Table 7-13: Stickleback Lake Base Case Water Quality Predictions

Parameter	Units	Min CCME[1]	Background Concentration	Operations				Closure			
				Dissolved		Total		Dissolved		Total	
				Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L		5.8	2.6	7.9	2.6	7.9	2.9	7.9	2.9	7.9
Fluoride	mg/L	0.12	0.054	0.066	***0.21***	0.066	***0.21***	0.052	***0.16***	0.052	***0.16***
Chloride	mg/L	120	63	43	***180***	43	***180***	15	70	15	70
Free Cyanide	mg/L	0.005	0.001	-	-	-	-	-	-	-	-
Total Cyanide	mg/L	0.005	0.001	0.0019	***0.0056***	0.0019	***0.0056***	0.0016	0.0048	0.0016	0.0048
Aluminum	mg/L	0.1	0.052	0.052	***0.19***	0.052	***0.19***	0.077	***0.21***	0.077	***0.21***
Arsenic	mg/L	0.005	0.00034	0.00039	0.0012	0.00039	0.0012	0.0005	0.0014	0.0005	0.0014
Chromium	mg/L	0.001	0.0005	0.00038	***0.0011***	0.00038	***0.0011***	0.00042	***0.0012***	0.00042	***0.0012***
Copper	mg/L	0.002	0.0013	0.0013	***0.005***	0.0013	***0.005***	***0.0031***	***0.0087***	***0.0031***	***0.0087***
Iron	mg/L	0.3	0.093	0.17	***0.48***	0.17	***0.48***	0.18	***0.49***	0.18	***0.49***
Manganese	mg/L	0.2	0.022	0.066	***0.26***	0.066	***0.26***	0.033	0.12	0.033	0.12
Selenium	mg/L	0.001	0.0002	0.00049	***0.0016***	0.00049	***0.0016***	0.00035	***0.0011***	0.00035	***0.0011***

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[1] – ***Bold italics indicates CCME Exceedance***

Table 7-14: Stickleback Lake Upper Case Water Quality Predictions

Parameter	Units	Min CCME[1]	Background Concentration	Operations				Closure			
				Dissolved		Total		Dissolved		Total	
				Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L		5.8	3.2	10	3.2	10	4	11	4	11
Fluoride	mg/L	0.12	0.054	0.088	***0.25***	0.088	***0.25***	0.089	***0.25***	0.089	***0.25***
Chloride	mg/L	120	63	44	***180***	44	***180***	17	74	17	74
Free Cyanide	mg/L	0.005	0.001	-	-	-	-	-	-	-	-
Total Cyanide	mg/L	0.005	0.001	0.0019	***0.0056***	0.0019	***0.0056***	0.0016	0.0048	0.0016	0.0048
Aluminum	mg/L	0.1	0.052	0.073	***0.28***	0.073	***0.28***	***0.11***	***0.31***	***0.11***	***0.31***
Arsenic	mg/L	0.005	0.00034	0.0004	0.0012	0.0004	0.0012	0.00056	0.0016	0.00056	0.0016
Chromium	mg/L	0.001	0.0005	0.00053	***0.0018***	0.00053	***0.0018***	0.00068	***0.0019***	0.00069	***0.0019***
Copper	mg/L	0.002	0.0013	0.0014	***0.0055***	0.0014	***0.0055***	***0.0034***	***0.0095***	***0.0034***	***0.0095***
Iron	mg/L	0.3	0.093	0.22	***0.69***	0.22	***0.69***	0.26	***0.72***	0.26	***0.72***
Manganese	mg/L	0.2	0.022	0.067	***0.26***	0.067	***0.26***	0.042	0.13	0.042	0.13
Selenium	mg/L	0.001	0.0002	0.00051	***0.0016***	0.00051	***0.0016***	0.00039	***0.0012***	0.00039	***0.0012***

Source: Y:\01_SITES\Hope.Bay\1CT022.004_Phase 2 DEIS - Engineering Support\Task 300_Water_Load_Balance\Deliverables\WB_Report\020_Tables\HopeBay_WBReport_Tables_1CT022.004_R01_ajb

[1] – ***Bold italics indicates CCME Exceedance***

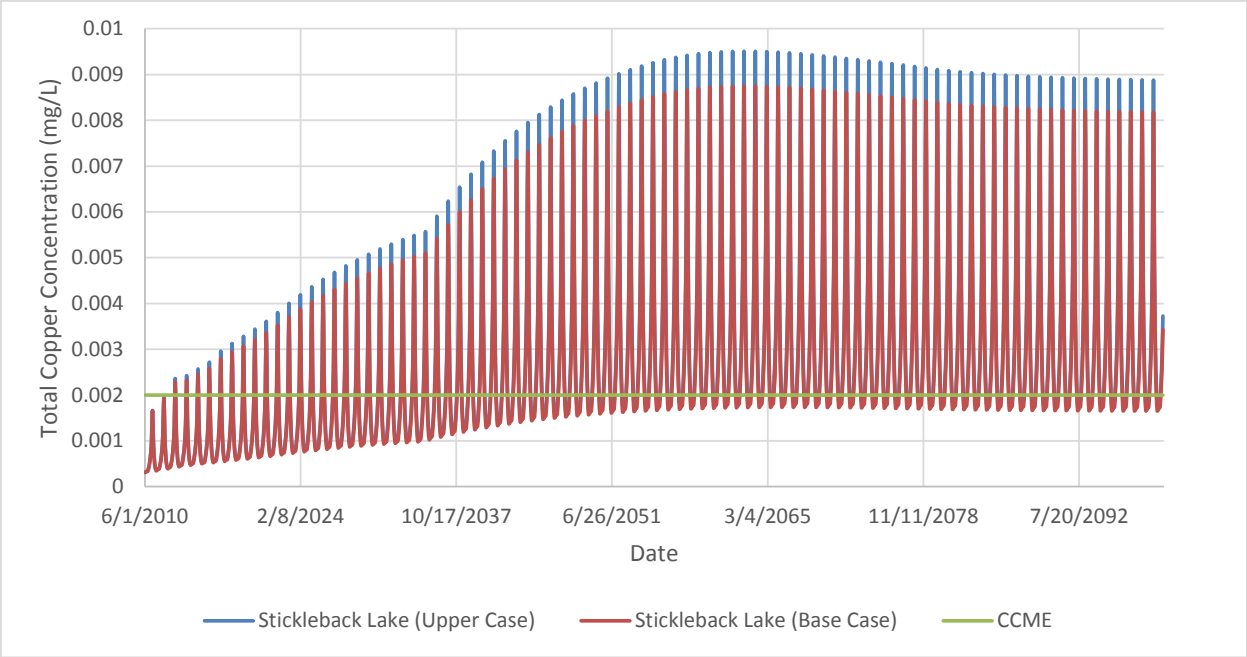

Figure 56: Stickleback Lake Base and Upper Case Copper Predictions

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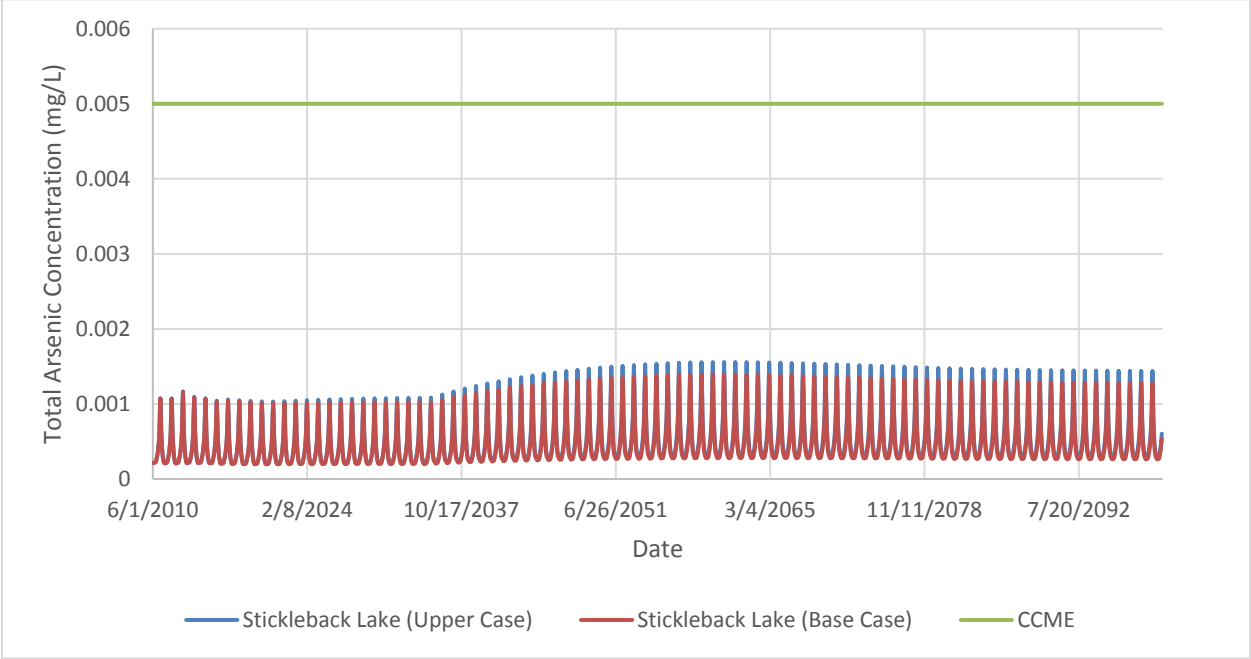

Figure 57: Stickleback Lake Base and Upper Case Arsenic Predictions

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7.4.2 Aimaokatalok Lake

Model results are provided for two areas within Aimaokatalok Lake, Section 2a and Section 2b. Section 2a extends along the western edge of the lake from the site to the outlet of the lake, while Section 2b of is located near the outflow of Stickleback Lake, where the majority of disturbed runoff from the project area enters the lake (Figure 10). Section 2b flows into Section 2a.

For the base case, maximum total copper predictions exceeded the minimum CCME guidelines in Section 2b throughout operations and post-closure. For the upper case, maximum total aluminum predictions exceeded the minimum CCME guidelines during operations and closure for Section 2a and 2b. In addition to this, maximum total copper and iron exceeded the minimum CCME guidelines for Section 2b throughout operations and closure (Table 7-15 to Table 7-18).

For Section 2a, base case total copper concentrations remained below the minimum CCME guideline. The concentrations for the upper case exceeded the CMME guideline with a maximum concentration of 0.0026 mg/L in the post-closure period (Figure 58). Total arsenic concentrations remained below CCME guidelines, throughout operations and post-closure for Section 2a (Figure 59).

For Section 2b, average base case predictions for total copper increased from 0.0016 mg/L in operations to 0.0019 mg/L in closure. The maximum total copper prediction increased from 0.0023 to 0.0025 mg/L for operations, and the post-closure concentration increased from 0.0026 to 0.0028 mg/L between the base and upper case water quality predictions (Figure 60).

For Section 2b, average base case predictions for total arsenic increased from 0.00029 mg/L in operations to 0.00076 mg/L in closure. The maximum total arsenic prediction increased from 0.00039 to 0.00051 mg/L during operations and increased from 0.00076 to 0.00080 mg/L in post-closure, between the base and upper case water quality predictions (Figure 61).

In addition to natural runoff, inflows from Stickleback Lake outflow, and disturbed runoff from Boston Mine surface infrastructure, including the Boston TMA, report to Sections 2a and 2b of Aimaokatalok Lake, while the WTP effluent (discharged to the west of the Boston Camp peninsula) and sewage effluent (discharged to the north of the peninsula) are only included as an inflows to Section 2a.

A number of assumptions were made when predicting water quality for Section 2b that highlight the need for additional assessment. Section 2b of Aimaokatalok Lake was assumed to be very shallow and predicted to completely freeze in winter. Based on this assumption, elevated concentrations of water quality parameters are expected during fall and spring when this portion of the lake is partially frozen.

It is noted that all inflows to Section 2b were assumed to completely mix, allowing for dilution with undisturbed inflow from Trout Lake. In reality, inflows from mine affected inflows could create a localized plume of elevated metals concentrations near the lake shore.

Table 7-15: Aimaokatalok Lake (Section 2a) Base Case Water Quality Predictions

Parameter	Units	Min CCME[1]	Background Concentration	Operations				Closure			
				Dissolved		Total		Dissolved		Total	
				Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L		5.8	2.2	3.6	2.2	3.6	2.2	3.4	2.2	3.4
Fluoride	mg/L	0.12	0.054	0.037	0.059	0.037	0.059	0.036	0.055	0.036	0.055
Chloride	mg/L	120	63	12	21	12	21	11	16	11	16
Free Cyanide	mg/L	0.005	0.001								
Total Cyanide	mg/L	0.005	0.001	0.0013	0.002	0.0013	0.002	0.0013	0.002	0.0013	0.002
Aluminum	mg/L	0.1	0.052	0.062	0.1	0.062	0.1	0.062	0.097	0.062	0.097
Arsenic	mg/L	0.005	0.00034	0.00022	0.00036	0.00022	0.00036	0.00022	0.00034	0.00022	0.00034
Chromium	mg/L	0.001	0.0005	0.00035	0.00058	0.00035	0.00058	0.00034	0.00054	0.00034	0.00054
Copper	mg/L	0.002	0.0013	0.0012	0.0019	0.0012	0.0019	0.0012	0.0019	0.0012	0.0019
Iron	mg/L	0.3	0.093	0.13	0.2	0.13	0.2	0.12	0.19	0.12	0.19
Manganese	mg/L	0.2	0.022	0.017	0.028	0.017	0.028	0.016	0.025	0.016	0.025
Selenium	mg/L	0.001	0.0002	0.00026	0.0004	0.00026	0.0004	0.00025	0.00039	0.00025	0.00039

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[1] – ***Bold italics indicates CCME Exceedance***

Table 7-16: Aimaokatalok Lake (Section 2b) Base Case Water Quality Predictions

Parameter	Units	Min CCME[1]	Background Concentration	Operations				Closure			
				Dissolved		Total		Dissolved		Total	
				Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L		5.8	2.6	3.5	2.6	3.5	2.5	3.3	2.5	3.3
Fluoride	mg/L	0.12	0.054	0.044	0.059	0.044	0.059	0.042	0.058	0.042	0.058
Chloride	mg/L	120	63	13	18	13	18	12	16	12	16
Free Cyanide	mg/L	0.005	0.001								
Total Cyanide	mg/L	0.005	0.001	0.0016	0.0021	0.0016	0.0021	0.0015	0.002	0.0015	0.002
Aluminum	mg/L	0.1	0.052	0.072	0.094	0.072	0.094	0.07	0.094	0.071	0.094
Arsenic	mg/L	0.005	0.00034	0.00028	0.00039	0.00029	0.00039	0.00049	0.00076	0.0005	0.00076
Chromium	mg/L	0.001	0.0005	0.0004	0.00054	0.0004	0.00054	0.00039	0.00053	0.0004	0.00053
Copper	mg/L	0.002	0.0013	0.0016	***0.0023***	0.0016	***0.0023***	0.0019	***0.0026***	0.0019	***0.0026***
Iron	mg/L	0.3	0.093	0.15	0.21	0.15	0.21	0.14	0.2	0.15	0.2
Manganese	mg/L	0.2	0.022	0.022	0.03	0.022	0.03	0.021	0.03	0.021	0.03
Selenium	mg/L	0.001	0.0002	0.0003	0.0004	0.0003	0.0004	0.00029	0.0004	0.00029	0.0004

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[1] – ***Bold italics indicates CCME Exceedance***

Table 7-17: Aimaokatalok Lake (Section 2a) Upper Case Water Quality Predictions

Parameter	Units	Min CCME[1]	Background Concentration	Operations				Closure			
				Dissolved		Total		Dissolved		Total	
				Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L		5.8	3.5	6.7	3.5	6.7	3.7	6.4	3.7	6.4
Fluoride	mg/L	0.12	0.054	0.064	0.1	0.064	0.1	0.061	0.093	0.061	0.093
Chloride	mg/L	120	63	13	23	13	23	12	18	12	18
Free Cyanide	mg/L	0.005	0.001								
Total Cyanide	mg/L	0.005	0.001	0.0013	0.002	0.0013	0.002	0.0013	0.002	0.0013	0.002
Aluminum	mg/L	0.1	0.052	0.087	***0.14***	0.087	***0.14***	0.086	***0.13***	0.086	***0.13***
Arsenic	mg/L	0.005	0.00034	0.00023	0.00037	0.00023	0.00037	0.00023	0.00035	0.00023	0.00035
Chromium	mg/L	0.001	0.0005	0.00055	0.00088	0.00055	0.00088	0.00054	0.00084	0.00054	0.00084
Copper	mg/L	0.002	0.0013	0.0013	0.002	0.0013	0.002	0.0013	0.002	0.0013	0.002
Iron	mg/L	0.3	0.093	0.18	0.29	0.18	0.29	0.18	0.27	0.18	0.27
Manganese	mg/L	0.2	0.022	0.019	0.03	0.019	0.03	0.018	0.028	0.018	0.028
Selenium	mg/L	0.001	0.0002	0.00029	0.00045	0.00029	0.00045	0.00028	0.00044	0.00028	0.00044

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[1] – ***Bold italics indicates CCME Exceedance***

Table 7-18: Aimaokatalok Lake (Section 2b) Upper Case Water Quality Predictions

Parameter	Units	Min CCME[1]	Background Concentration	Operations				Closure			
				Dissolved		Total		Dissolved		Total	
				Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L		5.8	3.9	6.3	3.9	6.3	3.9	5.4	3.9	5.4
Fluoride	mg/L	0.12	0.054	0.076	0.1	0.076	0.1	0.071	0.097	0.071	0.097
Chloride	mg/L	120	63	14	19	14	19	13	18	13	18
Free Cyanide	mg/L	0.005	0.001								
Total Cyanide	mg/L	0.005	0.001	0.0016	0.0021	0.0016	0.0021	0.0015	0.002	0.0015	0.002
Aluminum	mg/L	0.1	0.052	0.1	***0.14***	0.1	***0.14***	0.098	***0.13***	0.099	***0.13***
Arsenic	mg/L	0.005	0.00034	0.0003	0.00042	0.0003	0.00042	0.00051	0.0008	0.00052	0.0008
Chromium	mg/L	0.001	0.0005	0.00064	0.00084	0.00064	0.00084	0.00061	0.00083	0.00062	0.00083
Copper	mg/L	0.002	0.0013	0.0018	***0.0025***	0.0018	***0.0025***	0.002	***0.0028***	0.002	***0.0028***
Iron	mg/L	0.3	0.093	0.22	***0.31***	0.22	***0.31***	0.21	0.28	0.21	0.28
Manganese	mg/L	0.2	0.022	0.025	0.033	0.025	0.033	0.025	0.035	0.025	0.035
Selenium	mg/L	0.001	0.0002	0.00034	0.00044	0.00034	0.00044	0.00033	0.00045	0.00033	0.00045

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[1] – ***Bold italics indicates CCME Exceedance***

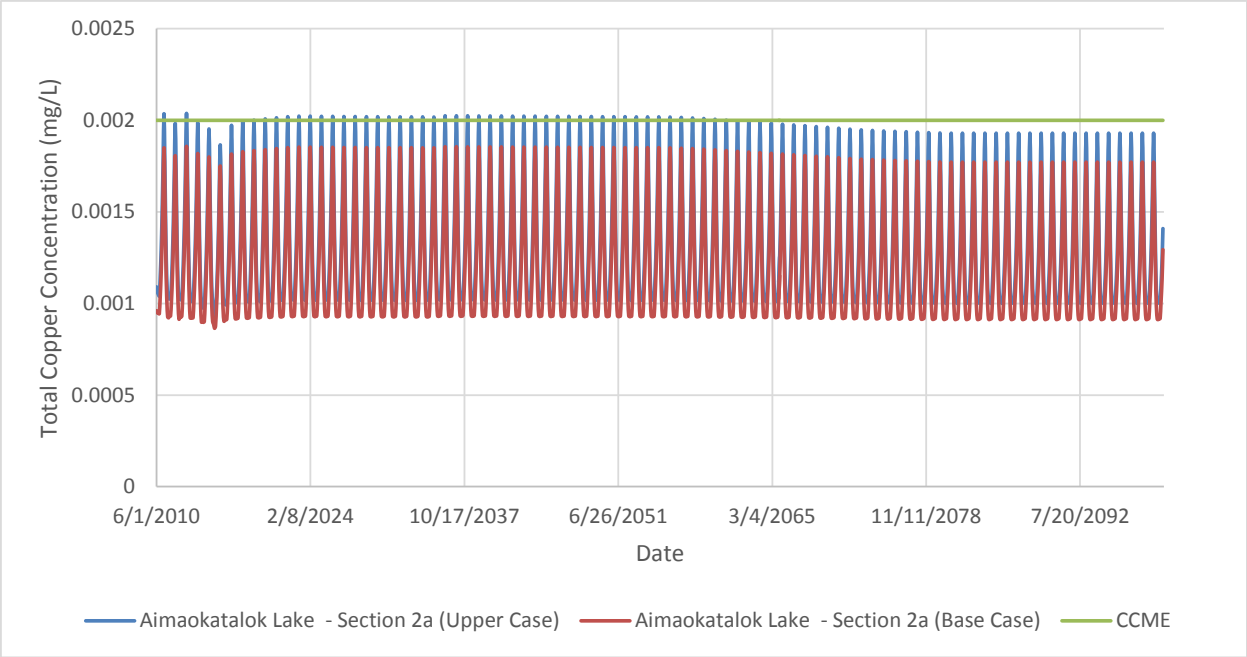

Figure 58: Aimaokatalok Lake – Section 2a Base and Upper Case Copper Predictions

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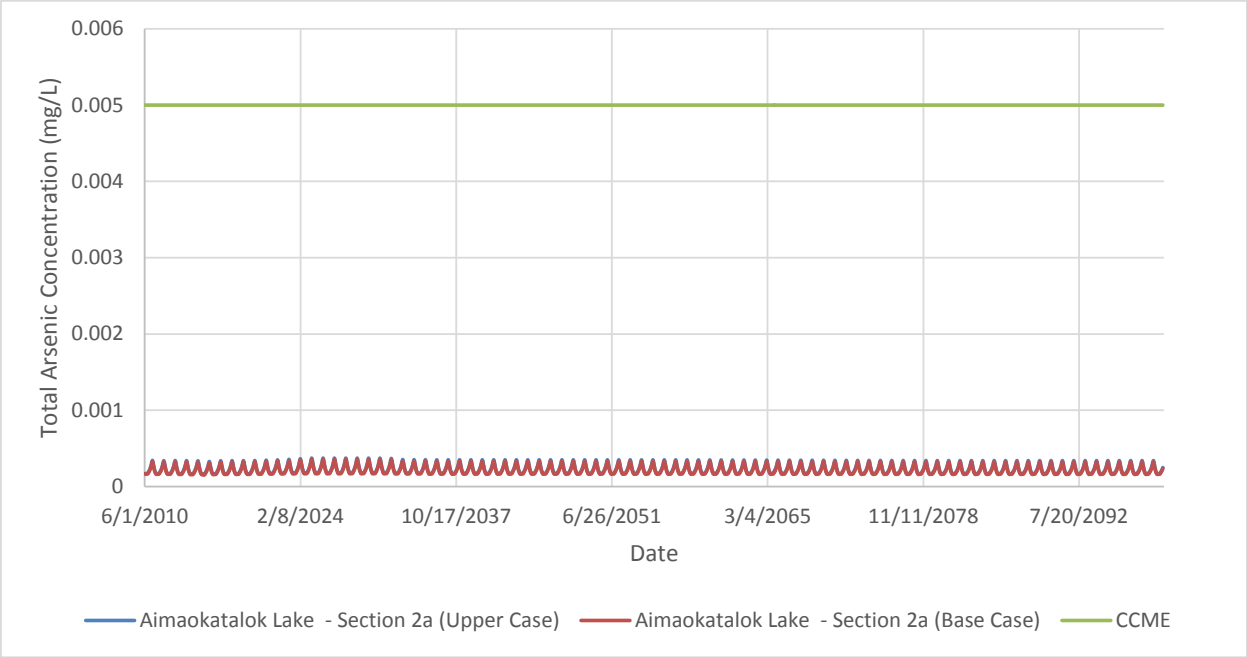

Figure 59: Aimaokatalok Lake – Section 2a Base and Upper Case Arsenic Predictions

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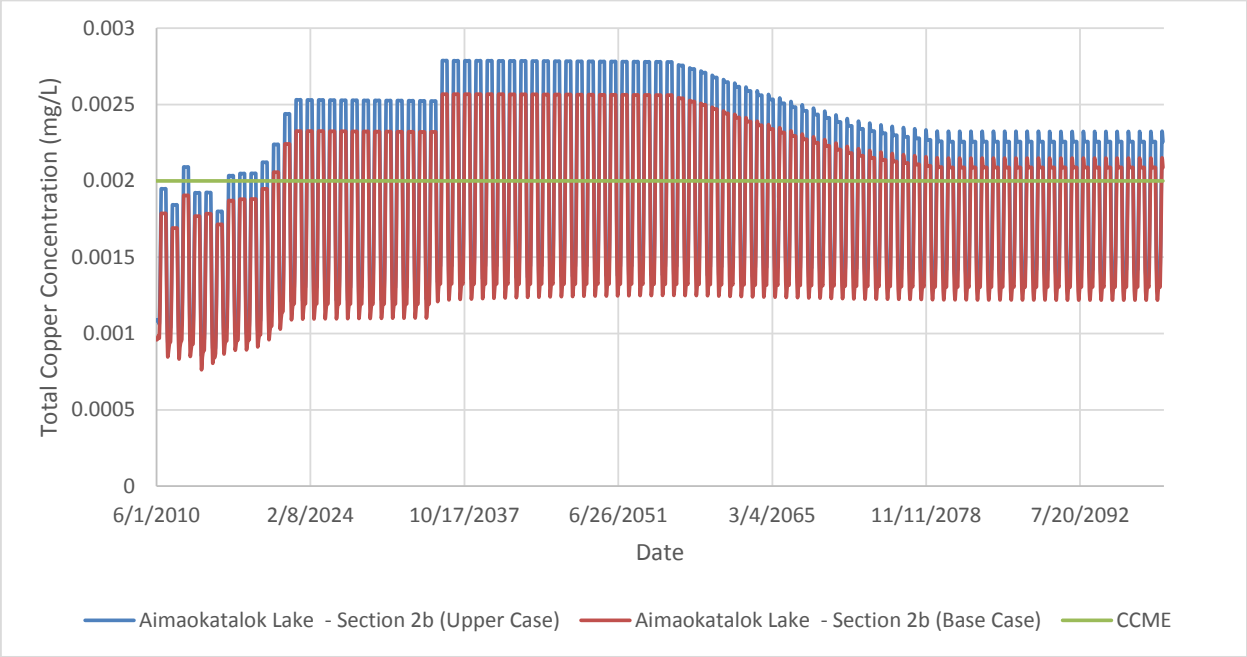

Figure 60: Aimaokatalok Lake – Section 2b Base and Upper Case Copper Predictions

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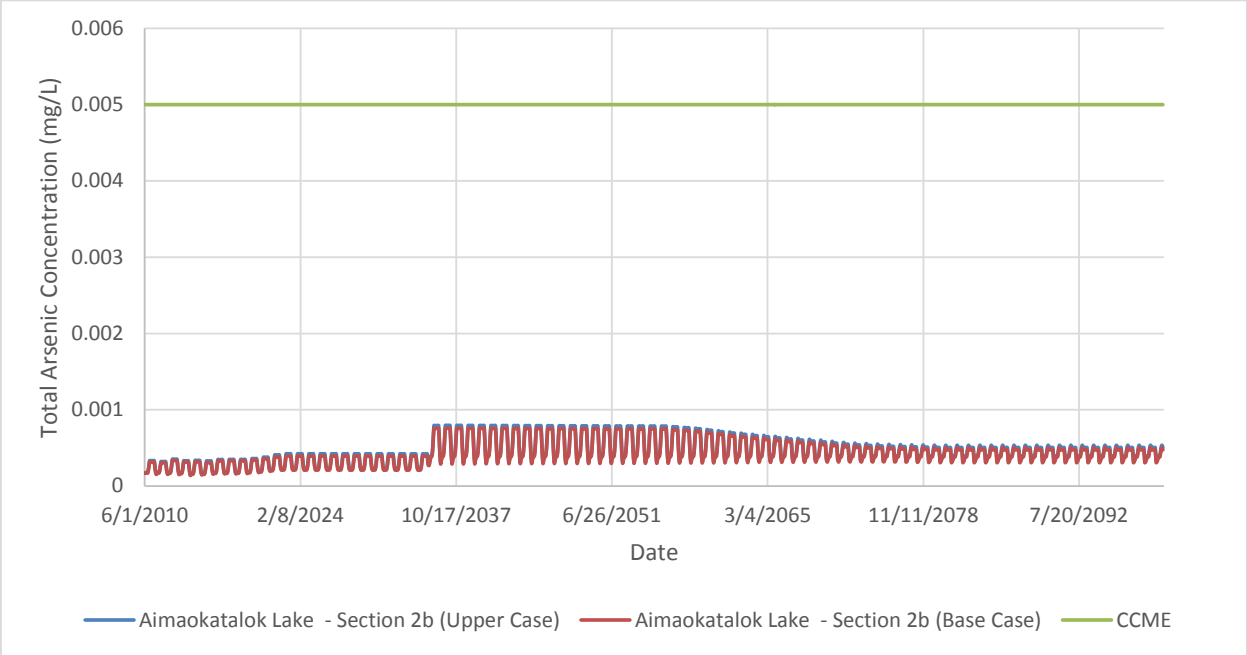

Figure 61: Aimaokatalok Lake – Section 2b Base and Upper Case Arsenic Predictions

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8 Sensitivity Analysis

To account for uncertainty in the input parameters and to provide an understanding of how inputs and certain water management decisions affect the final results, a sensitivity analysis was completed. The analysis included variations in:

- Intercepted groundwater management strategy; and
- Madrid process plant freshwater source.

Table 8-1 provides an outline of the cases modelled in the sensitivity analysis. The *sensitivity* column describes either the variation in the water management strategy used or the range the variable was changed from against the base case value.

Table 8-1: Sensitivity Cases Modelled

Scenario	Variable	Base Case	Sensitivity
1	Intercepted Groundwater Management	Groundwater to MMB	Periodic Groundwater to Doris TIA throughout operations
2	Madrid Process Plant Freshwater Source	Doris Lake	Windy or Patch lakes

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8.1 Intercepted Groundwater Management

In the model, intercepted groundwater in the base case was managed by pumping directly to the MMB at a rate of 3,000 m^3/day. There could be an operational need to pump the intercepted groundwater to the Doris TIA for a period of time. Therefore, the model was used to evaluate pumping of intercepted groundwater to the Doris TIA over a duration of 5 days, 30 days and 180 days at different points over the mine life, i.e. June 1 of 2020, 2025, and 2032. Predicted water quality in the Doris TIA was compared to the base case water quality predictions (Figure 62).

Because the chemical signature associated with backfill was similar to the chemical signature in the process water effluent, little impact or change in water quality in the Doris TIA was noted for parameters like arsenic, cadmium, aluminum, and iron. However, the Doris TIA does not receive a significant amount of chloride loading in the base case. With the addition of intercepted groundwater to the Doris TIA, the predicted chloride concentration during operations increased.

Depending on the intercepted groundwater source and pumping duration, the Doris TIA was able to maintain concentrations close to baseline predictions for the 5 and 30-day pumping events. However, the 180 day pumping duration resulted in a significant increase to the chloride predictions, excluding Madrid North intercepted groundwater, which could have a significant impact on process performance. The maximum intercepted groundwater flowrate for each mine is encountered during these periods. It is expected that lower intercepted flowrates could be pumped to the Doris TIA for longer periods of time without impacting the Doris TIA chloride

concentration, especially for Madrid North Mine. Prolonged use of the Doris TIA for storage of intercepted groundwater should be avoided for the Doris and Madrid South mines.

Table 8-2: Doris TIA Chloride Predictions Sensitivity Summary

Date Pumping Commences	Groundwater Source	Pump to TIA Duration (days)	Peak Chloride Concentration (mg/L)	Time to recover within 5% (months)
6/1/2020	Doris	0	280	-
		5	330	24
		30	670	39
		180	3,100	56
6/1/2025	Madrid North	0	350	-
		5	360	1
		30	400	15
		180	710	33
6/1/2036	Madrid South	0	800	-
		5	840	6
		30	1,000	>86*
		180	3,400	>86*

Source: Y:\01_SITES\Hope.Bay\1CT022.004_Phase 2 DEIS - Engineering Support\Task 300_Water_Load_Balance\Deliverables\WB_Report\020_Tables\HopeBay_WBReport_Tables_1CT022.004_R01_ajb

Notes: * – Closure pumping from the Doris TIA ceases prior to the chloride prediction recovering to baseline predictions

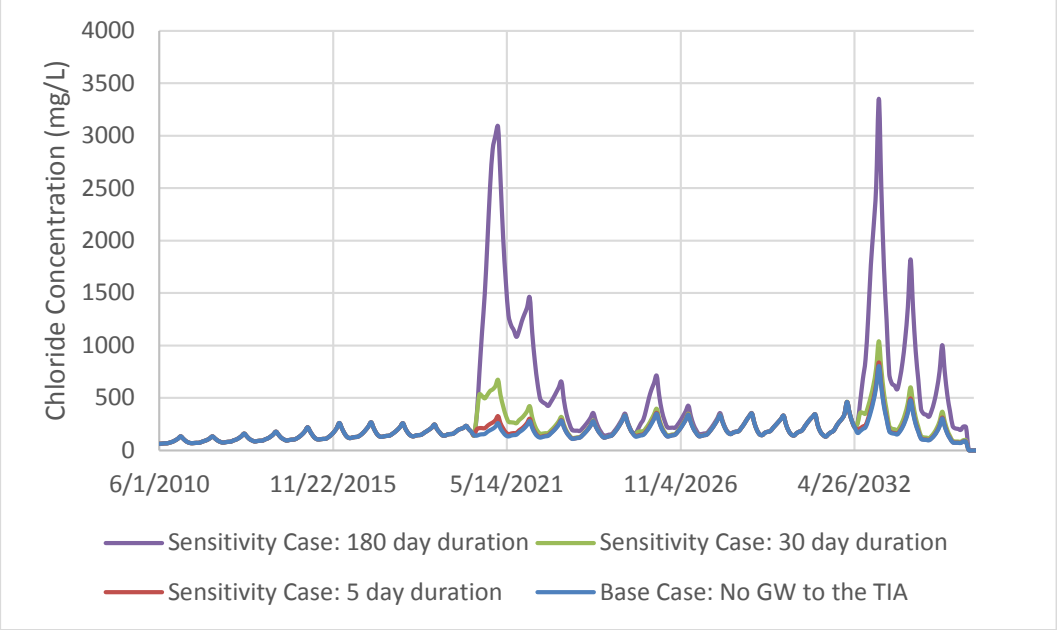

Figure 62: Doris TIA Chloride Concentration Sensitivity Analysis

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8.2 Madrid Process Plant Freshwater Source

Madrid process plant fresh water sourcing from Patch, Windy and Doris lakes was evaluated. Doris Lake was found to have the least impacts on lake elevation and lake outflows.

The model was run sourcing water from all three lakes and compared back to the base case project predictions. The maximum drawdown and flow reduction for each lake occurred in 2031 which also corresponded to the maximum drawdown (Table 8-3).

Windy Lake is the most sensitive lake with respect to water draw. It is located in a relatively small catchment and is unable to generate enough inflow through direct precipitation and runoff to maintain lake elevation and outflows. If Windy Lake were selected as the freshwater source, almost all lake outflow would be eliminated in 2031 (Figure 63 and Figure 64).

Patch Lake is more sensitive to freshwater draw in comparison to Doris Lake, because the catchment contributing runoff is one third of the catchment to Doris Lake. This is evident in the relative change in lake outflows to project base case flows.

Table 8-3: Madrid Process Plant Freshwater Source Sensitivity Summary

Madrid Process Plant Freshwater Source	Year of Maximum Effect	Maximum Annual Drawdown* (cm)	Maximum Flow Reduction* (%)
Windy Lake	2031	-16	-97%
Patch Lake	2031	-12	-54%
Doris Lake	2031	-9	-18%

Source: Y:\01_SITES\Hope.Bay\1CT022.004_Phase 2 DEIS - Engineering Support\Task 300_Water_Load_Balance\Deliverables\WB_Report\020_Tables\HopeBay_WBReport_Tables_1CT022.004_R01_ajb

* – Comparisons were made to the project results for the respective year without draw from Madrid North process plant not baseline results.

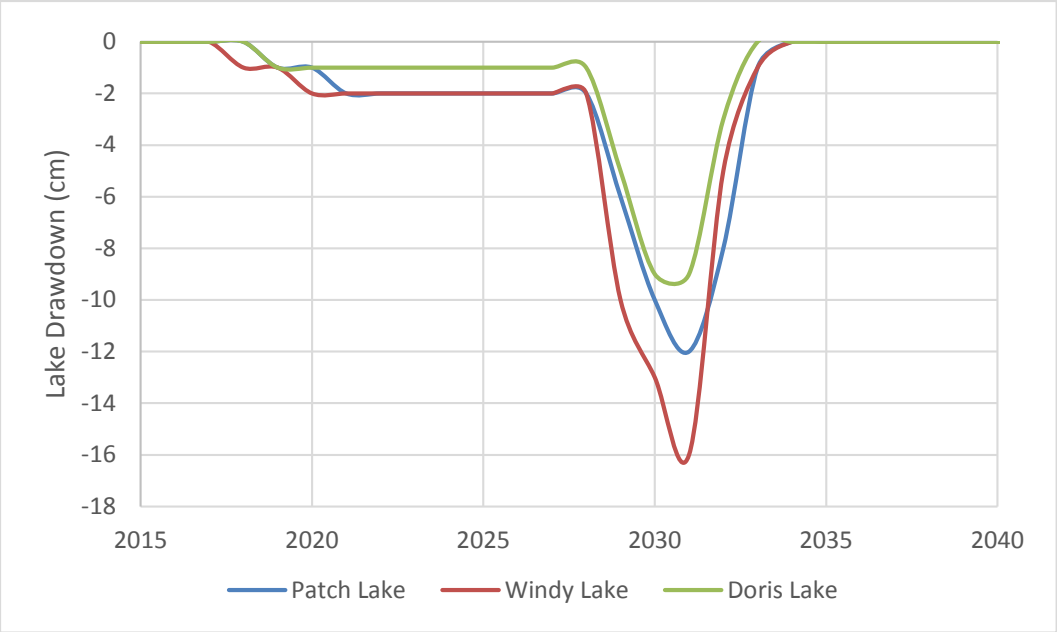

Figure 63: Freshwater Source Impact on Lake Drawdown

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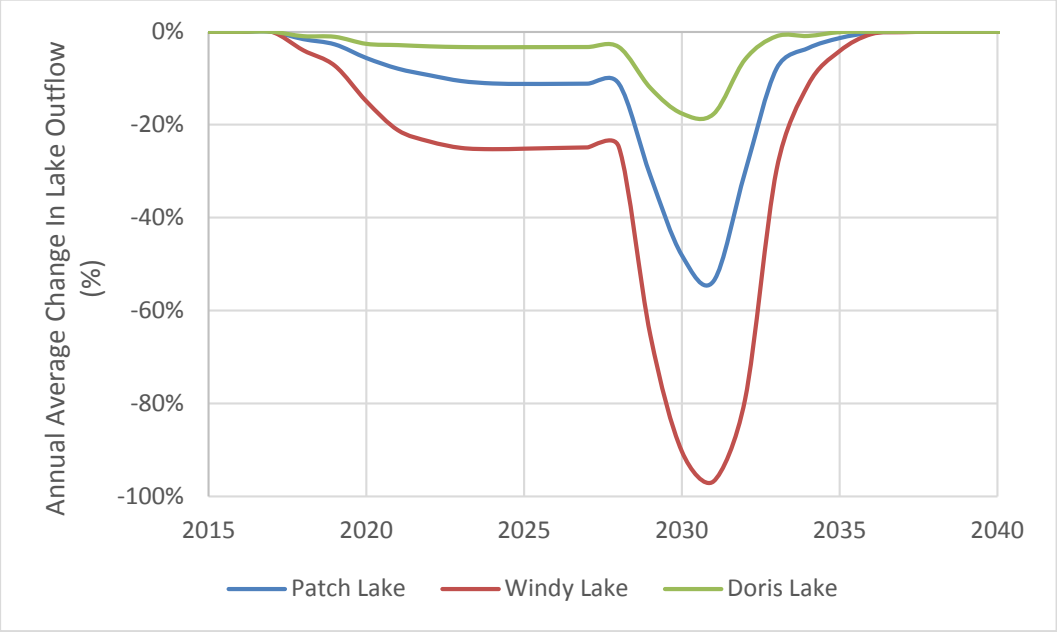

Figure 64: Freshwater Source Impact on Lake Overflow

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9 Conclusions

SRK developed a water and load balance model to predict flows and water quality for the Phase 2 Hope Bay Project from construction to post-closure.

The model encompassed four mines: Doris (existing), Madrid North, Madrid South, and Boston located within the Doris, Madrid and Boston independent watersheds. At the time of model construction, TMAC had yet to decide where the Boston ore was to be processed. The model was set up to simultaneously process this ore in both the Boston process plant and Doris mill. Since these sites are located in independent watersheds, the predictions produced the most conservative results for each watershed and the Project as a whole.

The water balance was run as a stochastic simulation using combinations of historical data to predict variability in flows and lake levels at the select model nodes. The load balance was run as a deterministic simulation under average hydrological conditions. Model inputs included geochemical source terms, groundwater flows, site monitoring data, climate data, and the mine plan. Conservative assumptions were made where possible. The model was run under various sensitivity cases in order to assess the range in expected results.

In total, seven lakes (Wolverine, Imniagut, Patch, Doris, Windy, Stickleback and Aimaokatalok) will be directly impacted through mining activities. The annual water draw for industrial, potable and mill water use is presented as Table 9-1 and Table 9-2. The major conclusions for the water and load balance predictions are summarised by each watershed below (Table 9-3). Overall the model is intended for use as a water management decision making tool and to identify potential impacts from the Project.

Major conclusions and key water management practices the presented model predictions rely on are as follows:

1. In order to discharge Doris TIA water from the marine mixing box, intercepted water from the underground workings must also be discharged. In 2028 the model predicts that arsenic concentrations in the marine mixing box will exceed the MMER guideline for arsenic (0.5 mg/L). The Doris TIA water quality should be monitored to confirm predicted arsenic trends. The monitoring program would be able to confirm the predicted need for arsenic treatment in 2028 or other mitigation measures to manage the effluent arsenic concentrations.

2. The Doris TIA water level must be maintained so that sufficient volume is stored for the Doris mill and Madrid process plant reclaim demand throughout the winter and sufficient storage capacity is available for spring runoff. In 2029 there is insufficient over winter reclaim capacity in the Doris TIA and reclaim water for the Madrid process plant and Doris mill is sourced from Doris Lake for this and each subsequent winter.

3. The use of the Doris TIA as a holding reservoir for intercepted groundwater should be avoided for prolonged periods. Intercepted groundwater (especially during Doris mining) contains high levels of chloride that would negatively impact process performance in the

Doris mill, through reclaim water sourced from the Doris TIA. However infrequent use of the facility in this capacity for durations under 30 days did not drastically increase the chloride concentration.

4. A water treatment plant must be operational at Boston in order to discharge CWP contact water and the Boston process plant effluent to Aimaokatalok Lake.

5. The Doris TIA and Boston TMA closure flows were predicted to contain elevated levels of arsenic and copper. Although water quality in the receiving node met CCME guidelines, the model predicted these nodes are perfectly mixed systems. In reality there could be a plume of elevated metal and arsenic concentrations within these lakes.

6. The two major parameters of concern for the project were arsenic and copper. Arsenic loading originated from process water, tailings and backfill while copper loading was from site infrastructure built with quarry rock. The other parameters with elevated concentrations compared to the CCME guidelines were not linked to a specific discharge, but were a result of cryoconcentration.

Table 9-1: Maximum Annual Freshwater Draw from the Doris and Madrid Watershed

Maximum Demand	Potable Water (m^3/y)	Mill Demand (m^3/y)		Doris and Madrid Industrial Demand (m^3/y)	Total Annual Demand (m^3/y)		
		Doris Mill	Madrid Process Plant				
Source	Windy Lake	Doris Lake		Doris Lake	Windy Lake	Doris Lake	Total
2017 to 2028	44,000	270,000	140,000	470,000	44,000	870,000	910,000
2029 to 2032	44,000	1,300,000	670,000	470,000	44,000	2,500,000	2,500,000

Source Y:\01_SITES\Hope.Bay\1CT022.004_Phase 2 DEIS - Engineering Support\Task 300_Water_Load_Balance\Deliverables\WB_Report\020_Tables\HopeBay_WBReport_Tables_1CT022.004_R00_ajb

Table 9-2: Maximum Annual Freshwater Draw from the Boston Watershed

Maximum Demand	Potable Water (m^3/y)	Boston Process Plant Demand (m^3/y)	Boston Industrial Demand (m^3/y)	Total Annual Demand (m^3/y)
Source	Aimaokatalok Lake			
2022-2032	22,000	110,000	180,000	310,000

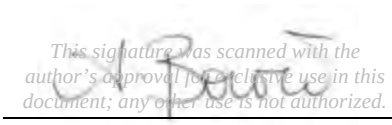
Source Y:\01_SITES\Hope.Bay\1CT022.004_Phase 2 DEIS - Engineering Support\Task 300_Water_Load_Balance\Deliverables\WB_Report\020_Tables\HopeBay_WBReport_Tables_1CT022.004_R00_ajb

Table 9-3: Summary of Water and Load Balance Predictions

Watershed	Prediction Node	Water Balance Effects	Load Balance Effects	Predicted Magnitude of Effect
Doris	Wolverine Lake	Drawdown through Madrid South Mine	Disturbed runoff from mine infrastructure	35% reduction in outflow during operations
		Removal of water from catchment during operations via MS CWP1		Predicted CCME exceedances (TSS, Cl, F, CN-Total, CN-free, Al, Cr, Cu, Fe, Se) due to cryoconcentration
				Drawdown of up to 4 cm
	Imniagut Lake	Drawdown through Madrid North		Drawdown of up to 130 cm to Madrid North Mine
	Patch Lake	Drawdown through Madrid North and South mines	Disturbed runoff from mine infrastructure	27% reduction in outflow during operations
		Removal of water from catchment during operations via MS CWP2	Underground flow from Madrid South Mine at post-closure	No change in lake level through drawdown
		Industrial water use withdrawal		Predicted CCME exceedances (Cl, Cr, Cu, Fe) due to cryoconcentration
	Doris Lake	Drawdown through Doris Mine	Disturbed runoff from mine infrastructure	43% reduction in outflow during operations
		Removal of water from catchment during operations via D CWP	Underground flow from Doris Mine at post-closure	Drawdown of up to 50 cm
		Industrial water use withdrawal	Doris TIA beach closure runoff	No predicted CCME exceedances
Marine Discharge	Marine Mixing Box	Intercepted groundwater flow	Intercepted groundwater loadings including flush of backfilled material	Predicted MMER arsenic exceedance starting in 2028
		Doris TIA discharge during open water season	Loadings from Doris TIA including the following sources: • Doris mill process effluent • contact water • grey water • beach runoff	Discharge to Roberts Bay ranging from 3,000 m^3/day to 8,000 m^3/day
Madrid	Windy Lake	Drawdown through Madrid North Mine	Disturbed runoff	7% reduction in outflow during operations
		Removal of water from catchment during operations via MN CWP2	Underground flow from Madrid North Mine at post-closure	No change in lake level through drawdown
		Industrial and potable water use withdrawal		Predicted CCME copper exceedance during closure

Watershed	Prediction Node	Water Balance Effects	Load Balance Effects	Predicted Magnitude of Effect
Boston	Stickleback Lake	Removal of water from catchment during operations via B CWP1 and B CWP3	Disturbed runoff from mine infrastructure	5% reduction in outflow during operations due to diversion of CWP water to WTP and discharged directly to Aimaokatalok Lake.
				CCME exceedances (Cl, F, CN-Total, Al, Cr, Cu, Fe, Mn, Se) due to cryoconcentration
	Aimaokatalok Lake	Removal of water from catchment during operation via B CWP2	Disturbed runoff from mine infrastructure	No change in predicted outflow during operations
		Industrial and potable water use withdrawal	Grey water	No predicted CCME exceedances
			Boston WTP effluent	
			Boston TMA closure seepage	

This report, “Hope Bay – Water and Load Balance”, was prepared by SRK Consulting (Canada) Inc.



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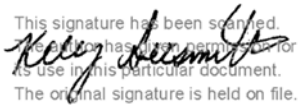

Kelly Sexsmith, PGeo
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All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

10 References

Canadian Council of Ministers of the Environment (CCME). 2016. Canadian Environmental Quality Guidelines Summary Table. http://st-ts.ccme.ca/en/index.html Accessed February 2016.

Environment Canada (EC). 2016. CanMatrix – Georeferenced, Digital Topographic Maps of Canada. http://ftp2.cits.rncan.gc.ca/pub/canmatrix/ Accessed March 2016.

ERM. 2015. Doris North Project, 2014 Hydrology Compliance Monitoring program. Memo Prepared for TMAC Resources Inc. February 2015.

ERM. 2016. Doris North Project, 2015 Hydrology Compliance Monitoring program. Memo Prepared for TMAC Resources Inc. February 2016.

Ferguson, K.D. and Leask, S.M. 1988. The export of Nutrients from Surface Coal Mines. Environment Canada, Conservation and Protection, Pacific and Yukon Region. Regional Program Report 87-12.

Gekko 2014. TMAC Resources Inc. – Hope Bay Project – SC0540 Engineering Study Interim Report. Report prepared for TMAC Resources Inc. by Gekko Systems Limited (Ballarat, Australia), September 2014.

Golder Associates. 2009. 2008 Hydrology Baseline Update, Doris Project Area. Report Prepared for Hope Bay Mining Limited. Project Number: 1CH008.011.0320. June 2009.

Mining Metal Effluent Regulations (MMER). 2016. Authorized Limits of Deleterious Substances – Schedule 4. Last amended February 20, 2015 http://laws-lois.justice.gc.ca/eng/regulations/SOR-2002-222/ Accessed February 2016.

Pieters, and Lawrence. Effect of Salt exclusion from lake ice on seasonal circulation. Limnology and Oceanography. 54(2). 2009, p 401–412.

Rescan. 2011a. Hope Bay Project, 2010 Hydrology Baseline Report. Report Prepared for Newmont North America. February 2011.

Rescan. 2011b. Doris North Gold Mine Project, Hydrology Compliance Report 2011. Report Prepared for Newmont North America. December 2011.

Rescan. 2012. Doris North Gold Mine Project, Hydrology Compliance Report 2012. Report Prepared for Newmont North America. December 2012.

Rescan. 2013. Ekati Diamond Mine Modelling Predictions of Water Quality for Pit Lakes.

Rescan. 2014. Doris North Project, Hydrology Compliance Monitoring Report 2013. Report Prepared for for TMAC Resources Inc. January 2014.

SRK Consulting (Canada) Inc. 2004. Colomac Site Enhanced Natural Removal Program 2003 Results. Report prepared for Indian and Northern Affairs Canada, NWT Region and Public Works and Government Services Canada, Western Region. 2004.

SRK Consulting (Canada) Inc. 2009. Hope Bay Project, Pre-Gate Stage 2 Study, Tailings Impoundment System Design. Report Prepared for Hope Bay Mining Limited. Project Number: 1CH008.011.0320. 2009.

SRK Consulting (Canada) Inc. 2015a. Doris North Project – Water and Load Balance. Report Prepared for TMAC Resources Inc. Project Number: 1CT022.022. 2015a.

SRK Consulting (Canada) Inc. 2015b. Hydrogeological Modeling of the Proposed Doris Mine, Hope Bay Project, Nunavut. Report Prepared for TMAC Resources Inc. Project Number: 1CT022.002.200.1000. 2015.

SRK Consulting (Canada) Inc. 2016a. Mean Annual Precipitation at Boston. Prepared for TMAC Resources, 2016.

SRK Consulting (Canada) Inc. 2016b. Geochemical Source Term Predictions for the Proposed Madrid North, Madrid South and Boston Mines, Hope Bay Project. Prepared for TMAC Resources, 2016.

SRK Consulting (Canada) Inc. 2016c. Hope Bay Project Climate Change Analysis. Prepared for TMAC Resources. 2016.

SRK Consulting (Canada) Inc. 2016d. Hope Bay Project Doris Tailings Impoundment Area Phase 2 Design. Prepared for TMAC Resources. 2016.

SRK Consulting (Canada) Inc. 2016e. Hydrogeological Characterization and Modeling of the Proposed Boston, Madrid South and Madrid North Mines, Hope Bay Project, Nunavut. Prepared for TMAC Resources. 2016.

TMAC Resources Inc. 2015. Nuna Daily Water Haul Tracking- inputting copy. Sent via email on January 6, 2016. December 2015.

TMAC Resources Inc. 2016. Personal communication with Floyd Varley, Vice President Operations. Mine plan updated from Roscoe Postle Associates Inc. NI 43-101 Technical Report on the Hope Bay Project, Nunavut, Canada, March 2015.

Appendix A: Model Inputs

ST-2 - Median													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	16	16	16	16	16	4.0	5.0	6.3	9.0	16	16	16
TDS	mg/L	3,700	3,700	3,700	3,700	1,800	1,900	2,600	2,800	3,900	3,700	3,700	3,700
Fluoride	mg/L	2.0	2.0	2.0	2.0	0.10	0.20	0.26	0.41	1.0	2.0	2.0	2.0
Chloride	mg/L	2,100	2,100	2,100	2,100	1,100	1,100	1,500	1,500	2,200	2,100	2,100	2,100
Free Cyanide	mg/L	0.0070	0.0070	0.0070	0.0070	0.0070	0.0070	0.0070	0.0070	0.0050	0.0070	0.0070	0.0070
Total Cyanide	mg/L	0.029	0.029	0.029	0.029	0.081	0.053	0.011	0.0069	0.019	0.029	0.029	0.029
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	43	43	43	43	22	26	29	18	28	43	43	43
Nitrate	mg/L as N	87	87	87	87	44	44	80	83	94	87	87	87
Nitrite	mg/L as N	0.72	0.72	0.72	0.72	1.1	0.59	0.5	0.5	0.53	0.72	0.72	0.72
Sulphate	mg/L	120	120	120	120	44	58	130	200	180	120	120	120
Alkalinity	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness	mg/L	2,400	2,400	2,400	2,400	1,200	1,300	1,700	1,400	2,800	2,400	2,400	2,400
Aluminum	mg/L	0.13	0.13	0.13	0.13	0.53	0.12	0.076	0.10	0.094	0.13	0.13	0.13
Antimony	mg/L	0.00065	0.00065	0.00065	0.00065	0.00040	0.00050	0.00050	0.00065	0.00050	0.00065	0.00065	0.00065
Arsenic	mg/L	0.00080	0.00080	0.00080	0.00080	0.00040	0.00072	0.0010	0.00055	0.00089	0.00080	0.00080	0.00080
Barium	mg/L	0.20	0.20	0.20	0.20	0.087	0.089	0.10	0.088	0.20	0.20	0.20	0.20
Beryllium	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Boron	mg/L	0.23	0.23	0.23	0.23	0.19	0.20	0.34	0.45	0.31	0.23	0.23	0.23
Cadmium	mg/L	0.00015	0.00015	0.00015	0.00015	0.000050	0.000066	0.00014	0.00012	0.00018	0.00015	0.00015	0.00015
Calcium	mg/L	750	750	750	750	380	400	470	430	750	750	750	750
Chromium	mg/L	0.0075	0.0075	0.0075	0.0075	0.016	0.0045	0.0034	0.0015	0.0018	0.0075	0.0075	0.0075
Cobalt	mg/L	0.0078	0.0078	0.0078	0.0078	0.0042	0.0036	0.0036	0.0042	0.0066	0.0078	0.0078	0.0078
Copper	mg/L	0.0064	0.0064	0.0064	0.0064	0.016	0.0081	0.0072	0.0077	0.0073	0.0064	0.0064	0.0064
Iron	mg/L	0.89	0.89	0.89	0.89	0.79	0.23	0.28	0.35	0.51	0.89	0.89	0.89
Lead	mg/L	0.00038	0.00038	0.00038	0.00038	0.00035	0.00028	0.00034	0.00050	0.00042	0.00038	0.00038	0.00038
Lithium	mg/L	0.24	0.24	0.24	0.24	0.12	0.11	0.066	0.055	0.17	0.24	0.24	0.24
Magnesium	mg/L	78	78	78	78	34	37	55	69	83	78	78	78
Manganese	mg/L	2.1	2.1	2.1	2.1	0.26	0.32	0.83	0.84	1.4	2.1	2.1	2.1
Mercury	mg/L	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020
Molybdenum	mg/L	0.0067	0.0067	0.0067	0.0067	0.0050	0.0050	0.0050	0.0073	0.0053	0.0067	0.0067	0.0067
Nickel	mg/L	0.0064	0.0064	0.0064	0.0064	0.012	0.0024	0.0038	0.0062	0.0069	0.0064	0.0064	0.0064
Selenium	mg/L	0.0017	0.0017	0.0017	0.0017	0.00075	0.00081	0.0022	0.0032	0.0023	0.0017	0.0017	0.0017
Silver	mg/L	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020
Sodium	mg/L	460	460	460	460	150	190	380	460	500	460	460	460
Thallium	mg/L	0.00023	0.00023	0.00023	0.00023	0.00011	0.00020	0.00016	0.00020	0.00020	0.00023	0.00023	0.00023
Uranium	mg/L	0.0013	0.0013	0.0013	0.0013	0.00046	0.00051	0.0012	0.0019	0.0016	0.0013	0.0013	0.0013
Vanadium	mg/L	0.0020	0.0020	0.0020	0.0020	0.0083	0.0010	0.0010	0.0020	0.0015	0.0020	0.0020	0.0020
Zinc	mg/L	0.11	0.11	0.11	0.11	0.0071	0.0081	0.012	0.038	0.15	0.11	0.11	0.11

ST-2 - 75th Percentile													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	30	30	30	30	25	6.3	13	10	13	30	30	30
TDS	mg/L	4,100	4,100	4,100	4,100	1,900	2,600	3,200	3,700	4,900	4,100	4,100	4,100
Fluoride	mg/L	2.0	2.0	2.0	2.0	0.10	0.25	0.33	0.56	1.0	2.0	2.0	2.0
Chloride	mg/L	2,200	2,200	2,200	2,200	1,100	1,300	1,700	2,200	2,900	2,200	2,200	2,200
Free Cyanide	mg/L	0.0070	0.0070	0.0070	0.0070	0.0070	0.0070	0.0070	0.0070	0.0050	0.0070	0.0070	0.0070
Total Cyanide	mg/L	0.044	0.044	0.044	0.044	0.11	0.069	0.023	0.013	0.046	0.044	0.044	0.044
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	48	48	48	48	24	38	37	29	44	48	48	48
Nitrate	mg/L as N	92	92	92	92	45	72	100	120	120	92	92	92
Nitrite	mg/L as N	0.99	0.99	0.99	0.99	1.2	0.72	0.51	0.51	0.99	0.99	0.99	0.99
Sulphate	mg/L	280	280	280	280	48	77	200	220	200	280	280	280
Alkalinity	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness	mg/L	2,500	2,500	2,500	2,500	1,300	2,100	1,700	2,400	3,200	2,500	2,500	2,500
Aluminum	mg/L	0.26	0.26	0.26	0.26	0.66	0.17	0.15	0.13	0.12	0.26	0.26	0.26
Antimony	mg/L	0.00095	0.00095	0.00095	0.00095	0.00048	0.00058	0.00095	0.0017	0.00073	0.00095	0.00095	0.00095
Arsenic	mg/L	0.0023	0.0023	0.0023	0.0023	0.00070	0.00094	0.0014	0.00088	0.0010	0.0023	0.0023	0.0023
Barium	mg/L	0.21	0.21	0.21	0.21	0.089	0.12	0.13	0.098	0.27	0.21	0.21	0.21
Beryllium	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Boron	mg/L	0.24	0.24	0.24	0.24	0.21	0.27	0.41	0.48	0.45	0.24	0.24	0.24
Cadmium	mg/L	0.00019	0.00019	0.00019	0.00019	0.00005	0.00013	0.00018	0.00022	0.00034	0.00019	0.00019	0.00019
Calcium	mg/L	820	820	820	820	400	580	560	530	980	820	820	820
Chromium	mg/L	0.018	0.018	0.018	0.018	0.016	0.0050	0.0050	0.0025	0.0050	0.018	0.018	0.018
Cobalt	mg/L	0.0086	0.0086	0.0086	0.0086	0.0057	0.0041	0.0052	0.0064	0.011	0.0086	0.0086	0.0086
Copper	mg/L	0.015	0.015	0.015	0.015	0.018	0.017	0.0097	0.013	0.0093	0.015	0.015	0.015
Iron	mg/L	1.2	1.2	1.2	1.2	1.3	0.39	0.3	0.48	0.77	1.2	1.2	1.2
Lead	mg/L	0.00049	0.00049	0.00049	0.00049	0.00047	0.00050	0.00050	0.00063	0.00050	0.00049	0.00049	0.00049
Lithium	mg/L	0.27	0.27	0.27	0.27	0.15	0.14	0.10	0.072	0.39	0.27	0.27	0.27
Magnesium	mg/L	85	85	85	85	41	62	68	84	91	85	85	85
Manganese	mg/L	2.5	2.5	2.5	2.5	0.67	0.86	0.93	1.2	2.5	2.5	2.5	2.5
Mercury	mg/L	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020
Molybdenum	mg/L	0.0096	0.0096	0.0096	0.0096	0.0050	0.0074	0.0059	0.013	0.0081	0.0096	0.0096	0.0096
Nickel	mg/L	0.0079	0.0079	0.0079	0.0079	0.013	0.0050	0.0071	0.0070	0.0074	0.0079	0.0079	0.0079
Selenium	mg/L	0.0019	0.0019	0.0019	0.0019	0.0013	0.0017	0.0038	0.0039	0.0026	0.0019	0.0019	0.0019
Silver	mg/L	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000028	0.000020	0.000020	0.000020
Sodium	mg/L	510	510	510	510	180	430	500	520	560	510	510	510
Thallium	mg/L	0.00025	0.00025	0.00025	0.00025	0.00018	0.00021	0.00020	0.00055	0.0002	0.00025	0.00025	0.00025
Uranium	mg/L	0.0023	0.0023	0.0023	0.0023	0.00048	0.00085	0.0016	0.0023	0.0017	0.0023	0.0023	0.0023
Vanadium	mg/L	0.0035	0.0035	0.0035	0.0035	0.010	0.0033	0.0019	0.0035	0.0025	0.0035	0.0035	0.0035
Zinc	mg/L	0.12	0.12	0.12	0.12	0.023	0.021	0.024	0.20	0.19	0.12	0.12	0.12

Doris Overflow B/G - Median													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	5.8	5.8	5.8	3.5	4.4	4.4	4.4	4.3	5.8	5.8	5.8	5.8
TDS	mg/L	170	170	170	200	150	150	150	170	170	170	170	170
Fluoride	mg/L	0.054	0.054	0.054	0.065	0.051	0.051	0.051	0.055	0.054	0.054	0.054	0.054
Chloride	mg/L	63	63	63	80	63	63	63	63	63	63	63	63
Free Cyanide	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Total Cyanide	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Nitrate	mg/L as N	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Nitrite	mg/L as N	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Sulphate	mg/L	2.7	2.7	2.7	3.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Alkalinity	mg/L	30	30	30	37	29	29	29	29	30	30	30	30
Hardness	mg/L	49	49	49	61	49	49	49	49	49	49	49	49
Aluminum	mg/L	0.052	0.052	0.052	0.0061	0.047	0.047	0.047	0.055	0.052	0.052	0.052	0.052
Antimony	mg/L	0.000027	0.000027	0.000027	0.00003	0.000021	0.000021	0.000021	0.000021	0.000027	0.000027	0.000027	0.000027
Arsenic	mg/L	0.00034	0.00034	0.00034	0.00033	0.00028	0.00028	0.00028	0.00034	0.00034	0.00034	0.00034	0.00034
Barium	mg/L	0.0033	0.0033	0.0033	0.0033	0.0034	0.0034	0.0034	0.0035	0.0033	0.0033	0.0033	0.0033
Beryllium	mg/L	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050
Boron	mg/L	0.036	0.036	0.036	0.033	0.033	0.033	0.033	0.031	0.036	0.036	0.036	0.036
Cadmium	mg/L	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050
Calcium	mg/L	8.9	8.9	8.9	11	8.8	8.8	8.8	8.9	8.9	8.9	8.9	8.9
Chromium	mg/L	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050
Cobalt	mg/L	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050
Copper	mg/L	0.0013	0.0013	0.0013	0.0015	0.0013	0.0013	0.0013	0.0014	0.0013	0.0013	0.0013	0.0013
Iron	mg/L	0.093	0.093	0.093	0.03	0.16	0.16	0.16	0.13	0.093	0.093	0.093	0.093
Lead	mg/L	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050	0.000050
Lithium	mg/L	0.0040	0.0040	0.0040	0.0045	0.0038	0.0038	0.0038	0.0036	0.0040	0.0040	0.0040	0.0040
Magnesium	mg/L	6.5	6.5	6.5	8.1	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Manganese	mg/L	0.022	0.022	0.022	0.0058	0.021	0.021	0.021	0.032	0.022	0.022	0.022	0.022
Mercury	mg/L	0.00000054	0.00000054	0.00000054	0.0000005	0.00000068	0.00000068	0.00000068	0.00000062	0.00000054	0.00000054	0.00000054	0.00000054
Molybdenum	mg/L	0.00021	0.00021	0.00021	0.00023	0.00017	0.00017	0.00017	0.00018	0.00021	0.00021	0.00021	0.00021
Nickel	mg/L	0.00054	0.00054	0.00054	0.00048	0.00051	0.00051	0.00051	0.00045	0.00054	0.00054	0.00054	0.00054
Selenium	mg/L	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020
Silver	mg/L	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050
Sodium	mg/L	32	32	32	40	33	33	33	33	32	32	32	32
Thallium	mg/L	0.0000020	0.0000020	0.0000020	0.0000020	0.0000020	0.0000020	0.0000020	0.0000020	0.0000020	0.0000020	0.0000020	0.0000020
Uranium	mg/L	0.000036	0.000036	0.000036	0.000036	0.000033	0.000033	0.000033	0.000035	0.000036	0.000036	0.000036	0.000036
Vanadium	mg/L	0.00017	0.00017	0.00017	0.000074	0.00016	0.00016	0.00016	0.00016	0.00017	0.00017	0.00017	0.00017
Zinc	mg/L	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030

Doris Overflow B/G - 75th Percentile													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	6.0	6.0	6.0	3.9	4.8	4.8	4.8	5.0	6.0	6.0	6.0	6.0
TDS	mg/L	170	170	170	200	160	160	160	170	170	170	170	170
Fluoride	mg/L	0.057	0.057	0.057	0.066	0.054	0.054	0.054	0.057	0.057	0.057	0.057	0.057
Chloride	mg/L	65	65	65	81	64	64	64	64	65	65	65	65
Free Cyanide	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Total Cyanide	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	0.0050	0.0050	0.0050	0.0160	0.0050	0.0050	0.0050	0.0057	0.0050	0.0050	0.0050	0.0050
Nitrate	mg/L as N	0.0050	0.0050	0.0050	0.038	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Nitrite	mg/L as N	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Sulphate	mg/L	2.8	2.8	2.8	3.5	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.8
Alkalinity	mg/L	31	31	31	38	29	29	29	29	31	31	31	31
Hardness	mg/L	51	51	51	62	50	50	50	49	51	51	51	51
Aluminum	mg/L	0.066	0.066	0.066	0.0098	0.070	0.070	0.070	0.062	0.066	0.066	0.066	0.066
Antimony	mg/L	0.000031	0.000031	0.000031	0.000032	0.000028	0.000028	0.000028	0.000030	0.000031	0.000031	0.000031	0.000031
Arsenic	mg/L	0.00040	0.00040	0.00040	0.00038	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040
Barium	mg/L	0.0034	0.0034	0.0034	0.0035	0.0037	0.0037	0.0037	0.0036	0.0034	0.0034	0.0034	0.0034
Beryllium	mg/L	0.0000063	0.0000063	0.0000063	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000063	0.0000063	0.0000063	0.0000063
Boron	mg/L	0.044	0.044	0.044	0.035	0.035	0.035	0.035	0.032	0.044	0.044	0.044	0.044
Cadmium	mg/L	0.0000050	0.0000050	0.0000050	0.0000084	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050
Calcium	mg/L	9.2	9.2	9.2	11	9.0	9.0	9.0	9.0	9.2	9.2	9.2	9.2
Chromium	mg/L	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050
Cobalt	mg/L	0.000050	0.000050	0.000050	0.000050	0.000055	0.000055	0.000055	0.000051	0.000050	0.000050	0.000050	0.000050
Copper	mg/L	0.0016	0.0016	0.0016	0.0017	0.0014	0.0014	0.0014	0.0015	0.0016	0.0016	0.0016	0.0016
Iron	mg/L	0.11	0.11	0.11	0.03	0.21	0.21	0.21	0.15	0.11	0.11	0.11	0.11
Lead	mg/L	0.00011	0.00011	0.00011	0.000050	0.000068	0.000068	0.000068	0.000051	0.00011	0.00011	0.00011	0.00011
Lithium	mg/L	0.0040	0.0040	0.0040	0.0045	0.0041	0.0041	0.0041	0.0037	0.0040	0.0040	0.0040	0.0040
Magnesium	mg/L	6.7	6.7	6.7	8.2	6.6	6.6	6.6	6.6	6.7	6.7	6.7	6.7
Manganese	mg/L	0.026	0.026	0.026	0.0084	0.028	0.028	0.028	0.039	0.026	0.026	0.026	0.026
Mercury	mg/L	0.00000057	0.00000057	0.00000057	0.00000065	0.00000072	0.00000072	0.00000072	0.00000077	0.00000057	0.00000057	0.00000057	0.00000057
Molybdenum	mg/L	0.00022	0.00022	0.00022	0.00024	0.00017	0.00017	0.00017	0.00020	0.00022	0.00022	0.00022	0.00022
Nickel	mg/L	0.00066	0.00066	0.00066	0.00057	0.00055	0.00055	0.00055	0.00065	0.00066	0.00066	0.00066	0.00066
Selenium	mg/L	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020
Silver	mg/L	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050	0.0000050
Sodium	mg/L	33	33	33	41	35	35	35	33	33	33	33	33
Thallium	mg/L	0.0000028	0.0000028	0.0000028	0.0000028	0.0000038	0.0000038	0.0000038	0.0000028	0.0000028	0.0000028	0.0000028	0.0000028
Uranium	mg/L	0.000037	0.000037	0.000037	0.000039	0.000035	0.000035	0.000035	0.000037	0.000037	0.000037	0.000037	0.000037
Vanadium	mg/L	0.00019	0.00019	0.00019	0.000083	0.0002	0.0002	0.0002	0.00019	0.00019	0.00019	0.00019	0.00019
Zinc	mg/L	0.0030	0.0030	0.0030	0.0036	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030	0.0030

Boston B/G - Median													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	2.0	2.0	2.0	2.0
TDS	mg/L	20	20	20	20	21	21	19	19	20	20	20	20
Fluoride	mg/L	0.025	0.025	0.025	0.025	0.030	0.030	0.030	0.020	0.025	0.025	0.025	0.025
Chloride	mg/L	8.3	8.3	8.3	8.3	8.5	8.5	7.8	7.6	8.3	8.3	8.3	8.3
Free Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Cyanide	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	0.0060	0.0060	0.0060	0.0060	0.014	0.014	0.0080	0.0054	0.0060	0.0060	0.0060	0.0060
Nitrate	mg/L as N	0.0050	0.0050	0.0050	0.0050	0.015	0.015	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Nitrite	mg/L as N	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Sulphate	mg/L	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Alkalinity	mg/L	9.4	9.4	9.4	9.4	9.9	9.9	8.7	8.9	9.4	9.4	9.4	9.4
Hardness	mg/L	12	12	12	12	13	13	11	11	12	12	12	12
Aluminum	mg/L	0.064	0.064	0.064	0.064	0.047	0.047	0.032	0.043	0.064	0.064	0.064	0.064
Antimony	mg/L	0.0000052	0.0000052	0.0000052	0.0000052	0.0000085	0.0000085	0.0000055	0.000073	0.0000052	0.0000052	0.0000052	0.0000052
Arsenic	mg/L	0.00017	0.00017	0.00017	0.00017	0.00017	0.00017	0.00014	0.00016	0.00017	0.00017	0.00017	0.00017
Barium	mg/L	0.0021	0.0021	0.0021	0.0021	0.0022	0.0022	0.0019	0.002	0.0021	0.0021	0.0021	0.0021
Beryllium	mg/L	0.0000048	0.0000048	0.0000048	0.0000048	0.0000050	0.0000050	0.0000050	0.0000055	0.0000048	0.0000048	0.0000048	0.0000048
Boron	mg/L	0.0053	0.0053	0.0053	0.0053	0.0052	0.0052	0.0038	0.0046	0.0053	0.0053	0.0053	0.0053
Cadmium	mg/L	0.0000021	0.0000021	0.0000021	0.0000021	0.0000079	0.0000079	0.0000021	0.0000040	0.0000021	0.0000021	0.0000021	0.0000021
Calcium	mg/L	2.5	2.5	2.5	2.5	2.7	2.7	2.2	2.3	2.5	2.5	2.5	2.5
Chromium	mg/L	0.00036	0.00036	0.00036	0.00036	0.00022	0.00022	0.00028	0.00023	0.00036	0.00036	0.00036	0.00036
Cobalt	mg/L	0.000034	0.000034	0.000034	0.000034	0.000062	0.000062	0.000040	0.000030	0.000034	0.000034	0.000034	0.000034
Copper	mg/L	0.00089	0.00089	0.00089	0.00089	0.00096	0.00096	0.00081	0.00091	0.00089	0.00089	0.00089	0.00089
Iron	mg/L	0.077	0.077	0.077	0.077	0.12	0.12	0.083	0.061	0.077	0.077	0.077	0.077
Lead	mg/L	0.000035	0.000035	0.000035	0.000035	0.000033	0.000033	0.000029	0.000045	0.000035	0.000035	0.000035	0.000035
Lithium	mg/L	0.0050	0.0050	0.0050	0.0050	0.0075	0.0075	0.0075	0.0075	0.0050	0.0050	0.0050	0.0050
Magnesium	mg/L	1.6	1.6	1.6	1.6	1.6	1.6	1.4	1.4	1.6	1.6	1.6	1.6
Manganese	mg/L	0.0072	0.0072	0.0072	0.0072	0.017	0.017	0.013	0.0057	0.0072	0.0072	0.0072	0.0072
Mercury	mg/L	0.0000080	0.0000080	0.0000080	0.0000080	0.00000070	0.00000070	0.00000060	0.00000060	0.0000080	0.0000080	0.0000080	0.0000080
Molybdenum	mg/L	0.000053	0.000053	0.000053	0.000053	0.000049	0.000049	0.000029	0.000041	0.000053	0.000053	0.000053	0.000053
Nickel	mg/L	0.00041	0.00041	0.00041	0.00041	0.00043	0.00043	0.00035	0.00034	0.00041	0.00041	0.00041	0.00041
Selenium	mg/L	0.00022	0.00022	0.00022	0.00022	0.00020	0.00020	0.00015	0.00020	0.00022	0.00022	0.00022	0.00022
Silver	mg/L	0.0000013	0.0000013	0.0000013	0.0000013	0.0000028	0.0000028	0.00000050	0.0000011	0.0000013	0.0000013	0.0000013	0.0000013
Sodium	mg/L	4.8	4.8	4.8	4.8	4.9	4.9	4	4.2	4.8	4.8	4.8	4.8
Thallium	mg/L	0.0000052	0.0000052	0.0000052	0.0000052	0.0000044	0.0000044	0.0000032	0.0000057	0.0000052	0.0000052	0.0000052	0.0000052
Uranium	mg/L	0.000022	0.000022	0.000022	0.000022	0.000021	0.000021	0.000018	0.000020	0.000022	0.000022	0.000022	0.000022
Vanadium	mg/L	0.00016	0.00016	0.00016	0.00016	0.00020	0.00020	0.000089	0.00010	0.00016	0.00016	0.00016	0.00016
Zinc	mg/L	0.00088	0.00088	0.00088	0.00088	0.0024	0.0024	0.0022	0.0014	0.00088	0.00088	0.00088	0.00088

Boston B/G - 75th Percentile													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	6.0	6.0	6.0	6.0	2.0	2.0	1.8	1.5	6.0	6.0	6.0	6.0
TDS	mg/L	23	23	23	23	23	23	20	19	23	23	23	23
Fluoride	mg/L	0.030	0.030	0.030	0.030	0.065	0.065	0.030	0.030	0.030	0.030	0.030	0.030
Chloride	mg/L	8.4	8.4	8.4	8.4	9.8	9.8	7.8	8.1	8.4	8.4	8.4	8.4
Free Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Cyanide	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	0.0066	0.0066	0.0066	0.0066	0.017	0.017	0.008	0.013	0.0066	0.0066	0.0066	0.0066
Nitrate	mg/L as N	0.0080	0.0080	0.0080	0.0080	0.022	0.022	0.0050	0.0050	0.0080	0.0080	0.0080	0.0080
Nitrite	mg/L as N	0.0010	0.0010	0.0010	0.0010	0.0040	0.0040	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Sulphate	mg/L	5.0	5.0	5.0	5.0	3.0	3.0	3.8	3.0	5.0	5.0	5.0	5.0
Alkalinity	mg/L	9.9	9.9	9.9	9.9	10	10	9.8	9.2	9.9	9.9	9.9	9.9
Hardness	mg/L	13	13	13	13	13	13	12	12	13	13	13	13
Aluminum	mg/L	0.071	0.071	0.071	0.071	0.081	0.081	0.032	0.045	0.071	0.071	0.071	0.071
Antimony	mg/L	0.0000069	0.0000069	0.0000069	0.0000069	0.000054	0.000054	0.0000055	0.000087	0.0000069	0.0000069	0.0000069	0.0000069
Arsenic	mg/L	0.00018	0.00018	0.00018	0.00018	0.00017	0.00017	0.00016	0.00016	0.00018	0.00018	0.00018	0.00018
Barium	mg/L	0.0022	0.0022	0.0022	0.0022	0.0031	0.0031	0.0019	0.002	0.0022	0.0022	0.0022	0.0022
Beryllium	mg/L	0.0000063	0.0000063	0.0000063	0.0000063	0.00010	0.00010	0.0000051	0.00010	0.0000063	0.0000063	0.0000063	0.0000063
Boron	mg/L	0.0060	0.0060	0.0060	0.0060	0.0083	0.0083	0.0048	0.0077	0.0060	0.0060	0.0060	0.0060
Cadmium	mg/L	0.0000026	0.0000026	0.0000026	0.0000026	0.0000090	0.0000090	0.0000087	0.0000072	0.0000026	0.0000026	0.0000026	0.0000026
Calcium	mg/L	2.5	2.5	2.5	2.5	2.9	2.9	2.4	2.3	2.5	2.5	2.5	2.5
Chromium	mg/L	0.00046	0.00046	0.00046	0.00046	0.00044	0.00044	0.00030	0.00037	0.00046	0.00046	0.00046	0.00046
Cobalt	mg/L	0.000055	0.000055	0.000055	0.000055	0.00013	0.00013	0.000040	0.000070	0.000055	0.000055	0.000055	0.000055
Copper	mg/L	0.00096	0.00096	0.00096	0.00096	0.0011	0.0011	0.00081	0.00096	0.00096	0.00096	0.00096	0.00096
Iron	mg/L	0.080	0.080	0.080	0.080	0.19	0.19	0.083	0.082	0.080	0.080	0.080	0.080
Lead	mg/L	0.000035	0.000035	0.000035	0.000035	0.000059	0.000059	0.000029	0.000047	0.000035	0.000035	0.000035	0.000035
Lithium	mg/L	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088	0.0088
Magnesium	mg/L	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.7	1.7	1.7	1.7
Manganese	mg/L	0.0076	0.0076	0.0076	0.0076	0.018	0.018	0.015	0.0068	0.0076	0.0076	0.0076	0.0076
Mercury	mg/L	0.000013	0.000013	0.000013	0.000013	0.0000058	0.0000058	0.0000006	0.0000059	0.000013	0.000013	0.000013	0.000013
Molybdenum	mg/L	0.000054	0.000054	0.000054	0.000054	0.000050	0.000050	0.000029	0.000048	0.000054	0.000054	0.000054	0.000054
Nickel	mg/L	0.00044	0.00044	0.00044	0.00044	0.00049	0.00049	0.00035	0.00040	0.00044	0.00044	0.00044	0.00044
Selenium	mg/L	0.00026	0.00026	0.00026	0.00026	0.00022	0.00022	0.00018	0.00020	0.00026	0.00026	0.00026	0.00026
Silver	mg/L	0.0000039	0.0000039	0.0000039	0.0000039	0.0000064	0.0000064	0.0000010	0.0000062	0.0000039	0.0000039	0.0000039	0.0000039
Sodium	mg/L	5.0	5.0	5.0	5.0	5.0	5.0	4.5	4.3	5.0	5.0	5.0	5.0
Thallium	mg/L	0.0000083	0.0000083	0.0000083	0.0000083	0.0000061	0.0000061	0.000015	0.0000097	0.0000083	0.0000083	0.0000083	0.0000083
Uranium	mg/L	0.000023	0.000023	0.000023	0.000023	0.000022	0.000022	0.000018	0.000022	0.000023	0.000023	0.000023	0.000023
Vanadium	mg/L	0.00017	0.00017	0.00017	0.00017	0.00024	0.00024	0.000089	0.00057	0.00017	0.00017	0.00017	0.00017
Zinc	mg/L	0.00094	0.00094	0.00094	0.00094	0.0055	0.0055	0.0023	0.0044	0.00094	0.00094	0.00094	0.00094

TL-1 - Median													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
TDS	mg/L	140	140	140	140	79	130	130	140	140	140	140	140
Fluoride	mg/L	0.063	0.063	0.063	0.063	0.023	0.05	0.054	0.06	0.063	0.063	0.063	0.063
Chloride	mg/L	40	40	40	40	9.2	37	40	40	40	40	40	40
Free Cyanide	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Total Cyanide	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	0.034	0.034	0.034	0.034	0.050	0.050	0.013	0.050	0.034	0.034	0.034	0.034
Nitrate	mg/L as N	0.050	0.050	0.050	0.050	0.11	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Nitrite	mg/L as N	0.0013	0.0013	0.0013	0.0013	0.050	0.050	0.0019	0.050	0.0013	0.0013	0.0013	0.0013
Sulphate	mg/L	2.7	2.7	2.7	2.7	2.7	2.1	2.1	2.8	2.7	2.7	2.7	2.7
Alkalinity	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness	mg/L	39	39	39	39	46	53	33	39	39	39	39	39
Aluminum	mg/L	0.032	0.032	0.032	0.032	0.048	0.016	0.012	0.019	0.032	0.032	0.032	0.032
Antimony	mg/L	0.00050	0.00050	0.00050	0.00050	0.00040	0.00040	0.00050	0.00040	0.00050	0.00050	0.00050	0.00050
Arsenic	mg/L	0.00050	0.00050	0.00050	0.00050	0.00040	0.00040	0.00050	0.00040	0.00050	0.00050	0.00050	0.00050
Barium	mg/L	0.020	0.020	0.020	0.020	0.0047	0.0059	0.020	0.0032	0.020	0.020	0.020	0.020
Beryllium	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Boron	mg/L	0.10	0.10	0.10	0.10	0.050	0.050	0.10	0.050	0.10	0.10	0.10	0.10
Cadmium	mg/L	0.000010	0.000010	0.000010	0.000010	0.000013	0.000010	0.000010	0.000010	0.000010	0.000010	0.000010	0.000010
Calcium	mg/L	12	12	12	12	12	13	12	12	12	12	12	12
Chromium	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Cobalt	mg/L	0.00030	0.00030	0.00030	0.00030	0.0020	0.0020	0.00030	0.0020	0.00030	0.00030	0.00030	0.00030
Copper	mg/L	0.0014	0.0014	0.0014	0.0014	0.0020	0.0014	0.0012	0.0013	0.0014	0.0014	0.0014	0.0014
Iron	mg/L	0.28	0.28	0.28	0.28	0.35	0.23	0.17	0.30	0.28	0.28	0.28	0.28
Lead	mg/L	0.00050	0.00050	0.00050	0.00050	0.00011	0.00010	0.00050	0.00028	0.00050	0.00050	0.00050	0.00050
Lithium	mg/L	0.0050	0.0050	0.0050	0.0050	0.010	0.010	0.0050	0.010	0.0050	0.0050	0.0050	0.0050
Magnesium	mg/L	5.9	5.9	5.9	5.9	3.0	6.0	5.8	5.7	5.9	5.9	5.9	5.9
Manganese	mg/L	0.023	0.023	0.023	0.023	0.094	0.020	0.023	0.024	0.023	0.023	0.023	0.023
Mercury	mg/L	0.000010	0.000010	0.000010	0.000010	0.000020	0.000020	0.000010	0.000010	0.000010	0.000010	0.000010	0.000010
Molybdenum	mg/L	0.0010	0.0010	0.0010	0.0010	0.0050	0.0050	0.0010	0.0050	0.0010	0.0010	0.0010	0.0010
Nickel	mg/L	0.0010	0.0010	0.0010	0.0010	0.0020	0.0020	0.0010	0.0020	0.0010	0.0010	0.0010	0.0010
Selenium	mg/L	0.00010	0.00010	0.00010	0.00010	0.00040	0.00040	0.00010	0.00040	0.00010	0.00010	0.00010	0.00010
Silver	mg/L	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020
Sodium	mg/L	19	19	19	19	6.2	19	19	19	19	19	19	19
Thallium	mg/L	0.00020	0.00020	0.00020	0.00020	0.00010	0.00010	0.00020	0.00010	0.00020	0.00020	0.00020	0.00020
Uranium	mg/L	0.00020	0.00020	0.00020	0.00020	0.00010	0.00010	0.00020	0.00010	0.00020	0.00020	0.00020	0.00020
Vanadium	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Zinc	mg/L	0.0050	0.0050	0.0050	0.0050	0.0051	0.0050	0.0050	0.0054	0.0050	0.0050	0.0050	0.0050

TL-1 - 75th Percentile													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	3.0	3.0	3.0	3.0	3.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0
TDS	mg/L	170	170	170	170	150	160	130	160	170	170	170	170
Fluoride	mg/L	0.072	0.072	0.072	0.072	0.023	0.053	0.059	0.065	0.072	0.072	0.072	0.072
Chloride	mg/L	51	51	51	51	41	48	41	41	51	51	51	51
Free Cyanide	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Total Cyanide	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0070	0.0050	0.0050	0.0050	0.0050
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	0.050	0.050	0.050	0.050	0.054	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Nitrate	mg/L as N	0.050	0.050	0.050	0.050	0.14	0.053	0.050	0.050	0.050	0.050	0.050	0.050
Nitrite	mg/L as N	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
Sulphate	mg/L	4.5	4.5	4.5	4.5	2.7	2.8	2.8	4.1	4.5	4.5	4.5	4.5
Alkalinity	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Hardness	mg/L	39	39	39	39	60	53	33	43	39	39	39	39
Aluminum	mg/L	0.048	0.048	0.048	0.048	0.18	0.027	0.019	0.038	0.048	0.048	0.048	0.048
Antimony	mg/L	0.00050	0.00050	0.00050	0.00050	0.00040	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050
Arsenic	mg/L	0.00050	0.00050	0.00050	0.00050	0.00041	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050
Barium	mg/L	0.020	0.020	0.020	0.020	0.0080	0.020	0.020	0.020	0.020	0.020	0.020	0.020
Beryllium	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Boron	mg/L	0.10	0.10	0.10	0.10	0.050	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Cadmium	mg/L	0.000010	0.000010	0.000010	0.000010	0.000017	0.000010	0.000010	0.000010	0.000010	0.000010	0.000010	0.000010
Calcium	mg/L	15	15	15	15	12	15	12	14	15	15	15	15
Chromium	mg/L	0.0010	0.0010	0.0010	0.0010	0.0011	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Cobalt	mg/L	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020
Copper	mg/L	0.0016	0.0016	0.0016	0.0016	0.0040	0.0016	0.0016	0.0015	0.0016	0.0016	0.0016	0.0016
Iron	mg/L	0.32	0.32	0.32	0.32	0.86	0.29	0.25	0.34	0.32	0.32	0.32	0.32
Lead	mg/L	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050
Lithium	mg/L	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Magnesium	mg/L	6.8	6.8	6.8	6.8	8.0	7.0	6.0	6.2	6.8	6.8	6.8	6.8
Manganese	mg/L	0.025	0.025	0.025	0.025	0.11	0.031	0.029	0.032	0.025	0.025	0.025	0.025
Mercury	mg/L	0.000010	0.000010	0.000010	0.000010	0.000020	0.000020	0.000020	0.000020	0.000010	0.000010	0.000010	0.000010
Molybdenum	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Nickel	mg/L	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020
Selenium	mg/L	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040	0.00040
Silver	mg/L	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020	0.000020
Sodium	mg/L	24	24	24	24	24	23	20	20	24	24	24	24
Thallium	mg/L	0.00020	0.00020	0.00020	0.00020	0.00010	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020
Uranium	mg/L	0.00020	0.00020	0.00020	0.00020	0.00010	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020	0.00020
Vanadium	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
Zinc	mg/L	0.0080	0.0080	0.0080	0.0080	0.010	0.0053	0.0050	0.017	0.0080	0.0080	0.0080	0.0080

Stickleback Lake B/G - Median													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
TDS	mg/L	98	98	98	54	54	54	92	91	98	98	98	98
Fluoride	mg/L	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.030	0.040	0.040	0.040	0.040
Chloride	mg/L	55	55	55	36	36	36	51	50	55	55	55	55
Free Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Cyanide	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	0.011	0.011	0.011	0.020	0.020	0.020	0.019	0.012	0.011	0.011	0.011	0.011
Nitrate	mg/L as N	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Nitrite	mg/L as N	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0025	0.0010	0.0010	0.0010	0.0010	0.0010
Sulphate	mg/L	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.90	3.0	3.0	3.0	3.0
Alkalinity	mg/L	34	34	34	16	16	16	34	35	34	34	34	34
Hardness	mg/L	69	69	69	26	26	26	70	71	69	69	69	69
Aluminum	mg/L	0.014	0.014	0.014	0.0093	0.0093	0.0093	0.016	0.010	0.014	0.014	0.014	0.014
Antimony	mg/L	0.000012	0.000012	0.000012	0.0000070	0.0000070	0.0000070	0.0000062	0.000035	0.000012	0.000012	0.000012	0.000012
Arsenic	mg/L	0.00047	0.00047	0.00047	0.00021	0.00021	0.00021	0.00048	0.00047	0.00047	0.00047	0.00047	0.00047
Barium	mg/L	0.0059	0.0059	0.0059	0.0036	0.0036	0.0036	0.0067	0.0061	0.0059	0.0059	0.0059	0.0059
Beryllium	mg/L	0.0000030	0.0000030	0.0000030	0.0000038	0.0000038	0.0000038	0.0000030	0.0000030	0.0000030	0.0000030	0.0000030	0.0000030
Boron	mg/L	0.017	0.017	0.017	0.0079	0.0079	0.0079	0.017	0.020	0.017	0.017	0.017	0.017
Cadmium	mg/L	0.0000049	0.0000049	0.0000049	0.0000038	0.0000038	0.0000038	0.0000024	0.0000027	0.0000049	0.0000049	0.0000049	0.0000049
Calcium	mg/L	18	18	18	6.8	6.8	6.8	17	18	18	18	18	18
Chromium	mg/L	0.00018	0.00018	0.00018	0.00015	0.00015	0.00015	0.00013	0.00018	0.00018	0.00018	0.00018	0.00018
Cobalt	mg/L	0.000067	0.000067	0.000067	0.000096	0.000096	0.000096	0.000066	0.00010	0.000067	0.000067	0.000067	0.000067
Copper	mg/L	0.00039	0.00039	0.00039	0.00031	0.00031	0.00031	0.00051	0.00050	0.00039	0.00039	0.00039	0.00039
Iron	mg/L	0.11	0.11	0.11	0.074	0.074	0.074	0.13	0.11	0.11	0.11	0.11	0.11
Lead	mg/L	0.000041	0.000041	0.000041	0.000042	0.000042	0.000042	0.000043	0.00011	0.000041	0.000041	0.000041	0.000041
Lithium	mg/L	0.0056	0.0056	0.0056	0.0050	0.0050	0.0050	0.0051	0.0051	0.0056	0.0056	0.0056	0.0056
Magnesium	mg/L	6.6	6.6	6.6	2.4	2.4	2.4	6.2	6.5	6.6	6.6	6.6	6.6
Manganese	mg/L	0.014	0.014	0.014	0.052	0.052	0.052	0.022	0.012	0.014	0.014	0.014	0.014
Mercury	mg/L	0.0000070	0.0000070	0.0000070	0.0000011	0.0000011	0.0000011	0.00000060	0.000010	0.0000070	0.0000070	0.0000070	0.0000070
Molybdenum	mg/L	0.000042	0.000042	0.000042	0.000025	0.000025	0.000025	0.000034	0.000050	0.000042	0.000042	0.000042	0.000042
Nickel	mg/L	0.00020	0.00020	0.00020	0.000099	0.000099	0.000099	0.000041	0.00031	0.00020	0.00020	0.00020	0.00020
Selenium	mg/L	0.00076	0.00076	0.00076	0.00031	0.00031	0.00031	0.00057	0.00054	0.00076	0.00076	0.00076	0.00076
Silver	mg/L	0.00000060	0.00000060	0.00000060	0.0000011	0.0000011	0.0000011	0.00000090	0.0000061	0.00000060	0.00000060	0.00000060	0.00000060
Sodium	mg/L	16	16	16	5.8	5.8	5.8	15	16	16	16	16	16
Thallium	mg/L	0.0000083	0.0000083	0.0000083	0.0000032	0.0000032	0.0000032	0.0000091	0.000012	0.0000083	0.0000083	0.0000083	0.0000083
Uranium	mg/L	0.0000099	0.0000099	0.0000099	0.0000077	0.0000077	0.0000077	0.0000099	0.000010	0.0000099	0.0000099	0.0000099	0.0000099
Vanadium	mg/L	0.000058	0.000058	0.000058	0.00013	0.00013	0.00013	0.000058	0.00010	0.000058	0.000058	0.000058	0.000058
Zinc	mg/L	0.0016	0.0016	0.0016	0.0029	0.0029	0.0029	0.0022	0.0011	0.0016	0.0016	0.0016	0.0016

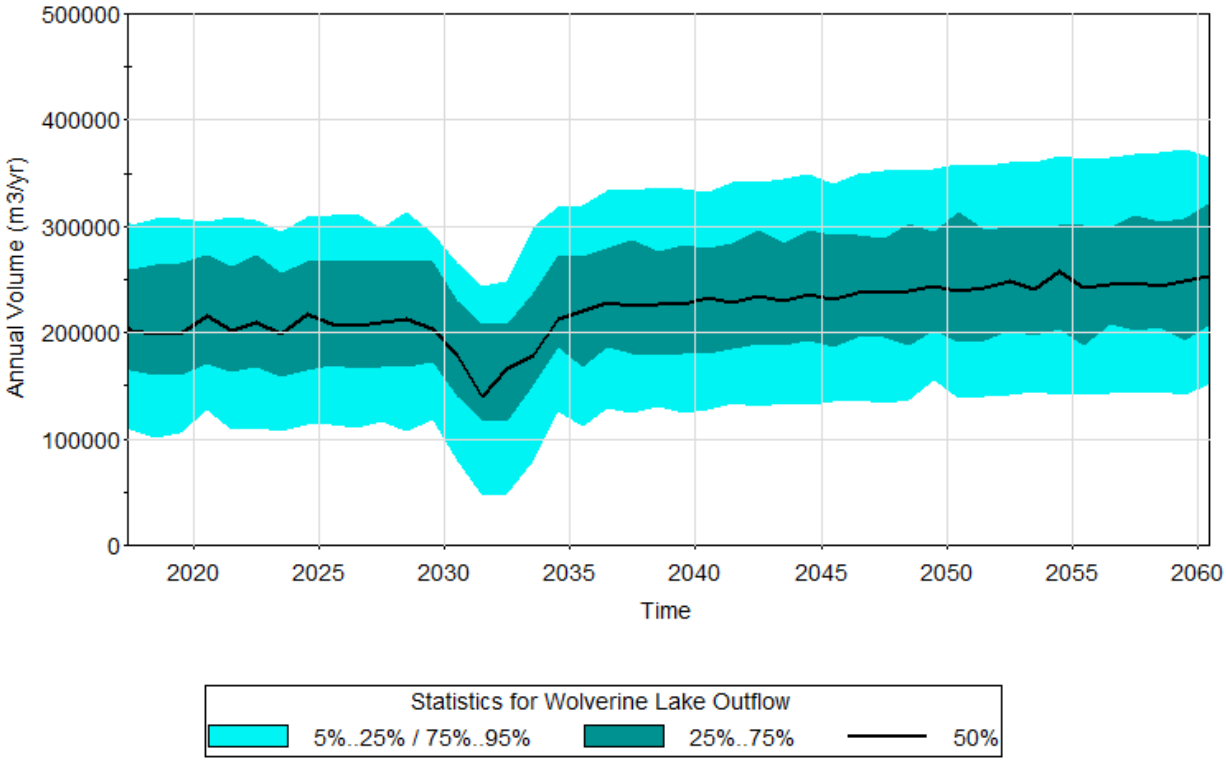
Stickleback Lake B/G - 75th Percentile													
Parameter	**Units**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
TSS	mg/L	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
TDS	mg/L	98	98	98	54	54	54	91	91	98	98	98	98
Fluoride	mg/L	0.040	0.040	0.040	0.040	0.040	0.040	0.035	0.030	0.040	0.040	0.040	0.040
Chloride	mg/L	55	55	55	36	36	36	51	50	55	55	55	55
Free Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Cyanide	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	0.011	0.011	0.011	0.020	0.020	0.020	0.019	0.012	0.011	0.011	0.011	0.011
Nitrate	mg/L as N	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Nitrite	mg/L as N	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0025	0.0018	0.0010	0.0010	0.0010	0.0010
Sulphate	mg/L	3.0	3.0	3.0	3.0	3.0	3.0	2.0	0.90	3.0	3.0	3.0	3.0
Alkalinity	mg/L	34	34	34	16	16	16	34	35	34	34	34	34
Hardness	mg/L	69	69	69	26	26	26	70	71	69	69	69	69
Aluminum	mg/L	0.014	0.014	0.014	0.0093	0.0093	0.0093	0.016	0.010	0.014	0.014	0.014	0.014
Antimony	mg/L	0.000012	0.000012	0.000012	0.0000070	0.0000070	0.0000070	0.0000062	0.000035	0.000012	0.000012	0.000012	0.000012
Arsenic	mg/L	0.00047	0.00047	0.00047	0.00021	0.00021	0.00021	0.00048	0.00047	0.00047	0.00047	0.00047	0.00047
Barium	mg/L	0.0059	0.0059	0.0059	0.0036	0.0036	0.0036	0.0067	0.0061	0.0059	0.0059	0.0059	0.0059
Beryllium	mg/L	0.0000030	0.0000030	0.0000030	0.0000038	0.0000038	0.0000038	0.0000030	0.0000030	0.0000030	0.0000030	0.0000030	0.0000030
Boron	mg/L	0.017	0.017	0.017	0.0079	0.0079	0.0079	0.017	0.020	0.017	0.017	0.017	0.017
Cadmium	mg/L	0.0000049	0.0000049	0.0000049	0.0000038	0.0000038	0.0000038	0.0000024	0.0000027	0.0000049	0.0000049	0.0000049	0.0000049
Calcium	mg/L	18	18	18	6.8	6.8	6.8	17	18	18	18	18	18
Chromium	mg/L	0.00018	0.00018	0.00018	0.00015	0.00015	0.00015	0.00013	0.00018	0.00018	0.00018	0.00018	0.00018
Cobalt	mg/L	0.000067	0.000067	0.000067	0.000096	0.000096	0.000096	0.000066	0.00010	0.000067	0.000067	0.000067	0.000067
Copper	mg/L	0.00039	0.00039	0.00039	0.00031	0.00031	0.00031	0.00051	0.00050	0.00039	0.00039	0.00039	0.00039
Iron	mg/L	0.11	0.11	0.11	0.074	0.074	0.074	0.13	0.11	0.11	0.11	0.11	0.11
Lead	mg/L	0.000041	0.000041	0.000041	0.000042	0.000042	0.000042	0.000043	0.00011	0.000041	0.000041	0.000041	0.000041
Lithium	mg/L	0.0056	0.0056	0.0056	0.0056	0.0056	0.0056	0.0056	0.0051	0.0056	0.0056	0.0056	0.0056
Magnesium	mg/L	6.6	6.6	6.6	2.4	2.4	2.4	6.2	6.5	6.6	6.6	6.6	6.6
Manganese	mg/L	0.014	0.014	0.014	0.052	0.052	0.052	0.022	0.012	0.014	0.014	0.014	0.014
Mercury	mg/L	0.0000070	0.0000070	0.0000070	0.0000011	0.0000011	0.0000011	0.00000060	0.000010	0.0000070	0.0000070	0.0000070	0.0000070
Molybdenum	mg/L	0.000042	0.000042	0.000042	0.000025	0.000025	0.000025	0.000034	0.000050	0.000042	0.000042	0.000042	0.000042
Nickel	mg/L	0.00020	0.00020	0.00020	0.000099	0.000099	0.000099	0.000041	0.00031	0.00020	0.00020	0.00020	0.00020
Selenium	mg/L	0.00076	0.00076	0.00076	0.00031	0.00031	0.00031	0.00057	0.00054	0.00076	0.00076	0.00076	0.00076
Silver	mg/L	0.00000060	0.00000060	0.00000060	0.0000011	0.0000011	0.0000011	0.00000090	0.0000061	0.00000060	0.00000060	0.00000060	0.0000006
Sodium	mg/L	16	16	16	5.8	5.8	5.8	15	16	16	16	16	16
Thallium	mg/L	0.0000083	0.0000083	0.0000083	0.0000032	0.0000032	0.0000032	0.0000091	0.000012	0.0000083	0.0000083	0.0000083	0.0000083
Uranium	mg/L	0.0000099	0.0000099	0.0000099	0.0000077	0.0000077	0.0000077	0.0000099	0.000010	0.0000099	0.0000099	0.0000099	0.0000099
Vanadium	mg/L	0.000058	0.000058	0.000058	0.00013	0.00013	0.00013	0.000058	0.00010	0.000058	0.000058	0.000058	0.000058
Zinc	mg/L	0.0016	0.0016	0.0016	0.0029	0.0029	0.0029	0.0022	0.0011	0.0016	0.0016	0.0016	0.0016

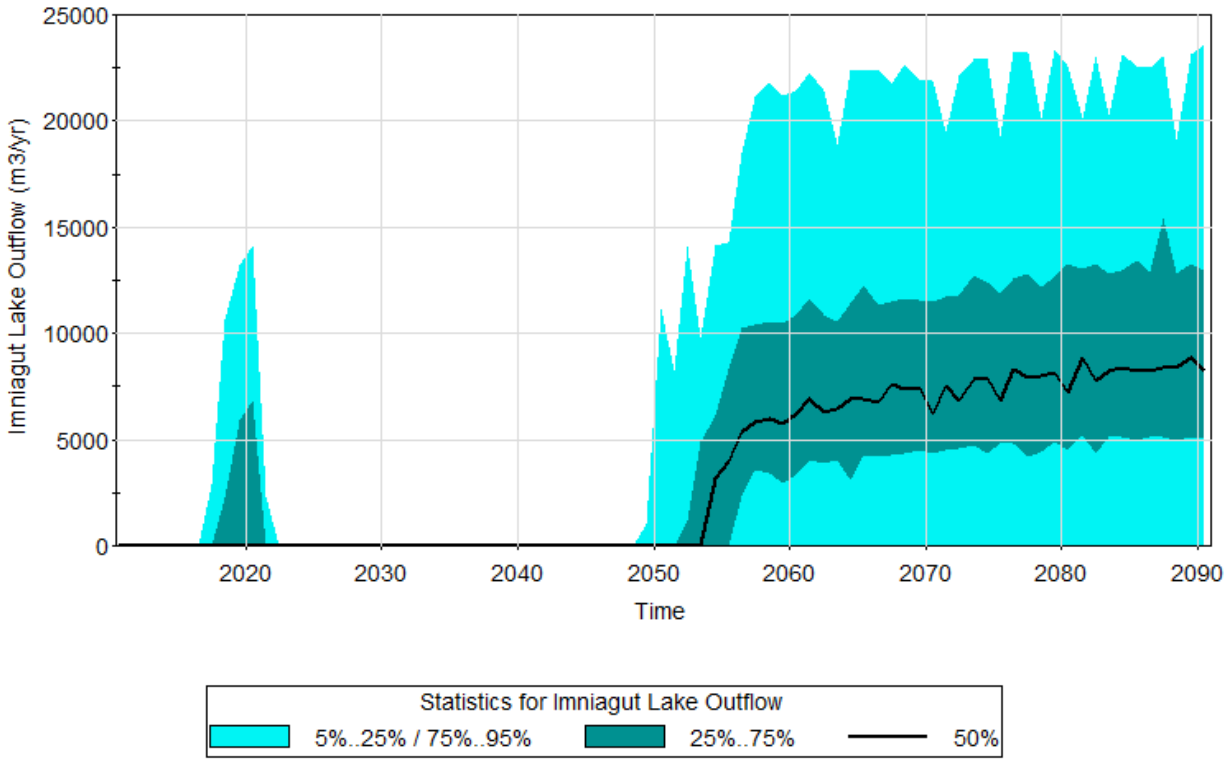
Intercepted Groundwater (without backfill loading)				
Parameter	**Units**	**Madird North**	**Madrid South**	**Doris**
TSS	mg/L	5.6	5.2	4.1
TDS	mg/L	4,200	18,000	32,000
Fluoride	mg/L	0.14	0.42	0.73
Chloride	mg/L	2,400	10,000	18,000
Free Cyanide	mg/L	0.00098	0.00091	0.00071
Total Cyanide	mg/L	0.00098	0.00091	0.00071
WAD Cyanide	mg/L	-	-	-
Cyanate	mg/L	-	-	-
Thiocyanate	mg/L	-	-	-
Ammonia	mg/L as N	0.44	1.9	3.4
Nitrate	mg/L as N	0.12	0.51	0.93
Nitrite	mg/L as N	0.013	0.054	0.097
Sulphate	mg/L	250	1,100	1,900
Alkalinity	mg/L as $CaCO_3$	38	64	92
Hardness	mg/L as $CaCO_3$	1,500	6,200	11,000
Aluminum	mg/L	0.051	0.048	0.038
Antimony	mg/L	0.00014	0.00053	0.00094
Arsenic	mg/L	0.00061	0.0015	0.0024
Barium	mg/L	0.018	0.068	0.12
Beryllium	mg/L	0.000066	0.00027	0.00048
Boron	mg/L	0.39	1.6	2.8
Cadmium	mg/L	0.000019	0.000066	0.00012
Calcium	mg/L	260	1,100	2,000
Chromium	mg/L	0.00050	0.00050	0.00050
Cobalt	mg/L	0.000067	0.00012	0.00018
Copper	mg/L	0.0013	0.0013	0.0011
Iron	mg/L	0.67	2.6	4.7
Lead	mg/L	0.000081	0.00018	0.00029
Lithium	mg/L	0.047	0.19	0.34
Magnesium	mg/L	170	730	1,300
Manganese	mg/L	0.23	0.94	1.7
Mercury	mg/L	0.0000066	0.000027	0.000048
Molybdenum	mg/L	0.0025	0.010	0.018
Nickel	mg/L	0.00065	0.0010	0.0014
Selenium	mg/L	0.00042	0.0012	0.0019
Silver	mg/L	0.000017	0.000056	0.000097
Sodium	mg/L	1,100	4,800	8,700
Thallium	mg/L	0.0000079	0.000028	0.000048
Uranium	mg/L	0.000039	0.000050	0.000062
Vanadium	mg/L	0.00021	0.00035	0.00049
Zinc	mg/L	0.022	0.085	0.15

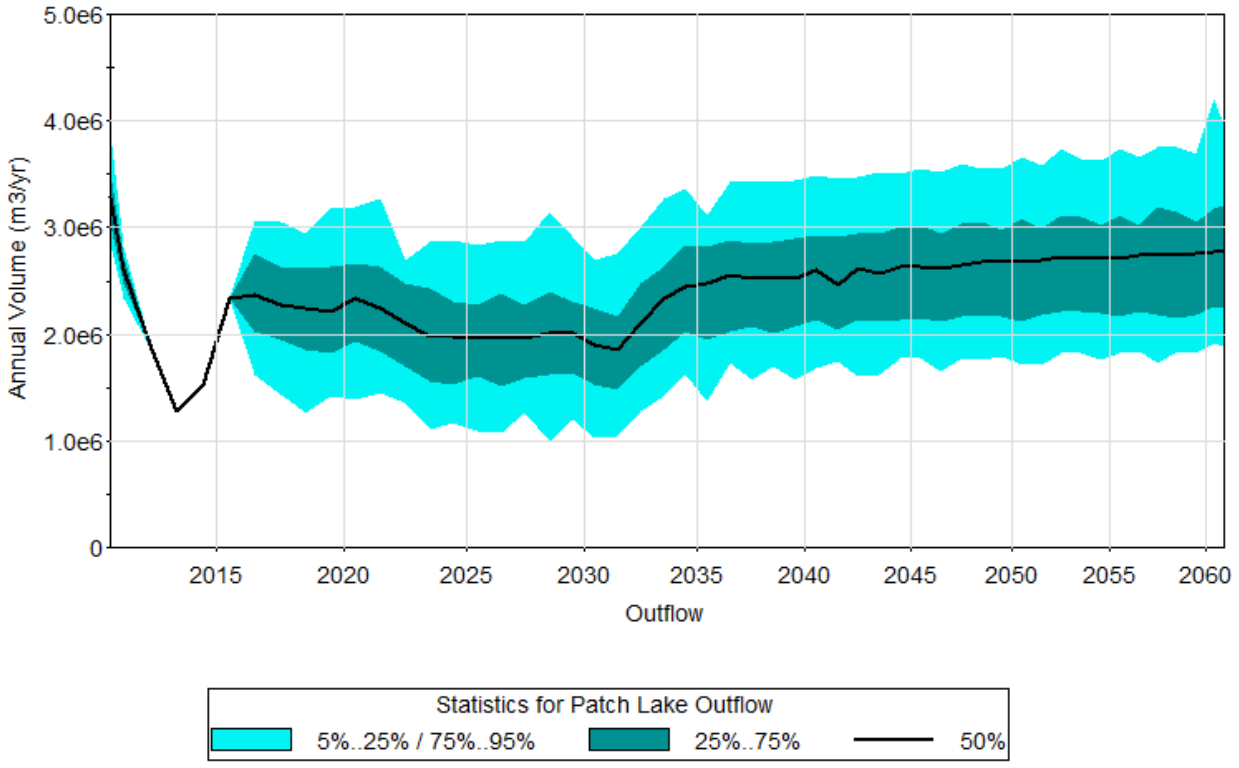
Appendix B: Water Balance Results

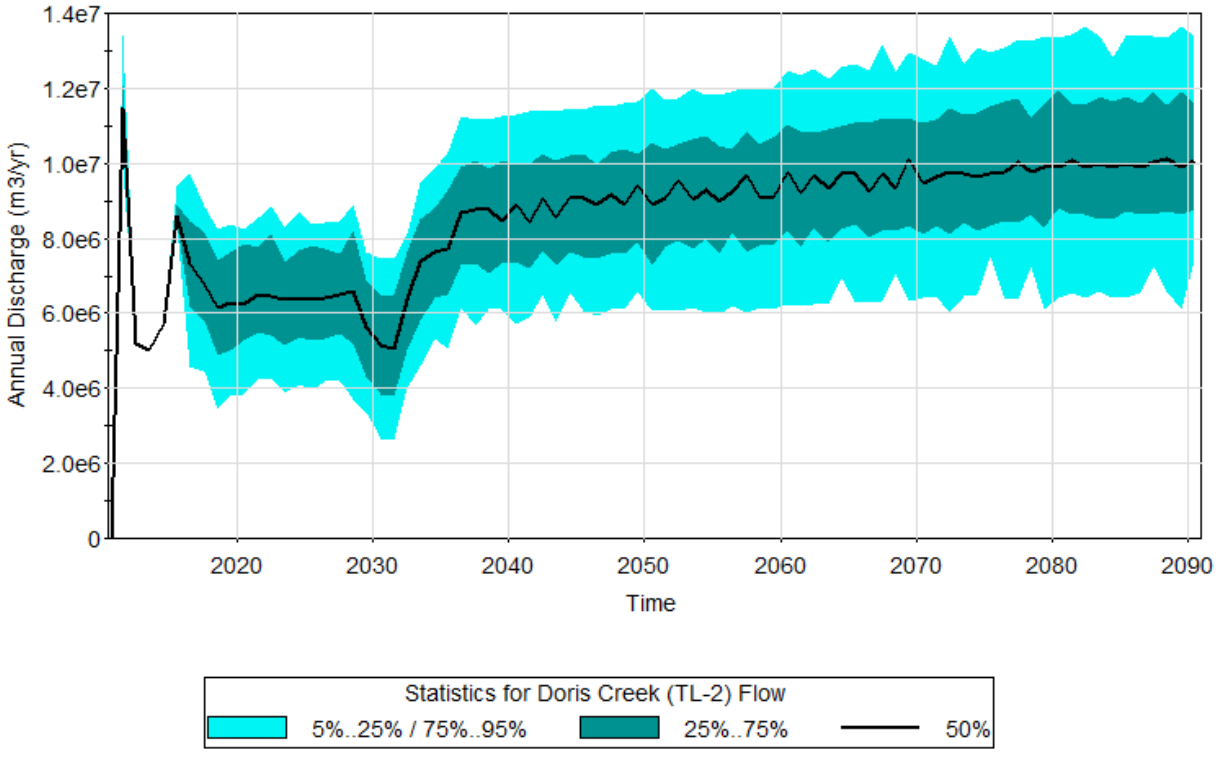
B1: Stream Flows

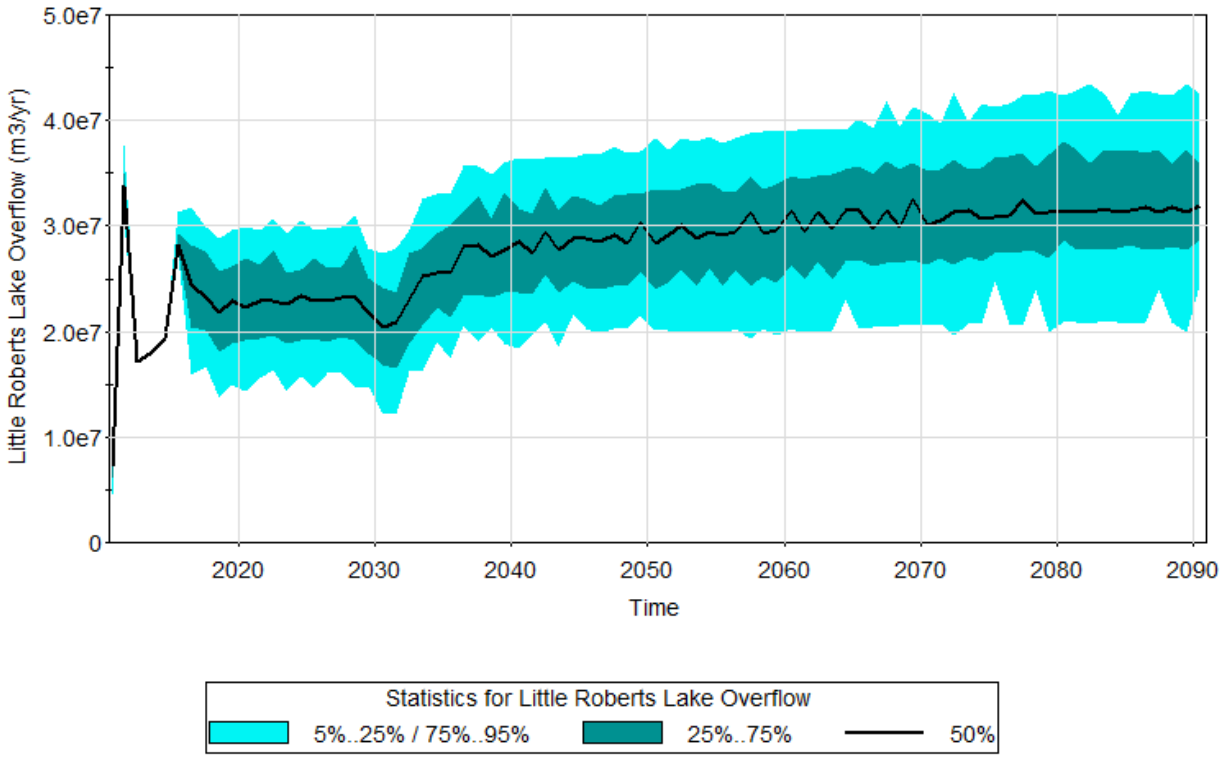
Doris Watershed





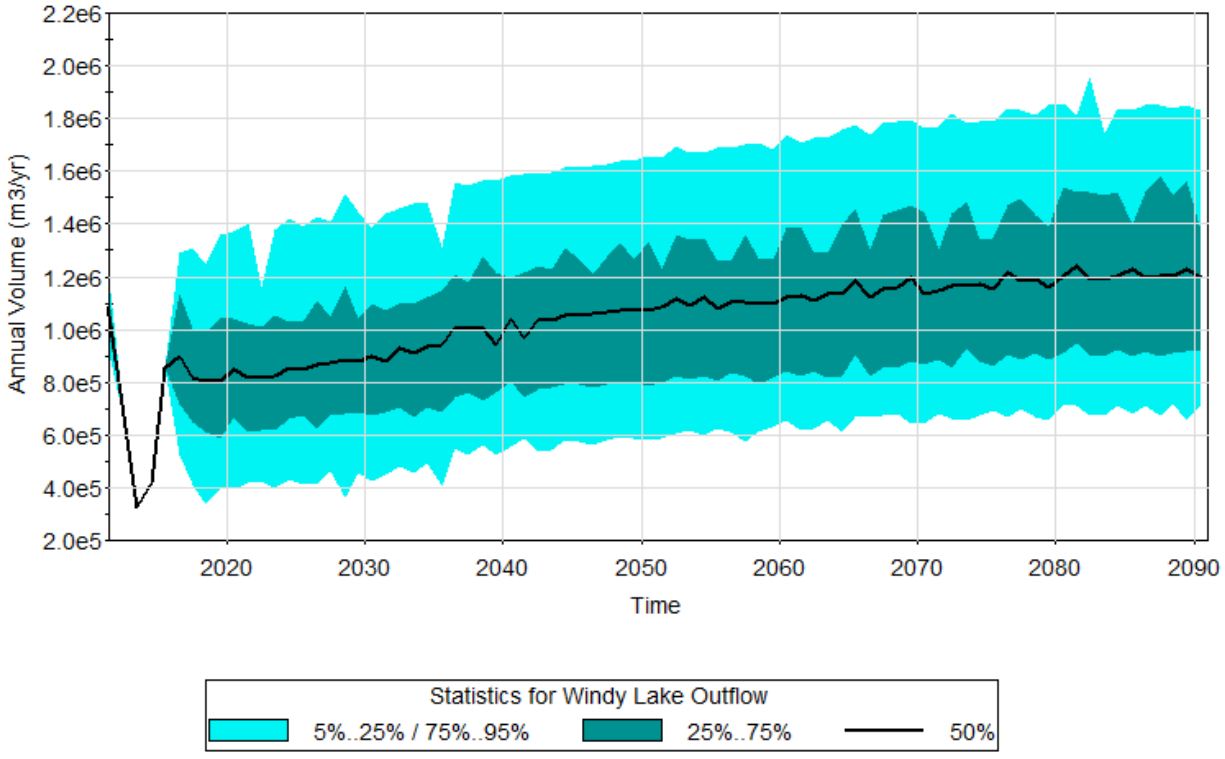

5.0e6
4.0e6
3.0e6
2.0e6
1.0e6
0
Annual Volume (m3/yr)
2015
2020
2025
2030
2035
2040
2045
2050
2055
2060
Outflow
Statistics for Patch Lake Outflow
5%..25% / 75%..95%
25%..75%
50%

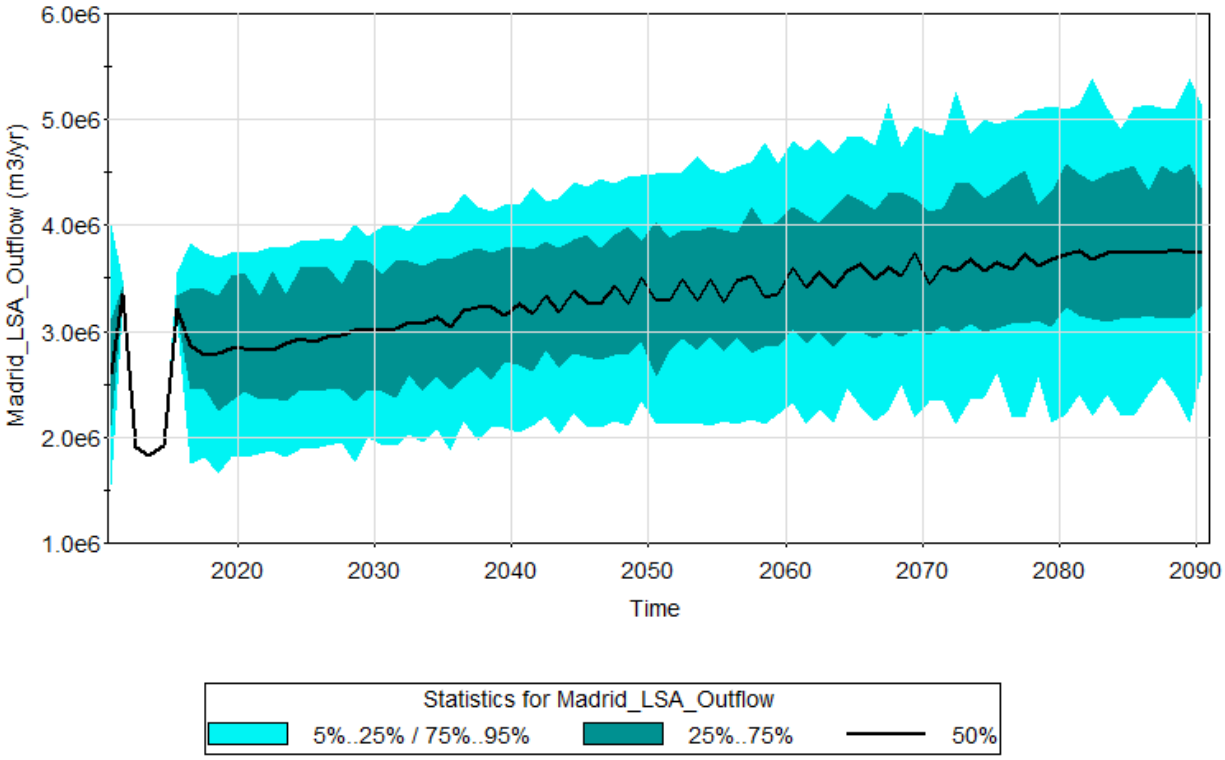

1.4e7
1.2e7
1.0e7
8.0e6
6.0e6
4.0e6
2.0e6
0
Annual Discharge (m3/yr)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Doris Creek (TL-2) Flow
5%..25% / 75%..95%
25%..75%
50%

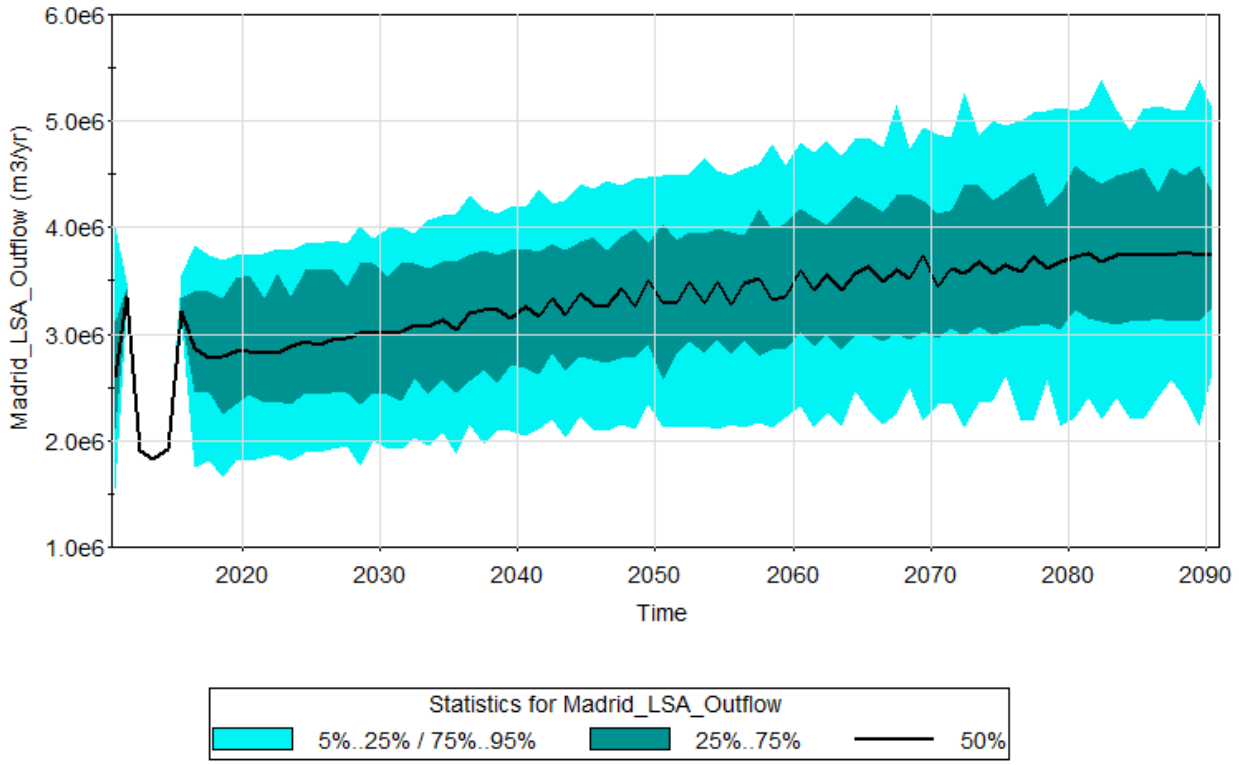

5.0e7
4.0e7
3.0e7
2.0e7
1.0e7
0
Little Roberts Lake Overflow (m3/yr)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Little Roberts Lake Overflow
5%..25% / 75%..95%
25%..75%
50%


5.0e7
4.0e7
3.0e7
2.0e7
1.0e7
0
Doris_LSA_Outflow (m3/yr)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Doris_LSA_Outflow
5%..25% / 75%..95%
25%..75%
50%

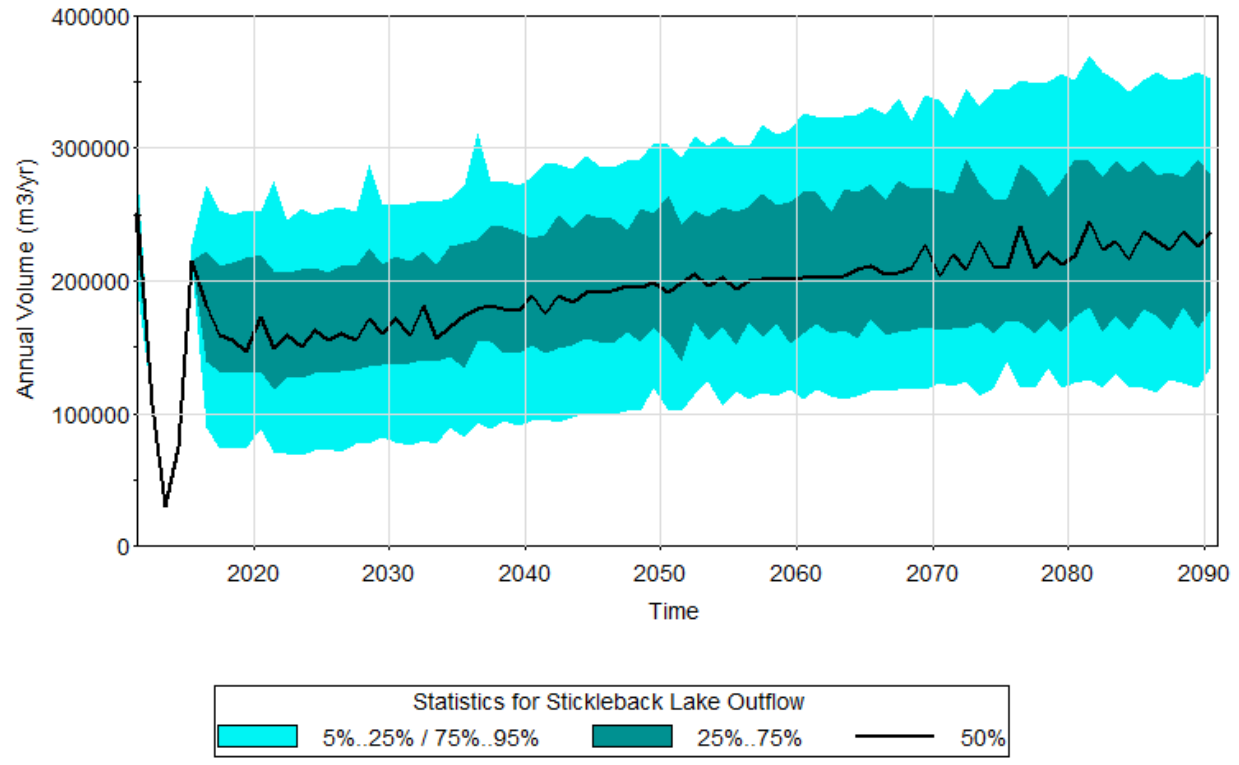
Windy Watershed

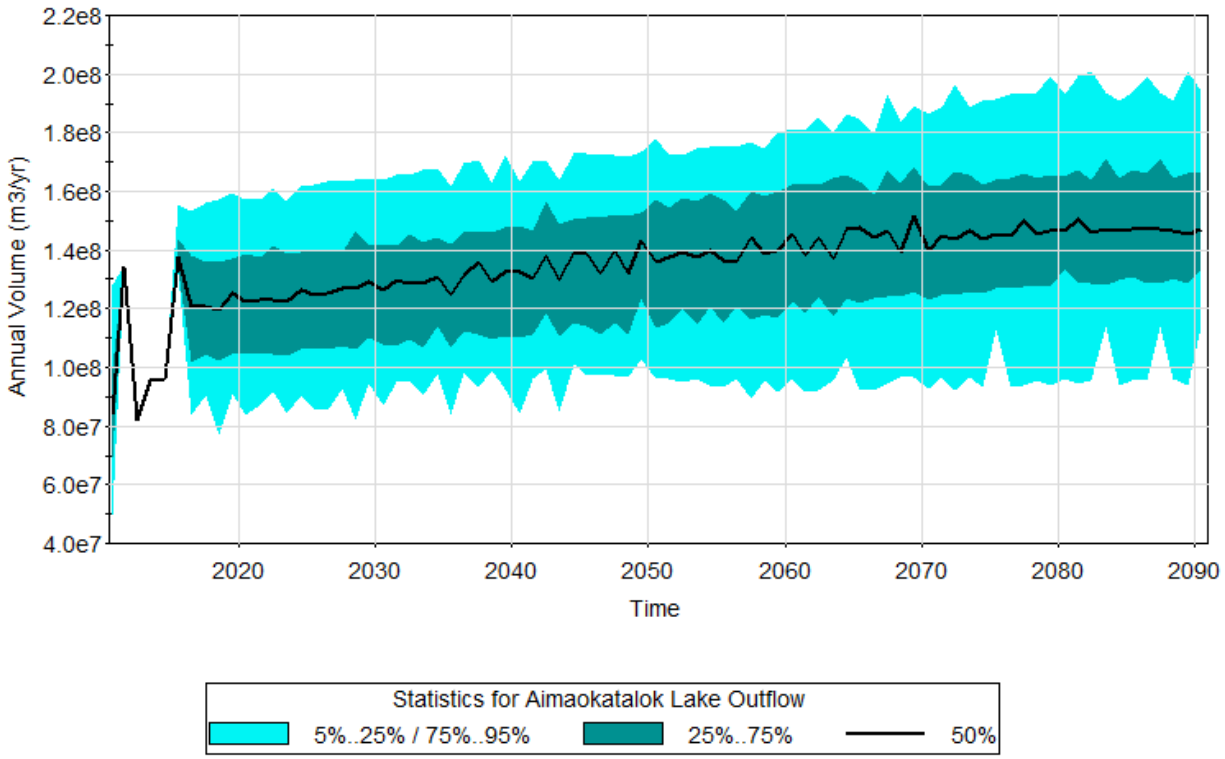


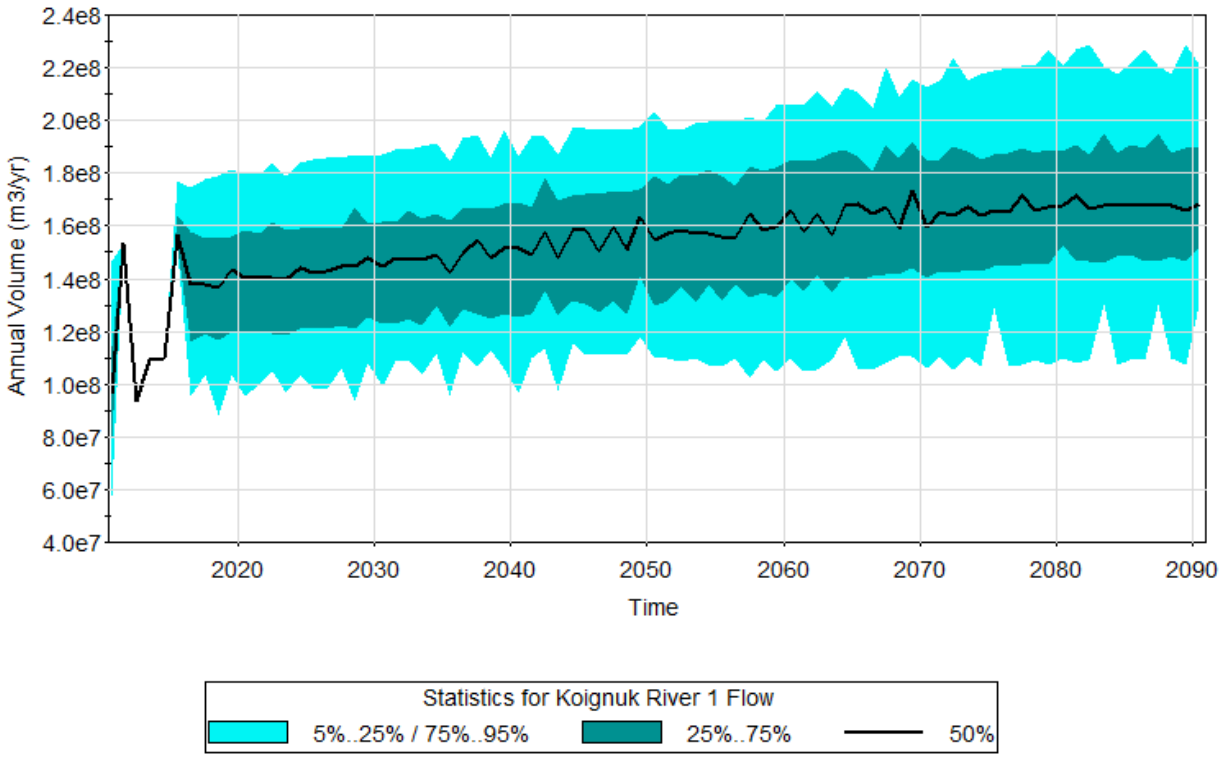


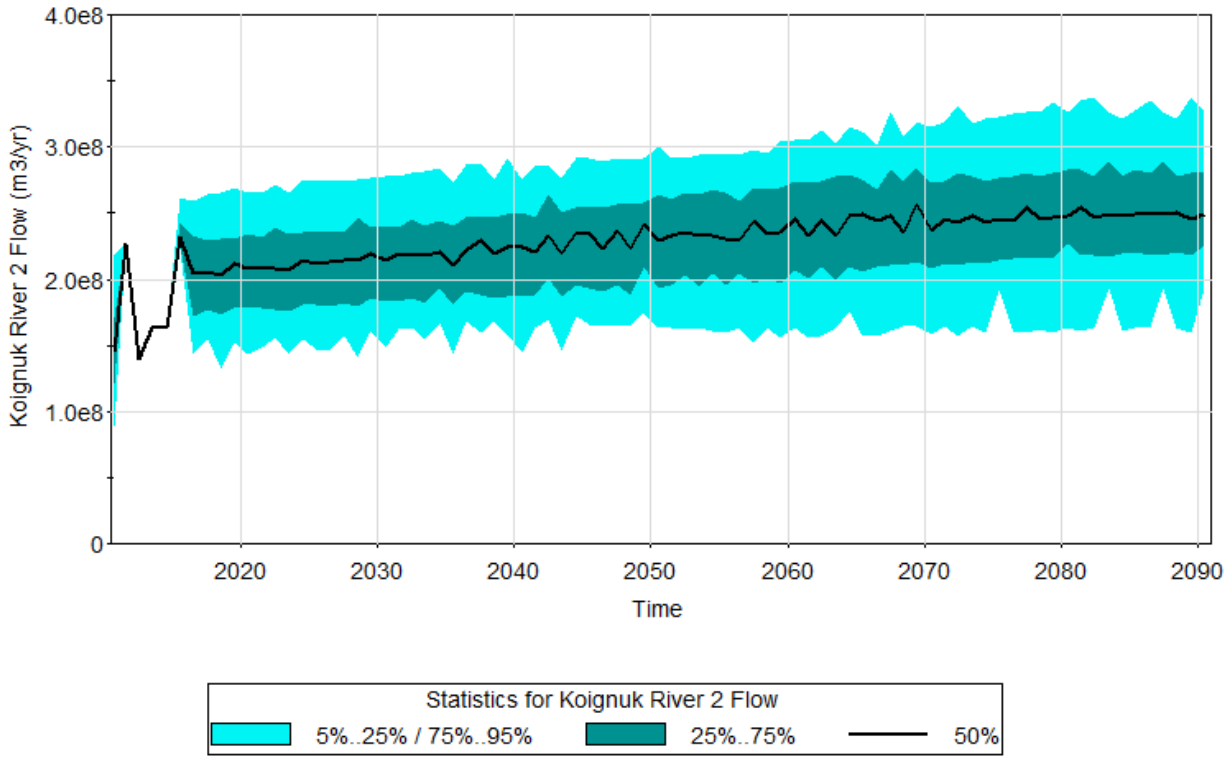


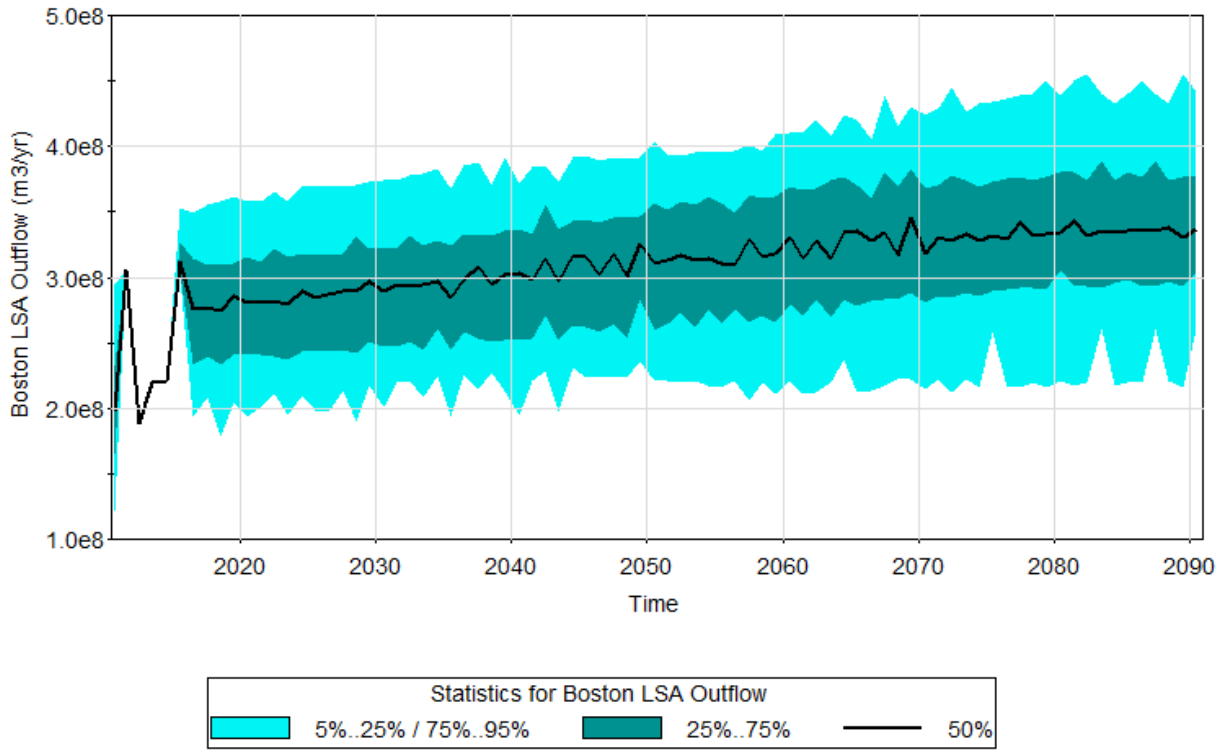
Boston Watershed



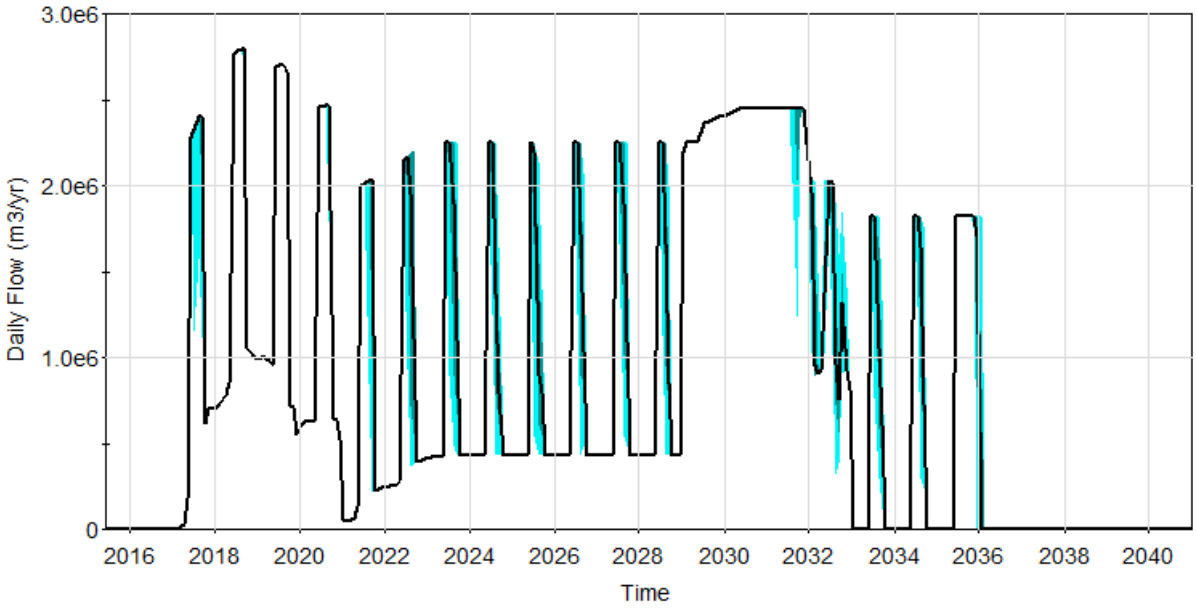

2.2e8
2.0e8
1.8e8
1.6e8
1.4e8
1.2e8
1.0e8
8.0e7
6.0e7
4.0e7
Annual Volume (m3/yr)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Aimaokatalok Lake Outflow
5%..25% / 75%..95%
25%..75%
50%

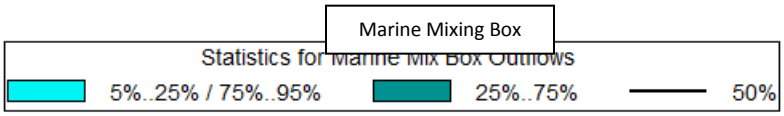

2.4e8
2.2e8
2.0e8
1.8e8
1.6e8
1.4e8
1.2e8
1.0e8
8.0e7
6.0e7
4.0e7
Annual Volume (m3/yr)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Koignuk River 1 Flow
5%..25% / 75%..95%
25%..75%
50%

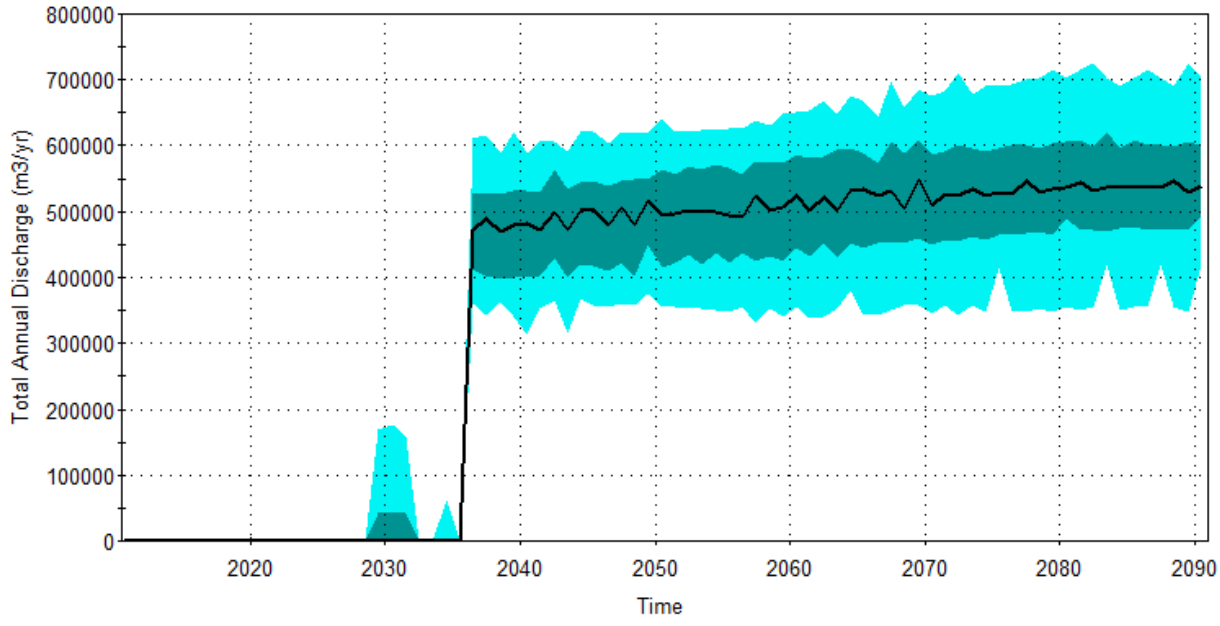

4.0e8
3.0e8
2.0e8
1.0e8
0
Koignuk River 2 Flow (m3/yr)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Koignuk River 2 Flow
5%..25% / 75%..95%
25%..75%
50%

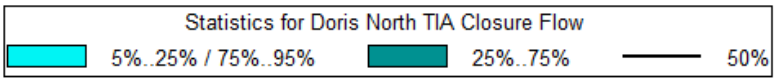

5.0e8
4.0e8
3.0e8
2.0e8
1.0e8
Boston LSA Outflow (m3/yr)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Boston LSA Outflow
5%..25% / 75%..95%
25%..75%
50%

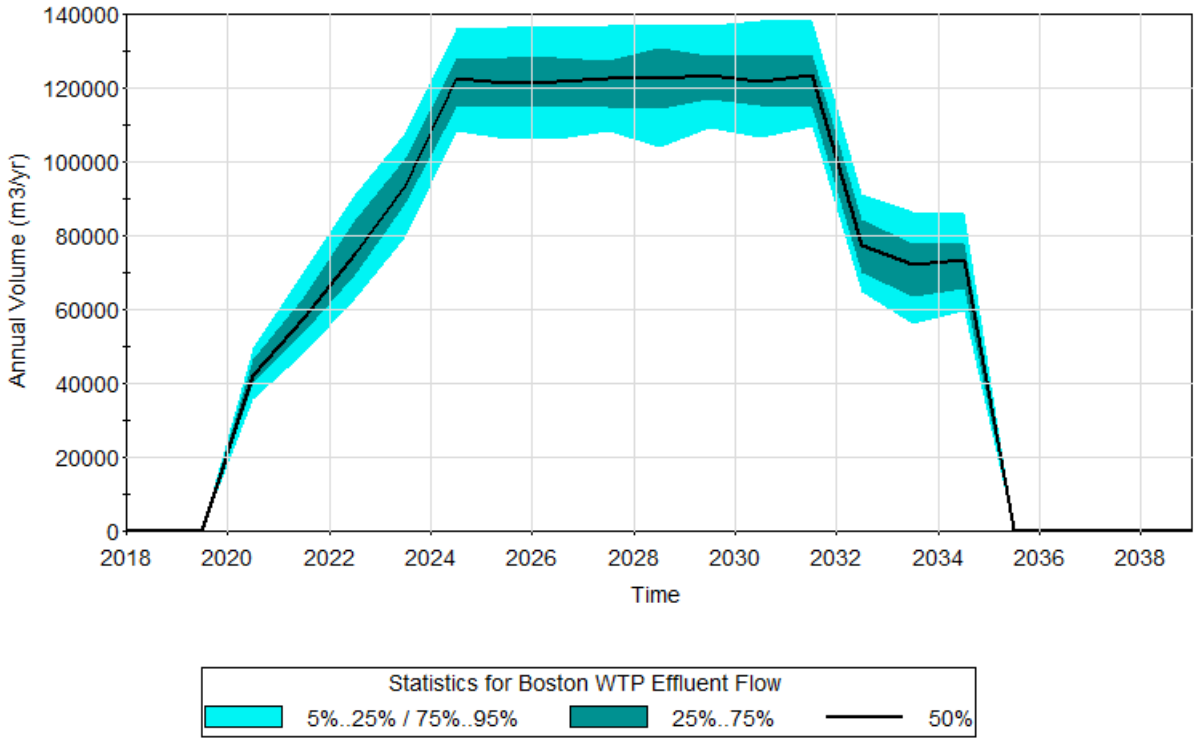
Mine Effluents







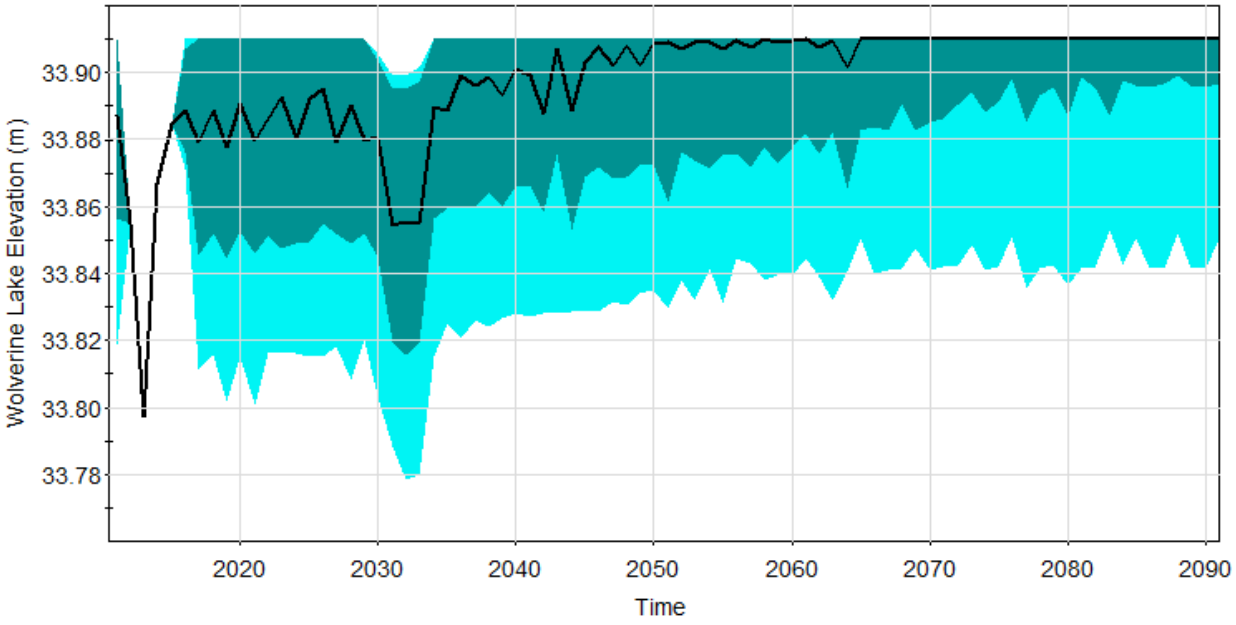


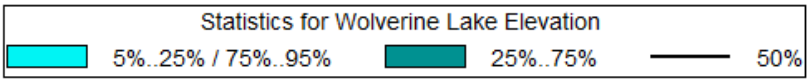

140000
120000
100000
80000
60000
40000
20000
0
Annual Volume (m3/yr)
2018
2020
2022
2024
2026
2028
2030
2032
2034
2036
2038
Time
Statistics for Boston WTP Effluent Flow
5%..25% / 75%..95%
25%..75%
50%

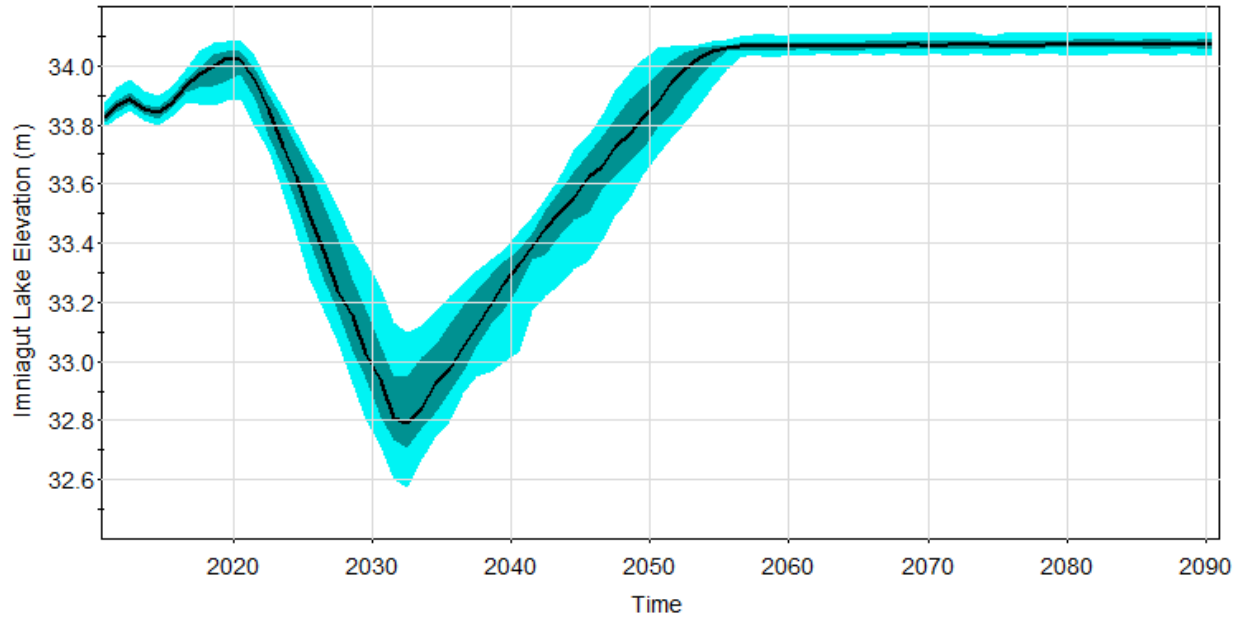

50000
40000
30000
20000
10000
0
Boston TIA Closure Flow (CWP3) (m3/yr)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Boston TIA Closure Flow (CWP3)
5%..25% / 75%..95%
25%..75%
50%

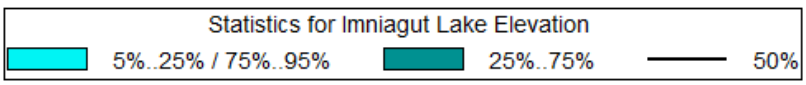
B2: Lake Elevations

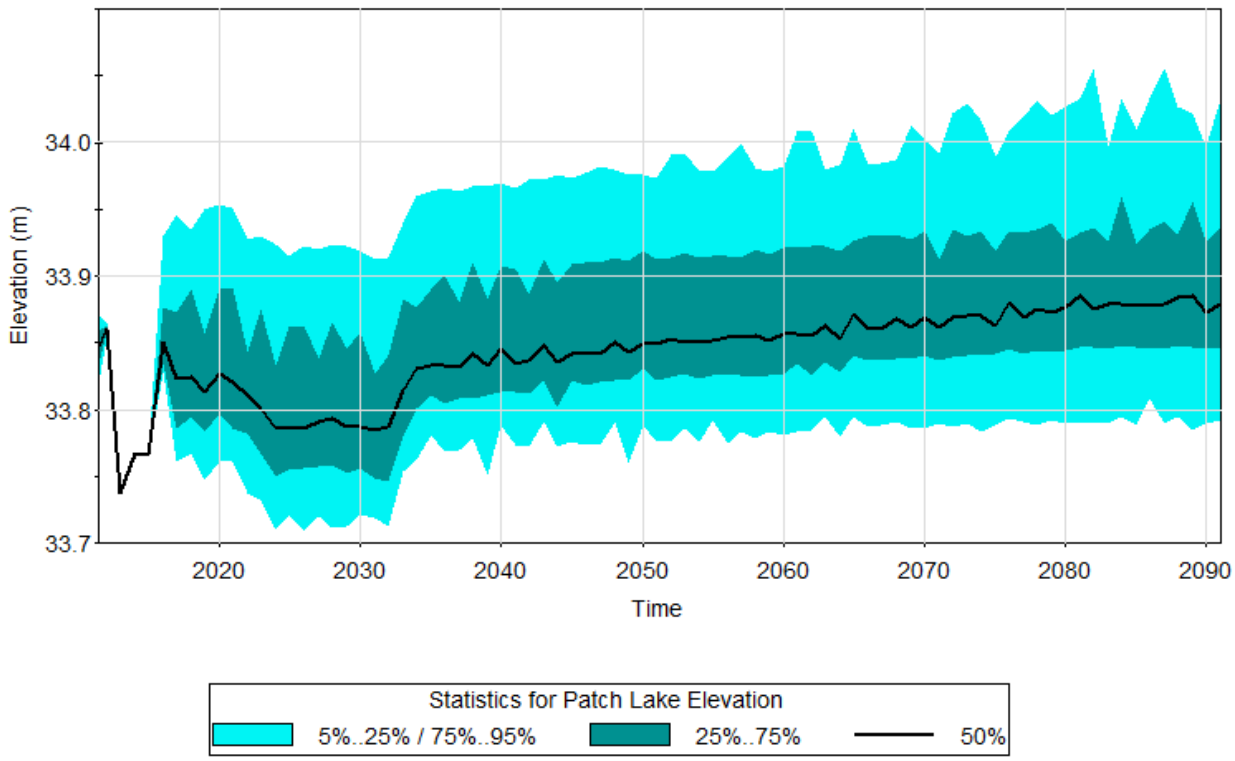
Doris Watershed

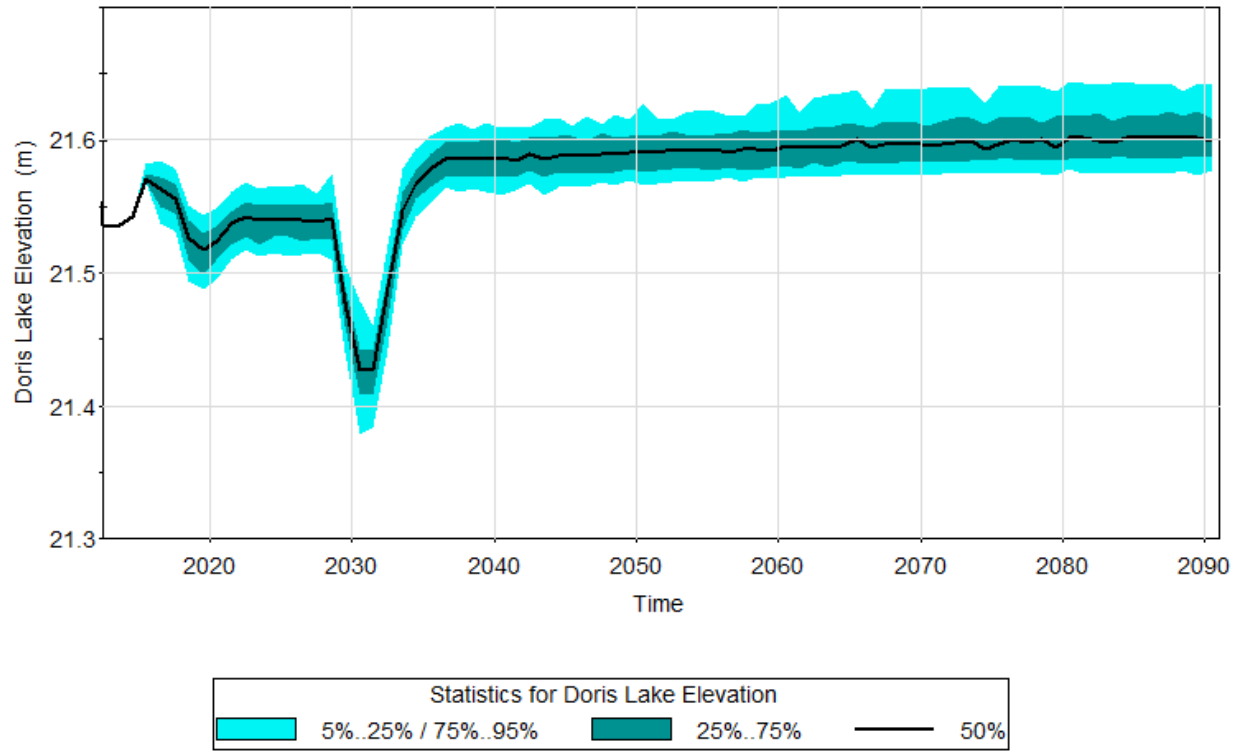


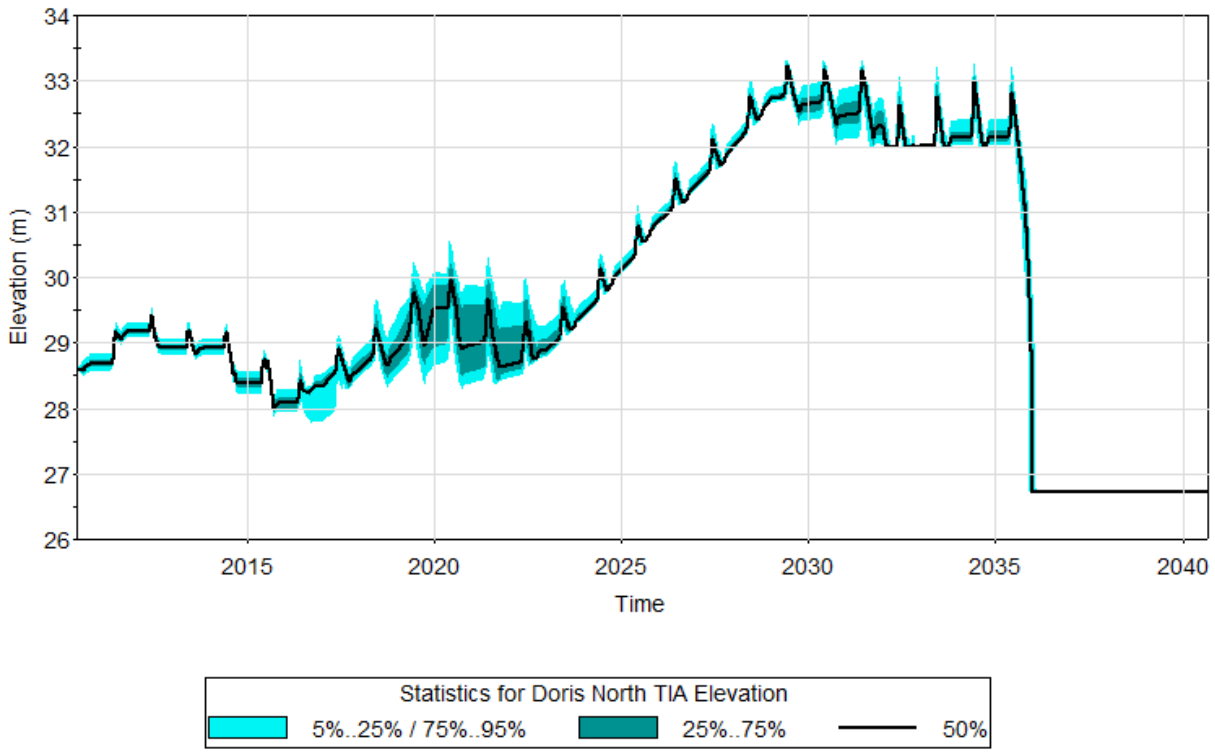




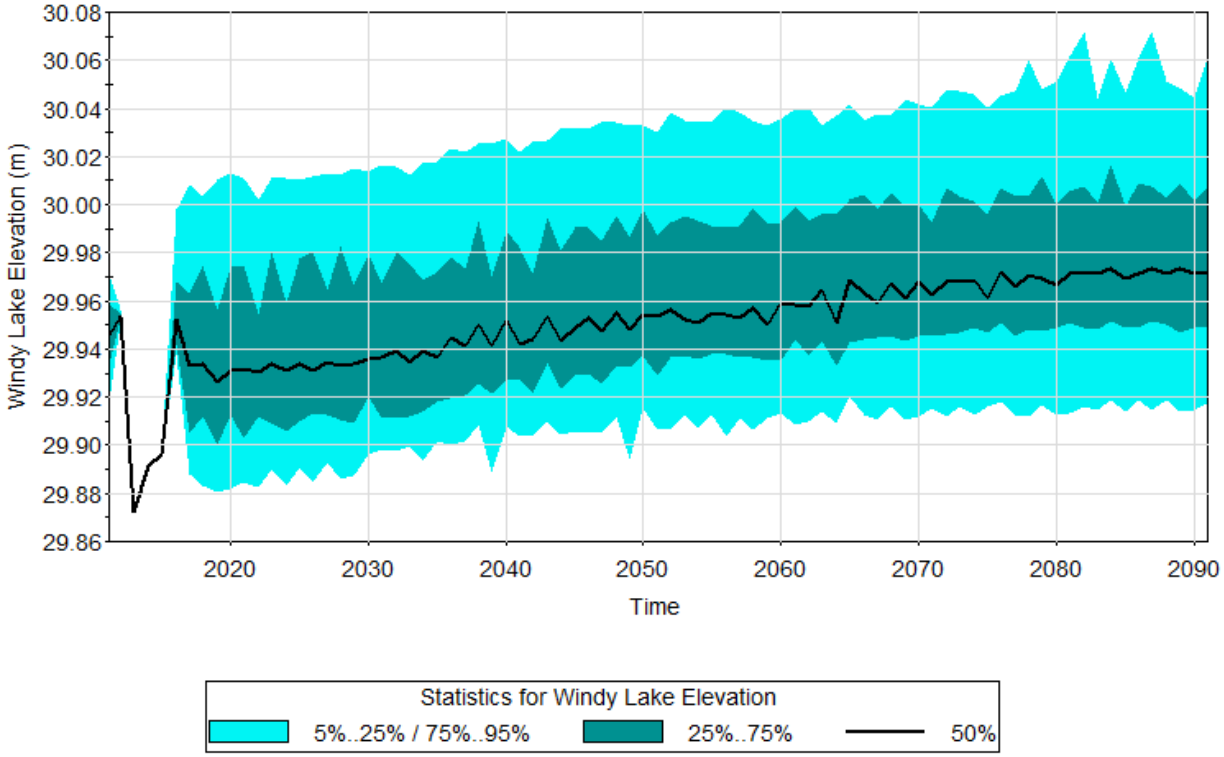



34.0
33.9
33.8
33.7
Elevation (m)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Patch Lake Elevation
5%..25% / 75%..95%
25%..75%
50%

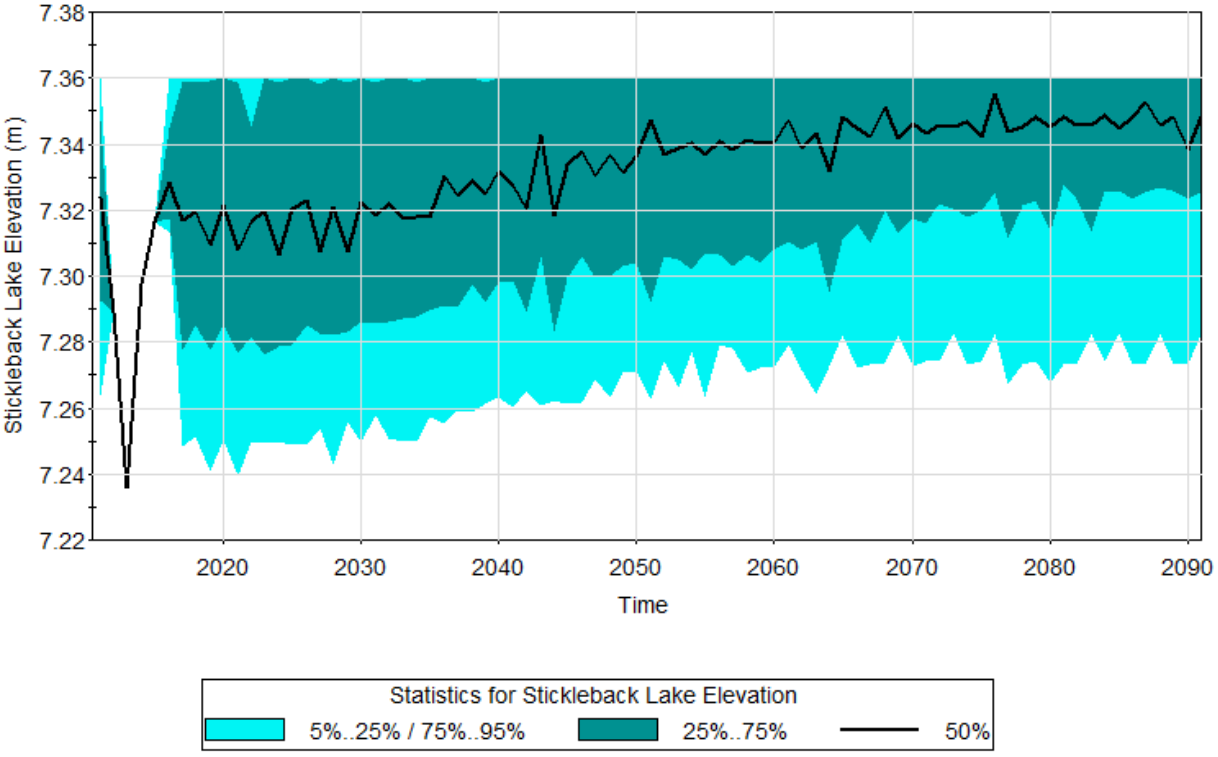

21.6
21.5
21.4
21.3
Doris Lake Elevation (m)
2020
2030
2040
2050
2060
2070
2080
2090
Time
Statistics for Doris Lake Elevation
5%..25% / 75%..95%
25%..75%
50%


34
33
32
31
30
29
28
27
26
Elevation (m)
2015
2020
2025
2030
2035
2040
Time
Statistics for Doris North TIA Elevation
5%..25% / 75%..95%
25%..75%
50%

Madrid Watershed



Boston Watershed



B3: Results Time Series for Prediction Nodes

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2010	Jun	33.91	34.05	33.90	21.62	30.08	7.36
2010	Jul	33.86	33.89	33.87	21.93	29.96	7.30
2010	Aug	33.82	33.80	33.81	22.09	29.90	7.26
2010	Sep	33.86	33.79	33.80	22.29	29.92	7.29
2010	Oct	33.88	33.83	33.81	22.43	29.94	7.31
2010	Nov	33.88	33.83	33.82	22.46	29.94	7.31
2010	Dec	33.88	33.83	33.82	22.45	29.94	7.31
2011	Jan	33.88	33.83	33.82	22.44	29.94	7.31
2011	Feb	33.88	33.83	33.82	22.43	29.94	7.31
2011	Mar	33.88	33.83	33.82	22.42	29.94	7.31
2011	Apr	33.88	33.83	33.82	22.41	29.94	7.31
2011	May	33.91	33.89	33.82	21.80	29.97	7.35
2011	Jun	33.91	34.13	33.90	21.87	30.11	7.36
2011	Jul	33.82	33.91	33.95	21.78	29.97	7.27
2011	Aug	33.77	33.80	33.87	21.56	29.90	7.21
2011	Sep	33.82	33.81	33.86	21.61	29.93	7.26
2011	Oct	33.85	33.86	33.88	21.60	29.95	7.29
2011	Nov	33.85	33.86	33.89	21.51	29.95	7.29
2011	Dec	33.85	33.86	33.89	21.50	29.95	7.29
2012	Jan	33.85	33.86	33.89	21.49	29.95	7.29
2012	Feb	33.85	33.86	33.89	21.48	29.95	7.29
2012	Mar	33.85	33.86	33.89	21.47	29.95	7.29
2012	Apr	33.85	33.86	33.89	21.46	29.95	7.29
2012	May	33.90	33.91	33.89	21.47	29.99	7.33
2012	Jun	33.90	34.00	33.97	21.84	30.03	7.35
2012	Jul	33.85	33.86	33.94	21.64	29.94	7.29
2012	Aug	33.79	33.76	33.88	21.55	29.88	7.24
2012	Sep	33.79	33.73	33.85	21.54	29.87	7.23
2012	Oct	33.80	33.74	33.85	21.52	29.87	7.24
2012	Nov	33.80	33.74	33.85	21.50	29.87	7.24
2012	Dec	33.80	33.74	33.85	21.49	29.87	7.24
2013	Jan	33.80	33.74	33.85	21.48	29.87	7.24
2013	Feb	33.80	33.74	33.85	21.47	29.87	7.24
2013	Mar	33.80	33.74	33.85	21.46	29.87	7.24
2013	Apr	33.80	33.74	33.85	21.45	29.87	7.24
2013	May	33.91	33.93	33.86	21.49	30.00	7.36
2013	Jun	33.90	33.89	33.93	21.79	29.97	7.35
2013	Jul	33.86	33.79	33.89	21.61	29.90	7.30
2013	Aug	33.81	33.72	33.83	21.53	29.84	7.24
2013	Sep	33.85	33.75	33.82	21.59	29.88	7.29
2013	Oct	33.87	33.77	33.83	21.56	29.89	7.30
2013	Nov	33.87	33.77	33.83	21.51	29.89	7.30
2013	Dec	33.87	33.77	33.83	21.49	29.89	7.30
2014	Jan	33.87	33.77	33.83	21.48	29.89	7.30
2014	Feb	33.87	33.77	33.83	21.48	29.89	7.30
2014	Mar	33.87	33.77	33.83	21.47	29.89	7.30
2014	Apr	33.87	33.77	33.83	21.46	29.89	7.30
2014	May	33.91	33.96	33.84	21.51	30.01	7.36
2014	Jun	33.91	33.90	33.91	21.78	29.98	7.36
2014	Jul	33.89	33.84	33.87	21.64	29.93	7.33
2014	Aug	33.84	33.75	33.83	21.57	29.87	7.27
2014	Sep	33.88	33.77	33.82	21.61	29.90	7.32
2014	Oct	33.88	33.77	33.82	21.52	29.90	7.32
2014	Nov	33.88	33.77	33.82	21.50	29.90	7.32
2014	Dec	33.88	33.77	33.82	21.49	29.90	7.32
2015	Jan	33.88	33.77	33.82	21.48	29.90	7.32
2015	Feb	33.89	33.77	33.82	21.47	29.90	7.32
2015	Mar	33.89	33.77	33.82	21.47	29.89	7.32
2015	Apr	33.89	33.77	33.82	21.46	29.89	7.32
2015	May	33.91	33.95	33.83	21.51	30.00	7.36
2015	Jun	33.91	33.95	33.91	21.85	30.00	7.36
2015	Jul	33.89	33.99	33.91	21.77	30.03	7.34
2015	Aug	33.86	33.87	33.91	21.69	29.95	7.30
2015	Sep	33.87	33.82	33.88	21.58	29.94	7.31
2015	Oct	33.87	33.83	33.89	21.54	29.94	7.31
2015	Nov	33.87	33.83	33.89	21.50	29.94	7.31
2015	Dec	33.87	33.83	33.89	21.49	29.94	7.31
2016	Jan	33.87	33.83	33.89	21.48	29.94	7.31
2016	Feb	33.87	33.83	33.89	21.47	29.94	7.31
2016	Mar	33.87	33.83	33.89	21.47	29.94	7.31
2016	Apr	33.87	33.83	33.89	21.46	29.94	7.31
2016	May	33.90	33.87	33.89	21.47	29.96	7.34
2016	Jun	33.91	34.02	33.99	21.86	30.05	7.36
2016	Jul	33.86	33.87	33.99	21.69	29.95	7.30
2016	Aug	33.82	33.79	33.92	21.58	29.89	7.26
2016	Sep	33.85	33.79	33.91	21.59	29.91	7.29
2016	Oct	33.86	33.79	33.92	21.54	29.91	7.29
2016	Nov	33.86	33.79	33.92	21.50	29.91	7.29
2016	Dec	33.86	33.79	33.92	21.49	29.91	7.29
2017	Jan	33.86	33.79	33.92	21.48	29.91	7.29
2017	Feb	33.86	33.79	33.92	21.47	29.91	7.29
2017	Mar	33.86	33.79	33.92	21.46	29.91	7.29
2017	Apr	33.86	33.79	33.92	21.45	29.91	7.29
2017	May	33.89	33.83	33.92	21.45	29.93	7.32
2017	Jun	33.91	34.01	34.02	21.86	30.04	7.36
2017	Jul	33.86	33.87	34.02	21.69	29.94	7.30
2017	Aug	33.82	33.78	33.96	21.57	29.89	7.26
2017	Sep	33.86	33.78	33.94	21.58	29.91	7.29
2017	Oct	33.86	33.79	33.95	21.53	29.91	7.29
2017	Nov	33.86	33.79	33.95	21.49	29.91	7.29
2017	Dec	33.86	33.79	33.95	21.47	29.91	7.29
2018	Jan	33.86	33.79	33.95	21.45	29.91	7.29
2018	Feb	33.86	33.79	33.95	21.42	29.91	7.29
2018	Mar	33.86	33.79	33.95	21.40	29.91	7.29
2018	Apr	33.86	33.79	33.95	21.37	29.91	7.29
2018	May	33.89	33.83	33.95	21.36	29.93	7.32
2018	Jun	33.91	34.01	34.05	21.83	30.04	7.36
2018	Jul	33.86	33.86	34.05	21.68	29.94	7.30
2018	Aug	33.82	33.78	33.99	21.57	29.89	7.26
2018	Sep	33.86	33.78	33.97	21.57	29.91	7.29
2018	Oct	33.86	33.79	33.98	21.53	29.91	7.29
2018	Nov	33.86	33.79	33.98	21.48	29.91	7.29
2018	Dec	33.86	33.79	33.98	21.45	29.91	7.29
2019	Jan	33.86	33.79	33.98	21.42	29.91	7.29
2019	Feb	33.86	33.79	33.98	21.39	29.91	7.29
2019	Mar	33.86	33.79	33.98	21.36	29.91	7.29
2019	Apr	33.86	33.79	33.98	21.33	29.91	7.29
2019	May	33.89	33.83	33.98	21.32	29.93	7.32
2019	Jun	33.91	34.01	34.08	21.81	30.04	7.36
2019	Jul	33.86	33.86	34.08	21.68	29.94	7.30
2019	Aug	33.82	33.78	34.02	21.57	29.89	7.26
2019	Sep	33.86	33.78	34.00	21.57	29.91	7.29

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2019	Oct	33.86	33.79	34.01	21.53	29.91	7.29
2019	Nov	33.86	33.79	34.01	21.48	29.91	7.29
2019	Dec	33.86	33.79	34.01	21.46	29.91	7.29
2020	Jan	33.86	33.79	34.01	21.43	29.91	7.29
2020	Feb	33.86	33.79	34.01	21.40	29.91	7.29
2020	Mar	33.86	33.79	34.01	21.37	29.91	7.29
2020	Apr	33.86	33.79	34.01	21.35	29.91	7.29
2020	May	33.89	33.83	34.01	21.34	29.93	7.32
2020	Jun	33.91	34.01	34.11	21.82	30.04	7.36
2020	Jul	33.86	33.86	34.10	21.68	29.94	7.30
2020	Aug	33.82	33.78	34.03	21.57	29.89	7.26
2020	Sep	33.86	33.78	34.01	21.57	29.91	7.29
2020	Oct	33.86	33.79	34.01	21.53	29.91	7.29
2020	Nov	33.86	33.79	34.00	21.49	29.91	7.29
2020	Dec	33.86	33.79	34.00	21.46	29.91	7.29
2021	Jan	33.86	33.79	33.99	21.43	29.91	7.29
2021	Feb	33.86	33.79	33.98	21.42	29.91	7.29
2021	Mar	33.86	33.79	33.97	21.40	29.91	7.29
2021	Apr	33.86	33.79	33.96	21.38	29.91	7.29
2021	May	33.89	33.83	33.95	21.38	29.93	7.32
2021	Jun	33.91	34.01	34.05	21.84	30.04	7.36
2021	Jul	33.86	33.86	34.03	21.68	29.94	7.30
2021	Aug	33.82	33.78	33.96	21.57	29.89	7.26
2021	Sep	33.86	33.78	33.93	21.58	29.91	7.29
2021	Oct	33.86	33.78	33.93	21.53	29.91	7.29
2021	Nov	33.86	33.78	33.92	21.49	29.91	7.29
2021	Dec	33.86	33.77	33.91	21.48	29.91	7.29
2022	Jan	33.86	33.77	33.90	21.46	29.91	7.29
2022	Feb	33.86	33.77	33.88	21.44	29.91	7.29
2022	Mar	33.86	33.76	33.87	21.42	29.91	7.29
2022	Apr	33.86	33.76	33.86	21.40	29.91	7.29
2022	May	33.89	33.80	33.85	21.41	29.93	7.32
2022	Jun	33.91	33.99	33.95	21.85	30.04	7.36
2022	Jul	33.86	33.85	33.93	21.68	29.94	7.30
2022	Aug	33.82	33.77	33.86	21.57	29.89	7.26
2022	Sep	33.86	33.77	33.83	21.58	29.91	7.29
2022	Oct	33.86	33.77	33.82	21.53	29.91	7.29
2022	Nov	33.86	33.76	33.81	21.49	29.91	7.29
2022	Dec	33.86	33.76	33.80	21.48	29.91	7.29
2023	Jan	33.86	33.75	33.79	21.46	29.91	7.29
2023	Feb	33.86	33.75	33.77	21.44	29.91	7.29
2023	Mar	33.86	33.74	33.76	21.42	29.91	7.29
2023	Apr	33.86	33.74	33.75	21.40	29.91	7.29
2023	May	33.89	33.77	33.74	21.40	29.93	7.32
2023	Jun	33.91	33.98	33.83	21.84	30.04	7.36
2023	Jul	33.86	33.84	33.81	21.67	29.94	7.30
2023	Aug	33.82	33.76	33.74	21.56	29.89	7.26
2023	Sep	33.86	33.76	33.71	21.57	29.91	7.29
2023	Oct	33.86	33.76	33.71	21.53	29.91	7.29
2023	Nov	33.86	33.75	33.70	21.49	29.91	7.29
2023	Dec	33.86	33.75	33.68	21.47	29.91	7.29
2024	Jan	33.86	33.74	33.67	21.45	29.91	7.29
2024	Feb	33.86	33.74	33.66	21.43	29.91	7.29
2024	Mar	33.86	33.73	33.65	21.42	29.91	7.29
2024	Apr	33.86	33.73	33.63	21.40	29.91	7.29
2024	May	33.89	33.76	33.62	21.40	29.94	7.32
2024	Jun	33.91	33.97	33.72	21.84	30.04	7.36
2024	Jul	33.86	33.84	33.70	21.67	29.94	7.30
2024	Aug	33.82	33.76	33.63	21.56	29.89	7.26
2024	Sep	33.86	33.76	33.60	21.57	29.91	7.29
2024	Oct	33.86	33.76	33.59	21.53	29.91	7.29
2024	Nov	33.86	33.75	33.58	21.49	29.91	7.29
2024	Dec	33.86	33.75	33.57	21.47	29.91	7.29
2025	Jan	33.86	33.74	33.55	21.45	29.91	7.29
2025	Feb	33.86	33.74	33.54	21.43	29.91	7.29
2025	Mar	33.86	33.73	33.53	21.42	29.91	7.29
2025	Apr	33.86	33.72	33.51	21.40	29.91	7.29
2025	May	33.89	33.76	33.50	21.40	29.94	7.32
2025	Jun	33.91	33.97	33.60	21.84	30.04	7.36
2025	Jul	33.86	33.84	33.58	21.67	29.94	7.30
2025	Aug	33.82	33.76	33.51	21.56	29.89	7.26
2025	Sep	33.86	33.76	33.48	21.57	29.91	7.29
2025	Oct	33.86	33.76	33.47	21.53	29.91	7.29
2025	Nov	33.86	33.75	33.46	21.49	29.91	7.29
2025	Dec	33.86	33.75	33.45	21.47	29.91	7.29
2026	Jan	33.86	33.74	33.43	21.45	29.91	7.29
2026	Feb	33.86	33.74	33.42	21.43	29.91	7.29
2026	Mar	33.86	33.73	33.41	21.42	29.91	7.29
2026	Apr	33.86	33.72	33.39	21.40	29.91	7.29
2026	May	33.89	33.77	33.38	21.40	29.94	7.32
2026	Jun	33.91	33.97	33.48	21.84	30.04	7.36
2026	Jul	33.86	33.84	33.46	21.67	29.94	7.30
2026	Aug	33.82	33.76	33.39	21.56	29.89	7.26
2026	Sep	33.86	33.76	33.36	21.57	29.91	7.29
2026	Oct	33.86	33.76	33.35	21.53	29.91	7.29
2026	Nov	33.86	33.75	33.34	21.49	29.91	7.29
2026	Dec	33.86	33.75	33.33	21.47	29.91	7.29
2027	Jan	33.86	33.74	33.31	21.45	29.91	7.29
2027	Feb	33.86	33.74	33.30	21.43	29.91	7.29
2027	Mar	33.86	33.73	33.29	21.42	29.91	7.29
2027	Apr	33.86	33.72	33.27	21.40	29.91	7.29
2027	May	33.89	33.77	33.26	21.40	29.94	7.32
2027	Jun	33.91	33.97	33.36	21.84	30.04	7.36
2027	Jul	33.86	33.84	33.34	21.67	29.94	7.30
2027	Aug	33.82	33.76	33.27	21.56	29.89	7.26
2027	Sep	33.86	33.76	33.24	21.57	29.91	7.29
2027	Oct	33.86	33.76	33.24	21.53	29.91	7.29
2027	Nov	33.86	33.75	33.22	21.49	29.91	7.29
2027	Dec	33.86	33.75	33.21	21.47	29.91	7.29
2028	Jan	33.86	33.74	33.20	21.45	29.91	7.29
2028	Feb	33.86	33.74	33.18	21.43	29.91	7.29
2028	Mar	33.86	33.73	33.17	21.42	29.91	7.29
2028	Apr	33.86	33.72	33.16	21.40	29.91	7.29
2028	May	33.90	33.77	33.15	21.40	29.94	7.32
2028	Jun	33.91	33.97	33.24	21.84	30.04	7.36
2028	Jul	33.86	33.84	33.23	21.67	29.94	7.30
2028	Aug	33.82	33.76	33.16	21.56	29.89	7.26
2028	Sep	33.86	33.76	33.13	21.57	29.91	7.29
2028	Oct	33.86	33.76	33.12	21.53	29.91	7.29
2028	Nov	33.86	33.75	33.11	21.49	29.91	7.29
2028	Dec	33.86	33.75	33.09	21.47	29.91	7.29
2029	Jan	33.86	33.74	33.08	21.43	29.91	7.29

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2029	Feb	33.86	33.74	33.06	21.36	29.91	7.29
2029	Mar	33.86	33.73	33.05	21.29	29.91	7.29
2029	Apr	33.86	33.72	33.03	21.22	29.91	7.29
2029	May	33.90	33.77	33.02	21.17	29.94	7.33
2029	Jun	33.91	33.97	33.13	21.76	30.04	7.36
2029	Jul	33.86	33.84	33.11	21.66	29.94	7.30
2029	Aug	33.82	33.76	33.03	21.56	29.89	7.26
2029	Sep	33.85	33.76	33.01	21.57	29.91	7.29
2029	Oct	33.85	33.76	33.00	21.51	29.91	7.29
2029	Nov	33.85	33.75	32.99	21.44	29.91	7.29
2029	Dec	33.85	33.74	32.97	21.37	29.91	7.29
2030	Jan	33.84	33.73	32.96	21.29	29.91	7.29
2030	Feb	33.84	33.73	32.94	21.22	29.91	7.29
2030	Mar	33.84	33.72	32.93	21.15	29.91	7.29
2030	Apr	33.83	33.71	32.91	21.08	29.91	7.29
2030	May	33.87	33.76	32.90	21.03	29.94	7.33
2030	Jun	33.91	33.96	33.01	21.70	30.04	7.36
2030	Jul	33.85	33.83	32.99	21.66	29.95	7.30
2030	Aug	33.81	33.75	32.91	21.56	29.89	7.26
2030	Sep	33.84	33.76	32.89	21.57	29.91	7.29
2030	Oct	33.84	33.75	32.88	21.51	29.91	7.29
2030	Nov	33.83	33.74	32.87	21.44	29.91	7.29
2030	Dec	33.83	33.74	32.85	21.37	29.91	7.29
2031	Jan	33.82	33.73	32.84	21.29	29.91	7.29
2031	Feb	33.81	33.72	32.82	21.22	29.91	7.29
2031	Mar	33.81	33.71	32.81	21.15	29.91	7.29
2031	Apr	33.80	33.71	32.79	21.08	29.91	7.29
2031	May	33.84	33.75	32.78	21.03	29.94	7.33
2031	Jun	33.91	33.95	32.89	21.70	30.04	7.36
2031	Jul	33.85	33.83	32.87	21.65	29.95	7.30
2031	Aug	33.81	33.75	32.80	21.56	29.89	7.26
2031	Sep	33.84	33.75	32.77	21.57	29.91	7.29
2031	Oct	33.84	33.75	32.76	21.51	29.91	7.29
2031	Nov	33.83	33.74	32.75	21.44	29.91	7.29
2031	Dec	33.82	33.74	32.74	21.37	29.91	7.29
2032	Jan	33.82	33.74	32.73	21.31	29.91	7.29
2032	Feb	33.81	33.73	32.73	21.28	29.91	7.29
2032	Mar	33.81	33.73	32.73	21.25	29.91	7.29
2032	Apr	33.80	33.73	32.73	21.22	29.91	7.29
2032	May	33.83	33.78	32.74	21.21	29.94	7.33
2032	Jun	33.91	33.97	32.86	21.79	30.04	7.36
2032	Jul	33.85	33.84	32.85	21.67	29.95	7.30
2032	Aug	33.81	33.77	32.80	21.57	29.89	7.26
2032	Sep	33.84	33.77	32.78	21.58	29.91	7.29
2032	Oct	33.84	33.77	32.79	21.53	29.91	7.29
2032	Nov	33.83	33.77	32.79	21.48	29.91	7.29
2032	Dec	33.83	33.77	32.79	21.45	29.91	7.29
2033	Jan	33.83	33.77	32.79	21.43	29.91	7.29
2033	Feb	33.83	33.77	32.79	21.42	29.91	7.29
2033	Mar	33.83	33.77	32.79	21.41	29.91	7.29
2033	Apr	33.83	33.77	32.79	21.40	29.91	7.29
2033	May	33.87	33.83	32.79	21.42	29.94	7.33
2033	Jun	33.91	34.00	32.91	21.86	30.05	7.36
2033	Jul	33.86	33.86	32.91	21.68	29.95	7.30
2033	Aug	33.82	33.78	32.85	21.58	29.89	7.26
2033	Sep	33.86	33.78	32.84	21.58	29.91	7.29
2033	Oct	33.86	33.79	32.85	21.54	29.91	7.29
2033	Nov	33.86	33.79	32.85	21.50	29.91	7.29
2033	Dec	33.86	33.79	32.85	21.49	29.91	7.29
2034	Jan	33.86	33.79	32.85	21.48	29.91	7.29
2034	Feb	33.86	33.79	32.85	21.47	29.91	7.29
2034	Mar	33.86	33.79	32.85	21.46	29.91	7.29
2034	Apr	33.86	33.79	32.85	21.45	29.91	7.29
2034	May	33.90	33.84	32.85	21.47	29.95	7.33
2034	Jun	33.91	34.01	32.97	21.87	30.05	7.36
2034	Jul	33.86	33.87	32.97	21.69	29.95	7.30
2034	Aug	33.82	33.78	32.91	21.58	29.89	7.26
2034	Sep	33.86	33.79	32.90	21.59	29.91	7.29
2034	Oct	33.86	33.79	32.90	21.54	29.91	7.29
2034	Nov	33.86	33.79	32.91	21.50	29.91	7.29
2034	Dec	33.86	33.79	32.91	21.49	29.91	7.29
2035	Jan	33.86	33.79	32.91	21.48	29.91	7.29
2035	Feb	33.86	33.79	32.91	21.49	29.91	7.29
2035	Mar	33.86	33.79	32.91	21.49	29.91	7.29
2035	Apr	33.86	33.79	32.91	21.49	29.91	7.29
2035	May	33.90	33.85	32.91	21.51	29.95	7.33
2035	Jun	33.91	34.01	33.03	21.89	30.05	7.36
2035	Jul	33.86	33.87	33.03	21.70	29.95	7.30
2035	Aug	33.82	33.79	32.97	21.59	29.90	7.26
2035	Sep	33.86	33.79	32.95	21.59	29.92	7.30
2035	Oct	33.86	33.79	32.96	21.54	29.92	7.30
2035	Nov	33.86	33.79	32.96	21.51	29.92	7.30
2035	Dec	33.86	33.79	32.96	21.50	29.92	7.30
2036	Jan	33.86	33.79	32.96	21.50	29.92	7.30
2036	Feb	33.86	33.79	32.96	21.50	29.92	7.30
2036	Mar	33.86	33.79	32.96	21.50	29.92	7.30
2036	Apr	33.86	33.79	32.96	21.50	29.92	7.30
2036	May	33.91	33.85	32.97	21.53	29.96	7.34
2036	Jun	33.91	34.02	33.09	21.89	30.05	7.36
2036	Jul	33.86	33.87	33.08	21.70	29.95	7.30
2036	Aug	33.83	33.79	33.02	21.59	29.90	7.26
2036	Sep	33.86	33.79	33.01	21.59	29.92	7.30
2036	Oct	33.86	33.79	33.02	21.54	29.92	7.30
2036	Nov	33.86	33.79	33.02	21.51	29.92	7.30
2036	Dec	33.86	33.79	33.02	21.50	29.92	7.30
2037	Jan	33.86	33.79	33.02	21.50	29.92	7.30
2037	Feb	33.86	33.79	33.02	21.50	29.92	7.30
2037	Mar	33.86	33.79	33.02	21.50	29.92	7.30
2037	Apr	33.86	33.79	33.02	21.50	29.92	7.30
2037	May	33.91	33.85	33.02	21.53	29.96	7.34
2037	Jun	33.91	34.02	33.15	21.89	30.05	7.36
2037	Jul	33.86	33.87	33.14	21.70	29.95	7.30
2037	Aug	33.83	33.79	33.08	21.59	29.90	7.26
2037	Sep	33.86	33.79	33.07	21.59	29.92	7.30
2037	Oct	33.86	33.79	33.08	21.54	29.92	7.30
2037	Nov	33.86	33.79	33.08	21.51	29.92	7.30
2037	Dec	33.86	33.79	33.08	21.50	29.92	7.30
2038	Jan	33.86	33.79	33.08	21.50	29.92	7.30
2038	Feb	33.86	33.79	33.08	21.50	29.92	7.30
2038	Mar	33.86	33.79	33.08	21.50	29.92	7.30
2038	Apr	33.86	33.79	33.08	21.50	29.92	7.30
2038	May	33.91	33.85	33.08	21.53	29.96	7.34

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2038	Jun	33.91	34.02	33.20	21.89	30.05	7.36
2038	Jul	33.86	33.87	33.20	21.70	29.95	7.30
2038	Aug	33.83	33.79	33.14	21.59	29.90	7.27
2038	Sep	33.86	33.79	33.12	21.59	29.92	7.30
2038	Oct	33.86	33.79	33.13	21.54	29.92	7.30
2038	Nov	33.86	33.79	33.13	21.51	29.92	7.30
2038	Dec	33.86	33.79	33.13	21.50	29.92	7.30
2039	Jan	33.86	33.79	33.13	21.50	29.92	7.30
2039	Feb	33.86	33.79	33.13	21.50	29.92	7.30
2039	Mar	33.86	33.79	33.13	21.50	29.92	7.30
2039	Apr	33.86	33.79	33.13	21.50	29.92	7.30
2039	May	33.91	33.85	33.14	21.53	29.96	7.34
2039	Jun	33.91	34.02	33.26	21.89	30.05	7.36
2039	Jul	33.86	33.87	33.25	21.70	29.95	7.30
2039	Aug	33.83	33.79	33.19	21.59	29.90	7.27
2039	Sep	33.86	33.79	33.18	21.59	29.92	7.30
2039	Oct	33.86	33.79	33.19	21.54	29.92	7.30
2039	Nov	33.86	33.79	33.19	21.51	29.92	7.30
2039	Dec	33.86	33.79	33.19	21.50	29.92	7.30
2040	Jan	33.86	33.79	33.19	21.50	29.92	7.30
2040	Feb	33.86	33.79	33.19	21.50	29.92	7.30
2040	Mar	33.86	33.79	33.19	21.50	29.92	7.30
2040	Apr	33.86	33.79	33.19	21.50	29.92	7.30
2040	May	33.91	33.86	33.19	21.53	29.96	7.34
2040	Jun	33.91	34.02	33.31	21.89	30.05	7.36
2040	Jul	33.86	33.87	33.30	21.70	29.95	7.30
2040	Aug	33.83	33.79	33.25	21.59	29.90	7.27
2040	Sep	33.86	33.79	33.23	21.59	29.92	7.30
2040	Oct	33.86	33.79	33.24	21.54	29.92	7.30
2040	Nov	33.86	33.79	33.24	21.51	29.92	7.30
2040	Dec	33.86	33.79	33.24	21.50	29.92	7.30
2041	Jan	33.86	33.79	33.24	21.50	29.92	7.30
2041	Feb	33.86	33.79	33.24	21.50	29.92	7.30
2041	Mar	33.86	33.79	33.24	21.50	29.92	7.30
2041	Apr	33.86	33.79	33.24	21.50	29.92	7.30
2041	May	33.91	33.86	33.24	21.53	29.96	7.34
2041	Jun	33.91	34.02	33.36	21.90	30.05	7.36
2041	Jul	33.86	33.87	33.36	21.70	29.95	7.31
2041	Aug	33.83	33.79	33.30	21.59	29.90	7.27
2041	Sep	33.86	33.79	33.28	21.59	29.92	7.30
2041	Oct	33.86	33.79	33.29	21.54	29.92	7.30
2041	Nov	33.86	33.79	33.29	21.51	29.92	7.30
2041	Dec	33.86	33.79	33.29	21.50	29.92	7.30
2042	Jan	33.86	33.79	33.29	21.50	29.92	7.30
2042	Feb	33.86	33.79	33.29	21.50	29.92	7.30
2042	Mar	33.86	33.79	33.29	21.50	29.92	7.30
2042	Apr	33.86	33.79	33.29	21.50	29.92	7.30
2042	May	33.91	33.86	33.30	21.53	29.96	7.34
2042	Jun	33.91	34.02	33.42	21.90	30.05	7.36
2042	Jul	33.86	33.87	33.41	21.70	29.95	7.31
2042	Aug	33.83	33.79	33.35	21.59	29.90	7.27
2042	Sep	33.86	33.79	33.34	21.59	29.92	7.30
2042	Oct	33.86	33.79	33.35	21.54	29.92	7.30
2042	Nov	33.86	33.79	33.35	21.51	29.92	7.30
2042	Dec	33.86	33.79	33.35	21.50	29.92	7.30
2043	Jan	33.86	33.79	33.35	21.50	29.92	7.30
2043	Feb	33.86	33.79	33.35	21.50	29.92	7.30
2043	Mar	33.86	33.79	33.35	21.50	29.92	7.30
2043	Apr	33.86	33.79	33.35	21.50	29.92	7.30
2043	May	33.91	33.86	33.35	21.53	29.96	7.34
2043	Jun	33.91	34.02	33.47	21.90	30.05	7.36
2043	Jul	33.86	33.87	33.46	21.70	29.95	7.31
2043	Aug	33.83	33.79	33.40	21.59	29.90	7.27
2043	Sep	33.86	33.79	33.39	21.60	29.92	7.30
2043	Oct	33.86	33.79	33.40	21.54	29.92	7.30
2043	Nov	33.86	33.79	33.40	21.51	29.92	7.30
2043	Dec	33.86	33.79	33.40	21.50	29.92	7.30
2044	Jan	33.86	33.79	33.40	21.50	29.92	7.30
2044	Feb	33.86	33.79	33.40	21.50	29.92	7.30
2044	Mar	33.86	33.79	33.40	21.50	29.92	7.30
2044	Apr	33.86	33.79	33.40	21.50	29.92	7.30
2044	May	33.91	33.86	33.40	21.53	29.96	7.35
2044	Jun	33.91	34.02	33.53	21.90	30.05	7.36
2044	Jul	33.86	33.87	33.52	21.70	29.95	7.31
2044	Aug	33.83	33.79	33.46	21.59	29.90	7.27
2044	Sep	33.86	33.79	33.44	21.60	29.92	7.30
2044	Oct	33.86	33.79	33.45	21.54	29.92	7.30
2044	Nov	33.86	33.79	33.45	21.51	29.92	7.30
2044	Dec	33.86	33.79	33.45	21.50	29.92	7.30
2045	Jan	33.86	33.79	33.45	21.50	29.92	7.30
2045	Feb	33.86	33.79	33.45	21.50	29.92	7.30
2045	Mar	33.86	33.79	33.45	21.50	29.92	7.30
2045	Apr	33.86	33.79	33.45	21.50	29.92	7.30
2045	May	33.91	33.86	33.46	21.53	29.97	7.35
2045	Jun	33.91	34.02	33.58	21.90	30.05	7.36
2045	Jul	33.86	33.87	33.57	21.70	29.95	7.31
2045	Aug	33.83	33.79	33.51	21.59	29.90	7.27
2045	Sep	33.86	33.79	33.50	21.60	29.92	7.30
2045	Oct	33.87	33.80	33.50	21.54	29.92	7.30
2045	Nov	33.87	33.80	33.51	21.51	29.92	7.30
2045	Dec	33.87	33.80	33.51	21.50	29.92	7.30
2046	Jan	33.87	33.80	33.51	21.50	29.92	7.30
2046	Feb	33.87	33.80	33.51	21.50	29.92	7.30
2046	Mar	33.87	33.80	33.51	21.50	29.92	7.30
2046	Apr	33.87	33.80	33.51	21.50	29.92	7.30
2046	May	33.91	33.87	33.51	21.53	29.97	7.35
2046	Jun	33.91	34.02	33.63	21.90	30.05	7.36
2046	Jul	33.86	33.87	33.62	21.70	29.95	7.31
2046	Aug	33.83	33.79	33.56	21.59	29.90	7.27
2046	Sep	33.86	33.79	33.55	21.60	29.92	7.30
2046	Oct	33.87	33.80	33.56	21.54	29.92	7.30
2046	Nov	33.87	33.80	33.56	21.51	29.92	7.30
2046	Dec	33.87	33.80	33.56	21.50	29.92	7.30
2047	Jan	33.87	33.80	33.56	21.50	29.92	7.30
2047	Feb	33.87	33.80	33.56	21.50	29.92	7.30
2047	Mar	33.87	33.80	33.56	21.50	29.92	7.30
2047	Apr	33.87	33.80	33.56	21.50	29.92	7.30
2047	May	33.91	33.87	33.56	21.53	29.97	7.35
2047	Jun	33.91	34.02	33.68	21.90	30.05	7.36
2047	Jul	33.86	33.87	33.67	21.70	29.95	7.31
2047	Aug	33.83	33.79	33.62	21.59	29.90	7.27
2047	Sep	33.86	33.79	33.60	21.60	29.92	7.30

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2047	Oct	33.87	33.80	33.61	21.54	29.92	7.30
2047	Nov	33.87	33.80	33.61	21.51	29.92	7.30
2047	Dec	33.87	33.80	33.61	21.50	29.92	7.30
2048	Jan	33.87	33.80	33.61	21.50	29.92	7.30
2048	Feb	33.87	33.80	33.61	21.50	29.92	7.30
2048	Mar	33.87	33.80	33.61	21.50	29.92	7.30
2048	Apr	33.87	33.80	33.61	21.50	29.92	7.30
2048	May	33.91	33.87	33.62	21.53	29.97	7.35
2048	Jun	33.91	34.02	33.73	21.90	30.05	7.36
2048	Jul	33.86	33.87	33.72	21.70	29.95	7.31
2048	Aug	33.83	33.79	33.67	21.59	29.90	7.27
2048	Sep	33.86	33.79	33.65	21.60	29.92	7.30
2048	Oct	33.87	33.80	33.66	21.54	29.92	7.30
2048	Nov	33.87	33.80	33.66	21.51	29.92	7.30
2048	Dec	33.87	33.80	33.66	21.50	29.92	7.30
2049	Jan	33.87	33.80	33.66	21.50	29.92	7.30
2049	Feb	33.87	33.80	33.66	21.50	29.92	7.30
2049	Mar	33.87	33.80	33.66	21.50	29.92	7.30
2049	Apr	33.87	33.80	33.66	21.50	29.92	7.30
2049	May	33.91	33.87	33.67	21.53	29.97	7.35
2049	Jun	33.91	34.02	33.78	21.90	30.05	7.36
2049	Jul	33.86	33.88	33.77	21.70	29.95	7.31
2049	Aug	33.83	33.79	33.72	21.59	29.90	7.27
2049	Sep	33.86	33.79	33.70	21.60	29.92	7.30
2049	Oct	33.87	33.80	33.71	21.54	29.92	7.30
2049	Nov	33.87	33.80	33.71	21.51	29.92	7.30
2049	Dec	33.87	33.80	33.71	21.50	29.92	7.30
2050	Jan	33.87	33.80	33.71	21.50	29.92	7.30
2050	Feb	33.87	33.80	33.71	21.50	29.92	7.30
2050	Mar	33.87	33.80	33.71	21.50	29.92	7.30
2050	Apr	33.87	33.80	33.71	21.50	29.92	7.30
2050	May	33.91	33.87	33.72	21.53	29.97	7.35
2050	Jun	33.91	34.02	33.83	21.90	30.05	7.36
2050	Jul	33.86	33.88	33.82	21.70	29.95	7.31
2050	Aug	33.83	33.79	33.77	21.59	29.90	7.27
2050	Sep	33.86	33.79	33.75	21.60	29.92	7.30
2050	Oct	33.87	33.80	33.76	21.54	29.92	7.30
2050	Nov	33.87	33.80	33.76	21.51	29.92	7.30
2050	Dec	33.87	33.80	33.76	21.50	29.92	7.30
2051	Jan	33.87	33.80	33.76	21.50	29.92	7.30
2051	Feb	33.87	33.80	33.76	21.50	29.92	7.30
2051	Mar	33.87	33.80	33.76	21.50	29.92	7.30
2051	Apr	33.87	33.80	33.76	21.50	29.92	7.30
2051	May	33.91	33.87	33.77	21.53	29.97	7.35
2051	Jun	33.91	34.02	33.89	21.90	30.05	7.36
2051	Jul	33.86	33.88	33.87	21.70	29.95	7.31
2051	Aug	33.83	33.79	33.82	21.59	29.90	7.27
2051	Sep	33.86	33.79	33.80	21.60	29.92	7.30
2051	Oct	33.87	33.80	33.81	21.54	29.92	7.30
2051	Nov	33.87	33.80	33.81	21.51	29.92	7.30
2051	Dec	33.87	33.80	33.81	21.50	29.92	7.30
2052	Jan	33.87	33.80	33.81	21.50	29.92	7.30
2052	Feb	33.87	33.80	33.81	21.50	29.92	7.30
2052	Mar	33.87	33.80	33.81	21.50	29.92	7.30
2052	Apr	33.87	33.80	33.81	21.50	29.92	7.30
2052	May	33.91	33.88	33.82	21.54	29.97	7.35
2052	Jun	33.91	34.02	33.94	21.91	30.05	7.36
2052	Jul	33.86	33.88	33.92	21.70	29.95	7.31
2052	Aug	33.83	33.79	33.87	21.59	29.90	7.27
2052	Sep	33.86	33.79	33.85	21.60	29.92	7.30
2052	Oct	33.87	33.80	33.86	21.54	29.92	7.30
2052	Nov	33.87	33.80	33.86	21.51	29.92	7.30
2052	Dec	33.87	33.80	33.86	21.50	29.92	7.30
2053	Jan	33.87	33.80	33.86	21.50	29.92	7.30
2053	Feb	33.87	33.80	33.86	21.50	29.92	7.30
2053	Mar	33.87	33.80	33.86	21.50	29.92	7.30
2053	Apr	33.87	33.80	33.86	21.50	29.92	7.30
2053	May	33.91	33.88	33.86	21.54	29.97	7.35
2053	Jun	33.91	34.02	33.99	21.91	30.05	7.36
2053	Jul	33.86	33.88	33.97	21.70	29.95	7.31
2053	Aug	33.83	33.79	33.91	21.59	29.90	7.27
2053	Sep	33.86	33.79	33.90	21.60	29.92	7.30
2053	Oct	33.87	33.80	33.91	21.54	29.92	7.30
2053	Nov	33.87	33.80	33.91	21.51	29.92	7.30
2053	Dec	33.87	33.80	33.91	21.50	29.92	7.30
2054	Jan	33.87	33.80	33.91	21.50	29.92	7.30
2054	Feb	33.87	33.80	33.91	21.50	29.92	7.30
2054	Mar	33.87	33.80	33.91	21.50	29.92	7.30
2054	Apr	33.87	33.80	33.91	21.50	29.92	7.30
2054	May	33.91	33.88	33.91	21.54	29.97	7.36
2054	Jun	33.91	34.02	34.04	21.91	30.05	7.36
2054	Jul	33.86	33.88	34.02	21.70	29.95	7.31
2054	Aug	33.83	33.79	33.96	21.59	29.90	7.27
2054	Sep	33.86	33.79	33.95	21.60	29.92	7.30
2054	Oct	33.87	33.80	33.96	21.54	29.92	7.30
2054	Nov	33.87	33.80	33.96	21.51	29.92	7.30
2054	Dec	33.87	33.80	33.96	21.50	29.92	7.30
2055	Jan	33.87	33.80	33.96	21.50	29.92	7.30
2055	Feb	33.87	33.80	33.96	21.50	29.92	7.30
2055	Mar	33.87	33.80	33.96	21.50	29.92	7.30
2055	Apr	33.87	33.80	33.96	21.50	29.92	7.30
2055	May	33.91	33.88	33.96	21.54	29.98	7.36
2055	Jun	33.91	34.02	34.09	21.91	30.05	7.36
2055	Jul	33.86	33.88	34.07	21.70	29.95	7.31
2055	Aug	33.83	33.79	34.01	21.59	29.90	7.27
2055	Sep	33.87	33.80	34.00	21.60	29.92	7.30
2055	Oct	33.87	33.80	34.01	21.54	29.92	7.30
2055	Nov	33.87	33.80	34.01	21.51	29.92	7.30
2055	Dec	33.87	33.80	34.01	21.50	29.92	7.30
2056	Jan	33.87	33.80	34.01	21.50	29.92	7.30
2056	Feb	33.87	33.80	34.01	21.50	29.92	7.30
2056	Mar	33.87	33.80	34.01	21.50	29.92	7.30
2056	Apr	33.87	33.80	34.01	21.50	29.92	7.30
2056	May	33.91	33.88	34.01	21.54	29.98	7.36
2056	Jun	33.91	34.03	34.13	21.91	30.05	7.36
2056	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2056	Aug	33.83	33.79	34.05	21.59	29.90	7.27
2056	Sep	33.87	33.80	34.03	21.60	29.92	7.30
2056	Oct	33.87	33.80	34.04	21.54	29.92	7.30
2056	Nov	33.87	33.80	34.04	21.51	29.92	7.30
2056	Dec	33.87	33.80	34.04	21.50	29.92	7.30
2057	Jan	33.87	33.80	34.04	21.50	29.92	7.30

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2057	Feb	33.87	33.80	34.04	21.50	29.92	7.30
2057	Mar	33.87	33.80	34.04	21.50	29.92	7.30
2057	Apr	33.87	33.80	34.04	21.50	29.92	7.30
2057	May	33.91	33.89	34.05	21.54	29.98	7.36
2057	Jun	33.91	34.03	34.13	21.91	30.05	7.36
2057	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2057	Aug	33.83	33.79	34.05	21.59	29.90	7.27
2057	Sep	33.87	33.80	34.03	21.60	29.92	7.30
2057	Oct	33.87	33.80	34.04	21.54	29.92	7.30
2057	Nov	33.87	33.80	34.04	21.51	29.93	7.30
2057	Dec	33.87	33.80	34.04	21.50	29.93	7.30
2058	Jan	33.87	33.80	34.04	21.50	29.93	7.30
2058	Feb	33.87	33.80	34.04	21.50	29.93	7.30
2058	Mar	33.87	33.80	34.04	21.50	29.93	7.30
2058	Apr	33.87	33.80	34.04	21.50	29.93	7.30
2058	May	33.91	33.89	34.05	21.54	29.98	7.36
2058	Jun	33.91	34.03	34.13	21.91	30.05	7.36
2058	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2058	Aug	33.83	33.79	34.05	21.59	29.90	7.27
2058	Sep	33.87	33.80	34.03	21.60	29.92	7.30
2058	Oct	33.87	33.80	34.04	21.54	29.92	7.30
2058	Nov	33.87	33.80	34.04	21.51	29.93	7.31
2058	Dec	33.87	33.80	34.05	21.50	29.93	7.31
2059	Jan	33.87	33.80	34.05	21.50	29.93	7.31
2059	Feb	33.87	33.80	34.05	21.50	29.93	7.31
2059	Mar	33.87	33.80	34.05	21.50	29.93	7.31
2059	Apr	33.87	33.80	34.05	21.50	29.93	7.31
2059	May	33.91	33.89	34.05	21.54	29.98	7.36
2059	Jun	33.91	34.03	34.13	21.91	30.05	7.36
2059	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2059	Aug	33.83	33.79	34.05	21.59	29.90	7.27
2059	Sep	33.87	33.80	34.03	21.60	29.92	7.30
2059	Oct	33.87	33.80	34.04	21.55	29.92	7.30
2059	Nov	33.87	33.81	34.05	21.51	29.93	7.31
2059	Dec	33.87	33.81	34.05	21.50	29.93	7.31
2060	Jan	33.87	33.81	34.05	21.50	29.93	7.31
2060	Feb	33.87	33.81	34.05	21.50	29.93	7.31
2060	Mar	33.87	33.81	34.05	21.50	29.93	7.31
2060	Apr	33.87	33.81	34.05	21.51	29.93	7.31
2060	May	33.91	33.90	34.05	21.54	29.99	7.36
2060	Jun	33.91	34.03	34.13	21.91	30.05	7.36
2060	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2060	Aug	33.83	33.80	34.05	21.59	29.90	7.27
2060	Sep	33.87	33.80	34.03	21.60	29.92	7.30
2060	Oct	33.87	33.80	34.04	21.55	29.93	7.31
2060	Nov	33.88	33.81	34.05	21.51	29.93	7.31
2060	Dec	33.88	33.81	34.05	21.50	29.93	7.31
2061	Jan	33.88	33.81	34.05	21.51	29.93	7.31
2061	Feb	33.88	33.81	34.05	21.51	29.93	7.31
2061	Mar	33.88	33.81	34.05	21.51	29.93	7.31
2061	Apr	33.88	33.81	34.05	21.51	29.93	7.31
2061	May	33.91	33.90	34.05	21.54	29.99	7.36
2061	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2061	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2061	Aug	33.83	33.80	34.05	21.59	29.90	7.27
2061	Sep	33.87	33.80	34.03	21.60	29.92	7.30
2061	Oct	33.87	33.80	34.04	21.55	29.93	7.31
2061	Nov	33.88	33.81	34.05	21.51	29.93	7.31
2061	Dec	33.88	33.81	34.05	21.51	29.93	7.31
2062	Jan	33.88	33.81	34.05	21.51	29.93	7.31
2062	Feb	33.88	33.81	34.05	21.51	29.93	7.31
2062	Mar	33.88	33.81	34.05	21.51	29.93	7.31
2062	Apr	33.88	33.81	34.05	21.51	29.93	7.31
2062	May	33.91	33.91	34.06	21.54	29.99	7.36
2062	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2062	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2062	Aug	33.83	33.80	34.05	21.59	29.90	7.27
2062	Sep	33.87	33.80	34.03	21.60	29.92	7.30
2062	Oct	33.87	33.81	34.05	21.55	29.93	7.31
2062	Nov	33.88	33.81	34.05	21.52	29.93	7.31
2062	Dec	33.88	33.81	34.05	21.51	29.93	7.31
2063	Jan	33.88	33.81	34.05	21.51	29.93	7.31
2063	Feb	33.88	33.81	34.05	21.51	29.93	7.31
2063	Mar	33.88	33.81	34.05	21.51	29.93	7.31
2063	Apr	33.88	33.81	34.05	21.51	29.93	7.31
2063	May	33.91	33.92	34.06	21.54	30.00	7.36
2063	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2063	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2063	Aug	33.83	33.80	34.05	21.59	29.90	7.27
2063	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2063	Oct	33.87	33.81	34.05	21.55	29.93	7.31
2063	Nov	33.88	33.82	34.05	21.52	29.93	7.31
2063	Dec	33.88	33.82	34.05	21.51	29.93	7.31
2064	Jan	33.88	33.82	34.05	21.51	29.93	7.31
2064	Feb	33.88	33.82	34.05	21.51	29.93	7.31
2064	Mar	33.88	33.82	34.05	21.51	29.93	7.31
2064	Apr	33.88	33.82	34.05	21.51	29.93	7.31
2064	May	33.91	33.92	34.06	21.55	30.00	7.36
2064	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2064	Jul	33.86	33.88	34.11	21.70	29.95	7.31
2064	Aug	33.83	33.80	34.05	21.59	29.90	7.27
2064	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2064	Oct	33.88	33.81	34.05	21.55	29.93	7.31
2064	Nov	33.88	33.82	34.05	21.52	29.94	7.32
2064	Dec	33.88	33.82	34.05	21.51	29.94	7.32
2065	Jan	33.88	33.82	34.05	21.51	29.94	7.32
2065	Feb	33.88	33.82	34.05	21.51	29.94	7.32
2065	Mar	33.88	33.82	34.05	21.51	29.94	7.32
2065	Apr	33.88	33.82	34.05	21.51	29.94	7.32
2065	May	33.91	33.93	34.06	21.55	30.00	7.36
2065	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2065	Jul	33.86	33.88	34.11	21.71	29.95	7.31
2065	Aug	33.83	33.80	34.05	21.59	29.90	7.27
2065	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2065	Oct	33.88	33.81	34.05	21.55	29.93	7.31
2065	Nov	33.88	33.82	34.05	21.52	29.94	7.32
2065	Dec	33.88	33.82	34.05	21.51	29.94	7.32
2066	Jan	33.88	33.82	34.05	21.51	29.94	7.32
2066	Feb	33.88	33.82	34.05	21.51	29.94	7.32
2066	Mar	33.88	33.82	34.05	21.51	29.94	7.32
2066	Apr	33.88	33.82	34.05	21.51	29.94	7.32
2066	May	33.91	33.94	34.06	21.55	30.01	7.36

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2066	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2066	Jul	33.86	33.88	34.11	21.71	29.95	7.31
2066	Aug	33.83	33.80	34.05	21.59	29.90	7.27
2066	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2066	Oct	33.88	33.81	34.05	21.56	29.93	7.31
2066	Nov	33.89	33.82	34.05	21.52	29.94	7.32
2066	Dec	33.89	33.82	34.05	21.51	29.94	7.32
2067	Jan	33.89	33.82	34.05	21.51	29.94	7.32
2067	Feb	33.89	33.82	34.05	21.51	29.94	7.32
2067	Mar	33.89	33.82	34.05	21.51	29.94	7.32
2067	Apr	33.89	33.82	34.05	21.51	29.94	7.32
2067	May	33.91	33.94	34.06	21.55	30.01	7.36
2067	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2067	Jul	33.86	33.88	34.11	21.71	29.96	7.31
2067	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2067	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2067	Oct	33.88	33.81	34.05	21.56	29.93	7.31
2067	Nov	33.89	33.83	34.05	21.52	29.94	7.32
2067	Dec	33.89	33.83	34.06	21.51	29.94	7.32
2068	Jan	33.89	33.83	34.06	21.51	29.94	7.32
2068	Feb	33.89	33.83	34.06	21.51	29.94	7.32
2068	Mar	33.89	33.83	34.06	21.51	29.94	7.32
2068	Apr	33.89	33.83	34.06	21.51	29.94	7.32
2068	May	33.91	33.95	34.06	21.55	30.02	7.36
2068	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2068	Jul	33.86	33.88	34.11	21.71	29.96	7.31
2068	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2068	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2068	Oct	33.88	33.82	34.05	21.56	29.93	7.31
2068	Nov	33.89	33.83	34.06	21.53	29.94	7.32
2068	Dec	33.89	33.83	34.06	21.51	29.94	7.32
2069	Jan	33.89	33.83	34.06	21.51	29.94	7.32
2069	Feb	33.89	33.83	34.06	21.51	29.94	7.32
2069	Mar	33.89	33.83	34.06	21.51	29.94	7.32
2069	Apr	33.89	33.83	34.06	21.51	29.94	7.32
2069	May	33.91	33.96	34.07	21.56	30.02	7.36
2069	Jun	33.91	34.03	34.13	21.91	30.06	7.36
2069	Jul	33.86	33.88	34.11	21.71	29.96	7.31
2069	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2069	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2069	Oct	33.88	33.82	34.05	21.56	29.93	7.31
2069	Nov	33.89	33.83	34.06	21.53	29.94	7.32
2069	Dec	33.89	33.83	34.06	21.51	29.94	7.32
2070	Jan	33.89	33.83	34.06	21.51	29.94	7.32
2070	Feb	33.89	33.83	34.06	21.51	29.94	7.32
2070	Mar	33.89	33.83	34.06	21.51	29.94	7.32
2070	Apr	33.89	33.83	34.06	21.51	29.94	7.32
2070	May	33.91	33.96	34.07	21.56	30.02	7.36
2070	Jun	33.91	34.04	34.14	21.91	30.06	7.36
2070	Jul	33.86	33.88	34.11	21.71	29.96	7.31
2070	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2070	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2070	Oct	33.88	33.82	34.05	21.56	29.93	7.31
2070	Nov	33.89	33.83	34.06	21.53	29.95	7.33
2070	Dec	33.89	33.83	34.06	21.51	29.95	7.33
2071	Jan	33.89	33.83	34.06	21.51	29.95	7.33
2071	Feb	33.89	33.83	34.06	21.51	29.95	7.33
2071	Mar	33.89	33.83	34.06	21.51	29.95	7.33
2071	Apr	33.89	33.83	34.06	21.51	29.95	7.33
2071	May	33.91	33.97	34.07	21.56	30.03	7.36
2071	Jun	33.91	34.04	34.14	21.91	30.06	7.36
2071	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2071	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2071	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2071	Oct	33.88	33.82	34.05	21.56	29.94	7.31
2071	Nov	33.90	33.84	34.06	21.53	29.95	7.33
2071	Dec	33.90	33.84	34.06	21.51	29.95	7.33
2072	Jan	33.90	33.84	34.06	21.51	29.95	7.33
2072	Feb	33.90	33.84	34.06	21.51	29.95	7.33
2072	Mar	33.90	33.84	34.06	21.51	29.95	7.33
2072	Apr	33.90	33.84	34.06	21.51	29.95	7.33
2072	May	33.91	33.98	34.07	21.56	30.03	7.36
2072	Jun	33.91	34.04	34.14	21.91	30.06	7.36
2072	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2072	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2072	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2072	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2072	Nov	33.90	33.84	34.06	21.53	29.95	7.33
2072	Dec	33.90	33.84	34.06	21.51	29.95	7.33
2073	Jan	33.90	33.84	34.06	21.51	29.95	7.33
2073	Feb	33.90	33.84	34.06	21.51	29.95	7.33
2073	Mar	33.90	33.84	34.06	21.51	29.95	7.33
2073	Apr	33.90	33.84	34.06	21.51	29.95	7.33
2073	May	33.91	33.98	34.07	21.56	30.03	7.36
2073	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2073	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2073	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2073	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2073	Oct	33.88	33.82	34.05	21.57	29.94	7.32
2073	Nov	33.90	33.84	34.06	21.53	29.95	7.33
2073	Dec	33.90	33.84	34.06	21.51	29.95	7.33
2074	Jan	33.90	33.84	34.06	21.51	29.95	7.33
2074	Feb	33.90	33.84	34.06	21.51	29.95	7.33
2074	Mar	33.90	33.84	34.06	21.51	29.95	7.33
2074	Apr	33.90	33.84	34.06	21.51	29.95	7.33
2074	May	33.91	33.99	34.07	21.57	30.04	7.36
2074	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2074	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2074	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2074	Sep	33.87	33.80	34.04	21.60	29.92	7.30
2074	Oct	33.88	33.82	34.05	21.57	29.94	7.32
2074	Nov	33.90	33.84	34.06	21.54	29.95	7.33
2074	Dec	33.90	33.84	34.06	21.51	29.95	7.33
2075	Jan	33.90	33.84	34.06	21.51	29.95	7.33
2075	Feb	33.90	33.84	34.06	21.51	29.95	7.33
2075	Mar	33.90	33.84	34.06	21.51	29.95	7.33
2075	Apr	33.90	33.84	34.06	21.51	29.95	7.33
2075	May	33.91	33.99	34.07	21.57	30.04	7.36
2075	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2075	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2075	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2075	Sep	33.87	33.80	34.04	21.60	29.93	7.30

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2075	Oct	33.88	33.82	34.05	21.57	29.94	7.32
2075	Nov	33.90	33.84	34.06	21.54	29.95	7.33
2075	Dec	33.90	33.84	34.06	21.51	29.95	7.33
2076	Jan	33.90	33.84	34.06	21.51	29.95	7.33
2076	Feb	33.90	33.84	34.06	21.51	29.95	7.33
2076	Mar	33.90	33.84	34.06	21.51	29.95	7.33
2076	Apr	33.90	33.84	34.06	21.52	29.95	7.33
2076	May	33.91	34.00	34.07	21.57	30.04	7.36
2076	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2076	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2076	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2076	Sep	33.87	33.80	34.04	21.60	29.93	7.30
2076	Oct	33.88	33.82	34.05	21.57	29.94	7.32
2076	Nov	33.90	33.84	34.06	21.54	29.95	7.33
2076	Dec	33.90	33.84	34.06	21.51	29.95	7.33
2077	Jan	33.90	33.84	34.06	21.51	29.95	7.33
2077	Feb	33.90	33.84	34.06	21.51	29.95	7.33
2077	Mar	33.90	33.84	34.06	21.52	29.95	7.33
2077	Apr	33.90	33.84	34.06	21.52	29.95	7.33
2077	May	33.91	34.00	34.07	21.57	30.05	7.36
2077	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2077	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2077	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2077	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2077	Oct	33.88	33.82	34.05	21.57	29.94	7.32
2077	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2077	Dec	33.90	33.85	34.06	21.51	29.95	7.33
2078	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2078	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2078	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2078	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2078	May	33.91	34.01	34.08	21.57	30.05	7.36
2078	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2078	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2078	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2078	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2078	Oct	33.88	33.82	34.05	21.57	29.94	7.32
2078	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2078	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2079	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2079	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2079	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2079	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2079	May	33.91	34.02	34.08	21.58	30.06	7.36
2079	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2079	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2079	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2079	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2079	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2079	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2079	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2080	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2080	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2080	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2080	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2080	May	33.91	34.02	34.08	21.58	30.06	7.36
2080	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2080	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2080	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2080	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2080	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2080	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2080	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2081	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2081	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2081	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2081	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2081	May	33.91	34.02	34.08	21.58	30.06	7.36
2081	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2081	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2081	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2081	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2081	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2081	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2081	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2082	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2082	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2082	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2082	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2082	May	33.91	34.02	34.08	21.58	30.06	7.36
2082	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2082	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2082	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2082	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2082	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2082	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2082	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2083	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2083	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2083	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2083	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2083	May	33.91	34.02	34.08	21.58	30.06	7.36
2083	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2083	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2083	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2083	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2083	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2083	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2083	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2084	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2084	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2084	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2084	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2084	May	33.91	34.02	34.08	21.58	30.06	7.36
2084	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2084	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2084	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2084	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2084	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2084	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2084	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2085	Jan	33.90	33.85	34.06	21.52	29.95	7.33

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2085	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2085	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2085	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2085	May	33.91	34.02	34.08	21.58	30.06	7.36
2085	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2085	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2085	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2085	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2085	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2085	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2085	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2086	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2086	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2086	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2086	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2086	May	33.91	34.02	34.08	21.58	30.06	7.36
2086	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2086	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2086	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2086	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2086	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2086	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2086	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2087	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2087	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2087	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2087	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2087	May	33.91	34.02	34.08	21.58	30.06	7.36
2087	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2087	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2087	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2087	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2087	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2087	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2087	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2088	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2088	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2088	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2088	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2088	May	33.91	34.02	34.08	21.58	30.06	7.36
2088	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2088	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2088	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2088	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2088	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2088	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2088	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2089	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2089	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2089	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2089	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2089	May	33.91	34.02	34.08	21.58	30.06	7.36
2089	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2089	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2089	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2089	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2089	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2089	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2089	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2090	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2090	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2090	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2090	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2090	May	33.91	34.02	34.08	21.58	30.06	7.36
2090	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2090	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2090	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2090	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2090	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2090	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2090	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2091	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2091	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2091	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2091	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2091	May	33.91	34.02	34.08	21.58	30.06	7.36
2091	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2091	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2091	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2091	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2091	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2091	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2091	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2092	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2092	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2092	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2092	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2092	May	33.91	34.02	34.08	21.58	30.06	7.36
2092	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2092	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2092	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2092	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2092	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2092	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2092	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2093	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2093	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2093	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2093	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2093	May	33.91	34.02	34.08	21.58	30.06	7.36
2093	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2093	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2093	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2093	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2093	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2093	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2093	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2094	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2094	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2094	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2094	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2094	May	33.91	34.02	34.08	21.58	30.06	7.36

Average Monthly Surface Elevation (m)							
Year	Month	Doris Watershed				Madrid Watershed	Boston Watershed
		Wolverine Lake	Patch Lake	Imniagut Lake	Doris Lake	Windy Lake	Stickleback Lake
2094	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2094	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2094	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2094	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2094	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2094	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2094	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2095	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2095	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2095	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2095	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2095	May	33.91	34.02	34.08	21.58	30.06	7.36
2095	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2095	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2095	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2095	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2095	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2095	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2095	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2096	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2096	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2096	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2096	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2096	May	33.91	34.02	34.08	21.58	30.06	7.36
2096	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2096	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2096	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2096	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2096	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2096	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2096	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2097	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2097	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2097	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2097	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2097	May	33.91	34.02	34.08	21.58	30.06	7.36
2097	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2097	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2097	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2097	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2097	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2097	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2097	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2098	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2098	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2098	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2098	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2098	May	33.91	34.02	34.08	21.58	30.06	7.36
2098	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2098	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2098	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2098	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2098	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2098	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2098	Dec	33.90	33.85	34.06	21.52	29.95	7.33
2099	Jan	33.90	33.85	34.06	21.52	29.95	7.33
2099	Feb	33.90	33.85	34.06	21.52	29.95	7.33
2099	Mar	33.90	33.85	34.06	21.52	29.95	7.33
2099	Apr	33.90	33.85	34.06	21.52	29.95	7.33
2099	May	33.91	34.02	34.08	21.58	30.06	7.36
2099	Jun	33.91	34.04	34.14	21.92	30.06	7.36
2099	Jul	33.86	33.89	34.11	21.71	29.96	7.31
2099	Aug	33.83	33.80	34.05	21.60	29.90	7.27
2099	Sep	33.87	33.81	34.04	21.60	29.93	7.31
2099	Oct	33.88	33.82	34.05	21.56	29.94	7.32
2099	Nov	33.90	33.85	34.06	21.54	29.95	7.33
2099	Dec	33.90	33.85	34.06	21.52	29.95	7.33

Appendix C: Water Quality Results

C1: Results Tables for All Prediction Nodes

Wolverine Lake Average and Maximum Concenrations During Operations and Post-Closure								
Parameter	Units	MMER[1]	Min CCME[2]	Background Concentration	Operations		Post-Closure	
					Dissolved		Dissolved	
					Average	Maximum	Average	Maximum
TSS	mg/L	15	-	5.8	9.6	29	8.3	25
TDS	mg/L	-	-	169	330	990	290	850
Fluoride	mg/L	-	0.12	0.054	0.11	***0.33***	0.097	***0.29***
Chloride	mg/L	-	120	63	***130***	***410***	110	***340***
Free Cyanide	mg/L	-	0.005	0.001	0.0021	***0.0065***	0.0018	***0.0055***
Total Cyanide	mg/L	1	0.005	0.001	0.0021	***0.0065***	0.0018	***0.0055***
WAD Cyanide	mg/L	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-
Ammonia	mg/L as N	-	1.54	0.005	0.011	0.032	0.0091	0.027
Nitrate	mg/L as N	-	3	0.005	0.011	0.032	0.0091	0.027
Nitrite	mg/L as N	-	10	0.001	0.0021	0.0065	0.0018	0.0055
Sulphate	mg/L	-	1000	2.75	5.8	17	6.7	20
Alkalinity	mg/L	-	-	30	62	190	59	170
Hardness	mg/L	-	-	49	57	170	56	160
Aluminum	mg/L	-	0.1	0.052	0.100	***0.310***	0.092	***0.270***
Antimony	mg/L	-	-	0.000027	0.000046	0.00014	0.000048	0.00014
Arsenic	mg/L	0.5	0.005	0.00034	0.00061	0.0018	0.00066	0.0019
Barium	mg/L	-	-	0.0033	0.0073	0.022	0.0067	0.02
Beryllium	mg/L	-	0.1	0.000005	0.000011	0.000032	0.000016	0.000047
Boron	mg/L	-	0.5	0.036	0.071	0.21	0.063	0.19
Cadmium	mg/L	-	0.00012	0.000005	0.000011	0.000032	0.00001	0.00003
Calcium	mg/L	-	-	8.9	19	57	18	54
Chromium	mg/L	-	0.001	0.0005	***0.0011***	***0.0032***	0.00093	***0.0028***
Cobalt	mg/L	-	0.05	0.00005	0.00011	0.00032	0.00011	0.00032
Copper	mg/L	0.3	0.002	0.0013	***0.0029***	***0.0087***	***0.0034***	***0.01***
Iron	mg/L	-	0.3	0.093	***0.34***	***1.00***	0.29	***0.86***
Lead	mg/L	0.2	0.001	0.00005	0.00011	0.00032	0.0001	0.00029
Lithium	mg/L	-	2.5	0.003975	0.0082	0.025	0.0071	0.021
Magnesium	mg/L	-	-	6.5	14	42	12	36
Manganese	mg/L	-	0.2	0.022	0.046	0.140	0.044	0.130
Mercury	mg/L	-	0.000016	0.00000054	0.0000015	0.0000044	0.0000019	0.0000056
Molybdenum	mg/L	-	0.01	0.00021	0.00038	0.0011	0.00039	0.0011
Nickel	mg/L	0.5	0.025	0.00054	0.0011	0.0033	0.0011	0.0032
Selenium	mg/L	-	0.001	0.0002	0.00043	***0.0013***	0.00038	***0.0011***
Silver	mg/L	-	0.00025	0.000005	0.000011	0.000032	0.0000098	0.000029
Sodium	mg/L	-	-	32	71	220	60	180
Thallium	mg/L	-	0.0008	0.000002	0.0000043	0.000013	0.0000043	0.000013
Uranium	mg/L	-	0.01	0.000036	0.000072	0.00021	0.000083	0.00025
Vanadium	mg/L	-	0.1	0.00017	0.00034	0.001	0.00036	0.0011
Zinc	mg/L	0.5	0.03	0.0030	0.0064	0.0190	0.0058	0.0170

[1] MMER Exceedance Format

[2] CCME Exccedance Format

Patch Lake Average and Maximum Concenrations During Operations and Post-Closure								
Parameter	Units	MMER[1]	Min CCME[2]	Background Concentration	Operations		Post-Closure	
					Dissolved		Dissolved	
					Average	Maximum	Average	Maximum
TSS	mg/L	15	-	5.8	5.9	9.4	5.6	8.8
TDS	mg/L	-	-	169	200	320	190	300
Fluoride	mg/L	-	0.12	0.054	0.068	0.11	0.064	0.10
Chloride	mg/L	-	120	63	83	***130***	78	120
Free Cyanide	mg/L	-	0.005	0.001	0.0013	0.0021	0.0012	0.0019
Total Cyanide	mg/L	1	0.005	0.001	0.0013	0.0021	0.0012	0.0019
WAD Cyanide	mg/L	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-
Ammonia	mg/L as N	-	1.54	0.005	0.0066	0.011	0.0062	0.0097
Nitrate	mg/L as N	-	3	0.005	0.0066	0.011	0.0062	0.0097
Nitrite	mg/L as N	-	10	0.001	0.0013	0.0021	0.0012	0.0019
Sulphate	mg/L	-	1000	2.75	3.6	5.7	3.6	5.6
Alkalinity	mg/L	-	-	30	38	61	37	57
Hardness	mg/L	-	-	49	35	56	34	53
Aluminum	mg/L	-	0.1	0.052	0.063	0.100	0.060	0.094
Antimony	mg/L	-	-	0.000027	0.000028	0.000045	0.000031	0.000049
Arsenic	mg/L	0.5	0.005	0.00034	0.00038	0.001	0.00088	0.0015
Barium	mg/L	-	-	0.0033	0.0045	0.0072	0.0043	0.0067
Beryllium	mg/L	-	0.1	0.000005	0.0000069	0.000011	0.0000073	0.000011
Boron	mg/L	-	0.5	0.036	0.044	0.070	0.042	0.065
Cadmium	mg/L	-	0.00012	0.000005	0.0000066	0.000011	0.0000064	0.0000099
Calcium	mg/L	-	-	8.9	12	19	11	18
Chromium	mg/L	-	0.001	0.0005	0.00066	***0.0011***	0.00062	0.00097
Cobalt	mg/L	-	0.05	0.00005	0.000066	0.00011	0.000072	0.00011
Copper	mg/L	0.3	0.002	0.0013	0.0018	***0.0028***	0.0018	***0.0028***
Iron	mg/L	-	0.3	0.093	0.210	***0.340***	0.190	0.300
Lead	mg/L	0.2	0.001	0.00005	0.000066	0.00011	0.000063	0.000099
Lithium	mg/L	-	2.5	0.003975	0.005	0.0081	0.0048	0.0074
Magnesium	mg/L	-	-	6.5	8.5	14	8.1	13
Manganese	mg/L	-	0.2	0.022	0.029	0.045	0.028	0.043
Mercury	mg/L	-	0.000016	0.00000054	0.00000091	0.0000014	0.00000093	0.0000014
Molybdenum	mg/L	-	0.01	0.00021	0.00023	0.00037	0.00023	0.00036
Nickel	mg/L	0.5	0.025	0.00054	0.00068	0.0011	0.00066	0.001
Selenium	mg/L	-	0.001	0.0002	0.00026	0.00042	0.00025	0.00039
Silver	mg/L	-	0.00025	0.000005	0.0000066	0.000011	0.0000063	0.0000098
Sodium	mg/L	-	-	32	44	71	41	64
Thallium	mg/L	-	0.0008	0.000002	0.0000027	0.0000042	0.0000026	0.000004
Uranium	mg/L	-	0.01	0.000036	0.000044	0.00007	0.000045	0.00007
Vanadium	mg/L	-	0.1	0.00017	0.00021	0.00033	0.00021	0.00032
Zinc	mg/L	0.5	0.03	0.003	0.0040	0.0064	0.0038	0.0059

[1] MMER Exceedance Format

[2] CCME Exccedance Format

Doris Creek Average and Maximum Concenrations During Operations and Post-Closure												
Parameter	Units	MMER[1]	Min CCME[2]	Background Concentration	Operations				Post-Closure			
					Dissolved		Total		Dissolved		Total	
					Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L	15	-	5.8	4.6	5.1	4.7	5.2	4.4	4.9	4.7	5.1
TDS	mg/L	-	-	169	160	180	160	180	150	170	150	170
Fluoride	mg/L	-	0.12	0.054	0.053	0.059	0.054	0.059	0.052	0.057	0.052	0.057
Chloride	mg/L	-	120	63	64	76	66	76	61	68	61	68
Free Cyanide	mg/L	-	0.005	0.001	0.0011	0.0022	0.0011	0.0022	0.00096	0.0011	0.00096	0.0011
Total Cyanide	mg/L	1	0.005	0.001	0.001	0.0012	0.001	0.0012	0.00096	0.0011	0.00096	0.0011
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	0.000047	0.00014	0.000047	0.00014	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	-	1.54	0.005	0.0051	0.0062	0.0052	0.0062	0.0048	0.0054	0.0048	0.0054
Nitrate	mg/L as N	-	3	0.005	0.017	0.31	0.012	0.31	0.0048	0.0054	0.0048	0.0054
Nitrite	mg/L as N	-	10	0.001	0.0016	0.019	0.0014	0.019	0.00096	0.0011	0.00096	0.0011
Sulphate	mg/L	-	1000	2.75	2.9	3.8	3	3.8	13	16	13	16
Alkalinity	mg/L	-	-	30	30	34	31	34	31	34	31	34
Hardness	mg/L	-	-	49	28	39	29	39	31	34	31	34
Aluminum	mg/L	-	0.1	0.052	0.049	0.055	0.050	0.055	0.049	0.053	0.050	0.054
Antimony	mg/L	-	-	0.000027	0.000027	0.000160	0.000026	0.00016	0.000076	0.0001	0.000076	0.0001
Arsenic	mg/L	0.5	0.005	0.00034	0.00030	0.00036	0.00031	0.00037	0.00280	0.00440	0.00290	0.00440
Barium	mg/L	-	-	0.0033	0.0037	0.0089	0.0037	0.0089	0.0053	0.0066	0.0053	0.0066
Beryllium	mg/L	-	0.1	0.000005	0.000015	0.000290	0.000011	0.000290	0.0000081	0.0000092	0.0000081	0.0000092
Boron	mg/L	-	0.5	0.036	0.035	0.055	0.035	0.055	0.036	0.038	0.036	0.038
Cadmium	mg/L	-	0.00012	0.000005	0.0000053	0.0000074	0.0000054	0.0000074	0.000007	0.0000077	0.000007	0.0000078
Calcium	mg/L	-	-	8.9	9.5	18	9.6	18	12	14	12	14
Chromium	mg/L	-	0.001	0.0005	0.00052	0.00068	0.00053	0.00068	0.0005	0.00055	0.00052	0.00055
Cobalt	mg/L	-	0.05	0.00005	0.000071	0.00063	0.000065	0.00063	0.0008	0.001	0.0008	0.001
Copper	mg/L	0.3	0.002	0.0013	0.0014	0.0016	0.0015	0.0016	0.0017	0.0019	0.0017	0.0019
Iron	mg/L	-	0.3	0.093	0.16	0.20	0.17	0.20	0.15	0.17	0.16	0.17
Lead	mg/L	0.2	0.001	0.00005	0.000056	0.00018	0.000055	0.00018	0.000052	0.000057	0.000053	0.000057
Lithium	mg/L	-	2.5	0.003975	0.0040	0.0063	0.0041	0.0063	0.0043	0.0048	0.0043	0.0048
Magnesium	mg/L	-	-	6.5	6.6	7.5	6.8	7.5	7.8	8.5	7.8	8.5
Manganese	mg/L	-	0.2	0.022	0.023	0.03	0.023	0.03	0.037	0.042	0.038	0.043
Mercury	mg/L	-	0.000016	0.00000054	0.00000093	0.0000067	0.00000087	0.0000067	0.00000098	0.0000011	0.00000098	0.0000011
Molybdenum	mg/L	-	0.01	0.00021	0.00023	0.0016	0.00022	0.0016	0.00025	0.00029	0.00025	0.00029
Nickel	mg/L	0.5	0.025	0.00054	0.00055	0.00098	0.00056	0.00099	0.0033	0.0042	0.0034	0.0042
Selenium	mg/L	-	0.001	0.0002	0.00021	0.00027	0.00021	0.00027	0.0005	0.00059	0.0005	0.00059
Silver	mg/L	-	0.00025	0.000005	0.0000053	0.0000095	0.0000054	0.0000095	0.0000053	0.0000057	0.0000053	0.0000057
Sodium	mg/L	-	-	32	34	39	35	39	32	36	32	36
Thallium	mg/L	-	0.0008	0.000002	0.0000039	0.00006	0.0000032	0.00006	0.0000043	0.0000049	0.0000043	0.0000049
Uranium	mg/L	-	0.01	0.000036	0.000037	0.000089	0.000038	0.000089	0.000043	0.000047	0.000043	0.000047
Vanadium	mg/L	-	0.1	0.00017	0.00017	0.00042	0.00018	0.00042	0.00019	0.0002	0.0002	0.00021
Zinc	mg/L	0.5	0.03	0.003	0.0031	0.0039	0.0032	0.0039	0.0033	0.0036	0.0033	0.0036

[1] MMER Exceedance Format

[2] CCME Exccedance Format

Windy Lake Average and Maximum Concenrations During Operations and Post-Closure							
Parameter	Units	MMER[1]	Min CCME[2]	Backgorund Concentration	Operations		Post-Closure (2044)
					Dissolved		Dissolved
					Average	Maximum	Steady State Conditions
TSS	mg/L	15	-	5.8	4.8	5.6	6.4
TDS	mg/L	-	-	169	160	190	180
Fluoride	mg/L	-	0.12	0.054	0.056	0.064	0.062
Chloride	mg/L	-	120	63	68	79	68
Free Cyanide	mg/L	-	0.005	0.001	0.0011	0.0013	0.0011
Total Cyanide	mg/L	1	0.005	0.001	0.0011	0.0013	0.0011
WAD Cyanide	mg/L	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-
Ammonia	mg/L as N	-	1.54	0.005	0.0054	0.0063	0.0053
Nitrate	mg/L as N	-	3	0.005	0.0054	0.0063	0.0053
Nitrite	mg/L as N	-	10	0.001	0.0011	0.0013	0.0011
Sulphate	mg/L	-	1000	2.75	3	3.7	9
Alkalinity	mg/L	-	-	30	32	36	35
Hardness	mg/L	-	-	49	29	34	56
Aluminum	mg/L	-	0.1	0.052	0.051	0.059	0.078
Antimony	mg/L	-	-	0.000027	0.000023	0.000029	0.000075
Arsenic	mg/L	0.5	0.005	0.00034	0.00032	0.00055	0.0036
Barium	mg/L	-	-	0.0033	0.0037	0.0043	0.0039
Beryllium	mg/L	-	0.1	0.000005	0.0000056	0.0000066	0.00001
Boron	mg/L	-	0.5	0.036	0.036	0.042	0.051
Cadmium	mg/L	-	0.00012	0.000005	0.0000055	0.0000066	0.000012
Calcium	mg/L	-	-	8.9	9.6	11	12
Chromium	mg/L	-	0.001	0.0005	0.00054	0.00063	0.00057
Cobalt	mg/L	-	0.05	0.00005	0.000057	0.000089	0.00048
Copper	mg/L	0.3	0.002	0.0013	0.0015	0.0017	***0.0023***
Iron	mg/L	-	0.3	0.093	0.18	0.21	0.14
Lead	mg/L	0.2	0.001	0.00005	0.000055	0.000064	0.00016
Lithium	mg/L	-	2.5	0.003975	0.0042	0.0048	0.0046
Magnesium	mg/L	-	-	6.5	7	8.2	7.6
Manganese	mg/L	-	0.2	0.022	0.023	0.027	0.038
Mercury	mg/L	-	0.000016	0.00000054	0.00000075	0.0000009	0.0000013
Molybdenum	mg/L	-	0.01	0.00021	0.00019	0.00022	0.00028
Nickel	mg/L	0.5	0.025	0.00054	0.00057	0.00073	0.0023
Selenium	mg/L	-	0.001	0.0002	0.00022	0.00025	0.00023
Silver	mg/L	-	0.00025	0.000005	0.0000055	0.0000063	0.000006
Sodium	mg/L	-	-	32	36	42	34
Thallium	mg/L	-	0.0008	0.000002	0.0000022	0.0000026	0.0000043
Uranium	mg/L	-	0.01	0.000036	0.000036	0.000042	0.000053
Vanadium	mg/L	-	0.1	0.00017	0.00017	0.0002	0.00028
Zinc	mg/L	0.5	0.03	0.003	0.0033	0.0038	0.0041

[1] MMER Exceedance Format

[2] CCME Exccedance Format

Stickleback Lake Average and Maximum Concenrations During Operations and Post-Closure												
Parameter	Units	MMER[1]	Min CCME[2]	Background Concentration	Operations				Post-Closure			
					Dissolved		Total		Dissolved		Total	
					Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L	15	-	1.8	2.6	7.9	2.6	7.9	2.9	7.9	2.9	7.9
TDS	mg/L	-	-	20	73	280	73	280	43	140	43	140
Fluoride	mg/L	-	0.12	0.026	0.066	***0.21***	0.066	***0.21***	0.052	***0.16***	0.052	***0.16***
Chloride	mg/L	-	120	8.2	43	***180***	43	***180***	15	70	15	70
Free Cyanide	mg/L	-	0.005	-	-	-	-	-	-	-	-	-
Total Cyanide	mg/L	1	0.005	0.001	0.0019	***0.0056***	0.0019	***0.0056***	0.0016	0.0048	0.0016	0.0048
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-	-	-	-	-	-	-
Ammonia	mg/L as N	-	1.54	0.0074	0.03	0.1	0.03	0.1	0.018	0.064	0.018	0.064
Nitrate	mg/L as N	-	3	0.0067	0.015	0.05	0.015	0.05	0.018	0.05	0.018	0.05
Nitrite	mg/L as N	-	10	0.001	0.0019	0.0056	0.0019	0.0056	0.0016	0.0048	0.0016	0.0048
Sulphate	mg/L	-	1000	3.0	6.1	17	6.1	17	7.9	22	7.9	22
Alkalinity	mg/L	-	-	9.4	26	86	26	86	26	72	26	72
Hardness	mg/L	-	-	12	39	130	39	130	34	93	34	93
Aluminum	mg/L	-	0.1	0.057	0.052	***0.19***	0.052	***0.19***	0.077	***0.21***	0.077	***0.21***
Antimony	mg/L	-	-	0.000011	0.000021	0.000069	0.000021	0.000069	0.000036	0.0001	0.000036	0.0001
Arsenic	mg/L	0.5	0.005	0.00017	0.00039	0.0012	0.00039	0.0012	0.0005	0.0014	0.0005	0.0014
Barium	mg/L	-	-	0.0021	0.0057	0.019	0.0057	0.019	0.0044	0.013	0.0044	0.013
Beryllium	mg/L	-	0.1	0.0000049	0.0000097	0.000032	0.0000097	0.000032	0.00002	0.000056	0.00002	0.000056
Boron	mg/L	-	0.5	0.0051	0.013	0.042	0.013	0.042	0.014	0.038	0.014	0.038
Cadmium	mg/L	-	0.00012	0.0000032	0.0000095	0.000029	0.0000095	0.000029	0.000012	0.000032	0.000012	0.000032
Calcium	mg/L	-	-	2.5	9.6	35	9.6	35	8.4	23	8.4	23
Chromium	mg/L	-	0.001	0.00032	0.00038	***0.0011***	0.00038	***0.0011***	0.00042	***0.0012***	0.00042	***0.0012***
Cobalt	mg/L	-	0.05	0.000039	0.00015	0.0005	0.00015	0.0005	0.00012	0.00033	0.00012	0.00033
Copper	mg/L	0.3	0.002	0.0009	0.0013	***0.005***	0.0013	***0.005***	***0.0031***	***0.0087***	***0.0031***	***0.0087***
Iron	mg/L	-	0.3	0.083	0.17	***0.48***	0.17	***0.48***	0.18	***0.49***	0.18	***0.49***
Lead	mg/L	0.2	0.001	0.000035	0.000074	0.00023	0.000074	0.00023	0.000069	0.00019	0.000069	0.00019
Lithium	mg/L	-	2.5	0.0058	0.012	0.034	0.012	0.034	0.011	0.034	0.011	0.034
Magnesium	mg/L	-	-	1.6	3.9	13	3.9	13	3.3	9.2	3.3	9.2
Manganese	mg/L	-	0.2	0.0092	0.066	***0.26***	0.066	***0.26***	0.033	0.12	0.033	0.12
Mercury	mg/L	-	0.000016	0.0000056	0.0000026	0.0000076	0.0000026	0.0000076	0.0000036	0.00001	0.0000036	0.00001
Molybdenum	mg/L	-	0.01	0.000049	0.000081	0.00029	0.000081	0.00029	0.00019	0.00055	0.00019	0.00055
Nickel	mg/L	0.5	0.025	0.00041	0.0005	0.0018	0.0005	0.0018	0.0009	0.0025	0.00091	0.0025
Selenium	mg/L	-	0.001	0.00021	0.00049	***0.0016***	0.00049	***0.0016***	0.00035	***0.0011***	0.00035	***0.0011***
Silver	mg/L	-	0.00025	0.0000015	0.0000031	0.00001	0.0000031	0.00001	0.0000045	0.000013	0.0000046	0.000013
Sodium	mg/L	-	-	4.7	10	32	10	32	7.4	24	7.4	24
Thallium	mg/L	-	0.0008	0.0000049	0.0000072	0.000021	0.0000072	0.000021	0.000008	0.000022	0.000008	0.000022
Uranium	mg/L	-	0.01	0.000021	0.000031	0.00011	0.000031	0.00011	0.000071	0.0002	0.000071	0.0002
Vanadium	mg/L	-	0.1	0.00016	0.0003	0.00088	0.0003	0.00088	0.0004	0.0011	0.0004	0.0011
Zinc	mg/L	0.5	0.03	0.0013	0.0048	0.015	0.0048	0.015	0.0039	0.011	0.0039	0.011

[1] MMER Exceedance Format

[2] CCME Exccedance Format

Aimaolokatalok Lake Average and Maximum Concenrations During Operations and Post-Closure												
Parameter	Units	MMER[1]	Min CCME[2]	Background Concentration	Operations				Post-Closure			
					Dissolved		Total		Dissolved		Total	
					Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L	15	-	1.8	2.2	3.6	2.2	3.6	2.2	3.4	2.2	3.4
TDS	mg/L	-	-	20	27	42	27	42	26	41	26	41
Fluoride	mg/L	-	0.12	0.026	0.037	0.059	0.037	0.059	0.036	0.055	0.036	0.055
Chloride	mg/L	-	120	8.2	12	21	12	21	11	16	11	16
Free Cyanide	mg/L	-	0.005	-	-	-	-	-	-	-	-	-
Total Cyanide	mg/L	1	0.005	0.001	0.0013	0.002	0.0013	0.002	0.0013	0.002	0.0013	0.002
WAD Cyanide	mg/L	-	-	-	-	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	0.000037	0.0001	0.000037	0.0001	1.7E-10	8.4E-09	1.7E-10	8.4E-09
Thiocyanate	mg/L	-	-	-	0.00037	0.001	0.00037	0.001	1.6E-09	8.4E-08	1.6E-09	8.4E-08
Ammonia	mg/L as N	-	1.54	0.0074	0.018	0.039	0.018	0.039	0.013	0.027	0.013	0.027
Nitrate	mg/L as N	-	3	0.0067	0.014	0.022	0.014	0.022	0.013	0.02	0.013	0.02
Nitrite	mg/L as N	-	10	0.001	0.0094	0.03	0.0094	0.03	0.0014	0.023	0.0014	0.023
Sulphate	mg/L	-	1000	3.000000	4.2	7.5	4.2	7.5	3.9	6.3	3.9	6.3
Alkalinity	mg/L	-	-	9.4	13	21	13	21	12	19	12	19
Hardness	mg/L	-	-	12	17	28	17	28	16	26	16	26
Aluminum	mg/L	-	0.1	0.057	0.062	0.10	0.062	0.1	0.062	0.097	0.062	0.097
Antimony	mg/L	-	-	0.000011	0.000033	0.000083	0.000033	0.000083	0.000021	0.000066	0.000021	0.000066
Arsenic	mg/L	0.5	0.005	0.00017	0.00022	0.00036	0.00022	0.00036	0.00022	0.00034	0.00022	0.00034
Barium	mg/L	-	-	0.0021	0.0028	0.0044	0.0028	0.0044	0.0027	0.0044	0.0027	0.0044
Beryllium	mg/L	-	0.1	0.0000049	0.0000078	0.000014	0.0000078	0.000014	0.0000067	0.000015	0.0000067	0.000015
Boron	mg/L	-	0.5	0.0051	0.0077	0.014	0.0077	0.014	0.0065	0.014	0.0065	0.014
Cadmium	mg/L	-	0.00012	0.0000032	0.000007	0.000011	0.000007	0.000011	0.0000067	0.00001	0.0000067	0.00001
Calcium	mg/L	-	-	2.5	3.7	6.6	3.7	6.6	3.3	5.5	3.3	5.5
Chromium	mg/L	-	0.001	0.00032	0.00035	0.00058	0.00035	0.00058	0.00034	0.00054	0.00034	0.00054
Cobalt	mg/L	-	0.05	0.000039	0.000087	0.00021	0.000087	0.00021	0.000063	0.00011	0.000063	0.00011
Copper	mg/L	0.3	0.002	0.0009	0.0012	0.0019	0.0012	0.0019	0.0012	0.0019	0.0012	0.0019
Iron	mg/L	-	0.3	0.083	0.13	0.2	0.13	0.2	0.12	0.19	0.12	0.19
Lead	mg/L	0.2	0.001	0.000035	0.000047	0.000078	0.000047	0.000078	0.000045	0.000071	0.000045	0.000071
Lithium	mg/L	-	2.5	0.0058	0.0093	0.014	0.0093	0.014	0.0089	0.014	0.0089	0.014
Magnesium	mg/L	-	-	1.6	2.1	3.4	2.1	3.4	2.0	3.2	2	3.2
Manganese	mg/L	-	0.2	0.0092	0.017	0.028	0.017	0.028	0.016	0.025	0.016	0.025
Mercury	mg/L	-	0.000016	0.0000056	0.0000028	0.0000066	0.0000028	0.0000066	0.0000031	0.0000062	0.0000031	0.0000062
Molybdenum	mg/L	-	0.01	0.000049	0.000067	0.00012	0.000067	0.00012	0.000061	0.0001	0.000061	0.0001
Nickel	mg/L	0.5	0.025	0.00041	0.00053	0.00082	0.00053	0.00082	0.00052	0.00081	0.00052	0.00081
Selenium	mg/L	-	0.001	0.00021	0.00026	0.0004	0.00026	0.0004	0.00025	0.00039	0.00025	0.00039
Silver	mg/L	-	0.00025	0.0000015	0.0000029	0.0000056	0.0000029	0.0000056	0.0000025	0.0000039	0.0000025	0.0000039
Sodium	mg/L	-	-	4.7	6.2	9.8	6.2	9.8	6.0	9.3	6	9.3
Thallium	mg/L	-	0.0008	0.0000049	0.0000066	0.000012	0.0000066	0.000012	0.0000059	0.0000097	0.0000059	0.0000097
Uranium	mg/L	-	0.01	0.000021	0.000028	0.000044	0.000028	0.000044	0.000027	0.000043	0.000027	0.000043
Vanadium	mg/L	-	0.1	0.00016	0.00026	0.00057	0.00026	0.00057	0.00021	0.00033	0.00021	0.00033
Zinc	mg/L	0.5	0.03	0.0013	0.0025	0.0041	0.0025	0.0041	0.0024	0.0037	0.0024	0.0037

[1] MMER Exceedance Format

[2] CCME Exccedance Format

Marine Mixing Box Average and Maximum Concenrations During Operations and Closure										
Parameter	Units	MMER[1]	Operations (2017-2032)				Closure (2033-2036)			
			Dissolved		Total		Dissolved		Total	
			Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L	15	3.8	5.6	3.8	5.6	2.5	3.5	2.5	3.5
TDS	mg/L	-	8,400	32,000	8,400	32,000	220	280	220	280
Fluoride	mg/L	-	0.28	0.8	0.28	0.8	0.057	0.08	0.057	0.08
Chloride	mg/L	-	4,900	18,000	4,900	18,000	66	83	66	83
Free Cyanide	mg/L	-	0.00072	0.0022	0.00072	0.0022	0.00047	0.00063	0.00047	0.00063
Total Cyanide	mg/L	1	0.025	0.26	0.025	0.26	0.00033	0.00041	0.00033	0.00041
WAD Cyanide	mg/L	-	0.1	0.33	0.1	0.33	0.023	0.031	0.023	0.031
Cyanate	mg/L	-	1.1	6.5	1.1	6.5	0.00034	0.00042	0.00034	0.00042
Thiocyanate	mg/L	-	1.3	7.3	1.3	7.3	0.00037	0.00053	0.00037	0.00053
Ammonia	mg/L as N	-	2.70	9.8	2.70	9.8	0.001	0.0014	0.001	0.0014
Nitrate	mg/L as N	-	0.42	2	0.42	2	0.031	0.04	0.031	0.04
Nitrite	mg/L as N	-	0.25	0.98	0.25	0.98	0.16	0.21	0.16	0.21
Sulphate	mg/L	-	790	3100	790	3100	66	84	66	84
Alkalinity	mg/L	-	100	270	100	270	70	89	70	89
Hardness	mg/L	-	3,000	11,000	3,000	11,000	170	210	170	210
Aluminum	mg/L	-	0.13	0.58	0.23	0.69	0.13	0.17	0.19	0.23
Antimony	mg/L	-	0.0079	0.036	0.0079	0.036	0.0041	0.0052	0.0041	0.0052
Arsenic	mg/L	0.5	0.24	0.98	0.24	0.99	0.072	0.093	0.073	0.095
Barium	mg/L	-	0.047	0.14	0.047	0.14	0.042	0.056	0.042	0.056
Beryllium	mg/L	-	0.0014	0.0082	0.0014	0.0082	0.0015	0.0019	0.0015	0.0019
Boron	mg/L	-	0.84	2.8	0.84	2.8	0.091	0.12	0.091	0.12
Cadmium	mg/L	-	0.00013	0.0004	0.00013	0.0004	0.000048	0.00006	0.000049	0.000061
Calcium	mg/L	-	680	2,300	680	2,300	53	65	53	66
Chromium	mg/L	-	0.003	0.015	0.004	0.016	0.0015	0.0018	0.0024	0.0028
Cobalt	mg/L	-	0.019	0.12	0.019	0.12	0.0015	0.0019	0.0017	0.0021
Copper	mg/L	0.3	0.0079	0.033	0.0088	0.033	0.0069	0.0089	0.007	0.0091
Iron	mg/L	-	1.4	4.7	1.8	5.00000	0.14	0.19	0.45	0.52
Lead	mg/L	0.2	0.00038	0.0011	0.00041	0.0011	0.00023	0.00028	0.00024	0.0003
Lithium	mg/L	-	0.094	0.39	0.094	0.39	0.0053	0.0068	0.0053	0.0068
Magnesium	mg/L	-	380	1,400	380	1,400	24	30	24	30
Manganese	mg/L	-	0.58	3.4	0.59	3.4	0.044	0.058	0.053	0.067
Mercury	mg/L	-	0.000033	0.000081	0.000033	0.000081	0.0000051	6.6E-06	5.1E-06	6.6E-06
Molybdenum	mg/L	-	0.034	0.16	0.034	0.16	0.013	0.017	0.013	0.017
Nickel	mg/L	0.5	0.068	0.46	0.069	0.46	0.0053	0.0066	0.0068	0.0082
Selenium	mg/L	-	0.0047	0.049	0.0047	0.049	0.0011	0.0014	0.0011	0.0014
Silver	mg/L	-	0.00024	0.00093	0.00024	0.00093	0.000081	0.0001	0.000082	0.0001
Sodium	mg/L	-	2,200	8,700	2,200	8,700	33	42	33	42
Thallium	mg/L	-	0.00011	0.00035	0.00011	0.00035	0.000043	0.000053	0.000043	0.000054
Uranium	mg/L	-	0.00032	0.0012	0.00032	0.0012	0.00028	0.00035	0.00028	0.00035
Vanadium	mg/L	-	0.004	0.013	0.0046	0.014	0.0024	0.003	0.0027	0.0033
Zinc	mg/L	0.5	0.05	0.18	0.051	0.18	0.0082	0.01	0.0084	0.01

[1] MMER Exceedance Format

Doris North TIA Average and Maximum Concenrations During Operations and Post-Closure												
Parameter	Units	MMER[1]	Min CCME[2]	Background Concentration	Operations & Closure[3] (Marine Discharge)				Post-Closure (Freshwater Discharge)			
					Dissolved		Total		Dissolved		Total	
					Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
TSS	mg/L	15	-	5.75	2.9	11	2.9	11	3.6	3.8	3.6	3.8
TDS	mg/L	-	-	169	610	2,500	610	2,500	130	140	130	140
Fluoride	mg/L	-	0.12	0.0535	0.12	0.37	0.12	0.37	0.053	0.054	0.053	0.054
Chloride	mg/L	-	120	62.9	180	800	180	800	37	38	37	38
Free Cyanide	mg/L	-	0.005	0.001	0.0018	0.0097	0.0018	0.0097	0.00059	0.0006	0.00059	0.0006
Total Cyanide	mg/L	1	0.005	0.001	0.072	0.41	0.072	0.41	0.00059	0.0006	0.00059	0.0006
WAD Cyanide	mg/L	-	-	-	0.2	0.5	0.2	0.5	-	-	-	-
Cyanate	mg/L	-	-	-	1.4	19	1.4	19	-	-	-	-
Thiocyanate	mg/L	-	-	-	2.9	15	2.9	15	-	-	-	-
Ammonia	mg/L as N	-	1.54	0.005	3.3	32	3.3	32	0.003	0.003	0.003	0.003
Nitrate	mg/L as N	-	3	0.005	0.89	4.3	0.89	4.3	0.003	0.003	0.003	0.003
Nitrite	mg/L as N	-	10	0.001	0.62	3.4	0.62	3.4	0.00059	0.0006	0.00059	0.0006
Sulphate	mg/L	-	1000	2.745	240	1200	240	1200	13	15	13	15
Alkalinity	mg/L	-	-	30.45	140	600	140	600	54	54	54	54
Hardness	mg/L	-	-	49.15	390	1,600	390	1,600	120	120	120	120
Aluminum	mg/L	-	0.1	0.05185	0.2	1.7	0.2	1.7	0.07	0.072	0.07	0.072
Antimony	mg/L	-	-	0.000027	0.016	0.07	0.016	0.07	0.00095	0.00097	0.00095	0.00097
Arsenic	mg/L	0.5	0.005	0.000343	0.32	1.3	0.32	1.3	***0.064***	***0.064***	***0.064***	***0.064***
Barium	mg/L	-	-	0.003315	0.045	0.17	0.045	0.17	0.051	0.053	0.051	0.053
Beryllium	mg/L	-	0.1	0.000005	0.0031	0.031	0.0031	0.031	0.00005	0.000067	0.00005	0.000067
Boron	mg/L	-	0.5	0.036	0.16	0.43	0.16	0.43	0.087	0.092	0.087	0.092
Cadmium	mg/L	-	0.00012	0.000005	0.0002	0.00078	0.0002	0.00078	0.000015	0.000018	0.000015	0.000018
Calcium	mg/L	-	-	8.925	150	720	150	720	25	33	25	33
Chromium	mg/L	-	0.001	0.0005	0.0063	0.02	0.0063	0.02	0.00072	0.0008	0.00072	0.0008
Cobalt	mg/L	-	0.05	0.00005	0.007	0.021	0.007	0.021	0.00018	0.00026	0.00018	0.00026
Copper	mg/L	0.3	0.002	0.00134	0.015	0.044	0.015	0.044	***0.0065***	***0.0066***	***0.0065***	***0.0066***
Iron	mg/L	-	0.3	0.0925	0.7	3.5	0.7	3.5	0.12	0.15	0.12	0.15
Lead	mg/L	0.2	0.001	0.00005	0.00069	0.0032	0.00069	0.0032	0.000084	0.000089	0.000084	0.000089
Lithium	mg/L	-	2.5	0.003975	0.015	0.032	0.015	0.032	0.0046	0.0063	0.0046	0.0063
Magnesium	mg/L	-	-	6.535	54	220	54	220	18	19	18	19
Manganese	mg/L	-	0.2	0.02185	0.078	0.2	0.078	0.2	0.045	0.058	0.045	0.058
Mercury	mg/L	-	0.000016	0.000000535	0.000039	0.00011	0.000039	0.00011	0.0000051	0.0000067	0.0000051	0.0000067
Molybdenum	mg/L	-	0.01	0.000205	0.071	0.25	0.071	0.25	0.0015	0.0016	0.0015	0.0016
Nickel	mg/L	0.5	0.025	0.00054	0.027	0.097	0.027	0.097	0.0013	0.0014	0.0013	0.0014
Selenium	mg/L	-	0.001	0.0002	0.0058	0.019	0.0058	0.019	0.00034	0.00037	0.00034	0.00037
Silver	mg/L	-	0.00025	0.000005	0.00054	0.0021	0.00054	0.0021	0.000011	0.000011	0.000011	0.000011
Sodium	mg/L	-	-	32.2	92	400	92	400	19	20	19	20
Thallium	mg/L	-	0.0008	0.000002	0.00023	0.0007	0.00023	0.0007	0.000011	0.000015	0.000011	0.000015
Uranium	mg/L	-	0.01	0.00003575	0.00065	0.0033	0.00065	0.0033	0.00016	0.00018	0.00016	0.00018
Vanadium	mg/L	-	0.1	0.000174	0.0062	0.038	0.0062	0.038	0.00056	0.00059	0.00056	0.00059
Zinc	mg/L	0.5	0.03	0.003	0.019	0.097	0.019	0.097	0.004	0.0043	0.004	0.0043

[1] MMER Exceedance Format

[2] CCME Exccedance Format

[3] CCME freshwater guidelines do not apply for marine discharge

Boston WTP Average and Maximum Concenrations During Operations and Post-Closure								
Parameter	Units	MMER[1]	Min CCME[2]	Background Concentration	Operations (2020-2034)			
					Dissolved		Total	
					Average	Maximum	Average	Maximum
TSS	mg/L	15	-	1.8	15	15	15	15
TDS	mg/L	-	-	20	510	510	510	510
Fluoride	mg/L	-	0.12	0.026	***1***	***1.5***	***1***	***1.5***
Chloride	mg/L	-	120	8.2	***1200***	***1,900***	***1200***	***1,900***
Free Cyanide	mg/L	-	0.005	-	-	-	-	-
Total Cyanide	mg/L	1	0.005	0.001	-	-	-	-
WAD Cyanide	mg/L	-	-	-	-	-	-	-
Cyanate	mg/L	-	-	-	0.027	0.044	0.027	0.044
Thiocyanate	mg/L	-	-	-	0.27	0.44	0.27	0.44
Ammonia	mg/L as N	-	1.54	0.0074	***2.7***	***4.4***	***2.7***	***4.4***
Nitrate	mg/L as N	-	3	0.0067	0.16	0.27	0.16	0.27
Nitrite	mg/L as N	-	10	0.001	0.11	0.17	0.11	0.17
Sulphate	mg/L	-	1000	3	380	500	380	500
Alkalinity	mg/L	-	-	9.4	640	990	640	990
Hardness	mg/L	-	-	12	1300	1300	1300	1300
Aluminum	mg/L	-	0.1	0.057	0.1	0.1	***0.26***	***0.27***
Antimony	mg/L	-	-	0.000011	0.014	0.047	0.014	0.047
Arsenic	mg/L	0.5	0.005	0.00017	***0.01***	***0.01***	***0.015***	***0.015***
Barium	mg/L	-	-	0.0021	0.052	0.2	0.052	0.2
Beryllium	mg/L	-	0.1	0.0000049	0.0011	0.0066	0.0011	0.0066
Boron	mg/L	-	0.5	0.0051	***1.3***	***6.4***	***1.3***	***6.4***
Cadmium	mg/L	-	0.00012	0.0000032	0.0001	0.0001	0.0001	0.0001
Calcium	mg/L	-	-	2.5	510	510	510	510
Chromium	mg/L	-	0.001	0.00032	***0.014***	***0.02***	***0.017***	***0.022***
Cobalt	mg/L	-	0.05	0.000039	0.029	0.042	0.03	0.042
Copper	mg/L	0.3	0.002	0.0009	0.001	0.001	0.0015	0.0015
Iron	mg/L	-	0.3	0.083	***0.5***	***0.5***	***1.4***	***1.4***
Lead	mg/L	0.2	0.001	0.000035	***0.0022***	***0.003***	***0.0023***	***0.0031***
Lithium	mg/L	-	2.5	0.0058	0.056	0.13	0.056	0.13
Magnesium	mg/L	-	-	1.6	84	120	85	120
Manganese	mg/L	-	0.2	0.0092	0.16	***0.46***	0.18	***0.48***
Mercury	mg/L	-	0.000016	0.0000056	***0.00011***	***0.00016***	***0.00011***	***0.00016***
Molybdenum	mg/L	-	0.01	0.000049	0.01	0.01	0.01	0.01
Nickel	mg/L	0.5	0.025	0.00041	0.005	0.005	0.0093	0.0094
Selenium	mg/L	-	0.001	0.00021	***0.002***	***0.002***	***0.002***	***0.002***
Silver	mg/L	-	0.00025	0.0000015	***0.0005***	***0.00074***	***0.00051***	***0.00074***
Sodium	mg/L	-	-	4.7	140	220	140	220
Thallium	mg/L	-	0.0008	0.0000049	***0.00089***	***0.0013***	***0.00089***	***0.0013***
Uranium	mg/L	-	0.01	0.000021	0.00054	0.0017	0.00055	0.0017
Vanadium	mg/L	-	0.1	0.00016	0.068	0.1	0.069	***0.11***
Zinc	mg/L	0.5	0.03	0.0013	0.02	0.02	0.021	0.021

[1] MMER Exceedance Format

[2] CCME Exccedance Format

Boston TMA Average and Maximum Concenrations During Operations and Post-Closure						
Parameter	Units	MMER[1]	Min CCME[2]	Background Concentration	Post-Closure	
					Dissolved	
					Average	Maximum
TSS	mg/L	15	-	1.8	1	1
TDS	mg/L	-	-	20	91	150
Fluoride	mg/L	-	0.12	0.026	0.057	0.066
Chloride	mg/L	-	120	8.2	-	-
Free Cyanide	mg/L	-	0.005	-	-	-
Total Cyanide	mg/L	1	0.005	0.001	-	-
WAD Cyanide	mg/L	-	-	-	-	-
Cyanate	mg/L	-	-	-	-	-
Thiocyanate	mg/L	-	-	-	-	-
Ammonia	mg/L as N	-	1.54	0.0074	-	-
Nitrate	mg/L as N	-	3	0.0067	-	-
Nitrite	mg/L as N	-	10	0.001	-	-
Sulphate	mg/L	-	1000	3	48	100
Alkalinity	mg/L	-	-	9.4	86	86
Hardness	mg/L	-	-	12	110	130
Aluminum	mg/L	-	0.1	0.057	0.06	0.061
Antimony	mg/L	-	-	0.000011	0.0033	0.011
Arsenic	mg/L	0.5	0.005	0.00017	***0.029***	***0.094***
Barium	mg/L	-	-	0.0021	0.0097	0.015
Beryllium	mg/L	-	0.1	0.0000049	0.00053	0.0016
Boron	mg/L	-	0.5	0.0051	0.47	***1.5***
Cadmium	mg/L	-	0.00012	0.0000032	***0.00013***	***0.0004***
Calcium	mg/L	-	-	2.5	34	37
Chromium	mg/L	-	0.001	0.00032	0.00052	0.00085
Cobalt	mg/L	-	0.05	0.000039	0.0014	0.0043
Copper	mg/L	0.3	0.002	0.0009	***0.014***	***0.014***
Iron	mg/L	-	0.3	0.083	0.14	0.14
Lead	mg/L	0.2	0.001	0.000035	0.00015	0.0002
Lithium	mg/L	-	2.5	0.0058	0.0056	0.013
Magnesium	mg/L	-	-	1.6	7.2	8.8
Manganese	mg/L	-	0.2	0.0092	0.069	0.077
Mercury	mg/L	-	0.000016	0.0000056	0.00001	0.000011
Molybdenum	mg/L	-	0.01	0.000049	0.0012	0.0017
Nickel	mg/L	0.5	0.025	0.00041	0.0045	0.0096
Selenium	mg/L	-	0.001	0.00021	0.0004	0.00063
Silver	mg/L	-	0.00025	0.0000015	0.000013	0.000019
Sodium	mg/L	-	-	4.7	-	-
Thallium	mg/L	-	0.0008	0.0000049	0.000017	0.000034
Uranium	mg/L	-	0.01	0.000021	0.00034	0.00037
Vanadium	mg/L	-	0.1	0.00016	0.0013	0.0018
Zinc	mg/L	0.5	0.03	0.0013	0.0061	0.0086

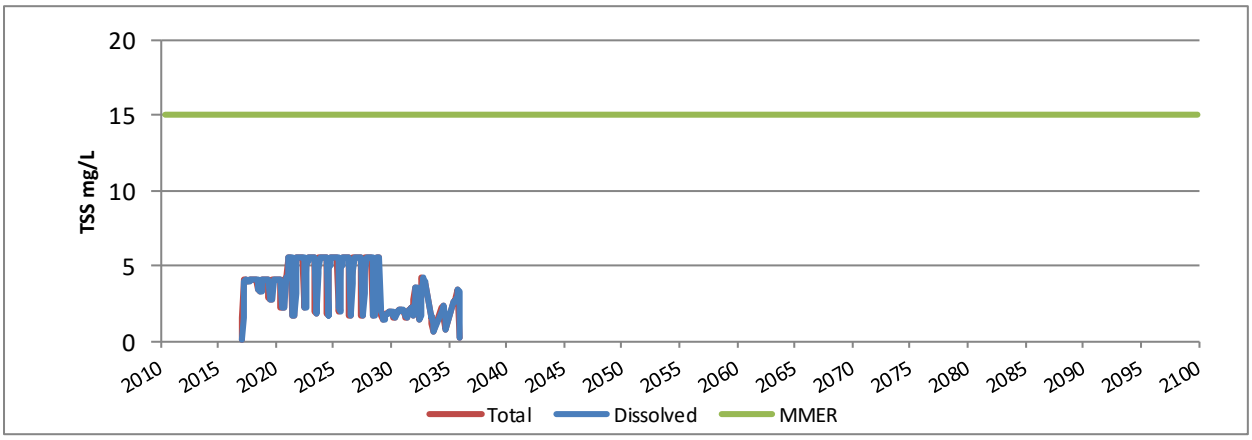
[1] MMER Exceedance Format

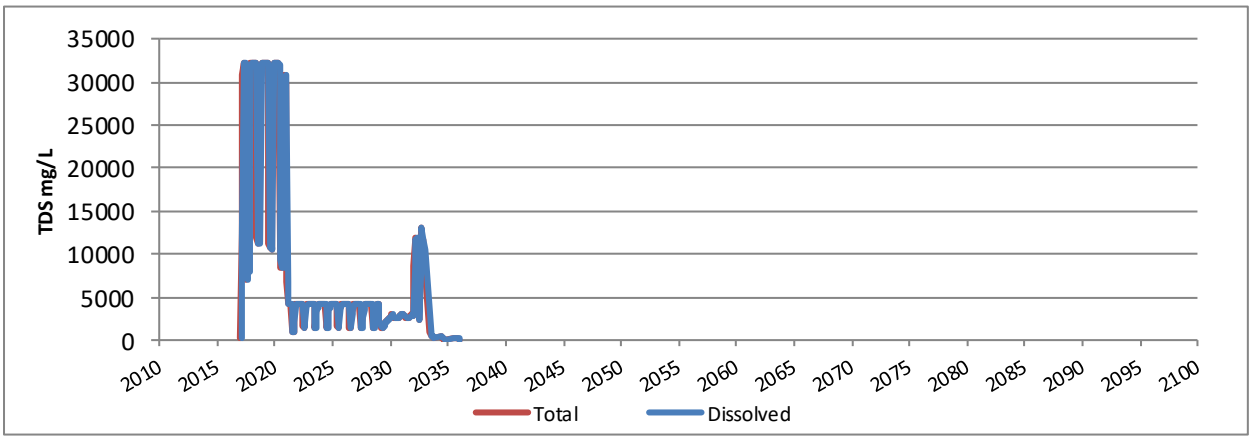
[2] CCME Exccedance Format

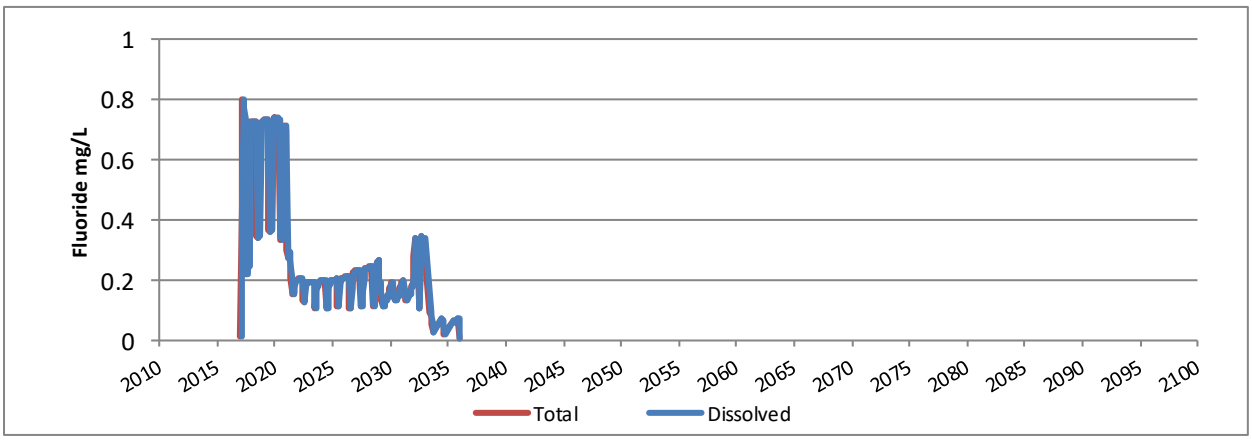
C2: Results Time Series for Effluent Prediction Nodes

Marine Mixing Box

For the closure period (2033 and 2034), discharge will occur during the open water season and in post-closure (2035) the TIA will be emptied year round until Jan 17, 2036.







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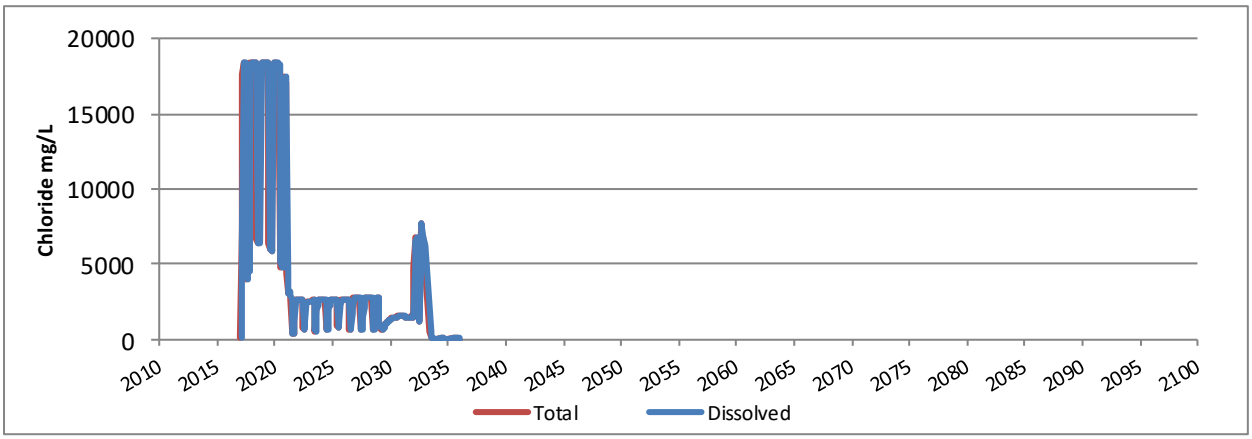

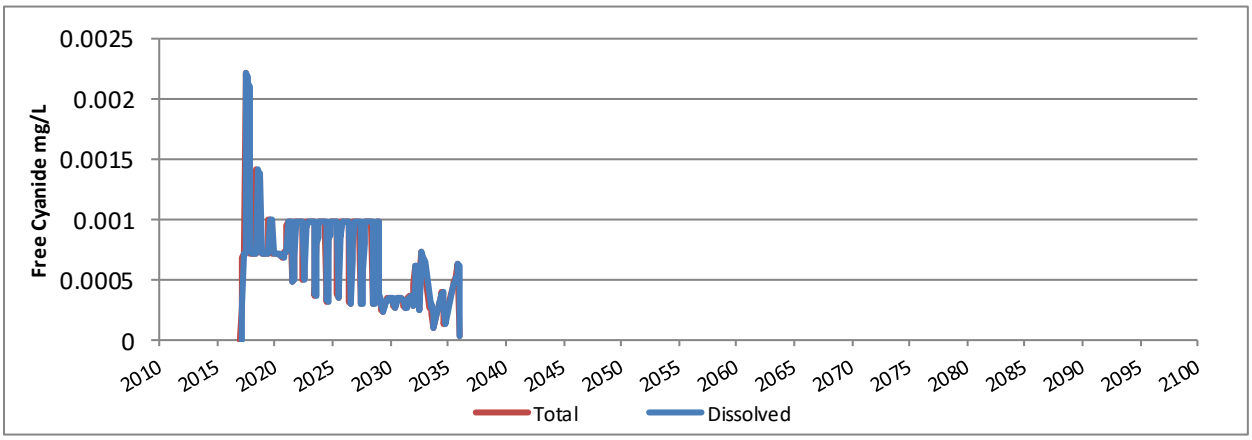

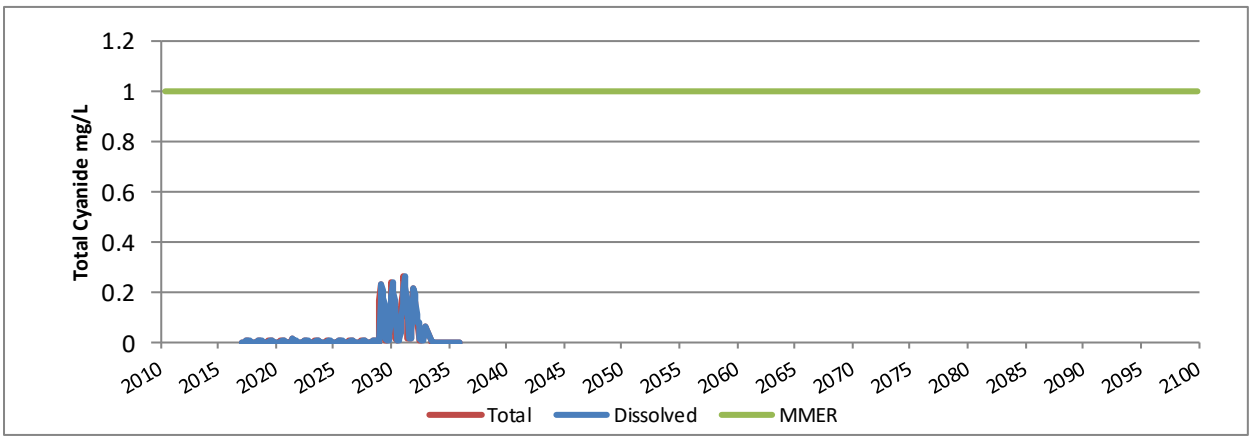

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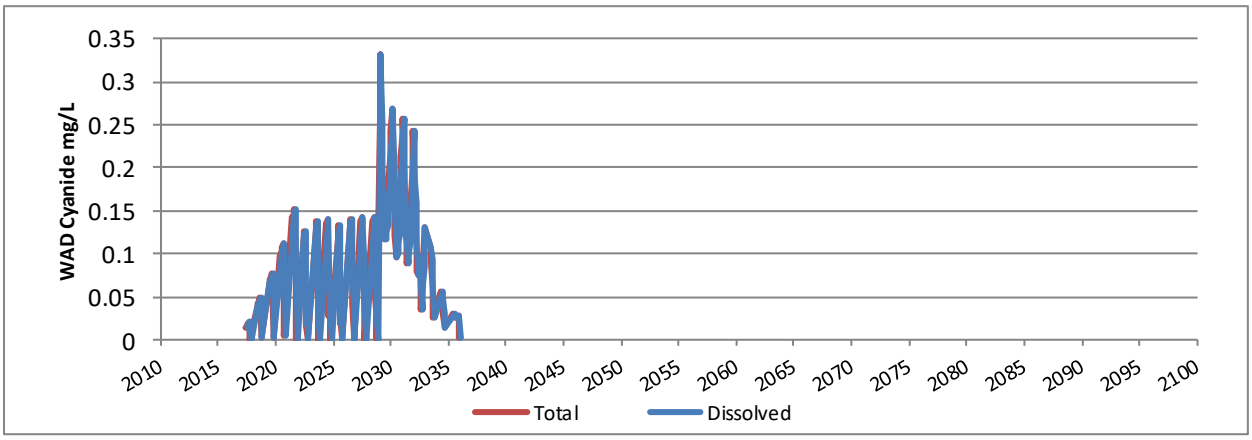

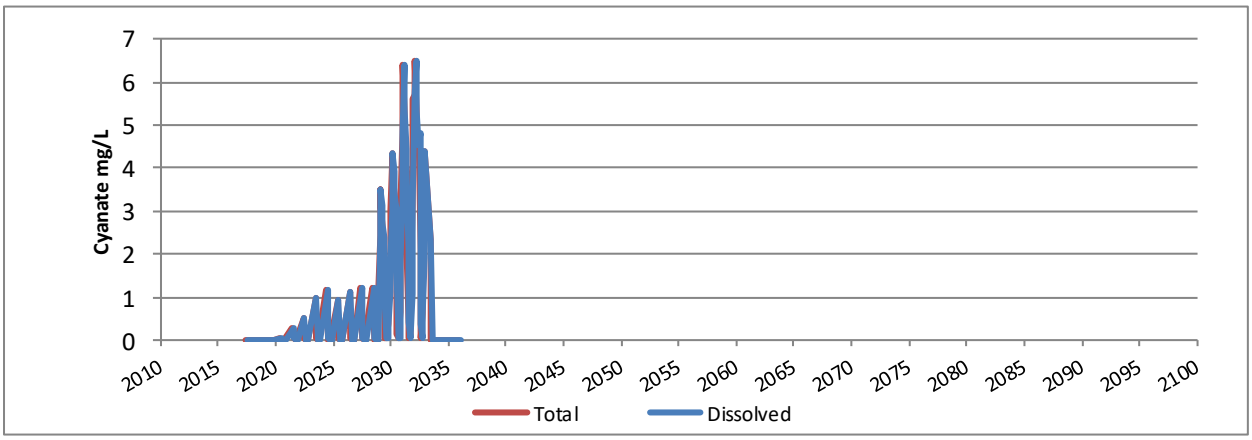

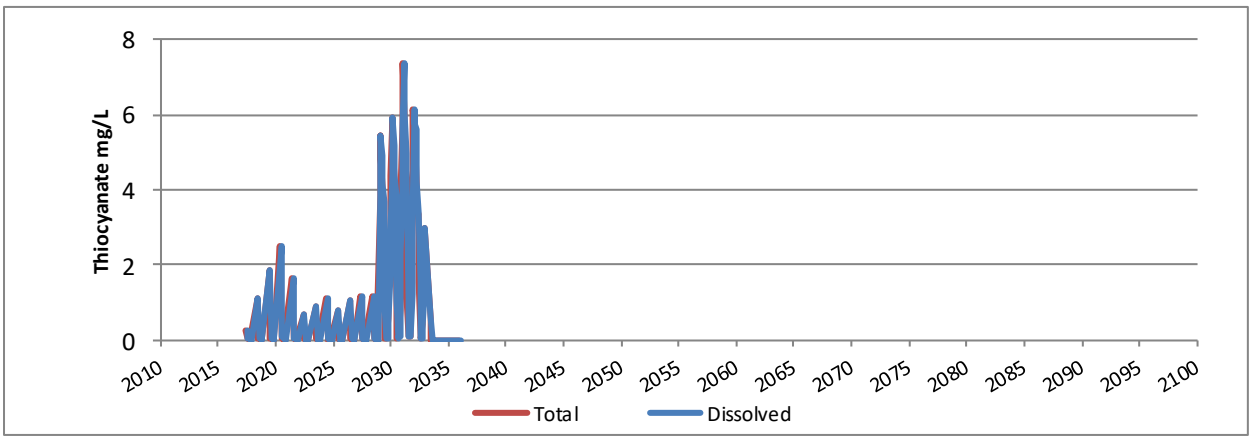

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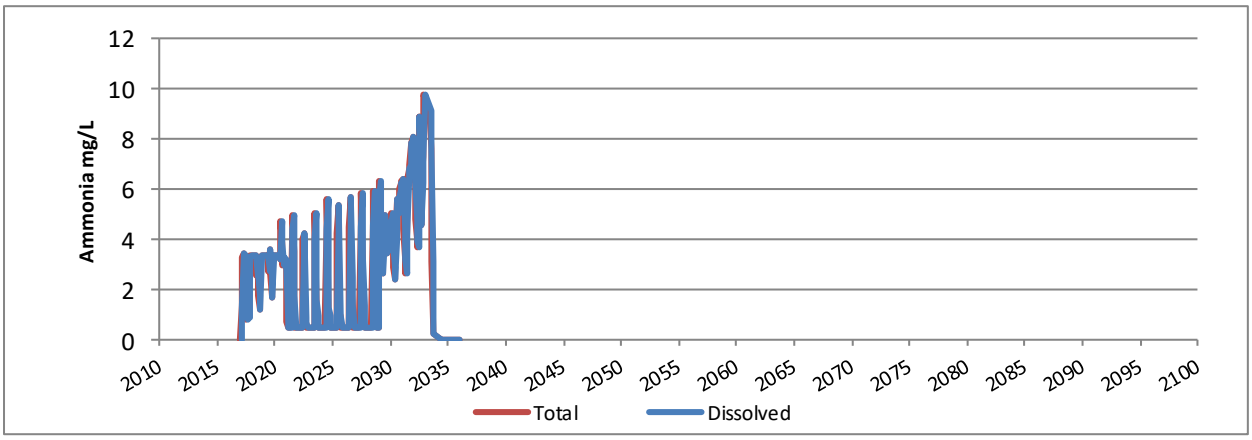

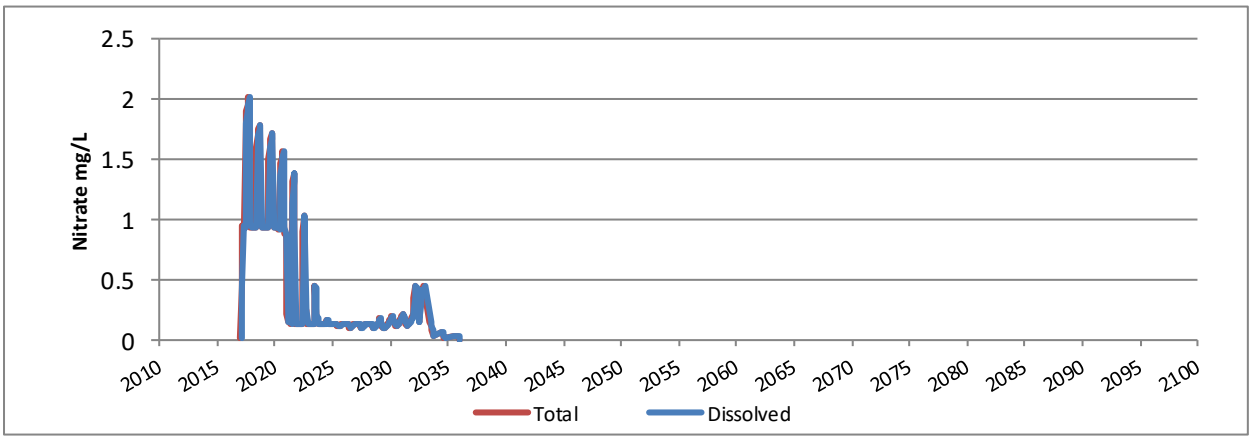

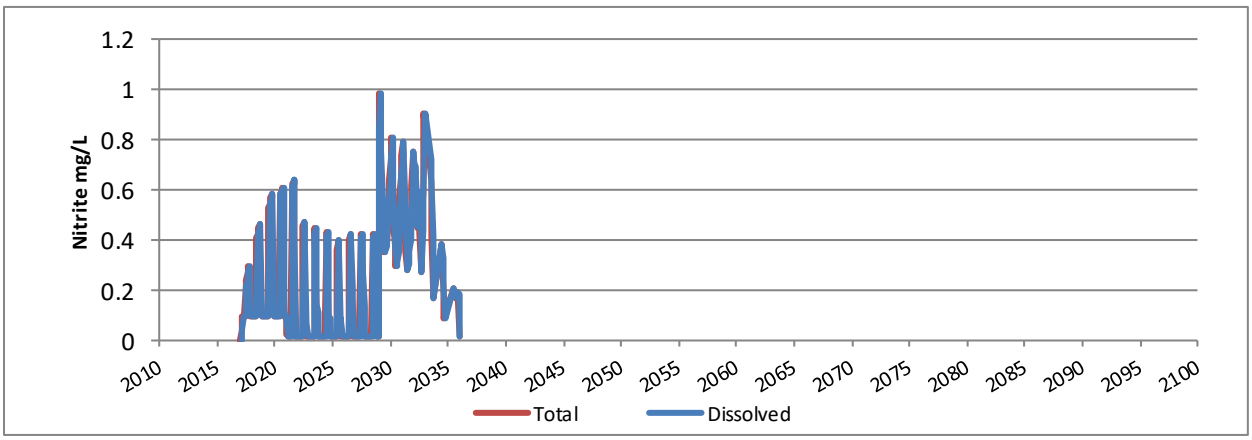

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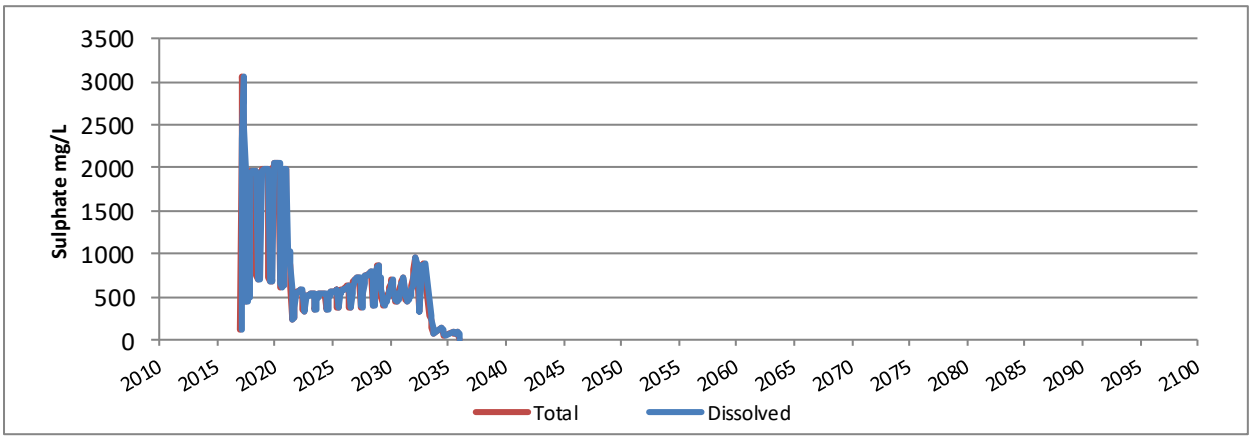

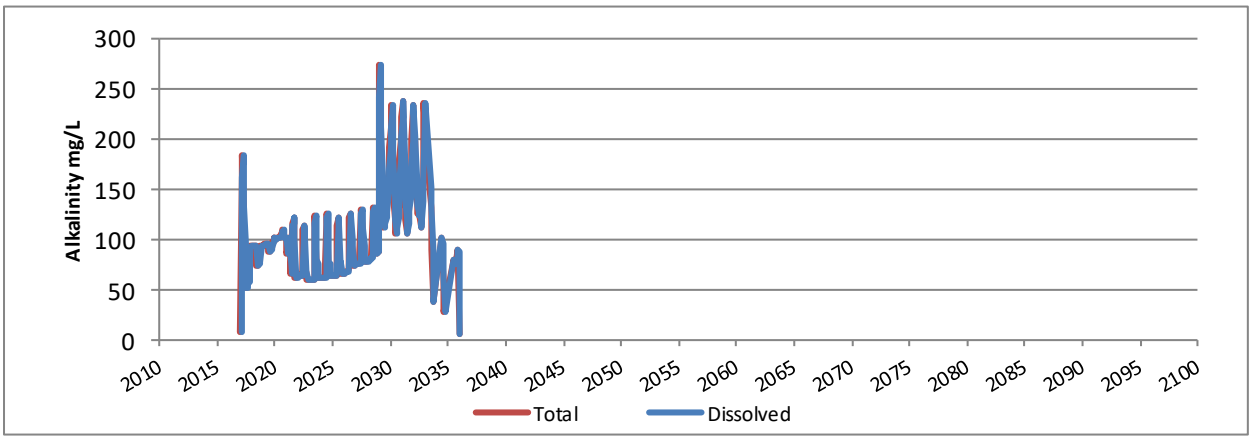

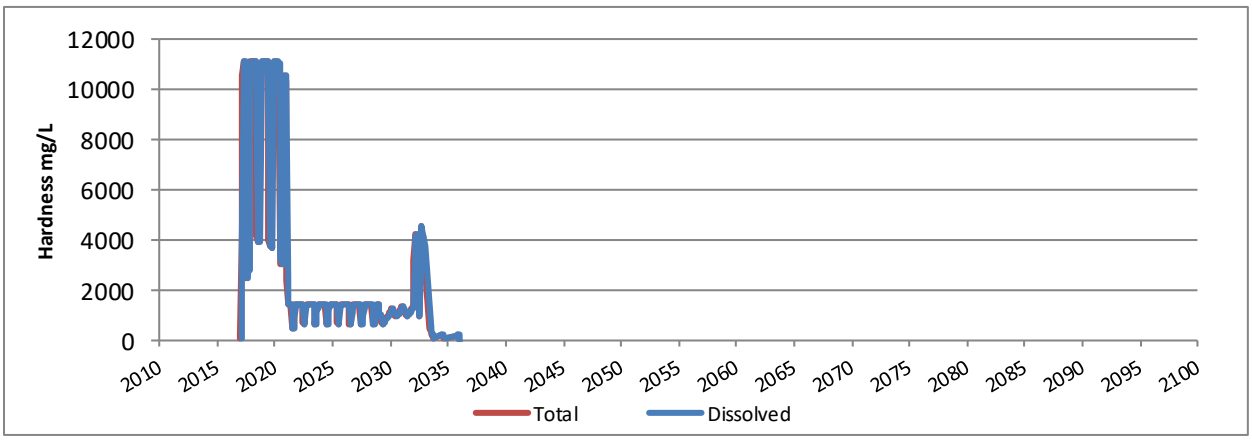

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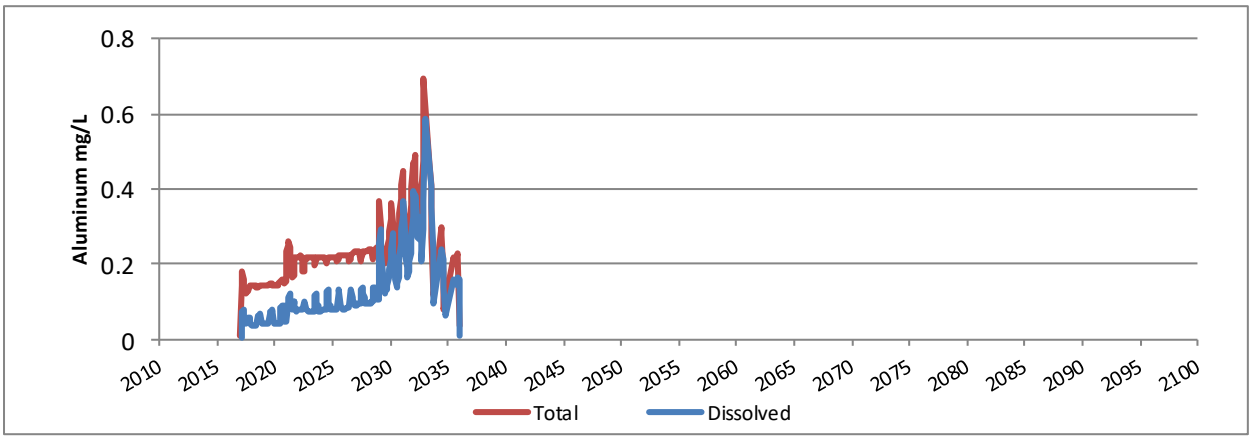

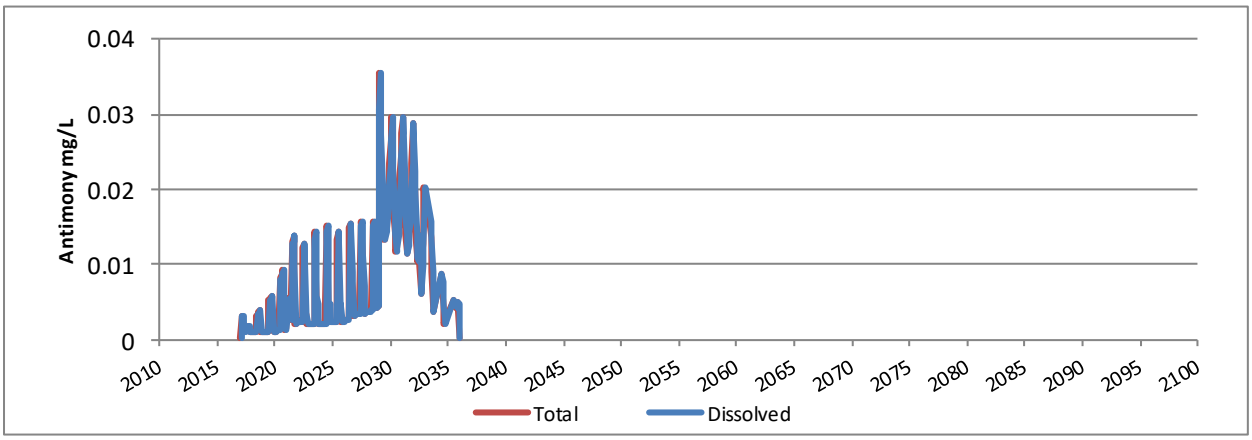

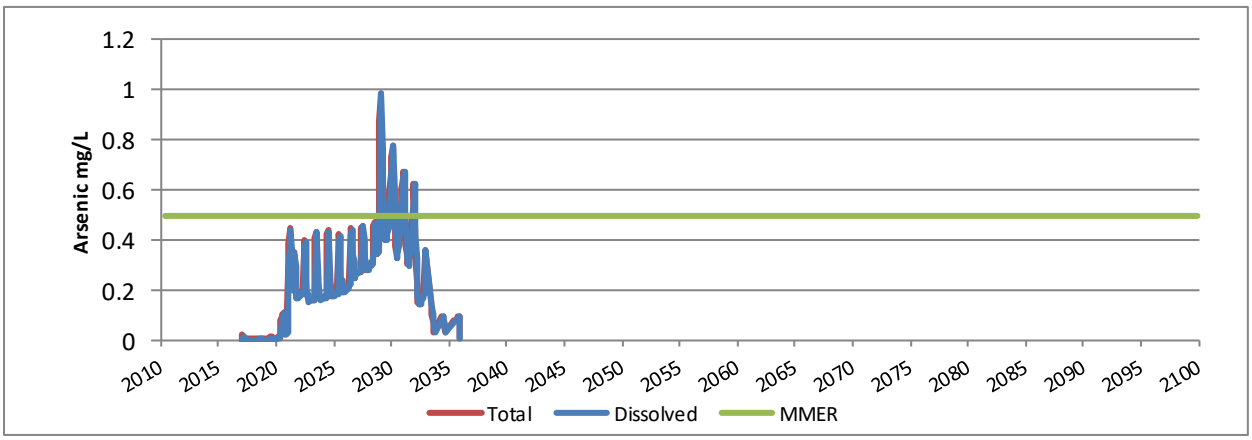

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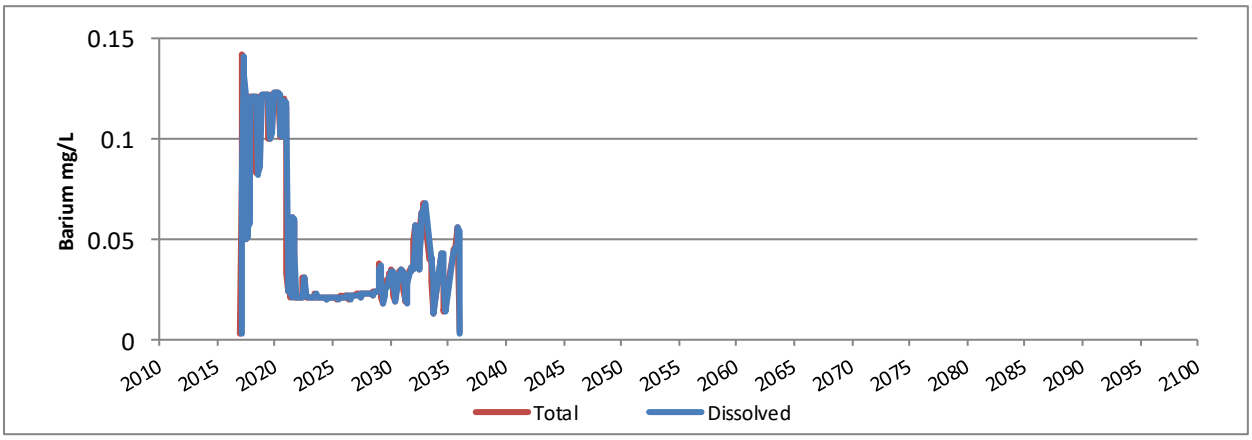

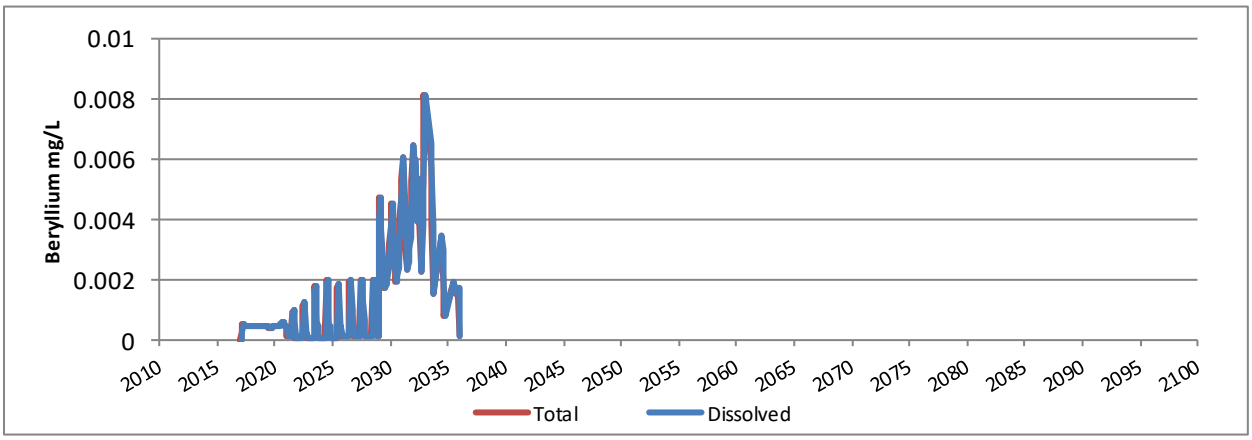

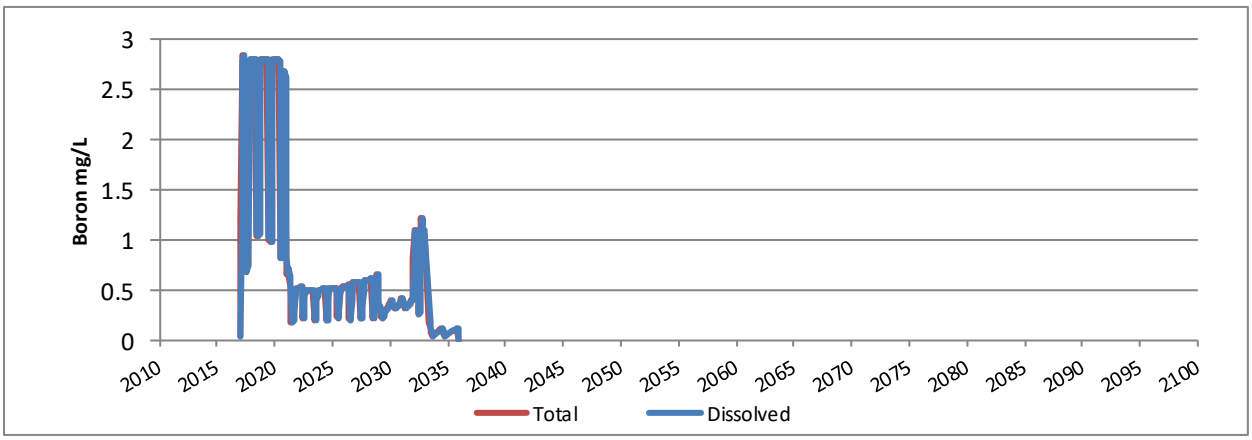

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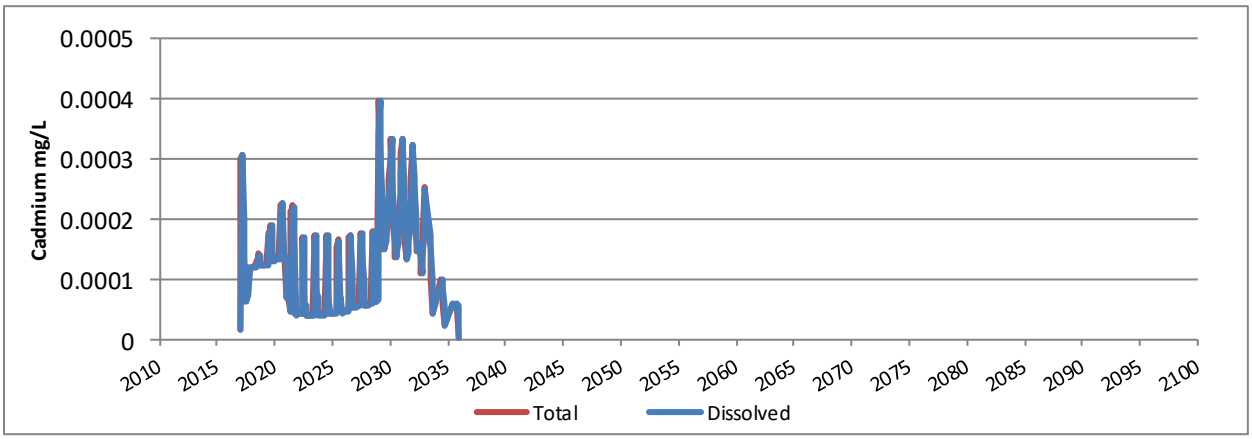

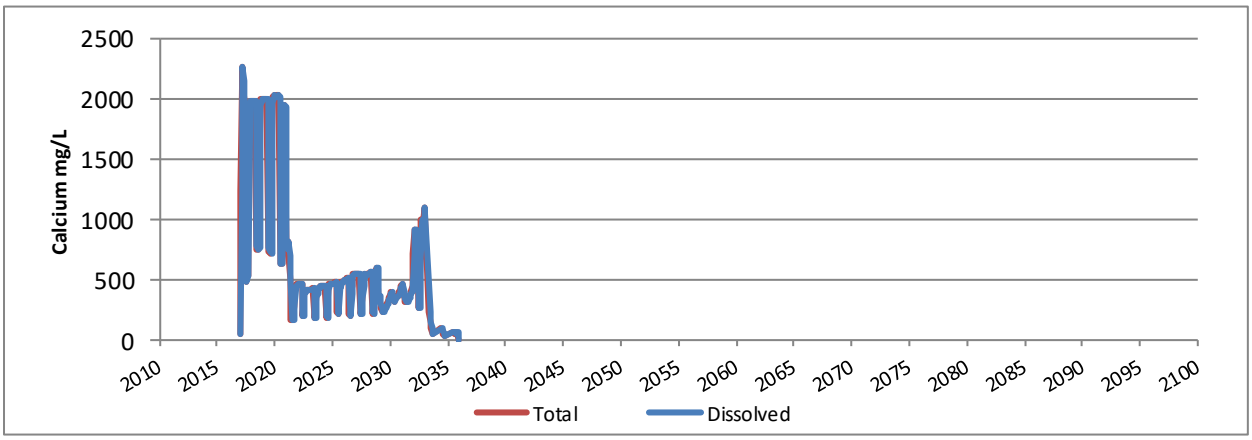

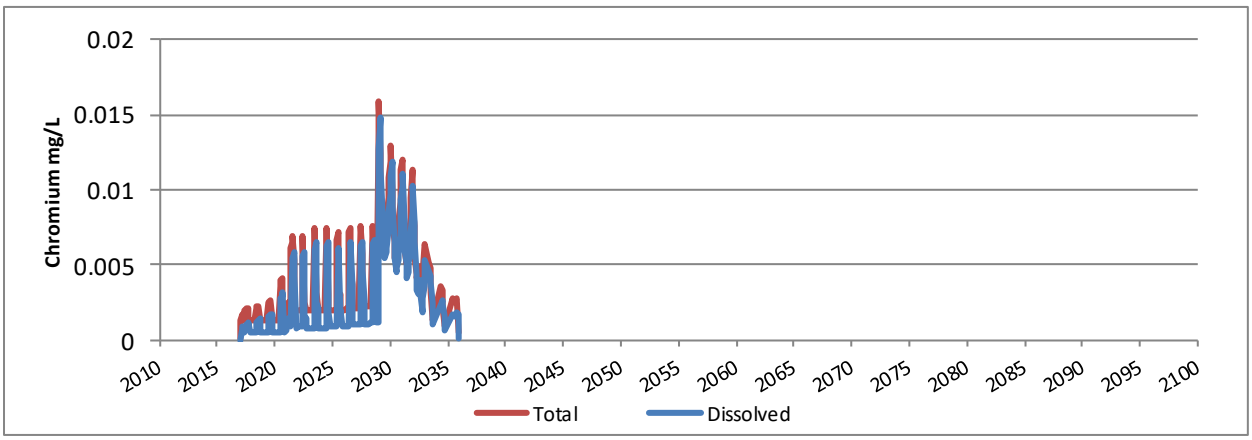

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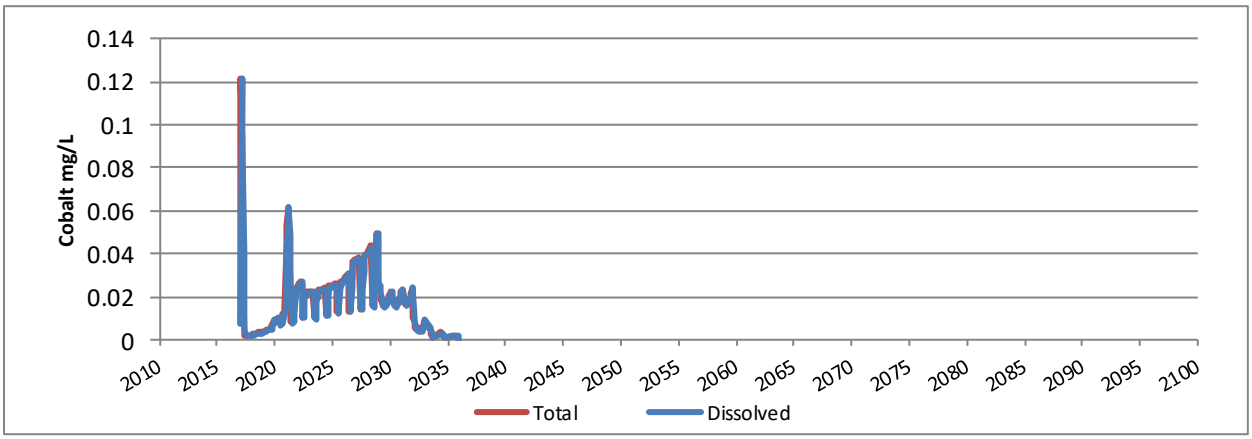

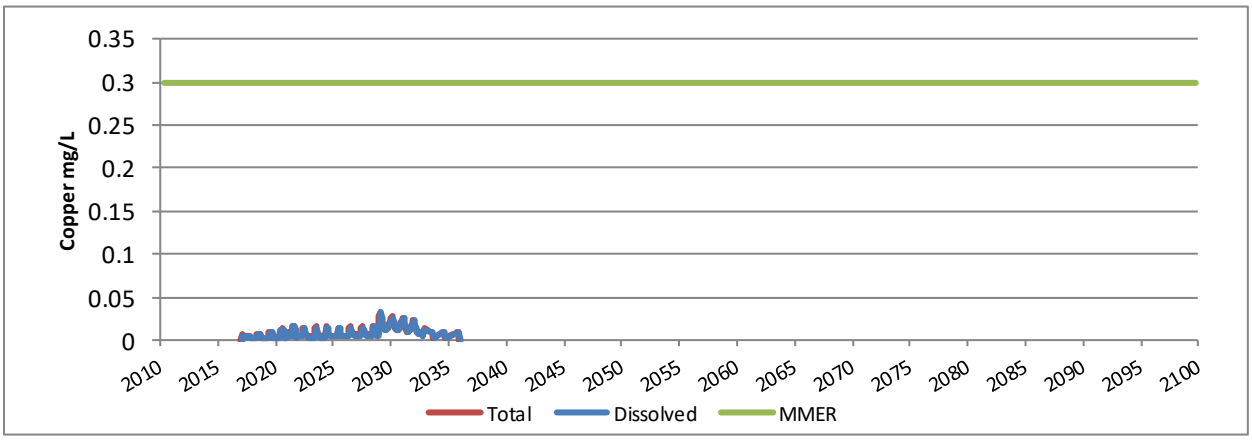

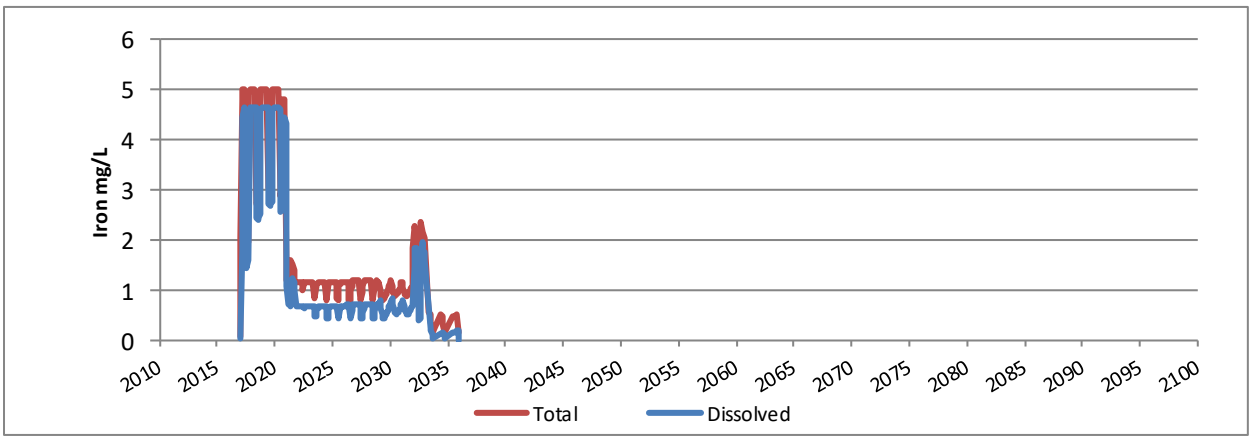

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