

Question 21.

2020 WATER QUALITY DATA

- 2020 DRMS Water Quality Monitoring Plan Evaluation
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- Trend Evaluations 1-35: POC Trend Graphs (Metals, pH, Sulfate, TDS, Fluoride)
- Map 5: WQMP Sites Eagle River Watershed
- Map 6: WQMP Sites Tenmile Creek Watershed
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Climax Mine Water Quality Monitoring Plan Evaluation - 2020

Sampling Locations

Groundwater

Sample Locations:

ARwell, ARK-MW-001D, EVMW-3S, EVMW-3D, EV-MW-004, TM-MW-002D, GW#2, TM-MW-001D, GW#1, ARK-MW-002S, ARK-MW-002D, EVMW-1D, EVMW-1S, EVMW-2, EVS-1, EVS-2, EVS-3

Internal Surface Water

Sample Locations:

CC-SW1, EI-SW1

Surface Water

Sample Locations:

Arkansas #1, Arkansas #2, AI, BI, EPR Outlet

Duplicate Sample Locations:

- First Quarter: ARWell
- Second Quarter: EVS-1
- Third Quarter: ARK-MW-001D
- Fourth Quarter: TM-MW-001D

During 2020 water quality samples were successfully collected from the above sample locations with the exception of the following:

First Quarter:

- Inaccessible or frozen due to winter conditions:
 - EVMW-2, EV-MW-004, EVS-1, EVS-2, EVS-3, EI-SW1, CC-SW1

Second Quarter:

- No Observable Discharge
 - EPR Outlet

Third Quarter:

- Dry
 - EVS-1

Fourth Quarter:

- Inaccessible or frozen due to winter conditions:
 - ARWell, EVS-1

Discussion of Results: POC Wells

Numeric Protection Limits (NPLs) were implemented at point of compliance (POC) wells in the new Water Quality Monitoring Plan (WQMP) for the indicator parameter list. Section 5.0 of the WQMP discusses the rationale for selection of the NPLs. A comparison of results to applicable NPLs is provided in Table 1. Trend Evaluation Graphs 1-35 show a 5-year data set for all indicator parameters. In 2020, all indicator parameter results were within the applicable NPLs with exception of pH at monitoring well GW#2 (described below).

GW#2 pH discussion:

On 4/16/18, the pH at GW#2 was measured at 6.18 standard units (exceeding the NPL range of 6.5 to 8.5). Climax notified DRMS on 4/17/18, per section 5.2.1.1 of the WQMP. Climax and DRMS agreed that the site should be monitored on a monthly basis until the pH was measured within the NPL range for three consecutive months. Table 1 and Trend Evaluation Graph #32 present pH results from 2016-2020 indicating no consistent trend. Monthly pH monitoring continued at this location in 2020, including additional investigation in the surrounding area during the summer months. Investigations will continue in this area throughout the 2021 summer months.

Discussion of Results: Trend Evaluation of Groundwater and Surface Water Data

Per section 4.2.2.1 of the WQMP, Climax will “routinely evaluate indicator parameter water quality trends for the groundwater monitoring sites identified above on an annual basis, and report findings in the Annual Report to DRMS.”

As requested by DRMS, 5-year trend graphs and data tables attached. The graph titles are color coordinated, matching the color of the data table of the corresponding POC well.

The 2020 evaluation of trends does not indicate any decline in water quality at monitoring locations.

Discussion of Results: Outlier Identification and Data Validation

The 2020 groundwater and surface water data were analyzed for outliers. No outliers or invalid data were observed in 2020 data.

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
ARwell	03/15/2016	0.00005	0.00025	0.02	0.225	0.0073	0.005	7.67	31.8	164	0.46
	05/26/2016	0.00005	0.00025	0.06	0.063	0.0069	0.005	7.1	22.2	157	0.37
	08/01/2016	0.00005	0.00025	0.06	0.045	0.006	0.005	6.75	25.8	152	0.3
	11/10/2016	0.00005	0.00025	0.05	0.125	0.0064	0.005	7.62	28.8	162	0.6
	03/20/2017	0.00005	0.00025	0.07	0.319	0.0077	0.005	7.63	29.9	166	0.51
	05/24/2017	0.00005	0.0002	0.01	0.109	0.0076	0.005	7.38	26.7	160	2
	08/14/2017	0.00005	0.0002	0.08	0.061	0.0076	0.005	7.26	26.4	157	2.5
	11/20/2017	0.00005	0.0002	0.01	0.122	0.0078	0.005	7.68	28.8	162	0.51
	02/26/2018	0.00005	0.0002	0.08	0.361	0.0127	0.005	7.93	31.1	174	0.51
	06/05/2018	0.00005	0.0006	0.05	0.066	0.0052	0.005	7.11	19.8	142	0.25
	09/16/2019	0.000025	0.0004	0.015	0.07	0.0046	0.005	7.16	33.1	158	0.4
	09/16/2019	0.000025	0.0004	0.015	0.07	0.004	0.005	7.16	32.3	168	0.4
	12/17/2018	0.000025	0.0004	0.01	0.171	0.0058	0.005	7.42	30.8	182	0.52
	03/20/2019	0.000025	0.0004	0.01	0.255	0.0063	0.005	7.25	30.8	184	0.5
	06/12/2019	0.000025	0.0013	0.015	0.02	0.003	0.005	7.01	17.8	156	0.2
	09/16/2019	0.000025	0.0004	0.015	0.07	0.004	0.005	7.16	32.3	168	0.4
	12/11/2019	0.000025	0.0004	0.015	0.1	0.0052	0.005	7.16	28.8	168	0.5
	03/12/2020	0.000025	0.0004	0.015	0.22	0.0062	0.005	7.05	28.1	170	0.5
	03/12/2020	0.000025	0.0004	0.04	0.23	0.0069	0.005	7.05	28.5	182	0.6
	05/19/2020	0.000025	0.0004	0.015	0.05	0.0043	0.01	7.23	24.5	176	0.05
	09/03/2020	0.000025	0.0004	0.015	0.07	0.0043	0.01	7.45	29.5	178	0.4
	11/10/2020	***	***	***	***	***	***	***	***	***	***
Numeric Protection Limit (NPL)		0.005	0.2	0.3	TBD	0.210	2.0	6.5 - 8.5	250	400	2.0

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect results so 1/2 MDL was used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is considered erroneous and was not used in trending graphs.

Note: Data in purple represents the duplicate sample for the 1st quarter

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
ARK-MW-001D	03/15/2016	0.00005	0.00025	0.08	0.011	0.0339	0.005	8.18	50.8	214	1.79
	06/02/2016	0.00005	0.00025	0.08	0.015	0.0307	0.005	8.14	44.8	226	1.9
	09/07/2016	0.00005	0.00025	0.14	0.204	0.0294	0.005	7.86	39.8	202	1.81
	12/21/2016	0.00005	0.00025	0.14	0.182	0.0301	0.005	8.13	43	228	1.86
	03/20/2017	0.00005	0.00025	0.12	0.062	0.0288	0.005	8.05	42.7	209	1.77
	06/29/2017	0.00005	0.0002	0.13	0.149	0.0317	0.005	7.98	41.4	208	1.83
	07/19/2017	0.00005	0.0002	0.13	0.152	0.0294	0.005	8.03	46.9	214	1.83
	12/18/2017	0.00005	0.0002	0.1	0.029	0.0296	0.005	7.81	44	206	1.96
	02/26/2018	0.00005	0.0002	0.1	0.057	0.0298	0.005	8.22	31.2	193	1.72
	05/14/2018	0.00005	0.0002	0.11	0.055	0.03	0.005	7.66	37.3	203	1.83
	09/18/2018	0.000025	0.0004	0.14	0.132	0.0329	0.005	7.98	41.2	224	1.79
	12/18/2018	0.000025	0.0004	0.12	0.029	0.0303	0.005	7.97	44.5	216	1.9
	03/20/2019	0.000025	0.0004	0.11	0.039	0.0306	0.005	7.87	29.5	220	1.7
	06/12/2019	0.000025	0.0004	0.08	0.005	0.0303	0.005	7.72	41.2	214	1.9
	09/16/2019	0.000025	0.0004	0.09	0.005	0.0324	0.005	7.78	41.2	218	1.7
	12/11/2019	***	***	***	***	***	***	***	***	***	***
	03/16/2020	0.000025	0.0004	0.08	0.005	0.0306	0.005	7.98	42.6	206	1.7
	05/19/2020	0.000025	0.0004	0.11	0.005	0.0301	0.01	7.46	39.3	224	1.7
	09/22/2020	0.000025	0.0004	0.099	0.019	0.0331	0.01	8.17	42.7	212	1.8
	09/22/2020	0.000025	0.0004	0.121	0.061	0.0307	0.01	8.17	43.5	212	1.7
	11/10/2020	0.000025	0.0004	0.097	0.066	0.0289	0.01	7.96	42.8	222	1.84
Numeric Protection Limit (NPL)		0.005	0.2	0.3	TBD	0.210	2.0	6.5 - 8.5	250	400	2.0

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Note: Data in purple represents the duplicate sample for the 3rd quarter

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EVMW-3S	01/26/2016	0.00005	0.00025	0.01	0.064	0.0023	0.005	7.76	13.5	222	0.08
	06/08/2016	0.00005	0.0007	0.01	0.06	0.0034	0.005	7.23	7.7	155	0.09
	08/31/2016	0.0008	0.0027	0.01	0.047	0.0035	0.02	7.26	6.7	221	0.09
	10/18/2016	0.00005	0.00025	0.03	0.042	0.0048	0.005	7.17	9.5	227	0.025
	03/14/2017	0.00005	0.0012	0.01	0.081	0.0035	0.005	7.27	11.8	194	0.09
	06/19/2017	0.00005	0.0006	0.01	0.017	0.0025	0.005	7.2	5.9	158	5
	08/28/2017	0.00005	0.0005	0.01	0.021	0.0047	0.03	nd	10.6	222	2.5
	10/30/2017	0.00005	0.0002	0.04	0.043	0.006	0.01	7.68	8.6	218	2.5
	02/28/2018	0.00005	0.0008	0.03	0.034	0.0039	0.01	6.7	18.8	215	0.08
	06/11/2018	0.00005	0.0002	0.01	0.0025	0.0015	0.005	7.39	6	180	0.05
	08/22/2018	0.00005	0.0011	0.03	0.071	0.006	0.005	7.34	17.8	234	0.07
	12/17/2018	0.000025	0.0004	0.01	0.006	0.0012	0.005	7.17	11	234	0.07
	01/23/2019	***	***	***	***	***	***	***	***	***	***
	06/18/2019	0.000025	0.0004	0.015	0.08	0.0014	0.005	7.26	6.2	180	0.05
	09/17/2019	0.000025	0.0004	0.015	0.01	0.0018	0.005	7.68	11.2	244	0.05
	11/20/2019	0.000025	0.0011	0.015	0.02	0.0026	0.005	7.07	10.1	236	0.05
	03/17/2020	0.000025	0.002	0.015	0.04	0.0012	0.005	7.89	11.7	218	0.05
	06/11/2020	0.000025	0.0013	0.03	0.03	0.0013	0.01	7.54	8.6	186	0.05
	08/18/2020	0.000025	0.0028	0.03	0.02	0.0021	0.01	7.27	11.8	236	0.05
	11/02/2020	0.000025	0.004	0.03	0.07	0.00146	0.01	7.43	11.5	252	0.06
Numeric Protection Limit (NPL)		0.005	0.2	0.3	TBD	0.210	2.0	6.5 - 8.5	250	400	None

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

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nd = no data collected for parameter at location during sampling event

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EVMW-3D	01/26/2016	0.00005	0.00025	0.03	0.02	0.0009	0.005	7.89	3.5	228	0.33
	06/08/2016	0.00005	0.00025	0.01	0.046	0.001	0.005	7.85	4.3	248	0.32
	08/31/2016	0.00005	0.0006	0.01	0.05	0.0011	0.02	7.89	4.6	232	0.26
	10/18/2016	0.00005	0.00025	0.01	0.068	0.0014	0.005	7.9	3.5	221	0.2
	03/13/2017	0.00005	0.0016	0.01	0.043	0.0008	0.03	7.57	8.7	237	0.26
	06/19/2017	0.00005	0.0002	0.01	0.077	0.0018	0.005	7.88	6.1	244	5
	09/11/2017	0.00005	0.0005	0.01	0.066	0.0013	0.005	7.66	5.2	254	2.5
	10/30/2017	0.00005	0.0002	0.01	0.071	0.0021	0.06	7.6	35.6	266	2.5
	02/12/2018	0.00005	0.0012	0.01	0.024	0.0011	0.005	7.66	2.8	233	0.27
	06/11/2018	0.00005	0.0007	0.01	0.027	0.0009	0.005	7.74	2.8	235	0.22
	08/22/2018	0.00005	0.0002	0.01	0.079	0.0025	0.005	7.6	4.1	246	0.26
	11/13/2018	0.000025	0.0012	0.01	0.006	0.0007	0.005	7.77	3	246	0.3
	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/18/2019	0.000025	0.0004	0.015	0.03	0.0011	0.005	7.69	2.5	238	0.4
	09/17/2019	0.000025	0.0014	0.015	0.02	0.0014	0.005	7.88	5.4	208	0.3
	11/20/2019	0.000025	0.0004	0.015	0.03	0.0011	0.005	7.48	2.3	244	0.3
	03/17/2020	0.000025	0.0004	0.015	0.005	0.0006	0.005	7.78	1.9	246	0.3
	06/11/2020	0.000025	0.0004	0.03	0.02	0.0007	0.01	7.46	5.2	244	0.3
	08/18/2020	0.000025	0.0037	0.03	0.06	0.0016	0.01	7.79	2.9	272	0.2
	11/02/2020	0.000025	0.0004	0.03	0.0008	0.0008	0.01	7.39	6.2	272	0.34
Numeric Protection Limit (NPL)		0.005	0.2	0.3	TBD	0.210	2.0	6.5 - 8.5	250	400	None

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

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Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EV-MW-004	03/09/2016	0.00005	0.00025	0.01	0.127	0.0034	0.04	7.71	57.1	294	0.14
	06/13/2016	0.00005	0.00025	0.01	0.176	0.0029	0.02	7.38	50.7	285	0.14
	09/01/2016	0.00005	0.00025	0.04	0.164	0.0033	0.02	7.52	45.6	278	0.12
	10/19/2016	0.00005	0.00025	0.01	0.094	0.0033	0.04	7.48	50.3	284	0.08
	03/06/2017	0.00005	0.00025	0.01	0.105	0.0029	0.02	7.7	45.4	276	0.14
	06/13/2017	0.00005	0.0002	0.02	0.109	0.0056	0.07	7.62	55.9	291	5
	08/21/2017	0.00005	0.0002	0.01	0.064	0.0032	0.005	7.39	52.6	295	2.5
	11/07/2017	0.00005	0.0002	0.01	0.023	0.0032	0.005	7.63	60.8	294	0.11
	03/12/2018	0.00005	0.0002	0.01	0.06	0.0033	0.005	7.08	43.3	281	0.1
	06/18/2018	0.00005	0.0002	0.02	0.054	0.003	0.01	7.24	47.2	287	0.14
	08/27/2018	0.00005	0.0008	0.01	0.036	0.0031	0.01	7.38	55.4	286	0.14
	11/28/2018	0.00007	0.0034	0.01	0.011	0.0026	0.03	7.29	51.8	316	0.27
	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/20/2019	0.000025	0.0004	0.015	0.09	0.0028	0.02	7.43	49.3	304	0.2
	08/28/2019	0.000025	0.0004	0.015	0.02	0.0028	0.005	7.64	48.9	322	0.1
	11/12/2019	0.000025	0.0004	0.015	0.005	0.0027	0.005	7.23	43.7	288	0.2
	03/03/2020	***	***	***	***	***	***	***	***	***	***
	06/24/2020	0.000025	0.0004	0.03	0.08	0.0032	0.01	6.92	48.8	304	0.2
	09/02/2020	0.000025	0.0004	0.03	0.005	0.0025	0.01	7.59	44.2	286	0.1
	11/03/2020	0.000025	0.0004	0.03	0.005	0.00258	0.01	7.24	47.7	300	0.14
Numeric Protection Limit (NPL)		0.005	0.2	0.3	TBD	0.210	2.0	6.5 - 8.5	250	400	None

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
TM-MW-002D	03/03/2016	0.00005	0.00025	0.01	0.0025	0.0076	0.005	8.5	57	158	0.48
	05/26/2016	0.00005	0.00025	0.01	0.006	0.0082	0.005	8.26	56.9	159	0.46
	08/01/2016	***	***	***	***	***	***	***	***	***	***
	11/14/2016	0.00005	0.00025	0.01	0.006	0.0077	0.005	8.74	55.7	164	0.44
	03/08/2017	0.00005	0.00025	0.01	0.0025	0.0068	0.005	8.24	57.9	156	0.44
	05/15/2017	0.00005	0.00025	0.01	0.0025	0.0071	0.005	7.83	56.4	168	2
	08/07/2017	0.00005	0.0002	0.01	0.0025	0.0071	0.005	7.46	67.8	180	0.46
	10/04/2017	0.00005	0.0002	0.01	0.0025	0.0068	0.005	8.1	55.2	157	0.43
	01/24/2018	0.00005	0.0002	0.01	0.0025	0.0086	0.005	7.94	56.6	158	0.45
	04/16/2018	0.00005	0.0006	0.01	0.0025	0.0092	0.01	7.81	41.7	142	0.46
	07/23/2018	0.00005	0.0002	0.01	0.0025	0.0063	0.005	8.15	59.6	174	0.44
	11/20/2018	0.000025	0.0004	0.01	0.0025	0.0066	0.005	8.32	55.4	186	0.42
	01/16/2019	0.000025	0.0004	0.01	0.005	0.0064	0.005	8.43	63.2	180	0.43
	05/30/2019	0.000025	0.0004	0.015	0.005	0.0068	0.005	8.14	54	152	0.5
	08/26/2019	0.000025	0.0004	0.015	0.005	0.0066	0.005	8.14	57.8	176	0.6
	10/22/2019	0.000025	0.0004	0.015	0.005	0.0072	0.01	7.88	58.6	182	0.4
	01/22/2020	0.000025	0.0004	0.015	0.005	0.0068	0.005	8.26	62.1	162	0.5
	05/12/2020	0.000025	0.0004	0.03	0.005	0.0058	0.01	8.08	55.5	180	0.5
	08/25/2020	0.000025	0.0009	0.03	0.005	0.0074	0.01	8.41	58.2	172	0.5
	11/19/2020	0.000025	0.0004	0.03	0.005	0.0066	0.01	8.31	54.1	172	0.39
Numeric Protection Limit (NPL)		0.005	0.2	0.3	0.050	0.210	2.0	6.5 - 8.5	250	400	None

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
GW#2	03/03/2016	0.00005	0.0011	0.01	0.0025	0.0015	0.01	6.8	30.4	100	0.23
	05/26/2016	0.00005	0.0022	0.01	0.0025	0.0012	0.03	6.6	24.1	87.5	0.08
	08/03/2016	0.00005	0.00025	0.01	0.0025	0.0013	0.005	5.9	24.7	92.3	0.08
	11/14/2016	0.00005	0.0007	0.01	0.0025	0.0012	0.01	6.8	28.6	92.2	0.09
	03/01/2017	0.00005	0.0034	0.01	0.0025	0.0013	0.03	6.5	38.5	106	0.1
	04/19/2017	*	*	*	*	*	*	6.7	*	*	*
	05/15/2017	0.00005	0.0023	0.01	0.0025	0.0011	0.02	6.9	37.4	107	5
	06/26/2017	*	*	*	*	*	*	6.7	*	*	*
	07/20/2017	*	*	*	*	*	*	6.7	*	*	*
	08/07/2017	0.00005	0.0007	0.01	0.0025	0.0012	0.005	6.4	26.4	94.4	0.08
	09/11/2017	*	*	*	*	*	*	6.7	*	*	*
	10/04/2017	0.00005	0.0004	0.01	0.0025	0.0014	0.005	7.2	26	86.2	0.07
	11/22/2017	*	*	*	*	*	*	6.7	*	*	*
	12/18/2017	*	*	*	*	*	*	6.7	*	*	*
	01/24/2018	0.00005	0.0002	0.01	0.0025	0.0011	0.005	6.9	33.6	98.2	0.08
	04/16/2018	0.00005	0.0002	0.01	0.0025	0.0011	0.005	6.2	35.5	110	0.08
	05/09/2018	*	*	*	*	*	*	6.7	*	*	*
	06/14/2018	*	*	*	*	*	*	6.7	*	*	*
	07/23/2018	0.00005	0.0006	0.01	0.0025	0.0013	0.005	6.1	34.5	108	0.08
	08/20/2018	*	*	*	*	*	*	6.7	*	*	*
	09/27/2018	*	*	*	*	*	*	6.7	*	*	*
	10/18/2018	*	*	*	*	*	*	6.7	*	*	*
	11/20/2018	0.000025	0.0004	0.01	0.0025	0.001	0.005	6.5	35.1	138	0.07
	12/05/2018	*	*	*	*	*	*	6.7	*	*	*
	01/16/2019	0.00005	0.0004	0.01	0.0025	0.0013	0.005	6.4	46.6	144	0.08
	02/13/2019	*	*	*	*	*	*	6.7	*	*	*
	03/28/2019	*	*	*	*	*	*	6.7	*	*	*
	04/24/2019	*	*	*	*	*	*	6.7	*	*	*
	05/30/2019	*	*	*	*	*	*	6.7	*	*	*
	06/10/2019	0.000025	0.0004	0.015	0.005	0.0011	0.005	6.9	36.3	136	0.1
	07/22/2019	*	*	*	*	*	*	6.7	*	*	*
	08/26/2019	0.000025	0.0004	0.015	0.005	0.0011	0.005	7.0	37.7	136	0.05
	10/22/2019	0.000025	0.0014	0.015	0.005	0.0011	0.03	6.3	40.6	128	0.05
	11/21/2019	*	*	*	*	*	*	6.7	*	*	*
	12/19/2019	*	*	*	*	*	*	6.7	*	*	*
	01/22/2020	0.000025	0.0004	0.015	0.005	0.0011	0.005	6.72	54.5	138	0.05
	02/18/2020	*	*	*	*	*	*	6.53	*	*	*
	03/19/2020	*	*	*	*	*	*	6.63	*	*	*
	04/13/2020	*	*	*	*	*	*	6.77	*	*	*
	05/12/2020	0.000025	0.0004	0.03	0.005	0.001	0.01	6.79	47.2	142	0.05
	06/10/2020	*	*	*	*	*	*	6.78	*	*	*
	07/08/2020	*	*	*	*	*	*	6.56	*	*	*
	08/25/2020	0.000025	0.0004	0.03	0.005	0.0012	0.01	6.22	42.5	128	0.04
	09/30/2020	*	*	*	*	*	*	7.0	*	*	*
	10/15/2020	*	*	*	*	*	*	6.4	*	*	*
	11/19/2020	0.000025	0.0004	0.03	0.005	0.00122	0.027	6.44	47.4	144	0.06
	12/21/2020	*	*	*	*	*	*	6.23	*	*	*
Numeric Protection Limit (NPL)		0.005	0.2	0.3	0.050	0.210	2.0	6.5 - 8.5	250	400	None

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

Note: Red italicized data are NPL exceedances for site, which have been communicated to DRMS and investigations are currently ongoing.

* Monthly pH data collection at GW#2 did not include sampling for other parameters

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
TM-MW-001D	03/03/2016	0.00005	0.00025	0.01	0.005	0.0375	0.005	8.66	184	319	3.11
	05/26/2016	0.00005	0.00025	0.01	0.008	0.0373	0.005	8.15	183	317	3.16
	08/03/2016	0.00005	0.00025	0.01	0.007	0.0406	0.005	7.59	194	330	3.12
	11/14/2016	0.00005	0.00025	0.01	0.01	0.0382	0.005	8.82	182	318	3.24
	03/01/2017	0.00005	0.00025	0.01	0.005	0.0361	0.005	8.35	180	314	3.15
	05/15/2017	0.00005	0.00025	0.01	0.01	0.0398	0.005	8.17	189	340	17
	09/11/2017	0.00005	0.0002	0.01	0.012	0.0358	0.005	8.39	180	314	2.5
	10/04/2017	0.00005	0.0002	0.01	0.005	0.0456	0.005	8.21	189	331	3.17
	01/24/2018	0.00005	0.0002	0.01	0.005	0.0423	0.005	8.22	178	313	3.08
	04/16/2018	0.00005	0.0002	0.01	0.0025	0.0405	0.005	7.92	176	322	3.16
	07/23/2018	0.00005	0.0002	0.01	0.0025	0.0391	0.005	8.07	182	346	3.28
	11/20/2018	0.000025	0.0004	0.01	0.0025	0.0361	0.005	8.37	184	354	3.29
	01/15/2019	0.00005	0.0004	0.01	0.01	0.0362	0.005	8.56	192	354	3.9
	06/10/2019	0.000025	0.0004	0.015	0.005	0.0413	0.005	8.06	187	354	3.2
	08/26/2019	0.00005	0.0004	0.015	0.005	0.0384	0.005	8.17	183	342	3.1
	10/23/2019	0.000025	0.0004	0.015	0.005	0.0399	0.005	8.06	194	348	3.2
	03/11/2020	0.00009	0.0004	0.015	0.005	0.0398	0.005	8.26	176	336	3.3
	05/12/2020	0.00006	0.0004	0.03	0.005	0.0365	0.01	8.14	174	350	3.3
	08/25/2020	0.000025	0.0004	0.03	0.005	0.0393	0.01	8.5	186	342	3
	11/19/2020	0.000025	0.0004	0.03	0.005	0.037	0.01	8.45	180	338	3.36
	11/19/2020	0.000025	0.0004	0.03	0.081	0.0479	0.01	8.45	179	338	3.34

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

Note: Data in purple represents the duplicate sample for the 4th quarter

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
GW#1	03/03/2016	0.0021	0.0026	0.01	0.0025	0.1837	0.4	6.66	225	370	1.09
	05/26/2016	0.0015	0.0011	0.01	0.0025	0.1671	0.32	6.37	172	297	1.07
	08/03/2016	0.002	0.0019	0.01	0.0025	0.1573	0.38	6.31	203	341	0.98
	11/14/2016	0.002	0.0016	0.01	0.0025	0.1662	0.4	6.62	203	347	1.05
	03/01/2017	0.0019	0.0016	0.01	0.0025	0.155	0.39	6.58	234	375	1.05
	05/15/2017	0.0017	0.0026	0.01	0.0025	0.144	0.33	6.53	153	282	2
	08/07/2017	0.0002	0.0002	0.01	0.0025	0.147	0.34	6.27	181	325	1.07
	10/04/2017	0.0019	0.0005	0.01	0.0025	0.154	0.38	7.56	192	337	1.01
	01/24/2018	0.0019	0.0011	0.01	0.0025	0.16	0.37	7.79	192	335	1.1
	04/16/2018	0.0013	0.0002	0.01	0.0025	0.145	0.35	5.95	189	332	1.02
	07/23/2018	0.0016	0.0002	0.01	0.0025	0.14	0.37	6.32	194	382	1.05
	11/20/2018	0.00193	0.0012	0.01	0.0025	0.132	0.36	6.2	199	394	1.14
	01/15/2019	0.00219	0.0016	0.01	0.0025	0.137	0.41	6.21	229	396	1.2
	06/10/2019	0.00152	0.0016	0.015	0.005	0.127	0.3	6.93	147	316	1
	08/26/2019	0.00037	0.0004	0.015	0.005	0.127	0.35	6.86	178	346	0.9
	10/23/2019	0.00196	0.0034	0.015	0.005	0.134	0.39	6.96	187	374	1.1
	03/11/2020	0.00209	0.0027	0.015	0.005	0.141	0.46	6.51	205	390	1.1
	05/12/2020	0.00161	0.0013	0.03	0.005	0.118	0.33	6.74	159	346	1.1
	08/25/2020	0.00193	0.0014	0.03	0.005	0.127	0.48	6.48	189	370	0.9
	11/19/2020	0.00211	0.00208	0.03	0.005	0.124	0.453	6.44	189	392	1.14

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
ARK-MW-002S	03/15/2016	0.00005	0.0007	1.85	3.69	0.0099	0.04	7.36	9.2	633	0.14
	05/26/2016	0.00005	0.0008	1.41	3.55	0.0066	0.01	6.93	3.8	640	0.14
	08/01/2016	0.0001	0.00025	0.72	3.16	0.0077	0.005	6.88	0.5	624	0.13
	11/10/2016	0.0001	0.0014	0.74	3.32	0.0102	0.01	7.09	1.6	635	0.12
	03/20/2017	0.0001	0.00025	1.23	3.14	0.0096	0.005	7.44	9.5	626	0.14
	05/24/2017	0.00005	0.0002	2.24	3.46	0.0141	0.005	7.28	4.6	654	2.5
	08/14/2017	0.0001	0.001	0.66	3.48	0.0139	0.005	6.84	2.8	621	2.5
	11/20/2017	0.00005	0.0002	1.25	3.53	0.0084	0.005	7.3	0.5	619	0.25
	03/12/2018	0.00005	0.0005	1.29	3.38	0.0118	0.01	6.53	1.9	601	0.11
	05/14/2018	0.00005	0.0002	3.17	3.6	0.0143	0.005	7.24	0.5	623	0.12
	09/17/2018	0.00006	0.0004	8.14	4.38	0.0081	0.005	6.89	0.5	680	0.14
	11/21/2018	0.000025	0.0004	6.08	3.45	0.0071	0.005	6.75	1.4	680	0.12
	03/28/2019	0.00006	0.0004	4.82	3.5	0.0076	0.01	7.1	8	638	0.14
	06/12/2019	0.000025	0.0004	1.78	3.74	0.0051	0.005	7.01	4.5	660	0.05
	09/17/2019	0.000025	0.0004	5.78	3.88	0.0041	0.005	7.1	0.5	648	0.1
	12/11/2019	0.000025	0.0004	6.21	4.04	0.0052	0.005	6.77	0.5	678	0.2
	03/16/2020	0.00006	0.0004	0.67	3.26	0.0059	0.005	6.92	8.2	644	0.1
	06/25/2020	0.000025	0.0004	4.36	4.2	0.0037	0.005	7.2	5	666	0.05
	09/03/2020	0.000025	0.0004	4.22	4.28	0.0039	0.01	7.13	5	654	0.1
	11/06/2020	0.000093	0.0004	3.7	3.91	0.00313	0.01	6.99	1.5	664	0.14

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
ARK-MW-002D	03/15/2016	0.00005	0.0005	0.04	0.006	0.0217	0.005	9.37	12.2	208	6.53
	05/26/2016	0.00005	0.00025	0.05	0.006	0.0196	0.005	9.35	10.1	218	6.69
	08/01/2016	0.00005	0.00025	0.09	0.047	0.0247	0.005	8.31	8.4	266	7.7
	11/10/2016	0.00005	0.0009	0.05	0.054	0.0322	0.005	9.56	44.5	294	7.59
	03/20/2017	0.00005	0.0009	0.1	0.055	0.0231	0.005	8.54	36	285	7.2
	05/24/2017	0.00005	0.0024	0.56	0.064	0.0239	0.005	8.39	42.9	288	12
	08/14/2017	0.0005	0.0002	0.01	0.067	0.0245	0.005	8.12	36.8	287	2.5
	11/20/2017	0.00005	0.0002	0.01	0.067	0.0214	0.005	8.41	27.2	283	7.79
	03/12/2018	0.00005	0.0002	0.01	0.047	0.0237	0.005	8.74	22.7	249	7.22
	05/14/2018	0.00005	0.0002	0.01	0.054	0.0232	0.04	8.3	29.9	283	7.95
	09/17/2018	0.000025	0.0004	0.01	0.006	0.0256	0.005	8.59	15.4	262	7.47
	11/21/2018	0.000025	0.0004	0.01	0.037	0.0238	0.005	8.57	28.7	308	7.72
	03/28/2019	0.000025	0.0004	0.01	0.045	0.0245	0.005	8.65	28.3	336	7.83
	03/28/2019	0.000025	0.0004	0.01	0.046	0.0242	0.005	8.65	24.7	348	7.83
	06/12/2019	0.000025	0.0004	0.015	0.02	0.0238	0.005	8.81	17.3	288	8.2
	09/17/2019	0.000025	0.0012	0.11	0.005	0.0233	0.005	8.97	14.6	270	7.4
	12/11/2019	0.000025	0.0004	0.06	0.03	0.0298	0.005	8.31	24.9	286	8
	03/16/2020	0.000025	0.0004	0.015	0.005	0.0231	0.005	8.46	13.1	242	7.6
	06/25/2020	0.000025	0.0004	0.03	0.01	0.0233	0.01	8.68	17	284	8
	09/03/2020	0.000025	0.0004	0.03	0.01	0.0257	0.01	8.49	16.7	294	7.3
	11/06/2020	0.000025	0.0004	0.03	0.005	0.0237	0.01	8.73	15.4	274	7.68

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EVMW-1D	03/09/2016	0.00005	0.00025	0.03	0.205	0.0029	0.005	7.98	363	627	0.21
	06/13/2016	0.00005	0.0005	0.06	0.226	0.0025	0.05	7.71	406	675	0.17
	09/01/2016	0.00005	0.00025	0.01	0.19	0.0026	0.01	7.67	371	639	0.16
	10/18/2016	0.00005	0.00025	0.01	0.105	0.0026	0.005	7.71	399	673	0.1
	03/20/2017	0.00005	0.00025	0.03	0.186	0.0025	0.005	7.62	369	630	0.14
	06/13/2017	0.00005	0.0002	0.01	0.186	0.0019	0.005	7.8	382	644	5
	08/21/2017	0.0001	0.0011	0.01	0.2	0.0034	0.01	7.64	375	652	2.5
	11/07/2017	0.00005	0.0002	0.01	0.111	0.0032	0.005	7.75	426	689	0.15
	01/29/2018	0.00005	0.0002	0.01	0.155	0.0035	0.02	7.49	379	650	0.15
	04/23/2018	0.00005	0.0002	0.03	0.126	0.0023	0.04	7.41	406	674	0.15
	08/27/2018	0.00005	0.0006	0.05	0.187	0.003	0.005	7.68	398	664	0.2
	11/13/2018	0.000025	0.0011	0.01	0.168	0.0022	0.005	7.64	382	718	0.15
	01/22/2019	0.000025	0.0004	0.06	0.181	0.0031	0.01	7.67	356	702	0.2
	06/20/2019	0.000025	0.0004	0.04	0.18	0.0021	0.06	7.94	384	706	0.1
	08/28/2019	0.000025	0.0012	0.19	0.21	0.0031	0.03	7.75	409	712	0.1
	11/12/2019	0.000025	0.0004	0.18	0.13	0.0022	0.005	7.46	433	716	0.1
	03/10/2020	0.000025	0.0004	0.12	0.17	0.0021	0.005	7.89	398	754	0.1
	05/13/2020	0.000025	0.0004	0.07	0.14	0.0024	0.01	8.08	356	718	0.2
	09/02/2020	0.000025	0.0004	0.1	0.24	0.0023	0.01	7.82	394	724	0.1
	11/06/2020	0.000025	0.0004	0.193	0.16	0.00182	0.01	7.73	398	730	0.13

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EVMW-1S	03/09/2016	0.00005	0.00025	1.27	0.598	0.38	0.005	7.67	515	901	0.18
	06/13/2016	0.00005	0.00025	1.51	0.546	0.3872	0.005	7.21	456	819	0.19
	09/01/2016	0.00005	0.00025	2.55	0.952	0.402	0.005	7.05	444	860	0.29
	10/18/2016	0.00005	0.00025	1.5	0.732	0.4498	0.005	7.25	448	833	0.17
	03/20/2017	0.00005	0.00025	1.48	0.612	0.416	0.005	7.41	475	869	0.12
	06/13/2017	0.00005	0.0002	0.43	0.552	0.362	0.005	7.49	433	768	5
	08/21/2017	0.0001	0.0002	0.44	0.689	0.414	0.005	7.37	456	845	2.5
	11/07/2017	0.00005	0.0002	0.44	0.62	0.398	0.005	7.47	517	895	0.19
	01/29/2018	0.00005	0.0002	1.08	0.609	0.394	0.02	7.4	468	841	0.15
	04/23/2018	0.00005	0.0002	1.47	0.74	0.335	0.01	6.8	520	898	0.2
	09/18/2018	0.000025	0.0004	1.65	0.733	0.424	0.005	7.2	478	916	0.22
	12/17/2018	0.00007	0.0004	1.88	0.672	0.4	0.005	7.38	505	958	0.2
	01/22/2019	0.000025	0.0004	1.83	0.802	0.377	0.005	7.19	509	976	0.24
	06/18/2019	0.00008	0.0004	1.68	0.57	0.372	0.005	7.2	452	896	0.2
	08/28/2019	0.000025	0.0004	2.15	0.88	0.361	0.01	7.42	512	954	0.2
	11/12/2019	0.000025	0.0004	2.19	0.89	0.368	0.005	7.04	507	946	0.2
	03/09/2020	0.00009	0.0004	1.53	0.83	0.338	0.005	7.25	589	1080	0.2
	06/15/2020	0.00007	0.0004	2.08	0.75	0.332	0.01	7.28	493	932	0.2
	09/02/2020	0.00007	0.0004	2.45	0.93	0.366	0.01	7.19	539	1030	0.2
	11/06/2020	0.000025	0.0004	1.7	0.897	0.346	0.01	7.33	541	1030	0.21

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EVMW-2	03/09/2016	0.00005	0.0013	0.03	0.056	0.0035	0.02	7.91	35.9	300	0.16
	06/13/2016	0.00005	0.0006	0.01	0.024	0.0008	0.01	7.6	17.2	269	0.06
	09/01/2016	0.00005	0.001	0.01	0.04	0.002	0.02	7.8	24.6	276	0.025
	10/18/2016	0.00005	0.0012	0.01	0.132	0.0029	0.01	7.58	27	292	0.025
	03/14/2017	0.00005	0.0012	0.01	0.057	0.007	0.005	7.71	31.2	294	0.06
	06/13/2017	0.00005	0.0002	0.01	0.074	0.0033	0.005	7.7	28.1	296	5
	08/21/2017	0.00005	0.0014	0.01	0.039	0.0058	0.005	7.73	34.6	300	2.5
	10/30/2017	0.00005	0.0006	0.01	0.07	0.0045	0.01	7.85	30.3	302	2.5
	03/12/2018	0.00005	0.0015	0.01	0.033	0.0025	0.005	7.31	20	276	0.025
	06/05/2018	0.00005	0.0016	0.01	0.016	0.0006	0.01	7.58	16.2	277	0.025
	08/27/2018	0.00005	0.0022	0.01	0.021	0.0039	0.005	7.48	52.9	274	0.06
	11/29/2018	0.000025	0.0014	0.01	0.051	0.0045	0.005	7.69	40.4	304	0.11
	01/23/2019	***	***	***	***	***	***	***	***	***	***
	06/20/2019	0.000025	0.0004	0.015	0.06	0.0027	0.005	7.65	26.8	292	0.05
	08/28/2019	0.000025	0.0011	0.015	0.02	0.0013	0.005	7.81	19.4	288	0.05
	12/10/2019	0.000025	0.0019	0.015	0.06	0.0184	0.01	7.73	32	326	0.05
	12/10/2019	0.000025	0.0021	0.015	0.1	0.0263	0.01	7.73	34.6	328	0.05
	03/03/2020	***	***	***	***	***	***	***	***	***	***
	06/24/2020	0.000025	0.0009	0.03	0.04	0.0029	0.01	7.28	24	304	0.05
	09/02/2020	0.000025	0.0012	0.03	0.02	0.003	0.01	7.76	22.6	286	0.05
	11/03/2020	0.000025	0.0013	0.03	0.022	0.00623	0.01	7.8	37.2	322	0.06

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EVS-1	03/21/2016	***	***	***	***	***	***	***	***	***	***
	06/13/2016	0.00005	0.0009	0.01	0.0025	0.0781	0.005	7.36	32.4	217	0.5
	09/01/2016	***	***	***	***	***	***	***	***	***	***
	03/22/2017	***	***	***	***	***	***	***	***	***	***
	06/19/2017	0.00005	0.0011	0.01	0.0025	0.0702	0.005	7.92	24	216	5
	08/28/2017	0.00005	0.0023	0.01	0.0025	0.0902	0.01	7.82	11.5	243	2.5
	10/16/2017	***	***	***	***	***	***	***	***	***	***
	03/19/2018	***	***	***	***	***	***	***	***	***	***
	06/11/2018	0.00005	0.0002	0.01	0.0025	0.0055	0.005	8.09	19.9	130	0.23
	08/27/2018	***	***	***	***	***	***	***	***	***	***
	11/13/2018	***	***	***	***	***	***	***	***	***	***
	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/26/2019	0.000025	0.0011	0.015	0.005	0.0921	0.005	7.83	37.7	226	0.4
	09/18/2019	***	***	***	***	***	***	***	***	***	***
	11/12/2019	0.000025	0.0004	2.19	0.89	0.368	0.005	7.04	507	946	0.2
	03/15/2020	***	***	***	***	***	***	***	***	***	***
	06/25/2020	0.000025	0.0017	0.03	0.005	0.109	0.01	7.65	41	268	0.4
	06/25/2020	0.000025	0.0017	0.03	0.005	0.11	0.01	7.65	41.5	260	0.5
	09/01/2020	***	***	***	***	***	***	***	***	***	***
	10/05/2020	***	***	***	***	***	***	***	***	***	***

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

** = No Sample Collected - Insufficient flow (or dry) due to late summer dry conditions

Note: Data in purple represents the duplicate sample for the 2nd quarter

Table 1 - Indicator Parameters
5-Year Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EVS-2	03/21/2016	***	***	***	***	***	***	***	***	***	***
	06/13/2016	0.00005	0.00025	0.01	0.0025	0.0089	0.005	7.52	10.2	109	0.25
	09/01/2016	0.00005	0.001	0.01	0.0025	0.0087	0.005	7.99	57.7	218	0.34
	10/10/2016	0.00005	0.00025	0.01	0.0025	0.0077	0.005	7.58	61.7	230	0.35
	03/22/2017	***	***	***	***	***	***	***	***	***	***
	06/19/2017	0.00005	0.0002	0.01	0.0025	0.0073	0.005	7.33	12.9	108	5
	08/28/2017	0.00005	0.0002	0.01	0.0025	0.0087	0.005	7.92	54.5	219	2.5
	10/16/2017	nd	0.0002	0.01	0.0025	0.0081	0.005	7.65	64.4	242	2.5
	03/19/2018	***	***	***	***	***	***	***	***	***	***
	06/11/2018	0.00005	0.0002	0.01	0.0025	0.0061	0.005	7.8	11.2	113	0.14
	08/27/2018	0.00005	0.0002	0.01	0.0025	0.0087	0.005	8.27	28.6	174	0.32
	11/13/2018	***	***	***	***	***	***	***	***	***	***
	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/26/2019	0.000025	0.0004	0.015	0.005	0.0071	0.005	7.87	10.7	116	nd
	09/18/2019	0.000025	0.0004	0.015	0.005	0.0077	0.005	8.26	30.4	184	0.3
	11/13/2019	0.000025	0.0004	0.015	0.005	0.006	0.005	7.85	39.2	220	0.2
	03/15/2020	***	***	***	***	***	***	***	***	***	***
	06/25/2020	0.000025	0.0004	0.03	0.005	0.0071	0.01	7.51	13	128	0.2
	09/01/2020	0.000025	0.0004	0.03	0.005	0.0073	0.01	8.21	30.9	192	0.3
	10/05/2020	0.000025	0.0004	0.03	0.005	0.00728	0.01	7.79	31.6	198	0.3

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = no data collected for parameter at location during sampling event

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride, Dissolved (mg/L)
EVS-3	03/21/2016	***	***	***	***	***	***	***	***	***	***
	06/13/2016	0.00005	0.00025	0.01	0.0025	0.0058	0.005	8.23	20.2	121	0.38
	09/01/2016	0.00005	0.00025	0.01	0.0025	0.009	0.02	8.16	77	257	0.52
	10/10/2016	0.00005	0.00025	0.01	0.0025	0.006	0.005	7.79	97.3	308	0.46
	03/22/2017	***	***	***	***	***	***	***	***	***	***
	06/19/2017	0.00005	0.0002	0.01	0.0025	0.0051	0.005	7.88	28.3	140	5
	08/28/2017	0.00005	0.0002	0.01	0.0025	0.0073	0.005	7.77	62.3	239	2.5
	10/17/2017	0.00005	0.0002	0.01	0.0025	0.0079	0.005	7.38	84.2	281	2.5
	03/19/2018	***	***	***	***	***	***	***	***	***	***
	06/11/2018	0.00005	0.0015	0.01	0.0025	0.0751	0.005	7.84	20.9	247	0.44
	08/27/2018	0.00005	0.0007	0.01	0.0025	0.0065	0.005	8.08	45.5	210	0.38
	11/13/2018	***	***	***	***	***	***	***	***	***	***
	03/15/2019	***	***	***	***	***	***	***	***	***	***
	06/26/2019	0.000025	0.0004	0.01	0.0025	0.0064	0.005	7.86	18.7	128	0.3
	09/18/2019	0.000025	0.0004	0.01	0.0025	0.0065	0.005	8.34	37.5	214	0.4
	11/13/2019	***	***	***	***	***	***	***	***	***	***
	03/15/2020	***	***	***	***	***	***	***	***	***	***
	06/25/2020	0.000025	0.0004	0.03	0.005	0.0051	0.01	7.99	17.1	138	0.3
	09/01/2020	0.000025	0.0004	0.03	0.005	0.006	0.01	7.98	39	214	0.3
	10/05/2020	0.000025	0.0004	0.03	0.018	0.00512	0.01	7.62	39.9	238	0.3

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

Note: Green data were non-detect data, 1/2 MDL used. Lab used dilution factor of 100, resulting in elevated MDLs. Data is not representative and considered erroneous.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Table 2 - Indicator Parameters
5-Year Internal Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
Arkansas #1	03/21/2016	***	***	***	***	***	***
	06/14/2016	0.00005	0.00025	0.04	0.09	0.009	0.0015
	08/01/2016	0.00005	0.00025	0.07	0.13	0.018	0.0017
	10/04/2016	0.00005	0.00025	0.1	0.13	0.015	0.0021
	03/22/2017	***	***	***	***	***	***
	06/26/2017	0.0477	0.0107	0.03	0.06	0.0025	0.0109
	08/14/2017	0.00005	0.0007	0.06	0.09	0.013	0.0019
	10/16/2017	0.00005	0.0002	0.08	0.12	0.02	0.0018
	03/15/2018	***	***	***	***	***	***
	06/18/2018	0.00005	0.0008	0.04	0.09	0.012	0.0013
	09/10/2018	0.00005	0.0002	0.08	0.1	0.012	0.0019
	07/15/2019	0.000025	0.0004	0.015	0.06	0.005	0.0014
	11/06/2019	0.000025	0.0004	0.05	0.08	0.02	0.002
	06/22/2020	0.000025	0.001	0.03	0.08	0.01	0.0015
	08/31/2020	0.000025	0.0004	0.06	0.1	0.02	0.0017

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
Arkansas #1	03/21/2016	***	***	***	***	***	***
	06/14/2016	nd	0.01	7.13	11.5	24	18
	08/01/2016	nd	0.005	6.98	6.8	22	32
	10/04/2016	nd	0.005	7.8	17.1	54	50
	03/22/2017	***	***	***	***	***	***
	06/26/2017	nd	0.005	6.48	3.6	24	19
	08/14/2017	nd	0.005	8.1	10.1	52	35
	10/16/2017	nd	0.005	7.76	21.1	54	49
	03/15/2018	***	***	***	***	***	***
	06/18/2018	nd	0.01	7.02	5.7	24	19
	09/10/2018	0.0019	0.005	7.33	23.7	140	65
	07/15/2019	0.0014	0.01	7.51	4.4	24	18
	11/06/2019	0.0019	0.02	8.46	20.1	70	51
	06/22/2020	0.0014	0.01	6.82	5.4	50	21
	08/31/2020	0.0016	0.01	7.99	24.4	60	51

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

Table 2 - Indicator Parameters
5-Year Internal Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
Arkansas #2	03/21/2016	***	***	***	***	***	***
	06/14/2016	0.00005	0.00025	0.04	0.09	0.013	0.0029
	08/01/2016	0.00005	0.00025	0.04	0.1	0.017	0.0051
	10/04/2016	0.00005	0.00025	0.05	0.13	0.072	0.0079
	03/20/2017	0.00005	0.00025	0.17	0.27	0.48	0.0164
	06/26/2017	0.0248	0.0056	0.03	0.06	0.013	0.0054
	08/14/2017	0.00005	0.0008	0.03	0.08	0.027	0.0054
	10/16/2017	0.00005	0.0005	0.05	0.12	0.048	0.0086
	03/15/2018	***	***	***	***	***	***
	06/18/2018	0.00005	0.0007	0.05	0.08	0.021	0.0029
	09/10/2018	0.00005	0.0004	0.07	0.1	0.049	0.0075
	07/15/2019	0.000025	0.0004	0.03	0.07	0.02	0.0027
	11/06/2019	0.000025	0.0004	0.05	0.13	0.14	0.0143
	06/22/2020	0.00006	0.0009	0.03	0.09	0.03	0.0038
	08/31/2020	0.000025	0.0004	0.03	0.09	0.04	0.0056

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
Arkansas #2	03/21/2016	***	***	***	***	***	***
	06/14/2016	nd	0.02	7.41	5.2	34	22
	08/01/2016	nd	0.005	7.08	11.8	32	35
	10/04/2016	nd	0.005	8.36	19.5	66	57
	03/20/2017	nd	0.03	7.94	32	144	98
	06/26/2017	nd	0.01	7.13	0.5	18	23
	08/14/2017	nd	0.005	7.92	13.1	56	40
	10/16/2017	nd	0.005	7.94	24.2	88	59
	03/15/2018	***	***	***	***	***	***
	06/18/2018	nd	0.01	7.58	6.2	36	25
	09/10/2018	0.0081	0.005	8.2	0.5	76	58
	07/15/2019	0.0031	0.01	7.39	16.5	26	20
	11/06/2019	0.0132	0.01	7.82	25.1	94	64
	06/22/2020	0.0036	0.02	6.99	8.2	50	26
	08/31/2020	0.0054	0.01	8.12	16.9	58	47

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

Table 2 - Indicator Parameters
5-Year Internal Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
AI	01/26/2016	***	***	***	***	***	***
	06/08/2016	0.00005	0.00025	0.07	0.41	0.0025	0.0006
	08/31/2016	0.00005	0.00025	0.01	0.04	0.0025	0.0027
	10/10/2016	0.00005	0.00025	0.01	0.01	0.0025	0.0009
	03/13/2017	0.00005	0.0025	0.01	0.01	0.0025	0.0006
	06/20/2017	0.00005	0.0002	0.04	0.53	0.0025	0.003
	08/28/2017	0.00005	0.0002	0.01	0.01	0.0025	0.0082
	10/16/2017	0.00005	0.0002	0.01	0.01	0.0025	0.0005
	02/12/2018	0.00005	0.0002	0.01	0.01	0.0025	0.0006
	06/11/2018	0.00005	0.0002	0.04	0.07	0.0025	0.0006
	09/10/2018	0.00005	0.0002	0.01	0.01	0.0025	0.00025
	06/26/2019	0.000025	0.0004	0.04	0.13	0.005	0.0006
	11/20/2019	0.000025	0.0004	0.015	0.015	0.01	0.0315
	06/11/2020	0.000025	0.0004	0.03	0.03	0.005	0.0101
	09/21/2020	0.000025	0.0004	0.03	0.03	0.005	0.025

Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
AI	01/26/2016	***	***	***	***	***	***
	06/08/2016	<i>nd</i>	0.005	7.65	0.5	40	31
	08/31/2016	<i>nd</i>	0.005	7.75	9.1	84	76
	10/10/2016	<i>nd</i>	0.005	7.36	0.5	82	78
	03/13/2017	<i>nd</i>	0.005	7.68	17.3	88	87
	06/20/2017	<i>nd</i>	0.005	7.32	1.5	72	42
	08/28/2017	<i>nd</i>	0.005	7.12	13.7	92	82
	10/16/2017	<i>nd</i>	0.005	8.1	11.5	64	68
	02/12/2018	<i>nd</i>	0.01	7.92	9.5	100	83
	06/11/2018	<i>nd</i>	0.005	7.47	0.5	258	43
	09/10/2018	0.00025	0.005	7.68	1.1	92	74
	06/26/2019	0.0009	0.005	7.84	0.5	50	36
	11/20/2019	0.0319	0.005	7.81	30.2	120	54
	06/11/2020	0.0115	0.01	7.39	13	88	61
	09/21/2020	0.0264	0.01	8.48	24.8	120	93

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

Table 2 - Indicator Parameters
5-Year Internal Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
BI	01/26/2016	0.00005	0.00025	0.01	0.03	0.0025	0.0413
	06/08/2016	0.00005	0.0006	0.07	0.43	0.0025	0.001
	08/31/2016	0.00005	0.00025	0.01	0.05	0.0025	0.0122
	10/10/2016	0.00005	0.001	0.01	0.12	0.0025	0.0285
	03/13/2017	0.00005	0.00025	0.01	0.01	0.0025	0.0037
	06/20/2017	0.00005	0.0002	0.04	1.04	0.0025	0.0045
	08/28/2017	0.00005	0.0002	0.01	0.49	0.0025	0.0177
	10/16/2017	0.00005	0.0002	0.01	0.01	0.0025	0.0134
	02/12/2018	0.00005	0.0002	0.01	0.02	0.0025	0.0318
	06/11/2018	0.00005	0.0002	0.04	0.08	0.0025	0.0012
	09/10/2018	0.00005	0.0006	0.01	0.07	0.0025	0.0218
	06/26/2019	0.000025	0.0004	0.04	0.13	0.005	0.0016
	11/20/2019	0.000025	0.0004	0.015	0.015	0.005	0.0004
	06/11/2020	0.000025	0.0004	0.03	0.19	0.005	0.0102
	09/21/2020	0.000025	0.0004	0.03	0.03	0.005	0.0005

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
BI	01/26/2016	<i>nd</i>	0.005	8.1	29.9	148	109
	06/08/2016	<i>nd</i>	0.005	7.78	0.5	58	36
	08/31/2016	<i>nd</i>	0.005	7.53	14.6	94	86
	10/10/2016	<i>nd</i>	0.005	7.64	5.9	118	103
	03/13/2017	<i>nd</i>	0.005	7.81	12.5	84	92
	06/20/2017	<i>nd</i>	0.005	7.52	4.1	74	47
	08/28/2017	<i>nd</i>	0.005	7.5	18.1	98	91
	10/16/2017	<i>nd</i>	0.005	7.85	16.2	98	85
	02/12/2018	<i>nd</i>	0.005	7.94	24.9	132	107
	06/11/2018	<i>nd</i>	0.005	7.64	0.5	64	46
	09/10/2018	0.0221	0.005	8.07	0.5	108	89
	06/26/2019	0.002	0.005	7.9	3.7	60	42
	11/20/2019	0.0004	0.005	7.49	13.1	84	80
	06/11/2020	0.0133	0.01	7.2	12.6	86	59
	09/21/2020	0.0005	0.01	8.42	10.3	84	77

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

Table 2 - Indicator Parameters
5-Year Internal Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
EPR Outlet	01/26/2016	0.00005	0.0007	0.01	0.03	0.0025	0.0463
	06/16/2016	0.00005	0.0005	0.01	0.13	0.0025	0.0339
	08/31/2016	0.00005	0.0008	0.01	0.05	0.0025	0.0306
	10/10/2016	0.00005	0.0006	0.01	0.01	0.0025	0.0285
	03/20/2017	0.00005	0.00025	0.01	0.01	0.0025	0.0381
	06/20/2017	0.00005	0.0004	0.01	0.12	0.0025	0.0276
	08/28/2017	0.00005	0.0002	0.01	0.03	0.0025	0.0318
	10/16/2017	0.00005	0.0005	0.01	0.02	0.0025	0.0308
	02/12/2018	0.00005	0.0005	0.01	0.01	0.0025	0.0361
	06/11/2018	***	***	***	***	***	***
	09/10/2018	0.00005	0.0005	0.01	0.02	0.0025	0.0231
	09/25/2019	0.000025	0.0004	0.015	0.015	0.005	0.028
	09/30/2019	0.000025	0.0004	0.015	0.03	0.005	0.0292
	12/18/2019	0.000025	0.001	0.015	0.015	0.005	0.0322
	06/25/2020	***	***	***	***	***	***
	09/21/2020	0.000025	0.0004	0.03	0.03	0.005	0.0252

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
EPR Outlet	01/26/2016	<i>nd</i>	0.005	7.98	33.6	152	114
	06/16/2016	<i>nd</i>	0.005	7.65	26.1	128	98
	08/31/2016	<i>nd</i>	0.005	7.75	25.9	118	103
	10/10/2016	<i>nd</i>	0.005	7.84	0.5	116	102
	03/20/2017	<i>nd</i>	0.005	7.24	27.3	120	108
	06/20/2017	<i>nd</i>	0.005	7.6	24.7	122	101
	08/28/2017	<i>nd</i>	0.005	7.87	24.2	104	97
	10/16/2017	<i>nd</i>	0.005	8.04	22.6	96	101
	02/12/2018	<i>nd</i>	0.005	8.08	27.3	138	109
	06/11/2018	***	***	***	***	***	***
	09/10/2018	0.0235	0.005	8.01	0.5	116	88
	09/25/2019	0.0288	0.005	7.67	24.3	92	94
	09/30/2019	0.0311	0.005	7.59	25.2	114	101
	12/18/2019	0.0305	0.005	7.76	23.1	118	99
	06/25/2020	***	***	***	***	***	***
	09/21/2020	0.025	0.01	8.38	21.7	112	93

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

Table 2 - Indicator Parameters
5-Year Internal Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
CC-SW1	03/21/2016	***	***	***	***	***	***
	06/14/2016	0.00005	0.00025	0.01	<i>nd</i>	0.0025	0.0009
	08/04/2016	0.00005	0.00025	0.03	0.04	0.005	0.0017
	10/04/2016	0.00005	0.00025	0.01	<i>nd</i>	0.005	0.0021
	03/22/2017	***	***	***	***	***	***
	06/26/2017	0.0451	0.0101	0.02	<i>nd</i>	0.005	0.0103
	08/22/2017	0.00005	0.0002	0.01	<i>nd</i>	0.0025	0.0018
	10/16/2017	0.00005	0.0004	0.04	<i>nd</i>	0.01	0.0018
	03/19/2018	***	***	***	***	***	***
	06/18/2018	0.00005	0.0007	0.03	<i>nd</i>	0.01	0.0012
	08/20/2018	0.00005	0.0002	0.03	0.04	0.0025	0.002
	10/24/2018	0.00008	0.0004	0.01	0.97	0.0025	0.0018
	06/25/2019	0.00008	0.0008	0.015	0.15	0.005	0.001
	09/24/2019	0.00007	0.0004	0.015	0.015	0.005	0.0019
	12/17/2019	***	***	***	***	***	***
	03/24/2020	***	***	***	***	***	***
	06/22/2020	0.00011	0.001	0.03	0.07	0.005	0.0014
	08/31/2020	0.00007	0.0004	0.03	0.03	0.005	0.0017
	10/19/2020	0.000094	0.0004	0.03	0.063	0.005	0.00249

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
CC-SW1	03/21/2016	***	***	***	***	***	***
	06/14/2016	<i>nd</i>	0.04	7.24	10.2	44	27
	08/04/2016	<i>nd</i>	0.01	6.65	21.9	60	46
	10/04/2016	<i>nd</i>	0.02	7.52	37.6	76	69
	03/22/2017	***	***	***	***	***	***
	06/26/2017	<i>nd</i>	0.02	6.96	12.2	38	31
	08/22/2017	<i>nd</i>	0.01	7.67	23.6	66	49
	10/16/2017	<i>nd</i>	0.01	7.92	33.1	82	63
	03/19/2018	***	***	***	***	***	***
	06/18/2018	<i>nd</i>	0.02	7.96	11.4	32	31
	08/20/2018	0.0022	0.01	8.24	27.9	68	57
	10/24/2018	0.0107	0.01	7.58	38.1	98	63
	06/25/2019	0.002	0.02	7.44	11.1	50	33
	09/24/2019	0.0021	0.01	7.64	31.9	62	65
	12/17/2019	***	***	***	***	***	***
	03/24/2020	***	***	***	***	***	***
	06/22/2020	0.0012	0.02	6.94	5	62	32
	08/31/2020	0.0016	0.01	7.31	30.8	80	54
	10/19/2020	0.00176	0.01	7.24	35.1	100	66

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

na = Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

Table 2 - Indicator Parameters
5-Year Internal Surface Water Quality Monitoring Data
Climax Mine

Location	Sample Date	Cadmium, Dissolved (mg/L)	Copper, Dissolved (mg/L)	Iron, Dissolved (mg/L)	Iron, Total Recoverable (mg/L)	Manganese, Dissolved (mg/L)	Molybdenum, Dissolved (mg/L)
EI-SW1	03/21/2016	***	***	***	***	***	***
	06/14/2016	0.00005	0.00025	0.01	<i>nd</i>	0.0025	0.0016
	08/04/2016	0.00005	0.00025	0.01	0.01	0.0025	0.0011
	10/04/2016	0.00005	0.00025	0.01	<i>nd</i>	0.0025	0.001
	03/22/2017	***	***	***	***	***	***
	06/26/2017	0.0459	0.0115	0.01	<i>nd</i>	0.0025	0.0105
	08/22/2017	0.00005	0.0002	0.01	<i>nd</i>	0.0025	0.0013
	10/16/2017	0.00005	0.0002	0.01	<i>nd</i>	0.0025	0.0013
	03/26/2018	***	***	***	***	***	***
	06/18/2018	0.00005	0.0002	0.01	<i>nd</i>	0.005	0.0014
	08/20/2018	0.00005	0.0002	0.01	0.01	0.0025	0.0013
	10/24/2018	***	***	***	***	***	***
	06/25/2019	0.000025	0.0004	0.015	0.13	0.005	0.0016
	09/24/2019	0.000025	0.0004	0.015	0.03	0.005	0.0015
	12/17/2019	***	***	***	***	***	***
	03/24/2020	***	***	***	***	***	***
	06/22/2020	0.000025	0.0004	0.03	0.12	0.005	0.0014
	08/31/2020	0.000025	0.0004	0.03	0.03	0.005	0.0016
	10/19/2020	0.000025	0.0004	0.03	0.156	0.005	0.00201

Note: Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

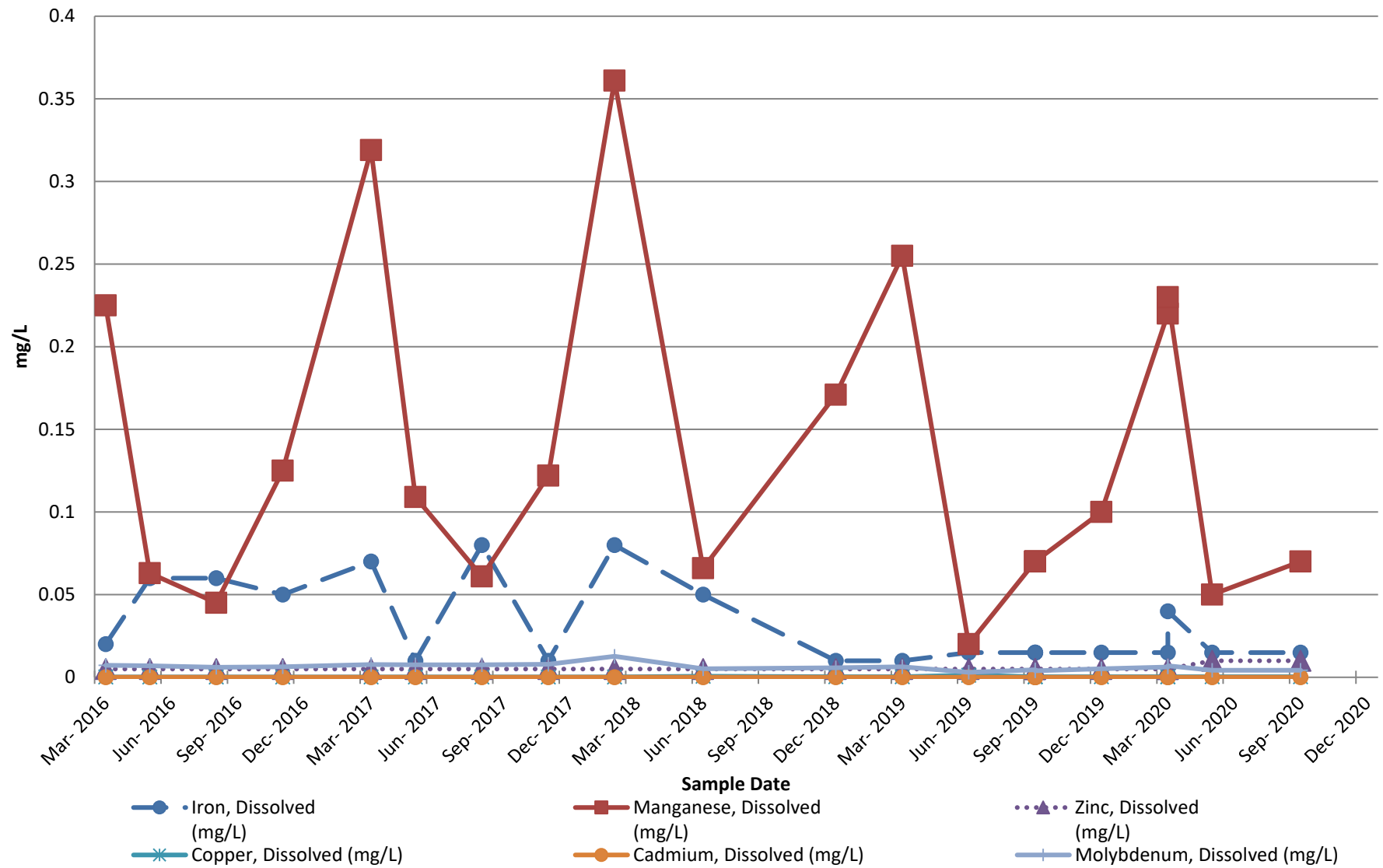
Location	Sample Date	Molybdenum, Total Recoverable (mg/L)	Zinc, Dissolved (mg/L)	pH, Field Measurement (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Hardness (mg/L)
EI-SW1	03/21/2016	***	***	***	***	***	***
	06/14/2016	<i>nd</i>	0.005	7.92	0.5	88	79
	08/04/2016	<i>nd</i>	0.005	8.25	12	148	151
	10/04/2016	<i>nd</i>	0.005	7.88	8.7	160	163
	03/22/2017	***	***	***	***	***	***
	06/26/2017	<i>nd</i>	0.005	7.85	4.2	100	101
	08/22/2017	<i>nd</i>	0.005	7.6	28.1	154	150
	10/16/2017	<i>nd</i>	0.005	7.31	10	174	167
	03/26/2018	***	***	***	***	***	***
	06/18/2018	<i>nd</i>	0.005	7.67	5.6	116	114
	08/20/2018	0.0014	0.005	7.84	6	178	166
	10/24/2018	***	***	***	***	***	***
	06/25/2019	0.0028	0.005	7.74	5	102	88
	09/24/2019	0.0019	0.005	8.01	7.2	158	180
	12/17/2019	***	***	***	***	***	***
	03/24/2020	***	***	***	***	***	***
	06/22/2020	0.0014	0.01	7.77	14.3	152	107
	08/31/2020	0.0015	0.01	8.31	7.7	180	156
	10/19/2020	0.00191	0.02	8.33	11.4	184	160

Bold italicized data are results below Lab Method Detection Limits (MDL) and are reported as 1/2 the MDL.

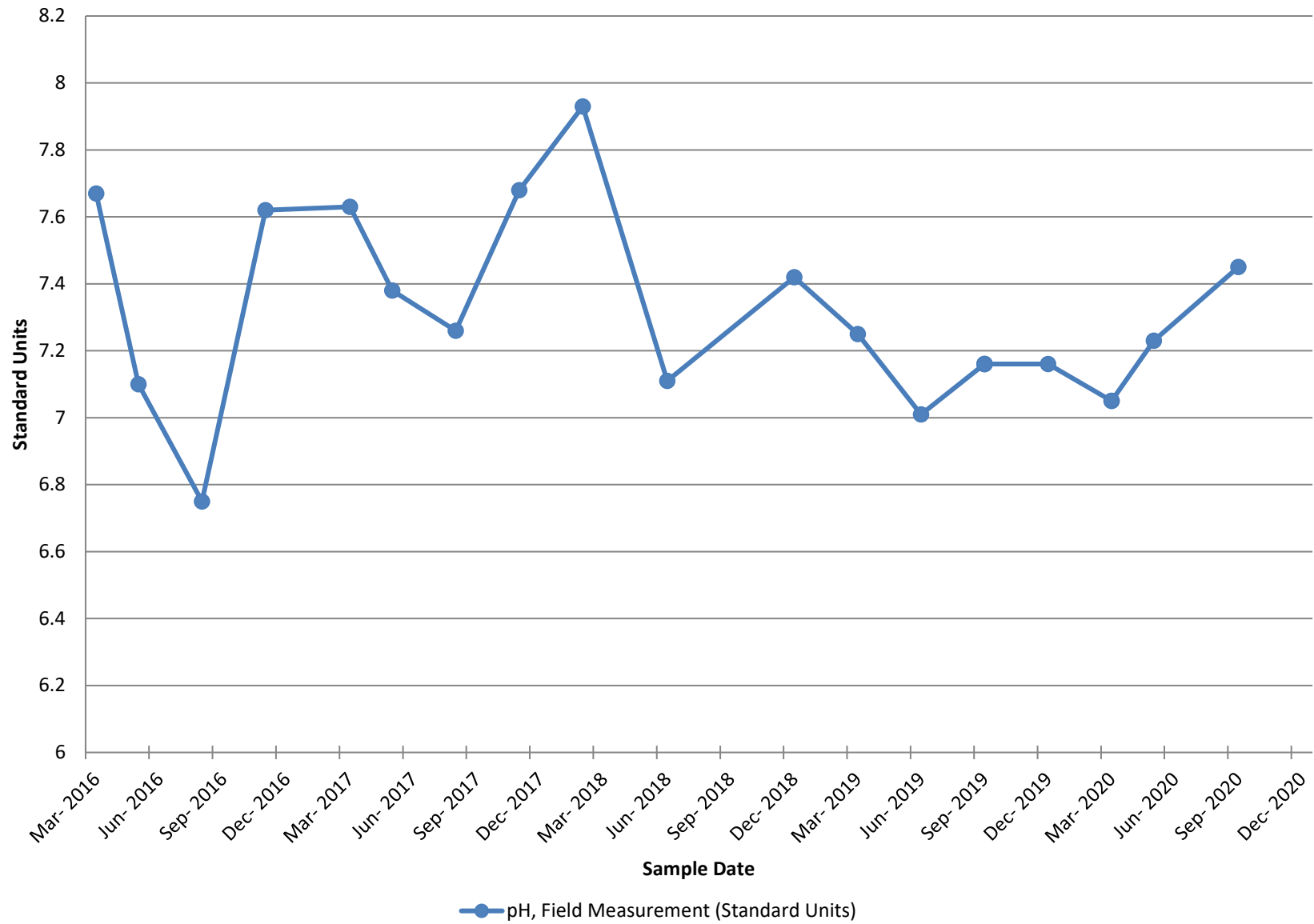
*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

nd = No Data. Pre-dates data collection at location.

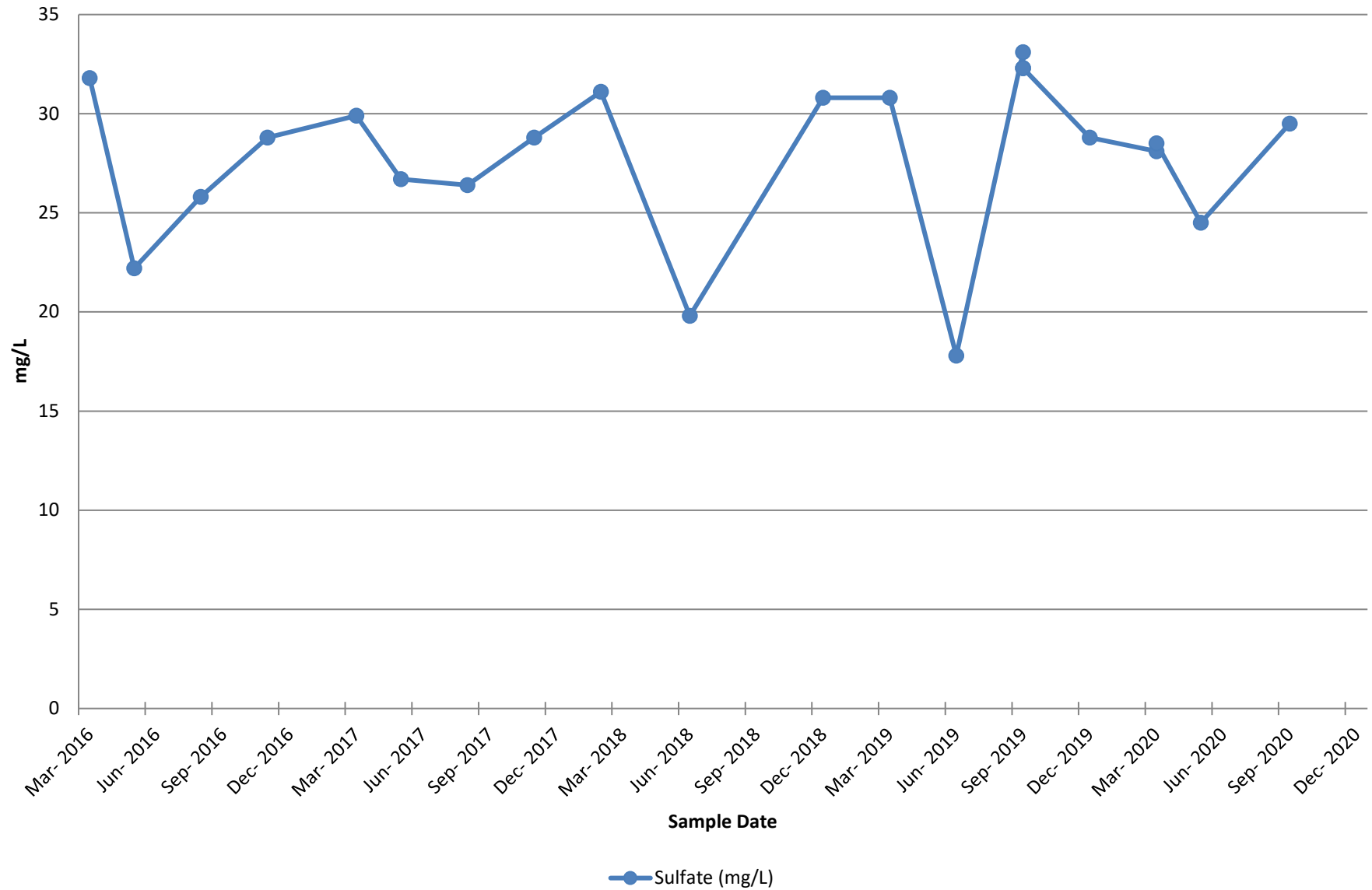
Trend Evaluation 1
ARwell: Metals
Climax Mine



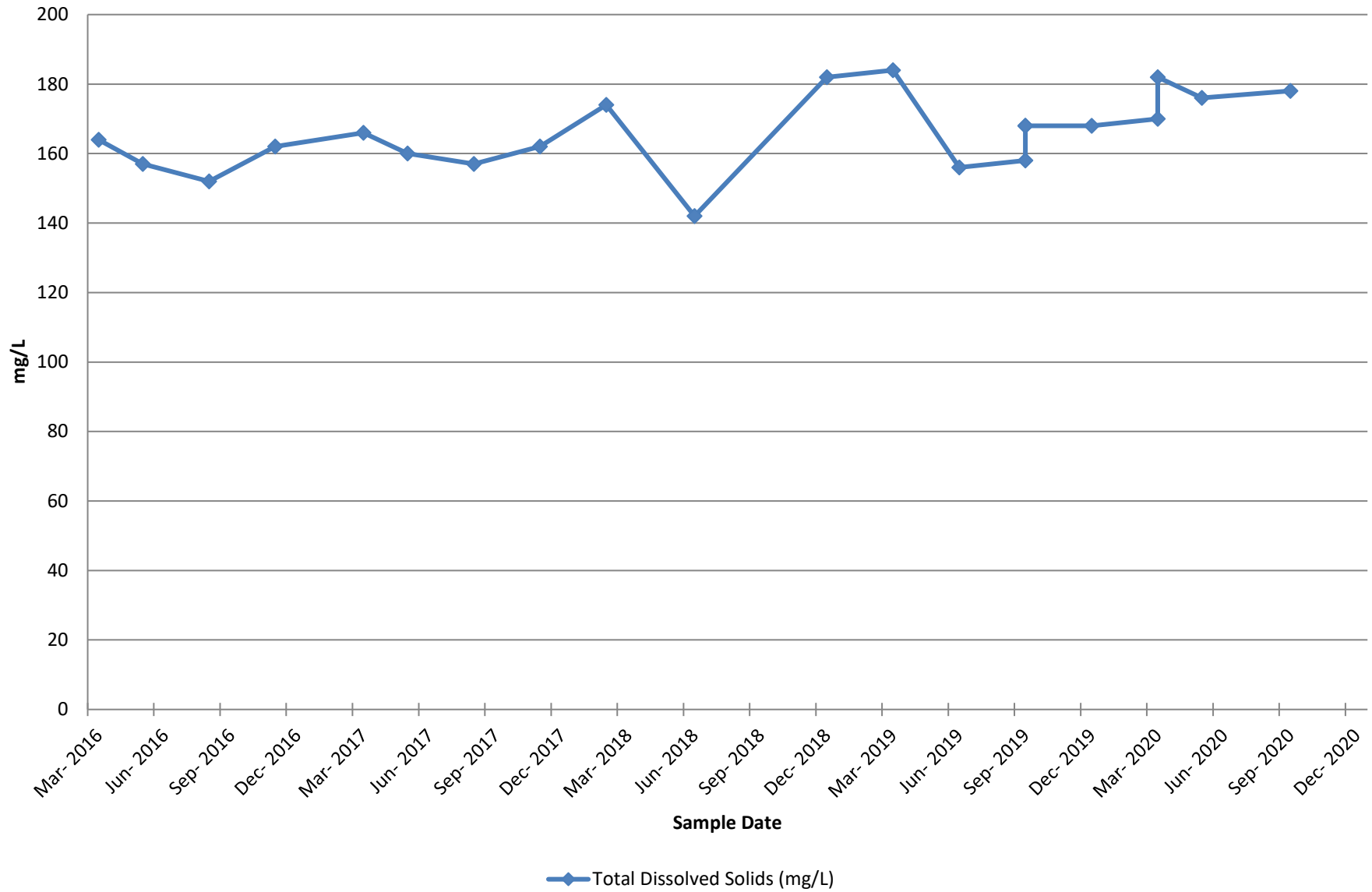
Trend Evaluation 2
ARwell: pH
Climax Mine



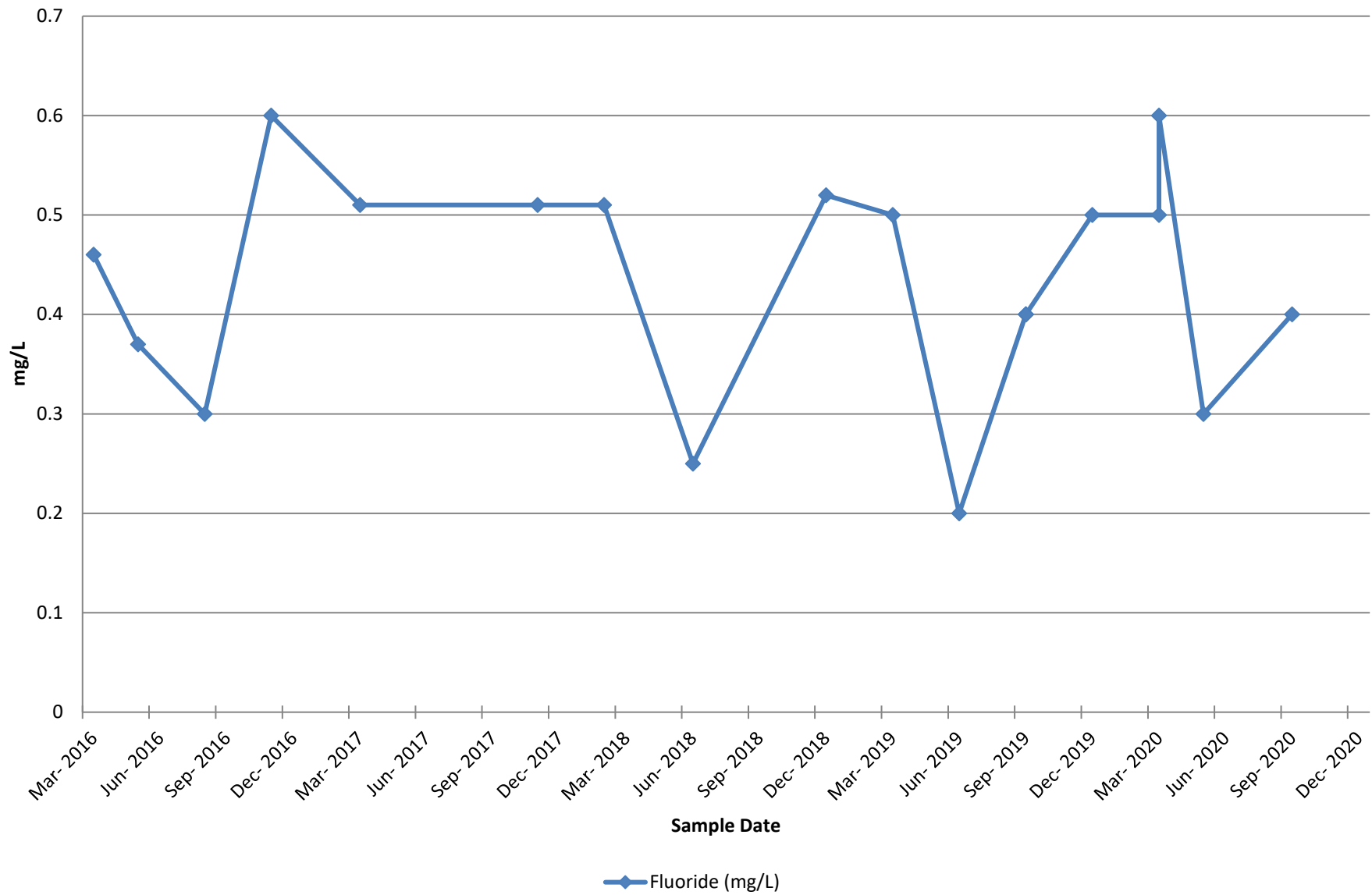
Trend Evaluation 3
ARwell: Sulfate
Climax Mine



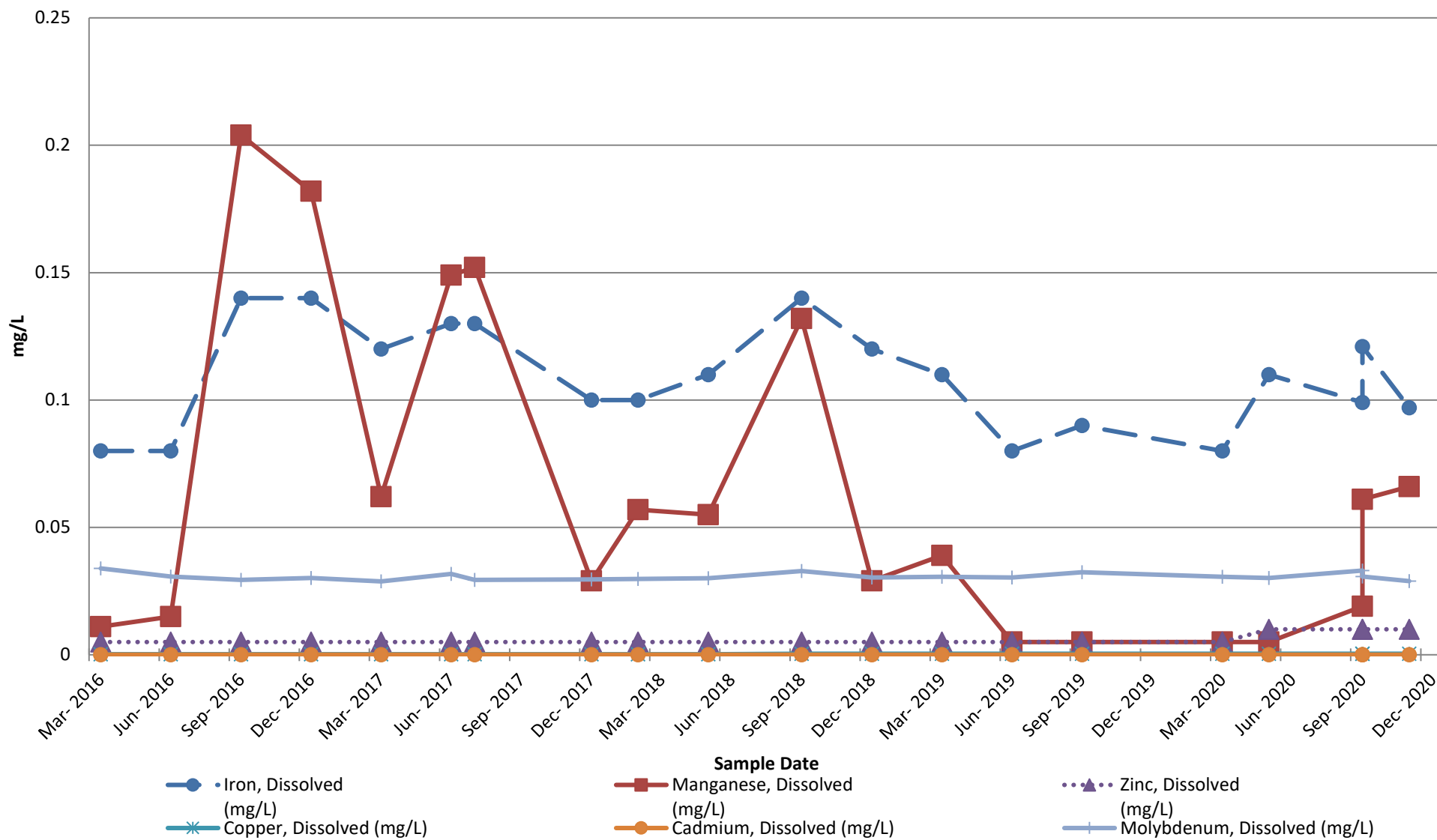
Trend Evaluation 4
ARwell: TDS
Climax Mine



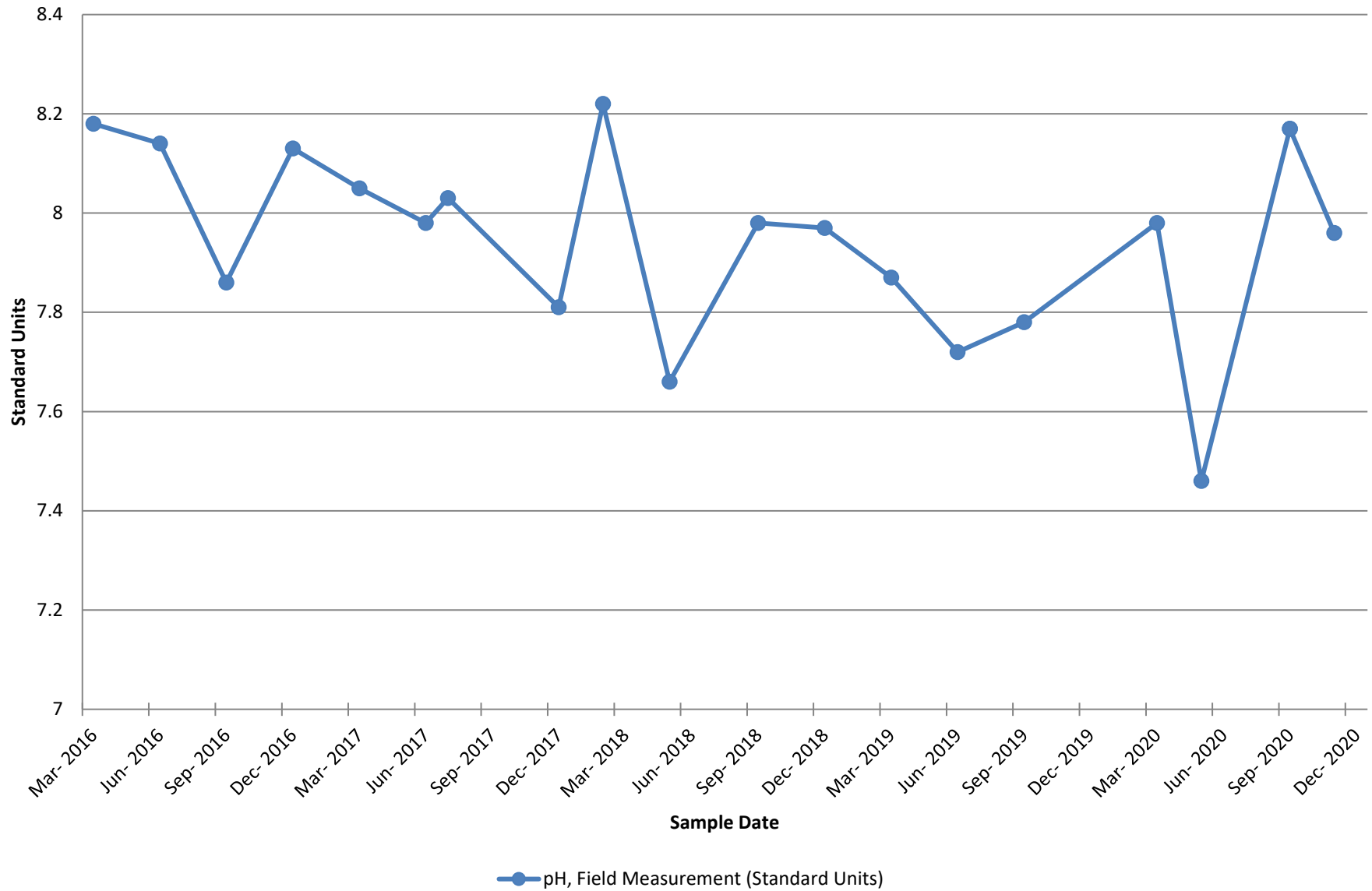
Trend Evaluation 5
ARwell: Fluoride
Climax Mine



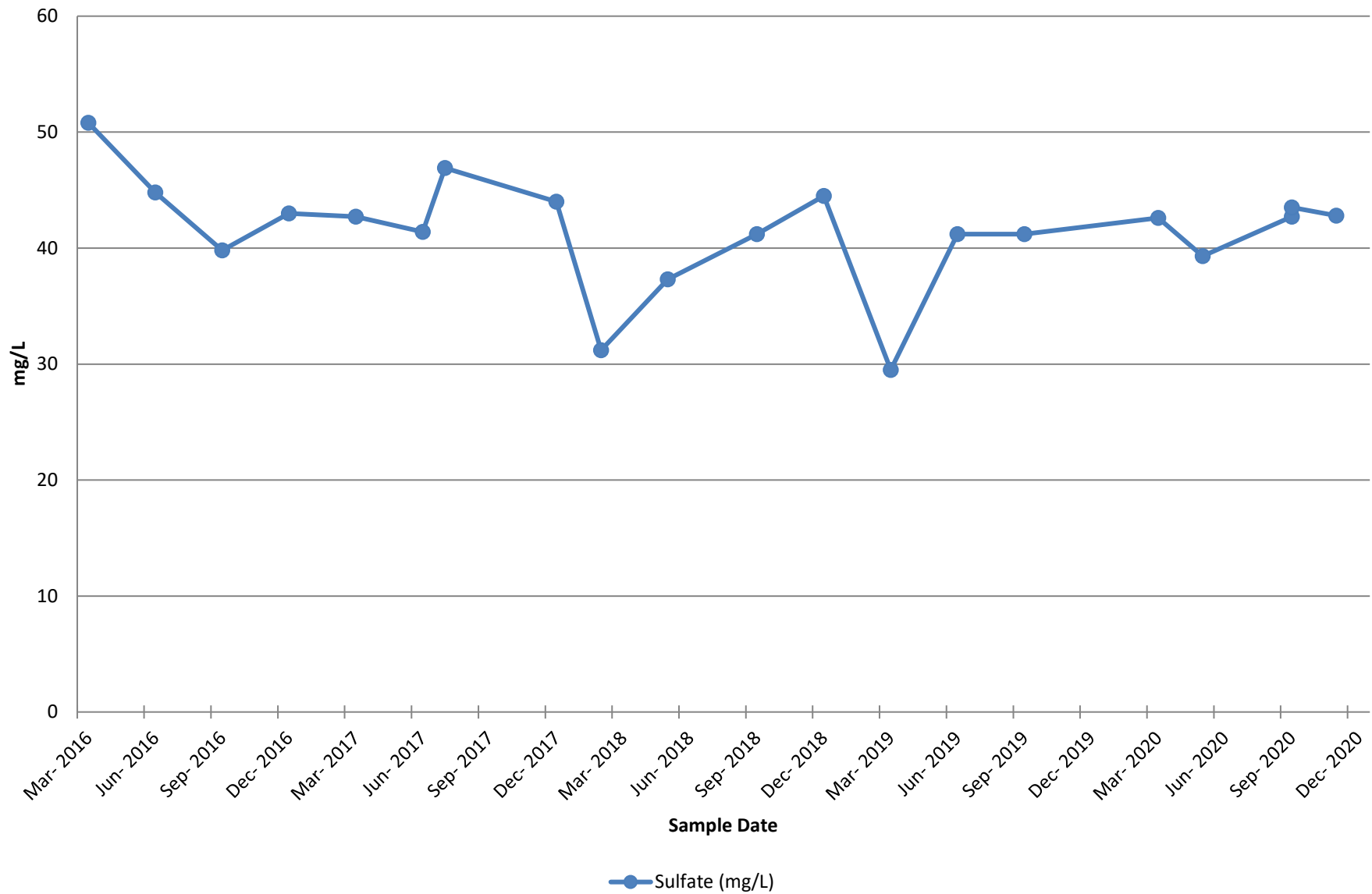
Trend Evaluation 6
ARK-MW-001D: Metals
Climax Mine



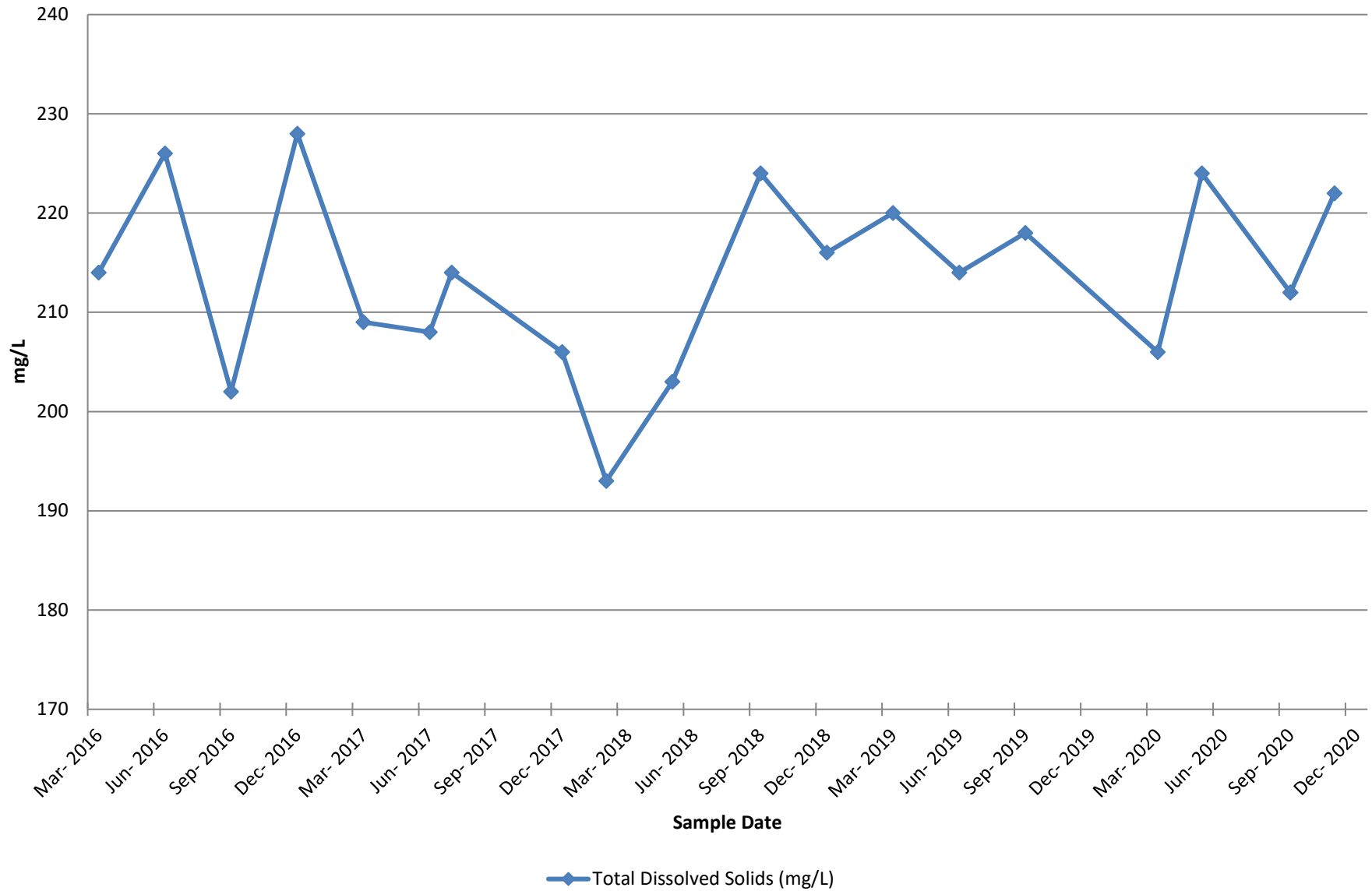
Trend Evaluation 7
ARK-MW-001D: pH
Climax Mine



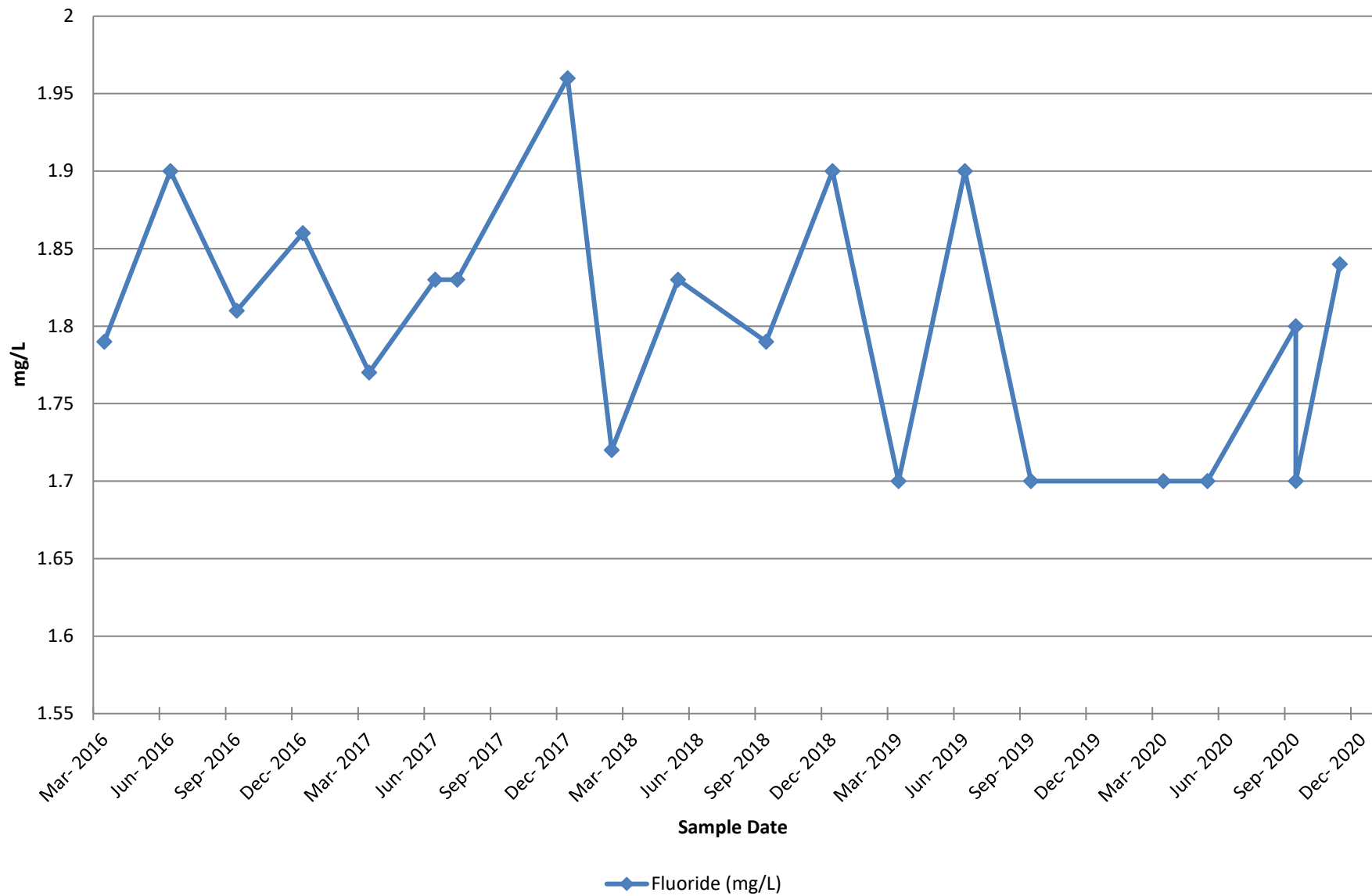
Trend Evaluation 8
ARK-MW-001D: Sulfate
Climax Mine



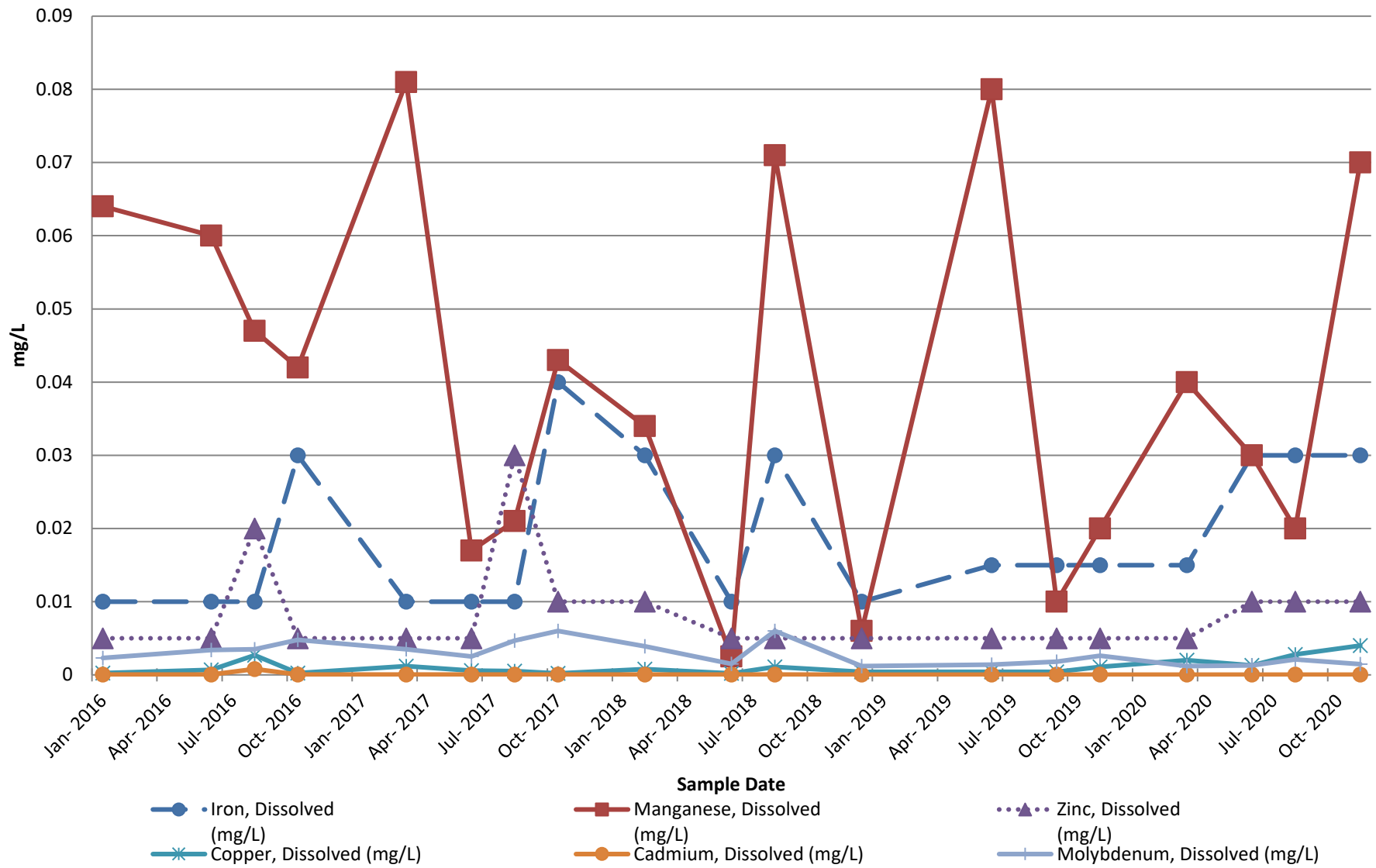
Trend Evaluation 9
ARK-MW-001D: TDS
Climax Mine



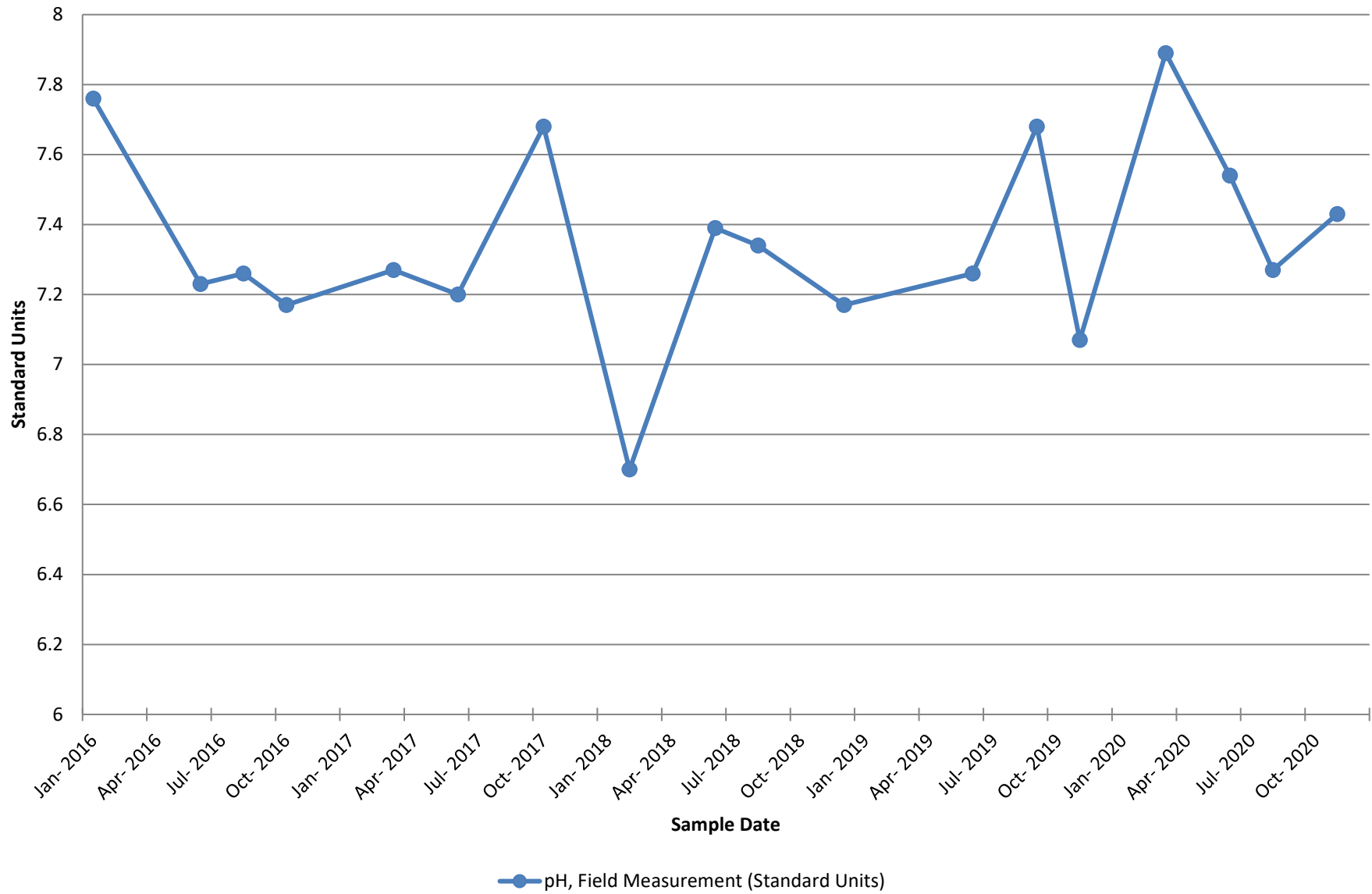
Trend Evaluation 10
ARK-MW-001D: Fluoride
Climax Mine



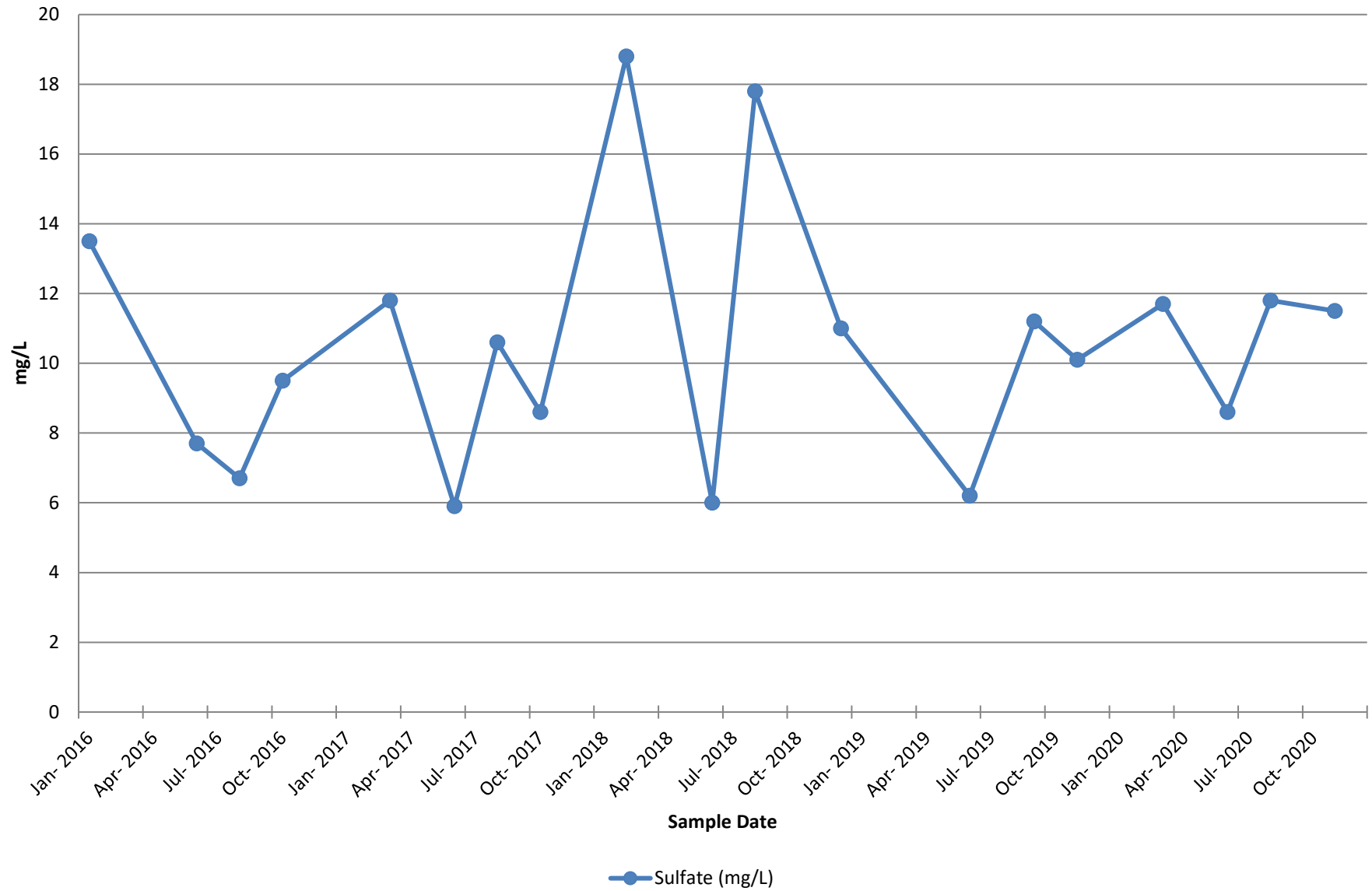
Trend Evaluation 11
EVMW-3S: Metals
Climax Mine



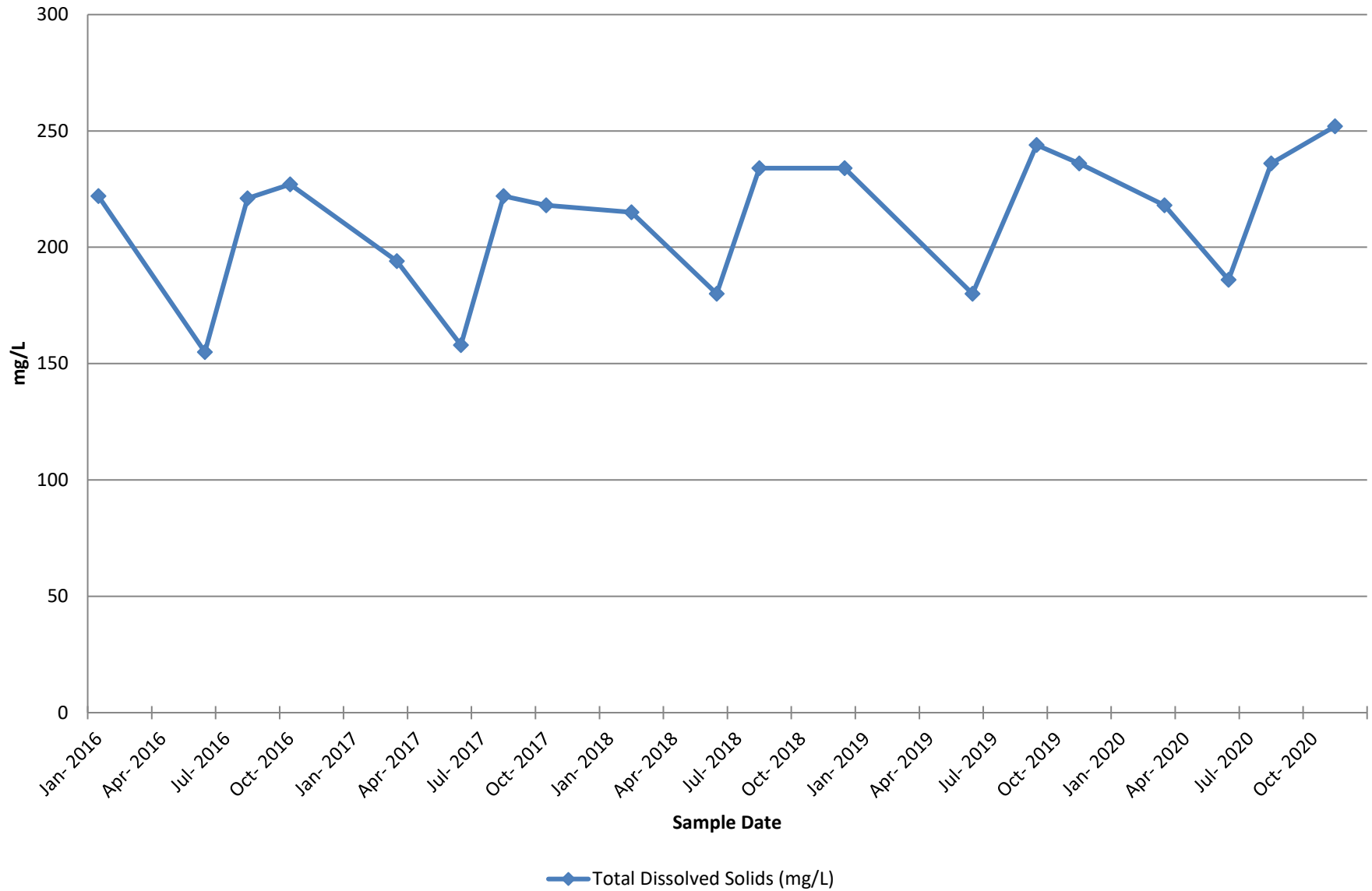
Trend Evaluation 12
EVMW-3S: pH
Climax Mine



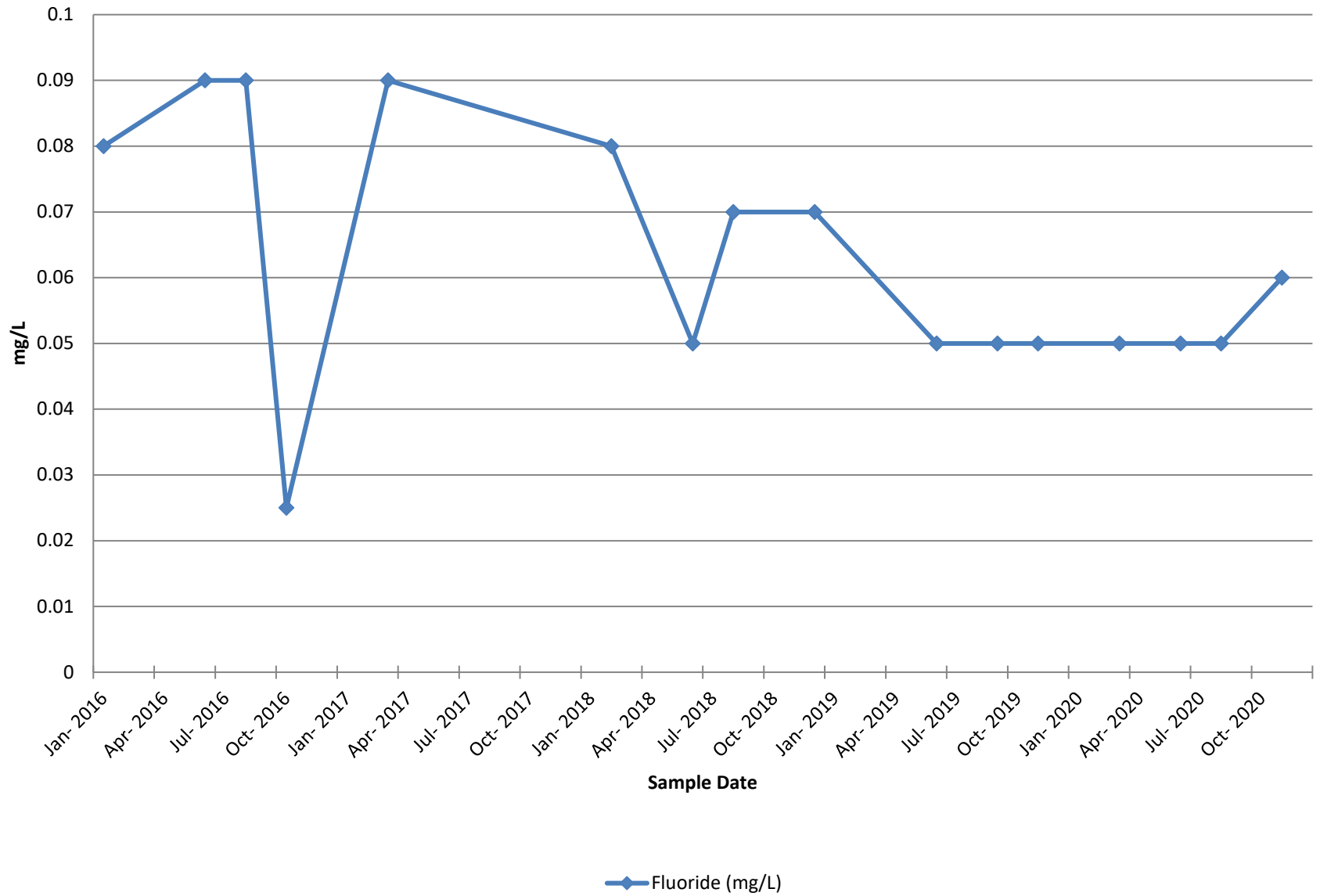
Trend Evaluation 13
EVMW-3S: Sulfate
Climax Mine



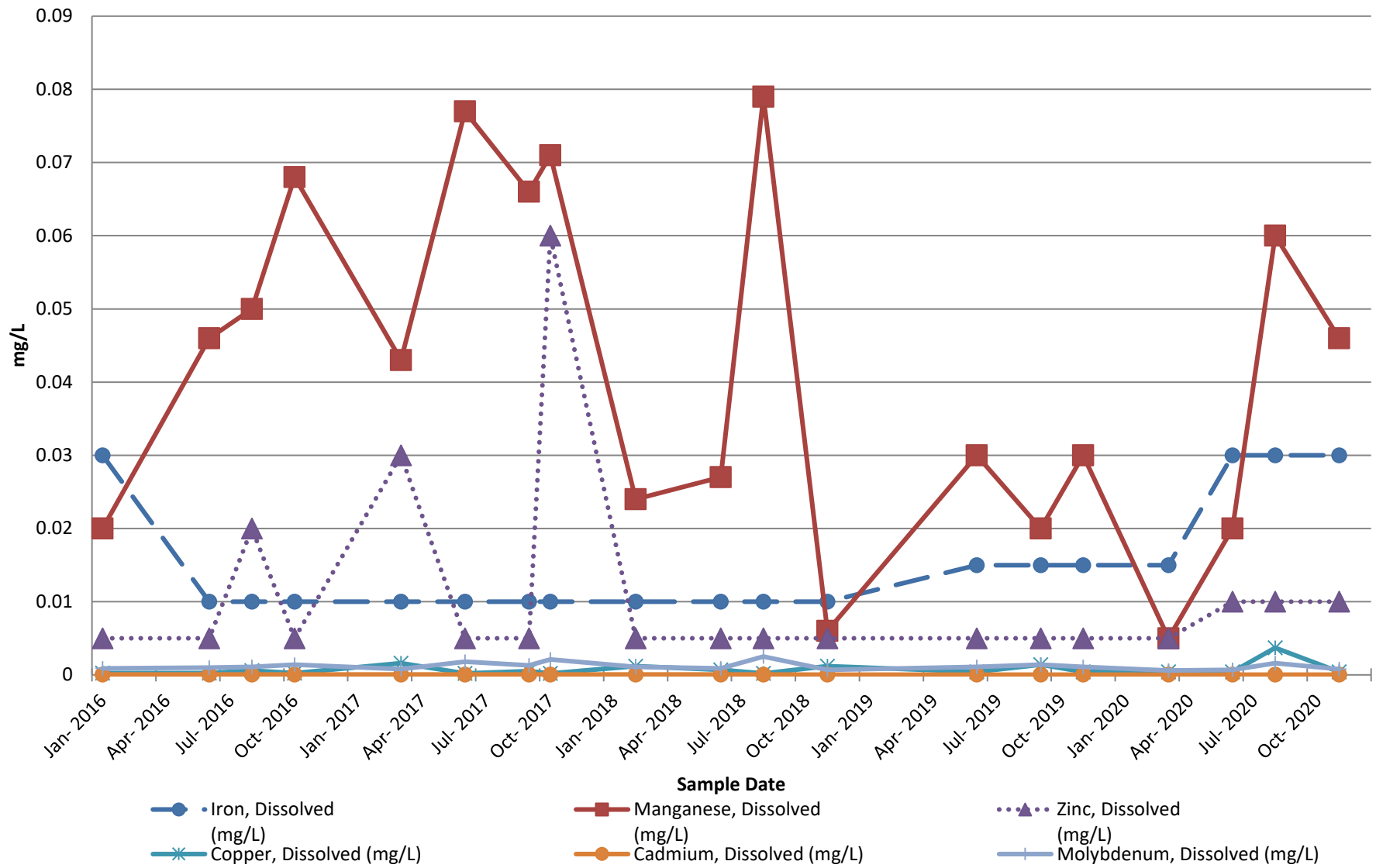
Trend Evaluation 14
EVMW-3S: TDS
Climax Mine



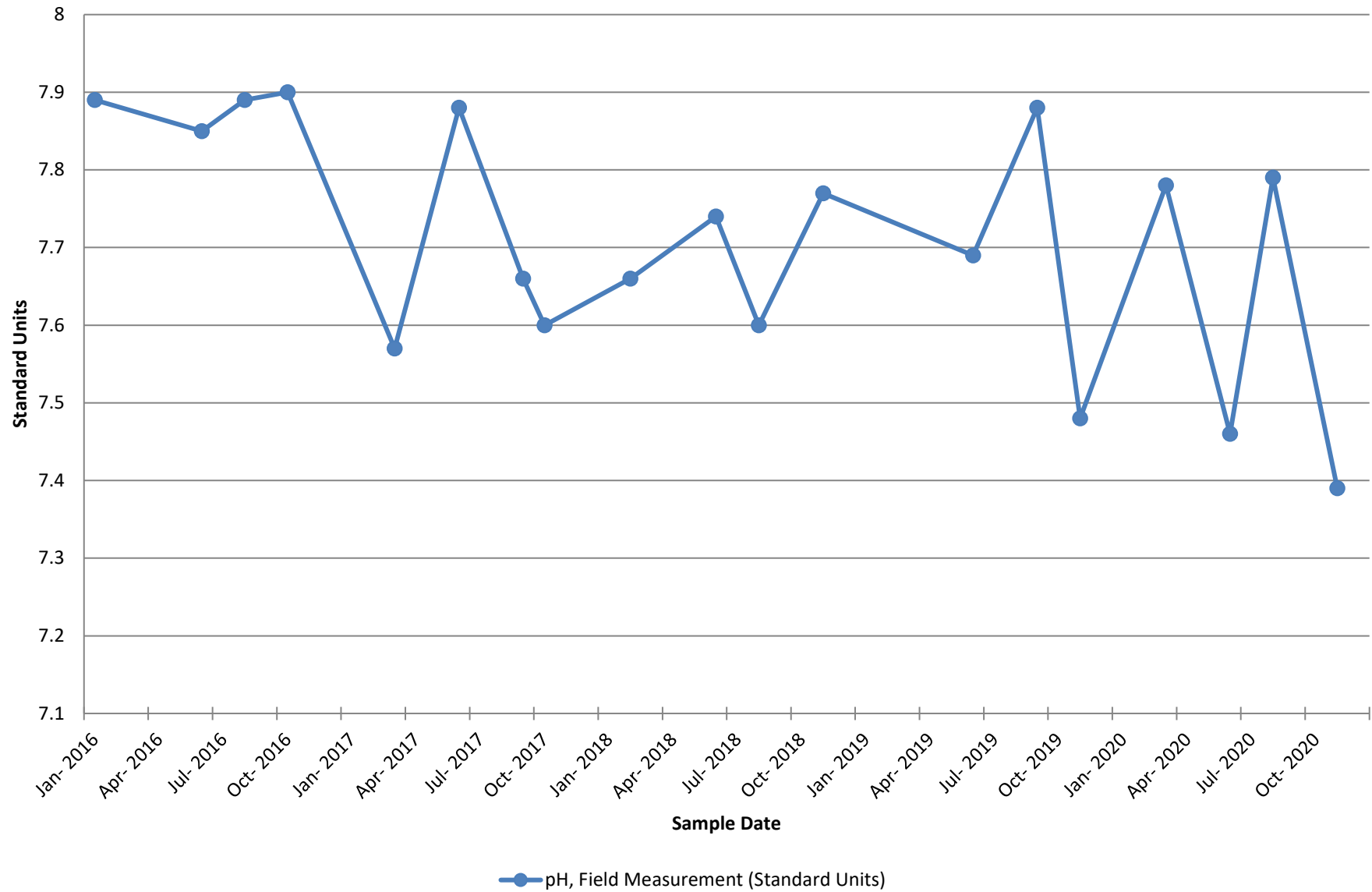
Trend Evaluation 15
EVMW-3S: Fluoride
Climax Mine



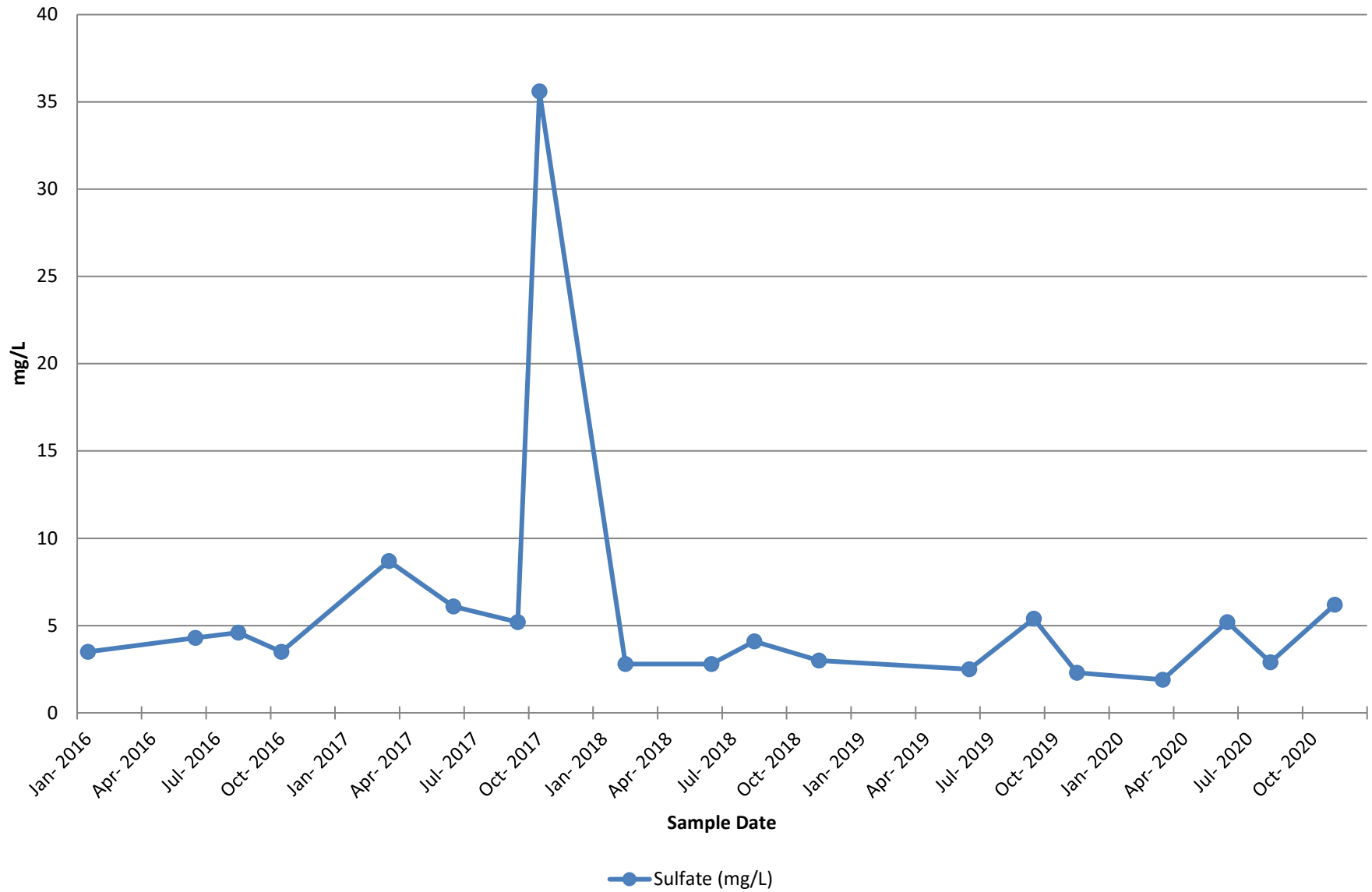
Trend Evaluation 16
EVMW-3D: Metals
Climax Mine



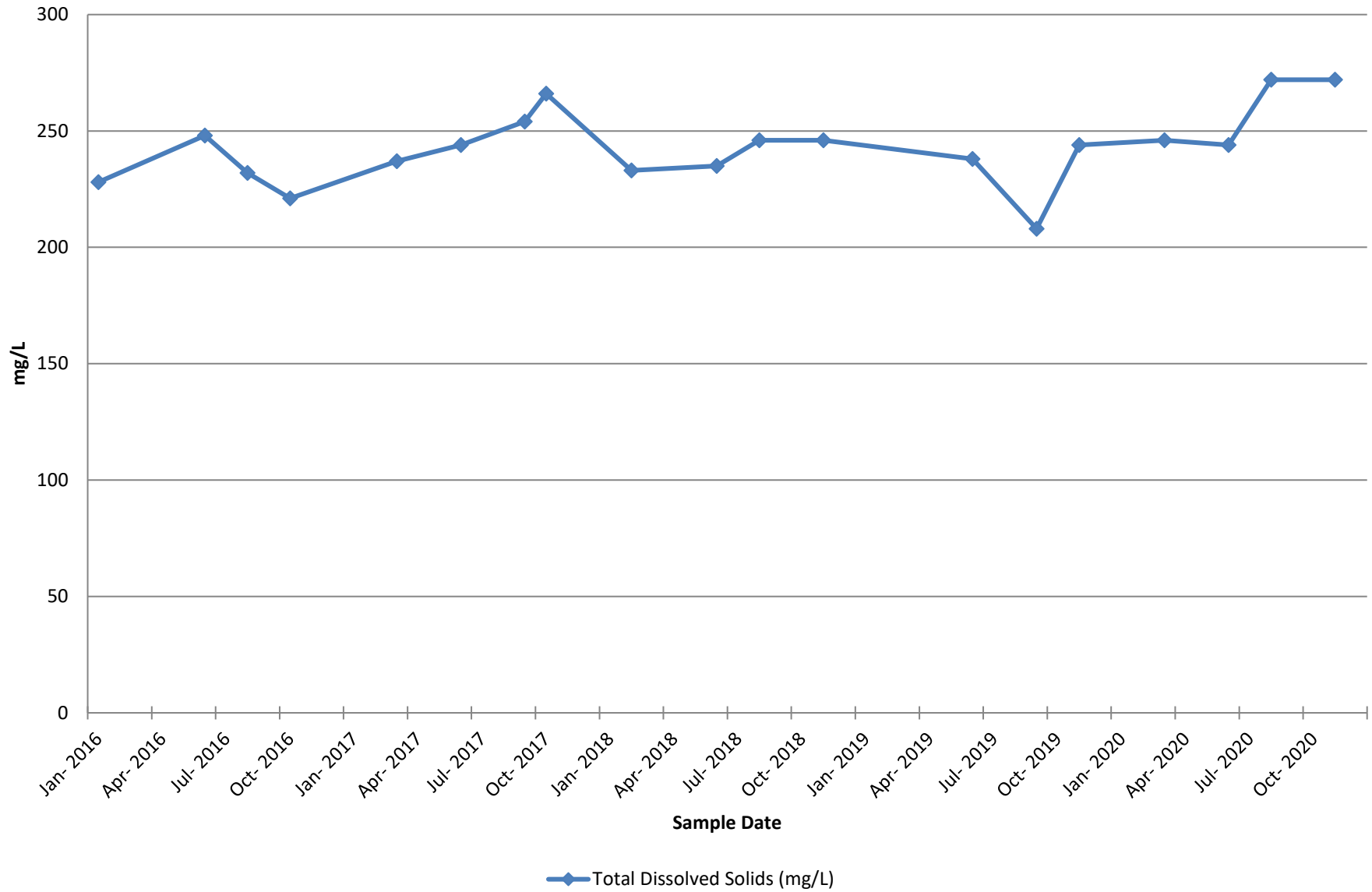
Trend Evaluation 17
EVMW-3D: pH
Climax Mine



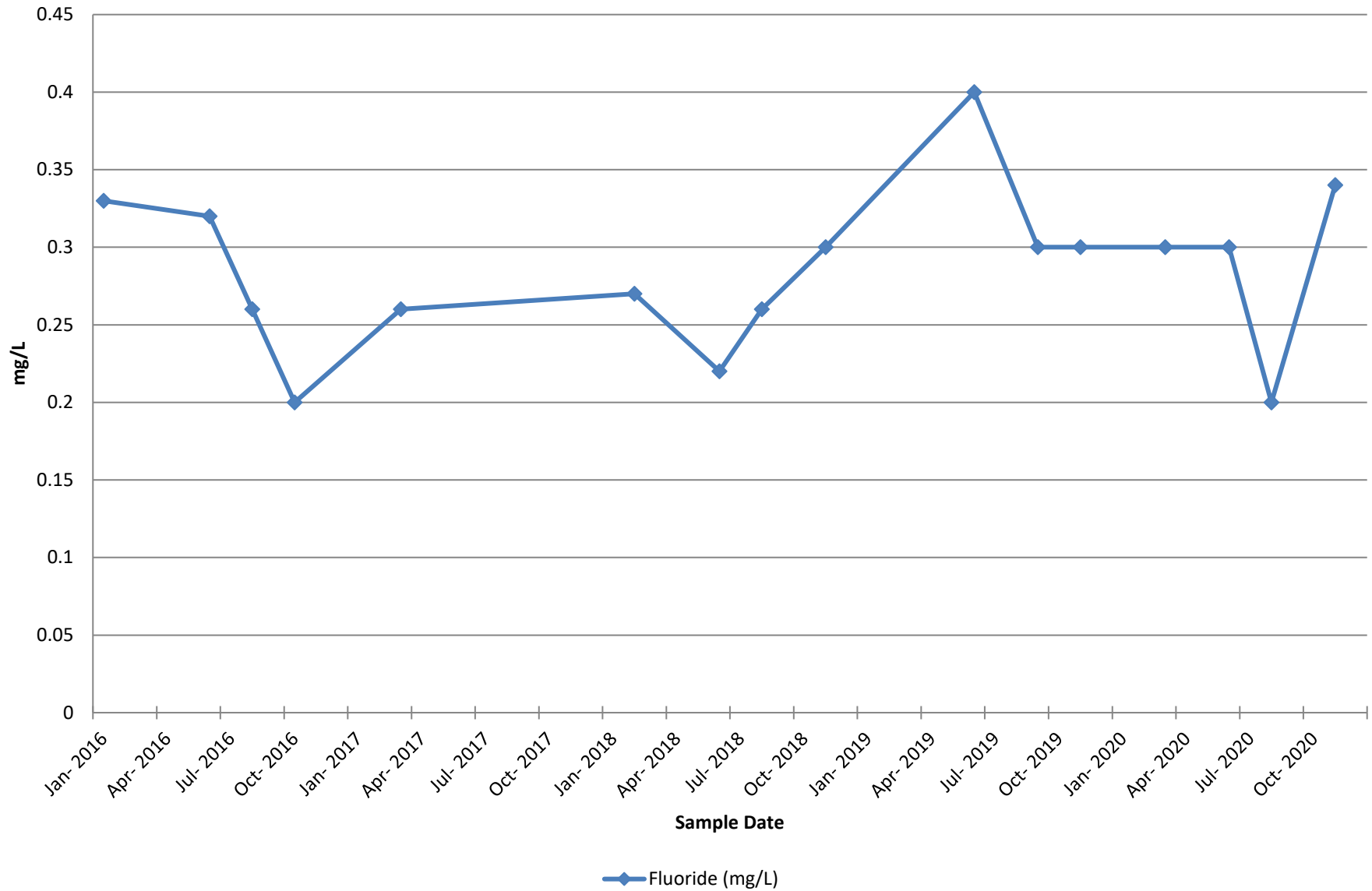
Trend Evaluation 18
EVMW-3D: Sulfate
Climax Mine



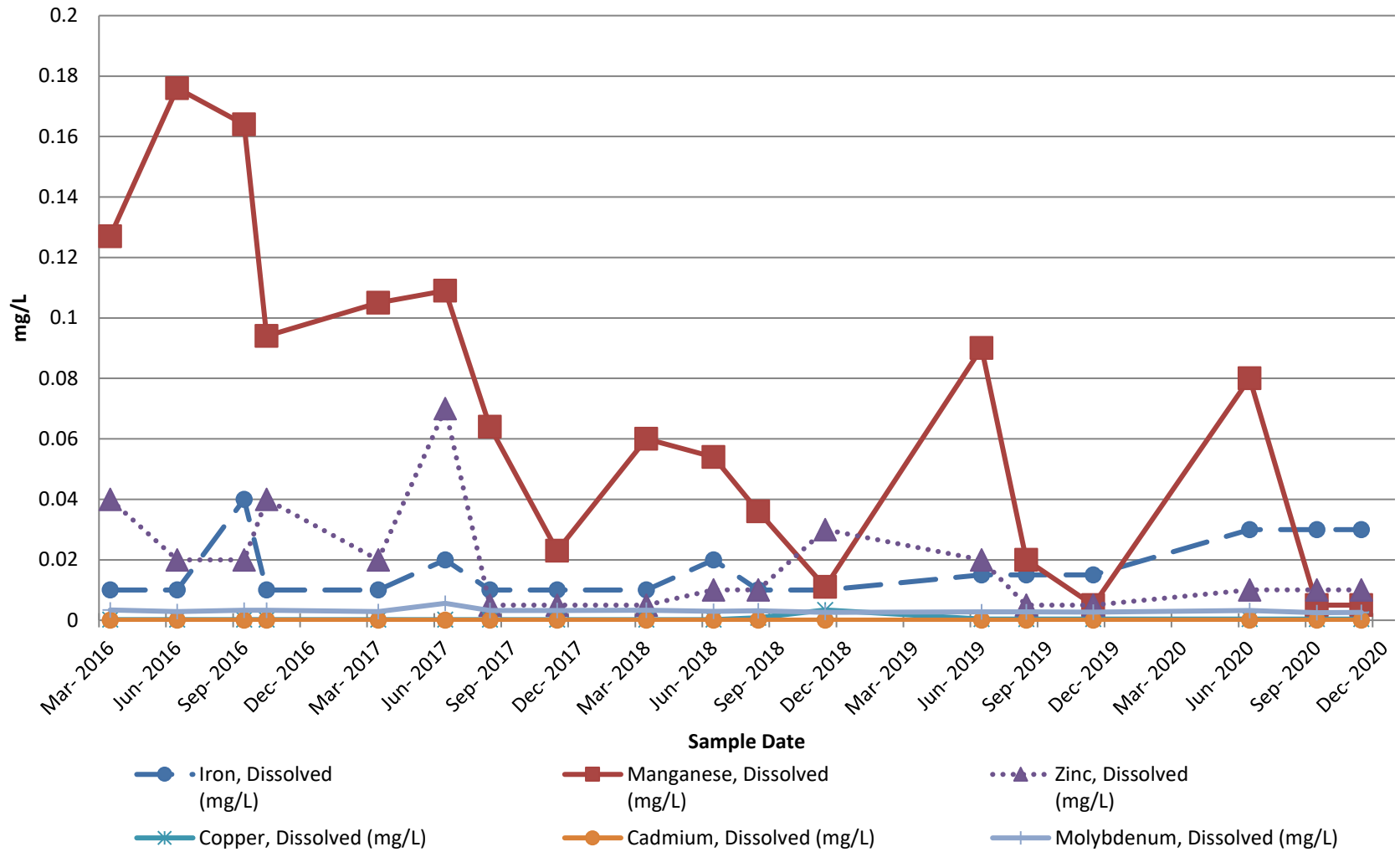
Trend Evaluation 19
EVMW-3D: TDS
Climax Mine



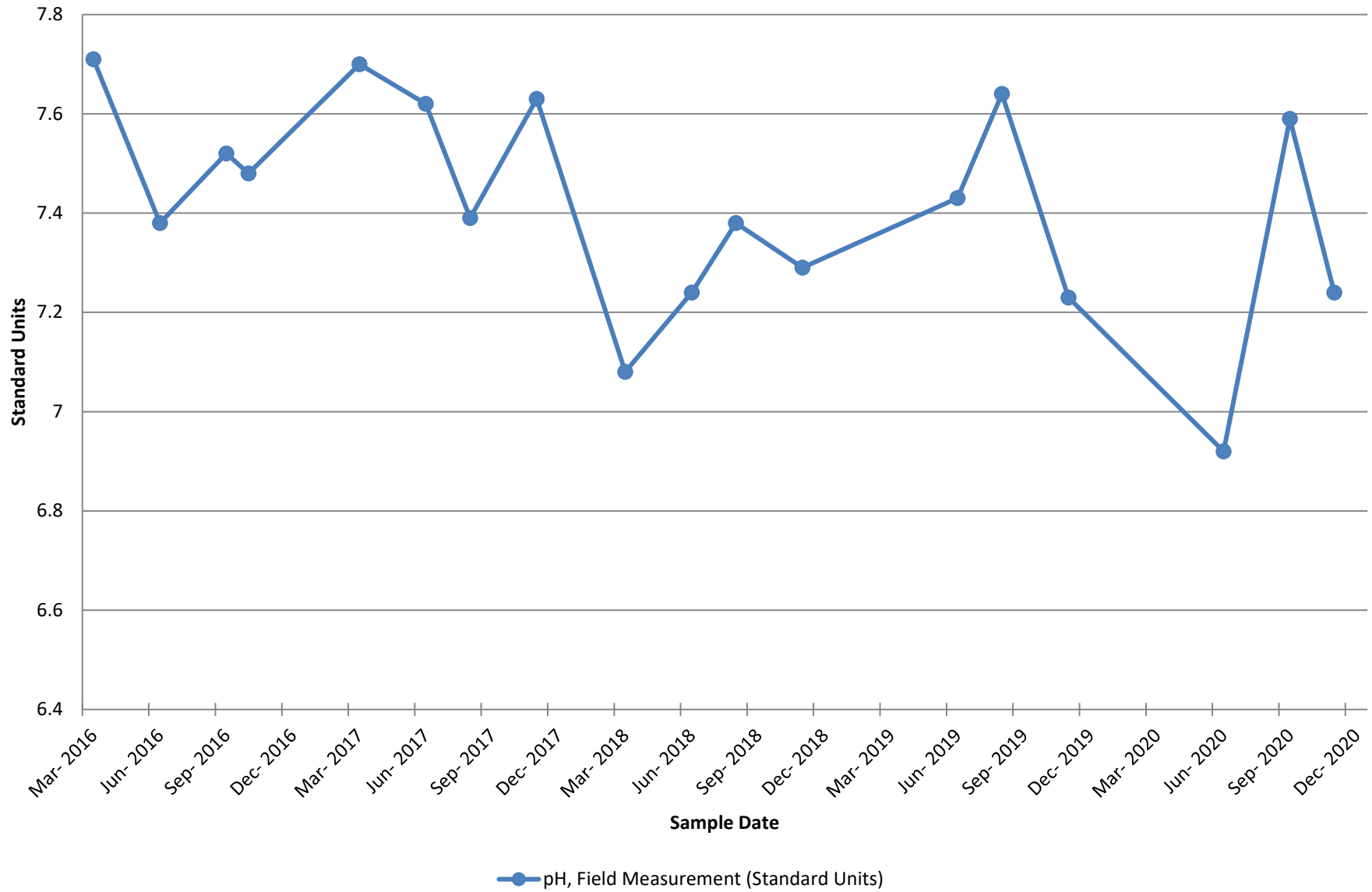
Trend Evaluation 20
EVMW-3D: Fluoride
Climax Mine



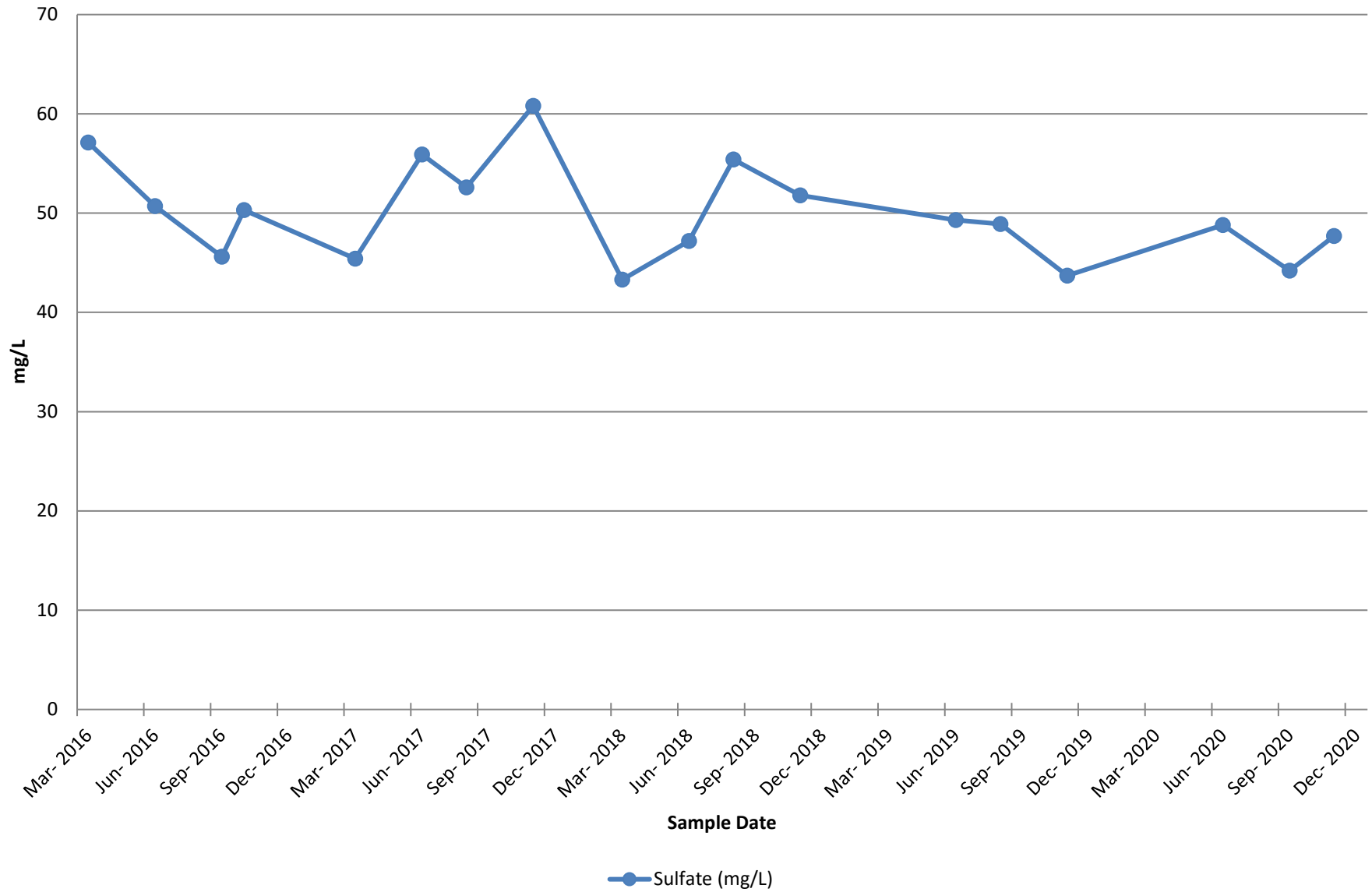
Trend Evaluation 21
EV-MW-004: Metals
Climax Mine



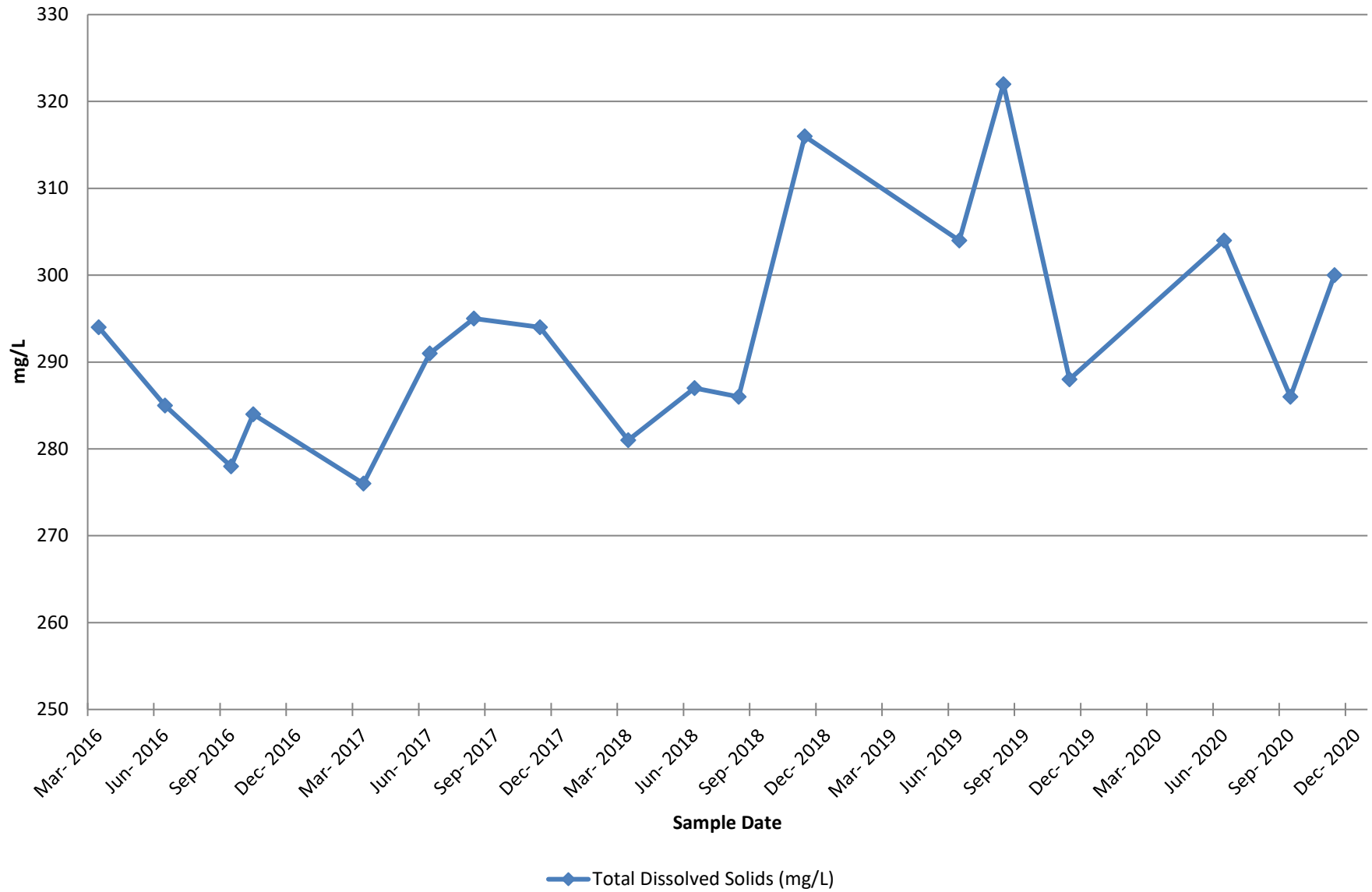
Trend Evaluation 22
EV-MW-004: pH
Climax Mine



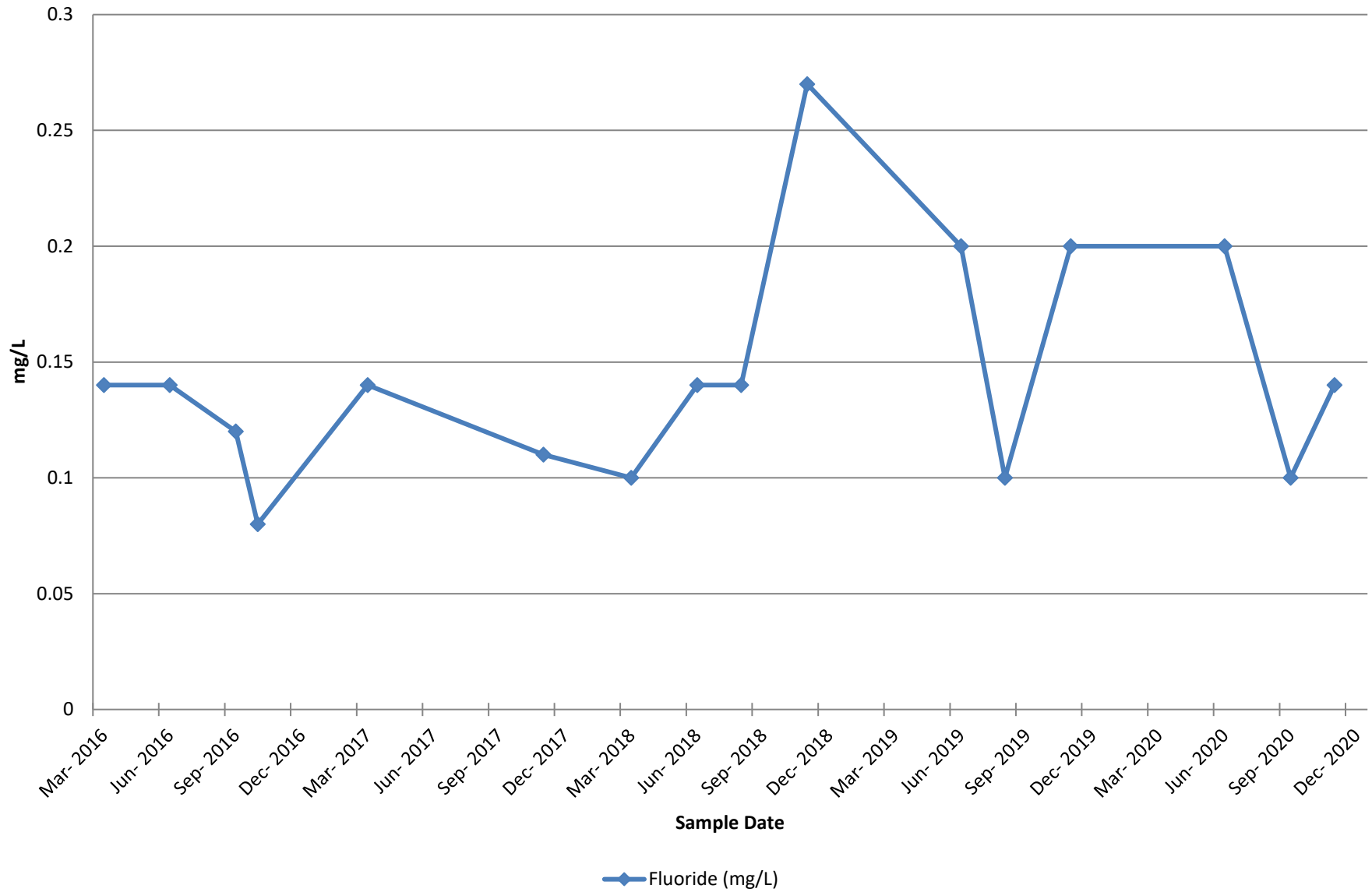
Trend Evaluation 23
EV-MW-004: Sulfate
Climax Mine



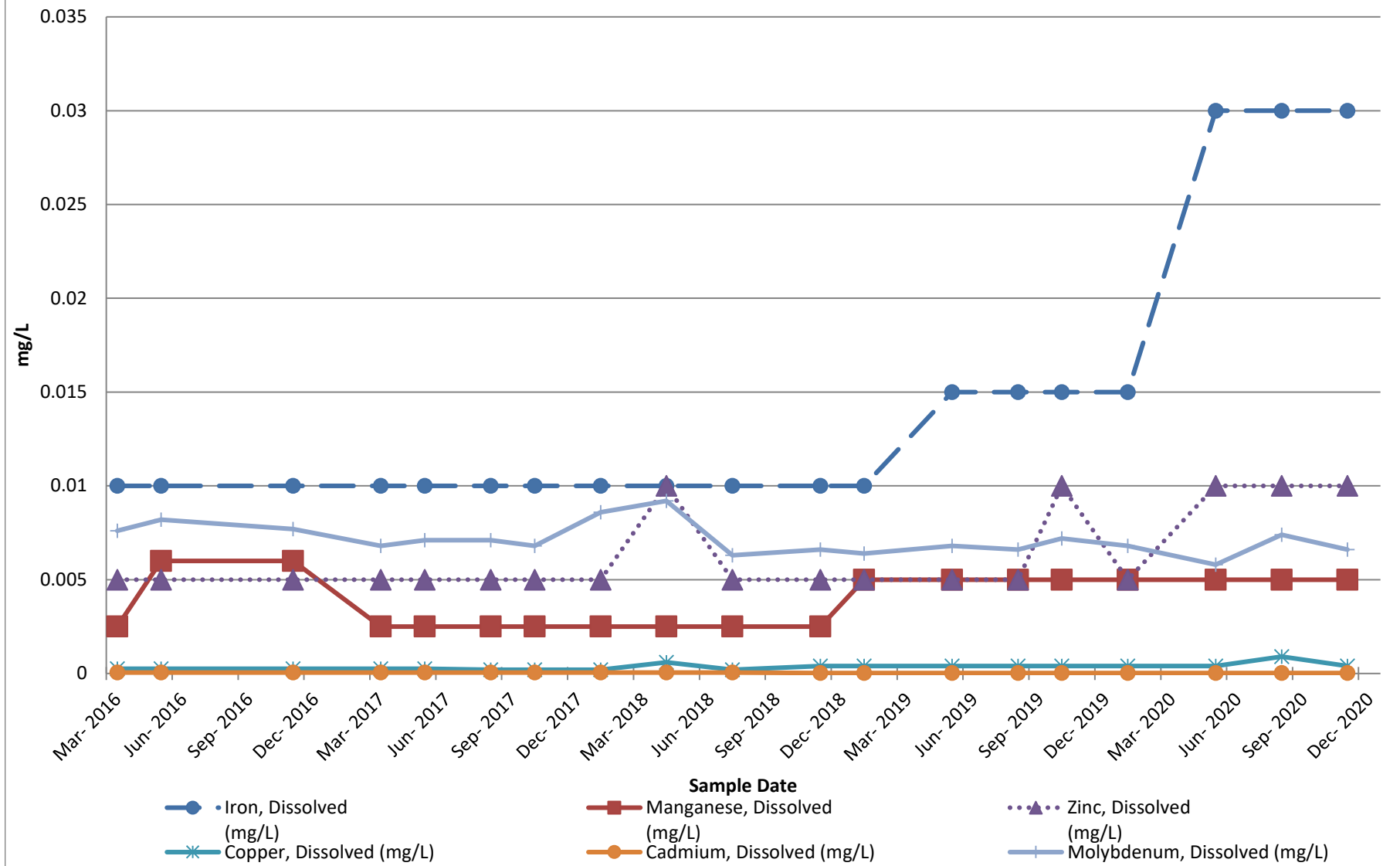
Trend Evaluation 24
EV-MW-004: TDS
Climax Mine



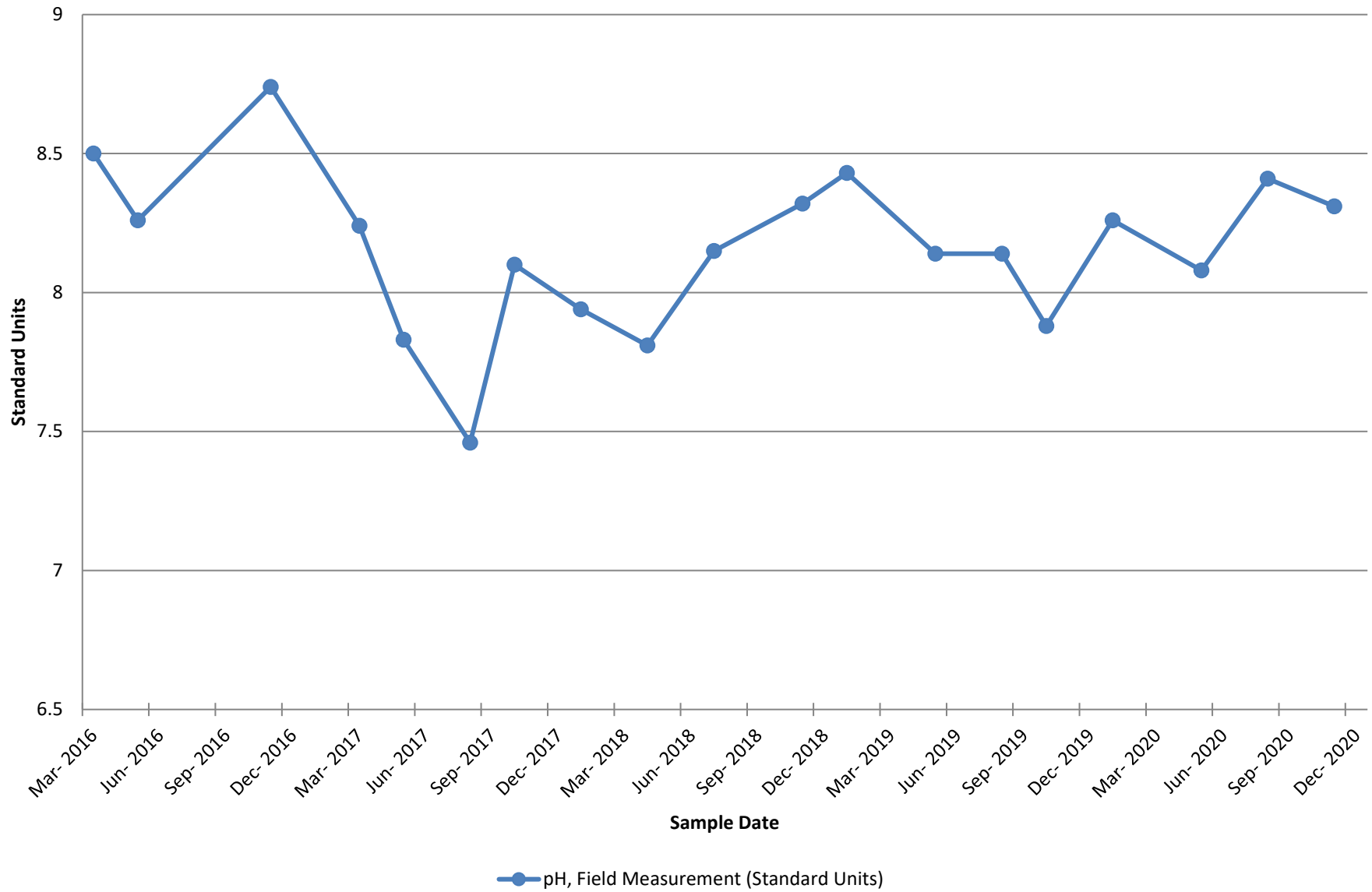
Trend Evaluation 25
EV-MW-004: Fluoride
Climax Mine



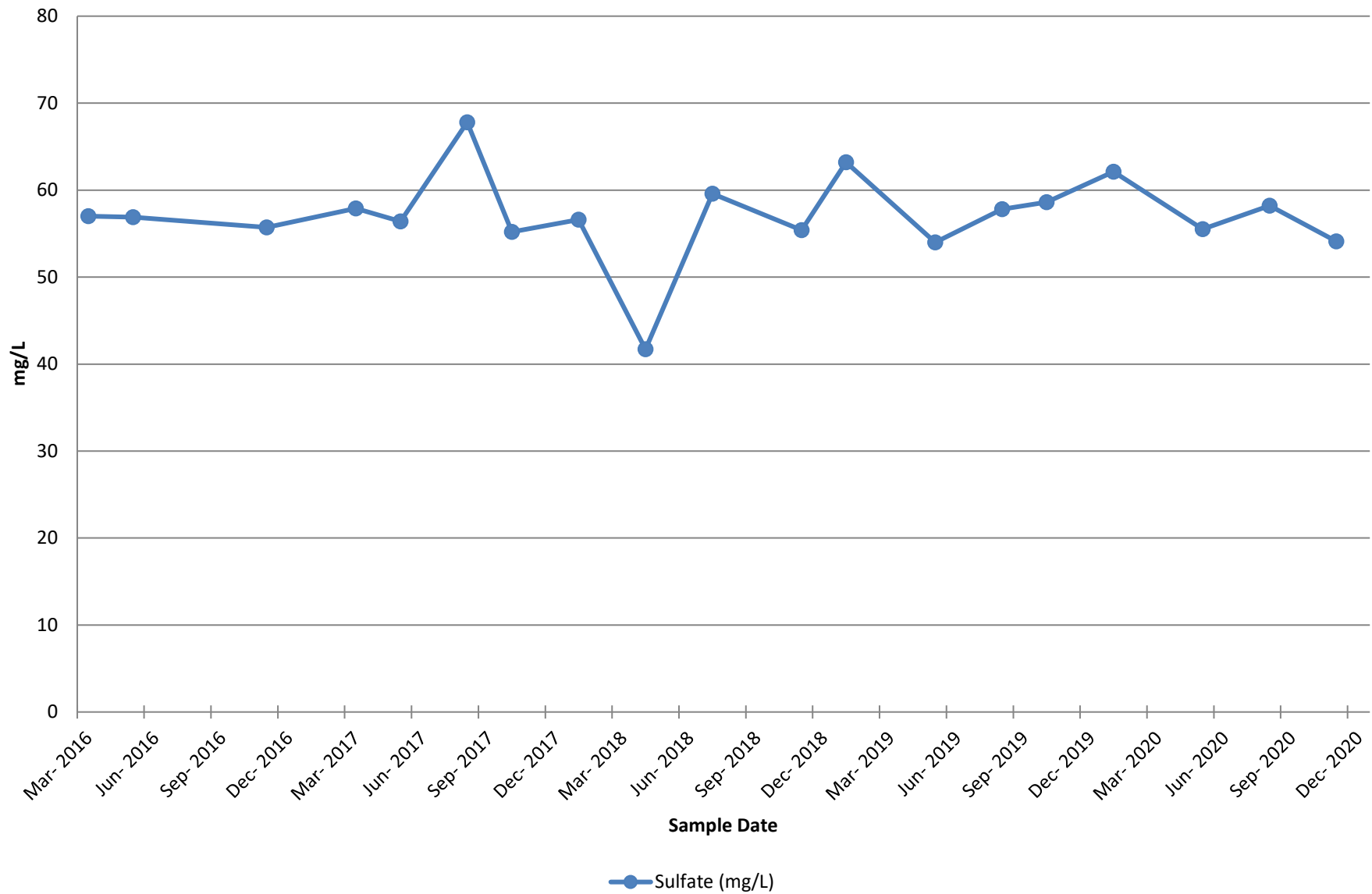
Trend Evaluation 26
TM-MW-002D: Metals
Climax Mine



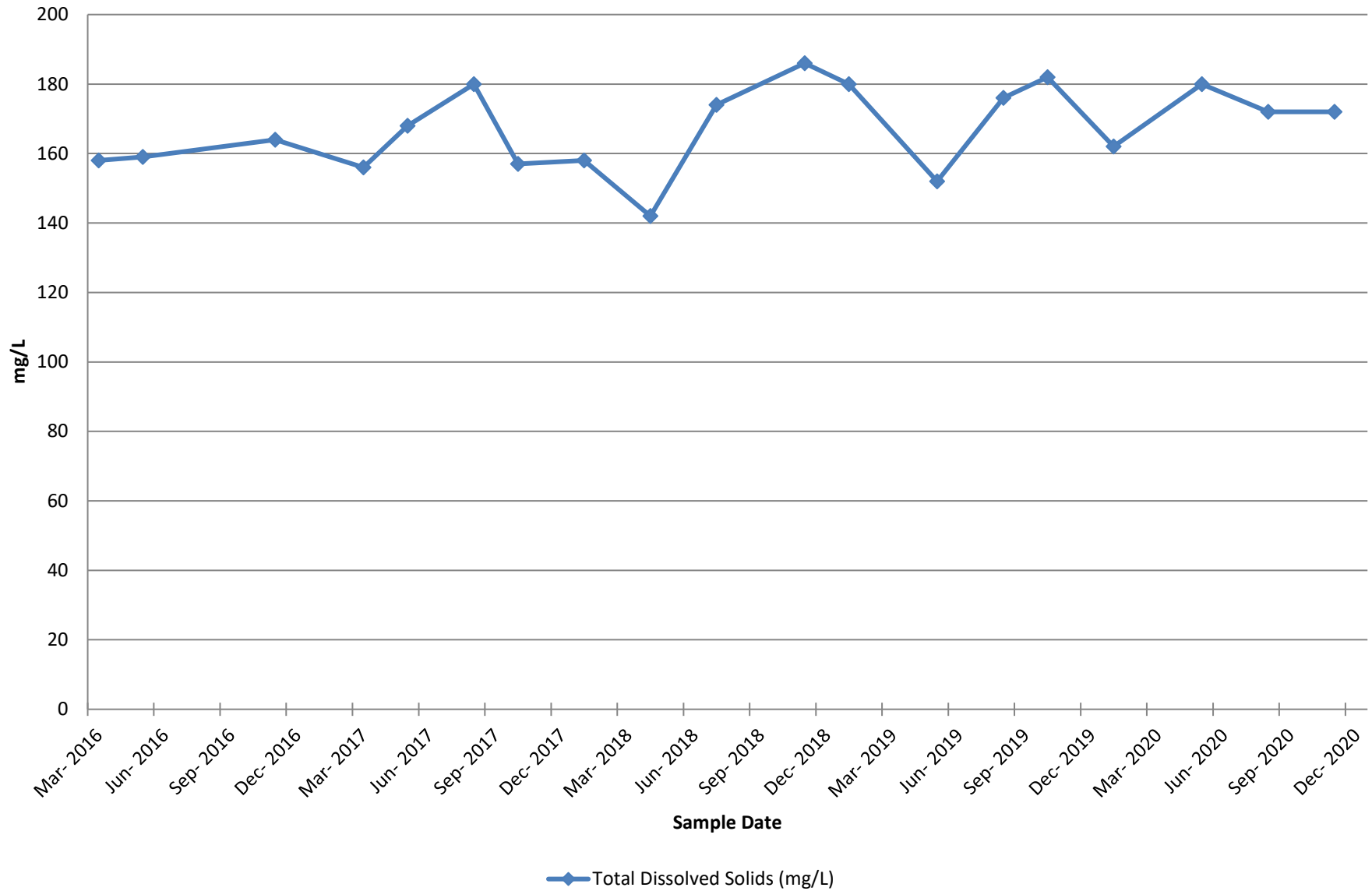
Trend Evaluation 27
TM-MW-002D: pH
Climax Mine



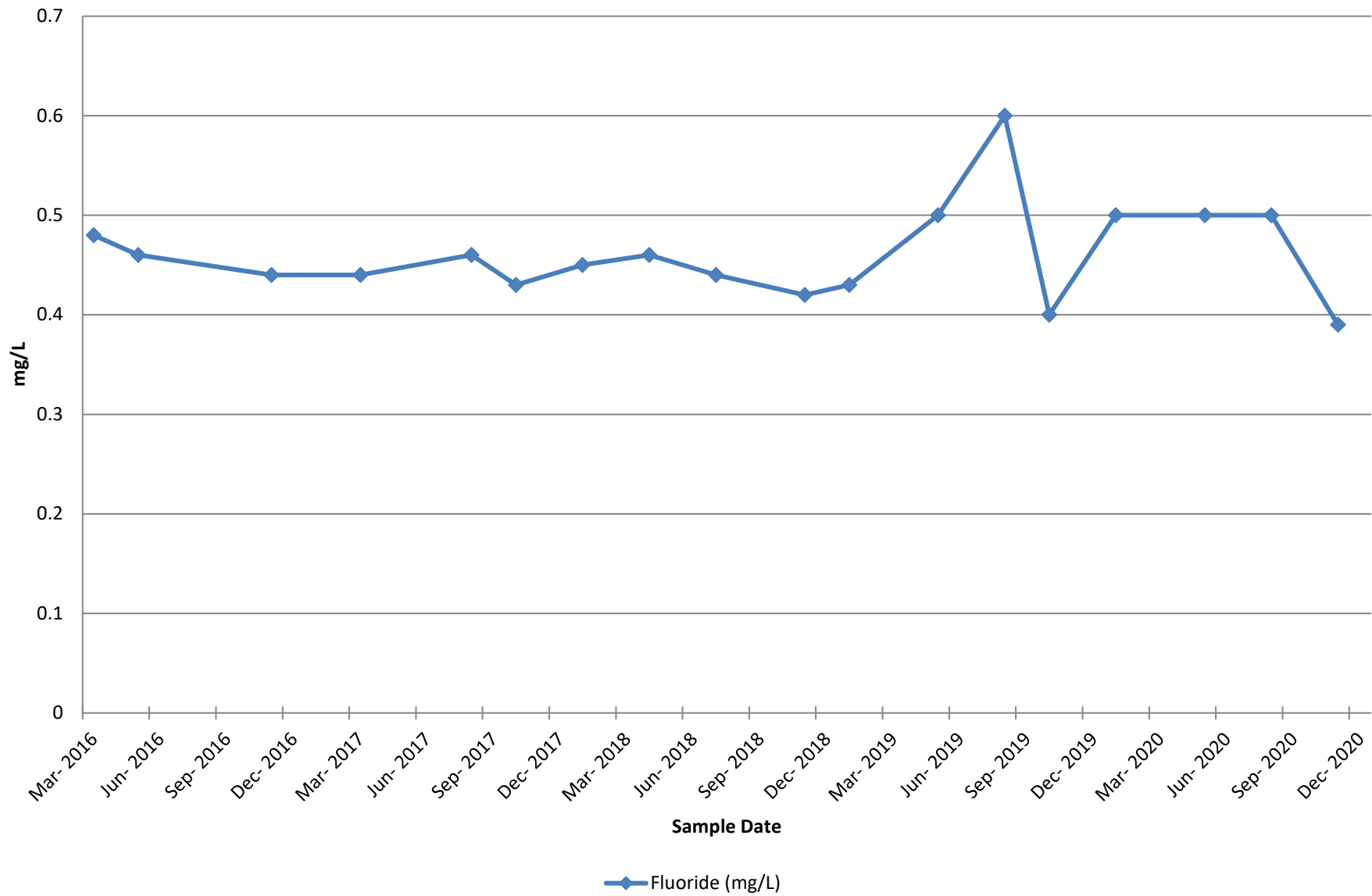
Trend Evaluation 28
TM-MW-002D: Sulfate
Climax Mine



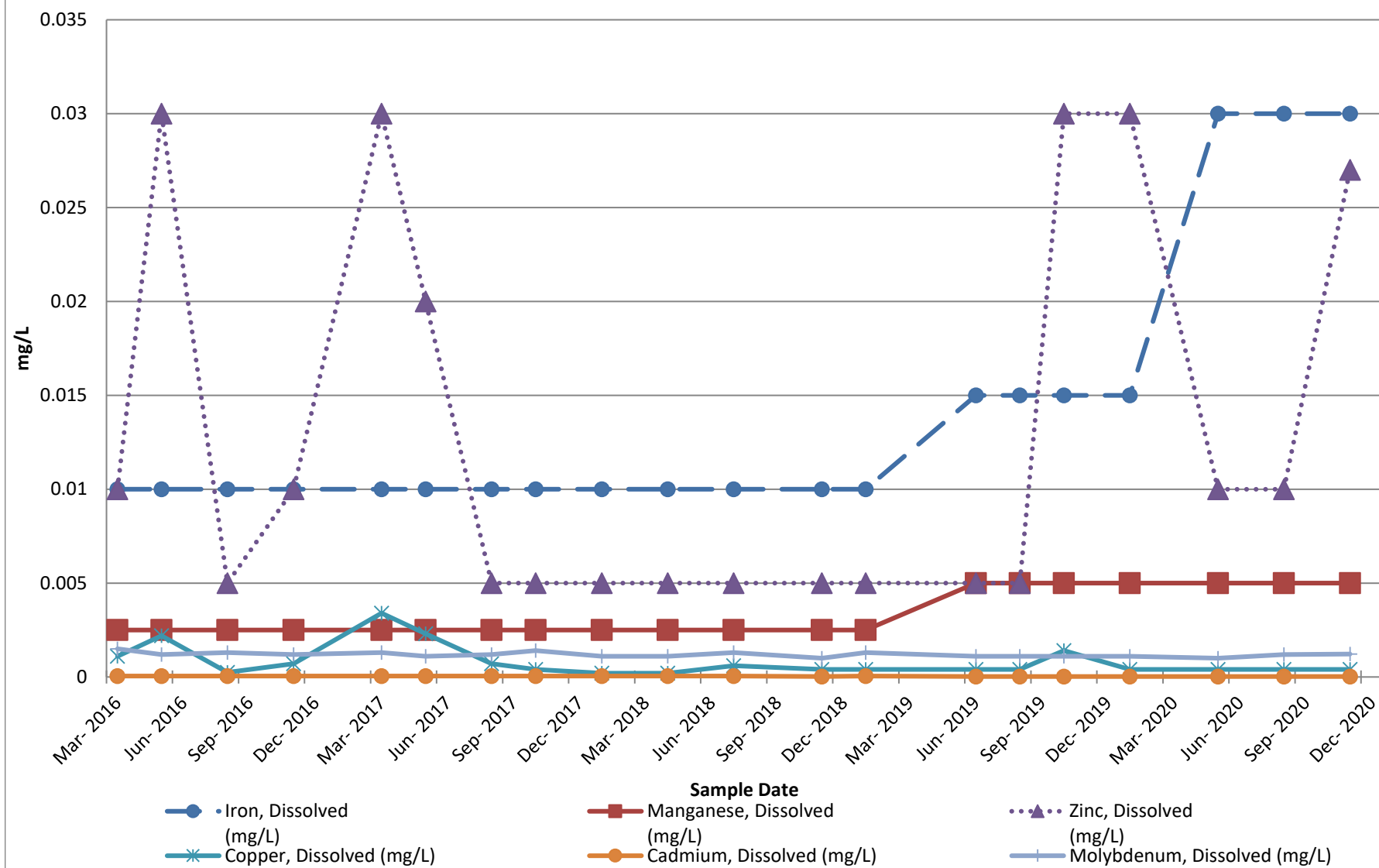
Trend Evaluation 29
TM-MW-002D: TDS
Climax Mine



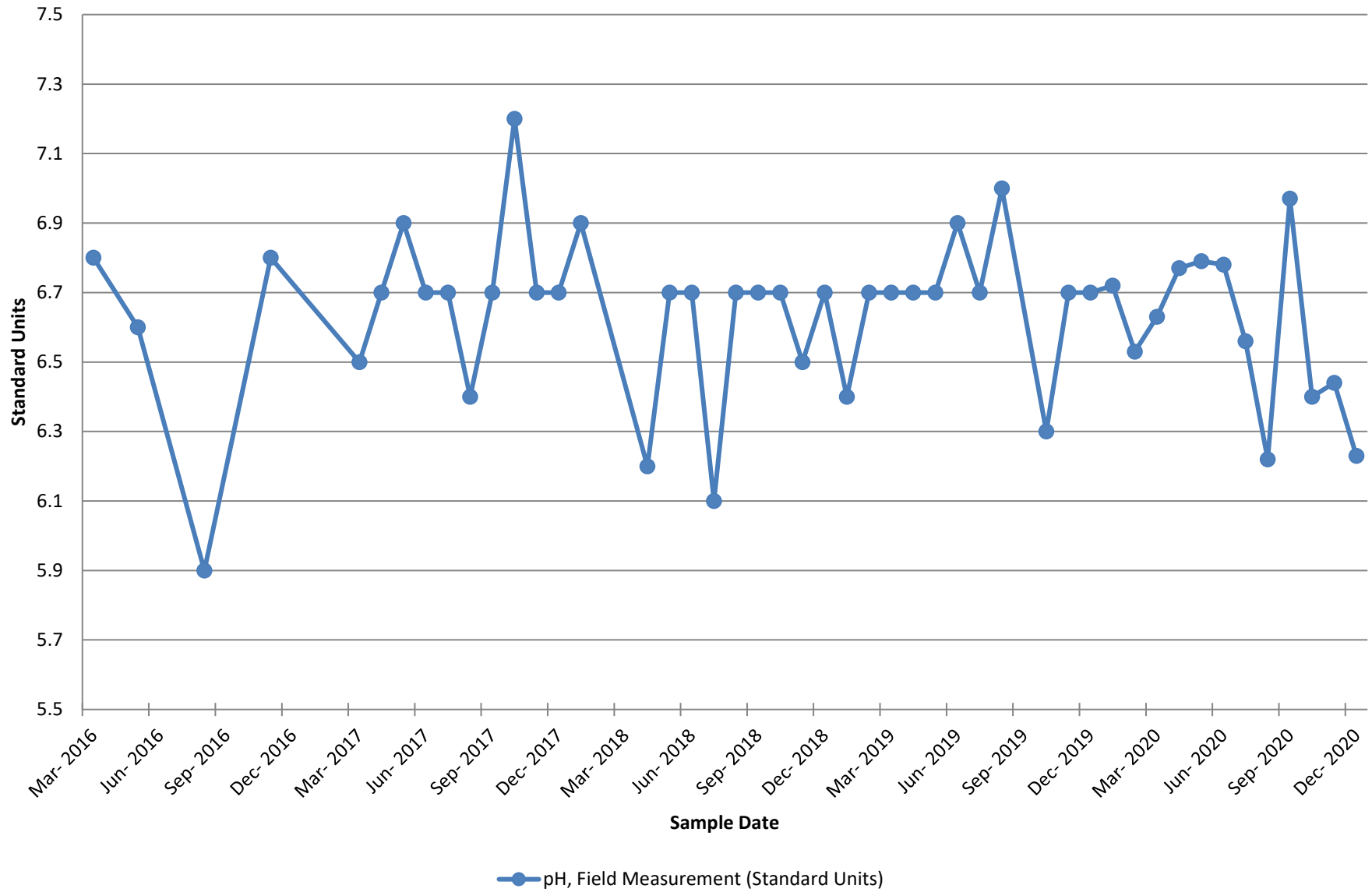
Trend Evaluation 30
TM-MW-002D: Fluoride
Climax Mine



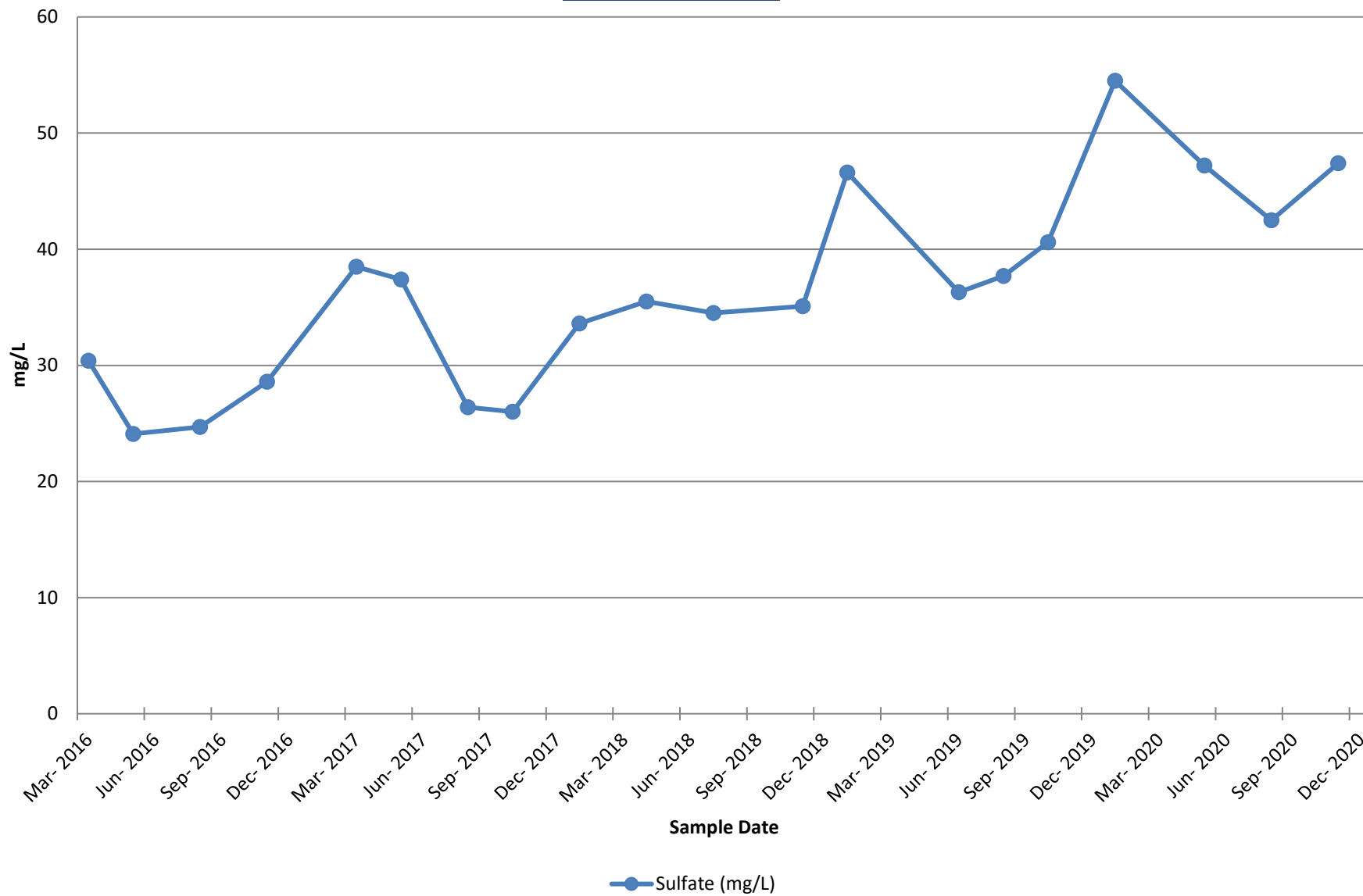
Trend Evaluation 31
GW#2: Metals
Climax Mine



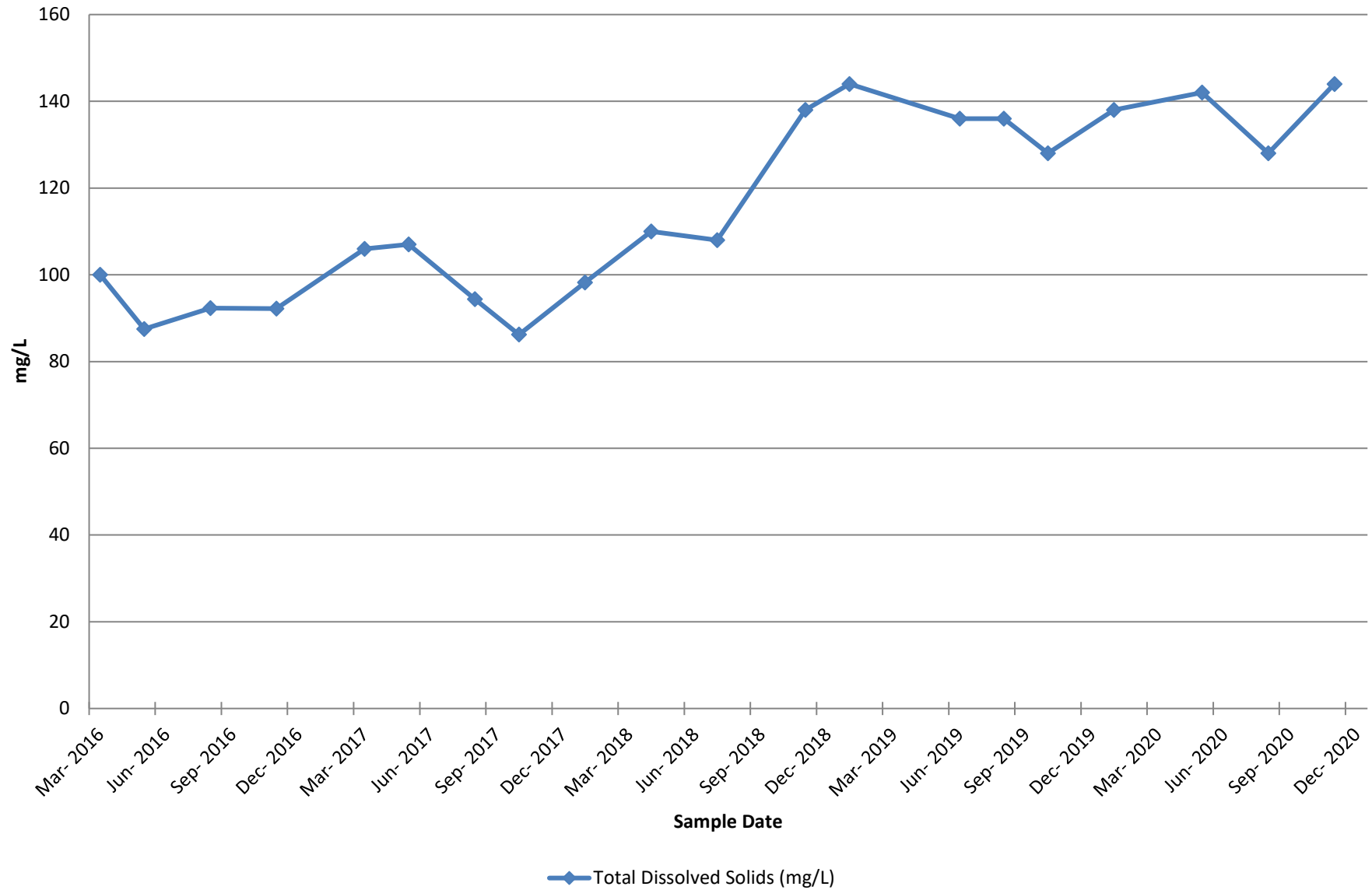
Trend Evaluation 32
GW#2: pH
Climax Mine



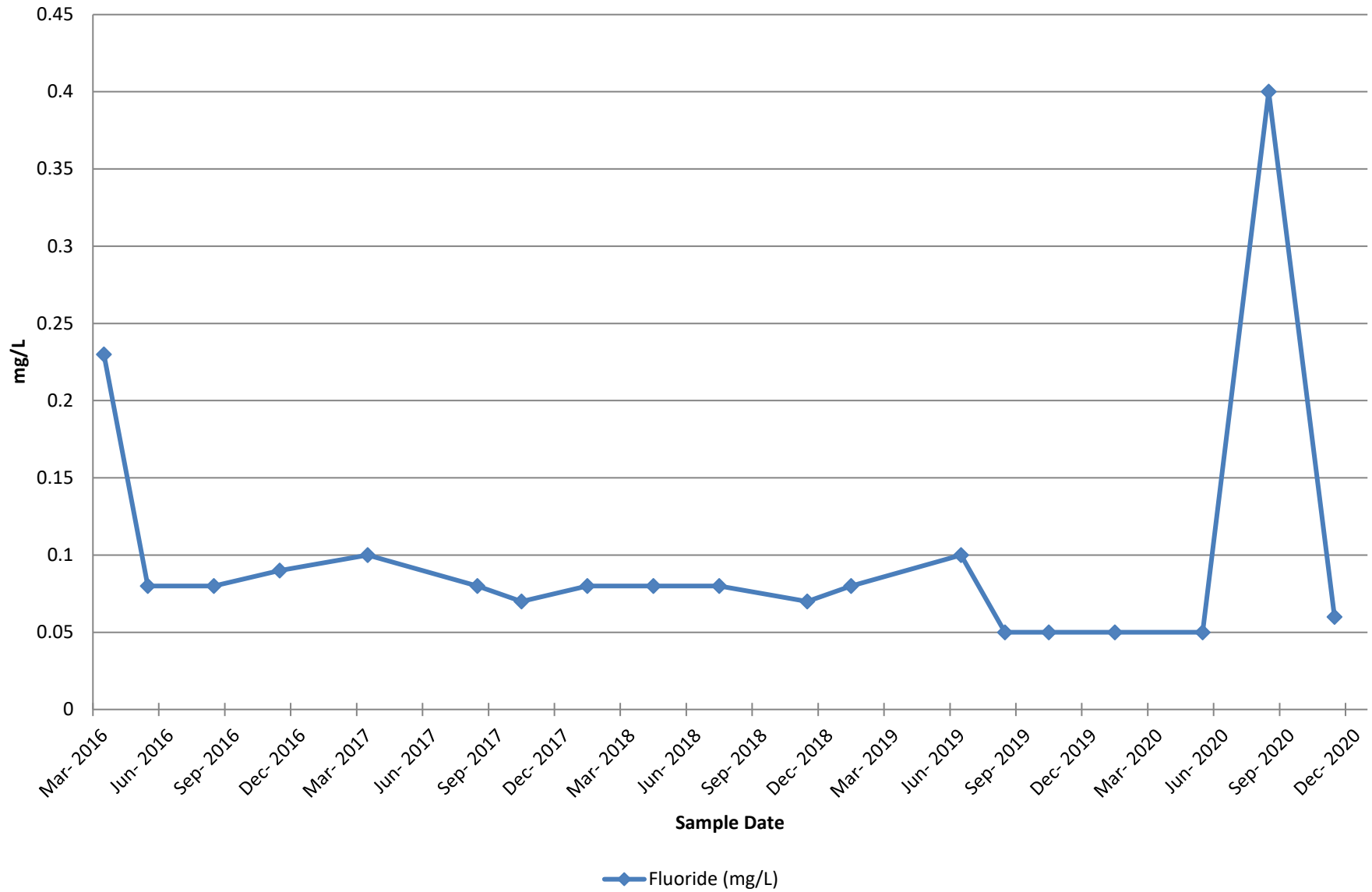
Trend Evaluation 33
GW#2: Sulfate
Climax Mine



Trend Evaluation 34
GW#2: TDS
Climax Mine



Trend Evaluation 35
GW#2: Fluoride
Climax Mine





REVISIONS				CLIMAX OPERATIONS		DIVISION: ENVIRONMENTAL DEPT.	
REV No		BY	DATE	SCALE: 1:13,655	SHEET SIZE: ANSIB	AREA:	
1	MODIFIED LAYOUT	JD	1/23/18	ENG'D BY:	DATE:	TITLE:	DWG. NO.
2				DWN BY: JD	DATE: 1/23/18	ANNUAL REPORT MAP 5 - WQMP SITES EAGLE RIVER WATERSHED	
3				CHKD BY: JH	DATE: 2/8/18		
				APVD BY: JH	DATE: 2/8/18	REVISION:	
						SHT. OF	



A Freeport-McMoRan Company



REVISIONS				SCALE: 1:30,000		SHEET SIZE: ANSIB		DIVISION: ENVIRONMENTAL DEPT.	
REV No		BY	DATE	ENG'D BY:	DATE:			AREA:	
A	MODIFIED LAYOUT	JD	1/23/18					TITLE:	DWG. NO.
1				DWN BY: JD	DATE: 1/23/18	Climax Molybdenum A Freeport-McMoRan Company			
2				CHKD BY: JH	DATE: 2/8/18				
3				APVD BY: JH	DATE: 2/8/18				
								ANNUAL REPORT MAP 6 - WQMP SITES TENMILE CREEK WATERSHED	REVISION: SHT. OF



REVISIONS				SCALE:		SHEET SIZE		DIVISION: ENVIRONMENTAL DEPT.		
REV No		BY	DATE	1:20,000	ANSI B			AREA:		
A	MODIFIED LAYOUT	JD	1/23/18	ENG'D BY:	DATE:	CLIMAX OPERATIONS  Climax Molybdenum A Freeport-McMoRan Company		TITLE:		DWG. NO.
1				DWN BY: JD	DATE: 1/23/18			ANNUAL REPORT		
2				CHKD BY: JH	DATE: 2/8/18			MAP 7 - WQMP SITES		REVISION:
3				APVD BY: JH	DATE: 2/8/18			ARKANSAS RIVER WATERSHED		SHT. OF