.8	--	--	0.07	--	9
Jack Creek	462155112181501	U/S of Jill Creek	3/30/2004	48	0.57	7.4	--	5	0.34	3.9	--	--	E 0.03	--	48
Jack Creek	462155112181501	U/S of Jill Creek	5/24/2004	26	3.9	7.5	--	5	0.11	4.7	--	--	0.31	--	19
Jack Creek	462155112181501	U/S of Jill Creek	7/30/2004	39	0.48	7.3	--	7	0.21	3.5	--	--	0.17	--	30
Jack Creek	462155112181501	U/S of Jill Creek	9/23/2004	36	1.8	7.6	--	6	0.09	3.1	--	--	0.2	--	12
Jack Creek	462155112181501	U/S of Jill Creek	5/2/2005	52	0.78	7.7	--	4	0.16	3.3	--	--	0.12	--	26
Jack Creek	462155112181501	U/S of Jill Creek	5/24/2005	25	7.7	7.4	--	5	0.07	25.6	--	--	0.93	--	12
Jack Creek	462155112181501	U/S of Jill Creek	8/3/2005	36	0.94	7.4	--	6	0.08	2.4	--	--	0.11	--	14
Jack Creek	462155112181501	U/S of Jill Creek	9/21/2005	43	0.73	7.2	--	5.3	0.21	3.3	--	--	0.07	--	31
Jack Creek	462155112181501	U/S of Jill Creek	2/9/2006	43	0.4	7.5	--	5	0.11	1.9	--	--	E 0.04	--	19
Jack Creek	462155112181501	U/S of Jill Creek	5/18/2006	23	12	7.5	--	7.2	0.1	8.2	--	--	1.71	--	17
Jack Creek	462155112181501	U/S of Jill Creek	7/25/2006	41	0.48	7.3	--	6.7	0.16	8.7	--	--	0.22	--	20
Jack Creek	462155112181501	U/S of Jill Creek	9/14/2006	46	0.22	7	--	5.4	0.14	1.7	--	--	E 0.04	--	19
Jack Creek	462155112181501	U/S of Jill Creek	3/6/2007	45	0.4	7.8	--	4.5	0.31	3.3	--	--	0.07	--	47
Jack Creek	462155112181501	U/S of Jill Creek	5/9/2007	30	4.6	7.5	--	4.7	0.12	4.7	--	--	0.4	--	16.9
Jack Creek	462155112181501	U/S of Jill Creek	7/11/2007	37	1.2	7.7	--	6.3	0.09	2.5	--	--	0.12	--	13.1
Jack Creek	462155112181501	U/S of Jill Creek	8/29/2007	47	0.28	7.6	--	5.5	0.03	< 1.2	--	--	E 0.03	--	4.6
Jack Creek	BE-58	D/S of Bullion Mine	06/10/09	18.0	20.60	6.13	--	10.0	1.13	23.0	520	< 0.05	1.8	< 0.5	140
Jack Creek	BE-58	D/S of Bullion Mine	08/20/09	35.0	2.31	7.26	--	9.0	4.25	76.0	940	< 0.05	1.2	< 0.5	520
Jack Creek	M07JACKC01	U/S of Jill Creek	6/8/2010	20	--	--	70	5	ND	5	250	--	1.1	ND	10
Jack Creek	M07JACKC01	U/S of Jill Creek	7/16/2010	27	--	--	< 30	6	ND	3	50	--	ND	ND	10
Jack Creek	M07JACKC01	U/S of Jill Creek	8/16/2010	32	--	--	< 30	6	ND	3	70	--	ND	ND	ND
Jack Creek	M07JACKC03 (BE-58)	D/S of Bullion Mine	6/8/2010	18	--	--	110	9	0.55	15	460	--	2.4	ND	70
Jack Creek	M07JACKC03 (BE-58)	D/S of Bullion Mine	7/15/2010	29	--	--	50	11	3.82	70	970	--	1.3	ND	480
Jack Creek	M07JACKC03 (BE-58)	D/S of Bullion Mine	8/16/2010	32	--	--	40	8	3.08	52	750	--	1.2	ND	370
Little Boulder River	M07LBLDR01	D/S of Wilson Creek	6/5/2010	17	167.1	--	110	6	< 0.08	8	630	--	1	< 0.5	< 10
Little Boulder River	M07LBLDR01	D/S of Wilson Creek	8/2/2010	34	11.72	8.2	< 30	4	< 0.08	3	520	--	1.1	< 0.5	< 10
Little Boulder River	BE-59	U/S of NF Little Boulder	6/10/2009	25.0	68.79	7.18	--	4.0	< 0.08	6.0	620	< 0.05	7	< 0.5	< 10
Little Boulder River	BE-59	U/S of NF Little Boulder	8/20/2009	43.0	11.88	7.64	--	< 3.0	< 0.08	2.0	240	< 0.05	< 0.5	< 0.5	10
Little Boulder River	BE-59	U/S of NF Little Boulder	6/5/2010	21	150.6	--	110	6	< 0.08	8	680	--	1	< 0.5	< 10
Little Boulder River	BE-59	U/S of NF Little Boulder	8/2/2010	42	16.53	8.2	< 30	3	< 0.08	3	400	--	< 0.5	< 0.5	< 10
Little Boulder River	BE-60	At mouth	6/12/2009	31.0	84.90	7.30	--	4.0	< 0.08	5.0	280	< 0.05	< 0.5	< 0.5	< 10
Little Boulder River	BE-60	At mouth	8/20/2009	46.0	19.25	7.89	--	< 3.0	< 0.08	2.0	650	< 0.05	< 0.5	< 0.5	< 10
Little Boulder River	BE-60	At mouth	6/5/2010	32	640.13	--	80	5	< 0.08	7	1050	--	1	< 0.5	< 10
Little Boulder River	BE-60	At mouth	8/2/2010	45	24.47	8.2	< 30	4	< 0.08	3	660	--	< 0.5	< 0.5	< 10
Little Boulder River	BE-61	U/S Bolder Hot Springs	6/15/2009	29.0	161.60	6.71	--	4.0	< 0.08	7.0	1270	< 0.05	0.9	< 0.5	< 10
Little Boulder River	BE-61	U/S Bolder Hot Springs	8/24/2009	47.0	16.42	7.07	--	< 3.0	< 0.08	2.0	770	< 0.05	< 0.5	< 0.5	< 10

Table D-1. Surface Water Quality Data for the Boulder-Elkhorn TMDL Planning Area

Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
Lowland Cr	BE-63	At first road crossing	8/18/2009	51	0.18	8.12	30	7.0	< 0.08	5.0	280	< 0.05	< 0.5	< 0.5	< 10
Lowland Cr	BE-63	At first road crossing	6/9/2009	26	1.64	6.52	110	5.0	< 0.08	8.0	250	< 0.05	< 0.5	< 0.5	< 10
Lowland Cr	BE-63	At first road crossing	7/18/2010	42	0.28	--	50	7.0	< 0.08	5.0	310	--	< 0.5	< 0.5	< 10
Lowland Cr	BE-63	At first road crossing	9/28/2010	57	0.1	--	< 30	5.0	< 0.08	2.0	180	--	< 0.5	< 0.5	< 10
Lowland Cr	BE-64	U/S Ruby Mine	8/18/2009	34.0	7.06	7.5	--	5.0	< 0.08	2.0	400	< 0.05	< 0.5	< 0.1	< 10
Lowland Cr	BE-64	U/S Ruby Mine	6/9/2009	27.0	56.31	6.67	--	5.0	< 0.08	4.0	850	< 0.05	0.8	< 0.1	< 10
Lowland Cr	BE-64	U/S Ruby Mine	6/9/2010	28.0	56.46	--	320	5.0	< 0.08	5	710	--	0.8	< 0.1	< 10
Lowland Cr	BE-64	U/S Ruby Mine	7/17/2010	36.0	14.77	--	130	5.0	< 0.08	2	410	--	< 0.5	< 0.1	< 10
Lowland Cr	BE-65	At mouth	8/18/2009	46.0	10.89	8.41	120	6.0	< 0.08	2.0	260	< 0.05	< 0.5	< 0.1	< 10
Lowland Cr	BE-65	At mouth	6/9/2009	32.0	88.24	6.97	210	6.0	< 0.08	4.0	760	< 0.05	0.7	< 0.1	< 10
Lowland Cr	BE-65	At mouth	6/9/2010	31	66.67		320	6.0	< 0.08	4	650	--	0.7	< 0.1	< 10
Lowland Cr	BE-65	At mouth	7/17/2010	46	24.84		100	6.0	< 0.08	2	330	--	< 0.5	< 0.1	< 10
Lowland Cr	BE-65	At mouth	9/28/2010	56	6.2	8.3	40	6.0	< 0.08	1	150	--	< 0.5	< 0.1	< 10
Muskrat Creek	M07MSKRC01	At 2nd pack trail crossing	6/3/2010	15	20.98	--	70	< 3.0	< 0.08	2	--	--	< 0.5	< 0.5	< 10
Muskrat Creek	M07MSKRC01	At 2nd pack trail crossing	7/5/2010	19	13.16	--	30	< 3.0	< 0.08	1	90	--	< 0.5	< 0.5	< 10
Muskrat Creek	M07MSKRC01	At 2nd pack trail crossing	8/6/2010	--	2.96	8.1	--	--	--	--	--	--	--	--	--
Muskrat Creek	M07MSKRC01	At 2nd pack trail crossing	9/9/2010	--	2.7	8	--	--	--	--	--	--	--	--	--
Muskrat Creek	BE-69	U/S of Nursery Creek	6/9/2009	23.0	12.18	6.90	--	3.0	< 0.08	1.0	100	< 0.05	< 0.5	< 0.1	< 10
Muskrat Creek	BE-69	U/S of Nursery Creek	8/19/2009	36.0	3.09	7.62	--	< 3.0	< 0.08	1.0	< 30	< 0.05	< 0.5	< 0.5	< 10
Muskrat Creek	M07MSKRC02 (BE-69)	U/S of Nursery Creek	6/3/2010	23	18.59	--	50	< 3.0	< 0.08	2	340	--	< 0.5	< 0.5	< 10
Muskrat Creek	M07MSKRC02 (BE-69)	U/S of Nursery Creek	7/5/2010	26	16.76	--	< 30	< 3.0	< 0.08	1	170	--	< 0.5	< 0.5	< 10
Muskrat Creek	M07MSKRC02 (BE-69)	U/S of Nursery Creek	8/6/2010	--	8.13	8.5	--	--	--	--	--	--	--	--	--
Muskrat Creek	M07MSKRC02 (BE-69)	U/S of Nursery Creek	9/9/2010	--	6.04	8	--	--	--	--	--	--	--	--	--
Muskrat Creek	BE-68	0.5 mi U/S from mouth	6/9/2009	149.0	18.86	7.32	--	4.0	< 0.08	2.0	960	< 0.05	< 0.5	0.1	< 10
Muskrat Creek	BE-68	0.5 mi U/S from mouth	8/19/2009	101.0	6.65	7.83	--	< 3	< 0.08	2.0	850	< 0.05	< 0.5	< 0.5	< 10
Muskrat Creek	BE-68	0.5 mi U/S from mouth	6/3/2010	160	13.46	--	< 30	7	< 0.08	5	2000	--	1.2	< 0.5	10
Muskrat Creek	BE-68	0.5 mi U/S from mouth	7/5/2010	103	25.33	--	< 30	4	< 0.08	2	1260	--	0.8	< 0.5	< 10
Muskrat Creek	BE-68	0.5 mi U/S from mouth	8/5/2010	--	8.43	8	--	--	--	--	--	--	--	--	--
Muskrat Creek	BE-68	0.5 mi U/S from mouth	9/9/2010	--	10.25	7.7	--	--	--	--	--	--	--	--	--
Little Boulder River North Fork	BE-62	0.25 mi U/S of mouth	6/10/2009	29.0	31.90	7.21	--	< 3.0	< 0.08	4.0	880	< 0.05	< 0.5	< 0.1	< 10
Little Boulder River North Fork	BE-62	0.25 mi U/S of mouth	8/20/2009	46.0	6.13	7.97	--	< 3.0	< 0.08	2.0	760	< 0.05	< 0.5	< 0.5	< 10
Little Boulder River North Fork	BE-62	0.25 mi U/S of mouth	6/5/2010	29	34.01	--	60	4	< 0.08	7	1040	--	< 0.5	< 0.5	< 10
Little Boulder River North Fork	BE-62	0.25 mi U/S of mouth	7/4/2010	33	24.38	--	50	4	< 0.08	5	1000	--	< 0.5	< 0.5	< 10
Little Boulder River North Fork	BE-62	0.25 mi U/S of mouth	8/4/2010	46	8.24	8.4	< 30	< 3	< 0.08	2	790	--	< 0.5	< 0.5	< 10
Little Boulder River North Fork	M07LBNFR01	Near mouth	6/16/2004	48	3.19	7.22	< 100	< 3	< 0.1	2.0	370	--	< 0.5	< 3	< 10
Little Boulder River North Fork	M07LBNFR02	1/2 mile D/S of Porcupine Gulch	6/16/2004	33	--	--	< 100	< 3	< 0.1	3.0	320	--	< 0.5	< 3	< 10
Little Boulder River North Fork	M07LBNFR02	1/2 mile D/S of Porcupine Gulch	6/5/2010	24	31.93	--	90	6	< 0.08	6	900	--	0.6	< 0.5	< 10
Little Boulder River North Fork	M07LBNFR02	1/2 mile D/S of Porcupine Gulch	7/4/2010	27	20.68	--	80	4	< 0.08	5	700	--	< 0.5	< 0.5	< 10
Little Boulder River North Fork	M07LBNFR02	1/2 mile D/S of Porcupine Gulch	8/4/2010	36	6.07	--	< 30	< 3	< 0.08	2	420	--	< 0.5	< 0.5	< 10
Little Boulder River North Fork	M07LBNFR03	D/S of Hidden Meadows	6/5/2010	21	28.5	--	90	5	< 0.08	6	590	--	< 0.5	< 0.5	< 10
Little Boulder River North Fork	M07LBNFR03	D/S of Hidden Meadows	7/4/2010	22	15.58	--	60	4	< 0.08	5	520	--	< 0.5	< 0.5	< 10
Little Boulder River North Fork	M07LBNFR03	D/S of Hidden Meadows	8/4/2010	32	5.31	8.2	< 30	< 3	< 0.08	2	510	--	< 0.5	< 0.5	< 10
Uncle Sam Gulch	BE-75	D/S of Crystal Mine	6/11/2009	18.0	1.52	5.91	--	19.0	22.51	250.0	980	< 0.05	11.4	< 0.5	1870
Uncle Sam Gulch	BE-75	D/S of Crystal Mine	8/21/2009	90.0	0.1	4.26	--	34.0	147.00	1900.0	5320	< 0.05	37.3	< 0.5	12100
Uncle Sam Gulch	BE-74	U/S of Crystal Mine	6/11/2009	6.0	1.03	7.28	--	< 3.0	< 0.08	2.0	110	< 0.05	0.6	< 0.5	< 10
Uncle Sam Gulch	BE-74	U/S of Crystal Mine	8/21/2009	15.0	0.065	7.28	--	6.0	< 0.08	2.0	160	< 0.05	0.7	< 0.5	10
Uncle Sam Gulch	M07UCLSG01	U/S of Crystal Mine	6/4/2010	13	0.28	--	50	< 3	< 0.08	2	80	--	1.3	< 0.5	< 10

Table D-1. Surface Water Quality Data for the Boulder-Elkhorn TMDL Planning Area

Waterbody Segment	Site ID	Site Description	Sample Date	Hardness (mg/L)	Flow (cfs)	Field pH (su)	AL (Dis) (µg/L)	As (TR) (µg/L)	Cd (TR) (µg/l)	Cu (TR) (µg/l)	Fe (TR) (mg/L)	Hg (TR) (µg/L)	Pb (TR) (µg/l)	Ag (TR) (µg/l)	Zn (TR) (µg/l)
Uncle Sam Gulch	M07UCLSG01	U/S of Crystal Mine	7/12/2010	19	0.03	--	< 30	< 3	< 0.08	< 1	< 50	--	< 0.5	< 0.5	< 10
Uncle Sam Gulch	M07UCLSG02	D/S of Crystal Mine	6/4/2010	12	0.68	--	80	< 3	< 0.08	2	90	--	1.1	< 0.5	< 10
Uncle Sam Gulch	M07UCLSG02	D/S of Crystal Mine	7/12/2010	17	0.04	--	40	< 3	< 0.08	< 1	< 50	--	< 0.5	< 0.5	< 10
Uncle Sam Gulch	M07UCLSG03	At mouth	7/12/2010	--	2.93	--	--	--	--	--	--	--	--	--	--
Uncle Sam Gulch	M07UCLSG03	At mouth	8/9/2010	--	1.72	8.4	--	--	--	--	--	--	--	--	--
Uncle Sam Gulch	M07UCLSG03	At mouth	9/26/2010	--	1.28	8.2	--	--	--	--	--	--	--	--	--
Uncle Sam Gulch	M07UCLSG03	At mouth	8/12/2011	48.9	1.38	--	30	9	10.17	68	100	--	1.5	--	920.2
Uncle Sam Gulch	M07UCLSG03	At mouth	9/12/2011	--	--	--	30	--	--	--	--	--	--	--	--
Uncle Sam Gulch	461904112144401	At mouth	5/17/2001	27	5.4	7	--	59	13.9	260	--	--	11.6	--	1170
Uncle Sam Gulch	461904112144401	At mouth	8/9/2001	59	0.56	7.3	--	8	48.6	243	--	--	4.41	--	3910
Uncle Sam Gulch	461904112144401	At mouth	9/26/2001	71	0.28	--	--	4	54.6	321	--	--	3.8	--	4700
Uncle Sam Gulch	461904112144401	At mouth	11/15/2001	56	0.71	7.2	17.8	5	39.2	237	101	--	3	--	3520
Uncle Sam Gulch	461904112144401	At mouth	5/23/2002	28	4.8	7.2	--	75	15.5	345	--	--	34.2	--	1410
Uncle Sam Gulch	461904112144401	At mouth	6/12/2002	23	6	7.7	125	47	13.1	282	991	--	9.04	--	1100
Uncle Sam Gulch	461904112144401	At mouth	3/25/2003	50	0.54	7.5	--	3	23	87.9	--	--	0.82	--	2170
Uncle Sam Gulch	461904112144401	At mouth	5/13/2003	35	3.4	8	--	15	11.2	125	--	--	8.19	--	1020
Uncle Sam Gulch	461904112144401	At mouth	6/4/2003	18	8.4	7.4	--	59	6.28	173	--	--	40	--	560
Uncle Sam Gulch	461904112144401	At mouth	8/21/2003	73	0.37	8	--	5	19.6	38.3	--	--	0.59	--	1650
Uncle Sam Gulch	461904112144401	At mouth	3/30/2004	43	1.1	7.1	--	6	20.3	165	--	--	3.57	--	2400
Uncle Sam Gulch	461904112144401	At mouth	5/24/2004	26	3.6	7.2	--	14	8.48	101	--	--	8.68	--	803
Uncle Sam Gulch	461904112144401	At mouth	7/6/2004	37	1.5	7.5	--	12	15.5	109	--	--	5.91	--	1470
Uncle Sam Gulch	461904112144401	At mouth	7/30/2004	61	0.56	7.4	--	7	28.1	106	--	--	2.57	--	2440
Uncle Sam Gulch	461904112144401	At mouth	8/27/2004	50	0.79	7.5	--	14	21.7	116	--	--	9.31	--	2040
Uncle Sam Gulch	461904112144401	At mouth	9/23/2004	43	1.5	7.8	--	21	21.6	168	--	--	16.9	--	1940
Uncle Sam Gulch	461904112144401	At mouth	11/9/2004	55	0.55	6.3	--	4	18.3	60	--	--	0.99	--	1850
Uncle Sam Gulch	461904112144401	At mouth	5/4/2005	44	1	7.5	--	9	12.5	71.2	--	--	3.9	--	1200
Uncle Sam Gulch	461904112144401	At mouth	5/24/2005	20	7	7.1	--	66	7.17	176	--	--	38.2	--	578
Uncle Sam Gulch	461904112144401	At mouth	7/12/2005	37	1.6	7.8	--	18	13.4	107	--	--	6.47	--	1310
Uncle Sam Gulch	461904112144401	At mouth	8/4/2005	58	0.74	7.7	--	8	21	95.2	--	--	2.48	--	1990
Uncle Sam Gulch	461904112144401	At mouth	9/22/2005	64	0.81	7.3	--	5.5	23.4	80.2	--	--	1.41	--	1950
Uncle Sam Gulch	461904112144401	At mouth	2/10/2006	58	0.51	7.6	--	73.8	25	323	--	--	43.4	--	2090
Uncle Sam Gulch	461904112144401	At mouth	5/17/2006	19	14	7.3	--	239	12.4	378	--	--	145	--	894
Uncle Sam Gulch	461904112144401	At mouth	6/23/2006	29	2.6	7.3	--	13.5	7.64	78.2	--	--	5.37	--	706
Uncle Sam Gulch	461904112144401	At mouth	7/26/2006	58	0.6	7.6	--	11.8	12.5	53.7	--	--	3.06	--	989
Uncle Sam Gulch	461904112144401	At mouth	8/15/2006	60	0.44	7.8	--	8.4	11.5	28.2	--	--	1.79	--	903
Uncle Sam Gulch	461904112144401	At mouth	9/15/2006	72	0.32	7.5	--	7	15.7	33	--	--	1.12	--	1440
Uncle Sam Gulch	461904112144401	At mouth	4/3/2007	52	0.7	7.7	--	8.8	10.6	45.8	--	--	2.49	--	1080
Uncle Sam Gulch	461904112144401	At mouth	5/10/2007	25	4.5	6	--	51.6	7.37	149	--	--	48.1	--	633
Uncle Sam Gulch	461904112144401	At mouth	6/12/2007	23	4.1	7	--	7.6	6.15	75.9	--	--	2.47	--	615
Uncle Sam Gulch	461904112144401	At mouth	7/12/2007	47	0.47	7.4	--	8.6	13.2	52.2	--	--	2.28	--	1190
Uncle Sam Gulch	461904112144401	At mouth	8/31/2007	73	0.23	8	--	6.1	12.4	23.4	--	--	0.53	--	1100

Table D-2. Metal concentrations in sediment and corresponding ratios of measured concentration to metal PEL concentrations recommended for fresh water sediment.

SEGMENT NAME	SITE ID	Sample Date	SiteDescription	As Conc. (ug/kg)	As Conc/ PEL Ratio	Cd Conc. (ug/kg)	Cd Conc/ PEL Ratio	Cu Conc. (ug/kg)	Cu Conc/ PEL Ratio	Pb Conc. (ug/kg)	Pb Conc/ PEL Ratio	Hg Conc. (ug/kg)	Hg Conc/ PEL Ratio	Zn Conc. (ug/kg)	Zn Conc/ PEL Ratio
Basin Cr	BE-07	8/20/09	Basin Cr. D/S of Jack Cr. confluence	1,180,000	69.4	29,100	8.2	874,000	4.4	739,000	8.1	320	0.7	2,960,000	9.4
Basin Cr	BE-08	8/20/09	Basin Cr. U/S of Basin	227,000	13.4	15,700	4.4	279,000	1.4	357,000	3.9	810	1.7	1,770,000	5.6
Basin Cr	BE-06	8/20/09	Basin Cr. D/S of Joe Bowers Cr. confluence	332,000	19.5	4,800	1.4	61,000	0.3	268,000	2.9	280	0.6	580,000	1.8
Basin Cr	BE-04	8/20/09	Basin Cr. D/S of Clear Cr. confluence	384,000	22.6	6,200	1.8	52,000	0.3	316,000	3.5	240	0.5	404,000	1.3
Clear Cr	BE-44	8/20/09	Clear Cr. Near mouth	16,000	0.9	600	0.2	16,000	0.1	37,000	0.4	600	1.2	72,000	0.2
Jack Cr.	M07JACKC03	7/15/10	Jack Creek D/S of Bullion Mine	1,420,000	83.5	22,000	6.2	853,000	4.3	674,000	7.4	140	0.3	1,940,000	6.2
Big Limber Gulch	BE-11	8/24/09	Big Limber Gulch U/S of Waldy /Redwing mine	63,000	3.7	1,400	0.4	43,000	0.2	50,000	0.5	230	0.5	159,000	0.5
Bison Cr	BE-16	8/18/09	headwater tributary of Bison Cr.	54,000	3.2	1,700	0.5	106,000	0.5	36,000	0.4	1,400	0.3	111,000	0.4
Bison Cr	M07BISNC01	8/19/10	Bison Cr headwaters	41,000	2.4	900	0.3	68,000	0.3	--	--	--	--	--	--
Bison Cr	BE-15	8/18/09	Bison Creek mouth	11,000	0.6	500	0.1	33,000	0.2	14,000	0.2	380	0.2	89,000	0.3
Boulder River	BE-28	8/18/09	Upper Boulder River headwaters	14,000	0.8	1,000	0.3	28,000	0.2	22,000	0.2	510	1.0	72,000	0.2
Boulder River	BE-30	8/20/09	Boulder River D/S of Lowland Cr.	16,000	0.9	1,100	0.3	37,000	0.2	30,000	0.3	600	1.2	94,000	0.3
Boulder River	BE-21	8/18/09	Boulder River 1 mile U/S of Basin Cr.	21,000	1.2	1,100	0.3	59,000	0.4	33,000	0.4	1,200	2.5	186,000	0.6
Rocker Cr	BE-72	8/19/09	Rocker Cr. At mouth	200,000	11.8	9,000	2.5	408,000	2.7	179,000	2.0	310	0.6	745,000	2.4
Boulder River	BE-22	8/18/09	Boulder River U/S of Cataract Cr.	70,000	4.1	6,000	1.7	211,000	1.1	136,000	1.5	380	0.8	10,000	0.0
Boulder River	BE-23	8/18/09	Boulder River D/S of Cataract Cr.	104,000	6.1	10,000	2.8	200,000	1.0	167,000	1.8	810	1.7	891,000	2.8
Boulder River	BE-24	8/18/09	Boulder River D/S of High Ore Cr.	147,000	8.6	13,300	3.8	213,000	1.1	206,000	2.3	240	0.5	1,160,000	3.7
Boulder River	BE-26	8/19/09	Boulder River D/S of Little Boulder River	131,000	7.7	9,900	2.8	324,000	1.6	207,000	2.3	420	0.9	1,210,000	3.8
Boulder River	BE-34	8/21/09	Bouler River D/S of Elkhorn Cr.	223,000	13.1	11,600	3.3	550,000	2.8	312,000	3.4	820	1.7	1,430,000	4.5
Boulder River	BE-27	8/21/09	Boulder River at mouth	29,000	1.7	4,300	1.2	147,000	0.7	72,000	0.8	350	0.7	775,000	2.5
Boulder River	BE-33	8/21/09	Boulder River U/S of Golden Sunlight Mine	31,000	1.8	4,500	1.3	168,000	0.9	79,000	0.9	760	1.6	858,000	2.7
Cataract Cr	BE-35	8/19/09	Cataract Cr. U/S of Nellie Grant Cr.	30,000	1.8	32600	9.2	311,000	1.6	167,000	1.8	660	1.4	3,650,000	11.6
Cataract Cr	BE-37	8/19/09	Cataract Cr D/S of Rocker Cr.	104,000	6.1	11,800	3.3	158,000	0.8	97,000	1.1	1,000	2.1	859,000	2.7
Cataract Cr	BE-39	8/19/09	Cataract Cr. D/S Hoodoo Cr.	525,000	30.9	6,900	2.0	229,000	1.2	782,000	8.6	1,700	3.5	866,000	2.7
Cataract Cr	BE-41	8/20/09	Cataract Cr D/S of Morning Glory tailings	1,220,000	71.8	22,200	6.3	712,000	3.6	1,330,000	14.6	950	2.0	2,180,000	6.9
Elkhorn Cr	BE-49	8/21/09	Elkhorn Cr. End of upper segment	69,000	4.1	37,900	10.7	174,000	0.9	1,070,000	11.7	11,000	22.6	3,100,000	9.8
High Ore Cr	BE-53	8/19/09	High Ore Cr. U/S of Comet Mine	19,000	1.1	1,200	0.3	26,000	0.1	48,000	0.5	290	0.6	101,000	0.3
Bishop Cr	BE-14	8/19/09	Bishop Cr. At mouth	47,000	2.8	2,100	0.6	60,000	0.3	119,000	1.3	540	1.1	330,000	1.0
High Ore Cr	BE-57	8/24/09	High Ore Cr. At mouth	1,390,000	81.8	35,800	10.1	286,000	1.5	1,210,000	13.3	490	1.0	8,070,000	25.6
Little Boulder River	BE-60	8/20/09	Little Boulder River at mouth	26,000	1.5	1,000	0.3	42,000	0.2	20,000	0.2	920	1.9	80,000	0.3
Little Boulder River	M07LBLDR01	8/2/10	Little Boulder River D/S of Wilson Cr.	56,000	3.3	1,700	0.5	75,000	0.4	< 170	0.5	--	--	150,000	0.5
Little Boulder River, NF	M07LBNFR04	8/3/10	North Fork Little Boulder River at mouth	15,000	0.9	300	0.1	24,000	0.1	9,000	0.1	< 110	--	48,000	0.2
Lowland Cr	BE-63	8/18/09	Lowland Cr headwaters	58,000	3.4	1,200	0.3	72,000	0.4	38,000	0.4	350	0.4	97,000	0.3
Lowland Cr	BE-63	9/2/10	Lowland Creek at road crossing	71,000	4.2	900	0.3	82,000	0.4	41,000	0.5	81	--	114,000	0.4
Lowland Cr	BE-65	8/18/09	Lowland Cr. At mouth	13,000	0.8	700	0.2	25,000	0.1	20,000	0.2	1,100	1.4	59,000	0.2
Lowland Cr	BE-65	9/28/10	Lowland Creek U/S of mouth	12,000	0.7	400	0.1	29,000	0.2	23,000	0.3	95	0.1	66,000	0.2
Uncle Sam Gulch	97-BMS-108S1	1997	0.5 mile U/S of Crystal Mine	3,9000	2.3	2,000	0.6	36,000	0.2	34,000	0.4	--	--	160,000	0.5
Uncle Sam Gulch	97-BMS-116	1997	0.5 mile D/S of Crystal Mine	3600,000	212	7,000	2	560,000	2.8	1,900,000	21	--	--	920,000	3
Uncle Sam Gulch	97-BMS-134	1997	0.9 mile D/S of Crystal Mine	3,900,000	229	9,000	2.5	220,000	1.1	1,600,000	18	--	--	2,700,000	30
Uncle Sam Gulch	97-BMS-118	1997	0.4 mile U/S of mouth	1,300,000	76	39,000	11	2,300,000	12	920,000	10	--	--	3,800,000	12