Appendix 53

Whale Tail 2022 Mercury Monitoring Program Report

2022 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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PLAIN LANGUAGE SUMMARY

The 2022 Mercury Monitoring Program (MMP) was completed according to the study design outlined in the *Mercury Monitoring Plan* (Agnico Eagle, 2019). The purpose of the MMP is to assess changes in mercury concentrations caused by the creation of the Whale Tail Impoundment ("Impoundment") following completion of the in-water 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 2022 program included water and sediment sampling at various locations within the Impoundment, downstream of the mine, and at local reference lakes. This report also includes the 2021 small-bodied fish tissue chemistry data, which were not available in time to include in the 2021 MMP report submitted in March 2022. Key findings from the 2022 MMP are provided below.

Water

Mercury concentrations in surface water in the Impoundment were between 1-2 ng/L for total mercury and between 0.1-0.7 ng/L for methylmercury. 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. There are some signs of downstream transport of methylmercury to Mammoth Lake, but the magnitude of change is hard to distinguish compared to baseline/reference conditions.

Mercury concentrations in surface water will continue to be monitored in 2023 as per the *Mercury Monitoring Plan Update* (Azimuth, 2023 [in prep]).

Sediment

In 2022, 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. Total mercury concentrations in the depositional zones of the Impoundment as well as downstream exposure areas in 2022 were similar to baseline/reference conditions.

Methylmercury concentrations in some deposition zone samples in the Impoundment in 2022 were higher than previous results. As anticipated, the inundation zone sediment samples had the highest methylmercury concentrations, as conditions in these areas are known to stimulate mercury methylation. Despite the lack of clear changes in either surface water or fish tissue, there was an increase in methylmercury concentrations in depositional zone sediments in MAM. One possible explanation for this increase is mercury methylation by sulphate-reducing microbes. Sulphate concentrations in surface water in MAM, while well below the CREMP trigger value (i.e., not a concern for aquatic life), were higher than baseline/reference conditions and exceeded the FEIS prediction. A comprehensive sediment coring program is planned for 2023. These results should help verify whether the increase in methylmercury concentrations at MAM is mining-related or not. Furthermore, sediment sampling within the inundation zone will be repeated to identify whether methylmercury concentrations have peaked and to allow comparison between flooded and depositional substrates within the Impoundment.

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 2020 and mercury concentrations were found to be similar compared to baseline/reference concentrations. Lake Trout mercury concentrations in the Impoundment were also below the predicted peak mercury concentration for Lake Trout in the Impoundment. The next sampling event is scheduled for August 2023. The MMP has committed to implementing further risk-based analyses if fish tissue mercury concentrations in the Impoundment exceed the predicted peak mercury concentration for Lake Trout (Azimuth, 2019).

Small-bodied Fish

Small-bodied fish (Slimy Sculpin [*Cottus cognatus*] and Ninespine Stickleback [*Pungitius pungitius*]) were collected from areas in the Impoundment and other lakes close to the Whale Tail mine from 2018–2021 as part of a research study looking at changes in lake productivity caused by flooding. To supplement tissue chemistry results from the Lake Trout study, mercury analysis was opportunistically completed on a subset of the small-bodied fish collected in 2018–2021 to understand temporal and spatial patterns of mercury bioaccumulation lower in the food web during the first few years of flooding. This report presents results from the most recent sampling event in 2021 along with results from 2018–2020. Both small-bodied fish species in the Impoundment showed marked increases in tissue mercury concentrations in 2020 that persisted in 2021. The temporal patterns seen to date for both species 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.

Mercury concentrations in small-bodied fish from MAM were similar in 2021 compared to concentrations in MAM from 2018–2020 and compared to the reference lakes. These results are consistent with the relatively low and stable concentrations of methylmercury in water from MAM.

The supplemental small-bodied fish mercury study will be completed for one more year in 2023 to verify that mercury concentrations have peaked in fish from the Impoundment.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

ACKNOWLEDGEMENTS

The following people were involved in the Mercury Monitoring Program:

- Marianna DiMauro and Eric Franz (Azimuth) were the lead authors of the 2022 Mercury Monitoring Program report.
- Gary Mann (Azimuth) – Gary was the technical advisor on this project and the primary reviewer.
- Marianna DiMauro (Azimuth), Ian McIvor (Azimuth), Lars Qaqqaq, Kathleen Newberry, and Rowan Woodall collected water and sediment samples for mercury analysis in August 2022. Additional support was provided by other members of the Whale Tail Environment Team.
- Bronte McPhedran and Noel Soogrim in Dr. Heidi Swanson's research group at the University of Waterloo collected small-bodied fish for tissue mercury analysis in August 2021.
- Cam Portt is a senior fisheries biologist who led the 2020 Environmental Effects Monitoring program and assisted Jared Ellenor from the University of Waterloo with fish sampling for the MMP.
- Wen Xu and Erin Mann at the University of Western Ontario analyzed water and fish tissue samples for total and methylmercury. Results were reported to Dr. Heidi Swanson's research group at the University of Waterloo.

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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In addition, the conclusions and recommendations of this report are based upon applicable legislation existing at the time the report was drafted. Changes to legislation, such as an alteration in acceptable limits of contamination, may alter conclusions and recommendations.

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
FEIS	Final Environmental Impact Statement
ISQG	Interim sediment quality guidelines (CCME sediment quality guidelines)
MAM	Mammoth Lake
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
WTS	Whale Tail Lake south basin
wwt	wet weight

REPORT ORGANIZATION

The 2022 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 2021 for small-bodied fish and 2022 for 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**).

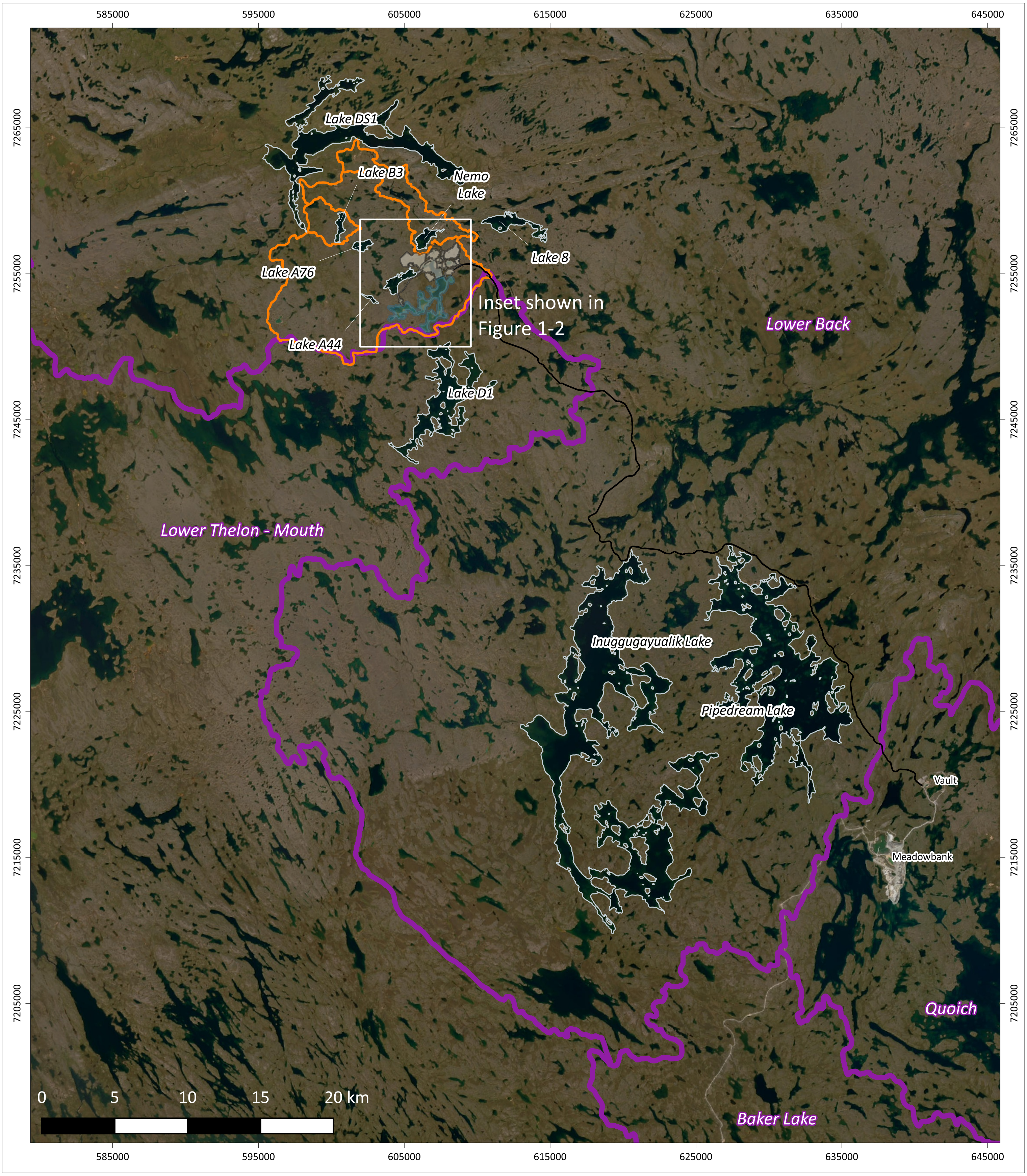
The Whale Tail deposit was developed as an open pit mine. To access the deposit, a dike was constructed across Whale Tail Lake to isolate the north basin of Whale Tail Lake before dewatering (**Figure 1-2**). Dike construction was completed in September 2018 and dewatering of the north basin occurred 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 Mammoth Lake 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. Water levels peaked at 155.6 to 155.7 masl during freshet in 2020 and 2021. 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).

Mercury monitoring is conducted according to the *Mercury Monitoring Plan* (the Plan; Agnico Eagle, 2019) 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, integrating data generated as part of a multi-year study investigating productivity within the Whale Tail Lake Impoundment by the University of Waterloo.

The primary objective of the MMP is to verify that mercury concentrations in Lake Trout (*Salvelinus namaycush*) are within or below the predictions[1] for the Whale Tail mine. The next large-bodied fish sampling event targeting Lake Trout is planned for 2023, coinciding with the Cycle 2 Environmental Effects Monitoring (EEM) study at Whale Tail.

[1] 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 (2022)
- 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: March 16, 2023
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

Roads

Measured peak flood level (155.84 masl; Oct 2019)

Regional Watershed Boundaries

Amaruq Watershed Boundaries

Dotted line = water elevations 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 16, 2023
Datum: NAD 83 UTM Zone 14N
Scale: 1:40,000
Software: QGIS version 3.22.11-Białowieża

REFERENCES:
1. Mine Plan from Agnico Eagle (2021)
2. Satellite image from ESRI taken on July 6, 2022
3. Regional watershed boundaries from NRCan
4. Amaruq watershed boundaries from Agnico Eagle

1.2 Mercury in the Aquatic Environment

Mercury is a naturally occurring element that is found in low levels everywhere- in air, water, soil, plants, animals, and humans. In aquatic environments, bacteria turn naturally occurring inorganic mercury into methylmercury, a highly bioavailable form of mercury. Methylmercury is readily bioaccumulated and biomagnified through the food chain, meaning it is found in the highest concentrations in long-lived animals near the top of the food chain. The flooding of terrestrial habitat, such is the case for the Whale Tail Lake south basin (WTS) and sub-watershed lakes, can lead to elevated production of methylmercury associated with the decomposition of organic matter within the flood zone. The elevated production of methylmercury 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 11 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 completed the ultra-trace mercury water sampling in 2021 and 2022.
- Azimuth completed sediment sampling as part of the Core Receiving Environment Monitoring Program (CREMP).
- Small-bodied fish sampling has been led by Dr. Swanson's research group to date, with assistance from C. Portt and Associates in 2020 as part of the harmonized fish sample collection for the Environmental Effects Monitoring (EEM) and MMP.

- 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[2], and A65).
- 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.
- Mammoth Lake (MAM) – 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 MAM via Lake A20.
- Lake A76 – this lake, located downstream of MAM, 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 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

[2] 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.

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 2022 Program

The scope of the 2022 MMP included:

- Surface water – results from 2022 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 in 2022; 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 resampled in 2021 to characterize post-inundation conditions, but the samples were mistakenly discarded by the laboratory before analysis. These locations were resampled in 2022, along with two new stations, and those results are included herein.
- Fish
    - Small-bodied fish tissue results from sampling in August 2021 were not available in time to include in the 2021 MMP report (Azimuth, 2022a). Those data are included herein. Two species are targeted for small-bodied fish: Slimy Sculpin (*Cottus cognatus*) and Ninespine Stickleback (*Pungitius pungitius*). The supplemental small-bodied fish mercury study will be completed for one more year in 2023 to verify that mercury concentrations have peaked in fish from the Impoundment.
    - Large-bodied fish were not collected in 2022. Sampling is planned for Whale Tail Lake and selected reference lakes in 2023, as per the *Mercury Monitoring Plan Update* (Azimuth, 2023 [in prep]).

2 WATER

2.1 Overview

Predicted changes in 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 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 mercury concentrations in surface water represent the maximum possible increase that could occur in Whale Tail Lake.

Ultra-trace mercury data for the MMP are collected in August of each year, concurrent with water sampling for the CREMP. The samples for ultra-trace mercury analysis are collected in addition to the mercury samples collected as part of the routine CREMP water quality program. Samples were collected in 2022 by Azimuth with field assistance from the Whale Tail Environment Team; details are provided below.

2.2 Methods

2.2.1 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[3] 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**.

[3] 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
Whale Tail (south basin) |Impoundment	NF	n=1	n=1	n=2	~~n=2~~	n=2	n=2	n=2
Lake A20 | Impoundment	NF	-	-	n=2	~~n=2~~	n=2	n=2	n=2
Lake A65 | Impoundment	NF	-	-	n=2	~~n=2~~	n=2	n=2	n=2
Mammoth Lake	NF	-	n=1	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
Inuggugayualik Lake	Reference	-	-	-	-	n=2	n=2	n=2
Pipedream Lake	Reference	-	-	-	-	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).
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).

2.2.2 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 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 method detection limit (MDL) with a safety factor of approximately 3-times the MDL applied. 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).

2.3 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 – two blank samples, one DI blank, and one travel blank, were submitted in 2022. Methylmercury concentrations in filtered and unfiltered DI blank and travel blank samples were below the method reporting limit. Total mercury was detected slightly above the method reporting limit in the unfiltered fraction of the travel blank, and in both filtered and unfiltered fractions of the DI blank. The concentrations detected in the DI blank were slightly above the MRL but were not considered likely to have implications on the results (**Appendix A1**).
- Field Duplicates – The target frequency of collecting sample duplicates was approximately 10% of the total number of samples collected. In 2022, 20 samples and two field duplicates were collected. The field duplicate data are provided in the laboratory results from Biotron (**Appendix A1**).

Laboratory QC results of 2022 surface water samples reported by the University of Western Ontario (Biotron) are summarized below.

- Laboratory duplicate samples analyzed for methylmercury and total mercury had an average relative percent difference (RPD) of 7% and 10%, respectively.
- The average matrix spike RPD for methylmercury and total mercury was 5% and 1%, respectively.
- The method blank (MB) was less than method reporting limits for methylmercury and total mercury analysis.
- For all mercury water results, the concentration in the unfiltered fraction was equal to or greater than the filtered fraction.

- The lab noticed a small crack on the bottle of sample B3-4. The crack was only noticeable after thawing the sample. The remaining volume was transferred to a clean 500 mL bottle prior to analysis. There were no flags on quality control violations.

Overall, the 2022 data met the data quality objectives of the MMP.

2.4 Results and Discussion

Total mercury and methylmercury concentrations in filtered and unfiltered samples collected from 2016 through 2022 are presented in **Figure 2-1** and **Figure 2-2**. The ratios of methylmercury to total mercury (%MeHg) in filtered surface water samples are presented in **Figure 2-3**.Tabulated results are provided in **Appendix A**.

Total mercury concentrations observed in Whale Tail Lake in 2022 are well below both the predicted concentrations in the FEIS[4] (50 to 100 ng/L) and the CCME water quality guidelines for the protection of aquatic life (26 ng/L; CCME 2003). Methylmercury concentrations in the Impoundment in 2022 were well below the 4 ng/L CCME water quality guideline 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 would be the most important exposure route for wildlife or people.

Key observations for mercury in surface water through 2022 are provided herein:

Total Mercury

- Baseline/reference conditions – total mercury concentrations in surface water samples collected prior to Impoundment or at reference lakes range from <0.017 ng/L to approximately 1.3 ng/L. Pre-impoundment concentrations for WTS were approximately 0.3 to 0.5 ng/L.
- Impoundment post-inundation – total mercury concentrations increased in the Impoundment post-inundation compared to reference/baseline conditions and ranged from approximately 0.9 to 3 ng/L. Concentrations reached a maximum concentration of approximately 3 ng/L which was observed at WTS in the first post-inundation event (2020); while still elevated, they have decreased since then with concentrations ranging from 0.9 to 1.8 ng/L. Notwithstanding, the concentrations remain well below FEIS predictions (50 to 100 ng/L) and CCME water quality guidelines (26 ng/L).

[4] 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).

- 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 MAM/A76/DS1 since 2020 have not been systematically higher than those measured in the reference lakes. These results suggest that natural variability is the dominant driver of the observed total mercury results to date downstream of the Impoundment.

Methylmercury

- Baseline/reference conditions – methylmercury concentrations in 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 – concentrations in WTS had increased by approximately an order of magnitude relative to baseline/reference conditions by the first post-inundation sampling event (0.5 ng/L in 2020) and appear somewhat stable since then. The 2022 results for WTS showed a modest increase up to approximately 0.7ng/L, but that trend was not seen in the A65 and A20 basins. While there is no clear evidence that concentrations have peaked yet in the Impoundment, the available results do not indicate that methylmercury concentrations are continuing to rise rapidly. Despite the elevated concentrations seen in the Impoundment from 2020 onwards ranging from 0.08 to 0.7 ng/L, 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 natural variability to some extent. For example, the highest methylmercury concentrations each year 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, concentrations were expected to be elevated at near-field area MAM and mid-field area Lake A76 relative to far-field Lake DS1, particularly given its much larger size; 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 summary, 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.

- 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 and increased in 2022. The 2022 results for WTS showed a modest increase in %MeHg, but that trend was not seen in the A65 and A20 basins. 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 – %MeHg in the three downstream sampling areas show some signs of increase relative to baseline/reference conditions, particularly at MAM and A76, but the changes are subtle and all except one sample in 2022 at Lake A76 were within the range of %MeHg observed at reference areas. Therefore, the changes in %MeHg observed at downstream areas, while possibly influenced by the Impoundment, are largely within the range of natural variability.

2.5 Summary of Key Findings

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 initially in 2020 after inundation has been fairly stable ever since. While there are some signs of downstream transport of methylmercury to Mammoth Lake, the magnitude of change is hard to distinguish relative to baseline/reference conditions.

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 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.

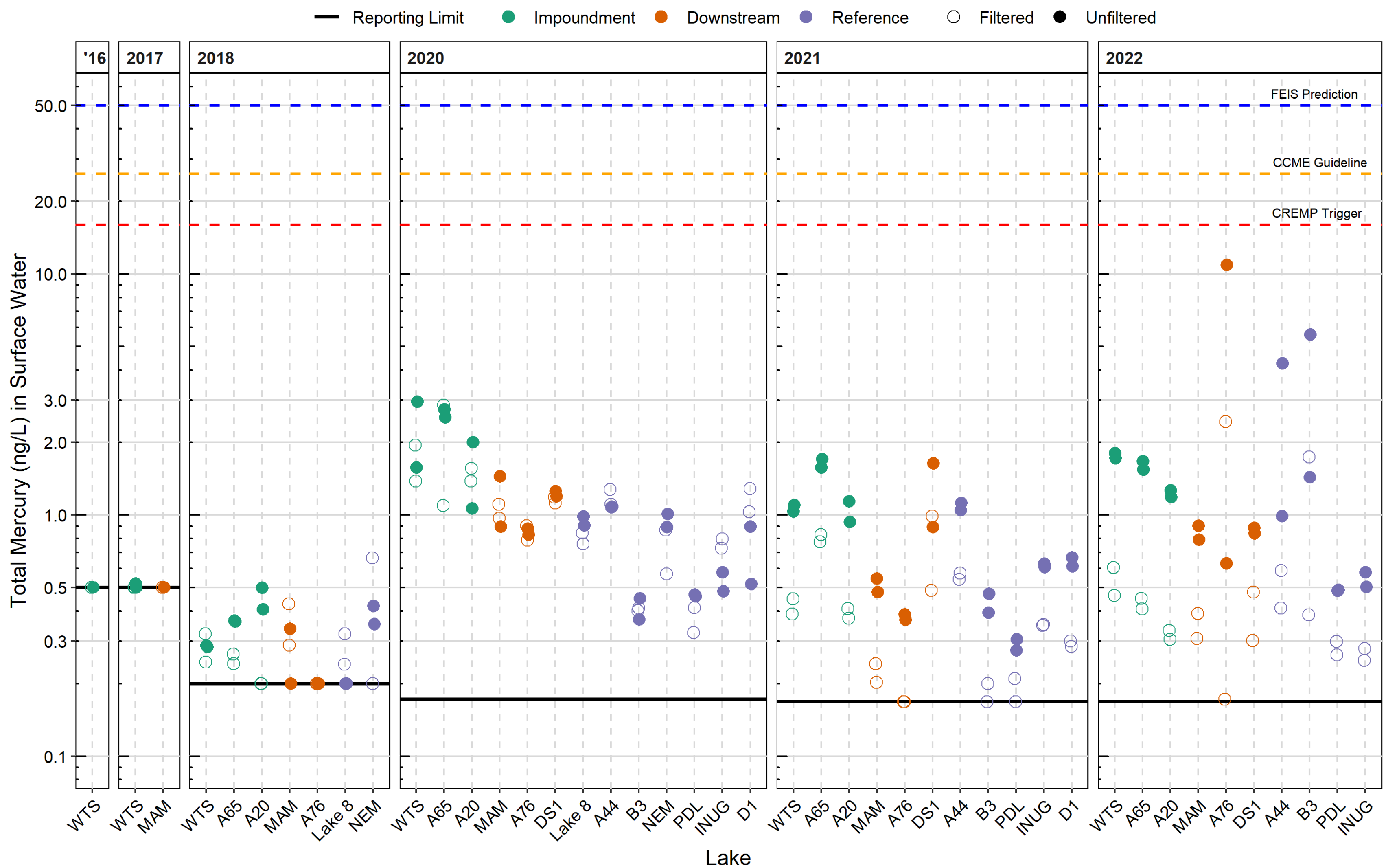


Figure 2-2. Methylmercury concentrations (ng/L) in filtered and unfiltered surface water samples in Whale Tail area lakes since 2016.

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

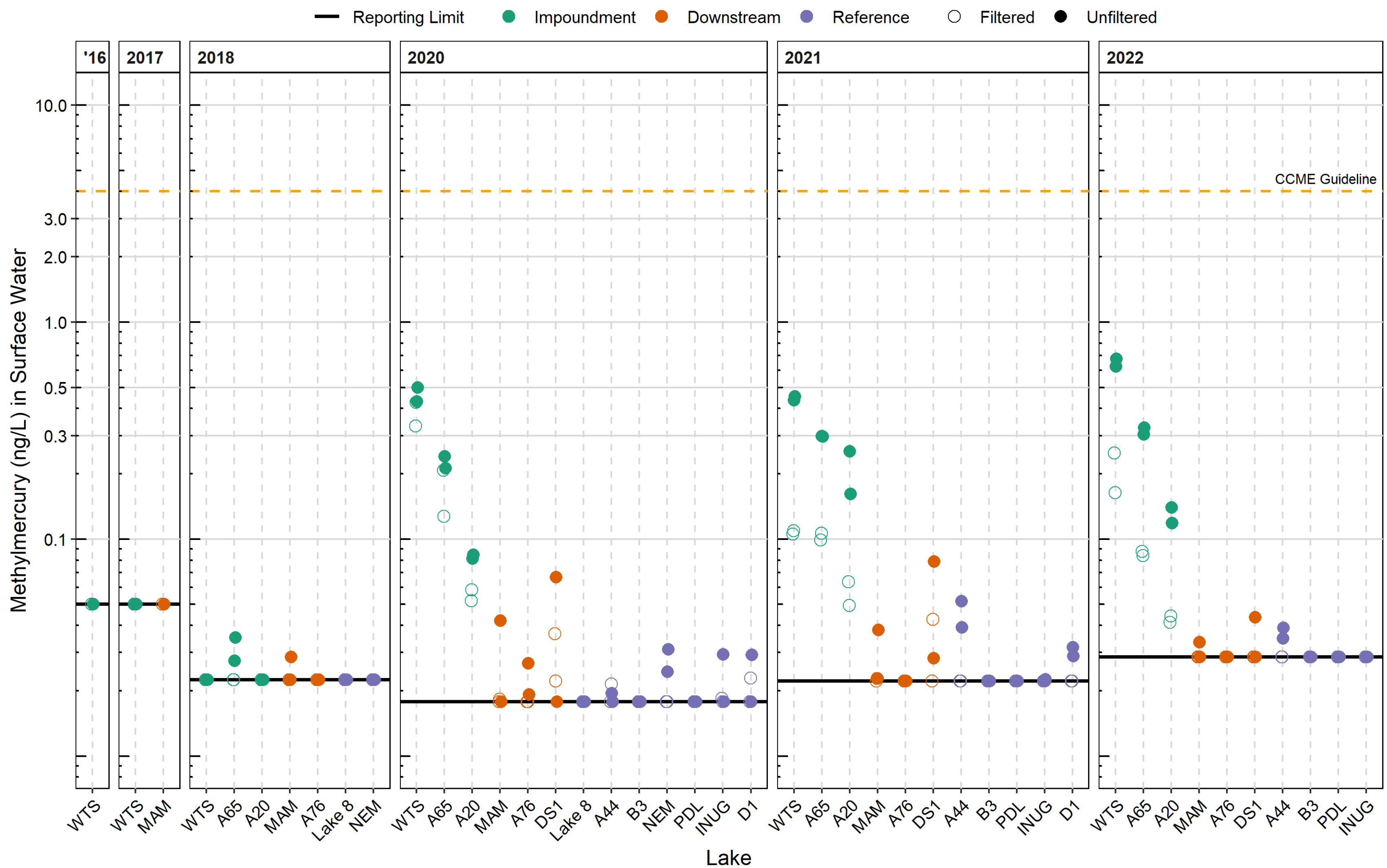
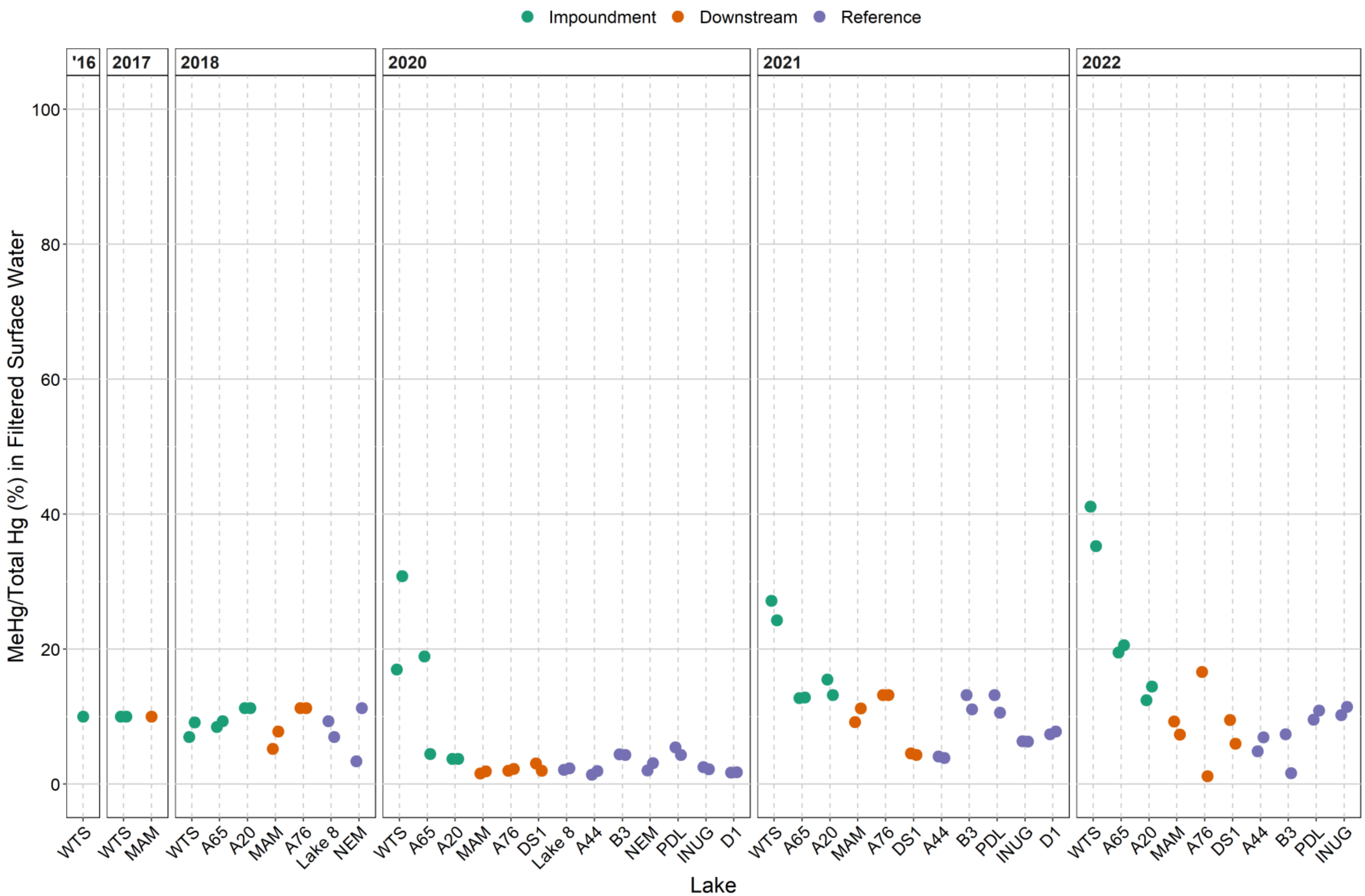


Figure 2-3. Ratio of methylmercury to total mercury (%MeHg) in filtered surface water samples in Whale Tail area lakes since 2016.

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



3 SEDIMENT

3.1 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; the next coring event is planned for 2023. In 2022, sediment grabs were collected from routine CREMP sampling areas and from six locations in the Whale Tail Lake inundation zone coinciding with 2016 soil sampling locations.

3.2 Field Methods

3.2.1 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 placed in a large stainless-steel bowl and 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.

3.2.2 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 new locations were sampled in 2022 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 SWTC.

Samples were collected using a stainless-steel spoon and bowl[5] 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 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 retained cold until shipment to the laboratory.

3.2.3 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.

Analysis of methylmercury in sediment was completed 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.

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

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
Whale Tail Lake | Impoundment†	NF	Depositional	G	G&C	G&C	G	G&C	G	G
		Inundation	S[1]	-	-	-	-	*	S
Lake A20 | Impoundment†	NF	Depositional	G	G&C	G	G	G&C	*	G
		Inundation	-	-	-	-	-	*	S
Lake A65 | Impoundment†	NF	Inundation	S[1]	-	-	-	-	*	S
Mammoth Lake	NF	Depositional	G	G&C	G	G	G&C	*	G
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
Pipedream Lake	Reference	Depositional	G	G&C	G	G	G&C	*	G
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 (Azimuth, 2022, see **Appendix B2**).
NF = near-field, MF = mid-field, FF = far-field.
"-" = data not collected as per the *Mercury Monitoring Plan* (Agnico Eagle, 2019).
C = Sediment core samples; G = Sediment grab samples; S = soil samples from the shoreline area (2016) or sediment samples from the inundated area (2019–2022).
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.

3.3 Quality Assurance / Quality Control

3.3.1 Field QA/QC

Field QA to avoid cross-contamination consisted of taking precautions between sampling areas by rinsing and cleaning the sampling gear for sediment samples (Petite Ponar grab, stainless steel compositing bowls and spoons) using site water and phosphate-free cleaning detergent.

Field QC measures for sediment grab 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 during cleaning procedures. All field QC results are provided in Appendix A of the 2022 CREMP report (Azimuth, 2023).

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. There was one RPD that was not met for methylmercury, and the result was flagged for uncertainty. The RPDs that failed to meet DQOs in the field duplicate results represented 1% of the RPDs calculated. Overall, field duplicate results indicate good field collection methods and a high degree of replicability in sampling.

Several analytes were detected in the sediment grab equipment filter swipes. However, none were estimated to affect sediment chemistry results by more than 0.02%, suggesting negligible cross-contamination.

3.3.2 Laboratory QC

The laboratory QC program for total mercury and methylmercury analysis in sediment was completed as part of the 2022 CREMP (Azimuth, 2023[In prep]). 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 Azimuth, 2023; Appendix A).

3.4 Results and Discussion

Total mercury and methylmercury concentrations in sediment samples collected from 2016 to 2022 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

- 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 (i.e., generally less than 50 µg/kg versus generally > 40 µg/kg dw).
- Impoundment post-inundation – there were no appreciable temporal patterns in WTS or A20 relative to creation of the Impoundment. Total mercury concentrations in the 2022 inundation zone samples were higher, typically above 100 µg/kg dw, likely indicative of aerial uptake of mercury by vegetation from atmospheric mercury sources prior to inundation (Obrist et al., 2017). Total mercury concentrations were below the CCME interim sediment quality guideline (ISQG) of 0.17 mg/kg dry weight in all 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 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. Concentrations were higher in 2022 at depositional areas in both the WTS and A20 basins of the Impoundment. One of the reference lakes, B3, also showed a marked increase in methylmercury concentrations in 2022, suggesting that some or all of the observed changes in the Impoundment may be due to natural variability. Methylmercury concentrations were highest in the inundation zone samples (shown as *flooded soil* in **Figure 3-1**), ranging up to 25 µg/kg dw.
- Downstream post-inundation – methylmercury concentrations showed a marked increase at depositional zones in MAM in 2022 relative to previous years, ranging up to 16 µg/kg dw. It is not clear what is driving these concentrations, which are higher than those ever seen in the depositional zones of the Impoundment. This is discussed further below for the %MeHg results.

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 %.
- 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 (up to 11%) in the Impoundment. One of the reference lakes, B3, also showed a marked increase in %MeHg in 2022, suggesting that some or all of the observed changes in the Impoundment may be due to natural variability. The inundation zone, which had not been sampled since it was flooded, had the highest %MeHg in 2022. This was expected, as there can be higher methylation rates in newly flooded soil (Hall *et al.*, 2005).
- Downstream post-inundation – The %MeHg showed a marked increase in depositional zones in MAM in 2022 relative to previous years, ranging from approximately 4 to 21%. Considering that there is no strong evidence of methylmercury transport in water from the Impoundment, and that the magnitude of methylmercury concentrations in depositional zones is higher in MAM, these results suggest an increase in local methylmercury production in MAM sediments. One possible explanation is the addition of sulphate to MAM. Sulphate has been shown to stimulate methylmercury production in lakes by increasing the activity of sulphate-reducing microbial communities (Gilmour *et al*., 1992). Relative to the other Whale Tail study lakes, surface water sulphate concentrations are higher; while they remain substantially lower than their respective CREMP trigger, they have continued to exceed FEIS predictions in MAM since 2018, with the highest concentrations to date reported in 2022 (Azimuth, 2023). Thus, the observed sulphate concentrations could be stimulating methylmercury production in MAM sediments. However, the lack of a clear signal in surface water methylmercury concentrations is puzzling. Sediment coring is planned for 2023, which will provide more comprehensive information to help verify whether the 2022 results represent a true mine-related change or are anomalous.

3.5 Summary of Key Findings

Prior to 2022, there were no signs of Impoundment-related changes to total mercury or methylmercury in depositional zone sediments. In 2022, sediment samples were collected from the depositional areas in the MMP area lakes and from inundated areas within the Impoundment; as 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).

Overall, 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 2022 were similar to baseline/reference conditions.

Methylmercury concentrations in some deposition zone samples in the Impoundment in 2022 were higher than previous results. As anticipated, the inundation zone samples had the highest methylmercury concentrations, as conditions in these areas are known to stimulate mercury methylation. Despite the lack of clear changes in either surface water or fish tissue, there was an increase in methylmercury concentrations in depositional zone sediments in MAM. One possible explanation for this increase is mercury methylation by sulphate-reducing microbes. Sulphate, which can stimulate methylmercury production in lakes, was elevated in surface water in MAM. While sulphate concentrations remained well below the CREMP trigger value (i.e., so not a concern for aquatic life), they were higher than baseline/reference conditions and exceeded the FEIS prediction. The more comprehensive sediment coring planned for 2023 should help verify whether this is a true mine-related change or not. Furthermore, sediment sampling within the inundation zone will be repeated to identify whether methylmercury concentrations have peaked and to allow comparison between flooded and depositional substrates within the Impoundment.

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).

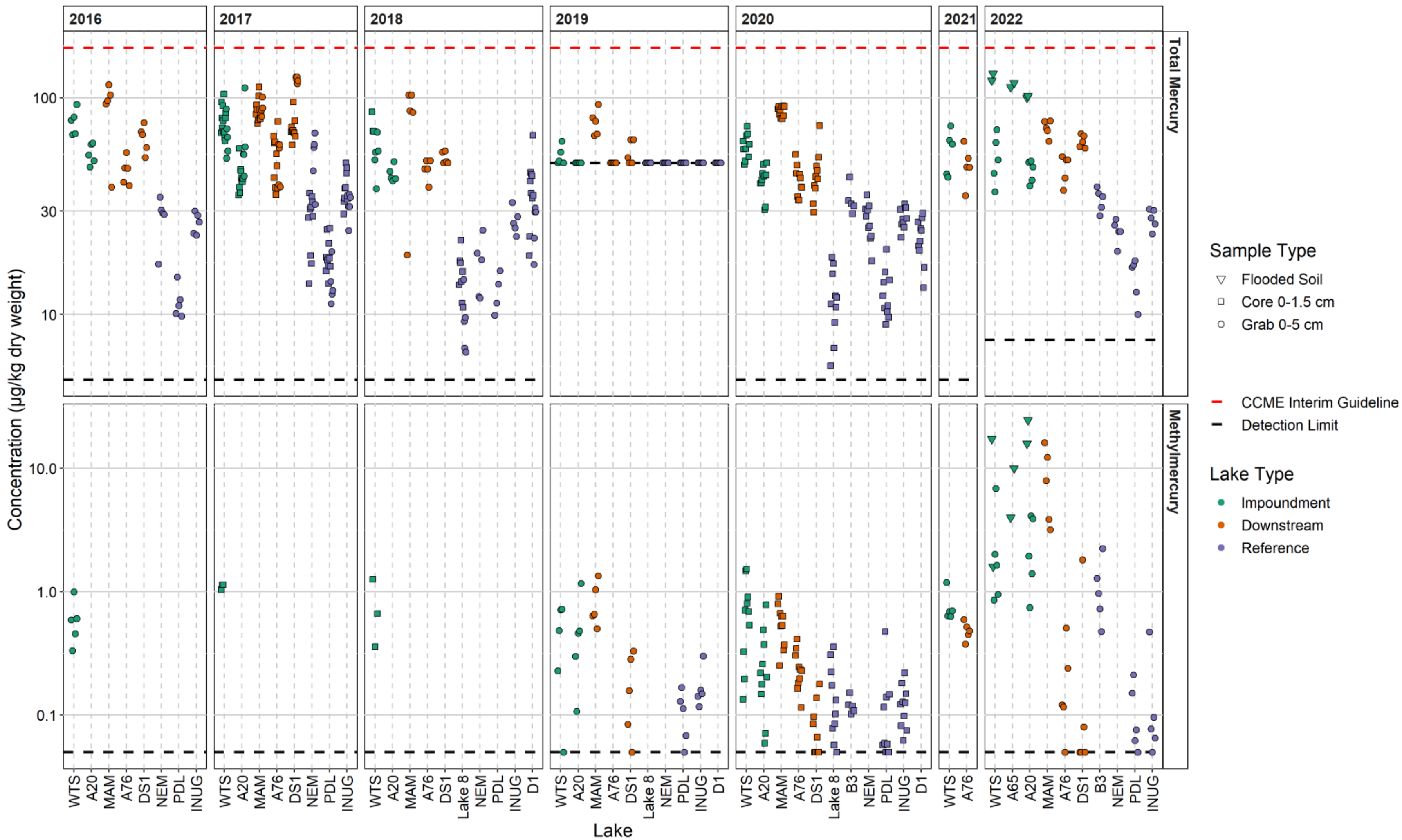
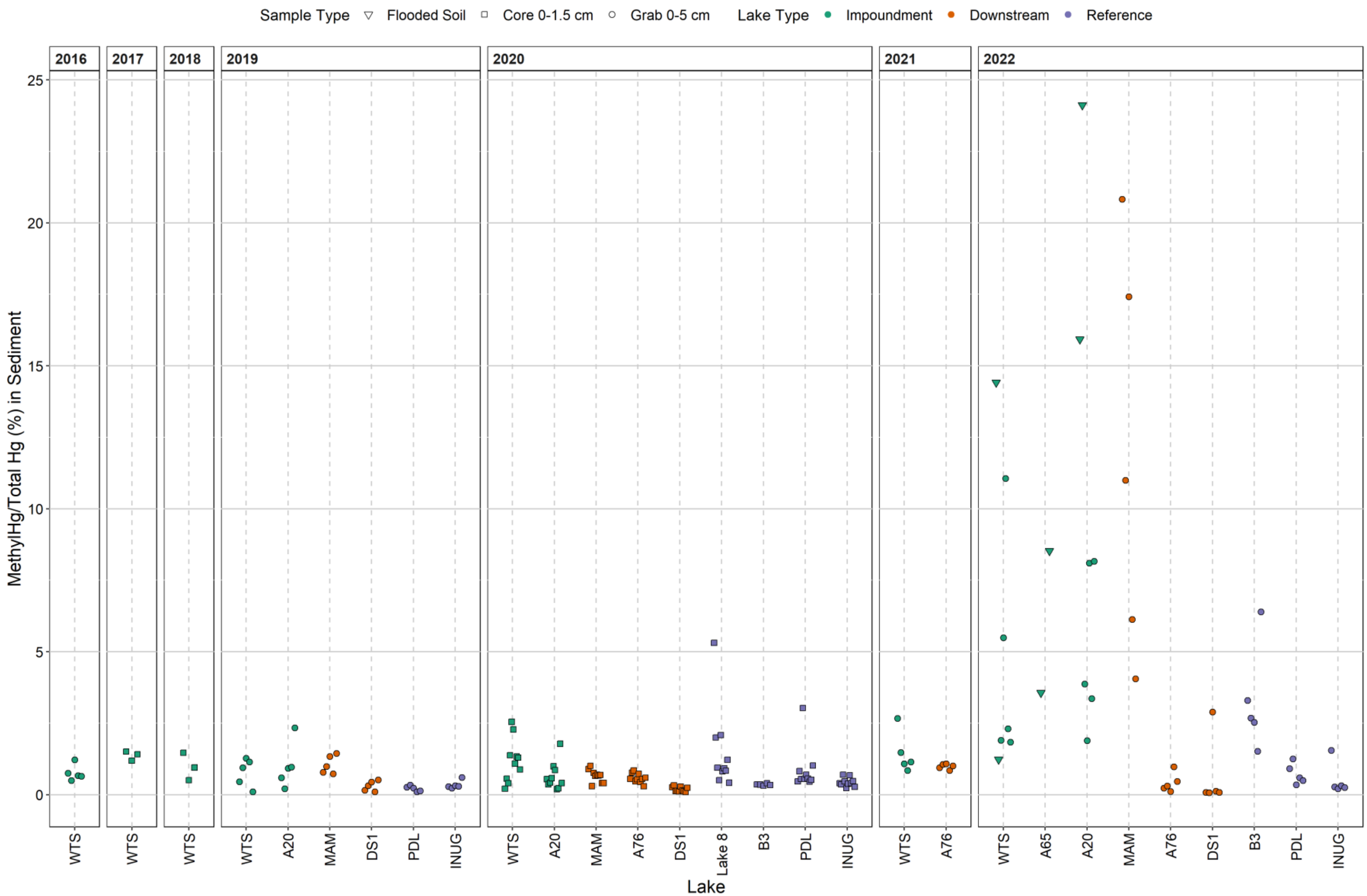


Figure 3-2. Ratio of methylmercury to total mercury (%MeHg) in sediment samples from Whale Tail area lakes since 2016.



4 SMALL-BODIED FISH

4.1 Overview

Slimy Sculpin and Ninespine Stickleback were collected opportunistically from 2018 to 2021[6] 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, with input from Azimuth when it came to selecting specimens for 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 the distribution of mercury in the food web and how that evolves, changes in feeding ecology affecting trophic position

[6] COVID-19 related health measures in Ontario restricted researcher's access to the lab at the University of Waterloo in Q4 2021. This caused delays in the processing and analysis of small-bodied fish collected in 2021. Laboratory results from the 2021 small-bodied fish sampling program were provided in January 2023 and are presented herein.

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.

4.2 Methods

4.2.1 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 Ninespine Stickleback and Slimy Sculpin samples collected by the University of Waterloo for total mercury analysis. Samples were selected after reviewing the length distributions for each species. A list of the 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 for spatial and temporal tissue mercury comparisons. For Ninespine Stickleback, two size classes were identified; up to five samples between 30-39 mm, and up to five samples between 40-49 mm were selected. For Slimy Sculpin, which had a more consistent distribution of samples among lakes/years, up to five samples targeting year-1 fish (i.e., total lengths between 27-45 mm) were selected.

4.2.2 Laboratory Methods

Fish tissue samples collected in 2018–2021 were processed at the University of Waterloo. After removing the viscera and otoliths, fish were placed in labeled 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 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 Environmental Isotope Laboratory (EIL) at the University of Waterloo. Measurements of ^{13}C and ^{15}N isotopes were determined through combustion conversion of sample material to gas through a 4010 Elemental Analyzer (Costech Instruments, Italy) coupled to a Delta Plus XL (Thermo-Finnigan, Germany) continuous flow isotope ratio mass spectrometer (CFIRMS). A complete description of the analytical method, including analytical precision, reference materials, and QA/QC procedures is available on the EIL website[7].

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*	2018	2019	2020	2021*
Whale Tail Lake | Impoundment	NF	n=8	n=6	n=10	n=5	n=5	n=5	n=5	n=10
Lake A20 | Impoundment	NF	n=2	n=10	n=10	n=5	n=5	-	n=5	n=5
Lake A65 |Impoundment	NF	-	n=10	n=10	n=2	n=5	-	n=5	n=5
Mammoth Lake	NF	n=1	n=2	n=4	n=5	n=5	n=5	n=5	n=5
Lake 8	Reference	-	-	-	-	n=5	-	n=5	n=5
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 are included in this report.
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.

[7] https://uwaterloo.ca/environmental-isotope-laboratory/

4.2.3 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[8] (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[9] 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 are known to change their diet as they grow bigger, 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 4.4**.

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

[9] 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.

4.3 Quality Assurance/Quality Control

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

Laboratory QC results for the 2021 small-bodied fish tissue samples were reported by the University of Western Ontario (Biotron). Note that in 2021 samples were analyzed using two different instruments: DMA-Dual Cell and DMA-EVO. Therefore, the laboratory QC results are summarized below for each instrument.

- The average RPD in 2021 laboratory duplicate samples analyzed for total mercury was 8% (DMA-EVO) and 1% (DMA-Dual Cell).
- The average matrix spike RPD for total mercury was 2% (DMA-EVO) and 1% (DMA-Dual Cell).
- The lab found one sample to be heterogeneous upon rerun. As a result, the lab analyzed five replicates and the average result was provided for a more representative total mercury concentration.
- All data were retained for analysis and there were no flags on quality control violations.

4.4 Results and Discussion

Of the fish collected in 2021, 45 Slimy Sculpin and 26 Ninespine Stickleback fish were submitted for analysis of total mercury and stable isotopes. Raw data are tabulated in **Appendix C1**. 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., Ninespine Stickleback at reference area Lake A44 in 2021 and Slimy Sculpin at Lake D1 in 2020).

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 remained elevated in 2021, but appear to have stabilized rather than continuing to rise. 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.

Downstream post-inundation – tissue mercury concentrations downstream of the Impoundment do not appear to have changed appreciably. Slimy Sculpin mercury concentrations in MAM have remained stable since 2018 and fairly consistent with the reference lakes. Mercury concentrations in Ninespine Stickleback at MAM in 2021 were higher than seen in previous years, but the magnitude of change was similar to what was observed at reference Lake A44 (see above), suggesting that the change may be related to natural variability. The lack of inundation-related changes in small-bodied fish mercury concentrations is consistent with the surface water methylmercury results in MAM (**Figure 2-2**). So far, there is no evidence that the elevated sediment methylmercury concentrations seen in the MAM depositional zone have affected mercury concentrations in surface water or small-bodied fish.

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) has occurred since 2018 (**Figure 4-3**). At WTS, for example, there was a progressive change to more negative (lower) $\delta^{13}C$ values between 2018 and 2020. While the pattern continued for Slimy Sculpin in 2021, it did not for Ninespine Stickleback. This shift may be due to a relative lag in benthic invertebrate production in newly flooded nearshore habitat. While a dietary shift will likely have some impact on mercury bioaccumulation, it is hard to say how this particular shift would affect tissue concentrations; this is discussed further below.
2. A reasonably consistent pattern of progressively higher $\delta^{15}N$ (y axis) values from A20 to A65 to WTS (**Figure 4-3**). This pattern appears to have existed prior to flooding and occurs in most years. As $\delta^{15}N$ values are indicative of trophic position, and mercury bioaccumulation is known to be greater in fish higher in the food chain, this pattern could be responsible for some of the spatial differences observed in tissue mercury concentrations within the Impoundment. However, the spatial patterns in tissue mercury concentrations also match spatial patterns in surface water methylmercury concentrations (**Figure 2-2**), which would also be expected to strongly influence fish tissue mercury concentrations.

Downstream post-inundation – stable isotope results for MAM have been fairly consistent across the monitoring period, suggesting that no systematic changes in feeding ecology have occurred that could affect mercury bioaccumulation.

4.5 Summary of Key Findings

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 prime focus is on large-bodied fish from a mercury perspective, the results for small-bodied fish help to understand how this northern ecosystem is responding to the creation of the Impoundment.

Both small-bodied fish species in the Impoundment showed marked increases in tissue mercury concentrations in 2020 that persisted in 2021. The temporal patterns seen to date for both species 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.

Downstream, in MAM, there was no strong evidence of temporal increases in small-bodied fish mercury concentrations relative to the reference lakes. This pattern is consistent with the surface water results, where increases were not seen in MAM, but is contradictory to the sediment methylmercury results, where the 2022 depositional habitat grab results showed much higher concentrations than seen in previous years.

The supplemental small-bodied fish mercury study will be completed for one more year in 2023 to verify that mercury concentrations have peaked in fish from the Impoundment.

Figure 4-1. Fish tissue mercury concentrations (mg/kg ww) in Ninespine Stickleback and Slimy Sculpin collected at Whale Tail area lakes, 2018–2021.

Species Codes: NSSB = Ninespine Stickleback, SLSC = Slimy Sculpin

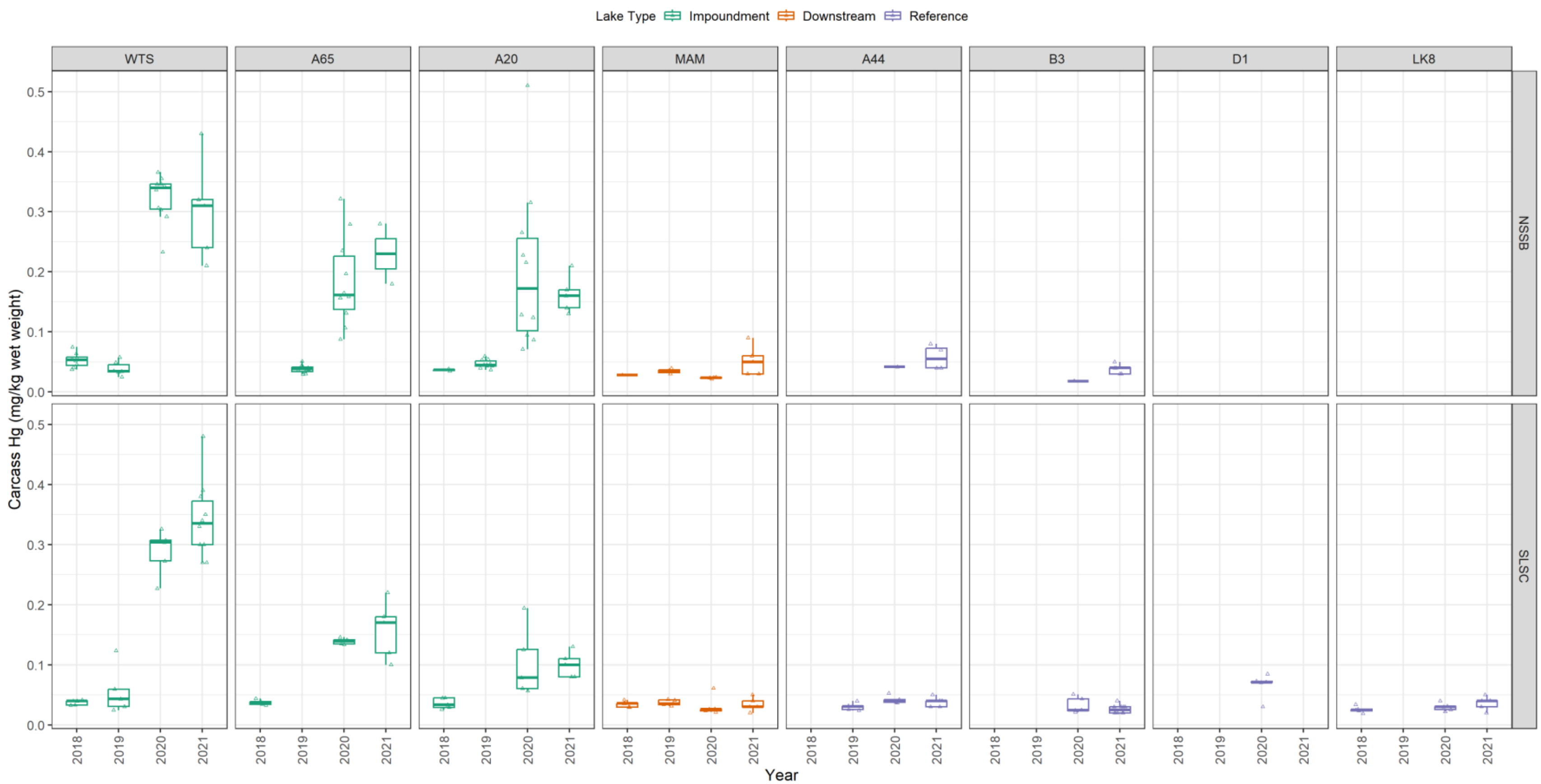


Figure 4-2. Fish tissue mercury concentrations (mg/kg ww) and fish sizes (length; mm) for Ninespine Stickleback and Slimy Sculpin collected at Whale Tail area lakes, 2018–2021.

Species Codes: NSSB = Ninespine Stickleback, SLSC = Slimy Sculpin

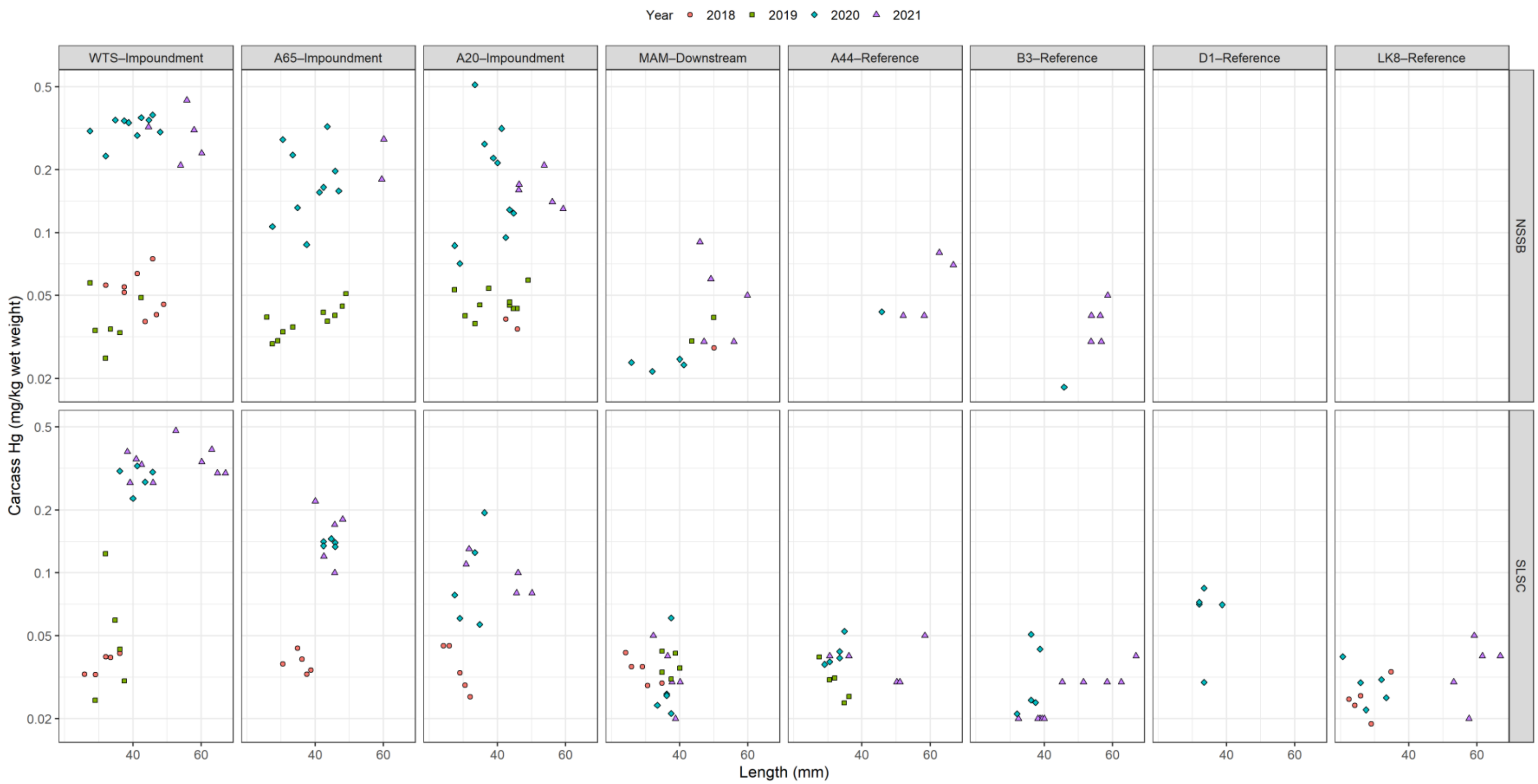


Figure 4-3. Mean δ¹⁵N and δ¹³C signatures (± standard deviation), of Ninespine Stickleback and Slimy Sculpin collected at Whale Tail area lakes, 2018–2021.

Species Codes: NSSB = Ninespine Stickleback, SLSC = Slimy Sculpin

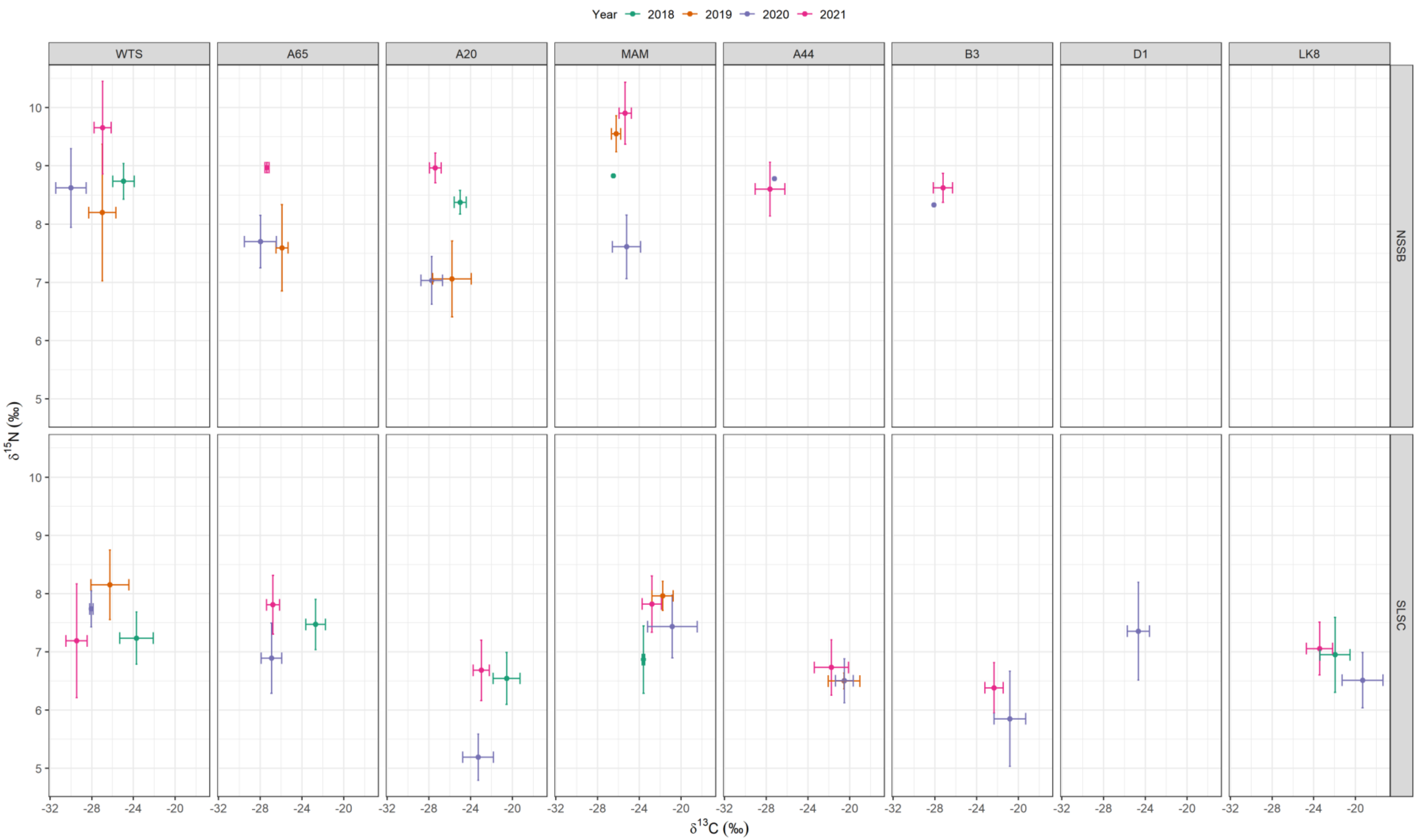
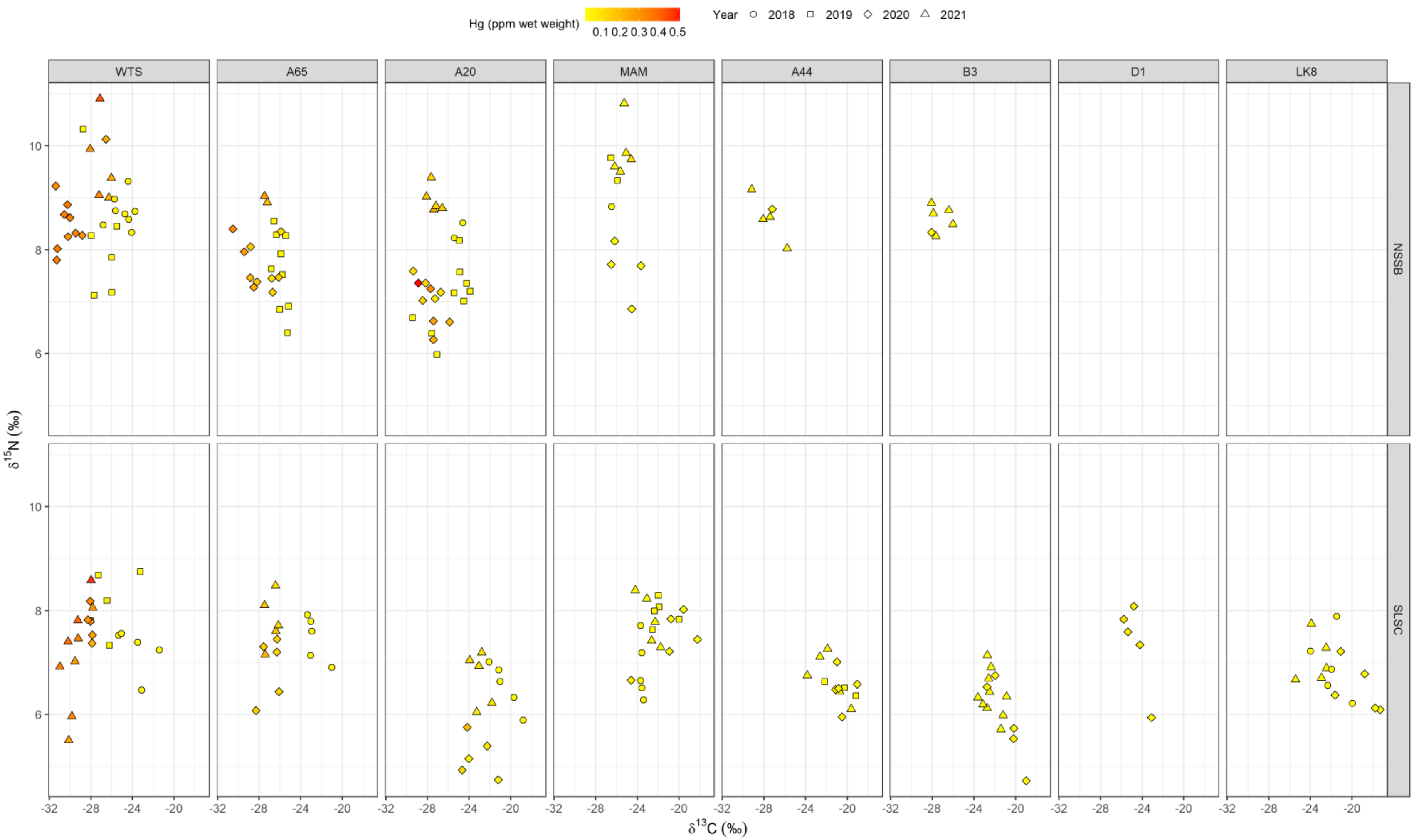


Figure 4-4. Stable isotope δ^{15}N and δ^{13}C signatures and mercury concentrations in tissue from Ninespine Stickleback and Slimy Sculpin collected at Whale Tail area lakes, 2018–2021.

Species Codes: NSSB = Ninespine Stickleback, SLSC = Slimy Sculpin



5 LARGE-BODIED FISH

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 herein:

- 2015: Lake Trout muscle tissue sampling was completed in Whale Tail Lake and Mammoth Lake as part of baseline sampling efforts.
- 2018: Lake Trout were captured during the fish-out of the north basin of Whale Tail Lake and a select number were retained for mercury analysis in muscle tissue. Lake Trout were also collected at Lake 8 in 2018 to characterize baseline mercury concentrations in fish from a nearby reference lake. Given that no flooding occurred in the north basin of Whale Tail Lake, these data should be reflective of baseline conditions from a methylmercury perspective.
- 2020: Lake Trout were captured from Mammoth Lake, Lake 8, and Lake D1 as part of the EEM sampling, with additional samples collected from Whale Tail Lake and Lake DS1 as per the MMP. Lake Trout tissue samples were submitted for mercury analysis in 2020, however, due to delays in processing the fish the results were not available in time for reporting in 2021 and results were therefore included in the March 2022 report (Azimuth, 2022a). The average total mercury concentration (0.59 mg/kg ww) in a 550-mm Lake Trout from Whale Tail Lake in 2020 was similar to concentrations reported in Lake Trout from the baseline period (2015) and fishout (2018). Furthermore, the average total mercury concentration was below the predicted peak mercury concentration in a 550-mm Lake Trout in the Impoundment (1.55 mg/kg ww; Azimuth, 2019).
- 2021 and 2022: No Lake Trout were collected in 2021 and 2022. The next Lake Trout sampling event is planned for August 2023.

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). **No meaningful increase in Lake Trout mercury concentrations has occurred through 2020. No MMP-related risk management measures are required at this time.**

6 SUMMARY AND RECOMMENDATIONS

The 2022 MMP was completed according to the study design outlined in the *Mercury Monitoring Plan* (Agnico Eagle, 2019). A summary of the 2022 results is provided below:

Water – 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 seen initially in 2020 after inundation has been fairly stable ever since. Mercury concentrations in surface water will continue to be monitored in 2023 as per the *Mercury Monitoring Plan Update* (Azimuth, 2023 [in prep]).

Sediment – 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 2022 were similar to baseline/reference conditions.

Methylmercury concentrations in some deposition zone samples in the Impoundment in 2022 were higher than in previous years. Despite the lack of clear changes in either surface water or fish tissue, there was an increase in methylmercury concentrations in depositional zone sediments in MAM. A comprehensive sediment coring program is planned for 2023. These results should help verify whether the increase at MAM is mining-related or not. Furthermore, sediment sampling within the inundation zone will be repeated to identify whether methylmercury concentrations have peaked and to allow comparison between flooded and depositional substrates within the Impoundment.

Small-bodied Fish – Both small-bodied fish species in the Impoundment showed marked increases in tissue mercury concentrations in 2020 that persisted in 2021. The temporal patterns seen to date for both species 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.

Downstream, in MAM, there was no strong evidence of temporal increases in small-bodied fish mercury concentrations relative to the reference lakes. This pattern is consistent with the surface water results, where increases were not seen in MAM, but is contradictory to the sediment methylmercury results, where the 2022 grab results from the deposition zone showed much higher concentrations than seen in previous years.

The supplemental small-bodied fish mercury study will be completed for one more year in 2023 to verify that mercury concentrations have peaked in fish from the Impoundment.

Lake Trout – No Lake Trout have been sampled since 2020 as per the *Mercury Monitoring Plan* (Agnico Eagle, 2019). Results to date show that mercury concentrations in Lake Trout have remained similar in the Impoundment compared to concentrations from baseline and reference lakes. The next sampling event is planned for August 2023. 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).

6.1 Scope of the 2023 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.

The primary objective of the MMP is to verify that mercury concentrations in Lake Trout are within or below the predictions[10] for the Whale Tail mine. The next large-bodied fish sampling event targeting Lake Trout is planned for 2023. Based on the 2022 results and the *Mercury Monitoring Plan Update* (Azimuth, 2023 [in prep]) the components and schedule for the 2023 MMP sampling program is summarized in **Table 6-1**.

Table 6-1. Monitoring components planned for the 2023 MMP.

Component		Impoundment			Downstream			Reference[1]	
		WTS	A20	A65	MAM	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, NEM, Lake B3, A44.

blue = baseline and reference areas (Control designation)

orange = post flooding (Impact designation).

[10] 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.

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APPENDICES

APPENDIX A WATER DATA

APPENDIX A1

2022 LABORATORY DATA

Western Biotron Experimental Climate Change Research

University of Western Ontario - Analytical Services

Marianna DiMauro	Date of Receipt :	August 29, 2022
Agnico Eagle Mines Limited	Client COC:	n/a
Environment Department, Meadowbank Division		
Baker Lake, Nunavut, X0C 0A0	Report ID :	2022-08-006

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

CERTIFICATE OF ANALYSIS

Sample type & number of samples: 24 water samples;

The following analytical analyses were requested: 24 U THg/MeHg & 24 F THg/MeHg.

THg (Tekran model 2600)

1. R^2: > 0.9975
2. IPR & OPR avg: 106% & 110%
3. Recovery QCS avg: 100%
4. Recovery MS & MSD avg: 105% & 106%
5. RPD in Sample Duplicates avg: 10%
6. RPD in MS & MSD avg: 1%
7. MDL: 0.055 ng/L
8. MRL: 0.166 ng/L
9. Method Blank avg: <MRL
10. IPR recovery SD avg: 1%

MeHg (Tekran model 2700) Water

1. R^2: > 0.9950
2. IPR & OPR avg: 100% & 97%
3. Recovery QCS avg: 90%
4. Recovery MS & MSD avg: 92% & 97%
5. RPD in Sample Duplicates avg: 7%
6. RPD in MS & MSD avg: 5%
7. MDL: 0.010 ng/L
8. MRL: 0.029 ng/L
9. Method Blank avg: <MDL
10. IPR recovery SD avg: 3%

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

Notes: *MDL and MRL are calculated once every year to comply with 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. The precision of the lab's analysis is represented by three decimal places in the final concentration. All digits in the results are solely left to the discretion of the client.*

COMMENTS REGARDING THIS REPORT: On September 2nd, 2022 a small crack was noticed in the bottle of sample BO3-4 (Lab ID 14). The crack was only noticeable after thawing the sample. The remaining volume was transferred to a clean 500 mL bottle. The client was notified on the same day. **For MeHg:** The glass receiver vial for Lab ID 17U broke when the cap+line was being removed, causing some of the sample to be lost and preventing the post-distillation mass to be recorded. The lab assumed a post-distillation volume of 45 mL for sample 17U (based on visual observation when removing the vial from the block), however there may be a difference of up to 2 mL, based on the post-distillation volumes of other samples in the run. The difference in the assumed and actual post-distillation volume is not large enough to significantly change the MeHg concentration in sample 17U (i.e., RPD < 5%), and so the sample was not rerun.

x Rod Sousa

Rod Sousa
Quality Control Specialist

Date: September 21, 2022

The Biotron Analytical Laboratory Services welcomes any form of feedback from our clients. Please send any enquiries to our corporate email at biotron_analytical@uwo.ca.

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Client Name: **Marianna DiMauro**
Environment Department, Meadowbank Division

Biotron WO#: 2022-08-006
Report date: September 21, 2022

Total Mercury (THg) - Analytical Results

Analytical Method: TM.0811

Sample ID	Lab ID	Prep Code	Date Collected	Analysis Period	Parameter Code	Blk Cor. THg (ng)	Sample Vol (L)	Final Concentration (ng/L)
DS1-63	1U	n/a	August 16, 2022	September 8 - 13, 2022	Total Hg	0.0221	0.025	0.883
DS1-64	2U	n/a	August 16, 2022	September 8 - 13, 2022	Total Hg	0.0210	0.025	0.839
INUG-145	3U	n/a	August 14, 2022	September 8 - 13, 2022	Total Hg	0.0145	0.025	0.579
INUG-144	4U	n/a	August 14, 2022	September 8 - 13, 2022	Total Hg	0.0126	0.025	0.503
PDL-109	5U	n/a	August 15, 2022	September 8 - 13, 2022	Total Hg	0.0121	0.025	0.486
PDL-110	6U	n/a	August 15, 2022	September 8 - 13, 2022	Total Hg	0.0122	0.025	0.488
WTS-73	7U	n/a	August 17, 2022	September 8 - 13, 2022	Total Hg	0.0452	0.025	1.807
WTS-74	8U	n/a	August 17, 2022	September 8 - 13, 2022	Total Hg	0.0430	0.025	1.719
A44-4	9U	n/a	August 19, 2022	September 8 - 13, 2022	Total Hg	0.0248	0.025	0.991
A44-3	10U	n/a	August 19, 2022	September 8 - 13, 2022	Total Hg	0.1064	0.025	4.254
MAM-73	11U	n/a	August 17, 2022	September 8 - 13, 2022	Total Hg	0.0226	0.025	0.904
MAM-74	12U	n/a	August 17, 2022	September 8 - 13, 2022	Total Hg	0.0197	0.025	0.790
B03-3	13U	n/a	August 18, 2022	September 8 - 13, 2022	Total Hg	0.0358	0.025	1.431
B03-4	14U	n/a	August 18, 2022	September 8 - 13, 2022	Total Hg	0.1402	0.025	5.609
A65-3	15U	n/a	August 19, 2022	September 8 - 13, 2022	Total Hg	0.0418	0.025	1.673
A65-4	16U	n/a	August 19, 2022	September 8 - 13, 2022	Total Hg	0.0386	0.025	1.544
A20-67	17U	n/a	August 17, 2022	September 8 - 13, 2022	Total Hg	0.0316	0.025	1.264
A20-68	18U	n/a	August 17, 2022	September 8 - 13, 2022	Total Hg	0.0296	0.025	1.185
A76-65	19U	n/a	August 16, 2022	September 8 - 13, 2022	Total Hg	0.0157	0.025	0.630
A76-66	20U	n/a	August 16, 2022	September 8 - 13, 2022	Total Hg	0.2725	0.025	10.900
AUG-DUP-1	21U	n/a	August 15, 2022	September 8 - 13, 2022	Total Hg	0.0345	0.025	1.382
AUG-DUP-2	22U	n/a	August 19, 2022	September 8 - 13, 2022	Total Hg	0.0373	0.025	1.492
AUG-DI	23U	n/a	August 22, 2022	September 8 - 13, 2022	Total Hg	0.0079	0.025	0.315
AUG-TB	24U	n/a	August 22, 2022	September 8 - 13, 2022	Total Hg	0.0043	0.025	0.170
DS1-63	1F	filtration	August 16, 2022	September 8 - 13, 2022	Dissolved Hg	0.0075	0.025	0.301
DS1-64	2F	filtration	August 16, 2022	September 8 - 13, 2022	Dissolved Hg	0.0120	0.025	0.478
INUG-145	3F	filtration	August 14, 2022	September 8 - 13, 2022	Dissolved Hg	0.0062	0.025	0.250
INUG-144	4F	filtration	August 14, 2022	September 8 - 13, 2022	Dissolved Hg	0.0070	0.025	0.279
PDL-109	5F	filtration	August 15, 2022	September 8 - 13, 2022	Dissolved Hg	0.0075	0.025	0.299
PDL-110	6F	filtration	August 15, 2022	September 8 - 13, 2022	Dissolved Hg	0.0066	0.025	0.262
WTS-73	7F	filtration	August 17, 2022	September 8 - 13, 2022	Dissolved Hg	0.0151	0.025	0.605
WTS-74	8F	filtration	August 17, 2022	September 8 - 13, 2022	Dissolved Hg	0.0116	0.025	0.464
A44-4	9F	filtration	August 19, 2022	September 8 - 13, 2022	Dissolved Hg	0.0103	0.025	0.411
A44-3	10F	filtration	August 19, 2022	September 8 - 13, 2022	Dissolved Hg	0.0147	0.025	0.587
MAM-73	11F	filtration	August 17, 2022	September 8 - 13, 2022	Dissolved Hg	0.0077	0.025	0.308
MAM-74	12F	filtration	August 17, 2022	September 8 - 13, 2022	Dissolved Hg	0.0097	0.025	0.389
B03-3	13F	filtration	August 18, 2022	September 8 - 13, 2022	Dissolved Hg	0.0096	0.025	0.386
B03-4	14F	filtration	August 18, 2022	September 8 - 13, 2022	Dissolved Hg	0.0435	0.025	1.741
A65-3	15F	filtration	August 19, 2022	September 8 - 13, 2022	Dissolved Hg	0.0113	0.025	0.450
A65-4	16F	filtration	August 19, 2022	September 8 - 13, 2022	Dissolved Hg	0.0102	0.025	0.408
A20-67	17F	filtration	August 17, 2022	September 8 - 13, 2022	Dissolved Hg	0.0083	0.025	0.332
A20-68	18F	filtration	August 17, 2022	September 8 - 13, 2022	Dissolved Hg	0.0076	0.025	0.305
A76-65	19F	filtration	August 16, 2022	September 8 - 13, 2022	Dissolved Hg	0.0043	0.025	0.172
A76-66	20F	filtration	August 16, 2022	September 8 - 13, 2022	Dissolved Hg	0.0609	0.025	2.437
AUG-DUP-1	21F	filtration	August 15, 2022	September 8 - 13, 2022	Dissolved Hg	0.0086	0.025	0.343
AUG-DUP-2	22F	filtration	August 19, 2022	September 8 - 13, 2022	Dissolved Hg	0.0154	0.025	0.615
AUG-DI	23F	filtration	August 22, 2022	September 8 - 13, 2022	Dissolved Hg	0.0056	0.025	0.222
AUG-TB	24F	filtration	August 22, 2022	September 8 - 13, 2022	Dissolved Hg	0.0021	0.025	<MRL
MDL						0.0014		
MRL						0.0042		

N/A: Not applicable

Comments: The above listed parameters are currently on the reporting laboratory's scope of accreditation. Values < MRL are solely left to the discretion of the client. Filtered results > Unfiltered results acceptability <20% RPD. MeHg>THg acceptability <35% RPD. On September 2nd, 2022 a small crack was noticed in the bottle of sample BO3-4 (Lab ID 14). The crack was only noticeable after thawing the sample. The remaining volume was transferred to a clean 500 mL bottle. The client was notified on the same day.

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

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Client Name: **Marianna DiMauro**
Environment Department, Meadowbank Division

Biotron WO#: 2022-08-006
Report date: September 21, 2022

Methyl Mercury (MeHg) - Analytical Results

Analytical Method: TM.0812

Sample ID	Lab ID	Prep Code	Date Collected	Analysis Period	Parameter Code	Total MeHg (ng)	Sample Vol (L)	Final Concentration (ng/L)
DS1-63	1U	n/a	August 16, 2022	September 6 - 13, 2022	Total MeHg	0.0017	0.0400	0.044
DS1-64	2U	n/a	August 16, 2022	September 6 - 13, 2022	Total MeHg	0.0008	0.0400	<MRL
INUG-145	3U	n/a	August 14, 2022	September 6 - 13, 2022	Total MeHg	<0.0004	0.0400	<MDL
INUG-144	4U	n/a	August 14, 2022	September 6 - 13, 2022	Total MeHg	<0.0004	0.0400	<MDL
PDL-109	5U	n/a	August 15, 2022	September 6 - 13, 2022	Total MeHg	<0.0004	0.0400	<MDL
PDL-110	6U	n/a	August 15, 2022	September 6 - 13, 2022	Total MeHg	<0.0004	0.0400	<MDL
WTS-73	7U	n/a	August 17, 2022	September 6 - 13, 2022	Total MeHg	0.0250	0.0400	0.626
WTS-74	8U	n/a	August 17, 2022	September 6 - 13, 2022	Total MeHg	0.0270	0.0400	0.676
A44-4	9U	n/a	August 19, 2022	September 6 - 13, 2022	Total MeHg	0.0014	0.0400	0.035
A44-3	10U	n/a	August 19, 2022	September 6 - 13, 2022	Total MeHg	0.0016	0.0400	0.039
MAM-73	11U	n/a	August 17, 2022	September 6 - 13, 2022	Total MeHg	0.0013	0.0400	0.033
MAM-74	12U	n/a	August 17, 2022	September 6 - 13, 2022	Total MeHg	0.0007	0.0400	<MRL
B03-3	13U	n/a	August 18, 2022	September 6 - 13, 2022	Total MeHg	0.0005	0.0400	<MRL
B03-4	14U	n/a	August 18, 2022	September 6 - 13, 2022	Total MeHg	0.0011	0.0400	<MRL
A65-3	15U	n/a	August 19, 2022	September 6 - 13, 2022	Total MeHg	0.0121	0.0400	0.303
A65-4	16U	n/a	August 19, 2022	September 6 - 13, 2022	Total MeHg	0.0130	0.0400	0.326
A20-67	17U	n/a	August 17, 2022	September 6 - 13, 2022	Total MeHg	0.0056	0.0400	0.140
A20-68	18U	n/a	August 17, 2022	September 6 - 13, 2022	Total MeHg	0.0047	0.0400	0.118
A76-65	19U	n/a	August 16, 2022	September 6 - 13, 2022	Total MeHg	0.0005	0.0400	<MRL
A76-66	20U	n/a	August 16, 2022	September 6 - 13, 2022	Total MeHg	0.0010	0.0400	<MRL
AUG-DUP-1	21U	n/a	August 15, 2022	September 6 - 13, 2022	Total MeHg	0.0008	0.0400	<MRL
AUG-DUP-2	22U	n/a	August 19, 2022	September 6 - 13, 2022	Total MeHg	0.0009	0.0400	<MRL
AUG-DI	23U	n/a	August 22, 2022	September 6 - 13, 2022	Total MeHg	<0.0004	0.0400	<MDL
AUG-TB	24U	n/a	August 22, 2022	September 6 - 13, 2022	Total MeHg	<0.0004	0.0400	<MDL
DS1-63	1F	filtration	August 16, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
DS1-64	2F	filtration	August 16, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0004	0.0400	<MRL
INUG-145	3F	filtration	August 14, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
INUG-144	4F	filtration	August 14, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
PDL-109	5F	filtration	August 15, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
PDL-110	6F	filtration	August 15, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
WTS-73	7F	filtration	August 17, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0100	0.0400	0.249
WTS-74	8F	filtration	August 17, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0065	0.0400	0.164
A44-4	9F	filtration	August 19, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
A44-3	10F	filtration	August 19, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
MAM-73	11F	filtration	August 17, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0004	0.0400	<MRL
MAM-74	12F	filtration	August 17, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0006	0.0400	<MRL
B03-3	13F	filtration	August 18, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
B03-4	14F	filtration	August 18, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0010	0.0400	<MRL
A65-3	15F	filtration	August 19, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0035	0.0400	0.088
A65-4	16F	filtration	August 19, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0034	0.0400	0.084
A20-67	17F	filtration	August 17, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0017	0.0400	0.041
A20-68	18F	filtration	August 17, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0018	0.0400	0.044
A76-65	19F	filtration	August 16, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
A76-66	20F	filtration	August 16, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0010	0.0400	<MRL
AUG-DUP-1	21F	filtration	August 15, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0005	0.0400	<MRL
AUG-DUP-2	22F	filtration	August 19, 2022	September 6 - 13, 2022	Dissolved MeHg	0.0005	0.0400	<MRL
AUG-DI	23F	filtration	August 22, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
AUG-TB	24F	filtration	August 22, 2022	September 6 - 13, 2022	Dissolved MeHg	<0.0004	0.0400	<MDL
MDL						0.0004		
MRL						0.0011		

N/A: Not applicable

Comments: The above listed parameters are currently on the reporting laboratory's scope of accreditation. Values < MRL are solely left to the discretion of the client. Filtered results > Unfiltered results acceptability <20% RPD. MeHg>THg acceptability <35% RPD. (1) On September 2nd, 2022 a small crack was noticed in the bottle of sample BO3-4 (Lab ID 14). The crack was only noticeable after thawing the sample. The remaining volume was transferred to a clean 500 mL bottle. The client was notified on the same day. (2) The glass receiver vial for Lab ID 17U broke when the cap+line was being removed, causing some of the sample to be lost and preventing the post-distillation mass to be recorded. The lab assumed a post-distillation volume of 45 mL for sample 17U (based on visual observation when removing the vial from the block), however there may be a difference of up to 2 mL, based on the post-distillation volumes of other samples in the run. The difference in the assumed and actual post-distillation volume is not large enough to significantly change the MeHg concentration in sample 17U (i.e., RPD < 5%), and so the sample was not rerun.

<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, 2017–2022.

Year	Date	Workorder	Collector	Site	Lake	Parameter	Units	Replicate	Sample Depth	Result	Detection Limit
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
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
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, 2017–2022.

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, 2017–2022.

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, 2017–2022.

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, 2017–2022.

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, 2017–2022.

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

APPENDIX B
SEDIMENT DATA

APPENDIX B1

SEDIMENT MERCURY DATABASE

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program, 2017–2022.

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	
2016	WTS-2	WTS	grab	0	5	12-Aug-16	0.068	0.00033	0.0050	0.00005	mg/kg	
2016	WTS-3	WTS	grab	0	5	12-Aug-16	0.082	0.00100	0.0050	0.00005	mg/kg	
2016	WTS-4	WTS	grab	0	5	12-Aug-16	0.068	0.00046	0.0050	0.00005	mg/kg	
2016	WTS-5	WTS	grab	0	5	12-Aug-16	0.093	0.00061	0.0050	0.00005	mg/kg	
2016	PDL-1	PDL	grab	0	5	06-Aug-16	0.010		0.0050		mg/kg	
2016	PDL-2	PDL	grab	0	5	06-Aug-16	0.015		0.0050		mg/kg	
2016	PDL-3	PDL	grab	0	5	06-Aug-16	0.011		0.0050		mg/kg	
2016	PDL-4	PDL	grab	0	5	06-Aug-16	0.012		0.0050		mg/kg	
2016	PDL-5	PDL	grab	0	5	06-Aug-16	0.0098		0.0050		mg/kg	
2016	INUG-1	INUG	grab	0	5	07-Aug-16	0.024		0.0050		mg/kg	
2016	INUG-2	INUG	grab	0	5	07-Aug-16	0.030		0.0050		mg/kg	
2016	INUG-3	INUG	grab	0	5	07-Aug-16	0.023		0.0050		mg/kg	
2016	INUG-4	INUG	grab	0	5	07-Aug-16	0.029		0.0050		mg/kg	
2016	INUG-5	INUG	grab	0	5	07-Aug-16	0.027		0.0050		mg/kg	
2016	MAM-1	MAM	grab	0	5	14-Aug-16	0.094		0.0050		mg/kg	
2016	MAM-2	MAM	grab	0	5	14-Aug-16	0.097		0.0050		mg/kg	
2016	MAM-3	MAM	grab	0	5	14-Aug-16	0.12		0.0050		mg/kg	
2016	MAM-4	MAM	grab	0	5	14-Aug-16	0.10		0.0050		mg/kg	
2016	MAM-5	MAM	grab	0	5	14-Aug-16	0.039		0.0050		mg/kg	
2016	A20-1	A20	grab	0	5	14-Aug-16	0.054		0.0050		mg/kg	
2016	A20-2	A20	grab	0	5	14-Aug-16	0.048		0.0050		mg/kg	
2016	A20-3	A20	grab	0	5	14-Aug-16	0.061		0.0050		mg/kg	
2016	A20-4	A20	grab	0	5	14-Aug-16	0.062		0.0050		mg/kg	
2016	A20-5	A20	grab	0	5	14-Aug-16	0.051		0.0050		mg/kg	
2016	DS1-1	DS1	grab	0	5	16-Aug-16	0.070		0.0050		mg/kg	
2016	DS1-2	DS1	grab	0	5	16-Aug-16	0.068		0.0050		mg/kg	
2016	DS1-3	DS1	grab	0	5	16-Aug-16	0.077		0.0050		mg/kg	
2016	DS1-4	DS1	grab	0	5	16-Aug-16	0.053		0.0050		mg/kg	
2016	DS1-5	DS1	grab	0	5	16-Aug-16	0.059		0.0050		mg/kg	
2016	NEM-1	NEM	grab	0	5	13-Aug-16	0.017		0.0050		mg/kg	
2016	NEM-2	NEM	grab	0	5	13-Aug-16	0.035		0.0050		mg/kg	
2016	NEM-3	NEM	grab	0	5	13-Aug-16	0.030		0.0050		mg/kg	
2016	NEM-4	NEM	grab	0	5	13-Aug-16	0.029		0.0050		mg/kg	
2016	NEM-5	NEM	grab	0	5	13-Aug-16	0.029		0.0050		mg/kg	
2016	A76-1	A76	grab	0	5	15-Aug-16	0.041		0.0050		mg/kg	
2016	A76-2	A76	grab	0	5	15-Aug-16	0.047		0.0050		mg/kg	
2016	A76-3	A76	grab	0	5	15-Aug-16	0.056		0.0050		mg/kg	
2016	A76-4	A76	grab	0	5	15-Aug-16	0.047		0.0050		mg/kg	
2016	A76-5	A76	grab	0	5	15-Aug-16	0.039		0.0050		mg/kg	
2017	WTS-1	WTS	grab	0	5	12-Aug-17	0.089		0.0050		mg/kg	
2017	WTS-2	WTS	grab	0	5	12-Aug-17	0.053		0.0050		mg/kg	
2017	WTS-3	WTS	grab	0	5	12-Aug-17	0.072		0.0050		mg/kg	
2017	WTS-4	WTS	grab	0	5	12-Aug-17	0.066		0.0050		mg/kg	
2017	WTS-5	WTS	grab	0	5	12-Aug-17	0.057		0.0050		mg/kg	
2017	A20-1	A20	grab	0	5	16-Aug-17	0.055		0.0050		mg/kg	
2017	A20-2	A20	grab	0	5	16-Aug-17	0.055		0.0050		mg/kg	
2017	A20-3	A20	grab	0	5	16-Aug-17	0.044		0.0050		mg/kg	
2017	A20-4	A20	grab	0	5	16-Aug-17	0.11		0.0050		mg/kg	
2017	A20-5	A20	grab	0	5	16-Aug-17	0.059		0.0050		mg/kg	
2017	MAM-1	MAM	grab	0	5	17-Aug-17	0.085		0.0050		mg/kg	
2017	MAM-2	MAM	grab	0	5	17-Aug-17	0.088		0.0050		mg/kg	
2017	MAM-3	MAM	grab	0	5	17-Aug-17	0.082		0.0050		mg/kg	
2017	MAM-4	MAM	grab	0	5	17-Aug-17	0.10		0.0050		mg/kg	
2017	MAM-5	MAM	grab	0	5	17-Aug-17	0.090		0.0050		mg/kg	
2017	DS1-1	DS1	grab	0	5	18-Aug-17	0.13		0.0050		mg/kg	
2017	DS1-2	DS1	grab	0	5	18-Aug-17	0.12		0.0050		mg/kg	
2017	DS1-3	DS1	grab	0	5	18-Aug-17	0.13		0.0050		mg/kg	
2017	DS1-4	DS1	grab	0	5	18-Aug-17	0.12		0.0050		mg/kg	
2017	DS1-5	DS1	grab	0	5	18-Aug-17	0.12		0.0050		mg/kg	
2017	PDL-1	PDL	grab	0	5	24-Aug-17	0.014		0.0050		mg/kg	
2017	PDL-2	PDL	grab	0	5	24-Aug-17	0.011		0.0050		mg/kg	
2017	PDL-3	PDL	grab	0	5	24-Aug-17	0.020		0.0050		mg/kg	
2017	PDL-4	PDL	grab	0	5	24-Aug-17	0.012		0.0050		mg/kg	
2017	PDL-5	PDL	grab	0	5	24-Aug-17	0.013		0.0050		mg/kg	
2017	INUG-1	INUG	grab	0	5	25-Aug-17	0.032		0.0050		mg/kg	
2017	INUG-2	INUG	grab	0	5	25-Aug-17	0.024		0.0050		mg/kg	
2017	INUG-3	INUG	grab	0	5	25-Aug-17	0.036		0.0050		mg/kg	
2017	INUG-4	INUG	grab	0	5	25-Aug-17	0.032		0.0050		mg/kg	
2017	INUG-5	INUG	grab	0	5	25-Aug-17	0.035		0.0050		mg/kg	
2017	NEM-1	NEM	grab	0	5	15-Aug-17	0.046		0.0050		mg/kg	
2017	NEM-2	NEM	grab	0	5	15-Aug-17	0.059		0.0050		mg/kg	
2017	NEM-3	NEM	grab	0	5	15-Aug-17	0.061		0.0050		mg/kg	
2017	NEM-4	NEM	grab	0	5	15-Aug-17	0.069		0.0050		mg/kg	
2017	NEM-5	NEM	grab	0	5	15-Aug-17	0.032		0.0050		mg/kg	
2017	WTS-SC-1	WTS	core	0	1.5	15-Aug-17	0.069	0.0010	0.0050	0.00005	mg/kg	
2017	WTS-SC-5	WTS	core	0	1.5	15-Aug-17	0.096	0.0011	0.0050	0.00005	mg/kg	
2017	WTS-SC-9	WTS	core	0	1.5	15-Aug-17	0.081	0.0011	0.0050	0.00005	mg/kg	
2017	WTS-SC-1	WTS	core	0	1.5	15-Aug-17	0.073		0.0050		mg/kg	
2017	WTS-SC-2	WTS	core	0	1.5	14-Aug-17	0.092		0.0050		mg/kg	
2017	WTS-SC-3	WTS	core	0	1.5	14-Aug-17	0.079		0.0050		mg/kg	
2017	WTS-SC-4	WTS	core	0	1.5	15-Aug-17	0.070		0.0050		mg/kg	
2017	WTS-SC-5	WTS	core	0	1.5	15-Aug-17	0.10		0.0050		mg/kg	
2017	WTS-SC-6	WTS	core	0	1.5	15-Aug-17	0.069		0.0050		mg/kg	
2017	WTS-SC-7	WTS	core	0	1.5	15-Aug-17	0.065		0.0050		mg/kg	
2017	WTS-SC-8	WTS	core	0	1.5	15-Aug-17	0.063		0.0050		mg/kg	
2017	WTS-SC-9	WTS	core	0	1.5	15-Aug-17	0.081		0.0050		mg/kg	
2017	WTS-SC-10	WTS	core	0	1.5	15-Aug-17	0.085		0.0050		mg/kg	
2017	NEM-SC-1	NEM	core	0	1.5	15-Aug-17	0.028		0.0050		mg/kg	
2017	NEM-SC-3	NEM	core	0	1.5	15-Aug-17	0.014		0.0050		mg/kg	
2017	NEM-SC-4	NEM	core	0	1.5	15-Aug-17	0.036		0.0050		mg/kg	
2017	NEM-SC-5	NEM	core	0	1.5	15-Aug-17	0.031		0.0050		mg/kg	
2017	NEM-SC-6	NEM	core	0	1.5	15-Aug-17	0.019		0.0050		mg/kg	
2017	NEM-SC-7	NEM	core	0	1.5	15-Aug-17	0.031		0.0050		mg/kg	
2017	NEM-SC-8	NEM	core	0	1.5	15-Aug-17	0.017		0.0050		mg/kg	
2017	NEM-SC-9	NEM	core	0	1.5	15-Aug-17	0.035		0.0050		mg/kg	
2017	NEM-SC-10	NEM	core	0	1.5	15-Aug-17	0.033		0.0050		mg/kg	
2017	NEM-SC-2	NEM	core	0	1.5	15-Aug-17	0.028		0.0050		mg/kg	
2017	A20-SC-1	A20	core	0	1.5	16-Aug-17	0.036		0.0050		mg/kg	
2017	A20-SC-2	A20	core	0	1.5	16-Aug-17	0.058		0.0050		mg/kg	
2017	A20-SC-3	A20	core	0	1.5	16-Aug-17	0.039		0.0050		mg/kg	
2017	A20-SC-4	A20	core	0	1.5	16-Aug-17	0.036		0.0050		mg/kg	
2017	A20-SC-5	A20	core	0	1.5	16-Aug-17	0.047		0.0050		mg/kg	
2017	A20-SC-6	A20	core	0	1.5	16-Aug-17	0.046		0.0050		mg/kg	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program, 2017–2022.

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2017	A20-SC-7	A20	core	0	1.5	16-Aug-17	0.043		0.0050		mg/kg	
2017	A20-SC-8	A20	core	0	1.5	16-Aug-17	0.041		0.0050		mg/kg	
2017	A20-SC-9	A20	core	0	1.5	16-Aug-17	0.041		0.0050		mg/kg	
2017	A20-SC-10	A20	core	0	1.5	16-Aug-17	0.042		0.0050		mg/kg	
2017	MAM-SC-1	MAM	core	0	1.5	17-Aug-17	0.084		0.0050		mg/kg	
2017	MAM-SC-2	MAM	core	0	1.5	17-Aug-17	0.093		0.0050		mg/kg	
2017	MAM-SC-3	MAM	core	0	1.5	17-Aug-17	0.088		0.0050		mg/kg	
2017	MAM-SC-4	MAM	core	0	1.5	17-Aug-17	0.076		0.0050		mg/kg	
2017	MAM-SC-5	MAM	core	0	1.5	17-Aug-17	0.079		0.0050		mg/kg	
2017	MAM-SC-6	MAM	core	0	1.5	17-Aug-17	0.10		0.0050		mg/kg	
2017	MAM-SC-7	MAM	core	0	1.5	17-Aug-17	0.11		0.0050		mg/kg	
2017	MAM-SC-8	MAM	core	0	1.5	17-Aug-17	0.088		0.0050		mg/kg	
2017	MAM-SC-9	MAM	core	0	1.5	17-Aug-17	0.080		0.0050		mg/kg	
2017	MAM-SC-10	MAM	core	0	1.5	17-Aug-17	0.080		0.0050		mg/kg	
2017	A76-SC-1	A76	core	0	1.5	17-Aug-17	0.067		0.0050		mg/kg	
2017	A76-SC-2	A76	core	0	1.5	18-Aug-17	0.043		0.0050		mg/kg	
2017	A76-SC-3	A76	core	0	1.5	18-Aug-17	0.062		0.0050		mg/kg	
2017	A76-SC-4	A76	core	0	1.5	18-Aug-17	0.063		0.0050		mg/kg	
2017	A76-SC-5	A76	core	0	1.5	18-Aug-17	0.039		0.0050		mg/kg	
2017	A76-SC-6	A76	core	0	1.5	18-Aug-17	0.036		0.0050		mg/kg	
2017	A76-SC-7	A76	core	0	1.5	18-Aug-17	0.055		0.0050		mg/kg	
2017	A76-SC-8	A76	core	0	1.5	18-Aug-17	0.049		0.0050		mg/kg	
2017	A76-SC-9	A76	core	0	1.5	18-Aug-17	0.038		0.0050		mg/kg	
2017	A76-SC-10	A76	core	0	1.5	18-Aug-17	0.078		0.0050		mg/kg	
2017	DS1-SC-1	DS1	core	0	1.5	18-Aug-17	0.070		0.0050		mg/kg	
2017	DS1-SC-2	DS1	core	0	1.5	18-Aug-17	0.073		0.0050		mg/kg	
2017	DS1-SC-3	DS1	core	0	1.5	18-Aug-17	0.061		0.0050		mg/kg	
2017	DS1-SC-4	DS1	core	0	1.5	18-Aug-17	0.071		0.0050		mg/kg	
2017	DS1-SC-5	DS1	core	0	1.5	18-Aug-17	0.071		0.0050		mg/kg	
2017	DS1-SC-6	DS1	core	0	1.5	18-Aug-17	0.096		0.0050		mg/kg	
2017	DS1-SC-7	DS1	core	0	1.5	18-Aug-17	0.069		0.0050		mg/kg	
2017	DS1-SC-8	DS1	core	0	1.5	18-Aug-17	0.069		0.0050		mg/kg	
2017	DS1-SC-9	DS1	core	0	1.5	18-Aug-17	0.078		0.0050		mg/kg	
2017	DS1-SC-10	DS1	core	0	1.5	18-Aug-17	0.066		0.0050		mg/kg	
2017	PDL-SC-1	PDL	core	0	1.5	24-Aug-17	0.016		0.0050		mg/kg	
2017	PDL-SC-2	PDL	core	0	1.5	24-Aug-17	0.018		0.0050		mg/kg	
2017	PDL-SC-3	PDL	core	0	1.5	24-Aug-17	0.025		0.0050		mg/kg	
2017	PDL-SC-4	PDL	core	0	1.5	24-Aug-17	0.018		0.0050		mg/kg	
2017	PDL-SC-5	PDL	core	0	1.5	24-Aug-17	0.017		0.0050		mg/kg	
2017	PDL-SC-9	PDL	core	0	1.5	24-Aug-17	0.014		0.0050		mg/kg	
2017	PDL-SC-6	PDL	core	0	1.5	24-Aug-17	0.021		0.0050		mg/kg	
2017	PDL-SC-7	PDL	core	0	1.5	24-Aug-17	0.018		0.0050		mg/kg	
2017	PDL-SC-8	PDL	core	0	1.5	24-Aug-17	0.025		0.0050		mg/kg	
2017	PDL-SC-10	PDL	core	0	1.5	24-Aug-17	0.017		0.0050		mg/kg	
2017	INUG-SC-1	INUG	core	0	1.5	25-Aug-17	0.029		0.0050		mg/kg	
2017	INUG-SC-2	INUG	core	0	1.5	25-Aug-17	0.033		0.0050		mg/kg	
2017	INUG-SC-3	INUG	core	0	1.5	25-Aug-17	0.035		0.0050		mg/kg	
2017	INUG-SC-4	INUG	core	0	1.5	25-Aug-17	0.038		0.0050		mg/kg	
2017	INUG-SC-5	INUG	core	0	1.5	25-Aug-17	0.039		0.0050		mg/kg	
2017	INUG-SC-6	INUG	core	0	1.5	25-Aug-17	0.050		0.0050		mg/kg	
2017	INUG-SC-7	INUG	core	0	1.5	25-Aug-17	0.045		0.0050		mg/kg	
2017	INUG-SC-8	INUG	core	0	1.5	25-Aug-17	0.048		0.0050		mg/kg	
2017	INUG-SC-9	INUG	core	0	1.5	25-Aug-17	0.034		0.0050		mg/kg	
2017	INUG-SC-10	INUG	core	0	1.5	25-Aug-17	0.035		0.0050		mg/kg	
2017	A76-1	A76	grab	0	5	17-Aug-17	0.061		0.0050		mg/kg	
2017	A76-2	A76	grab	0	5	17-Aug-17	0.040		0.0050		mg/kg	
2017	A76-3	A76	grab	0	5	17-Aug-17	0.059		0.0050		mg/kg	
2017	A76-4	A76	grab	0	5	17-Aug-17	0.061		0.0050		mg/kg	
2017	A76-5	A76	grab	0	5	17-Aug-17	0.039		0.0050		mg/kg	
2018	WTS-1	WTS	grab	0	5	13-Aug-18	0.052		0.0050		mg/kg	
2018	WTS-2	WTS	grab	0	5	13-Aug-18	0.056		0.0050		mg/kg	
2018	WTS-3	WTS	grab	0	5	13-Aug-18	0.038		0.0050		mg/kg	
2018	WTS-4	WTS	grab	0	5	13-Aug-18	0.070		0.0050		mg/kg	
2018	WTS-5	WTS	grab	0	5	13-Aug-18	0.057		0.0050		mg/kg	
2018	INUG-1	INUG	grab	0	5	13-Aug-18	0.033		0.0050		mg/kg	
2018	INUG-2	INUG	grab	0	5	13-Aug-18	0.026		0.0050		mg/kg	
2018	INUG-3	INUG	grab	0	5	13-Aug-18	0.025		0.0050		mg/kg	
2018	INUG-4	INUG	grab	0	5	13-Aug-18	0.023		0.0050		mg/kg	
2018	INUG-5	INUG	grab	0	5	13-Aug-18	0.028		0.0050		mg/kg	
2018	PDL-1	PDL	grab	0	5	13-Aug-18	0.0099		0.0050		mg/kg	
2018	PDL-2	PDL	grab	0	5	13-Aug-18	0.011		0.0050		mg/kg	
2018	PDL-3	PDL	grab	0	5	13-Aug-18	0.014		0.0050		mg/kg	
2018	PDL-4	PDL	grab	0	5	13-Aug-18	0.016		0.0050		mg/kg	
2018	MAM-1	MAM	grab	0	5	16-Aug-18	0.019		0.0050		mg/kg	
2018	MAM-2	MAM	grab	0	5	16-Aug-18	0.10		0.0050		mg/kg	
2018	MAM-3	MAM	grab	0	5	16-Aug-18	0.087		0.0050		mg/kg	
2018	MAM-4	MAM	grab	0	5	16-Aug-18	0.10		0.0050		mg/kg	
2018	MAM-5	MAM	grab	0	5	16-Aug-18	0.086		0.0050		mg/kg	
2018	A20-1	A20	grab	0	5	18-Aug-18	0.046		0.0050		mg/kg	
2018	A20-2	A20	grab	0	5	18-Aug-18	0.043		0.0050		mg/kg	
2018	A20-3	A20	grab	0	5	18-Aug-18	0.041		0.0050		mg/kg	
2018	A20-4	A20	grab	0	5	18-Aug-18	0.051		0.0050		mg/kg	
2018	A20-5	A20	grab	0	5	18-Aug-18	0.042		0.0050		mg/kg	
2018	DS1-1	DS1	grab	0	5	19-Aug-18	0.056		0.0050		mg/kg	
2018	DS1-2	DS1	grab	0	5	19-Aug-18	0.050		0.0050		mg/kg	
2018	DS1-3	DS1	grab	0	5	19-Aug-18	0.057		0.0050		mg/kg	
2018	DS1-4	DS1	grab	0	5	19-Aug-18	0.051		0.0050		mg/kg	
2018	DS1-5	DS1	grab	0	5	19-Aug-18	0.050		0.0050		mg/kg	
2018	LK8-1	LK8	grab	0	5	17-Aug-18	0.015		0.0050		mg/kg	
2018	LK8-2	LK8	grab	0	5	17-Aug-18	0.0093		0.0050		mg/kg	
2018	LK8-3	LK8	grab	0	5	17-Aug-18	0.0070		0.0050		mg/kg	
2018	LK8-4	LK8	grab	0	5	17-Aug-18	0.0097		0.0050		mg/kg	
2018	LK8-5	LK8	grab	0	5	17-Aug-18	0.0067		0.0050		mg/kg	
2018	NEM-1	NEM	grab	0	5	17-Aug-18	0.019		0.0050		mg/kg	
2018	NEM-2	NEM	grab	0	5	17-Aug-18	0.012		0.0050		mg/kg	
2018	NEM-3	NEM	grab	0	5	17-Aug-18	0.012		0.0050		mg/kg	
2018	NEM-4	NEM	grab	0	5	17-Aug-18	0.018		0.0050		mg/kg	
2018	NEM-5	NEM	grab	0	5	17-Aug-18	0.025		0.0050		mg/kg	
2018	WTS-1	WTS	core	0	1.5	18-Aug-18	0.086	0.0013	0.0050	0.00005	mg/kg	
2018	WTS-1	WTS	core	5	6	18-Aug-18	0.052	0.00030	0.0050	0.00005	mg/kg	
2018	WTS-1	WTS	core	10	11	18-Aug-18	0.042	0.0014	0.0050	0.00005	mg/kg	
2018	WTS-2	WTS	core	0	1.5	18-Aug-18	0.070	0.00036	0.0050	0.00005	mg/kg	
2018	WTS-2	WTS	core	5	6	18-Aug-18	0.052	0.00029	0.0050	0.00005	mg/kg	
2018	WTS-2	WTS	core	10	11	18-Aug-18	0.049	0.00008	0.0050	0.00005	mg/kg	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program, 2017–2022.

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2018	WTS-3	WTS	core	0	1.5	18-Aug-18	0.070	0.00066	0.0050	0.00005	mg/kg	
2018	WTS-3	WTS	core	5	6	18-Aug-18	0.045	0.00020	0.0050	0.00005	mg/kg	
2018	WTS-3	WTS	core	10	11	18-Aug-18	0.041	0.00030	0.0050	0.00005	mg/kg	
2018	LK8-SC-1	LK8	core	0	1.5	17-Aug-18	0.014		0.0050		mg/kg	
2018	LK8-SC-2	LK8	core	0	1.5	17-Aug-18	0.018		0.0050		mg/kg	
2018	LK8-SC-3	LK8	core	0	1.5	17-Aug-18	0.017		0.0050		mg/kg	
2018	LK8-SC-4	LK8	core	0	1.5	17-Aug-18	0.022		0.0050		mg/kg	
2018	LK8-SC-5	LK8	core	0	1.5	17-Aug-18	0.014		0.0050		mg/kg	
2018	LK8-SC-6	LK8	core	0	1.5	17-Aug-18	0.011		0.0050		mg/kg	
2018	LK8-SC-7	LK8	core	0	1.5	17-Aug-18	0.016		0.0050		mg/kg	
2018	LK8-SC-8	LK8	core	0	1.5	17-Aug-18	0.011		0.0050		mg/kg	
2018	A76-1	A76	grab	0	5	18-Aug-18	0.047		0.0050		mg/kg	
2018	A76-2	A76	grab	0	5	18-Aug-18	0.051		0.0050		mg/kg	
2018	A76-3	A76	grab	0	5	18-Aug-18	0.047		0.0050		mg/kg	
2018	A76-4	A76	grab	0	5	18-Aug-18	0.039		0.0050		mg/kg	
2018	A76-5	A76	grab	0	5	18-Aug-18	0.051		0.0050		mg/kg	
2018	D1-1	D1	grab	0	5	15-Aug-18	0.017		0.0050		mg/kg	
2018	D1-2	D1	grab	0	5	15-Aug-18	0.023		0.0050		mg/kg	
2018	D1-3	D1	grab	0	5	15-Aug-18	0.030		0.0050		mg/kg	
2018	D1-4	D1	grab	0	5	15-Aug-18	0.031		0.0050		mg/kg	
2018	D1-5	D1	grab	0	5	15-Aug-18	0.030		0.0050		mg/kg	
2018	LK1-SC-1	D1	core	0	1.5	14-Aug-18	0.019		0.0050		mg/kg	
2018	LK1-SC-2	D1	core	0	1.5	14-Aug-18	0.023		0.0050		mg/kg	
2018	LK1-SC-3	D1	core	0	1.5	14-Aug-18	0.041		0.0050		mg/kg	
2018	LK1-SC-4	D1	core	0	1.5	15-Aug-18	0.045		0.0050		mg/kg	
2018	LK1-SC-5	D1	core	0	1.5	15-Aug-18	0.036		0.0050		mg/kg	
2018	LK1-SC-6	D1	core	0	1.5	15-Aug-18	0.044		0.0050		mg/kg	
2018	LK1-SC-7	D1	core	0	1.5	15-Aug-18	0.044		0.0050		mg/kg	
2018	LK1-SC-8	D1	core	0	1.5	15-Aug-18	0.035		0.0050		mg/kg	
2018	LK1-SC-9	D1	core	0	1.5	15-Aug-18	0.067		0.0050		mg/kg	
2018	LK1-SC-10	D1	core	0	1.5	15-Aug-18	0.036		0.0050		mg/kg	
2019	WTS-1	WTS	grab	0	5	18-Aug-19	<0.050	0.00023	0.050	0.00005	mg/kg	
2019	WTS-2	WTS	grab	0	5	18-Aug-19	0.051	0.00048	0.050	0.00005	mg/kg	
2019	WTS-3	WTS	grab	0	5	18-Aug-19	0.056	0.00071	0.050	0.00005	mg/kg	
2019	WTS-4	WTS	grab	0	5	18-Aug-19	0.063	0.00072	0.050	0.00005	mg/kg	
2019	WTS-5	WTS	grab	0	5	18-Aug-19	<0.050	<0.000050	0.050	0.00005	mg/kg	
2019	INUG-1	INUG	grab	0	5	15-Aug-19	<0.050	0.00014	0.050	0.00005	mg/kg	
2019	INUG-2	INUG	grab	0	5	15-Aug-19	<0.050	0.00012	0.050	0.00005	mg/kg	
2019	INUG-3	INUG	grab	0	5	15-Aug-19	<0.050	0.00016	0.050	0.00005	mg/kg	
2019	INUG-4	INUG	grab	0	5	15-Aug-19	<0.050	0.00015	0.050	0.00005	mg/kg	
2019	INUG-5	INUG	grab	0	5	15-Aug-19	<0.050	0.00030	0.050	0.00005	mg/kg	
2019	PDL-1	PDL	grab	0	5	14-Aug-19	<0.050	0.00013	0.050	0.00005	mg/kg	
2019	PDL-2	PDL	grab	0	5	14-Aug-19	<0.050	0.00017	0.050	0.00005	mg/kg	
2019	PDL-3	PDL	grab	0	5	14-Aug-19	<0.050	0.00011	0.050	0.00005	mg/kg	
2019	PDL-4	PDL	grab	0	5	14-Aug-19	<0.050	<0.000050	0.050	0.00005	mg/kg	
2019	PDL-5	PDL	grab	0	5	14-Aug-19	<0.050	0.00007	0.050	0.00005	mg/kg	
2019	MAM-1	MAM	grab	0	5	19-Aug-19	0.081	0.00064	0.050	0.00005	mg/kg	
2019	MAM-2	MAM	grab	0	5	19-Aug-19	0.067	0.00066	0.050	0.00005	mg/kg	
2019	MAM-3	MAM	grab	0	5	19-Aug-19	0.078	0.0010	0.050	0.00005	mg/kg	
2019	MAM-4	MAM	grab	0	5	19-Aug-19	0.068	0.00050	0.050	0.00005	mg/kg	
2019	MAM-5	MAM	grab	0	5	19-Aug-19	0.093	0.0013	0.050	0.00005	mg/kg	
2019	A20-1	A20	grab	0	5	16-Aug-19	<0.050	0.00030	0.050	0.00005	mg/kg	
2019	A20-2	A20	grab	0	5	16-Aug-19	<0.050	0.00011	0.050	0.00005	mg/kg	
2019	A20-3	A20	grab	0	5	16-Aug-19	<0.050	0.00046	0.050	0.00005	mg/kg	
2019	A20-4	A20	grab	0	5	16-Aug-19	<0.050	0.00048	0.050	0.00005	mg/kg	
2019	A20-5	A20	grab	0	5	16-Aug-19	<0.050	0.0012	0.050	0.00005	mg/kg	
2019	DS1-1	DS1	grab	0	5	17-Aug-19	0.053	0.00008	0.050	0.00005	mg/kg	
2019	DS1-2	DS1	grab	0	5	17-Aug-19	<0.050	0.00016	0.050	0.00005	mg/kg	
2019	DS1-3	DS1	grab	0	5	17-Aug-19	0.064	0.00028	0.050	0.00005	mg/kg	
2019	DS1-4	DS1	grab	0	5	17-Aug-19	<0.050	<0.000050	0.050	0.00005	mg/kg	
2019	DS1-5	DS1	grab	0	5	17-Aug-19	0.064	0.00033	0.050	0.00005	mg/kg	
2019	LK8-1	LK8	grab	0	5	16-Aug-19	<0.050		0.050		mg/kg	
2019	LK8-2	LK8	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2019	LK8-3	LK8	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2019	LK8-4	LK8	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2019	LK8-5	LK8	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2019	A76-1	A76	grab	0	5	15-Aug-19	<0.050		0.050		mg/kg	
2019	A76-2	A76	grab	0	5	15-Aug-19	<0.050		0.050		mg/kg	
2019	A76-3	A76	grab	0	5	15-Aug-19	<0.050		0.050		mg/kg	
2019	A76-4	A76	grab	0	5	15-Aug-19	<0.050		0.050		mg/kg	
2019	A76-5	A76	grab	0	5	15-Aug-19	<0.050		0.050		mg/kg	
2019	NEM-1	NEM	grab	0	5	18-Aug-19	<0.050		0.050		mg/kg	
2019	NEM-2	NEM	grab	0	5	18-Aug-19	<0.050		0.050		mg/kg	
2019	NEM-3	NEM	grab	0	5	18-Aug-19	<0.050		0.050		mg/kg	
2019	NEM-4	NEM	grab	0	5	18-Aug-19	<0.050		0.050		mg/kg	
2019	NEM-5	NEM	grab	0	5	18-Aug-19	<0.050		0.050		mg/kg	
2019	LK1-1	D1	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2019	LK1-2	D1	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2019	LK1-3	D1	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2019	LK1-4	D1	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2019	LK1-5	D1	grab	0	5	17-Aug-19	<0.050		0.050		mg/kg	
2020	PDL-SC-1	PDL	core	0	1.5	22-Aug-20	0.012	0.00006	0.0050	0.00005	mg/kg	
2020	PDL-SC-2	PDL	core	0	1.5	22-Aug-20	0.014	0.00012	0.0050	0.00005	mg/kg	
2020	PDL-SC-3	PDL	core	0	1.5	22-Aug-20	0.011	0.00006	0.0050	0.00005	mg/kg	
2020	PDL-SC-4	PDL	core	0	1.5	22-Aug-20	0.016	0.00048	0.0050	0.00005	mg/kg	
2020	PDL-SC-5	PDL	core	0	1.5	22-Aug-20	0.0090	<0.00005	0.0050	0.00005	mg/kg	
2020	PDL-SC-6	PDL	core	0	1.5	22-Aug-20	0.020	0.00014	0.0050	0.00005	mg/kg	
2020	PDL-SC-7	PDL	core	0	1.5	22-Aug-20	0.010	0.00006	0.0050	0.00005	mg/kg	
2020	PDL-SC-8	PDL	core	0	1.5	22-Aug-20	0.011	<0.00005	0.0050	0.00005	mg/kg	
2020	PDL-SC-9	PDL	core	0	1.5	22-Aug-20	0.0097	<0.00005	0.0050	0.00005	mg/kg	
2020	PDL-SC-10	PDL	core	0	1.5	22-Aug-20	0.014	0.00015	0.0050	0.00005	mg/kg	
2020	INUG-SC-1	INUG	core	0	1.5	21-Aug-20	0.031	0.00012	0.0050	0.00005	mg/kg	
2020	INUG-SC-2	INUG	core	0	1.5	21-Aug-20	0.023	0.00008	0.0050	0.00005	mg/kg	
2020	INUG-SC-3	INUG	core	0	1.5	21-Aug-20	0.026	0.00018	0.0050	0.00005	mg/kg	
2020	INUG-SC-4	INUG	core	0	1.5	21-Aug-20	0.028	0.00013	0.0050	0.00005	mg/kg	
2020	INUG-SC-5	INUG	core	0	1.5	21-Aug-20	0.027	0.00006	0.0050	0.00005	mg/kg	
2020	INUG-SC-6	INUG	core	0	1.5	21-Aug-20	0.025	0.00010	0.0050	0.00005	mg/kg	
2020	INUG-SC-7	INUG	core	0	1.5	21-Aug-20	0.032	0.00022	0.0050	0.00005	mg/kg	
2020	INUG-SC-8	INUG	core	0	1.5	21-Aug-20	0.031	0.00013	0.0050	0.00005	mg/kg	
2020	INUG-SC-9	INUG	core	0	1.5	21-Aug-20	0.031	0.00015	0.0050	0.00005	mg/kg	
2020	INUG-SC-10	INUG	core	0	1.5	21-Aug-20	0.028	0.00008	0.0050	0.00005	mg/kg	
2020	LK8-SC-1	LK8	core	0	1.5	28-Aug-20	0.0058	0.00031	0.0050	0.00005	mg/kg	
2020	LK8-SC-2	LK8	core	0	1.5	28-Aug-20	0.011	0.00022	0.0050	0.00005	mg/kg	
2020	LK8-SC-3	LK8	core	0	1.5	28-Aug-20	0.018	0.00017	0.0050	0.00005	mg/kg	

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program, 2017–2022.

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2020	LK8-SC-4	LK8	core	0	1.5	28-Aug-20	0.015	0.00008	0.0050	0.00005	mg/kg	
2020	LK8-SC-5	LK8	core	0	1.5	28-Aug-20	0.017	0.00036	0.0050	0.00005	mg/kg	
2020	LK8-SC-6	LK8	core	0	1.5	28-Aug-20	0.0070	0.00006	0.0050	0.00005	mg/kg	
2020	LK8-SC-7	LK8	core	0	1.5	28-Aug-20	0.0092	0.00009	0.0050	0.00005	mg/kg	
2020	LK8-SC-8	LK8	core	0	1.5	28-Aug-20	0.012	0.00010	0.0050	0.00005	mg/kg	
2020	LK8-SC-9	LK8	core	0	1.5	28-Aug-20	0.011	0.00013	0.0050	0.00005	mg/kg	
2020	LK8-SC-10	LK8	core	0	1.5	28-Aug-20	0.012	<0.00005	0.0050	0.00005	mg/kg	
2020	B3-SC-1	B3	core	0	1.5	22-Aug-20	0.034	0.00012	0.0050	0.00005	mg/kg	
2020	B3-SC-2	B3	core	0	1.5	30-Aug-20	0.043	0.00015	0.0050	0.00005	mg/kg	
2020	B3-SC-3	B3	core	0	1.5	30-Aug-20	0.032	<0.000102	0.0050	0.00005	mg/kg	
2020	B3-SC-4	B3	core	0	1.5	30-Aug-20	0.029	0.00012	0.0050	0.00005	mg/kg	
2020	B3-SC-5	B3	core	0	1.5	30-Aug-20	0.032	0.00011	0.0050	0.00005	mg/kg	
2020	LK1-SC-1	D1	core	0	1.5	19-Aug-20	0.027		0.0050		mg/kg	
2020	LK1-SC-2	D1	core	0	1.5	19-Aug-20	0.021		0.0050		mg/kg	
2020	LK1-SC-3	D1	core	0	1.5	19-Aug-20	0.020		0.0050		mg/kg	
2020	LK1-SC-4	D1	core	0	1.5	19-Aug-20	0.022		0.0050		mg/kg	
2020	LK1-SC-5	D1	core	0	1.5	19-Aug-20	0.025		0.0050		mg/kg	
2020	LK1-SC-6	D1	core	0	1.5	19-Aug-20	0.024		0.0050		mg/kg	
2020	LK1-SC-7	D1	core	0	1.5	19-Aug-20	0.028		0.0050		mg/kg	
2020	LK1-SC-8	D1	core	0	1.5	19-Aug-20	0.029		0.0050		mg/kg	
2020	LK1-SC-9	D1	core	0	1.5	19-Aug-20	0.013		0.0050		mg/kg	
2020	LK1-SC-10	D1	core	0	1.5	19-Aug-20	0.017		0.0050		mg/kg	
2020	DS1-SC-1	DS1	core	0	1.5	21-Aug-20	0.032	0.00009	0.0050	0.00005	mg/kg	
2020	DS1-SC-2	DS1	core	0	1.5	21-Aug-20	0.030	0.00010	0.0050	0.00005	mg/kg	
2020	DS1-SC-3	DS1	core	0	1.5	21-Aug-20	0.039	<0.00005	0.0050	0.00005	mg/kg	
2020	DS1-SC-4	DS1	core	0	1.5	21-Aug-20	0.038	<0.00005	0.0050	0.00005	mg/kg	
2020	DS1-SC-5	DS1	core	0	1.5	21-Aug-20	0.043	<0.00005	0.0050	0.00005	mg/kg	
2020	DS1-SC-6	DS1	core	0	1.5	21-Aug-20	0.048	0.00014	0.0050	0.00005	mg/kg	
2020	DS1-SC-7	DS1	core	0	1.5	21-Aug-20	0.046	0.00007	0.0050	0.00005	mg/kg	
2020	DS1-SC-8	DS1	core	0	1.5	21-Aug-20	0.042	<0.00005	0.0050	0.00005	mg/kg	
2020	DS1-SC-9	DS1	core	0	1.5	21-Aug-20	0.053	<0.00005	0.0050	0.00005	mg/kg	
2020	DS1-SC-10	DS1	core	0	1.5	21-Aug-20	0.074	0.00018	0.0050	0.00005	mg/kg	
2020	A20-SC-1	A20	core	0	1.5	21-Aug-20	0.040	0.00022	0.0050	0.00005	mg/kg	
2020	A20-SC-2	A20	core	0	1.5	21-Aug-20	0.041	0.00015	0.0050	0.00005	mg/kg	
2020	A20-SC-3	A20	core	0	1.5	21-Aug-20	0.042	0.00018	0.0050	0.00005	mg/kg	
2020	A20-SC-4	A20	core	0	1.5	21-Aug-20	0.045	0.00026	0.0050	0.00005	mg/kg	
2020	A20-SC-5	A20	core	0	1.5	21-Aug-20	0.049	0.00049	0.0050	0.00005	mg/kg	
2020	A20-SC-6	A20	core	0	1.5	21-Aug-20	0.044	0.00037	0.0050	0.00005	mg/kg	
2020	A20-SC-7	A20	core	0	1.5	21-Aug-20	0.031	0.00006	0.0050	0.00005	mg/kg	
2020	A20-SC-8	A20	core	0	1.5	21-Aug-20	0.031	0.00007	0.0050	0.00005	mg/kg	
2020	A20-SC-9	A20	core	0	1.5	21-Aug-20	0.044	0.00078	0.0050	0.00005	mg/kg	
2020	A20-SC-10	A20	core	0	1.5	21-Aug-20	0.050	0.00020	0.0050	0.00005	mg/kg	
2020	NEM-SC-1	NEM	core	0	1.5	21-Aug-20	0.031		0.0050		mg/kg	
2020	NEM-SC-2	NEM	core	0	1.5	21-Aug-20	0.028		0.0050		mg/kg	
2020	NEM-SC-3	NEM	core	0	1.5	21-Aug-20	0.036		0.0050		mg/kg	
2020	NEM-SC-4	NEM	core	0	1.5	21-Aug-20	0.030		0.0050		mg/kg	
2020	NEM-SC-5	NEM	core	0	1.5	21-Aug-20	0.025		0.0050		mg/kg	
2020	NEM-SC-6	NEM	core	0	1.5	21-Aug-20	0.032		0.0050		mg/kg	
2020	NEM-SC-7	NEM	core	0	1.5	21-Aug-20	0.026		0.0050		mg/kg	
2020	NEM-SC-8	NEM	core	0	1.5	21-Aug-20	0.023		0.0050		mg/kg	
2020	NEM-SC-9	NEM	core	0	1.5	21-Aug-20	0.023		0.0050		mg/kg	
2020	NEM-SC-10	NEM	core	0	1.5	21-Aug-20	0.018		0.0050		mg/kg	
2020	WTS-SC-1	WTS	core	0	1.5	21-Aug-20	0.063	0.00013	0.0050	0.00005	mg/kg	
2020	WTS-SC-2	WTS	core	0	1.5	21-Aug-20	0.058	0.00033	0.0050	0.00005	mg/kg	
2020	WTS-SC-3	WTS	core	0	1.5	21-Aug-20	0.049	0.00020	0.0050	0.00005	mg/kg	
2020	WTS-SC-4	WTS	core	0	1.5	21-Aug-20	0.051	0.00071	0.0050	0.00005	mg/kg	
2020	WTS-SC-5	WTS	core	0	1.5	21-Aug-20	0.058	0.0015	0.0050	0.00005	mg/kg	
2020	WTS-SC-6	WTS	core	0	1.5	21-Aug-20	0.067	0.0015	0.0050	0.00005	mg/kg	
2020	WTS-SC-7	WTS	core	0	1.5	21-Aug-20	0.074	0.00080	0.0050	0.00005	mg/kg	
2020	WTS-SC-8	WTS	core	0	1.5	21-Aug-20	0.068	0.00091	0.0050	0.00005	mg/kg	
2020	WTS-SC-9	WTS	core	0	1.5	21-Aug-20	0.053	0.00069	0.0050	0.00005	mg/kg	
2020	WTS-SC-10	WTS	core	0	1.5	21-Aug-20	0.061	0.00054	0.0050	0.00005	mg/kg	
2020	MAM-SC-1	MAM	core	0	1.5	21-Aug-20	0.089	0.00080	0.0050	0.00005	mg/kg	
2020	MAM-SC-2	MAM	core	0	1.5	21-Aug-20	0.091	0.00092	0.0050	0.00005	mg/kg	
2020	MAM-SC-3	MAM	core	0	1.5	21-Aug-20	0.084	0.00025	0.0050	0.00005	mg/kg	
2020	MAM-SC-4	MAM	core	0	1.5	21-Aug-20	0.088	0.00067	0.0050	0.00005	mg/kg	
2020	MAM-SC-5	MAM	core	0	1.5	21-Aug-20	0.080	0.00053	0.0050	0.00005	mg/kg	
2020	MAM-SC-6	MAM	core	0	1.5	21-Aug-20	0.091	0.00063	0.0050	0.00005	mg/kg	
2020	MAM-SC-7	MAM	core	0	1.5	21-Aug-20	0.080	0.00053	0.0050	0.00005	mg/kg	
2020	MAM-SC-8	MAM	core	0	1.5	21-Aug-20	0.092	0.00063	0.0050	0.00005	mg/kg	
2020	MAM-SC-9	MAM	core	0	1.5	21-Aug-20	0.083	0.00034	0.0050	0.00005	mg/kg	
2020	MAM-SC-10	MAM	core	0	1.5	21-Aug-20	0.091	0.00037	0.0050	0.00005	mg/kg	
2020	A76-SC-1	A76	core	0	1.5	21-Aug-20	0.055	0.00031	0.0050	0.00005	mg/kg	
2020	A76-SC-2	A76	core	0	1.5	21-Aug-20	0.045	0.00035	0.0050	0.00005	mg/kg	
2020	A76-SC-3	A76	core	0	1.5	21-Aug-20	0.049	0.00041	0.0050	0.00005	mg/kg	
2020	A76-SC-4	A76	core	0	1.5	21-Aug-20	0.035	0.00017	0.0050	0.00005	mg/kg	
2020	A76-SC-5	A76	core	0	1.5	21-Aug-20	0.034	0.00018	0.0050	0.00005	mg/kg	
2020	A76-SC-6	A76	core	0	1.5	21-Aug-20	0.034	0.00025	0.0050	0.00005	mg/kg	
2020	A76-SC-7	A76	core	0	1.5	21-Aug-20	0.044	0.00020	0.0050	0.00005	mg/kg	
2020	A76-SC-8	A76	core	0	1.5	21-Aug-20	0.043	0.00023	0.0050	0.00005	mg/kg	
2020	A76-SC-9	A76	core	0	1.5	21-Aug-20	0.039	0.00012	0.0050	0.00005	mg/kg	
2020	A76-SC-10	A76	core	0	1.5	21-Aug-20	0.039	0.00023	0.0050	0.00005	mg/kg	
2021	WTS-1	WTS	grab	0	5	05-Aug-21	0.045	0.0012	0.0050	0.00005	mg/kg	
2021	WTS-2	WTS	grab	0	5	05-Aug-21	0.043	0.00064	0.0050	0.00005	mg/kg	
2021	WTS-3	WTS	grab	0	5	05-Aug-21	0.064	0.00069	0.0050	0.00005	mg/kg	
2021	WTS-4	WTS	grab	0	5	05-Aug-21	0.074	0.00063	0.0050	0.00005	mg/kg	
2021	WTS-5	WTS	grab	0	5	05-Aug-21	0.061	0.00070	0.0050	0.00005	mg/kg	
2021	A76-1	A76	grab	0	5	07-Aug-21	0.063	0.00059	0.0050	0.00010	mg/kg	
2021	A76-2	A76	grab	0	5	07-Aug-21	0.035	0.00038	0.0050	0.00005	mg/kg	
2021	A76-3	A76	grab	0	5	07-Aug-21	0.048	0.00052	0.0050	0.00005	mg/kg	
2021	A76-4	A76	grab	0	5	07-Aug-21	0.053	0.00045	0.0050	0.00010	mg/kg	
2021	A76-5	A76	grab	0	5	07-Aug-21	0.048	0.00048	0.0050	0.00010	mg/kg	
2021	DUP-1	DUP-1	grab	0	5	06-Aug-21	0.045	0.0011	0.0050	0.00005	mg/kg	
2021	DUP-3	DUP-3	grab	0	5	06-Aug-21	0.066	0.00040	0.0050	0.00010	mg/kg	
2022	INUG-1	INUG	grab	0	5	14-Aug-22	0.031	0.00047	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	INUG-2	INUG	grab	0	5	14-Aug-22	0.028	0.00008	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	INUG-3	INUG	grab	0	5	14-Aug-22	0.024	<0.00005	0.050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	INUG-4	INUG	grab	0	5	14-Aug-22	0.030	0.00010	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	INUG-5	INUG	grab	0	5	14-Aug-22	0.026	0.00007	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	PDL-1	PDL	grab	0	5	15-Aug-22	0.017	0.00015	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	PDL-2	PDL	grab	0	5	15-Aug-22	0.017	0.00021	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	PDL-3	PDL	grab	0	5	15-Aug-22	0.018	0.00006	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	PDL-4	PDL	grab	0	5	15-Aug-22	0.013	0.00008	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	PDL-5	PDL	grab	0	5	15-Aug-22	0.010	0.00005	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample

Table B1-1. Total and methylmercury concentrations in sediment samples collected for the Mercury Monitoring Program, 2017–2022.

Year	Sample ID	Lake	Method	Depth Start (cm)	Depth End (cm)	Date	THg	MeHg	THg Detection Limit	MeHg Detection Limit	Hg Units	Notes
2022	MAM-1	MAM	grab	0	5	15-Aug-22	0.078	0.016	0.0050	0.00005	mg/kg	
2022	MAM-2	MAM	grab	0	5	15-Aug-22	0.072	0.0080	0.0050	0.00005	mg/kg	
2022	MAM-3	MAM	grab	0	5	15-Aug-22	0.071	0.012	0.0050	0.00005	mg/kg	
2022	MAM-4	MAM	grab	0	5	15-Aug-22	0.063	0.0039	0.0050	0.00005	mg/kg	
2022	MAM-5	MAM	grab	0	5	15-Aug-22	0.078	0.0032	0.0050	0.00005	mg/kg	
2022	A20-1	A20	grab	0	5	17-Aug-22	0.050	0.0020	0.0050	0.00005	mg/kg	
2022	A20-2	A20	grab	0	5	17-Aug-22	0.039	0.00074	0.0050	0.00005	mg/kg	
2022	A20-3	A20	grab	0	5	17-Aug-22	0.051	0.0041	0.0050	0.00005	mg/kg	
2022	A20-4	A20	grab	0	5	17-Aug-22	0.042	0.0014	0.0050	0.00005	mg/kg	
2022	A20-5	A20	grab	0	5	17-Aug-22	0.048	0.0039	0.0050	0.00005	mg/kg	
2022	DS1-1	DS1	grab	0	5	16-Aug-22	0.060	<0.00005	0.050	0.00005	mg/kg	
2022	DS1-2	DS1	grab	0	5	16-Aug-22	0.068	<0.00005	0.050	0.00005	mg/kg	
2022	DS1-3	DS1	grab	0	5	16-Aug-22	0.063	0.0018	0.0050	0.00005	mg/kg	
2022	DS1-4	DS1	grab	0	5	16-Aug-22	0.067	0.00008	0.0050	0.00005	mg/kg	
2022	DS1-5	DS1	grab	0	5	16-Aug-22	0.059	<0.00005	0.0050	0.00005	mg/kg	
2022	A76-1	A76	grab	0	5	16-Aug-22	0.054	0.00012	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	A76-2	A76	grab	0	5	16-Aug-22	0.037	0.00012	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	A76-3	A76	grab	0	5	16-Aug-22	0.043	<0.00005	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	A76-4	A76	grab	0	5	16-Aug-22	0.052	0.00051	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	A76-5	A76	grab	0	5	16-Aug-22	0.052	0.00024	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	NEM-1	NEM	grab	0	5	15-Aug-22	0.026	-	0.0050	0.00005	mg/kg	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	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	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	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	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	
2022	WTS-2	WTS	grab	0	5	14-Aug-22	0.037	0.0020	0.0050	0.00005	mg/kg	
2022	WTS-3	WTS	grab	0	5	14-Aug-22	0.062	0.0069	0.0050	0.00005	mg/kg	
2022	WTS-4	WTS	grab	0	5	14-Aug-22	0.071	0.0016	0.0050	0.00005	mg/kg	
2022	WTS-5	WTS	grab	0	5	14-Aug-22	0.052	0.00095	0.0050	0.00005	mg/kg	
2022	B3-1	B3	grab	0	5	18-Aug-22	0.039	0.0013	0.0050	0.00005	mg/kg	
2022	B3-2	B3	grab	0	5	18-Aug-22	0.036	0.00097	0.0050	0.00005	mg/kg	
2022	B3-3	B3	grab	0	5	18-Aug-22	0.029	0.00073	0.0050	0.00005	mg/kg	
2022	B3-4	B3	grab	0	5	18-Aug-22	0.031	0.00048	0.0050	0.00005	mg/kg	
2022	B3-5	B3	grab	0	5	18-Aug-22	0.035	0.0022	0.0050	0.00005	mg/kg	
2022	DUP-3	DUP-3	grab	0	5	13-Aug-22	0.027	0.00012	0.0050	0.00005	mg/kg	Moisture, TOC and PSA not calculated due to high moisture content in sample
2022	DUP-5	DUP-5	grab	0	5	15-Aug-22	0.078	0.00023	0.0050	0.00005	mg/kg	
2022	DUP-6	DUP-6	grab	0	5	15-Aug-22	0.020	-	0.0050	0.00005	mg/kg	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	
2022	WTS-INUN-1	WTS	inundation	7	8	21-Aug-22	0.12	0.017	0.0050	0.00005	mg/kg	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	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	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	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	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	Inundation samples; collected by spoon

APPENDIX C
FISH DATA

APPENDIX C1

SMALL-BODIED FISH MERCURY DATABASE

Table C1-1. Small-bodied fish samples collected for the Mercury Monitoring Program, 2018–2021.

Notes: NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin

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	10.32	
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, 2018–2021.

Notes: NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin

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	10.13	
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, 2018–2021.

Notes: NSSB = Ninespine Stickleback; SLSC = Slimy Sculpin

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	10.91	
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	10.82	
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	