

Question 21.

2021 WATER QUALITY DATA

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Climax Mine Water Quality Monitoring Plan Evaluation - 2021

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: ARK-MW-002S
- Second Quarter: EVMW-3D
- Third Quarter: CC-SW1
- Fourth Quarter: EVMW-3S

During 2021 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:
 - ARK-MW-001D, ARwell, EVMW-2, EVMW-3S, EVMW-3D, 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, EVS-3

Fourth Quarter:

- Inaccessible or frozen due to winter conditions:
 - ARK-MW-001D, ARK-MW-002S, EVS-1, EVS-2, EVS-3, CC-SW1

Discussion of Results: POC Wells

Numeric Protection Limits (NPLs) were implemented at point of compliance (POC) wells in the approved 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 attached Table 1 and Trend Evaluation Graphs 1-35 show a five-year data set for all indicator parameters. In 2021, 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, which is outside 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 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 GW#2. Monthly pH monitoring continued at this location in 2021. Monthly monitoring in 2021 yielded pH measurements greater than 6.5, within the NPL range, for six consecutive months, January through June 2021; however, three of the following six months in 2021 yielded results less than 6.5. Therefore, Climax plans to continue monthly monitoring of GW#2 in 2022.

In summer of 2021, Climax initiated a broader analysis of groundwater conditions in the vicinity of GW#2. So far, Climax has reviewed recent and historic water levels and water chemistry sampling results for GW#2, as well as other locations in Tenmile Creek. The objectives of the review were to evaluate water chemistry trends (if any) and whether there are other changes in the shallow aquifer system that may explain pH measurements in GW#2. The analysis is ongoing and additional studies are planned for Summer 2022. The results and findings of the analysis will be presented in the 2023 Annual Report; however, the following is a list of preliminary findings:

- Lower pH values are not uncommon in GW#2. Readings less than 6.5 have been measured as far back as 1997. The average of all measurements collected since 1997 is about 6.6. Fluctuations above and below the average value are to be expected and values below 6.5 are not necessarily out of line with normal conditions at this location.
- A statistical analysis of GW#2 pH measurements since 2011 (Mann-Kendall) yielded a declining trend. Graphs of pH measurements also suggest a slight declining trend with the decline rate more prominent in later results.
- Groundwater chemistry at GW#2 changed abruptly in late 2011/early 2012. Most common cations and anions declined, resulting in a corresponding decrease in total dissolved solids.
- The shift in water chemistry correlates with an abrupt shift in aquifer water levels.
- Despite the lower pH values and declining pH trend, water chemistry data since 2012 have had non-detect or low concentrations for indicator parameters (no other exceedances of NPLs). Relative to pre-2012 data, samples from GW#2

have yielded lower concentrations of most parameters and lower total dissolved solids.

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 (Tables 1 and 3) attached. The graph titles are color coordinated, matching the color of the data table of the corresponding POC well.

Every three years, Climax samples one of the four quarters using an expanded parameter list known as the baseline parameter analytical suite. The most recent baseline parameter sampling event was in 2018; so, in one quartering 2021, baseline parameters were obtained in addition to the indicator parameters. These data are summarized in Table 2 (groundwater baseline parameters) and Table 4 (surface water baseline parameters). The 2021 baseline parameter data are tabulated with 2018 baseline data for comparison. In general, it is difficult to identify trends or outlier data with only two pairs of baseline data for each monitoring site.

The 2021 evaluation of trends does not indicate any decline in water quality at monitoring locations.

Discussion of Results: Outlier Identification and Data Validation

The 2021 groundwater and surface water data were analyzed for outliers. No outliers or invalid data were observed in 2021 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 (mg/L)
ARwell	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	0.3
	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	***	***	***	***	***	***	***	***	***	***
	03/25/2021	0.000025	0.0004	0.015	0.22	0.0062	0.005	7.05	28.1	170	0.5
	06/11/2021	0.000025	0.0004	0.04	0.159	0.00731	0.01	7.47	27.3	161	0.71
	09/23/2021	0.000025	0.0004	0.03	0.138	0.0062	0.01	7.39	29.5	172	0.53
	12/02/2021	0.000025	0.00763	0.03	0.157	0.00671	0.01	7.42	28.8	188	0.57
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: 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 a duplicate sample

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 (mg/L)
ARK-MW-001D	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
	03/25/2021	***	***	***	***	***	***	***	***	***	***
	06/23/2021	0.000025	0.0004	0.129	0.091	0.0288	0.01	8.12	38.1	218	1.76
	09/23/2021	0.000025	0.0004	0.075	0.005	0.0313	0.01	7.99	40.8	218	1.89
	12/06/2021	***	***	***	***	***	***	***	***	***	***
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 a duplicate sample

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 (mg/L)
EVMW-3S	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	0.0004	0.03	0.07	0.00146	0.01	7.43	11.5	252	0.06
	03/22/2021	***	***	***	***	***	***	***	***	***	***
	06/18/2021	0.000025	0.004	0.03	0.016	0.00093	0.01	7.23	10.5	200	0.075
	09/16/2021	0.000025	0.004	0.03	0.019	0.00174	0.01	7.1	10.9	268	0.075
	12/08/2021	0.000025	0.004	0.03	0.06	0.00168	0.01	7.48	10.1	240	0.075
	12/08/2021	0.000025	0.004	0.115	0.065	0.00167	0.022	7.48	14.9	246	0.075
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

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

Note: Data in purple represents a duplicate sample

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 (mg/L)
EVMW-3D	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	0.046	0.0008	0.01	7.39	6.2	272	0.34
	03/22/2021	***	***	***	***	***	***	***	***	***	***
	06/18/2021	0.000025	0.00124	0.03	0.023	0.00078	0.01	7.71	9.4	230	0.34
	06/18/2021	0.000025	0.00129	0.03	0.021	0.00078	0.01	7.71	2.7	234	0.34
	09/16/2021	0.000141	0.0038	0.03	0.024	0.00105	0.01	7.62	4.1	246	0.31
	12/08/2021	0.000025	0.0004	0.03	0.021	0.00062	0.032	7.71	2.3	242	0.38
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.

Note: Sample on 10/30/2017 contained anomalous sulfate value; extended lab qualifier noted on lab analytical report.

Note: Data in purple represents a duplicate sample

*** = 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 (mg/L)
EV-MW-004	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
	03/22/2021	***	***	***	***	***	***	***	***	***	***
	06/22/2021	0.000025	0.0004	0.03	0.005	0.00258	0.01	7.52	45.9	296	0.15
	08/31/2021	0.000025	0.0004	0.03	0.017	0.00302	0.041	7.46	51.7	314	0.075
	12/09/2021	0.000025	0.0004	0.03	0.069	0.00361	0.01	7.47	48.6	296	0.15
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 (mg/L)
TM-MW-002D	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
	03/24/2021	0.000025	0.0004	0.03	0.005	0.00616	0.01	8.37	63.7	170	0.34
	06/28/2021	0.000025	0.0004	0.03	0.005	0.00636	0.01	8.39	57	182	0.62
	09/02/2021	0.000025	0.0004	0.03	0.005	0.00585	0.01	8.28	58.3	164	0.49
	11/30/2021	0.000025	0.0004	0.03	0.005	0.00596	0.01	8.31	57.6	190	0.4
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 (mg/L)
GW#2	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	0.03	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	0.4
	09/30/2020	*	*	*	*	*	*	6.97	*	*	*
	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	*	*	*
	01/28/2021	*	*	*	*	*	*	6.57	*	*	*
	02/23/2021	*	*	*	*	*	*	6.65	*	*	*
	03/24/2021	0.000025	0.0004	0.03	0.005	0.001	0.01	6.6	69.8	154	0.08
	04/28/2021	*	*	*	*	*	*	6.77	*	*	*
	05/27/2021	*	*	*	*	*	*	6.65	*	*	*
	06/28/2021	0.000025	0.0004	0.03	0.005	0.00099	0.032	6.53	45.6	115	0.89
	07/27/2021	*	*	*	*	*	*	6.47	*	*	*
	08/17/2021	*	*	*	*	*	*	6.51	*	*	*
	09/02/2021	0.000025	0.0004	0.03	0.005	0.00105	0.01	6.46	60	146	0.08
	10/26/2021	*	*	*	*	*	*	6.64	*	*	*
	11/30/2021	0.000025	0.0004	0.03	0.005	0.00106	0.02	6.51	59.5	176	0.08
	12/22/2021	*	*	*	*	*	*	6.37	*	*	*
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 (mg/L)
TM-MW-001D	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
	03/24/2021	0.000059	0.0004	0.03	0.005	0.0367	0.01	8.44	195	330	3.02
	06/28/2021	0.000025	0.0004	0.03	0.005	0.0369	0.01	8.55	182	318	3.29
	09/02/2021	0.000025	0.0004	0.03	0.005	0.0403	0.01	8.45	183	344	3.31
	12/02/2021	0.000025	0.0004	0.03	0.005	0.0375	0.01	8.48	176	348	3.24

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Note: Data in purple represents a duplicate sample

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 (mg/L)
GW#1	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
	03/24/2021	0.00228	0.00213	0.03	0.005	0.126	0.441	6.51	236	392	1.13
	06/28/2021	0.00205	0.00161	0.03	0.005	0.118	0.431	6.43	219	365	1.15
	09/02/2021	0.00227	0.00186	0.03	0.005	0.127	0.432	6.24	230	420	1.23
	12/02/2021	0.00244	0.00202	0.03	0.005	0.129	0.441	6.32	218	428	1.19

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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 (Standard Units)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Fluoride (mg/L)
ARK-MW-002S	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	0.5	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
	03/25/2021	0.00005	0.0004	3.21	3.47	0.00517	0.01	7.15	1.4	650	0.25
	03/25/2021	0.00005	0.0004	3.33	3.71	0.00549	0.01	7.15	0.5	650	0.075
	06/14/2021	0.000025	0.0004	3.65	4.07	0.0104	0.01	6.89	0.5	605	0.075
	09/22/2021	0.000025	0.0004	4.19	4.26	0.00223	0.01	6.93	12.5	648	0.075
	12/06/2021	***	***	***	***	***	***	***	***	***	***

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 a duplicate sample

*** = 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 (mg/L)
ARK-MW-002D	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
	03/25/2021	0.000025	0.0004	0.03	0.018	0.0273	0.01	8.81	18.5	282	7.82
	06/14/2021	0.000025	0.0004	0.03	0.034	0.0285	0.01	8.83	23.1	286	7.42
	09/22/2021	0.000025	0.0004	0.03	0.005	0.0287	0.01	8.83	18.1	258	8.04
	12/06/2021	0.000025	0.0004	0.03	0.026	0.0325	0.01	8.75	20.8	292	8.11

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 (mg/L)
EVMW-1D	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
	02/24/2021	0.000025	0.0004	0.093	0.188	0.0024	0.01	7.6	451	732	0.16
	06/15/2021	0.000025	0.0004	0.122	0.298	0.0021	0.01	7.56	413	703	0.075
	08/31/2021	0.000025	0.0004	0.003	0.051	0.00183	0.035	7.61	419	728	0.075
	12/01/2021	0.000025	0.0004	0.108	0.195	0.00187	0.01	7.64	443	712	0.075

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 (mg/L)
EVMW-1S	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
	02/24/2021	0.000109	0.0004	1.42	0.798	0.333	0.01	7.41	635	1070	0.2
	06/15/2021	0.000052	0.0004	2.46	0.883	0.338	0.01	7.25	519	911	0.24
	08/31/2021	0.000111	0.0004	2.55	0.996	0.332	0.01	7.25	554	1050	0.26
	12/01/2021	0.000025	0.0004	2.48	0.918	0.328	0.01	7.27	578	1030	0.25

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 (mg/L)
EVMW-2	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
	02/24/2021	***	***	***	***	***	***	***	***	***	***
	06/04/2021	0.000025	0.00098	0.03	0.028	0.0074	0.01	7.72	41.6	338	0.075
	08/31/2021	0.000025	0.00104	0.03	0.017	0.00225	0.01	7.74	25.5	308	0.075
	12/08/2021	0.000025	0.0004	0.03	0.038	0.00242	0.03	7.75	25.2	286	0.075

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 (mg/L)
EVS-1	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	**	**	**	**	**	**	**	**	**	**
	02/24/2021	***	***	***	***	***	***	***	***	***	***
	06/22/2021	0.000025	0.00207	0.03	0.005	0.12	0.01	7.79	88.7	350	0.44
	09/02/2021	**	**	**	**	**	**	**	**	**	**
	12/09/2021	***	***	***	***	***	***	***	***	***	***

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 - Insufficient flow (or dry) due to late summer dry conditions

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

Note: Data in purple represents a duplicate sample

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 (mg/L)
EVS-2	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	<i>nd</i>	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	<i>nd</i>
	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
	02/24/2021	***	***	***	***	***	***	***	***	***	***
	06/22/2021	0.000025	0.0004	0.03	0.005	0.00749	0.01	***	17.7	158	0.27
	09/02/2021	0.000025	0.0004	0.03	0.005	0.00863	0.01	8.16	31.3	194	0.32
	12/09/2021	***	***	***	***	***	***	***	***	***	***

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 (mg/L)
EVS-3	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
	02/24/2021	***	***	***	***	***	***	***	***	***	***
	06/22/2021	0.000025	0.0004	0.03	0.005	0.0064	0.01	8.01	24	147	0.39
	09/02/2021	***	***	***	***	***	***	***	***	***	***
	12/09/2021	***	***	***	***	***	***	***	***	***	***

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 2 - Baseline Parameters
Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Aluminum, Dissolved (mg/L)	Antimony, Dissolved (mg/L)	Arsenic, Dissolved (mg/L)	Barium, Dissolved (mg/L)	Beryllium, Dissolved (mg/L)	Calcium, Dissolved (mg/L)	Chromium (CrIII + CrVI), Dissolved (mg/L)
ARwell	02/26/2018	0.015	0.0002	0.0001	0.068	0.000025	33.3	0.0008
	02/26/2018	0.015	0.0002	0.0001	0.072	0.000025	32.9	0.00025
	06/05/2018	0.04	0.0002	0.0001	0.064	0.000025	28	0.0009
	06/11/2021	0.376	0.0002	0.0003	0.0681	0.00004	32.3	0.00025
ARK-MW-001D	02/26/2018	0.015	0.0002	0.0001	0.024	0.000025	23.9	0.00025
	05/14/2018	0.015	0.0002	0.0003	0.021	0.000025	24.6	0.00025
	06/23/2021	0.025	0.0002	0.0001	0.0252	0.00004	25.3	0.00025
	03/12/2018	0.015	0.0002	0.0015	0.01	0.000025	3	0.00025
ARK-MW-002D	05/14/2018	0.04	0.0002	0.0018	0.005	0.000025	3.5	0.00025
	06/14/2021	0.025	0.00045	0.00196	0.0135	0.00004	3.28	0.00025
	03/12/2018	0.015	0.0002	0.0011	0.309	0.000025	163	0.00025
	05/14/2018	0.03	0.0002	0.0015	0.309	0.000025	169	0.00025
ARK-MW-002S	06/14/2021	0.025	0.0002	0.0018	0.405	0.00004	173	0.00025
	01/29/2018	0.015	0.0002	0.0003	0.038	0.000025	69.1	0.00025
	04/23/2018	0.015	0.0002	0.0004	0.034	0.000025	71.2	0.00025
	06/15/2021	0.025	0.0002	0.00053	0.0351	0.00004	77.9	0.00025
EVMW-1D	01/29/2018	0.015	0.0002	0.0001	0.029	0.000025	161	0.00025
	04/23/2018	0.015	0.0002	0.0001	0.018	0.000025	164	0.0006
	06/15/2021	0.025	0.0002	0.00021	0.0213	0.00004	183	0.00025
	03/12/2018	0.015	0.0002	0.0001	0.201	0.000025	38.3	0.00025
EVMW-2	06/05/2018	0.04	0.0002	0.0001	0.202	0.000025	37.1	0.00025
	06/04/2021	0.052	0.0002	0.0001	0.123	0.00004	44.5	0.00025
	02/12/2018	0.015	0.0002	0.0001	0.343	0.000025	10.1	0.00025
	06/11/2018	0.015	0.0002	0.0001	0.36	0.000025	9.9	0.00025
EVMW-3D	06/18/2021	0.025	0.0002	0.0001	0.378	0.00004	9.29	0.00025
	06/18/2021	0.025	0.0002	0.0001	0.383	0.00004	9.38	0.00025
	02/28/2018	0.015	0.0002	0.0001	0.122	0.000025	42.8	0.00025
	06/11/2018	0.015	0.0002	0.0001	0.142	0.000025	38.5	0.00025
EVMW-3S	06/11/2018	0.015	0.0002	0.0001	0.145	0.000025	36.8	0.00025
	06/18/2021	0.025	0.0002	0.0001	0.138	0.00004	39.2	0.00025
	03/12/2018	0.015	0.0002	0.0003	0.033	0.000025	49	0.00025
	06/18/2018	0.015	0.0002	0.0004	0.032	0.000025	48.9	0.00025
EV-MW-004	06/22/2021	0.025	0.0002	0.00032	0.0375	0.00004	51	0.00025
	03/19/2018	***	***	***	***	***	***	***
	06/11/2018	0.015	0.0002	0.0001	0.06	0.000025	29.7	0.00025
	06/22/2021	0.025	0.0002	0.00032	0.122	0.00004	76.3	0.00025
EVS-1	03/19/2018	***	***	***	***	***	***	***
	06/11/2018	0.015	0.0002	0.0001	0.058	0.000025	26.5	0.00025
	06/22/2021	0.025	0.0002	0.0001	0.0818	0.00004	34.5	0.00025
	03/19/2018	***	***	***	***	***	***	***
EVS-2	06/11/2018	0.015	0.0002	0.0001	0.094	0.000025	57.8	0.00025
	06/22/2021	0.025	0.0002	0.0001	0.0661	0.00004	35	0.00025
	01/24/2018	0.04	0.0002	0.0001	0.028	0.00042	82	0.00025
	04/16/2018	0.015	0.0002	0.0001	0.027	0.00038	82.9	0.00025
GW#1	06/28/2021	0.025	0.0002	0.0001	0.0329	0.000438	85.3	0.00025
	01/24/2018	0.015	0.0002	0.001	0.018	0.000025	23.4	0.00025
	04/16/2018	0.015	0.0006	0.0007	0.017	0.000025	24.3	0.00025
	06/28/2021	0.025	0.0002	0.00032	0.0207	0.00004	22.7	0.00025
TM-MW-001D	01/24/2018	0.015	0.0002	0.0001	0.058	0.000025	23.1	0.00025
	04/16/2018	0.015	0.0002	0.0001	0.051	0.000025	25.6	0.00025
	06/28/2021	0.025	0.0002	0.0001	0.0511	0.00004	26.8	0.00025
	01/24/2018	0.015	0.0064	0.003	0.026	0.000025	14.6	0.00025
GW#2	04/16/2018	0.015	0.0056	0.0023	0.022	0.000025	14.7	0.00025
	06/28/2021	0.025	0.00274	0.00133	0.0262	0.00004	14.3	0.00025
	01/24/2018	0.015	0.0002	0.0001	0.058	0.000025	23.1	0.00025
	04/16/2018	0.015	0.0002	0.0001	0.051	0.000025	25.6	0.00025
	06/28/2021	0.025	0.0002	0.0001	0.0511	0.00004	26.8	0.00025
TM-MW-002D	01/24/2018	0.015	0.0064	0.003	0.026	0.000025	14.6	0.00025
	04/16/2018	0.015	0.0056	0.0023	0.022	0.000025	14.7	0.00025
	06/28/2021	0.025	0.00274	0.00133	0.0262	0.00004	14.3	0.00025
	01/24/2018	0.015	0.0002	0.0001	0.058	0.000025	23.1	0.00025

Notes:

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

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

Data in green font represent a duplicate sample

Table 2 - Baseline Parameters
Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Cobalt, Dissolved (mg/L)	Lead, Dissolved (mg/L)	Magnesium, Dissolved (mg/L)	Mercury, Dissolved (mg/L)	Nickel, Dissolved (mg/L)	Potassium, Dissolved (mg/L)	Selenium, Dissolved (mg/L)	Silver, Dissolved (mg/L)	Sodium, Dissolved (mg/L)
ARwell	02/26/2018	0.00145	0.00005	12.7	0.0001	0.0297	1.2	0.00005	0.005	6.6
	02/26/2018	0.00106	0.00005	12.6	0.0001	0.0187	1.2	0.00005	0.005	6.5
	06/05/2018	0.00025	0.00005	12.2	0.0001	0.0062	1.2	0.00005	0.005	5.4
	06/11/2021	0.000114	0.00005	14	0.0001	0.0002	1.3	0.00005	0.005	7.4
ARK-MW-001D	02/26/2018	0.00014	0.00005	17.7	0.0001	0.0003	1.6	0.00005	0.005	24.4
	05/14/2018	0.000025	0.00005	17.9	0.0001	0.0003	1.7	0.00005	0.005	25
	06/23/2021	0.000053	0.00005	19	0.0001	0.0002	1.7	0.00037	0.005	26.2
ARK-MW-002D	03/12/2018	0.00006	0.00005	0.7	0.0001	0.0003	0.5	0.0004	0.005	98.5
	05/14/2018	0.000025	0.0001	0.8	0.0001	0.0003	0.5	0.0004	0.005	107
	06/14/2021	0.000025	0.00005	0.8	0.0001	0.0002	0.5	0.00048	0.005	106
ARK-MW-002S	03/12/2018	0.00363	0.00005	26.1	0.0001	0.0255	3.1	0.00005	0.005	29.5
	05/14/2018	0.00321	0.00005	27	0.0001	0.0345	3.2	0.0001	0.005	31.3
	06/14/2021	0.00147	0.00005	27.2	0.0001	0.00211	3.4	0.00005	0.005	28.5
EVMW-1D	01/29/2018	0.00071	0.00005	27.6	0.0001	0.0024	1.7	0.00005	0.005	93.8
	04/23/2018	0.00167	0.00005	28.2	0.0001	0.0016	1.6	0.00005	0.005	98.6
	06/15/2021	0.000689	0.00005	30.6	0.0001	0.00066	1.8	0.00005	0.005	101
EVMW-1S	01/29/2018	0.00155	0.00005	56.3	0.0001	0.0174	2.1	0.00005	0.005	22
	04/23/2018	0.00388	0.00005	55.2	0.0001	0.0159	2.2	0.00005	0.005	20.8
	06/15/2021	0.00103	0.00005	61.7	0.0001	0.00067	2.4	0.00005	0.005	21.1
EVMW-2	03/12/2018	0.00034	0.00005	45.4	0.0001	0.0003	2.6	0.00005	0.005	3.6
	06/05/2018	0.00009	0.00005	41.3	0.0001	0.0003	2.7	0.00005	0.005	3.7
	06/04/2021	0.000128	0.00005	43.6	0.0001	0.0002	1.9	0.00005	0.005	3.6
EVMW-3D	02/12/2018	0.00014	0.00005	6.6	0.0001	0.0003	2.7	0.00005	0.005	75
	06/11/2018	0.00014	0.00005	6.6	0.0001	0.0003	2.6	0.00005	0.005	75.3
	06/18/2021	0.000145	0.00005	6.15	0.0001	0.00041	2.5	0.00005	0.005	71.2
	06/18/2021	0.000144	0.00005	6.15	0.0001	0.00043	2.6	0.00005	0.005	71.6
EVMW-3S	02/28/2018	0.00288	0.00005	23.7	0.0001	0.0136	1.9	0.0005	0.005	3.6
	06/11/2018	0.00032	0.00005	20.4	0.0001	0.0026	1.7	0.00005	0.005	2.5
	06/11/2018	0.0004	0.00005	19.9	0.0001	0.0034	1.8	0.00005	0.005	2.7
	06/18/2021	0.000283	0.00005	20.9	0.0001	0.00121	1.7	0.00019	0.005	3
EV-MW-004	03/12/2018	0.00076	0.00005	28.5	0.0001	0.0017	1.6	0.00005	0.005	18.3
	06/18/2018	0.00071	0.00005	28.4	0.0001	0.0013	1.6	0.00005	0.005	18.1
	06/22/2021	0.00097	0.00005	28.7	0.0001	0.0002	1.5	0.00005	0.005	18.3
EVS-1	03/19/2018	***	***	***	***	***	***	***	***	***
	06/11/2018	0.000025	0.00005	12.2	0.0001	0.0003	0.7	0.00005	0.005	0.9
	06/22/2021	0.000177	0.00005	25.4	0.0001	0.0002	1.9	0.00005	0.005	2.73
EVS-2	03/19/2018	***	***	***	***	***	***	***	***	***
	06/11/2018	0.000025	0.00005	10.4	0.0001	0.0003	0.6	0.00005	0.005	0.9
	06/22/2021	0.000076	0.00005	12.9	0.0001	0.0002	0.6	0.00011	0.005	0.85
EVS-3	03/19/2018	***	***	***	***	***	***	***	***	***
	06/11/2018	0.00013	0.00005	20.2	0.0001	0.0007	1.7	0.00005	0.005	2.4
	06/22/2021	0.000088	0.00005	13.9	0.0001	0.0002	0.5	0.00015	0.005	0.92
GW#1	01/24/2018	0.0003	0.00005	8.8	0.0001	0.0037	6.1	0.0022	0.005	7.1
	04/16/2018	0.00044	0.00005	8.7	0.0001	0.0045	5.8	0.0001	0.005	7.1
	06/28/2021	0.000235	0.00005	10.7	0.0001	0.00364	5.6	0.00013	0.005	6.75
TM-MW-001D	01/24/2018	0.0001	0.00005	1.3	0.0001	0.0003	0.7	0.0074	0.005	76.4
	04/16/2018	0.00013	0.00005	1.2	0.0001	0.0003	0.5	0.0007	0.005	81.6
	06/28/2021	0.000058	0.00005	1.21	0.0001	0.0002	0.6	0.00005	0.005	78.1
GW#2	01/24/2018	0.00009	0.00005	4.4	0.0001	0.0003	1.4	0.0006	0.005	4.3
	04/16/2018	0.00014	0.00005	4.6	0.0001	0.0003	1.3	0.0001	0.005	4.4
	06/28/2021	0.000077	0.00005	5	0.0001	0.0002	1.4	0.00014	0.005	4.29
TM-MW-002D	01/24/2018	0.00007	0.00005	9.8	0.0001	0.0003	3.0	0.0008	0.005	26.3
	04/16/2018	0.00007	0.00005	9.7	0.0001	0.0003	3.0	0.00005	0.005	26.7
	06/28/2021	0.000025	0.00005	9.31	0.0001	0.0002	3.0	0.00005	0.005	25.7

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Data in green font represent a duplicate sample

Table 2 - Baseline Parameters
Groundwater Quality Monitoring Data
Climax Mine

Location	Sample Date	Thallium, Dissolved (mg/L)	Vanadium, Dissolved (mg/L)	Bicarbonate (HCO ₃) (mg/L)	Total Alkalinity (mg/L)	Chloride, Dissolved (mg/L)	Cyanide (WAD) (mg/L)	Cyanide, Total (mg/L)	Total Nitrite + Nitrate as N (mg/L)	Total Organic Carbon (TOC) (mg/L)
ARwell	02/26/2018	0.00005	0.0025	140	140	2.9	0.0015	0.0015	0.01	0.5
	02/26/2018	0.00005	0.0025	127	127	2.9	0.0015	0.0015	0.01	0.5
	06/05/2018	0.00005	0.0025	120	120	1.9	0.0015	0.0015	0.01	1.5
	06/11/2021	0.00005	0.005	121	121	3.7	0.0015	0.0015	0.01	1.4
ARK-MW-001D	02/26/2018	0.00005	0.0025	143	149	1.0	0.0015	0.0015	0.01	0.5
	05/14/2018	0.00005	0.0025	151	153	1.1	0.0015	0.0015	0.01	0.5
	06/23/2021	0.00005	0.005	141	150	0.7	0.0015	0.0015	0.01	0.5
ARK-MW-002D	03/12/2018	0.00005	0.005	177	188	1.4	0.0015	0.0015	0.01	0.5
	05/14/2018	0.00005	0.0025	204	215	2.6	0.0015	0.0015	0.01	10.6
	06/14/2021	0.00005	0.005	197	213	2.4	0.0015	0.0015	0.01	1.4
ARK-MW-002S	03/12/2018	0.00005	0.0025	521	521	54.9	0.0015	0.0015	0.01	8.6
	05/14/2018	0.00005	0.0025	539	539	56.7	0.0015	0.0015	0.01	15
	06/14/2021	0.00005	0.005	519	519	49.0	0.0015	0.0015	0.01	20.7
EVMW-1D	01/29/2018	0.00005	0.0025	121	121	5.1	0.0015	0.0015	0.01	9.5
	04/23/2018	0.00005	0.0025	103	103	5.7	0.0015	0.0015	0.01	0.5
	06/15/2021	0.00005	0.005	117	117	6.9	0.0015	0.0015	0.01	2.1
EVMW-1S	01/29/2018	0.00005	0.0025	207	207	3.6	0.0015	0.0015	0.01	24.2
	04/23/2018	0.00005	0.0025	210	210	5.0	0.0015	0.0015	0.01	0.5
	06/15/2021	0.00005	0.005	187	187	6.7	0.0015	0.0015	0.01	1.6
EVMW-2	03/12/2018	0.00005	0.0025	263	271	0.7	0.0015	0.0015	0.01	0.5
	06/05/2018	0.00005	0.0025	275	288	0.8	0.0015	0.0015	0.01	0.5
	06/04/2021	0.00005	0.005	261	261	1.2	0.0015	0.0015	0.01	0.5
EVMW-3D	02/12/2018	0.00005	0.0025	203	212	5.8	0.0015	0.0015	0.02	1.9
	06/11/2018	0.00005	0.0025	208	216	5.9	0.0015	0.0015	0.02	0.5
	06/18/2021	0.00005	0.005	192	206	5.6	0.0015	0.0015	0.02	0.5
	06/18/2021	0.00005	0.005	190	206	5.6	0.0071	0.0015	0.01	0.5
EVMW-3S	02/28/2018	0.00005	0.005	203	203	0.3	0.0015	0.0015	0.01	0.5
	06/11/2018	0.00005	0.0025	181	181	0.3	0.0015	0.0015	0.01	2.2
	06/11/2018	0.00005	0.0025	184	184	0.3	0.0015	0.0015	0.01	1.7
	06/18/2021	0.00005	0.005	199	206	0.3	0.0015	0.0015	0.01	2.7
EV-MW-004	03/12/2018	0.00005	0.0025	228	229	1.3	0.0015	0.0015	0.01	0.5
	06/18/2018	0.00005	0.0025	231	231	1.6	0.0015	0.0015	0.01	3.1
	06/22/2021	0.00005	0.005	217	224	1.4	0.0015	0.0015	0.01	0.5
EVS-1	03/19/2018	***	***	***	***	***	***	***	***	***
	06/11/2018	0.00005	0.0025	108	110	0.8	0.0015	0.0015	0.01	2.2
	06/22/2021	0.00005	0.005	183	189	4.6	0.0015	0.0015	0.01	7
EVS-2	03/19/2018	***	***	***	***	***	***	***	***	***
	06/11/2018	0.00005	0.0025	102	102	0.7	0.0015	0.0015	0.01	0.5
	06/22/2021	0.00005	0.005	137	140	0.9	0.0015	0.0015	0.01	1.8
EVS-3	03/19/2018	***	***	***	***	***	***	***	***	***
	06/11/2018	0.00005	0.0025	211	220	9.6	0.0015	0.0015	0.01	4
	06/22/2021	0.00005	0.005	111	117	1.2	0.0015	0.0015	0.01	7
GW#1	01/24/2018	0.00005	0.0025	41.4	41.4	12.3	0.0015	0.0015	0.17	7.8
	04/16/2018	0.00005	0.0025	39.9	39.9	12.4	0.0015	0.1	0.19	10.2
	06/28/2021	0.00005	0.005	40.1	40.1	11.2	0.0015	0.0015	0.232	1.2
TM-MW-001D	01/24/2018	0.00005	0.0025	47	47.3	1.5	0.0015	0.0015	0.01	9.5
	04/16/2018	0.00005	0.0025	56.2	56.2	1.0	0.0015	0.1	0.01	5.8
	06/28/2021	0.00005	0.005	46.8	46.8	1.4	0.0015	0.0015	0.01	0.5
GW#2	01/24/2018	0.00005	0.0025	48.3	48.3	1.9	0.0015	0.0015	0.51	6.4
	04/16/2018	0.00005	0.0025	59.2	59.2	2.6	0.0015	0.1	0.5	9.6
	06/28/2021	0.00005	0.005	44.9	44.9	3.7	0.0015	0.0015	0.357	0.5
TM-MW-002D	01/24/2018	0.00005	0.0025	76.6	77.2	0.6	0.0015	0.0015	0.01	7.2
	04/16/2018	0.00005	0.0025	73.9	75.1	0.7	0.0015	0.1	0.03	10.1
	06/28/2021	0.00005	0.005	74.8	76.5	0.9	0.0015	0.0015	0.01	0.5

Notes:

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Data in green font represent a duplicate sample

Table 3 - Indicator Parameters
5-Year 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	03/22/2017	***	***	***	***	***	***
	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
	06/17/2021	0.000052	0.00093	0.03	0.075	0.05	0.00147
	09/21/2021	0.000025	0.0004	0.101	0.151	0.02	0.00195

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	03/22/2017	***	***	***	***	***	***
	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
	06/17/2021	0.00127	0.01	7.6	5.4	34	20
	09/21/2021	0.002	0.01	7.94	27.2	76	58

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 3 - Indicator Parameters
5-Year 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	03/20/2017	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
	03/30/2021	***	***	***	***	***	***
	06/17/2021	0.00005	0.0004	0.03	0.072	0.017	0.00278
	09/21/2021	0.000025	0.0004	0.062	0.113	0.059	0.00759
	12/30/2021	***	***	***	***	***	***

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	03/20/2017	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
	06/17/2021	0.00272	0.01	7.68	5.8	38	22
	09/21/2021	0.00776	0.01	8.94	23.2	78	60

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 3 - Indicator Parameters
5-Year 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	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
	06/18/2021	0.000025	0.0004	0.03	0.089	0.005	0.0016
	09/16/2021	0.000025	0.0004	0.03	0.03	0.005	0.0336

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	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
	06/18/2021	0.00345	0.01	7.98	6.1	60	49
	09/16/2021	0.0325	0.01	8.22	23.4	116	104

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 3 - Indicator Parameters
5-Year 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	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
	06/18/2021	0.000025	0.0004	0.03	0.03	0.005	0.00041
	09/16/2021	0.000025	0.0004	0.03	0.03	0.005	0.00061

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	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
	06/18/2021	0.00036	0.01	7.96	5.4	48	44
	09/16/2021	0.00092	0.01	8.03	8.9	90	81

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 3 - Indicator Parameters
5-Year 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	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
	06/30/2021	**	**	**	**	**	**
	09/02/2021	0.000025	0.0004	0.03	0.06	0.005	0.0329

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

** = No Sample Collected - No flow at Outlet

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	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
	06/30/2021	**	**	**	**	**	**
	09/02/2021	0.0355	0.01	7.97	25.5	118	103

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

** = No Sample Collected - No flow at Outlet

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

Table 3 - Indicator Parameters
5-Year 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	03/22/2017	***	***	***	***	***	***
	06/26/2017	0.0451	0.0101	0.02	nd	0.005	0.0103
	08/22/2017	0.00005	0.0002	0.01	nd	0.0025	0.0018
	10/16/2017	0.00005	0.0004	0.04	nd	0.01	0.0018
	03/19/2018	***	***	***	***	***	***
	06/18/2018	0.00005	0.0007	0.03	nd	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
	03/31/2021	***	***	***	***	***	***
	06/17/2021	0.000108	0.0004	0.03	0.115	0.005	0.00128
	09/21/2021	0.000079	0.0004	0.03	0.03	0.005	0.00173
	09/21/2021	0.000076	0.0004	0.03	0.03	0.005	0.00178
	10/29/2021	***	***	***	***	***	***

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.

Note: Data in purple represents a duplicate sample

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	03/22/2017	***	***	***	***	***	***
	06/26/2017	nd	0.02	6.96	12.2	38	31
	08/22/2017	nd	0.01	7.67	23.6	66	49
	10/16/2017	nd	0.01	7.92	33.1	82	63
	03/19/2018	***	***	***	***	***	***
	06/18/2018	nd	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
	03/31/2021	***	***	***	***	***	***
	06/17/2021	0.00119	0.024	7.52	17.7	52	33
	09/21/2021	0.00163	0.01	7.57	35.6	86	69
	09/21/2021	0.0168	0.01	7.57	35.7	90	68
	10/29/2021	***	***	***	***	***	***

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

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

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

Note: Data in purple represents a duplicate sample

Table 3 - Indicator Parameters
5-Year 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	03/22/2017	***	***	***	***	***	***
	06/26/2017	0.0459	0.0115	0.01	nd	0.0025	0.0105
	08/22/2017	0.00005	0.0002	0.01	nd	0.0025	0.0013
	10/16/2017	0.00005	0.0002	0.01	nd	0.0025	0.0013
	03/26/2018	***	***	***	***	***	***
	06/18/2018	0.00005	0.0002	0.01	nd	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
	03/31/2021	***	***	***	***	***	***
	05/27/2021	***	***	***	***	***	***
	06/08/2021	0.000025	0.0004	0.03	0.134	0.005	0.00247
	07/29/2021	0.000095	0.0273	0.03	0.03	0.005	0.0013
	08/12/2021	0.000025	0.0004	0.03	0.03	0.005	0.00129
	09/15/2021	0.000025	0.0004	0.03	0.03	0.005	0.0017
	10/29/2021	0.000025	0.0004	0.03	0.03	0.005	0.00141

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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	03/22/2017	***	***	***	***	***	***
	06/26/2017	nd	0.005	7.85	4.2	100	101
	08/22/2017	nd	0.005	7.6	28.1	154	150
	10/16/2017	nd	0.005	7.31	10	174	167
	03/26/2018	***	***	***	***	***	***
	06/18/2018	nd	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
	03/31/2021	***	***	***	***	***	***
	05/27/2021	***	***	***	***	***	***
	06/08/2021	0.00250	0.01	8.35	0.5	94	85
	07/29/2021	0.00135	0.01	8.41	9.4	154	149
	08/12/2021	0.00124	0.01	8.4	7.4	156	149
	09/15/2021	0.0168	0.01	8.36	7.7	172	181
	10/29/2021	0.00131	0.01	8.33	7.7	176	153

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Table 4 - Baseline Parameters
Surface Water Quality Monitoring Data
Climax Mine

Site Number	Sample Date	Aluminum, Dissolved (mg/L)	Antimony, Dissolved (mg/L)	Arsenic, Dissolved (mg/L)	Arsenic, Total Recoverable (mg/L)	Barium, Dissolved (mg/L)	Beryllium, Dissolved (mg/L)	Calcium, Dissolved (mg/L)	Chromium (CrIII + CrVI), Dissolved (mg/L)
CC-SW1	03/19/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.04	0.0002	0.0001	0.0001	0.018	0.000025	9.6	0.00025
	06/17/2021	0.025	0.0002	0.0001	0.0001	0.0198	0.00004	10.8	0.00025
EI-SW1	03/26/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.04	0.0002	0.0001	0.0001	0.175	0.000025	37	0.00025
	06/08/2021	0.025	0.0002	0.0002	0.0001	0.126	0.00004	27.9	0.00025
Arkansas #1	03/15/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.05	0.0002	0.0001	0.0001	0.014	0.000025	5.4	0.00025
	06/17/2021	0.025	0.0002	0.0001	0.0001	0.0174	0.00004	5.82	0.00025
Arkansas #2	03/15/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.05	0.0002	0.0001	0.0001	0.017	0.000025	7.2	0.00025
	06/17/2021	0.025	0.0002	0.0001	0.0001	0.017	0.00004	6.45	0.00025
AI	02/12/2018	0.015	0.0002	0.0001	0.0001	0.069	0.000025	17.7	0.00025
	06/11/2018	0.015	0.0002	0.0001	0.0001	0.046	0.000025	9.3	0.00025
	06/18/2021	0.025	0.0002	0.0001	0.0001	0.0538	0.00004	10.7	0.00025
BI	02/12/2018	0.015	0.0002	0.0001	0.0001	0.049	0.000025	24.7	0.00025
	06/11/2018	0.015	0.0002	0.0001	0.0001	0.046	0.000025	10.1	0.00025
	06/18/2021	0.025	0.0002	0.0001	0.0001	0.0527	0.00004	9.66	0.00025
EPR Outlet	02/12/2018	0.015	0.0002	0.0001	0.0001	0.046	0.000025	25.5	0.00025
	06/30/2021	**	**	**	**	**	**	**	**

Site Number	Sample Date	Cobalt, Dissolved (mg/L)	Lead, Dissolved (mg/L)	Magnesium, Dissolved (mg/L)	Mercury, Total (mg/L)	Nickel, Dissolved (mg/L)	Potassium, Dissolved (mg/L)	Selenium, Dissolved (mg/L)	Silver, Dissolved (mg/L)
CC-SW1	03/19/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.000025	0.00005	1.6	0.0001	0.0003	0.5	0.0005	0.005
	06/17/2021	0.000025	0.00034	1.57	0.0001	0.0002	0.73	0.001	0.005
EI-SW1	03/26/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.00008	0.00005	5.3	0.0001	0.0003	0.5	0.0005	0.005
	06/08/2021	0.000092	0.00005	3.7	0.0001	0.0002	0.49	0.001	0.005
Arkansas #1	03/15/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.000025	0.00005	1.4	0.0001	0.0003	0.3	0.0005	0.005
	06/17/2021	0.000025	0.00019	1.35	0.0001	0.0002	0.54	0.001	0.005
Arkansas #2	03/15/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.000025	0.0001	1.7	0.0001	0.0003	0.4	0.0005	0.005
	06/17/2021	0.000025	0.00019	1.37	0.0001	0.0002	0.42	0.001	0.005
AI	02/12/2018	0.000025	0.00005	9.4	0.0001	0.0003	0.7	0.0005	0.005
	06/11/2018	0.00005	0.00005	4.8	0.0001	0.0003	0.5	0.0005	0.005
	06/18/2021	0.000025	0.00005	5.28	0.0001	0.0002	0.68	0.001	0.005
BI	02/12/2018	0.000025	0.00005	11	0.0001	0.0003	1	0.0005	0.005
	06/11/2018	0.00005	0.00005	5.1	0.0001	0.0003	0.5	0.0005	0.005
	06/18/2021	0.000025	0.00005	4.85	0.0001	0.0002	0.65	0.001	0.005
EPR Outlet	02/12/2018	0.000025	0.00005	11.1	0.0001	0.0003	1.1	0.0005	0.005
	06/30/2021	**	**	**	**	**	**	**	**

Notes:

** = No Sample Collected - No flow in Q2 2021

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

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

Table 4 - Baseline Parameters
Surface Water Quality Monitoring Data
Climax Mine

Site Number	Sample Date	Sodium, Dissolved (mg/L)	Thallium, Dissolved (mg/L)	Vanadium, Dissolved (mg/L)	Nitrogen, Ammonia, Total (mg/L)	Alkalinity, Bicarbonate (mg/L)	Alkalinity, Total (mg/L)	Chloride, Dissolved (mg/L)	Cyanide, WAD (mg/L)
CC-SW1	03/19/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.7	0.00005	0.0025	0.025	20.3	20.3	0.25	0.0015
	06/17/2021	0.83	0.00012	0.005	0.089	21.1	21.1	0.25	0.0015
EI-SW1	03/26/2018	***	***	***	***	***	***	***	***
	06/18/2018	1.2	0.00005	0.0025	0.025	113	113	0.6	0.0015
	06/08/2021	0.97	0.00005	0.005	0.025	76.2	76.2	0.25	0.0015
Arkansas #1	03/15/2018	***	***	***	***	***	***	***	***
	06/18/2018	0.5	0.00005	0.0025	0.025	14.6	14.6	0.25	0.0015
	06/17/2021	0.65	0.00005	0.005	0.071	12.8	12.8	0.25	0.0015
Arkansas #2	03/15/2018	***	***	***	***	***	***	***	***
	06/18/2018	1	0.00005	0.0025	0.025	20.9	20.9	1.3	0.0015
	06/17/2021	0.89	0.00005	0.005	0.178	23.9	23.9	0.99	0.0015
AI	02/12/2018	1	0.00005	0.0025	0.025	91.4	91.4	0.7	0.0015
	06/11/2018	0.7	0.00005	0.0025	0.025	41.9	41.9	0.5	0.0015
	06/18/2021	0.72	0.00005	0.005	0.025	49.5	49.5	0.53	0.0015
BI	02/12/2018	1.1	0.00005	0.0025	0.025	82.9	84.3	0.8	0.0015
	06/11/2018	0.7	0.00005	0.0025	0.025	43.8	43.8	0.5	0.0015
	06/18/2021	0.66	0.00005	0.005	0.025	43.8	43.8	0.25	0.0015
EPR Outlet	02/12/2018	1.1	0.00005	0.0025	0.025	85.1	85.4	0.7	0.0015
	06/30/2021	**	**	**	**	**	**	**	**

Site Number	Sample Date	Cyanide, Total (mg/L)	Fluoride, Dissolved (mg/L)	Total Nitrate + Nitrite as N (mg/L)	Total Organic Carbon (mg/L)
CC-SW1	03/19/2018	***	***	***	***
	06/18/2018	0.0015	0.36	0.11	2
	06/17/2021	0.0015	0.74	0.186	1.5
EI-SW1	03/26/2018	***	***	***	***
	06/18/2018	0.0015	0.09	0.06	1.4
	06/08/2021	0.0015	0.075	0.197	3.2
Arkansas #1	03/15/2018	***	***	***	***
	06/18/2018	0.0015	0.18	0.16	1.5
	06/17/2021	0.0015	0.31	0.171	2
Arkansas #2	03/15/2018	***	***	***	***
	06/18/2018	0.0015	0.22	0.08	1.8
	06/17/2021	0.0015	0.27	0.13	1.8
AI	02/12/2018	0.0015	0.09	0.12	1.3
	06/11/2018	0.0015	0.05	0.01	4.2
	06/18/2021	0.0015	0.17	0.01	4.5
BI	02/12/2018	0.0015	0.29	0.06	2.3
	06/11/2018	0.0015	0.025	0.01	3.8
	06/18/2021	0.0015	0.075	0.01	4.8
EPR Outlet	02/12/2018	0.0015	0.32	0.05	2.9
	06/30/2021	**	**	**	**

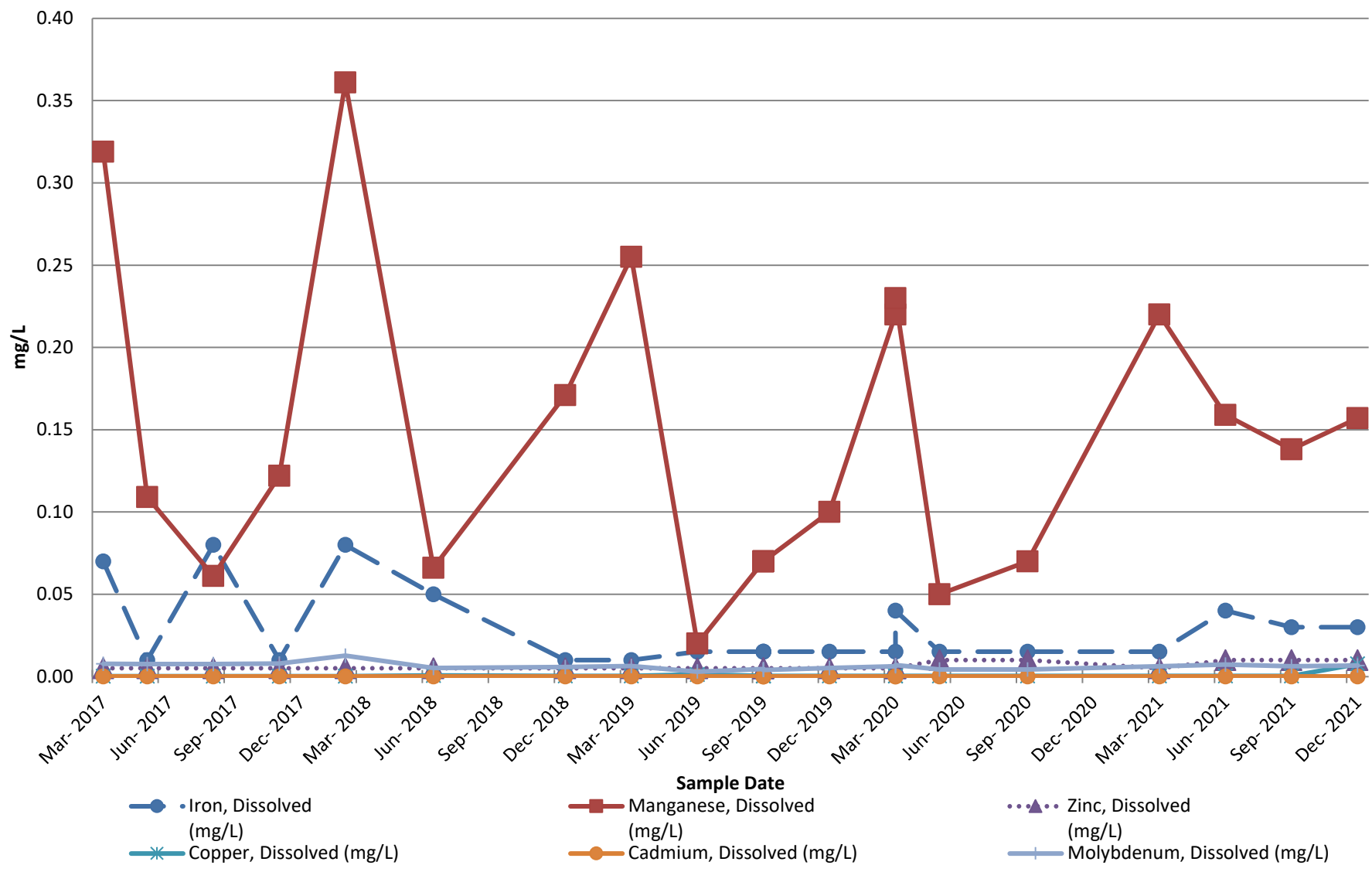
Notes:

** = No Sample Collected - No flow in Q2 2021

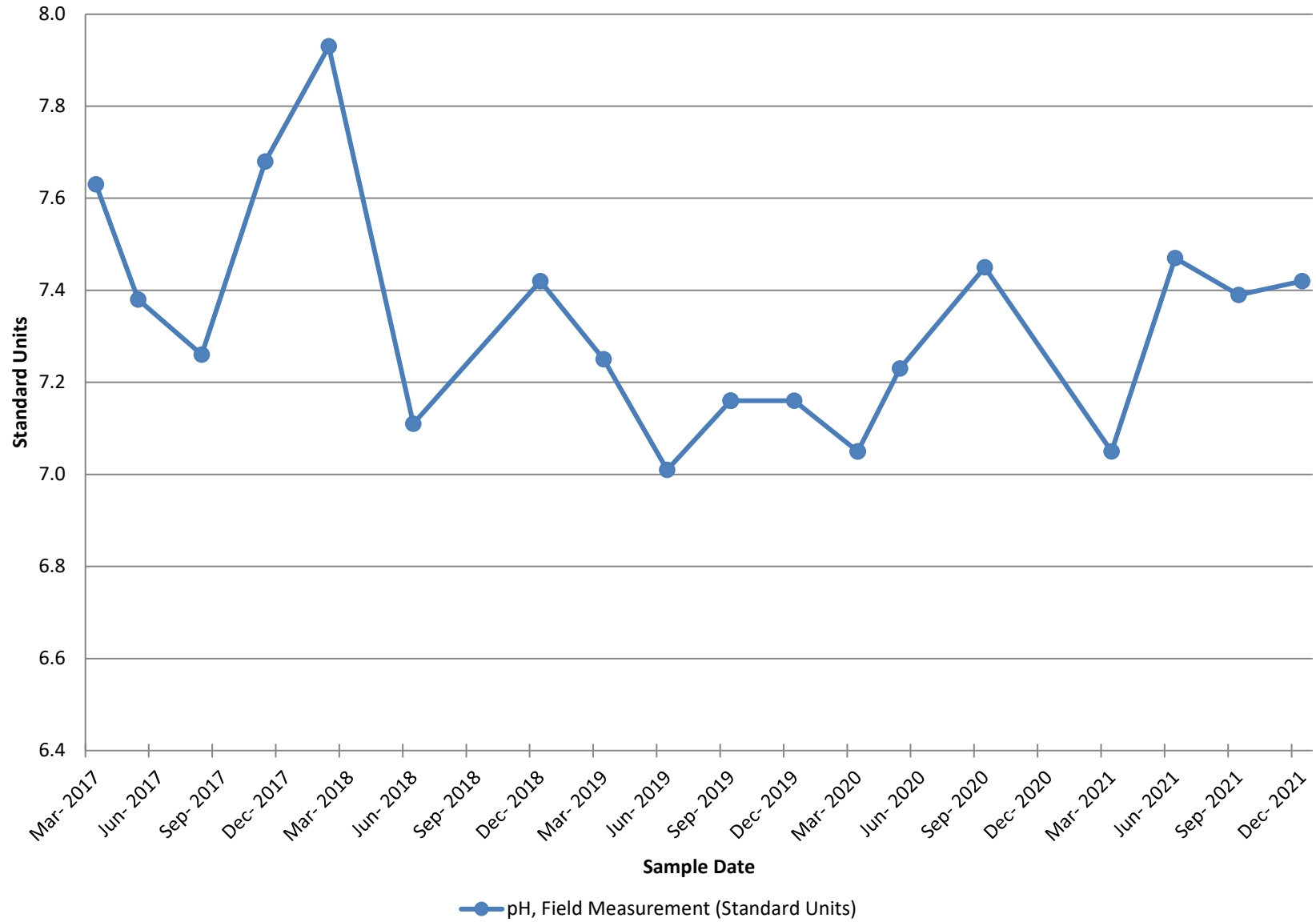
*** = No Sample Collected - Not Accessible (or Frozen) due to Winter Conditions

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

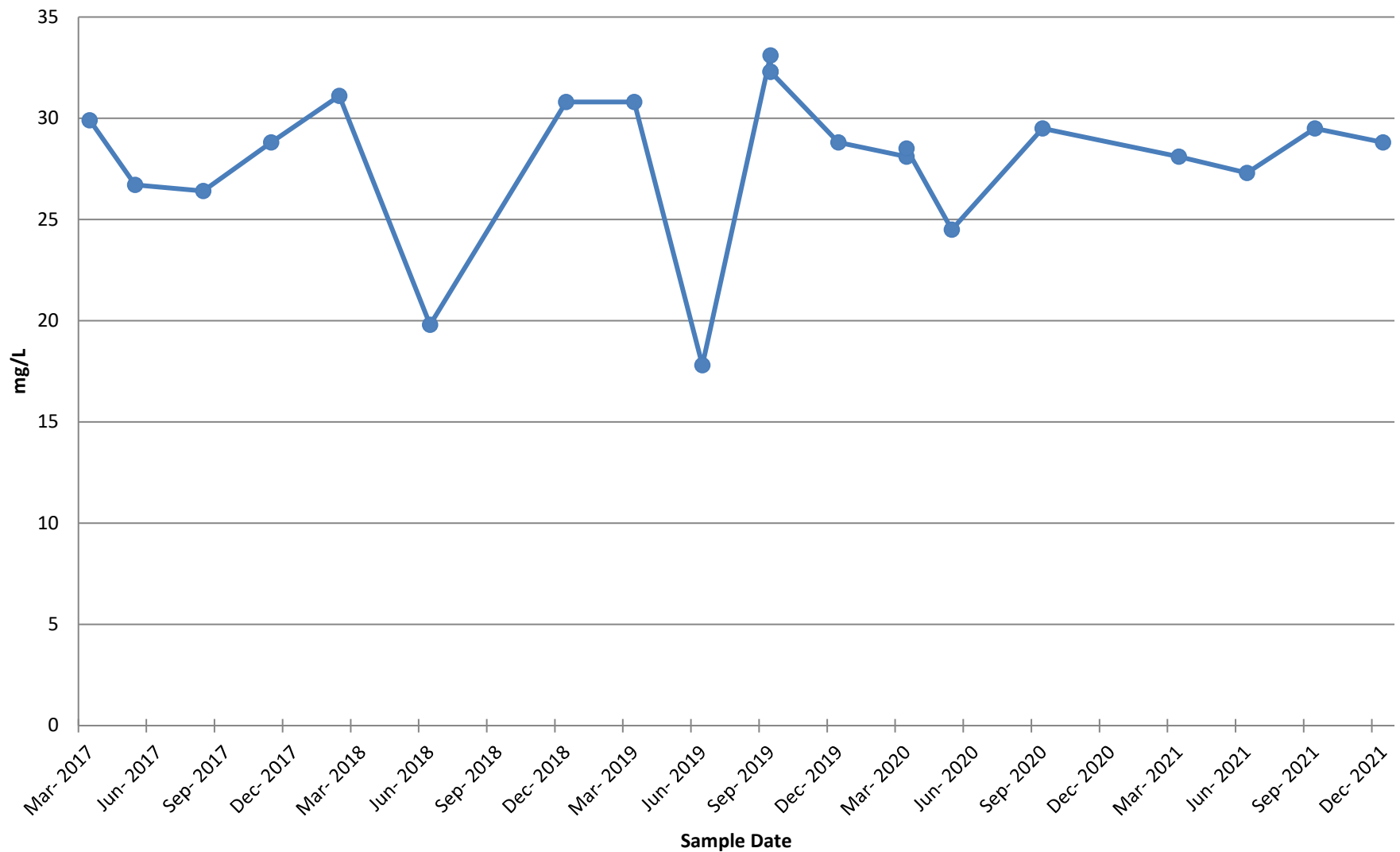
Trend Evaluation 1
ARwell: Metals
Climax Mine



Trend Evaluation 2
ARwell: pH
Climax Mine

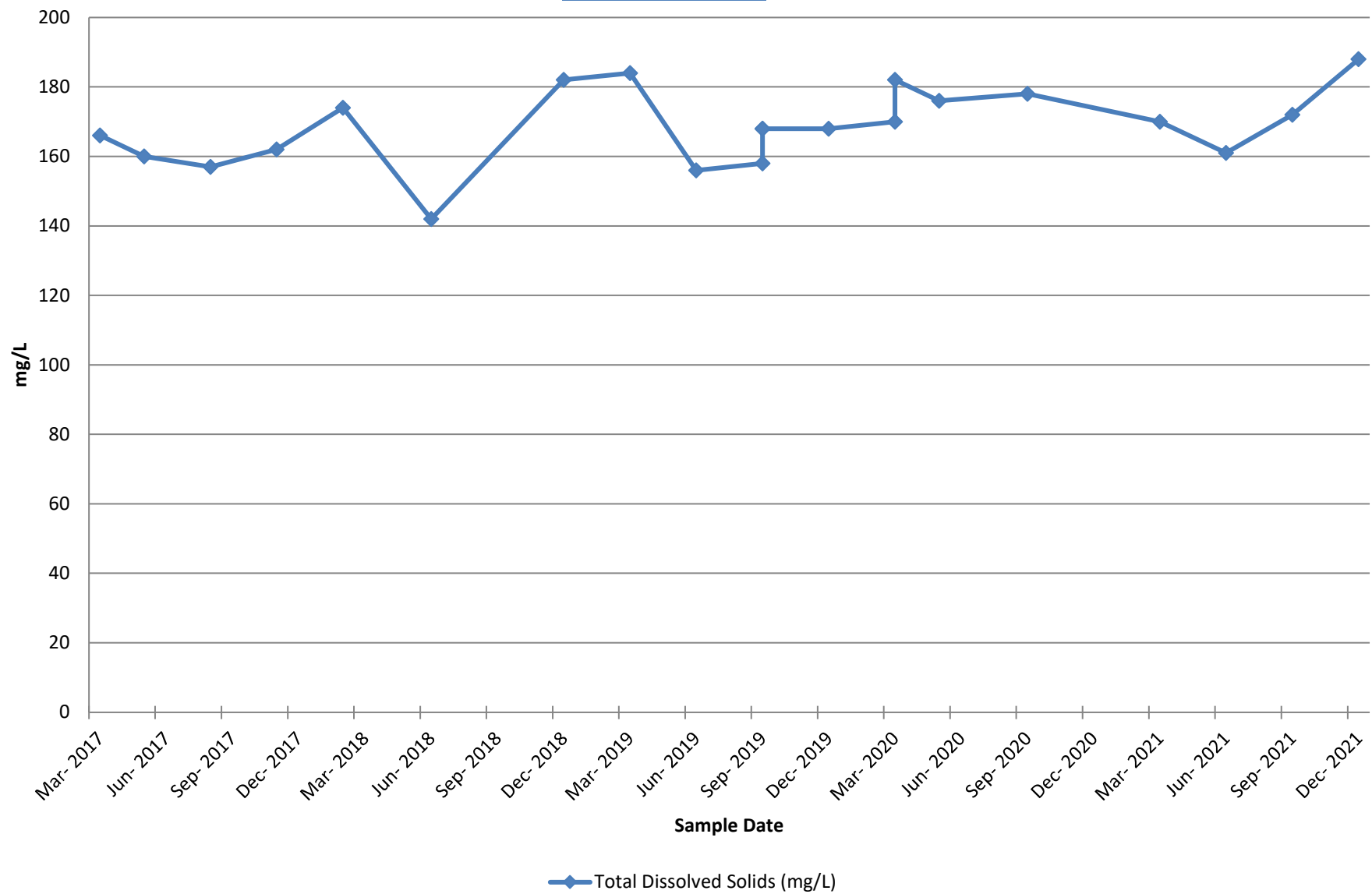


Trend Evaluation 3
ARwell: Sulfate
Climax Mine

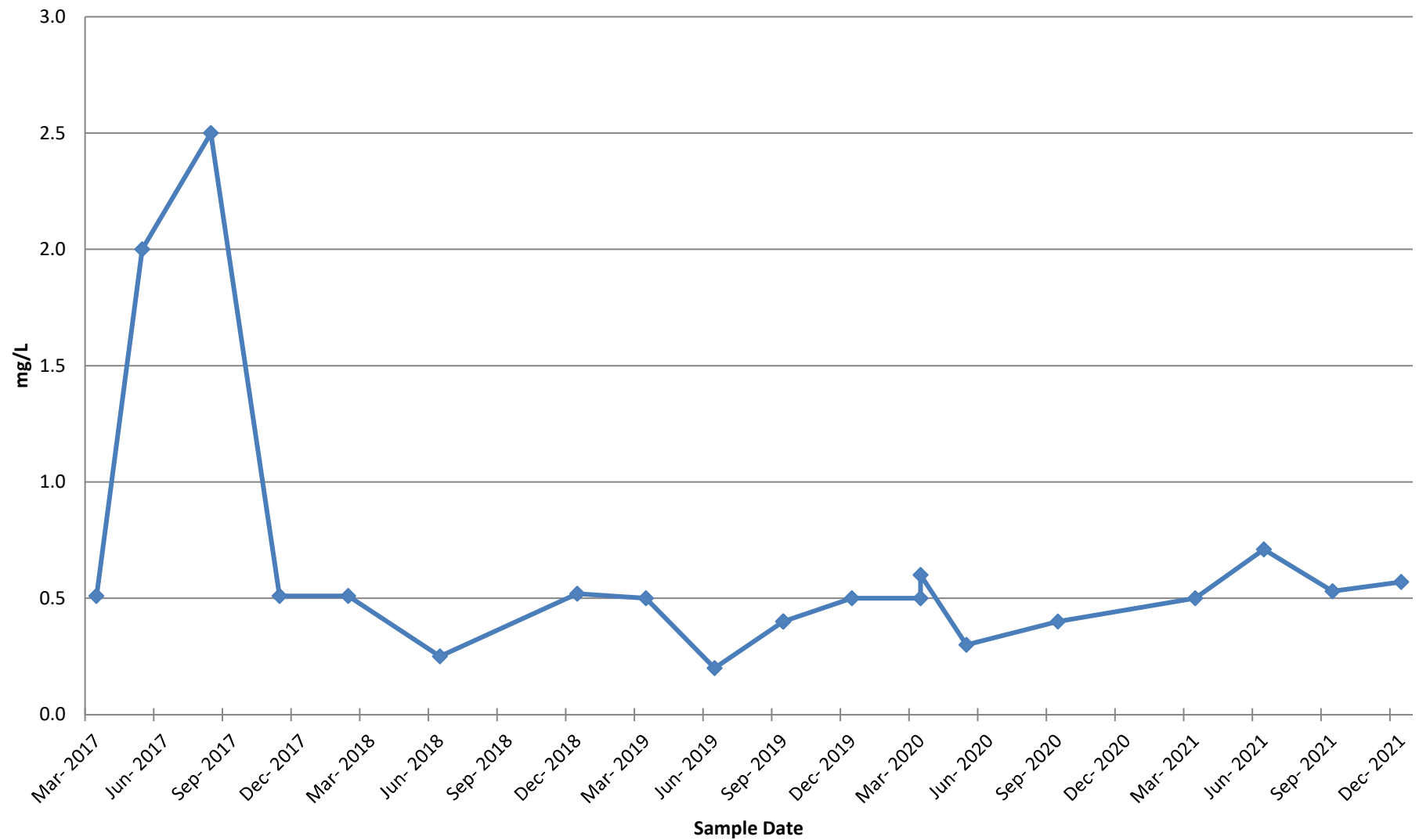


—●— Sulfate (mg/L)

Trend Evaluation 4
ARwell: TDS
Climax Mine

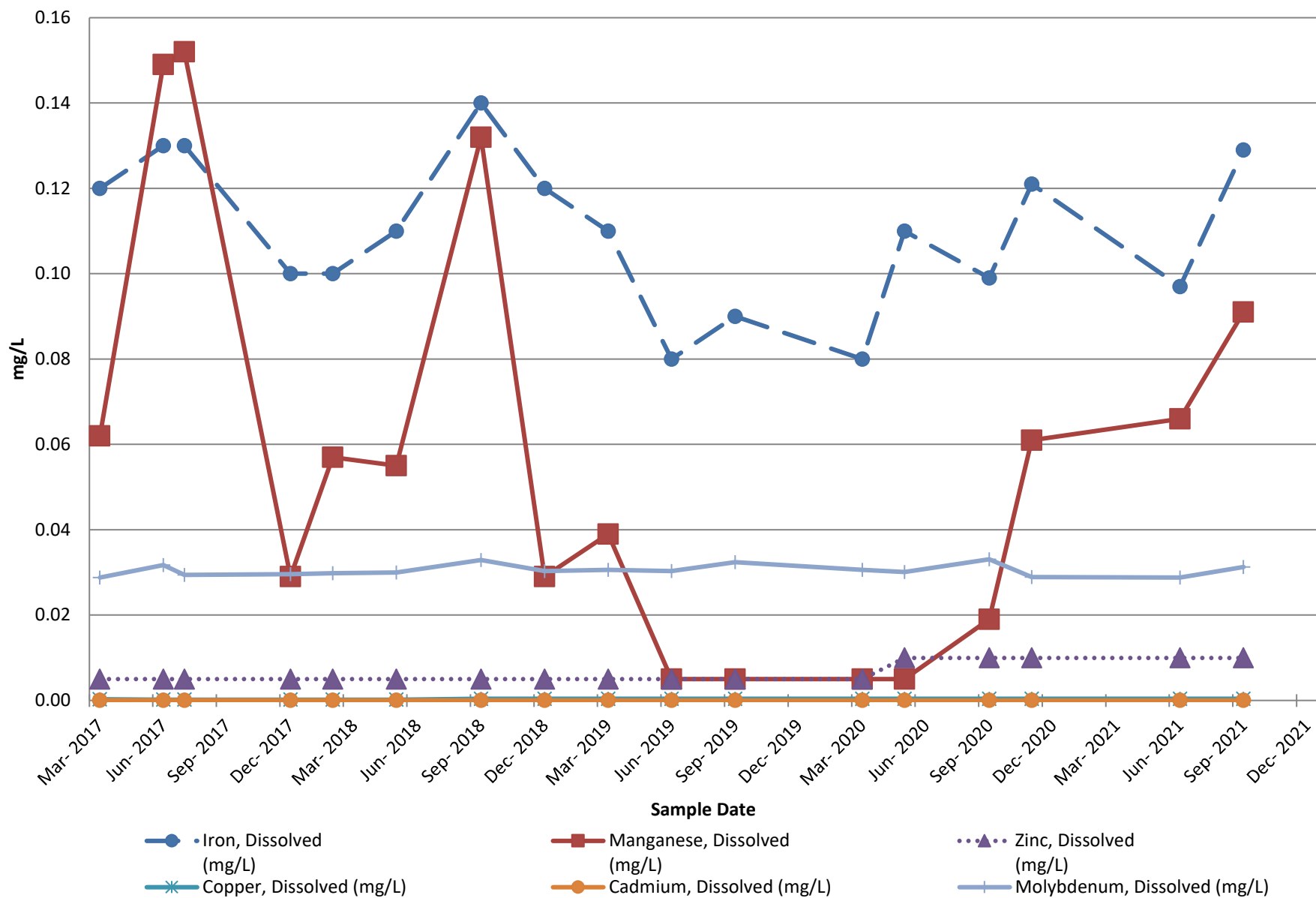


Trend Evaluation 5
ARwell: Fluoride
Climax Mine

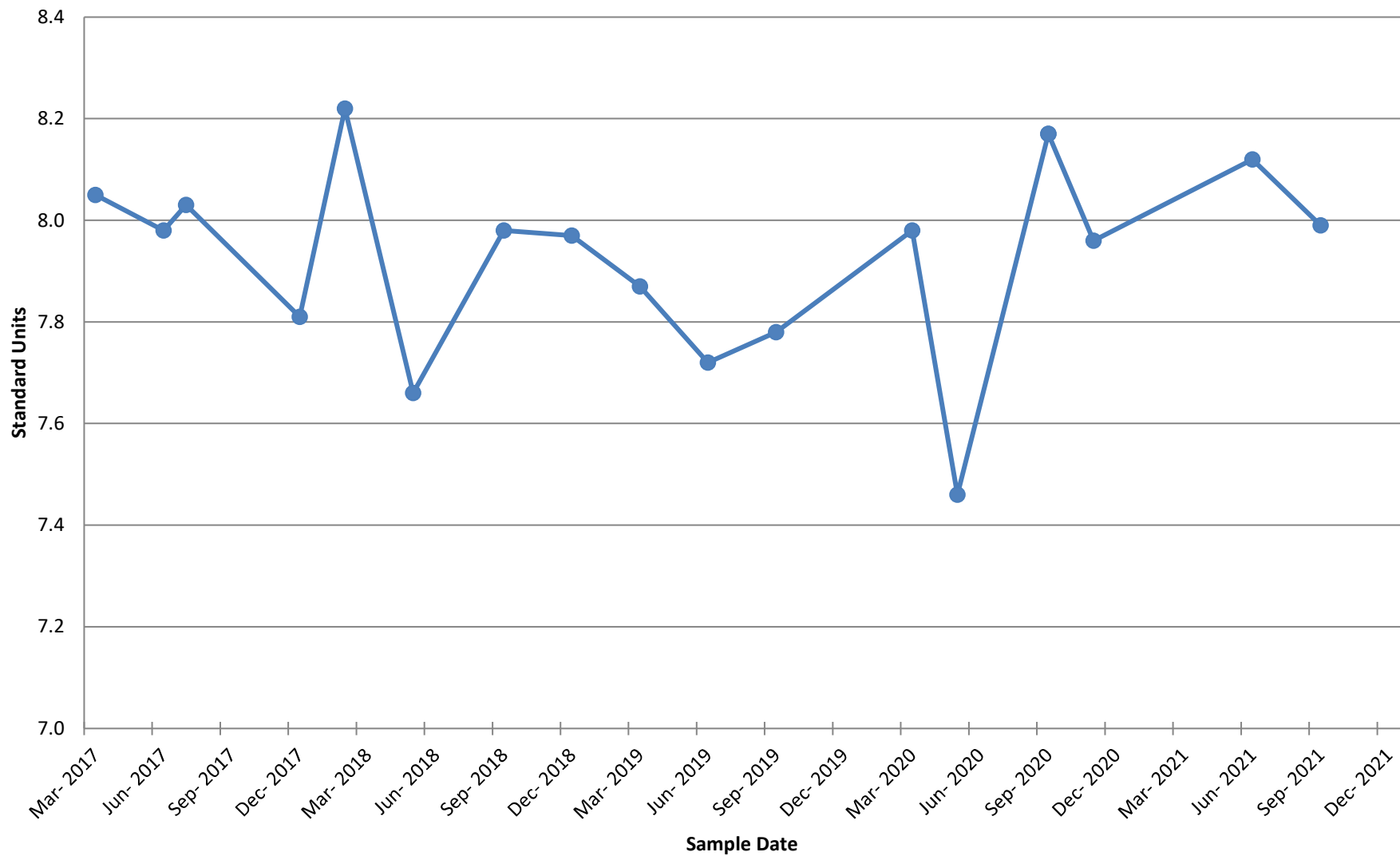


—◆— Fluoride (mg/L)

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

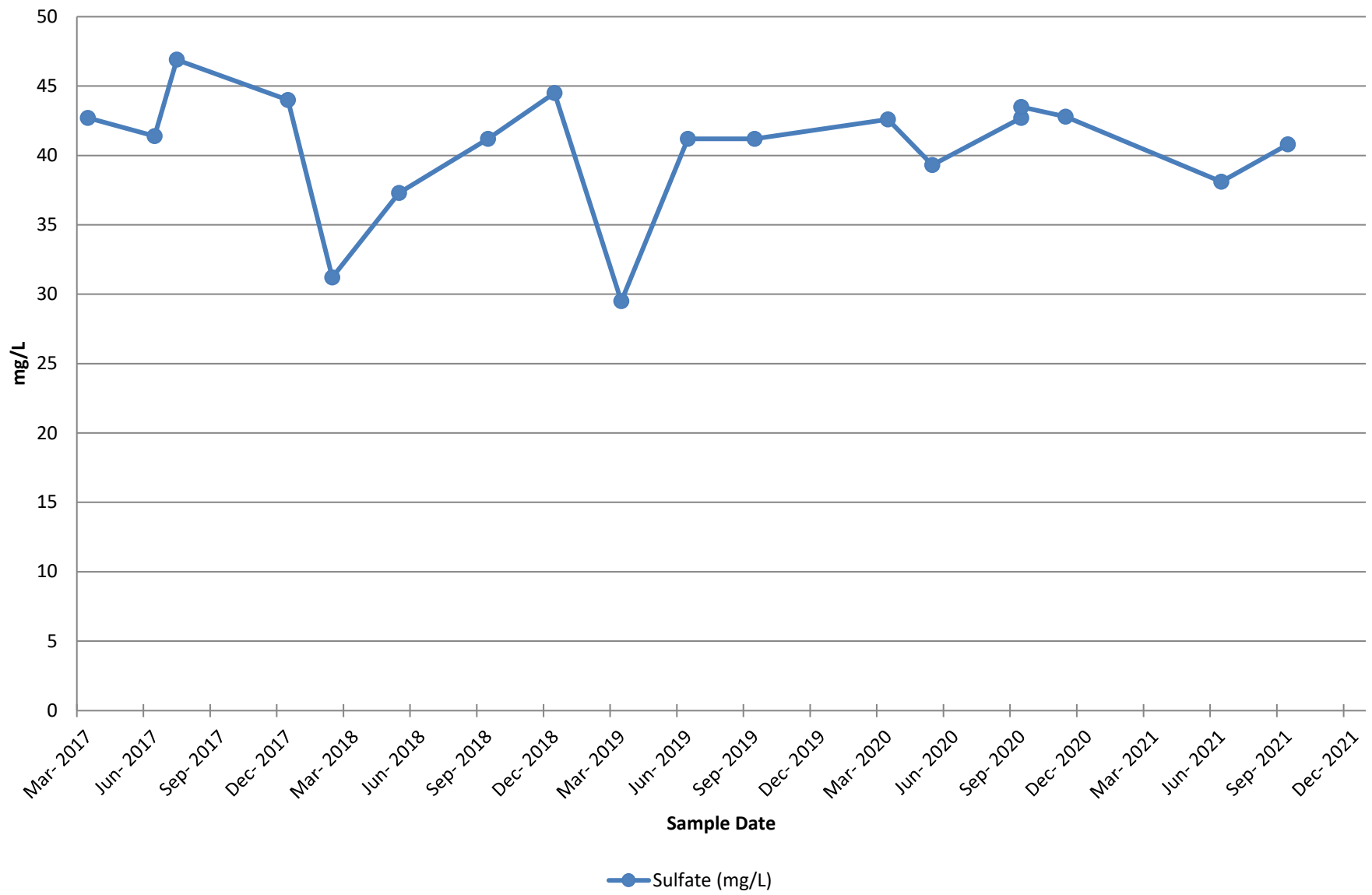


Trend Evaluation 7
ARK-MW-001D: pH
Climax Mine

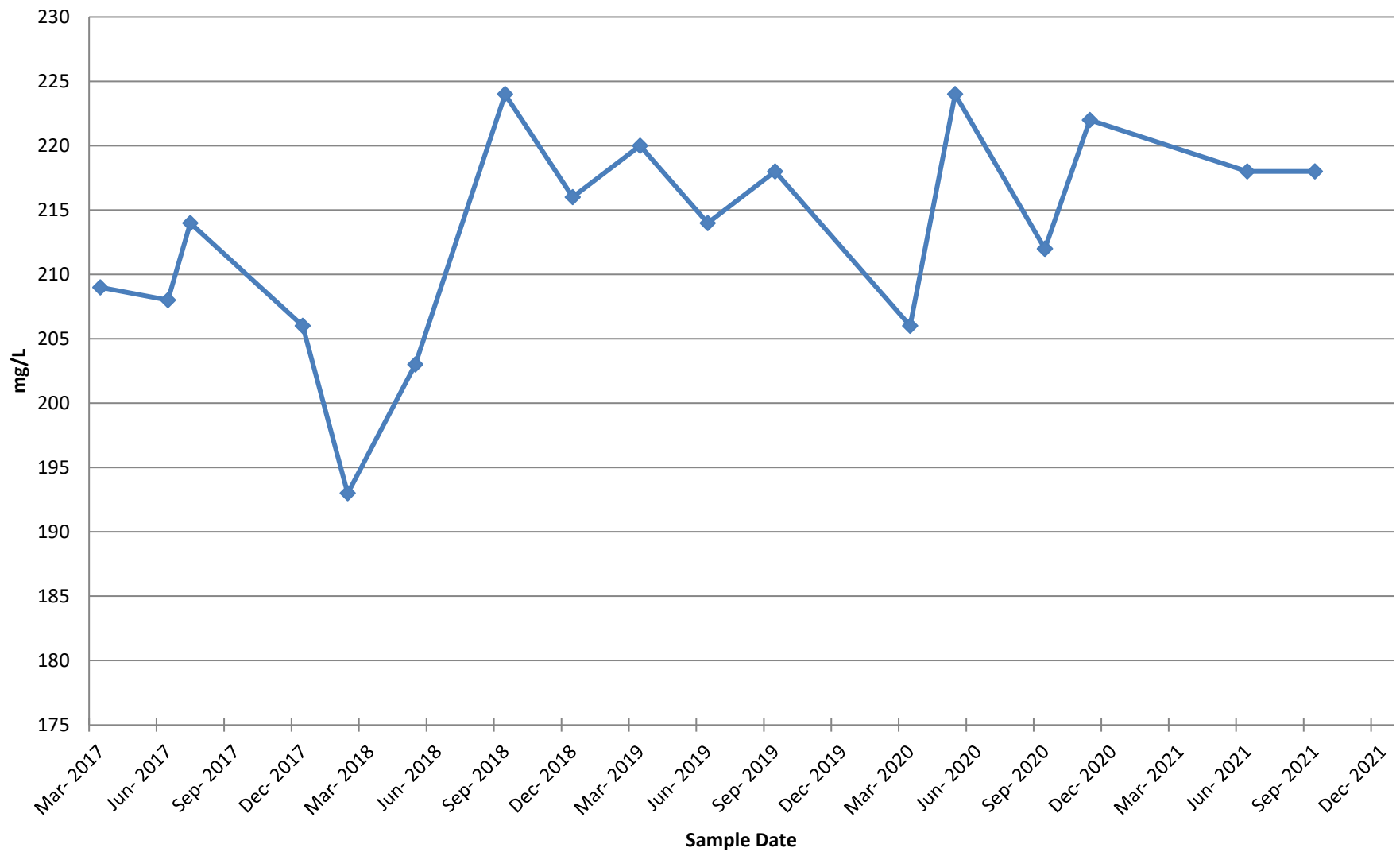


—●— pH, Field Measurement (Standard Units)

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

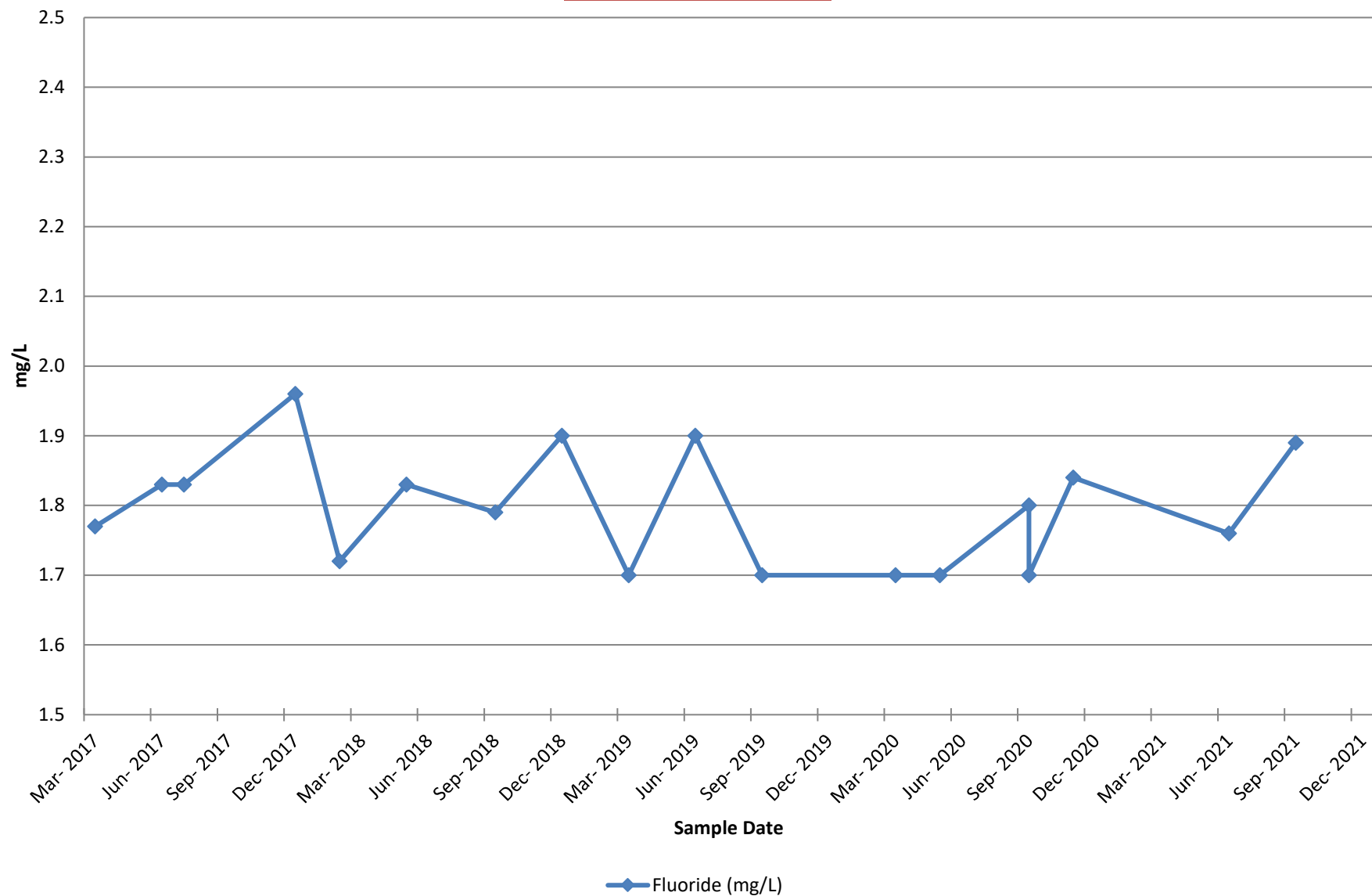


Trend Evaluation 9
ARK-MW-001D: TDS
Climax Mine

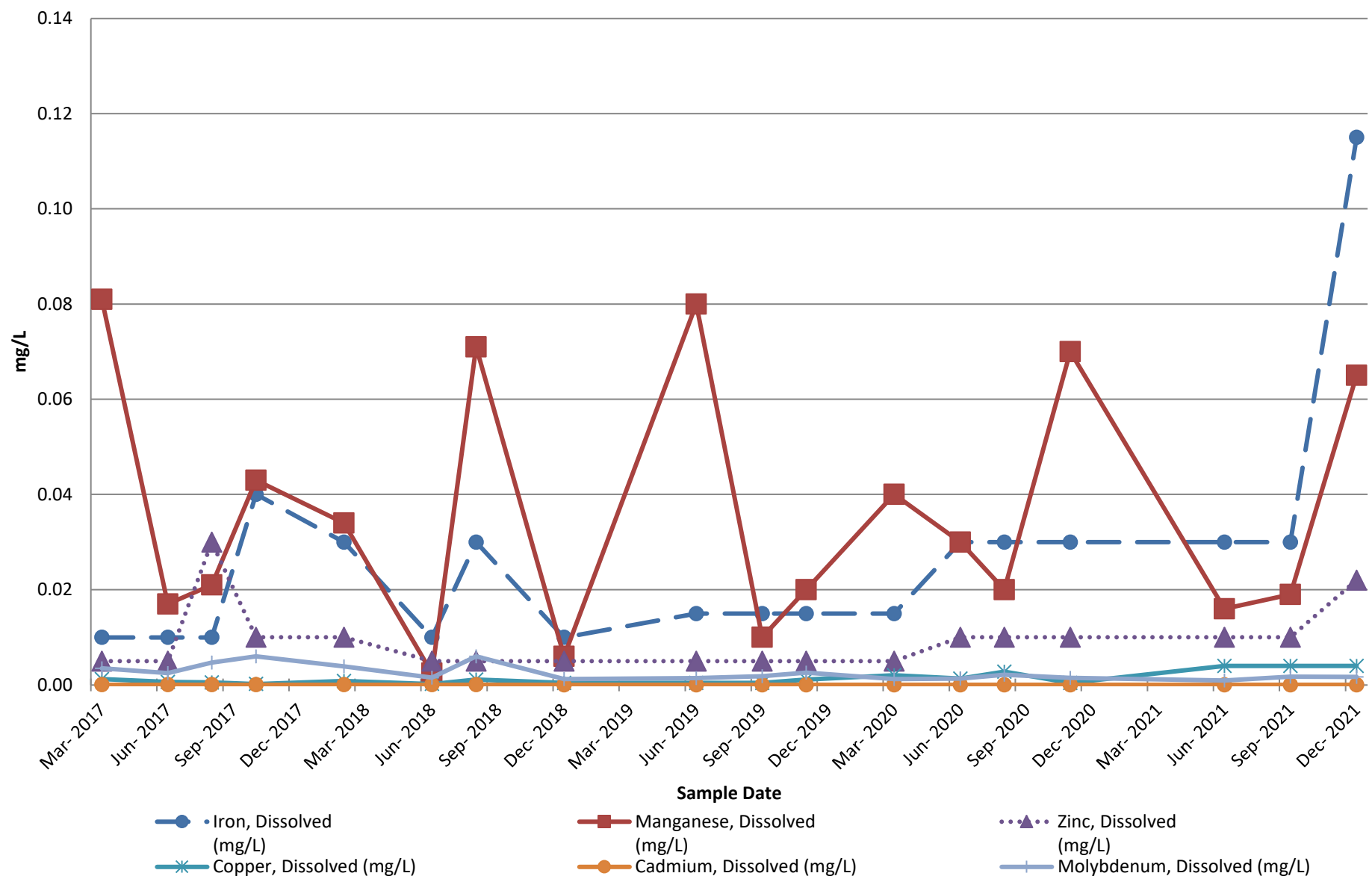


—◆— Total Dissolved Solids (mg/L)

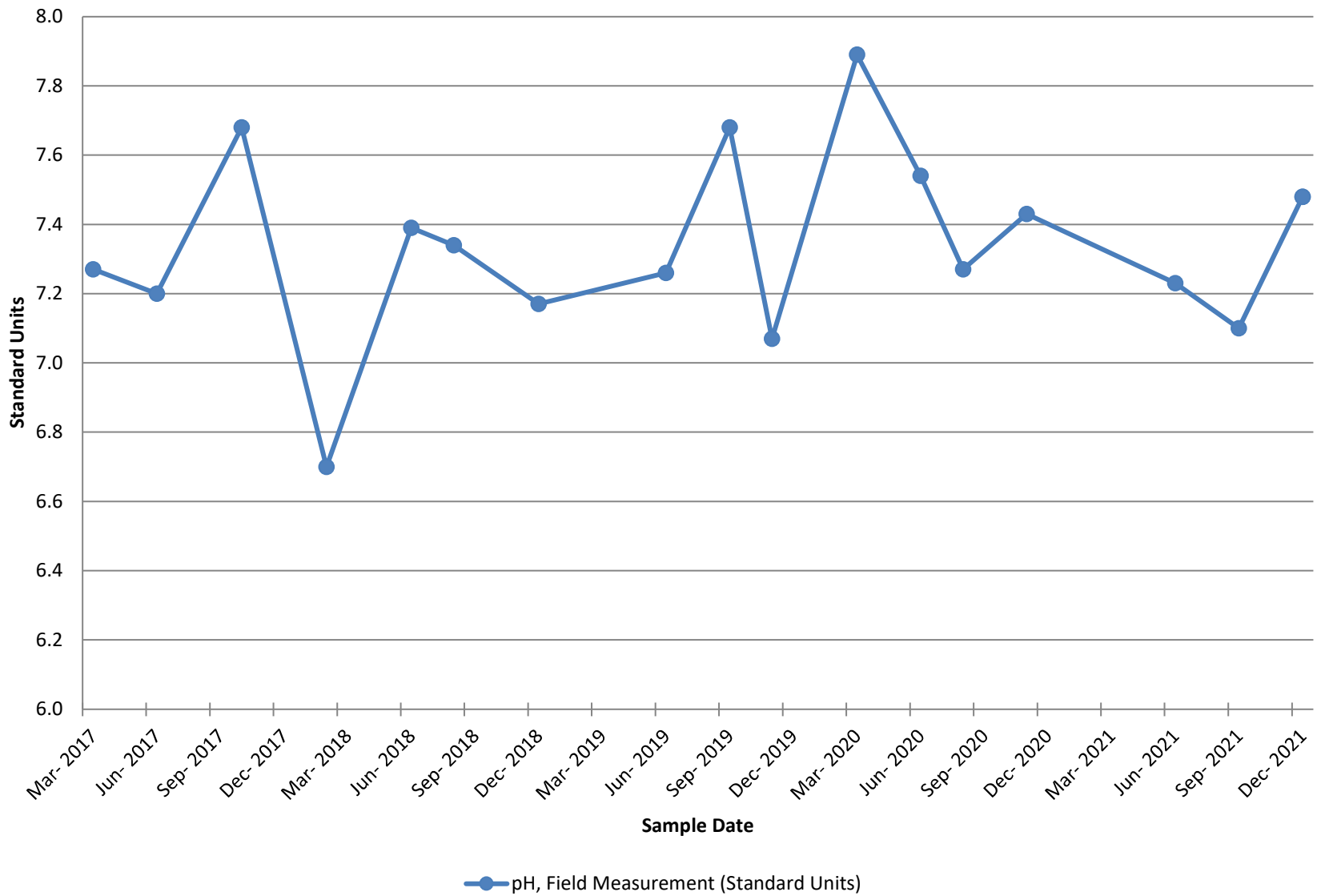
Trend Evaluation 10
ARK-MW-001D: Fluoride
Climax Mine



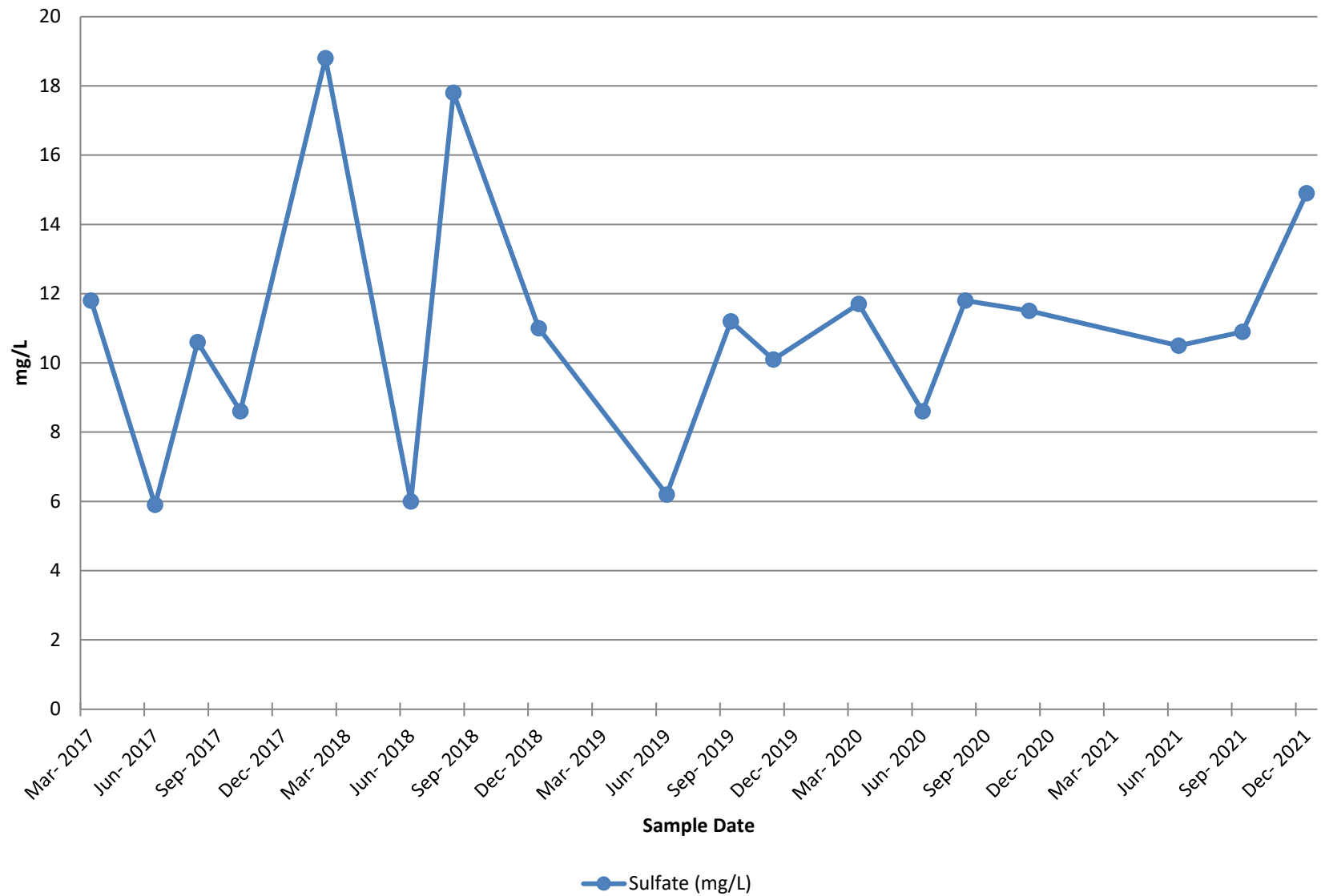
Trend Evaluation 11
EVMW-3S: Metals
Climax Mine



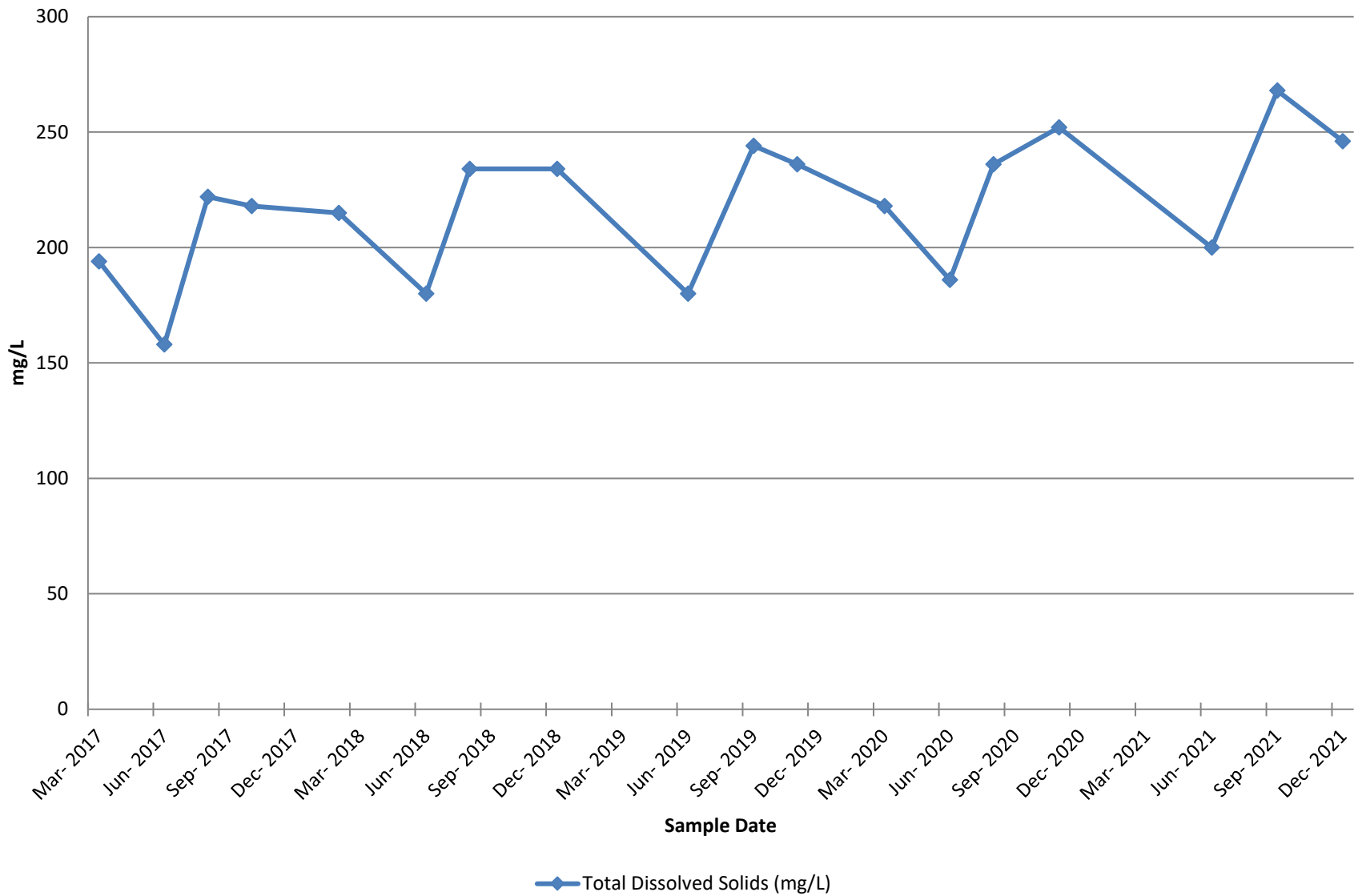
Trend Evaluation 12
EVMW-3S: pH
Climax Mine



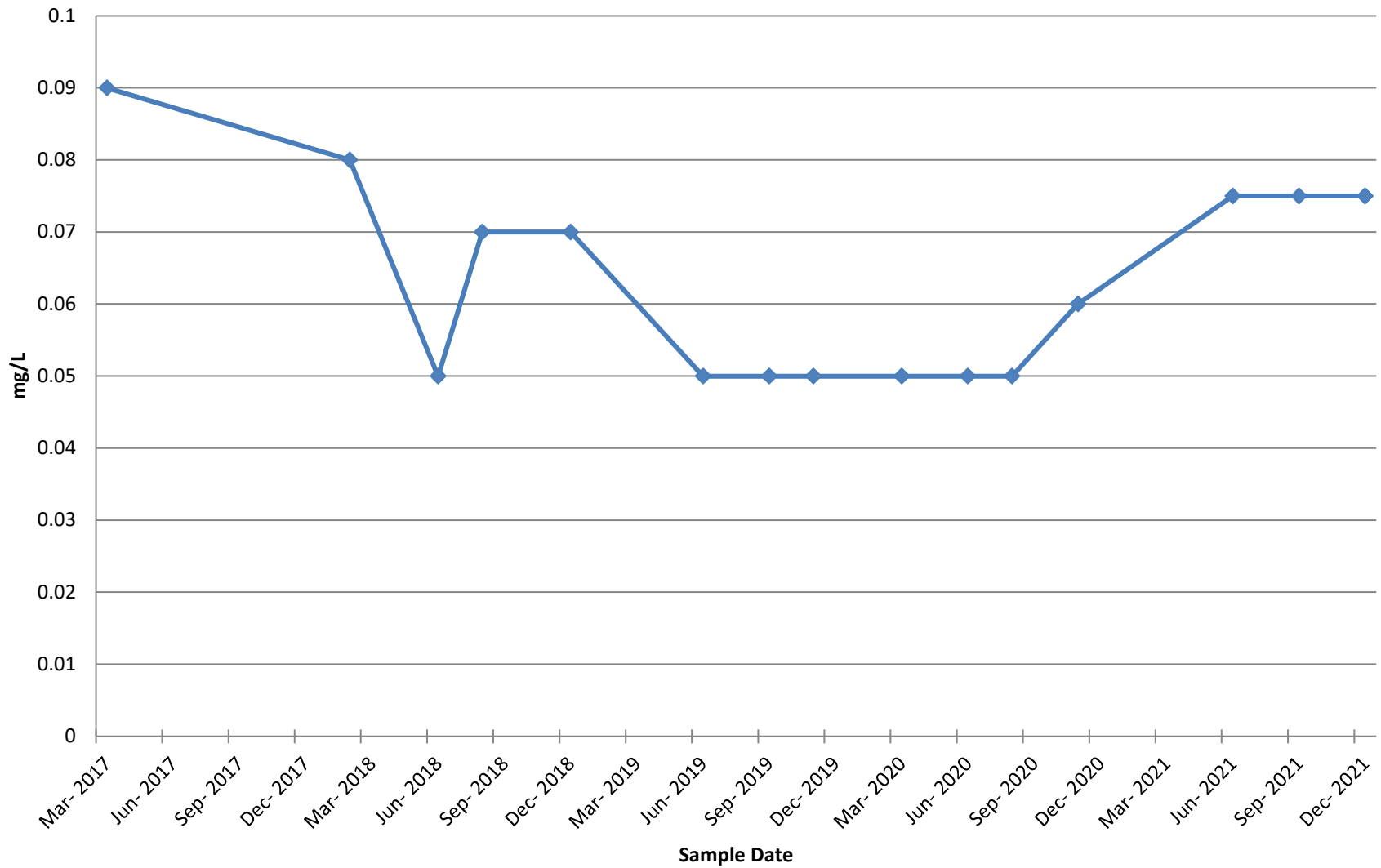
Trend Evaluation 13
EVMW-3S: Sulfate
Climax Mine



Trend Evaluation 14
EVMW-3S: TDS
Climax Mine

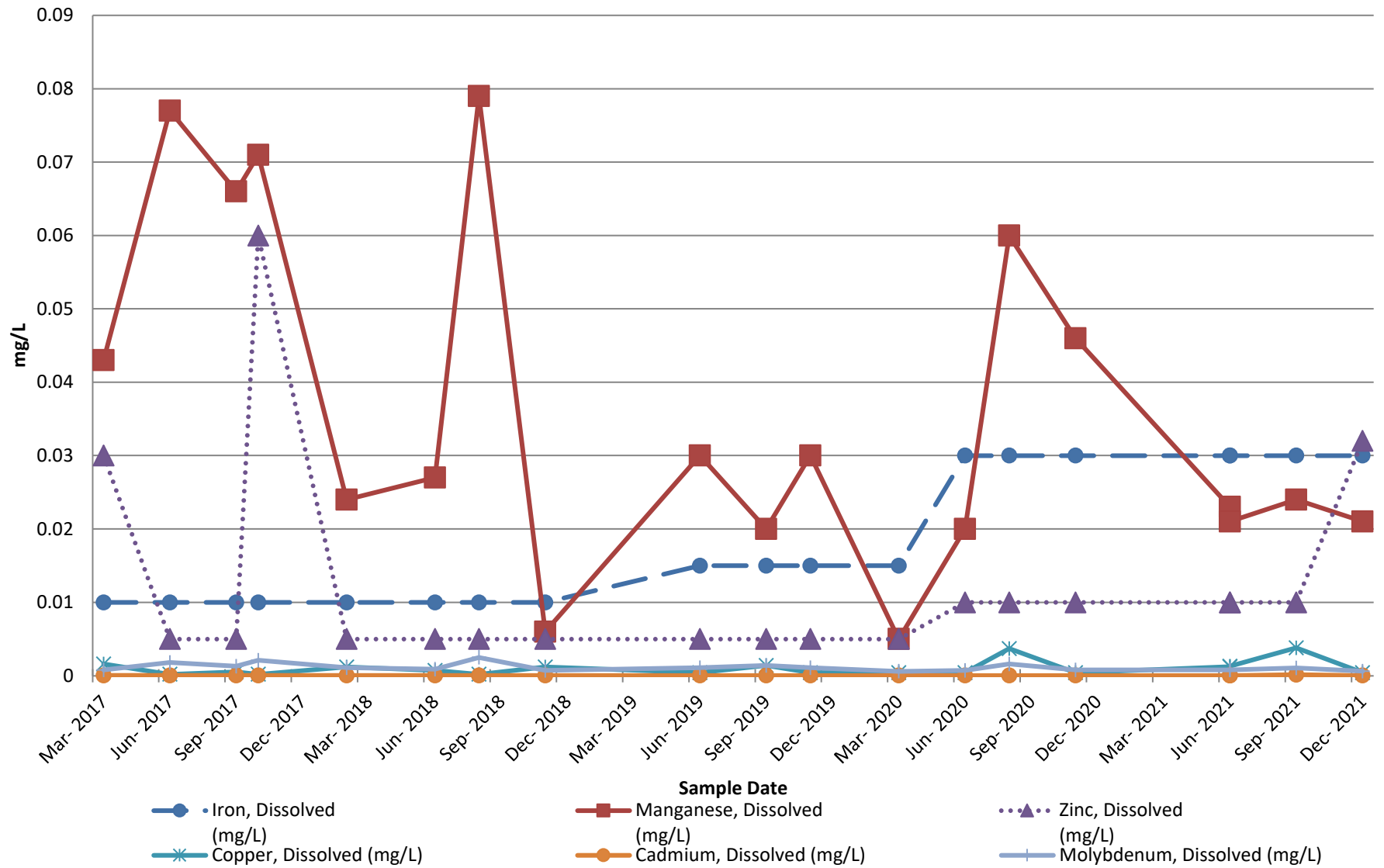


Trend Evaluation 15
EVMW-3S: Fluoride
Climax Mine

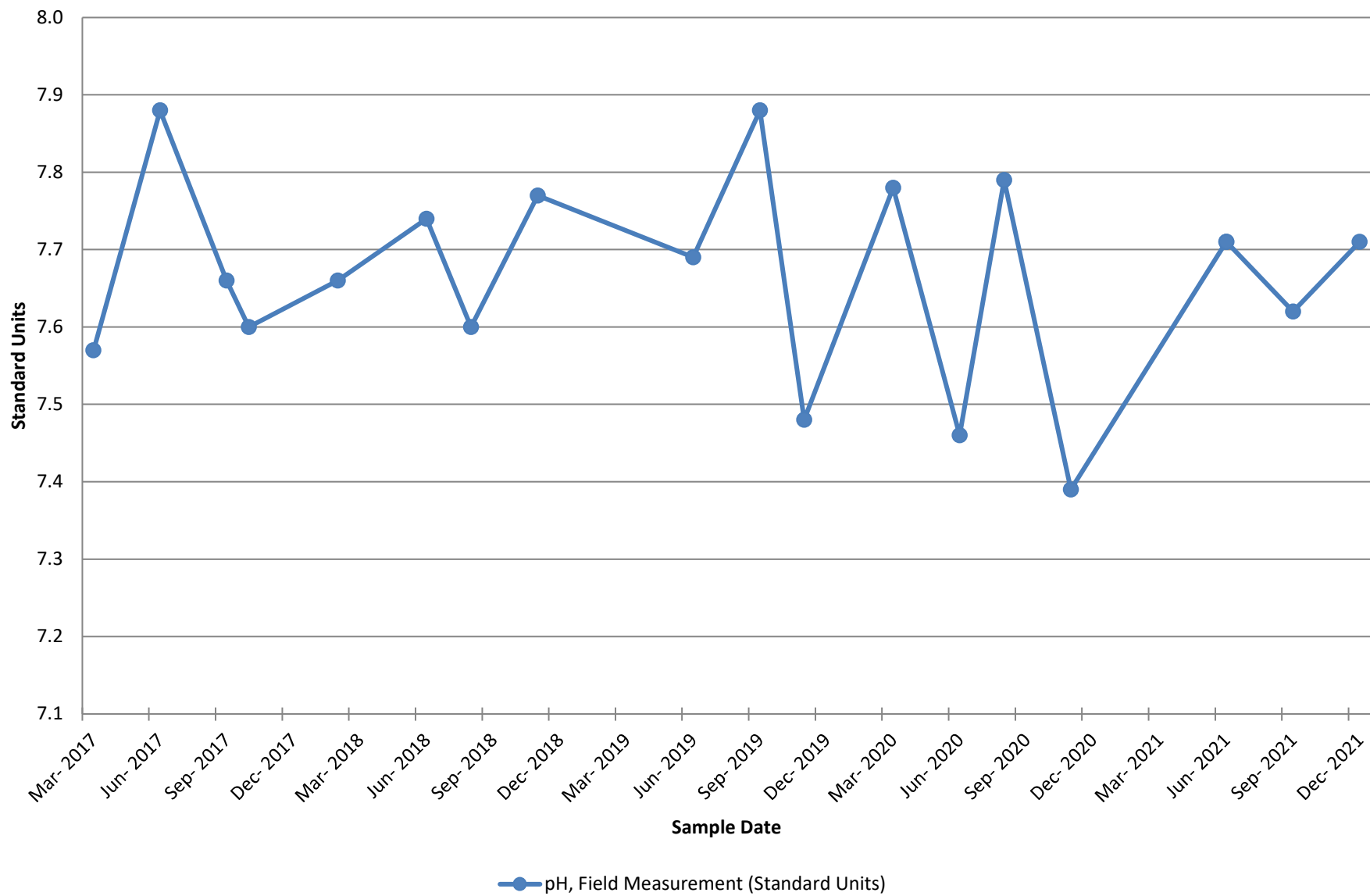


—◆— Fluoride (mg/L)

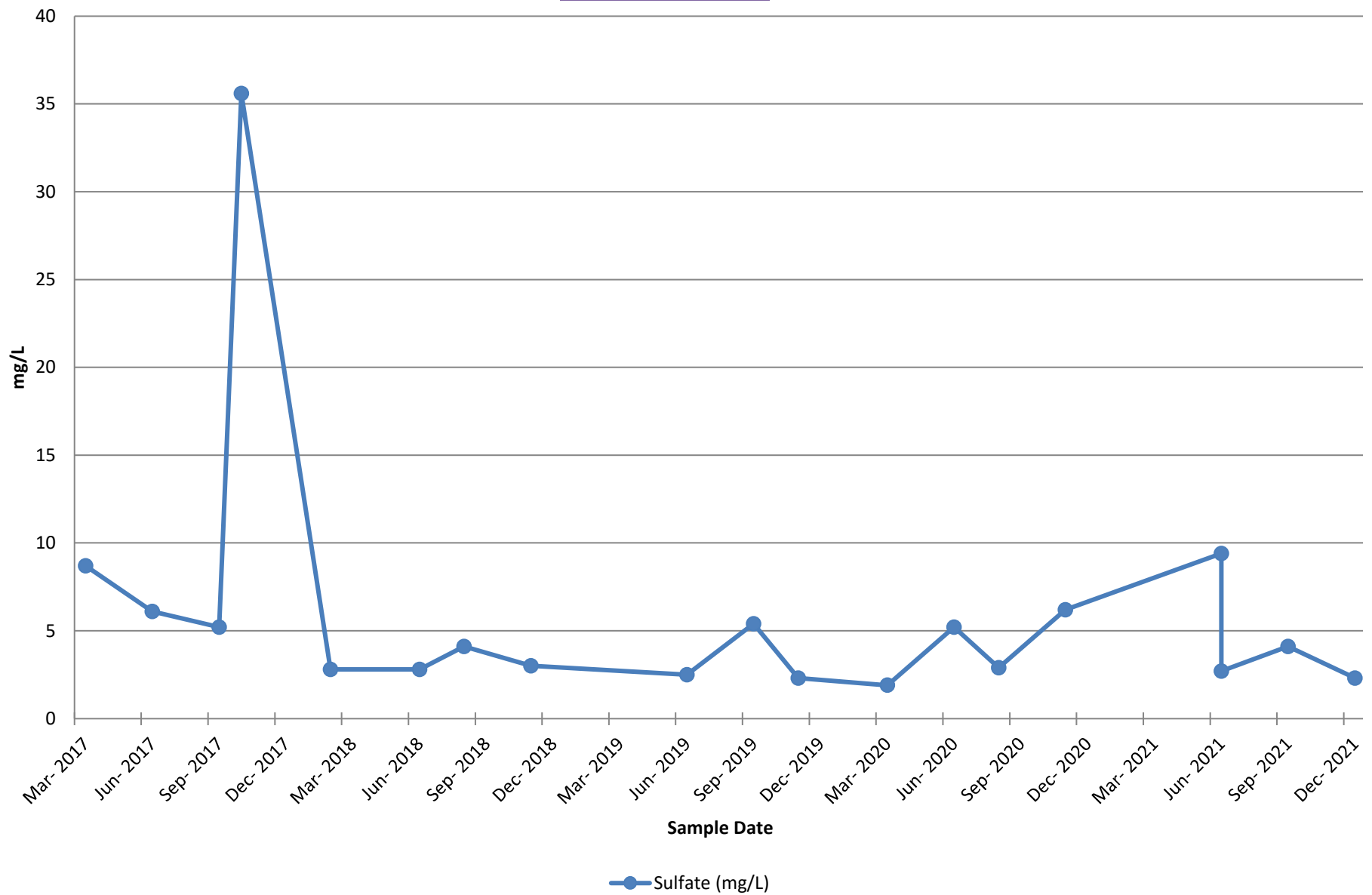
Trend Evaluation 16
EVMW-3D: Metals
Climax Mine



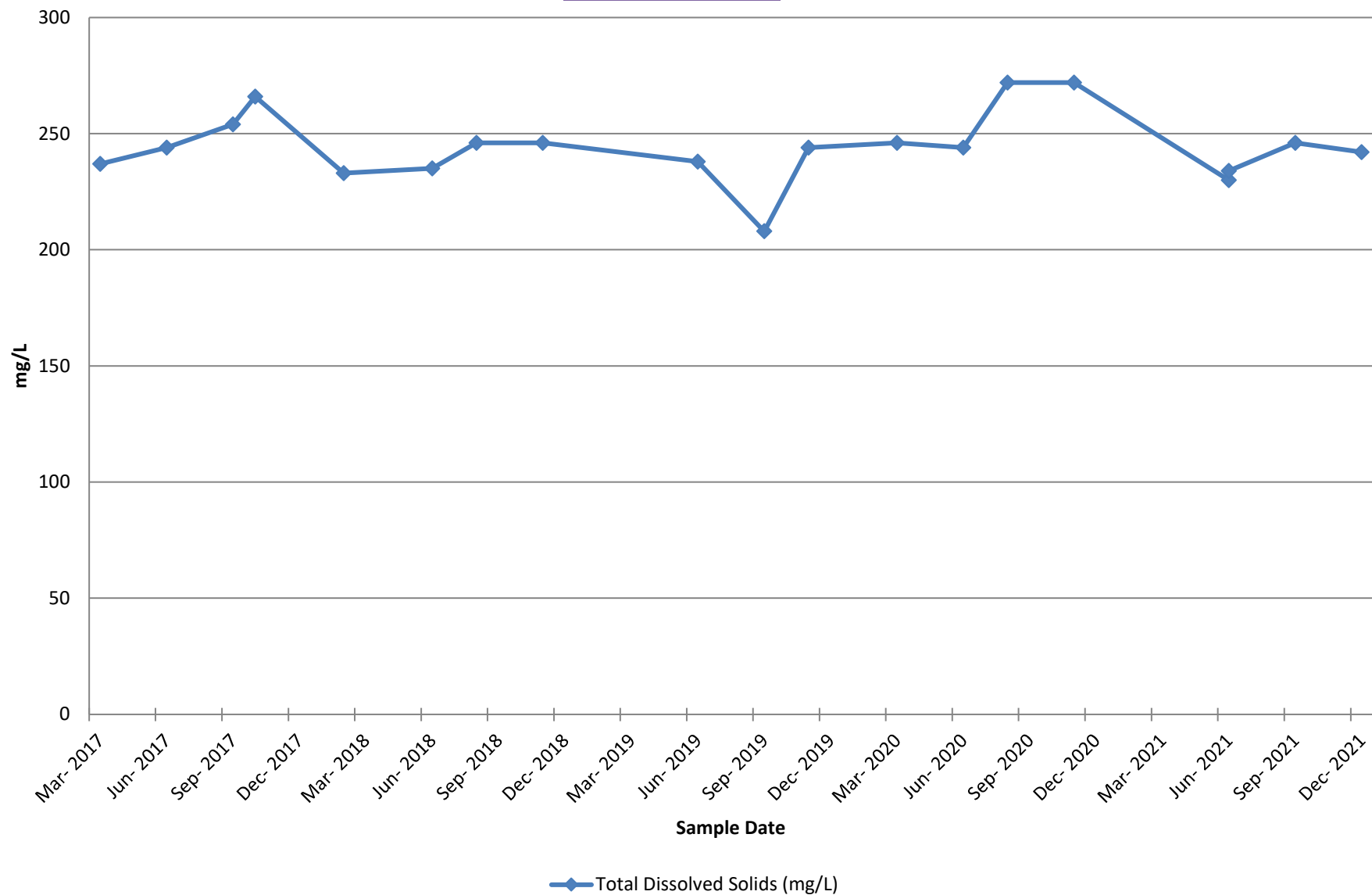
Trend Evaluation 17
EVMW-3D: pH
Climax Mine



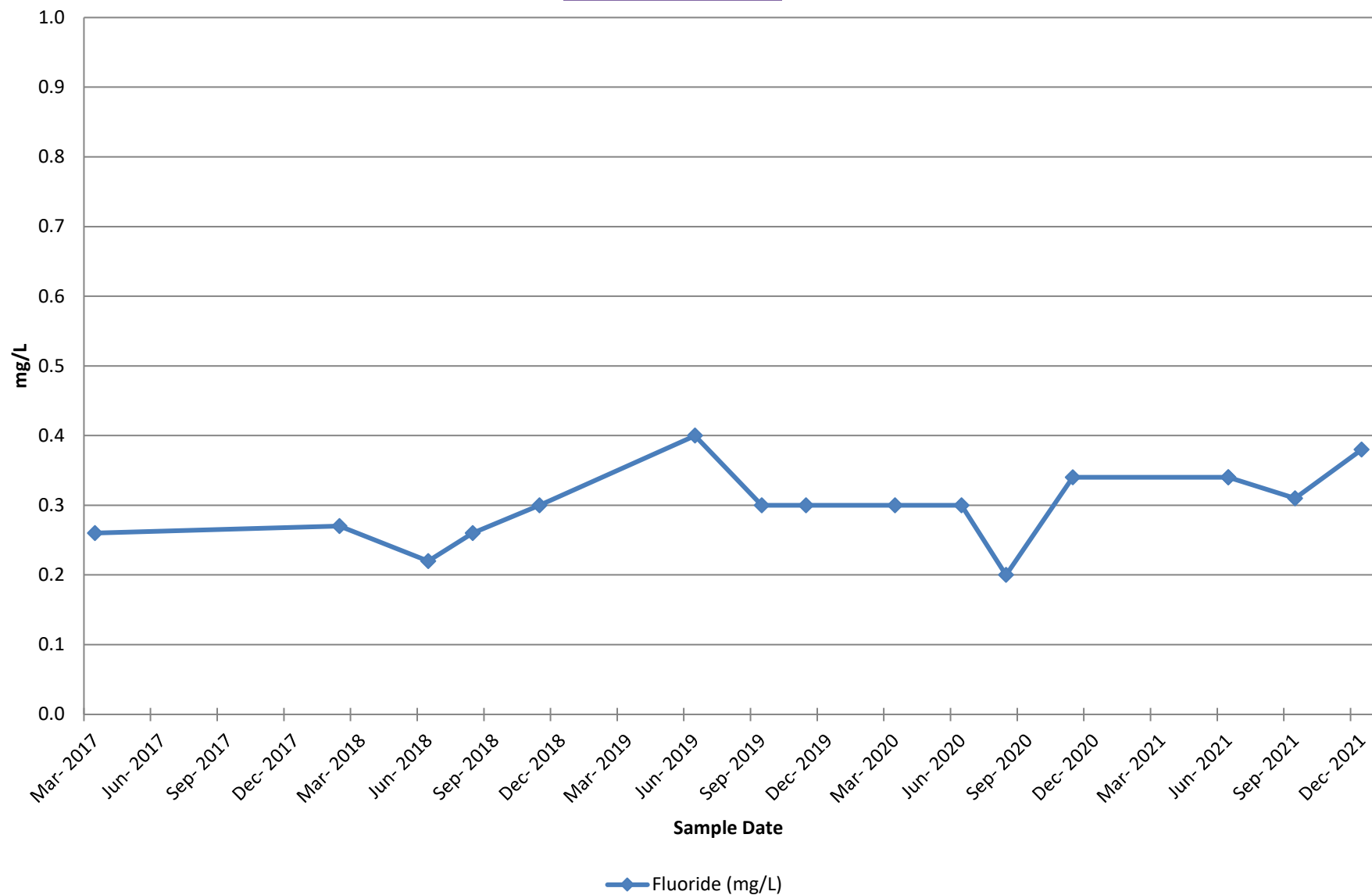
Trend Evaluation 18
EVMW-3D: Sulfate
Climax Mine



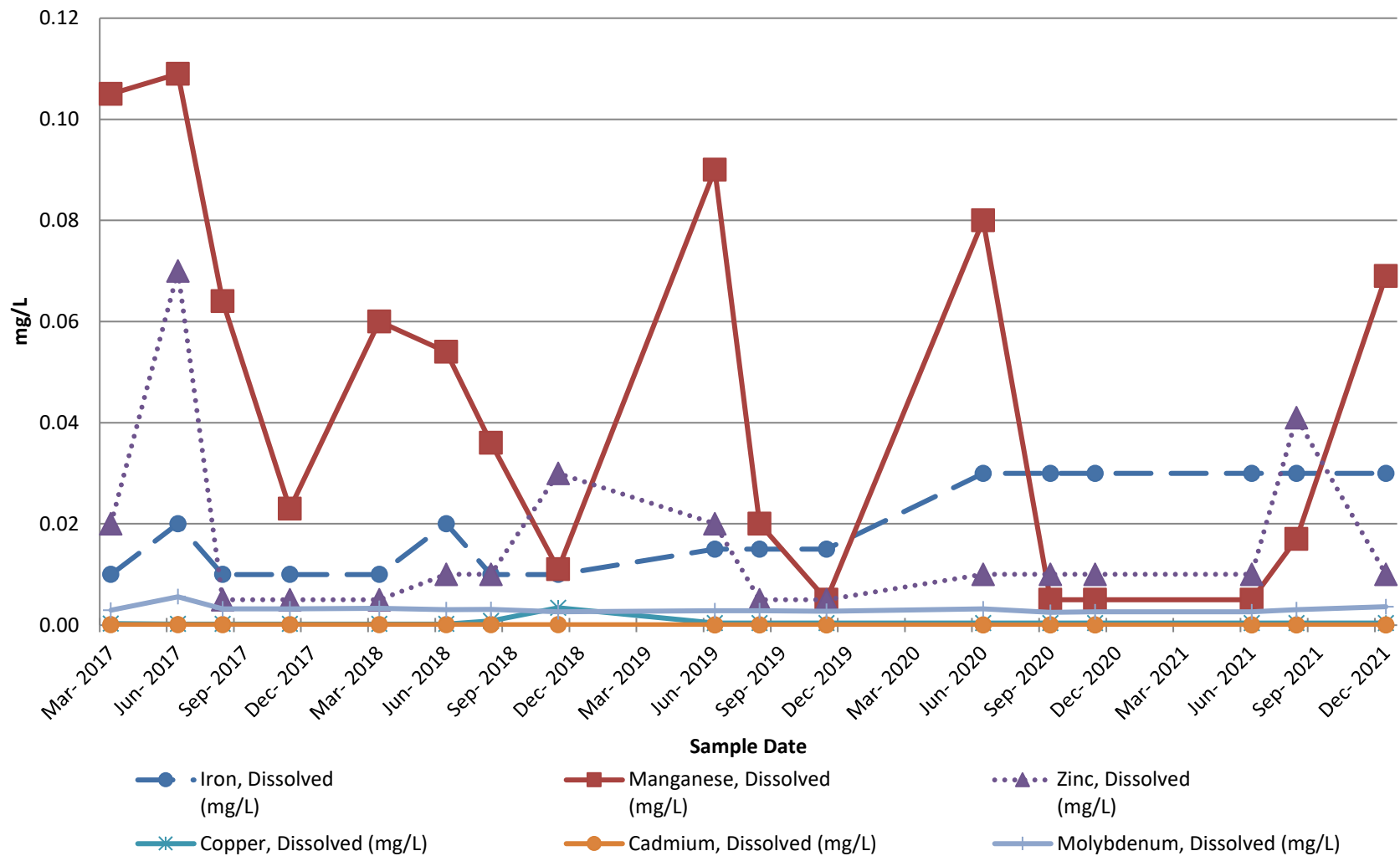
Trend Evaluation 19
EVMW-3D: TDS
Climax Mine



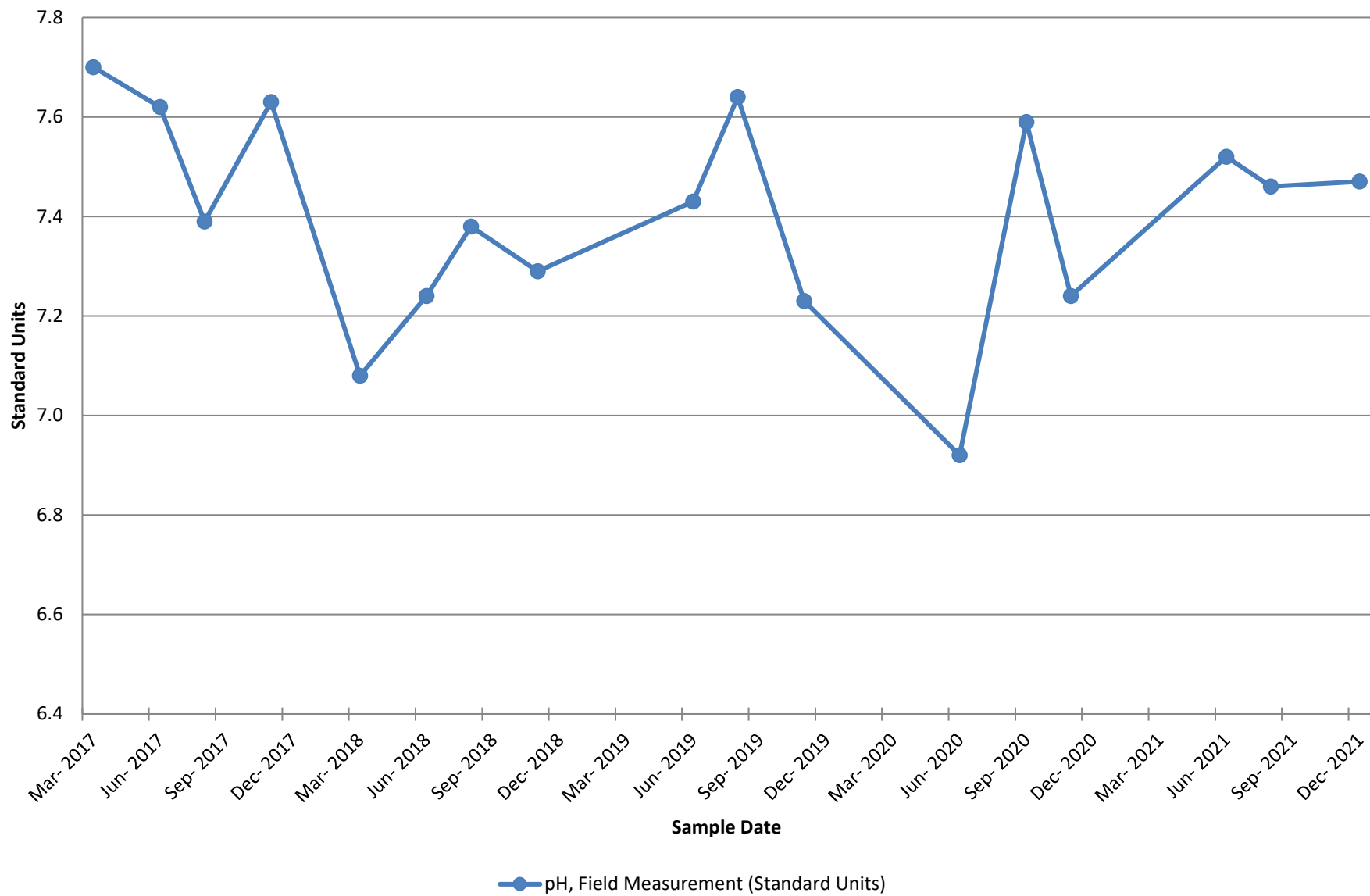
Trend Evaluation 20
EVMW-3D: Fluoride
Climax Mine



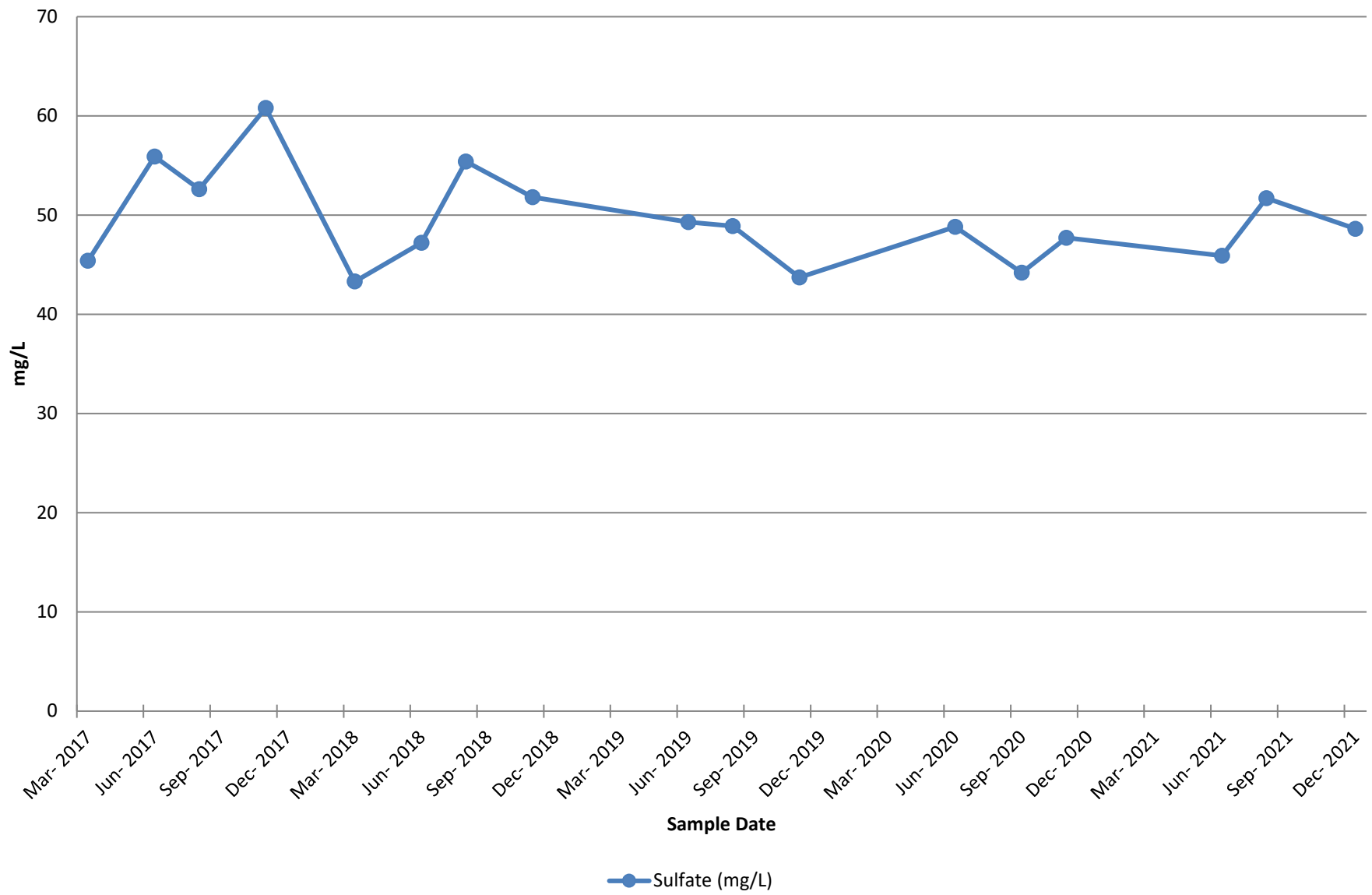
Trend Evaluation 21
EV-MW-004: Metals
Climax Mine



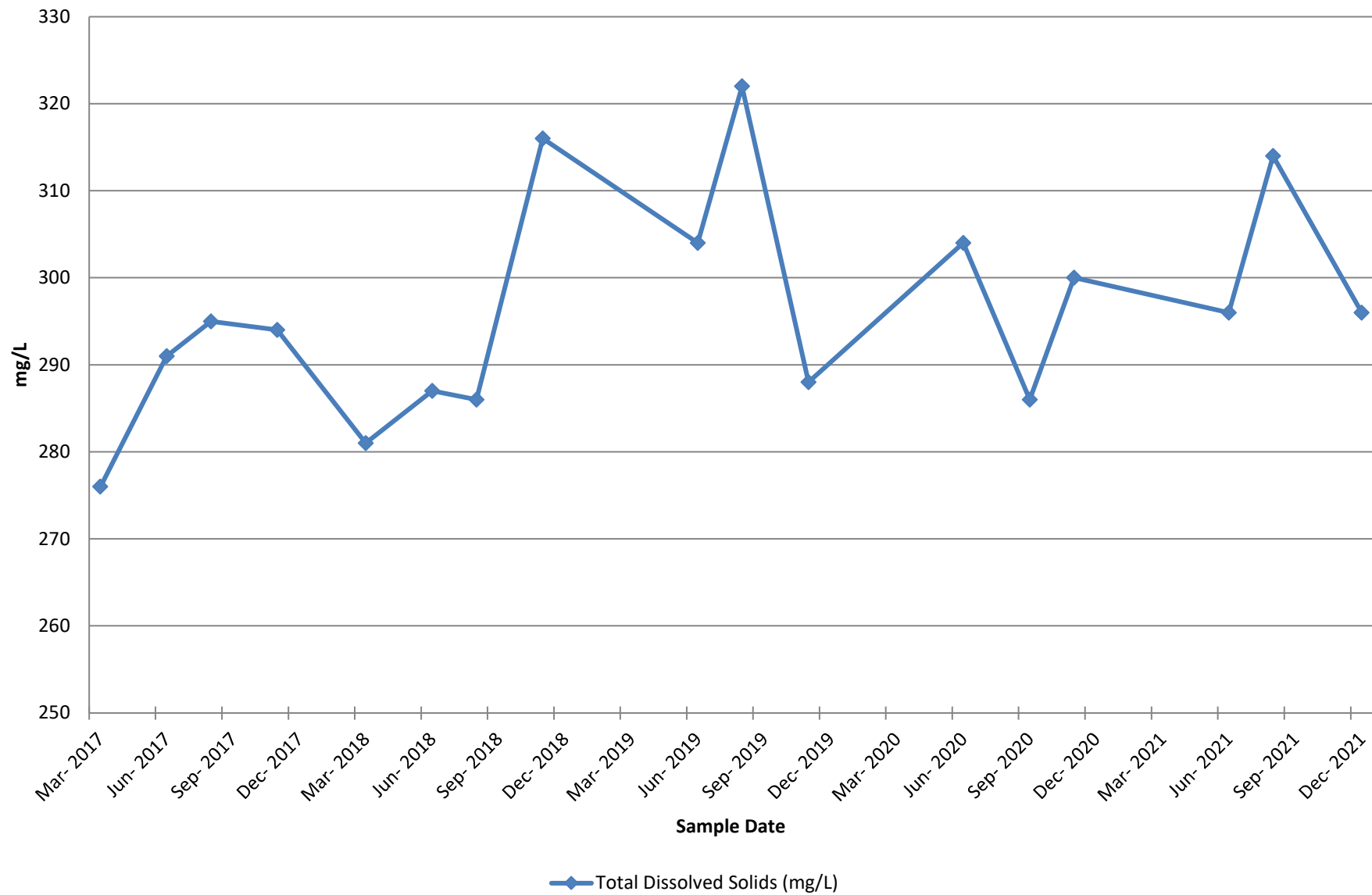
Trend Evaluation 22
EV-MW-004: pH
Climax Mine



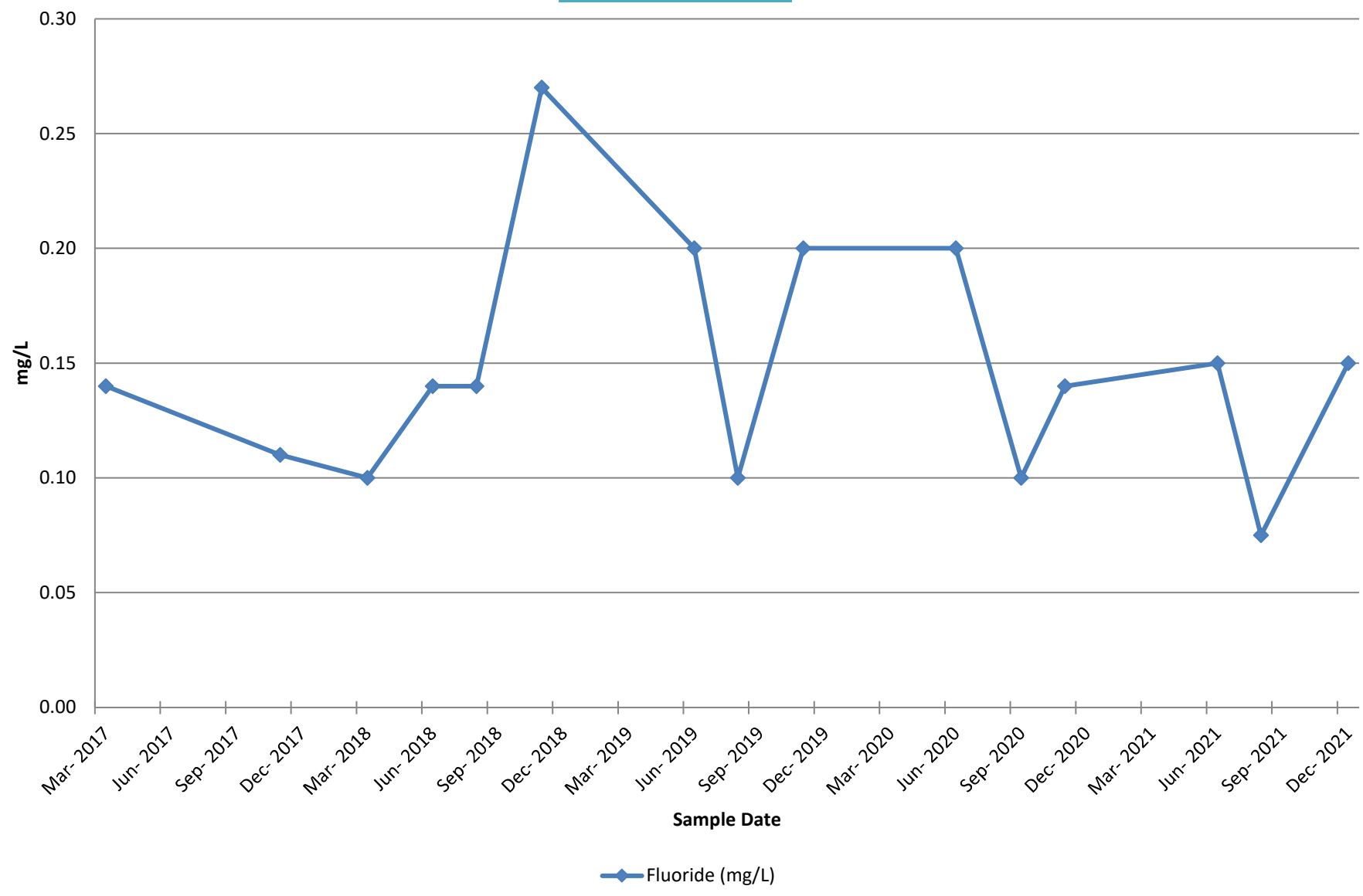
Trend Evaluation 23
EV-MW-004: Sulfate
Climax Mine



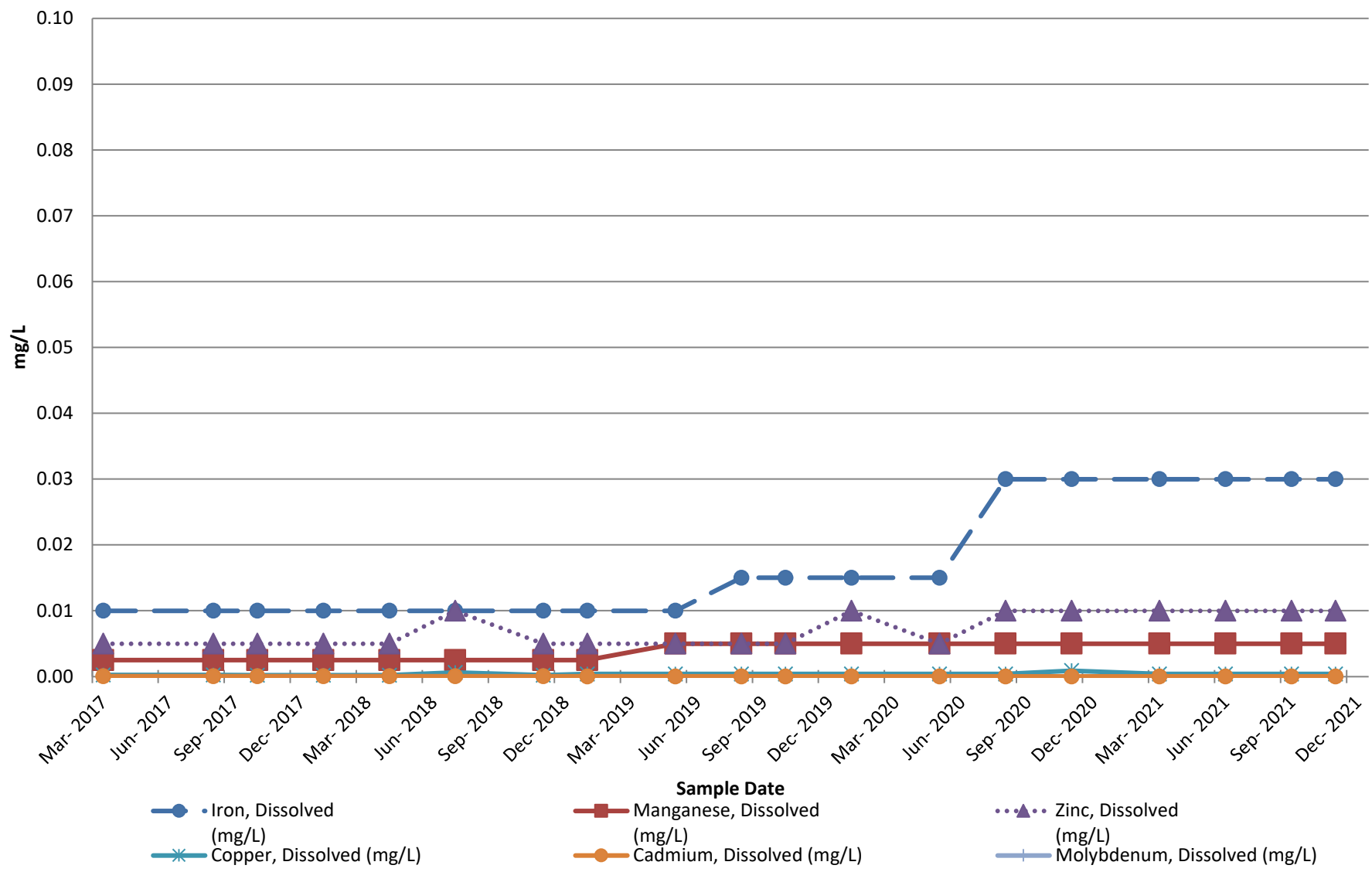
Trend Evaluation 24
EV-MW-004: TDS
Climax Mine



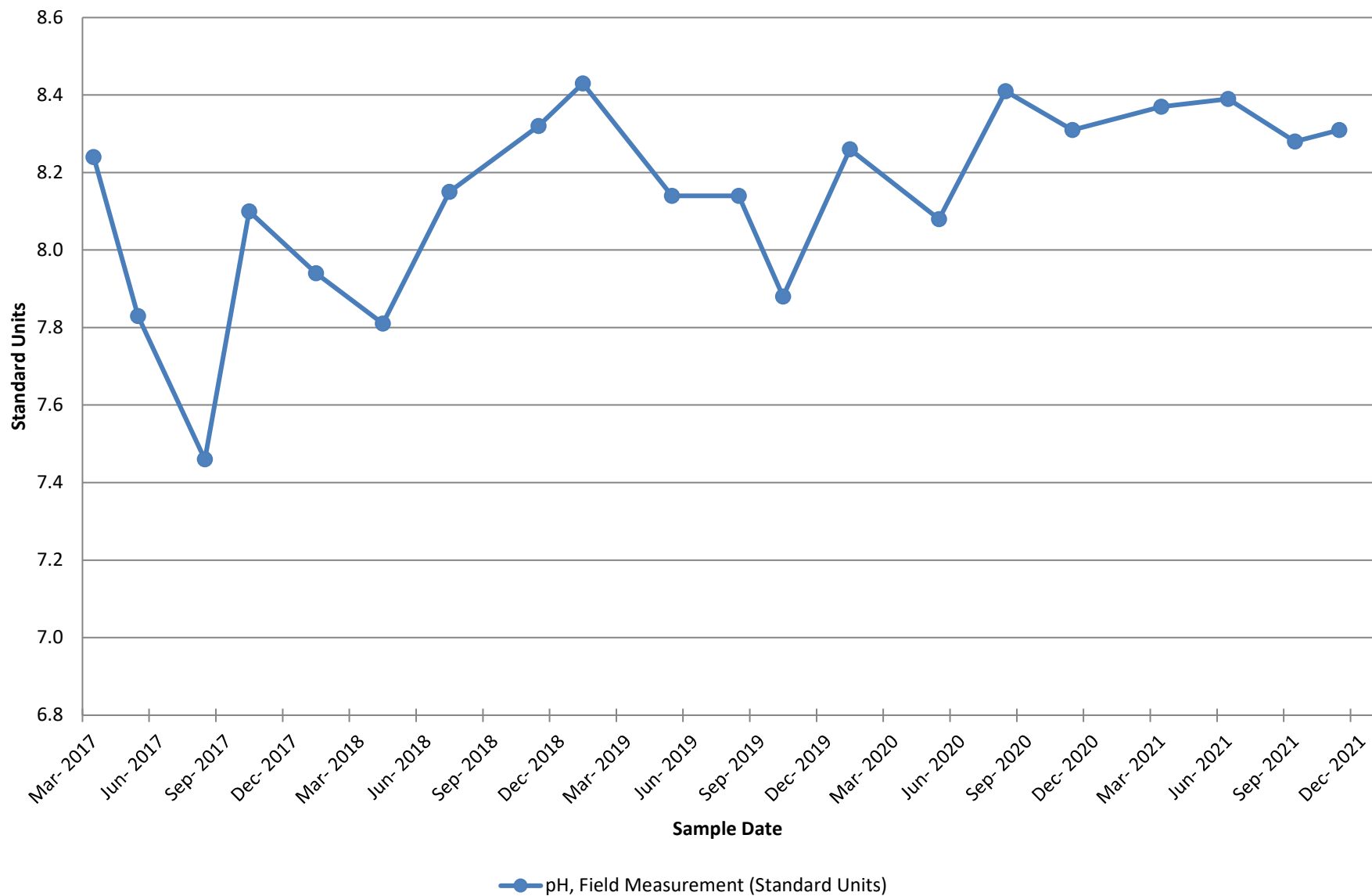
Trend Evaluation 25
EV-MW-004: Fluoride
Climax Mine



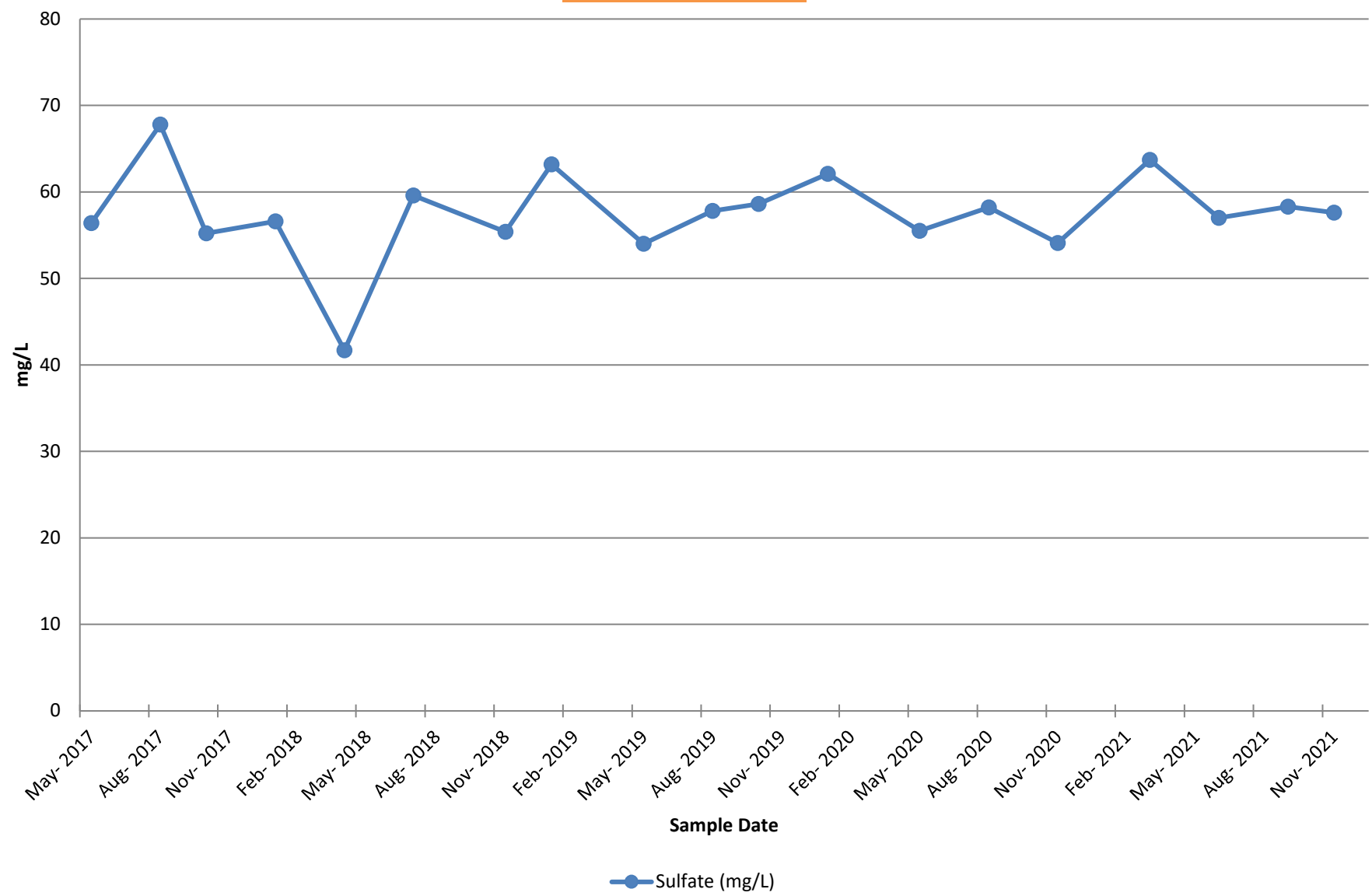
Trend Evaluation 26
TM-MW-002D: Metals
Climax Mine



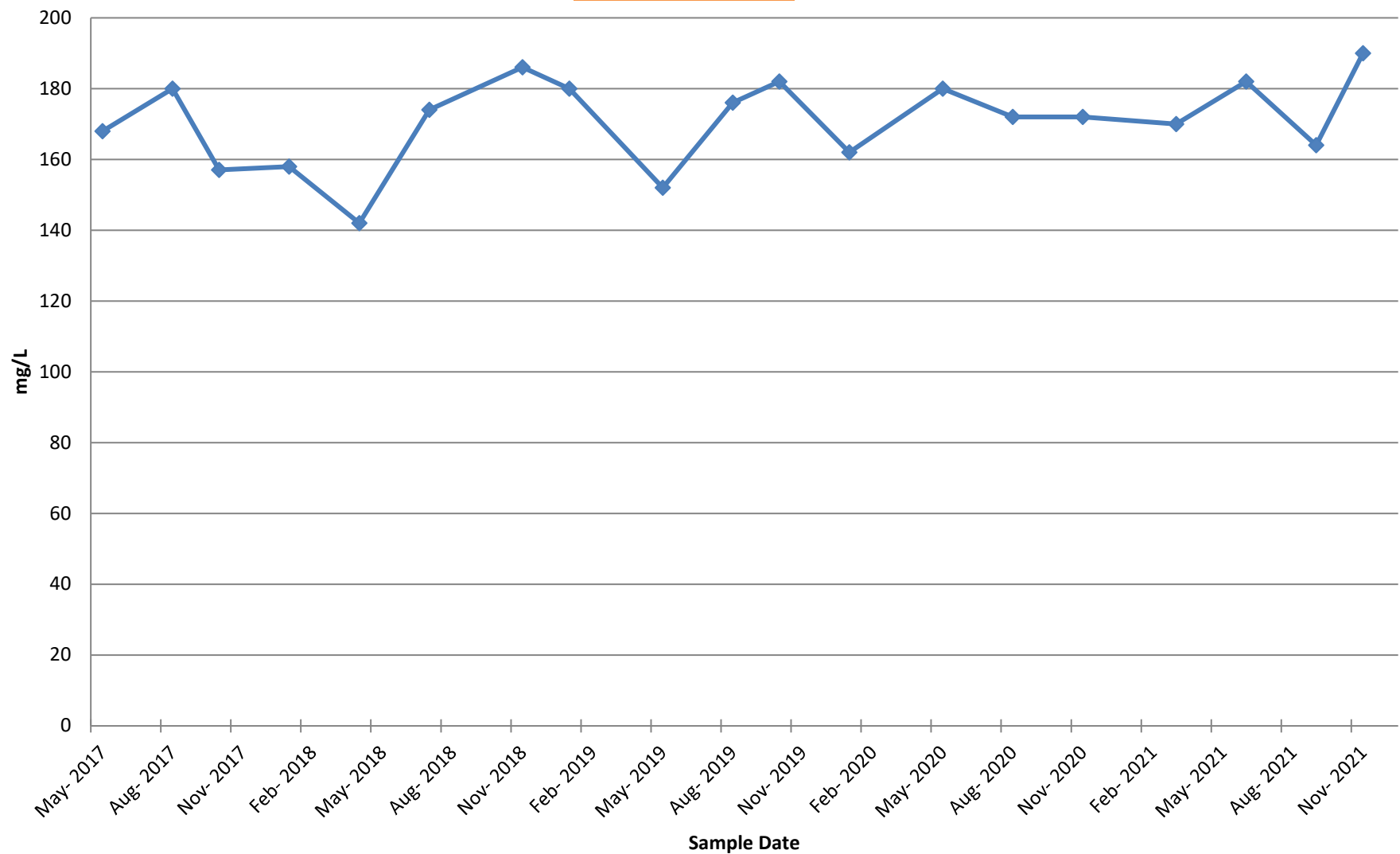
Trend Evaluation 27
TM-MW-002D: pH
Climax Mine



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

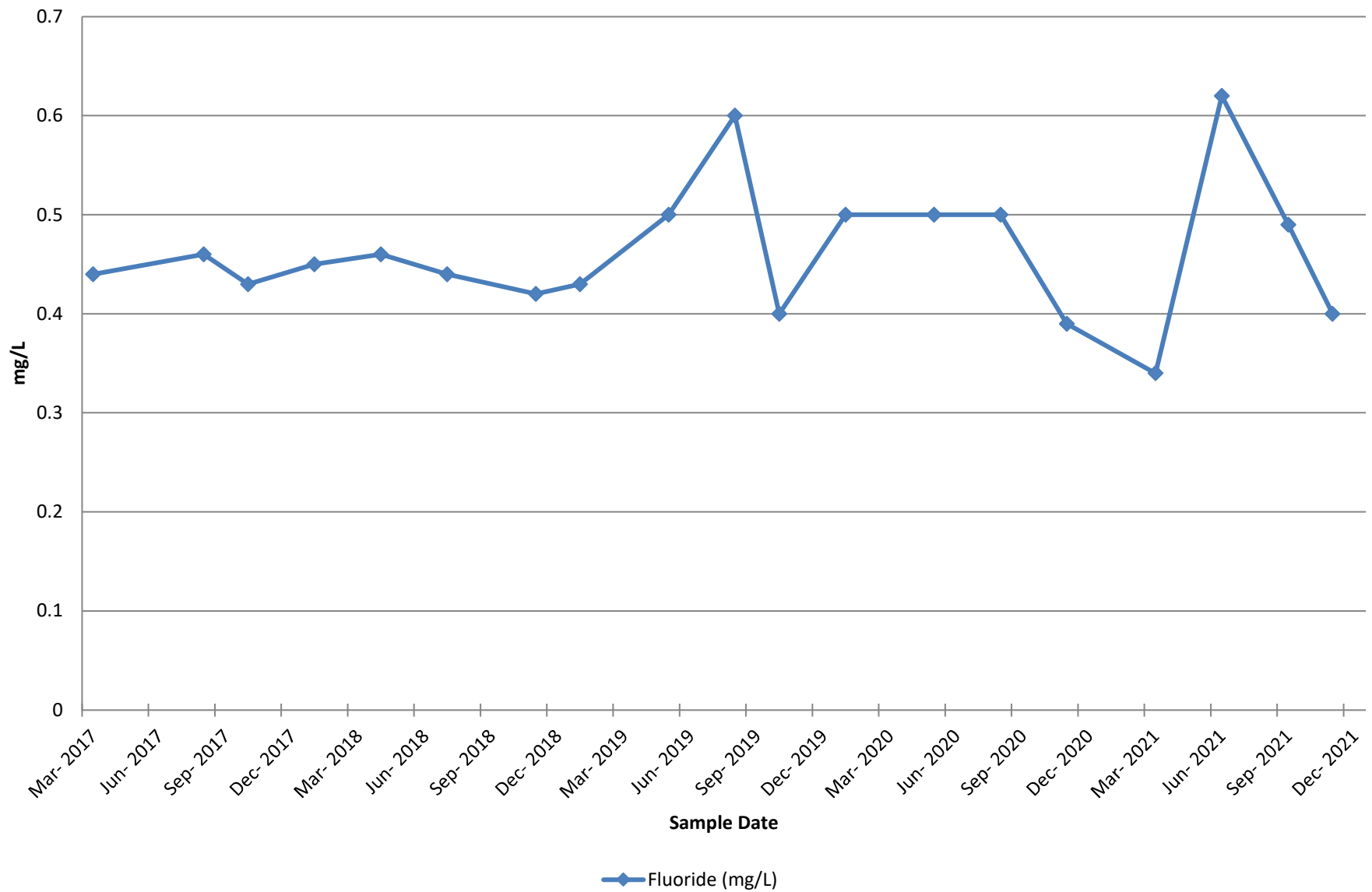


Trend Evaluation 29
TM-MW-002D: TDS
Climax Mine

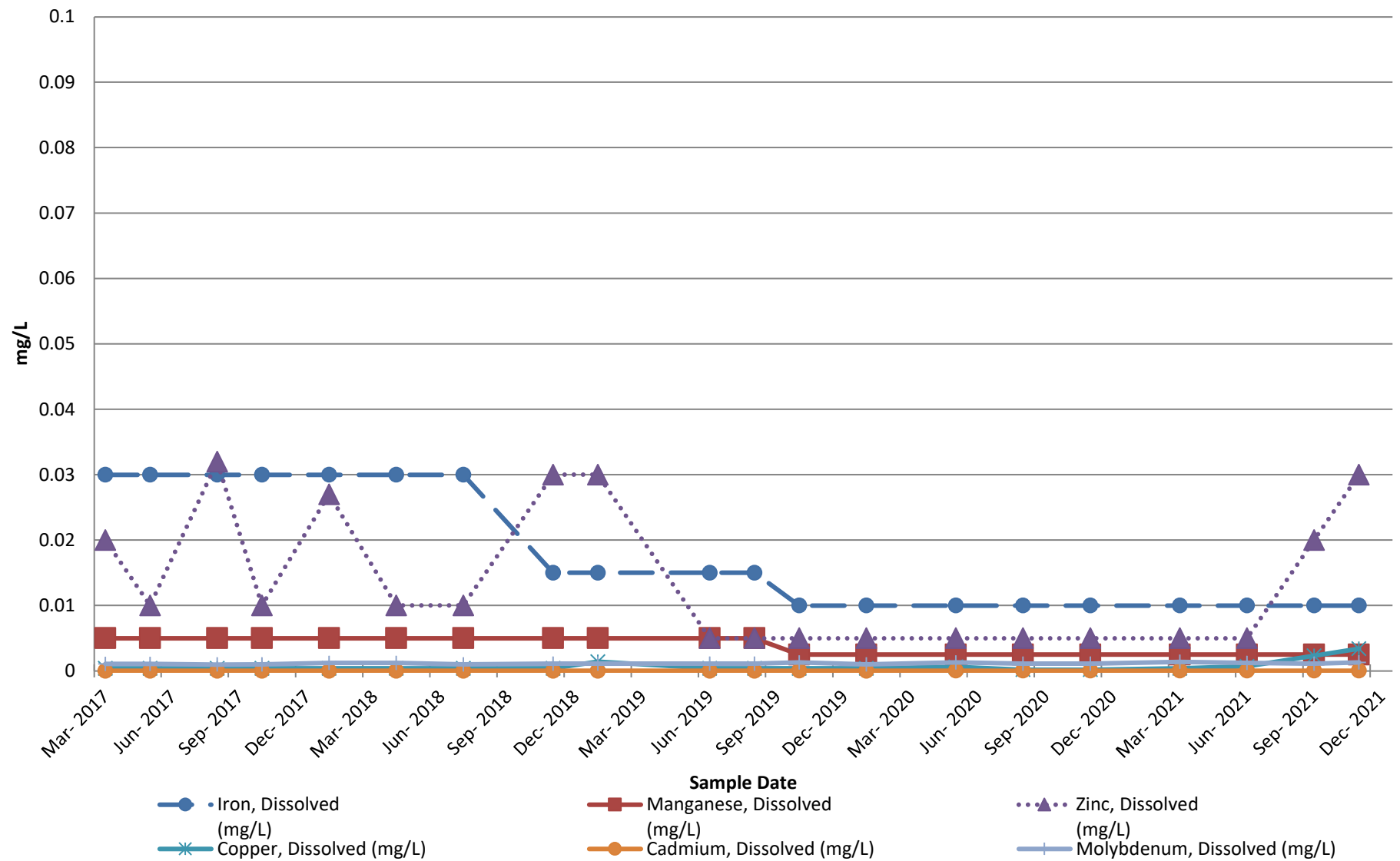


—◆— Total Dissolved Solids (mg/L)

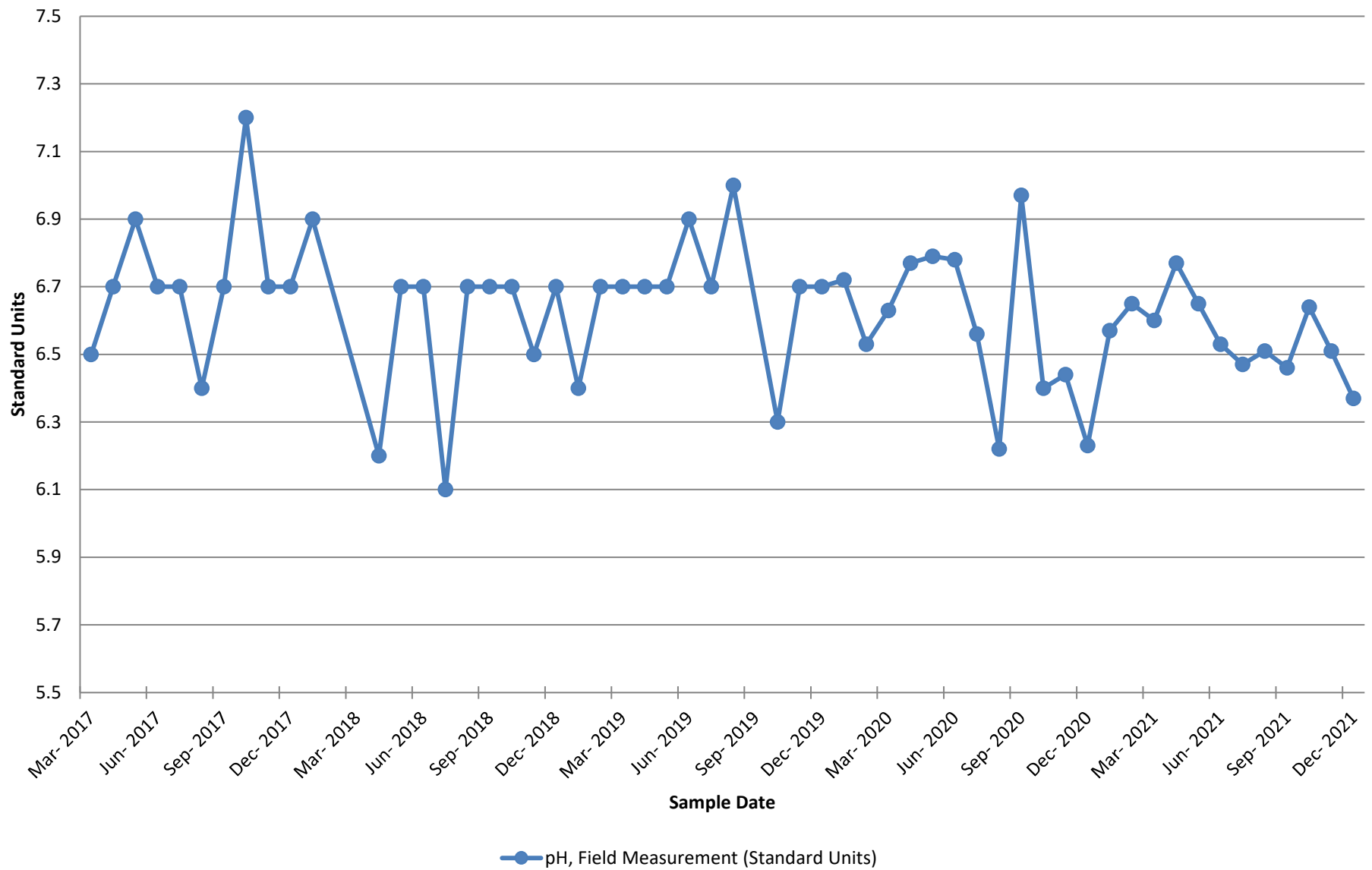
Trend Evaluation 30
TM-MW-002D: Fluoride
Climax Mine



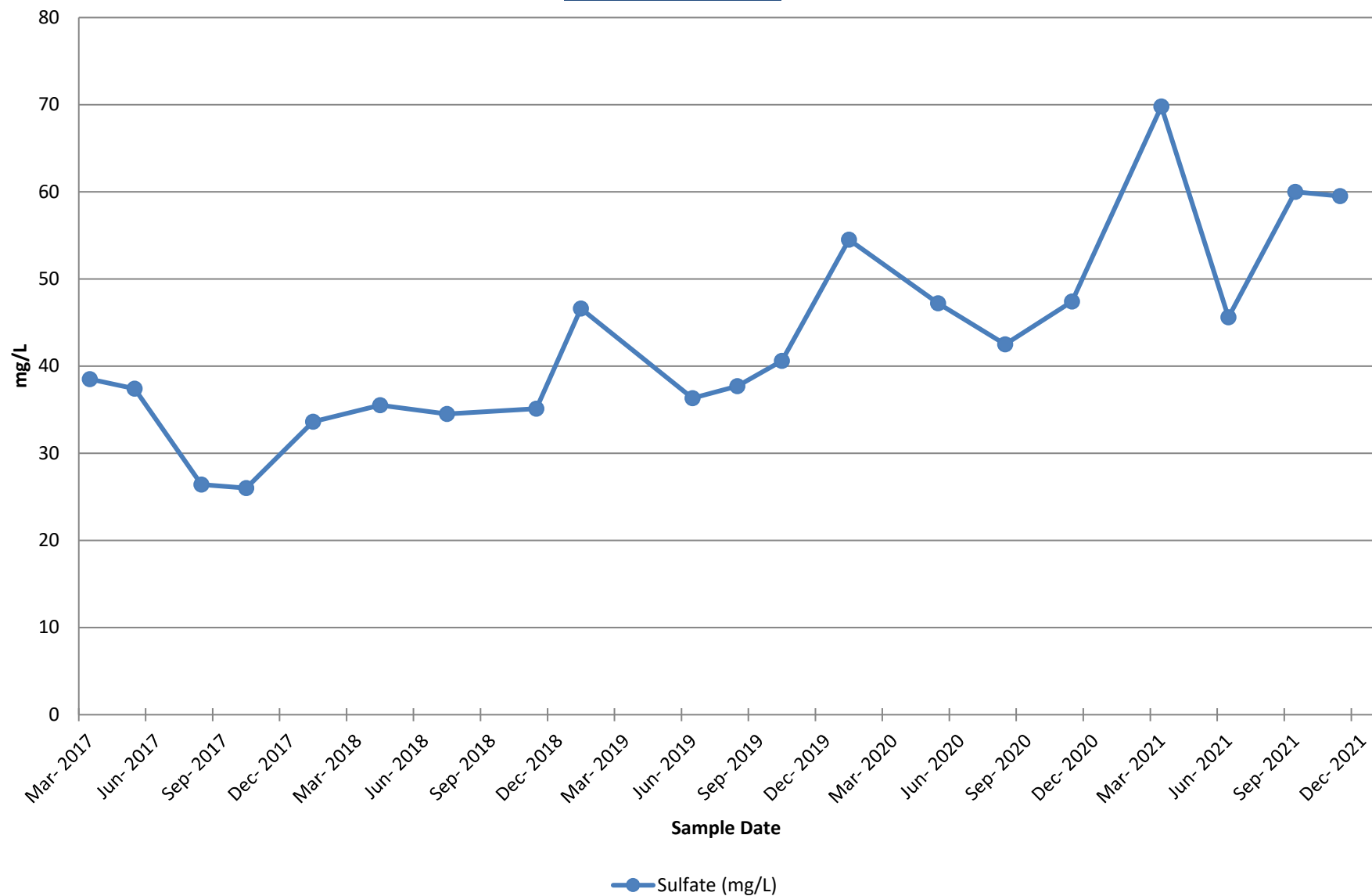
Trend Evaluation 31
GW#2: Metals
Climax Mine



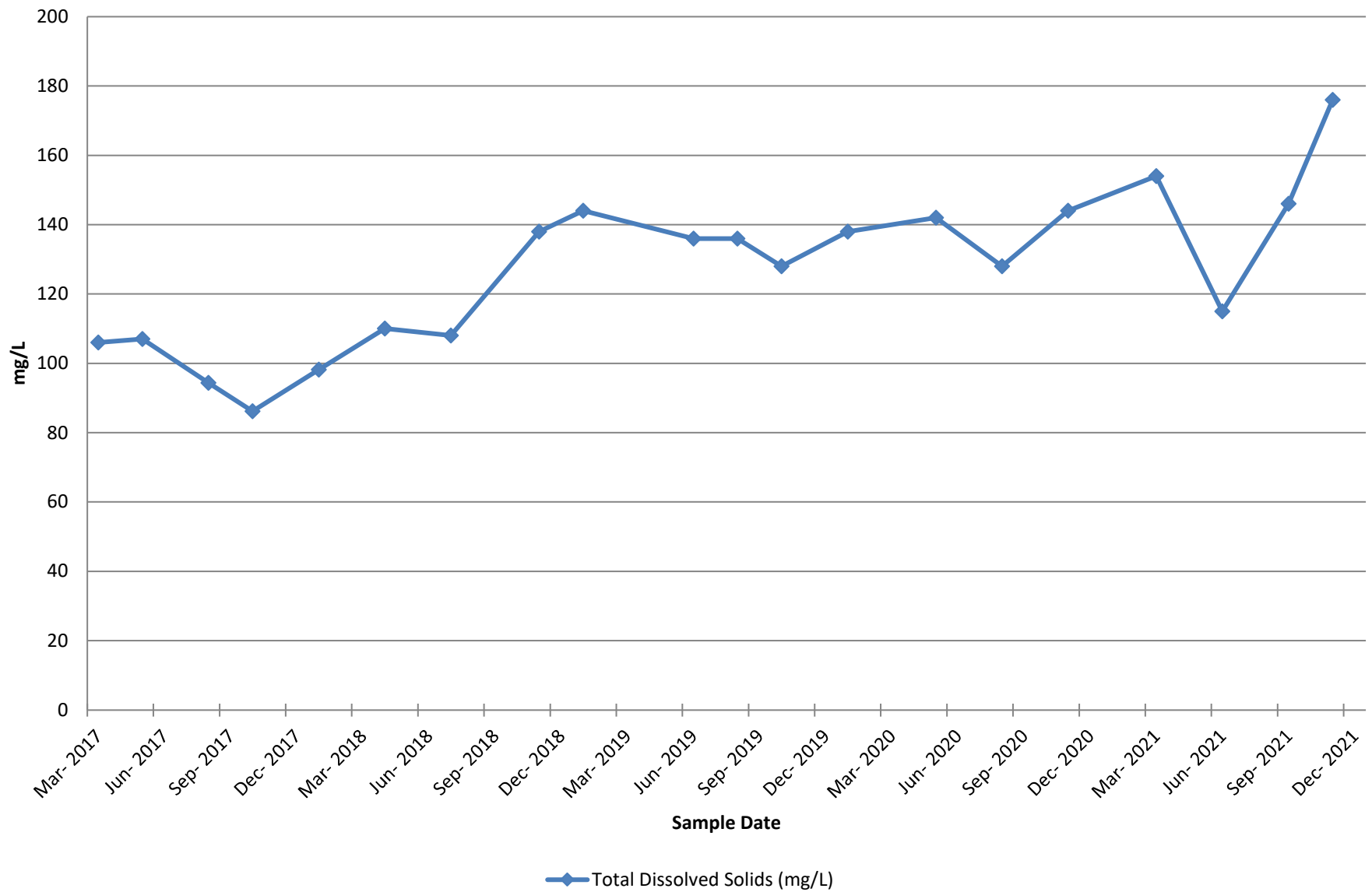
Trend Evaluation 32
GW#2: pH
Climax Mine



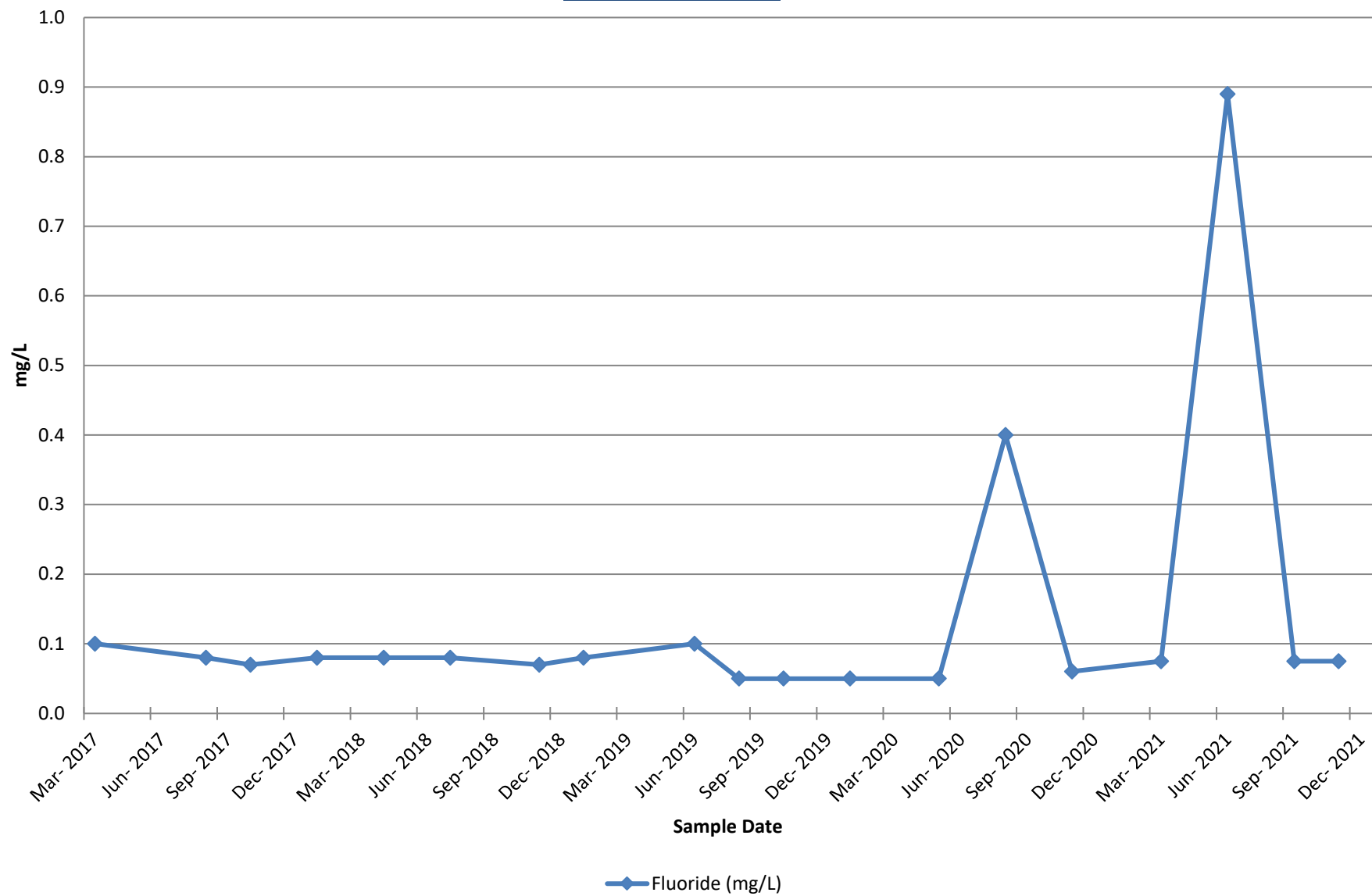
Trend Evaluation 33
GW#2: Sulfate
Climax Mine



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

DIVISION: ENVIRONMENTAL DEPT.

AREA:

TITLE: ANNUAL REPORT
MAP 5 - WQMP SITES
EAGLE RIVER WATERSHED

DWG. NO.

REVISION:

SHT. OF



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



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