

Appendix 27

Whale Tail 2024 Mercury Monitoring Program Report

2024 Mercury Monitoring Program

Whale Tail Mine

Prepared for:



Agnico Eagle Mines Ltd
Meadowbank Complex
Baker Lake, NU X0C 0A0

FINAL

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SUMMARY

The 2024 Mercury Monitoring Program (MMP) was completed according to the study design outlined in the *Mercury Monitoring Plan* (Azimuth, 2023b). The purpose of the MMP is to assess changes in mercury concentrations caused by the creation of the Whale Tail Impoundment (“Impoundment”) following the construction of the Whale Tail Dike in September 2018. Construction of the dike raised the elevation of the south basin of Whale Tail Lake (WTS) and connected WTS with Lake A20, Lake A65, and other small waterbodies adjacent to WTS.

One of the effects of newly formed reservoirs is an increase in the production of methylmercury. Methylmercury bioaccumulates in aquatic food webs with the highest concentrations of methylmercury typically observed in large-bodied fish species like Lake Trout. Predictions for the expected increase of methylmercury concentrations in Lake Trout were included in the Final Environmental Impact Statement (FEIS) in anticipation of this situation (Azimuth, 2019). Mercury concentrations in Lake Trout were predicted to increase between 2-3 times above baseline concentrations. Total mercury concentrations in surface water were predicted to peak at 50-100 ng/L (Golder, 2019). No predictions were made for methylmercury in surface water or sediment.

The MMP was designed to monitor mercury dynamics in key components of the ecosystem to verify the FEIS predictions and manage methylmercury-related risks should those predictions be exceeded. The scope of the 2024 MMP included the following sampling components:

- Large-bodied (Lake Trout) and small-bodied fish from the Impoundment;
- Surface water from the Impoundment, downstream lakes, and reference lakes; and
- Sediment from the Impoundment, one downstream lake, and reference lakes.

Key findings from the 2024 MMP are provided below.

Water

Current concentrations of mercury in surface water are less than predictions in the FEIS and less than the CCME water quality guidelines for the protection of aquatic life (26 ng/L for total mercury and 4 ng/L for methylmercury). There was a noticeable increase in both total and methylmercury in WTS from 2018 (baseline) to 2020 and concentrations remained elevated through the fourth-year post-impoundment (2022). Concentrations of methylmercury in filtered samples decreased in 2023 (0.11 ng/L) and continued to decrease in 2024 (0.054 and 0.067 ng/L). While results suggest concentrations peaked in 2022 and are now declining, annual surface water sampling in 2025 will help confirm that methylmercury concentrations are decreasing in the Impoundment. Evidence of downstream transport

of methylmercury to Kangislulik Lake¹ and beyond is weak, suggesting that any contributions from WTS are minor relative to variability in baseline/reference conditions.

Mercury concentrations in surface water will continue to be monitored in 2025 as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

Sediment

In 2024, sediment samples were collected from the depositional areas in the MMP lakes. Total mercury concentrations were below the CCME sediment quality guidelines at all areas. In 2024, total mercury concentrations in the depositional zone of the Impoundment and in downstream exposure areas were similar to baseline/reference conditions.

In 2025, sediment grabs will be collected from depositional zones in the MMP area lakes and analyzed for total mercury as per the *CREMP 2022 Plan Update* (Azimuth, 2022c). Trends in methylmercury in depositional zones will be reviewed during the next sediment coring program planned for 2026. Sediment sampling within the inundation zone is planned for 2026.

Small-bodied Fish

Small-bodied fish (Slimy Sculpin [*Cottus cognatus*] and Ninespine Stickleback [*Pungitius pungitius*]) were included in the MMP to track temporal and spatial patterns in mercury at a key step in the food chain that ultimately leads to large-bodied fish. Lake Trout are the primary focus of the MMP, but the mercury results for small-bodied fish provide valuable insight into mercury bioaccumulation within the aquatic food web in the Impoundment. This is particularly important for understanding the timing of the ‘reservoir effect’ and predicting when fish mercury concentrations are expected to begin decreasing.

Small-bodied fish sampling is not required under the *Mercury Monitoring Plan* (Azimuth, 2023b). However, Slimy Sculpin and Ninespine Stickleback were collected from WTS and A20 in August 2024 to improve temporal resolution when assessing changes in total mercury concentrations in small-bodied fish. Due to delays at the analytical laboratory with preparing and analyzing the samples, the results of the small-bodied fish sampling program were not available to include in this year’s report.

For 2025, the supplemental small-bodied fish mercury study is not planned as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

¹ Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Large-bodied fish – Lake Trout

Lake Trout (*Salvelinus namaycush*) is the target species to monitor mercury bioaccumulation in the food web because piscivorous fish such as Lake Trout typically have the highest concentrations of mercury in high-latitude lakes. Lake Trout sampling for the MMP occurs every three years (2020, 2023, 2026).

However, a targeted sampling program was conducted in the Impoundment in August 2024 to verify the 2023 study results, which indicated that mercury concentrations in Lake Trout were consistent with predictions in the FEIS. The mercury concentrations in Lake Trout samples from 2024 were similar to the results from 2023.

The MMP has committed to implementing further risk-based analyses if fish tissue mercury concentrations in the Impoundment exceed the predicted peak mercury concentration for Lake Trout (Azimuth, 2019). The estimated mean tissue mercury concentration for a 550-mm Lake Trout in 2024 from Whale Tail Lake remained within the confidence levels of the peak mercury concentration predicted in the FEIS. Therefore, no MMP-related risk management measures are required at this time.

The next large-bodied fish sampling event is planned for August 2026 as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

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ACKNOWLEDGEMENTS

The following people were involved in the Mercury Monitoring Program:

- Mehdi Aqdam (Azimuth) and Marianna DiMauro (Azimuth) were the lead authors of the 2024 Mercury Monitoring Program report.
- Gary Mann (Azimuth) was the technical advisor on this project and the primary reviewer.
- Ian Mclvor (Azimuth), Marianna DiMauro, Jenna Keen (Azimuth), and Brendan Mannik collected water and sediment samples for mercury analysis in August 2024. Members of the Whale Tail Environment Team provided support for the August field program and collected additional water samples in September 2024.
- Ian Mclvor and Jeffrey Pratt collected small-bodied fish for tissue mercury analysis in August 2024.
- Ian Mclvor and Marianna DiMauro collected Lake Trout for tissue mercury analysis in August 2024.
- Rodrigo Santos Sousa, Wen Xu, Erin Mann, and Jeff Warner at the University of Western Ontario analyzed water and fish tissue samples for total and methylmercury. Results from 2018 to 2020 were reported to Dr. Heidi Swanson's research group at the University of Waterloo. Results from 2021 to 2024 were reported to Azimuth.
- Ken Ambrose and others from North/South Consultants Inc. who processed small-bodied fish collected in 2024.

USE & LIMITATIONS OF THIS REPORT

This report has been prepared by Azimuth Consulting Group Incorporated (Azimuth), for the use of Agnico Eagle Mines Ltd., who has been party to the development of the scope of work for this project and understands its limitations. The extent to which previous investigations were relied on is detailed in the report.

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ACRONYMS

CCME	Canadian Council of Ministers of the Environment
CFIRMS	Continuous flow isotope ratio mass spectrometer
CPUE	Catch per unit effort
CREMP	Core Receiving Environment Monitoring Program
CRM	Certified Reference Material
DQO(s)	Data Quality Objective(s)
dw	dry weight
EEM	Environmental Effects Monitoring
ELARP	Experimental Lakes Area Reservoir Project
FEIS	Final Environmental Impact Statement
FLUDEX	Flooded Uplands Dynamics Experiment
ISQG	Interim sediment quality guidelines (CCME sediment quality guidelines)
KAN	Kangislulik Lake (formerly known as Mammoth Lake [MAM])
masl	Metres above sea level
MB	Method blank
MDL	Method detection limit
MMP	Mercury Monitoring Program
MRL	Method Reporting Limit
MS	Matrix spike
NEM	Nemo Lake
NIRB	Nunavut Impact Review Board
NSSB	Ninespine Stickleback
NWB	Nunavut Water Board
PEL	Probable effect level (CCME sediment quality guidelines)
QA/QC	Quality Assurance / Quality Control
RPD	Relative percent difference
SLSC	Slimy Sculpin
SOP	Standard Operating Procedure
SWTC	South Whale Tail Channel
US EPA	United States Environmental Protection Agency
WQG	Water quality guideline
WTS	Whale Tail Lake south basin
wwt	wet weight

REPORT ORGANIZATION

The Mercury Monitoring Program (MMP) report is organized in a main document and four appendices. Below is an overview of the various sections of the report to help the reader navigate the document.

Section 1 introduces the MMP and provides an overview of the environmental setting for the project. The scope of mining development at the Whale Tail mine study area is outlined to describe how the MMP has been implemented to monitor changes in mercury concentrations in the aquatic receiving environment.

The following sections summarize the methods, results, and recommendations of the spatial and temporal trends in water quality, sediment chemistry, large-bodied and small-bodied fish in some of the Whale Tail mine area lakes.

- **Section 2** (Water)
- **Section 3** (Sediment)
- **Section 4** (Small-bodied Fish)
- **Section 5** (Large-bodied Fish)

Figures and tables are included within the text.

1 INTRODUCTION

1.1 Background

The Amaruq Property is a 408-square-kilometer area located on Inuit Owned Land, approximately 150 kilometers north of Baker Lake and approximately 50 kilometers northwest of the Meadowbank mine. Approval for the development of the Whale Tail gold deposit was originally issued in 2018 and amended in 2020 to include proposed changes as per the Whale Tail Expansion Project (NIRB Project Certificate No. 008, Amendment 001). The Amaruq satellite deposits and the original Meadowbank mine are referred to as the Meadowbank Complex (**Figure 1-1**).

The Whale tail deposit was developed as an open pit mine. To access the deposit, a dike was constructed across Whale Tail Lake to isolate the north basin of Whale Tail Lake before dewatering (**Figure 1-2**). Dike construction was completed in September 2018 and dewatering of the north basin occurred between March 2019 and May 2020 (Agnico Eagle, 2021). The Whale Tail Dike altered the local hydrology by increasing water levels and creating a small reservoir (the “Impoundment”). The rising water level connected Whale Tail Lake with Lake A65, Lake A63, Lake A20, and other small ponds nearby. Approximately 157 ha of tundra were originally predicted to be flooded at peak water elevation. However, that estimate was revised to 148.5 ha based on high-resolution LiDAR imagery collected in 2018 as part of the Whale Tail Expansion Project (Agnico Eagle, 2021).

Before flooding, the water level in Whale Tail Lake was approximately 152.5 metres above sea level (masl). Peak flooding occurred in 2019 (155.8 masl), coinciding with an abnormally high amount of precipitation in July and August. A diversion channel – the South Whale Tail Channel (SWTC) – was constructed between Lake A20 and Kangislulik Lake² prior to the 2020 spring freshet to passively manage the water level in the Impoundment below 156 masl (**Figure 1-2**). In 2022, the water levels decreased slightly to 155 masl at WTS, and 154.9 masl at Lake A20 (Pers. Comm. Patrice Gagnon and Tom Thomson, August 19, 2022). Water levels peaked between 155.5 to 155.7 masl during freshet from 2020 to 2023 (Pers. Comm. Leilan Baxter, February 8, 2024).

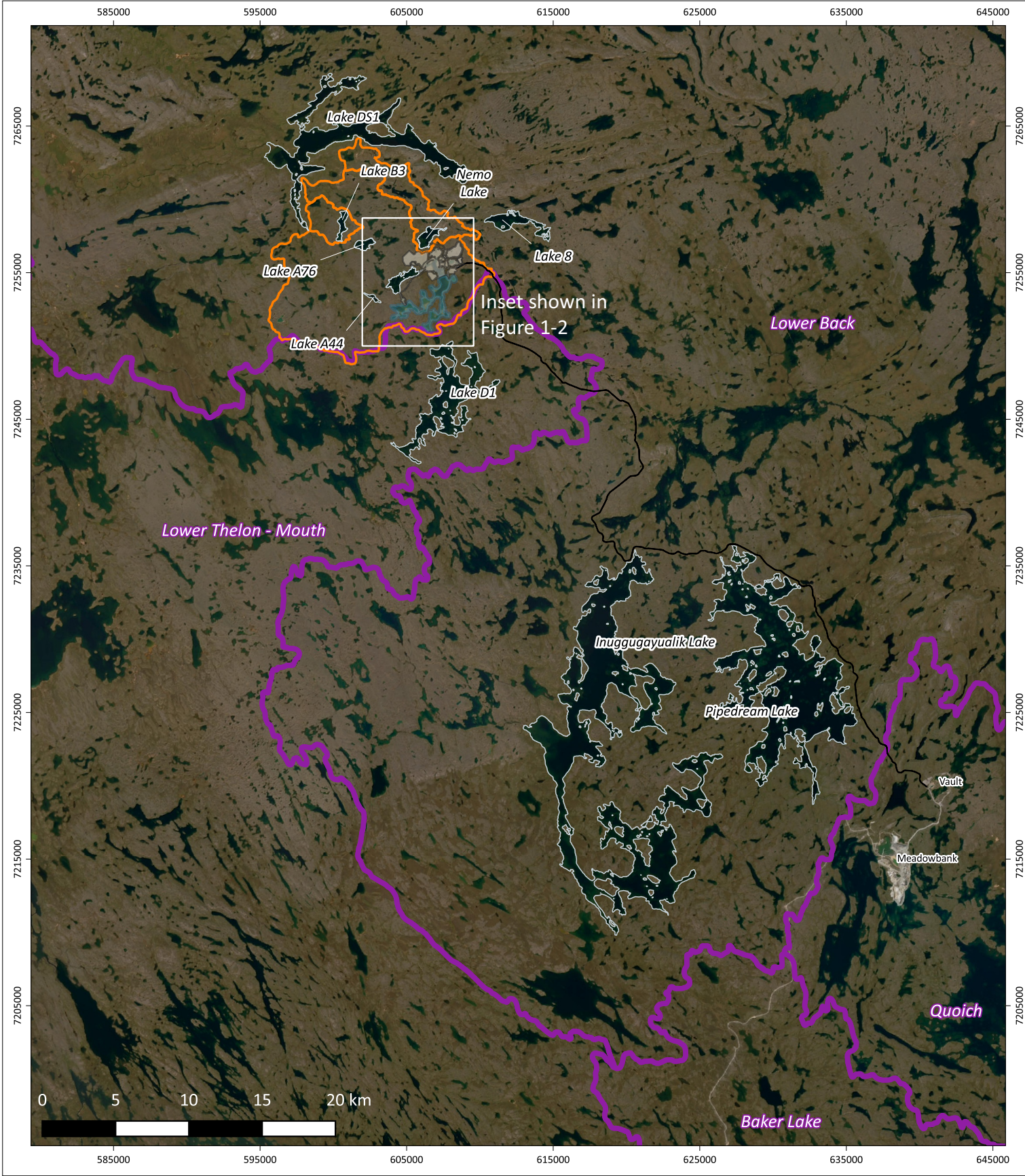
Mercury monitoring is conducted according to the *Mercury Monitoring Plan* (the Plan; Azimuth, 2023b) to satisfy requirements under Condition 63 NIRB Project Certificate No. 008 and NWB Water License 2AM-WTP1830. The core components of the Mercury Monitoring Program (MMP) are water, sediment, and large-bodied fish chemistry (Lake Trout; *Salvelinus namaycush*). Small-bodied fish tissue chemistry data has also been incorporated into the MMP. These data were collected as part of a multi-year study

² Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

investigating productivity within the Whale Tail Lake Impoundment by the University of Waterloo (2018 to 2021) and supplemental sampling for the MMP (2023 and 2024).

The primary objective of the MMP is to verify that mercury concentrations in Lake Trout are within or below the predictions³ for the Whale Tail mine. The next large-bodied fish sampling event targeting Lake Trout is planned for 2026.

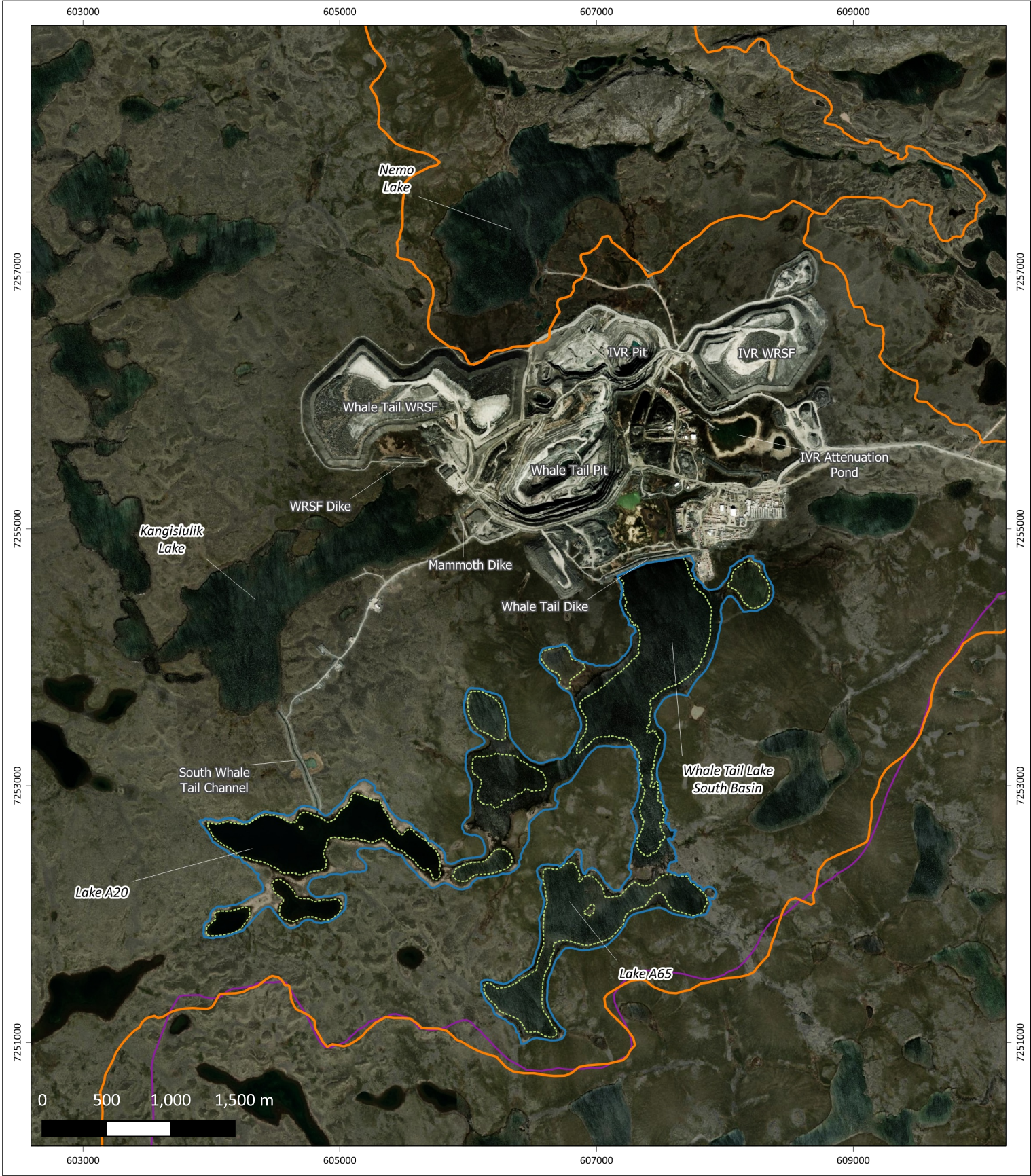
³ Predictions in the FEIS (Golder, 2018) were originally presented in Azimuth 2017 and were updated in Azimuth 2019 to reflect changes to the proposed flooding duration of Whale Tail Lake (South Basin) as part of the proposed expansion activities for the Whale Tail mine.



Legend

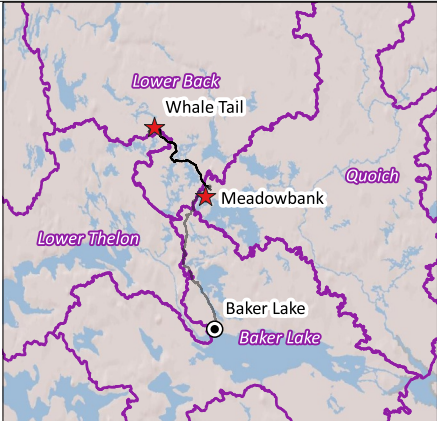
- Whale Tail Haul Road
- Whale Tail Mine
- Impoundment
- Regional Watershed Boundaries
- Amaruq Watershed Boundaries

Client	Agnico Eagle Mines Limited - Meadowbank Division
Figure 1-1	Lakes Sampled as Part of the Mercury Monitoring Program
Project	Whale Tail Mine Mercury Monitoring Program
Date:	March 05, 2025
Datum:	NAD 83 UTM Zone 14N
Scale:	1:350,000
Software:	QGIS version 3.22.11-Białowieża
REFERENCES:	1. Mine Plan from Agnico Eagle (2021) 2. Satellite image from ESRI 3. Regional watershed boundaries and waterbodies from NRCan 4. Amaruq watershed boundaries from Agnico Eagle



Legend

- All Weather Access Road
- Haul Road
- Measured peak flood level (155.84 masl; Oct 2019)
- Amaruq Watersheds
- Regional Watersheds
- Dotted line = water elevation prior to flooding (NRCAN 1:50K)



Client	Agnico Eagle Mines Limited Meadowbank Division
Figure 1-2	Post-Flood Water Levels in the Impoundment
Project	Whale Tail Mine Mercury Monitoring Program
Date:	March 05, 2025
Datum:	NAD 83 UTM Zone 14N
Scale:	1:40,000
Software:	QGIS Version 3.22.11-Białowieża
REFERENCES: 1. Mine plan and sub-watershed boundary layers from Agnico Eagle. 2. Basemap imagery from ESRI. 3. Regional watershed boundaries from NRCAN 4. Amaruq watershed boundaries from Agnico Eagle.	

1.2 Mercury in the Aquatic Environment

Mercury is a naturally occurring element that is found in low levels everywhere – in air, water, soil, plants, animals, and humans. In aquatic environments, bacteria turn naturally occurring inorganic mercury into methylmercury, a highly bioavailable form of mercury. Methylmercury is readily bioaccumulated and biomagnified through the food chain, meaning it is found in the highest concentrations in long-lived animals near the top of the food chain. Flooding terrestrial habitat, such as the case for the Whale Tail Lake south basin (WTS) and sub-watershed lakes, can lead to elevated methylmercury production associated with the decomposition of organic matter within the flood zone. The elevated methylmercury production results in increases in methylmercury in all components of the ecosystem. Concentrations are highest in the tissue of long-lived, predatory fish species, such as Lake Trout, and peak anywhere from four to 12 years after flooding. The increase is temporary, however, and as flooded carbon sources for bacterial decomposition are exhausted, methylmercury concentrations gradually decline throughout the ecosystem.

Additional information on mercury in the environment, including the physical, chemical, and ecological factors that drive mercury methylation dynamics in aquatic environments following flooding and soil inundation, is described in Azimuth (2017).

1.3 Mercury Monitoring Program

1.3.1 Overview

The core elements of the MMP are water chemistry, sediment chemistry, and fish tissue chemistry. This report compares water chemistry, sediment chemistry, and fish tissue data collected before (i.e., baseline) with data collected after flooding of the tundra around the south basin of Whale Tail Lake.

Data presented in the MMP have been collected under various research and monitoring programs (see below). Data analysis and reporting under the MMP are completed solely by Azimuth.

- Ultra-trace mercury sampling in water was led by Dr. Heidi Swanson (University of Waterloo) until 2020. Azimuth has been leading the ultra-trace mercury water sampling since 2021.
- Azimuth completed sediment sampling as part of the Core Receiving Environment Monitoring Program (CREMP).
- Small-bodied fish sampling was led by Dr. Swanson's research group from 2018 to 2021. In 2023, C. Portt and Associates and Kilgour and Associates collected fish as part of the harmonized fish sample collection for the Environmental Effects Monitoring (EEM) and MMP. Azimuth assisted with small-bodied sample collection in 2023 and led collection in 2024.

- Large-bodied fish samples have been collected by North/South Consultants (Whale Tail North basin fish-out) and C. Portt and Associates (index sampling and EEM). Supplemental fish sampling was led by Azimuth in 2023 and 2024.

1.3.2 Study Areas for the Mercury Monitoring Program

Sampling areas include locations within the Impoundment, downstream from the mine, and regional reference area lakes.

- **Whale Tail Lake South Basin (Whale Tail Lake [WTS]).** Water levels were consistent with baseline conditions in the south basin until dewatering started in March 2019. The Impoundment was fully flooded by August 2019 (i.e., connected to sub-watershed lakes, including A20, A63⁴, and A65). Details on the water levels in Whale Tail Lake and the connectivity with surrounding lakes are provided in [Section 1.1](#).
- **Lakes A20 and A65.** These lakes are situated inside the full-flood zone of the Impoundment. They would still have been independent of the Impoundment in August 2018, but were part of the contiguous Impoundment by the August 2019 MMP sampling event.
- **Kangislulik Lake (KAN).** This lake first received post-inundation inputs from the Impoundment in the fall of 2019 to manage water levels before completing the SWTC, which became operational in spring of 2020. The SWTC connects the Impoundment to KAN via Lake A20.
- **Lake A76.** This lake, located downstream of KAN, is a mid-field (MF) area for both the CREMP and the MMP.
- **Lake DS1 (Amur Lake).** Lake DS1 is the downstream-most lake sampled in the Whale Tail Lake watershed and the far-field (FF) exposure area for the CREMP and MMP. Lake DS1 is the largest lake in the local study area.
- **Nemo Lake (NEM).** Nemo Lake was originally included as a reference lake in the CREMP. It shifted to an exposure lake in 2019 when it received dewatering inputs. However, since it is not connected to the Whale Tail Lake watershed it was retained as a reference lake for surface water collection in the MMP in 2018 and 2020.
- **Reference Lakes.** Several reference lakes have been sampled for the MMP because of cross-over with the productivity study, the EEM program, and the CREMP. The list of reference lakes includes Lake 8, Lake D1, Lake B3, Lake A44, Inuggugayualik Lake (INUG), and Pipedream Lake (PDL). These lakes are located outside Whale Tail Lake watershed and together they provide a

⁴ Lake A63 was one of the lakes monitored under the mandate of the research conducted by the University of Waterloo. Since Lake A63 is now part of the contiguous Impoundment and was not formally included in the MMP, the data are not provided in this report.

comprehensive understanding of background mercury concentrations in the region. At least two reference lakes have been sampled annually to help explain natural or climate-related changes in mercury that are affecting the entire region. Decisions about which reference lakes to include in the MMP in a given year are influenced by study design requirements for other programs, namely the CREMP and EEM. The goal is to optimize the MMP to ensure resources are deployed efficiently.

1.4 Scope of the 2024 Program

The scope of the 2024 MMP included:

- **Surface water.** Results from 2024 were compared to previous years (pre- and post-inundation), to predictions for the Expansion Project, and applicable water quality guidelines.
- **Sediment.** Samples were collected from depositional zones, which are deep zones targeted in near-field areas in both the CREMP and the MMP. Sediment accumulating in these habitats provides a long-term record of lake-wide processes. Results from 2024 were compared to baseline results and applicable sediment quality guidelines.
- **Fish**
 - Large-bodied fish (Lake Trout) were collected from Whale Tail Lake in August 2024.
 - Small-bodied fish were collected in August 2024 to track temporal changes in mercury concentrations in WTS and Lake A20, though sampling was not required under the *Mercury Monitoring Plan* (Azimuth, 2023b). Two species of small-bodied fish were targeted: Slimy Sculpin (*Cottus cognatus*) and Ninespine Stickleback (*Pungitius pungitius*). Unfortunately, due to delays in processing and analyzing samples, results were not available to include in this report.

2 WATER

2.1 Key Findings for Water Chemistry in 2024

- In 2024, total mercury concentrations in surface water in the Impoundment were below predicted concentrations in the FEIS; total mercury and methylmercury concentrations were below CCME water quality guidelines for the protection of aquatic life.
- In 2024, surface water concentrations of total and methylmercury in the Impoundment were higher than the baseline period. However, the results from 2024 suggest concentrations are decreasing compared to the peak observed in 2022-2023.

- Evidence of downstream transport of methylmercury to Kangislulik Lake and beyond is weak, suggesting that any contributions from WTS are minor relative to variability in baseline/reference conditions.

2.2 Overview

Predicted changes in total mercury concentrations in surface water were presented in the FEIS for the Whale Tail mine (main document of the 2018 FEIS Addendum, Section 6.2.3.2.; Golder, 2019). The predicted changes in total mercury concentrations in Whale Tail Lake were between 50 ng/L and 100 ng/L. The prediction is based on baseline measurements and scaling from the mercury literature review (Azimuth, 2017). The total mercury concentrations in surface water represent the maximum possible increase that could occur in Whale Tail Lake.

Methylmercury concentrations can indicate changes in mercury methylation rates following impoundment creation. Based on two experimental reservoir studies in Ontario⁵, the expected temporal trend is an increase in the first year, followed by a peak within two to three years, and then a decline towards background levels. Dissolved methylmercury in surface water is the best indicator of increased methylation rates in an impoundment. While the FEIS did not include predictions for changes in dissolved methylmercury, an initial increase is expected as methylation rates remain high in the flooded area, followed by a decline as bacterial decomposition driving methylation slows down. A clear peak followed by a decrease in dissolved methylmercury concentrations in surface water would therefore indicate decreasing methylmercury production, suggesting that mercury levels in the food web should also start to decline. In 2024, methylmercury concentrations in the Impoundment were lower than in 2023, suggesting concentrations peaked in 2022-2023 and are now declining.

2.3 Methods

Ultra-trace total mercury data for the MMP are collected in August of each year, concurrent with water sampling for the CREMP. Samples were collected by Azimuth in August 2024; details are provided below.

2.3.1 Sample Collection

Ultra-trace mercury samples were collected as surface level-grabs, following the *clean hands/dirty hands method* (US EPA, 1996). Sample bottles were double-bagged from the laboratory and returned to the laboratory in the same double bags. Samples were collected by a two-person field team; one team member, designated the *clean hands*, only handled the inner bag and sample container, while the second team member, designated the *dirty hands*, handled the outer bag and filtering equipment, but

⁵ Experimental Lakes Area Reservoir Project and Flooded Uplands Dynamics Experiment.

never contacted the sample container or inner bag. Unfiltered samples were collected at each station for total⁶ and methylmercury. Samples were stored in a freezer on-site. Water samples were shipped in coolers with ice packs to the laboratory at the earliest convenience to minimize the possibility of exceeding the recommended hold-times between collection and analysis. Samples were filtered and preserved by the laboratory (Biotron) upon receipt. Samples collected for mercury analysis are summarized in **Table 2-1**.

⁶ The *total* in total mercury refers to the inclusion of all species of mercury (i.e., both inorganic and organic forms). To avoid confusion, we use the term *unfiltered* rather than *total* when addressing partitioning between particulate-bound and dissolved phases.

Table 2-1. Summary of surface water samples collected for ultra-trace mercury analysis (total mercury and methylmercury).

Area/Lake	Designation	Year [†]								
		2016	2017	2018	2019	2020	2021	2022	2023	2024
Whale Tail - South Basin Impoundment	NF	1	2	2	~~2~~	2	2	2	2	2
Lake A20 Impoundment	NF	-	-	2	~~2~~	2	2	2	2	2
Lake A65 Impoundment	NF	-	-	2	~~2~~	2	2	2	2	2
Kangislulik Lake*	NF	-	1	2	~~2~~	2	2	2	2	2
Lake A76	MF	-	-	2	~~2~~	2	2	2	-	-
Lake DS1	FF	-	-	-	~~2~~	2	2	2	2	-
Inuggugayualik Lake	Reference	-	-	-	-	2	2	2	2	2
Pipedream Lake	Reference	-	-	-	-	2	2	2	2	2
Lake 8	Reference	-	-	2	~~2~~	2	-	-	-	-
Lake D1	Reference	-	-	-	-	2	2	-	-	-
Lake B3	Reference	-	-	-	-	2	2	2	-	-
Lake A44	Reference	-	-	-	-	2	2	2	-	-
Nemo Lake	Reference	-	-	2	-	2	-	-	-	-

Notes:

[†]Minor flooding of the Impoundment, limited to Whale Tail (south basin) during 2018 sampling. Extensive during 2019 and 2020 sampling (i.e., connectivity between impounded lakes).

*Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Designation includes: NF = near-field, MF = mid-field, FF = far-field.

Numbers given indicate the number of sites sampled and "-" means no sample was collected as per the Mercury Monitoring Plan.

Shading indicates the status of the lake (blue = baseline and reference areas [Control designation]; orange = post flooding [Impact designation]).

Water chemistry results from 2019 (strikethrough) excluded from the dataset because they were contaminated at the University of Waterloo prior to analysis (see Appendix L in Azimuth 2020).

2.3.2 Laboratory Analysis

Water samples were analyzed at Biotron, at the University of Western Ontario, using an ultra-low detection limit. Biotron is a CALA-accredited laboratory, with detection limits for mercury that are lower than those available from commercial analytical laboratories. The detection limits are calculated each year to comply with the EPA method detection limit (MDL) revision 2 (EPA 821-R-16-006 - Dec 2016). The reporting limit for all ultra-trace water data collected to date was set to the method reporting limit (MRL) for the MMP, which corresponds to the MDL with a safety factor of approximately 3-times the MDL applied. From 2020 to 2023, Biotron increased the MDL/MRL for methylmercury slightly each year to counter a drop in signal due to aging instrumentation. In January 2024, Biotron received new instrumentation and their new MDL/MRL values are now comparable to 2020 levels (Pers. Comm. Rod Santos Sousa from Biotron, March 11, 2024).

Total mercury analysis of filtered and unfiltered samples was completed using cold vapour atomic fluorescence spectrophotometry (Tekran Model 2600) – TM.0811 (Method Ref. modified from EPA 1631). Methylmercury analysis of filtered and unfiltered samples was completed using cold vapour atomic fluorescence spectroscopy (Tekran Model 2700) – TM.0812.A (Method Ref. modified from EPA 1630).

2.4 Quality Assurance/Quality Control

The objective of quality assurance/quality control (QA/QC) is to assure that the chemistry data collected are representative of the material or populations being sampled, are of known quality, have sufficient laboratory precision to be highly repeatable, are properly documented, and are scientifically defensible. Data quality was assured throughout sample collection and analysis using specified standardized procedures, using laboratories that have been certified for all applicable methods, and staffing the program with experienced environmental scientists.

In 2024, the water samples collected for the MMP arrived thawed at the laboratory. Although, they were immediately placed in the freezer upon receipt, it is suspected that the samples thawed during the three days in transit – exceeding the recommended holding time of 48 hours for unpreserved samples stated in the EPA methods 1630 and 1631⁷ (Pers. Comm. Rod Santos Sousa, September 4, 2025). To assess the impact of thawing on total and methylmercury concentrations, two additional paired samples were collected from WTS and A20 in September and analyzed by Biotron. For each lake, one sample was kept frozen until analysis, while the other was stored thawed in a cooler to replicate the conditions of the August samples. Results indicated that the differences in total and methylmercury concentrations

⁷ EPA methods 1630 and 1631 note that samples must be preserved or analyzed within 48 hours of collection.

between thawed and frozen samples were low and fell within the acceptable relative percent difference for field duplicates (<30%, [Appendix A2](#)). Based on this analysis, we do not expect the results from the August samples to be significantly affected by thawing, as the observed differences in the September samples remained within acceptable quality control limits.

Field QC procedures included collecting and analyzing field duplicates and two types of blank samples: travel blanks and de-ionized (DI) water blanks. Blank sample collection required careful planning, attention to detail, focus on the importance of cleanliness, and generally provided a good opportunity to assess QA procedures. Blank samples were collected during the August sampling event and were submitted blind to the laboratory to ensure they were treated the same as field-collected samples during analysis. Results of the field QA/QC analysis are summarized herein:

- **Travel blanks and DI blanks.** One DI blank and one travel blank were submitted in 2024. Total mercury and methylmercury concentrations in filtered and unfiltered DI blank and travel blank samples were below the method reporting limit ([Appendix A1](#)).
- **Field Duplicates.** The target frequency of collecting sample duplicates was 10% of the total number of samples collected. In 2024, 12 water samples and two field duplicates were collected. The field duplicate data are provided in the laboratory results from Biotron ([Appendix A1](#)).

Laboratory QC results reported by Biotron are summarized below.

- Laboratory duplicate samples had an average relative percent difference (RPD) of 5% for methylmercury and 7% for total mercury.
- The average matrix spike RPD was 3% for methylmercury and 2% for total mercury.
- The method blank (MB) was less than method reporting limits for methylmercury and total mercury analysis.
- In all 2024 samples, concentrations of total mercury and methylmercury in the unfiltered fraction were greater than the corresponding filtered fraction.
- There were no flags on quality control violations for any of the samples in 2024.

Overall, the 2024 data met the data quality objectives of the MMP.

2.5 Results and Discussion

Total mercury and methylmercury concentrations in filtered and unfiltered samples collected from 2016 through 2024 are presented in [Figure 2-1](#) and [Figure 2-2](#). Tabulated results are provided in [Appendix A](#). Results are first compared to FEIS predictions and to CCME water quality guidelines (WQGs), then

spatial-temporal patterns are reviewed. Lastly, ratios of methylmercury to total mercury (%MeHg) in filtered surface water samples are explored.

Comparison to FEIS Predictions and to CCME WQGs

Total mercury concentrations observed in Whale Tail Lake in 2024 were below the predicted concentrations in the FEIS⁸ (50 to 100 ng/L) and the CCME WQGs for the protection of aquatic life (26 ng/L; CCME, 2003). Methylmercury concentrations in the Impoundment in 2024 were below the 4 ng/L CCME WQG for the protection of aquatic life (CCME, 2003). The CCME guidelines are appropriate for assessing the potential effects from direct exposure to total mercury or methylmercury. However, these guidelines were not derived to protect aquatic-dependent wildlife or humans from dietary exposure to mercury; we address this by directly measuring mercury in fish, which is an important exposure route for wildlife and humans.

Total Mercury

- **Reference conditions.** Since 2018, total mercury concentrations in unfiltered surface water samples collected from reference lakes have ranged from <0.017 ng/L to approximately 1.5 ng/L. In 2022, there were two total mercury concentrations in unfiltered surface water samples that were higher than the typical range (i.e., 4.25 ng/L at A44 and 5.61 ng/L at B3). In reference lakes, total mercury concentrations in unfiltered surface water were generally lower in 2023 (<0.16 ng/L to 0.38 ng/L) compared to the observations in previous years, and concentrations declined further in 2024 (0.16 ng/L to 0.30 ng/L).
- **Baseline conditions in WTS, A20, and A65 (pre-flooding).** Total mercury concentrations in unfiltered surface water samples collected in WTS from 2016 to 2018 ranged from 0.29 ng/L to 0.52 ng/L. Total mercury concentrations in unfiltered surface water samples collected from A20 and A65 in 2018 (when minor flooding of the Impoundment was limited to WTS) ranged from 0.36 ng/L to 0.50 ng/L.
- **Impoundment post-flooding.** Total mercury concentrations in unfiltered surface water increased in WTS, A20, and A65 after flooding compared to reference and baseline conditions. Total mercury concentrations reached a maximum of approximately 3 ng/L, which was observed at Whale Tail in the second post-flooding event (2020); while still elevated, concentrations decreased in 2023. In 2024, results from A20 and A65 were generally similar to

⁸ Predicted maximum total mercury concentrations in water during impoundment. Predicted concentrations are conservatively based on assumptions from literature on permanently flooded reservoirs and baseline measurements (Golder, 2019).

those observed in 2023, while results from WTS showed that concentrations continued to decrease (0.97 and 0.99 ng/L in 2023; 0.55 and 0.59 ng/L in 2024).

- **Downstream post-flooding.** Downstream trends are harder to attribute to the Impoundment. While total mercury concentrations in unfiltered surface water samples downstream of the Impoundment have been higher than baseline conditions since 2020, the same pattern was seen across the reference lakes. Furthermore, mercury concentrations in the exposure areas – KAN, A76, and DS1 – since 2020 have not been consistently higher than those measured in the reference lakes. In 2023, total mercury concentrations in unfiltered water samples from downstream lakes KAN and DS1 ranged from 0.33 to 0.60 ng/L, which were generally lower than those recorded in the previous years. Concentrations observed in 2024 unfiltered samples from KAN were slightly lower compared to 2023. These results may suggest that environmental variability is the dominant driver of the observed total mercury results to date downstream of the Impoundment.

Methylmercury

- **Reference conditions.** Methylmercury concentrations in filtered surface water samples collected at reference lakes were below laboratory detection limits (<0.018 to <0.034 ng/L) in most samples.
- **Baseline conditions in WTS, A20, and A65 (pre-flooding).** Methylmercury concentrations in filtered surface water samples collected in WTS from 2016 to 2018 ranged from <0.023 ng/L to <0.05 ng/L. Methylmercury concentrations in filtered surface water samples collected from A20 and A65 in 2018 were all less than the detection limit (<0.023 ng/L).
- **Impoundment post-flooding.** Methylmercury concentrations in WTS had increased by approximately an order of magnitude relative to baseline conditions by the second post-flooding sampling event (approximately 0.4 ng/L in 2020). Concentrations remained elevated through the fourth-year post-impoundment (2022). Concentrations decreased in the Impoundment in 2023 and continued to decrease in 2024. While the levels remain elevated compared to baseline conditions, evidence to date suggest that concentrations peaked in 2022-2023 and are now declining. The magnitude of post-impoundment increase observed at WTS is consistent with the Ontario studies, but the duration of higher methylmercury concentrations is longer, likely due to colder temperatures and a shorter open-water period at higher latitudes. Methylmercury concentrations consistently remained below CCME water quality guidelines (4 ng/L; CCME, 2003).
- **Downstream post-flooding.** Concentrations in the three downstream sampling areas show some signs of increase relative to reference conditions, but the changes are subtle and are

likely influenced by environmental variability rather than by methylmercury exports from the Impoundment. For example, the highest methylmercury concentrations in filtered samples collected from downstream areas since 2020 have been observed at the far-field exposure area Lake DS1, which was not sampled in the baseline period. With the Impoundment as the source of elevated methylmercury, downstream concentrations would be expected to first increase at near-field area KAN, then mid-field area Lake A76 before seeing any change at far-field Lake DS1. However, this was not observed. Furthermore, methylmercury concentrations at the downstream areas were not consistently higher than those observed at the reference lakes. When concentrations were higher downstream than at reference lakes, they were only marginally so. In 2023, methylmercury concentrations in filtered samples were all below detection limits. There were two unfiltered samples with detectable concentrations; the highest mercury concentration of the two detected concentrations was in the sample collected from DS1 (0.59 ng/L). In 2024, concentrations in samples collected from KAN were below detection limits (<0.022 ng/L).

Methylmercury: Total Mercury Ratios

The relative amount of methylmercury compared to total mercury (%MeHg) in environmental media (e.g., water, sediment) provides information on how much mercury is in the methylated form. When assessed over space and/or time, %MeHg may indicate the differences in methylmercury production (Figure 2-3).

- **Reference conditions.** The %MeHg in filtered surface water samples collected at reference lakes ranged from 3.4 to 11.3.
- **Baseline conditions in WTS, A20, and A65 (pre-flooding).** The %MeHg in filtered surface water samples collected at WTS from 2016 to 2018 ranged from 7 to 10. The %MeHg in filtered surface water samples collected at A20 and A65 in 2018 ranged from 9.3 to 11.3.
- **Impoundment post-flooding.** The %MeHg in surface water samples collected in the Impoundment after flooding have ranged from 3.7 to 41; baseline/reference %MeHg have generally been below 20. Impoundment %MeHg appears to have peaked in 2022 and has declined since then, but remains higher than baseline/reference conditions.
- **Downstream post-flooding.** Similar to methylmercury concentrations, the evidence for downstream increases in %MeHg is weak. A downstream influence would be expected to result in more pronounced changes at KAN, followed by more muted changes at A76 and DS1 relative to baseline/reference conditions. That pattern has not been observed. Rather, results for the downstream lakes have been variable but within the range observed across baseline/reference conditions (~5 to 20 %MeHg). Results from the reference lakes in 2023 were at the upper end

of that range, and results from KAN in 2024 were lower compared those in 2023. Thus, there is no apparent influence of the Impoundment on %MeHg in downstream areas.

2.6 Water Chemistry Summary

Mercury concentrations in surface water in the Impoundment were below predicted concentrations in the FEIS and below CCME water quality guidelines for the protection of aquatic life.

Filtered methylmercury concentrations can be indicative of methylation rates in the impoundment as they provide a direct measure of methylmercury without the possible confounding influence of suspended particulates. Hall et al. (2009) described temporal changes in methylmercury in water from four experimental reservoirs created during the Experimental Lakes Area Reservoir Project and Flooded Uplands Dynamics Experiment programs in Ontario. They found that methylmercury concentrations increased substantially in the first year, peaked in the second or third year, and then decreased; peak concentrations of methylmercury in unfiltered water samples (filtered samples were not collected) ranged from 0.4 to 1.9 ng/L in the experimental reservoirs.

Results from 2024 suggest that mercury concentrations are decreasing in the Impoundment. Total mercury and methylmercury increased in the Impoundment after inundation in 2020 and remained high through 2021 and 2022. The highest concentration of methylmercury in unfiltered samples (0.68 ng/L) was reported in WTS in 2022, four years after flooding. In 2023, concentrations declined at WTS but remained stable or slightly increased at A65 and A20. By 2024, concentrations were lower at WTS, A65, and A20. The 'reservoir effect' appears less severe but more prolonged at WTS due to colder temperatures and shorter open water periods at higher latitudes.

Evidence of downstream transport of methylmercury to Kangislulik Lake and beyond is weak, suggesting that any contributions from WTS are minor relative to variability in baseline/reference conditions.

The 2025 MMP will help confirm that concentrations in the Impoundment are decreasing in the Impoundment.

In 2025, surface water samples will be collected from MMP area lakes and analyzed for ultra-trace total mercury and methylmercury (filtered and unfiltered samples) as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

Figure 2-1. Total mercury concentrations (ng/L) in filtered and unfiltered surface water samples in Whale Tail area lakes since 2016.

Notes: Water samples for ultra-trace mercury analyses were collected in August. Total mercury concentrations are below the 26 ng/L CCME water quality guideline for the protection of aquatic life. Total mercury concentrations in Whale Tail (south basin) are below the FEIS predicted concentration of 50 to 100 ng/L and the 16 ng/L CREMP trigger value.

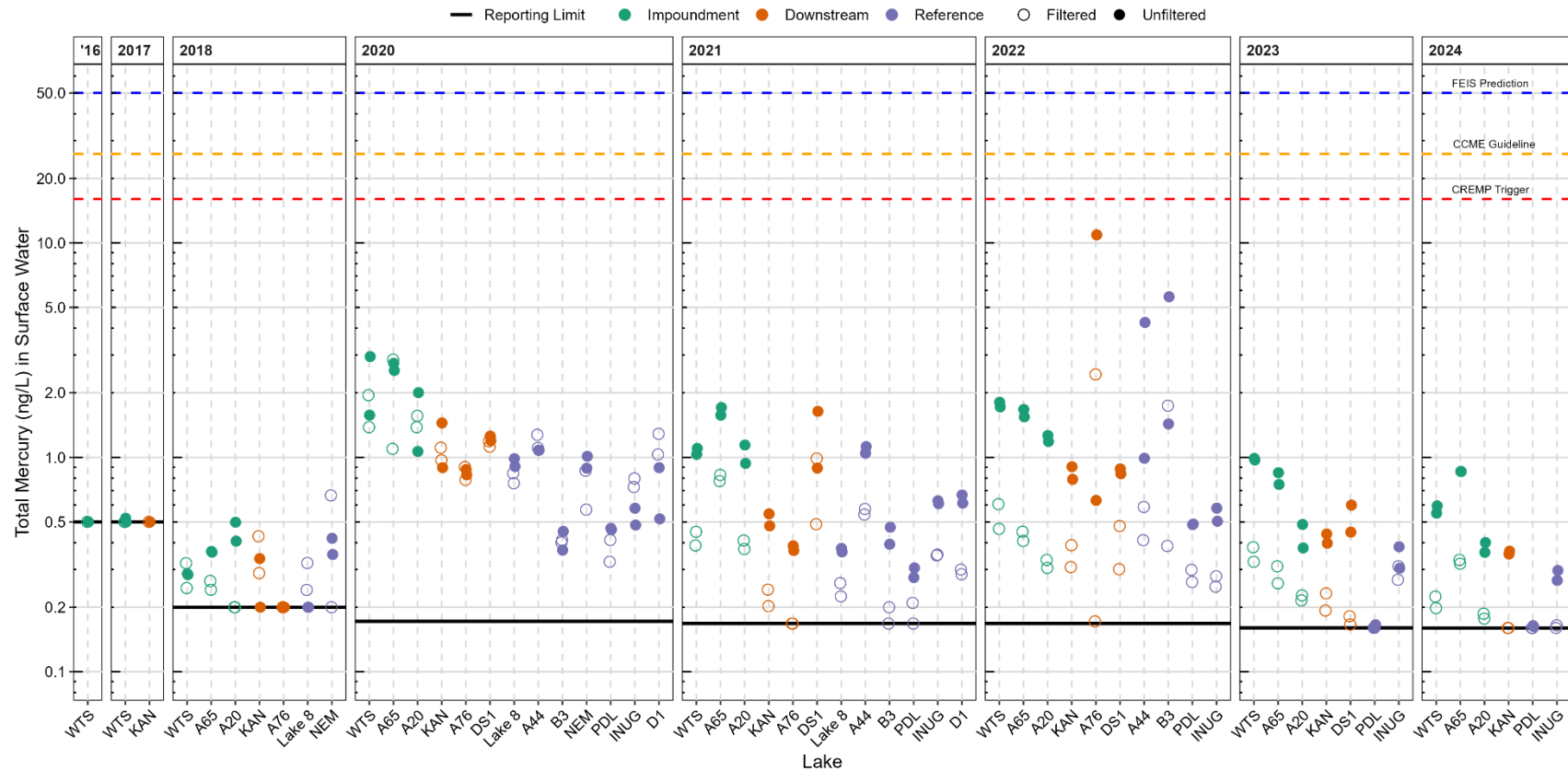


Figure 2-2. Methylmercury concentrations (ng/L) in filtered and unfiltered surface water samples in Whale Tail area lakes since 2016.

Notes: Water samples for ultra-trace mercury analyses were collected in August. All methylmercury concentrations are below the 4 ng/L CCME water quality guideline for the protection of aquatic life.

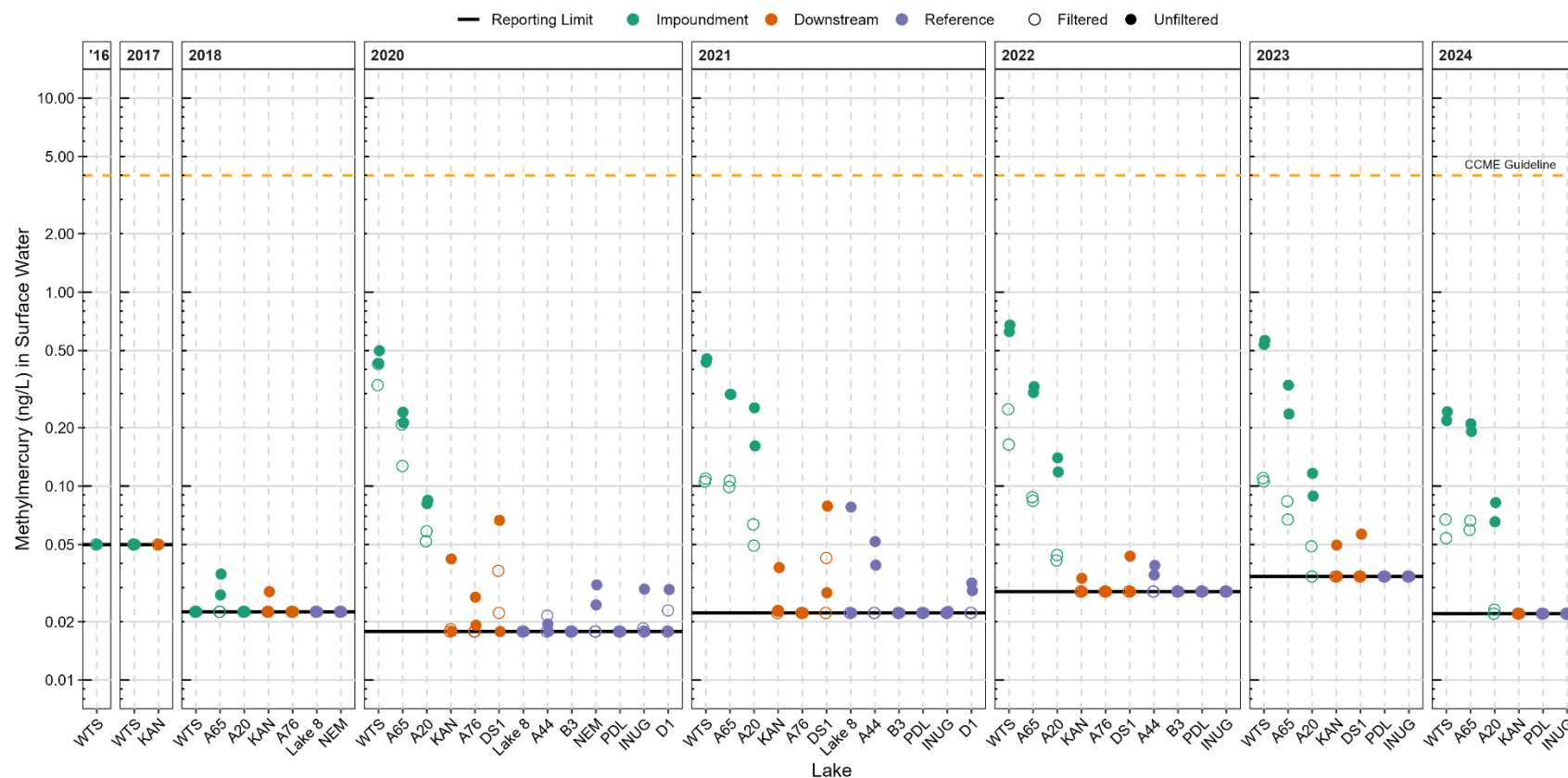
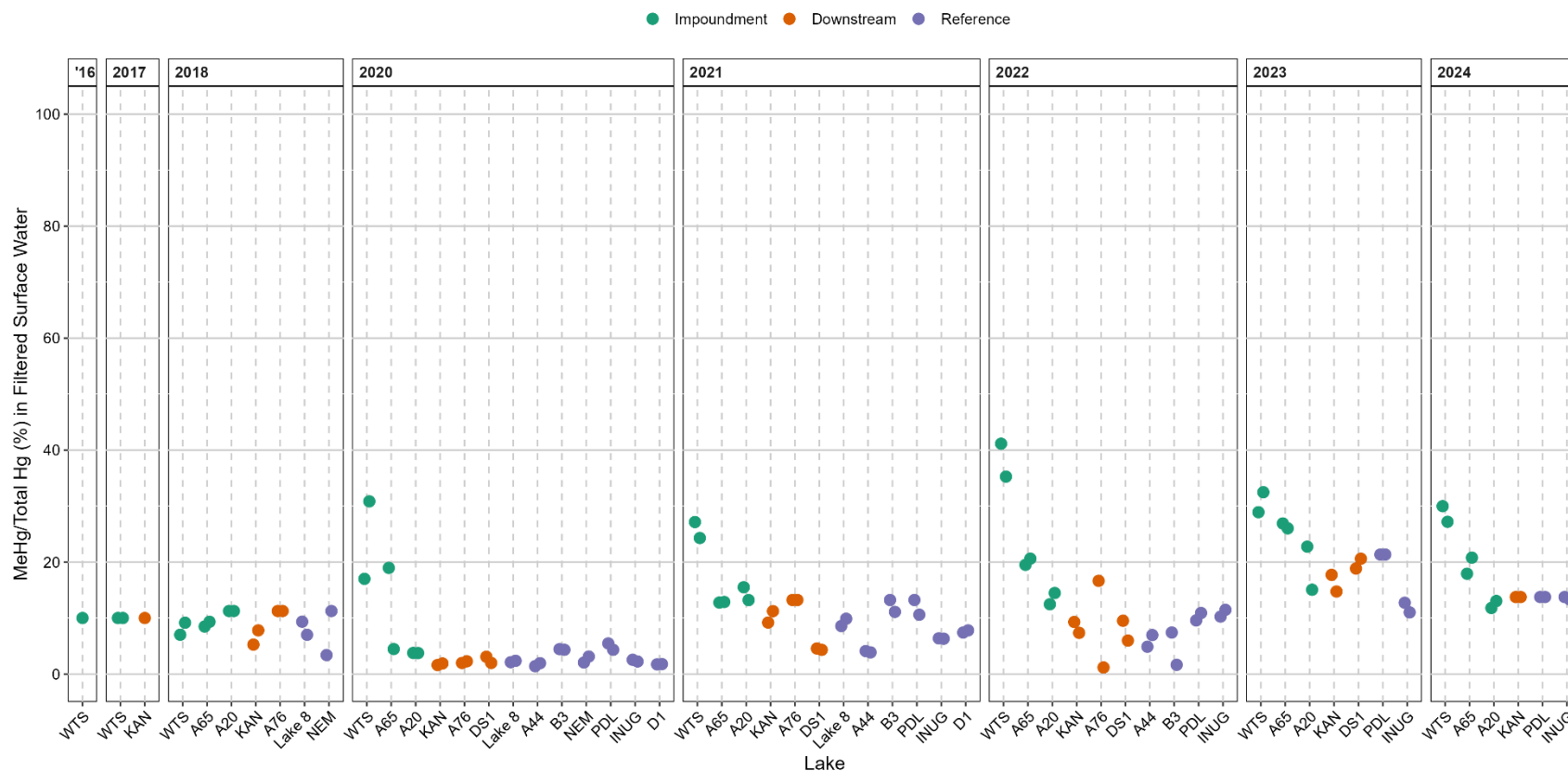


Figure 2-3. Ratio of methylmercury to total mercury (%MeHg) in filtered surface water samples in Whale Tail area lakes since 2016.

Notes: Water samples for ultra-trace mercury analyses were collected in August.



3 SEDIMENT

3.1 Key Findings for Sediment Chemistry in 2024

- Total mercury concentrations remain below the CCME sediment quality guidelines at all areas.
- Total mercury concentrations were similar to baseline/reference conditions in the depositional zones of the Impoundment and at downstream exposure area KAN.

3.2 Overview

The sediment chemistry component of the MMP consists of both grab samples and core samples. Grab samples integrate sediment chemistry across the top 3 to 5 cm to characterize conditions within the biologically active zone. Sedimentation rates in these headwater lakes are typically low, so sediment coring is done to quantify changes in sediment chemistry in the most active layer. The coring program focuses on the top 1.5 cm of sediment to track changes over time. Grab samples are collected each year as part of the CREMP and MMP at the same locations as the CREMP benthic invertebrate community samples. Sediment cores are collected every three years under the CREMP to coincide with EEM requirements under the MDMER. In 2024, grab samples were collected from routine CREMP sampling areas and cores were collected from WTS.

3.3 Methods

A summary of sediment samples collected (grabs and cores) by location and year is provided in **Table 3-1**. Sediment grab samples were collected using a Petite Ponar (6" x 6"). Sediment was collected by lowering the grab to within 1 m of the sediment, at which point the rate of descent was slowed to minimize disruption of the surficial layer of sediment. Upon retrieval, the grab was inspected according to the acceptability criteria outlined in the standard operating procedure (SOP), namely: the absence of large foreign objects, adequate penetration depth, the grab is not overfilled, the jaws closed completely (i.e., well-sealed), and the sediment surface in the grab is undisturbed. Grabs that failed the acceptability criteria were discarded into a 20-L bucket and retained until sampling was completed at the station. The top 3 to 5 cm was collected, consistent with Meadowbank and Whale Tail CREMP protocols and analyzed for total mercury. A total of five grab sample replicates were collected at WTS, A20, KAN, PDL, and INUG as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

Sediment cores were collected using the same method as grabs, except only the top 1.5 cm of the sediment was collected for total mercury analysis. As part of supplemental CREMP sampling, twenty-five core samples were collected at WTS with at least 5 m between stations and analyzed for total mercury.

3.3.1 Laboratory Analysis

Sediment samples were submitted to ALS (Burnaby, BC) for analysis. The samples were transported in coolers with ice packs and shipped to ALS at the earliest convenience to minimize the possibility of exceeding the recommended hold-times between when the samples were collected and analysis.

Total mercury in sediment was analyzed by cold vapour atomic fluorescence spectrophotometry, following US EPA methods. Moisture content was determined gravimetrically.

Table 3-1. Summary of sediment chemistry samples collected for total mercury analysis.

Area/Lake	Designation	Habitat	Year								
			2016	2017	2018	2019	2020	2021	2022	2023	2024
Whale Tail Lake Impoundment [†]	NF	Depositional	G	G&C	G&C	G	C	G	G	C	G&C
		Inundation	S ¹	-	-	-	-	*	S	S	-
Lake A20 Impoundment [†]	NF	Depositional	G	G&C	G	G	C	*	G	C	G
		Inundation	-	-	-	-	-	*	S	S	-
Lake A65 Impoundment [†]	NF	Depositional	-	-	G	G	-	*	-	-	-
		Inundation	S ¹	-	-	-	-	*	S	S	-
Kangislulik Lake ²	NF	Depositional	G	G&C	G	G	C	*	G	C	G
Lake A76	MF	Depositional	G	G&C	G	G	C	G	G	-	-
Lake DS1	FF	Depositional	G	G&C	G	G	C	*	G	-	-
Inuggugayualik Lake	Reference	Depositional	G	G&C	G	G	C	*	G	C	G
Pipedream Lake	Reference	Depositional	G	G&C	G	G	C	*	G	C	G
Lake 8	Reference	Depositional	-	-	G&C	G	C	-	-	-	-
Lake D1	Reference	Depositional	-	-	G&C	G	C	-	-	-	-
Lake B3	Reference	Depositional	-	-	-	-	C	-	G	-	-
Nemo Lake	Reference	Depositional	G	G&C	G	G	C	-	G	C	-

Notes:

[†] Minor flooding of impoundment, limited to Whale Tail (south basin). Extensive during 2019 and 2020 sampling (i.e., connectivity between impounded lakes).

¹ Soil samples collected along Whale Tail Lake shoreline in 2016 as part of baseline studies.

* Samples were collected but an error at the lab resulted in these samples being discarded prior to analysis. Refer to the ALS Corrective Action Report in the 2021 MMP report (see [Appendix B2](#) in Azimuth, 2022).

NF = near-field, MF = mid-field, FF = far-field.

"-" = data not collected as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

C = Sediment core samples; G = Sediment grab samples; S = soil samples from the shoreline area (2016) or sediment samples from the inundated area (2019–2023).

Shading indicates the status of the lake:

blue = baseline and reference areas (Control designation).

orange = post flooding (Impact designation).

Refer to tabulated data in [Appendix B1](#) for the number of samples collected at each area.

3.4 Quality Assurance / Quality Control

3.4.1 Field QA/QC

For field QA, field staff implemented precautions to avoid cross-contamination between sampling areas by rinsing and cleaning the sediment sampling gear (Petite Ponar grab, stainless steel compositing bowls, spoons) using site water and phosphate-free cleaning detergent.

Field QC measures for sediment grab and core sampling were conducted on approximately 10% of samples. These measures included field duplicates to characterize spatial heterogeneity and to assess consistency in field methodology, and filter swipes of the sampling equipment to assess the potential for cross-contamination between samples. All field QC results are provided in Appendix B of the 2024 CREMP report (Azimuth, 2025).

Field duplicate RPD DQOs were set at 1.5-times the laboratory DQOs (i.e., 1.5 x 40% for total mercury and 1.5 x 30% for methylmercury). The RPDs met the DQOs for total mercury and methylmercury. The field duplicate results indicate good field collection methods and a high degree of replicability in sampling. Mercury was not detected in the sediment grab and core equipment filter swipes.

3.4.2 Laboratory QC

The laboratory QC program for total mercury and methylmercury analysis in sediment was completed as part of the 2024 CREMP (Azimuth, 2025). The laboratory QC program consisted of laboratory duplicates, method blanks, and certified reference materials (CRM) or laboratory control samples (LCS). The distinction between the latter two types is that CRMs are commercially available while LCSs are prepared by the laboratory. All laboratory QC measures met ALS' data quality objectives (see Appendix B in Azimuth, 2025).

3.5 Results and Discussion

Total mercury concentrations in sediment samples collected from 2016 to 2024 are shown in **Figure 3-1**. Tabulated sediment mercury results are provided in **Appendix B1**.

Total Mercury

- Total mercury concentrations were below the CCME interim sediment quality guideline (ISQG) of 170 µg/kg dry weight in all samples collected in 2024.
- **Baseline/reference conditions.** Total mercury concentrations varied spatially across lakes during the baseline sampling period. Between 2016 and 2018, clear patterns were evident, with reference lakes NEM, PDL, and INUG consistently having lower total mercury concentrations in sediment compared to the impoundment and downstream areas (i.e.,

generally less than 50 µg/kg versus generally >40 µg/kg dw). This pattern was still evident at reference areas in 2023 and 2024.

- **Impoundment post-inundation.** There were no appreciable temporal patterns in WTS or A20 relative to creation of the Impoundment. In 2024, total mercury concentrations in the deposition zone samples were consistent with baseline conditions.
- **Downstream post-inundation.** Consistent with the Impoundment results, there were no temporal patterns apparent for total mercury in relation to inundation.

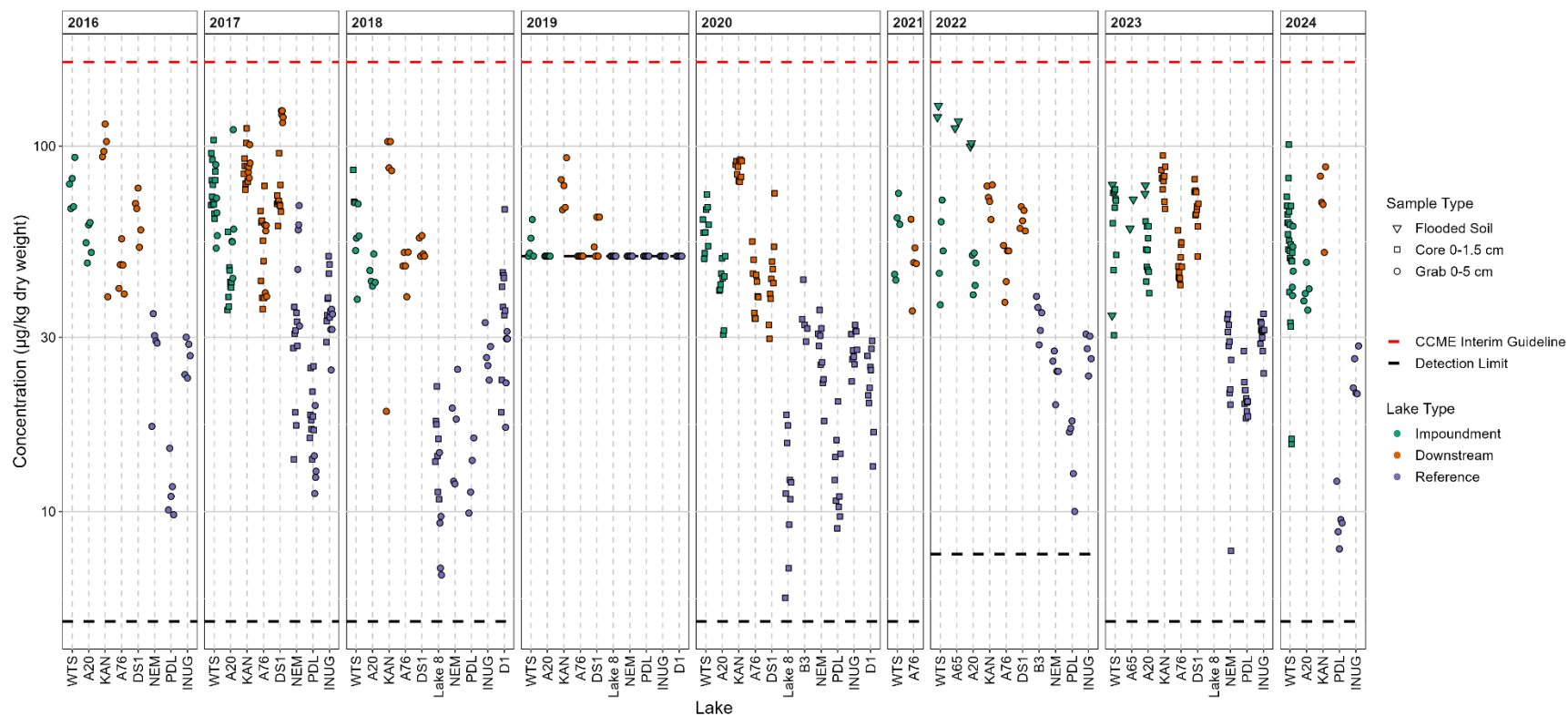
3.6 Sediment Chemistry Summary

In 2024, sediment samples were collected from the depositional areas in the MMP area lakes. Total mercury concentrations were below the CCME sediment quality guidelines at all areas for depositional zone samples. Total mercury concentrations in the depositional zones of the Impoundment as well as downstream exposure area KAN in 2024 were similar to baseline/reference conditions.

For 2025, sediment grabs will be collected from depositional zones in the MMP area lakes and analyzed for total mercury as per the *CREMP 2022 Plan Update (Azimuth, 2022c)*. Trends in methylmercury in depositional zones will be reviewed during the next sediment coring program planned for 2026. Sediment sampling within the inundation zone is planned for 2026.

Figure 3-1. Total mercury ($\mu\text{g/kg}$ dry weight) in sediment samples from Whale Tail area lakes since 2016.

Notes: All data in figure are shown on a log-scale. All total mercury concentrations are below the 170 $\mu\text{g/kg}$ dry weight CCME interim sediment quality guideline for the protection of aquatic life (red dashed line) and below the 486 $\mu\text{g/kg}$ dry weight CCME probable effect level (not shown in figure).



4 SMALL-BODIED FISH

4.1 Overview

Small-bodied fish are not a core component of the MMP and their collection is not required under the *Mercury Monitoring Plan* (Azimuth, 2023b). Slimy Sculpin and Ninespine Stickleback sample collection in 2024 was elective and completed to track concentrations of total mercury in small-bodied fish. Due to delays in processing and analyzing small-bodied fish collected in 2024, results of the small-bodied fish sampling program are not presented herein.

4.2 Methods

4.2.1 Field Methods

Sample Collection

Fish were collected by backpack electrofishing wadable areas of the shoreline at WTS and A20. Slimy Sculpin and Ninespine Stickleback can have different habitat preferences and the increase in lake elevation in the Impoundment resulted in shifts in catch-per-unit-effort (CPUE) for each species in Lake A65 and Lake A20. Before flooding, Slimy Sculpin were easier to catch (higher CPUE) than Ninespine Stickleback. This changed in 2019, when it became relatively easier (higher CPUE) to catch Ninespine Stickleback in the A65 and A20 basins of the Impoundment. The difference in CPUE is most likely related to differences in accessible, wadable habitat. Given the uncertainty regarding potential population-level changes to either of the species, both were retained in the study after inundation to ensure that temporal trends could be tracked.

Sample Selection for Mercury Analysis

Ninespine Stickleback and Slimy Sculpin samples collected for total mercury analysis were selected after reviewing the length distributions for each species. Size classes with sufficient sample numbers across collection years and lakes were selected to allow comparisons of spatial and temporal tissue mercury concentrations. For Ninespine Stickleback, two size classes were identified; samples between 30-39 mm and between 40-49 mm were selected. For Slimy Sculpin, which had a more consistent distribution of samples among lakes/years, up to ten samples targeting year-1 fish (i.e., total lengths between 27-45 mm) were selected. Ten samples of each species from each area (A20 and WTS) were submitted for analysis in 2024 (**Table 4-1**).

4.2.2 Laboratory Methods

Slimy Sculpin and Ninespine Stickleback samples collected in 2024 were processed by North South Consultants. Standard operating procedures for processing small-bodied fish were provided to the laboratory to ensure consistency across laboratories and years.

In 2024, after removing the viscera and otoliths, fish carcasses were placed in Whirlpak® bags and shipped frozen to Biotron at the University of Western Ontario. Upon arrival carcasses were weighed, then placed in labeled vials, covered with Kimtech® tissues, and placed in the freeze dryer. Dried samples were homogenized and are currently being analyzed for total mercury analysis in tissue using a Milestone® DMA-80 Direct Mercury Analyzer as per U.S. EPA method 7473 (US EPA, 2007). Mercury concentrations will be converted to wet weight assuming 78% moisture content in the muscle tissue.

Table 4-1. Summary of small-bodied fish samples submitted for total mercury analysis.

Area/Lake	Designation	Ninespine Stickleback						Slimy Sculpin					
		Year [†]						Year [†]					
		2018	2019	2020	2021*	2023 [§]	2024	2018	2019	2020	2021*	2023	2024
Whale Tail Lake Impoundment	NF	8	6	10	5	23	10	5	5	5	10	10	10
Lake A20 Impoundment	NF	2	10	10	5	6	10	5	-	5	5	9	10
Lake A65 Impoundment	NF	-	10	10	2	-	-	5	-	5	5	-	-
Kangislulik Lake	NF	1	2	4	5	-	-	5	5	5	5	10	-
Lake 8	Reference	-	-	-	-	-	-	5	-	5	5	10	-
Lake A44	Reference	-	-	1	4	-	-	-	5	5	5	-	-
Lake B3	Reference	-	-	1	5	-	-	-	-	5	10	-	-
Lake D1	Reference	-	-	-	-	-	-	-	-	5	-	-	-

Notes:

† Minor flooding in the Impoundment was limited to Whale Tail (south basin). Extensive flooding during 2019 and 2020 sampling (i.e., connectivity between WTS, A65, and A20).

* Due to delays in processing and analysis, 2021 small-bodied fish mercury results were only received in January 2023 and were included in the 2022 MMP report (Azimuth, 2023).

§ Ninespine stickleback were only captured from Whale Tail (south basin) and Lake A20 in 2023.

NF = Near-field.

blue = baseline and reference areas (Control designation)

orange = post flooding (Impact designation)

Numbers given indicate the number of fish collected and submitted for analysis. "-" means no sample was collected as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

4.3 Quality Assurance/Quality Control

Data quality was assured throughout sample analysis using specified standardized procedures, using laboratories that have been certified for all applicable methods, and staffing the program with experienced field sampling technicians. Samples were collected according to standard care and QA/QC procedures. Whole fish samples were placed in individual Whirl-Pak® bags, labeled with sample ID and date, and placed in a freezer in the field. Samples were placed in coolers with ice during shipment to the laboratory.

4.4 Small-bodied Fish Data Status and Summary

Small-bodied fish are not a core component of the MMP and their collection is not required under the *Mercury Monitoring Plan* (Azimuth, 2023b). Slimy Sculpin and Ninespine Stickleback sample collection in 2024 was elective and completed to track concentrations of total mercury in small-bodied fish. Due to laboratory delays, small-bodied fish sample analysis is in progress and results are expected in late spring/early summer 2025.

The primary reason small-bodied fish have been included in the MMP is to track temporal and spatial patterns in mercury at a key step in the food chain that ultimately leads to large-bodied fish. While the MMP's main focus is on mercury concentrations in large-bodied fish, the results for small-bodied fish help to understand how this northern ecosystem is responding to the creation of the Impoundment. This is particularly important for understanding the overall trajectory of the 'reservoir effect' (e.g., to know when to expect fish mercury concentrations to start decreasing).

Both small-bodied fish species in the Impoundment showed marked increases in tissue mercury concentrations in 2020 that persisted in 2023. The temporal patterns seen for Ninespine Stickleback suggest that conditions may have stabilized somewhat as tissue mercury concentrations neither continued to rise sharply nor showed clear signs of decreasing back to baseline levels. For Slimy Sculpin, concentrations have continued to increase, though at a lesser extent than what was observed in the first- and second-years post-Impoundment (i.e., 2019 and 2020). These trends will be reviewed upon receipt of the 2024 results.

The supplemental small-bodied fish mercury study is not planned for 2025 as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

5 LARGE-BODIED FISH

5.1 Key Findings for Large-bodied Fish in 2024

- Lake Trout sampling was conducted in the Impoundment to verify the 2023 results, which showed a substantial increase in mercury concentrations in Lake Trout muscle tissue compared to baseline/reference conditions. Concentrations in 2023 were consistent with predictions in the FEIS.
- The 2024 Lake Trout mercury results (1) verify the increase observed in 2023 and (2) show that the rate of increase appears to have slowed down.
- The concentration of mercury adjusted to 550-mm fork length was 1.57 mg/kg ww in 2024, which was slightly higher than 1.51 mg/kg ww obtained in 2023 (year five after impoundment⁹). The 2023 result showed a clear increase compared to the 0.61 mg/kg ww observed in 2020, when concentrations were virtually unchanged relative to baseline/pre-impoundment conditions.
- The estimated mean tissue mercury concentration for a 550-mm Lake Trout in 2024 from Whale Tail Lake was generally consistent with the peak mercury concentration predicted in the FEIS (i.e., 1.55 mg/kg ww from Azimuth, 2019).

5.2 Overview

Lake Trout are the target species for monitoring changes in large-bodied fish for the MMP. Large-bodied fish tissue sampling is completed on a three-year cycle, coinciding with the EEM biological monitoring program. An overview of the fish sampling events for the MMP to date is provided in [Appendix C2](#).

In 2023, there was a notable increase in mercury concentrations of Lake Trout from Whale Tail Lake, although the size-adjusted concentration remained within the predicted peak mercury level. While not required under the design plan, additional Lake Trout were collected from Whale Tail Lake in 2024 to monitor mercury concentrations in large-bodied fish.

5.3 Field Methods

Fish tissue data have been collected under various programs. Methods for each sampling event dating back to baseline sampling in 2015 are provided in [Appendix C1](#).

⁹ Peak mercury concentrations in large-bodied fish can occur anywhere between four and 12 years after the creation of most reservoirs.

In 2024, Lake Trout were captured using gill nets or angling. Dorsal muscle tissue samples were collected using biopsy or boneless, skinless dorsal muscle was taken from anterior to the dorsal fin for incidental mortalities. Tissue samples were placed in labelled Whirl-Pak® bags, frozen, and transported to Biotron at the University of Western Ontario for total mercury analysis.

5.4 Laboratory Methods

Mercury

Fish tissue samples collected in 2018, 2020, and 2023 were subsampled at the University of Waterloo. Frozen tissue samples collected in 2024 were submitted directly to Biotron for analysis of total mercury. Using sterilized scissors and tweezers, samples placed in labelled vials, covered with Kimtech® tissues, and placed in the freeze dryer. Dried samples¹⁰ were analyzed for total mercury in tissue using a Milestone® DMA-80 Direct Mercury Analyzer as per U.S. EPA method 7473 (US EPA, 2007). Mercury concentrations were converted to wet weight assuming 78% moisture content in the muscle tissue.

Aging

No aging was done for Lake Trout collected in 2024 as these samples were collected in addition to the requirements in the design plan for 2024, to provide additional information on mercury concentrations in Lake Trout from Whale Tail Lake. Lake Trout collected in 2015, 2020, and 2023 were aged by Louise Stanley, a fish aging expert who provides consulting services to C. Portt and Associates. Otoliths were mounted whole on a glass slide with CrystalBond thermoplastic adhesive. Otoliths which could not be aged whole were ground to the core on one side, flipped to adhere the core area to the glass, and then ground to a thin section on the other side. Age was estimated based on the number of annuli counted using transmitted light and a Leica GZ6 Stereo Zoom microscope.

5.5 Data Analysis

Large-bodied fish data analysis included modelling temporal and spatial length-mercury relationships across areas sampled in years 2015 onwards. Data analysis also included estimating mercury concentrations and associated confidence limits for a 550-mm Lake Trout. Using standardized sizes, like 550 mm, allows for more robust spatial or temporal comparisons by explicitly taking fish size into consideration. Finally, mercury concentrations estimated for a 550-mm Lake Trout were quantitatively compared to the FEIS prediction (Azimuth, 2019).

¹⁰ Fillet samples were homogenized prior to analysis.

Mercury and Ancillary Data

Fish meristic data and sampling details were recorded on field data sheets and entered into an Excel database. Mercury data from Biotron were also entered into the Excel database upon receipt. The large-bodied fish database is provided in [Appendix C1](#).

Characterization of Size-Mercury Relationships

For the analysis of pre-impoundment/baseline data and post-impoundment fish mercury data, we considered the following elements: catch data, length and age data, general mercury relationships, and length-mercury relationships. These are described below.

Catch and data summary. Catch refers to the fish that were caught and selected for mercury analysis. Because sampling for mercury analysis is conducted to characterize a range of fish sizes, the focus is on sampling evenly across the relevant size range of a species, rather than randomly sampling from all fish caught (see length-mercury relationships below for more details). Catch data for each year and location are provided in [Table 5-1](#). See [Table 5-2](#) for a summary of sample sizes as well as mean and range for length, weight, condition¹¹, and mercury concentrations.

Length and age. These two variables provide information on the size and age of Lake Trout. No aging was completed in 2024.

General mercury-related relationships. Length, weight, and age can all influence fish mercury concentrations. Plots were used to explore the following key relationships:

- *Length-weight:* the length-weight relationship shows how weight increases as fish get longer. This relationship is usually strong in that the range of observed weights for a given fish length is narrow relative to the other relationships. Consequently, this plot is useful to identify outliers or anomalous results (e.g., transcription errors).
- *Length-mercury:* length-mercury is a well-established relationship, because mercury concentrations increase as fish length increases. Length is simple to measure and highly repeatable, so measurement error tends to be low. Mercury concentrations are also positively correlated to weight and age, but measurement error for both those variables relative to length is higher. For example, if the age is off by a year that could mean a 100% error for a year-old fish and the time since a fish's last meal can influence weight. This makes weight and age correlations less useful than length, particularly for comparing patterns over time or space.

¹¹ Condition is a measure of fish weight relative to its length. It is calculated as $\text{weight}/\text{length}^3 \times 100$ and is represented by the letter K. Higher condition fish weigh more for their size compared to lower condition fish.

When looking at patterns in fish mercury concentrations over time or space, it is important to consider fish size or length. Failing to do so can lead to biased results. For example, tissue mercury concentrations are known to increase as a fish length increases. While sampling targets similar number of fish in each range of size classes, there are almost always differences in sizes of fish caught. Therefore, the best way to remove potential size-related bias is to characterize the length-mercury relationship then use that relationship to estimate mercury concentrations for a specific fish size (i.e., standardized sizes). The approach we used to characterize or model the length-mercury relationships is presented in detail in [Appendix D](#).

5.6 Quality Assurance/Quality Control

Data quality was assured throughout sample analysis using specified standardized procedures, by using laboratories that have been certified for all applicable methods, and by staffing the program with experienced technicians. Samples were collected according to standard care and QA/QC procedures:

- Tissue samples were placed in individual Whirl-Pak® bags, labelled with sample ID and date, and placed in a freezer in the field. Samples were placed in coolers with ice during shipment to the laboratory.
- Technicians wore gloves while handling the fillet and worked carefully to avoid introducing foreign particles in the sample.
- The equipment (fillet knife and cutting board) was washed with phosphate-free cleaning detergent and site water and wiped dry with paper towel between samples.

QA/QC results for large-bodied fish tissue samples reported by Biotron are summarized below. The data met the data quality objectives (DQOs) for the MMP.

- The average RPD in laboratory duplicate samples analyzed for total mercury was 4%.
- The average recovery of DORM5 certified reference material (CRM) was 99%.
- There were no flags on quality control violations and all data were retained for analysis.

5.7 Results and Discussion

All Lake Trout tissue samples were analyzed for total mercury. It is generally assumed that the total mercury present in large predatory fish is predominantly in the form of methylmercury.

Data Overview and Catch Data. The fish mercury dataset contains 333 tissue mercury samples for Lake Trout collected since 2015 ([Table 5-1](#)). The results show that despite efforts to keep fish size consistent across locations, there were differences among areas and years that could bias the mercury results ([Table 5-2](#)). For example, mean fish length was much lower for Lake Trout from Whale Tail Lake in 2018

relative to either 2015 or 2020. This highlights the need to use the length-mercury relationships as the foundation for making comparisons across time or space.

Length Frequency. We used length frequency plots to compare the distribution of fish samples from each location (**Figure 5-1**). In general, the ranges of length were similar across locations within a given year. Larger or older individuals (i.e., >500 mm) were sampled less frequently at Whale Tail Lake in 2015 compared to 2020, 2023, and 2024. For Kangislulik Lake, larger individuals (i.e., >500 mm) were sampled less frequently in 2015 and 2023 compared to 2020.

Length-Mercury Relationships. Key results are summarized below, and detailed methods and results are provided in **Appendix D**:

- Mercury concentrations in Lake Trout from WTS in 2024 were only slightly higher than those from 2023, when sharp increases were observed compared to the Lake Trout samples from the previous events (**Figure 5-2**). Size-adjusted mercury concentration for a 550-mm Lake Trout in 2024 was 1.57 mg/kg ww, which was only slightly higher than the value obtained in 2023 (1.51 mg/kg ww). In 2020, size-adjusted mercury concentration for a 550-mm Lake Trout was 0.61 mg/kg ww, which was virtually unchanged relative to baseline/pre-impoundment conditions (0.57 mg/kg ww in 2015 and 0.60 mg/kg ww in 2018).
- Estimated mercury concentration for a 550-mm Lake Trout, along with the predicted value of the FEIS, are presented in **Figure 5-3**. The 2024 results are generally consistent with the peak mercury concentration predicted in the FEIS (i.e., 1.55 mg/kg ww; see Azimuth, 2019), being marginally above the predicted value but well within its associated confidence limits.

Methylmercury concentrations in both surface water (**Section 2**) and in small-bodied fish tissue (**Section 4**) collected from the Impoundment showed clear increases starting in 2020. However, the lack of a measurable increase in Lake Trout in 2020 was not surprising. As methylmercury production ramped up during the first year of inundation, methylmercury concentrations would have increased first in sediments and water, then entered the food web. In the food web, smaller organisms with higher relative feeding and growth rates will respond more rapidly than larger organisms (e.g., a 3 g forage fish versus a 10 kg Lake Trout), consequently creating a progressive lag up the food chain. Thus, in addition to relative growth patterns, fish feeding lower in the food chain will respond more rapidly than higher trophic-position fish. For a species like Lake Trout, smaller individuals feeding on zooplankton or small forage fish will respond more rapidly than larger, older fish feeding on larger fish (e.g., Arctic Char). The 2023 WTS Lake Trout results are consistent with this explanation (e.g., large change for small fish but no change in the largest fish). Bodaly et al. (2007) and Bilodeau et al. (2017) observed similar patterns in Manitoba and Quebec hydroelectric reservoirs, respectively.

The mean Lake Trout mercury concentration for a 550-mm fish in Whale Tail Lake in 2024 (i.e., 1.57 mg/kg ww) is slightly above the mean predicted peak mercury concentration (i.e., 1.55 mg/kg ww or

approximately three times baseline mercury concentrations for a 550-mm Lake Trout; Azimuth, 2019). Given that 2024 result is still within the range of confidence limits of the FEIS prediction, conclusions presented in the FEIS addendum (Golder, 2018) remain applicable.

The MMP committed to further risk-based analyses if measured fish tissue concentrations exceed the predicted peak mercury concentration for Lake Trout in Whale Tail Lake (Azimuth, 2019). This approach was deemed reasonable considering the low rates of fishing by residents and the non-fishing policy in the Whale Tail project area lakes. Furthermore, Azimuth (2019) explored the implications of the predicted changes in fish mercury concentrations based on the number of servings/month of Lake Trout (550-mm fish) following Health Canada (2007) guidance. Based on the 2019 mean empirical model prediction for peak fish mercury concentrations, the number of servings per month of Lake Trout (550 mm) would be approximately four for adults in general and one (1) for women of child-bearing age (based on Health Canada, 2007; Azimuth, 2019).

The 2024 results, while marginally (1.3%) higher than the predicted peak tissue mercury value, remain below its upper confidence limit (1.72 mg/kg ww). Consequently, no additional MMP-related risk-based analyses are required at this time. This is supported by:

1. The slightly higher tissue mercury concentrations measured in 2024 relative to the peak predicted value would not change the allowable servings/month for people eating Lake Trout from the Impoundment (see above).
2. Further, we are unaware of any fishing activity in the Impoundment, so it is unlikely that anyone is regularly eating fish from that location.
3. Lastly, we expect that Lake Trout mercury levels will start to decrease soon as there are indications (e.g., water methylmercury) that methylmercury production within the Impoundment has slowed. Ultimately (e.g., over the next few decades), Lake Trout mercury levels will decrease to a new baseline.

Table 5-1. Summary of Lake Trout muscle tissue samples submitted for total mercury analysis since 2015.

Area/Lake	Designation	Year				
		2015	2018 [†]	2020	2023	2024
Whale Tail Lake Impoundment	NF	21	15	30	25	32
Kangislulik Lake	NF	25	-	25	25	-
Lake DS1	FF	-	-	24	-	-
Lake 8	Reference	-	8	26	25	-
Lake D1	Reference	-	-	27	25	-

Notes

[†] Fish collected from Whale Tail in 2018 were collected from the north basin following dike construction.

 Control area

 Impact area

NF = near-field, FF = far-field.

Numbers given indicate the number of fish collected and submitted for analysis.

"-" means no sample was collected as per the Mercury Monitoring Plan (Azimuth, 2023b).

Table 5-2. Lake Trout size, age, and mercury concentration data summary in Whale Tail area lakes since 2015.

Area/Lake	Designation	Year	Number of Fish	Mean (Minimum - Maximum)				
				Fork Length (mm)	Total Weight (g)	Age (yr)	Condition (index)	THg (mg/kg ww)
Whale Tail (Impoundment)	NF	2015	21	469 (159 - 860)	1412 (37 - 7320)	21 (9 - 44)	1.048 (0.864 - 1.282)	0.505 (0.077 - 2.19)
		2018	15	388 (225 - 836)	940 (150 - 5600)	-	1.131 (0.926 - 1.391)	0.455 (0.07 - 3.415)
		2020	30	483 (238 - 866)	1761 (156 - 7410)	20 (5 - 44)	1.235 (0.957 - 1.64)	0.604 (0.26 - 2.347)
		2023	25	428 (206 - 878)	1440 (108 - 8760)	13 (3 - 42)	1.163 (0.912 - 1.348)	1.306 (0.712 - 2.58)
		2024	32	488 (355 - 720)	1468 (500 - 4400)	-	1.123 (0.754 - 1.463)	1.399 (0.649 - 3.012)
Kangislulik Lake	NF	2015	25	360 (215 - 700)	661 (96 - 4670)	12 (5 - 37)	1.071 (0.913 - 1.362)	0.209 (0.072 - 1.07)
		2020	25	474 (176 - 855)	2043 (64 - 6750)	21 (3 - 42)	1.18 (0.935 - 1.606)	0.575 (0.058 - 2.076)
		2023	25	371 (187 - 876)	873 (62 - 8430)	13 (4 - 34)	1.08 (0.904 - 1.254)	0.22 (0.093 - 0.967)
Lake DS1	FF	2020	24	512 (269 - 745)	1531 (199 - 3706)	18 (3 - 49)	1.032 (0.808 - 1.223)	0.785 (0.212 - 4.04)
Lake 8	Reference	2018	8	431 (204 - 583)	988 (83 - 1980)	-	0.992 (0.715 - 1.13)	0.428 (0.084 - 1.163)
		2020	26	398 (150 - 660)	839 (33 - 3263)	16 (4 - 43)	1.018 (0.804 - 1.243)	0.332 (0.072 - 1.059)
		2023	25	404 (190 - 520)	824 (67 - 1510)	16 (3 - 34)	1.05 (0.837 - 1.253)	0.253 (0.039 - 0.989)
Lake D1	Reference	2020	27	490 (169 - 876)	2446 (49 - 9530)	21 (5 - 50)	1.112 (0.871 - 1.526)	0.819 (0.12 - 2.959)
		2023	25	518 (193 - 861)	2102 (81 - 8660)	21 (8 - 41)	1.085 (0.577 - 1.357)	0.623 (0.149 - 1.762)

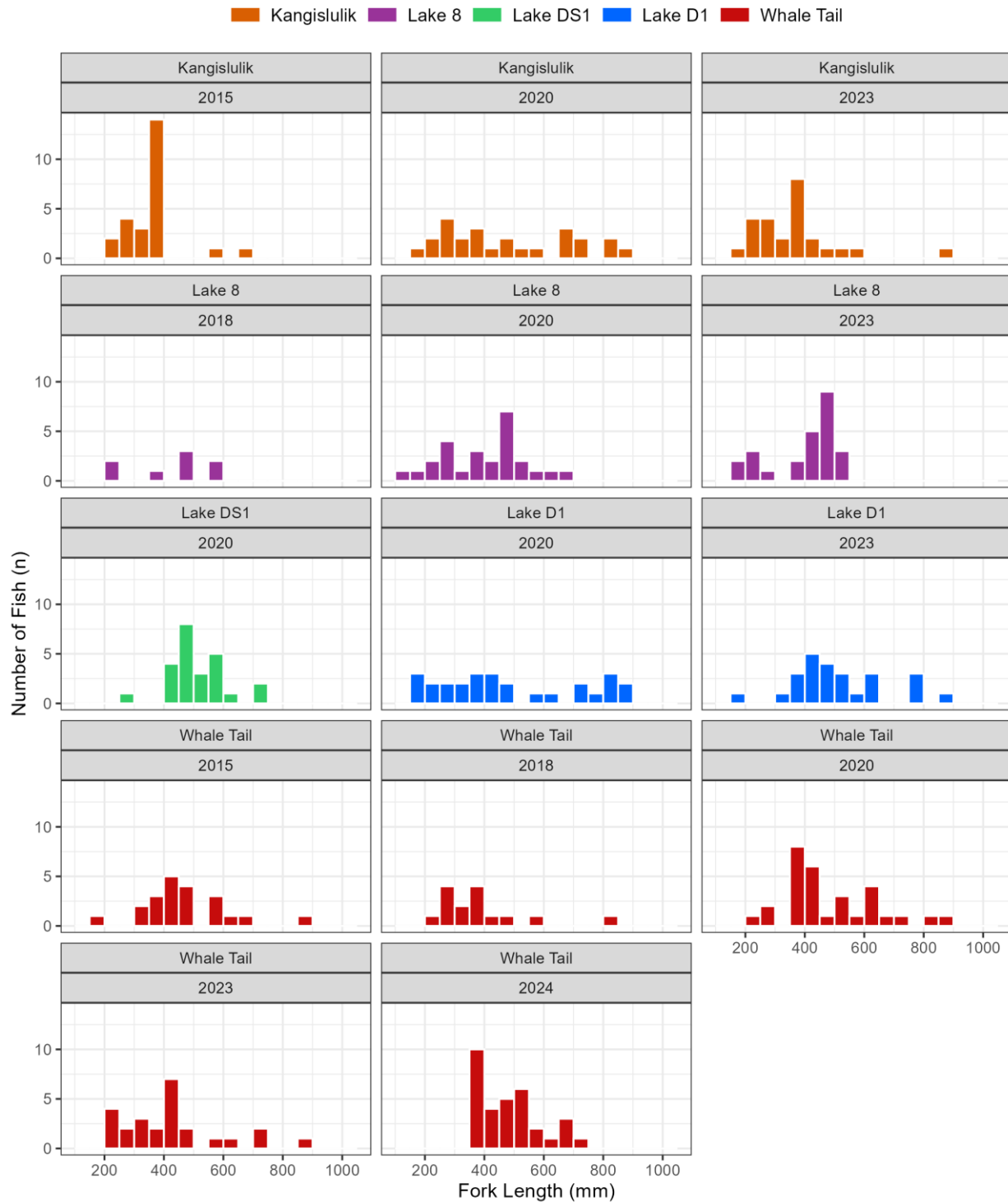
Figure 5-1. Length frequency distributions of Lake Trout in Whale Tail study area lakes since 2015.

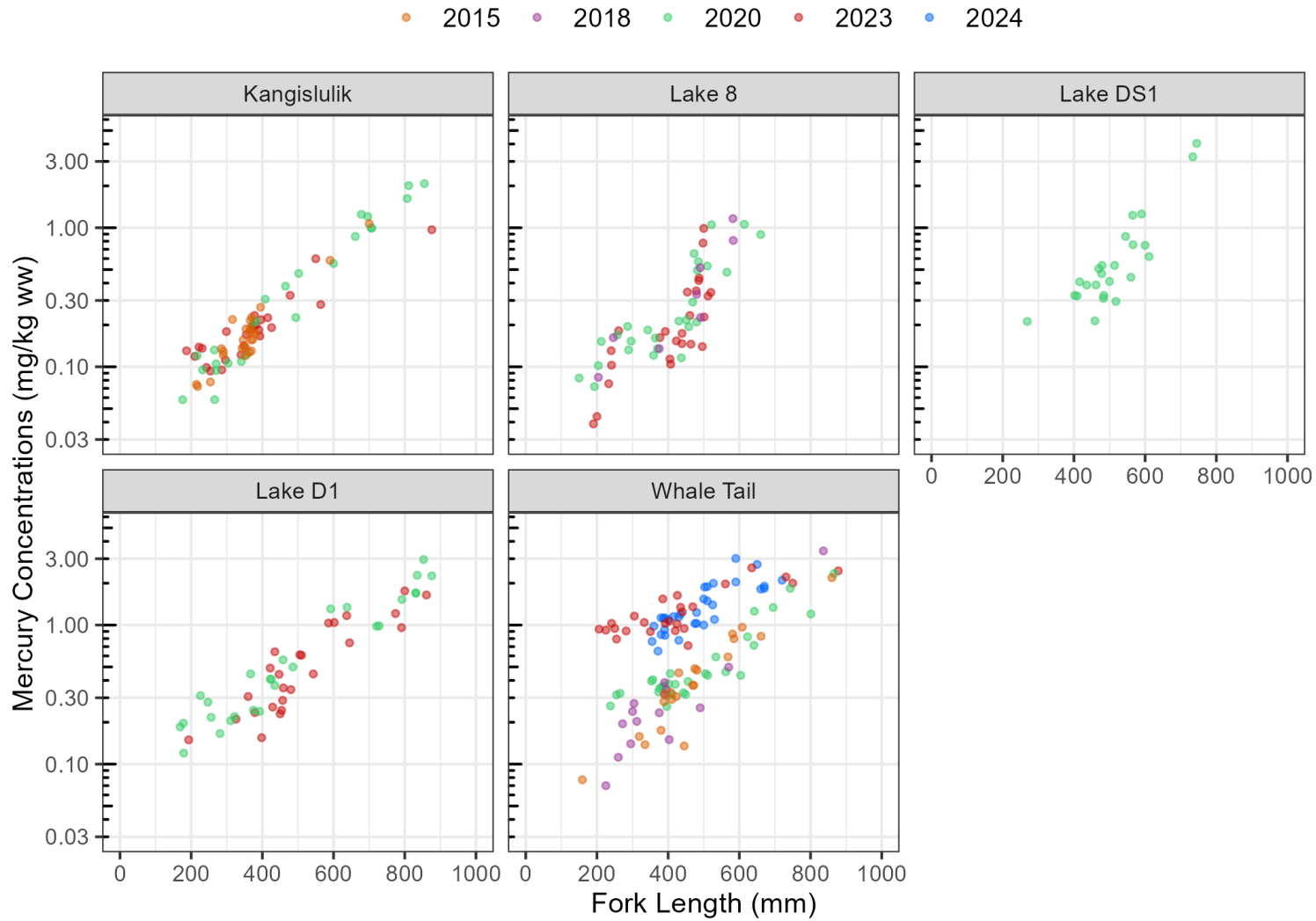
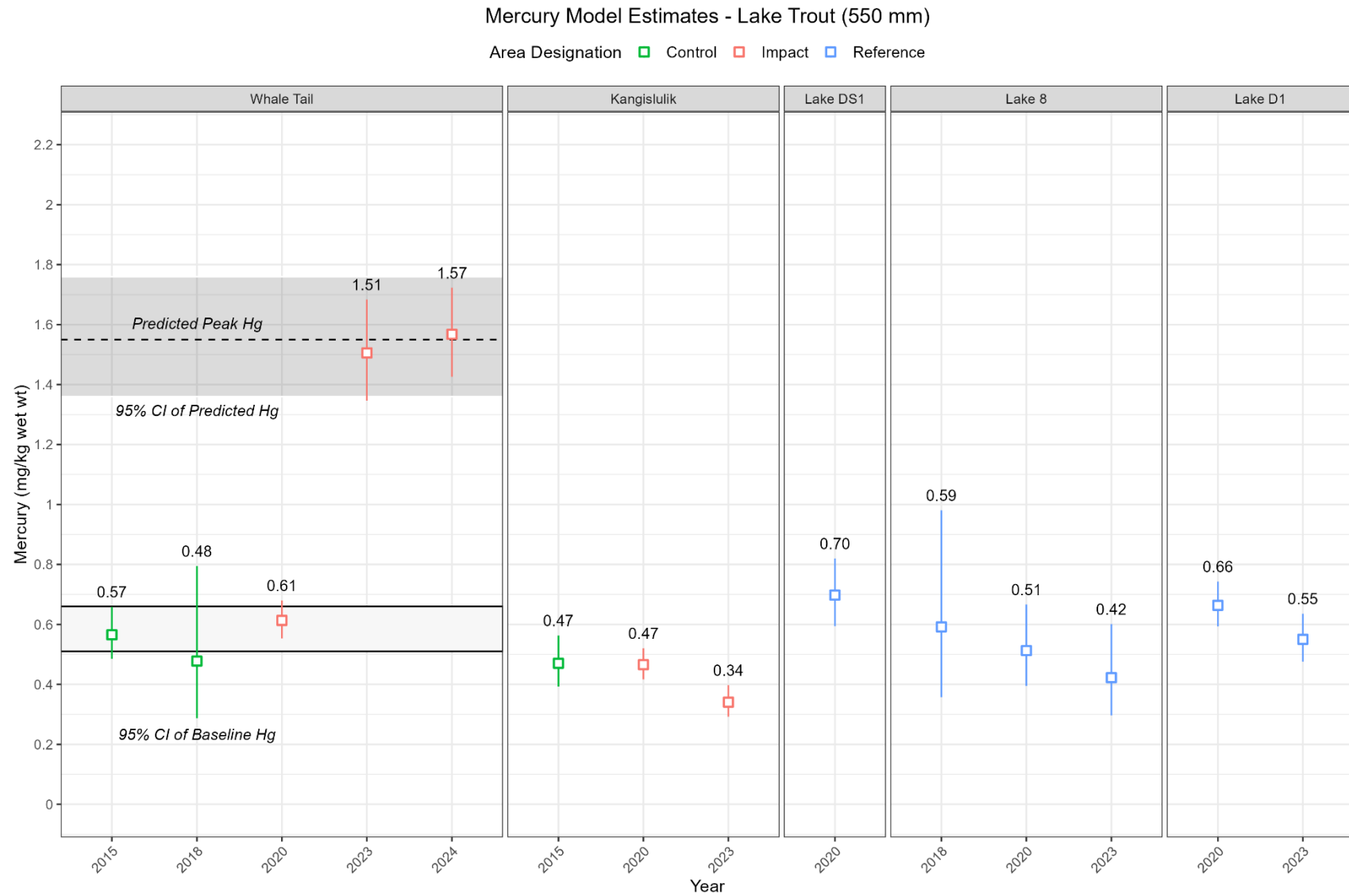
Figure 5-2. Key mercury relationships for Lake Trout in Whale Tail study area lakes since 2015.

Figure 5-3. Estimated tissue mercury concentrations for a 550 mm Lake Trout in Whale Tail area lakes since 2015.

5.8 Large-bodied Fish Summary

While not originally planned for 2024 (Azimuth, 2023b), Lake Trout sampling was conducted in the Impoundment to verify the 2023 results. This adaptive management effort aimed to continue monitoring mercury levels in Lake Trout, which increased to near the predicted peak mercury concentration in 2023. Size-adjusted concentration (550-mm fork length) was slightly higher in 2024 compared to the result obtained in 2023, suggesting that relative increases of mercury concentrations in Lake Trout have slowed down. The 2024 results were marginally higher than the predicted peak tissue mercury value for 550-mm Lake Trout, however, they remain below its upper confidence limit.

The MMP has committed to implementing further risk-based analyses if measured fish tissue mercury concentrations in the Impoundment exceed the predicted peak mercury concentration for Lake Trout (Azimuth, 2019).

No MMP-related risk management measures are required at this time. The next Lake Trout sampling event is planned for 2026 as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

6 SCOPE OF THE 2025 MMP

The core elements of the MMP are water, sediment, and large-bodied fish chemistry (Lake Trout). Small-bodied fish tissue chemistry is also included in the MMP which was initially part of a multi-year study investigating productivity within the Whale Tail Lake Impoundment by the University of Waterloo (2018–2021).

The primary objective of the MMP is to verify that mercury concentrations in Lake Trout are within or below the predictions¹² for the Whale Tail mine. The next large-bodied fish sampling event targeting Lake Trout is planned for 2026. Based on the 2024 results and the *Mercury Monitoring Plan* (Azimuth, 2023b) the components for the 2025 MMP sampling program are summarized in [Table 6-1](#).

¹² Predictions in the FEIS (Agnico Eagle, 2018) were originally presented in Azimuth 2017 and were updated in Azimuth 2019 to reflect changes to the proposed flooding duration of Whale Tail Lake (South Basin) as part of the proposed expansion activities for the Whale Tail mine.

Table 6-1. Monitoring components planned for the 2025 MMP.

Component		Impoundment			Downstream			Reference ¹	
		WTS	A20	A65	KAN	A76	DS1		
Core MMP Components	Water	✓	✓	✓	✓			✓	✓
	Sediment – Depositional*	✓	✓		✓	✓	✓	✓	✓
	Sediment – Inundation*								
	Lake Trout**								
Supplemental Studies	Small-Bodied Fish								

Notes:

1. Sampling includes at least two of the following reference areas: INUG, PDL, Lake 8, Lake 1, Lake B3, A44.

blue = baseline and reference areas (Control designation)

orange = post flooding (Impact designation).

* Grab samples will be collected and analyzed for total mercury in 2025. The next coring program to review trends in methylmercury in sediment from depositional zones and sediment from the inundation zone are planned for 2026.

**The next sampling event for Lake Trout is planned for 2026.

7 REFERENCES

- Agnico Eagle Mines Limited. 2021. Meadowbank Complex – 2020 Migratory Bird Protection Report. Prepared by Agnico Eagle. March 2021.
- Agnico Eagle. 2016. Whale Tail Pit Project - Meadowbank Mine Final Environmental Impact Statement and Type A Water Licence Amendments. Amendment/Reconsideration of the Project Certificate (No. 004/ File No.03MN107) and Amendment to the Type A Water Licence (No. 2AM-MEA1525). Submitted to the Nunavut Impact Review Board. June 2016.
- Arciszewski T., M.A. Gray, C. Hrenchuk, P.A. Cott, N.J. Mochnacz, and J.D. Reist. 2015. Fish Life history, diets, and habitat use in the Northwest Territories: freshwater sculpin species. Can. Manuscr. Rep. Fish. Aquat. Sci. 3066: vii + 41 p
- Azimuth. 2025. 2024 Core Receiving Environment Monitoring Program [In Prep]. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. March 2025.
- Azimuth. 2024. 2023 Core Receiving Environment Monitoring Program. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. March 2024.
- Azimuth. 2023. 2022 Core Receiving Environment Monitoring Program. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. March 2023.
- Azimuth. 2023b. Mercury Monitoring Plan: Whale Tail Mine. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. March 2023.
- Azimuth. 2022. 2021 Mercury Monitoring Program – Whale Tail Pit Project. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. March 2022.
- Azimuth. 2022b. 2021 Core Receiving Environment Monitoring Program. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. March 2022.
- Azimuth. 2022c. Core Receiving Environment Monitoring Program (CREMP) 2022 Plan Update. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. April 2022.
- Azimuth. 2021. 2020 Core Receiving Environment Monitoring Program. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. March 2021.
- Azimuth. 2020. 2019 Core Receiving Environment Monitoring Program, Meadowbank Mine and Whale Tail Project. Report prepared by Azimuth Consulting Group, Vancouver, BC for Agnico Eagle Mines Ltd., Baker Lake, NU. March 2020.
- Azimuth. 2019. Technical Memorandum: Whale Tail Permitting Support – Revised Predictions of Fish Mercury Concentrations in Whale Tail Lake (South Basin) FINAL. Prepared for Agnico Eagle Mines Ltd., Baker Lake, NU. August 2019.
- Azimuth. 2017. Whale Tail Pit Project: Predicted changes in fish mercury concentrations in the flooded area of Whale Tail Lake (South Basin). Report prepared for Agnico Eagle Mines Ltd., Baker Lake, NU. February 2017.

- Bilodeau, F., Therrien, J., and R. Schetagne. 2017. Intensity and duration of effects of impoundment on mercury levels in fishes of hydroelectric reservoirs in northern Québec (Canada). *Inland Waters*, 7(4), 493-503.
- Bloom, N. 1992. On the chemical form of mercury in edible fish and marine invertebrate tissue. *Canadian Journal of Fisheries and Aquatic Sciences* 49(5): 1010-1017.
- Bodaly, R. A., and R.J. Fudge. 1999. Uptake of mercury by fish in an experimental boreal reservoir. *Archives of Environmental Contamination and Toxicology*, 37, 103-109.
- Bodaly, R. A., Jansen, W. A., Majewski, A. R., Fudge, R. J. P., Strange, N. E., Derksen, A. J., and D.J Green. 2007. Postimpoundment time course of increased mercury concentrations in fish in hydroelectric reservoirs of northern Manitoba, Canada. *Archives of Environmental Contamination and Toxicology*, 53, 379-389.
- C. Portt and Associates. 2015. Whale Tail Pit 2015 Fish and Fish Habitat Field Investigations, AEM, Meadowbank Division. 58 pp. + appendices.
- C. Portt and Associates. 2018. Whale Tail Pit 2014-2016 fish and fish habitat field investigations: Agnico Eagle Mines Ltd. – Meadowbank Division. February 26, 2018.
- CCME (Canadian Council of Ministers of the Environment). 2003. Canadian water quality guidelines for the protection of aquatic life: Inorganic mercury and methylmercury. In: Canadian environmental quality guidelines, 1999. Canadian Council of Ministers of the Environment, Winnipeg, MB.
- CCME (Canadian Council of Ministers of the Environment). 1999. Canadian sediment quality guidelines for the protection of aquatic life: Mercury. In Canadian environmental quality guidelines, 1999, Canadian Council of Ministers of the Environment, Winnipeg, MB.
- Golder Associates Ltd. 2019. Mine Site and Downstream Receiving Water Quality Predictions. Whale Tail Pit – Expansion Project. Report Submitted to Agnico Eagle Mines Ltd, Meadowbank Division, May 2019.
- Golder Associates Ltd. 2018. Final Environmental Impact Statement (FEIS) Addendum. Whale Tail Pit – Expansion Project. Submitted to Nunavut Impact Review Board. December 2018.
- Hall, B.D., V.S. Louis, K.R. Rolfhus, R.A. Bodaly, K.G. Beaty, M.J. Paterson, and K.P. Cherewyk. 2005. Impacts of reservoir creation on the biogeochemical cycling of methyl mercury and total mercury in boreal upland forests. *Ecosystems*, 8, 248-266.
- Health Canada. 2014. Guidelines for Canadian Drinking Water Quality – Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.
- United States Environmental Protection Agency (US EPA). 1996. Method 1669: Sampling ambient water for trace metals at EPA water quality criteria levels. U.S. EPA Office of Water, Washington D.C. 35 pp.
- United States Environmental Protection Agency (US EPA). 2007. Method 7473: Mercury in solids and solutions by thermal decomposition, amalgamation, and atomic absorption spectrophotometry. Revision 0. Washington, DC. 17 pp.

APPENDICES

APPENDIX A

WATER DATA

APPENDIX A1

2024 LABORATORY DATA

University of Western Ontario - Analytical Services

Marianna DiMauro
Agnico Eagle mine c/o Azimuth Consulting Group
218 - 2902 West Broadway
Vancouver, BC, V6K 2G8

Date of Receipt: August 26, 2024
Client COC: n/a
Report ID: 2024-08-006

Via email: mdimauro@azimuthgroup.ca; imcivor@azimuthgroup.ca; efranz@azimuthgroup.ca;
meadowbank.environment@agnicoeagle.com

CERTIFICATE OF ANALYSIS

Sample type & number of samples: 16 water samples;

The following analytical analyses were requested: 16 Unfiltered THg (water); 16 Filtered THg (water); 16 Unfiltered MeHg (water); 16 Filtered MeHg (water).

TM.0811 THg (Tekran model 2600) Water

1. R^2 : > 0.9975
2. IPR & OPR avg: 100% & 99%
3. Recovery QCS avg: 95%
4. Recovery MS & MSD avg: 98% & 96%
5. RPD in Sample Duplicates avg: 7%
6. RPD in MS & MSD avg: 2%
7. MDL: 0.053 ng/L
8. MRL: 0.160 ng/L
9. Method Blank avg: <MDL
10. IPR recovery SD avg: 3%

TM.0812.A MeHg (Tekran model 2700) Water

1. R^2 : > 0.9950
2. IPR & OPR avg: 96% & 98%
3. Recovery QCS avg: 97%
4. Recovery MS & MSD avg: 93% & 96%
5. RPD in Sample Duplicates avg: 5%
6. RPD in MS & MSD avg: 3%
7. MDL: 0.007 ng/L
8. MRL: 0.022 ng/L
9. Method Blank avg: <MDL
10. IPR recovery SD avg: 3%

ACRONYMS:

R^2 : Coefficient of determination, **QCS**: Quality control sample, **MS**: Matrix spike, **MSD**: Matrix spike duplicate, **RPD**: Relative percentage difference, **IPR & OPR**: Initial & on-going precision and recovery, **MDL**: Method detection limit, **MRL**: Method reporting limit, **MB**: Method blank, **SD**: Standard deviation.

Notes: Calculations for MDL and MRL have been revised to comply with the EPA MDL revision 2 (EPA 821-R-16-006 - Dec 2016). Reporting limit is set to MRL. Please contact the lab if further information is required. Summarized QA/QC available upon request. All digits in the result are solely left to the discretion of the client.

COMMENTS REGARDING THIS REPORT: Samples were shipped on August 21st, but arrived on August 26th fully thawed. Client informed by email. Please see the data spreadsheets for comments on each analysis.

x 
Rod Sousa
Quality Control Specialist

Date: February 19, 2025

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Client Name: Marianna DiMauro
Agnico Eagle mine c/o Azimuth Consulting Group

Biotron WO#: 2024-08-006
Report date: February 19, 2025

Total Mercury (THg) - Analytical Results

Analytical Method: TM.0811

Sample ID	Date Collected	Lab ID #	Prep Code	Analysis Date	Parameter Code	Sample Volume (L)	Bik Cor. THg (ng)	Final Concentration (ng/L)
INUG-162	August 10, 2024	1F	Filtered	October 10, 2024	Total Hg	0.025	0.0034	<MRL
INUG-163	August 10, 2024	2F	Filtered	October 10, 2024	Total Hg	0.025	0.0041	0.16
PDL-127	August 11, 2024	3F	Filtered	October 10, 2024	Total Hg	0.025	0.0026	<MRL
PDL-128	August 11, 2024	4F	Filtered	October 10, 2024	Total Hg	0.025	0.0024	<MRL
A20-85	August 18, 2024	5F	Filtered	October 10, 2024	Total Hg	0.025	0.0047	0.19
A20-86	August 18, 2024	6F	Filtered	October 10, 2024	Total Hg	0.025	0.0044	0.18
WTS-93	August 14, 2024	7F	Filtered	October 10, 2024	Total Hg	0.025	0.0056	0.22
WTS-94	August 14, 2024	8F	Filtered	October 10, 2024	Total Hg	0.025	0.0050	0.20
MAM-93	August 15, 2024	9F	Filtered	October 10, 2024	Total Hg	0.025	0.0025	<MRL
MAM-94	August 15, 2024	10F	Filtered	October 10, 2024	Total Hg	0.025	0.0024	<MRL
A65-7	August 14, 2024	11F	Filtered	October 10, 2024	Total Hg	0.025	0.0083	0.33
A65-8	August 14, 2024	12F	Filtered	October 10, 2024	Total Hg	0.025	0.0080	0.32
AUG-DUP-1	August 11, 2024	13F	Filtered	October 10, 2024	Total Hg	0.025	0.0029	<MRL
AUG-DUP-2	August 14, 2024	14F	Filtered	October 10, 2024	Total Hg	0.025	0.0065	0.26
DI-Blank	August 18, 2024	15F	Filtered	October 10, 2024	Total Hg	0.025	<0.0013	<MDL
AUG-TB	N/A	16F	Filtered	October 10, 2024	Total Hg	0.025	<0.0013	<MDL
INUG-162	August 10, 2024	1U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0067	0.27
INUG-163	August 10, 2024	2U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0074	0.30
PDL-127	August 11, 2024	3U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0041	0.16
PDL-128	August 11, 2024	4U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0041	0.16
A20-85	August 18, 2024	5U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0090	0.36
A20-86	August 18, 2024	6U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0100	0.40
WTS-93	August 14, 2024	7U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0137	0.55
WTS-94	August 14, 2024	8U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0148	0.59
MAM-93	August 15, 2024	9U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0089	0.35
MAM-94	August 15, 2024	10U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0091	0.37
A65-7	August 14, 2024	11U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0215	0.86
A65-8	August 14, 2024	12U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0215	0.86
AUG-DUP-1	August 11, 2024	13U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0049	0.20
AUG-DUP-2	August 14, 2024	14U	Unfiltered	October 18, 2024	Total Hg	0.025	0.0154	0.62
DI-Blank	August 18, 2024	15U	Unfiltered	October 18, 2024	Total Hg	0.025	<0.0013	<MDL
AUG-TB	N/A	16U	Unfiltered	October 18, 2024	Total Hg	0.025	<0.0013	<MDL
MDL Abs. (ng)							0.0013	
MRL Abs. (ng)							0.0040	

Comments: (I) Values <MRL (highlighted in yellow) are solely left to the discretion of the client.
(II) MeHg higher than THg acceptability criteria is less than 35% of Relative Percent Difference.
(III) Samples were shipped on August 21st, but arrived on August 26th fully thawed. Client informed by email.

Legend:
<MRL (Method Reporting Limit)
<MDL (Method Detection Limit)

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Client Name: Marianna DiMauro
Agnico Eagle mine c/o Azimuth Consulting Group

Biotron WO#: 2024-08-006
Report date: February 19, 2025

Methyl Mercury (MeHg) - Analytical Results

Analytical Method: TM.0812.A - Water Samples

Sample ID	Date Collected	Lab ID #	Prep Code	Analysis Date	Parameter Code	Sample Vol (L)	Total MeHg (ng)	Final Concentration (ng/L)
INUG-162	August 10, 2024	1F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0004	<MRL
INUG-163	August 10, 2024	2F	Filtered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
PDL-127	August 11, 2024	3F	Filtered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
PDL-128	August 11, 2024	4F	Filtered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
A20-85	August 18, 2024	5F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0005	<MRL
A20-86	August 18, 2024	6F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0009	0.023
WTS-93	August 14, 2024	7F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0027	0.067
WTS-94	August 14, 2024	8F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0022	0.054
MAM-93	August 15, 2024	9F	Filtered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
MAM-94	August 15, 2024	10F	Filtered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
A65-7	August 14, 2024	11F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0024	0.060
A65-8	August 14, 2024	12F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0027	0.066
AUG-DUP-1	August 11, 2024	13F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0004	<MRL
AUG-DUP-2	August 14, 2024	14F	Filtered	February 3, 2025	Hg_Methyl	0.040	0.0036	0.089
DI-Blank	August 18, 2024	15F	Filtered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
AUG-TB	N/A	16F	Filtered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
INUG-162	August 10, 2024	1U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0003	<MRL
INUG-163	August 10, 2024	2U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0004	<MRL
PDL-127	August 11, 2024	3U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
PDL-128	August 11, 2024	4U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
A20-85	August 18, 2024	5U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0026	0.065
A20-86	August 18, 2024	6U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0033	0.082
WTS-93	August 14, 2024	7U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0087	0.218
WTS-94	August 14, 2024	8U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0097	0.242
MAM-93	August 15, 2024	9U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0005	<MRL
MAM-94	August 15, 2024	10U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0005	<MRL
A65-7	August 14, 2024	11U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0084	0.210
A65-8	August 14, 2024	12U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0077	0.191
AUG-DUP-1	August 11, 2024	13U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	0.0004	<MRL
AUG-DUP-2	August 14, 2024	14U	Unfiltered	February 4, 2025	Hg_Methyl	0.040	0.0107	0.268
DI-Blank	August 18, 2024	15U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
AUG-TB	N/A	16U	Unfiltered	February 3, 2025	Hg_Methyl	0.040	<0.0003	<MDL
MDL Abs. (ng)							0.0003	
MRL Abs. (ng)							0.0009	

Comments: (I) Values <MRL (highlighted in yellow) are solely left to the discretion of the client.
(II) MeHg higher than THg acceptability criteria is less than 35% of Relative Percent Difference.
(III) Samples were shipped on August 21st, but arrived on August 26th fully thawed. Client informed by email.

Legend:
 <MRL (Method Reporting Limit)
 <MDL (Method Detection Limit)

Marianna DiMauro
Agnico Eagle mine c/o Azimuth Consulting Group
218 - 2902 West Broadway
Vancouver, BC, V6K 2G8

Date of Receipt: September 26, 2024
Client COC: n/a
Report ID: 2024-09-003

Via email: mdimauro@azimuthgroup.ca; imcivor@azimuthgroup.ca; efranz@azimuthgroup.ca;
meadowbank.environment@agnicoeagle.com

CERTIFICATE OF ANALYSIS

Sample type & number of samples: 4 water samples;

The following analytical analyses were requested: 4 Unfiltered THg (water); 4 Filtered THg (water); 4 Unfiltered MeHg (water); 4 Filtered MeHg (water).

TM.0811 THg (Tekran model 2600) Water

1. R^2 : > 0.9975
2. IPR & OPR avg: 103% & 100%
3. Recovery QCS avg: 95%
4. Recovery MS & MSD avg: 98% & 99%
5. RPD in Sample Duplicates avg: 4%
6. RPD in MS & MSD avg: 2%
7. MDL: 0.053 ng/L
8. MRL: 0.160 ng/L
9. Method Blank avg: <MDL
10. IPR recovery SD avg: 3%

TM.0812.A MeHg (Tekran model 2700) Water

1. R^2 : > 0.9950
2. IPR & OPR avg: 102% & 99%
3. Recovery QCS avg: 96%
4. Recovery MS & MSD avg: 99% & 103%
5. RPD in Sample Duplicates avg: 1%
6. RPD in MS & MSD avg: 3%
7. MDL: 0.007 ng/L
8. MRL: 0.022 ng/L
9. Method Blank avg: <MDL
10. IPR recovery SD avg: 2%

ACRONYMS:

R^2 : Coefficient of determination, **QCS**: Quality control sample, **MS**: Matrix spike, **MSD**: Matrix spike duplicate, **RPD**: Relative percentage difference, **IPR & OPR**: Initial & on-going precision and recovery, **MDL**: Method detection limit, **MRL**: Method reporting limit, **MB**: Method blank, **SD**: Standard deviation.

Notes: Calculations for MDL and MRL have been revised to comply with the EPA MDL revision 2 (EPA 821-R-16-006 - Dec 2016). Reporting limit is set to MRL. Please contact the lab if further information is required. Summarized QA/QC available upon request. All digits in the result are solely left to the discretion of the client.

COMMENTS REGARDING THIS REPORT: This work order was submitted by the client as an experiment to assess the effect of delayed transportation on the results of WO2024-08-006 (received on August 26, 2024). Lab IDs no. 1 and 3 (dups "A") were treated as normal (i.e., samples were received frozen and kept frozen until ready for filtration and acid-preservation). Lab IDs no. 2 and 4 (dups "B") were left on the cooler from Sept. 24 to Sept. 29, 2024 to mimic the condition in which the samples from WO2024-08-006 were received. Please see the data spreadsheets for comments on each analysis.

x 
Rod Sousa
Quality Control Specialist

Date: February 19, 2025

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Client Name: Marianna DiMauro
Agnico Eagle mine c/o Azimuth Consulting Group

Biotron WO#: 2024-09-003
Report date: February 19, 2025

Total Mercury (THg) - Analytical Results

Analytical Method: TM.0811

Sample ID	Date Collected	Lab ID #	Prep Code	Analysis Date	Parameter Code	Sample Volume (L)	Blk Cor. THg (ng)	Final Concentration (ng/L)
WTS-A	September 17, 2024	1F	Filtered	February 6, 2025	Total Hg	0.025	0.0068	0.27
WTS-B	September 17, 2024	2F	Filtered	February 6, 2025	Total Hg	0.025	0.0070	0.28
A20-A	September 17, 2024	3F	Filtered	February 6, 2025	Total Hg	0.025	0.0050	0.20
A20-B	September 17, 2024	4F	Filtered	February 6, 2025	Total Hg	0.025	0.0056	0.22
WTS-A	September 17, 2024	1U	Unfiltered	February 6, 2025	Total Hg	0.025	0.0151	0.60
WTS-B	September 17, 2024	2U	Unfiltered	February 13, 2025	Total Hg	0.025	0.0147	0.59
A20-A	September 17, 2024	3U	Unfiltered	February 6, 2025	Total Hg	0.025	0.0110	0.44
A20-B	September 17, 2024	4U	Unfiltered	February 6, 2025	Total Hg	0.025	0.0119	0.48
MDL Abs. (ng)							0.0013	
MRL Abs. (ng)							0.0040	

Comments: (I) Values <MRL (highlighted in yellow) are solely left to the discretion of the client.
(II) MeHg higher than THg acceptability criteria is less than 35% of Relative Percent Difference.

(III) This work order was submitted by the client as an experiment to asses the effect of delayed transportation on the results of WO2024-08-006 (received on August 26, 2024). Lab IDs no. 1 and 3 (dups "A") were treated as normal (i.e., samples were received frozen and kept frozen until ready for filtration and acid-preservation). Lab IDs no. 2 and 4 (dups "B") were left on the cooler from Sept. 24 to Sept. 29, 2024 to mimic the condition in which the samples from WO2024-08-006 were received.

Legend:
 <MRL (Method Reporting Limit)
 <MDL (Method Detection Limit)

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Client Name: Marianna DiMauro
Agnico Eagle mine c/o Azimuth Consulting Group

Biotron WO#: 2024-09-003
Report date: February 19, 2025

Methyl Mercury (MeHg) - Analytical Results

Analytical Method: TM.0812.A - Water Samples

Sample ID	Date Collected	Lab ID #	Prep Code	Analysis Date	Parameter Code	Sample Vol (L)	Total MeHg (ng)	Final Concentration (ng/L)
WTS-A	September 17, 2024	1F	Filtered	February 11, 2025	Hg_Methyl	0.040	0.0040	0.099
WTS-B	September 17, 2024	2F	Filtered	February 4, 2025	Hg_Methyl	0.040	0.0042	0.106
A20-A	September 17, 2024	3F	Filtered	February 4, 2025	Hg_Methyl	0.040	0.0017	0.041
A20-B	September 17, 2024	4F	Filtered	February 4, 2025	Hg_Methyl	0.040	0.0021	0.053
WTS-A	September 17, 2024	1U	Unfiltered	February 4, 2025	Hg_Methyl	0.040	0.0091	0.228
WTS-B	September 17, 2024	2U	Unfiltered	February 4, 2025	Hg_Methyl	0.040	0.0092	0.230
A20-A	September 17, 2024	3U	Unfiltered	February 4, 2025	Hg_Methyl	0.040	0.0033	0.082
A20-B	September 17, 2024	4U	Unfiltered	February 4, 2025	Hg_Methyl	0.040	0.0040	0.100
MDL Abs. (ng)							0.0003	
MRL Abs. (ng)							0.0009	

Comments: (I) Values <MRL (highlighted in yellow) are solely left to the discretion of the client.
(II) MeHg higher than THg acceptability criteria is less than 35% of Relative Percent Difference.

(III) This work order was submitted by the client as an experiment to asses the effect of delayed transportation on the results of WO2024-08-006 (received on August 26, 2024). Lab IDs no. 1 and 3 (dups "A") were treated as normal (i.e., samples were received frozen and kept frozen until ready for filtration and acid-preservation). Lab IDs no. 2 and 4 (dups "B") were left on the cooler from Sept. 24 to Sept. 29, 2024 to mimic the condition in which the samples from WO2024-08-006 were received.

Legend:

<MRL (Method Reporting Limit)

<MDL (Method Detection Limit)

APPENDIX A2

SURFACE WATER MERCURY DATABASE AND QUALITY CONTROL

TABLES

Table A2-1. Total and methylmercury concentrations in unfiltered and filtered surface water samples collected for the Mercury Monitoring Program since 2016.	2
Table A2-2. Total and methylmercury concentrations in unfiltered and filtered surface water from paired samples collected in September 2024 to review the relative percent difference (RPD) between frozen (“A”) and thawed (“B”) samples.	9

Table A2-1. Total and methylmercury concentrations in unfiltered and filtered surface water samples collected for the Mercury Monitoring Program since 2016.

Note: Kangislulik Lake (KAN) previously referred to as Mammoth Lake (MAM).

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2016	17-Aug-16	L1817642	Azimuth	WTS-12	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	<0.50	0.5
2016	17-Aug-16	L1817642	Azimuth	WTS-12	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	<0.50	0.5
2016	17-Aug-16	L1817642	Azimuth	WTS-12	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	<0.050	0.05
2016	17-Aug-16	L1817642	Azimuth	WTS-12	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	<0.050	0.05
2017	28-Aug-17	L1985255	Azimuth	WTS-23	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	0.52	0.5
2017	28-Aug-17	L1985255	Azimuth	WTS-23	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	<0.50	0.5
2017	28-Aug-17	L1985255	Azimuth	WTS-23	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	<0.050	0.05
2017	28-Aug-17	L1985255	Azimuth	WTS-23	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	<0.050	0.05
2017	28-Aug-17	L1985255	Azimuth	MAM-23	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	<0.50	0.5
2017	28-Aug-17	L1985255	Azimuth	MAM-23	Kangislulik	Total Hg Filtered	ng/L	A	Surface	<0.50	0.5
2017	28-Aug-17	L1985255	Azimuth	MAM-23	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	<0.050	0.05
2017	28-Aug-17	L1985255	Azimuth	MAM-23	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.050	0.05
2017	14-Aug-17	L1981162	Azimuth	WTS-23	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	0.5	0.5
2017	14-Aug-17	L1981162	Azimuth	WTS-23	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	<0.50	0.5
2017	14-Aug-17	L1981162	Azimuth	WTS-23	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	<0.050	0.05
2017	14-Aug-17	L1981162	Azimuth	WTS-23	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	<0.050	0.05
2018	16-Aug-18	WO2019-02-008	UoW	WTL-WQ01	Whale Tail	Total Hg Unfiltered	ng/L	A	Surface	0.287	0.2
2018	16-Aug-18	WO2019-02-008	UoW	WTL-WQ01	Whale Tail	Total Hg Filtered	ng/L	A	Surface	0.321	0.2
2018	16-Aug-18	WO2019-02-008	UoW	WTL-WQ02	Whale Tail	Total Hg Unfiltered	ng/L	A	Surface	0.284	0.2
2018	16-Aug-18	WO2019-02-008	UoW	WTL-WQ02	Whale Tail	Total Hg Filtered	ng/L	A	Surface	0.246	0.2
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ01	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.337	0.2
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ01	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.428	0.2
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ02	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	<0.2	0.2
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ02	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.289	0.2
2018	17-Aug-18	WO2019-02-008	UoW	NEM-WQ01	Nemo	Total Hg Unfiltered	ng/L	A	Surface	0.419	0.2
2018	17-Aug-18	WO2019-02-008	UoW	NEM-WQ01	Nemo	Total Hg Filtered	ng/L	A	Surface	0.665	0.2
2018	17-Aug-18	WO2019-02-008	UoW	NEM-WQ02	Nemo	Total Hg Unfiltered	ng/L	A	Surface	0.352	0.2
2018	17-Aug-18	WO2019-02-008	UoW	NEM-WQ02	Nemo	Total Hg Filtered	ng/L	A	Surface	<0.2	0.2
2018	17-Aug-18	WO2019-02-008	UoW	A20-WQ01	A20	Total Hg Unfiltered	ng/L	A	Surface	0.498	0.2
2018	17-Aug-18	WO2019-02-008	UoW	A20-WQ01	A20	Total Hg Filtered	ng/L	A	Surface	<0.2	0.2
2018	17-Aug-18	WO2019-02-008	UoW	A20-WQ02	A20	Total Hg Unfiltered	ng/L	A	Surface	0.407	0.2
2018	17-Aug-18	WO2019-02-008	UoW	A20-WQ02	A20	Total Hg Filtered	ng/L	A	Surface	<0.2	0.2
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ01	A76	Total Hg Unfiltered	ng/L	A	Surface	<0.2	0.2
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ01	A76	Total Hg Filtered	ng/L	A	Surface	<0.2	0.2
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ02	A76	Total Hg Unfiltered	ng/L	A	Surface	<0.2	0.2
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ02	A76	Total Hg Filtered	ng/L	A	Surface	<0.2	0.2
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ02	A76	Total Hg Unfiltered	ng/L	B	Surface	0.381	0.2
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ02	A76	Total Hg Filtered	ng/L	B	Surface	<0.2	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A65-WQ01	A65	Total Hg Unfiltered	ng/L	A	Surface	0.364	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A65-WQ01	A65	Total Hg Filtered	ng/L	A	Surface	0.265	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A65-WQ02	A65	Total Hg Unfiltered	ng/L	A	Surface	0.361	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A65-WQ02	A65	Total Hg Filtered	ng/L	A	Surface	0.241	0.2
2018	21-Aug-18	WO2019-02-008	UoW	LK8-WQ01	Lake 8	Total Hg Unfiltered	ng/L	A	Surface	<0.2	0.2
2018	21-Aug-18	WO2019-02-008	UoW	LK8-WQ01	Lake 8	Total Hg Filtered	ng/L	A	Surface	0.241	0.2
2018	21-Aug-18	WO2019-02-008	UoW	LK8-WQ02	Lake 8	Total Hg Unfiltered	ng/L	A	Surface	<0.2	0.2
2018	21-Aug-18	WO2019-02-008	UoW	LK8-WQ02	Lake 8	Total Hg Filtered	ng/L	A	Surface	0.322	0.2
2018	16-Aug-18	WO2019-02-008	UoW	WTL-WQ01	Whale Tail	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	WTL-WQ01	Whale Tail	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	WTL-WQ02	Whale Tail	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	WTL-WQ02	Whale Tail	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ01	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ01	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ02	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	0.029	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ02	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	17-Aug-18	WO2019-02-008	UoW	NEM-WQ01	Nemo	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	17-Aug-18	WO2019-02-008	UoW	NEM-WQ01	Nemo	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	17-Aug-18	WO2019-02-008	UoW	NEM-WQ02	Nemo	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	17-Aug-18	WO2019-02-008	UoW	NEM-WQ02	Nemo	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	17-Aug-18	WO2019-02-008	UoW	A20-WQ01	A20	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	17-Aug-18	WO2019-02-008	UoW	A20-WQ01	A20	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	17-Aug-18	WO2019-02-008	UoW	A20-WQ02	A20	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	17-Aug-18	WO2019-02-008	UoW	A20-WQ02	A20	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ01	A76	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ01	A76	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ02	A76	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ02	A76	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ02	A76	MeHg Unfiltered	ng/L	B	Surface	<0.0225	0.0225
2018	18-Aug-18	WO2019-02-008	UoW	A76-WQ02	A76	MeHg Filtered	ng/L	B	Surface	<0.0225	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A65-WQ01	A65	MeHg Unfiltered	ng/L	A	Surface	0.027	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A65-WQ01	A65	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A65-WQ02	A65	MeHg Unfiltered	ng/L	A	Surface	0.035	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A65-WQ02	A65	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	21-Aug-18	WO2019-02-008	UoW	LK8-WQ01	Lake 8	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	21-Aug-18	WO2019-02-008	UoW	LK8-WQ01	Lake 8	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	21-Aug-18	WO2019-02-008	UoW	LK8-WQ02	Lake 8	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	21-Aug-18	WO2019-02-008	UoW	LK8-WQ02	Lake 8	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2020	12-Aug-20	WO2020-09-009	UoW	A65-WQ01	A65	Total Hg Unfiltered	ng/L	A	Surface	2.745	0.172
2020	12-Aug-20	WO2020-09-008	UoW	A65-WQ01	A65	Total Hg Filtered	ng/L	A	Surface	1.096	0.172
2020	12-Aug-20	WO2020-09-008	UoW	A65-WQ02	A65	Total Hg Unfiltered	ng/L	A	Surface	2.541	0.172
2020	12-Aug-20	WO2020-09-008	UoW	A65-WQ02	A65	Total Hg Filtered	ng/L	A	Surface	2.853	0.172
2020	12-Aug-20	WO2020-09-008	UoW	WTL-WQ01	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	1.573	0.172
2020	12-Aug-20	WO2020-09-008	UoW	WTL-WQ01	Whale Tail	Total Hg Filtered	ng/L	A	Surface	1.95	0.172
2020	12-Aug-20	WO2020-09-008	UoW	WTL-WQ01	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	B	Surface	1.341	0.172
2020	12-Aug-20	WO2020-09-008	UoW	WTL-WQ01	Whale Tail	Total Hg Filtered	ng/L	B	Surface	1.221	0.172
2020	12-Aug-20	WO2020-09-008	UoW	WTL-WQ02	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	2.951	0.172
2020	12-Aug-20	WO2020-09-008	UoW	WTL-WQ02	Whale Tail	Total Hg Filtered	ng/L	A	Surface	1.382	0.172
2020	14-Aug-20	WO2020-09-008	UoW	A20-WQ01	A20	Total Hg Unfiltered	ng/L	A	Surface	1.066	0.172
2020	14-Aug-20	WO2020-09-008	UoW	A20-WQ01	A20	Total Hg Filtered	ng/L	A	Surface	1.382	0.172

Table A2-1. Total and methylmercury concentrations in unfiltered and filtered surface water samples collected for the Mercury Monitoring Program since 2016.

Note: Kangislulik Lake (KAN) previously referred to as Mammoth Lake (MAM).

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2020	14-Aug-20	WO2020-09-008	UoW	A20-WQ01	A20	Total Hg Unfiltered	ng/L	B	Surface	2.395	0.172
2020	14-Aug-20	WO2020-09-008	UoW	A20-WQ01	A20	Total Hg Filtered	ng/L	B	Surface	1.803	0.172
2020	14-Aug-20	WO2020-09-008	UoW	A20-WQ02	A20	Total Hg Unfiltered	ng/L	A	Surface	2.003	0.172
2020	14-Aug-20	WO2020-09-008	UoW	A20-WQ02	A20	Total Hg Filtered	ng/L	A	Surface	1.561	0.172
2020	15-Aug-20	WO2020-09-008	UoW	MMT-WQ01	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	1.447	0.172
2020	15-Aug-20	WO2020-09-008	UoW	MMT-WQ01	Kangislulik	Total Hg Filtered	ng/L	A	Surface	1.109	0.172
2020	15-Aug-20	WO2020-09-008	UoW	MMT-WQ02	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.895	0.172
2020	15-Aug-20	WO2020-09-008	UoW	MMT-WQ02	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.969	0.172
2020	16-Aug-20	WO2020-09-008	UoW	A76-WQ01	A76	Total Hg Unfiltered	ng/L	A	Surface	0.879	0.172
2020	16-Aug-20	WO2020-09-008	UoW	A76-WQ01	A76	Total Hg Filtered	ng/L	A	Surface	0.901	0.172
2020	16-Aug-20	WO2020-09-008	UoW	A76-WQ02	A76	Total Hg Unfiltered	ng/L	A	Surface	0.829	0.172
2020	16-Aug-20	WO2020-09-008	UoW	A76-WQ02	A76	Total Hg Filtered	ng/L	A	Surface	0.785	0.172
2020	17-Aug-20	WO2020-09-008	UoW	DS1-WQ01	DS1	Total Hg Unfiltered	ng/L	A	Surface	1.256	0.172
2020	17-Aug-20	WO2020-09-008	UoW	DS1-WQ01	DS1	Total Hg Filtered	ng/L	A	Surface	1.188	0.172
2020	17-Aug-20	WO2020-09-008	UoW	DS1-WQ02	DS1	Total Hg Unfiltered	ng/L	A	Surface	1.198	0.172
2020	17-Aug-20	WO2020-09-008	UoW	DS1-WQ02	DS1	Total Hg Filtered	ng/L	A	Surface	1.122	0.172
2020	21-Aug-20	WO2020-09-008	UoW	INUG-124	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.579	0.172
2020	21-Aug-20	WO2020-09-008	UoW	INUG-124	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.727	0.172
2020	21-Aug-20	WO2020-09-008	UoW	INUG-125	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.484	0.172
2020	21-Aug-20	WO2020-09-008	UoW	INUG-125	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.797	0.172
2020	22-Aug-20	WO2020-09-008	UoW	PDL-89	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.467	0.172
2020	22-Aug-20	WO2020-09-008	UoW	PDL-89	Pipedream	Total Hg Filtered	ng/L	A	Surface	0.326	0.172
2020	22-Aug-20	WO2020-09-008	UoW	PDL-90	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.46	0.172
2020	22-Aug-20	WO2020-09-008	UoW	PDL-90	Pipedream	Total Hg Filtered	ng/L	A	Surface	0.412	0.172
2020	23-Aug-20	WO2020-09-008	UoW	LK1-23	Lake D1	Total Hg Unfiltered	ng/L	A	Surface	0.895	0.172
2020	23-Aug-20	WO2020-09-008	UoW	LK1-23	Lake D1	Total Hg Filtered	ng/L	A	Surface	1.031	0.172
2020	23-Aug-20	WO2020-09-008	UoW	LK1-24	Lake D1	Total Hg Unfiltered	ng/L	A	Surface	0.517	0.172
2020	23-Aug-20	WO2020-09-008	UoW	LK1-24	Lake D1	Total Hg Filtered	ng/L	A	Surface	1.288	0.172
2020	23-Aug-20	WO2020-09-008	UoW	LK8-WQ01	Lake 8	Total Hg Unfiltered	ng/L	A	Surface	0.986	0.172
2020	23-Aug-20	WO2020-09-008	UoW	LK8-WQ01	Lake 8	Total Hg Filtered	ng/L	A	Surface	0.843	0.172
2020	23-Aug-20	WO2020-09-008	UoW	LK8-WQ02	Lake 8	Total Hg Unfiltered	ng/L	A	Surface	0.907	0.172
2020	23-Aug-20	WO2020-09-008	UoW	LK8-WQ02	Lake 8	Total Hg Filtered	ng/L	A	Surface	0.757	0.172
2020	23-Aug-20	WO2020-09-008	UoW	FIELD BLANK	FIELD BLANK	Total Hg Unfiltered	ng/L	A	Surface	0.23	0.172
2020	23-Aug-20	WO2020-09-008	UoW	FIELD BLANK	FIELD BLANK	Total Hg Filtered	ng/L	A	Surface	0.461	0.172
2020	29-Aug-20	WO2020-09-008	UoW	B3-WQ01	B3	Total Hg Unfiltered	ng/L	A	Surface	0.369	0.172
2020	29-Aug-20	WO2020-09-008	UoW	B3-WQ01	B3	Total Hg Filtered	ng/L	A	Surface	0.401	0.172
2020	29-Aug-20	WO2020-09-008	UoW	B3-WQ02	B3	Total Hg Unfiltered	ng/L	A	Surface	0.451	0.172
2020	29-Aug-20	WO2020-09-008	UoW	B3-WQ02	B3	Total Hg Filtered	ng/L	A	Surface	0.412	0.172
2020	29-Jun-20	WO2020-09-008	UoW	TRAVEL BLANK	TRAVEL BLANK	Total Hg Unfiltered	ng/L	A	Surface	<0.172	0.172
2020	12-Aug-20	WO2020-09-009	UoW	A65-WQ01	A65	MeHg Unfiltered	ng/L	A	Surface	0.24	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	A65-WQ01	A65	MeHg Filtered	ng/L	A	Surface	0.208	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	A65-WQ02	A65	MeHg Unfiltered	ng/L	A	Surface	0.212	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	A65-WQ02	A65	MeHg Filtered	ng/L	A	Surface	0.127	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	WTL-WQ01	Whale Tail	MeHg Unfiltered	ng/L	A	Surface	0.43	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	WTL-WQ01	Whale Tail	MeHg Filtered	ng/L	A	Surface	0.331	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	WTL-WQ01	Whale Tail	MeHg Unfiltered	ng/L	B	Surface	0.447	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	WTL-WQ01	Whale Tail	MeHg Filtered	ng/L	B	Surface	0.328	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	WTL-WQ02	Whale Tail	MeHg Unfiltered	ng/L	A	Surface	0.499	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	WTL-WQ02	Whale Tail	MeHg Filtered	ng/L	A	Surface	0.426	0.0178
2020	14-Aug-20	WO2020-09-009	UoW	A20-WQ01	A20	MeHg Unfiltered	ng/L	A	Surface	0.081	0.0178
2020	14-Aug-20	WO2020-09-009	UoW	A20-WQ01	A20	MeHg Filtered	ng/L	A	Surface	0.052	0.0178
2020	14-Aug-20	WO2020-09-009	UoW	A20-WQ01	A20	MeHg Unfiltered	ng/L	B	Surface	0.098	0.0178
2020	14-Aug-20	WO2020-09-009	UoW	A20-WQ01	A20	MeHg Filtered	ng/L	B	Surface	0.058	0.0178
2020	14-Aug-20	WO2020-09-009	UoW	A20-WQ02	A20	MeHg Unfiltered	ng/L	A	Surface	0.084	0.0178
2020	14-Aug-20	WO2020-09-009	UoW	A20-WQ02	A20	MeHg Filtered	ng/L	A	Surface	0.058	0.0178
2020	15-Aug-20	WO2020-09-009	UoW	MMT-WQ01	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	0.042	0.0178
2020	15-Aug-20	WO2020-09-009	UoW	MMT-WQ01	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	15-Aug-20	WO2020-09-009	UoW	MMT-WQ02	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	15-Aug-20	WO2020-09-009	UoW	MMT-WQ02	Kangislulik	MeHg Filtered	ng/L	A	Surface	0.018	0.0178
2020	16-Aug-20	WO2020-09-009	UoW	A76-WQ01	A76	MeHg Unfiltered	ng/L	A	Surface	0.027	0.0178
2020	16-Aug-20	WO2020-09-009	UoW	A76-WQ01	A76	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	16-Aug-20	WO2020-09-009	UoW	A76-WQ02	A76	MeHg Unfiltered	ng/L	A	Surface	0.019	0.0178
2020	16-Aug-20	WO2020-09-009	UoW	A76-WQ02	A76	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	17-Aug-20	WO2020-09-009	UoW	DS1-WQ01	DS1	MeHg Unfiltered	ng/L	A	Surface	0.067	0.0178
2020	17-Aug-20	WO2020-09-009	UoW	DS1-WQ01	DS1	MeHg Filtered	ng/L	A	Surface	0.037	0.0178
2020	17-Aug-20	WO2020-09-009	UoW	DS1-WQ02	DS1	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	17-Aug-20	WO2020-09-009	UoW	DS1-WQ02	DS1	MeHg Filtered	ng/L	A	Surface	0.022	0.0178
2020	21-Aug-20	WO2020-09-009	UoW	INUG-124	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	0.029	0.0178
2020	21-Aug-20	WO2020-09-009	UoW	INUG-124	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	0.018	0.0178
2020	21-Aug-20	WO2020-09-009	UoW	INUG-125	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	21-Aug-20	WO2020-09-009	UoW	INUG-125	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	22-Aug-20	WO2020-09-009	UoW	PDL-89	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	22-Aug-20	WO2020-09-009	UoW	PDL-89	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	22-Aug-20	WO2020-09-009	UoW	PDL-90	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	22-Aug-20	WO2020-09-009	UoW	PDL-90	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	LK1-23	Lake D1	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	LK1-23	Lake D1	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	LK1-24	Lake D1	MeHg Unfiltered	ng/L	A	Surface	0.029	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	LK1-24	Lake D1	MeHg Filtered	ng/L	A	Surface	0.023	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	LK8-WQ01	Lake 8	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	LK8-WQ01	Lake 8	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	LK8-WQ02	Lake 8	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	LK8-WQ02	Lake 8	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	FIELD BLANK	FIELD BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	23-Aug-20	WO2020-09-009	UoW	FIELD BLANK	FIELD BLANK	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	29-Aug-20	WO2020-09-009	UoW	B3-WQ01	B3	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	29-Aug-20	WO2020-09-009	UoW	B3-WQ01	B3	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	29-Aug-20	WO2020-09-009	UoW	B3-WQ02	B3	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178

Table A2-1. Total and methylmercury concentrations in unfiltered and filtered surface water samples collected for the Mercury Monitoring Program since 2016.

Note: Kangislulik Lake (KAN) previously referred to as Mammoth Lake (MAM).

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2020	29-Aug-20	WO2020-09-009	UoW	B3-WQ02	B3	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	29-Jun-20	WO2020-09-009	UoW	TRAVEL BLANK	TRAVEL BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	NEM-WQ01	Nemo	Total Hg Unfiltered	ng/L	A	Surface	0.89	0.172
2020	12-Aug-20	WO2020-09-009	UoW	NEM-WQ01	Nemo	Total Hg Filtered	ng/L	A	Surface	0.867	0.172
2020	12-Aug-20	WO2020-09-009	UoW	NEM-WQ02	Nemo	Total Hg Unfiltered	ng/L	A	Surface	1.011	0.172
2020	12-Aug-20	WO2020-09-009	UoW	NEM-WQ02	Nemo	Total Hg Filtered	ng/L	A	Surface	0.57	0.172
2020	29-Aug-20	WO2020-09-009	UoW	A44-WQ01	A44	Total Hg Unfiltered	ng/L	A	Surface	1.078	0.172
2020	29-Aug-20	WO2020-09-009	UoW	A44-WQ01	A44	Total Hg Filtered	ng/L	A	Surface	1.274	0.172
2020	29-Aug-20	WO2020-09-009	UoW	A44-WQ02	A44	Total Hg Unfiltered	ng/L	A	Surface	1.08	0.172
2020	29-Aug-20	WO2020-09-009	UoW	A44-WQ02	A44	Total Hg Filtered	ng/L	A	Surface	1.107	0.172
2020	12-Aug-20	WO2020-09-009	UoW	NEM-WQ01	Nemo	MeHg Unfiltered	ng/L	A	Surface	0.024	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	NEM-WQ01	Nemo	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	NEM-WQ02	Nemo	MeHg Unfiltered	ng/L	A	Surface	0.031	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	NEM-WQ02	Nemo	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	29-Aug-20	WO2020-09-009	UoW	A44-WQ01	A44	MeHg Unfiltered	ng/L	A	Surface	0.019	0.0178
2020	29-Aug-20	WO2020-09-009	UoW	A44-WQ01	A44	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	29-Aug-20	WO2020-09-009	UoW	A44-WQ02	A44	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	29-Aug-20	WO2020-09-009	UoW	A44-WQ02	A44	MeHg Filtered	ng/L	A	Surface	0.021	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-M	A20 Profile	Total Hg Filtered	ng/L	A	10m	0.379	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-M	A20 Profile	Total Hg Filtered	ng/L	B	10m	0.381	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-S	A20 Profile	Total Hg Filtered	ng/L	A	3m	0.367	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-S	A20 Profile	Total Hg Filtered	ng/L	B	3m	0.376	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-D	A20 Profile	Total Hg Filtered	ng/L	A	17m	0.456	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-FB	FIELD BLANK	Total Hg Filtered	ng/L	A	Surface	<0.172	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-TB	TRAVEL BLANK	Total Hg Filtered	ng/L	A	Surface	<0.172	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-M	A20 Profile	Total Hg Unfiltered	ng/L	A	10m	0.738	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-M	A20 Profile	Total Hg Unfiltered	ng/L	B	10m	0.719	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-S	A20 Profile	Total Hg Unfiltered	ng/L	A	3m	0.683	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-S	A20 Profile	Total Hg Unfiltered	ng/L	B	3m	0.694	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-D	A20 Profile	Total Hg Unfiltered	ng/L	A	17m	0.714	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-FB	FIELD BLANK	Total Hg Unfiltered	ng/L	A	Surface	<0.172	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-TB	TRAVEL BLANK	Total Hg Unfiltered	ng/L	A	Surface	<0.172	0.172
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-M	A20 Profile	MeHg Filtered	ng/L	A	10m	0.039	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-M	A20 Profile	MeHg Filtered	ng/L	B	10m	0.059	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-S	A20 Profile	MeHg Filtered	ng/L	A	3m	0.056	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-S	A20 Profile	MeHg Filtered	ng/L	B	3m	0.063	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-D	A20 Profile	MeHg Filtered	ng/L	A	17m	0.067	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-FB	FIELD BLANK	MeHg Filtered	ng/L	A	Surface	<MRL	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-TB	TRAVEL BLANK	MeHg Filtered	ng/L	A	Surface	<MRL	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-M	A20 Profile	MeHg Unfiltered	ng/L	A	10m	0.072	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-M	A20 Profile	MeHg Unfiltered	ng/L	B	10m	0.082	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-S	A20 Profile	MeHg Unfiltered	ng/L	A	3m	0.067	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-S	A20 Profile	MeHg Unfiltered	ng/L	B	3m	0.08	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-D	A20 Profile	MeHg Unfiltered	ng/L	A	17m	0.086	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-FB	FIELD BLANK	MeHg Unfiltered	ng/L	A	Surface	<MRL	0.0178
2020	02-Dec-20	WO2020-12-005	Agnico	A20-MMP-TB	TRAVEL BLANK	MeHg Unfiltered	ng/L	A	Surface	<MRL	0.0178
2021	07-Aug-21	WO2021-08-009	Azimuth	A76-55	A76	Total Hg Unfiltered	ng/L	A	Surface	0.39	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	A76-56	A76	Total Hg Unfiltered	ng/L	A	Surface	0.37	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-63	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.54	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.48	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	A20-57	A20	Total Hg Unfiltered	ng/L	A	Surface	1.14	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	A20-58	A20	Total Hg Unfiltered	ng/L	A	Surface	0.94	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	1.03	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-64	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	1.10	0.01679
2021	11-Aug-21	WO2021-08-009	Azimuth	LK1-31	Lake D1	Total Hg Unfiltered	ng/L	A	Surface	0.67	0.01679
2021	11-Aug-21	WO2021-08-009	Azimuth	LK1-32	Lake D1	Total Hg Unfiltered	ng/L	A	Surface	0.61	0.01679
2021	13-Aug-21	WO2021-08-009	Azimuth	A44-1	A44	Total Hg Unfiltered	ng/L	A	Surface	1.05	0.01679
2021	13-Aug-21	WO2021-08-009	Azimuth	A44-2	A44	Total Hg Unfiltered	ng/L	A	Surface	1.12	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Kangislulik	Total Hg Unfiltered	ng/L	B	Surface	0.53	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	B	Surface	1.01	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	DI-1	FIELD BLANK	Total Hg Unfiltered	ng/L	A	Surface	<0.01679	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	B3-1	B3	Total Hg Unfiltered	ng/L	A	Surface	0.39	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	B3-2	B3	Total Hg Unfiltered	ng/L	A	Surface	0.47	0.01679
2021	12-Aug-21	WO2021-08-009	Azimuth	A65-1	A65	Total Hg Unfiltered	ng/L	A	Surface	1.57	0.01679
2021	12-Aug-21	WO2021-08-009	Azimuth	A65-2	A65	Total Hg Unfiltered	ng/L	A	Surface	1.71	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	LK8-1	Lake 8	Total Hg Unfiltered	ng/L	A	Surface	0.38	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	LK8-2	Lake 8	Total Hg Unfiltered	ng/L	A	Surface	0.36	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	DS1-53	DS1	Total Hg Unfiltered	ng/L	A	Surface	0.89	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	DS1-54	DS1	Total Hg Unfiltered	ng/L	A	Surface	1.64	0.01679
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-99	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.28	0.01679
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-100	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.31	0.01679
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-134	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.63	0.01679
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-135	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.61	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	A76-55	A76	Total Hg Filtered	ng/L	A	Surface	<0.01679	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	A76-56	A76	Total Hg Filtered	ng/L	A	Surface	<0.01679	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-63	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.24	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.20	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	A20-57	A20	Total Hg Filtered	ng/L	A	Surface	0.41	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	A20-58	A20	Total Hg Filtered	ng/L	A	Surface	0.37	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.39	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-64	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.45	0.01679
2021	11-Aug-21	WO2021-08-009	Azimuth	LK1-31	Lake D1	Total Hg Filtered	ng/L	A	Surface	0.30	0.01679
2021	11-Aug-21	WO2021-08-009	Azimuth	LK1-32	Lake D1	Total Hg Filtered	ng/L	A	Surface	0.28	0.01679
2021	13-Aug-21	WO2021-08-009	Azimuth	A44-1	A44	Total Hg Filtered	ng/L	A	Surface	0.54	0.01679
2021	13-Aug-21	WO2021-08-009	Azimuth	A44-2	A44	Total Hg Filtered	ng/L	A	Surface	0.57	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Kangislulik	Total Hg Filtered	ng/L	B	Surface	0.26	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail - South Basin	Total Hg Filtered	ng/L	B	Surface	0.44	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	DI-1	FIELD BLANK	Total Hg Filtered	ng/L	A	Surface	<0.01679	0.01679

Table A2-1. Total and methylmercury concentrations in unfiltered and filtered surface water samples collected for the Mercury Monitoring Program since 2016.

Note: Kangislulik Lake (KAN) previously referred to as Mammoth Lake (MAM).

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2021	15-Aug-21	WO2021-08-009	Azimuth	B3-1	B3	Total Hg Filtered	ng/L	A	Surface	<0.01679	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	B3-2	B3	Total Hg Filtered	ng/L	A	Surface	0.20	0.01679
2021	12-Aug-21	WO2021-08-009	Azimuth	A65-1	A65	Total Hg Filtered	ng/L	A	Surface	0.77	0.01679
2021	12-Aug-21	WO2021-08-009	Azimuth	A65-2	A65	Total Hg Filtered	ng/L	A	Surface	0.83	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	LK8-1	Lake 8	Total Hg Filtered	ng/L	A	Surface	0.26	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	LK8-2	Lake 8	Total Hg Filtered	ng/L	A	Surface	0.22	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	DS1-53	DS1	Total Hg Filtered	ng/L	A	Surface	0.49	0.01679
2021	15-Aug-21	WO2021-08-009	Azimuth	DS1-54	DS1	Total Hg Filtered	ng/L	A	Surface	0.99	0.01679
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-99	Pipedream	Total Hg Filtered	ng/L	A	Surface	0.21	0.01679
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-100	Pipedream	Total Hg Filtered	ng/L	A	Surface	<0.01679	0.01679
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-134	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.349	0.01679
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-135	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.352	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	A76-55	A76	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	A76-56	A76	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-63	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Kangislulik	MeHg Filtered	ng/L	A	Surface	0.02	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	A20-57	A20	MeHg Filtered	ng/L	A	Surface	0.06	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	A20-58	A20	MeHg Filtered	ng/L	A	Surface	0.05	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.105	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-64	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.11	0.022
2021	11-Aug-21	WO2021-08-009	Azimuth	LK1-31	Lake D1	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	11-Aug-21	WO2021-08-009	Azimuth	LK1-32	Lake D1	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	13-Aug-21	WO2021-08-009	Azimuth	A44-1	A44	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	13-Aug-21	WO2021-08-009	Azimuth	A44-2	A44	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Kangislulik	MeHg Filtered	ng/L	B	Surface	0.025	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail - South Basin	MeHg Filtered	ng/L	B	Surface	0.12	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	DI-1	FIELD BLANK	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	B3-1	B3	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	B3-2	B3	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	12-Aug-21	WO2021-08-009	Azimuth	A65-1	A65	MeHg Filtered	ng/L	A	Surface	0.10	0.022
2021	12-Aug-21	WO2021-08-009	Azimuth	A65-2	A65	MeHg Filtered	ng/L	A	Surface	0.11	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	LK8-1	Lake 8	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	LK8-2	Lake 8	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	DS1-53	DS1	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	DS1-54	DS1	MeHg Filtered	ng/L	A	Surface	0.043	0.022
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-99	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-100	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-134	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-135	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	A76-55	A76	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	A76-56	A76	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-63	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	0.023	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	0.04	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	A20-57	A20	MeHg Unfiltered	ng/L	A	Surface	0.25	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	A20-58	A20	MeHg Unfiltered	ng/L	A	Surface	0.16	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.44	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-64	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.45	0.022
2021	11-Aug-21	WO2021-08-009	Azimuth	LK1-31	Lake D1	MeHg Unfiltered	ng/L	A	Surface	0.032	0.022
2021	11-Aug-21	WO2021-08-009	Azimuth	LK1-32	Lake D1	MeHg Unfiltered	ng/L	A	Surface	0.029	0.022
2021	13-Aug-21	WO2021-08-009	Azimuth	A44-1	A44	MeHg Unfiltered	ng/L	A	Surface	0.052	0.022
2021	13-Aug-21	WO2021-08-009	Azimuth	A44-2	A44	MeHg Unfiltered	ng/L	A	Surface	0.039	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Kangislulik	MeHg Unfiltered	ng/L	B	Surface	0.042	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail - South Basin	MeHg Unfiltered	ng/L	B	Surface	0.48	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	DI-1	FIELD BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	B3-1	B3	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	B3-2	B3	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	12-Aug-21	WO2021-08-009	Azimuth	A65-1	A65	MeHg Unfiltered	ng/L	A	Surface	0.30	0.022
2021	12-Aug-21	WO2021-08-009	Azimuth	A65-2	A65	MeHg Unfiltered	ng/L	A	Surface	0.30	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	LK8-1	Lake 8	MeHg Unfiltered	ng/L	A	Surface	0.08	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	LK8-2	Lake 8	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	DS1-53	DS1	MeHg Unfiltered	ng/L	A	Surface	0.03	0.022
2021	15-Aug-21	WO2021-08-009	Azimuth	DS1-54	DS1	MeHg Unfiltered	ng/L	A	Surface	0.08	0.022
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-99	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-100	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-134	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-135	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	0.02	0.022
2022	16-Aug-22	WO2022-08-006	Azimuth	DS1-63	DS1	Total Hg Unfiltered	ng/L	A	Surface	0.88	0.01679
2022	16-Aug-22	WO2022-08-006	Azimuth	DS1-64	DS1	Total Hg Unfiltered	ng/L	A	Surface	0.84	0.01679
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-145	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.58	0.01679
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-144	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.50	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-109	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.49	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-110	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.49	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-73	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	1.81	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-74	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	1.72	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-4	A44	Total Hg Unfiltered	ng/L	A	Surface	0.99	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-3	A44	Total Hg Unfiltered	ng/L	A	Surface	4.25	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-73	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.90	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-74	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.79	0.01679
2022	18-Aug-22	WO2022-08-006	Azimuth	B3-3	B3	Total Hg Unfiltered	ng/L	A	Surface	1.43	0.01679
2022	18-Aug-22	WO2022-08-006	Azimuth	B3-4	B3	Total Hg Unfiltered	ng/L	A	Surface	5.61	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A65-3	A65	Total Hg Unfiltered	ng/L	A	Surface	1.67	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A65-4	A65	Total Hg Unfiltered	ng/L	A	Surface	1.54	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	A20-67	A20	Total Hg Unfiltered	ng/L	A	Surface	1.26	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	A20-68	A20	Total Hg Unfiltered	ng/L	A	Surface	1.19	0.01679
2022	16-Aug-22	WO2022-08-006	Azimuth	A76-65	A76	Total Hg Unfiltered	ng/L	A	Surface	0.63	0.01679
2022	16-Aug-22	WO2022-08-006	Azimuth	A76-66	A76	Total Hg Unfiltered	ng/L	A	Surface	10.90	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	MAM-74	Kangislulik	Total Hg Unfiltered	ng/L	B	Surface	1.38	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-4	A44	Total Hg Unfiltered	ng/L	B	Surface	1.49	0.01679

Table A2-1. Total and methylmercury concentrations in unfiltered and filtered surface water samples collected for the Mercury Monitoring Program since 2016.

Note: Kangislulik Lake (KAN) previously referred to as Mammoth Lake (MAM).

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2022	22-Aug-22	WO2022-08-006	Azimuth	AUG-DI	DI BLANK	Total Hg Unfiltered	ng/L	A	Surface	0.32	0.01679
2022	22-Aug-22	WO2022-08-006	Azimuth	AUG-TB	TRAVEL BLANK	Total Hg Unfiltered	ng/L	A	Surface	0.17	0.01679
2022	16-Aug-22	WO2022-08-006	Azimuth	DS1-63	DS1	Total Hg Filtered	ng/L	A	Surface	0.30	0.01679
2022	16-Aug-22	WO2022-08-006	Azimuth	DS1-64	DS1	Total Hg Filtered	ng/L	A	Surface	0.48	0.01679
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-145	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.25	0.01679
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-144	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.28	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-109	Pipedream	Total Hg Filtered	ng/L	A	Surface	0.30	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-110	Pipedream	Total Hg Filtered	ng/L	A	Surface	0.26	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-73	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.60	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-74	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.46	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-4	A44	Total Hg Filtered	ng/L	A	Surface	0.41	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-3	A44	Total Hg Filtered	ng/L	A	Surface	0.59	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-73	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.31	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-74	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.39	0.01679
2022	18-Aug-22	WO2022-08-006	Azimuth	B3-3	B3	Total Hg Filtered	ng/L	A	Surface	0.39	0.01679
2022	18-Aug-22	WO2022-08-006	Azimuth	B3-4	B3	Total Hg Filtered	ng/L	A	Surface	1.74	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A65-3	A65	Total Hg Filtered	ng/L	A	Surface	0.45	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A65-4	A65	Total Hg Filtered	ng/L	A	Surface	0.41	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	A20-67	A20	Total Hg Filtered	ng/L	A	Surface	0.33	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	A20-68	A20	Total Hg Filtered	ng/L	A	Surface	0.31	0.01679
2022	16-Aug-22	WO2022-08-006	Azimuth	A76-65	A76	Total Hg Filtered	ng/L	A	Surface	0.17	0.01679
2022	16-Aug-22	WO2022-08-006	Azimuth	A76-66	A76	Total Hg Filtered	ng/L	A	Surface	2.44	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	MAM-74	Kangislulik	Total Hg Filtered	ng/L	B	Surface	0.34	0.01679
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-4	A44	Total Hg Filtered	ng/L	B	Surface	0.62	0.01679
2022	22-Aug-22	WO2022-08-006	Azimuth	AUG-DI	DI BLANK	Total Hg Filtered	ng/L	A	Surface	0.22	0.01679
2022	22-Aug-22	WO2022-08-006	Azimuth	AUG-TB	TRAVEL BLANK	Total Hg Filtered	ng/L	A	Surface	<0.01679	0.01679
2022	16-Aug-22	WO2022-08-006	Azimuth	DS1-63	DS1	MeHg Unfiltered	ng/L	A	Surface	0.04	0.0286
2022	16-Aug-22	WO2022-08-006	Azimuth	DS1-64	DS1	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-145	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-144	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-109	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-110	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-73	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.63	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-74	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.68	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-4	A44	MeHg Unfiltered	ng/L	A	Surface	0.03	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-3	A44	MeHg Unfiltered	ng/L	A	Surface	0.04	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-73	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	0.03	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-74	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	18-Aug-22	WO2022-08-006	Azimuth	B3-3	B3	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	18-Aug-22	WO2022-08-006	Azimuth	B3-4	B3	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A65-3	A65	MeHg Unfiltered	ng/L	A	Surface	0.30	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A65-4	A65	MeHg Unfiltered	ng/L	A	Surface	0.33	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	A20-67	A20	MeHg Unfiltered	ng/L	A	Surface	0.14	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	A20-68	A20	MeHg Unfiltered	ng/L	A	Surface	0.12	0.0286
2022	16-Aug-22	WO2022-08-006	Azimuth	A76-65	A76	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	16-Aug-22	WO2022-08-006	Azimuth	A76-66	A76	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	MAM-74	Kangislulik	MeHg Unfiltered	ng/L	B	Surface	<0.0286	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-4	A44	MeHg Unfiltered	ng/L	B	Surface	<0.0286	0.0286
2022	22-Aug-22	WO2022-08-006	Azimuth	AUG-DI	DI BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	22-Aug-22	WO2022-08-006	Azimuth	AUG-TB	TRAVEL BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	16-Aug-22	WO2022-08-006	Azimuth	DS1-63	DS1	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	16-Aug-22	WO2022-08-006	Azimuth	DS1-64	DS1	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-145	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-144	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-109	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-110	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-73	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.25	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-74	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.16	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-4	A44	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-3	A44	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-73	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-74	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	18-Aug-22	WO2022-08-006	Azimuth	B3-3	B3	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	18-Aug-22	WO2022-08-006	Azimuth	B3-4	B3	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A65-3	A65	MeHg Filtered	ng/L	A	Surface	0.09	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A65-4	A65	MeHg Filtered	ng/L	A	Surface	0.08	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	A20-67	A20	MeHg Filtered	ng/L	A	Surface	0.04	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	A20-68	A20	MeHg Filtered	ng/L	A	Surface	0.04	0.0286
2022	16-Aug-22	WO2022-08-006	Azimuth	A76-65	A76	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	16-Aug-22	WO2022-08-006	Azimuth	A76-66	A76	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	MAM-74	Kangislulik	MeHg Filtered	ng/L	B	Surface	<0.0286	0.0286
2022	19-Aug-22	WO2022-08-006	Azimuth	A44-4	A44	MeHg Filtered	ng/L	B	Surface	<0.0286	0.0286
2022	22-Aug-22	WO2022-08-006	Azimuth	AUG-DI	DI BLANK	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	22-Aug-22	WO2022-08-006	Azimuth	AUG-TB	TRAVEL BLANK	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-152	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.38	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-153	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.30	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-117	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	<0.1603	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-118	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.17	0.1603
2023	17-Aug-23	WO2023-08-012	Azimuth	DS1-71	DS1	Total Hg Unfiltered	ng/L	A	Surface	0.45	0.1603
2023	17-Aug-23	WO2023-08-012	Azimuth	DS1-72	DS1	Total Hg Unfiltered	ng/L	A	Surface	0.60	0.1603
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-81	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	0.99	0.1603
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-82	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	0.97	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-81	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.44	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.40	0.1603
2023	20-Aug-23	WO2023-08-012	Azimuth	A65-5	A65	Total Hg Unfiltered	ng/L	A	Surface	0.85	0.1603
2023	20-Aug-23	WO2023-08-012	Azimuth	A65-6	A65	Total Hg Unfiltered	ng/L	A	Surface	0.75	0.1603
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-75	A20	Total Hg Unfiltered	ng/L	A	Surface	0.49	0.1603
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-76	A20	Total Hg Unfiltered	ng/L	A	Surface	0.38	0.1603

Table A2-1. Total and methylmercury concentrations in unfiltered and filtered surface water samples collected for the Mercury Monitoring Program since 2016.

Note: Kangislulik Lake (KAN) previously referred to as Mammoth Lake (MAM).

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	Kangislulik	Total Hg Unfiltered	ng/L	B	Surface	0.33	0.1603
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-75	A20	Total Hg Unfiltered	ng/L	B	Surface	0.44	0.1603
2023	20-Aug-23	WO2023-08-012	Azimuth	DI-Blank	DI BLANK	Total Hg Unfiltered	ng/L	A	Surface	<0.1603	0.1603
2023	20-Aug-23	WO2023-08-012	Azimuth	AUG-TB	TRAVEL BLANK	Total Hg Unfiltered	ng/L	A	Surface	<0.1603	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-152	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.27	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-153	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.31	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-117	Pipedream	Total Hg Filtered	ng/L	A	Surface	<0.1603	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-118	Pipedream	Total Hg Filtered	ng/L	A	Surface	<0.1603	0.1603
2023	17-Aug-23	WO2023-08-012	Azimuth	DS1-71	DS1	Total Hg Filtered	ng/L	A	Surface	0.18	0.1603
2023	17-Aug-23	WO2023-08-012	Azimuth	DS1-72	DS1	Total Hg Filtered	ng/L	A	Surface	0.17	0.1603
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-81	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.38	0.1603
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-82	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.33	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-81	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.19	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	Kangislulik	Total Hg Filtered	ng/L	A	Surface	0.23	0.1603
2023	20-Aug-23	WO2023-08-012	Azimuth	A65-5	A65	Total Hg Filtered	ng/L	A	Surface	0.31	0.1603
2023	20-Aug-23	WO2023-08-012	Azimuth	A65-6	A65	Total Hg Filtered	ng/L	A	Surface	0.26	0.1603
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-75	A20	Total Hg Filtered	ng/L	A	Surface	0.22	0.1603
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-76	A20	Total Hg Filtered	ng/L	A	Surface	0.23	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	Kangislulik	Total Hg Filtered	ng/L	B	Surface	0.21	0.1603
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-75	A20	Total Hg Filtered	ng/L	B	Surface	0.40	0.1603
2023	20-Aug-23	WO2023-08-012	Azimuth	DI-Blank	DI BLANK	Total Hg Filtered	ng/L	A	Surface	<0.1603	0.1603
2023	20-Aug-23	WO2023-08-012	Azimuth	AUG-TB	TRAVEL BLANK	Total Hg Filtered	ng/L	A	Surface	<0.1603	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-152	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-153	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-117	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-118	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	17-Aug-23	WO2023-08-012	Azimuth	DS1-71	DS1	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	17-Aug-23	WO2023-08-012	Azimuth	DS1-72	DS1	MeHg Unfiltered	ng/L	A	Surface	0.06	0.0342
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-81	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.54	0.0342
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-82	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.56	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-81	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	0.05	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	20-Aug-23	WO2023-08-012	Azimuth	A65-5	A65	MeHg Unfiltered	ng/L	A	Surface	0.33	0.0342
2023	20-Aug-23	WO2023-08-012	Azimuth	A65-6	A65	MeHg Unfiltered	ng/L	A	Surface	0.24	0.0342
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-75	A20	MeHg Unfiltered	ng/L	A	Surface	0.12	0.0342
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-76	A20	MeHg Unfiltered	ng/L	A	Surface	0.09	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	Kangislulik	MeHg Unfiltered	ng/L	B	Surface	<0.0342	0.0342
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-75	A20	MeHg Unfiltered	ng/L	B	Surface	0.13	0.0342
2023	20-Aug-23	WO2023-08-012	Azimuth	DI-Blank	DI BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	20-Aug-23	WO2023-08-012	Azimuth	AUG-TB	TRAVEL BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-152	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-153	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-117	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-118	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	17-Aug-23	WO2023-08-012	Azimuth	DS1-71	DS1	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	17-Aug-23	WO2023-08-012	Azimuth	DS1-72	DS1	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-81	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.11	0.0342
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-82	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.11	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-81	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	20-Aug-23	WO2023-08-012	Azimuth	A65-5	A65	MeHg Filtered	ng/L	A	Surface	0.08	0.0342
2023	20-Aug-23	WO2023-08-012	Azimuth	A65-6	A65	MeHg Filtered	ng/L	A	Surface	0.07	0.0342
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-75	A20	MeHg Filtered	ng/L	A	Surface	0.05	0.0342
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-76	A20	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	Kangislulik	MeHg Filtered	ng/L	B	Surface	<0.0342	0.0342
2023	18-Aug-23	WO2023-08-012	Azimuth	A20-75	A20	MeHg Filtered	ng/L	B	Surface	<0.0342	0.0342
2023	20-Aug-23	WO2023-08-012	Azimuth	DI-Blank	DI BLANK	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	20-Aug-23	WO2023-08-012	Azimuth	AUG-TB	TRAVEL BLANK	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2024	10-Aug-24	WO2024-08-006	Azimuth	INUG-162	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	<0.16	0.16
2024	10-Aug-24	WO2024-08-006	Azimuth	INUG-163	Inuggugayualik	Total Hg Filtered	ng/L	A	Surface	0.165	0.16
2024	11-Aug-24	WO2024-08-006	Azimuth	PDL-127	Pipedream	Total Hg Filtered	ng/L	A	Surface	<0.16	0.16
2024	11-Aug-24	WO2024-08-006	Azimuth	PDL-128	Pipedream	Total Hg Filtered	ng/L	A	Surface	<0.16	0.16
2024	18-Aug-24	WO2024-08-006	Azimuth	A20-85	A20	Total Hg Filtered	ng/L	A	Surface	0.187	0.16
2024	18-Aug-24	WO2024-08-006	Azimuth	A20-86	A20	Total Hg Filtered	ng/L	A	Surface	0.177	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	WTS-93	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.224	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	WTS-94	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.198	0.16
2024	15-Aug-24	WO2024-08-006	Azimuth	MAM-93	Kangislulik	Total Hg Filtered	ng/L	A	Surface	<0.16	0.16
2024	15-Aug-24	WO2024-08-006	Azimuth	MAM-94	Kangislulik	Total Hg Filtered	ng/L	A	Surface	<0.16	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	A65-7	A65	Total Hg Filtered	ng/L	A	Surface	0.332	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	A65-8	A65	Total Hg Filtered	ng/L	A	Surface	0.319	0.16
2024	11-Aug-24	WO2024-08-006	Azimuth	AUG-DUP-1	DUPLICATE	Total Hg Filtered	ng/L	B	Surface	<0.16	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	AUG-DUP-2	DUPLICATE	Total Hg Filtered	ng/L	C	Surface	0.258	0.16
2024	18-Aug-24	WO2024-08-006	Azimuth	DI-Blank	DI BLANK	Total Hg Filtered	ng/L	A	Surface	<0.16	0.16
2024	18-Aug-24	WO2024-08-006	Azimuth	AUG-TB	TRAVEL BLANK	Total Hg Filtered	ng/L	A	Surface	<0.16	0.16
2024	10-Aug-24	WO2024-08-006	Azimuth	INUG-162	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.267	0.16
2024	10-Aug-24	WO2024-08-006	Azimuth	INUG-163	Inuggugayualik	Total Hg Unfiltered	ng/L	A	Surface	0.297	0.16
2024	11-Aug-24	WO2024-08-006	Azimuth	PDL-127	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.164	0.16
2024	11-Aug-24	WO2024-08-006	Azimuth	PDL-128	Pipedream	Total Hg Unfiltered	ng/L	A	Surface	0.162	0.16
2024	18-Aug-24	WO2024-08-006	Azimuth	A20-85	A20	Total Hg Unfiltered	ng/L	A	Surface	0.361	0.16
2024	18-Aug-24	WO2024-08-006	Azimuth	A20-86	A20	Total Hg Unfiltered	ng/L	A	Surface	0.401	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	WTS-93	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	0.549	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	WTS-94	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	0.594	0.16
2024	15-Aug-24	WO2024-08-006	Azimuth	MAM-93	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.354	0.16
2024	15-Aug-24	WO2024-08-006	Azimuth	MAM-94	Kangislulik	Total Hg Unfiltered	ng/L	A	Surface	0.365	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	A65-7	A65	Total Hg Unfiltered	ng/L	A	Surface	0.860	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	A65-8	A65	Total Hg Unfiltered	ng/L	A	Surface	0.859	0.16
2024	11-Aug-24	WO2024-08-006	Azimuth	AUG-DUP-1	DUPLICATE	Total Hg Unfiltered	ng/L	B	Surface	0.196	0.16
2024	14-Aug-24	WO2024-08-006	Azimuth	AUG-DUP-2	DUPLICATE	Total Hg Unfiltered	ng/L	C	Surface	0.618	0.16

Table A2-1. Total and methylmercury concentrations in unfiltered and filtered surface water samples collected for the Mercury Monitoring Program since 2016.

Note: Kangislulik Lake (KAN) previously referred to as Mammoth Lake (MAM).

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2024	18-Aug-24	WO2024-08-006	Azimuth	DI-Blank	DI BLANK	Total Hg Unfiltered	ng/L	A	Surface	<0.16	0.16
2024	18-Aug-24	WO2024-08-006	Azimuth	AUG-TB	TRAVEL BLANK	Total Hg Unfiltered	ng/L	A	Surface	<0.16	0.16
2024	10-Aug-24	WO2024-08-006	Azimuth	INUG-162	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	10-Aug-24	WO2024-08-006	Azimuth	INUG-163	Inuggugayualik	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	11-Aug-24	WO2024-08-006	Azimuth	PDL-127	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	11-Aug-24	WO2024-08-006	Azimuth	PDL-128	Pipedream	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	18-Aug-24	WO2024-08-006	Azimuth	A20-85	A20	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	18-Aug-24	WO2024-08-006	Azimuth	A20-86	A20	MeHg Filtered	ng/L	A	Surface	0.0231	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	WTS-93	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.0672	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	WTS-94	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.0539	0.022
2024	15-Aug-24	WO2024-08-006	Azimuth	MAM-93	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	15-Aug-24	WO2024-08-006	Azimuth	MAM-94	Kangislulik	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	A65-7	A65	MeHg Filtered	ng/L	A	Surface	0.0595	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	A65-8	A65	MeHg Filtered	ng/L	A	Surface	0.0663	0.022
2024	11-Aug-24	WO2024-08-006	Azimuth	AUG-DUP-1	DUPLICATE	MeHg Filtered	ng/L	B	Surface	<0.022	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	AUG-DUP-2	DUPLICATE	MeHg Filtered	ng/L	C	Surface	0.0894	0.022
2024	18-Aug-24	WO2024-08-006	Azimuth	DI-Blank	DI BLANK	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	18-Aug-24	WO2024-08-006	Azimuth	AUG-TB	TRAVEL BLANK	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2024	10-Aug-24	WO2024-08-006	Azimuth	INUG-162	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2024	10-Aug-24	WO2024-08-006	Azimuth	INUG-163	Inuggugayualik	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2024	11-Aug-24	WO2024-08-006	Azimuth	PDL-127	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2024	11-Aug-24	WO2024-08-006	Azimuth	PDL-128	Pipedream	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2024	18-Aug-24	WO2024-08-006	Azimuth	A20-85	A20	MeHg Unfiltered	ng/L	A	Surface	0.0655	0.022
2024	18-Aug-24	WO2024-08-006	Azimuth	A20-86	A20	MeHg Unfiltered	ng/L	A	Surface	0.0822	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	WTS-93	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.2177	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	WTS-94	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.2418	0.022
2024	15-Aug-24	WO2024-08-006	Azimuth	MAM-93	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2024	15-Aug-24	WO2024-08-006	Azimuth	MAM-94	Kangislulik	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	A65-7	A65	MeHg Unfiltered	ng/L	A	Surface	0.2096	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	A65-8	A65	MeHg Unfiltered	ng/L	A	Surface	0.1914	0.022
2024	11-Aug-24	WO2024-08-006	Azimuth	AUG-DUP-1	DUPLICATE	MeHg Unfiltered	ng/L	B	Surface	<0.022	0.022
2024	14-Aug-24	WO2024-08-006	Azimuth	AUG-DUP-2	DUPLICATE	MeHg Unfiltered	ng/L	C	Surface	0.2676	0.022
2024	18-Aug-24	WO2024-08-006	Azimuth	DI-Blank	DI BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2024	18-Aug-24	WO2024-08-006	Azimuth	AUG-TB	TRAVEL BLANK	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2024	17-Sep-24	WO2024-09-003	Azimuth	WTS-A	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.274	0.16
2024	17-Sep-24	WO2024-09-003	Azimuth	WTS-B	Whale Tail - South Basin	Total Hg Filtered	ng/L	A	Surface	0.281	0.16
2024	17-Sep-24	WO2024-09-003	Azimuth	A20-A	A20	Total Hg Filtered	ng/L	A	Surface	0.201	0.16
2024	17-Sep-24	WO2024-09-003	Azimuth	A20-B	A20	Total Hg Filtered	ng/L	A	Surface	0.222	0.16
2024	17-Sep-24	WO2024-09-003	Azimuth	WTS-A	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	0.603	0.16
2024	17-Sep-24	WO2024-09-003	Azimuth	WTS-B	Whale Tail - South Basin	Total Hg Unfiltered	ng/L	A	Surface	0.590	0.16
2024	17-Sep-24	WO2024-09-003	Azimuth	A20-A	A20	Total Hg Unfiltered	ng/L	A	Surface	0.439	0.16
2024	17-Sep-24	WO2024-09-003	Azimuth	A20-B	A20	Total Hg Unfiltered	ng/L	A	Surface	0.476	0.16
2024	17-Sep-24	WO2024-09-003	Azimuth	WTS-A	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.099	0.022
2024	17-Sep-24	WO2024-09-003	Azimuth	WTS-B	Whale Tail - South Basin	MeHg Filtered	ng/L	A	Surface	0.106	0.022
2024	17-Sep-24	WO2024-09-003	Azimuth	A20-A	A20	MeHg Filtered	ng/L	A	Surface	0.041	0.022
2024	17-Sep-24	WO2024-09-003	Azimuth	A20-B	A20	MeHg Filtered	ng/L	A	Surface	0.053	0.022
2024	17-Sep-24	WO2024-09-003	Azimuth	WTS-A	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.228	0.022
2024	17-Sep-24	WO2024-09-003	Azimuth	WTS-B	Whale Tail - South Basin	MeHg Unfiltered	ng/L	A	Surface	0.230	0.022
2024	17-Sep-24	WO2024-09-003	Azimuth	A20-A	A20	MeHg Unfiltered	ng/L	A	Surface	0.082	0.022
2024	17-Sep-24	WO2024-09-003	Azimuth	A20-B	A20	MeHg Unfiltered	ng/L	A	Surface	0.100	0.022

Appendix A2:

Table A2-2. Total and methylmercury concentrations in unfiltered and filtered surface water from paired samples collected in September 2024 to review the relative percent difference (RPD) between frozen ("A") and thawed ("B") samples.

Parameter	Preparation	Concentration (ng/L)		RPD	Concentration (ng/L)		RPD
		WTS-A	WTS-B		A20-A	A20-B	
Total Hg	Filtered	0.27	0.28	3%	0.20	0.22	10%
	Unfiltered	0.60	0.59	2%	0.44	0.48	8%
MeHg	Filtered	0.10	0.11	7%	0.04	0.05	25%
	Unfiltered	0.23	0.23	1%	0.08	0.10	20%

Notes:

Samples "A" were treated as normal (i.e., samples received frozen and kept frozen until ready for filtration and preservation).
Samples "B" were left in the cooler from September 24 to 29, 2024 to match the conditions of the August 2024 samples.

APPENDIX B

SEDIMENT DATA

APPENDIX B1

SEDIMENT MERCURY DATABASE

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2017.**Notes:**

dw = dry weight; "-" = Not analyzed.

¹ Kangistulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2016	WTS-1	WTS	grab	0	5	12-Aug-16	0.079	0.00059	0.0050	0.00005	mg/kg dw	
2016	WTS-2	WTS	grab	0	5	12-Aug-16	0.068	0.00033	0.0050	0.00005	mg/kg dw	
2016	WTS-3	WTS	grab	0	5	12-Aug-16	0.082	0.00100	0.0050	0.00005	mg/kg dw	
2016	WTS-4	WTS	grab	0	5	12-Aug-16	0.068	0.00046	0.0050	0.00005	mg/kg dw	
2016	WTS-5	WTS	grab	0	5	12-Aug-16	0.093	0.00061	0.0050	0.00005	mg/kg dw	
2016	PDL-1	PDL	grab	0	5	06-Aug-16	0.010	-	0.0050	-	mg/kg dw	
2016	PDL-2	PDL	grab	0	5	06-Aug-16	0.015	-	0.0050	-	mg/kg dw	
2016	PDL-3	PDL	grab	0	5	06-Aug-16	0.011	-	0.0050	-	mg/kg dw	
2016	PDL-4	PDL	grab	0	5	06-Aug-16	0.012	-	0.0050	-	mg/kg dw	
2016	PDL-5	PDL	grab	0	5	06-Aug-16	0.0098	-	0.0050	-	mg/kg dw	
2016	INUG-1	INUG	grab	0	5	07-Aug-16	0.024	-	0.0050	-	mg/kg dw	
2016	INUG-2	INUG	grab	0	5	07-Aug-16	0.030	-	0.0050	-	mg/kg dw	
2016	INUG-3	INUG	grab	0	5	07-Aug-16	0.023	-	0.0050	-	mg/kg dw	
2016	INUG-4	INUG	grab	0	5	07-Aug-16	0.029	-	0.0050	-	mg/kg dw	
2016	INUG-5	INUG	grab	0	5	07-Aug-16	0.027	-	0.0050	-	mg/kg dw	
2016	MAM-1	KAN	grab	0	5	14-Aug-16	0.094	-	0.0050	-	mg/kg dw	
2016	MAM-2	KAN	grab	0	5	14-Aug-16	0.097	-	0.0050	-	mg/kg dw	
2016	MAM-3	KAN	grab	0	5	14-Aug-16	0.12	-	0.0050	-	mg/kg dw	
2016	MAM-4	KAN	grab	0	5	14-Aug-16	0.10	-	0.0050	-	mg/kg dw	
2016	MAM-5	KAN	grab	0	5	14-Aug-16	0.039	-	0.0050	-	mg/kg dw	
2016	A20-1	A20	grab	0	5	14-Aug-16	0.054	-	0.0050	-	mg/kg dw	
2016	A20-2	A20	grab	0	5	14-Aug-16	0.048	-	0.0050	-	mg/kg dw	
2016	A20-3	A20	grab	0	5	14-Aug-16	0.061	-	0.0050	-	mg/kg dw	
2016	A20-4	A20	grab	0	5	14-Aug-16	0.062	-	0.0050	-	mg/kg dw	
2016	A20-5	A20	grab	0	5	14-Aug-16	0.051	-	0.0050	-	mg/kg dw	
2016	DS1-1	DS1	grab	0	5	16-Aug-16	0.070	-	0.0050	-	mg/kg dw	
2016	DS1-2	DS1	grab	0	5	16-Aug-16	0.068	-	0.0050	-	mg/kg dw	
2016	DS1-3	DS1	grab	0	5	16-Aug-16	0.077	-	0.0050	-	mg/kg dw	
2016	DS1-4	DS1	grab	0	5	16-Aug-16	0.053	-	0.0050	-	mg/kg dw	
2016	DS1-5	DS1	grab	0	5	16-Aug-16	0.059	-	0.0050	-	mg/kg dw	
2016	NEM-1	NEM	grab	0	5	13-Aug-16	0.017	-	0.0050	-	mg/kg dw	
2016	NEM-2	NEM	grab	0	5	13-Aug-16	0.035	-	0.0050	-	mg/kg dw	
2016	NEM-3	NEM	grab	0	5	13-Aug-16	0.030	-	0.0050	-	mg/kg dw	
2016	NEM-4	NEM	grab	0	5	13-Aug-16	0.029	-	0.0050	-	mg/kg dw	
2016	NEM-5	NEM	grab	0	5	13-Aug-16	0.029	-	0.0050	-	mg/kg dw	
2016	A76-1	A76	grab	0	5	15-Aug-16	0.041	-	0.0050	-	mg/kg dw	
2016	A76-2	A76	grab	0	5	15-Aug-16	0.047	-	0.0050	-	mg/kg dw	
2016	A76-3	A76	grab	0	5	15-Aug-16	0.056	-	0.0050	-	mg/kg dw	
2016	A76-4	A76	grab	0	5	15-Aug-16	0.047	-	0.0050	-	mg/kg dw	
2016	A76-5	A76	grab	0	5	15-Aug-16	0.039	-	0.0050	-	mg/kg dw	
2017	WTS-1	WTS	grab	0	5	12-Aug-17	0.089	-	0.0050	-	mg/kg dw	
2017	WTS-2	WTS	grab	0	5	12-Aug-17	0.053	-	0.0050	-	mg/kg dw	
2017	WTS-3	WTS	grab	0	5	12-Aug-17	0.072	-	0.0050	-	mg/kg dw	
2017	WTS-4	WTS	grab	0	5	12-Aug-17	0.066	-	0.0050	-	mg/kg dw	
2017	WTS-5	WTS	grab	0	5	12-Aug-17	0.057	-	0.0050	-	mg/kg dw	
2017	A20-1	A20	grab	0	5	16-Aug-17	0.055	-	0.0050	-	mg/kg dw	
2017	A20-2	A20	grab	0	5	16-Aug-17	0.055	-	0.0050	-	mg/kg dw	
2017	A20-3	A20	grab	0	5	16-Aug-17	0.044	-	0.0050	-	mg/kg dw	
2017	A20-4	A20	grab	0	5	16-Aug-17	0.11	-	0.0050	-	mg/kg dw	
2017	A20-5	A20	grab	0	5	16-Aug-17	0.059	-	0.0050	-	mg/kg dw	
2017	MAM-1	KAN	grab	0	5	17-Aug-17	0.085	-	0.0050	-	mg/kg dw	
2017	MAM-2	KAN	grab	0	5	17-Aug-17	0.088	-	0.0050	-	mg/kg dw	
2017	MAM-3	KAN	grab	0	5	17-Aug-17	0.082	-	0.0050	-	mg/kg dw	
2017	MAM-4	KAN	grab	0	5	17-Aug-17	0.10	-	0.0050	-	mg/kg dw	
2017	MAM-5	KAN	grab	0	5	17-Aug-17	0.090	-	0.0050	-	mg/kg dw	
2017	DS1-1	DS1	grab	0	5	18-Aug-17	0.13	-	0.0050	-	mg/kg dw	
2017	DS1-2	DS1	grab	0	5	18-Aug-17	0.12	-	0.0050	-	mg/kg dw	
2017	DS1-3	DS1	grab	0	5	18-Aug-17	0.13	-	0.0050	-	mg/kg dw	
2017	DS1-4	DS1	grab	0	5	18-Aug-17	0.12	-	0.0050	-	mg/kg dw	
2017	DS1-5	DS1	grab	0	5	18-Aug-17	0.12	-	0.0050	-	mg/kg dw	
2017	PDL-1	PDL	grab	0	5	24-Aug-17	0.014	-	0.0050	-	mg/kg dw	
2017	PDL-2	PDL	grab	0	5	24-Aug-17	0.011	-	0.0050	-	mg/kg dw	
2017	PDL-3	PDL	grab	0	5	24-Aug-17	0.020	-	0.0050	-	mg/kg dw	
2017	PDL-4	PDL	grab	0	5	24-Aug-17	0.012	-	0.0050	-	mg/kg dw	
2017	PDL-5	PDL	grab	0	5	24-Aug-17	0.013	-	0.0050	-	mg/kg dw	
2017	INUG-1	INUG	grab	0	5	25-Aug-17	0.032	-	0.0050	-	mg/kg dw	
2017	INUG-2	INUG	grab	0	5	25-Aug-17	0.024	-	0.0050	-	mg/kg dw	
2017	INUG-3	INUG	grab	0	5	25-Aug-17	0.036	-	0.0050	-	mg/kg dw	
2017	INUG-4	INUG	grab	0	5	25-Aug-17	0.032	-	0.0050	-	mg/kg dw	
2017	INUG-5	INUG	grab	0	5	25-Aug-17	0.035	-	0.0050	-	mg/kg dw	
2017	NEM-1	NEM	grab	0	5	15-Aug-17	0.046	-	0.0050	-	mg/kg dw	
2017	NEM-2	NEM	grab	0	5	15-Aug-17	0.059	-	0.0050	-	mg/kg dw	
2017	NEM-3	NEM	grab	0	5	15-Aug-17	0.061	-	0.0050	-	mg/kg dw	
2017	NEM-4	NEM	grab	0	5	15-Aug-17	0.069	-	0.0050	-	mg/kg dw	
2017	NEM-5	NEM	grab	0	5	15-Aug-17	0.032	-	0.0050	-	mg/kg dw	
2017	WTS-SC-1	WTS	core	0	1.5	15-Aug-17	0.069	0.0010	0.0050	0.00005	mg/kg dw	
2017	WTS-SC-5	WTS	core	0	1.5	15-Aug-17	0.096	0.0011	0.0050	0.00005	mg/kg dw	
2017	WTS-SC-9	WTS	core	0	1.5	15-Aug-17	0.081	0.0011	0.0050	0.00005	mg/kg dw	
2017	WTS-SC-1	WTS	core	0	1.5	15-Aug-17	0.073	-	0.0050	-	mg/kg dw	
2017	WTS-SC-2	WTS	core	0	1.5	14-Aug-17	0.092	-	0.0050	-	mg/kg dw	
2017	WTS-SC-3	WTS	core	0	1.5	14-Aug-17	0.079	-	0.0050	-	mg/kg dw	
2017	WTS-SC-4	WTS	core	0	1.5	15-Aug-17	0.070	-	0.0050	-	mg/kg dw	
2017	WTS-SC-5	WTS	core	0	1.5	15-Aug-17	0.10	-	0.0050	-	mg/kg dw	
2017	WTS-SC-6	WTS	core	0	1.5	15-Aug-17	0.069	-	0.0050	-	mg/kg dw	
2017	WTS-SC-7	WTS	core	0	1.5	15-Aug-17	0.065	-	0.0050	-	mg/kg dw	
2017	WTS-SC-8	WTS	core	0	1.5	15-Aug-17	0.063	-	0.0050	-	mg/kg dw	
2017	WTS-SC-9	WTS	core	0	1.5	15-Aug-17	0.081	-	0.0050	-	mg/kg dw	
2017	WTS-SC-10	WTS	core	0	1.5	15-Aug-17	0.085	-	0.0050	-	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2017.**Notes:**

dw = dry weight; "-" = Not analyzed.

¹ Kangisuluk Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2017	NEM-SC-1	NEM	core	0	1.5	15-Aug-17	0.028	-	0.0050	-	mg/kg dw	
2017	NEM-SC-3	NEM	core	0	1.5	15-Aug-17	0.014	-	0.0050	-	mg/kg dw	
2017	NEM-SC-4	NEM	core	0	1.5	15-Aug-17	0.036	-	0.0050	-	mg/kg dw	
2017	NEM-SC-5	NEM	core	0	1.5	15-Aug-17	0.031	-	0.0050	-	mg/kg dw	
2017	NEM-SC-6	NEM	core	0	1.5	15-Aug-17	0.019	-	0.0050	-	mg/kg dw	
2017	NEM-SC-7	NEM	core	0	1.5	15-Aug-17	0.031	-	0.0050	-	mg/kg dw	
2017	NEM-SC-8	NEM	core	0	1.5	15-Aug-17	0.017	-	0.0050	-	mg/kg dw	
2017	NEM-SC-9	NEM	core	0	1.5	15-Aug-17	0.035	-	0.0050	-	mg/kg dw	
2017	NEM-SC-10	NEM	core	0	1.5	15-Aug-17	0.033	-	0.0050	-	mg/kg dw	
2017	NEM-SC-2	NEM	core	0	1.5	15-Aug-17	0.028	-	0.0050	-	mg/kg dw	
2017	A20-SC-1	A20	core	0	1.5	16-Aug-17	0.036	-	0.0050	-	mg/kg dw	
2017	A20-SC-2	A20	core	0	1.5	16-Aug-17	0.058	-	0.0050	-	mg/kg dw	
2017	A20-SC-3	A20	core	0	1.5	16-Aug-17	0.039	-	0.0050	-	mg/kg dw	
2017	A20-SC-4	A20	core	0	1.5	16-Aug-17	0.036	-	0.0050	-	mg/kg dw	
2017	A20-SC-5	A20	core	0	1.5	16-Aug-17	0.047	-	0.0050	-	mg/kg dw	
2017	A20-SC-6	A20	core	0	1.5	16-Aug-17	0.046	-	0.0050	-	mg/kg dw	
2017	A20-SC-7	A20	core	0	1.5	16-Aug-17	0.043	-	0.0050	-	mg/kg dw	
2017	A20-SC-8	A20	core	0	1.5	16-Aug-17	0.041	-	0.0050	-	mg/kg dw	
2017	A20-SC-9	A20	core	0	1.5	16-Aug-17	0.041	-	0.0050	-	mg/kg dw	
2017	A20-SC-10	A20	core	0	1.5	16-Aug-17	0.042	-	0.0050	-	mg/kg dw	
2017	MAM-SC-1	KAN	core	0	1.5	17-Aug-17	0.084	-	0.0050	-	mg/kg dw	
2017	MAM-SC-2	KAN	core	0	1.5	17-Aug-17	0.093	-	0.0050	-	mg/kg dw	
2017	MAM-SC-3	KAN	core	0	1.5	17-Aug-17	0.088	-	0.0050	-	mg/kg dw	
2017	MAM-SC-4	KAN	core	0	1.5	17-Aug-17	0.076	-	0.0050	-	mg/kg dw	
2017	MAM-SC-5	KAN	core	0	1.5	17-Aug-17	0.079	-	0.0050	-	mg/kg dw	
2017	MAM-SC-6	KAN	core	0	1.5	17-Aug-17	0.10	-	0.0050	-	mg/kg dw	
2017	MAM-SC-7	KAN	core	0	1.5	17-Aug-17	0.11	-	0.0050	-	mg/kg dw	
2017	MAM-SC-8	KAN	core	0	1.5	17-Aug-17	0.088	-	0.0050	-	mg/kg dw	
2017	MAM-SC-9	KAN	core	0	1.5	17-Aug-17	0.080	-	0.0050	-	mg/kg dw	
2017	MAM-SC-10	KAN	core	0	1.5	17-Aug-17	0.080	-	0.0050	-	mg/kg dw	
2017	A76-SC-1	A76	core	0	1.5	17-Aug-17	0.067	-	0.0050	-	mg/kg dw	
2017	A76-SC-2	A76	core	0	1.5	18-Aug-17	0.043	-	0.0050	-	mg/kg dw	
2017	A76-SC-3	A76	core	0	1.5	18-Aug-17	0.062	-	0.0050	-	mg/kg dw	
2017	A76-SC-4	A76	core	0	1.5	18-Aug-17	0.063	-	0.0050	-	mg/kg dw	
2017	A76-SC-5	A76	core	0	1.5	18-Aug-17	0.039	-	0.0050	-	mg/kg dw	
2017	A76-SC-6	A76	core	0	1.5	18-Aug-17	0.036	-	0.0050	-	mg/kg dw	
2017	A76-SC-7	A76	core	0	1.5	18-Aug-17	0.055	-	0.0050	-	mg/kg dw	
2017	A76-SC-8	A76	core	0	1.5	18-Aug-17	0.049	-	0.0050	-	mg/kg dw	
2017	A76-SC-9	A76	core	0	1.5	18-Aug-17	0.038	-	0.0050	-	mg/kg dw	
2017	A76-SC-10	A76	core	0	1.5	18-Aug-17	0.078	-	0.0050	-	mg/kg dw	
2017	DS1-SC-1	DS1	core	0	1.5	18-Aug-17	0.070	-	0.0050	-	mg/kg dw	
2017	DS1-SC-2	DS1	core	0	1.5	18-Aug-17	0.073	-	0.0050	-	mg/kg dw	
2017	DS1-SC-3	DS1	core	0	1.5	18-Aug-17	0.061	-	0.0050	-	mg/kg dw	
2017	DS1-SC-4	DS1	core	0	1.5	18-Aug-17	0.071	-	0.0050	-	mg/kg dw	
2017	DS1-SC-5	DS1	core	0	1.5	18-Aug-17	0.071	-	0.0050	-	mg/kg dw	
2017	DS1-SC-6	DS1	core	0	1.5	18-Aug-17	0.096	-	0.0050	-	mg/kg dw	
2017	DS1-SC-7	DS1	core	0	1.5	18-Aug-17	0.069	-	0.0050	-	mg/kg dw	
2017	DS1-SC-8	DS1	core	0	1.5	18-Aug-17	0.069	-	0.0050	-	mg/kg dw	
2017	DS1-SC-9	DS1	core	0	1.5	18-Aug-17	0.078	-	0.0050	-	mg/kg dw	
2017	DS1-SC-10	DS1	core	0	1.5	18-Aug-17	0.066	-	0.0050	-	mg/kg dw	
2017	PDL-SC-1	PDL	core	0	1.5	24-Aug-17	0.016	-	0.0050	-	mg/kg dw	
2017	PDL-SC-2	PDL	core	0	1.5	24-Aug-17	0.018	-	0.0050	-	mg/kg dw	
2017	PDL-SC-3	PDL	core	0	1.5	24-Aug-17	0.025	-	0.0050	-	mg/kg dw	
2017	PDL-SC-4	PDL	core	0	1.5	24-Aug-17	0.018	-	0.0050	-	mg/kg dw	
2017	PDL-SC-5	PDL	core	0	1.5	24-Aug-17	0.017	-	0.0050	-	mg/kg dw	
2017	PDL-SC-9	PDL	core	0	1.5	24-Aug-17	0.014	-	0.0050	-	mg/kg dw	
2017	PDL-SC-6	PDL	core	0	1.5	24-Aug-17	0.021	-	0.0050	-	mg/kg dw	
2017	PDL-SC-7	PDL	core	0	1.5	24-Aug-17	0.018	-	0.0050	-	mg/kg dw	
2017	PDL-SC-8	PDL	core	0	1.5	24-Aug-17	0.025	-	0.0050	-	mg/kg dw	
2017	PDL-SC-10	PDL	core	0	1.5	24-Aug-17	0.017	-	0.0050	-	mg/kg dw	
2017	INUG-SC-1	INUG	core	0	1.5	25-Aug-17	0.029	-	0.0050	-	mg/kg dw	
2017	INUG-SC-2	INUG	core	0	1.5	25-Aug-17	0.033	-	0.0050	-	mg/kg dw	
2017	INUG-SC-3	INUG	core	0	1.5	25-Aug-17	0.035	-	0.0050	-	mg/kg dw	
2017	INUG-SC-4	INUG	core	0	1.5	25-Aug-17	0.038	-	0.0050	-	mg/kg dw	
2017	INUG-SC-5	INUG	core	0	1.5	25-Aug-17	0.039	-	0.0050	-	mg/kg dw	
2017	INUG-SC-6	INUG	core	0	1.5	25-Aug-17	0.050	-	0.0050	-	mg/kg dw	
2017	INUG-SC-7	INUG	core	0	1.5	25-Aug-17	0.045	-	0.0050	-	mg/kg dw	
2017	INUG-SC-8	INUG	core	0	1.5	25-Aug-17	0.048	-	0.0050	-	mg/kg dw	
2017	INUG-SC-9	INUG	core	0	1.5	25-Aug-17	0.034	-	0.0050	-	mg/kg dw	
2017	INUG-SC-10	INUG	core	0	1.5	25-Aug-17	0.035	-	0.0050	-	mg/kg dw	
2017	A76-1	A76	grab	0	5	17-Aug-17	0.061	-	0.0050	-	mg/kg dw	
2017	A76-2	A76	grab	0	5	17-Aug-17	0.040	-	0.0050	-	mg/kg dw	
2017	A76-3	A76	grab	0	5	17-Aug-17	0.059	-	0.0050	-	mg/kg dw	
2017	A76-4	A76	grab	0	5	17-Aug-17	0.061	-	0.0050	-	mg/kg dw	
2017	A76-5	A76	grab	0	5	17-Aug-17	0.039	-	0.0050	-	mg/kg dw	
2018	WTS-1	WTS	grab	0	5	13-Aug-18	0.052	-	0.0050	-	mg/kg dw	
2018	WTS-2	WTS	grab	0	5	13-Aug-18	0.056	-	0.0050	-	mg/kg dw	
2018	WTS-3	WTS	grab	0	5	13-Aug-18	0.038	-	0.0050	-	mg/kg dw	
2018	WTS-4	WTS	grab	0	5	13-Aug-18	0.070	-	0.0050	-	mg/kg dw	
2018	WTS-5	WTS	grab	0	5	13-Aug-18	0.057	-	0.0050	-	mg/kg dw	
2018	INUG-1	INUG	grab	0	5	13-Aug-18	0.033	-	0.0050	-	mg/kg dw	
2018	INUG-2	INUG	grab	0	5	13-Aug-18	0.026	-	0.0050	-	mg/kg dw	
2018	INUG-3	INUG	grab	0	5	13-Aug-18	0.025	-	0.0050	-	mg/kg dw	
2018	INUG-4	INUG	grab	0	5	13-Aug-18	0.023	-	0.0050	-	mg/kg dw	
2018	INUG-5	INUG	grab	0	5	13-Aug-18	0.028	-	0.0050	-	mg/kg dw	
2018	PDL-1	PDL	grab	0	5	13-Aug-18	0.0099	-	0.0050	-	mg/kg dw	
2018	PDL-2	PDL	grab	0	5	13-Aug-18	0.011	-	0.0050	-	mg/kg dw	
2018	PDL-3	PDL	grab	0	5	13-Aug-18	0.014	-	0.0050	-	mg/kg dw	
2018	PDL-4	PDL	grab	0	5	13-Aug-18	0.016	-	0.0050	-	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2017.

Notes:

dw = dry weight; "-" = Not analyzed.

¹ Kangistulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2018	MAM-1	KAN	grab	0	5	16-Aug-18	0.019	-	0.0050	-	mg/kg dw	
2018	MAM-2	KAN	grab	0	5	16-Aug-18	0.10	-	0.0050	-	mg/kg dw	
2018	MAM-3	KAN	grab	0	5	16-Aug-18	0.087	-	0.0050	-	mg/kg dw	
2018	MAM-4	KAN	grab	0	5	16-Aug-18	0.10	-	0.0050	-	mg/kg dw	
2018	MAM-5	KAN	grab	0	5	16-Aug-18	0.086	-	0.0050	-	mg/kg dw	
2018	A20-1	A20	grab	0	5	18-Aug-18	0.046	-	0.0050	-	mg/kg dw	
2018	A20-2	A20	grab	0	5	18-Aug-18	0.043	-	0.0050	-	mg/kg dw	
2018	A20-3	A20	grab	0	5	18-Aug-18	0.041	-	0.0050	-	mg/kg dw	
2018	A20-4	A20	grab	0	5	18-Aug-18	0.051	-	0.0050	-	mg/kg dw	
2018	A20-5	A20	grab	0	5	18-Aug-18	0.042	-	0.0050	-	mg/kg dw	
2018	DS1-1	DS1	grab	0	5	19-Aug-18	0.056	-	0.0050	-	mg/kg dw	
2018	DS1-2	DS1	grab	0	5	19-Aug-18	0.050	-	0.0050	-	mg/kg dw	
2018	DS1-3	DS1	grab	0	5	19-Aug-18	0.057	-	0.0050	-	mg/kg dw	
2018	DS1-4	DS1	grab	0	5	19-Aug-18	0.051	-	0.0050	-	mg/kg dw	
2018	DS1-5	DS1	grab	0	5	19-Aug-18	0.050	-	0.0050	-	mg/kg dw	
2018	LK8-1	LK8	grab	0	5	17-Aug-18	0.015	-	0.0050	-	mg/kg dw	
2018	LK8-2	LK8	grab	0	5	17-Aug-18	0.0093	-	0.0050	-	mg/kg dw	
2018	LK8-3	LK8	grab	0	5	17-Aug-18	0.0070	-	0.0050	-	mg/kg dw	
2018	LK8-4	LK8	grab	0	5	17-Aug-18	0.0097	-	0.0050	-	mg/kg dw	
2018	LK8-5	LK8	grab	0	5	17-Aug-18	0.0067	-	0.0050	-	mg/kg dw	
2018	NEM-1	NEM	grab	0	5	17-Aug-18	0.019	-	0.0050	-	mg/kg dw	
2018	NEM-2	NEM	grab	0	5	17-Aug-18	0.012	-	0.0050	-	mg/kg dw	
2018	NEM-3	NEM	grab	0	5	17-Aug-18	0.012	-	0.0050	-	mg/kg dw	
2018	NEM-4	NEM	grab	0	5	17-Aug-18	0.018	-	0.0050	-	mg/kg dw	
2018	NEM-5	NEM	grab	0	5	17-Aug-18	0.025	-	0.0050	-	mg/kg dw	
2018	WTS-1	WTS	core	0	1.5	18-Aug-18	0.086	0.0013	0.0050	0.00005	mg/kg dw	
2018	WTS-1	WTS	core	5	6	18-Aug-18	0.052	0.00030	0.0050	0.00005	mg/kg dw	
2018	WTS-1	WTS	core	10	11	18-Aug-18	0.042	0.0014	0.0050	0.00005	mg/kg dw	
2018	WTS-2	WTS	core	0	1.5	18-Aug-18	0.070	0.00036	0.0050	0.00005	mg/kg dw	
2018	WTS-2	WTS	core	5	6	18-Aug-18	0.052	0.00029	0.0050	0.00005	mg/kg dw	
2018	WTS-2	WTS	core	10	11	18-Aug-18	0.049	0.00008	0.0050	0.00005	mg/kg dw	
2018	WTS-3	WTS	core	0	1.5	18-Aug-18	0.070	0.00066	0.0050	0.00005	mg/kg dw	
2018	WTS-3	WTS	core	5	6	18-Aug-18	0.045	0.00020	0.0050	0.00005	mg/kg dw	
2018	WTS-3	WTS	core	10	11	18-Aug-18	0.041	0.00030	0.0050	0.00005	mg/kg dw	
2018	LK8-SC-1	LK8	core	0	1.5	17-Aug-18	0.014	-	0.0050	-	mg/kg dw	
2018	LK8-SC-2	LK8	core	0	1.5	17-Aug-18	0.018	-	0.0050	-	mg/kg dw	
2018	LK8-SC-3	LK8	core	0	1.5	17-Aug-18	0.017	-	0.0050	-	mg/kg dw	
2018	LK8-SC-4	LK8	core	0	1.5	17-Aug-18	0.022	-	0.0050	-	mg/kg dw	
2018	LK8-SC-5	LK8	core	0	1.5	17-Aug-18	0.014	-	0.0050	-	mg/kg dw	
2018	LK8-SC-6	LK8	core	0	1.5	17-Aug-18	0.011	-	0.0050	-	mg/kg dw	
2018	LK8-SC-7	LK8	core	0	1.5	17-Aug-18	0.016	-	0.0050	-	mg/kg dw	
2018	LK8-SC-8	LK8	core	0	1.5	17-Aug-18	0.011	-	0.0050	-	mg/kg dw	
2018	A76-1	A76	grab	0	5	18-Aug-18	0.047	-	0.0050	-	mg/kg dw	
2018	A76-2	A76	grab	0	5	18-Aug-18	0.051	-	0.0050	-	mg/kg dw	
2018	A76-3	A76	grab	0	5	18-Aug-18	0.047	-	0.0050	-	mg/kg dw	
2018	A76-4	A76	grab	0	5	18-Aug-18	0.039	-	0.0050	-	mg/kg dw	
2018	A76-5	A76	grab	0	5	18-Aug-18	0.051	-	0.0050	-	mg/kg dw	
2018	D1-1	D1	grab	0	5	15-Aug-18	0.017	-	0.0050	-	mg/kg dw	
2018	D1-2	D1	grab	0	5	15-Aug-18	0.023	-	0.0050	-	mg/kg dw	
2018	D1-3	D1	grab	0	5	15-Aug-18	0.030	-	0.0050	-	mg/kg dw	
2018	D1-4	D1	grab	0	5	15-Aug-18	0.031	-	0.0050	-	mg/kg dw	
2018	D1-5	D1	grab	0	5	15-Aug-18	0.030	-	0.0050	-	mg/kg dw	
2018	LK1-SC-1	D1	core	0	1.5	14-Aug-18	0.019	-	0.0050	-	mg/kg dw	
2018	LK1-SC-2	D1	core	0	1.5	14-Aug-18	0.023	-	0.0050	-	mg/kg dw	
2018	LK1-SC-3	D1	core	0	1.5	14-Aug-18	0.041	-	0.0050	-	mg/kg dw	
2018	LK1-SC-4	D1	core	0	1.5	15-Aug-18	0.045	-	0.0050	-	mg/kg dw	
2018	LK1-SC-5	D1	core	0	1.5	15-Aug-18	0.036	-	0.0050	-	mg/kg dw	
2018	LK1-SC-6	D1	core	0	1.5	15-Aug-18	0.044	-	0.0050	-	mg/kg dw	
2018	LK1-SC-7	D1	core	0	1.5	15-Aug-18	0.044	-	0.0050	-	mg/kg dw	
2018	LK1-SC-8	D1	core	0	1.5	15-Aug-18	0.035	-	0.0050	-	mg/kg dw	
2018	LK1-SC-9	D1	core	0	1.5	15-Aug-18	0.067	-	0.0050	-	mg/kg dw	
2018	LK1-SC-10	D1	core	0	1.5	15-Aug-18	0.036	-	0.0050	-	mg/kg dw	
2019	WTS-1	WTS	grab	0	5	18-Aug-19	<0.050	0.00023	0.050	0.00005	mg/kg dw	
2019	WTS-2	WTS	grab	0	5	18-Aug-19	0.051	0.00048	0.050	0.00005	mg/kg dw	
2019	WTS-3	WTS	grab	0	5	18-Aug-19	0.056	0.00071	0.050	0.00005	mg/kg dw	
2019	WTS-4	WTS	grab	0	5	18-Aug-19	0.063	0.00072	0.050	0.00005	mg/kg dw	
2019	WTS-5	WTS	grab	0	5	18-Aug-19	<0.050	<0.000050	0.050	0.00005	mg/kg dw	
2019	INUG-1	INUG	grab	0	5	15-Aug-19	<0.050	0.00014	0.050	0.00005	mg/kg dw	
2019	INUG-2	INUG	grab	0	5	15-Aug-19	<0.050	0.00012	0.050	0.00005	mg/kg dw	
2019	INUG-3	INUG	grab	0	5	15-Aug-19	<0.050	0.00016	0.050	0.00005	mg/kg dw	
2019	INUG-4	INUG	grab	0	5	15-Aug-19	<0.050	0.00015	0.050	0.00005	mg/kg dw	
2019	INUG-5	INUG	grab	0	5	15-Aug-19	<0.050	0.00030	0.050	0.00005	mg/kg dw	
2019	PDL-1	PDL	grab	0	5	14-Aug-19	<0.050	0.00013	0.050	0.00005	mg/kg dw	
2019	PDL-2	PDL	grab	0	5	14-Aug-19	<0.050	0.00017	0.050	0.00005	mg/kg dw	
2019	PDL-3	PDL	grab	0	5	14-Aug-19	<0.050	0.00011	0.050	0.00005	mg/kg dw	
2019	PDL-4	PDL	grab	0	5	14-Aug-19	<0.050	<0.000050	0.050	0.00005	mg/kg dw	
2019	PDL-5	PDL	grab	0	5	14-Aug-19	<0.050	0.00007	0.050	0.00005	mg/kg dw	
2019	MAM-1	KAN	grab	0	5	19-Aug-19	0.081	0.00064	0.050	0.00005	mg/kg dw	
2019	MAM-2	KAN	grab	0	5	19-Aug-19	0.067	0.00066	0.050	0.00005	mg/kg dw	
2019	MAM-3	KAN	grab	0	5	19-Aug-19	0.078	0.0010	0.050	0.00005	mg/kg dw	
2019	MAM-4	KAN	grab	0	5	19-Aug-19	0.068	0.00050	0.050	0.00005	mg/kg dw	
2019	MAM-5	KAN	grab	0	5	19-Aug-19	0.093	0.0013	0.050	0.00005	mg/kg dw	
2019	A20-1	A20	grab	0	5	16-Aug-19	<0.050	0.00030	0.050	0.00005	mg/kg dw	
2019	A20-2	A20	grab	0	5	16-Aug-19	<0.050	0.00011	0.050	0.00005	mg/kg dw	
2019	A20-3	A20	grab	0	5	16-Aug-19	<0.050	0.00046	0.050	0.00005	mg/kg dw	
2019	A20-4	A20	grab	0	5	16-Aug-19	<0.050	0.00048	0.050	0.00005	mg/kg dw	
2019	A20-5	A20	grab	0	5	16-Aug-19	<0.050	0.0012	0.050	0.00005	mg/kg dw	
2019	DS1-1	DS1	grab	0	5	17-Aug-19	0.053	0.00008	0.050	0.00005	mg/kg dw	
2019	DS1-2	DS1	grab	0	5	17-Aug-19	<0.050	0.00016	0.050	0.00005	mg/kg dw	
2019	DS1-3	DS1	grab	0	5	17-Aug-19	0.064	0.00028	0.050	0.00005	mg/kg dw	
2019	DS1-4	DS1	grab	0	5	17-Aug-19	<0.050	<0.000050	0.050	0.00005	mg/kg dw	
2019	DS1-5	DS1	grab	0	5	17-Aug-19	0.064	0.00033	0.050	0.00005	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2017.**Notes:**

dw = dry weight; "-" = Not analyzed.

¹ Kangistulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2019	LK8-1	LK8	grab	0	5	16-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK8-2	LK8	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK8-3	LK8	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK8-4	LK8	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK8-5	LK8	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	A76-1	A76	grab	0	5	15-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	A76-2	A76	grab	0	5	15-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	A76-3	A76	grab	0	5	15-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	A76-4	A76	grab	0	5	15-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	A76-5	A76	grab	0	5	15-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	NEM-1	NEM	grab	0	5	18-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	NEM-2	NEM	grab	0	5	18-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	NEM-3	NEM	grab	0	5	18-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	NEM-4	NEM	grab	0	5	18-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	NEM-5	NEM	grab	0	5	18-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK1-1	D1	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK1-2	D1	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK1-3	D1	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK1-4	D1	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2019	LK1-5	D1	grab	0	5	17-Aug-19	<0.050	-	0.050	-	mg/kg dw	
2020	PDL-SC-1	PDL	core	0	1.5	22-Aug-20	0.012	0.00006	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-2	PDL	core	0	1.5	22-Aug-20	0.014	0.00012	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-3	PDL	core	0	1.5	22-Aug-20	0.011	0.00006	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-4	PDL	core	0	1.5	22-Aug-20	0.016	0.00048	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-5	PDL	core	0	1.5	22-Aug-20	0.0090	<0.00005	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-6	PDL	core	0	1.5	22-Aug-20	0.020	0.00014	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-7	PDL	core	0	1.5	22-Aug-20	0.010	0.00006	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-8	PDL	core	0	1.5	22-Aug-20	0.011	<0.00005	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-9	PDL	core	0	1.5	22-Aug-20	0.0097	<0.00005	0.0050	0.00005	mg/kg dw	
2020	PDL-SC-10	PDL	core	0	1.5	22-Aug-20	0.014	0.00015	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-1	INUG	core	0	1.5	21-Aug-20	0.031	0.00012	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-2	INUG	core	0	1.5	21-Aug-20	0.023	0.00008	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-3	INUG	core	0	1.5	21-Aug-20	0.026	0.00018	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-4	INUG	core	0	1.5	21-Aug-20	0.028	0.00013	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-5	INUG	core	0	1.5	21-Aug-20	0.027	0.00006	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-6	INUG	core	0	1.5	21-Aug-20	0.025	0.00010	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-7	INUG	core	0	1.5	21-Aug-20	0.032	0.00022	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-8	INUG	core	0	1.5	21-Aug-20	0.031	0.00013	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-9	INUG	core	0	1.5	21-Aug-20	0.031	0.00015	0.0050	0.00005	mg/kg dw	
2020	INUG-SC-10	INUG	core	0	1.5	21-Aug-20	0.028	0.00008	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-1	LK8	core	0	1.5	28-Aug-20	0.0058	0.00031	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-2	LK8	core	0	1.5	28-Aug-20	0.011	0.00022	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-3	LK8	core	0	1.5	28-Aug-20	0.018	0.00017	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-4	LK8	core	0	1.5	28-Aug-20	0.015	0.00008	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-5	LK8	core	0	1.5	28-Aug-20	0.017	0.00036	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-6	LK8	core	0	1.5	28-Aug-20	0.0070	0.00006	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-7	LK8	core	0	1.5	28-Aug-20	0.0092	0.00009	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-8	LK8	core	0	1.5	28-Aug-20	0.012	0.00010	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-9	LK8	core	0	1.5	28-Aug-20	0.011	0.00013	0.0050	0.00005	mg/kg dw	
2020	LK8-SC-10	LK8	core	0	1.5	28-Aug-20	0.012	<0.00005	0.0050	0.00005	mg/kg dw	
2020	B3-SC-1	B3	core	0	1.5	22-Aug-20	0.034	0.00012	0.0050	0.00005	mg/kg dw	
2020	B3-SC-2	B3	core	0	1.5	30-Aug-20	0.043	0.00015	0.0050	0.00005	mg/kg dw	
2020	B3-SC-3	B3	core	0	1.5	30-Aug-20	0.032	<0.000102	0.0050	0.00005	mg/kg dw	
2020	B3-SC-4	B3	core	0	1.5	30-Aug-20	0.029	0.00012	0.0050	0.00005	mg/kg dw	
2020	B3-SC-5	B3	core	0	1.5	30-Aug-20	0.032	0.00011	0.0050	0.00005	mg/kg dw	
2020	LK1-SC-1	D1	core	0	1.5	19-Aug-20	0.027	-	0.0050	-	mg/kg dw	
2020	LK1-SC-2	D1	core	0	1.5	19-Aug-20	0.021	-	0.0050	-	mg/kg dw	
2020	LK1-SC-3	D1	core	0	1.5	19-Aug-20	0.020	-	0.0050	-	mg/kg dw	
2020	LK1-SC-4	D1	core	0	1.5	19-Aug-20	0.022	-	0.0050	-	mg/kg dw	
2020	LK1-SC-5	D1	core	0	1.5	19-Aug-20	0.025	-	0.0050	-	mg/kg dw	
2020	LK1-SC-6	D1	core	0	1.5	19-Aug-20	0.024	-	0.0050	-	mg/kg dw	
2020	LK1-SC-7	D1	core	0	1.5	19-Aug-20	0.028	-	0.0050	-	mg/kg dw	
2020	LK1-SC-8	D1	core	0	1.5	19-Aug-20	0.029	-	0.0050	-	mg/kg dw	
2020	LK1-SC-9	D1	core	0	1.5	19-Aug-20	0.013	-	0.0050	-	mg/kg dw	
2020	LK1-SC-10	D1	core	0	1.5	19-Aug-20	0.017	-	0.0050	-	mg/kg dw	
2020	D51-SC-1	D51	core	0	1.5	21-Aug-20	0.032	0.00009	0.0050	0.00005	mg/kg dw	
2020	D51-SC-2	D51	core	0	1.5	21-Aug-20	0.030	0.00010	0.0050	0.00005	mg/kg dw	
2020	D51-SC-3	D51	core	0	1.5	21-Aug-20	0.039	<0.00005	0.0050	0.00005	mg/kg dw	
2020	D51-SC-4	D51	core	0	1.5	21-Aug-20	0.038	<0.00005	0.0050	0.00005	mg/kg dw	
2020	D51-SC-5	D51	core	0	1.5	21-Aug-20	0.043	<0.00005	0.0050	0.00005	mg/kg dw	
2020	D51-SC-6	D51	core	0	1.5	21-Aug-20	0.048	0.00014	0.0050	0.00005	mg/kg dw	
2020	D51-SC-7	D51	core	0	1.5	21-Aug-20	0.046	0.00007	0.0050	0.00005	mg/kg dw	
2020	D51-SC-8	D51	core	0	1.5	21-Aug-20	0.042	<0.00005	0.0050	0.00005	mg/kg dw	
2020	D51-SC-9	D51	core	0	1.5	21-Aug-20	0.053	<0.00005	0.0050	0.00005	mg/kg dw	
2020	D51-SC-10	D51	core	0	1.5	21-Aug-20	0.074	0.00018	0.0050	0.00005	mg/kg dw	
2020	A20-SC-1	A20	core	0	1.5	21-Aug-20	0.040	0.00022	0.0050	0.00005	mg/kg dw	
2020	A20-SC-2	A20	core	0	1.5	21-Aug-20	0.041	0.00015	0.0050	0.00005	mg/kg dw	
2020	A20-SC-3	A20	core	0	1.5	21-Aug-20	0.042	0.00018	0.0050	0.00005	mg/kg dw	
2020	A20-SC-4	A20	core	0	1.5	21-Aug-20	0.045	0.00026	0.0050	0.00005	mg/kg dw	
2020	A20-SC-5	A20	core	0	1.5	21-Aug-20	0.049	0.00049	0.0050	0.00005	mg/kg dw	
2020	A20-SC-6	A20	core	0	1.5	21-Aug-20	0.044	0.00037	0.0050	0.00005	mg/kg dw	
2020	A20-SC-7	A20	core	0	1.5	21-Aug-20	0.031	0.00006	0.0050	0.00005	mg/kg dw	
2020	A20-SC-8	A20	core	0	1.5	21-Aug-20	0.031	0.00007	0.0050	0.00005	mg/kg dw	
2020	A20-SC-9	A20	core	0	1.5	21-Aug-20	0.044	0.00078	0.0050	0.00005	mg/kg dw	
2020	A20-SC-10	A20	core	0	1.5	21-Aug-20	0.050	0.00020	0.0050	0.00005	mg/kg dw	
2020	NEM-SC-1	NEM	core	0	1.5	21-Aug-20	0.031	-	0.0050	-	mg/kg dw	
2020	NEM-SC-2	NEM	core	0	1.5	21-Aug-20	0.028	-	0.0050	-	mg/kg dw	
2020	NEM-SC-3	NEM	core	0	1.5	21-Aug-20	0.036	-	0.0050	-	mg/kg dw	
2020	NEM-SC-4	NEM	core	0	1.5	21-Aug-20	0.030	-	0.0050	-	mg/kg dw	
2020	NEM-SC-5	NEM	core	0	1.5	21-Aug-20	0.025	-	0.0050	-	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2017.**Notes:**

dw = dry weight; "-" = Not analyzed.

¹ Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2020	NEM-SC-6	NEM	core	0	1.5	21-Aug-20	0.032	-	0.0050	-	mg/kg dw	
2020	NEM-SC-7	NEM	core	0	1.5	21-Aug-20	0.026	-	0.0050	-	mg/kg dw	
2020	NEM-SC-8	NEM	core	0	1.5	21-Aug-20	0.023	-	0.0050	-	mg/kg dw	
2020	NEM-SC-9	NEM	core	0	1.5	21-Aug-20	0.023	-	0.0050	-	mg/kg dw	
2020	NEM-SC-10	NEM	core	0	1.5	21-Aug-20	0.018	-	0.0050	-	mg/kg dw	
2020	WTS-SC-1	WTS	core	0	1.5	21-Aug-20	0.063	0.00013	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-2	WTS	core	0	1.5	21-Aug-20	0.058	0.00033	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-3	WTS	core	0	1.5	21-Aug-20	0.049	0.00020	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-4	WTS	core	0	1.5	21-Aug-20	0.051	0.00071	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-5	WTS	core	0	1.5	21-Aug-20	0.058	0.0015	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-6	WTS	core	0	1.5	21-Aug-20	0.067	0.0015	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-7	WTS	core	0	1.5	21-Aug-20	0.074	0.00080	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-8	WTS	core	0	1.5	21-Aug-20	0.068	0.00091	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-9	WTS	core	0	1.5	21-Aug-20	0.053	0.00069	0.0050	0.00005	mg/kg dw	
2020	WTS-SC-10	WTS	core	0	1.5	21-Aug-20	0.061	0.00054	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-1	KAN	core	0	1.5	21-Aug-20	0.089	0.00080	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-2	KAN	core	0	1.5	21-Aug-20	0.091	0.00092	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-3	KAN	core	0	1.5	21-Aug-20	0.084	0.00025	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-4	KAN	core	0	1.5	21-Aug-20	0.088	0.00067	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-5	KAN	core	0	1.5	21-Aug-20	0.080	0.00053	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-6	KAN	core	0	1.5	21-Aug-20	0.091	0.00063	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-7	KAN	core	0	1.5	21-Aug-20	0.080	0.00053	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-8	KAN	core	0	1.5	21-Aug-20	0.092	0.00063	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-9	KAN	core	0	1.5	21-Aug-20	0.083	0.00034	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-10	KAN	core	0	1.5	21-Aug-20	0.091	0.00037	0.0050	0.00005	mg/kg dw	
2020	A76-SC-1	A76	core	0	1.5	21-Aug-20	0.055	0.00031	0.0050	0.00005	mg/kg dw	
2020	A76-SC-2	A76	core	0	1.5	21-Aug-20	0.045	0.00035	0.0050	0.00005	mg/kg dw	
2020	A76-SC-3	A76	core	0	1.5	21-Aug-20	0.049	0.00041	0.0050	0.00005	mg/kg dw	
2020	A76-SC-4	A76	core	0	1.5	21-Aug-20	0.035	0.00017	0.0050	0.00005	mg/kg dw	
2020	A76-SC-5	A76	core	0	1.5	21-Aug-20	0.034	0.00018	0.0050	0.00005	mg/kg dw	
2020	A76-SC-6	A76	core	0	1.5	21-Aug-20	0.034	0.00025	0.0050	0.00005	mg/kg dw	
2020	A76-SC-7	A76	core	0	1.5	21-Aug-20	0.044	0.00020	0.0050	0.00005	mg/kg dw	
2020	A76-SC-8	A76	core	0	1.5	21-Aug-20	0.043	0.00023	0.0050	0.00005	mg/kg dw	
2020	A76-SC-9	A76	core	0	1.5	21-Aug-20	0.039	0.00012	0.0050	0.00005	mg/kg dw	
2020	A76-SC-10	A76	core	0	1.5	21-Aug-20	0.039	0.00023	0.0050	0.00005	mg/kg dw	
2021	WTS-1	WTS	grab	0	5	05-Aug-21	0.045	0.0012	0.0050	0.00005	mg/kg dw	
2021	WTS-2	WTS	grab	0	5	05-Aug-21	0.043	0.00064	0.0050	0.00005	mg/kg dw	
2021	WTS-3	WTS	grab	0	5	05-Aug-21	0.064	0.00069	0.0050	0.00005	mg/kg dw	
2021	WTS-4	WTS	grab	0	5	05-Aug-21	0.074	0.00063	0.0050	0.00005	mg/kg dw	
2021	WTS-5	WTS	grab	0	5	05-Aug-21	0.061	0.00070	0.0050	0.00005	mg/kg dw	
2021	A76-1	A76	grab	0	5	07-Aug-21	0.063	0.00059	0.0050	0.00010	mg/kg dw	
2021	A76-2	A76	grab	0	5	07-Aug-21	0.035	0.00038	0.0050	0.00005	mg/kg dw	
2021	A76-3	A76	grab	0	5	07-Aug-21	0.048	0.00052	0.0050	0.00005	mg/kg dw	
2021	A76-4	A76	grab	0	5	07-Aug-21	0.053	0.00045	0.0050	0.00010	mg/kg dw	
2021	A76-5	A76	grab	0	5	07-Aug-21	0.048	0.00048	0.0050	0.00010	mg/kg dw	
2021	DUP-1	DUP-1	grab	0	5	06-Aug-21	0.045	0.0011	0.0050	0.00005	mg/kg dw	
2021	DUP-3	DUP-3	grab	0	5	06-Aug-21	0.066	0.00040	0.0050	0.00010	mg/kg dw	
2022	INUG-1	INUG	grab	0	5	14-Aug-22	0.031	0.00047	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	INUG-2	INUG	grab	0	5	14-Aug-22	0.028	0.00008	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	INUG-3	INUG	grab	0	5	14-Aug-22	0.024	<0.00005	0.050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	INUG-4	INUG	grab	0	5	14-Aug-22	0.030	0.00010	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	INUG-5	INUG	grab	0	5	14-Aug-22	0.026	0.00007	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	PDL-1	PDL	grab	0	5	15-Aug-22	0.017	0.00015	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	PDL-2	PDL	grab	0	5	15-Aug-22	0.017	0.00021	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	PDL-3	PDL	grab	0	5	15-Aug-22	0.018	0.00006	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	PDL-4	PDL	grab	0	5	15-Aug-22	0.013	0.00008	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	PDL-5	PDL	grab	0	5	15-Aug-22	0.010	0.00005	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	MAM-1	KAN	grab	0	5	15-Aug-22	0.078	0.016	0.0050	0.00005	mg/kg dw	
2022	MAM-2	KAN	grab	0	5	15-Aug-22	0.072	0.0080	0.0050	0.00005	mg/kg dw	
2022	MAM-3	KAN	grab	0	5	15-Aug-22	0.071	0.012	0.0050	0.00005	mg/kg dw	
2022	MAM-4	KAN	grab	0	5	15-Aug-22	0.063	0.0039	0.0050	0.00005	mg/kg dw	
2022	MAM-5	KAN	grab	0	5	15-Aug-22	0.078	0.0032	0.0050	0.00005	mg/kg dw	
2022	A20-1	A20	grab	0	5	17-Aug-22	0.050	0.0020	0.0050	0.00005	mg/kg dw	
2022	A20-2	A20	grab	0	5	17-Aug-22	0.039	0.00074	0.0050	0.00005	mg/kg dw	
2022	A20-3	A20	grab	0	5	17-Aug-22	0.051	0.0041	0.0050	0.00005	mg/kg dw	
2022	A20-4	A20	grab	0	5	17-Aug-22	0.042	0.0014	0.0050	0.00005	mg/kg dw	
2022	A20-5	A20	grab	0	5	17-Aug-22	0.048	0.0039	0.0050	0.00005	mg/kg dw	
2022	DS1-1	DS1	grab	0	5	16-Aug-22	0.060	<0.00005	0.050	0.00005	mg/kg dw	
2022	DS1-2	DS1	grab	0	5	16-Aug-22	0.068	<0.00005	0.050	0.00005	mg/kg dw	
2022	DS1-3	DS1	grab	0	5	16-Aug-22	0.063	0.0018	0.0050	0.00005	mg/kg dw	
2022	DS1-4	DS1	grab	0	5	16-Aug-22	0.067	0.00008	0.0050	0.00005	mg/kg dw	
2022	DS1-5	DS1	grab	0	5	16-Aug-22	0.059	<0.00005	0.0050	0.00005	mg/kg dw	
2022	A76-1	A76	grab	0	5	16-Aug-22	0.054	0.00012	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	A76-2	A76	grab	0	5	16-Aug-22	0.037	0.00012	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	A76-3	A76	grab	0	5	16-Aug-22	0.043	<0.00005	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	A76-4	A76	grab	0	5	16-Aug-22	0.052	0.00051	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	A76-5	A76	grab	0	5	16-Aug-22	0.052	0.00024	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	NEM-1	NEM	grab	0	5	15-Aug-22	0.026	-	0.0050	0.00005	mg/kg dw	MeHg not included in this years MMP
2022	NEM-2	NEM	grab	0	5	15-Aug-22	0.028	-	0.0050	0.00005	mg/kg dw	MeHg not included in this years MMP
2022	NEM-3	NEM	grab	0	5	15-Aug-22	0.020	-	0.0050	0.00005	mg/kg dw	MeHg not included in this years MMP
2022	NEM-4	NEM	grab	0	5	15-Aug-22	0.024	-	0.0050	0.00005	mg/kg dw	MeHg not included in this years MMP
2022	NEM-5	NEM	grab	0	5	15-Aug-22	0.024	-	0.0050	0.00005	mg/kg dw	MeHg not included in this years MMP
2022	WTS-1	WTS	grab	0	5	14-Aug-22	0.045	0.00086	0.0050	0.00005	mg/kg dw	
2022	WTS-2	WTS	grab	0	5	14-Aug-22	0.037	0.0020	0.0050	0.00005	mg/kg dw	
2022	WTS-3	WTS	grab	0	5	14-Aug-22	0.062	0.0069	0.0050	0.00005	mg/kg dw	
2022	WTS-4	WTS	grab	0	5	14-Aug-22	0.071	0.0016	0.0050	0.00005	mg/kg dw	
2022	WTS-5	WTS	grab	0	5	14-Aug-22	0.052	0.00095	0.0050	0.00005	mg/kg dw	
2022	B3-1	B3	grab	0	5	18-Aug-22	0.039	0.0013	0.0050	0.00005	mg/kg dw	
2022	B3-2	B3	grab	0	5	18-Aug-22	0.036	0.00097	0.0050	0.00005	mg/kg dw	
2022	B3-3	B3	grab	0	5	18-Aug-22	0.029	0.00073	0.0050	0.00005	mg/kg dw	
2022	B3-4	B3	grab	0	5	18-Aug-22	0.031	0.00048	0.0050	0.00005	mg/kg dw	
2022	B3-5	B3	grab	0	5	18-Aug-22	0.035	0.0022	0.0050	0.00005	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2017.**Notes:**

dw = dry weight; "-" = Not analyzed.

¹ Kangisuluk Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2022	DUP-3	DUP-3	grab	0	5	13-Aug-22	0.027	0.00012	0.0050	0.00005	mg/kg dw	Moisture, TOC and PSA not calculated due to high moisture content
2022	DUP-5	DUP-5	grab	0	5	15-Aug-22	0.078	0.00023	0.0050	0.00005	mg/kg dw	
2022	DUP-6	DUP-6	grab	0	5	15-Aug-22	0.020	-	0.0050	0.00005	mg/kg dw	MeHg not included in this years MMP
2022	DUP-7	DUP-7	grab	0	5	17-Aug-22	0.048	0.0040	0.0050	0.00005	mg/kg dw	
2022	WTS-INUN-1	WTS	inundation	7	8	21-Aug-22	0.12	0.017	0.0050	0.00005	mg/kg dw	Inundation samples; collected by spoon
2022	WTS-INUN-2	WTS	inundation	7	8	21-Aug-22	0.13	0.0016	0.0050	0.00005	mg/kg dw	Inundation samples; collected by spoon
2022	A20-INUN-1	A20	inundation	7	8	21-Aug-22	0.100	0.016	0.0050	0.00005	mg/kg dw	Inundation samples; collected by spoon
2022	A20-INUN-2	A20	inundation	7	8	21-Aug-22	0.10	0.025	0.0050	0.00005	mg/kg dw	Inundation samples; collected by spoon
2022	A65-INUN-1	A65	inundation	7	8	19-Aug-22	0.11	0.0040	0.0050	0.00005	mg/kg dw	Inundation samples; collected by spoon
2022	A65-INUN-2	A65	inundation	7	8	19-Aug-22	0.12	0.0100	0.0050	0.00005	mg/kg dw	Inundation samples; collected by spoon
2023	INUG-SC-1	INUG	core	0	1.5	22-Aug-23	0.029	0.00020	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-2	INUG	core	0	1.5	22-Aug-23	0.033	-	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-3	INUG	core	0	1.5	22-Aug-23	0.031	0.00029	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-4	INUG	core	0	1.5	22-Aug-23	0.033	-	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-5	INUG	core	0	1.5	22-Aug-23	0.031	-	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-6	INUG	core	0	1.5	22-Aug-23	0.030	0.00008	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-7	INUG	core	0	1.5	22-Aug-23	0.028	0.00012	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-8	INUG	core	0	1.5	22-Aug-23	0.031	-	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-9	INUG	core	0	1.5	22-Aug-23	0.035	0.00027	0.0050	0.00005	mg/kg dw	
2023	INUG-SC-10	INUG	core	0	1.5	22-Aug-23	0.024	-	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-1	PDL	core	0	1.5	22-Aug-23	0.028	-	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-2	PDL	core	0	1.5	22-Aug-23	0.023	-	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-3	PDL	core	0	1.5	22-Aug-23	0.020	-	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-4	PDL	core	0	1.5	22-Aug-23	0.022	0.00018	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-5	PDL	core	0	1.5	22-Aug-23	0.022	0.00016	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-6	PDL	core	0	1.5	22-Aug-23	0.018	0.00007	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-7	PDL	core	0	1.5	22-Aug-23	0.020	-	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-8	PDL	core	0	1.5	22-Aug-23	0.019	-	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-9	PDL	core	0	1.5	22-Aug-23	0.020	0.00016	0.0050	0.00005	mg/kg dw	
2023	PDL-SC-10	PDL	core	0	1.5	22-Aug-23	0.020	0.00016	0.0050	0.00005	mg/kg dw	
2023	A20-SC-1	A20	core	0	1.5	16-Aug-23	0.062	-	0.0050	0.00005	mg/kg dw	
2023	A20-SC-2	A20	core	0	1.5	16-Aug-23	0.052	-	0.0050	0.00005	mg/kg dw	
2023	A20-SC-3	A20	core	0	1.5	16-Aug-23	0.043	-	0.0050	0.00005	mg/kg dw	
2023	A20-SC-4	A20	core	0	1.5	16-Aug-23	0.047	0.00051	0.0050	0.00005	mg/kg dw	
2023	A20-SC-5	A20	core	0	1.5	16-Aug-23	0.060	0.00086	0.0050	0.00005	mg/kg dw	
2023	A20-SC-6	A20	core	0	1.5	16-Aug-23	0.052	-	0.0050	0.00005	mg/kg dw	
2023	A20-SC-7	A20	core	0	1.5	16-Aug-23	0.046	0.00088	0.0050	0.00005	mg/kg dw	
2023	A20-SC-8	A20	core	0	1.5	16-Aug-23	0.056	-	0.0050	0.00005	mg/kg dw	
2023	A20-SC-9	A20	core	0	1.5	16-Aug-23	0.060	0.00028	0.0050	0.00005	mg/kg dw	
2023	A20-SC-10	A20	core	0	1.5	16-Aug-23	0.045	0.00070	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-1	WTS	core	0	1.5	12-Aug-23	0.062	-	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-2	WTS	core	0	1.5	12-Aug-23	0.075	<0.000066	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-3	WTS	core	0	1.5	12-Aug-23	0.046	0.00086	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-4	WTS	core	0	1.5	12-Aug-23	0.030	-	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-5	WTS	core	0	1.5	12-Aug-23	0.075	0.00030	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-6	WTS	core	0	1.5	12-Aug-23	0.068	0.00036	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-7	WTS	core	0	1.5	12-Aug-23	0.076	-	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-8	WTS	core	0	1.5	12-Aug-23	0.072	0.00025	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-9	WTS	core	0	1.5	12-Aug-23	0.071	-	0.0050	0.00005	mg/kg dw	
2023	WTS-SC-10	WTS	core	0	1.5	12-Aug-23	0.050	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-1	KAN	core	0	1.5	15-Aug-23	0.086	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-2	KAN	core	0	1.5	15-Aug-23	0.082	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-3	KAN	core	0	1.5	15-Aug-23	0.082	0.0018	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-4	KAN	core	0	1.5	15-Aug-23	0.076	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-5	KAN	core	0	1.5	15-Aug-23	0.094	0.0022	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-6	KAN	core	0	1.5	15-Aug-23	0.080	0.0012	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-7	KAN	core	0	1.5	15-Aug-23	0.083	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-8	KAN	core	0	1.5	15-Aug-23	0.083	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-9	KAN	core	0	1.5	15-Aug-23	0.071	0.00037	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-10	KAN	core	0	1.5	15-Aug-23	0.067	0.00032	0.0050	0.00005	mg/kg dw	
2023	A76-SC-1	A76	core	0	1.5	13-Aug-23	0.059	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-2	A76	core	0	1.5	13-Aug-23	0.047	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-3	A76	core	0	1.5	13-Aug-23	0.044	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-4	A76	core	0	1.5	13-Aug-23	0.045	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-5	A76	core	0	1.5	13-Aug-23	0.043	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-6	A76	core	0	1.5	13-Aug-23	0.044	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-7	A76	core	0	1.5	13-Aug-23	0.042	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-8	A76	core	0	1.5	13-Aug-23	0.050	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-9	A76	core	0	1.5	13-Aug-23	0.054	-	0.0050	0.00005	mg/kg dw	
2023	A76-SC-10	A76	core	0	1.5	13-Aug-23	0.055	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-1	D51	core	0	1.5	17-Aug-23	0.075	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-2	D51	core	0	1.5	17-Aug-23	0.081	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-3	D51	core	0	1.5	17-Aug-23	0.076	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-4	D51	core	0	1.5	17-Aug-23	0.065	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-5	D51	core	0	1.5	17-Aug-23	0.065	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-6	D51	core	0	1.5	17-Aug-23	0.075	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-7	D51	core	0	1.5	17-Aug-23	0.067	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-8	D51	core	0	1.5	17-Aug-23	0.068	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-9	D51	core	0	1.5	17-Aug-23	0.050	-	0.0050	0.00005	mg/kg dw	
2023	D51-SC-10	D51	core	0	1.5	17-Aug-23	0.060	-	0.0050	0.00005	mg/kg dw	
2023	INUG-1	INUG	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	INUG-2	INUG	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	INUG-3	INUG	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	INUG-4	INUG	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	INUG-5	INUG	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	PDL-1	PDL	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	PDL-2	PDL	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	PDL-3	PDL	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	PDL-4	PDL	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	PDL-5	PDL	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2017.**Notes:**

dw = dry weight; "-", " " = Not analyzed.

¹ Kangistulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2023	A20-1	A20	grab	0	5	16-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A20-2	A20	grab	0	5	16-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A20-3	A20	grab	0	5	16-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A20-4	A20	grab	0	5	16-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A20-5	A20	grab	0	5	16-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	WTS-1	WTS	grab	0	5	12-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	WTS-2	WTS	grab	0	5	12-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	WTS-3	WTS	grab	0	5	12-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	WTS-4	WTS	grab	0	5	12-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	WTS-5	WTS	grab	0	5	12-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-1	KAN	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-2	KAN	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-3	KAN	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-4	KAN	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-5	KAN	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A76-1	A76	grab	0	5	13-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A76-2	A76	grab	0	5	13-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A76-3	A76	grab	0	5	13-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A76-4	A76	grab	0	5	13-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	A76-5	A76	grab	0	5	13-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	DS1-1	DS1	grab	0	5	17-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	DS1-2	DS1	grab	0	5	17-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	DS1-3	DS1	grab	0	5	17-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	DS1-4	DS1	grab	0	5	17-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	DS1-5	DS1	grab	0	5	17-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	LK8-1	LK8	grab	0	5	20-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	LK8-2	LK8	grab	0	5	20-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	LK8-3	LK8	grab	0	5	20-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	LK8-4	LK8	grab	0	5	20-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	LK8-5	LK8	grab	0	5	20-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	DUP-SC-9	A76	core	0	1.5	23-Aug-23	0.047	-	0.0050	0.00005	mg/kg dw	Duplicate of A76-SC-4
2023	SC-DUP-10	KAN	core	0	1.5	23-Aug-23	0.088	0.0013	0.0050	0.00005	mg/kg dw	Duplicate of MAM-SC-3
2023	DUP-SC-12	A20	core	0	1.5	16-Aug-23	0.040	0.00032	0.0050	0.00005	mg/kg dw	Duplicate of A20-SC-7
2023	DUP-SC-13	DS1	core	0	1.5	17-Aug-23	0.070	-	0.0050	0.00005	mg/kg dw	Duplicate of DS1-SC-4
2023	DUP-SC-15	INUG	core	0	1.5	22-Aug-23	0.031	0.00015	0.0050	0.00005	mg/kg dw	Duplicate of INUG-SC-1
2023	DUP-SC-16	PDL	core	0	1.5	22-Aug-23	0.018	0.00015	0.0050	0.00005	mg/kg dw	Duplicate of PDL-SC-2
2023	Grab-DUP-3	INUG	grab	0	5	22-Aug-23	-	-	0.0050	0.00005	mg/kg dw	Duplicate of INUG-2
2023	Grab-DUP-5	LK8	grab	0	5	20-Aug-23	-	-	0.0050	0.00005	mg/kg dw	Duplicate of LK8-4
2023	Grab-DUP-6	A76	grab	0	5	23-Aug-23	-	-	0.0050	0.00005	mg/kg dw	Duplicate of A76-1
2023	Grab-DUP-7	KAN	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	Duplicate of MAM-1
2023	Grab-DUP-9	A20	grab	0	5	16-Aug-23	-	-	0.0050	0.00005	mg/kg dw	Duplicate of A20-3
2023	Grab-DUP-10	DS1	grab	0	5	17-Aug-23	-	-	0.0050	0.00005	mg/kg dw	Duplicate of DS1-5
2023	A20-INUN-3	A20	inundation	7	8	14-Aug-23	0.074	0.0056	0.0050	0.00005	mg/kg dw	
2023	A20-INUN-4	A20	inundation	7	8	14-Aug-23	0.078	0.020	0.0050	0.00005	mg/kg dw	
2023	WTS-INUN-3	WTS	inundation	7	8	19-Aug-23	0.034	0.0078	0.0050	0.00005	mg/kg dw	
2023	WTS-INUN-4	WTS	inundation	7	8	19-Aug-23	0.078	0.021	0.0050	0.00005	mg/kg dw	
2023	A65-INUN-3	A65	inundation	7	8	20-Aug-23	0.060	0.0072	0.0050	0.00005	mg/kg dw	
2023	A65-INUN-4	A65	inundation	7	8	20-Aug-23	0.072	0.0059	0.0050	0.00005	mg/kg dw	
2023	DUP-INUN-1	A65	inundation	7	8	20-Aug-23	0.065	0.0055	0.0050	0.00005	mg/kg dw	Duplicate of A65-INUN-4
2024	PDL-1	PDL	grab	0	5	11-Aug-24	0.012	-	0.0050	-	mg/kg dw	
2024	PDL-2	PDL	grab	0	5	11-Aug-24	0.0088	-	0.0050	-	mg/kg dw	
2024	PDL-3	PDL	grab	0	5	11-Aug-24	0.0079	-	0.0050	-	mg/kg dw	
2024	PDL-4	PDL	grab	0	5	11-Aug-24	0.0095	-	0.0050	-	mg/kg dw	
2024	PDL-5	PDL	grab	0	5	11-Aug-24	0.0093	-	0.0050	-	mg/kg dw	
2024	INUG-1	INUG	grab	0	5	10-Aug-24	0.022	-	0.0050	-	mg/kg dw	
2024	INUG-2	INUG	grab	0	5	10-Aug-24	0.026	-	0.0050	-	mg/kg dw	
2024	INUG-3	INUG	grab	0	5	10-Aug-24	0.021	-	0.0050	-	mg/kg dw	
2024	INUG-4	INUG	grab	0	5	10-Aug-24	0.021	-	0.0050	-	mg/kg dw	
2024	INUG-5	INUG	grab	0	5	10-Aug-24	0.028	-	0.0050	-	mg/kg dw	
2024	WTS-1	WTS	grab	0	5	15-Aug-24	0.041	-	0.0050	-	mg/kg dw	
2024	WTS-2	WTS	grab	0	5	15-Aug-24	0.039	-	0.0050	-	mg/kg dw	
2024	WTS-3	WTS	grab	0	5	15-Aug-24	0.053	-	0.0050	-	mg/kg dw	
2024	WTS-4	WTS	grab	0	5	15-Aug-24	0.060	-	0.0050	-	mg/kg dw	
2024	WTS-5	WTS	grab	0	5	15-Aug-24	0.046	-	0.0050	-	mg/kg dw	
2024	MAM-1	KAN	grab	0	5	18-Aug-24	0.083	-	0.0050	-	mg/kg dw	
2024	MAM-2	KAN	grab	0	5	18-Aug-24	0.070	-	0.0050	-	mg/kg dw	
2024	MAM-3	KAN	grab	0	5	18-Aug-24	0.069	-	0.0050	-	mg/kg dw	
2024	MAM-4	KAN	grab	0	5	18-Aug-24	0.051	-	0.0050	-	mg/kg dw	
2024	MAM-5	KAN	grab	0	5	18-Aug-24	0.088	-	0.0050	-	mg/kg dw	
2024	A20-1	A20	grab	0	5	18-Aug-24	0.038	-	0.0050	-	mg/kg dw	
2024	A20-2	A20	grab	0	5	18-Aug-24	0.040	-	0.0050	-	mg/kg dw	
2024	A20-3	A20	grab	0	5	18-Aug-24	0.048	-	0.0050	-	mg/kg dw	
2024	A20-4	A20	grab	0	5	18-Aug-24	0.036	-	0.0050	-	mg/kg dw	
2024	A20-5	A20	grab	0	5	18-Aug-24	0.041	-	0.0050	-	mg/kg dw	
2024	Grab-DUP-2	INUG	grab	0	5	10-Aug-24	0.025	-	0.0050	-	mg/kg dw	Grab dup collected at INUG-4
2024	Grab-DUP-5	WTS	grab	0	5	15-Aug-24	0.047	-	0.0050	-	mg/kg dw	Grab dup collected at WTS-5
2024	WTS-SC-1	WTS	core	0	1.5	15-Aug-24	0.073	-	0.0050	-	mg/kg dw	
2024	WTS-SC-2	WTS	core	0	1.5	15-Aug-24	0.069	-	0.0050	-	mg/kg dw	
2024	WTS-SC-3	WTS	core	0	1.5	15-Aug-24	0.069	-	0.0050	-	mg/kg dw	
2024	WTS-SC-4	WTS	core	0	1.5	15-Aug-24	0.062	-	0.0050	-	mg/kg dw	
2024	WTS-SC-5	WTS	core	0	1.5	15-Aug-24	0.065	-	0.0050	-	mg/kg dw	
2024	WTS-SC-6	WTS	core	0	1.5	15-Aug-24	0.057	-	0.0050	-	mg/kg dw	
2024	WTS-SC-7	WTS	core	0	1.5	15-Aug-24	0.052	-	0.0050	-	mg/kg dw	
2024	WTS-SC-8	WTS	core	0	1.5	15-Aug-24	0.062	-	0.0050	-	mg/kg dw	
2024	WTS-SC-9	WTS	core	0	1.5	17-Aug-24	0.082	-	0.0050	-	mg/kg dw	
2024	WTS-SC-10	WTS	core	0	1.5	17-Aug-24	0.10	-	0.0050	-	mg/kg dw	
2024	WTS-SC-11	WTS	core	0	1.5	17-Aug-24	0.066	-	0.0050	-	mg/kg dw	
2024	WTS-SC-12	WTS	core	0	1.5	17-Aug-24	0.055	-	0.0050	-	mg/kg dw	
2024	WTS-SC-13	WTS	core	0	1.5	17-Aug-24	0.040	-	0.0050	-	mg/kg dw	
2024	WTS-SC-14	WTS	core	0	1.5	17-Aug-24	0.061	-	0.0050	-	mg/kg dw	
2024	WTS-SC-15	WTS	core	0	1.5	17-Aug-24	0.052	-	0.0050	-	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2017.**Notes:**

dw = dry weight; "-" = Not analyzed.

¹ Kangistulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2024	WTS-SC-16	WTS	core	0	1.5	17-Aug-24	0.049	-	0.0050	-	mg/kg dw	
2024	WTS-SC-17	WTS	core	0	1.5	17-Aug-24	0.033	-	0.0050	-	mg/kg dw	
2024	WTS-SC-18	WTS	core	0	1.5	17-Aug-24	0.054	-	0.0050	-	mg/kg dw	
2024	WTS-SC-19	WTS	core	0	1.5	17-Aug-24	0.032	-	0.0050	-	mg/kg dw	
2024	WTS-SC-20	WTS	core	0	1.5	17-Aug-24	0.069	-	0.0050	-	mg/kg dw	
2024	WTS-SC-21	WTS	core	0	1.5	18-Aug-24	0.049	-	0.0050	-	mg/kg dw	
2024	WTS-SC-22	WTS	core	0	1.5	18-Aug-24	0.015	-	0.0050	-	mg/kg dw	
2024	WTS-SC-23	WTS	core	0	1.5	18-Aug-24	0.016	-	0.0050	-	mg/kg dw	
2024	WTS-SC-24	WTS	core	0	1.5	18-Aug-24	0.048	-	0.0050	-	mg/kg dw	
2024	WTS-SC-25	WTS	core	0	1.5	18-Aug-24	0.051	-	0.0050	-	mg/kg dw	
2024	SC-DUP-1	WTS	core	0	1.5	18-Aug-24	0.056	-	0.0050	-	mg/kg dw	
2024	SC-DUP-2	WTS	core	0	1.5	18-Aug-24	0.054	-	0.0050	-	mg/kg dw	

APPENDIX C

FISH DATA

APPENDIX C1

SMALL-BODIED FISH MERCURY DATABASE

Table C1-1. Small-bodied fish samples collected for the Mercury Monitoring Program since 2018.

Notes:

NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin

"-" = Not Reported.

¹ Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Area ¹	Date	Species	Total Length (mm)	Field Weight (g)	Total Hg in Fish Tissue (THg ppm ww)	Stable Isotopes		Notes
								C13	N15	
2018	14012	WTS	26-Jul-18	NSSB	38	0.40	0.052	-24	8.6	
2018	14014	WTS	26-Jul-18	NSSB	38	0.40	0.055	-27	8.5	
2018	14017	WTS	26-Jul-18	NSSB	45	0.60	0.075	-26	8.8	
2018	14018	WTS	26-Jul-18	NSSB	34	0.30	0.056	-24	9.3	
2018	14019	WTS	26-Jul-18	NSSB	48	0.70	0.045	-25	8.7	
2018	14022	WTS	26-Jul-18	NSSB	41	0.60	0.064	-26	9.0	
2018	14023	WTS	26-Jul-18	NSSB	46	0.60	0.041	-24	8.3	
2018	14031	WTS	28-Jul-18	NSSB	43	0.50	0.038	-24	8.7	
2018	14041	KAN	29-Jul-18	NSSB	49	0.70	0.028	-26	8.8	
2018	14044	KAN	29-Jul-18	SLSC	36	0.40	0.030	-24	6.7	
2018	14045	KAN	29-Jul-18	SLSC	30	0.20	0.036	-24	7.7	
2018	14049	KAN	29-Jul-18	SLSC	33	0.30	0.029	-23	6.3	
2018	14053	KAN	29-Jul-18	SLSC	29	0.30	0.041	-24	6.5	
2018	14059	KAN	29-Jul-18	SLSC	32	0.30	0.036	-24	7.2	
2018	14099	WTS	30-Jul-18	SLSC	37	0.40	0.041	-25	7.5	
2018	14100	WTS	30-Jul-18	SLSC	30	0.30	0.033	-23	6.5	
2018	14106	WTS	30-Jul-18	SLSC	35	0.30	0.039	-24	7.4	
2018	14109	WTS	30-Jul-18	SLSC	34	0.40	0.040	-25	7.6	
2018	14115	WTS	30-Jul-18	SLSC	32	0.30	0.033	-21	7.2	
2018	14126	A65	31-Jul-18	SLSC	36	0.40	0.044	-23	7.9	
2018	14129	A65	31-Jul-18	SLSC	39	0.60	0.034	-23	7.1	
2018	14131	A65	31-Jul-18	SLSC	38	0.40	0.033	-23	7.6	
2018	14132	A65	31-Jul-18	SLSC	33	0.30	0.037	-21	6.9	
2018	14156	A65	31-Jul-18	SLSC	37	0.50	0.039	-23	7.8	
2018	14161	A20	31-Jul-18	NSSB	45	0.60	0.035	-25	8.5	
2018	14162	A20	31-Jul-18	NSSB	42	0.50	0.039	-25	8.2	
2018	14166	A20	01-Aug-18	SLSC	29	0.20	0.045	-21	6.6	
2018	14177	A20	01-Aug-18	SLSC	30	0.30	0.045	-22	7.0	
2018	14181	A20	01-Aug-18	SLSC	32	0.30	0.033	-21	6.9	
2018	14183	A20	01-Aug-18	SLSC	34	0.30	0.026	-19	5.9	
2018	14186	A20	01-Aug-18	SLSC	33	0.20	0.029	-20	6.3	Tail broken- could not confirm FL
2018	14200	LK8	02-Aug-18	SLSC	30	0.30	0.026	-24	7.2	
2018	14201	LK8	02-Aug-18	SLSC	29	0.30	0.023	-22	6.6	
2018	14204	LK8	02-Aug-18	SLSC	36	0.20	0.034	-22	6.9	Fork length wrong- fish was 27 mm
2018	14206	LK8	02-Aug-18	SLSC	28	0.20	0.025	-20	6.2	
2018	14208	LK8	02-Aug-18	SLSC	32	0.30	0.019	-22	7.9	
2019	14262	A44	18-Aug-19	SLSC	36	0.32	0.024	-20	6.5	
2019	14266	A44	18-Aug-19	SLSC	34	0.30	0.031	-22	6.6	
2019	14269	A44	18-Aug-19	SLSC	31	0.20	0.040	NA	NA	
2019	14270	A44	18-Aug-19	SLSC	33	0.27	0.031	NA	NA	
2019	14283	A44	18-Aug-19	SLSC	37	0.35	0.026	-19	6.4	Tail broken- could not confirm FL
2019	14297	A65	19-Aug-19	NSSB	31	0.22	0.029	-25	6.9	
2019	14299	A65	19-Aug-19	NSSB	35	0.27	0.035	-27	7.6	
2019	14304	A65	19-Aug-19	NSSB	48	0.79	0.051	-26	7.9	
2019	14305	A65	19-Aug-19	NSSB	42	0.57	0.042	-27	8.6	
2019	14330	A65	19-Aug-19	NSSB	33	0.24	0.033	-26	7.5	
2019	14334	A65	19-Aug-19	NSSB	47	0.88	0.044	NA	NA	
2019	14337	A65	19-Aug-19	NSSB	32	0.26	0.030	-26	6.9	
2019	14338	A65	19-Aug-19	NSSB	43	0.67	0.038	-26	8.3	
2019	14339	A65	19-Aug-19	NSSB	45	0.85	0.040	-25	8.3	
2019	14346	A65	19-Aug-19	NSSB	30	0.19	0.039	-25	6.4	
2019	14351	WTS	20-Aug-19	NSSB	31	0.22	0.057	-26	7.9	
2019	14361	WTS	20-Aug-19	NSSB	32	0.21	0.034	-28	7.1	
2019	14363	WTS	20-Aug-19	NSSB	35	0.14	0.035	-26	7.2	Fork length wrong- fish was 25 mm
2019	14369	WTS	20-Aug-19	NSSB	42	0.70	0.049	-26	8.5	
2019	14372	WTS	20-Aug-19	NSSB	34	0.29	0.025	-28	8.3	
2019	14378	WTS	20-Aug-19	SLSC	36	0.47	0.059	-26	8.2	
2019	14379	WTS	20-Aug-19	SLSC	32	0.32	0.025	-23	8.8	
2019	14380	WTS	20-Aug-19	SLSC	38	0.50	0.030	-27	8.7	
2019	14384	WTS	20-Aug-19	SLSC	37	0.45	0.043	-26	7.3	
2019	14386	WTS	20-Aug-19	SLSC	34	0.38	0.12	-28	7.8	
2019	14418	WTS	20-Aug-19	NSSB	37	0.40	0.033	-29	10.3	
2019	14464	A20	21-Aug-19	NSSB	45	0.78	0.043	NA	NA	
2019	14465	A20	21-Aug-19	NSSB	44	0.52	0.043	-25	7.6	
2019	14466	A20	21-Aug-19	NSSB	43	0.53	0.045	-25	7.0	
2019	14470	A20	21-Aug-19	NSSB	38	0.31	0.054	-29	6.7	
2019	14477	A20	21-Aug-19	NSSB	33	0.23	0.040	-28	6.4	
2019	14481	A20	21-Aug-19	NSSB	48	0.78	0.059	-25	8.2	
2019	14485	A20	21-Aug-19	NSSB	43	0.51	0.046	-24	7.2	
2019	14495	A20	21-Aug-19	NSSB	35	0.24	0.037	-27	6.0	
2019	14497	A20	21-Aug-19	NSSB	36	0.32	0.045	-25	7.2	
2019	14498	A20	21-Aug-19	NSSB	31	0.25	0.053	-24	7.4	
2019	14503	KAN	22-Aug-19	SLSC	36	0.42	0.033	-20	7.8	
2019	14506	KAN	22-Aug-19	SLSC	38	0.45	0.031	-22	8.3	
2019	14508	KAN	22-Aug-19	SLSC	36	0.37	0.042	-22	8.1	
2019	14532	KAN	22-Aug-19	SLSC	39	0.42	0.041	-22	8.0	
2019	14534	KAN	22-Aug-19	SLSC	40	0.45	0.035	-23	7.6	

Table C1-1. Small-bodied fish samples collected for the Mercury Monitoring Program since 2018.

Notes:

NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin

"-" = Not Reported.

¹ Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Area ¹	Date	Species	Total Length (mm)	Field Weight (g)	Total Hg in Fish Tissue (THg ppm ww)	Stable Isotopes		Notes
								C13	N15	
2019	14535	KAN	22-Aug-19	NSSB	43	0.51	0.030	-27	9.8	
2019	14536	KAN	22-Aug-19	NSSB	49	0.76	0.039	-26	9.3	
2020	14546	KAN	21-Aug-20	SLSC	37	0.42	0.026	-20	8.0	
2020	14550	KAN	21-Aug-20	NSSB	30	0.19	0.024	-25	6.9	
2020	14551	KAN	21-Aug-20	NSSB	40	0.44	0.025	-24	7.7	
2020	14562	KAN	21-Aug-20	SLSC	37	0.36	0.026	-21	7.8	
2020	14565	KAN	21-Aug-20	SLSC	38	0.45	0.061	-25	6.7	
2020	14577	KAN	21-Aug-20	SLSC	38	0.46	0.021	-18	7.4	Tail broken- could not confirm FL
2020	14578	KAN	21-Aug-20	SLSC	35	0.36	0.023	-21	7.2	
2020	14580	KAN	21-Aug-20	NSSB	34	0.25	0.022	-27	7.7	
2020	14604	LK1	22-Aug-20	SLSC	39	0.68	0.070	-25	8.1	
2020	14607	LK1	22-Aug-20	SLSC	35	0.41	0.085	-26	7.8	
2020	14608	LK1	22-Aug-20	SLSC	34	0.51	0.071	-25	7.6	
2020	14613	LK1	22-Aug-20	SLSC	34	0.34	0.072	-24	7.3	
2020	14614	LK1	22-Aug-20	SLSC	35	0.56	0.030	-23	5.9	
2020	14622	LK8	23-Aug-20	SLSC	35	0.39	0.025	-17	6.1	
2020	14628	LK8	23-Aug-20	SLSC	34	0.29	0.031	-22	6.4	
2020	14634	LK8	23-Aug-20	SLSC	31	0.27	0.022	-18	6.1	
2020	14637	LK8	23-Aug-20	SLSC	27	0.22	0.040	-21	7.2	
2020	14647	LK8	23-Aug-20	SLSC	30	0.27	0.030	-19	6.8	
2020	14655	KAN	25-Aug-20	NSSB	41	0.45	0.023	-26	8.2	
2020	14657	WTS	26-Aug-20	NSSB	38	0.34	0.34	-31	8.7	
2020	14660	WTS	26-Aug-20	NSSB	36	0.29	0.35	-30	8.6	
2020	14661	WTS	26-Aug-20	NSSB	39	0.43	0.34	-29	8.3	
2020	14671	WTS	26-Aug-20	NSSB	45	0.62	0.37	-30	8.9	
2020	14672	WTS	26-Aug-20	NSSB	41	0.42	0.29	-30	8.3	
2020	14673	WTS	26-Aug-20	NSSB	47	0.67	0.30	-31	9.2	
2020	14675	WTS	26-Aug-20	NSSB	44	0.56	0.35	-31	7.8	
2020	14676	WTS	26-Aug-20	NSSB	42	0.54	0.36	-31	8.0	
2020	14677	WTS	26-Aug-20	NSSB	31	0.22	0.31	-29	8.3	
2020	14687	WTS	26-Aug-20	NSSB	34	0.30	0.23	-27	10.1	
2020	17000	WTS	26-Aug-20	SLSC	37	0.52	0.31	-28	7.8	
2020	17014	WTS	26-Aug-20	SLSC	40	0.58	0.23	-28	7.4	
2020	17019	WTS	26-Aug-20	SLSC	45	0.71	0.30	-28	7.8	
2020	17020	WTS	26-Aug-20	SLSC	43	0.64	0.27	-28	7.5	
2020	17021	WTS	26-Aug-20	SLSC	41	0.59	0.33	-28	8.2	
2020	17023	A20	27-Aug-20	NSSB	44	0.58	0.12	-28	7.0	
2020	17028	A20	27-Aug-20	NSSB	32	0.21	0.071	-27	7.1	
2020	17029	A20	27-Aug-20	NSSB	31	0.22	0.087	-27	7.2	
2020	17031	A20	27-Aug-20	NSSB	41	0.46	0.32	-28	7.3	
2020	17039	A20	27-Aug-20	NSSB	35	0.28	0.51	-29	7.4	
2020	17041	A20	27-Aug-20	NSSB	37	0.35	0.27	-27	6.6	
2020	17045	A20	27-Aug-20	NSSB	42	0.55	0.095	-29	7.6	
2020	17047	A20	27-Aug-20	NSSB	40	0.43	0.22	-26	6.6	
2020	17050	A20	27-Aug-20	NSSB	43	0.44	0.13	-28	7.4	
2020	17051	A20	27-Aug-20	NSSB	39	0.33	0.23	-27	6.3	
2020	17063	A20	27-Aug-20	SLSC	37	0.46	0.19	-24	5.8	
2020	17064	A20	27-Aug-20	SLSC	36	0.36	0.057	-24	5.2	
2020	17065	A20	27-Aug-20	SLSC	35	0.35	0.13	-25	4.9	
2020	17073	A20	27-Aug-20	SLSC	31	0.33	0.078	-22	5.4	
2020	17079	A20	27-Aug-20	SLSC	32	0.35	0.061	-21	4.7	
2020	17097	A65	27-Aug-20	NSSB	35	0.34	0.24	-29	7.3	
2020	17099	A65	27-Aug-20	NSSB	38	0.39	0.088	-27	7.5	
2020	17102	A65	27-Aug-20	NSSB	36	0.40	0.13	-27	7.2	
2020	17103	A65	27-Aug-20	NSSB	46	0.81	0.16	-28	7.4	
2020	17105	A65	27-Aug-20	NSSB	33	0.26	0.28	-29	8.0	
2020	17108	A65	27-Aug-20	NSSB	45	0.58	0.20	-29	7.5	
2020	17110	A65	27-Aug-20	NSSB	43	0.57	0.32	-31	8.4	
2020	17124	A65	27-Aug-20	NSSB	42	0.45	0.16	-26	7.5	
2020	17125	A65	27-Aug-20	NSSB	41	0.41	0.16	-29	8.1	
2020	17127	A65	27-Aug-20	NSSB	31	0.20	0.11	-26	8.4	
2020	17138	A65	27-Aug-20	SLSC	42	0.88	0.14	-26	6.4	
2020	17141	A65	27-Aug-20	SLSC	44	0.80	0.15	-28	6.1	
2020	17142	A65	27-Aug-20	SLSC	42	0.87	0.13	-26	7.5	
2020	17144	A65	27-Aug-20	SLSC	45	1.0	0.14	-28	7.3	
2020	17159	A65	27-Aug-20	SLSC	45	0.76	0.13	-26	7.2	
2020	17172	A44	29-Aug-20	SLSC	33	0.33	0.037	-19	6.6	
2020	17181	A44	29-Aug-20	SLSC	36	0.38	0.053	-21	6.5	
2020	17187	A44	29-Aug-20	SLSC	32	0.45	0.036	-21	6.5	
2020	17190	A44	29-Aug-20	SLSC	35	0.39	0.039	-21	7.0	
2020	17196	A44	29-Aug-20	SLSC	35	0.34	0.042	-21	6.0	
2020	17200	A44	29-Aug-20	NSSB	45	0.52	0.042	-27	8.8	
2020	17201	B3	29-Aug-20	SLSC	34	0.34	0.021	-19	4.7	
2020	17203	B3	29-Aug-20	SLSC	37	0.42	0.025	-22	6.8	
2020	17206	B3	29-Aug-20	SLSC	39	0.46	0.043	-23	6.5	
2020	17223	B3	29-Aug-20	SLSC	38	0.51	0.024	-20	5.7	
2020	17224	B3	29-Aug-20	SLSC	37	0.53	0.051	-20	5.5	

Table C1-1. Small-bodied fish samples collected for the Mercury Monitoring Program since 2018.

Notes:

NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin

"-" = Not Reported.

¹ Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Area ¹	Date	Species	Total Length (mm)	Field Weight (g)	Total Hg in Fish Tissue (THg ppm ww)	Stable Isotopes		Notes
								C13	N15	
2020	17235	B3	29-Aug-20	NSSB	45	0.60	0.018	-28	8.3	
2021	17369	A20	10-Aug-21	SLSC	45.2	0.70	0.10	-23	7.2	
2021	17370	A20	10-Aug-21	SLSC	44.8	0.60	0.080	-22	6.2	
2021	17371	A20	10-Aug-21	SLSC	33.8	0.30	0.13	-24	7.0	
2021	17372	A20	10-Aug-21	SLSC	33.2	0.20	0.11	-23	6.9	
2021	17375	A20	10-Aug-21	NSSB	52.8	0.90	0.21	-27	8.8	
2021	17376	A20	10-Aug-21	NSSB	59.1	1.1	0.13	-27	8.8	
2021	17377	A20	10-Aug-21	NSSB	45.5	0.40	0.17	-28	9.0	
2021	17383	A20	10-Aug-21	NSSB	45.4	0.50	0.16	-27	8.8	
2021	17837	A20	10-Aug-21	NSSB	55.4	1.0	0.14	-28	9.4	
2021	17843	A20	10-Aug-21	SLSC	49.1	0.90	0.080	-23	6.0	
2021	17845	A65	12-Aug-21	SLSC	44.9	0.60	0.10	-26	8.5	
2021	17850	A65	12-Aug-21	SLSC	44.9	0.70	0.17	-26	7.6	
2021	17851	A65	12-Aug-21	SLSC	40	0.60	0.22	-27	7.2	
2021	17853	A65	12-Aug-21	SLSC	47.1	0.70	0.18	-27	8.1	
2021	17855	A65	12-Aug-21	SLSC	42.1	0.60	0.12	-26	7.7	
2021	17856	A65	12-Aug-21	NSSB	59.4	1.2	0.18	-27	8.9	
2021	17857	A65	12-Aug-21	NSSB	60.1	1.2	0.28	-27	9.0	
2021	17859	A44	13-Aug-21	SLSC	37	0.30	0.040	-23	7.1	
2021	17863	A44	13-Aug-21	SLSC	33	0.20	0.040	-22	7.3	
2021	17872	WTS	14-Aug-21	SLSC	66.1	2.3	0.30	NA	NA	
2021	17874	WTS	14-Aug-21	SLSC	60.2	1.7	0.34	-29	7.5	
2021	17875	WTS	14-Aug-21	SLSC	51.6	1.0	0.48	-28	8.6	
2021	17876	WTS	14-Aug-21	SLSC	38.7	0.40	0.38	-30	7.4	
2021	17877	WTS	14-Aug-21	SLSC	40.8	0.60	0.35	-31	6.9	
2021	17880	WTS	14-Aug-21	NSSB	55.1	0.90	0.43	-27	10.9	
2021	17882	WTS	14-Aug-21	NSSB	57.5	1.0	0.31	-28	9.9	
2021	17887	B3	14-Aug-21	SLSC	50.5	0.90	0.030	-21	6.0	
2021	17892	B3	14-Aug-21	SLSC	34.3	0.20	0.020	-22	6.9	
2021	17893	B3	14-Aug-21	NSSB	56.1	1.0	0.030	-26	8.8	
2021	17894	B3	14-Aug-21	NSSB	52.8	0.80	0.030	-26	8.5	
2021	17896	LK8	15-Aug-21	SLSC	59	1.4	0.050	-25	6.7	
2021	17897	LK8	15-Aug-21	SLSC	68.9	3.0	0.040	-23	6.7	
2021	17898	LK8	15-Aug-21	SLSC	52.2	1.0	0.030	-22	7.3	
2021	17904	LK8	15-Aug-21	SLSC	61.9	1.9	0.040	-24	7.7	
2021	17905	LK8	15-Aug-21	SLSC	57.2	1.5	0.020	-22	6.9	
2021	17958	WTS	16-Aug-21	SLSC	39.3	0.50	0.27	-30	5.5	
2021	17961	WTS	16-Aug-21	SLSC	69.3	3.3	0.30	-28	8.1	
2021	17964	WTS	16-Aug-21	SLSC	45.1	0.70	0.27	-30	7.0	
2021	17965	WTS	16-Aug-21	SLSC	63.9	1.9	0.39	-29	7.8	
2021	17966	WTS	16-Aug-21	SLSC	42.1	0.60	0.33	-30	6.0	
2021	17970	WTS	16-Aug-21	NSSB	53.1	0.80	0.21	-26	9.0	
2021	17972	WTS	16-Aug-21	NSSB	43.9	0.70	0.32	-27	9.1	
2021	17973	WTS	16-Aug-21	NSSB	60.2	1.3	0.24	-26	9.4	
2021	17980	KAN	17-Aug-21	NSSB	45.1	0.50	0.090	-25	9.7	
2021	17982	KAN	17-Aug-21	NSSB	59.8	1.2	0.050	-26	9.5	
2021	17995	KAN	17-Aug-21	NSSB	48.1	0.60	0.060	-25	9.9	
2021	18006	KAN	17-Aug-21	NSSB	55.2	1.0	0.030	-25	10.8	
2021	18009	KAN	17-Aug-21	NSSB	46.2	0.70	0.030	-26	9.6	
2021	18016	KAN	17-Aug-21	SLSC	34.2	0.30	0.050	-24	8.4	
2021	18025	KAN	17-Aug-21	SLSC	38.2	0.40	0.030	-22	7.8	
2021	18031	KAN	17-Aug-21	SLSC	40.1	0.50	0.030	-22	7.3	
2021	18033	KAN	17-Aug-21	SLSC	39	0.40	0.020	-23	8.2	
2021	18042	KAN	17-Aug-21	SLSC	37.2	0.40	0.040	-23	7.4	
2021	18045	B3	18-Aug-21	SLSC	39	0.50	0.020	-24	6.3	
2021	18049	B3	18-Aug-21	SLSC	38.5	0.40	0.020	-23	6.1	
2021	18052	B3	18-Aug-21	SLSC	39.5	0.40	0.020	-23	6.2	
2021	18053	B3	18-Aug-21	SLSC	69	2.9	0.040	-23	6.7	
2021	18057	B3	18-Aug-21	SLSC	40	0.40	0.020	-21	5.7	
2021	18059	B3	18-Aug-21	SLSC	44.5	0.60	0.030	-23	6.4	
2021	18062	B3	18-Aug-21	SLSC	58.1	1.6	0.030	-21	6.3	
2021	18065	B3	18-Aug-21	SLSC	63.2	2.1	0.030	-23	7.1	
2021	18067	B3	18-Aug-21	NSSB	52.9	0.90	0.040	-28	8.7	
2021	18068	B3	18-Aug-21	NSSB	58.3	1.3	0.050	-28	8.9	
2021	18071	B3	18-Aug-21	NSSB	55.8	1.0	0.040	-28	8.3	
2021	18073	A44	18-Aug-21	SLSC	49.2	0.90	0.030	-21	6.4	
2021	18074	A44	18-Aug-21	SLSC	50.1	0.90	0.030	-20	6.1	
2021	18075	A44	18-Aug-21	SLSC	58.1	1.5	0.050	-24	6.8	
2021	18076	A44	18-Aug-21	NSSB	68.8	2.0	0.070	-28	8.6	
2021	18077	A44	18-Aug-21	NSSB	63.3	1.3	0.080	-29	9.2	
2021	18078	A44	18-Aug-21	NSSB	57.9	1.1	0.040	-26	8.0	
2021	18079	A44	18-Aug-21	NSSB	51.1	0.70	0.040	-27	8.6	
2023	SC-219	LK8	25-Aug-23	SLSC	-	-	0.026	-18	7.1	
2023	SC-223	LK8	25-Aug-23	SLSC	-	-	0.062	-25	7.1	
2023	SC-224	LK8	25-Aug-23	SLSC	-	-	0.031	-22	6.6	
2023	SC-226	LK8	25-Aug-23	SLSC	-	-	0.060	-24	6.7	
2023	SC-230	LK8	25-Aug-23	SLSC	-	-	0.057	-21	7.6	

Table C1-1. Small-bodied fish samples collected for the Mercury Monitoring Program since 2018.

Notes:

NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin

"-" = Not Reported.

¹ Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

Year	Sample ID	Area ¹	Date	Species	Total Length (mm)	Field Weight (g)	Total Hg in Fish Tissue (THg ppm ww)	Stable Isotopes		Notes
								C13	N15	
2023	SC-235	LK8	25-Aug-23	SLSC	-	-	0.042	-23	6.4	
2023	SC-247	LK8	25-Aug-23	SLSC	-	-	0.031	-21	7.0	
2023	SC-250	LK8	25-Aug-23	SLSC	-	-	0.023	-18	6.9	
2023	SC-251	LK8	25-Aug-23	SLSC	-	-	0.040	-24	7.4	
2023	SC-252	LK8	25-Aug-23	SLSC	-	-	0.035	-20	6.9	
2023	SC-19	KAN	20-Aug-23	SLSC	40	0.4908	0.047	-18	9.3	
2023	SC-27	KAN	20-Aug-23	SLSC	40	0.4921	0.029	-19	8.6	
2023	SC-37	KAN	20-Aug-23	SLSC	39	0.4533	0.052	-22	9.2	
2023	SC-38	KAN	20-Aug-23	SLSC	39	0.4925	0.046	-19	10.4	
2023	SC-39	KAN	20-Aug-23	SLSC	38	0.447	0.063	-22	8.8	
2023	SC-40	KAN	20-Aug-23	SLSC	39	0.4552	0.075	-22	8.7	
2023	SC-41	KAN	20-Aug-23	SLSC	36	0.4284	0.055	-22	8.5	
2023	SC-43	KAN	20-Aug-23	SLSC	38	0.4259	0.067	-23	8.9	
2023	SC-49	KAN	20-Aug-23	SLSC	37	0.3883	0.048	-22	8.8	
2023	SC-54	KAN	20-Aug-23	SLSC	38	0.4282	0.050	-19	10.4	
2023	SC-55	WTS	20-Aug-23	SLSC	40	0.5763	0.53	-28	10.6	
2023	SC-57	WTS	20-Aug-23	SLSC	49	0.9535	0.55	-29	11.3	
2023	SC-58	WTS	20-Aug-23	SLSC	51	1.131	0.81	-28	9.9	
2023	SC-59	WTS	20-Aug-23	SLSC	48	0.9452	0.50	-29	10.4	
2023	SC-60	WTS	20-Aug-23	SLSC	42	0.4896	0.39	-27	10.9	
2023	SC-62	WTS	20-Aug-23	SLSC	40	0.5798	0.36	-28	11.6	
2023	SC-63	WTS	20-Aug-23	SLSC	47	0.8603	0.43	-28	11.6	
2023	SC-200	WTS	25-Aug-23	SLSC	37	0.3718	0.51	-28	12.5	
2023	SC-201	WTS	25-Aug-23	SLSC	41	0.5083	0.65	-29	13.2	
2023	SC-204	WTS	25-Aug-23	SLSC	28	0.2589	0.48	-29	13.5	
2023	SC-146	A20	23-Aug-23	SLSC	44	0.7607	0.17	-25	7.9	
2023	SC-147	A20	23-Aug-23	SLSC	42	0.6253	0.15	-25	8.6	
2023	SC-148	A20	23-Aug-23	SLSC	46	0.861	0.16	-25	8.6	
2023	SC-149	A20	23-Aug-23	SLSC	40	0.6077	0.14	-21	8.1	
2023	SC-151	A20	23-Aug-23	SLSC	41	0.5737	0.15	-27	8.4	
2023	SC-152	A20	23-Aug-23	SLSC	42	0.6802	0.25	-23	9.1	
2023	SC-153	A20	23-Aug-23	SLSC	38	0.4884	0.10	-23	8.8	
2023	SC-155	A20	23-Aug-23	SLSC	45	0.7672	0.078	-23	9.1	
2023	SC-156	A20	23-Aug-23	SLSC	39	0.6051	0.15	-24	8.6	
2023	NS-9	A20	23-Aug-23	NSSB	49	0.7053	0.24	-30	11.6	
2023	NS-10	A20	23-Aug-23	NSSB	42	0.4036	0.077	-26	9.0	
2023	NS-11	A20	23-Aug-23	NSSB	49	0.6849	0.13	-25	10.4	
2023	NS-12	A20	23-Aug-23	NSSB	39	0.2908	0.15	-23	9.6	
2023	NS-13	A20	23-Aug-23	NSSB	49	0.735	0.17	-30	10.1	
2023	NS-17	A20	23-Aug-23	NSSB	42	0.5209	0.085	-27	9.7	
2023	NS-43	WTS	25-Aug-23	NSSB	42	0.4559	0.23	-30	11.4	
2023	NS-45	WTS	25-Aug-23	NSSB	44	0.567	0.47	-28	11.6	
2023	NS-46	WTS	25-Aug-23	NSSB	34	0.2739	0.37	-26	10.9	
2023	NS-47	WTS	25-Aug-23	NSSB	45	0.6647	0.31	-30	10.9	
2023	NS-49	WTS	25-Aug-23	NSSB	49	0.716	0.22	-29	12.5	
2023	NS-51	WTS	25-Aug-23	NSSB	35	0.2773	0.28	-26	9.1	
2023	NS-52	WTS	25-Aug-23	NSSB	47	0.7564	0.34	-27	10.9	
2023	NS-55	WTS	25-Aug-23	NSSB	36	0.2866	0.35	-30	11.0	
2023	NS-57	WTS	26-Aug-23	NSSB	40	0.4504	0.30	-30	11.5	
2023	NS-58	WTS	26-Aug-23	NSSB	39	0.4173	0.28	-30	10.4	
2023	NS-61	WTS	26-Aug-23	NSSB	41	0.4228	0.30	-28	11.8	
2023	NS-62	WTS	26-Aug-23	NSSB	37	0.369	0.43	-29	12.1	
2023	NS-69	WTS	26-Aug-23	NSSB	49	0.8157	0.37	-27	11.4	
2023	NS-1	WTS	20-Aug-23	NSSB	43	0.4292	0.23	-30	11.8	
2023	NS-44	WTS	25-Aug-23	NSSB	37	0.325	0.38	-29	11.0	
2023	NS-48	WTS	25-Aug-23	NSSB	43	0.5696	0.57	-29	11.0	
2023	NS-53	WTS	25-Aug-23	NSSB	47	0.6705	0.35	-31	11.7	
2023	NS-54	WTS	25-Aug-23	NSSB	39	0.3894	0.40	-25	11.5	
2023	NS-59	WTS	26-Aug-23	NSSB	37	0.3535	0.27	-28	10.5	
2023	NS-60	WTS	26-Aug-23	NSSB	35	0.2748	0.26	-28	11.2	
2023	NS-64	WTS	26-Aug-23	NSSB	41	0.2419	0.28	-31	11.0	
2023	NS-72	WTS	26-Aug-23	NSSB	35	0.2789	0.33	-26	11.3	
2023	NS-63	WTS	26-Aug-23	NSSB	35	0.2495	0.17	-27	7.7	

APPENDIX C2

LARGE-BODIED FISH MERCURY DATABASE

LAKE TROUT SAMPLING PROGRAM OVERVIEW

Fish tissue data have been collected in Whale Tail area lakes under various programs dating back to baseline sampling in 2015. Methods for each sampling event are outlined below.

- **2015 Whale Tail and Kangislulik Lake Sampling.** Lake Trout were captured in Whale Tail Lake and Kangislulik Lake for collection of muscle tissue for baseline mercury and metals analysis. Fish sampling was conducted by C. Portt and Associates. Fish were captured using gill nets and samples of skinless, boneless dorsal muscle were collected in the field using a standard filleting knife. Samples were placed in labelled Whirl-Pak® bags, frozen, and transported to Guelph, Ontario, where they were stored frozen prior to shipping to ALS Laboratories in Burnaby, BC (C. Portt and Associates 2018).
- **2018 Fish-out of the North Basin of Whale Tail Lake.** The fish-out was conducted by North/South Consultants (Winnipeg, MB). Results of the fish-out were submitted to the *Department of Fisheries and Oceans* in accordance with project requirements. Fish were captured using gill nets and filleted in the field. Tissue samples were placed in labelled Whirl-Pak® bags, frozen, and shipped to University of Waterloo. All fish tissue samples collected by North/South had skin and muscle tissue taken from the caudal peduncle.
- The fish tissue sample sizes varied between samples; to maximize the preservation of baseline samples, University of Waterloo selected 20 of the largest tissue samples from each species (Round Whitefish, Arctic Char and Lake Trout) collected during the fish-out.
- **2018 Lake 8 Reference.** In 2018, University of Waterloo researchers collected eight Lake Trout tissue samples from Reference Lake 8. Fish were captured using gill nets and filleted in the field. Tissue samples were collected following *Swanson Lab SOP – Fish sampling for chemical parameters*; tissue samples were taken from the muscle located above the lateral line and anterior to the dorsal fin. Tissue samples were placed in labelled Whirl-Pak® bags, frozen, and shipped to University of Waterloo. These eight samples serve as reference/control data for this work and future productivity studies.
- **2020 EEM and supplementary sampling.** As part of the 2020 Cycle 1 EEM study implemented by C. Portt and Associates, Lake Trout were collected from Kangislulik Lake, Lake 8, and Lake D1. Additional fish were collected from Whale Tail Lake and Lake DS1 for the MMP. Fish were captured using gill nets and filleted in the field. Boneless, skinless dorsal muscle was taken from anterior to the dorsal fin. Tissue samples were placed in labelled Whirl-Pak® bags, frozen, and transported to the University of Waterloo.

- **2023 EEM and supplementary sampling.** As part of the 2023 Cycle 2 EEM study implemented by C. Portt and Associates, Lake Trout were captured from Kangislulik Lake, Lake 8, and Lake D1. Additional fish were collected from Whale Tail Lake for the MMP. A select number of fish of similar size classes as previous years were retained for mercury analysis in muscle tissue. Fish were captured using gill nets and filleted in the field. Boneless, skinless dorsal muscle was taken from anterior to the dorsal fin. Tissue samples were placed in labelled Whirl-Pak® bags, frozen, and transported to the University of Waterloo.
- **2024 supplementary sampling.** Due to the significant increase in concentrations of mercury in 550-mm Lake Trout from 2020 to 2023, Lake Trout were collected from Whale Tail Lake to review concentrations of mercury in 2024. Lake Trout were captured using gill nets or angling and biopsy samples or fillets were collected in the field. Biopsy samples were collected using a biopsy punch, while for incidental mortalities, boneless, skinless dorsal muscle was taken from anterior to the dorsal fin using a standard filet knife. Tissue samples were placed in labelled Whirl-Pak® bags, frozen, and transported to the University of Waterloo.

Table C2-1. Large-bodied fish samples collected for the Mercury Monitoring Program since 2015.

Notes:

¹ Kangisulilik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

² M = Mature; I = Immature; U = Unknown.

DELts = Deformities, erosion, lesions, or tumours.

NA = No data

U = Unknown

Fish ID	Year	Date	Area	Capture Method/Effort	Species	Fork Length (mm)	Weight (g)	Liver Weight (g)	Gonad weight (g)	Sex	Maturity	Egg Sample Weight (g)	Egg Count	Age (years)	Sample Weight (g)	THg in Sample (ng)	THg (ppm)	THg (ppm ww)	C13	N15	Condition (K)	Stomach Contents	DELts	Comment
46	2015	NA	Whale Tail	NA	Lake Trout	568	1830	NA	NA	F	M	NA	NA	28	NA	NA	NA	0.59	NA	NA	1.00	NA	none	NA
47	2015	NA	Whale Tail	NA	Lake Trout	661	3110	NA	NA	M	M	NA	NA	24	NA	NA	NA	0.83	NA	NA	1.1	NA	none	NA
48	2015	NA	Whale Tail	NA	Lake Trout	581	2210	NA	NA	F	M	NA	NA	27	NA	NA	NA	0.86	NA	NA	1.1	NA	none	NA
49	2015	NA	Whale Tail	NA	Lake Trout	608	2230	NA	NA	F	M	NA	NA	26	NA	NA	NA	0.97	NA	NA	0.99	NA	none	NA
50	2015	NA	Whale Tail	NA	Lake Trout	481	1090	NA	NA	M	I	NA	NA	25	NA	NA	NA	0.47	NA	NA	0.98	NA	none	NA
52	2015	NA	Whale Tail	NA	Lake Trout	445	1130	NA	NA	M	M	NA	NA	15	NA	NA	NA	0.14	NA	NA	1.3	NA	none	NA
53	2015	NA	Whale Tail	NA	Lake Trout	472	970	NA	NA	M	I	NA	NA	18	NA	NA	NA	0.37	NA	NA	0.92	NA	none	NA
56	2015	NA	Whale Tail	NA	Lake Trout	407	775	NA	NA	M	M	NA	NA	23	NA	NA	NA	0.33	NA	NA	1.2	NA	none	NA
57	2015	NA	Whale Tail	NA	Lake Trout	388	607	NA	NA	M	M	NA	NA	13	NA	NA	NA	0.28	NA	NA	1.0	NA	none	NA
58	2015	NA	Whale Tail	NA	Lake Trout	469	987	NA	NA	M	I	NA	NA	18	NA	NA	NA	0.37	NA	NA	0.96	NA	none	NA
59	2015	NA	Whale Tail	NA	Lake Trout	380	655	NA	NA	M	M	NA	NA	12	NA	NA	NA	0.18	NA	NA	1.2	NA	none	NA
60	2015	NA	Whale Tail	NA	Lake Trout	430	687	NA	NA	F	M	NA	NA	13	NA	NA	NA	0.45	NA	NA	0.86	NA	none	NA
61	2015	NA	Whale Tail	NA	Lake Trout	860	7320	NA	NA	M	M	NA	NA	44	NA	NA	NA	2.2	NA	NA	1.2	NA	none	NA
62	2015	NA	Whale Tail	NA	Lake Trout	585	2110	NA	NA	M	M	NA	NA	26	NA	NA	NA	0.80	NA	NA	1.1	NA	none	NA
63	2015	NA	Whale Tail	NA	Lake Trout	475	1020	NA	NA	M	M	NA	NA	25	NA	NA	NA	0.49	NA	NA	0.95	NA	none	NA
64	2015	NA	Whale Tail	NA	Lake Trout	410	745	NA	NA	F	M	NA	NA	25	NA	NA	NA	0.29	NA	NA	1.1	NA	none	NA
65	2015	NA	Whale Tail	NA	Lake Trout	423	693	NA	NA	F	M	NA	NA	14	NA	NA	NA	0.31	NA	NA	0.92	NA	none	NA
66	2015	NA	Whale Tail	NA	Lake Trout	335	427	NA	NA	M	I	NA	NA	12	NA	NA	NA	0.14	NA	NA	1.1	NA	none	NA
68	2015	NA	Whale Tail	NA	Lake Trout	319	348	NA	NA	M	I	NA	NA	9	NA	NA	NA	0.16	NA	NA	1.1	NA	none	NA
69	2015	NA	Whale Tail	NA	Lake Trout	159	37.4	NA	NA	U	I	NA	NA	na	NA	NA	NA	0.077	NA	NA	0.93	NA	none	NA
70	2015	NA	Whale Tail	NA	Lake Trout	390	672	NA	NA	F	R	NA	NA	19	NA	NA	NA	0.32	NA	NA	1.1	NA	none	NA
97	2015	NA	Kangisulilik	NA	Lake Trout	370	510	NA	NA	F	M	NA	NA	13	NA	NA	NA	0.23	NA	NA	1.0	NA	none	NA
98	2015	NA	Kangisulilik	NA	Lake Trout	369	501	NA	NA	F	M	NA	NA	13	NA	NA	NA	0.16	NA	NA	1.00	NA	none	NA
99	2015	NA	Kangisulilik	NA	Lake Trout	373	550	NA	NA	F	M	NA	NA	11	NA	NA	NA	0.16	NA	NA	1.1	NA	none	NA
100	2015	NA	Kangisulilik	NA	Lake Trout	363	542	NA	NA	M	M	NA	na	na	NA	na	NA	0.13	NA	NA	1.1	NA	none	NA
101	2015	NA	Kangisulilik	NA	Lake Trout	343	460	NA	NA	F	M	NA	NA	9	NA	NA	NA	0.14	NA	NA	1.1	NA	none	NA
102	2015	NA	Kangisulilik	NA	Lake Trout	353	433	NA	NA	F	M	NA	NA	10	NA	NA	NA	0.14	NA	NA	0.98	NA	none	NA
103	2015	NA	Kangisulilik	NA	Lake Trout	373	474	NA	NA	F	M	NA	NA	16	NA	NA	NA	0.18	NA	NA	0.91	NA	none	NA
105	2015	NA	Kangisulilik	NA	Lake Trout	385	612	NA	NA	F	M	NA	NA	11	NA	NA	NA	0.17	NA	NA	1.1	NA	none	NA
106	2015	NA	Kangisulilik	NA	Lake Trout	395	692	NA	NA	F	M	NA	NA	12	NA	NA	NA	0.27	NA	NA	1.1	NA	none	NA
108	2015	NA	Kangisulilik	NA	Lake Trout	351	474	NA	NA	M	M	NA	na	na	NA	na	NA	0.12	NA	NA	1.1	NA	none	NA
110	2015	NA	Kangisulilik	NA	Lake Trout	346	478	NA	NA	F	M	NA	NA	10	NA	NA	NA	0.16	NA	NA	1.2	NA	none	NA
111	2015	NA	Kangisulilik	NA	Lake Trout	365	504	NA	NA	M	M	NA	NA	12	NA	NA	NA	0.19	NA	NA	1.0	NA	none	NA
112	2015	NA	Kangisulilik	NA	Lake Trout	365	504	NA	NA	F	M	NA	NA	13	NA	NA	NA	0.18	NA	NA	1.0	NA	none	NA
114	2015	NA	Kangisulilik	NA	Lake Trout	390	2110	NA	NA	M	M	NA	NA	24	NA	NA	NA	0.58	NA	NA	1.0	NA	none	NA
115	2015	NA	Kangisulilik	NA	Lake Trout	369	511	NA	NA	M	M	NA	NA	12	NA	NA	NA	0.13	NA	NA	1.0	NA	none	NA
116	2015	NA	Kangisulilik	NA	Lake Trout	354	472	NA	NA	M	M	NA	NA	13	NA	NA	NA	0.19	NA	NA	1.1	NA	none	NA
117	2015	NA	Kangisulilik	NA	Lake Trout	366	534	NA	NA	M	I	NA	NA	13	NA	NA	NA	0.22	NA	NA	1.1	NA	none	NA
118	2015	NA	Kangisulilik	NA	Lake Trout	316	319	NA	NA	M	I	NA	NA	10	NA	NA	NA	0.22	NA	NA	1.0	NA	none	NA
119	2015	NA	Kangisulilik	NA	Lake Trout	290	269	NA	NA	M	I	NA	NA	8	NA	NA	NA	0.13	NA	NA	1.1	NA	none	NA
120	2015	NA	Kangisulilik	NA	Lake Trout	290	287	NA	NA	F	I	NA	NA	8	NA	NA	NA	0.12	NA	NA	1.2	NA	none	NA
121	2015	NA	Kangisulilik	NA	Lake Trout	285	239	NA	NA	U	I	NA	NA	8	NA	NA	NA	0.14	NA	NA	1.0	NA	none	NA
122	2015	NA	Kangisulilik	NA	Lake Trout	254	181	NA	NA	U	I	NA	NA	6	NA	NA	NA	0.078	NA	NA	1.1	NA	none	NA
123	2015	NA	Kangisulilik	NA	Lake Trout	215	96.2	NA	NA	F	I	NA	NA	5	NA	NA	NA	0.075	NA	NA	0.97	NA	none	NA
124	2015	NA	Kangisulilik	NA	Lake Trout	700	4670	NA	NA	F	M	NA	NA	37	NA	NA	NA	1.1	NA	NA	1.4	NA	none	NA
126	2015	NA	Kangisulilik	NA	Lake Trout	218	111	NA	NA	U	I	NA	NA	5	NA	NA	NA	0.072	NA	NA	1.1	NA	none	NA
14241	2018	22-Aug-18	Lake 8	NA	Lake Trout	375	596	NA	NA	F	I	NA	NA	NA	0.022	13	0.61	0.14	NA	NA	1.1	zooplankton	NA	NA
14242	2018	22-Aug-18	Lake 8	NA	Lake Trout	583	1980	NA	NA	M	U	NA	NA	NA	0.020	72	3.7	0.81	NA	NA	1.00	empty	NA	NA
14243	2018	22-Aug-18	Lake 8	NA	Lake Trout	491	1270	NA	NA	F	I	NA	NA	NA	0.021	12	0.10	0.23	NA	NA	0.99	zooplankton	NA	NA
14244	2018	22-Aug-18	Lake 8	NA	Lake Trout	490	1320	NA	NA	M	M	NA	NA	NA	0.020	53	2.3	0.52	NA	NA	1.1	zooplankton	NA	NA
14245	2018	22-Aug-18	Lake 8	NA	Lake Trout	480	1210	NA	NA	F	M	NA	NA	NA	0.021	32	1.5	0.33	NA	NA	1.1	zooplankton	NA	NA
14246	2018	22-Aug-18	Lake 8	NA	Lake Trout	582	1410	NA	NA	F	U	NA	NA	NA	0.019	102	5.3	1.2	NA	NA	0.72	empty	NA	NA
14247	2018	22-Aug-18	Lake 8	NA	Lake Trout	204																		

Table C2-1. Large-bodied fish samples collected for the Mercury Monitoring Program since 2015.

Notes:

¹ Kangisulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).

² M = Mature; I = Immature; U = Unknown.

DELts = Deformities, erosion, lesions, or tumours.

NA = No data

U = Unknown

Fish ID	Year	Date	Area	Capture Method	Species	Fork Length (mm)	Weight (g)	Liver Weight (g)	Gonad weight (g)	Sex	Maturity	Egg Sample Weight (g)	Egg Count	Age (years)	Sample Weight (g)	THg in Sample (ng)	THg (ppm)	THg (ppm ww)	C13	N15	Condition (K)	Stomach Contents	DELts	Comment	
LT-31	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	831	5400	74.5	71.32	F	M	NA	NA	36	0.0041	32	7.7	1.7	-22.25000	13	0.94	NA	NA	NA	NA
LT-32	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	728	5886	59.12	150.4	M	M	NA	NA	27	0.0063	28	4.5	0.99	-22.21000	13	1.5	NA	NA	NA	NA
LT-33	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	853	7890	56.49	77.2	F	M	NA	NA	36	0.0038	51	13	3.0	-25.16000	12	1.3	NA	NA	NA	NA
LT-34	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	638	3171	47.22	22.76	F	I	NA	NA	33	0.0037	23	6.1	1.3	-20.65000	12	1.7	NA	NA	NA	NA
LT-35	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	458	895	7.9	0.52	U	I	NA	NA	13	0.0034	8.7	2.6	0.56	-24.45000	12	0.93	NA	NA	NA	NA
LT-36	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	422	807	7.42	18.8	M	M	NA	NA	22	0.0058	11	1.9	0.41	-25.35000	9.7	1.1	Invertebrates	NA	NA	NA
LT-37	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	392	666	5.33	9.02	F	I	NA	NA	19	0.0043	4.7	1.1	0.24	-24.71000	9.7	1.1	Invertebrates	18 encysted parasites	NA	NA
LT-38	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	435	662	8.74	17.68	M	M	NA	NA	20	0.0055	10	1.8	0.41	-25.82000	10	1.1	NA	25 encysted parasites	NA	NA
LT-39	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	281	261	3.19	0.49	F	I	NA	NA	10	0.0039	2.9	0.76	0.17	-24.15000	10.0	1.2	NA	NA	NA	NA
LT-40	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	367	477	3.77	1.39	F	I	NA	NA	14	0.0035	7.1	2.0	0.45	-22.85000	11	0.97	NA	33 encysted parasites	NA	NA
LT-41	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	322	357	2.5	0.15	U	I	NA	NA	12	0.0039	3.9	1.00	0.22	-23.82000	9.7	1.1	NA	25 encysted parasites	NA	NA
LT-42	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	311	262	2.32	0.52	F	I	NA	NA	9	0.0044	4.1	0.93	0.21	-22.95000	11	0.87	NA	11 encysted parasites	NA	NA
LT-43	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	226	140.33	1.16	0.26	U	I	NA	NA	11	0.0040	5.7	1.4	0.31	-22.06000	11	1.2	NA	12 encysted parasites	NA	NA
LT-44	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	178	61.72	0.87	0.03	U	I	NA	NA	9	0.0032	2.9	0.90	0.20	-23.90000	9.8	1.1	NA	14 encysted parasites	NA	NA
LT-45	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	179	57.92	0.64	0.03	U	I	NA	NA	5	0.0033	1.8	0.55	0.12	-23.68000	10	1.0	NA	4 encysted parasites	NA	NA
LT-46	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	169	48.74	0.49	0.06	U	I	NA	NA	8	0.0028	2.4	0.84	0.19	-24.26000	10	1.0	NA	9 encysted parasites	NA	NA
LT-47	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	256	184	1.84	0.06	U	I	NA	NA	9	0.0033	3.3	0.99	0.22	-23.43000	11	1.1	NA	9 encysted parasites	NA	NA
LT-128	2020	30-Aug-20	Lake D51	1	Lake Trout	269	199	2.41	0.07	U	I	NA	NA	3	0.0042	4.0	0.96	0.21	-22.82000	11	1.0	NA	3 encysted parasites	NA	NA
LT-132	2020	30-Aug-20	Lake D51	2	Lake Trout	402	712	7.59	1.58	F	I	NA	NA	11	0.0060	8.9	1.5	0.33	-19.89000	11	1.1	NA	7 encysted parasites	NA	NA
LT-121	2020	30-Aug-20	Lake D51	1	Lake Trout	409	708	6.27	0.94	M	I	NA	NA	10	0.0040	5.9	1.5	0.32	-22.61000	10	1.0	NA	1 encysted parasite	NA	NA
LT-122	2020	30-Aug-20	Lake D51	1	Lake Trout	436	736	6	0.18	F	I	NA	NA	13	0.0051	9.4	1.9	0.41	-21.10000	11	1.0	NA	NA	NA	NA
LT-130	2020	30-Aug-20	Lake D51	2	Lake Trout	436	852	6.99	0.5	M	I	NA	NA	11	0.0039	8.8	1.8	0.39	-25.27000	13	1.0	NA	6 encysted parasites	NA	NA
LT-131	2020	30-Aug-20	Lake D51	2	Lake Trout	459	1071	9.62	7.19	F	I	NA	NA	12	0.0054	5.3	0.97	0.21	-25.59000	11	1.1	NA	1 encysted parasite	NA	NA
LT-136	2020	30-Aug-20	Lake D51	2	Lake Trout	462	960	8.57	0.57	M	I	NA	NA	17	0.0038	6.7	1.8	0.39	-22.93000	11	0.97	NA	NA	NA	NA
LT-137	2020	30-Aug-20	Lake D51	2	Lake Trout	470	1012	12.09	0.77	M	I	NA	NA	14	0.0040	9.2	2.3	0.51	-24.83000	12	0.98	NA	NA	NA	NA
LT-134	2020	30-Aug-20	Lake D51	2	Lake Trout	478	1216	12.39	5.61	F	I	NA	NA	14	0.0036	7.6	2.1	0.47	-24.13000	11	1.1	NA	NA	NA	NA
LT-142	2020	30-Aug-20	Lake D51	2	Lake Trout	479	1055	6.91	7.75	F	I	NA	NA	22	0.0033	7.5	2.4	0.54	-25.47000	10	0.96	NA	11 encysted parasites	NA	NA
LT-135	2020	30-Aug-20	Lake D51	2	Lake Trout	483	1101	9.88	0.92	M	I	NA	NA	12	0.0047	6.6	1.4	0.31	-23.89000	11	0.98	NA	NA	NA	NA
LT-126	2020	30-Aug-20	Lake D51	1	Lake Trout	484	1112	9.88	18.85	M	M	NA	NA	16	0.0062	9.2	1.5	0.33	-23.09000	11	0.98	NA	NA	NA	NA
LT-133	2020	30-Aug-20	Lake D51	2	Lake Trout	500	1277	11.58	23.34	M	M	NA	NA	13	0.0043	8.0	1.9	0.41	-24.76000	12	1.0	NA	NA	NA	NA
LT-127	2020	30-Aug-20	Lake D51	1	Lake Trout	514	1202	8.74	0.65	F	I	NA	NA	14	0.0040	9.74	2.4	0.54	-22.74000	11	0.89	NA	6 encysted parasites	NA	NA
LT-123	2020	30-Aug-20	Lake D51	1	Lake Trout	518	1484	22.93	134.21	F	M	36.45	348	14	0.0044	5.9	1.3	0.30	-26.28000	12	1.1	NA	NA	NA	NA
LT-120	2020	30-Aug-20	Lake D51	1	Lake Trout	545	1725	11.08	1.76	M	I	NA	NA	19	0.0039	15	3.9	0.87	-22.52000	12	1.1	NA	Fluid filled tumor fused to liver and abdominal wall	NA	NA
LT-125	2020	30-Aug-20	Lake D51	1	Lake Trout	560	2112	16.08	35.8	M	M	NA	NA	14	0.0048	9.6	2.0	0.44	-25.77000	12	1.2	NA	3 encysted parasites	NA	NA
LT-138	2020	30-Aug-20	Lake D51	2	Lake Trout	565	1994	13.01	4.75	F	M	NA	NA	28	0.0031	17	5.6	1.2	-20.98000	12	1.1	NA	3 encysted parasites	NA	NA
LT-140	2020	30-Aug-20	Lake D51	2	Lake Trout	566	1575	10.92	15.56	F	M	NA	NA	20	0.0034	12	3.4	0.76	-21.34000	11	0.87	NA	2 encysted parasites	NA	NA
LT-124	2020	30-Aug-20	Lake D51	1	Lake Trout	590	2352	22.66	6.04	M	M	NA	NA	30	0.0037	21	5.7	1.3	-22.37000	13	1.1	NA	2 encysted parasites	NA	NA
LT-129	2020	30-Aug-20	Lake D51	1	Lake Trout	600	2641	38.28	334	F	M	40.09	296	26	0.0033	11	3.4	0.75	-20.87000	11	1.2	NA	4 encysted parasites	NA	NA
LT-139	2020	30-Aug-20	Lake D51	2	Lake Trout	611	2596	19.98	2.97	M	I	NA	NA	30	0.0035	9.8	2.9	0.62	-23.16000	12	1.1	Fish remains	NA	NA	NA
LT-141	2020	30-Aug-20	Lake D51	2	Lake Trout	734	3706	42.75	33.44	F	M	NA	NA	49	0.0026	38	15	3.2	-22.61000	13	0.94	Fish remains	NA	NA	NA
LT-143	2020	30-Aug-20	Lake D51	2	Lake Trout	745	3340	21.62	49.09	F	M	NA	NA	30	0.0035	64	18	4.0	-24.42000	12	0.81	Bird feathers	NA	NA	NA

APPENDIX D

LENGTH-MERCURY RELATIONSHIPS FOR LARGE-BODIED FISH

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D.1. INTRODUCTION

The mercury monitoring program (MMP) is designed based on the assumption that fish catch is similar in terms of size distribution for a given species at sampling events (i.e., each combination of area and year). There are, however, often differences in the size distribution of sampled populations and/or in the size distribution of captured fish across sampling events. As mercury concentrations are often positively related to fish size, basing data analysis on mean mercury concentrations can introduce size-related bias to the interpretation of temporal and spatial differences or changes in fish mercury concentrations. Modelling length-mercury relationships helps account for potential effects of catching larger or smaller fish across temporal and spatial scales. It also enables estimating mercury concentrations at various "standardized" sizes¹, providing a more intuitive means for tracking differences and/or changes across space and time.

D.2. METHODS

As shown in **Section 5** of the main report (**Table 5-2**), fish mercury dataset is comprised of different sampling areas and years. Specifically, the dataset containing mercury concentrations in Lake Trout included the following sampling areas and years:

- Whale Tail (2015, 2018, 2020, 2023, and 2024),
- Kangislulik (2015, 2020, and 2023),
- Lake DS1 (2020),
- Lake D1 (2020 and 2023), and
- Lake 8 (2018, 2020, and 2023).

Length-mercury relationships in Lake Trout were investigated using area- and year-specific models. Each model was used to estimate mercury concentrations in Lake Trout at a standardized size of 550 mm fork

¹ Historically, fish mercury concentrations were compared among sampled populations or sampling events using species-specific means (or averages). The major limitation of that approach is a bias in the calculated mean, which is associated with random differences in the size of captured fish as mercury concentrations are often positively related to fish size due to bioaccumulation. This potential bias is avoided by using length-mercury relationship to estimate mercury concentrations for specific sizes of fish (the standardized sizes) and comparing them species-specifically to provide insight regarding potential change and/or differences.

length (FL) for each combination of sampling area and year. Size-standardized estimates of mercury concentrations were compared qualitatively between sampling areas and years to reflect potential differences.

The following sections present details on the methods and results of statistical analyses conducted to compare size-adjusted estimates of mercury concentrations in Lake Trout across sampling areas and years.

- **Length-Mercury Models.** The structure of area- and year-specific models was $THg \sim LC$, where THg was $\log_{10}$ -transformed concentrations of total mercury in Lake Trout in mg/kg wet weight and LC was fish length centered to 550 mm FL. Note that most of the mercury analyzed and reported as THg in fish is generally assumed to be methylmercury (MeHg). Also, centering fish length to a standardized size allows direct interpretation of the regression coefficients of the models.
- **Assessment of Outliers.** The length-mercury models were used to identify ‘high residual’ (studentized residuals ≥ 4) and/or ‘high leverage’ (Cook’s distance ≥ 0.5) outliers. If identified, the outliers were removed from the data and model fitting (previous step) was repeated to reflect any potential changes in parameter estimation.
- **Estimates of Mercury Concentrations.** The length-mercury models were used to provide estimates ($\pm$ 95% confidence intervals) of mercury concentrations in Lake Trout length centered to 550 mm FL for each combination of sampling area and year. These size-adjusted estimates of mercury concentrations were visualized to help highlight spatial and temporal changes.

D.3. RESULTS

Results of length-mercury models are provided in **Table D-1**. The fitted models showed statistically significant ($P < 0.05$ and $R^2 = 0.54\text{--}0.96$) relationships between fork length and mercury concentrations; two samples identified as outliers in mercury modelling were removed (**Figure D-1**). Model fits for each area/year combination are shown relative to the underlying data in **Figure D-2**. These fits were used to estimate the mercury concentrations (and $\pm 95\%$ confidence intervals) for a 550-mm Lake Trout (**Table D-2**).

Mercury concentrations in Lake Trout from Whale Tail were similar between 2023 and 2024 (**Figure D-3**). Estimate of size-standardized mercury concentrations in Lake Trout was 1.568 mg/kg wet weight in 2024. Size-standardized estimate of mercury concentrations in Lake Trout was 1.506 mg/kg wet weight in 2023, which indicated a notable increase compared to 2020 (0.613 mg/kg wet weight).

TABLES

Table D-1. Results of length-mercury models in Lake Trout.

Area/Lake	Year	R ²	Parameter	Sum Square	DF	F-value	P-value
Whale Tail	2024	0.67	Intercept	0.890	1	94.239	p < 0.0001
			LC	0.567	1	60.009	p < 0.0001
			Residuals	0.283	30		
	2023	0.66	Intercept	0.516	1	57.342	p < 0.0001
			LC	0.398	1	44.208	p < 0.0001
			Residuals	0.207	23		
	2020	0.82	Intercept	1.142	1	94.401	p < 0.0001
			LC	1.552	1	128.277	p < 0.0001
			Residuals	0.339	28		
	2018	0.54	Intercept	0.258	1	10.008	0.0082
			LC	0.356	1	13.823	0.0029
			Residuals	0.309	12		
	2015	0.87	Intercept	0.965	1	60.901	p < 0.0001
			LC	2.033	1	128.252	p < 0.0001
			Residuals	0.301	19		
Kangislulik	2023	0.83	Intercept	2.079	1	210.597	p < 0.0001
			LC	1.105	1	111.930	p < 0.0001
			Residuals	0.227	23		
	2020	0.96	Intercept	2.428	1	201.990	p < 0.0001
			LC	5.893	1	490.117	p < 0.0001
			Residuals	0.277	23		
	2015	0.89	Intercept	0.566	1	75.711	p < 0.0001
			LC	1.335	1	178.498	p < 0.0001
			Residuals	0.172	23		
Lake DS1	2020	0.78	Intercept	0.513	1	21.718	0.0001
			LC	1.719	1	72.707	p < 0.0001
			Residuals	0.497	21		
Lake 8	2023	0.60	Intercept	1.220	1	25.522	p < 0.0001
			LC	1.621	1	33.918	p < 0.0001
			Residuals	1.099	23		
	2020	0.72	Intercept	0.939	1	27.615	p < 0.0001
			LC	2.093	1	61.541	p < 0.0001
			Residuals	0.816	24		
	2018	0.80	Intercept	0.233	1	6.462	0.0440
			LC	0.886	1	24.555	0.0026
			Residuals	0.216	6		
Lake D1	2023	0.79	Intercept	1.615	1	73.077	p < 0.0001
			LC	1.911	1	86.458	p < 0.0001
			Residuals	0.508	23		
	2020	0.92	Intercept	0.804	1	56.325	p < 0.0001
			LC	4.136	1	289.840	p < 0.0001
			Residuals	0.357	25		

DF = degrees of freedom and LC = centred length

Table D-2. Estimates of size-adjusted mercury concentrations in Lake Trout.

Area/Lake	Year	Total mercury concentrations (mg/kg wet weight) in Lake Trout at fork length = 500 mm		
		Estimates	Lower 95% CI	Upper 95% CI
Whale Tail	2024	1.568	1.426	1.723
	2023	1.506	1.346	1.684
	2020	0.613	0.553	0.680
	2018	0.478	0.287	0.795
	2015	0.565	0.485	0.659
Kangislulik	2023	0.341	0.292	0.397
	2020	0.466	0.417	0.521
	2015	0.470	0.393	0.563
Lake DS1	2020	0.698	0.594	0.819
Lake 8	2023	0.422	0.297	0.601
	2020	0.513	0.394	0.667
	2018	0.592	0.357	0.981
Lake D1	2023	0.550	0.476	0.636
	2020	0.664	0.593	0.743

CI = Confidence Intervals

FIGURES

Figure D-1. Tissue mercury concentrations in Lake Trout.

Note: Total mercury concentrations presented in this figure are not based on 550-mm Lake Trout. Square symbols indicate outliers identified and removed during mercury-length modelling.

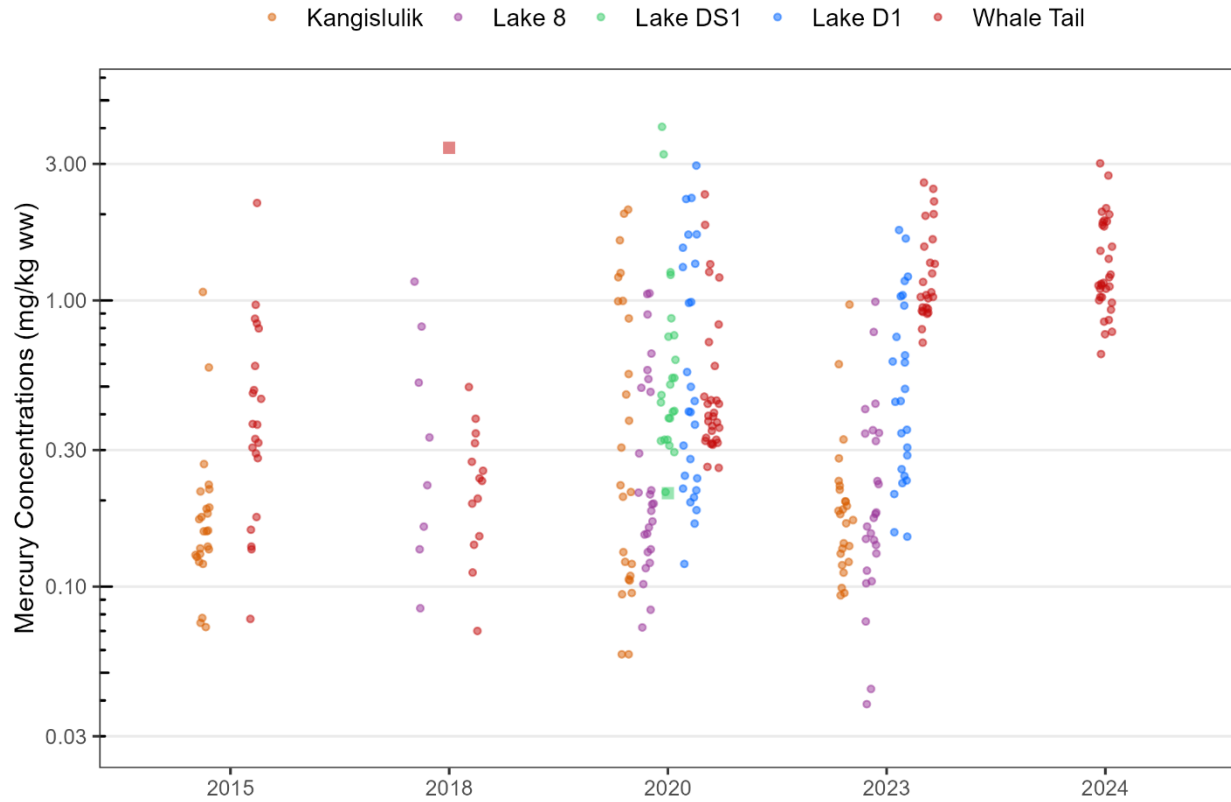


Figure D-2. Length-mercury relationships in Lake Trout.

Note: Figure below depicts model fits (solid lines) $\pm$ 95% confidence intervals (grey highlights) along with underlying data (symbols).

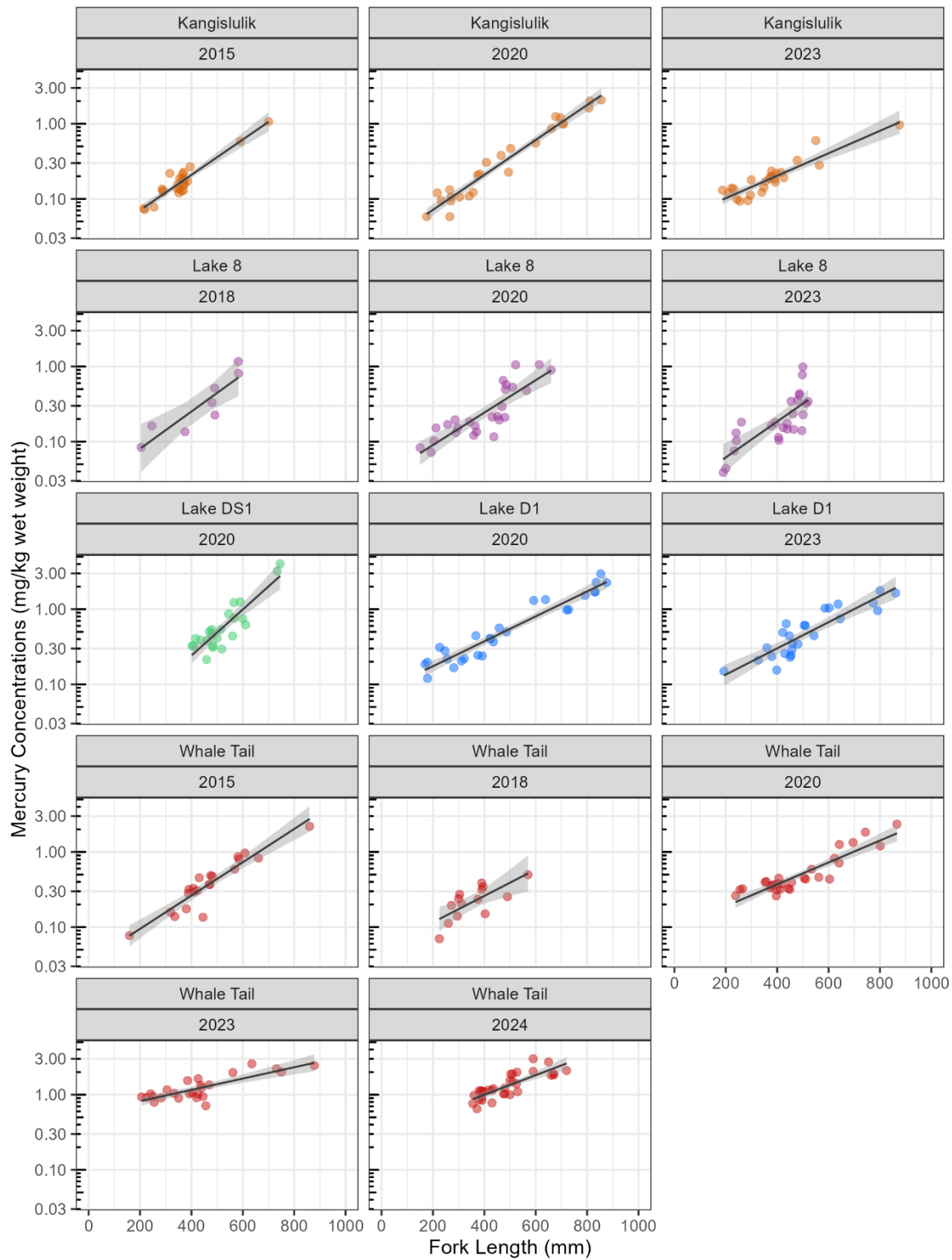


Figure D-3. Estimated tissue mercury concentrations for a 550-mm Lake Trout.

