



Interim Water Treatment Plant at the Bonita Peak Mining District Superfund Site Gladstone, Colorado

Interim Water Treatment Plant Shutdown from March 14-16, 2019

- The data analysis confirms that there were no impacts to downstream drinking water or agricultural users associated with the short-term shutdown of the plant. Impacts to aquatic life, if any, were limited to the Animas River near Silverton.
- Water samples were collected at the confluence of Cement Creek and the Animas River (near CC48), Animas River approximately one mile south of Silverton (A72), Bakers Bridge, and Rotary Park from March 15 to March 20.
- A preliminary analysis of the sampling data from March 15 to March 20 shows a measurable elevation of metals concentrations, particularly copper, at the confluence of Cement Creek and the Animas River, about six miles below Gladstone. Levels of metals were slightly elevated at a location on the Animas River approximately one mile south of Silverton. From that point downstream, very small increases in concentrations of a few metals in the Animas River were detected. The cause of these increases may be the result of the closure of the IWTP, but they may also be related to several other factors that should be considered when evaluating these data.
- Samples were analyzed for total and dissolved metals and ions.
- Analytic results for samples collected on March 21 will be released next week.

Sample Number:	CC48_03/15/2019	CC48-D_03/15/2019		CC48_03/16/2019		CC48_03/17/2019		CC48_03/18/2019		CC48_03/19/2019		CC48_03/20/2019		A68_03/16/2019	
Sampling Location:	CC48	CC48		CC48		CC48		CC48		CC48		CC48		A68	
Matrix:	Water	Water		Water		Water		Water		Water		Water		Water	
Date Sampled:	3/15/2019	3/15/2019		3/16/2019		3/17/2019		3/18/2019		3/19/2019		3/20/2019		3/16/2019	
Date Analyzed:	3/19/2019	3/19/2019		3/19/2019		3/19/2019		3/21/2019		3/21/2019		3/21/2019		3/19/2019	
Parameter	Result Units	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	ug/L	9430		11100		11400		8400		8840		8820		9070	
Aluminum; Dissolved	ug/L	9650		10400		8750		8660		8050		8000		8210	
Antimony	ug/L	2.5	U	2.5 U		2.5 U	U	2.5	U	2.5 U	U	2.5	U	2.5	U
Antimony; Dissolved	ug/L	2.5	U	2.5 U		2.5 U	U	2.5	U	2.5 U	U	2.5	U	2.5	U
Arsenic	ug/L	9.42	JD	11 D		10.6 D	D	6.15	JD	4.86	JD	5.78	JD	5.96	JD
Arsenic; Dissolved	ug/L	2.5	U	2.5 U		2.5 U	U	2.5	U	2.5 U	U	2.5	U	2.5	U
Barium	ug/L	25	U	25 U		46.8 JD		25	U	25 U	U	25	U	25	U
Barium; Dissolved	ug/L	25	U	25 U		25 U	U	25	U	25 U	U	25	U	25	U
Beryllium	ug/L	2	U	2 U		2 U	U	2	U	2 U	U	2	U	2	U
Beryllium; Dissolved	ug/L	2	U	2 U		2 U	U	2	U	2 U	U	2	U	2	U
Cadmium	ug/L	4.37	D	4.82 D		3.97 D	D	2.5	D	2.78 D	D	3	D	3.06 D	JD
Cadmium; Dissolved	ug/L	4.39	D	4.69 D		3.8 D	D	2.62	D	2.75 D	D	2.89	D	2.93 D	
Calcium	ug/L	228000		271000		218000		217000		223000		220000		224000	
Calcium; Dissolved	ug/L	229000		242000		214000		219000		221000		223000		224000	
Chloride	mg/L	5	U	5 U		5 U	U	5	U	5 U	U	5	U	5	U
Chromium	ug/L	5	U	5 U		5 U	U	5	U	5 U	U	5	U	5	U
Chromium; Dissolved	ug/L	5	U	5 U		5 U	U	5	U	5 U	U	5	U	5	U
Cobalt	ug/L	30	D	35.9 D		27.9 D	D	26.2	D	26.8 D	D	27.1 D	D	27.8 D	JD
Cobalt; Dissolved	ug/L	28.5	D	31.4 D		24.1 D	D	23.5 D	D	27.4 D	D	27.5 D	D	27.4 D	
Copper	ug/L	111	D	135 D		119 D	D	31	D	30.3 D	D	33.7 D	D	33	D
Copper; Dissolved	ug/L	100	D	111 D		90.4 D	D	27.6 D	D	30.6 D	D	35.7 D	D	31.7 D	
Fluoride	mg/L	2.3	D	2.7 D		2 D	D	2.2 D	D	2 D	D	2.2 D	D	2.1 D	D
Hardness	mg/L	622		659		583		595		600		606		608	
Iron	ug/L	23000		27200		25600		18500		19300		17800		21200	
Iron; Dissolved	ug/L	16200		17200		14100		14900		15800		14000		16500	
Lead	ug/L	16.6	D	19.5 D		142 D	D	16.1 D	D	12.1 BD	BD	12.8 BD	BD	14.5 BD	D
Lead; Dissolved	ug/L	10.4	D	11.4 D		16.8 D	D	9.92 D	D	10.4 D	D	13.1 D	D	12.2 D	
Magnesium	ug/L	12600		14800		13400		11700		12000		11800		12100	
Magnesium; Dissolved	ug/L	12300		13100		11900		11700		11900		11700		12000	
Manganese	ug/L	5500		6520		5280		4840		4920		4770		4990	
Manganese; Dissolved	ug/L	5440		5740		5020		4790		4780		4670		4850	
Nickel	ug/L	8.4	D	11.3 D		9.12 D	D	6.92 D	D	7.38 D	D	8.22 D	D	7.77 D	U
Nickel; Dissolved	ug/L	7.47	D	7.99 D		6.53 D	D	5.76 D	D	7.27 D	D	7.63 D	D	7.36 D	U
Potassium	ug/L	2130		2540		2750		2000		2090		2080		2130	
Potassium; Dissolved	ug/L	2140		2260		2040		2000		2040		2040		2100	
Selenium	ug/L	5	U	5 U		5 U	U	5	U	5 U	U	5	U	5	U
Selenium; Dissolved	ug/L	5	U	5 U		5 U	U	5	U	5 U	U	5	U	5	U
Silver	ug/L	2.5	U	2.5 U		2.5 U	U	2.5	U	2.5 U	U	2.5	U	2.5	U
Silver; Dissolved	ug/L	2.5	U	2.5 U		2.5 U	U	2.5	U	2.5 U	U	2.5	U	2.5	U
Sodium	ug/L	5380		6370		5230		5020		5230		5150		5270	
Sodium; Dissolved	ug/L	5200		5540		4930		5010		5190		5150		5230	
Sulfate as SO4	mg/L	794	D	730 D		668 D	D	717 D	D	701 D	D	705 D	D	672 D	D
Thallium	ug/L	5	U	5 U		5 U	U	5	U	5 U	U	5	U	5	U
Thallium; Dissolved	ug/L	5	U	5 U		5 U	U	5	U	5 U	U	5	U	5	U
Total Alkalinity	mg CaCO3 / L	5	U	5 U		5 U	U	5	U	5 U	U	5	U	5	U
Vanadium	ug/L	10	U	10 U		10 U	U	10	U	10 U	U	10	U	10	U
Vanadium; Dissolved	ug/L	10	U	10 U		10 U	U	10	U	10 U	U	10	U	10	U
Zinc	ug/L	2510		2980		2420		1970		2010		2050		2020	
Zinc; Dissolved	ug/L	2550		2700		2390		1980		1990		2150		2000	

Sample Number:	A68_03/17/2019			A68_03/18/2019			A68-D_03/18/2019			A68_03/19/2019			A68_03/20/2019			A72_03/16/2019			A72_03/17/2019			A72_03/18/2019		
Sampling Location:	A68			A68			A68			A68			A68			A72			A72			A72		
Matrix:	Water			Water			Water			Water			Water			Water			Water			Water		
Date Sampled:	3/17/2019			3/18/2019			3/18/2019			3/19/2019			3/20/2019			3/16/2019			3/17/2019			3/18/2019		
Date Analyzed:	3/19/2019			3/21/2019			3/21/2019			3/21/2019			3/21/2019			3/19/2019			3/19/2019			3/21/2019		
Parameter	Result Units	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	
Aluminum	ug/L	129		131		133		108		143		2110		3750		3730								
Aluminum; Dissolved	ug/L	36.8	J	33.3	J	26.2	J	38.4	J	31.2	J	860		1900		1330								
Antimony	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	
Antimony; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
Arsenic	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	
Arsenic; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	
Barium	ug/L	25	U	25	U	25	U	25	U	25	U	28.1	JD	25	U	25	U							
Barium; Dissolved	ug/L	23		23.9		24		25.1		24.9		25.8		23.5		22.5								
Beryllium	ug/L	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	
Beryllium; Dissolved	ug/L	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	
Cadmium	ug/L	1.11	D	1.34	D	1.18	D	1.4	D	1.61	D	1.38	D	1.27	D	1.29	D							
Cadmium; Dissolved	ug/L	1.4		1.47		1.46		1.46		1.67		1.74		1.56		1.62								
Calcium	ug/L	68700		71000		71700		73200		75100		106000		115000		115000								
Calcium; Dissolved	ug/L	68100		71700		71300		72600		75300		104000		116000		114000								
Chloride	mg/L	2	U	2	U	2	U	2	U	2	U	5	U	5	U	5	U	5	U	5	U	5	U	
Chromium	ug/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	
Chromium; Dissolved	ug/L	1.62	J	1.24	J	1	U	1.31	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U	
Cobalt	ug/L	1.27	D	1.28	D	1.3	D	1.43	D	1.59	D	8.59	D	10.6	D	10.1	D							
Cobalt; Dissolved	ug/L	1.3		1.31		1.29		1.35		1.54		8.34		10.3		9.64								
Copper	ug/L	7.87	D	7.75	JD	7.75	JD	7.04	JD	8.32	JD	19.1	D	14.5	D	14	JD							
Copper; Dissolved	ug/L	4.71		3.91		3.86		4.15		4.3		14.4		11.6		10.3								
Fluoride	mg/L	0.7	D	0.7	D	0.7	D	0.7	D	0.8	D	0.8	JD	1	D	0.9	D							
Hardness	mg/L	186		195		194		198		205		288		321		314								
Iron	ug/L	351		366		370		260		332		4870		6730		7340								
Iron; Dissolved	ug/L	102	J	114	J	104	J	108	J	113	J	2640		3090		3080								
Lead	ug/L	5.42	D	3.2	JBD	3.51	JBD	2.8	JBD	2.82	JBD	12.1	D	10	D	7.54	BD							
Lead; Dissolved	ug/L	0.1	U	0.261	J	0.2	U	0.292	J	0.2	U	0.987		2.23		1.76								
Magnesium	ug/L	3840		3910		3960		4010		4150		6850		7500		7340								
Magnesium; Dissolved	ug/L	3800		3960		3900		4050		4200		6710		7520		7270								
Manganese	ug/L	2200		2260		2310		2370		2760		1740		1840		1800								
Manganese; Dissolved	ug/L	2140		2230		2220		2290		2720		1690		1800		1760								
Nickel	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U							
Nickel; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U							
Potassium	ug/L	575	J	620	J	545	J	571	J	587	J	1000		1010		998	J							
Potassium; Dissolved	ug/L	482	J	593	J	557	J	589	J	593	J	994	J	1010		1000								
Selenium	ug/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U							
Selenium; Dissolved	ug/L	1.06	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U							
Silver	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U							
Silver; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U							
Sodium	ug/L	2700		2850		2880		2880		2980		4100		4460		4450								
Sodium; Dissolved	ug/L	2660		2870		2830		2930		3010		4040		4500		4420								
Sulfate as SO4	mg/L	167	D	169	D	173	D	174	D	184	D	303	D	347	D	349	D							
Thallium	ug/L	5	U	5	U	5	U	6.16	JD	6.72	JD	5	U	5	U	5	U							
Thallium; Dissolved	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U							
Total Alkalinity	mg CaCO3 / L	33.2		36.4		7.29	J	36.7		37.5		5	U	5	U	5	U							
Vanadium	ug/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U							
Vanadium; Dissolved	ug/L	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U							
Zinc	ug/L	525		548		552		545		626		730		710		688								
Zinc; Dissolved	ug/L	506		547		533		535		619		727		702		688								

Sample Number:		A72_03/19/2019		A72_03/20/2019		Bakers Bridge_03/16/2019		Bakers Bridge_03/17/2019		Bakers Bridge_03/18/2019		Bakers Bridge_03/19/2019		Bakers Bridge_03/20/2019	
Sampling Location:		A72		A72		Bakers Bridge		Bakers Bridge		Bakers Bridge		Bakers Bridge		Bakers Bridge	
Matrix:		Water		Water		Water		Water		Water		Water		Water	
Date Sampled:		3/19/2019		3/20/2019		3/16/2019		3/17/2019		3/18/2019		3/19/2019		3/20/2019	
Date Analyzed:		3/21/2019		3/21/2019		3/19/2019		3/19/2019		3/19/2019		3/21/2019		3/21/2019	
Parameter	Result Units	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	ug/L	3550		3740		604		701		802		658		759	
Aluminum; Dissolved	ug/L	1680		1790		20	U	20	U	20	U	20	U	20	U
Antimony	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Antimony; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Arsenic	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Arsenic; Dissolved	ug/L	0.5	U	0.5	U	0.556	J	0.544	J	0.512	J	0.5	U	0.5	U
Barium	ug/L	25	U	25	U	52.5	D	51.5	D	50.2	D	50.2	D	46.4	JD
Barium; Dissolved	ug/L	22.3		21.3		49.4		46.4		46.9		47.7		45.9	
Beryllium	ug/L	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Beryllium; Dissolved	ug/L	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Cadmium	ug/L	1.59	D	1.66	D	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cadmium; Dissolved	ug/L	1.64		1.8		0.255		0.231		0.307		0.304		0.238	
Calcium	ug/L	121000		122000		56100		54600		55300		57700		56200	
Calcium; Dissolved	ug/L	120000		122000		55300		54200		55500		57000		55700	
Chloride	mg/L	2	U	2	JD	3.6	JD	3.8	JD	3.4	JD	3.5	JD	3.5	JD
Chromium	ug/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Chromium; Dissolved	ug/L	1	U	2.29		4.19		3.66		2.92		1.44	J	2.24	
Cobalt	ug/L	10.7	D	10.7	D	1.61	D	1.61	D	1.89	D	1.92	D	1.9	D
Cobalt; Dissolved	ug/L	10.1		11.6		1.42		1.41		1.72		1.8		1.68	
Copper	ug/L	15.3	JD	16.6	JD	3.29	JD	4.91	JD	5.79	D	3.94	JD	3.77	JD
Copper; Dissolved	ug/L	12.1		13		1.76		1.88		1.71		1.83		1.99	
Fluoride	mg/L	0.9	D	1	D	0.5	D	0.4	D	0.4	D	0.4	D	0.4	D
Hardness	mg/L	329		336		173		169		172		177		174	
Iron	ug/L	6120		7720		915		1120		1450		970		1160	
Iron; Dissolved	ug/L	2880		3840		100	U	100	U	100	U	100	U	100	U
Lead	ug/L	7.16	BD	8.32	BD	3.91	D	5.83	D	5.01	D	1.7	JBD	1.82	JBD
Lead; Dissolved	ug/L	2.48		2.03		0.1	U	0.1	U	0.1	U	0.2	U	0.2	U
Magnesium	ug/L	7700		7640		8300		8180		8020		8290		8180	
Magnesium; Dissolved	ug/L	7510		7700		8470		8280		8210		8370		8390	
Manganese	ug/L	2050		2350		310		322		394		386		376	
Manganese; Dissolved	ug/L	1980		2310		291		294		356		358		343	
Nickel	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Nickel; Dissolved	ug/L	0.5	U	2.72		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Potassium	ug/L	1070		1120		1060		1160		1040		1130		1050	
Potassium; Dissolved	ug/L	1040		1160		1030		1070		1020		1030		986	J
Selenium	ug/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Selenium; Dissolved	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Silver	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Silver; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Sodium	ug/L	4620		4540		3190		3160		3050		3270		3140	
Sodium; Dissolved	ug/L	4530		4570		3250		3250		3090		3290		3210	
Sulfate as SO4	mg/L	359	D	378	D	111	D	110	D	114	D	118	D	118	D
Thallium	ug/L	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Thallium; Dissolved	ug/L	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Total Alkalinity	mg CaCO3 / L	5	U	5	U	69.4		68.3		66.4		66.1		67.2	
Vanadium	ug/L	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Vanadium; Dissolved	ug/L	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Zinc	ug/L	793		866		190		157		185		173		166	
Zinc; Dissolved	ug/L	788		868		126		82.4		114		110		91.1	

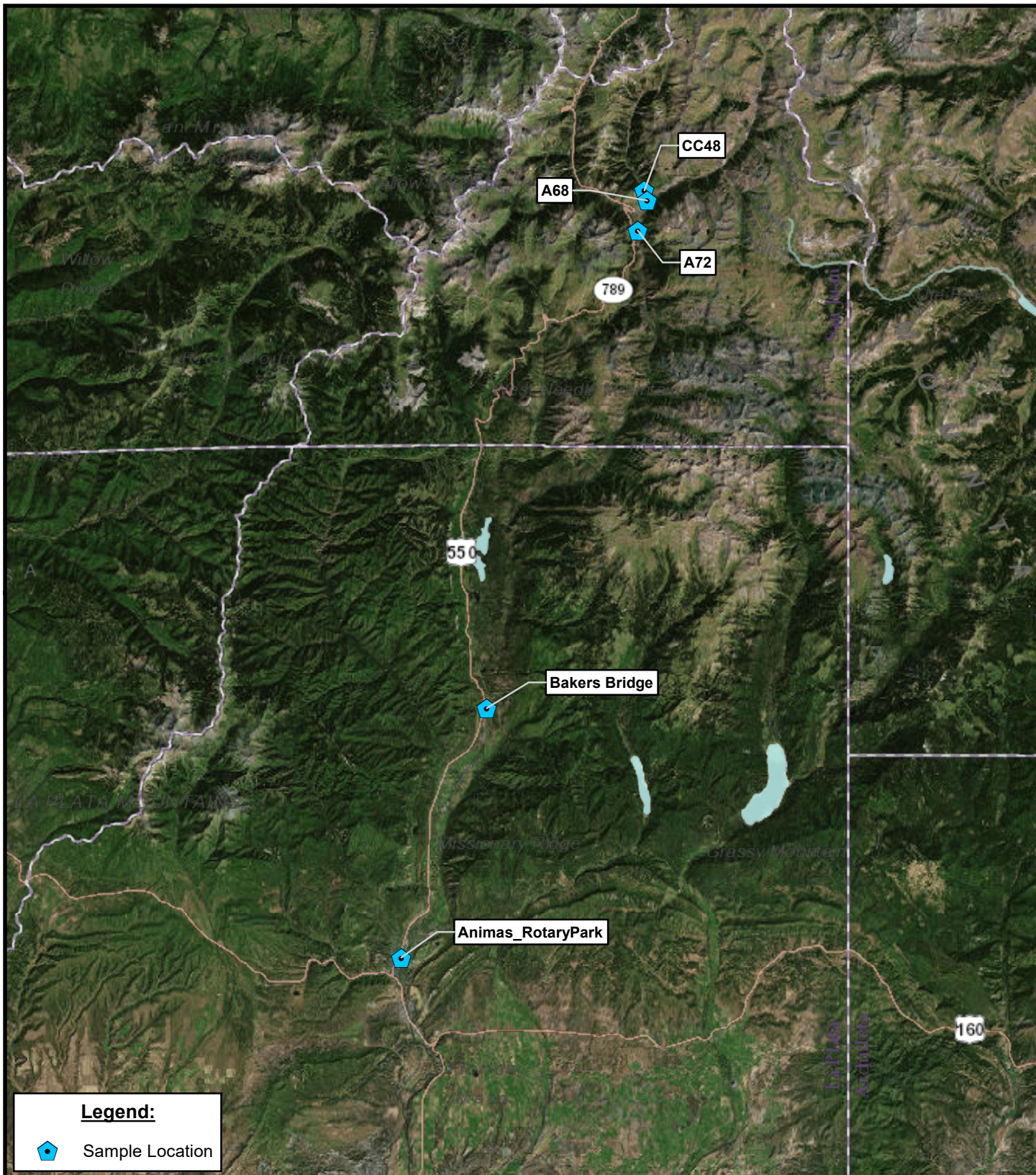
Sample Number:		Animas_RotaryPark_03/16/2019		Animas_RotaryPark_03/17/2019		Animas_RotaryPark_03/18/2019		Animas_RotaryPark_03/19/2019		Animas_RotaryPark_03/20/2019	
Sampling Location:		Animas_RotaryPark		Animas_RotaryPark		Animas_RotaryPark		Animas_RotaryPark		Animas_RotaryPark	
Matrix:		Water		Water		Water		Water		Water	
Date Sampled:		3/16/2019		3/17/2019		3/18/2019		3/19/2019		3/20/2019	
Date Analyzed:		3/19/2019		3/19/2019		3/19/2019		3/21/2019		3/21/2019	
Parameter	Result Units	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aluminum	ug/L	851		748		1080		1930		1120	
Aluminum; Dissolved	ug/L	20	U	20	U	20	U	20	U	20	U
Antimony	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Antimony; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Arsenic	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Arsenic; Dissolved	ug/L	0.673	J	0.706	J	0.616	J	0.72	J	0.5	U
Barium	ug/L	80.4	D	55.4	D	71.8	D	86.5	D	76.2	D
Barium; Dissolved	ug/L	72.5		62		65.5		65.5		65	
Beryllium	ug/L	2	U	2	U	2	U	2	U	2	U
Beryllium; Dissolved	ug/L	2	U	2	U	2	U	2	U	2	U
Cadmium	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cadmium; Dissolved	ug/L	0.1	U	0.1	U	0.1	U	0.171	J	0.1	U
Calcium	ug/L	87600		80600		84100		83100		83700	
Calcium; Dissolved	ug/L	84500		80000		80900		79600		81400	
Chloride	mg/L	17.8	D	15.5	D	16.7	D	15.4	D	15.8	D
Chromium	ug/L	5	U	5	U	5	U	5	U	5	U
Chromium; Dissolved	ug/L	6.77		6.8		5.86		2.07		3.54	
Cobalt	ug/L	0.831	JD	0.809	JD	0.825	JD	1.24	D	1.02	D
Cobalt; Dissolved	ug/L	0.47		0.495		0.471		0.644		0.508	
Copper	ug/L	3.02	JD	2.5	U	2.85	JD	4.52	JD	3.51	JD
Copper; Dissolved	ug/L	1.89		1.06		1.19		1.28		1.17	
Fluoride	mg/L	0.5	JD	0.4	D	0.6	D	0.5	JD	0.5	JD
Hardness	mg/L	266		252		254		249		255	
Iron	ug/L	1030		941		1200		1940		1310	
Iron; Dissolved	ug/L	100	U	100	U	100	U	100	U	100	U
Lead	ug/L	5.43	D	4.86	D	5.24	D	4.73	JBD	3.81	JBD
Lead; Dissolved	ug/L	0.119	J	0.1	U	0.1	U	0.2	J	0.2	U
Magnesium	ug/L	13800		12500		13300		12800		12800	
Magnesium; Dissolved	ug/L	13300		12600		12700		12300		12500	
Manganese	ug/L	382		308		292		333		321	
Manganese; Dissolved	ug/L	327		259		234		248		253	
Nickel	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Nickel; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Potassium	ug/L	2970		2630		3030		3120		2820	
Potassium; Dissolved	ug/L	2760		2570		2700		2550		2550	
Selenium	ug/L	5	U	5	U	5	U	5	U	5	U
Selenium; Dissolved	ug/L	1	U	1	U	1	U	1.85	J	1	U
Silver	ug/L	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Silver; Dissolved	ug/L	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Sodium	ug/L	16300		14500		16000		14500		14700	
Sodium; Dissolved	ug/L	15300		14300		14800		14100		14300	
Sulfate as SO4	mg/L	155	D	146	D	144	D	135	D	141	D
Thallium	ug/L	5	U	5	U	5	U	5	U	5	U
Thallium; Dissolved	ug/L	1	U	1	U	1	U	1	U	1	U
Total Alkalinity	mg CaCO3 / L	131		128		131		128		128	
Vanadium	ug/L	10	U	10	U	10	U	10	U	10	U
Vanadium; Dissolved	ug/L	2	U	2	U	2	U	2	U	2	U
Zinc	ug/L	81		54.9		55.5		65.4		61.2	
Zinc; Dissolved	ug/L	35.7		24.6		23.1		22.8		22.5	

Location	CC48		CC48		CC48		CC48		CC48		CC48	
Date	3/15/2019		3/16/2019		3/17/2019		3/18/2019		3/19/2019		3/20/2019	
Time	16:45		15:40		15:20		12:00		12:00		9:45	
Parameter	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit
Temperature	3.7	C	4.7	C	5.3	C	1.8	C	4.2	C	-0.1	C
Specific Conductivity	1248	us/cm	1225	us/cm	1217	us/cm	1204	us/cm	1188	us/cm	1199	us/cm
pH	3.66	S.U.	3.63	S.U.	3.63	S.U.	3.57	S.U.	3.61	S.U.	3.57	S.U.
Flow Rate	11.73	cfs	14.1	cfs	11.1	cfs	9.9	cfs	12	cfs	10.75	cfs

Location	A68		A68		A68		A68		A68	
Date	3/16/2019		3/17/2019		3/18/2019		3/19/2019		3/20/2019	
Time	16:50		16:50		12:40		13:10		10:20	
Parameter	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit
Temperature	0	C	1.2	C	0.1	C	2.5	C	0.1	C
Specific Conductivity	384	us/cm	384	us/cm	406	us/cm	400	us/cm	419	us/cm
pH	6.88	S.U.	6.92	S.U.	6.91	S.U.	7.09	S.U.	6.56	S.U.

Location	A72		A72		A72		A72		A72	
Date	3/16/2019		3/17/2019		3/18/2019		3/19/2019		3/20/2019	
Time	18:40		18:00		12:40		14:40		11:30	
Parameter	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit
Temperature	0.9	C	2.1	C	0.1	C	5.6	C	1.2	C
Specific Conductivity	600	us/cm	653	us/cm	406	us/cm	639	us/cm	668	us/cm
pH	5.78	S.U.	5.45	S.U.	6.91	S.U.	5.43	S.U.	5.41	S.U.

Location	Animas_RotaryPark		Animas_RotaryPark		Animas_RotaryPark		Animas_RotaryPark		Animas_RotaryPark	
Date	3/16/2019		3/17/2019		3/18/2019		3/19/2019		3/20/2019	
Time	16:10		17:20		12:25		10:20		14:10	
Parameter	Result	Unit	Result	Unit	Result	Unit	Result	Unit	Result	Unit
Temperature	8.3	C	8.1	C	8	C	6.2	C	7.3	C
Specific Conductivity	549	us/cm	534	us/cm	531	us/cm	519	us/cm	526	us/cm
pH	8	S.U.	8.1	S.U.	8	S.U.	7.9	S.U.	8	S.U.
Flow Rate	236	cfs	245	cfs	270	cfs	275	cfs	286	cfs



Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere
Projection: Mercator Auxiliary Sphere
Datum: WGS 1984

Source:
Site Boundary: Georeferenced Aerial (Google Earth 2019)
Background: ESRI World Imagery (2019)

0 4.5 9 18 Miles



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U.S. EPA - Region 8

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FIGURE 2
SAMPLE LOCATION MAP
SURFACE WATER SAMPLING ANIMAS RIVER
BONITA PEAK WATER CONVEYANCE
AND WATER TREATMENT PLANT
SAN JUAN COUNTY,
COLORADO

Date: 3/21/2019