

APPENDIX E – WATER CHEMISTRY FOR NATURAL BACKGROUND SITES, BOULDER-ELKHORN TPA

This appendix consists of **Table E-1** that contains site information and water chemistry results for monitoring locations representing natural background conditions in the Boulder-Elkhorn TMDL planning area.

Table E-1. Surface Water Quality Data for natural background sites, 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	BE-01	Headwaters	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	Headwaters	6/12/2009	--	6.83	7.25	--	--	--	--	--	--	--	--	--
Basin Creek	BE-01	Headwaters	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	M07BASNC01	Headwaters	7/15/2010	22	0.11	--	50	<3.0	<0.08	2	170	--	< 0.5	< 0.5	< 10
Basin Creek	M07BASNC01	Headwaters	6/6/2010	12	2.1	--	130	<3.0	<0.08	4	220	--	< 0.5	< 0.5	< 10
Basin Creek	BE-01	Headwaters	7/15/2010	22	1.84	--	<30	<3.0	<0.08	2	60	--	< 0.5	< 0.5	< 10
Basin Creek	BE-01	Headwaters	6/6/2010	16	12.2	--	80	<3.0	<0.08	3	270	--	< 0.5	< 0.5	< 10
Big Limber Gulch	BE-11	Headwaters	8/24/2009	61.0	0.03	8	--	4.0	<0.08	1.0	90	< 0.05	< 0.5	< 0.5	10
Big Limber Gulch	BE-11	Headwaters	6/11/2009	24.0	0.218	7	--	<3.0	<0.08	1.0	160	< 0.05	< 0.5	< 0.5	< 10
Big Limber Gulch	BE-11	Headwaters	6/4/2010	40	0.45	--	110	8	0.22	11	2740	--	8.4	< 0.5	40
Big Limber Gulch	BE-11	Headwaters	7/9/2010	45	0.12	--	< 30	<3.0	<0.08	1	140	--	< 0.5	< 0.5	< 10
Bison Cr	BE-16	Headwaters Trib.	6/9/2009	22	7.95	6.3	--	5	<0.08	7	490	< 0.05	< 0.5	< 0.5	< 10
Bison Cr	BE-16	Headwaters Trib.	6/9/2010	23	10.51	--	70	6	<0.08	10	790	--	0.8	< 0.5	< 10
Bison Cr	BE-16	Headwaters Trib.	8/18/2009	28.0	1.87	7.61	--	5.0	<0.08	4.0	320	< 0.05	< 0.5	< 0.5	10
Bison Cr	BE-16	Headwaters Trib.	7/19/2010	30	1.86	--	50	9	0.13	13	2120	--	3.2	< 0.5	10
Bison Cr	BE-16	Headwaters Trib.	8/19/2010	33	1.22	--	< 30	5	<0.08	4	370	--	< 0.5	< 0.5	< 10
Bison Cr	BE-16	Headwaters Trib.	9/30/2010	36	1.03	--	< 30	4	<0.08	3	300	--	< 0.5	< 0.5	< 10

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Upper Boulder River	Be-28	Headwaters	6/9/2009	34	14.1	6.79	--	4	<0.08	3.0	320	< 0.05	< 0.5	< 0.5	< 10
Upper Boulder River	BE-28	Headwaters	8/18/2009	52	1.98	8.15	--	4	<0.08	1.0	250	< 0.05	< 0.5	< 0.5	< 10
Cataract Cr.	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 Cr.	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	--	--
Elkhorn Cr.	M07ELKHC01	U/S of town site	7/3/2010	35	0.1	--	< 30	4	<0.08	< 1	< 50	--	< 0.5	< 0.5	< 10
Elkhorn Cr.	M07ELKHC01	U/S of town site	9/3/2010	25	0	--	< 30	<3.0	<0.08	< 1	< 50	--	< 0.5	< 0.5	< 10
High Ore Cr.	BE-53	U/S of Comet MIne	6/11/09	31.0	--	--	--	--	--	--	--	--	--	--	--
High Ore Cr.	BE-53	U/S of Comet MIne	8/19/09	53.0	--	--	--	--	--	--	--	--	--	--	--
Jack Cr.	M07JACKC02	tributary U/S of Bullion Mine	6/8/2010	12	--	--	140	<3.0	<0.08	3	< 50	--	0.33	< 0.5	< 10
Jack Cr.	M07JACKC02	tributary U/S of Bullion Mine	7/16/2010	20	--	--	60	<3.0	<0.08	2	250	--	< 0.5	< 0.5	< 10
Little Boulder River	M07LBLDR01	D/S of Wilson Cr	6/5/2010	17	167.1	--	110	6	<0.08	8	630		1	< 0.5	< 10
Little Boulder River	M07LBLDR01	D/S of Wilson Cr	8/2/2010	34.0	11.72	8.2	< 30	4	<0.08	3	520	--	1.1	< 0.5	< 10
Little Boulder River	M07LBLDR02	U/S of NF confluence	6/5/2010	21	150.6	--	110	6	0.08	8	680		1	< 0.5	< 10

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Little Boulder River	M07LBLDR02	U/S of NF confluence	6/10/2009	25.0	68.79	7.2	--	4	<0.08	6	620	< 0.05	7	< 0.5	< 10
Little Boulder River	M07LBLDR02	U/S of NF confluence	8/20/2009	43.0	11.88	7.6	--	<3.0	<0.08	2	240	< 0.05	< 0.5	< 0.5	10
Little Boulder River	M07LBLDR02	U/S of NF confluence	8/2/2010	42	16.53	8.2	<30	3	<0.08	3	400	--	< 0.5	< 0.5	< 10
Lowland Cr.	M07LOWLC03	Headwater Trib.	6/9/2010	23	2.81	--	130	4	<0.08	4	380	--	< 0.5	< 0.5	< 10
Lowland Cr.	BE-63	Headwaters	6/9/2009	26	1.64	6.5	110	5.0	<0.08	8	250	< 0.05	< 0.5	< 0.1	< 10
Lowland Cr.	BE-63	Headwaters	8/18/2009	51	0.18	8.1	30	7.0	<0.08	5	280	< 0.05	< 0.5	< 0.1	< 10
Lowland Cr.	BE-63	Headwaters	7/18/2010	42	0.28	--	50	7	<0.08	5	310	--	< 0.5	< 0.5	< 10
Lowland Cr.	BE-63	Headwaters	9/28/2010	57	0.1	--	<30	5	<0.08	2	180	--	< 0.5	< 0.5	< 10
Muskrat Cr.	M07MSKRC01	Headwaters	6/3/2010	15	20.98	--	70	<3.0	<0.08	2		--	< 0.5	< 0.5	< 10
Muskrat Cr.	M07MSKRC01	Headwaters	7/5/2010	19	13.16	--	30	<3.0	<0.08	1	90	--	< 0.5	< 0.5	< 10
Muskrat Cr.	M07MSKRC01	Headwaters	8/6/2010		2.96	8.1	--	--	--	--	--	--	--	--	--
Muskrat Cr.	M07MSKRC01	Headwaters	9/9/2010		2.7	8	--	--	--	--	--	--	--	--	--
Muskrat Cr.	M07MSKRC02	U/S of Nursery Cr.	6/3/2010	23	18.59	--	50	<3.0	<0.08	2	340	--	< 0.5	< 0.5	< 10
Muskrat Cr.	M07MSKRC02	U/S of Nursery Cr.	7/5/2010	26	16.76	--	<30	<3.0	<0.08	1	170	--	< 0.5	< 0.5	< 10
Muskrat Cr.	M07MSKRC02	U/S of Nursery Cr.	8/6/2010	--	8.13	8.5	--	--	--	--	--	--	--	--	--
Muskrat Cr.	M07MSKRC02	U/S of Nursery Cr.	9/9/2010	--	6.04	8	--	--	--	--	--	--	--	--	--
North Fork Little Boulder River	M07LBNFR02	1/2 mi D/S of Porcupine Gulch	6/16/2004	33	--	--	<100	<3.0	< 0.1	4.9	320	--	< 0.5	<3.0	< 10

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North Fork Little Boulder River	M07LBNFR02	1/2 mi D/S of Porcupine Gulch	6/16/2004	--	2.87	6.9	--	--	--	--	--	--	--	--	--
North Fork Little Boulder River	M07LBNFR02	1/2 mi D/S of Porcupine Gulch	6/5/2010	24	31.93	--	90	6	<0.08	3.8	900	--	0.6	< 0.5	< 10
North Fork Little Boulder River	M07LBNFR02	1/2 mi D/S of Porcupine Gulch	7/4/2010	27	20.68	--	80	4	<0.08	4.1	700	--	< 0.5	< 0.5	< 10
North Fork Little Boulder River	M07LBNFR02	1/2 mi D/S of Porcupine Gulch	8/4/2010	36	6.07	--	< 30	<3.0	<0.08	5.3	420	--	< 0.5	< 0.5	< 10
North Fork Little Boulder River	M07LBNFR02	1/2 mi D/S of Porcupine Gulch	9/8/2010	--	4.34	8	--	--	--	--	--	--	--	--	--
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	< 0.5	< 0.5	10
Uncle Sam Gulch	BE-74	U/S of Crystal Mine	6/11/2009	6.0	1.03	4.28	--	<3.0	<0.08	2.0	110	< 0.05	< 0.5	< 0.5	< 10
Uncle Sam Gulch	M07UCLSG01	U/S of Crystal Mine	6/4/2010	13	0.28	--	50	<3.0	<0.08	2	80	--	< 0.5	< 0.5	< 10
Uncle Sam Gulch	M07UCLSG01	U/S of Crystal Mine	7/12/2010	19.0	0.03	--	< 30	<3.0	<0.08	< 1	< 50	--	< 0.5	< 0.5	< 10