Appendix 27

Whale Tail 2023 Mercury Monitoring Program Report

2023 Mercury Monitoring Program

Whale Tail Mine

Prepared for:

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

FINAL

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AZIMUTH

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SUMMARY

The 2023 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. In anticipation of this situation, predictions were made for the magnitude of increase expected in Lake Trout for the Final Environmental Impact Statement (FEIS; Azimuth, 2019). Mercury concentrations in Lake Trout are predicted to increase between 2-3 times above baseline concentrations. Total mercury concentrations in surface water are 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 2023 program included large-bodied (Lake Trout) and small-bodied fish, water, and sediment sampling at various locations within the Impoundment, downstream of the mine, and at local reference lakes. Key findings from the 2023 MMP are provided below.

Water

Mercury concentrations in surface water in the Impoundment were between 0.37 and 1 ng/L for total mercury and between 0.03 and 0.1 ng/L for methylmercury (filtered). Current concentrations are well below predictions in the FEIS and below the CCME water quality guidelines for the protection of aquatic life (26 ng/L for total mercury and 4 ng/L for methylmercury). Concentrations of total mercury and methylmercury increased during the early post-flooding years, but since 2020, concentrations have been fairly stable. In 2023, for the first time since the Impoundment was created, total mercury concentrations decreased compared to previous years. Methylmercury concentrations in filtered samples were still elevated in the Impoundment in 2023. Results from an additional year of sampling will help confirm whether methylmercury concentrations are decreasing in the Impoundment. Evidence of downstream transport of methylmercury to Kangislulik Lake[1] and beyond is weak, suggesting that any contributions from WTS are minor relative to variability in baseline/reference conditions.

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

Mercury concentrations in surface water will continue to be monitored in 2024 as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

Sediment

In 2023, sediment samples were collected from the depositional areas in the MMP lakes and inundated areas within the Impoundment. Flooded terrestrial soils are known to drive increased methylmercury production in reservoirs. Therefore, methylmercury concentrations are expected to be higher within the inundation zone sediment (formerly soils) compared to the depositional areas in the Impoundment.

Total mercury concentrations were below the CCME sediment quality guidelines at all areas for depositional and inundation zone samples. In 2023, total mercury concentrations in the depositional and inundation zones of the Impoundment were similar to baseline/reference conditions. Total mercury concentrations in the deposition zones in downstream exposure areas were similar to baseline/reference conditions.

Methylmercury concentrations in deposition zone samples in the Impoundment and in downstream areas were similar to baseline/reference. As anticipated, methylmercury concentrations were highest in the inundation zone sediment samples, which is expected as these areas are the main driver of the 'reservoir effect' in which bacterial decomposition of organic matter in inundated soils results in the methylation of inorganic mercury to form methylmercury.

Methylmercury concentrations in depositional zone sediments in Kangislulik Lake were similar to baseline and within reference range in 2023. This suggests, the increase in Kangislulik Lake observed in 2022 was an anomaly and unlikely to be related to mining activities.

For 2024, 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)* to confirm that concentrations are within baseline/reference across sampling areas and remain below the CCME guideline in the Impoundment and at downstream areas. Methylmercury will not be analyzed in the sediment grabs from depositional zones in 2024. Trends in methylmercury in depositional zones will be reviewed during the next sediment coring program planned for 2026. Sediment sampling within the inundation zone will be repeated in 2026.

Small-bodied Fish

The primary reason small-bodied fish (Slimy Sculpin [*Cottus cognatus*] and Ninespine Stickleback [*Pungitius pungitius*]) are 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 to date 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 year post-Impoundment (i.e., from 2019 to 2020).

Downstream, in KAN, there was no strong evidence of temporal increases in mercury concentrations relative to the reference lakes. This pattern is consistent with the surface water and depositional sediment results, where increases were not seen in KAN in 2023.

For 2024, the supplemental small-bodied fish mercury study is not planned as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

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 were collected from the Impoundment in 2023 and mercury concentrations were found to be higher than baseline/reference concentrations and similar to the predicted peak mercury concentration.

Downstream, in KAN, mercury concentrations in Lake Trout were similar to baseline/reference concentrations and remained below the predicted peak mercury concentration. This indicates that downstream transport of mercury from the Impoundment is limited. These findings are consistent with the results to date for surface water, depositional sediment, and small-bodied fish.

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). However, as the 2023 mercury concentrations did not exceed the peak predicted concentration, 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:

- Marianna DiMauro and Mehdi Aqdam (Azimuth) were the lead authors of the 2023 Mercury Monitoring Program report.
- Gary Mann (Azimuth) – Gary was the technical advisor on this project and the primary reviewer.
- Ian McIvor (Azimuth), Marianna DiMauro (Azimuth), Brett Fotheringham, and Lars Qaqqaq collected water and sediment samples for mercury analysis in August 2023. Additional support was provided by other members of the Whale Tail Environment Team.
- Kilgour and Associates collected small-bodied fish for tissue mercury analysis in August 2023.
- Cam Portt (C. Portt and Associates) and Sawyer Stoyanovich (Kilgour and Associates) collected Lake Trout for tissue mercury analysis in August 2023. Cam Portt is a senior fisheries biologist who led the 2020 and 2023 Environmental Effects Monitoring program and assisted with fish sampling for the MMP.
- 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 2023 were reported to Azimuth.
- Ken Ambrose and others from North/South Consultants Inc. who processed small-bodied fish collected in 2023 and provided ageing services for Ninespine Stickleback.

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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This report is time-sensitive and pertains to a specific site and a specific scope of work. It is not applicable to any other site, development or remediation other than that to which it specifically refers. Any change in the site, remediation or proposed development may necessitate a supplementary investigation and assessment.

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
EIL	Environmental Isotope Laboratory
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
SIA	Stable isotope analysis
SLSC	Slimy Sculpin
SOP	Standard Operating Procedure
SWTC	South Whale Tail Channel
US EPA	United States Environmental Protection Agency
WOE	Weight-of-evidence

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 three appendices. Below is an overview of the various sections of the report to help the reader navigate the document.

The plain language summary provides a high-level summary of the monitoring results from 2023 for Lake Trout, small-bodied fish, water, and sediment. The monitoring results are discussed by media (i.e., water, sediment, fish tissue).

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 Project 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 Project, located on the Amaruq site, is operated as an extension to the operational Meadowbank mine, now 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 Impoundment has resulted in interconnectivity among Whale Tail Lake, Lake A65, Lake A63, Lake A20, and other small ponds. 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 higher-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 Lake[2] prior to the 2020 spring freshet to passively manage the water level in the Impoundment below 156 masl (**Figure 1-2**). The inlet of the SWTC at Lake A20 is approximately 0.5 m below the maximum water level of 156 masl. 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).

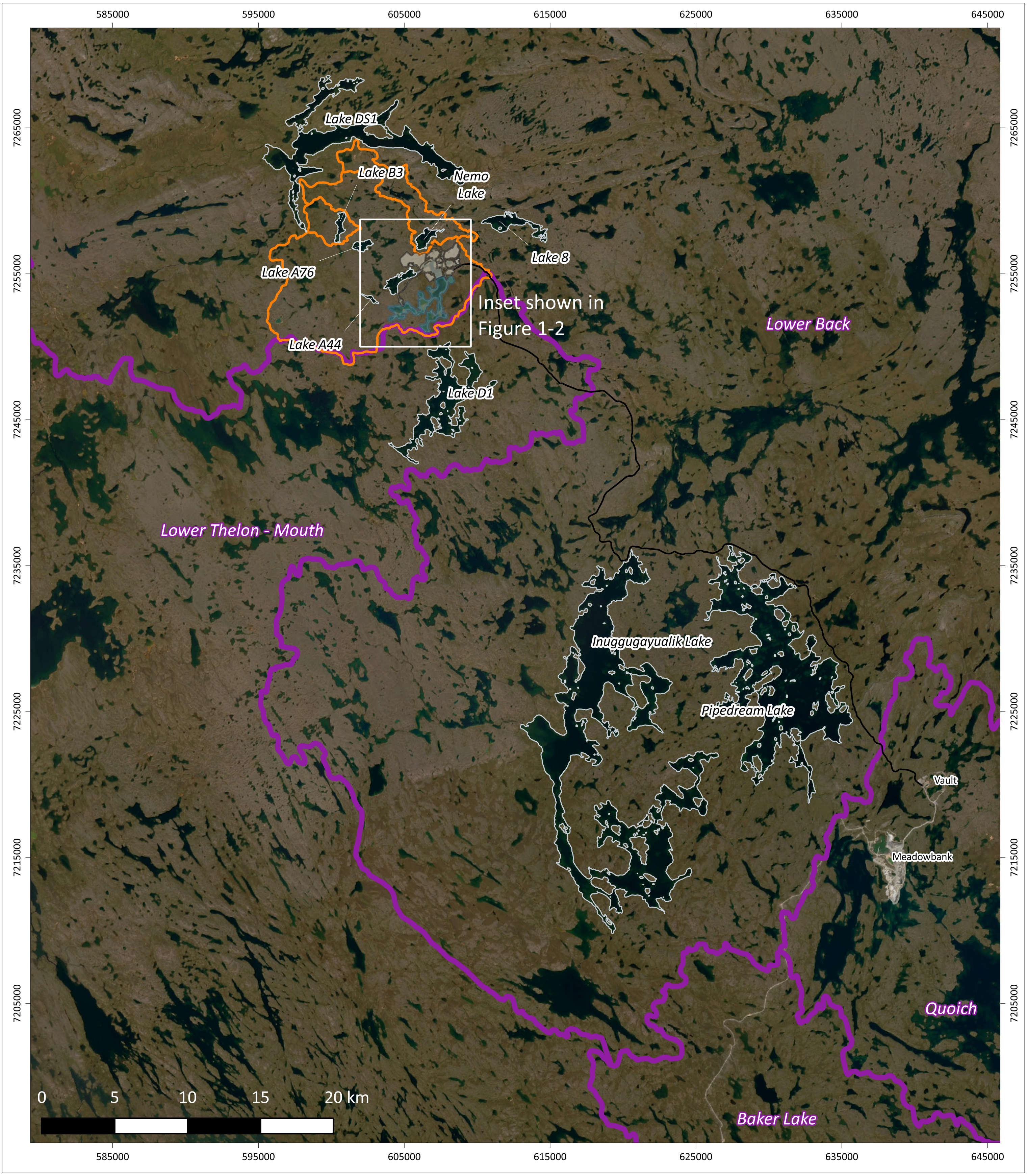
Mercury monitoring is conducted according to the *Mercury Monitoring Plan* (the Plan; Azimuth, 2023b) to satisfy requirements under Condition 63 NIRB Project Certificate No. 008 and NWB Water License 2AM-WTP1830. The core elements of the Mercury Monitoring Program (MMP) are water, sediment, and large-bodied fish chemistry (Lake Trout). Small-bodied fish tissue chemistry is also included in the MMP,

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

integrating data generated as part of a multi-year study investigating productivity within the Whale Tail Lake Impoundment by the University of Waterloo (2018 to 2021) and supplemental sampling for the MMP (2023).

The primary objective of the MMP is to verify that mercury concentrations in Lake Trout (*Salvelinus namaycush*) are within or below the predictions[3] for the Whale Tail mine. The next large-bodied fish sampling event targeting Lake Trout is planned for 2026, coinciding with the Cycle 2 Environmental Effects Monitoring (EEM) study at Whale Tail.

[3] 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.



Legend

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

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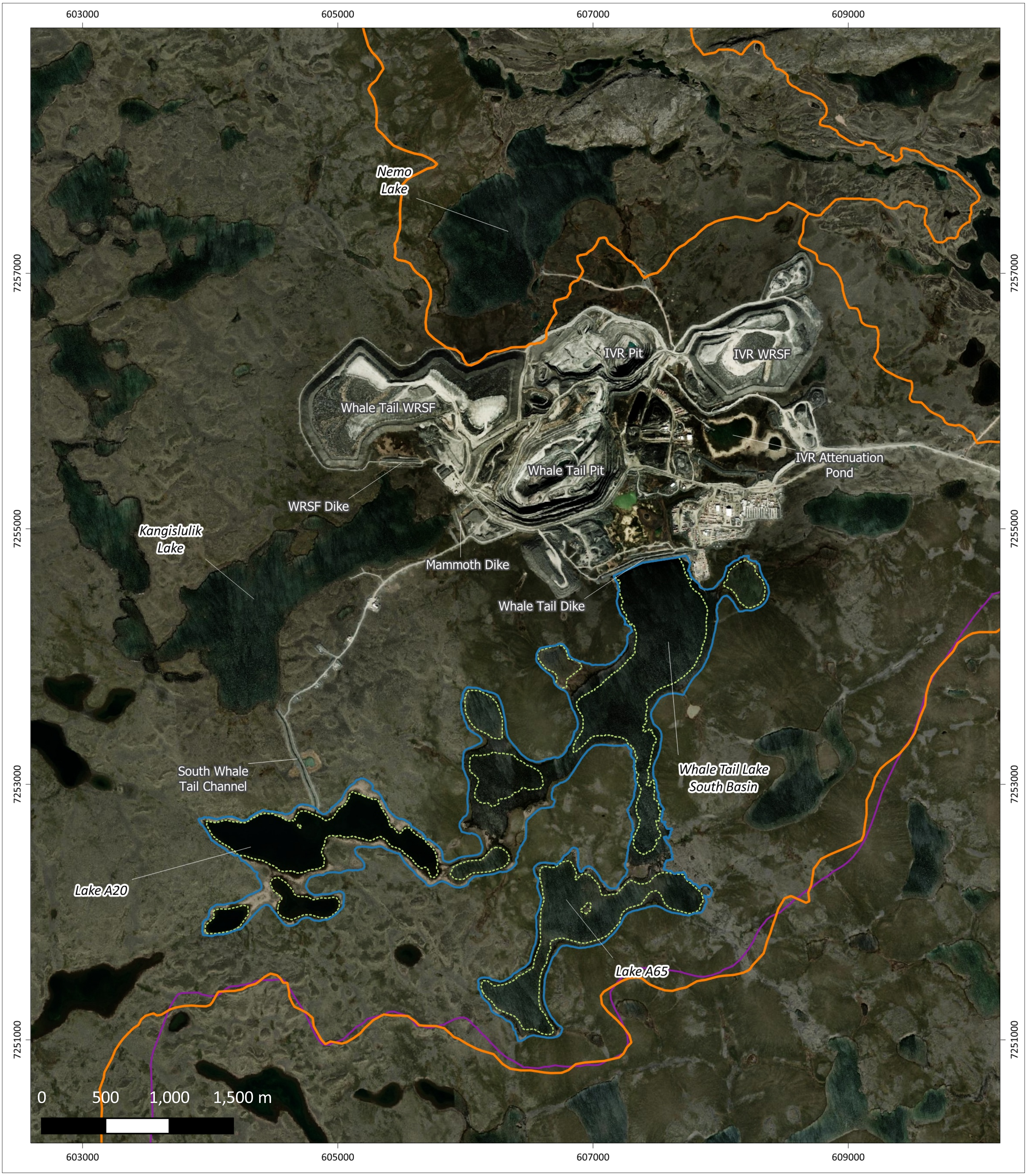
Client	Agnico Eagle Mines Limited - Meadowbank Division
Figure 1-1	Lakes Sampled as Part of the Mercury Monitoring Program
Project	Whale Tail Mine Mercury Monitoring Program

Date: February 21, 2024
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)

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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 13, 2024
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 watershet 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 is 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 Lake Trout sample collection in 2023.

- 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.

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, A63[4], 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, A63, 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 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) – this lake, the downstream-most lake sampled in the Whale Tail Lake watershed, is 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). All of 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 2023 Program

The scope of the 2023 MMP included:

- Surface water – results from 2023 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 two habitat zones; they were compared to baseline results and applicable sediment quality guidelines.
    - Deposition – these deep zones are targeted in all sampling areas in both the CREMP and the MMP. Sediment accumulating in these habitats provides a long-term record of lake-wide processes.
    - Inundation – these shallower zones only occur in the Impoundment. They were formerly terrestrial habitat that was inundated as water levels increased after dike construction. Tundra soils situated within the future inundation zone of the Impoundment were sampled for soil chemistry at four locations in 2016 to characterize mercury-related baseline conditions (Azimuth, 2018). Now flooded, these areas are expected to be important zones for mercury methylation within the Impoundment. The four original locations, submerged since 2019 and categorized as sediment, were sampled in 2021 to characterize post-inundation conditions, but the samples were mistakenly discarded by the laboratory before analysis. These locations were resampled in 2022 and 2023, along with two new stations, and those results are included in this report.
- Fish
    - Large-bodied fish (Lake Trout) were collected in August 2023. The next sampling event is planned for Whale Tail Lake and selected reference lakes in 2026, as per the *Mercury Monitoring Plan* (Azimuth, 2023b).
    - Small-bodied fish were collected in August 2023 to verify whether mercury concentrations had peaked in fish from the Impoundment. Two species are targeted for small-bodied fish: Slimy Sculpin (*Cottus cognatus*) and Ninespine Stickleback (*Pungitius pungitius*).

2 WATER

2.1 Key Findings for Water Chemistry in 2023

- In 2023, total mercury concentrations in surface water in the Impoundment were below predicted concentrations in the FEIS; total mercury and methylmercury concentrations were well below CCME water quality guidelines for the protection of aquatic life.
- Methylmercury concentrations are the best indicator of changes in mercury methylation rates associated with impoundment creation. Based on patterns observed in two experimental reservoir studies in Ontario[5], the expected temporal trend is an increase in the first year, followed by a peak within the first two to three years, and then a decline towards background levels. After a sharp increase at WTS in the first year after impoundment (2020), concentrations have remained elevated through the fourth year post-impoundment (2023). The magnitude of increase observed at WTS is consistent with the Ontario studies, but the duration of higher methylmercury production is longer, likely due to colder temperatures and a shorter open water period at WTS. We anticipate that methylmercury concentrations should start to decline in the next year or two.
- 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.

Dissolved methylmercury concentrations in surface waters are the best indicators of increased methylation rates in the impoundment. While no specific predictions were made, the expected temporal pattern is an increasing trend while methylation rates in the inundation zone remain elevated followed by a decrease as the bacterial decomposition that drives methylation taper off. Thus, a definitive peak in dissolved methylmercury concentrations in surface water indicates that methylmercury production is decreasing and that concentrations throughout the food web should also

[5] Experimental Lakes Area Reservoir Project (ELARP) and Flooded Uplands Dynamics Experiment (FLUDEX).

start decreasing. In 2023, methylmercury concentrations are still elevated in the Impoundment. Results from an additional year of sampling will help confirm whether methylmercury concentrations are decreasing.

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 in 2023 by Azimuth; 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 never contacted the sample container or inner bag. Unfiltered samples were collected at each station for total[6] 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
Whale Tail – South Basin |Impoundment	NF	n=1	n=1	n=2	~~n=2~~	n=2	n=2	n=2	n=2
Lake A20 | Impoundment	NF	-	-	n=2	~~n=2~~	n=2	n=2	n=2	n=2
Lake A65 | Impoundment	NF	-	-	n=2	~~n=2~~	n=2	n=2	n=2	n=2
Kangislulik Lake*	NF	-	n=1	n=2	~~n=2~~	n=2	n=2	n=2	n=2
Lake A76	MF	-	-	n=2	~~n=2~~	n=2	n=2	n=2	-
Lake DS1	FF	-	-	-	~~n=2~~	n=2	n=2	n=2	n=2
Inuggugayualik Lake	Reference	-	-	-	-	n=2	n=2	n=2	n=2
Pipedream Lake	Reference	-	-	-	-	n=2	n=2	n=2	n=2
Lake 8	Reference	-	-	n=2	~~n=2~~	n=2	-	-	-
Lake D1	Reference	-	-	-	-	n=2	n=2	-	-
Nemo Lake	Reference	-	-	n=2	-	n=2	-	-	-
Lake B3	Reference	-	-	-	-	n=2	n=2	n=2	-
Lake A44	Reference	-	-	-	-	n=2	n=2	n=2	-

Notes

†Minor flooding of the Impoundment, limited to Whale Tail (south basin). Extensive during 2019 and 2020 sampling (i.e., connectivity between impounded lakes).
*Kangislulik Lake (KAN) was previously referred to as Mammoth Lake (MAM).
NF = near-field, MF = mid-field, FF = far-field
Shading indicates the status of the lake:
blue = baseline and reference areas (Control designation)
orange = post flooding (Impact designation)
"n" = number of sites sampled
"-" = data not collected as per the *Mercury Monitoring Plan* (Agnico Eagle, 2019)
Strikethrough = data excluded from the dataset. Water chemistry results from 2019 (strikethrough) were excluded from the dataset because they were contaminated at the University of Waterloo before analysis (see Appendix L in Azimuth 2020 for details).

2.3.2 Laboratory Analysis

Water samples were analyzed at Biotron, at the University of Western Ontario, using an ultra-low detection limit. This 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. Since 2020, Biotron has increased the MDL/MRL for methylmercury slightly each year to counter a drop in signal due to ageing 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 (Method Ref. modified from EPA 1631). Methylmercury analysis of filtered and unfiltered samples was completed using cold vapour atomic fluorescence spectroscopy (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.

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 2023. 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 approximately 10% of the total number of samples collected. In 2023, 14 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 8% for methylmercury and 12% for total mercury.
- The average matrix spike RPD was 2% for methylmercury and 8% for total mercury.
- The method blank (MB) was less than method reporting limits for methylmercury and total mercury analysis.
- For one sample (INUG-153), the filtered fraction was slightly higher than the unfiltered fraction of total mercury (RPD = 2.1%). For all of the other mercury water results, the concentration in the unfiltered fraction was equal to or greater than the filtered fraction.
- There were no flags on quality control violations for any of the samples in 2023.

Overall, the 2023 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 2023 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 2023 were well below both the predicted concentrations in the FEIS[7] (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 2023 were well below the 4 ng/L CCME WQG for the protection of aquatic life (CCME, 2003). Note that while both CCME guidelines are appropriate for assessing the potential effects from direct exposure to total mercury or methylmercury, neither were derived to protect aquatic-dependent wildlife or humans from exposure to mercury bioaccumulation into the food chain; we address this by directly measuring mercury in fish, which is an important exposure route for wildlife and humans.

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

Total Mercury

- **Baseline/reference conditions** – total mercury concentrations in unfiltered surface water samples collected prior to Impoundment or at reference lakes ranged from <0.017 ng/L to approximately 1.5 ng/L. There were two total mercury concentrations in unfiltered surface water samples that were higher than the typical range in 2022 (i.e., 4.25 ng/L at A44 and 5.61 ng/L at B3). Pre-impoundment concentrations for WTS were approximately 0.3 to 0.5 ng/L. In references lakes, concentrations were generally lower in 2023 compared to the observations in previous years.
- **Impoundment post-inundation** – total mercury concentrations in filtered samples increased in the Impoundment post-inundation compared to reference/baseline conditions and ranged from approximately 0.3 to 3 ng/L. Total mercury concentrations reached a maximum of approximately 3 ng/L, which was observed at A65 in the first post-inundation event (2020); while still elevated, in 2023 concentrations decreased in filtered samples and ranged from 0.22 to 0.4 ng/L.
- **Downstream post-inundation** – trends downstream of the Impoundment are harder to attribute to the Impoundment. While total mercury concentrations downstream of the Impoundment have been higher than baseline conditions since 2020, the same pattern was seen across the reference lakes. Further, the results seen for exposure areas KAN, A76, and DS1 since 2020 have not been systematically higher than those measured in the reference lakes. In 2023, total mercury concentrations in filtered water samples from downstream lakes KAN and DS1 ranged from 0.17 to 0.23 ng/L, which were generally lower than those recorded in the previous years. These results suggest that environmental variability is the dominant driver of the observed total mercury results to date downstream of the Impoundment.

Methylmercury

- **Baseline/reference conditions** – methylmercury concentrations in filtered surface water samples collected prior to flooding or at reference lakes were below laboratory detection limits (<0.018 to <0.05 ng/L) in most samples.
- **Impoundment post-inundation** – methylmercury concentrations in filtered surface water samples in WTS had increased by approximately an order of magnitude relative to baseline/reference conditions by the first post-inundation sampling event (approximately 0.5 ng/L in 2020) and have remained elevated since then. Despite the elevated methylmercury concentrations in surface water seen in the Impoundment from 2020 onwards ranging from <0.034 to 0.4 ng/L in filtered samples and from 0.08 to 0.7 ng/L in unfiltered samples, they are still below CCME water quality guidelines (4 ng/L; CCME, 2003).
- **Downstream post-inundation** – concentrations in the three downstream sampling areas show some signs of increase relative to baseline/reference conditions, but the changes are subtle and

are likely influenced by environmental variability. For example, the highest methylmercury concentrations in 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. Further, methylmercury concentrations at the downstream areas were not consistently higher than those observed at the reference lakes. When concentrations were higher than at reference lakes, they were only marginally so. In 2023, results were mostly less than detection limit, except two unfiltered samples; the highest mercury concentration of the two detected concentrations was in the sample collected from DS1 (0.59 ng/L). While there may be subtle Impoundment-related increases of methylmercury at the downstream exposure areas, the observed concentrations at Lake DS1 appear unrelated to the Impoundment.

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 in the system. When assessed over space and/or time, the %MeHg metric provides insights into differences in methylmercury production (**Figure 2-3**).

- **Baseline/reference conditions** – the %MeHg in filtered surface water samples collected before flooding or at reference lakes ranged from 1.4 to 13 %MeHg.
- **Impoundment post-inundation** – the %MeHg in filtered surface water samples collected in the Impoundment after flooding ranged from 3.7 to 41 %MeHg. Increases in %MeHg over baseline/reference conditions were observed at WTS in the first post-inundation event (2020). The %MeHg has remained elevated since then. While results generally show a slight increase in the Impoundment in 2023 compared to 2022, %MeHg was lower for WTS in 2023. While there is no clear evidence that methylmercury production has peaked yet in the Impoundment, the available results do not indicate that it is still increasing rapidly.
- **Downstream post-inundation** – 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). In 2023, the reference lakes were at the upper end of that range. Thus, there is no apparent influence of the impoundment on %MeHg.

2.6 Water Chemistry Summary

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

The increase in both total mercury and methylmercury that were seen in the Impoundment initially in 2020 after inundation has been fairly stable ever since. Filtered methylmercury concentrations are the best indicator 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 ELARP and FLUDEX programs at the Experimental Lakes Area 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 unfiltered methylmercury (filtered samples not collected) ranged from 0.4 to 1.9 ng/L in the experimental reservoirs. The highest unfiltered methylmercury concentration in WTS was 0.7 ng/L in 2022, three years after flooding. These results suggest that we should see concentrations decreasing fairly soon. However, given the high latitude of WTS, it is possible that the ‘reservoir effect’ will be less severe but more drawn out at WTS due to colder temperatures and a shorter open water period.

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.

In 2024, surface water samples will be collected from MMP area lakes and analyzed for ultratrace 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.

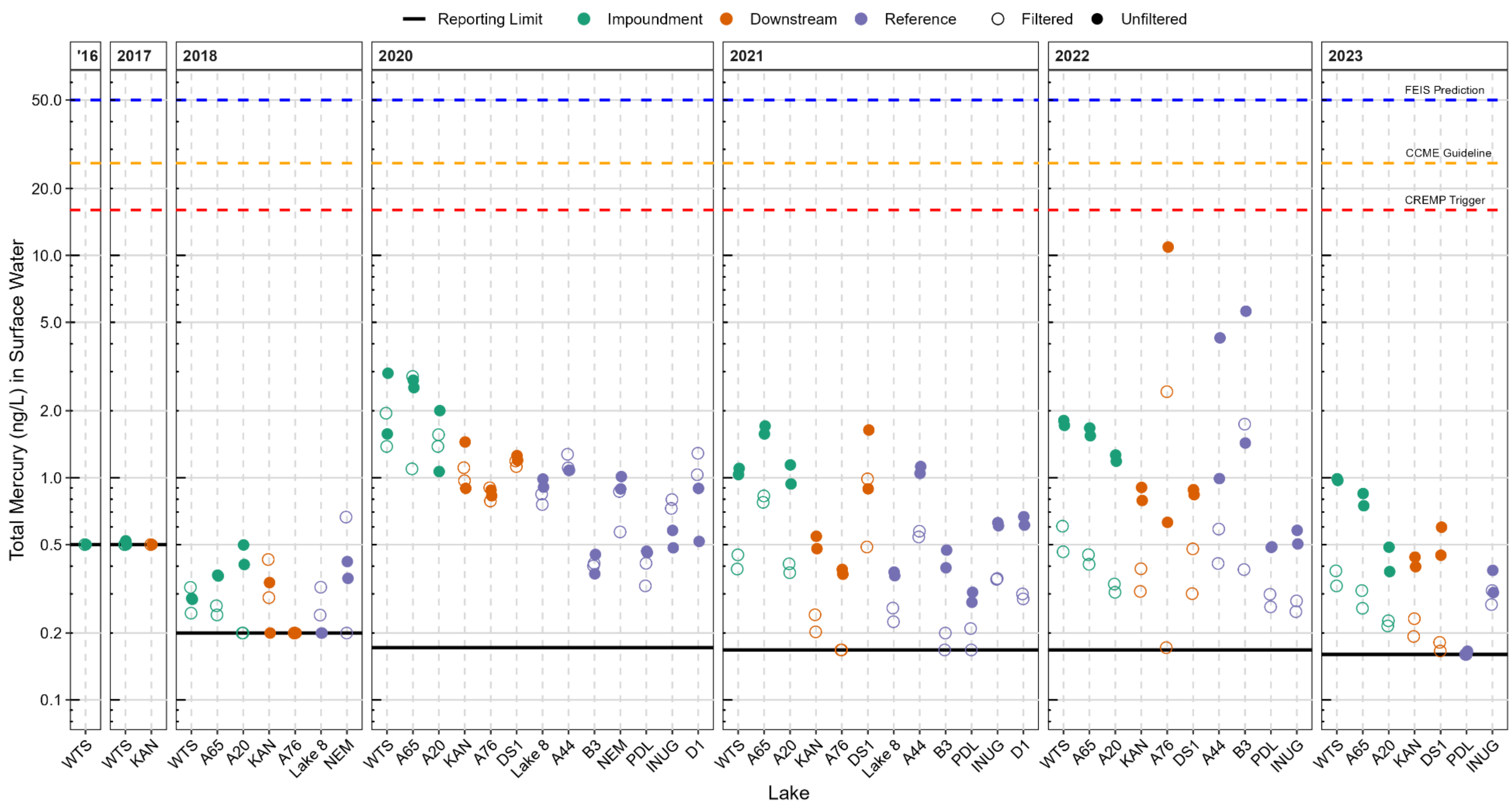


Figure 2-2. Methylmercury concentrations (ng/L) in filtered and unfiltered surface water samples in Whale Tail area lakes since 2016.

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.

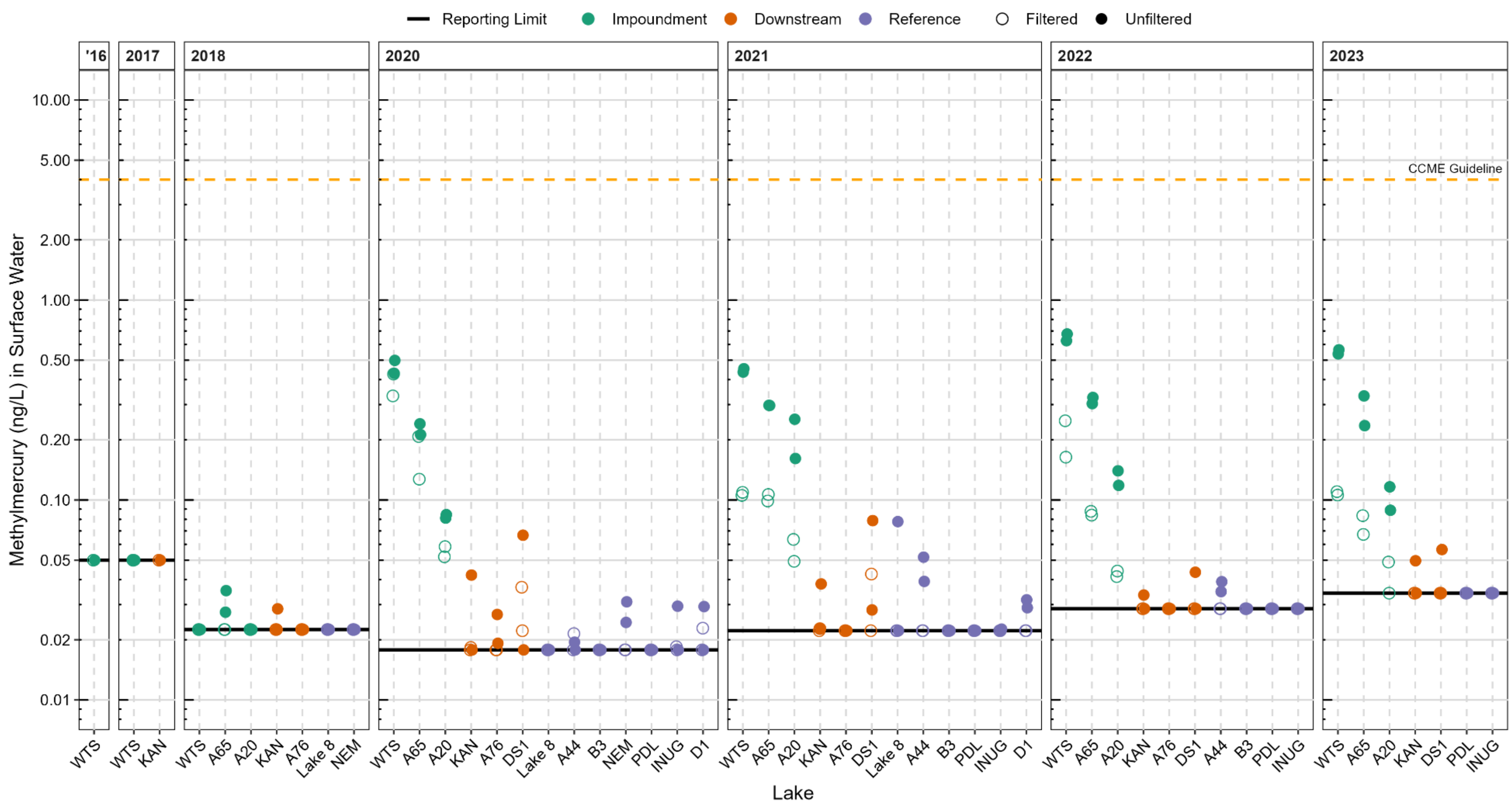
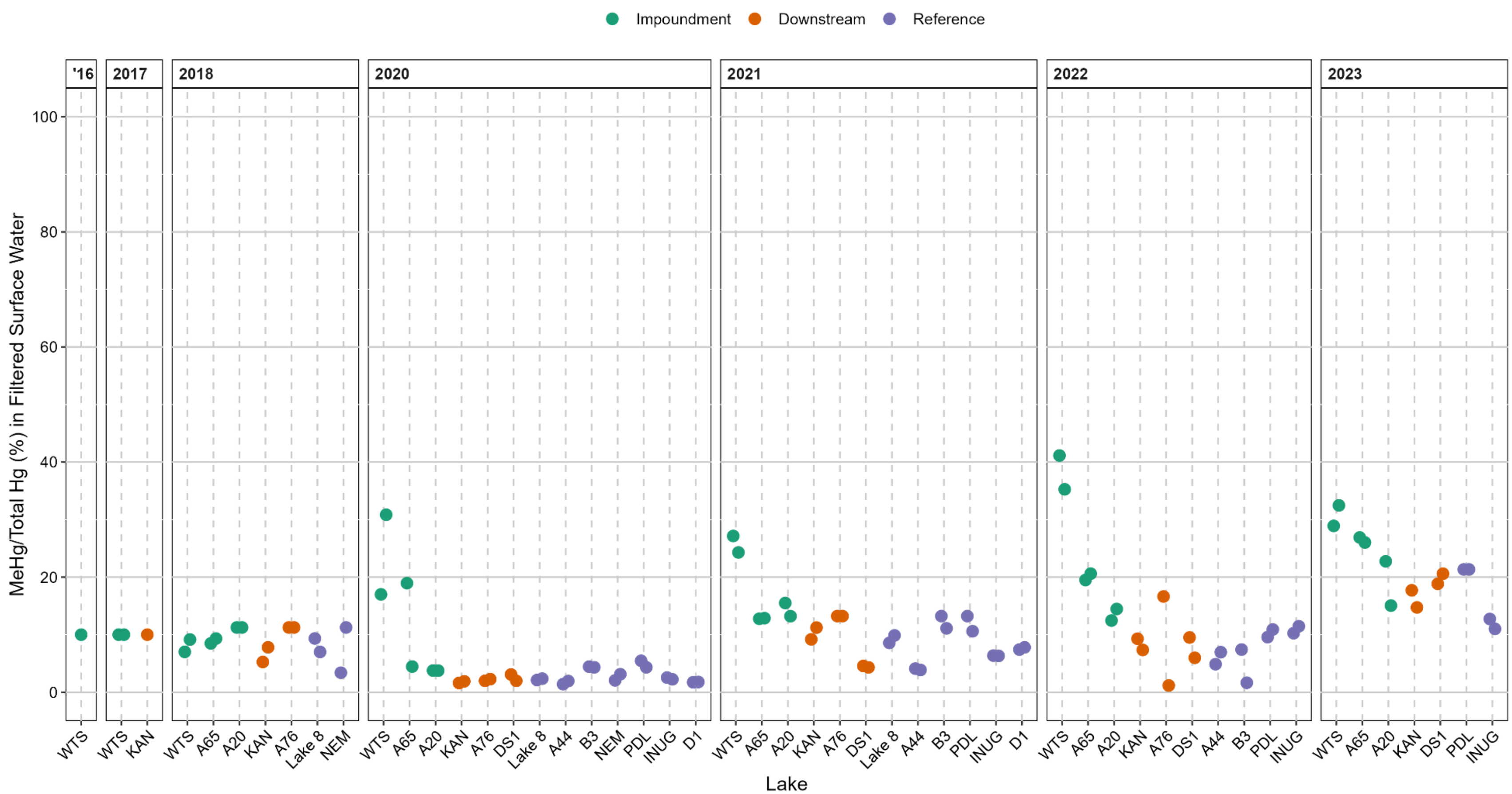


Figure 2-3. Ratio of methylmercury to total mercury (%MeHg) in filtered surface water samples in Whale Tail area lakes since 2016.

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



3 SEDIMENT

3.1 Key Findings for Sediment Chemistry in 2023

- Total mercury concentrations remain below the CCME sediment quality guidelines at all areas for depositional and inundation zone samples.
- Total mercury concentrations were similar to baseline/reference conditions in the depositional zones of the Impoundment and downstream exposure areas. Total mercury concentrations in the inundation zone samples were similar to baseline/reference conditions in 2023.
- Methylmercury concentrations in the depositional zone sediments in the Impoundment were similar to baseline. The inundation zone methylmercury concentrations remained elevated compared to depositional zone samples in 2023. This was expected, as conditions in these areas are known to stimulate mercury methylation.
- Methylmercury concentrations in depositional zone sediments in downstream area KAN were similar to baseline and within reference range in 2023. This suggests the apparent increase in KAN observed in 2022 was an anomaly and unlikely to be mine-related.

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 2023, core and grab samples were collected from routine CREMP sampling areas and from six locations in the Whale Tail Lake inundation zone coinciding with 2016 soil sampling locations.

3.3 Methods

3.3.1 Depositional Zones

A summary of sediment sample collection (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 and methylmercury. A total of five grab sample replicates are collected at each lake.

Sediment cores were collected using a gravity corer (barrel diameter of 7 cm). The corer was lowered to within 1 m of the bottom, then the rate of descent was slowed letting the weight of the core head assembly push the core barrel into the sediment. The depth of penetration depends on the sediment composition (i.e., shallow cores in predominantly clay sediment, deeper cores in silt sediments). The corer was then retrieved and a check valve was used to retain the sediment in the core tube. Each time the corer was retrieved, the contents were inspected to ensure the core was intact, not mixed or disturbed, and that the overlying water was clear. The top 1.5 cm of the sediment core was extruded into a sample jar for total and methylmercury analysis. Ten core samples collected at each lake with at least 5 m between stations. All ten cores were analyzed for total mercury, while only five of the ten cores were analyzed for methylmercury as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

3.3.2 Inundation Zone

Sediment samples for methylmercury analysis were collected at six locations within the inundation zone to support the MMP. Four samples were collected along the shorelines of Whale Tail Lake and Lake A65 from areas where mercury-related soil samples were collected in 2016 as part of the baseline studies for the Project. Two additional locations were sampled in 2023 in the flood areas along the shoreline of Lake A20.

The inundated area in WTS, Lake A20, and Lake A65 ranged from approximately 20 to 50 cm deep, limiting the area that could be sampled. Furthermore, most of the shoreline around Lake A20 is very rocky further limiting the potential sample areas. Two locations in Lake A20 were selected near the South Whale Tail Channel (SWTC).

Samples were collected using a stainless-steel spoon and bowl[8] from flooded areas within the inundation zone to a maximum water depth of 50 cm accessed using chest waders. The substrate throughout the inundation zone primarily consisted of an organic layer overlying soil. As a whole, the

[8] Efforts to collect sediment in this zone using traditional methods (e.g., grab or core) were not possible given the organic mat present at all locations.

substrate had the appearance of a flooded terrestrial habitat, with the organic layer showing limited obvious signs of decomposition (e.g., the layer was a mat with woody stems and plant material still clearly visible). Sampling targeted the transitional zone beneath the organic mat (~7-10 cm below the top of the mat), where there was clear evidence of soil but also of interspersed organic matter. For each sample, sediment from two subsampling locations approximately 10 to 20 m apart were homogenized to achieve the desired volume for analysis. Samples were collected into 250 mL jars and kept cold until shipment to the laboratory.

3.3.3 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.

Methylmercury in sediment was analyzed according to standard methods from the US Geological Survey. Methylmercury is extracted from the sample and analyzed by cold vapour atomic fluorescence spectrophotometry. Total mercury in sediment is also 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 and methylmercury analysis.

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

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, corer, coring spatula) 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 A of the 2023 CREMP report (Azimuth, 2024).

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 2023 CREMP (Azimuth, 2024). 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 A in Azimuth, 2024).

3.5 Results and Discussion

Total mercury and methylmercury concentrations in sediment samples collected from 2016 to 2023 are shown in **Figure 3-1**. The ratios of methylmercury to total mercury (%MeHg) in sediment are shown in **Figure 3-2**. 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 2023.
- **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.

- **Impoundment post-inundation** – there were no appreciable temporal patterns in WTS or A20 relative to creation of the Impoundment. In 2023, total mercury concentrations in the inundation zone samples were similar to the deposition zone samples.
- **Downstream post-inundation** – consistent with the Impoundment results, there were no temporal patterns apparent for total mercury in relation to inundation.

Methylmercury

- **Baseline/reference conditions** – methylmercury sampling was limited to WTS between 2016 and 2018, where concentrations were typically < 2 µg/kg dw. Analysis was expanded in 2019 to include downstream and reference stations; given that the SWTC was not operational until 2020, conditions could be considered baseline for the downstream stations. Methylmercury concentrations ranged up to ~ 2.5 µg/kg dw across the reference lakes.
- **Impoundment post-inundation** – sampling in the Impoundment from 2019 through 2021 focused on the depositional zones only in WTS and A20 and showed no marked increases in methylmercury concentrations. In 2023, concentrations were similar to baseline at depositional areas in both the WTS and A20 basins of the Impoundment. In 2023, methylmercury concentrations continued to be highest in the inundation zone samples (shown as *flooded soil* in **Figure 3-1**), ranging up to 21 µg/kg dw.
- **Downstream post-inundation** – In 2023, concentrations at KAN were within the range of reference/baseline. Methylmercury concentrations showed a marked increase at depositional zones in KAN in 2022 relative to previous years, ranging up to 16 µg/kg dw. It is not clear what was driving the 2022 concentrations, but appears to have been an anomaly based on results from 2023.

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 in the system. When assessed over space and/or time, the %MeHg metric provides insights into differences in methylmercury production.

- **Baseline/reference conditions** – the ratio of methylmercury to total mercury (%MeHg) was generally less than 2.5%, but has ranged up to 6.4 % in reference areas in years since baseline.
- **Impoundment post-inundation** – Similar to sediment methylmercury concentrations, the %MeHg in 2019 through 2021 in the depositional zones in WTS and A20 showed no marked increases. In

2022, %MeHg was higher in the Impoundment compared to baseline/reference. Though %MeHg was lower in 2023, it still remained higher than baseline/reference in depositional zones in the Impoundment. In 2022 and 2023, the inundation zone had the highest %MeHg. This was expected, as higher methylation rates in newly flooded soils are the main driver of the 'reservoir effect' that propagates elevated methylmercury into the food web (Hall et al, 2005).

- **Downstream post-inundation** – In 2023, %MeHg in KAN appeared to be similar to baseline/reference. In 2022, there was a marked apparent increase in %MeHg in depositional zones in KAN relative to previous years, ranging from approximately 4 to 21%. Based on 2023 results, it appears as though the increased methylmercury observed in 2022 was an anomaly. This is corroborated by a lack of a clear signal in surface water methylmercury concentrations in KAN compared to baseline/reference. Sediment cores will be collected in 2026 to verify the results.

3.6 Sediment Chemistry Summary

In 2023, sediment samples were collected from the depositional areas in the MMP area lakes and for a second year in a row from inundated areas within the Impoundment. Flooded terrestrial soils are known to drive increased methylmercury production in reservoirs, there is an expectation that methylmercury concentrations should be higher within the inundation zone sediment (formerly soils).

Total mercury concentrations were below the CCME sediment quality guidelines at all areas for depositional and inundation zone samples. Total mercury concentrations in the depositional zones of the Impoundment as well as downstream exposure areas in 2023 were similar to baseline/reference conditions.

In 2023, methylmercury concentrations in depositional zone samples in the Impoundment were similar to baseline. The inundation zone samples had the highest methylmercury concentrations, which is expected as these areas are the main driver of the 'reservoir effect' in which bacterial decomposition of organic matter in inundated soils results in the methylation of inorganic mercury to form methylmercury.

Methylmercury concentrations in depositional zone sediments in KAN were similar to baseline and within reference range in 2023. This suggests, the increase in KAN observed in 2022 was an anomaly and unlikely to be related to mining activities.

For 2024, 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)* to confirm that concentrations are within baseline/reference across sampling areas and remain below the CCME guideline in the Impoundment and at downstream areas. Methylmercury will not be analyzed in the sediment grabs from depositional zones in 2024. Trends in methylmercury in depositional zones will

be reviewed during the next sediment coring program planned for 2026. Sediment sampling within the inundation zone will be repeated in 2026.

Figure 3-1. Total mercury and methylmercury (µg/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 µg/kg dry weight CCME interim sediment quality guideline for the protection of aquatic life (red dashed line) and below the 486 µg/kg dry weight CCME probable effect level (not shown in figure).

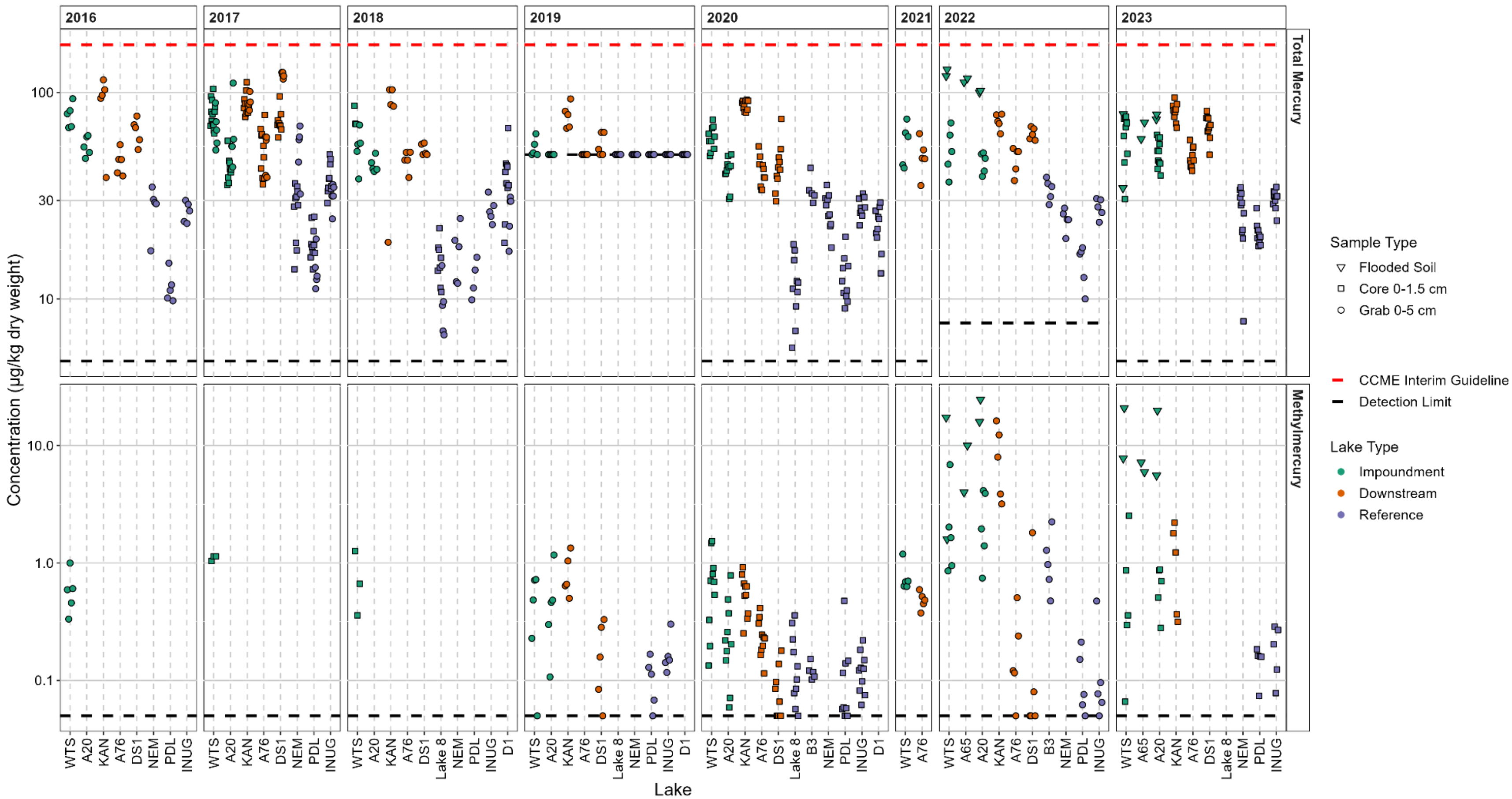
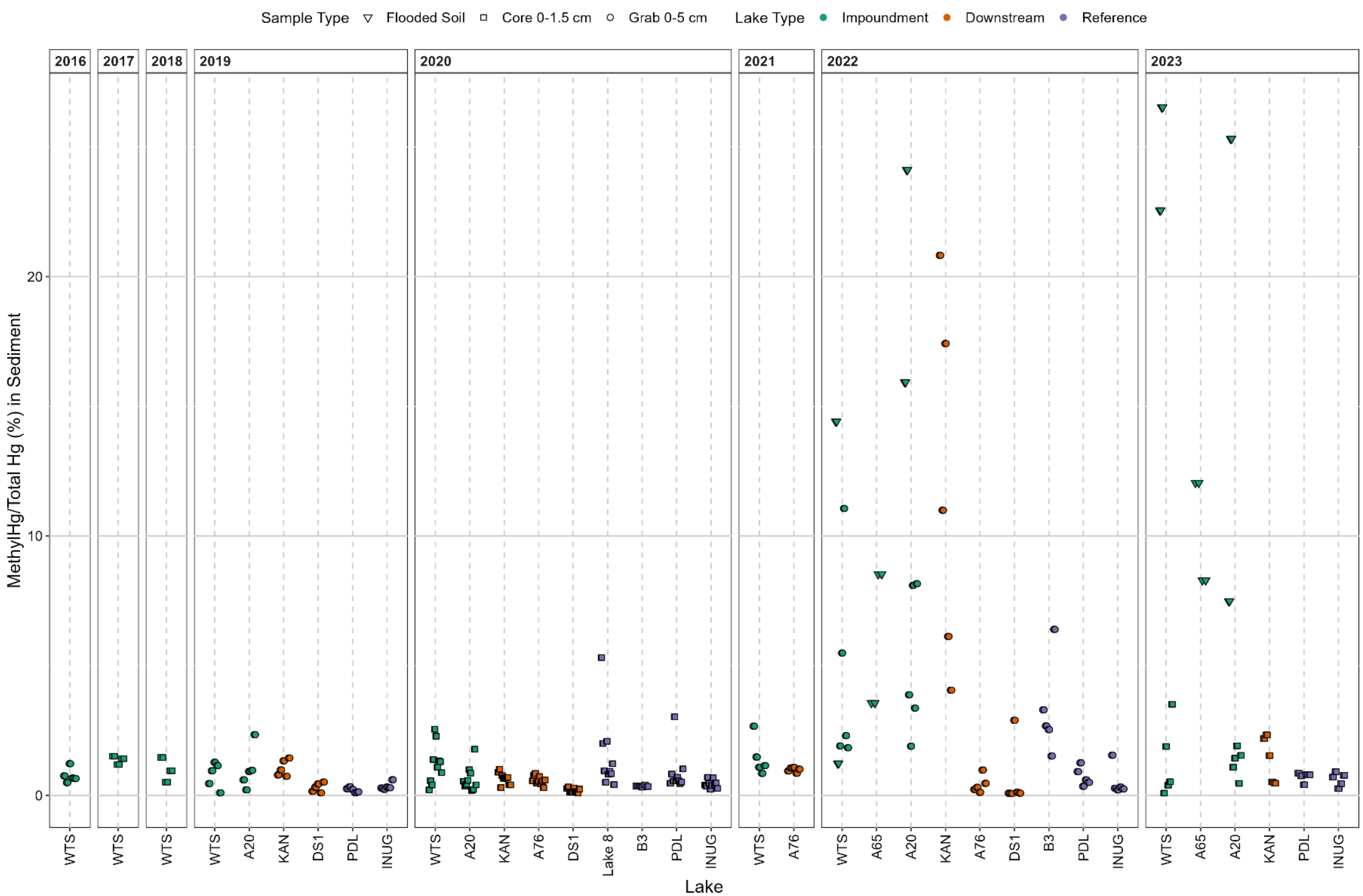


Figure 3-2. Ratio of methylmercury to total mercury (%MeHg) in sediment samples from Whale Tail area lakes since 2016.



4 SMALL-BODIED FISH

4.1 Key Findings for Small-bodied Fish in 2023

- Ninespine Stickleback and Slimy Sculpin in the Impoundment showed marked increases in tissue mercury concentrations in 2020 that have persisted through 2023.
- The temporal patterns seen to date 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, tissue mercury concentrations have continued to increase, though at a lesser extent than what was observed in the first year post-Impoundment (i.e., from 2019 to 2020).
- Evidence for downstream changes in small-bodied fish mercury concentrations in KAN is weak; there was no clear pattern of temporal increases relative to the reference lakes, which matches the results of the surface water and sediment components of the MMP.

4.2 Overview

Slimy Sculpin and Ninespine Stickleback were collected opportunistically from 2018 to 2021 as part of a multi-year research study looking at changes in productivity within the Impoundment. Small-bodied fish are not a core component of the MMP, but the timing of the productivity study provided an opportunity to collect information about mercury bioaccumulation lower in the food web in the initial years after flooding without much incremental effort. Sampling was led by researchers at the University of Waterloo.

Slimy Sculpin and Ninespine Stickleback were collected in 2023 by C. Portt and Associates with assistance from Kilgour and Associates. The small-bodied fish program coincided with the EEM program. Azimuth provided input on selecting fish to be analyzed for total mercury and stable isotope analysis.

Slimy Sculpin typically prey on a wide variety of bottom-dwelling (benthic) organisms, which include chironomids, gastropods, fish eggs, and small fish (Scott and Crossman, 1973); isotopic signatures from other northern lakes indicate a range of diets that could include the pelagic environment (Arciszewski et al, 2015). Ninespine Stickleback also target aquatic insect larvae, but have a more pelagic (water column) diet that includes zooplankton (Scott and Crossman, 1973). Data analyses for small-bodied fish focus on spatial and temporal trends in total mercury, with stable isotope data used to provide insights into the feeding ecology of each species.

Total Mercury

All of the total mercury measured in fish is conservatively assumed to be methylmercury. This is generally the case for large, predatory species, in which approximately 95% of the total mercury measured in fish consists of methylmercury (Bloom, 1992). Smaller, non-predatory species of freshwater fish may have a lower fraction of methylmercury relative to total mercury (Lescord et al, 2018). However, as these fish typically have much lower total mercury concentrations compared to the large, predatory species, the lower methylmercury fraction is less important to take into consideration.

Stable Isotopes

Stable isotopes provide insights into trophic position (i.e., how high in the food chain a fish is feeding; $\delta^{15}N$) and which energy pathway is predominant (i.e., does a fish feed more from the water-column [pelagic] pathway or from the bottom substrate [benthic] pathway; $\delta^{13}C$). Depending on how mercury is distributed in the food web and how that evolves, changes in feeding ecology affecting trophic position or energy pathway could lead to corresponding changes in tissue mercury concentrations. This is particularly true within the Impoundment after flooding as terrestrial habitat transitions to aquatic habitat. Thus, understanding spatial and temporal patterns in feeding ecology can be used to help explain patterns in mercury bioaccumulation.

4.3 Methods

4.3.1 Field Methods

Sample Collection

Fish were collected by backpack electrofishing wadable areas of the shoreline. 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

Azimuth selected a subset of the Ninespine Stickleback and Slimy Sculpin samples collected for total mercury analysis. Samples were selected after reviewing the length distributions for each species. The number of small-bodied fish that were submitted to Biotron for analysis is provided in **Table 4-1**. 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. Ninespine Stickleback were only captured in MMP areas Whale Tail (south basin) and Lake A20. All six samples from A20 and 23 from Whale Tail (south basin) were submitted for analysis in 2023. 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. Some slightly larger Slimy Sculpin (up to 67 mm) collected from Lake 8 were selected for analysis to match the sizes of fish collected and analyzed in 2021.

4.3.2 Laboratory Methods

Slimy Sculpin samples collected in 2023 were processed by Kilgour and Associates and Ninespine Stickleback were processed by North South Consultants. Samples collected from 2018 to 2021 were processed at the University of Waterloo. Standard operating procedures for processing small-bodied fish were provided to each laboratory to ensure consistency across laboratories and years.

In 2023, 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 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 were converted to wet weight assuming 78% moisture content in the muscle tissue.

A subsample of the homogenized, freeze-dried samples was submitted for stable isotope analysis at the Stable Isotopes in Nature Laboratory (SINLAB) at the University of New Brunswick. Measurements of ^{13}C and ^{15}N isotopes were determined through combustion conversion of sample material to gas through three elemental analyzers, a 4010 Elemental Analyzer (Costech Instruments, USA), a CE NC2500 (Carlo Erba; Italy), and a FlashEA 1112 (Thermo-Fisher Scientific; USA). A complete description of the analytical method, including analytical precision, reference materials, and QA/QC procedures is available on the SINLAB website[9].

[9] https://www.isotopeecology.com/

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§	2018	2019	2020	2021*	2023
Whale Tail Lake |Impoundment	NF	n=8	n=6	n=10	n=5	n=23	n=5	n=5	n=5	n=10	n=10
Lake A20 | Impoundment	NF	n=2	n=10	n=10	n=5	n=6	n=5	-	n=5	n=5	n=9
Lake A65 | Impoundment	NF	-	n=10	n=10	n=2	-	n=5	-	n=5	n=5	-
Kangislulik Lake	NF	n=1	n=2	n=4	n=5	-	n=5	n=5	n=5	n=5	n=10
Lake 8	Reference	-	-	-	-	-	n=5	-	n=5	n=5	n=10
Lake A44	Reference	-	-	n=1	n=4	-	-	n=5	n=5	n=5	-
Lake B3	Reference	-	-	n=1	n=5	-	-	-	n=5	n=10	-
Lake D1	Reference	-	-	-	-	-	-	-	n=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)
"n =" = number of fish collected and submitted for analysis.
"-" = data not collected as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

4.3.3 Data Analysis

Mercury

Whole-body (carcass) mercury concentrations for each species were plotted across all years and areas sampled as follows:

- Mercury concentrations by year,
- Mercury concentrations by length (mm),
- Mercury concentrations within the context of the stable isotope data, are discussed in the following section.

Stable Isotopes

Stable isotope analysis[10] (SIA) was done on a subset of the small-bodied fish submitted for mercury analysis to understand the feeding relationships among and within species and across the sampling areas. Stable isotopes[11] are slightly different types of the same element (light & heavy) that are stable in the environment. Both types participate in chemical and biological reactions, but at different rates, which leads to patterns in the ratios of these isotopes in the environment. The ratios of carbon and nitrogen, two principal elements in biological tissue, can be used to quantify the feeding ecology of fish.

Nitrogen isotopes are used to determine the trophic position of consumers in aquatic systems (i.e., where they are within the food chain). With each increasing trophic level in the food chain organisms become more enriched in the stable isotope nitrogen-15 ($\delta^{15}N$). For example, the $\delta^{15}N$ value in a mature Lake Trout that eats other fish will be higher than in a Slimy Sculpin or Ninespine Stickleback that mostly eat invertebrates. Fish typically change their diet as they grow and tend to feed at higher trophic positions as they get larger. As trophic levels increase, i.e., as the relative position of a fish in the food chain increases, the $\delta^{15}N$ values increase. The length-$\delta^{15}N$ relationship essentially shows how feeding preferences affect mercury concentrations in fish tissue. Therefore, we expect higher tissue mercury concentrations in fish that feed higher in the food chain.

Carbon isotopes ($\delta^{13}C$) trace the flow of energy, and therefore the flow of mercury, through food webs. Carbon isotopes can be used to determine whether fish are feeding more from the benthic or pelagic food webs. The results of the SIA analysis are provided in **Section 4.5**.

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[10] Stable isotope analysis is not a core component of the MMP.

[11] Isotope ratios are represented by the symbol δ, which is the Greek letter delta and is often used to signify difference. In this case, delta refers to the isotopic ratio of sample relative to that of a standard reference material. Units are ‰, which is per mil or parts per thousand.

4.4 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 or dry ice during shipment to the laboratory.

Laboratory QC results for the 2023 small-bodied fish tissue samples were reported by Biotron.

- The average RPD in 2023 laboratory duplicate samples analyzed for total mercury was 8%.
- The average matrix spike RPD for total mercury was 2%.
- All data were retained for analysis and there were no flags on quality control violations.

4.5 Results and Discussion

Of the fish collected in 2023, 39 Slimy Sculpin and 29 Ninespine Stickleback fish were submitted for total mercury and stable isotopes analyses. Raw data are tabulated in **Appendix C2**. Data were plotted to highlight key spatial and temporal trends, as follows:

- Total mercury concentrations by year, species, and sampling area are shown in **Figure 4-1**. This plot highlights temporal trends in tissue mercury across the Impoundment, downstream exposure areas, and reference lakes.
- Total mercury concentrations by year, species, size, and sampling area are shown in **Figure 4-2**. This plot explores the influence of fish size on mercury concentrations. While efforts were made to collect similar fish sizes for each species across years and locations, this was not always possible.
- Stable isotope results by year, species, and sampling area are shown in **Figure 4-3**. This plot shows temporal and spatial trends in isotopic signatures that reflect potential changes in feeding ecology that could help explain mercury bioaccumulation patterns.
- Stable isotope results (by year, species, and area) with point fill showing the associated mercury concentration are shown in **Figure 4-4**. This plot simultaneously looks at changes in feeding ecology and mercury concentrations to visualize how feeding ecology may affect mercury concentrations.

Mercury and stable isotope results are presented and discussed below.

Total Mercury

Baseline/reference conditions – tissue mercury concentrations for both species were generally < 0.05 mg/kg wwt (**Figure 4-1**). Slightly higher concentrations (e.g., between 0.05 and 0.1 mg/kg wwt) were seen from time to time (e.g., Slimy Sculpin at Lake D1 in 2020 and Lake 8 in 2023 and Ninespine Stickleback at Lake A44 in 2021).

Impoundment post-inundation – tissue mercury concentrations for both species showed a clear increase at the Impoundment areas (WTS, A65, and A20) in 2020 relative to baseline/reference conditions. Concentrations remain elevated in 2023. For Ninespine Stickleback, the concentrations appear to have stabilized. For Slimy Sculpin, mercury concentrations have continued to rise but to a lesser extent than what was observed between 2019 and 2020. The magnitude of increase for both species was highest in WTS, followed by A65 and A20; this trend matches the post-inundation trend in surface water methylmercury concentrations. The results do not appear to be influenced meaningfully by differences in fish sizes across years/locations (**Figure 4-2**), as no strong relationships were evident for any of the years/locations for either species. In the ELARP experimental reservoir study in Ontario, small-bodied fish increased two to three times after inundation (Bodaly and Fudge, 1999).

Downstream post-inundation – tissue mercury concentrations downstream of the Impoundment do not appear to have changed appreciably. Slimy Sculpin mercury concentrations in KAN have remained stable since 2018 and fairly consistent with the reference lakes. Mercury concentrations in Slimy Sculpin at KAN in 2023 were slightly higher than seen in previous years, but the magnitude of change was similar to what was observed at reference Lake 8 (**Figure 4-1**), suggesting that the change is likely related to environmental variability. The lack of inundation-related changes in small-bodied fish mercury concentrations in KAN is consistent with the surface water methylmercury results (**Figure 2-2**).

Stable Isotopes

Stable isotopes provide insights into feeding ecology that can help explain patterns of mercury bioaccumulation in fish.

Baseline/reference conditions – as described in **Section 4.1**, there are some general differences in feeding ecology between Slimy Sculpin and Ninespine Stickleback. The sculpin typically targets bottom-dwelling (benthic) prey items whereas the stickleback targets water-column (pelagic) prey (Scott and Crossman, 1973). The stable isotope results for the reference lakes corroborate this pattern (**Figure 4-3**), with higher $\delta^{13}C$ for the sculpin relative to the stickleback where both were sampled (A44 and B3). The pattern is less evident at WTS, where there was only a slight difference in $\delta^{13}C$ between the two fish species. Lastly, there are no obvious patterns in tissue mercury concentrations related to stable isotopes at the reference lakes or during the baseline period (**Figure 4-4**).

Impoundment post-inundation – the stable isotope results for the Impoundment show two interesting trends:

1. A shift to more pelagic feeding (a shift to the left on the $\delta^{13}C$ axis) generally occurred between 2018 and 2021 at WTS (**Figure 4-3**). This is apparent from the progressive change to more

negative (lower) $\delta^{13}C$ values between 2018 and 2020, particularly for Slimy Sculpin. In 2023, both species appear to more aligned with pelagic feeding ($\delta^{13}C$ ~ -28‰). For Ninespine Stickleback, the feeding preference was fairly similar to that seen in reference lakes A44 and B3 in past events (neither sampled in 2023). Ninespine Stickleback are known generalists, feeding on zooplankton or benthic invertebrates opportunistically (Laske et al. 2022). For Slimy Sculpin, the shift to a more pelagic diet in WTS ($\delta^{13}C$ ~ -28‰) is a departure from the more benthic-focused diet observed in the reference lakes (($\delta^{13}C$ ~ -24 to -20‰). This shift may be due to a relative lag in benthic invertebrate production in newly flooded nearshore habitat.

2. As noted for previous years, there is a reasonably consistent pattern of progressively higher $\delta^{15}N$ (y axis) values from A20 to A65 to WTS that existed prior to inundation (**Figure 4-3**). As $\delta^{15}N$ values are indicative of trophic position, this pattern could be responsible for some of the spatial differences observed in tissue mercury concentrations within the Impoundment. In 2023, $\delta^{15}N$ values were higher in the impoundment than have been seen previously, indicating an upward trophic shift, particularly for Slimy Sculpin. This type of change would be expected to result in increased tissue mercury concentrations, which may be why we observed the bigger increases in Slimy Sculpin at WTS.

Laske et al (2022) modelled fish growth, feeding and mercury uptake in Ninespine Stickleback using a bioenergetics model for a range of temperatures and diets (pelagic vs benthic). Relative to the two diets, their model results showed higher tissue mercury concentrations for Ninespine Stickleback on a pelagic diet relative to a benthic diet. The authors attributed the results to differences in energy content in the diets (i.e., they used 2256 J/g for pelagic and 3500 J/g for benthic). It is likely that the same mechanisms would affect Slimy Sculpin concentrations. Thus, the higher use of the pelagic-based food web may be responsible for some of the observed increase in tissue mercury concentrations in both species.

Downstream post-inundation – In 2023, there was a slight shift in trophic position (higher $\delta^{15}N$) for Slimy Sculpin at KAN. This change was not observed in reference areas and could affect mercury bioaccumulation. However, tissue mercury concentrations and surface water methylmercury concentrations did not change appreciably in 2023 compared to baseline.

4.6 Small-bodied Fish Summary

The primary reason small-bodied fish are 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 to date 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 year post-Impoundment (i.e., from 2019 to 2020).

Downstream, in KAN, there was no strong evidence of temporal increases in mercury concentrations relative to the reference lakes. This pattern is consistent with the surface water and depositional sediment results, where increases were not seen in KAN in 2023.

The supplemental small-bodied fish mercury study is not planned for 2024 as per the *Mercury Monitoring Plan* (Azimuth, 2023b).

Figure 4-1. Fish tissue mercury concentrations (mg/kg ww) in Ninespine Stickleback (NSSB) and Slimy Sculpin (SLSC) collected at Whale Tail area lakes, 2018–2023.

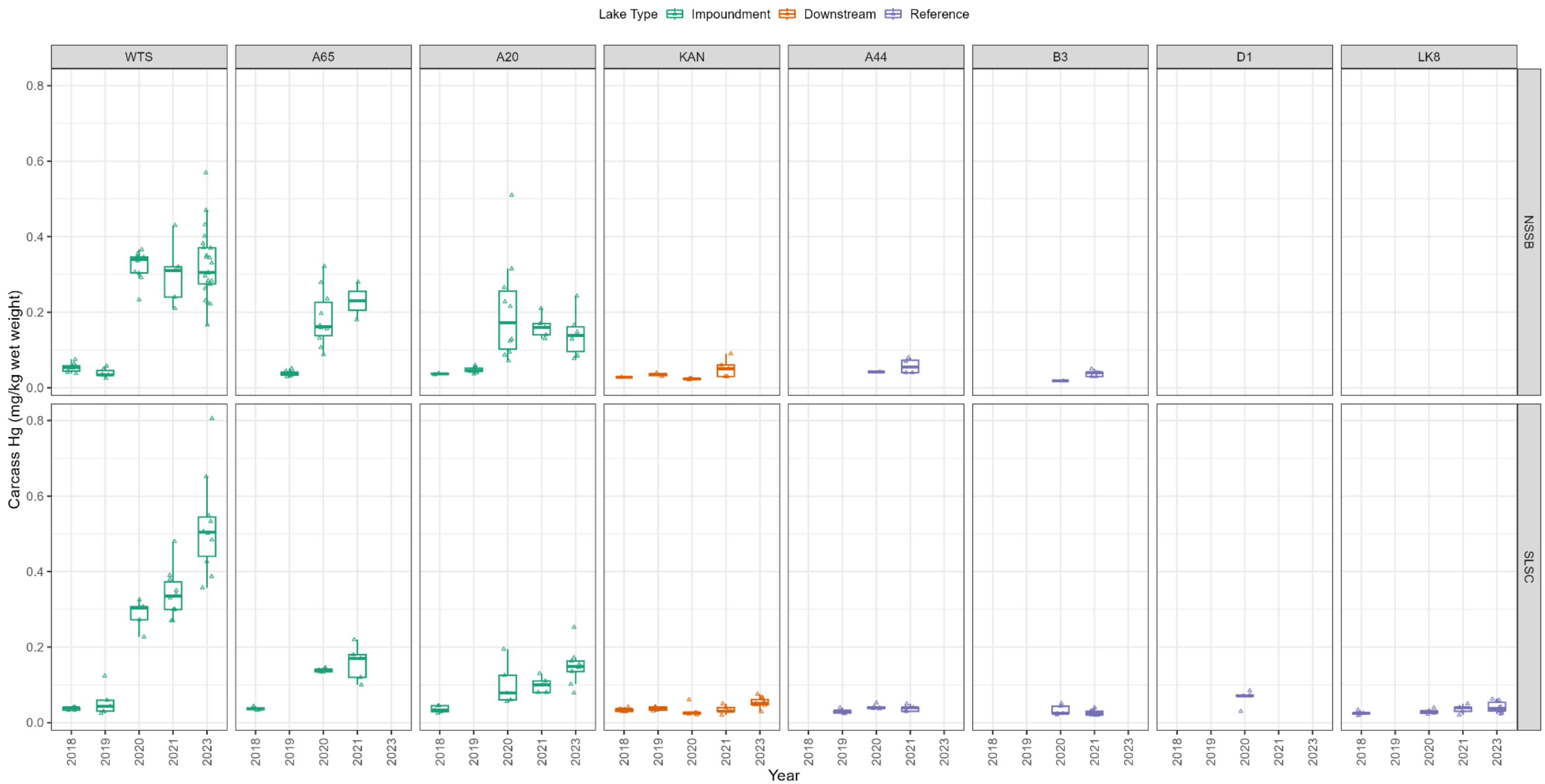


Figure 4-2. Fish tissue mercury concentrations (mg/kg ww) and fish sizes (length; mm) for Ninespine Stickleback (NSSB) and Slimy Sculpin (SLSC) collected at Whale Tail area lakes, 2018–2023.

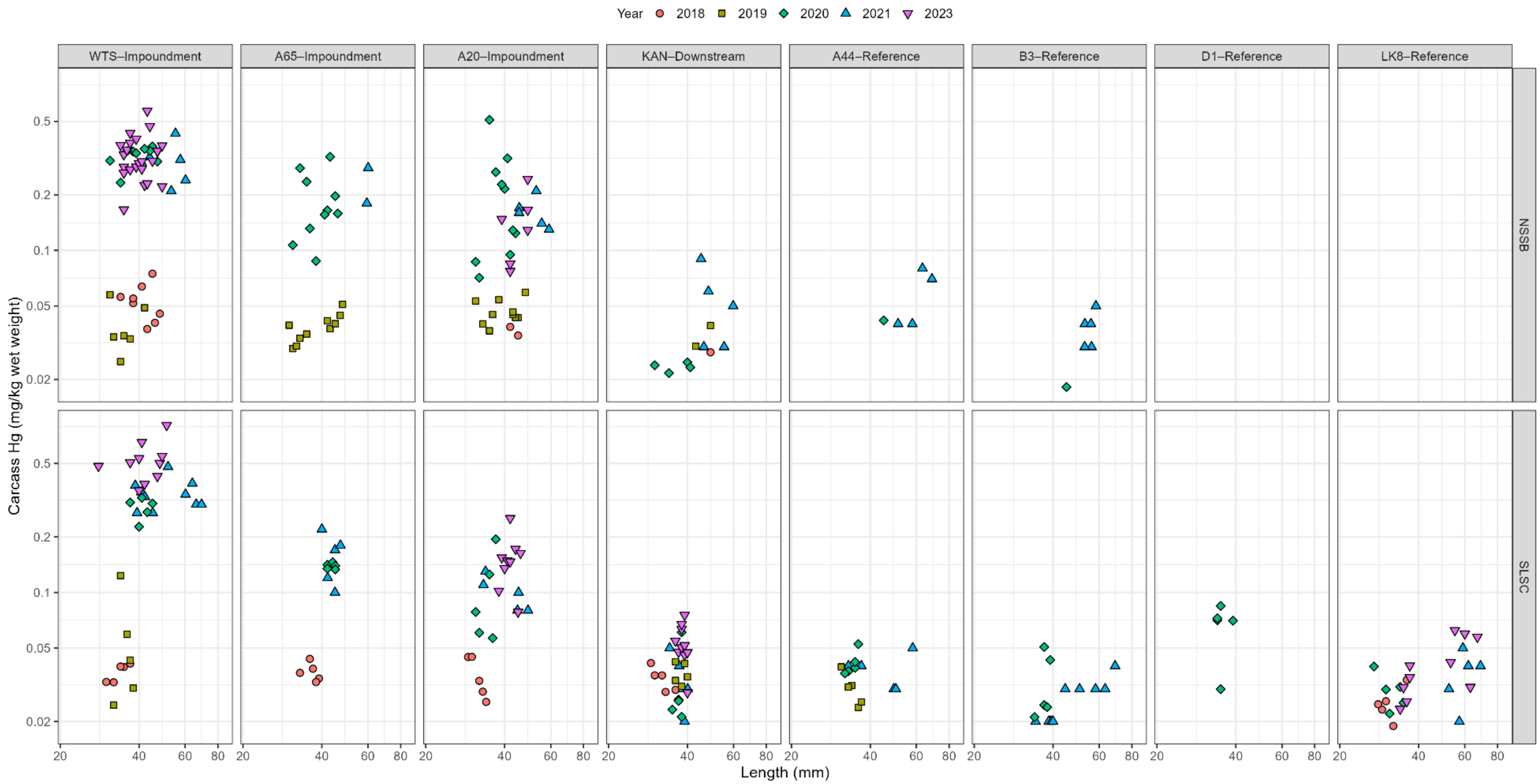


Figure 4-3. Mean δ15N and δ13C signatures (± standard deviation), of Ninespine Stickleback (NSSB) and Slimy Sculpin (SLSC) collected at Whale Tail area lakes, 2018–2023.

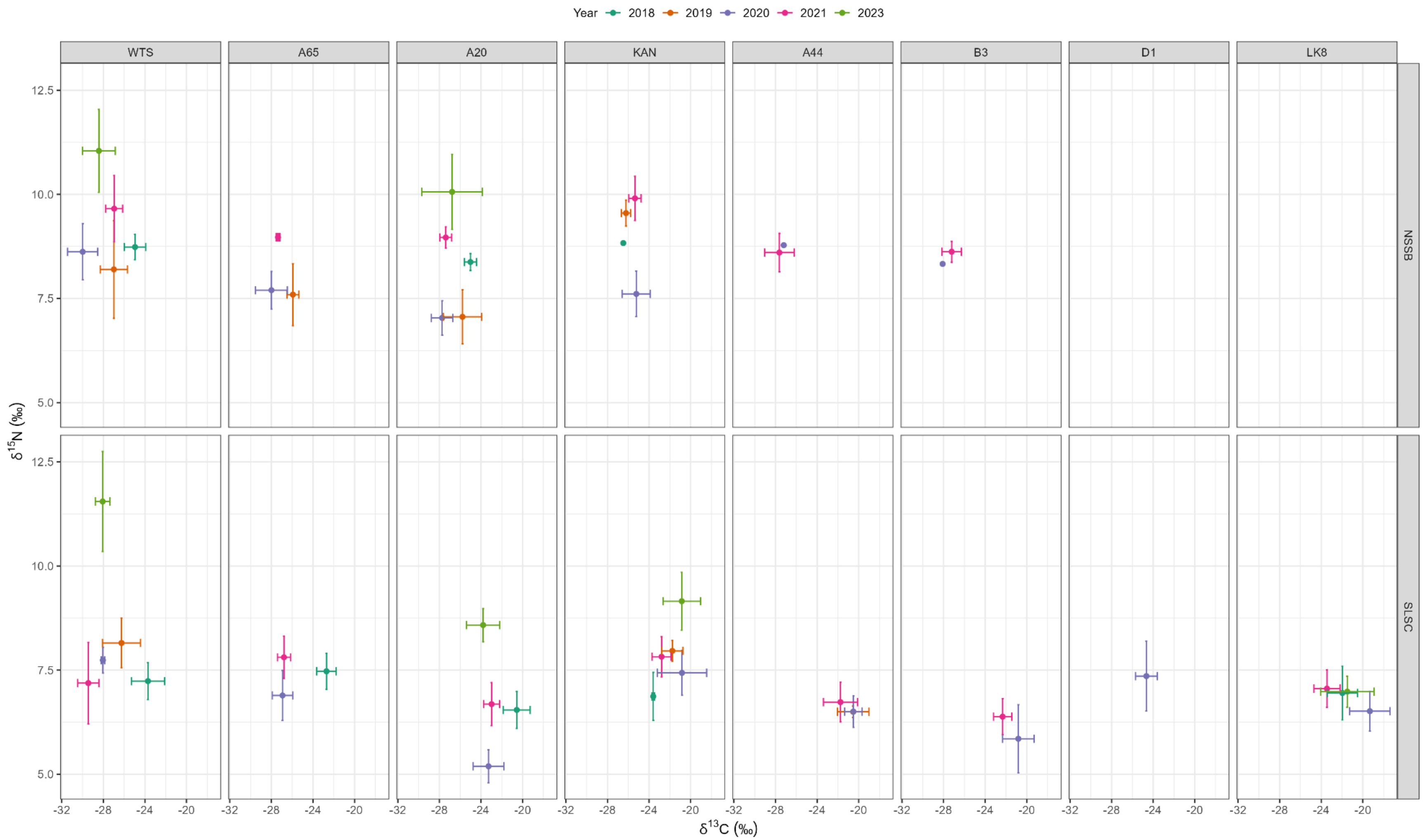
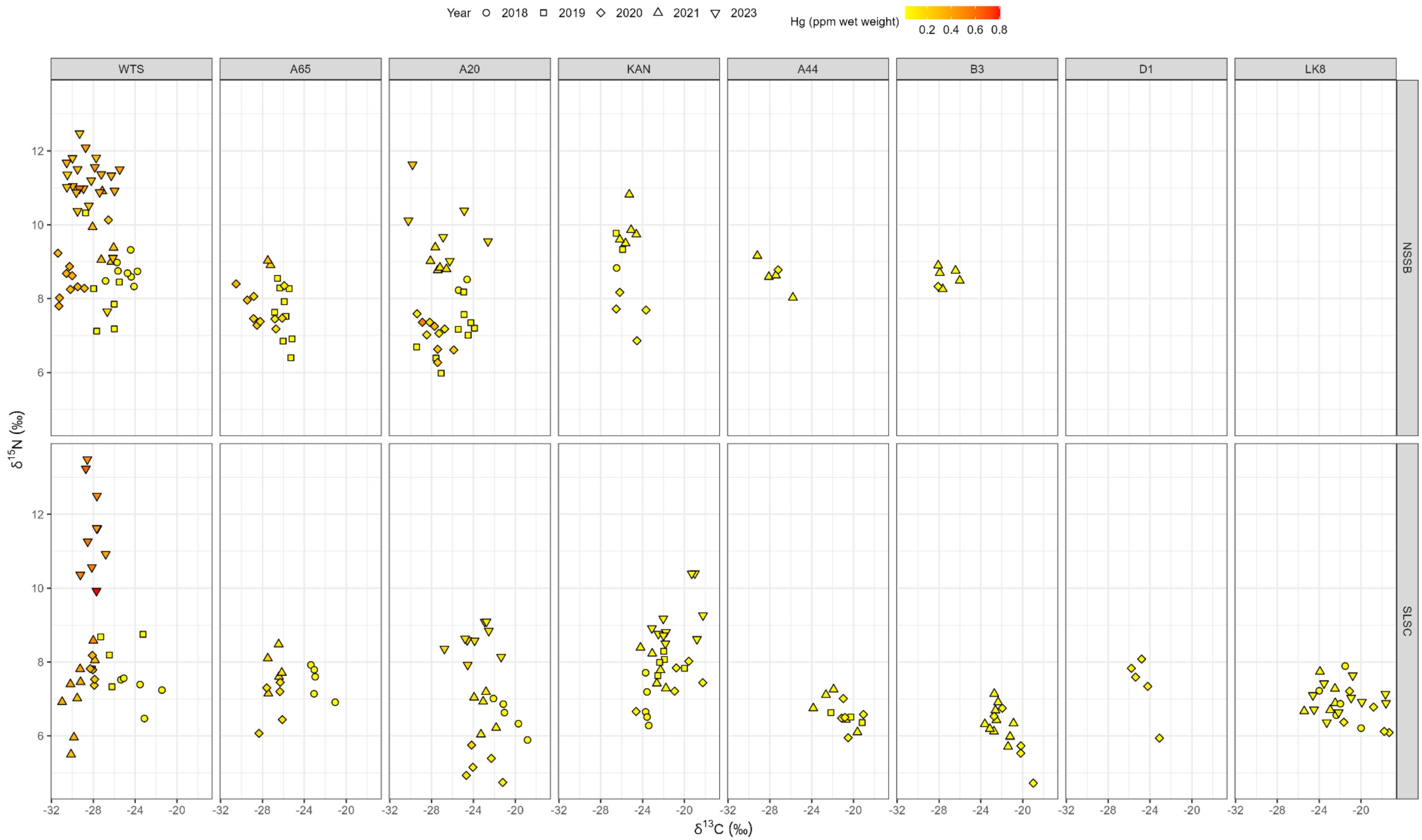


Figure 4-4. Stable isotope $\delta^{15}N$ and $\delta^{13}C$ signatures and mercury concentrations in tissue from Ninespine Stickleback (NSSB) and Slimy Sculpin (SLSC) collected at Whale Tail area lakes, 2018–2023.



5 LARGE-BODIED FISH

5.1 Key Findings for Large-bodied Fish in 2023

- Mercury concentrations in Lake Trout from Whale Tail Lake increased sharply in 2023 (year 4 after impoundment[12]) relative to previous sampling events. The estimated mean tissue mercury concentration for a 550 mm Lake Trout in 2023 was 1.5 mg/kg ww, increasing from 0.61 mg/kg ww 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 2023 from Whale Tail Lake was nearly equal to the peak mercury concentration predicted in the FEIS (i.e., 1.55 mg/kg ww, Azimuth, 2019).
- Downstream, in KAN, tissue mercury concentrations in Lake Trout in 2023 were similar to baseline/pre-impoundment conditions. The estimated mean concentration for 550 mm Lake Trout from KAN was slightly lower in 2023 (0.34 mg/kg ww) than in 2015 and 2020 (0.47 mg/kg ww). The apparent decrease in the estimated mean concentration in 550 mm Lake Trout from KAN in 2023 is likely due to low numbers of larger fish.

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 C1**.

In 2023, Lake Trout were captured from Kangislulik[13] Lake, Lake 8, and Lake D1 as part of the EEM sampling program, with additional samples collected from Whale Tail Lake as per the MMP. A select number of fish of similar size classes as previous years were retained for mercury analysis in muscle tissue.

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

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

[13] Fish collected from KAN in 2023 were archived pending total mercury results in Lake Trout from Whale Tail Lake. Based on the increase in mercury concentrations observed in Lake Trout from Whale Tail Lake in 2023, fish from KAN were submitted to Biotron for total mercury analysis. Results are included in this years MMP report.

While there was a notable increase in Lake Trout mercury concentrations in 2023, they remain within the predicted peak mercury concentration.

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**.

In 2023, Lake Trout 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.

5.4 Laboratory Methods

Mercury

Fish tissue samples collected in 2015 were sent to ALS Laboratories in Burnaby, BC for percent moisture and metals analysis (including total mercury). Concentrations of total mercury in tissue were determined for wet and dried tissue samples using atomic fluorescence spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7.

Fish tissue samples collected in 2018, 2020, and 2023 were subsampled at the University of Waterloo using sterilized scissors and tweezers, placed in labelled vials, covered with Kimtech® tissues, and placed in the freeze dryer. Dried samples were homogenized and submitted to Biotron at the University of Western Ontario for analysis of 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.

Ageing

Lake Trout collected in 2015, 2020, and 2023 were aged by Louise Stanley, a fish ageing 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, we compared 2023 mercury concentrations estimated for 550 mm Lake Trout to the approximate three-fold increase (1.55 mg/kg ww) and associated 95% confidence interval (1.36 to 1.76 mg/kg ww) predictions made for the FEIS (Azimuth, 2019).

Mercury and Ancillary Data

Fish meristic data and sampling details were recorded on field data sheets and entered into an Excel database. Ageing data from Cam Portt and Associates and 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 and the mean and range for length, weight, condition[14], age, and mercury concentrations.

Length and age – these two variables provide information on the size and age of Lake Trout.

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).
- *Age-length*: age-length relationships show how fish length increases as fish get older. These relationships are typically variable and show a wide range of length values for each age. This variability makes it harder to identify outliers, but the plots can still provide useful insights into growth patterns and how they influence mercury concentrations.

[14] Condition is a measure of fish weight relative to its length. It is calculated as weight/length^3 x 100 and is represented by the letter K. Higher condition fish weigh more for their size compared to lower condition fish.

- *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.

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 or dry 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 DQOs for the MMP.

- The average RPD in 2023 laboratory duplicate samples analyzed for total mercury was 5% and 3% in the first and second batches of samples analyzed, respectively.
- The average matrix spike RPD for total mercury was 4% and 1% in the first and second batches of samples analyzed, respectively.
- 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.

Fish Mercury Concentrations – Fish mercury concentrations for all Lake Trout caught since 2015, by area, are shown in **Figure D-1** in **Appendix D**. Note that at this stage of the assessment fish size is not considered, although size is an important factor when comparing fish mercury concentrations over time or space; this is explored further in sections that follow.

Data Overview and Catch Data – The fish mercury dataset contains 301 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 and Age Frequency – We used length frequency plots and age frequency plots to compare the distribution of fish samples from each location (**Figure 5-1**). In general, the ranges of length and age 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 and 2023. For Kangislulik Lake, larger or older individuals (i.e., > 500 mm) were sampled less frequently in 2015 and 2023 compared to 2020. No ageing was completed in 2018.

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

- Length-mercury results for Lake Trout by lake and event are shown in **Figure 5-2**. The 2023 results (blue points) for WTS clearly stand out relative to previous events; this was not the case for reference lakes 8 and D1 or for downstream area Kangislulik Lake. Note that the difference was more pronounced in smaller Lake Trout (e.g., < 700 mm).
- Mercury concentrations in Lake Trout from WTS increased sharply in 2023 (year four after impoundment) relative to previous sampling events. Estimated mean tissue mercury concentration for a 550 mm Lake Trout in 2023 was 1.5 mg/kg ww. In 2020, the mean tissue 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; see **Figure 5-3**).
- The estimated mean tissue mercury concentration for a 550-mm Lake Trout from WTS in 2023 was slightly less than the peak mercury concentration predicted in the FEIS (i.e., 1.55 mg/kg ww, see **Figure 5-3** and Azimuth, 2019).

- Downstream from the Impoundment, at KAN, the estimated mean concentration for 550 mm Lake Trout was slightly lower in 2023 (0.34 mg/kg ww) than in 2015 and 2020 (0.47 mg/kg ww). The apparent decrease in the estimated mean concentration in 550 mm Lake Trout from KAN in 2023 is likely due to low numbers of larger fish.

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. Within 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 2023 (i.e., 1.5 mg/kg ww) is slightly below 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) and conclusions presented in the FEIS addendum (Golder, 2018) remain applicable.

The mean Lake Trout mercury concentration for a 550 mm fish in downstream area Kangislulik Lake in 2023 (i.e., 0.34 mg/kg ww) is similar to baseline/reference concentrations and remains below the predicted peak mercury concentration. This indicates that downstream transport of mercury from the Impoundment is limited. These findings are consistent with the results to date for surface water, depositional sediment, and small-bodied fish.

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 on the basis of the number of servings[4]/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).

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
Whale Tail Lake | Impoundment	NF	n=21	n=15	n=30	n=25
Kangislulik Lake	NF	n=25	-	n=25	n=25
Lake DS1	FF	-	-	n=24	-
Lake 8	Reference	-	n=8	n=26	n=25
Lake D1	Reference	-	-	n=27	n=25

Notes

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

Control area (blue shading: 2015 Whale Tail Lake and Kangislulik Lake; 2018 Whale Tail Lake and Lake 8; 2020 and 2023 Lake 8 and Lake D1)

Impact area (orange shading: 2020 Whale Tail Lake, Kangislulik Lake and Lake DS1; 2023 Whale Tail Lake and Kangislulik Lake)

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

"n =" = number of fish sampled.

"-" = data not 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	Designation	Year	N Fish	Fork Length (mm)		Weight (g)		Condition (K)		Age (yrs)		Hg (ppm ww)	
				Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Whale Tail | Impoundment	NF	2015	21	469	159-860	1412	37.4-7320	1.1	0.86-1.28	-	12	0.51	0.077-2.19
		2018	15	388	225-836	940	150-5600	1.1	0.93-1.39	-	-	0.46	0.07-3.42
		2020	30	483	238-866	1761	156-7410	1.2	0.96-1.64	-	10-9	0.60	0.26-2.35
		2023	25	428	206-878	1440	108-8760	1.2	0.91-1.35	-	11-9	1.31	0.71-2.58
Kangislulik Lake	NF	2015	25	360	215-700	661	96.2-4670	1.1	0.91-1.36	-	10	0.21	0.072-1.07
		2020	25	474	176-855	2043	64.4-6750	1.2	0.94-1.61	-	12-8	0.58	0.058-2.08
		2023	25	371	187-876	873	62.25-8430	1.1	0.9-1.25	-	10-9	0.22	0.093-0.967
Lake DS1	FF	2020	24	512	269-745	1531	199-3706	1.0	0.81-1.22	-	10-49	0.79	0.21-4.04
Lake 8	Reference	2018	8	431	204-583	988	83.3-1980	1.0	0.72-1.13	-	-	0.43	0.084-1.16
		2020	26	398	150-660	839	33.0-3263	1.0	0.8-1.24	-	10-9	0.33	0.072-1.06
		2023	25	404	190-520	824	66.6-1510	1.1	0.84-1.25	-	10-7	0.25	0.039-0.99
Lake D1	Reference	2020	27	490	169-876	2446	48.7-9530	1.1	0.87-1.53	-	10-9	0.82	0.12-2.96
		2023	25	518	193-867	2102	80.76-8660	1.1	0.58-1.36	-	11-9	0.62	0.15-1.76

Notes

n = number of fish submitted for analysis.

Range shown in brackets.

"-" = no measurement, or no data collected.

Figure 5-1. Length and age frequency for Lake Trout in Whale Tail study area lakes since 2015.

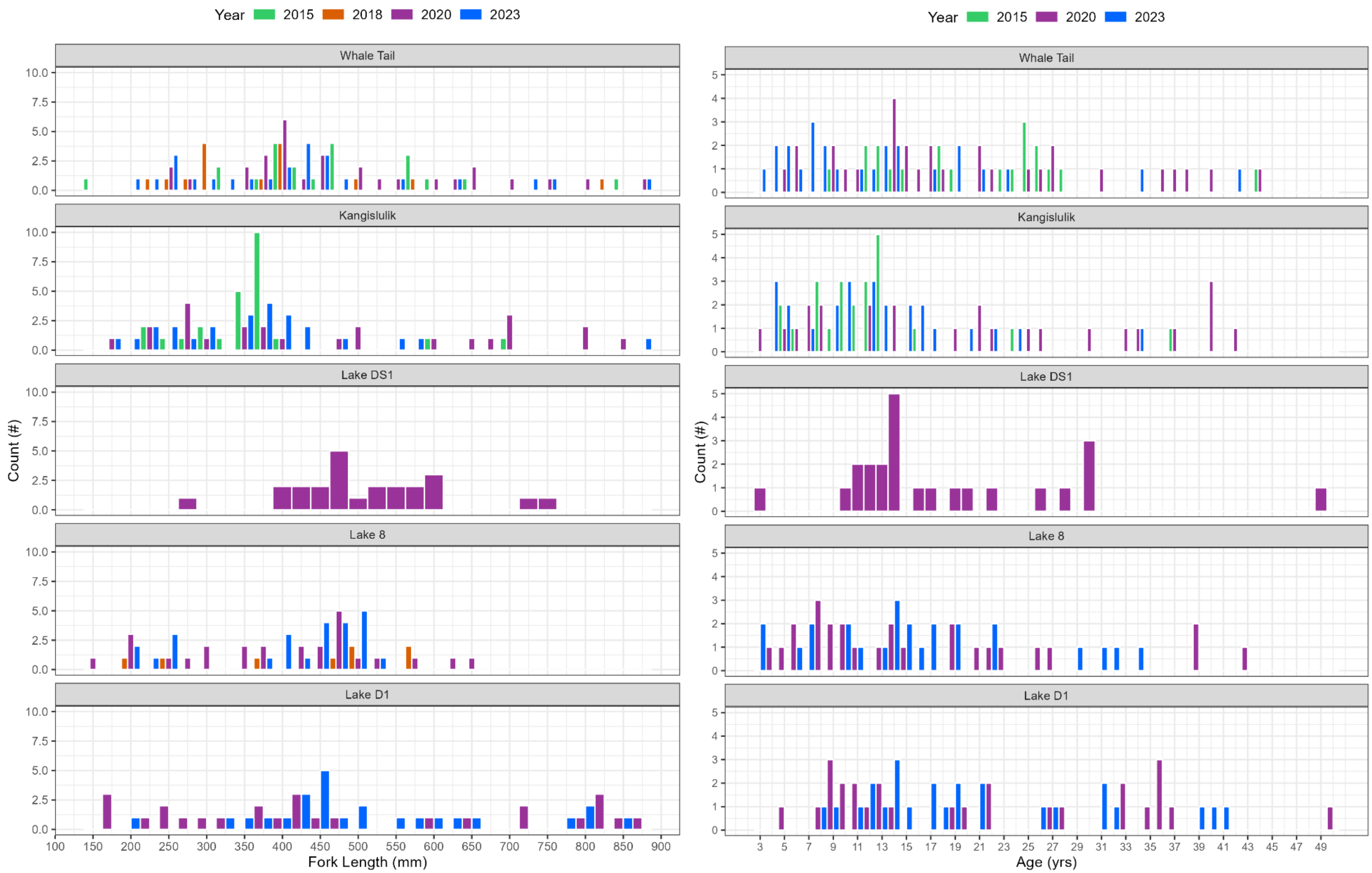


Figure 5-2. Key mercury relationships for Lake Trout in Whale Tail study area lakes since 2015.

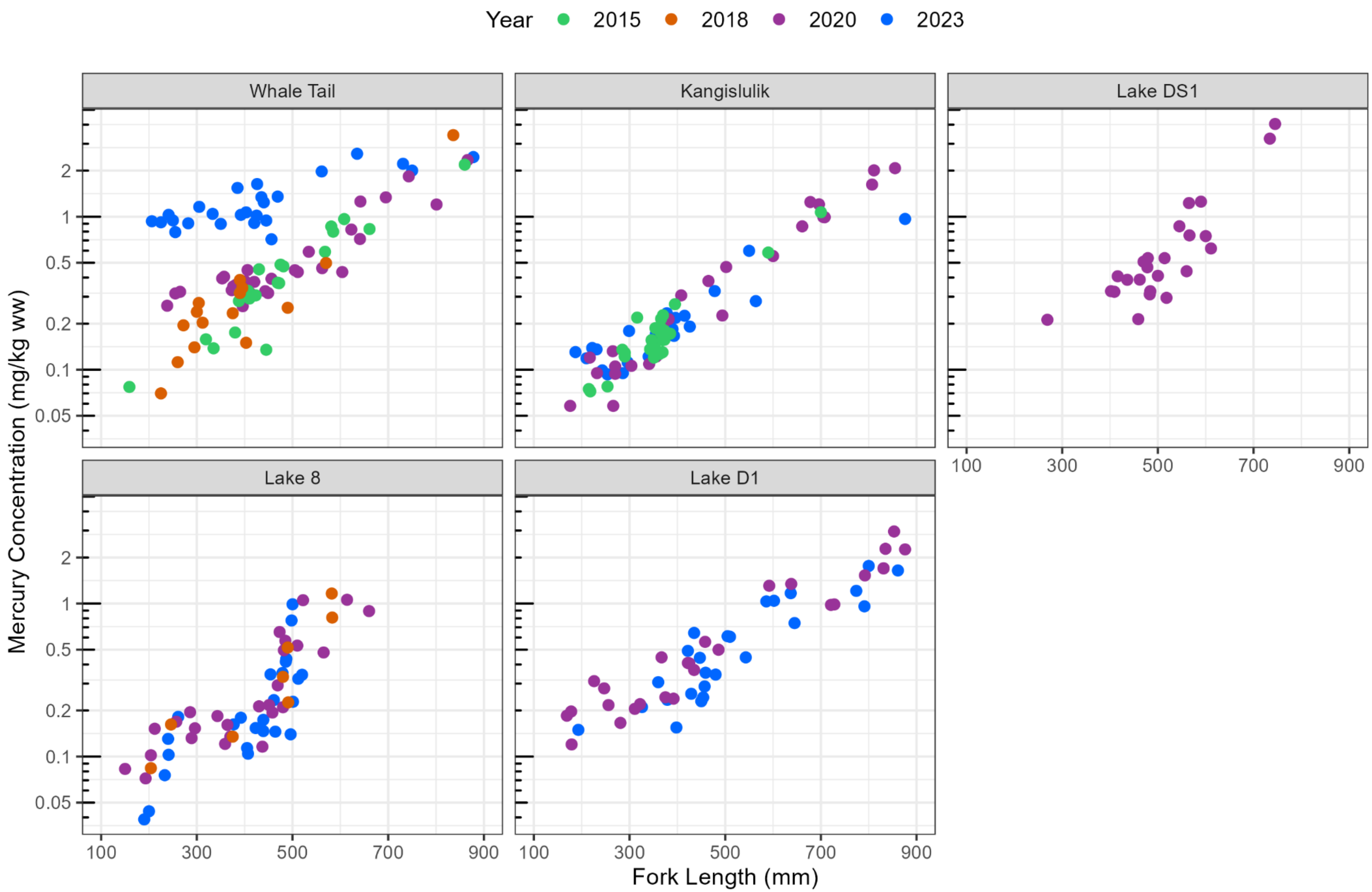
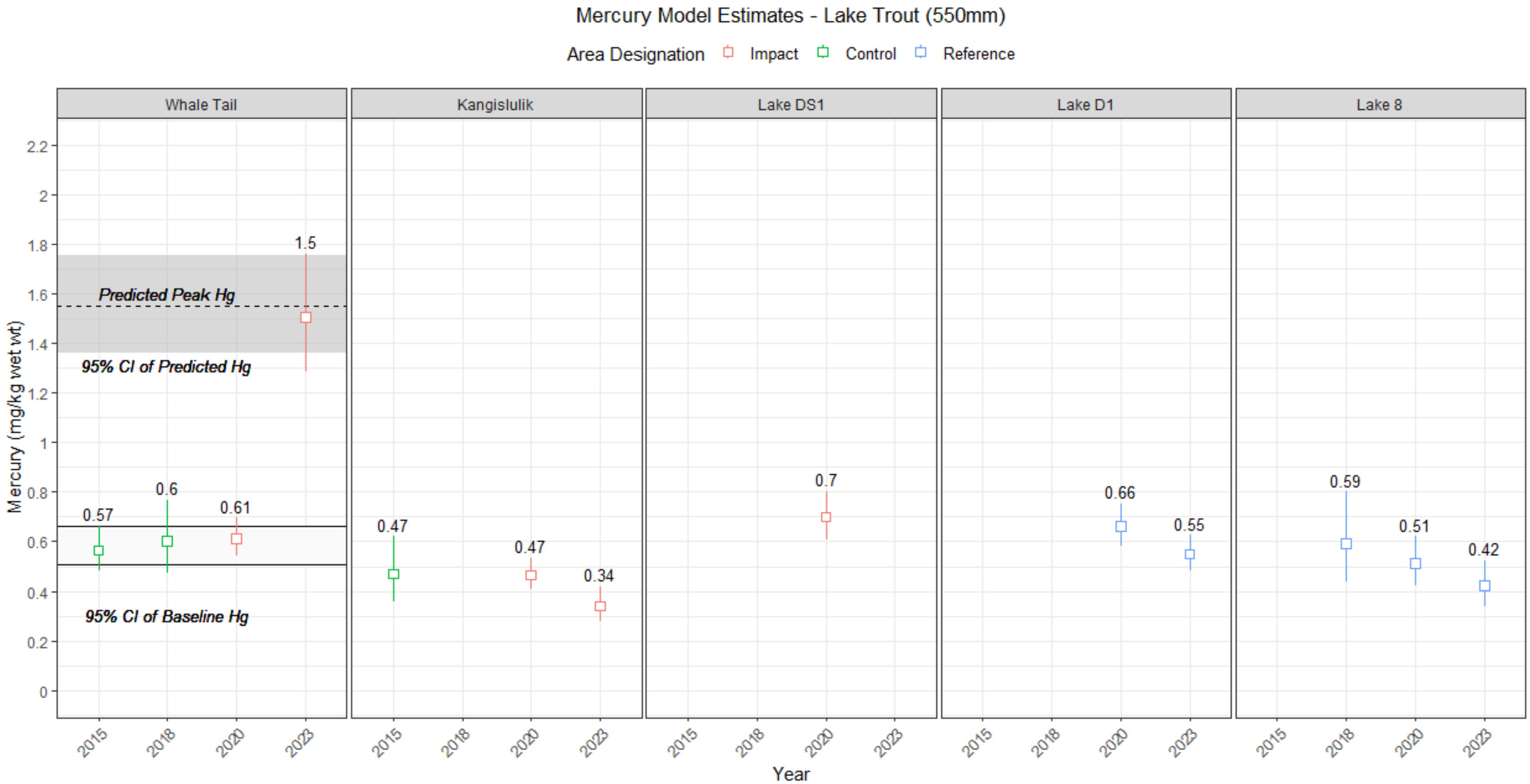


Figure 5-3. Estimated tissue mercury concentrations for a 550 mm Lake Trout in Whale Tail area lakes since 2015.



5.8 Large-bodied Fish Summary

Lake Trout were sampled in 2023 as per the *Mercury Monitoring Plan* (Azimuth, 2023b). Results in 2023, show that mercury tissue concentrations in Lake Trout (550 mm) increased in Whale Tail (south basin) to near the predicted peak mercury concentration.

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 2024 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 predictions[15] for the Whale Tail mine. The next large-bodied fish sampling event targeting Lake Trout is planned for 2026. Based on the 2023 results and the *Mercury Monitoring Plan* (Azimuth, 2023b) the components for the 2024 MMP sampling program are summarized in **Table 6-1**.

[15] 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 2024 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 2024. 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.

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APPENDICES

APPENDIX A
WATER DATA

APPENDIX A1
2023 LABORATORY DATA

Western Biotron Experimental Climate Change Research

University of Western Ontario - Analytical Services

Marianna DiMauro		Date of Receipt:	August 31, 2023
Agnico Eagle Mines Limited		Client COC:	n/a
Environment Department, Meadowbank Division			
Baker Lake, Nunavut, X0C 0A0		Report ID:	2023-08-012

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

CERTIFICATE OF ANALYSIS

Sample type & number of samples: 18 water samples;

The following analytical analyses were requested: 18 F THg/MeHg & 18 U THg/MeHg.

THg (Tekran model 2600)

1. R^2: > 0.9975
2. IPR & OPR avg: 106% & 108%
3. Recovery QCS avg: 86%
4. Recovery MS & MSD avg: 93% & 101%
5. RPD in Sample Duplicates avg: 12%
6. RPD in MS & MSD avg: 8%
7. MDL: 0.05 ng/L
8. MRL: 0.16 ng/L
9. Method Blank avg: <MDL
10. IPR recovery SD avg: 1%

MeHg (Tekran model 2700) Water

1. R^2: > 0.9950
2. IPR & OPR avg: 97% & 102%
3. Recovery QCS avg: 97%
4. Recovery MS & MSD avg: 93% & 94%
5. RPD in Sample Duplicates avg: 8%
6. RPD in MS & MSD avg: 2%
7. MDL: 0.011 ng/L
8. MRL: 0.034 ng/L
9. Method Blank avg: <MDL
10. IPR recovery SD avg: 4%

ACRONYMS:

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

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: None.

x Rod Sousa (signature)

Rod Sousa
Quality Control Specialist

Date: October 17, 2023

The University of Western Ontario
Biotron Research Building - 1151 Richmond Street N., Dock #65 London, ON N6A 5B7
T: (519) 661-3777 F: (519) 661-4162

Client Name: Marianna DiMauro
Agnico Eagle Mines Limited

Biotron WO#: 2023-08-012
Report date: October 17, 2023

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)
INUG-152	August 22, 2023	1U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0096	0.38
INUG-153	August 22, 2023	2U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0076	0.30
PDL-117	August 22, 2023	3U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0034	<MRL
PDL-118	August 22, 2023	4U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0041	0.17
DS1-71	August 17, 2023	5U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0112	0.45
DS1-72	August 17, 2023	6U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0150	0.60
WTS-81	August 14, 2023	7U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0247	0.99
WTS-82	August 14, 2023	8U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0243	0.97
MAM-81	August 15, 2023	9U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0110	0.44
MAM-82	August 15, 2023	10U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0099	0.40
A65-5	August 20, 2023	11U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0212	0.85
A65-6	August 20, 2023	12U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0187	0.75
A20-75	August 18, 2023	13U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0122	0.49
A20-76	August 18, 2023	14U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0095	0.38
AUG-DUP-1	August 15, 2023	15U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0081	0.33
AUG-DUP-2	August 18, 2023	16U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0111	0.44
DI-Blank	August 20, 2023	17U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	0.0016	<MRL
AUG-TB	August 20, 2023	18U	n/a	October 5, 2023	Unfiltered Total Hg	0.025	<0.0013	<MDL
INUG-152	August 22, 2023	1F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0067	0.27
INUG-153	August 22, 2023	2F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0078	0.31
PDL-117	August 22, 2023	3F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0024	<MRL
PDL-118	August 22, 2023	4F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0027	<MRL
DS1-71	August 17, 2023	5F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0045	0.18
DS1-72	August 17, 2023	6F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0042	0.17
WTS-81	August 14, 2023	7F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0095	0.38
WTS-82	August 14, 2023	8F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0081	0.33
MAM-81	August 15, 2023	9F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0048	0.19
MAM-82	August 15, 2023	10F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0058	0.23
A65-5	August 20, 2023	11F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0078	0.31
A65-6	August 20, 2023	12F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0065	0.26
A20-75	August 18, 2023	13F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0054	0.22
A20-76	August 18, 2023	14F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0057	0.23
AUG-DUP-1	August 15, 2023	15F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0051	0.21
AUG-DUP-2	August 18, 2023	16F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0100	0.40
DI-Blank	August 20, 2023	17F	filtration	October 5, 2023	Filtered Total Hg	0.025	0.0035	<MRL
AUG-TB	August 20, 2023	18F	filtration	October 5, 2023	Filtered Total Hg	0.025	<0.0013	<MDL
MDL (ng)							0.0013	
MRL (ng)							0.0040	

NA: Not applicable

Comments: Samples Values <MRL are solely left to the discretion of the client. MeHg higher than THg acceptability is less than 35% of Relative Percent Difference.

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

Client Name: Marianna DiMauro
Agnico Eagle Mines Limited

Biotron WO#: 2023-08-012
Report date: October 17, 2023

Methyl Mercury (MeHg) - Analytical Results

Analytical Method: TM.0812

Sample ID	Date Collected	Lab ID #	Prep Code	Analysis Period	Parameter Code	Sample Vol (L)	Total MeHg (ng)	Final Concentration (ng/L)
INUG-152	August 22, 2023	1U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	<0.0005	<MDL
INUG-153	August 22, 2023	2U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	<0.0005	<MDL
PDL-117	August 22, 2023	3U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	<0.0005	<MDL
PDL-118	August 22, 2023	4U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	<0.0005	<MDL
DS1-71	August 17, 2023	5U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0008	<MRL
DS1-72	August 17, 2023	6U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0023	0.057
WTS-81	August 14, 2023	7U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0215	0.538
WTS-82	August 14, 2023	8U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0225	0.564
MAM-81	August 15, 2023	9U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0020	0.050
MAM-82	August 15, 2023	10U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0007	<MRL
A65-5	August 20, 2023	11U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0133	0.331
A65-6	August 20, 2023	12U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0094	0.235
A20-75	August 18, 2023	13U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0047	0.116
A20-76	August 18, 2023	14U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0036	0.089
AUG-DUP-1	August 15, 2023	15U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	<0.0005	<MDL
AUG-DUP-2	August 18, 2023	16U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	0.0052	0.129
DI-Blank	August 20, 2023	17U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	<0.0005	<MDL
AUG-TB	August 20, 2023	18U	n/a	October 05 - 06, 2023	Unfiltered MeHg	0.040	<0.0005	<MDL
INUG-152	August 22, 2023	1F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
INUG-153	August 22, 2023	2F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
PDL-117	August 22, 2023	3F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
PDL-118	August 22, 2023	4F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
DS1-71	August 17, 2023	5F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
DS1-72	August 17, 2023	6F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
WTS-81	August 14, 2023	7F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	0.0044	0.110
WTS-82	August 14, 2023	8F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	0.0042	0.106
MAM-81	August 15, 2023	9F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
MAM-82	August 15, 2023	10F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
A65-5	August 20, 2023	11F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	0.0033	0.084
A65-6	August 20, 2023	12F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	0.0027	0.067
A20-75	August 18, 2023	13F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	0.0020	0.049
A20-76	August 18, 2023	14F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	0.0008	<MRL
AUG-DUP-1	August 15, 2023	15F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
AUG-DUP-2	August 18, 2023	16F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	0.0009	<MRL
DI-Blank	August 20, 2023	17F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
AUG-TB	August 20, 2023	18F	filtration	October 05 - 06, 2023	Filtered MeHg	0.040	<0.0005	<MDL
MDL (ng)							0.0005	
MRL (ng)							0.0014	

NA: Not applicable

Comments: Samples Values <MRL are solely left to the discretion of the client. MeHg higher than THg acceptability is less than 35% of Relative Percent Difference.

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

APPENDIX A2

SURFACE WATER MERCURY DATABASE

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

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2016	17-Aug-16	L1817642	Azimuth	WTS-12	Whale Tail	Total Hg Unfiltered	ng/L	A	Surface	<0.50	0.5
2016	17-Aug-16	L1817642	Azimuth	WTS-12	Whale Tail	Total Hg Filtered	ng/L	A	Surface	<0.50	0.5
2016	17-Aug-16	L1817642	Azimuth	WTS-12	Whale Tail	MeHg Unfiltered	ng/L	A	Surface	<0.050	0.05
2016	17-Aug-16	L1817642	Azimuth	WTS-12	Whale Tail	MeHg Filtered	ng/L	A	Surface	<0.050	0.05
2017	28-Aug-17	L1985255	Azimuth	WTS-23	Whale Tail	Total Hg Unfiltered	ng/L	A	Surface	0.52	0.5
2017	28-Aug-17	L1985255	Azimuth	WTS-23	Whale Tail	Total Hg Filtered	ng/L	A	Surface	<0.50	0.5
2017	28-Aug-17	L1985255	Azimuth	WTS-23	Whale Tail	MeHg Unfiltered	ng/L	A	Surface	<0.050	0.05
2017	28-Aug-17	L1985255	Azimuth	WTS-23	Whale Tail	MeHg Filtered	ng/L	A	Surface	<0.050	0.05
2017	28-Aug-17	L1985255	Azimuth	MAM-23	Mammoth	Total Hg Unfiltered	ng/L	A	Surface	<0.50	0.5
2017	28-Aug-17	L1985255	Azimuth	MAM-23	Mammoth	Total Hg Filtered	ng/L	A	Surface	<0.50	0.5
2017	28-Aug-17	L1985255	Azimuth	MAM-23	Mammoth	MeHg Unfiltered	ng/L	A	Surface	<0.050	0.05
2017	28-Aug-17	L1985255	Azimuth	MAM-23	Mammoth	MeHg Filtered	ng/L	A	Surface	<0.050	0.05
2017	14-Aug-17	L1981162	Azimuth	WTS-23	Whale Tail	Total Hg Unfiltered	ng/L	A	Surface	0.5	0.5
2017	14-Aug-17	L1981162	Azimuth	WTS-23	Whale Tail	Total Hg Filtered	ng/L	A	Surface	<0.50	0.5
2017	14-Aug-17	L1981162	Azimuth	WTS-23	Whale Tail	MeHg Unfiltered	ng/L	A	Surface	<0.050	0.05
2017	14-Aug-17	L1981162	Azimuth	WTS-23	Whale Tail	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	Mammoth	Total Hg Unfiltered	ng/L	A	Surface	0.337	0.2
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ01	Mammoth	Total Hg Filtered	ng/L	A	Surface	0.428	0.2
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ02	Mammoth	Total Hg Unfiltered	ng/L	A	Surface	<0.2	0.2
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ02	Mammoth	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	A63-WQ01	A63	Total Hg Unfiltered	ng/L	A	Surface	0.319	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ01	A63	Total Hg Filtered	ng/L	A	Surface	0.272	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ01	A63	Total Hg Unfiltered	ng/L	B	Surface	0.325	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ01	A63	Total Hg Filtered	ng/L	B	Surface	0.306	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ02	A63	Total Hg Unfiltered	ng/L	A	Surface	0.385	0.2
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ02	A63	Total Hg Filtered	ng/L	A	Surface	0.3	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	Mammoth	MeHg Unfiltered	ng/L	A	Surface	<0.0225	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ01	Mammoth	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ02	Mammoth	MeHg Unfiltered	ng/L	A	Surface	0.029	0.0225
2018	16-Aug-18	WO2019-02-008	UoW	MMT-WQ02	Mammoth	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	A63-WQ01	A63	MeHg Unfiltered	ng/L	A	Surface	0.03	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ01	A63	MeHg Filtered	ng/L	A	Surface	<0.0225	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ01	A63	MeHg Unfiltered	ng/L	B	Surface	<0.0225	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ01	A63	MeHg Filtered	ng/L	B	Surface	<0.0225	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ02	A63	MeHg Unfiltered	ng/L	A	Surface	0.049	0.0225
2018	20-Aug-18	WO2019-02-008	UoW	A63-WQ02	A63	MeHg Filtered	ng/L	A	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

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

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
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	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	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	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
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	Mammoth	Total Hg Unfiltered	ng/L	A	Surface	1.447	0.172
2020	15-Aug-20	WO2020-09-008	UoW	MMT-WQ01	Mammoth	Total Hg Filtered	ng/L	A	Surface	1.109	0.172
2020	15-Aug-20	WO2020-09-008	UoW	MMT-WQ02	Mammoth	Total Hg Unfiltered	ng/L	A	Surface	0.895	0.172
2020	15-Aug-20	WO2020-09-008	UoW	MMT-WQ02	Mammoth	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	INUG	Total Hg Unfiltered	ng/L	A	Surface	0.579	0.172
2020	21-Aug-20	WO2020-09-008	UoW	INUG-124	INUG	Total Hg Filtered	ng/L	A	Surface	0.727	0.172
2020	21-Aug-20	WO2020-09-008	UoW	INUG-125	INUG	Total Hg Unfiltered	ng/L	A	Surface	0.484	0.172
2020	21-Aug-20	WO2020-09-008	UoW	INUG-125	INUG	Total Hg Filtered	ng/L	A	Surface	0.797	0.172
2020	22-Aug-20	WO2020-09-008	UoW	PDL-89	PDL	Total Hg Unfiltered	ng/L	A	Surface	0.467	0.172
2020	22-Aug-20	WO2020-09-008	UoW	PDL-89	PDL	Total Hg Filtered	ng/L	A	Surface	0.326	0.172
2020	22-Aug-20	WO2020-09-008	UoW	PDL-90	PDL	Total Hg Unfiltered	ng/L	A	Surface	0.46	0.172
2020	22-Aug-20	WO2020-09-008	UoW	PDL-90	PDL	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	Mammoth	MeHg Unfiltered	ng/L	A	Surface	0.042	0.0178
2020	15-Aug-20	WO2020-09-009	UoW	MMT-WQ01	Mammoth	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	15-Aug-20	WO2020-09-009	UoW	MMT-WQ02	Mammoth	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	15-Aug-20	WO2020-09-009	UoW	MMT-WQ02	Mammoth	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	INUG	MeHg Unfiltered	ng/L	A	Surface	0.029	0.0178
2020	21-Aug-20	WO2020-09-009	UoW	INUG-124	INUG	MeHg Filtered	ng/L	A	Surface	0.018	0.0178
2020	21-Aug-20	WO2020-09-009	UoW	INUG-125	INUG	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	21-Aug-20	WO2020-09-009	UoW	INUG-125	INUG	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	22-Aug-20	WO2020-09-009	UoW	PDL-89	PDL	MeHg Unfiltered	ng/L	A	Surface	<0.0178	0.0178
2020	22-Aug-20	WO2020-09-009	UoW	PDL-89	PDL	MeHg Filtered	ng/L	A	Surface	<0.0178	0.0178
2020	22-Aug-20	WO2020-09-009	UoW	PDL-90	PDL	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.

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2020	22-Aug-20	WO2020-09-009	UoW	PDL-90	PDL	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
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	12-Aug-20	WO2020-09-009	UoW	A63-WQ01	A63	Total Hg Unfiltered	ng/L	A	Surface	3.264	0.172
2020	12-Aug-20	WO2020-09-009	UoW	A63-WQ01	A63	Total Hg Filtered	ng/L	A	Surface	1.962	0.172
2020	12-Aug-20	WO2020-09-009	UoW	A63-WQ02	A63	Total Hg Unfiltered	ng/L	A	Surface	3.925	0.172
2020	12-Aug-20	WO2020-09-009	UoW	A63-WQ02	A63	Total Hg Filtered	ng/L	A	Surface	3.145	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	12-Aug-20	WO2020-09-009	UoW	A63-WQ01	A63	MeHg Unfiltered	ng/L	A	Surface	0.91	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	A63-WQ01	A63	MeHg Filtered	ng/L	A	Surface	0.48	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	A63-WQ02	A63	MeHg Unfiltered	ng/L	A	Surface	0.949	0.0178
2020	12-Aug-20	WO2020-09-009	UoW	A63-WQ02	A63	MeHg Filtered	ng/L	A	Surface	0.548	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	Mammoth	Total Hg Unfiltered	ng/L	A	Surface	0.54	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Mammoth	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	Total Hg Unfiltered	ng/L	A	Surface	1.03	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-64	Whale Tail	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	Mammoth	Total Hg Unfiltered	ng/L	B	Surface	0.53	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail	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

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

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
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	PDL	Total Hg Unfiltered	ng/L	A	Surface	0.28	0.01679
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-100	PDL	Total Hg Unfiltered	ng/L	A	Surface	0.31	0.01679
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-134	INUG	Total Hg Unfiltered	ng/L	A	Surface	0.63	0.01679
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-135	INUG	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	Mammoth	Total Hg Filtered	ng/L	A	Surface	0.24	0.01679
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Mammoth	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	Total Hg Filtered	ng/L	A	Surface	0.39	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-64	Whale Tail	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	Mammoth	Total Hg Filtered	ng/L	B	Surface	0.26	0.01679
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail	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
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	PDL	Total Hg Filtered	ng/L	A	Surface	0.21	0.01679
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-100	PDL	Total Hg Filtered	ng/L	A	Surface	<0.01679	0.01679
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-134	INUG	Total Hg Filtered	ng/L	A	Surface	0.349	0.01679
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-135	INUG	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	Mammoth	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Mammoth	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	MeHg Filtered	ng/L	A	Surface	0.105	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-64	Whale Tail	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	Mammoth	MeHg Filtered	ng/L	B	Surface	0.025	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail	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	PDL	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-100	PDL	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-134	INUG	MeHg Filtered	ng/L	A	Surface	<0.022	0.022
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-135	INUG	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	Mammoth	MeHg Unfiltered	ng/L	A	Surface	0.023	0.022
2021	07-Aug-21	WO2021-08-009	Azimuth	MAM-64	Mammoth	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	MeHg Unfiltered	ng/L	A	Surface	0.44	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-64	Whale Tail	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	Mammoth	MeHg Unfiltered	ng/L	B	Surface	0.042	0.022
2021	10-Aug-21	WO2021-08-009	Azimuth	WTS-63	Whale Tail	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	PDL	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	16-Aug-21	WO2021-08-009	Azimuth	PDL-100	PDL	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022

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

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-134	INUG	MeHg Unfiltered	ng/L	A	Surface	<0.022	0.022
2021	18-Aug-21	WO2021-08-009	Azimuth	INUG-135	INUG	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	INUG	Total Hg Unfiltered	ng/L	A	Surface	0.58	0.01679
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-144	INUG	Total Hg Unfiltered	ng/L	A	Surface	0.50	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-109	PDL	Total Hg Unfiltered	ng/L	A	Surface	0.49	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-110	PDL	Total Hg Unfiltered	ng/L	A	Surface	0.49	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-73	Whale Tail	Total Hg Unfiltered	ng/L	A	Surface	1.81	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-74	Whale Tail	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	Mammoth	Total Hg Unfiltered	ng/L	A	Surface	0.90	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-74	Mammoth	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	Mammoth	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
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	INUG	Total Hg Filtered	ng/L	A	Surface	0.25	0.01679
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-144	INUG	Total Hg Filtered	ng/L	A	Surface	0.28	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-109	PDL	Total Hg Filtered	ng/L	A	Surface	0.30	0.01679
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-110	PDL	Total Hg Filtered	ng/L	A	Surface	0.26	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-73	Whale Tail	Total Hg Filtered	ng/L	A	Surface	0.60	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-74	Whale Tail	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	Mammoth	Total Hg Filtered	ng/L	A	Surface	0.31	0.01679
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-74	Mammoth	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	Mammoth	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	INUG	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-144	INUG	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-109	PDL	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-110	PDL	MeHg Unfiltered	ng/L	A	Surface	<0.0286	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-73	Whale Tail	MeHg Unfiltered	ng/L	A	Surface	0.63	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-74	Whale Tail	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	Mammoth	MeHg Unfiltered	ng/L	A	Surface	0.03	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-74	Mammoth	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	Mammoth	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	INUG	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	14-Aug-22	WO2022-08-006	Azimuth	INUG-144	INUG	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-109	PDL	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	15-Aug-22	WO2022-08-006	Azimuth	PDL-110	PDL	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-73	Whale Tail	MeHg Filtered	ng/L	A	Surface	0.25	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	WTS-74	Whale Tail	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	Mammoth	MeHg Filtered	ng/L	A	Surface	<0.0286	0.0286
2022	17-Aug-22	WO2022-08-006	Azimuth	MAM-74	Mammoth	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

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

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
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	Mammoth	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	INUG	Total Hg Unfiltered	ng/L	A	Surface	0.38	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-153	INUG	Total Hg Unfiltered	ng/L	A	Surface	0.30	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-117	PDL	Total Hg Unfiltered	ng/L	A	Surface	<0.1603	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-118	PDL	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	WTS	Total Hg Unfiltered	ng/L	A	Surface	0.99	0.1603
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-82	WTS	Total Hg Unfiltered	ng/L	A	Surface	0.97	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-81	MAM	Total Hg Unfiltered	ng/L	A	Surface	0.44	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	MAM	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
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	MAM	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	INUG	Total Hg Filtered	ng/L	A	Surface	0.27	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-153	INUG	Total Hg Filtered	ng/L	A	Surface	0.31	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-117	PDL	Total Hg Filtered	ng/L	A	Surface	<0.1603	0.1603
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-118	PDL	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	WTS	Total Hg Filtered	ng/L	A	Surface	0.38	0.1603
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-82	WTS	Total Hg Filtered	ng/L	A	Surface	0.33	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-81	MAM	Total Hg Filtered	ng/L	A	Surface	0.19	0.1603
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	MAM	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	MAM	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	INUG	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-153	INUG	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-117	PDL	MeHg Unfiltered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-118	PDL	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	WTS	MeHg Unfiltered	ng/L	A	Surface	0.54	0.0342
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-82	WTS	MeHg Unfiltered	ng/L	A	Surface	0.56	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-81	MAM	MeHg Unfiltered	ng/L	A	Surface	0.05	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	MAM	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	MAM	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	INUG	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	INUG-153	INUG	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-117	PDL	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	22-Aug-23	WO2023-08-012	Azimuth	PDL-118	PDL	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	WTS	MeHg Filtered	ng/L	A	Surface	0.11	0.0342
2023	14-Aug-23	WO2023-08-012	Azimuth	WTS-82	WTS	MeHg Filtered	ng/L	A	Surface	0.11	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-81	MAM	MeHg Filtered	ng/L	A	Surface	<0.0342	0.0342
2023	15-Aug-23	WO2023-08-012	Azimuth	MAM-82	MAM	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	MAM	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

APPENDIX B
SEDIMENT DATA

Appendix B1

Sediment Mercury Database

Appendix B1. Sediment Mercury Database.

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2016.

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

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	MAM	grab	0	5	14-Aug-16	0.094	-	0.0050	-	mg/kg dw	
2016	MAM-2	MAM	grab	0	5	14-Aug-16	0.097	-	0.0050	-	mg/kg dw	
2016	MAM-3	MAM	grab	0	5	14-Aug-16	0.12	-	0.0050	-	mg/kg dw	
2016	MAM-4	MAM	grab	0	5	14-Aug-16	0.10	-	0.0050	-	mg/kg dw	
2016	MAM-5	MAM	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	MAM	grab	0	5	17-Aug-17	0.085	-	0.0050	-	mg/kg dw	
2017	MAM-2	MAM	grab	0	5	17-Aug-17	0.088	-	0.0050	-	mg/kg dw	
2017	MAM-3	MAM	grab	0	5	17-Aug-17	0.082	-	0.0050	-	mg/kg dw	
2017	MAM-4	MAM	grab	0	5	17-Aug-17	0.10	-	0.0050	-	mg/kg dw	
2017	MAM-5	MAM	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	
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	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2016.

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

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-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	MAM	core	0	1.5	17-Aug-17	0.084	-	0.0050	-	mg/kg dw	
2017	MAM-SC-2	MAM	core	0	1.5	17-Aug-17	0.093	-	0.0050	-	mg/kg dw	
2017	MAM-SC-3	MAM	core	0	1.5	17-Aug-17	0.088	-	0.0050	-	mg/kg dw	
2017	MAM-SC-4	MAM	core	0	1.5	17-Aug-17	0.076	-	0.0050	-	mg/kg dw	
2017	MAM-SC-5	MAM	core	0	1.5	17-Aug-17	0.079	-	0.0050	-	mg/kg dw	
2017	MAM-SC-6	MAM	core	0	1.5	17-Aug-17	0.10	-	0.0050	-	mg/kg dw	
2017	MAM-SC-7	MAM	core	0	1.5	17-Aug-17	0.11	-	0.0050	-	mg/kg dw	
2017	MAM-SC-8	MAM	core	0	1.5	17-Aug-17	0.088	-	0.0050	-	mg/kg dw	
2017	MAM-SC-9	MAM	core	0	1.5	17-Aug-17	0.080	-	0.0050	-	mg/kg dw	
2017	MAM-SC-10	MAM	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	
2018	MAM-1	MAM	grab	0	5	16-Aug-18	0.019	-	0.0050	-	mg/kg dw	
2018	MAM-2	MAM	grab	0	5	16-Aug-18	0.10	-	0.0050	-	mg/kg dw	
2018	MAM-3	MAM	grab	0	5	16-Aug-18	0.087	-	0.0050	-	mg/kg dw	
2018	MAM-4	MAM	grab	0	5	16-Aug-18	0.10	-	0.0050	-	mg/kg dw	
2018	MAM-5	MAM	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	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2016.

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

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
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	MAM	grab	0	5	19-Aug-19	0.081	0.00064	0.050	0.00005	mg/kg dw	
2019	MAM-2	MAM	grab	0	5	19-Aug-19	0.067	0.00066	0.050	0.00005	mg/kg dw	
2019	MAM-3	MAM	grab	0	5	19-Aug-19	0.078	0.0010	0.050	0.00005	mg/kg dw	
2019	MAM-4	MAM	grab	0	5	19-Aug-19	0.068	0.00050	0.050	0.00005	mg/kg dw	
2019	MAM-5	MAM	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	
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	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2016.

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

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
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	DS1-SC-1	DS1	core	0	1.5	21-Aug-20	0.032	0.00009	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-2	DS1	core	0	1.5	21-Aug-20	0.030	0.00010	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-3	DS1	core	0	1.5	21-Aug-20	0.039	<0.00005	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-4	DS1	core	0	1.5	21-Aug-20	0.038	<0.00005	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-5	DS1	core	0	1.5	21-Aug-20	0.043	<0.00005	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-6	DS1	core	0	1.5	21-Aug-20	0.048	0.00014	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-7	DS1	core	0	1.5	21-Aug-20	0.046	0.00007	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-8	DS1	core	0	1.5	21-Aug-20	0.042	<0.00005	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-9	DS1	core	0	1.5	21-Aug-20	0.053	<0.00005	0.0050	0.00005	mg/kg dw	
2020	DS1-SC-10	DS1	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	
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	MAM	core	0	1.5	21-Aug-20	0.089	0.00080	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-2	MAM	core	0	1.5	21-Aug-20	0.091	0.00092	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-3	MAM	core	0	1.5	21-Aug-20	0.084	0.00025	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-4	MAM	core	0	1.5	21-Aug-20	0.088	0.00067	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-5	MAM	core	0	1.5	21-Aug-20	0.080	0.00053	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-6	MAM	core	0	1.5	21-Aug-20	0.091	0.00063	0.0050	0.00005	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2016.

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

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2020	MAM-SC-7	MAM	core	0	1.5	21-Aug-20	0.080	0.00053	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-8	MAM	core	0	1.5	21-Aug-20	0.092	0.00063	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-9	MAM	core	0	1.5	21-Aug-20	0.083	0.00034	0.0050	0.00005	mg/kg dw	
2020	MAM-SC-10	MAM	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	MAM	grab	0	5	15-Aug-22	0.078	0.016	0.0050	0.00005	mg/kg dw	
2022	MAM-2	MAM	grab	0	5	15-Aug-22	0.072	0.0080	0.0050	0.00005	mg/kg dw	
2022	MAM-3	MAM	grab	0	5	15-Aug-22	0.071	0.012	0.0050	0.00005	mg/kg dw	
2022	MAM-4	MAM	grab	0	5	15-Aug-22	0.063	0.0039	0.0050	0.00005	mg/kg dw	
2022	MAM-5	MAM	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	
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	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2016.

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

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
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	0.0025	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	MAM	core	0	1.5	15-Aug-23	0.086	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-2	MAM	core	0	1.5	15-Aug-23	0.082	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-3	MAM	core	0	1.5	15-Aug-23	0.082	0.0018	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-4	MAM	core	0	1.5	15-Aug-23	0.076	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-5	MAM	core	0	1.5	15-Aug-23	0.094	0.0022	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-6	MAM	core	0	1.5	15-Aug-23	0.080	0.0012	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-7	MAM	core	0	1.5	15-Aug-23	0.083	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-8	MAM	core	0	1.5	15-Aug-23	0.083	-	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-9	MAM	core	0	1.5	15-Aug-23	0.071	0.00037	0.0050	0.00005	mg/kg dw	
2023	MAM-SC-10	MAM	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	DS1-SC-1	DS1	core	0	1.5	17-Aug-23	0.075	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-2	DS1	core	0	1.5	17-Aug-23	0.081	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-3	DS1	core	0	1.5	17-Aug-23	0.076	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-4	DS1	core	0	1.5	17-Aug-23	0.065	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-5	DS1	core	0	1.5	17-Aug-23	0.065	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-6	DS1	core	0	1.5	17-Aug-23	0.075	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-7	DS1	core	0	1.5	17-Aug-23	0.067	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-8	DS1	core	0	1.5	17-Aug-23	0.068	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-9	DS1	core	0	1.5	17-Aug-23	0.050	-	0.0050	0.00005	mg/kg dw	
2023	DS1-SC-10	DS1	core	0	1.5	17-Aug-23	0.060	-	0.0050	0.00005	mg/kg dw	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program since 2016.

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

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
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	
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	MAM	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-2	MAM	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-3	MAM	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-4	MAM	grab	0	5	15-Aug-23	-	-	0.0050	0.00005	mg/kg dw	
2023	MAM-5	MAM	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	DUP-SC-10	MAM	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	MAM	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-2023	0.074	0.0056	0.0050	0.00005	mg/kg dw	
2023	A20-INUN-4	A20	inundation	7	8	14-Aug-2023	0.078	0.020	0.0050	0.00005	mg/kg dw	
2023	WTS-INUN-3	WTS	inundation	7	8	19-Aug-2023	0.034	0.0078	0.0050	0.00005	mg/kg dw	
2023	WTS-INUN-4	WTS	inundation	7	8	19-Aug-2023	0.078	0.021	0.0050	0.00005	mg/kg dw	
2023	A65-INUN-3	A65	inundation	7	8	20-Aug-2023	0.060	0.0072	0.0050	0.00005	mg/kg dw	
2023	A65-INUN-4	A65	inundation	7	8	20-Aug-2023	0.072	0.0059	0.0050	0.00005	mg/kg dw	
2023	DUP-INUN-1	A65	inundation	7	8	20-Aug-2023	0.065	0.0055	0.0050	0.00005	mg/kg dw	Duplicate of A65-INUN-4

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.

Year	Sample ID	Lake	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	MAM	29-Jul-18	NSSB	49	0.70	0.028	-26	8.8	
2018	14044	MAM	29-Jul-18	SLSC	36	0.40	0.030	-24	6.7	
2018	14045	MAM	29-Jul-18	SLSC	30	0.20	0.036	-24	7.7	
2018	14049	MAM	29-Jul-18	SLSC	33	0.30	0.029	-23	6.3	
2018	14053	MAM	29-Jul-18	SLSC	29	0.30	0.041	-24	6.5	
2018	14059	MAM	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	MAM	22-Aug-19	SLSC	36	0.42	0.033	-20	7.8	
2019	14506	MAM	22-Aug-19	SLSC	38	0.45	0.031	-22	8.3	
2019	14508	MAM	22-Aug-19	SLSC	36	0.37	0.042	-22	8.1	
2019	14532	MAM	22-Aug-19	SLSC	39	0.42	0.041	-22	8.0	
2019	14534	MAM	22-Aug-19	SLSC	40	0.45	0.035	-23	7.6	
2019	14535	MAM	22-Aug-19	NSSB	43	0.51	0.030	-27	9.8	

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

Notes: NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin; "-" = Not Reported.

Year	Sample ID	Lake	Date	Species	Total Length (mm)	Field Weight (g)	Total Hg in Fish Tissue (THg ppm ww)	Stable Isotopes		Notes
								C13	N15	
2019	14536	MAM	22-Aug-19	NSSB	49	0.76	0.039	-26	9.3	
2020	14546	MAM	21-Aug-20	SLSC	37	0.42	0.026	-20	8.0	
2020	14550	MAM	21-Aug-20	NSSB	30	0.19	0.024	-25	6.9	
2020	14551	MAM	21-Aug-20	NSSB	40	0.44	0.025	-24	7.7	
2020	14562	MAM	21-Aug-20	SLSC	37	0.36	0.026	-21	7.8	
2020	14565	MAM	21-Aug-20	SLSC	38	0.45	0.061	-25	6.7	
2020	14577	MAM	21-Aug-20	SLSC	38	0.46	0.021	-18	7.4	Tail broken- could not confirm FL
2020	14578	MAM	21-Aug-20	SLSC	35	0.36	0.023	-21	7.2	
2020	14580	MAM	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	MAM	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	
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	

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

Notes: NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin; "-" = Not Reported.

Year	Sample ID	Lake	Date	Species	Total Length (mm)	Field Weight (g)	Total Hg in Fish Tissue (THg ppm ww)	Stable Isotopes		Notes
								C13	N15	
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	MAM	17-Aug-21	NSSB	45.1	0.50	0.090	-25	9.7	
2021	17982	MAM	17-Aug-21	NSSB	59.8	1.2	0.050	-26	9.5	
2021	17995	MAM	17-Aug-21	NSSB	48.1	0.60	0.060	-25	9.9	
2021	18006	MAM	17-Aug-21	NSSB	55.2	1.0	0.030	-25	10.8	
2021	18009	MAM	17-Aug-21	NSSB	46.2	0.70	0.030	-26	9.6	
2021	18016	MAM	17-Aug-21	SLSC	34.2	0.30	0.050	-24	8.4	
2021	18025	MAM	17-Aug-21	SLSC	38.2	0.40	0.030	-22	7.8	
2021	18031	MAM	17-Aug-21	SLSC	40.1	0.50	0.030	-22	7.3	
2021	18033	MAM	17-Aug-21	SLSC	39	0.40	0.020	-23	8.2	
2021	18042	MAM	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	
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	

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

Notes: NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin; "-" = Not Reported.

Year	Sample ID	Lake	Date	Species	Total Length (mm)	Field Weight (g)	Total Hg in Fish Tissue (THg ppm ww)	Stable Isotopes		Notes
								C13	N15	
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	MAM	20-Aug-23	SLSC	40	0.4908	0.047	-18	9.3	
2023	SC-27	MAM	20-Aug-23	SLSC	40	0.4921	0.029	-19	8.6	
2023	SC-37	MAM	20-Aug-23	SLSC	39	0.4533	0.052	-22	9.2	
2023	SC-38	MAM	20-Aug-23	SLSC	39	0.4925	0.046	-19	10.4	

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 1 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.

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

Notes:
[1] Kangislulik 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 [1]	Capture Method Effort	Species	Fork Length (mm)	Weight (g)	Liver Weight (g)	Gonad weight (g)	Sex	Maturity [2]	Egg Sample Weight (g)	Egg Count	Age (years)	Total Mercury in fish tissue				Stable Isotopes		Condition (K)	Stomach Contents	DELTs	Comment
															Sample Weight (g)	THg in Sample (ng)	THg (ppm)	THg (ppm ww)	C13	N15				
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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	NA	Lake Trout	590	2110	NA	NA	M	M	NA	NA	24	NA	NA	NA	0.58	NA	NA	1.0	NA	none	NA
115	2015	NA	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	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	Kangislulik	NA	Lake Trout	215	96.2	NA	NA	U	I	NA	NA	5	NA	NA	NA	0.075	NA	NA	0.97	NA	none	NA
124	2015	NA	Kangislulik	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	Kangislulik	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	1170	NA	NA	F	U	NA	NA	NA	0.021	22	1.0	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	0.023	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	83.3	NA	NA	M	I	NA	NA	NA	0.022	8.6	0.38	0.084	NA	NA	0.98	zooplankton	NA	NA
14248	2018	22-Aug-18	Lake 8	NA	Lake Trout	246	134.7	NA	NA	M	I	NA	NA	NA	0.019	14	0.74	0.16	NA	NA	0.91	empty	NA	NA
1000-13	2018	10-Aug-18	Whale Tail	NA	Lake Trout	390	600	3.9	NA	M	I	NA	NA	NA	0.021	36	1.8	0.39	NA	NA	1.0	0	NA	NA
1002-10	2018	10-Aug-18	Whale Tail	NA	Lake Trout	490	1350	22.4	14.3	F	M	NA	NA	NA	0.023	27	1.2	0.25	NA	NA	1.1	bivalves	NA	NA
1003-2	2018	11-Aug-18	Whale Tail	NA	Lake Trout	395	600	6	3.4	F	M	NA	NA	NA	0.022	34	1.6	0.34	NA	NA	0.97	0	NA	NA
1005-9	2018	11-Aug-18	Whale Tail	NA	Lake Trout	304	300	2.6	0.2	F	I	NA	NA	NA	0.021	26	1.2	0.27	NA	NA	1.1	0	NA	NA
1009a-1	2018	14-Aug-18	Whale Tail	NA	Lake Trout	570	1900	26.9	NA	M	M	NA	NA	NA	0.022	49	2.3	0.50	NA	NA	1.0	0	NA	NA
500a-18	2018	13-Aug-18	Whale Tail	NA	Lake Trout	225	150	1.5	NA	M	I	NA	NA	NA	0.020	6.2	0.32	0.070	NA	NA	1.3	inverts	NA	NA
500a-7	2018	13-Aug-18	Whale Tail	NA	Lake Trout	260	200	2.2	NA	M	I	NA	NA	NA	0.020	10	0.51	0.11	NA	NA	1.1	inverts	NA	NA
500b-27	2018	13-Aug-18	Whale Tail	NA	Lake Trout	375	600	5.7	4.9	F	M	NA	NA	NA	0.023	24	1.1	0.23	NA	NA	1.1	inverts	NA	NA
500b-3	2018	13-Aug-18	Whale Tail	NA	Lake Trout	295	300	3.3	NA	F	I	NA	NA	NA	0.022	14	0.64	0.14	NA	NA	1.2	inverts	NA	NA
501a-12	2018	13-Aug-18	Whale Tail	NA	Lake Trout	272	250	2.8	NA	M	I	NA	NA	NA	0.022	19	0.89	0.20	NA	NA	1.2	inverts	NA	NA
501a-19	2018	13-Aug-18	Whale Tail	NA	Lake Trout	390	825	4.7	NA	M	M	NA	NA	NA	0.020	29	1.4	0.32	NA	NA	1.4	inverts	NA	NA
501b-15	2018	13-Aug-18	Whale Tail	NA	Lake Trout	312	375	3.8	2.6	F	M	NA	NA	NA	0.021	19	0.92	0.20	NA	NA	1.2	inverts	NA	NA
502a-11	2018	13-Aug-18	Whale Tail	NA	Lake Trout	403	800	8.6	NA	M	M	NA	NA	NA	0.022	15	0.68	0.15	NA	NA	1.2	mollusks	NA	NA
502b-5	2018	13-Aug-18	Whale Tail	NA	Lake Trout	300	250	3.4	NA	F	I	NA	NA	NA	0.026	28	1.1	0.24	NA	NA	0.93	unidentified fish	NA	NA
531b-2	2018	20-Aug-18	Whale Tail	NA	Lake Trout	836	5600	NA	NA	F	M	NA	NA	NA	0.018	281	16	3.4	NA	NA	0.96	NA	NA	NA
LT-1	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	855	6750	51.47	101.49	F	M	NA	NA	42	0.0077	73	9.4	2.1	-21.61000	13	1.1	NA	NA	NA
LT-2	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	705	4110	56.2	413	F	M	57.26	NA	40	0.0064	29	4.5	1.00	-20.99000	12	1.2	NA	NA	NA
LT-3	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	661	3447	22.34	81.75	M	M	NA	NA	30	0.0051	20	3.9	0.87	-20.27000	12	1.2	NA	NA	NA
LT-4	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	807	6570	62.84	220	M	M	NA	NA	33	0.0056	41	7.4	1.6	-21.98000	13	1.3	Lake Trout, 410 mm	NA	NA
LT-5	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	811	6040	49.16	157.52	F	M	NA	NA	37	0.0057	52	9.1	2.0	-22.53000	13	1.1	NA	NA	NA
LT-6	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	494	1219	8.88	1.42	M	I	NA	NA	22	0.0039	4.0	1.0	0.23	-21.22000	11	1.0	NA	NA	NA
LT-7	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	374	627	4.08	22.68	M	M	NA	NA	21	0.0057	5.3	0.94	0.21	-24.27000	9.4	1.2	NA	NA	NA
LT-8	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	341	543	5.45	17.53	M	M	NA	NA	12	0.0053	2.6	0.49	0.11	-24.02000	9.4	1.4	NA	NA	NA
LT-9	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	465	1116	8.93	0.79	F	I	NA	NA	21	0.0053	9.1	1.7	0.38	-20.43000	12	1.1	NA	NA	NA
LT-10	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	356	588	8.53	59.79	F	M	59.79	NA	14	0.0070	3.9	0.55	0.12	-23.66000	9.3	1.3	NA	14 encysted parasites on stomach	NA
LT-11	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	270	226	2.91	0.12	F	I	NA	NA	12	0.0049	2.3	0.48	0.11	-24.39000	9.2	1.1	NA	NA	NA
LT-12	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	265	197	1.83	0.1	F	I	NA	NA	8	0.0042	2.5	0.60	0.13	-20.32000	11	1.1	NA	NA	NA
LT-13	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	266	230	2.66	0.11	F	I	NA	NA	8	0.0052	1.4	0.26	0.058	-25.89000	8.7	1.2	NA	NA	NA
LT-14	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	502	1290	11.89	9.08	F	I	NA	NA	26	0.0041	8.7	2.1	0.47	-20.51000	11	1.0	NA	NA	NA
LT-15	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	382	648	4.15	7.02	F	I	NA	NA	19	0.0041	4.0	0.97	0.21	-24.55000	10	1.2	NA	NA	NA
LT-16	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	304	355	3.63	0.16	F	I	NA	NA	7	0.0052	2.5	0.48	0.11	-26.16000	10	1.3	NA	NA	NA
LT-17	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	270	246	2.72	0.38	F	I	NA	NA	7	0.0042	1.8	0.43	0.094	-27.14000	8.9	1.3	NA	23 encysted parasites on stomach	NA
LT-18	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	232	141	1.47	0.03	U	I	NA	NA	6	0.0043	1.9	0.43	0.095	-21.99000	8.5	1.1	NA	NA	NA
LT-19	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	217	119.6	1.06	-	U	I	NA	NA	5	0.0044	2.4	0.55	0.12	-20.24000	11	1.2	NA	NA	NA
LT-20	2020	19-Aug-20	Kangislulik	1.1	Lake Trout	176	64.4	0.56	-	U	I	NA	NA	3	0.0049	1.3	0.26	0.058	-24.16000	9.0	1.2	NA	NA	NA
LT-80	2020	25-Aug-20	Kangislulik	1.2	Lake Trout	678	3919	58.17	454	F	M	32.25	371	34	0.0037	21	5.7	1.2	-21.54000	12	1.3	2 fish and invertebrates	Photo taken mistakenly says LT-83	NA
LT-81	2020	25-Aug-20	Kangislulik	1.2	Lake Trout	600	2468	30.29	1.91	F	I	NA	NA	25	0.0050	13	2.5	0.55	-19.99000	12	1.1	NA	NA	NA
LT-82	2020	25-Aug-20	Kangislulik	1.2	Lake Trout	696	3832	31.76	58.84	F	M	NA	NA	40	0.0032	18	5.5	1.2	-20.54000	12	1.1	NA	2 encysted parasites	NA
LT-83	2020	25-Aug-20	Kangislulik	1.2	Lake Trout	708	5699	67.46	51.78	F	M	NA	NA	40	0.0035	16	4.5	0.99	-20.32000	12	1.6	3 whitefish with combined weight of 1011 g	NA	NA
LT-84	2020	26-Aug-20	Kangislulik	1.4	Lake Trout	408	635	5.43	0.74	F	I	NA	NA	14	0.0044	6.1	1.4	0.31	-19.43000	11	0.94	Invertebrates	NA	NA
LT-114	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	238	156.36	1.37	0.04	U	I	NA	NA	5	0.0067	8.0	1.2	0.26	-23.17000	11	1.2	Sculpin, 53 mm	14 encysted parasites on stomach	NA
LT-85	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	255	189.75	1.79	0.16	F	I	NA	NA	6	0.0093	13	1.4	0.32	-26.47000	10	1.1	NA	8 encysted parasites	NA
LT-88	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	265	231	2.17	0.38	F	I	NA	NA	6	0.0079	12	1.5	0.32	-26.71000	11	1.2	NA	NA	NA
LT-89	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	353	606	5.98	0.27	U	I	NA	NA	9	0.0088	16	1.8	0.40	-28.67000	9.5	1.4	NA	NA	Fat around stomach
LT-90	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	357	649	7.52	0.42	M	I	NA	NA	10	0.0095	17	1.8	0.41	-28.35000	10	1.4	NA	15 encysted parasites	Fat around intestines
LT-102	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	373	704	6.6	1.53	F	I	NA	NA	9	0.0058	8.7	1.5	0.33	-28.65000	10	1.4	NA	NA	NA
LT-117	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	376	776	10.98	92.78	F	M	36.88	393	14	0.0045	7.1	1.6	0.35	-27.28000	9.8	1.5	NA	NA	NA
LT-91	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	382	771	5.06	31.21	M	M	NA	NA	15	0.0099	16	1.6	0.36	-27.88000	9.3	1.4	NA	18 encysted parasites	NA
LT-107	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	388	958	11.41	122.59	F	M	43.73	421	14	0.0056	9.3	1.7	0.36	-27.95000	9.8	1.6	NA	NA	NA
LT-99	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	396	850	9.24	28.15	M	M	NA	NA	15	0.0063	7.4	1.2	0.26	-27.15000	9.6	1.4	NA	12 encysted parasites	NA
LT-97	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	398	795	6.65	23.34	M	M	NA	NA	14	0.0048	6.8	1.4	0.31	-30.55000	9.6	1.3	NA	NA	NA
LT-100	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	401	813	7.45	26.34	M	M	NA	NA	21	0.0052	8.9	1.7	0.38	-28.74000	9.3	1.3	NA	NA	NA
LT-95	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	406	934	19.57	114.83	F	M	37.81	380	16	0.010	21	2.0	0.45	-27.22000	9.9	1.4	NA	2 encysted parasites	NA
LT-103	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	411	821	7.91	0.68	M	I	NA	NA	14	0.0070	10	1.4	0.32	-23.74000	11	1.2	NA	NA	NA
LT-94	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	420	983	14.36	119.31	F	M	33.84	311	21	0.0092	16	1.7	0.38	-27.51000	9.2	1.3	Zooplankton	NA	NA
LT-96	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	443	1195	14.82	197.8	F	M	33.44	300	18	0.0097	14	1.5	0.33	-27.36000	8.9	1.4	NA	NA	NA
LT-109	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	449	1202	13.09	32.25	M	M	NA	NA	26	0.0063	9.1	1.4	0.32	-27.58000	9.3	1.3	Fingernail clams	NA	NA
LT-104	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	456	1142	20.64	2.75	F	I	NA	NA	11	0.0057	10	1.8	0.39	-23.22000	12	1.2	NA	7 encysted parasites	NA
LT-113	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	505	1232	10.17	8.64	F	I	NA	NA	17	0.0069	14	2.0	0.45	-22.38000	12	0.96	NA	NA	NA
LT-116	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	511	1359	13.89	1.67	M	I	NA	NA	17	0.0079	16	2.0	0.44	-21.91000	12	1.0	NA	NA	NA
LT-110	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	534	1611	10.5	2.01	M	I	NA	NA	27	0.0086	23	2.7	0.59	-21.55000	12	1.1	NA	7 encysted parasites	NA
LT-112	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	562	1882	15.08	17.5	F	M	NA	NA	22	0.0076	16	2.1	0.46	-21.78000	12	1.1	NA	NA	NA
LT-118	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	604	2363	27.73	4.5	M	M	NA	NA	27	0.0065	13	2.0	0.44	-22.66000	11	1.1	Invertebrates	NA	NA
LT-93	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	623	2648	16.14	70.1	M	M	NA	NA	25	0.0095	36	3.7	0.82	-23.77000	12	1.1	NA	1 encysted parasite	NA
LT-92	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	641	2909	24.59	20.78	F	M	NA	NA	31	0.0072	23	3.2	0.72	-23.29000	12	1.1	Whitefish, 370g	NA	NA
LT-101	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	642	3205	35.91	82.42	M	M	NA	NA	40	0.0069	39	5.7	1.3	-22.49000	12	1.2	NA	15 encysted parasites	NA
LT-115	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	695	4096	36.63	98.1	M	M	NA	NA	36	0.0070	43	6.1	1.3	-22.27000	12	1.2	NA	encysted tapeworm in liver	NA
LT-106	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	743	4304	46.52	59.88	F	M	NA	NA	44	0.0052	43	8.3	1.8	-20.72000	13	1.0	Fish remains	NA	Previous spawn eggs present in body cavity
LT-119	2020	28-Aug-20	Whale Tail	1.2	Lake Trout	801	6040	64.09	214	M	M	NA	NA	37	0.0076	41	5.5	1.2	-24.15000	12	1.2	NA	NA	NA
LT-98	2020	28-Aug-20	Whale Tail	1.1	Lake Trout	866	7410	48.35	220	M	M	NA	NA	38	0.0051	54	11	2.3	-23.84000	13	1.1	NA	NA	Operculum frozen
LT-79	2020	24-Aug-20	Lake 8	1.2	Lake Trout	150	32.97	0.3	-	U	I	NA	NA	5	0.0034	1.3	0.38	0.083	-22.24000	9.4	0.98	NA	NA	NA
LT-78	2020	24-Aug-20	Lake 8	1.2	Lake Trout	193	70.81	0.73	-	U	I	NA	NA	6	0.0035	1.1	0.33	0.072	-20.39000	8.8	0.99	Invertebrates	11 encysted parasites	NA
LT-68	2020	24-Aug-20	Lake 8	1.1	Lake Trout	204	96.33	1.06	0.02	U	I	NA	NA	6	0.0043	2.0	0.47	0.10	-19.94000	9.6	1.1	4 sculpin	NA	NA
LT-69	2020	24-Aug-20	Lake 8	1.1	Lake Trout	212	89.56	0.92	-	U	I	NA	NA	4	0.0050	3.4	0.69	0.15	-25.63000	11	0.94	1 sculpin, 39 mm	NA	NA
LT-67	2020	24-Aug-20	Lake 8	1.1	Lake Trout	257	173.49	1.47	0.11	U	I	NA	NA	8	0.0044	3.4	0.77	0.17	-24.76000	9.5	1.0	NA	1 encysted parasite	NA
LT-64	2020	24-Aug-20	Lake 8	1.1	Lake Trout	286	236	1.73	0.41	F	I	NA	NA	8	0.0033	2.9	0.89	0.20	-26.09000	10	1.0	NA	NA	NA
LT-65	2020	24-Aug-20	Lake 8	1.1	Lake Trout	289	246	2.59	0.48	F	I	NA	NA	9	0.0054	3.2	0.60	0.13	-20.67000	11	1.0	NA	NA	NA
LT-66	2020	24-Aug-20	Lake 8	1.1	Lake Trout	296	260	1.98	0.44	F	I	NA	NA	8	0.0034	2.4	0.69	0.15	-24.50000	9.3	1.0	NA	NA	NA
LT-76	2020	24-Aug-20	Lake 8	1.2	Lake Trout	343	383	3.77	0.6	F	I	NA	NA	10	0.0060	5.0	0.83	0.18	-25.93000	10	0.95	NA	NA	NA
LT-52	2020	24-Aug-20	Lake 8	1.1	Lake Trout	359	505	2.89	0.25	U	I	NA	NA	11	0.0046	2.5	0.55	0.12	-19.93000	9.4	1.1	NA	NA	NA
LT-77	2020	24-Aug-20	Lake 8	1.2	Lake Trout	364	523	3.9	0.2	U	I	NA	NA	10	0.0060	4.4	0.73	0.16	-24.15000	9.9	1.1	Dipteran	NA	NA
LT-63	2020	24-Aug-20	Lake 8	1.1	Lake Trout	370	519	4.31	1.52	F	I	NA	NA	9	0.0051	3.1	0.62	0.14	-24.09000	9.3	1.0	Inverterates and fish	NA	NA
LT-50	2020	24-Aug-20	Lake 8	1.1	Lake Trout	430	988	8.83	21.84	M	M	NA	NA	14	0.0043	4.2	0.97	0.21	-24.04000	9.9	1.2	Invertebrates - full	NA	NA
LT-49	2020	24-Aug-20	Lake 8	1.1	Lake Trout	437	891	5.99	0.87	F	I	NA	NA	14	0.0040	2.1	0.52	0.12	-20.71000	9.5	1.1	NA	6 encysted parasites	NA
LT-75	2020	24-Aug-20	Lake 8	1.2	Lake Trout	451	891	8.11	22.42	M	M	NA	NA	15	0.0063	6.2	0.99	0.22	-25.33000	10	0.97	NA	NA	NA
LT-48	2020	24-Aug-20	Lake 8	1.1	Lake Trout	458	997	5.82	0.87	M	I	NA	NA	19	0.0052	4.6	0.88	0.19	-24.60000	9.6	1.0	Invertebrates	2 encysted parasites	NA
LT-60	2020	24-Aug-20	Lake 8	1.1	Lake Trout	469	1053	10.7	6.32	F	I	NA	NA	23	0.0041	5.4	1.3	0.29	-19.26000	9.5	1.0	Invertebrates and fish remains	NA	NA
LT-54	2020	24-Aug-20	Lake 8	1.1	Lake Trout	473	1165	14.52	125.13	F	M	22.98	227	22	0.0036	11	3.0	0.65	-25.10000	11	1.1	NA	NA	NA
LT-74	2020	24-Aug-20	Lake 8	1.2	Lake Trout	480	1266	12.33	23.85	M	M	NA	NA	21	0.0059	5.6	0.95	0.21	-17.49000	9.0	1.1	Zooplankton - full	NA	NA
LT-51	2020	24-Aug-20	Lake 8	1.1	Lake Trout	482	1132	9.42	40.43	M	M	NA	NA	13	0.0048	11	2.2	0.50	-23.89000	11	1.0	NA	NA	NA
LT-73	2020	24-Aug-20	Lake 8	1.2	Lake Trout	485	1143	13.08	3.04	M	I	NA	NA	26	0.0040	10	2.6	0.57	-24.03000	11	1.0	NA	NA	NA
LT-70	2020	24-Aug-20	Lake 8	1.2	Lake Trout	510	1290	14.52	8.07	F	I	NA	NA	19	0.0043	10	2.4	0.53	-22.35000	11	0.97	Whitefish, ~160mm	NA	Developing, 2nd otolith broken, but included
LT-61	2020	24-Aug-20	Lake 8	1.1	Lake Trout	522	1282	11.93	26.45	F	I	NA	NA	39	0.0039	19	4.8	1.1	-24.44000	12	0.90	NA	NA	Developing
LT-71	2020	24-Aug-20	Lake 8	1.2	Lake Trout	565	1463	8.89	1.5	M	I	NA	NA	27	0.0026	5.7	2.2	0.48	-18.99000	11	0.81	NA	6 encysted parasites	NA
LT-72	2020	24-Aug-20	Lake 8	1.2	Lake Trout	614	1862	11.08	3.4	M	I	NA	NA	39	0.0052	25	4.8	1.1	-21.83000	11	0.80	NA	NA	NA
LT-59	2020	24-Aug-20	Lake 8	1.1	Lake Trout	660	3263	26.78	32.17	M	M	NA	NA	43	0.0038	15	4.1	0.89	-20.97000	12	1.1	NA	NA	NA
LT-21	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	876	9530	108.19	350	M	M	NA	NA	35	0.0059	61	10	2.3	-25.23000	13	1.4	Lake Trout, 422mm 696g	NA	NA
LT-22	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	831	7750	66.44	305	M	M	NA	NA	37	0.0064	49	7.7	1.7	-23.83000	13	1.4	NA	NA	NA
LT-23	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	835	6920	58.95	104.46	F	M	NA	NA	36	0.0050	52	10	2.3	-23.92000	12	1.2	NA	NA	NA
LT-24	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	792	5580	55.43	65.59	F	M	NA	NA	50	0.0064	44	6.9	1.5	-22.12000	13	1.1	NA	NA	NA
LT-25	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	721	4295	40.61	131.6	M	M	NA	NA	33	0.0058	26	4.4	0.98	-22.06000	13	1.1	NA	NA	NA
LT-26	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	592	1854	22.72	14.95	F	I	NA	NA	28	0.0047	28	5.9	1.3	-23.65000	13	0.89	NA	20 encysted parasites	NA
LT-27	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	486	1051	8.7	1.34	M	I	NA	NA	13	0.0034	7.7	2.3	0.50	-25.00000	11	0.92	NA	17 encysted parasites	NA
LT-28	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	375	613	8.33	1.42	M	I	NA	NA	10	0.0042	4.7	1.1	0.24	-24.61000	8.8	1.2	Invertebrates	21 encysted parasites	NA
LT-29	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	435	867	7.01	1.29	M	I	NA	NA	22	0.0040	6.7	1.7	0.37	-23.47000	9.8	1.1	Invertebrates	42 encysted parasites	NA
LT-30	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	247	160.12	1.39	0.28	F	I	NA	NA	11	0.0030	3.8	1.3	0.28	-23.80000	10	1.1	4 eggs in coleom, mature eggs. 1 embedded in liver (see photo)	NA	NA

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

Notes:
[1] Kangislulik 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 [1]	Capture Method Effort	Species	Fork Length (mm)	Weight (g)	Liver Weight (g)	Gonad weight (g)	Sex	Maturity [2]	Egg Sample Weight (g)	Egg Count	Age (years)	Total Mercury in fish tissue				Stable Isotopes		Condition (K)	Stomach Contents	DELTs	Comment
															Sample Weight (g)	THg in Sample (ng)	THg (ppm)	THg (ppm ww)	C13	N15				
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
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
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
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	1.2	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
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
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
LT-38	2020	20-Aug-20	Lake D1	1&2/1	Lake Trout	425	865	7.1	17.68	M	M	NA	NA	20	0.0055	10	1.8	0.41	-25.82000	10	1.1	NA	25 encysted parasites	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
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
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 enysted parasites	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
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
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
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
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
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
LT-128	2020	30-Aug-20	Lake DS1	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
LT-132	2020	30-Aug-20	Lake DS1	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
LT-121	2020	30-Aug-20	Lake DS1	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
LT-122	2020	30-Aug-20	Lake DS1	1	Lake Trout	416	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
LT-130	2020	30-Aug-20	Lake DS1	2	Lake Trout	436	852	6.99	0.5	M	I	NA	NA	11	0.0039	6.8	1.8	0.39	-25.27000	13	1.0	NA	6 encysted parasites	NA
LT-131	2020	30-Aug-20	Lake DS1	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
LT-136	2020	30-Aug-20	Lake DS1	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
LT-137	2020	30-Aug-20	Lake DS1	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
LT-134	2020	30-Aug-20	Lake DS1	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
LT-142	2020	30-Aug-20	Lake DS1	2	Lake Trout	479	1055	6.91	7.75	F	I	NA	NA	22	0.0031	7.5	2.4	0.54	-25.47000	10	0.96	NA	11 encysted parasites	NA
LT-135	2020	30-Aug-20	Lake DS1	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
LT-126	2020	30-Aug-20	Lake DS1	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
LT-133	2020	30-Aug-20	Lake DS1	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
LT-127	2020	30-Aug-20	Lake DS1	1	Lake Trout	514	1202	8.74	0.65	M	I	NA	NA	14	0.0040	9.7	2.4	0.54	-22.74000	11	0.89	NA	6 encysted parasites	NA
LT-123	2020	30-Aug-20	Lake DS1	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
LT-120	2020	30-Aug-20	Lake DS1	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
LT-125	2020	30-Aug-20	Lake DS1	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
LT-138	2020	30-Aug-20	Lake DS1	2	Lake Trout	565	1994	13.01	4.75	M	M	NA	NA	28	0.0031	17	5.6	1.2	-20.98000	12	1.1	NA	3 encysted parasites	NA
LT-140	2020	30-Aug-20	Lake DS1	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 parsites	NA
LT-124	2020	30-Aug-20	Lake DS1	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
LT-129	2020	30-Aug-20	Lake DS1	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
LT-139	2020	30-Aug-20	Lake DS1	2	Lake Trout	611	2594	19.98	2.87	M	I	NA	NA	30	0.0035	9.8	2.8	0.62	-23.16000	12	1.1	Fish remains	NA	NA
LT-141	2020	30-Aug-20	Lake DS1	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
LT-143	2020	30-Aug-20	Lake DS1	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
LT-1	2023	21-Aug-23	Lake D1	Gill net 2	Lake Trout	505	1360	15.01	14.19	F	I	NA	NA	21	0.0042	12	2.8	0.61	NA	NA	1.1	Z	EC	NA
LT-3	2023	21-Aug-23	Lake D1	Gill net 2	Lake Trout	480	638	9.57	1.87	F	I	NA	NA	14	0.0048	7.5	1.6	0.34	NA	NA	0.58	RW	EC	NA
LT-4	2023	21-Aug-23	Lake D1	Gill net 2	Lake Trout	398	741	8.07	0.25	F	I	NA	NA	14	0.0067	4.7	0.70	0.15	NA	NA	1.2	E	EC	NA
LT-5	2023	21-Aug-23	Lake D1	Gill net 2	Lake Trout	450	1079	12.28	6.61	F	I	NA	NA	14	0.0092	9.6	1.0	0.23	NA	NA	1.2	E	EC	NA
LT-6	2023	21-Aug-23	Lake D1	Gill net 2	Lake Trout	422	809	8.29	3.12	F	I	NA	NA	12	0.0063	14	2.2	0.49	NA	NA	1.1	E	EC	NA
LT-7	2023	21-Aug-23	Lake D1	Gill net 2	Lake Trout	326	332	3.96	0.18	U	I	NA	NA	9	0.0064	6.1	0.96	0.21	NA	NA	0.96	6 NS	NA	NA
LT-8	2023	21-Aug-23	Lake D1	Gill net 2	Lake Trout	193	80.76	0.9	NA	U	I	NA	NA	8	0.0050	3.4	0.68	0.15	NA	NA	1.1	E	EC	NA
LT-11	2023	21-Aug-23	Lake D1	Gill net 2	Lake Trout	791	6580	98.28	76.65	F	M	NA	NA	31	0.0081	35	4.4	0.96	NA	NA	1.3	RW	EC	RW Was 332 grams
LT-12	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	510	1253	10.28	0.61	M	I	NA	NA	15	0.0087	24	2.8	0.61	NA	NA	0.95	E	EC	NA
LT-13	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	435	789	7.38	0.1	U	I	NA	NA	17	0.0050	15	2.9	0.64	NA	NA	0.96	E	EC	NA
LT-14	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	457	1034	7.57	6.65	F	I	NA	NA	13	0.0072	9.4	1.3	0.29	NA	NA	1.1	E	EC	May be maturing
LT-15	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	429	958	8.14	23.03	M	M	NA	NA	17	0.011	13	1.2	0.26	NA	NA	1.2	E	EC	NA
LT-16	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	379	534	5.48	0.8	F	I	NA	NA	11	0.0084	9.0	1.1	0.23	NA	NA	0.98	Z	EC	NA
LT-17	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	543	1702	19.39	1.94	M	I	NA	NA	19	0.0080	16	2.0	0.44	NA	NA	1.1	E	EC	NA
LT-19	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	586	2102	15.7	49.23	M	M	NA	NA	26	0.0076	36	4.7	1.0	NA	NA	1.0	E	EC	May be maturing
LT-21	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	459	1055	21.26	114.47	F	M	68.69	495	18	0.011	17	1.6	0.35	NA	NA	1.1	Z	EC	NA
LT-22	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	454	974	10.36	7.23	F	I	NA	NA	21	0.011	12	1.1	0.24	NA	NA	1.0	E	EC	May be maturing
LT-24	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	360	504	4.88	0.92	F	I	NA	NA	12	0.0072	10	1.4	0.31	NA	NA	1.1	E	EC	NA
LT-25	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	602	2249	16.23	18.74	F	M	NA	NA	31	0.0080	38	4.7	1.0	NA	NA	1.0	E	EC	NA
LT-26	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	637	2738	17.39	30.92	M	M	NA	NA	32	0.0078	41	5.3	1.2	NA	NA	1.1	E	EC	NA
LT-27	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	447	865	7.11	4.21	F	I	NA	NA	19	0.0044	8.8	2.0	0.44	NA	NA	0.97	E	EC	NA
LT-28	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	861	8660	118.58	134.39	F	M	NA	NA	39	0.0096	72	7.5	1.6	NA	NA	1.4	LT	EC	LT 617 grams, atretic eggs
LT-29	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	800	6600	78.6	203	M	M	NA	NA	41	0.011	86	8.0	1.8	NA	NA	1.3	NS AND UNIDENTIFIED FISH	NA	NA
LT-31	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	774	5570	56.76	69.38	F	M	NA	NA	40	0.010	57	5.5	1.2	NA	NA	1.2	E	EC	NA
LT-32	2023	21-Aug-23	Lake D1	Gill net 1	Lake Trout	645	3339	35.26	3.36	M	I	NA	NA	27	0.0080	27	3.4	0.75	NA	NA	1.2	E	NA	NA
LT-65	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	464	1025	6.81	21.13	M	M	NA	NA	16	0.0062	4.1	0.66	0.15	NA	NA	1.0	Z,I	EC	NA
LT-66	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	498	1167	10.34	14.69	F	M	NA	NA	32	0.0064	23	3.5	0.78	NA	NA	0.95	Z,I	EC	NA
LT-67	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	500	1046	8.24	13.75	F	M	NA	NA	34	0.0060	27	4.5	0.99	NA	NA	0.84	Z,I	EC	NA
LT-68	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	407	845	9.55	5.93	F	I	NA	NA	14	0.0067	3.2	0.47	0.10	NA	NA	1.3	Z	EC	NA
LT-69	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	405	768	9.36	3.36	F	I	NA	NA	14	0.0067	3.5	0.52	0.11	NA	NA	1.2	Z	EC	NA
LT-70	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	439	893	5.5	23.65	M	M	NA	NA	17	0.011	8.4	0.79	0.17	NA	NA	1.1	1 SC	EC	NA
LT-71	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	392	664	6.14	0.45	M	I	NA	NA	10	0.0058	4.7	0.81	0.18	NA	NA	1.1	Z,I	EC	NA
LT-72	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	261	173.18	1.52	0.05	U	I	NA	NA	6	0.0061	5.0	0.82	0.18	NA	NA	0.97	E	EC	NA
LT-73	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	233	127.38	0.66	NA	U	I	NA	NA	7	0.0057	2.0	0.34	0.076	NA	NA	1.0	Z	EC	NA
LT-74	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	241	147.99	1.2	0.31	M	I	NA	NA	7	0.0052	2.4	0.47	0.10	NA	NA	1.1	Z	EC	NA
LT-75	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	190	66.63	0.57	0.07	F	I	NA	NA	3	0.0055	0.97	0.18	0.039	NA	NA	0.97	Z	NA	NA
LT-76	2023	21-Aug-23	Lake 8	Gill net 1	Lake Trout	200	83.45	0.74	NA	U	I	NA	NA	3	0.0077	1.5	0.20	0.044	NA	NA	1.0	Z	EC	NA
LT-81	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	486	1170	7.34	23.46	M	M	NA	NA	29	0.0069	13	1.9	0.42	NA	NA	1.0	I	NA	NA
LT-82	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	501	1416	14.55	23.25	F	M	NA	NA	19	0.0091	9.4	1.0	0.23	NA	NA	1.1	Z,I	NA	NA
LT-83	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	439	977	7.85	6.62	F	I	NA	NA	15	0.0093	6.2	0.67	0.15	NA	NA	1.2	Z,I	EC	NA
LT-84	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	496	1233	11.69	15.83	F	M	NA	NA	15	0.0067	4.3	0.63	0.14	NA	NA	1.0	Z,I	EC	NA
LT-85	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	423	880	12.7	2.83	F	I	NA	NA	11	0.0066	4.6	0.70	0.15	NA	NA	1.2	Z,I	EC	NA
LT-86	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	454	1052	10.02	1.27	M	I	NA	NA	13	0.0060	9.4	1.6	0.34	NA	NA	1.1	Z,I	NA	NA
LT-87	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	461	1070	8.72	24.46	M	M	NA	NA	19	0.0068	7.2	1.1	0.23	NA	NA	1.1	Z,I	EC	NA
LT-88	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	479	1170	9.63	28.97	M	M	NA	NA	22	0.0063	10	1.6	0.35	NA	NA	1.1	Z,I	NA	NA
LT-89	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	487	1095	9.93	14.42	F	M	NA	NA	31	0.0077	15	2.0	0.44	NA	NA	0.95	Z,I	EC	NA
LT-90	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	512	1510	13.75	16.15	F	M	NA	NA	22	0.0062	9.1	1.5	0.32	NA	NA	1.1	LAKE TROUT AND UNIDENTIFIED SMALL FISH	EC	NA
LT-91	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	377	565	8.54	0.41	M	I	NA	NA	14	0.0053	3.9	0.74	0.16	NA	NA	1.1	Z	EC	NA
LT-92	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	520	1304	12.54	7.84	F	M	NA	NA	17	0.0067	10	1.6	0.34	NA	NA	0.93	Z	EC	NA
LT-93	2023	21-Aug-23	Lake 8	Gill net 2	Lake Trout	240	140.27	1.31	NA	U	I	NA	NA	10	0.0090	5.3	0.59	0.13	NA	NA	1.0	E	NA	NA
LT-96	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	635	2334	24.49	18.81	F	M	NA	NA	21	0.0047	55	12	2.6	NA	NA	0.91	E	NA	NA
LT-97	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	440	962	14.37	118.12	F	M	40.31	407	19	0.0063	36	5.6	1.2	NA	NA	1.1	E	EC	NA
LT-98	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	445	1058	9.78	41.87	M	M	NA	NA	17	0.0068	29	4.3	0.94	NA	NA	1.2	Z	EC	NA
LT-101	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	425	1035	18.66	118.61	F	M	39.98	337	12	0.0075	35	4.6	1.0	NA	NA	1.3	FINGERNAIL CLAMS AND Z	EC	NA
LT-103	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	456	1143	12.04	30.11	M	M	NA	NA	14	0.0091	29	3.2	0.71	NA	NA	1.2	FINGERNAIL CLAMS AND Z	EC	NA
LT-104	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	403	753	7.09	11.58	M	M	NA	NA	9	0.0058	28	4.8	1.1	NA	NA	1.2	Z	EC	NA
LT-105	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	350	486	4.75	0.86	F	I	NA	NA	8	0.0062	25	4.1	0.90	NA	NA	1.1	E	NA	NA
LT-106	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	333	430	3.49	0.55	F	I	NA	NA	7	0.0078	37	4.7	1.0	NA	NA	1.2	Z AND 1 NINESPINE	EC	NA
LT-108	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	282	264	2.28	0.09	M	I	NA	NA	6	0.0081	33	4.1	0.91	NA	NA	1.2	E	EC	NA
LT-110	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	250	192	1.89	0.21	F	I	NA	NA	5	0.0064	27	4.3	0.95	NA	NA	1.2	Z	EC	NA
LT-111	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	241	146	0.94	NA	U	I	NA	NA	7	0.0053	25	4.7	1.0	NA	NA	1.0	E	EC	NA
LT-113	2023	24-Aug-23	Whale Tail	Gill net 2	Lake Trout	750	5130	55.1	126.62	M	M	NA	NA	34	0.011	98	9.1	2.0	NA	NA	1.2	E	EC	Tag#nsc115941, fat around intestines and along the back
LT-114	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	469	1057	9.57	3.41	F	I	NA	NA	13	0.0071	44	6.1	1.4	NA	NA	1.0	E	EC	NA
LT-115	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	420	943	8.2	23.52	M	M	NA	NA	11	0.010	43	4.1	0.91	NA	NA	1.3	Z	EC	NA
LT-116	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	392	689	5.32	3.63	F	I	NA	NA	13	0.0075	35	4.7	1.0	NA	NA	1.1	Z	EC	NA
LT-117	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	561	2245	35.63	306	F	M	51.6	388	8	0.0099	89	9.0	2.0	NA	NA	1.3	E	NA	NA
LT-118	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	426	883	5.83	24.87	M	M	NA	NA	23	0.0057	42	7.4	1.6	NA	NA	1.1	UNIDENTIFIED FISH EMAINS	EC	NA
LT-120	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	435	975	11.66	136.82	F	M	50.37	514	14	0.0077	47	6.1	1.3	NA	NA	1.2	I	EC	NA
LT-121	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	385	569	4.09	0.45	M	I	NA	NA	5	0.0070	49	7.0	1.5	NA	NA	1.00	1 NINESPINE	EC	NA
LT-124	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	255	186	1.82	NA	U	I	NA	NA	4	0.0049	18	3.6	0.79	NA	NA	1.1	Z	EC	NA
LT-128	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	878	8760	57.16	286	M	M	NA	NA	42	0.012	134	11	2.5	NA	NA	1.3	E	EC	NA
LT-129	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	731	5210	61.91	70.04	F	M	NA	NA	19	0.0074	75	10	2.2	NA	NA	1.3	E	EC	NA
LT-130	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	305	318	2.96	NA	U	I	NA	NA	7	0.0046	24	5.3	1.2	NA	NA	1.1	Z	EC	NA
LT-135	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	225	117	1.26	NA	U	I	NA	NA	4	0.0063	26	4.2	0.92	NA	NA	1.0	Z	EC	NA
LT-136	2023	24-Aug-23	Whale Tail	Gill net 1	Lake Trout	206	108	1.58	NA	U	I	NA	NA	3	0.0062	26	4.2	0.93	NA	NA	1.2	Z	EC	NA
LT-34	2023	19-Aug-23	Kangislulik	Gill net 2	Lake Trout	396	655	4.99	21.74	M	M	NA	NA		0.011	10	0.99	0.22			1.1	I	EC	
LT-35	2023	19-Aug-23	Kangislulik	Gill net 2	Lake Trout	296	292	2.68	0.25	F	I	NA	NA		0.011	5.3	0.51	0.11			1.1	Z		
LT-36	2023	19-Aug-23	Kangislulik	Gill net 2	Lake Trout	254	196	2.47	0.17	M	I	NA	NA		0.012	4.4	0.42	0.093			1.2	E	EC	
LT-37	2023	19-Aug-23	Kangislulik	Gill net 2	Lake Trout	243	179	1.53	0.02	U	I	NA	NA		0.013	4.4	0.45	0.099			1.2	Z	EC	
LT-38	2023	19-Aug-23	Kangislulik	Gill net 2	Lake Trout	222	111	1.24	0.03	U	I	NA	NA		0.0097	7.8	0.63	0.14			1.0	E		
LT-39	2023	19-Aug-23	Kangislulik	Gill net 2	Lake Trout	187	62.25	0.46		U	I	NA	NA		0.010	6.3	0.59	0.13			0.95	E	EC	
LT-40	2023	19-Aug-23	Kangislulik	Gill net 2	Lake Trout	876	8430	126.81	993	F	M	57.79	512		0.010	49	4.4	0.97			1.3	E		SECOND FECUNDITY 56.45 GRAMS AND 509 EGGS
LT-41	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	564	2085	27.09	22.94	F	M	NA	NA		0.0095	14	1.3	0.28			1.2	E		
LT-42	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	382	550	4.15	0.26	M	I	NA	NA		0.011	10	0.90	0.20			0.99	E	EC	
LT-43	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	390	608	3.3	0.39	M	I	NA	NA		0.010	8.0	0.84	0.18			1.0	I	EC	
LT-44	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	393	637	4.01	14.73	M	M	NA	NA		0.0095	8.7	0.76	0.17			1.0	I	EC	
LT-45	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	370	562	4.25	20.63	M	M	NA	NA		0.011	7.9	0.85	0.19			1.1	I	EC	
LT-46	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	378	558	3.13	9.96	F	M	NA	NA		0.012	8.8	1.1	0.23			1.0	I	EC	
LT-48	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	478	1144	7.23	0.98	M	I	NA	NA		0.011	16	1.5	0.33			1.0	E	EC	
LT-49	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	415	710	4.63	6.99	F	I	NA	NA		0.0083	12	1.0	0.23			0.99	E	EC	
LT-50	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	348	510	3.08	11.85	M	M	NA	NA		0.0093	6.1	0.64	0.14			1.2	Z	EC	
LT-51	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	550	1504	9.72	10.79	F	I	NA	NA		0.0096	28	2.7	0.60			0.90	E	EC	
LT-53	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	426	732	4.93	3.35	F	I	NA	NA		0.012	9.0	0.87	0.19			0.95	E	EC	
LT-56	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	355	520	2.94	10.64	M	M	NA	NA		0.010	8.8	0.78	0.17			1.2	I	EC	
LT-57	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	340	484	3.41	2.08	F	I	NA	NA		0.012	5.6	0.55	0.12			1.2	I, 1 SCULPIN	EC	
LT-58	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	374	534	3.38	10.64	F	M	NA	NA		0.010	10	0.90	0.20			1.0	Z	EC	
LT-59	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	299	258	2.12	0.43	F	I	NA	NA		0.011	8.2	0.81	0.18			0.97	E	EC	
LT-60	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	286	290	2.83	0.13	F	I	NA	NA		0.010	4.1	0.43	0.095			1.2	Z	EC	
LT-61	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	210	96.86	0.93	0.13	F	I	NA	NA		0.011	5.7	0.54	0.12			1.0	E	EC	
LT-62	2023	19-Aug-23	Kangislulik	Gill net 1	Lake Trout	231	125.77	0.75		U	I	NA	NA		0.011	7.7	0.62	0.14			1.0	JUVENILE BURBOT REMAINS	EC	

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/changes in fish mercury concentrations. Modelling length-mercury relationships facilitates removing potential effects related to catching larger or smaller fish across temporal and spatial scales. It also enables estimating mercury concentrations at various "standardized" sizes[1], providing a more intuitive means for tracking differences and/or changes across space and time.

As described in **Section 5** of the main report and in **Appendix C2**, the fish mercury dataset is comprised of fish mercury results for Lake Trout caught in Whale Tail study area lakes since 2015. The following sections present details on the methods and results of statistical analyses conducted to estimate fish mercury concentrations for 550 mm Lake Trout sampled from Whale Tail study area lakes (i.e., Whale Tail, Kangislulik, Lake DS1, Lake D1, Lake 8) in 2015, 2018, 2020, and 2023.

Length-mercury relationships in Lake Trout were fit using a combination of models in Appendix D of the 2021 MMP report (Azimuth, 2022). The models incorporated various levels of complexity to investigate differences and/or changes in mercury concentrations in Lake Trout across sampling areas and/or years. The best model was selected based on Akaike's Information Criterion corrected for small sample sizes (AICc). Then, the selected model was used to estimate mercury concentrations in Lake Trout at a standardized size of 550 mm fork length (FL) for each combination of sampling area and year. The mercury concentration estimates were compared qualitatively between sampling areas and years to reflect potential differences.

Substantially different mercury concentrations were observed for Lake Trout collected in the 2023 sampling campaign, especially from Whale Tail area. Even the best model that was used to estimate the

[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.

2020 mercury concentrations in 550 mm Lake Trout failed to satisfactorily fit and describe the 2023 data. To ensure that models adequately characterize length-mercury relationships in the new dataset, mercury concentrations were fit against fish length using area- and year-specific models in 2023. Similar to previous years, mercury concentrations were then estimated for Lake Trout of standardized size of 550 mm FL for each combination of sampling area and year, which were eventually compared qualitatively to reflect potential differences.

D.2. METHODS

According to data availability (see **Section 5**, **Table 5-2** of the main report), a total of 12 models were fit, each representing a combination of sampling area and year, including:

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

The following steps provide detailed information about the statistical analyses:

- **Coarse Assessment of Outliers** – Data were first visually assessed to determine coarse outliers. Datapoints that appeared substantially outside the boundaries in an overall plot depicting relationship between mercury concentrations and fish length were double-checked to ensure that there were no errors in data entry.
- **Transformations** – Length-mercury relationships were first plotted using all data and a combination of transformations (Y axis, X axis, and/or both) to determine the most suitable transformation for linear modelling.
- **Length-Mercury Models** – The structure of area- and year-specific models was THg ~ LC, where THg was 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.
- **Formal Assessment of Outliers** – The models were used to formally identify 'high residual' (studentized residuals ≥ 4) and/or 'high leverage' (Cook's distance ≥ 0.5) outliers. Any outliers were removed from the data and model fitting (previous step) was repeated to reflect any

potential changes in parameter estimation. If no outlier(s) was identified, the analysis proceeded to the next step.

- **Estimates of Mercury Concentrations** – The models were eventually used to provide estimates (± 95% confidence intervals) of mercury concentrations in Lake Trout length centered to 550 mm FL for each combination of sampling area and year. Estimated mercury concentrations were plotted to help identify changes using spatial and temporal comparisons.

D.3. RESULTS

No outliers were identified during the coarse assessment of outliers. Lake Trout mercury concentrations are shown by lake and year in **Figure D-1**.

Modelling was performed with log_{10}-transformed data of mercury concentrations and untransformed data of fish length (centered to standard size of 550 mm FL); this combination produced the most linear result for the data (**Figure D-2**).

Model fit results are provided in **Table D-1**. The fitted models generally showed strong (R^2 = 0.60-0.96) and statistically significant ($P \leq 0.05$) relationships between fork length and mercury concentrations. Visual inspection of model diagnostics showed no issues in terms of assumptions for linear modelling and no outliers were identified in the formal screening. Final model fits for each lake/year combination are shown relative to the underlying data in **Figure D-3**. These fits were used to estimate the mercury concentrations (and ±95% confidence intervals) for a 550-mm Lake Trout (**Table D-2**).

D.4. REFERENCES

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.

TABLES

Table D-1. Results for length-mercury relationships in Lake Trout sampled from Whale Tail area lakes since 2015 (estimate ± standard error are given for intercepts and slopes).

Area	Year	Intercept	Slope	DF	F	P-value[1]	R^2
Whale Tail	2023	0.178±0.0235	0.0008±0.0001	1, 23	44.2	**< 0.0001**	0.658
	2020	-0.212±0.0218	0.0015±0.0001	1, 28	128	**< 0.0001**	0.821
	2018	-0.22±0.0627	0.0022±0.0003	1, 13	61.4	**< 0.0001**	0.825
	2015	-0.248±0.0317	0.0022±0.0002	1, 19	128	**< 0.0001**	0.871
Kangislulik	2020	-0.332±0.0234	0.0023±0.0001	1, 23	490	**< 0.0001**	0.955
	2015	-0.328±0.0377	0.0024±0.0002	1, 23	178	**< 0.0001**	0.886
	2023	-0.4677±0.0322	0.0015±0.0001	1, 23	112	**< 0.0001**	0.83
Lake DS1	2020	-0.155±0.0354	0.0027±0.0003	1, 22	68.6	**< 0.0001**	0.757
Lake D1	2023	-0.259±0.0303	0.0017±0.0002	1, 23	86.5	**< 0.0001**	0.79
	2020	-0.178±0.0237	0.0017±0.0001	1, 25	290	**< 0.0001**	0.921
Lake 8	2023	-0.374±0.0741	0.0024±0.0004	1, 23	33.9	**< 0.0001**	0.596
	2020	-0.29±0.0552	0.0022±0.0003	1, 24	61.5	**< 0.0001**	0.719
	2018	-0.228±0.0896	0.0025±0.0005	1, 6	24.6	0.0026	0.804

1. **Bolded values** are statistically significant (p-values < 0.001).

DF = degrees of freedom.

F = F value.

Table D-2. Estimated tissue mercury concentrations for 550-mm Lake Trout in Whale Tail area lakes since 2015.

Area	Year	Estimated total mercury concentrations (mg/kg ww)		
		Mean	Lower 95% CI	Upper 95% CI
Whale Tail	2023	1.51	1.29	1.76
	2020	0.613	0.540	0.696
	2018	0.602	0.472	0.769
	2015	0.565	0.481	0.664
Kangislulik	2020	0.341	0.277	0.419
	2015	0.466	0.407	0.534
	2023	0.470	0.356	0.621
Lake DS1	2020	0.700	0.609	0.805
Lake D1	2023	0.550	0.483	0.627
	2020	0.664	0.585	0.753
Lake 8	2023	0.422	0.340	0.524
	2020	0.513	0.424	0.621
	2018	0.592	0.438	0.800

Notes:

CI = Confidence interval

FIGURES

Figure D-1. Tissue mercury concentrations in Lake Trout from Whale Tail study area lakes since 2015.

Note: The total mercury concentrations presented in this figure are not based on 550-mm Lake Trout.

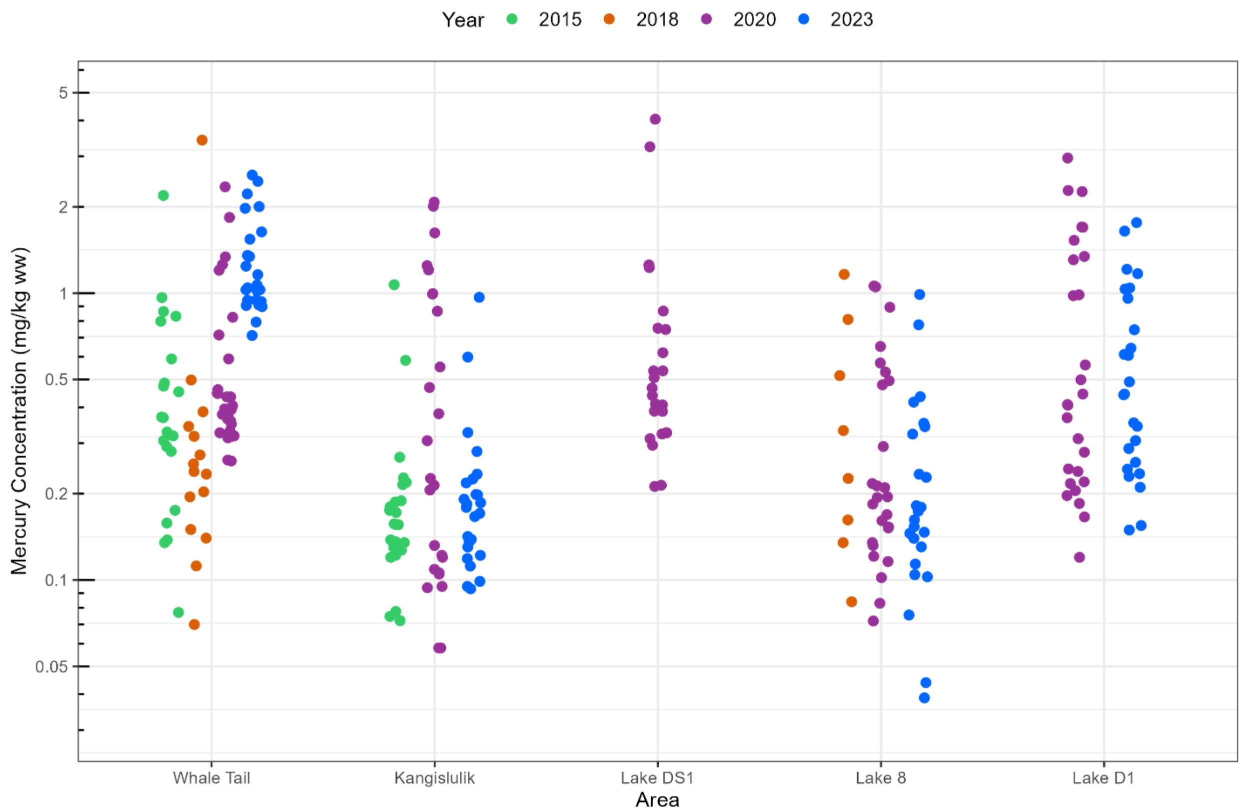

Figure D-2. Overall length-mercury plots for Lake Trout showing transformation options.

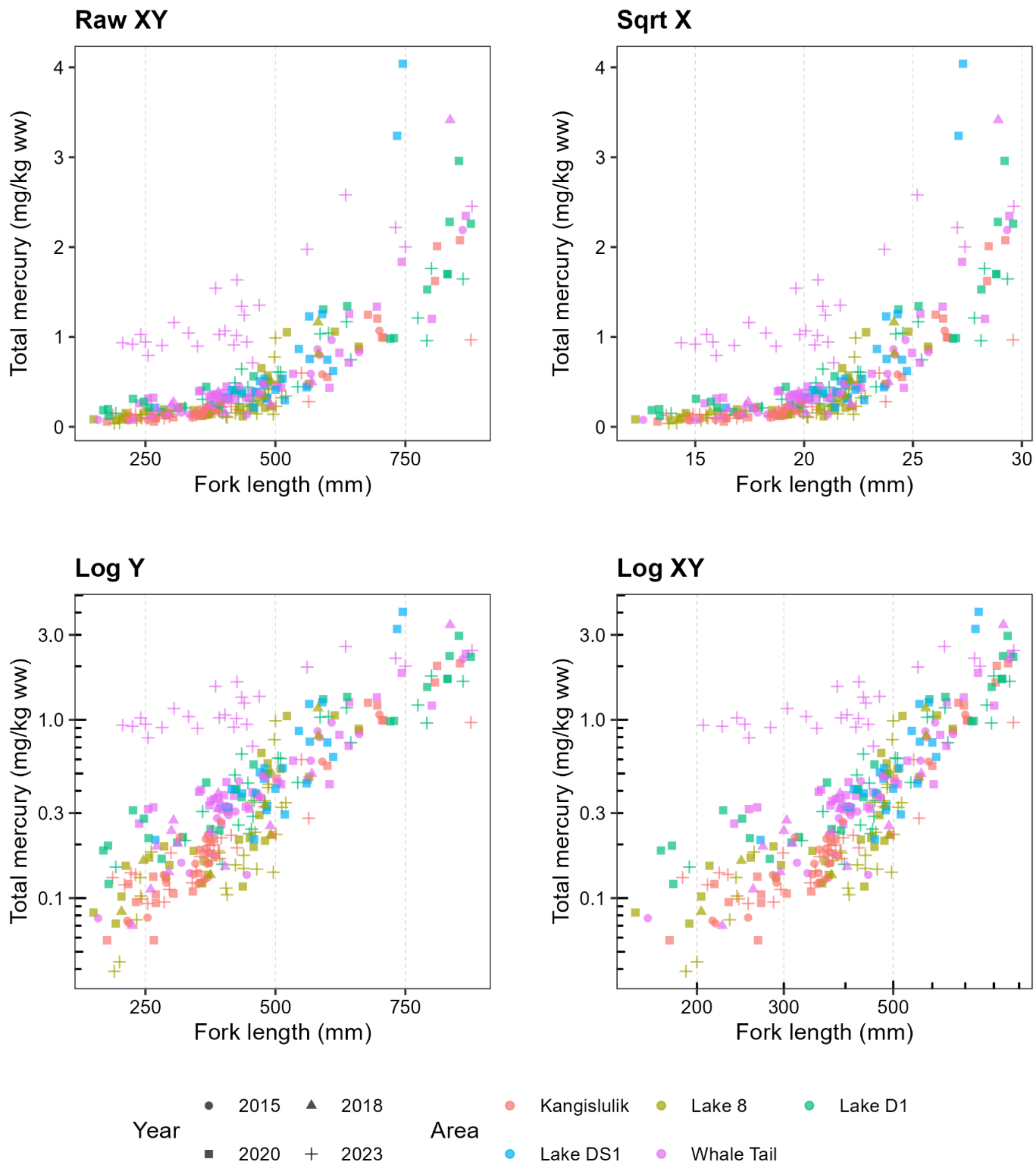

Figure D-3. Length-mercury plots showing model fits (and ±95% confidence intervals) for Lake Trout sampled from Whale Tail area lakes since 2015.