EASTERN ATHABASCA REGIONAL MONITORING PROGRAM

2018/2019 COMMUNITY REPORT

FINAL REPORT

April 2020

Acknowledgments

The Eastern Athabasca Regional Monitoring Program (EARMP) is conducted in partnership with the Government of Saskatchewan, The Canadian Nuclear Safety Commission, and industry partners Cameco Corporation and Orano Canada Inc.

The EARMP steering committee would like to thank the Athabasca residents and communities who have donated their time and traditional foods over the years and for their continued support for the program. Community member participation and local knowledge are essential to the success of the program.

All Dene translations were provided by Allan Adam of Fond du Lac Denesuline First Nation.

For more information on the program and additional reports please visit us at www.earmp.com

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Executive Summary

The Eastern Athabasca Regional Monitoring Program (EARMP) was established in 2011 under the Province of Saskatchewan's Boreal Watershed Initiative and consists of two components. The EARMP community program monitors the safety of traditionally harvested country foods by collecting and testing representative water, fish, berry, and mammal tissue samples from the seven communities located in the region. Harvesting and consuming traditional country foods are an important part of the culture in northern Saskatchewan which contributes to an overall healthy lifestyle through physical activity and healthy eating. The 2018 program continues to show that country foods are safe for consumption with chemical profiles for water, fish, berry, and mammal tissue samples similar to natural background.

Ku yutthęn nęnę nąne hoʔá Eastern Athabasca Regıonal Monıtorıng Program (EARMP) nįh k'e ʔası net'ı hats'edí sı ʔası due nodher dé bet'a hulʔá ha 2011 nęnę k'e nųt'ą nı Saskatchewan yutthı dechęn yaghé Watershed hulyé gharé honet'ı sı nake ʔası honet'ı ha. Ku ʔedırı EARMP dene t'ok'e naradé sı ʔası honet'ı k'ı t'a dene nįh hots'ı nakoreldé net'ı ha ʔası beyedhí ha honet'ı ha hotthe ts'ęn tth'ú, tu hu, łue hu, jıe chu tech'adıé tthen danełʔįh łesdı haíyorįla dene naradé hots'ı. Ku tech'adıe t'a bekozełʔįh chu t'a beghą sehets'elyı dene ch'alanıe ha nezų sı t'ą ʔedısı naradé sı yet'a sughuá ʔehená sı ʔeyı ts'ená dé. Ku 2018 nęnę k'e ʔedırı ʔası hok'enats'edí k'ı nǫ́nįsı hots'ı ber nezų sı ʔası beyé hųlı hılé sı tu ye hu, jıe chu łue chu tech'adıe ye t'a honet'ı sı honezí benaré naradé sı ʔełełt'e sí.

INTRODUCTION

Background

The Eastern Athabasca Regional Monitoring Program (EARMP) is a collaborative industry-government partnership, long-term environmental monitoring program established in 2011 under the Province of Saskatchewan's Boreal Watershed Initiative. The program is supported by contributions from several stakeholders including the Saskatchewan Ministry of Environment, the Canadian Nuclear Safety Commission, Cameco Corporation (Cameco), and Orano Canada Inc. (Orano). One of the primary goals of the Boreal Watershed Initiative was to assess the ecological integrity of Saskatchewan's northern watersheds to address potential environmental concerns, and to identify sustainable management practices in the region. The EARMP was designed to identify potential cumulative effects downstream of uranium mining and milling operations in the Eastern Athabasca region of northern Saskatchewan (Figure 1).

Figure 1 Study location.

Cumulative effects are defined as impacts on the environment that result from the incremental impact of an action when added to other past, present, and foreseeable future actions (Joint Panel 1992). Cumulative effects might occur when projects overlap spatially, such as when two watersheds exposed to uranium mining and milling activities converge. Cumulative effects may also occur temporally if contaminants are emitted into the environment over extended periods of time. The EARMP was developed to establish baseline conditions and facilitate the examination of spatial and temporal changes over the long term.

This program is intended to augment the extensive environmental monitoring completed

near each uranium mining and milling operation in northern Saskatchewan, which are regulated by both federal and provincial agencies including the Canadian Nuclear Safety Commission, the Saskatchewan Ministry of Environment, and Environment and Climate Change Canada. In addition, community sampling has occurred through the Athabasca Working Group Environmental Monitoring Program for 18 years (2000-2017) and continues today as the Community-Based Environmental Monitoring Program under the Ya'Thi Néné Collaboration Agreement. The EARMP is designed to complement these monitoring programs and allows a more comprehensive evaluation of potential cumulative effects from industry in northern Saskatchewan. A full description of the EARMP community program study design is provided in Appendix A.

The EARMP framework includes two programs: a community program and a technical program. The technical monitoring program was established to monitor potential long-term changes in the aquatic environment far-downstream of uranium mining and milling operations in the Eastern Athabasca region. Information from the technical monitoring program is presented in a separate report and sampling was last completed in 2015 (www.earmp.com). The community program monitors the safety of traditionally harvested country foods by collecting and testing water, fish, berry, and mammal tissue samples from the seven communities located in the Athabasca region. The community program results for the last eight years (2011-2018) can be viewed on the EARMP website (www.earmp.com). The objective of this document is to present a summary of the results of the community program in 2018/2019.

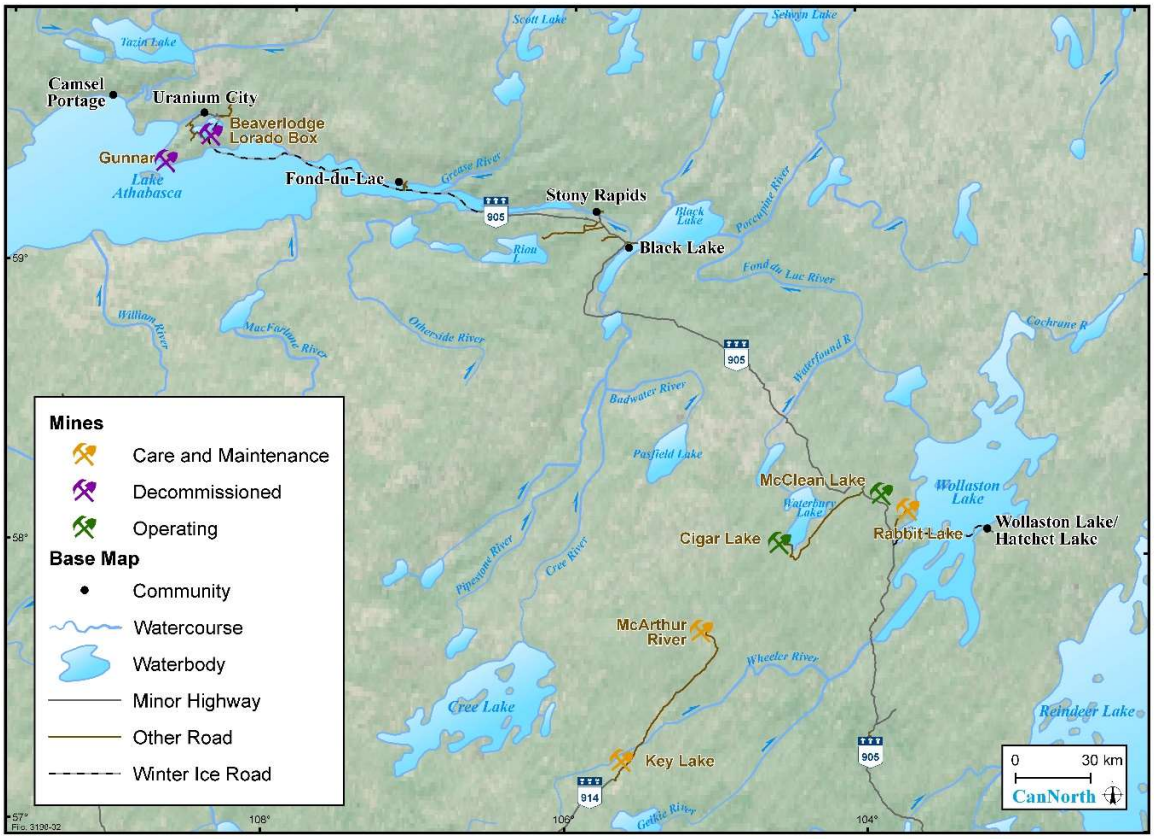
Cigar Lake (above) and McArthur River (below) are two uranium mines located in northern Saskatchewan.

Uranium Mining and Milling Operations in the Region

Currently there is one active uranium mine (Cigar Lake) and one active uranium mill (McClean Lake) in the Eastern Athabasca region. Additional mine and mill operations in the region (i.e., Key Lake, McArthur River, and Rabbit Lake) have been placed into "care and maintenance "due to market forces. In addition, other closed, decommissioned, and/or abandoned uranium mine sites are located in the region and near the community of Uranium City. The locations of these uranium mining and milling operations are presented in *Figure 2*. Extensive monitoring within the local study areas of each of the uranium mines/mills generally includes testing the air, soil, vegetation, water, sediment, benthic invertebrates, and fish (ARCADIS 2015; AREVA 2016; CanNorth 2016, 2018a; EcoMetrix 2015a, 2015b).

These monitoring programs are designed specifically for each mine and are a requirement under the provincial operating licence and the CNSC Licenses as documented in the facilities Licence Condition Handbook

Figure 2 Study area overview.



Communities in the Region

There are seven communities in the region, including Black Lake Denesuline First Nation, Fond du Lac Denesuline First Nation, Stony Rapids, Wollaston Lake, Hatchet Lake Denesuline First Nation, Camsell Portage, and Uranium City (

Figure 2). For the EARMP community program, the communities of Wollaston Lake and Hatchet Lake Denesuline First Nation were assessed together for a total of six study areas.

EARMP Community Program Objectives

The EARMP community program was developed to address potential concerns about the safety of traditional foods that community members routinely consume. Traditional foods can be defined as "traditional native foods that are obtained from the land, such as wild game, birds, fish, and berries by local residents during subsistence hunting and gathering" (Peace Athabasca Delta Group Project 1972).

A number of traditional food studies have been completed across northern Saskatchewan including Hatchet Lake, Uranium City, the Lac La Ronge Indian Band, and English River First Nation, and have established that fish, berries, and wild game are extremely important food sources for these northern communities (CanNorth 1999, 2011, 2014, 2017). In this way, the EARMP community program provides important information to the residents of northern Saskatchewan.

The EARMP community monitoring program objectives are to:

01 *Determine the safety of traditionally harvested food for local consumption.*

Above: George St. Pierre from Hatchet Lake First Nation helps land a fish on Wollaston Lake, Saskatchewan.

02 *Establish long-term monitoring at community harvesting areas to assess variability and changes over time.*

03 *To foster confidence in the consumption of traditional foods as well as engage and involve community members in the gathering of information for the program.*

04 *Communicate monitoring results to community members and other stakeholders through reporting, meetings, and public media.*

In 2018, a human health risk assessment was completed using all the available chemistry data collected from 2011 to 2017. The assessment determined that the level of chemicals of interest in the traditional foods were safe and do not pose health risks to members of the Athabasca Basin communities. The risk assessment is available in the 2017/2018 EARMP community report (CanNorth 2018b).

Summary of EARMP Community Program Framework

Community Involvement

The community monitoring program relies on the participation of community members for the selection of sampling locations and for sample collection. Prior to commencing the fieldwork in the summer of 2011, notices describing a new environmental monitoring program were distributed to the band chief/mayor and council for circulation and discussion within each community. The purpose of the notices was to invite community members to select representatives from each community to carry out the country food sample collection for the EARMP. The selected representatives from each community were provided training in sample collection, storage, and shipping procedures for the EARMP community sampling program. The sampling locations within each community were established during the field training session when physical variables such as water depth, fishing locations, and berry patches were determined.

The collection of country food samples is carried out either: independently by the community member, or in conjunction with a representative of CanNorth, the consultant selected to manage the program.

Community Communication

Communicating the monitoring results is one of the primary goals of the EARMP community program. To accomplish this, communication and engagement strategies are implemented; these strategies are summarized below.

Above: Wayne and Chelsea Powder picking blueberry samples in Uranium City, Saskatchewan.

01 *The EARMP website (www.earmp.com): In 2020 the EARMP website was updated to improve the ease at which communities can access information and encourage community engagement.*

02 *Social media will begin to be used as a new promotional tool starting in 2020 through the CanNorth Facebook page (@CanNorthEnviroServices) and LinkedIn (linkedin.com/company/cannorth) pages.*

03 *Free EARMP calendars in English, Cree, and Dene are distributed to the Athabasca communities and other northern communities once a year and circulated through the band offices, community health centers, post offices, and schools.*

04 *Ads in local magazines/papers that include information about the program as well as contact information for those who have any questions or concerns.*

05 *Annual presentation of results to the northern Saskatchewan Environmental Quality Committee in La Ronge.*

Study Design and Objectives of the 2018/2019 Program

The EARMP community monitoring program objective continues to follow the study design and objectives outlined in the EARMP community program framework (Appendix A), and consists of comparison to baseline data, regional reference data, and the most recent human health risk assessment (CanNorth 2018b). The study focuses on key chemicals of interest including the metals aluminum, arsenic, cadmium, cobalt, copper, iron, lead, molybdenum, nickel, selenium, uranium, vanadium, and zinc. Radionuclides including lead-210, polonium-210, radium-226, and thorium-230 are also a primary focus. Ammonia in water and mercury in fish are also addressed. Note, all of these are present naturally in the environment but can become elevated due to mining and other industrial development activities.

The program is completed annually with the core of the program involving annual sampling of water and fish. A portion of the budget is also set aside to support chemical analyses of additional samples targeted for the sampling year. These community requested samples can range from additional core samples or may be uniquely harvested species or specimens not historically part of the program (berries or animals hunted) or involve samples which have generated some community concern or interest.

The 2018/2019 program collected the core elements (water and fish) with the focus on ensuring multiple fish species and replicate collections at each community. Additional community requested samples consisted of berries and mammals (barren-ground caribou/ moose) and were also submitted and analyzed.

Above: Smoking fish and meat at the Fond du Lac First Nation culture camp along the shores of Lake Athabasca, Saskatchewan.

Report Structure

The EARMP community report is subdivided into six sections including appendices:

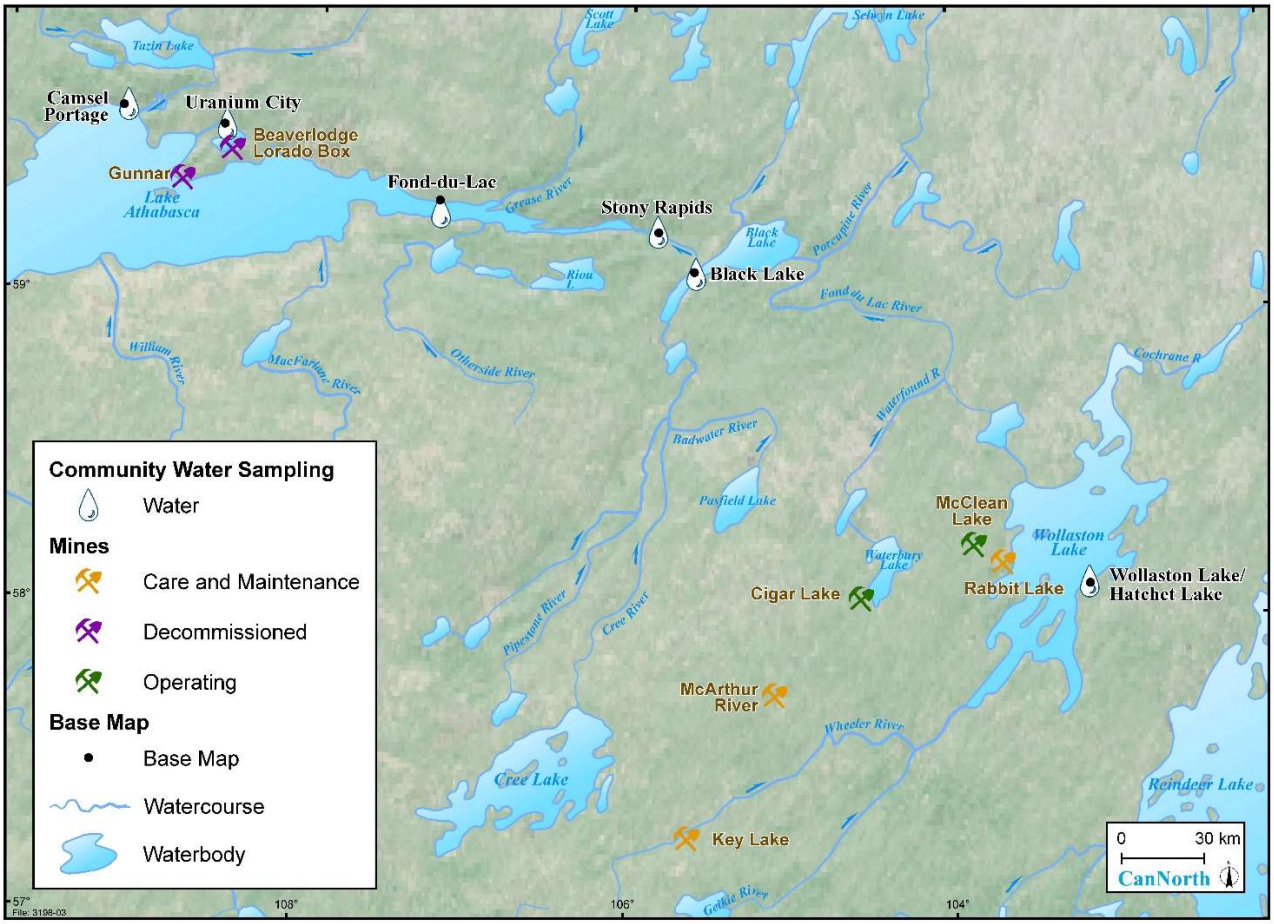
01 *Introduction*
02 *Water Chemistry*
03 *Fish Chemistry*
04 *Berry Chemistry*
05 *Mammal Chemistry*
06 *Summary*

Appendix A provides a description of the community monitoring program framework, Appendix B presents a summary of the chemistry results, and detailed results from all sampling years are provided in Appendix C.

WATER CHEMISTRY

Surface water samples were collected by hand at one waterbody of interest near each community by community members and CanNorth field staff in 2011-2012 (baseline), 2013, 2014, 2017, and 2018, with the exception of Camsell Portage in 2018. Waterbodies assessed included Black Lake, Ellis Bay of Lake Athabasca near Camsell Portage, the Fond du Lac River near Fond du Lac, the Fond du Lac River near Stony Rapids, the Fredette River near Uranium City, and Welcome Bay of Wollaston Lake (Figure 3). All samples were preserved as required and kept refrigerated until chemical analysis was completed. All water samples were submitted to the Saskatchewan Research Council analytical laboratory for chemical analysis. The summary water quality data is presented in Appendix B, Figure 1; Table 1 and summarized below. The raw water quality data is presented in Appendix C, Table 1.

Figure 3 Water quality sampling areas, 2011 to 2018



Concentrations of the chemicals in the water over the years is very low, with most chemicals at levels so low the laboratory could not measure them even with the use of laboratory techniques known for their ability to measure low levels of chemicals. Chemicals that were at measurable levels were all lower than the Canadian Drinking Water Quality guidelines (Health Canada 2017) and the Saskatchewan Environmental Quality Guidelines for the protection of freshwater aquatic life (GS 2019). In addition, the pH at all locations was within the guideline range. Additionally, the majority of the chemical concentrations were within the range of concentrations expected for the region and the baseline assessment.

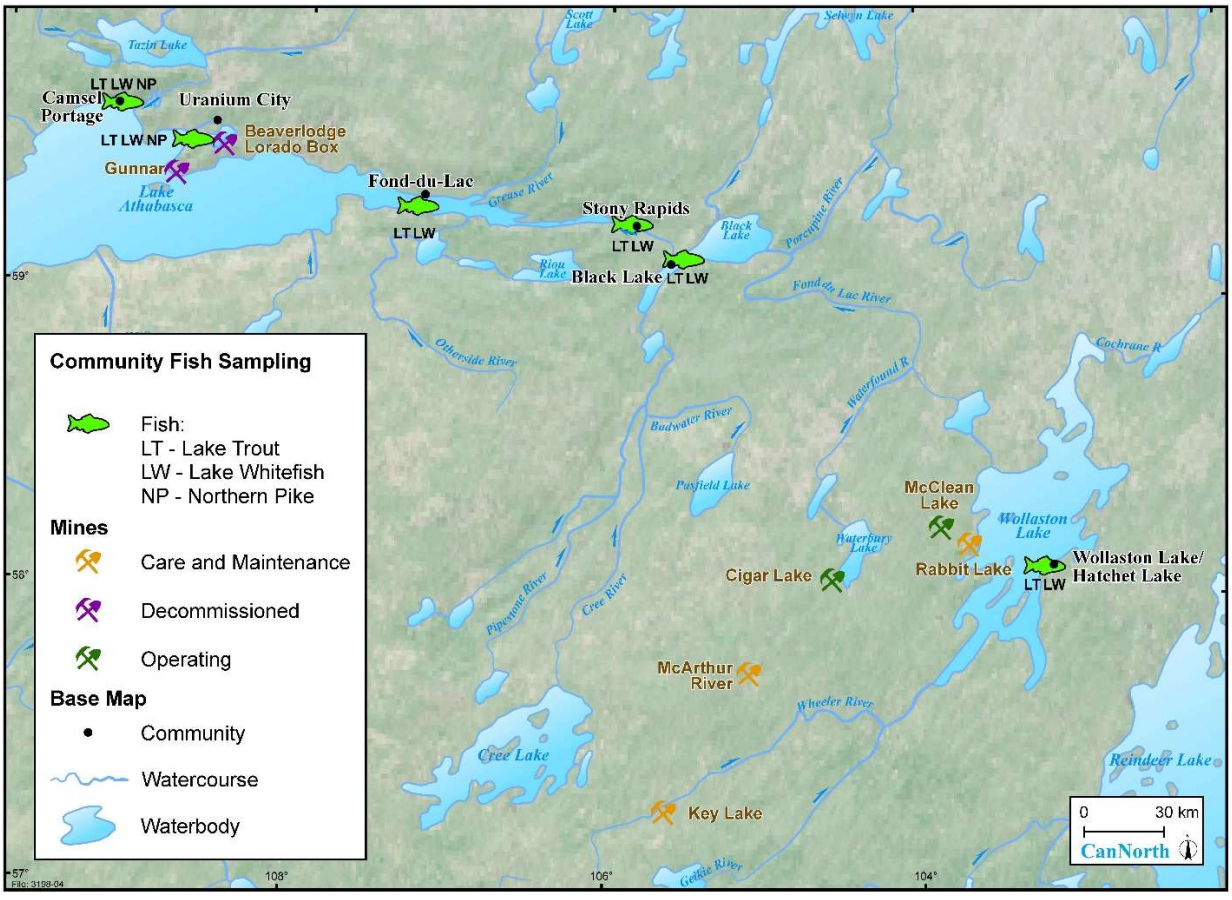
Above: Elder Joe Martin of Fond du Lac First Nation collecting a water in front of his community.

Overall, the concentrations of the chemicals assessed in the community water samples since the baseline sampling years (2011-2012) are very low and the water is safe to drink based on these chemical. Drinking raw water from any source does carry a risk of ingesting natural parasites that can result in gastro-intestinal infections such as *Giardia* and *Cryptosporidium*.

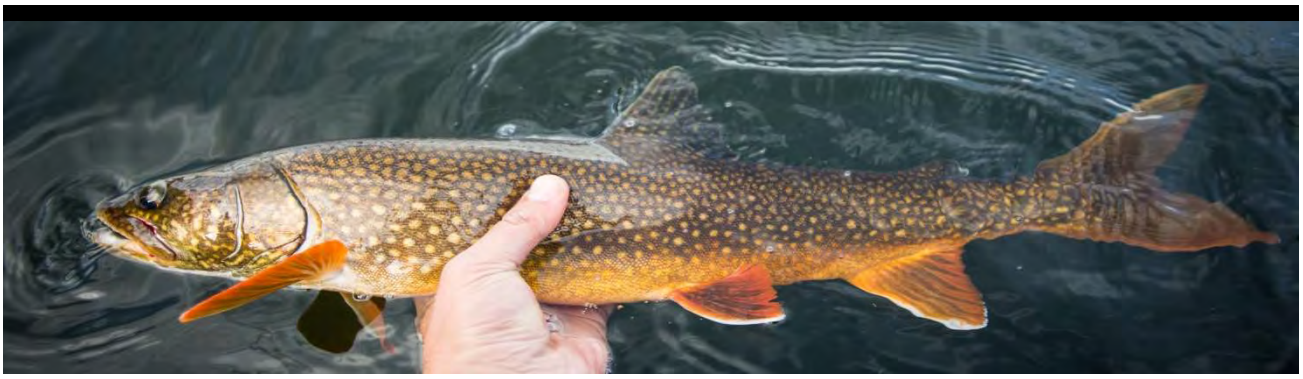
FISH CHEMISTRY

Fish chemistry samples were collected by community members using overnight gill nets set at waterbodies near their communities or by angling. Fish collected have included lake trout, lake whitefish, and northern pike (Figure 4). In 2018, lake trout and lake whitefish were collected from all communities except Camsell Portage. Ageing structures (otoliths[1]) were removed and submitted to a specialized laboratory to determine the age of the fish. The fish flesh was submitted to the Saskatchewan Research Council for chemical analysis. The data are summarized in detail in Appendix B, while raw data are provided in Appendix C, Table 2.

Figure 4 Fish chemistry sampling areas, 2011 to 2018



[1]Otoliths are calcified structures that fish use for balance and orientation. They can be used to age some species of fish.



Similar to the water chemistry results, the levels of the chemicals in the fish was very low in 2018, with most chemicals at levels so low the laboratory could not measure them even with the use of laboratory techniques known for their ability to measure low levels of chemicals. Chemicals that were measurable in 2018 were within the regional reference range and comparable to concentrations measured during previous monitoring years.

Overall, the levels of chemicals assessed in the fish collected from the communities over the years are considered low and similar to levels assessed in the 2018 human health risk assessment that determined fish do not present health risks to Athabasca Basin residents. Mercury levels were low in fish sampled in 2018; however, it is recommended that community members consult the Saskatchewan Mercury in Fish Guidelines:

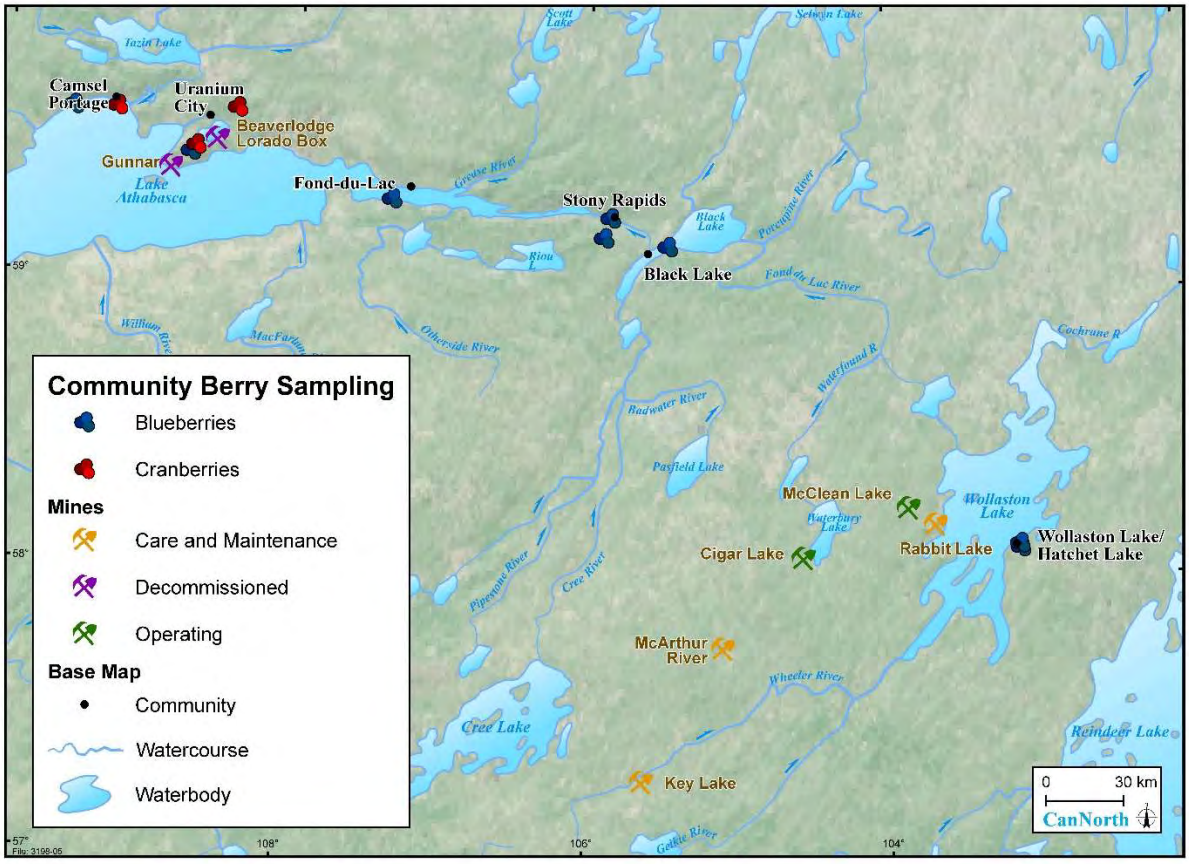
https://publications.saskatchewan.ca/#/products/68781

BERRY CHEMISTRY

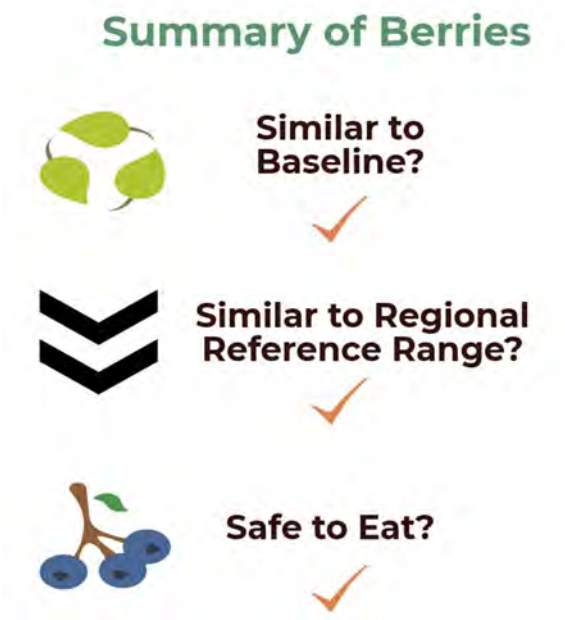
The focus of the 2018 EARMP community program was Water and Fish; however, berry samples were also hand-collected by local community members independently or with the aid of CanNorth personnel near each study community. Sampling is conducted at locations typically used for berry collection by community members (Figure 5). Depending on accessibility and on current local abundance, the type of berry selected for collection was either blueberry or bog cranberry. Berry chemistry samples were collected in 2011-2012 (baseline), and in 2013, 2014, 2015, and 2016.

Three cranberry samples were available from each of Camsell Portage, Fond du Lac, and Wollaston Lake in 2018. Three blueberry samples were available from Stony Rapids and Uranium City. The data are summarized in detail in Appendix B, while raw data are provided in Appendix C, Tables 3 and 4.

Figure 5 Berry sampling areas, 2011 to 2018



Similar to the water and fish chemistry results, the levels of the chemicals in the blueberries and cranberries was very low in 2018, with most chemicals at levels so low the laboratory could not measure them even with the use of laboratory techniques known for their ability to measure low levels of chemicals. Chemicals that were measurable in 2018 were within the regional reference range and comparable to concentrations measured during previous monitoring years with two exceptions. Aluminum in cranberries from Stony Rapids and cadmium in cranberries from Wollaston Lake were higher than the regional reference range established for cranberries, but the levels were similar to blueberries and are therefore not considered a concern.



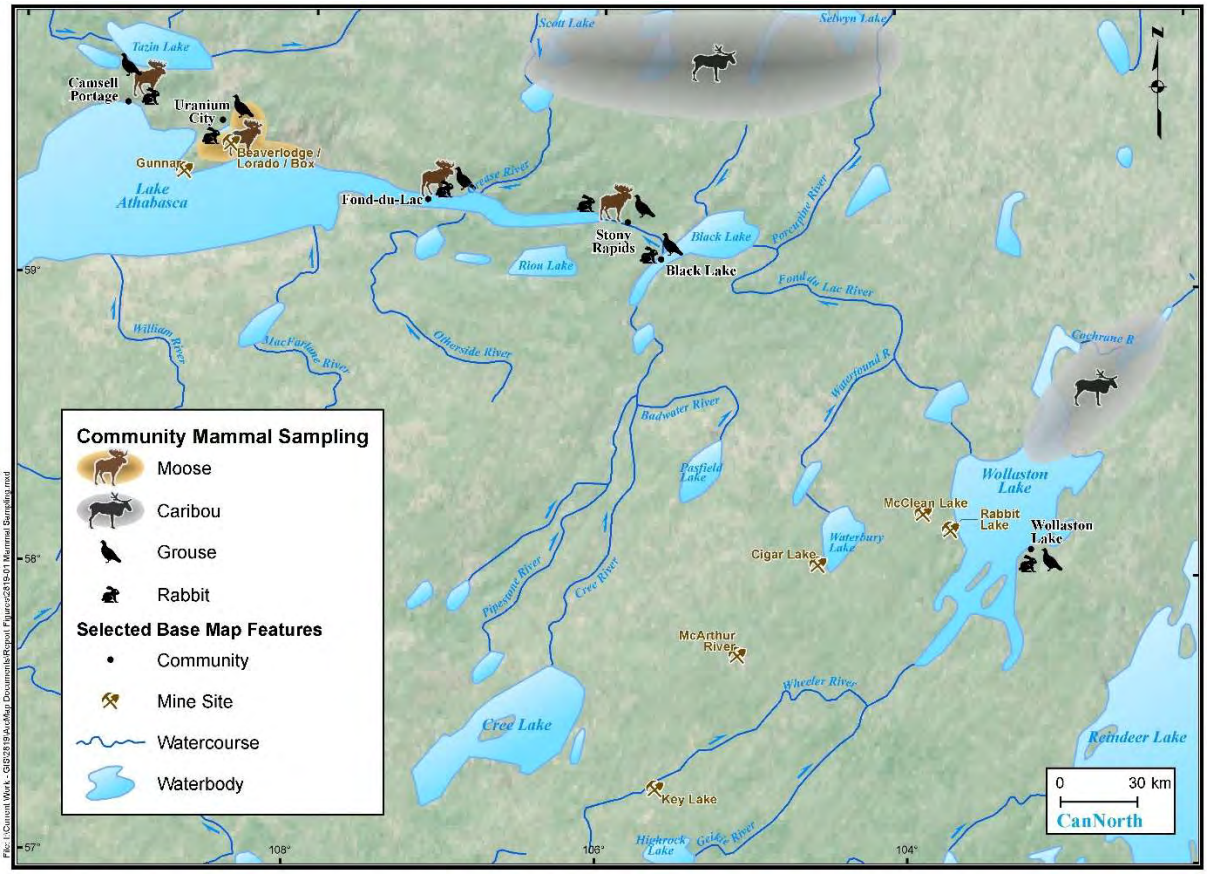
Above: Fresh picked blueberries are a summer treat for northern residents.

Overall, the levels of chemicals assessed in blueberries and bog cranberries collected from the communities are considered low, and based on previous human health risk assessment, the consumption of berries by Athabasca Basin residents is considered safe.

MAMMAL AND BIRD CHEMISTRY

The primary focus of the 2018 EARMP program was Water and Fish; however, mammal tissue samples have also been collected and submitted for analyses by local community members during their routine hunting activities. Two main species that are commonly hunted and consumed in northern Saskatchewan are targeted; barren-ground caribou and moose. Spruce grouse and snowshoe hare samples have also been assessed during past monitoring years as they have also been cited as an important traditional food for community members; however, none were submitted for this monitoring period. In 2018, mammals and birds were not the focus of the program; however, barren-ground caribou and moose from Uranium City and moose from Stony Rapids were sent in by community members and assessed as supplemental data. The 2018/2019 mammal data are summarized in detail in Appendix B, while detailed data are provided in Appendix C, Table 5 and 6.

Figure 6 Mammal and Bird Sampling Areas, 2011 to 2018



Similar to the water, fish, and berry chemistry results, the levels of the chemicals in the barren-ground caribou and moose were very low, chemicals at levels so low the laboratory could not measure them even with very sensitive methods of measurement. Chemicals that were measurable in 2018/2019 were within the regional reference range and comparable to concentrations measured during previous monitoring years.

Beginning in 2014, the EARMP community program started collecting moose and barren-ground caribou organ samples (heart, liver, and kidney) as requested by some communities as they are also consumed. In addition to the barren-ground caribou meat samples from Uranium City, heart and liver from the caribou were submitted for analysis. Generally speaking, chemicals are higher in organs as compared to muscle tissue, and as expected, the liver samples from the caribou had higher concentrations of chemicals than those found in the heart or flesh tissue. Overall, the levels in the barren-ground caribou liver samples were comparable to liver samples collected during previous monitoring years.

Above: Moose and barren- ground caribou are essential part the traditional diet of Athabasca basin residents.

SUMMARY

The 2018/2019 results indicate that the measured concentrations of contaminants of interest in water, fish, berries, and mammal samples collected and tested in 2018-2019 EARMP community program were similar to baseline and regionally measured levels. The measured concentrations were also similar to those incorporated into the last human health risk assessment completed in 2018. Thus the community traditional foods continue to be safe and healthy dietary choice for residents of the Athabasca basin.

> *Gathering and eating traditional country foods can help reduce the risk of diabetes, heart disease, and obesity, especially when the foods are cooked in traditional ways.*

Dr. James Irvine – Saskatchewan Population Health Unit

If you have any comments or questions on the Eastern Athabasca Regional Monitoring Program please contact us info@earmp.com or visit our website at www.earmp.com

“We live off the land and waters, birds, animals, fish, and berries; we have to respect and preserve them"

Joe Beavereye

Elder from Black Lake Denesuline First Nation

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The report was prepared by:

CanNorth

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APPENDICES

LIST OF APPENDICES

Appendix A Community Monitoring Program Framework

Appendix B Detailed Data Analysis

Appendix C Detailed Data

APPENDIX A

EARMP COMMUNITY PROGRAM FRAMEWORK

APPENDIX A: COMMUNITY MONITORING PROGRAM FRAMEWORK

1.0 INTRODUCTION

The Eastern Athabasca Regional Monitoring Program (EARMP) is a collaborative industry-government partnership, long-term environmental monitoring program established in 2011 under the Province of Saskatchewan's Boreal Watershed Initiative. The EARMP was designed to identify potential cumulative effects downstream of uranium mining and milling operations in the Eastern Athabasca region of northern Saskatchewan. It consists of two programs: a technical monitoring program and a community monitoring program. The technical program was established to monitor long-term changes in the aquatic environment far downstream of uranium mining and milling operations in the Eastern Athabasca region. The community program was established to monitor the safety of traditionally harvested country foods from the communities located in the Eastern Athabasca region.

The following document focuses entirely on the EARMP community program. The objective of the EARMP community program framework document is to provide detailed information related to the communities and mine sites located in the Eastern Athabasca region of northern Saskatchewan, the rationale for studying country foods, detailed information and rationale on the EARMP community program study design, and details of the data analyses and communication of the results.

2.0 STUDY AREA

2.1 Communities

There are seven communities in the region including Black Lake, Camsell Portage, Fond du Lac Denesuline First Nation, Hatchet Lake Denesuline First Nation/Wollaston Lake, Stony Rapids, and Uranium City. For the EARMP community program, the communities of Wollaston Lake and Hatchet Lake Denesuline First Nation were assessed together due to their close proximity to each other, creating a total of six community study areas. Provided below are brief descriptions of each community.

2.1.1 Black Lake

The Black Lake Denesuline First Nation is situated in northern Saskatchewan's Athabasca region approximately 1,180 km northwest of Prince Albert. Access to the community is by air to Stony Rapids and then by all-weather road approximately 20 km to Black Lake. Access to the Athabasca Seasonal Road (provincial highway 905) also lies between the two communities. The community currently maintains a total registered membership of 2,035 members, with 1,586 of those members residing on reserve and 442 members residing at locations off reserve (AANDC 2012).

The people of Black Lake initially settled at Stony Lake prior to relocating to the area currently occupied by the fishing camp on the banks of the Black Lake River. The current community of Black Lake was settled in the early 1950s after a new Roman Catholic church was constructed. The Dene language is still very strong and continues to be taught by the Elders to children and youth, both at home and within the school system. The people continue to maintain their traditional lifestyle: with hunting, fishing, and trapping very evident on a year-round basis as both commercial and private pursuits (PAGC 2008, 2012).

2.1.2 Camsell Portage

Camsell Portage is a small community located on the northern shoreline of Lake Athabasca, approximately 35 km from the community of Uranium City. It remains the most northern and isolated community in the province and is only accessible by boat in the open water season and by air year round.

Camsell Portage was settled by trappers who arrived during the 1900s from Lac La Biche, the Northwest Territories and Fort Fitzgerald, Alberta and who used it as a historical portage route to the north. During peak activities near Uranium City, Camsell Portage had a population of over 300 people (pers. comm. Philippe Steene). The population of Camsell Portage is currently 27 people. No mining activity has taken place in the area; however, currently there are operating hydroelectricity generating stations nearby the community of Camsell Portage on the Waterloo, Wellington, and Charlot River systems.

2.1.3 Fond du Lac

The Fond du Lac Denesuline First Nation is situated on the northeast shore of Lake Athabasca in the Athabasca region of northern Saskatchewan, approximately 60 km south of the Northwest Territories border and 1,275 km northwest of Prince Albert. It currently maintains a total

registered membership of 1,842 members, with 1,045 members residing on reserve and 796 members residing at locations off reserve (AANDC 2012). Members are primarily of Dene and Cree decent. Access to the community is by seasonal ice road in the winter and by boat during the summer. Two airline companies also provide year-round access to the community.

Founded over 150 years ago, Fond du Lac is one of the oldest and most remote northern communities in Saskatchewan. During Cultural Camp, the Elders share their cultural and traditional knowledge with the youth, including demonstrations in setting traps, tent raising, fire building, snow shoe racing, and preparing and smoking dry meat (PAGC 2008, 2012).

2.1.4 Hatchet Lake/Wollaston Lake

The Hatchet Lake Denesuline First Nation and the community of Wollaston Lake are situated on the south-eastern shoreline of Wollaston Lake (known in Dene as "Axe" Lake) in the Athabasca region of northern Saskatchewan, approximately 724 km northwest of Prince Albert (PAGC 2008). The Hatchet Lake Denesuline First Nation has total of 1,659 registered members, with 1,276 residing on the reserve and 377 members residing at locations off reserve (AANDC 2012). The northern settlement of Wollaston Lake has a population of 129 (SMMA 2012). Access to Hatchet Lake and Wollaston Lake is by ice road in the winter and by barge during the open water season. Year-round access is provided by two airline companies that operate scheduled flights to and from the surrounding communities and southern Saskatchewan.

Traditionally, the people lived as a hunting and gathering society, primarily barren-ground caribou. They still follow the seasonal caribou hunting patterns today. The majority of residents are Dene; however, during the 1950s some people of Cree-Metis ancestry moved to the northern settlement of Wollaston Lake (PAGC 2012).

2.1.5 Stony Rapids

Stony Rapids is a northern hamlet in Saskatchewan with a total population of 243 residents (SC 2012). The community is located on the shoreline of the Fond du Lac River, approximately 80 km south of the border to the Northwest Territories. The Fond du Lac River connects the community of Stony Rapids to the Fond du Lac Denesuline First Nation, Uranium City, and Camsell Portage. An all-weather road also connects the community to the Black Lake Denesuline First Nation.

2.1.6 Uranium City

The history of Uranium City area dates back to the late 1930s when uranium ore was first discovered in the area. It was not until 1952 that the town of Uranium City was established as a base for uranium mining in the Beaverlodge area. Operations at Saskatchewan's first uranium mine began in May of 1953 and continued until June of 1982, by which time rising costs and failing ore grade made it unprofitable. Within a year following the closure of the mine, Uranium City changed from a resource town of almost 2,500 inhabitants to a northern settlement with approximately 150 residents (Bone 1998). Uranium City continued to serve as the regional base for a number of services including education, health care, and the RCMP headquarters for a number of years following the mine closure. Many public institutions closed in 1983 and the hospital closed in 2003. The current population is approximately 101 residents.

2.2 Uranium Operations

There are currently five uranium mines in the Eastern Athabasca region. These include Key Lake, McArthur River, McClean Lake, Rabbit Lake, and Cigar Lake. In addition, the decommissioned Beaverlodge uranium mine and mill site is located within the region and nearby the community of Uranium City.

2.2.1 Key Lake

Cameco Corporation's (Cameco) Key Lake Operation is located in north-central Saskatchewan approximately 570 km north of Saskatoon. Mining at the Key Lake Operation began in 1982 with open pit mining of the Gaertner orebody followed by open pit mining of the Deilmann orebody beginning in 1986. Once stockpiles from the Deilmann orebody were consumed in late 1999, the mill began processing ore from the McArthur River Operation. Due to continue market weakness in uranium prices Cameco have suspended the production at McArthur River and Key Lake for an intermediate duration and placed both sites in a state of care and maintenance.

2.2.2 McArthur River

The McArthur River Operation is located approximately 270 km north of La Ronge and 80 km north of the Key Lake Operation. It is currently the world's largest, high-grade uranium deposit. McArthur River has been operational since 1999 and is managed and operated by Cameco. The operation includes underground mining, processing systems, an ore handling system, and camp infrastructure. Specialized mining equipment is used to extract the high-grade uranium ore and

mineralized wastes are blended with high-grade ore to produce a slurry, which is trucked to the Key Lake Operation for processing.

2.2.3 McClean Lake

The McClean Lake Operation is located approximately 15 km west of Wollaston Lake in northern Saskatchewan. Orano Canada Inc. (formerly AREVA) is the majority owner (70%) and operator of the McClean Lake Operation. Exploration activities started in the late 1970s, environmental assessment in the early 1990s, and the initiation of mining and mill operations in 1996 and 1999, respectively. The McClean Lake Operation currently comprises of three main areas: the JEB area, which includes the permanent camp and the JEB mill and tailing management facility; the Sue mining area, which includes the mined out Sue A/C, Sue B, and Sue E pits; and the Sink/Vulture Treated Effluent Management System (S/V TEMS).

2.2.4 Rabbit Lake

The Rabbit Lake Operation, owned and operated by Cameco, is the longest-operating uranium production facility in Saskatchewan (since 1975). It is located in northeastern Saskatchewan, on the west side of Wollaston Lake approximately 350 km north of La Ronge. The Rabbit Lake Operation includes the Eagle Point underground mine, Rabbit Lake mill, four mined-out open pit mines, of which the original Rabbit Lake pit is being used as the Rabbit Lake In-Pit Tailings Management Facility (RLTMF), the Rabbit Lake Above Ground Tailings Management Facility (AGTMF), overburden stockpiles, waste rock stockpiles, effluent treatment facilities, and camp infrastructure. Rabbit Lake was transitioned into care and maintenance in 2016.

2.2.5 Cigar Lake

The Cigar Lake Operation is located approximately 80 km west of Wollaston Lake and 40 km inside the eastern margin of the Athabasca Basin region of northern Saskatchewan. The Operation involves the construction, mining operation, and eventual decommissioning of what is currently the world's second largest known high-grade uranium deposit. The Operation is currently managed and operated by Cameco. The initial discovery of the Cigar Lake uranium deposit occurred in May 1981. Following the acquisition of the construction license in December 2004, underground construction activities commenced. Site construction activities were expected to take 24 months to 36 months; however, in 2006 and 2008 the mine experienced two inflow events that caused flooding of all underground workings of the Cigar Lake Project. Cigar Lake became operational in July 2014 and is continues to be operational today.

2.2.6 Other Properties

The decommissioned Eldorado uranium mining and milling operation is located approximately 8 km east of Uranium City north-east of Beaverlodge Lake in northern Saskatchewan. The mine operated for almost 30 years between 1953 and 1982. Decommissioning of the site occurred from 1983 to 1985 and transition phase monitoring continues today. Upon its inception as a publicly traded company, Cameco was assigned responsibility for the management and reclamation of the decommissioned site. Post-decommissioning activities include the ongoing monitoring and maintenance of the site, regular water quality monitoring at stations within the area, and a variety of special investigations to assess specific environmental concerns.

In addition, Beaverlodge Lake is the receiving environment for the discharges from at least nine other abandoned uranium mine sites and one former uranium mill tailings area (the Lorado Uranium Mining Ltd. mill site), which are managed by the Saskatchewan Research Council (SRC). SRC is managing Project Cleans, which is also responsible for the assessment and reclamation of the Gunnar uranium mine and mill site and over 30 abandoned satellite mines in the Uranium City area.

3.0 RATIONALE FOR STUDYING COUNTRY FOODS

The uranium mining and milling operations in northern Saskatchewan complete extensive environmental monitoring that routinely test the air, soil, vegetation, water, sediment, benthic invertebrates, and fish in their local study areas. However, these monitoring programs do not answer the question of whether country foods that are fished, hunted, or gathered near communities located downstream of multiple uranium operations are safe to eat. Since country foods, such as fish, berries, and wild game are important food sources in northern communities, the EARMP community program was developed to conduct an extensive and long-term regional sampling program testing these foods. The following section further discusses some of the uses and benefits of traditional country foods by northern residents.

3.1 Traditional Use of Country Foods

Studies conducted across Canada have documented that harvesting, sharing, and preparing traditional country foods is an important part of the Aboriginal lifestyle (Wein et al. 1991; Wein and Freeman 1995; Kuhnlein and Receveur 1996; Receveur et al. 1997; AFN 2007). Traditional

country food studies conducted in Hatchet Lake and Uranium City established that fish, berries, and wild game are important food sources for communities located in northern Saskatchewan (CanNorth 1999, 2011).

Studies in northern Saskatchewan have indicated that Hatchet Lake residents have a strong dependence on barren-ground caribou meat (especially during the winter months) whereas Uranium City residents rely more on moose and birds (CanNorth 1999, 2011). Uranium City residents have comparable meat/bird (grams per day) consumption values to the residents from similar regions such as Fort Smith, Northwest Territories and Fort Chipewyan, Alberta (CanNorth 2011). The more frequent caribou meat consumption in Hatchet Lake may be explained by availability, cultural differences, and/or preference of Hatchet Lake residents for caribou. A number of factors play a role in the differences in consumption patterns such as population size, road access, proximity to animal migration routes, presence of hunters, trappers, or fishermen, age and gender, costs and availability of market foods, and access to transportation with the south (Wein et al. 1991; Blanchet et al. 2000; Batal et al. 2005).

3.2 Health Benefits of Traditional Country Foods

Harvesting and consuming traditional foods are integral components of good health among Indigenous people, influencing both physical health and social well-being. The act of hunting and gathering traditional foods is an important aspect of physical activity. Hunting, fishing, and berry picking also provides socio-cultural benefits to community members including mental health, cultural identity, and morale (AFN 2007). Gathering and eating traditional country foods can help reduce the risk of diabetes, heart disease, and obesity, especially when the foods are cooked in traditional ways (PHU AHA 2005).

Several health benefits of consuming traditional country foods have been documented across northern Canada. Fish are an important part of a healthy diet containing high-quality protein, Vitamin B, Vitamin D, omega-3 fatty acids, other essential nutrients (NWT 2011; PHU AHA 2014). Fatty fish, such as lake trout, are especially high in omega 3 fatty acids and are considered important for heart health and brain and eye development. Compared to store bought chicken breast and ground beef (0.10-0.31g/100g) northern Saskatchewan fresh water fish have much higher contents of omega 3 fatty acids (0.31-1.19g/100g). In addition, northern Saskatchewan fish have substantially lower levels of saturated fat, compared to store bought chicken and ground beef (PHU AHA 2014). Fish eggs are also an excellent source of protein, Vitamin C, B vitamins, and iron (NWT 2002; NWT 2011). The skin of the fish and soups cooked with fish head and bones are good sources of calcium (Receveur et al. 1997; NWT 2011).

Wild game meat such as moose and caribou are an important source of vitamins, minerals, and protein and has less saturated fats than store bought meats (PHU AHA 2005; 2014). The fat content of barren-ground caribou meat is very low (1%) compared to beef, pork, or poultry (12% to 40%) (NWT 2002). Wild game are also high in essential nutrients such as iron, zinc, copper, magnesium, and phosphorous (Kuhnlein et al 1995; Receveur et al. 1997).

Compared to store bought chicken breast and ground beef, the northern game meats have similar amounts of protein (21.4-25.6 g/100g), between 2 and 7 times higher levels of Iron (3.08-4.1 mg/100g) and lower levels of calories (98-123 kcal/ 100g). Overall, this indicates that northern Saskatchewan caribou, moose, and rabbit are low calorie, nutrient dense, healthy servings of meat and meat alternatives (PHU AHA, 2014). Soups and/or stews cooked with bones for broth are high in calcium (Receveur et al. 1997), while many organ meats including liver contain high levels of iron needed for healthy blood and Vitamin A needed for healthy bones, skin, and teeth (HWC 1987; NWT 2002).

Traditional plants such as cranberries, blueberries, and Labrador tea are often used in both food and medicine (CanNorth 1999, 2011) and may potentially offer benefits through diet. Wild plants are excellent sources of Vitamin C, fibre, and carbohydrates (Johnson et al. 1995; NWT 2002). For example, rose hips, consumed by many First Nations in a variety of medicinal and food preparations, are high in Vitamin C and demonstrate antibacterial and antioxidant properties (Yi et al. 2007).

3.3 Canada Food Guide – First Nations, Inuit, and Métis

In 2007, Health Canada introduced a newly tailored Canada Food Guide *"Eating Well with Canada's Food Guide - First Nations, Inuit and Métis" (HC 2007)* that includes both traditional country foods and store-bought foods that are generally available and accessible across Canada. This tailored food guide has recommendations for healthy eating based on science and recognizes the importance of traditional/country and store-bought foods for First Nations, Inuit, and Métis today. In addition, the government of Northwest Territories (NWT 2005) has also established a food guide that is tailored towards traditional country foods. Both the Canada Food Guide and the Northwest Territories Food Guide contain recommendations on the number of servings[1] (grams per day) of wild meats, birds, plants, fish, and other staples such as bannock, wild rice,

[1] It should be noted that the food guide serving size for meat and alternatives has decreased over time and each serving size recommended is 75 g, which is likely less than what most people consider a serving size. For this study, actual intake amounts were used from the area to complete the Human Health Risk Assessment.

and traditional fats. Choosing the amount and type of food recommended in Canada's Food Guide will help:

- children and teens grow and thrive;
- meet needs for vitamins, minerals, and other nutrients; and,
- lower risk of obesity, type 2 diabetes, heart disease, certain types of cancer, and, osteoporosis (weak and brittle bones).

For more information on Canada's Food Guide please visit www.healthcanada.gc.ca/foodguide or *"Eating Well with Canada's Food Guide - First Nations, Inuit and Métis"* http://www.hc-sc.gc.ca/fn-an/pubs/fnim-pnim/index-eng.php. For more information on the Northwest Territories Food guide please visit http://www.hss.gov.nt.ca/publications/posters-flyers/nwt-food-guide.

4.0 STUDY DESIGN AND OBJECTIVES

The EARMP community monitoring program objectives are to:

1. determine the safety of traditionally harvested food for local consumption;
2. establish long-term monitoring at community sampling areas to assess variability and potential changes over time;
3. build mutually beneficial relationships and engage and involve community members in the gathering of information for the program; and
4. communicate monitoring results to community members and other stakeholders through reporting, public media, and meetings.

The 2011/2012 and 2012/2013 data were used to establish baseline/current conditions for each species sampled in each community area. Each subsequent monitoring year's data will be compared to this baseline in order to assess potential changes over time or temporal trends in chemical concentrations of country foods routinely eaten by residents of the Eastern Athabasca region.

The study design for the EARMP community program will remain consistent over time, to the extent possible, in order to collect a consistent long-term data set. However, the program is also

adaptive and may be refined in response to new information or changes associated with the development in the region. Some things to consider moving forward include:

- Community Concerns: The EARMP community program monitors endpoints of highest concern to the communities. Sampling components may be refined or expanded based on the needs of the community members.
- Regional Development: The development of additional uranium mining and milling operations in the region may also influence the overall design of the program.
- EARMP Community Program Results: Changes to the design of the EARMP community program may occur based on results and conclusions from each monitoring year.

A key aspect of a successful community monitoring program is that the sampling locations and media are selected based on their importance to the communities and the sampling is completed by, or with, local residents. It also helps to build trust between the residents of communities and industrial operators in the region. Traditional Ecological Knowledge (TEK) is an essential part of the program. The approach of the EARMP community program is summarized below in Appendix A, Figure 1.

In addition to community input, chemicals of interest are selected based on those identified through the environmental assessment process and monitoring requirements in the region. Uranium mining and milling operations are subject to the *Canadian Environmental Assessment Act* and regulated by the Canadian Nuclear Safety Commission, the Saskatchewan Ministry of Environment, and Environment and Climate Change Canada.

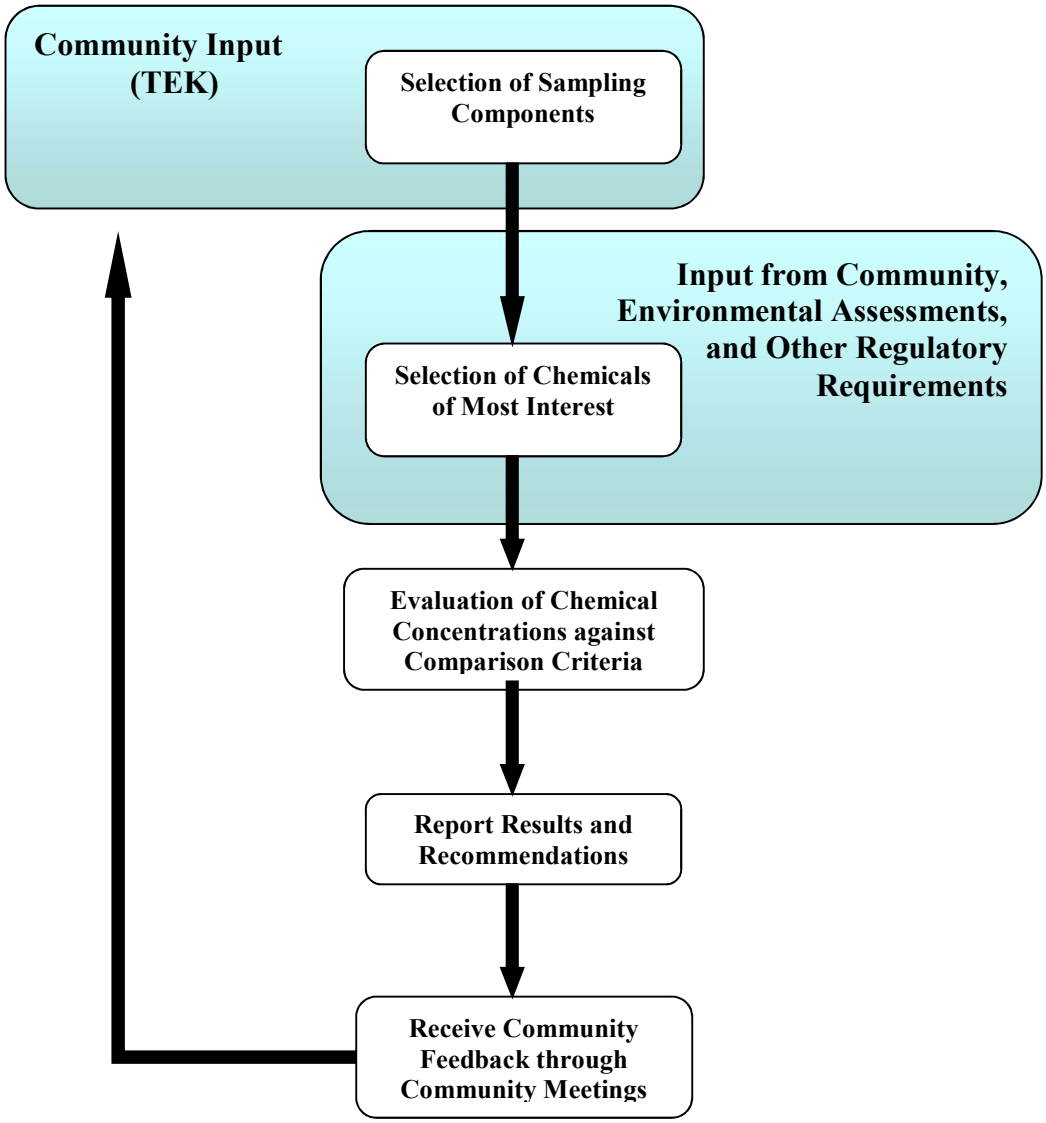
4.1 Sampling Components

The program is completed annually with the core of the program involving annual sampling of water and fish along with a selected focus traditional food each year. A portion of the budget is set aside to support chemical analyses of additional samples beyond the core samples targeted for that sampling year. The country foods were selected in consultation with community members and currently include water, and fish (lake trout and lake whitefish,), while berries (blueberry and bog cranberry), and mammals (moose, barren-ground caribou, and snowshoe hare[2]) have all been selected and sampled as additional samples in years when they were abundant. Sampling components are meant to be representative of what community members

[2] New country food as of 2013/2014.

are consuming; therefore, they vary from time to time throughout the long-term monitoring program to include other components (e.g., game birds, snow shoe hare, other).

Two dietary surveys have been completed for communities within the region: The Hatchet Lake Dietary Survey (CanNorth 1999) and the Uranium City Country Foods Study (CanNorth 2011). Country foods currently selected for the EARMP community program formed a large percentage of foods identified in these surveys.



Appendix A, Figure 1.
Summary of the EARMP community monitoring program approach.

4.2 Sampling Locations

Near each community, one station was established from which a water quality sample was obtained. The station locations were decided upon by the CanNorth staff member and the community members conducting the sampling and were determined by accessibility, water depth, and proximity to the community. Fish, berry, and mammal samples were obtained from locations that community members routinely fish, gather, and hunt their traditional country foods. This ensures the sampling program is testing the study areas most relevant to the communities.

4.3 Sampling Frequency

The EARMP community program is intended to be an annual sampling campaign (every fall/winter) for the first five years, after which the sampling frequency was re-evaluated as planned. Annual sampling has continued since the program began with alternating media types yearly keeps the community program fresh in the mind of community members and allows for thorough training of community members for sample collection.

Additionally, each year a portion of the budget is also set aside to support chemical analyses of a few additional samples beyond those specifically targeted for that sampling year. This approach has proven to be the most efficient means of ensuring the collection of traditional foods across all the communities with adequate replication within a single sample year. These community samples can range from additional core samples or focus samples due to an especially abundant harvest, may include uniquely harvested species or specimens not historically a part of the program or involve samples which have generated some community concern or interest (e.g., visible abnormalities or indicators of poor health).

The target sample size is generally five samples from each community of each media type. However, some sampling components are harder to obtain, such as moose and barren-ground caribou; thus sample sizes may be lower at some communities in some years.

4.4 Laboratory Analysis

All samples are analyzed by the Saskatchewan Research Council (SRC) in Saskatoon. The SRC Analytical Laboratories are certified and accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA). Accreditation ensures that procedures, facilities, and methods conform to ISO/IEC 17025, which is an internationally recognized standard. SRC has an extensive Quality Assurance/Quality Control (QA/QC) program to ensure reliable analytical results. With

each set of samples run, SRC tests reference materials, duplicates, and spiked samples. Data results provided by SRC include full QA/QC reports for each sample submission.

Sample analyses completed by SRC included a full suite of parameters for each media type and are described Appendix A, Table 1.

Metals and trace elements analysis are completed by ICP-MS because it is a fast, multi-elemental technique similar to ICP-AES, but with better detection limits. For most elements, ICP-MS is able to achieve detection limits similar to or lower than Graphite Furnace AAS (Wolf 2005). The analysis of metals and trace elements with ICP-MS also meets MMER requirements (EC 2012). However, it should be noted that even with the use of ICP-MS, concentrations of many metals and trace elements in the EARMP sampling media are at levels below the Reporting Detection Limit (RDL). In addition, RDL for radionuclides tend to vary based on the mass of the sample. For values that were below the RDL, it is not possible to determine the actual concentration; therefore, all values were set equal to the RDL for computing averages and standard deviations. This is a conservative approach as the actual concentrations could be substantially lower than the RDL.

Appendix A, Table 1

List of chemicals and supportive parameters measured in traditional foods for the EARMP community program.

Parameter		Water	Berries	Fish	Mammals
Inorganic Ions	Bicarbonate, Calcium, Carbonate, Chloride, Magnesium, Potassium, Sodium, Sulphate, Hydroxide	x			
Metals and Trace Elements	Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Fluoride Iron, Lead, Manganese, Mercury*, Molybdenum, Nickel, Selenium, Silver, Strontium, Thallium, Tin, Titanium, Uranium, Vanadium, Zinc	x	x	x	x
Nutrients	Ammonia, Nitrate, Total Nitrogen, Total Kjeldahl Nitrogen, Total Organic Carbon, Phosphorus	x			
Radionuclides	Lead-210, Polonium-210, Throium-230, Radium-226	x	x	x	x
Physical Properties	pH, Specific Conductance, Sum of Ions, Total Alkalinity, Total Dissolved Solids, Total Hardness, Total Suspended Solids, Turbidity	x			
	% Moisture		x	x	x

*Water and fish only.

4.5 Data Assessment Approach

4.5.1 Endpoints

Although a full suite of chemical parameters were measured for each sample, this report focuses on a smaller list of chemicals, which have been identified as the chemicals of most interest for uranium operations by regulatory agencies, environmental assessments, as well as other monitoring programs. Appendix A, Table 2 summarizes the endpoints assessed for the EARMP Community Program. Supporting endpoints for the water quality assessment also included organic carbon, specific conductivity, total hardness, and pH.

While mercury is included in Appendix A, Table 2, it is not associated with uranium mining and milling operations. Monitoring programs completed in each mine site's local study area have repeatedly shown that mercury concentrations in the treated effluent are below the Metal Mining Effluent Regulations (MMER) criteria for monitoring[3] (EcoMetrix 2010a, 2010b; SENES 2010, 2012; AREVA 2012). Mercury occurs naturally in the environment and can be found at low levels in most soils and rocks. In northern Saskatchewan, natural deposits associated with lead, zinc, copper, silver, and gold are likely the cause of higher levels of mercury in fish in some lakes (SE 2011). Since mercury has been identified as a concern to community members in the Athabasca Region, it has been included in the assessment.

Appendix A, Table 2
Chemical endpoints selected for the EARMP.

Reduced List of Chemicals	
Aluminum	Molybdenum
Ammonia*	Nickel
Arsenic	Polonium-210
Cadmium	Radium-226
Cobalt	Selenium
Copper	Thorium-230
Iron	Uranium
Lead	Vanadium
Lead-210	Zinc
Mercury**	

*For water only.
**Mercury is not associated with the uranium mining and milling process.

[3] If the concentrations of total mercury is less than 0.1 µg/L in 12 consecutive treated effluent samples, monitoring is not required (MMER, Schedule 5, subsection 4(3)).

4.5.2 Comparison Criteria

To evaluate the community data, concentrations of the reduced list of chemicals are compared to:

- available guidelines;
- available regional reference data; and,
- available literature and/or Human Health Risk Assessments.

The above comparison criteria is used for each media type to establish if the country foods sampled in each community are within the expected background concentrations for the region, are below guidelines, and are considered safe to eat based on a Human Health Risk Assessment. As additional monitoring phases are completed, assessing changes in potential chemical concentrations over time will be an important component of the program. Data sources for the information used are described below.

4.5.3 Data Sources

4.5.3.1 Guidelines

Federal and provincial guidelines are available for some media types assessed in the EARMP community program. These include the Canadian Drinking Water Quality Guidelines (CDWQGs; HC 2017), the Canadian Water Quality Guidelines (CWQGs) for the protection of freshwater aquatic life (CCME 2019), and the Saskatchewan Environmental Quality Guidelines (SEQG) for the protection of freshwater aquatic life (GS 2019). For those chemicals where the values depend on hardness, the hardness concentration from each location was used to establish the guideline. Appendix A, Table 3 summarizes the guidelines used for comparison to the EARMP community data.

Appendix A, Table 3
Chemistry guidelines used for comparison to EARMP community data.

Chemical	Guideline		
	CDWQG (Drinking Water)	CWQG (Environmental)	SEQG (Environmental)
Aluminum	0.2 mg/L	0.1[1] mg/L	0.1[1] mg/L
Ammonia as nitrogen	-	2.68-26.65[2] mg/L	2.68-26.65[2] mg/L
Arsenic	10 µg/L	5 µg/L	5 µg/L
Cadmium	0.005 mg/L	0.00004-0.0001[3]mg/L	0.00004-0.0001[3]mg/L

Chemical	Guideline		
	CDWQG (Drinking Water)	CWQG (Environmental)	SEQG (Environmental)
Copper	1.0 mg/L	0.002[3] mg/L	0.002[3] mg/L
Iron	0.3 mg/L	0.3 mg/L	0.3 mg/L
Lead	0.01 mg/L	0.001[3] mg/L	0.001[3] mg/L
Lead-210	0.2 Bq/L	-	-
Mercury	1 µg/L	0.026 µg/L	0.026 µg/L
Molybdenum	-	0.073 mg/L	31 mg/L
Nickel	-	0.025[3] mg/L	0.025[3] mg/L
pH	6.5 to 8.5	6.5 to 9.0	6.5 to 9.0
Radium-226	0.5 Bq/L	-	0.11
Selenium	0.01 mg/L	0.001 mg/L	0.001 mg/L
Uranium	20 µg/L	15 µg/L	15 µg/L
Zinc	5.0 mg/L	0.03 mg/L	0.03 mg/L

[1]Adjusted to a pH > 6.5.
[2]Adjusted according to water temperature and pH of each waterbody.
[3]Adjusted to water hardness in each waterbody.

4.5.3.2 Regional Reference Data

Regional reference data are available from a number of sources. Reference water and fish chemistry data are available from CanNorth's database. Water and fish chemistry data from a number of lakes north of Point's North sampled between 2005 and 2014 were utilized to generate the regional reference values (Appendix A, Table 4). This included 249 water samples, 69 lake whitefish samples, and 35 lake trout samples. In 2015, additional lake trout (24 samples) were also collected from reference areas (McKenzie Lake, Henday Lake, and Riou Lake) to improve the regional reference data set to 59 samples for this species. Water samples spanned a total of 39 lakes, while lake trout data spanned 6 lakes, and lake whitefish data spanned 12 lakes. As more data become available, the regional reference data set will become more robust, particularly for the lake trout data set.

Historical data (2008 to 2011) available from the Athabasca Working Group (AWG) Environment Monitoring Program and the Uranium City Country Foods Program (CanNorth and SENES 2012) were utilized to generate the regional reference values for the berry data (Appendix A, Table 5). Data from the AWG program were also used to establish regional reference ranges for the moose and barren-ground caribou data (Appendix A, Table 5). In most cases, data from 2000 to 2010 were included in order to have adequate samples sizes; however, there were some situations where obvious and consistent changes in reporting detection limits (RDLs) precluded earlier data from being included.

Appendix A, Table 4

EARMP regional reference range data sources for water and fish chemistry.

Factor	Water		Lake Trout Flesh	Lake Whitefish Flesh
Years[1]	2006 to 2014		2005[2], 2010 to 2012 and 2015[3]	2006 to 2014
Areas[1]	Agent Lake	Lower Read Lake	Cree Lake	Alsask Lake
	Alsask Lake	Mad Dog Lake	Henday Lake	Cree Lake
	Bobby's Lake	McGowan Lake	Milliken Lake	Fredette Lake
	Brayden Lake	Milliken Lake	McKenzie Lake	Henday Lake
	Carys Lake	Moon Lake	Pasfield Lake	Lac Philip
	Colette Lake	Pasfield Lake	Riou Lake	Mallen Lake
	Cree Lake	Read Lake		Milliken Lake
	David Lake	Reference 2		Pasfield Lake
	East Spur Lake	Reference 3		Riou Lake
	Fredette Lake	Reference 4		Ryan Lake
	Kapesin Lake	Reference 5		Wapata Lake
	Kazz Lake	Riou Lake		West Spur Lake
	Lac Philip	Ryan Lake		
	Lake B	Shallow Lake		
	Lake C2	Slush Lake		
	Lake C3	Wapata Lake		
	Lake C4	West Spur Lake		
	Lake C5	White Lake		
	Lake C6	Yeoung Lake		
	Lake C7			

[1]Not all areas were sampled all years.

[2]Five additional lake trout from 2005 from Henday Lake were added to improve sample sizes (n) for parameters that were less than the reporting detection limit (<RDL), namely arsenic, copper, iron, selenium, and zinc. These additional lake trout samples could not be used for other parameters because of large differences in RDLs in 2005 compared to later years.

[3]An additional 24 samples from Cree Lake, Henday Lake, McKenzie Lake, and Riou Lake were later included in 2015.

Appendix A, Table 5

EARMP regional reference range data sources for berry and mammal chemistry.

Factor	Blueberries	Cranberries	Caribou Flesh	Moose Flesh	Snowshoe Hare Flesh
Years[1]	2000 to 2011	2000 to 2011	2000 to 2011	2000 to 2011	2011
Areas[1]	Black Lake	Black Lake	Black Lake	Black Lake	Camsell Portage
	Camsell Portage	Bushell Bay	Camsell Portage	Camsell Portage	
	Fond Du Lac	Camsell Portage	Fond Du Lac	Fond Du Lac	
	Stony Lake	Fond Du Lac	Stony Rapids	Stony Rapids	
	Stony Rapids	Stony Lake	Uranium City	Uranium City	
	Uranium City	Stony Rapids	Wollaston Lake	Wollaston Lake	
	Wollaston Lake	Uranium City			
		Wollaston Lake			

[1]Not all areas were sampled all years.

4.5.3.4 Human Health Risk Assessment

Human Health Risk Assessment is a scientific procedure that is used to assess the potential for adverse health effects to humans caused by a selected group of chemicals that are a concern. Risk assessments involve the application of a staged, formal, and reproducible process that incorporates procedures accepted by regulatory authorities. Through the completion of a Human Health Risk Assessment, it is possible to answer one of the primary questions of the EARMP community program: are country foods safe to eat?

The most recent Human Health Risk Assessment was completed in 2018 utilizing the 2011 to 2018 EARMP data and determined that the country foods were safe to eat in all communities assessed. In subsequent monitoring phases, if the levels of chemicals remain within the range of those measured during the baseline conditions, the Human Health Risk Assessment can be used as a basis for concluding if the country foods remain safe to eat. As more data become available, and potentially new types of country foods assessed, it may be necessary to complete a new Human Health Risk Assessment.

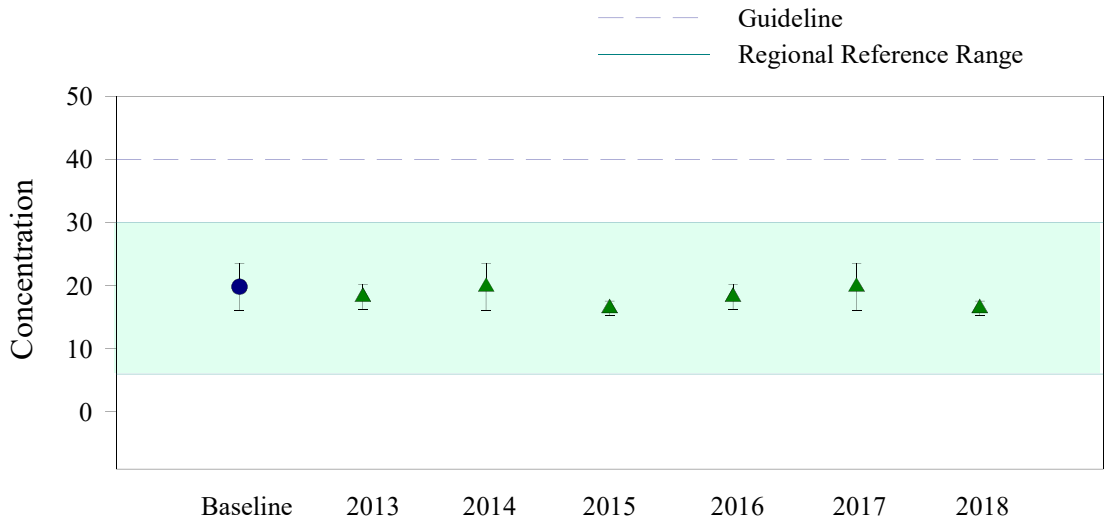
4.5.4 Data Presentation

The EARMP community data is presented using both summary tables and figures. Descriptive statistics (average, standard deviation, number of samples, and number of values below the RDL) are calculated and reported for each chemical, media, and study area. A graphical presentation of the data is used to compare chemical concentrations to guidelines, the regional reference range, and baseline levels. Data are only graphed if >50% of the values are above the RDL.

The regional reference range has been re-assessed as the range between the 2.5% to 97.5% of the regional reference distribution (where 95% of the regional reference data are expected to fall), since it was determined the majority of the chemistry data is not normally distributed. The highest and lowest 2.5% of the reference data were identified using regression analysis of the cumulative percent frequencies of the observed reference concentrations. After identification, the highest and lowest 2.5% of the data were excluded and the remainder were used as the reference ranges representative of natural conditions. As more regional reference data becomes available, the ranges will be further refined.

Appendix A, Figure 2 shows a hypothetical figure that will be used to assess levels of chemicals in country foods. This figure provides information on guidelines values, the regional reference range, and temporal changes in a single image for each chemical in each sampling component.

The blue line represents a guideline concentration (e.g., drinking water guidelines). The shaded area represents the regional reference range (i.e., reference average ± 2 standard deviations). The average concentration in the EARMP community sample is shown as a circle for the baseline year and a triangle for those sampling years following the baseline data collection. The error bars represent one standard deviation. The graph will be a very useful visual tool for assessing the EARMP community data against the comparison criteria at a glance. It will also allow for a qualitative assessment of increasing or decreasing concentrations of individual chemicals over time in each community.



Appendix A, Figure 2.
Example of how the EARMP community program results will be presented graphically during future monitoring campaigns.

5.0 REPORTING AND COMMUNICATION PLAN

A report will be completed to assess the EARMP community data following each monitoring year. The report will be structured so that the most relevant information is presented in the main document, with the detailed analysis presented in appendices. This will allow all potential audiences access to the information most relevant to them. The report, along with the raw data, will be available for download from the EARMP website: www.earmp.ca

In addition to the report, community visits may be completed to present the results of the monitoring program. Community visits may include presentations, distribution of summary brochures/calendars, school visits, and/or ads. The community visits will be an opportunity to

receive feedback on the program and encourage to further involvement from community members. Feedback on the program can also be provided through the EARMP website. Since 2012, the EARMP has taken the opportunity to engage communities at least annually about their environment while also distributing information about the new project.

APPENDIX B

DETAILED DATA ANALYSIS

APPENDIX B: DETAILED DATA ANALYSIS

1.0 WATER QUALITY

To evaluate the 2018 EARMP community water quality data, concentrations of the reduced chemical list were compared to:

1. Canadian Drinking Water Quality Guidelines (CDWQG; HC 2017) and the Saskatchewan Environmental Quality Guidelines (SEQG) for the protection of freshwater aquatic life (GS 2019);
2. regional reference data; and
3. previous monitoring phases.

Summaries of available guidelines, regional reference data, and the 2011 to 2018 EARMP community data are presented in Appendix B, Figure 1 and Appendix B, Table 1. Data were graphed if concentrations of a certain chemical were above the Reportable Detection Limit (RDL) in at least one community. If available, the CDWQG are presented on the graphs since the EARMP community program is most concerned with human health. If CDWQG are not available for a certain chemical, then the SEQG were included on the graph. The detailed water chemistry results are presented in Appendix C, Table 1.

In 2018, concentrations of most chemicals were very low and in the case of the following chemicals the concentrations were at or below the lowest concentrations at which the laboratory can measure to:

- Cadmium,
- Cobalt,
- Lead,
- Lead-210,
- Polonium-210,
- Radium-226,
- Selenium,
- Thorium-230, and
- Vanadium

All chemical concentrations measured near the communities were below available CDWQG or SEQG (Appendix B, Figure 1 and Appendix B, Table 1), with the exception of pH at all locations being within the guideline ranges (7.0 – 10.5 pH and 6.5 - 9.0 pH, respectively) but not exceeding it. In addition, all chemicals were within the expected range for the region or similar to those measured during the baseline years, with the exception of iron at Black Lake. The concentration measured in 2018 was 0.17 mg/L, which is still below guidelines (0.3 mg/L for the SEQG and CDWG), but outside the baseline range of 0.013 mg/L to 0.026 mg/L. As there has been no apparent increase in the concentrations of the chemicals assessed in the community water samples since the baseline sampling years and the last Human Health Risk Assessment (CanNorth 2018) indicated there was no risk, there are no concerns associated with the 2018 EARMP community water quality.

2.0 FISH CHEMISTRY

To evaluate the EARMP community fish chemistry data, concentrations of the reduced chemical list were compared to:

1. regional reference data; and

2. previous monitoring phases.

Lake trout and lake whitefish samples were collected from all communities except Camsell Portage in 2018. Five samples of each species were collected from each community. A summary of fish descriptive statistics (length, weight, and age) is provided in Appendix B, Figure 2 and Appendix B, Figure 3. Summaries of available chemical concentrations measured in regional reference data, baseline data, and the 2014 to 2018 EARMP community data are presented in Appendix B, Table 2. Data were graphed if >50% of the concentrations for a certain chemical were above the RDL in at least one community (Appendix B, Figure 4 and Appendix B, Figure 5). The detailed fish chemistry results are presented in Appendix C, Table 2.

Chemical concentrations in the community fish samples from 2018 were often so low that the laboratory could not measure the level. This was the case for aluminum, molybdenum, nickel, vanadium, lead-210, radium-226, and thorium-230, in over half of the lake whitefish and lake trout samples assessed in all of the communities. In addition,

cadmium, uranium, and polonium-210 were below levels the laboratory could measure in over half of the lake trout sampled from each community.

Those parameters that were above the RDL, were within the regional reference range and similar to concentrations measured during previous monitoring years. As there has been no apparent increase in the concentrations of the chemicals assessed in the lake trout or lake whitefish community samples since the baseline sampling years and the last Human Health Risk Assessment (CanNorth 2018) indicated there was no risk, there are no concerns associated with the 2018 EARMP community fish quality.

3.0 BERRY CHEMISTRY

To evaluate the EARMP community berry chemistry data, concentrations of the reduced chemical list were compared to:

1. regional reference data; and

2. previous monitoring phases.

Summaries of available chemical concentrations measured in regional reference data, baseline data, and the 2014 to 2018 EARMP community data are presented in Appendix B, Table 3 and Appendix B, Table 4. Data were graphed if >50% of the concentrations for a certain chemical were above the RDL in at least one community. The detailed berry chemistry results are presented in Appendix C, Tables 3 and 4.

Levels of chemicals in the blueberries were often too low for the laboratory to measure. This included levels of arsenic, cadmium, cobalt, selenium, uranium, vanadium, thorium-230, which were below measurable levels in more than half of the samples from 2018. Those chemicals that could be measured were at levels within the regional reference range and similar to levels measured during previous monitoring periods. Overall, blueberries are considered safe to eat in all of the EARMP communities.

Cranberry samples were available from Camsell Portage, Fond du Lac, Stony Rapids, and Wollaston Lake in 2018. This marks the first cranberry samples from Fond du Lac, Stony Rapids, and Wollaston Lake for this program Similar to the blueberry samples, chemicals were often too low for the laboratory to measure including arsenic, selenium, uranium, vanadium, and thorium-230. For the most part, chemicals that were measurable were

within the regional reference range and similar to concentrations measured during previous monitoring periods. Aluminum in cranberries from Stony Rapids, and cadmium in cranberries from Stony Rapids and Wollaston Lake were measured at levels slightly above the regional reference range (Appendix B, Figure 7). The aluminum concentrations measured 91 ± 5 µg/g in the cranberries from Stony Rapids which falls within the regional reference range established for blueberries in the region, and is not considered a concern. Similarly, although measurable, cadmium levels in both Stony Rapids (0.03 ± 0.007 µg/g) and Wollaston Lake (0.045 µg/g) were near to the RDL of 0.01 µg/g and therefore not considered a concern.

4.0 MAMMAL CHEMISTRY

To evaluate the EARMP community barren-ground caribou and moose flesh chemistry data, concentrations of the reduced chemical list were compared to:

1. regional reference data; and

2. previous monitoring phases.

Summaries of available caribou and moose chemical concentrations measured in regional reference data, baseline data, and the 2014 to 2019 community data are presented in Appendix B, Table 5 for caribou and Appendix B, Table 6 for moose. It is noted that mammals were not the focus of the 2018/2019 monitoring year; however, barren-ground caribou samples from Uranium City (n = 3) and moose samples from Stony Rapids (n = 1) and Uranium City (n = 2) were available and submitted as supplemental data for the program. Data were graphed if >50% of the concentrations for a certain chemical were above the RDL in at least one community (Appendix B, Figure 8 and Appendix B, Figure 9). The raw mammal chemistry results are presented in Appendix C, Tables 5 and 6.

Concentrations of chemicals that were too low for the laboratory to measure varied only slightly between the barren-ground caribou and moose flesh samples. Levels of aluminum, arsenic, lead, molybdenum, nickel, uranium, vanadium, lead-210, radium-226, and thorium-230 were below RDLs in more than half of the barren-ground caribou samples from Uranium City and moose samples from Stony Rapids and Uranium City. Those chemicals that could be measured, were within the regional reference range for both caribou and moose flesh samples.

5.0 OTHER CHEMISTRY

Beginning in 2014, the EARMP community program started collecting moose and barren-ground caribou organ samples (heart, liver, and kidney) as requested by some communities as they are also consumed. From 2014 to 2016, a total of 13 barren-ground caribou and 14 moose organ samples were submitted for analysis. These data were utilized in the Human Health Risk Assessment completed as part of the EARMP 2017/2018 community program as they form part of the diet of Athabasca basin residents (CanNorth 2018). In 2019, additional organ samples were submitted from Uranium City; three barren-ground caribou heart samples and three barren-ground caribou liver samples. These data are presented in Appendix B, Table 7 and the detailed data are presented in Appendix C, Table 7. Generally speaking, heavy metals follow a predictable pattern in mammals with the highest metal concentrations in kidney, less in the liver, and lowest in muscle tissue, and levels increase with the age of the animal (Gamberg 2005). Therefore, as was expected, the barren-ground caribou liver samples had higher average levels of chemicals than the heart and flesh samples.

In addition to organ samples, spruce grouse and snowshoe hare samples have been assessed during passed monitoring years as they have also been cited as an important traditional food for Athabasca residents. No additional snowshoe hare or spruce grouse samples were submitted for the 2018/2019 monitoring year. All previous data are summarized in **Error! Reference source not found.** and **Error! Reference source not found.**; detailed in Appendix C, Tables 8 and 9.

6.0 LITERATURE CITED

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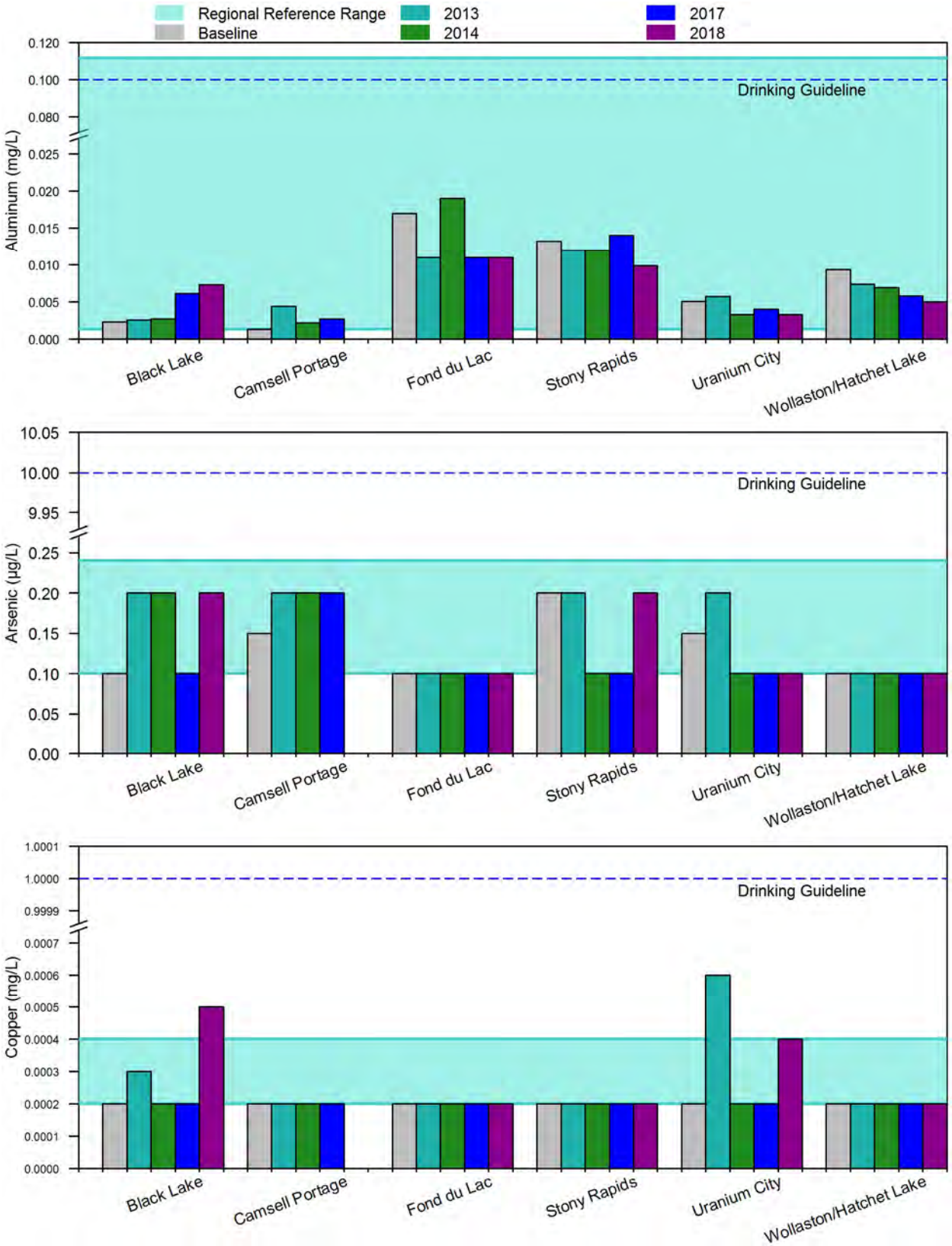
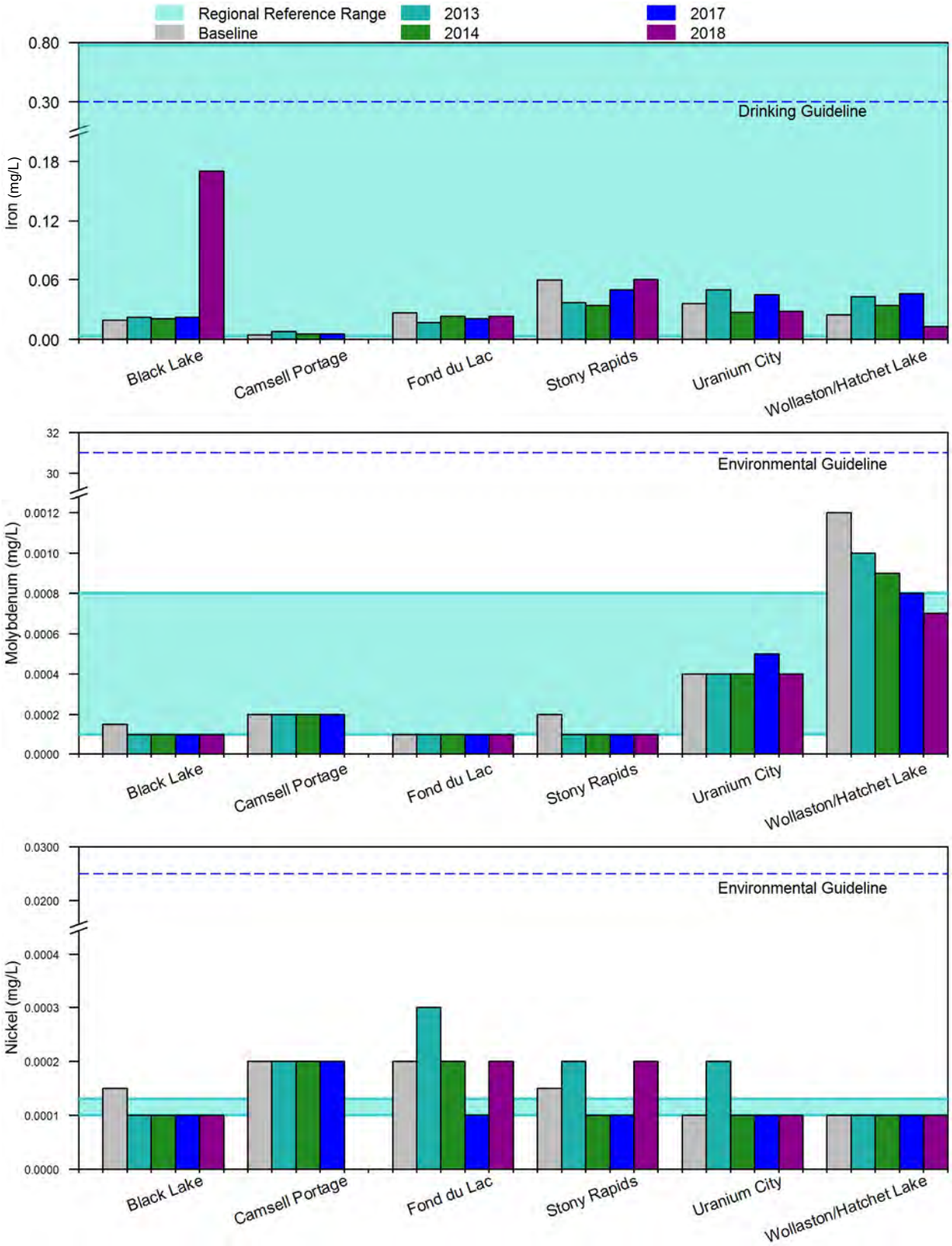
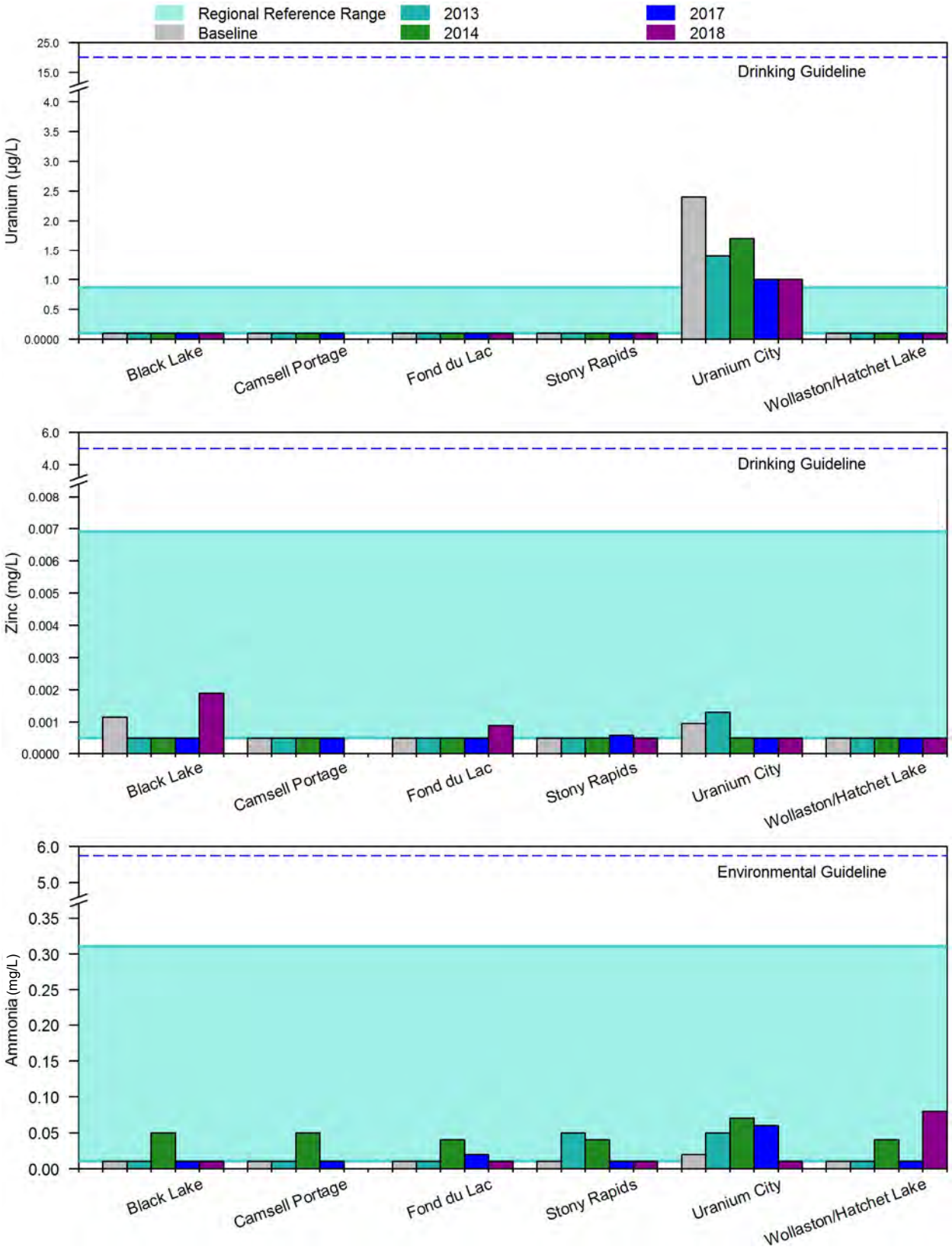
Appendix B, Figure 9 Chemicals in moose from the EARMP community study areas, 2011 to 2018.



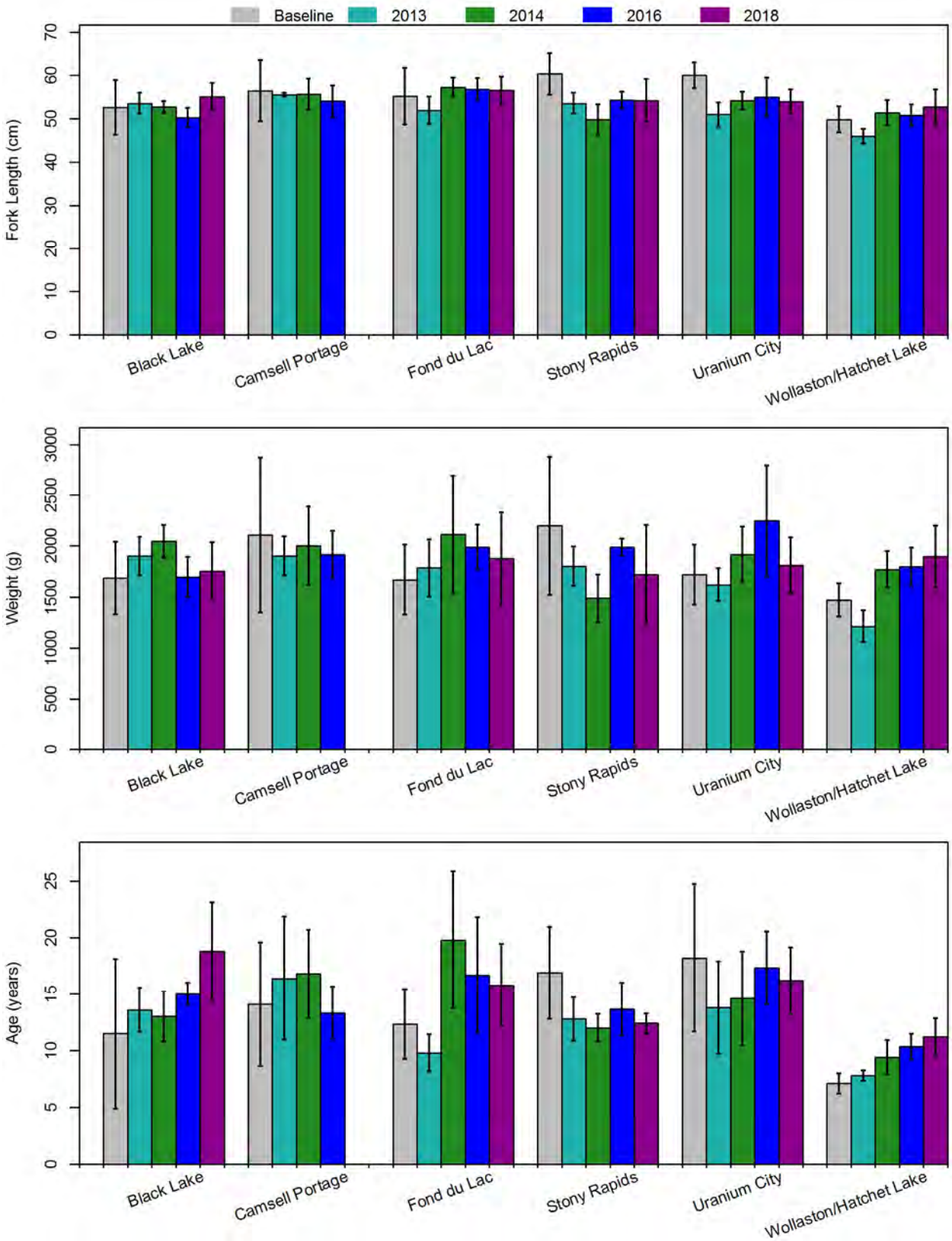
Appendix B, Figure 1
Chemicals in water from the EARMP community study area, 2011 to 2018.



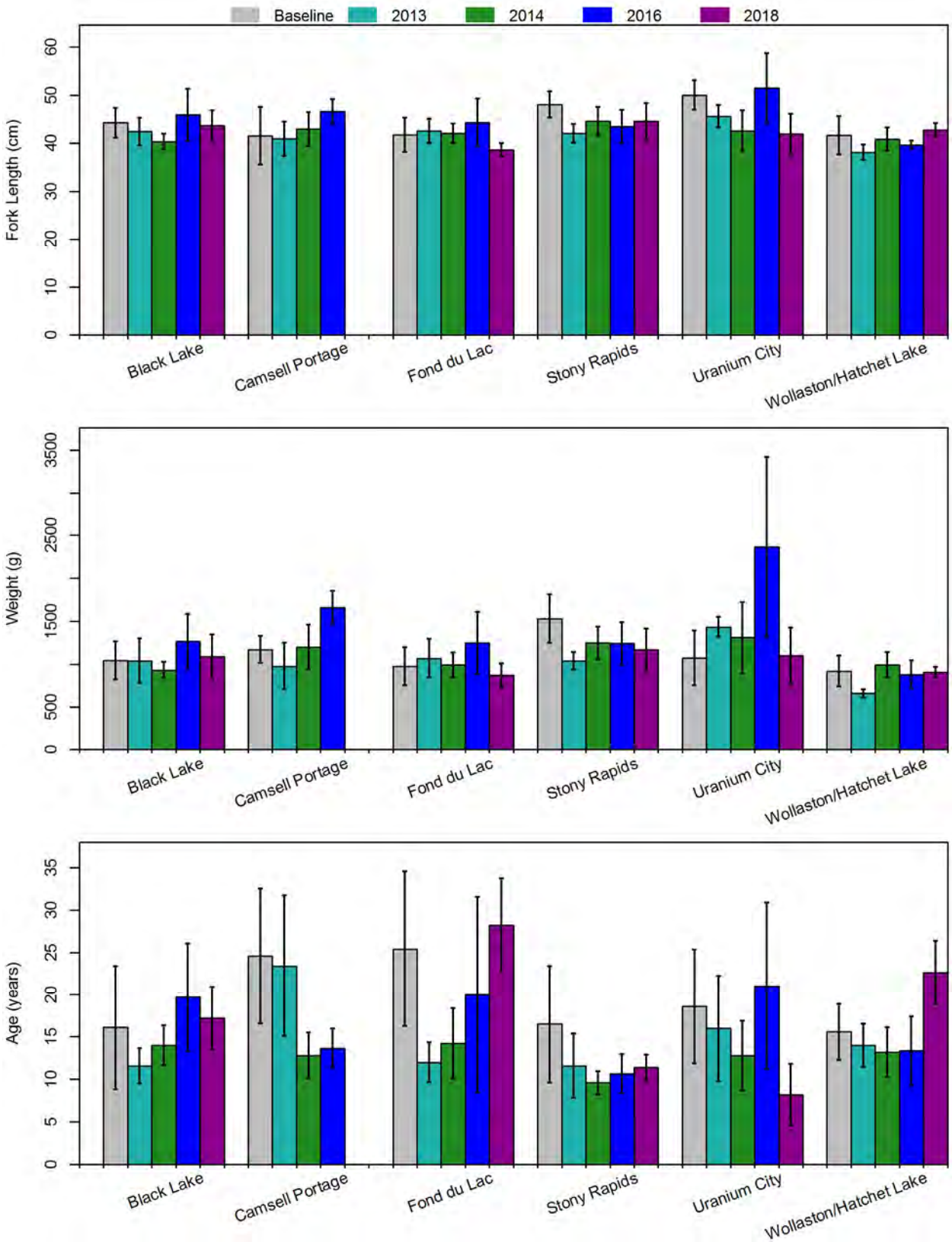
Appendix B, Figure 1
Chemicals in water from the EARMP community study area, 2011 to 2018.



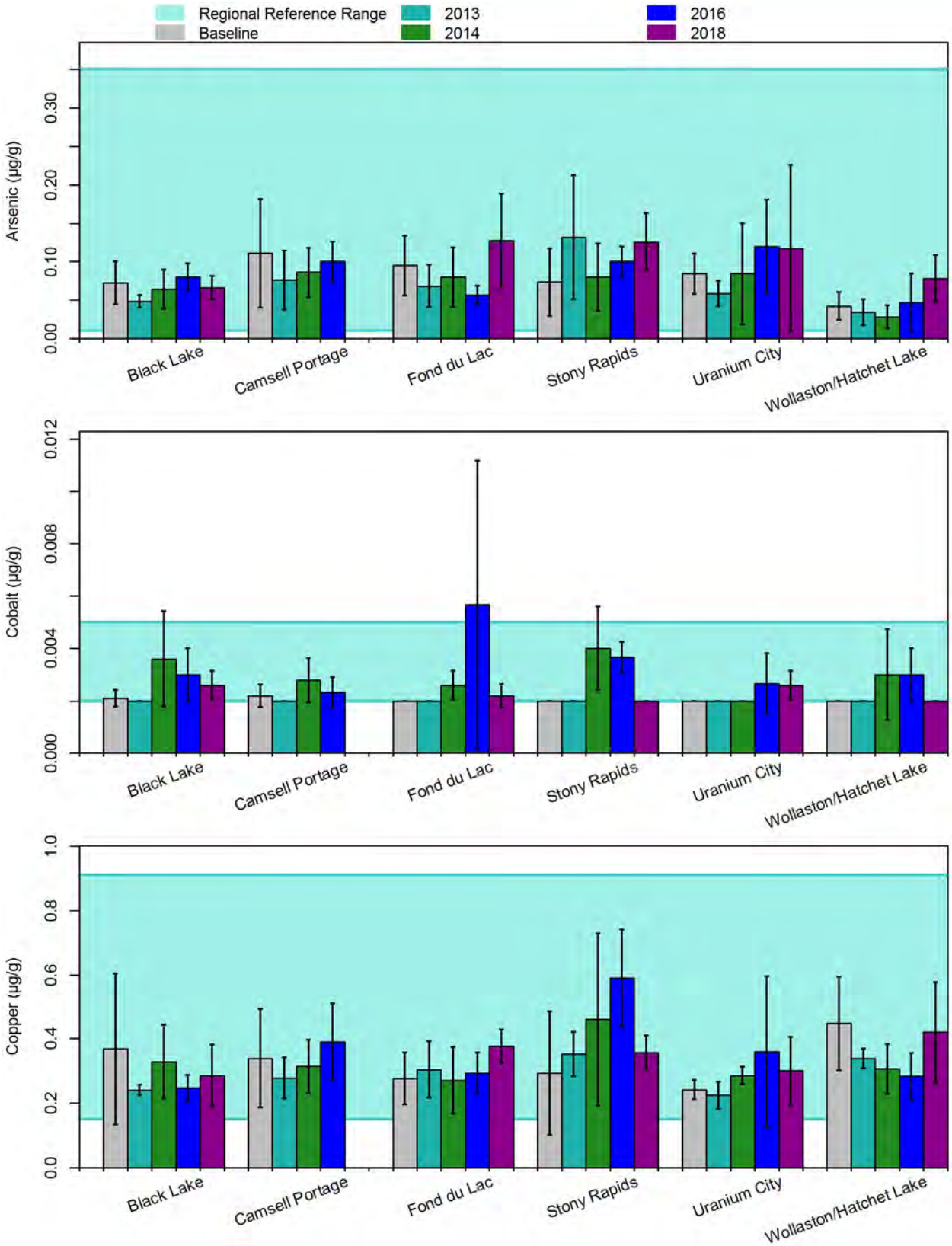
Appendix B, Figure 1
Chemicals in water from the EARMP community study area, 2011 to 2018.



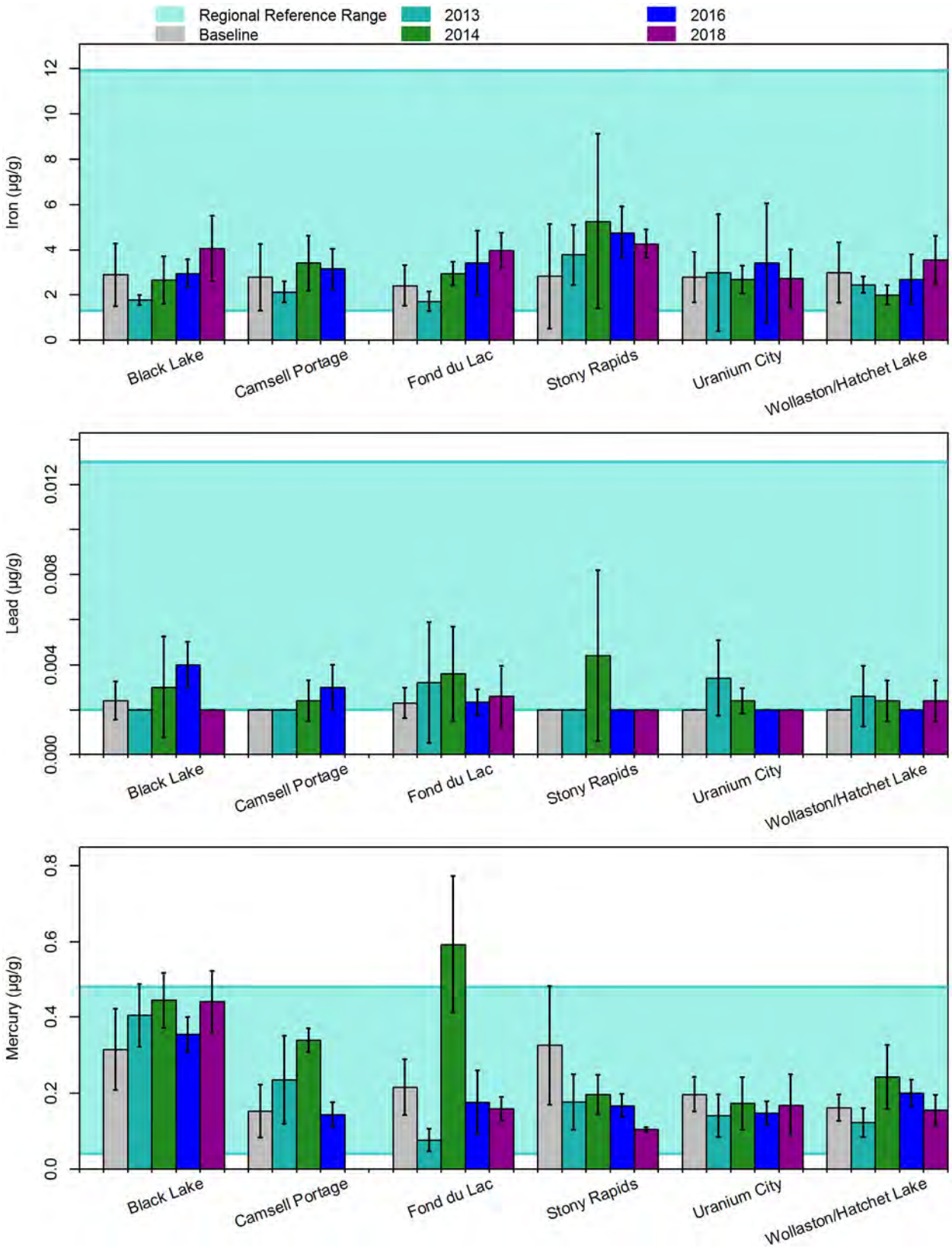
Appendix B, Figure 2
Length, weight, and age of lake trout assessed by EARMP, 2011 to 2018.



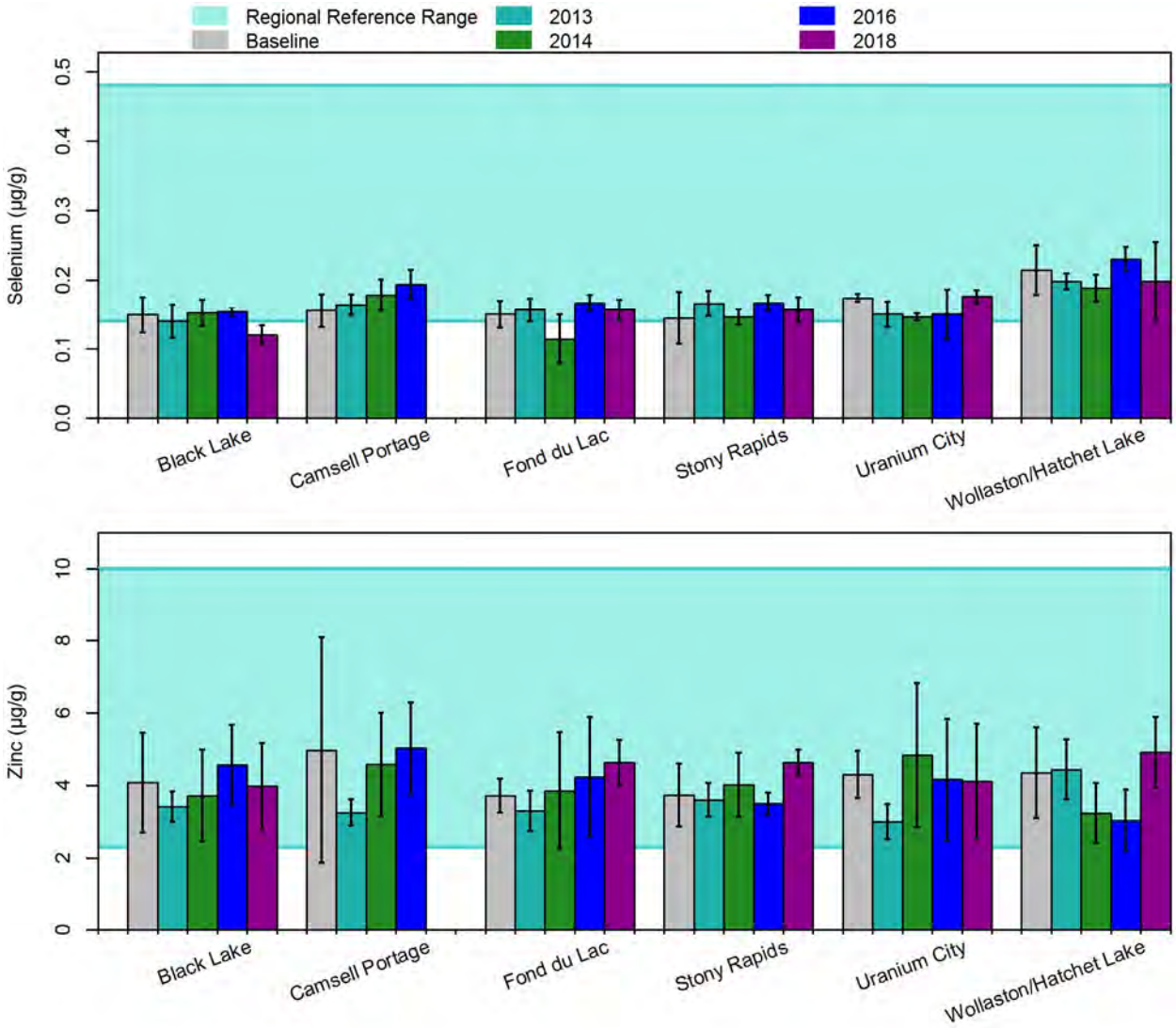
Appendix B, Figure 3
Length, weight, and age of lake whitefish assessed by EARMP, 2011 to 2018.



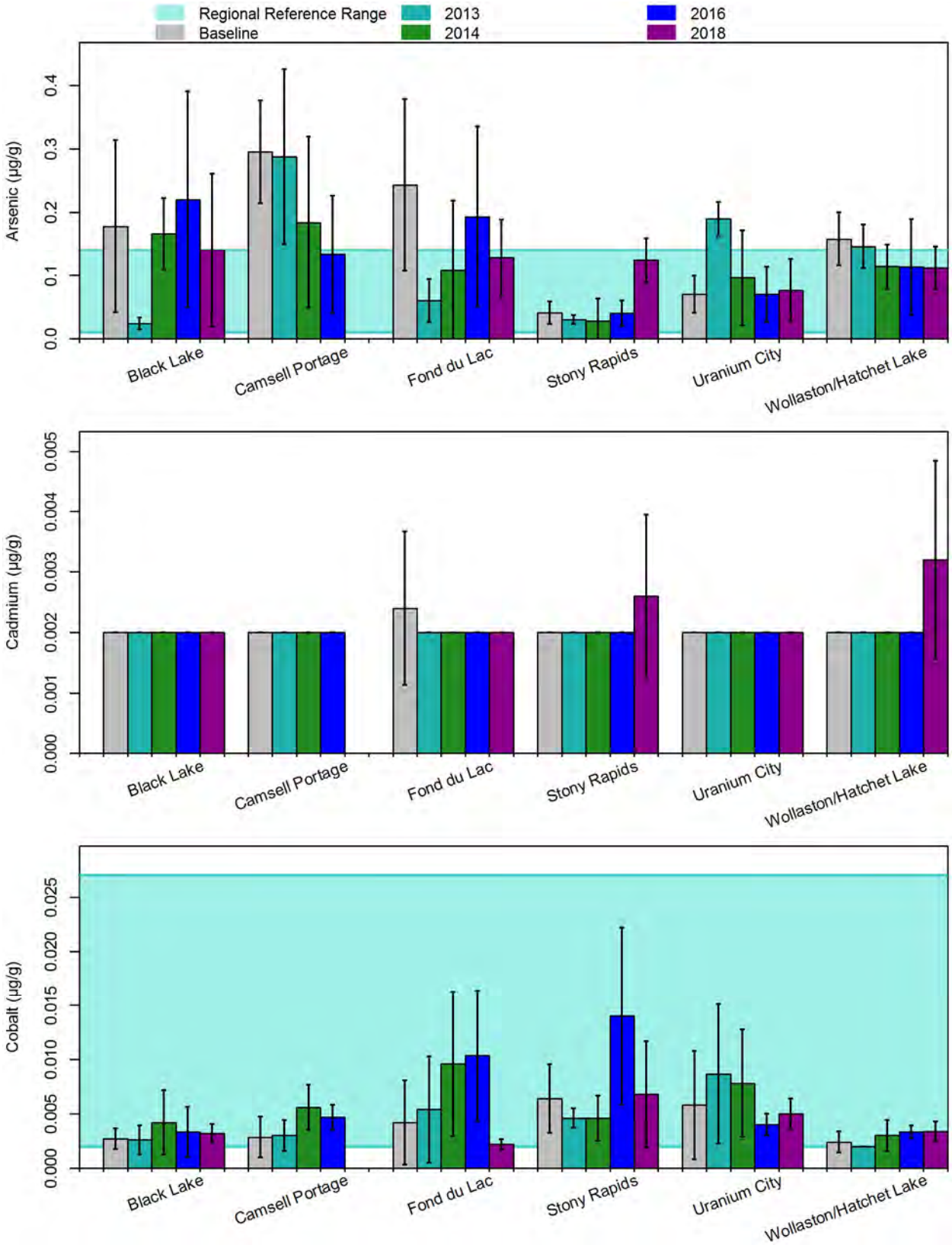
Appendix B, Figure 4
Chemicals in lake trout from the EARMP community study areas, 2011 to 2018.



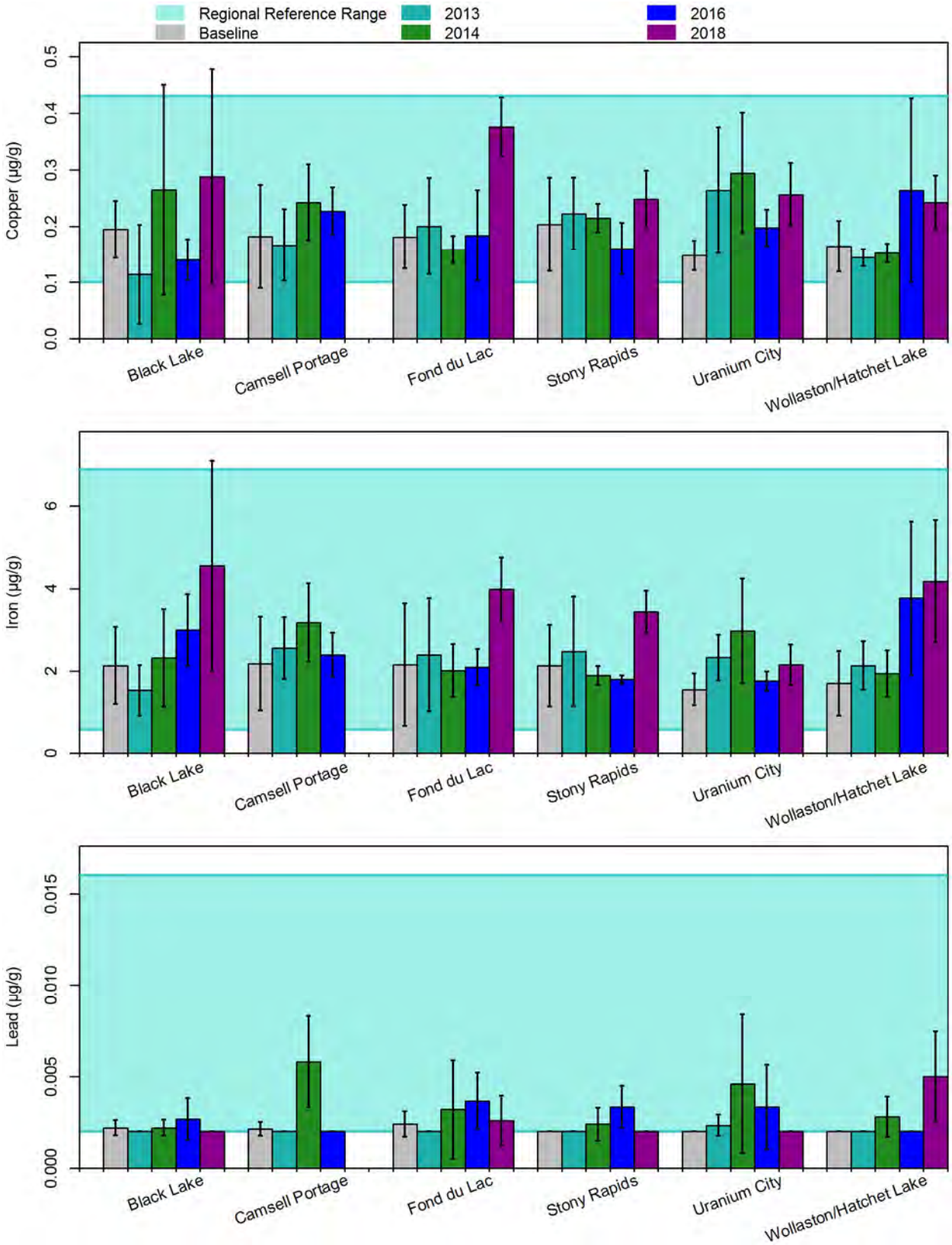
Appendix B, Figure 4
Chemicals in lake trout from the EARMP community study areas, 2011 to 2018.



Appendix B, Figure 4
Chemicals in lake trout from the EARMP community study areas, 2011 to 2018.



Appendix B, Figure 5
Chemicals in lake whitefish from the EARMP community study areas, 2011 to 2018.



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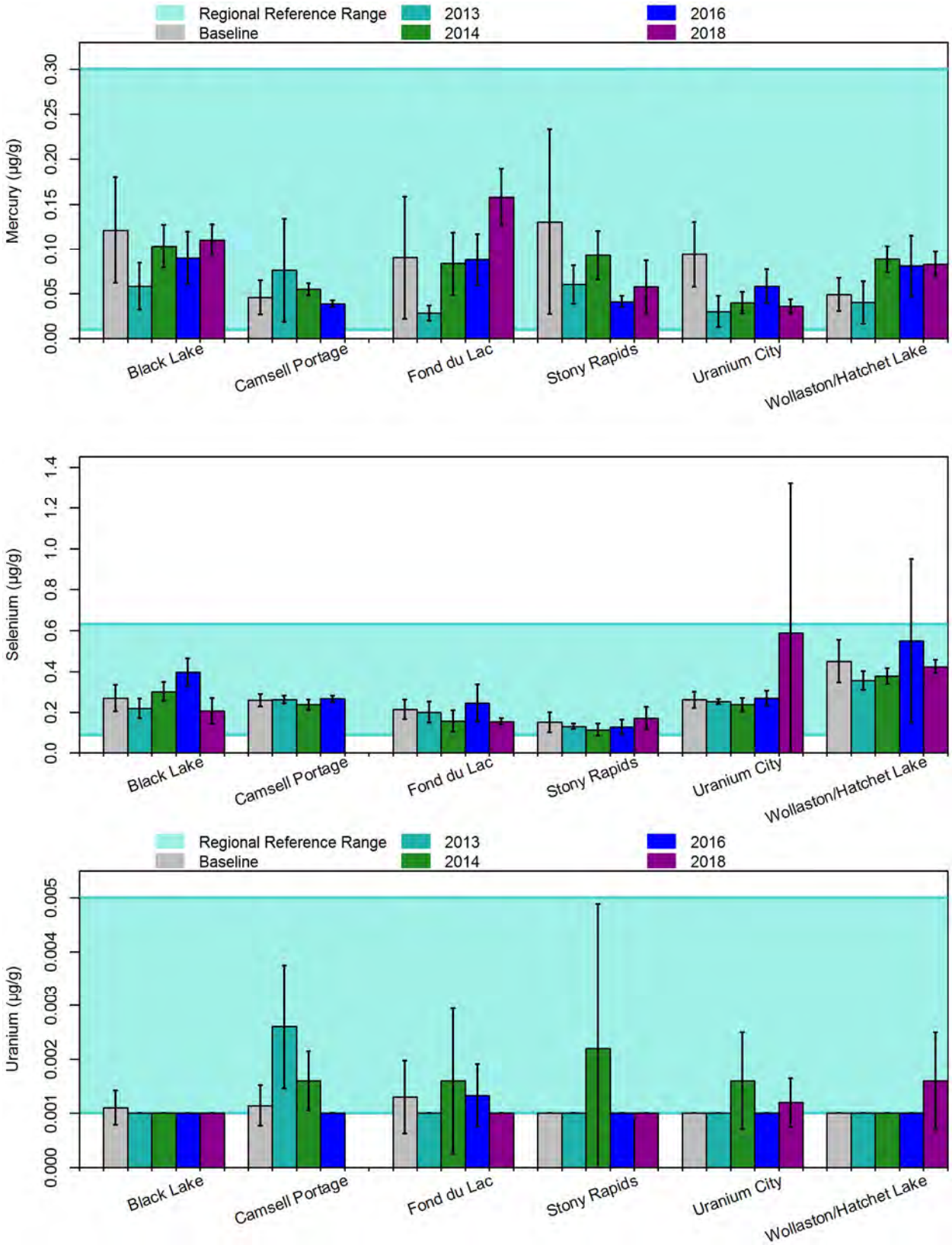

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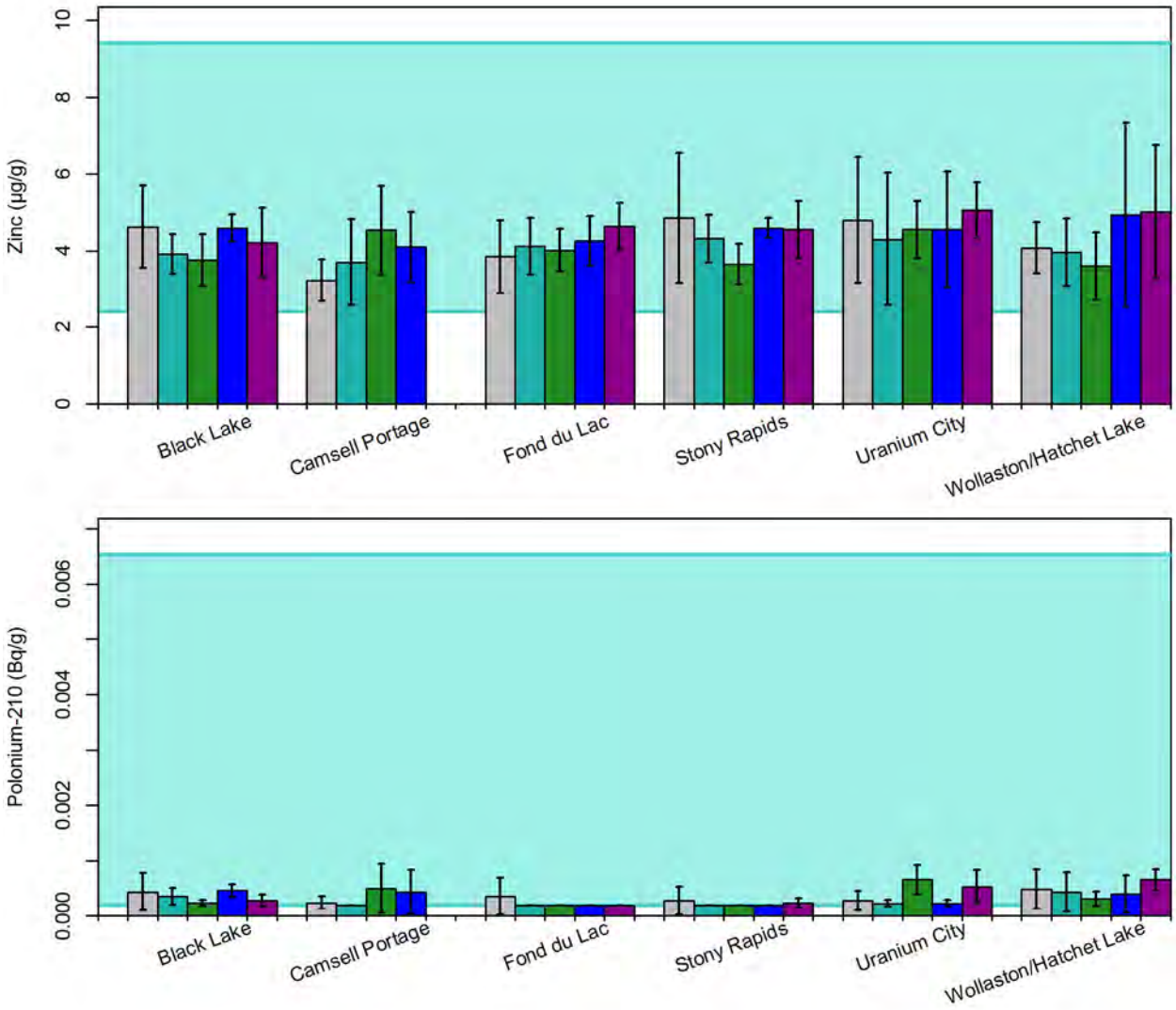

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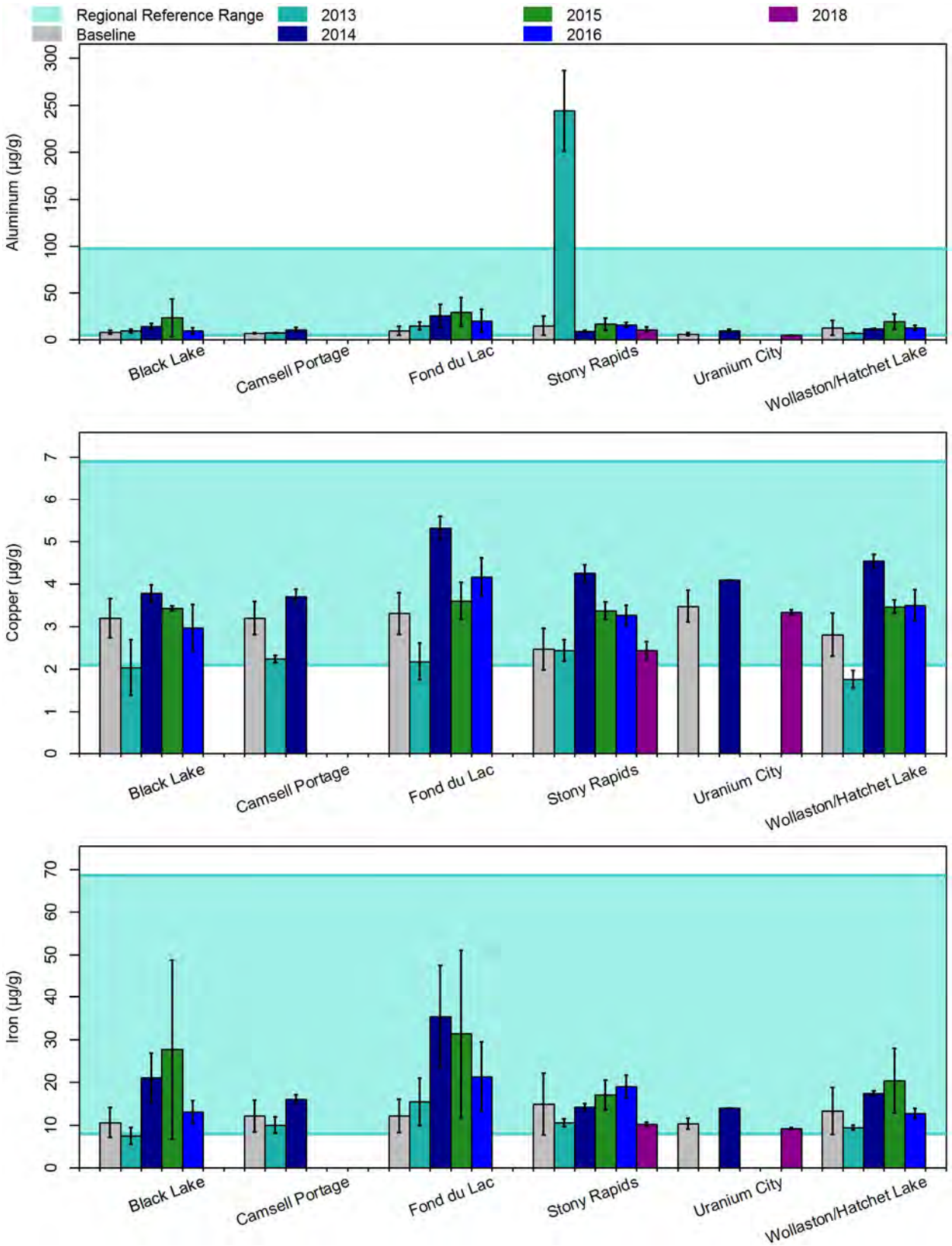
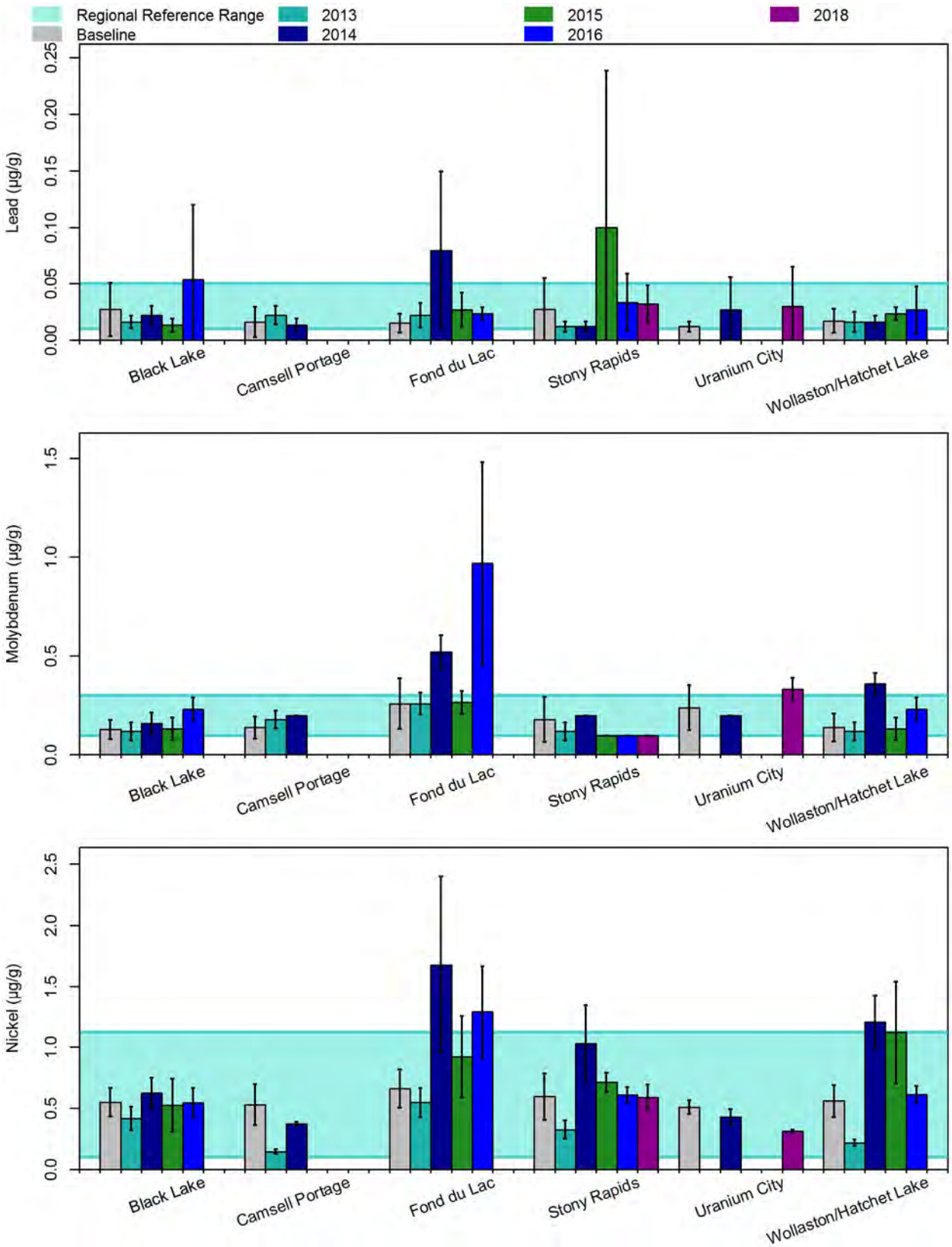


Appendix B, Figure 6
Chemicals in blueberries from the EARMP community study areas, 2011 to 2018.



Appendix B, Figure 6
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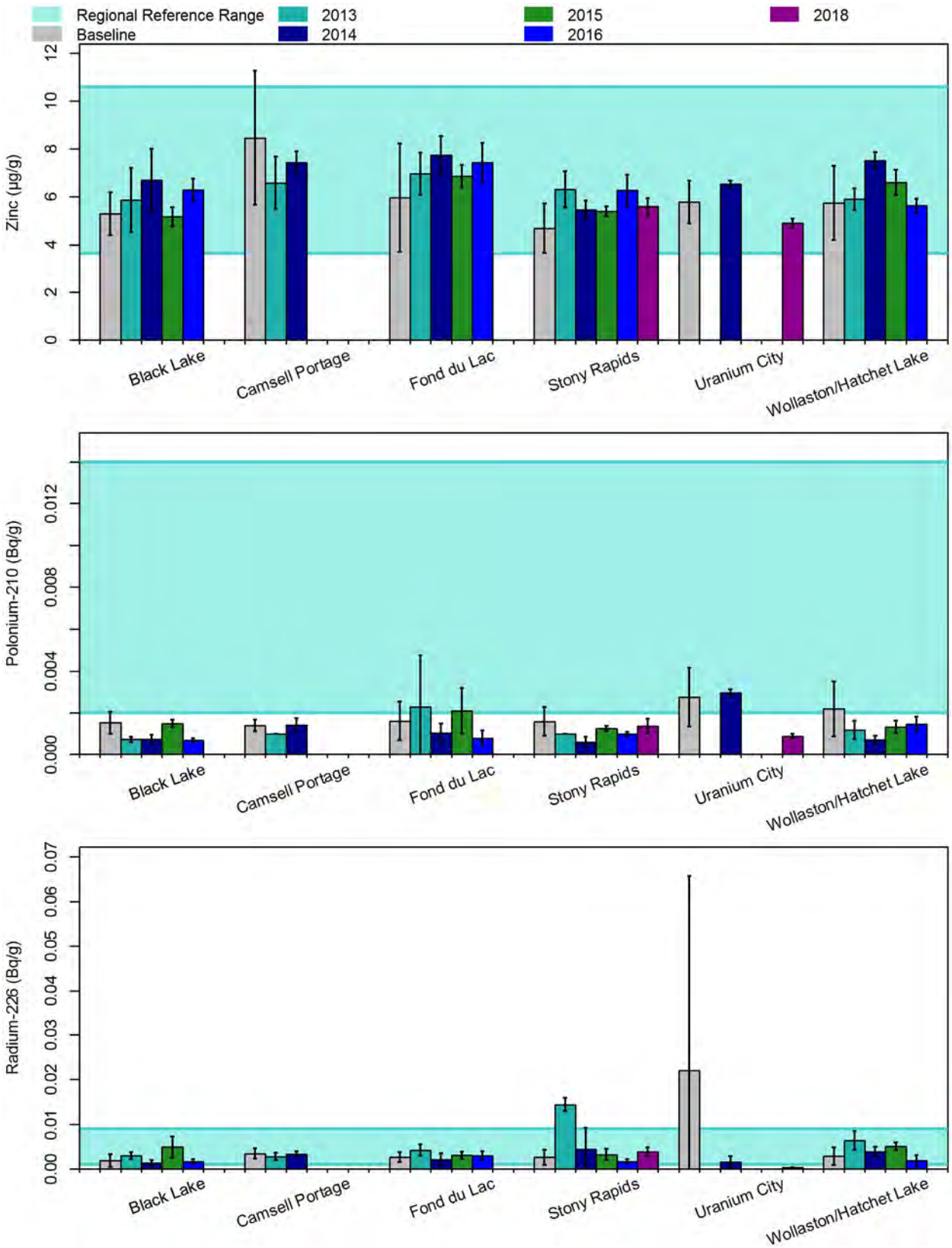

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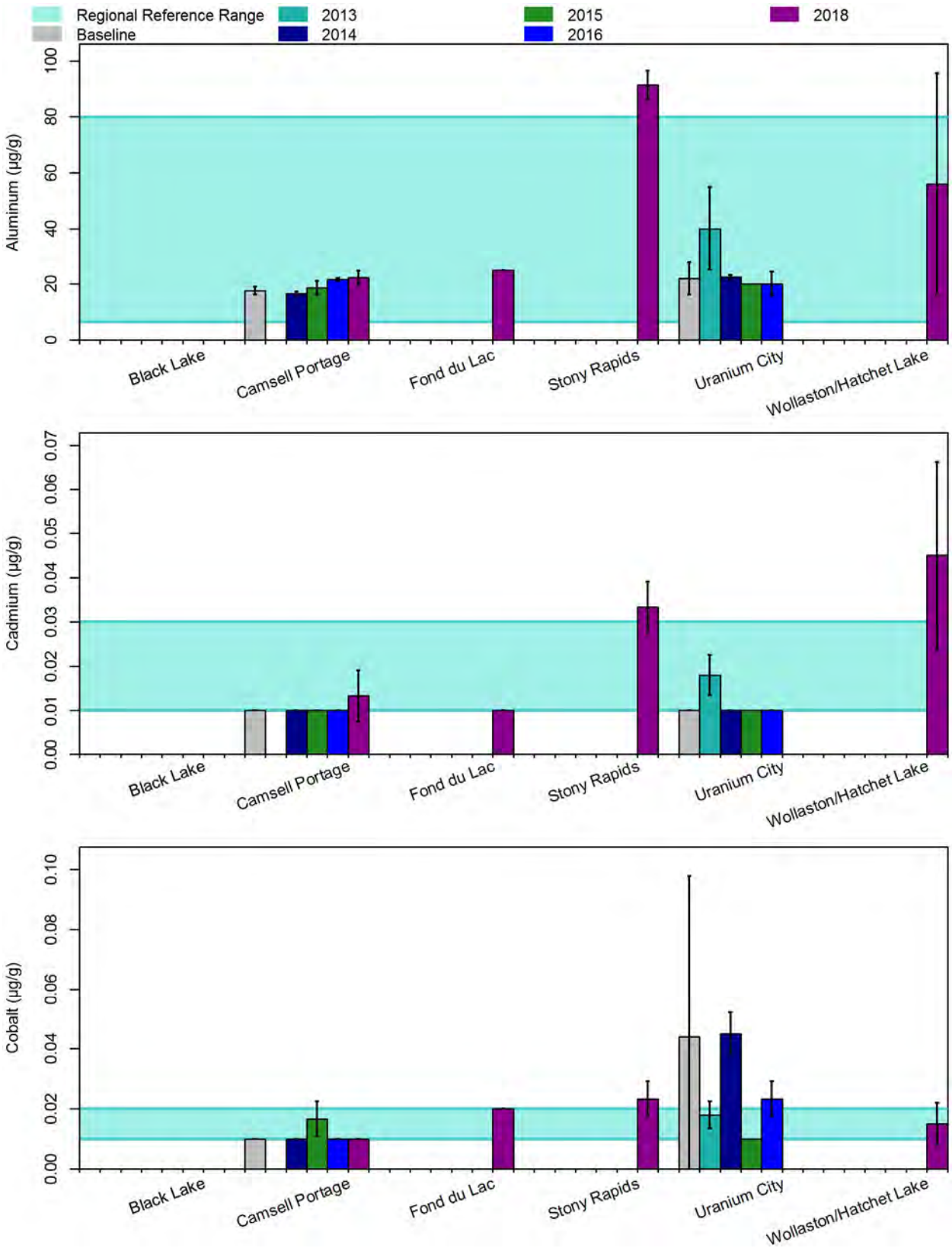
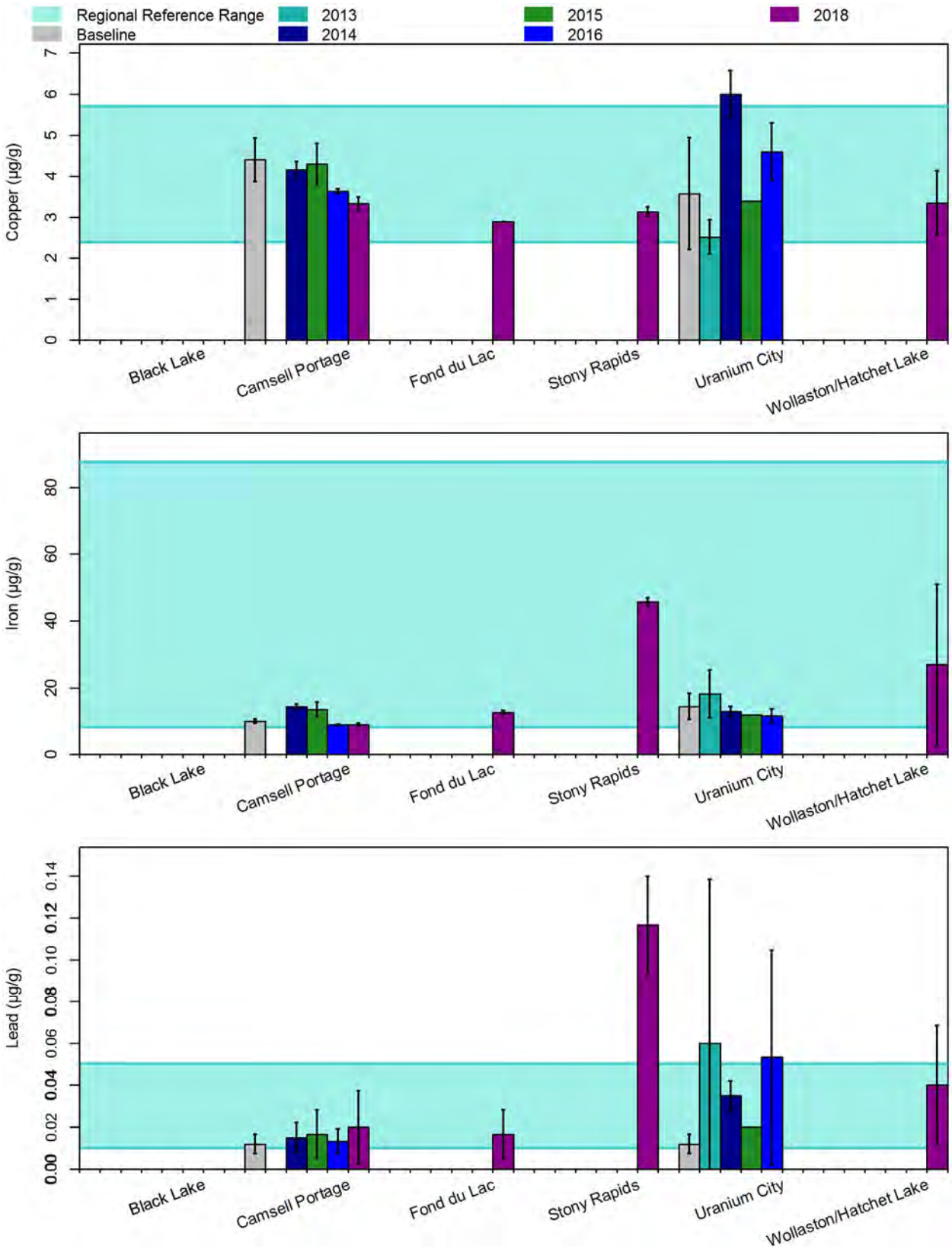
Chemicals in blueberries from the EARMP community study areas, 2011 to 2018.



Appendix B, Figure 7
Chemicals in cranberries from the EARMP community study areas, 2011 to 2018.



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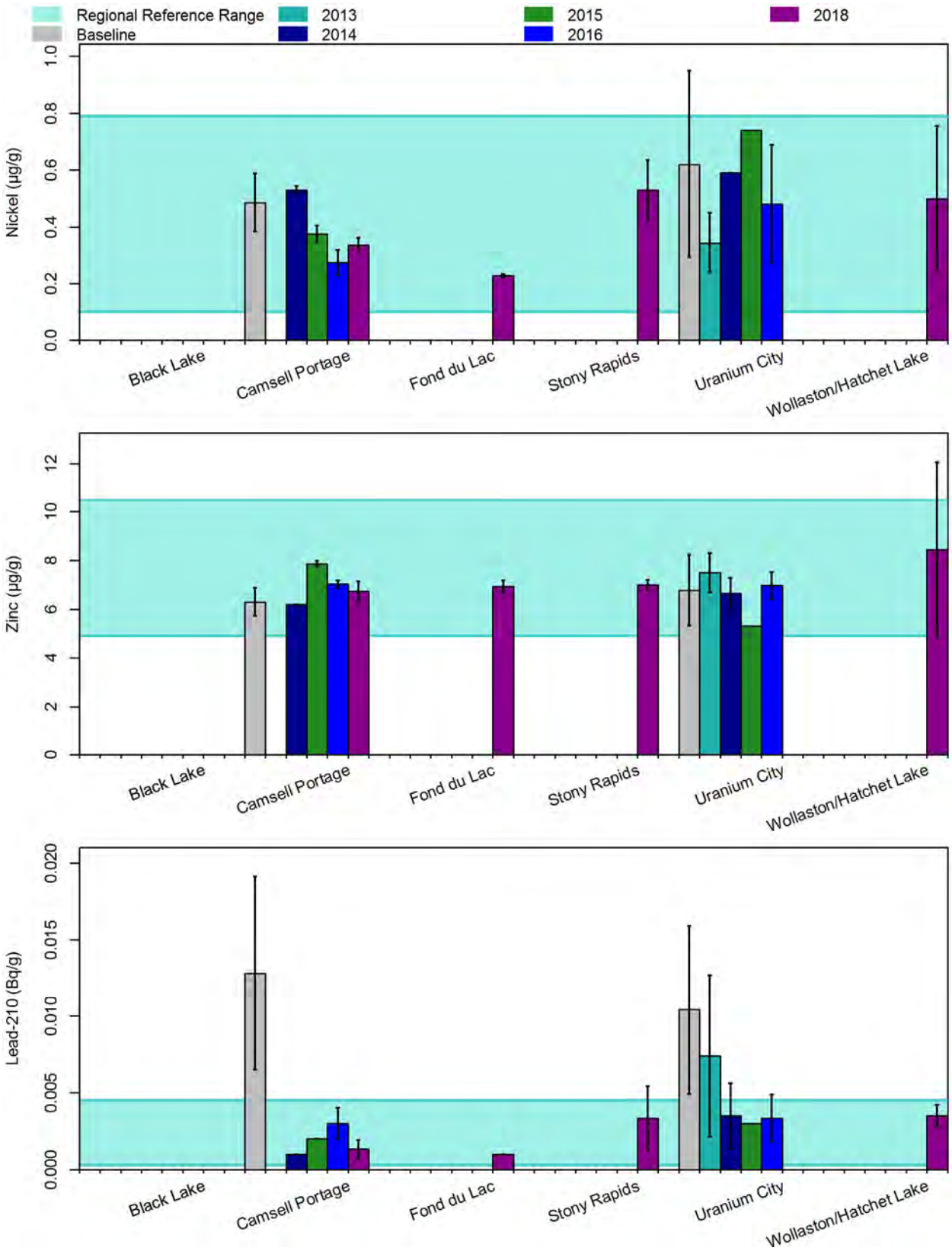
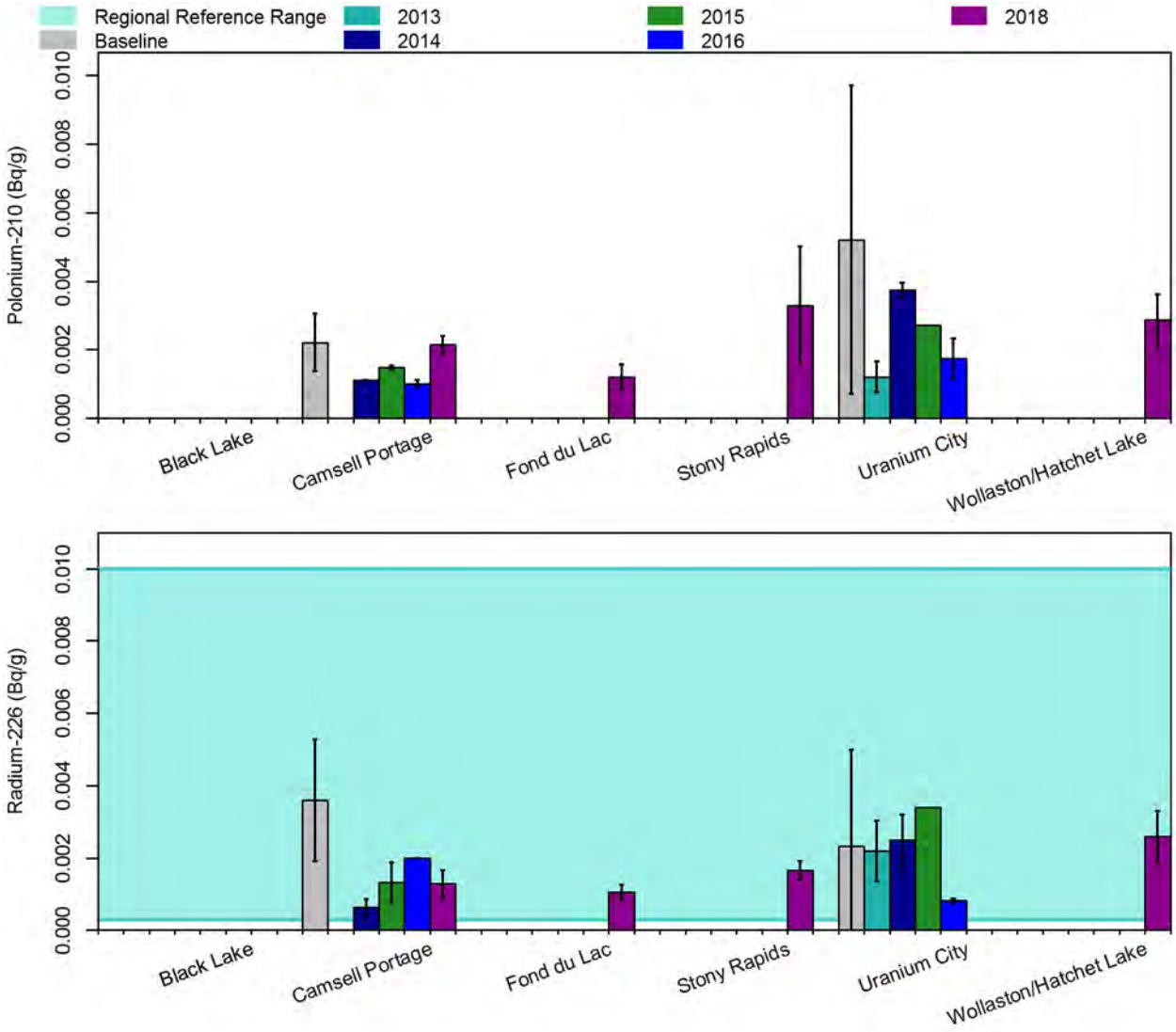
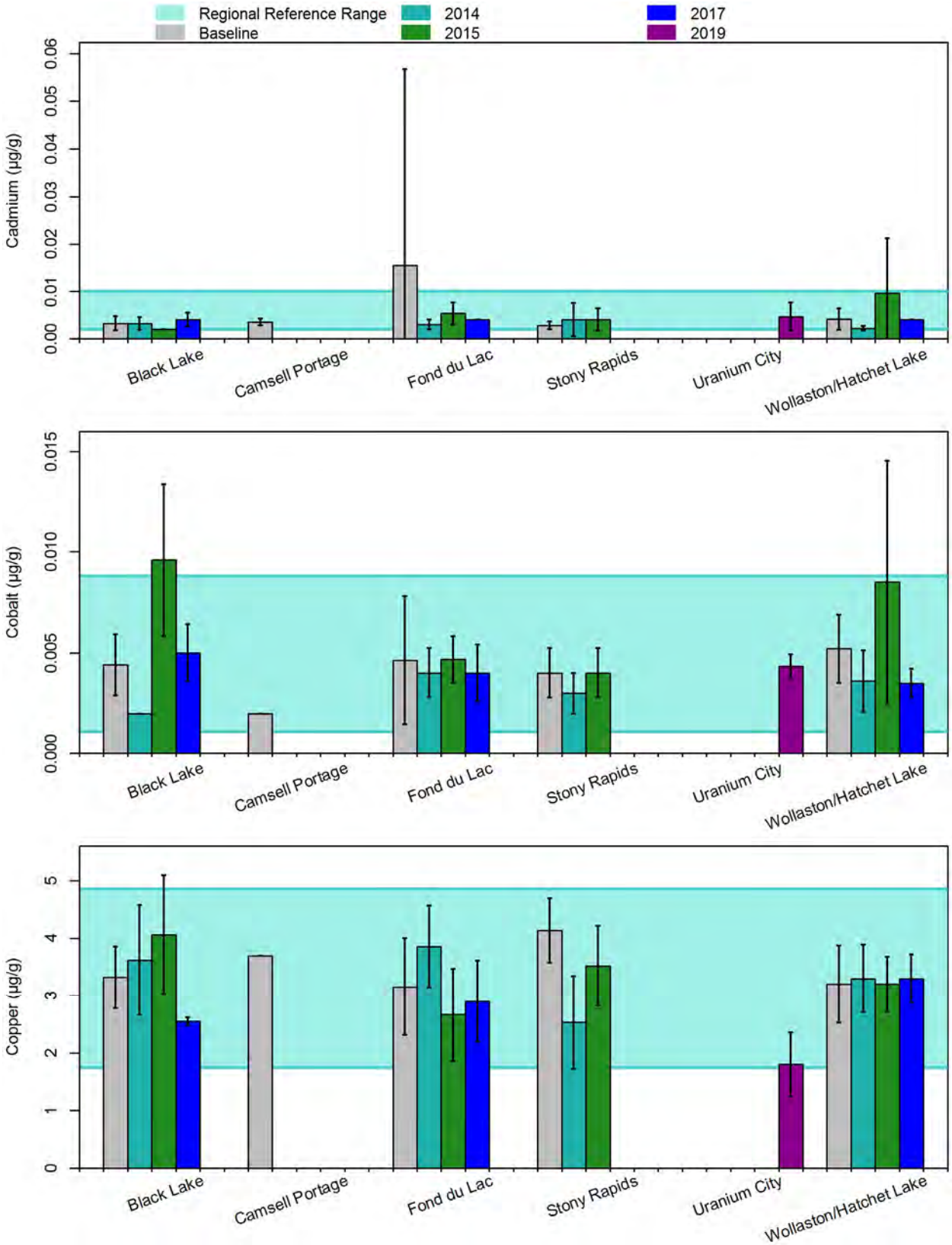
Chemicals in cranberries from the EARMP community study areas, 2011 to 2018.



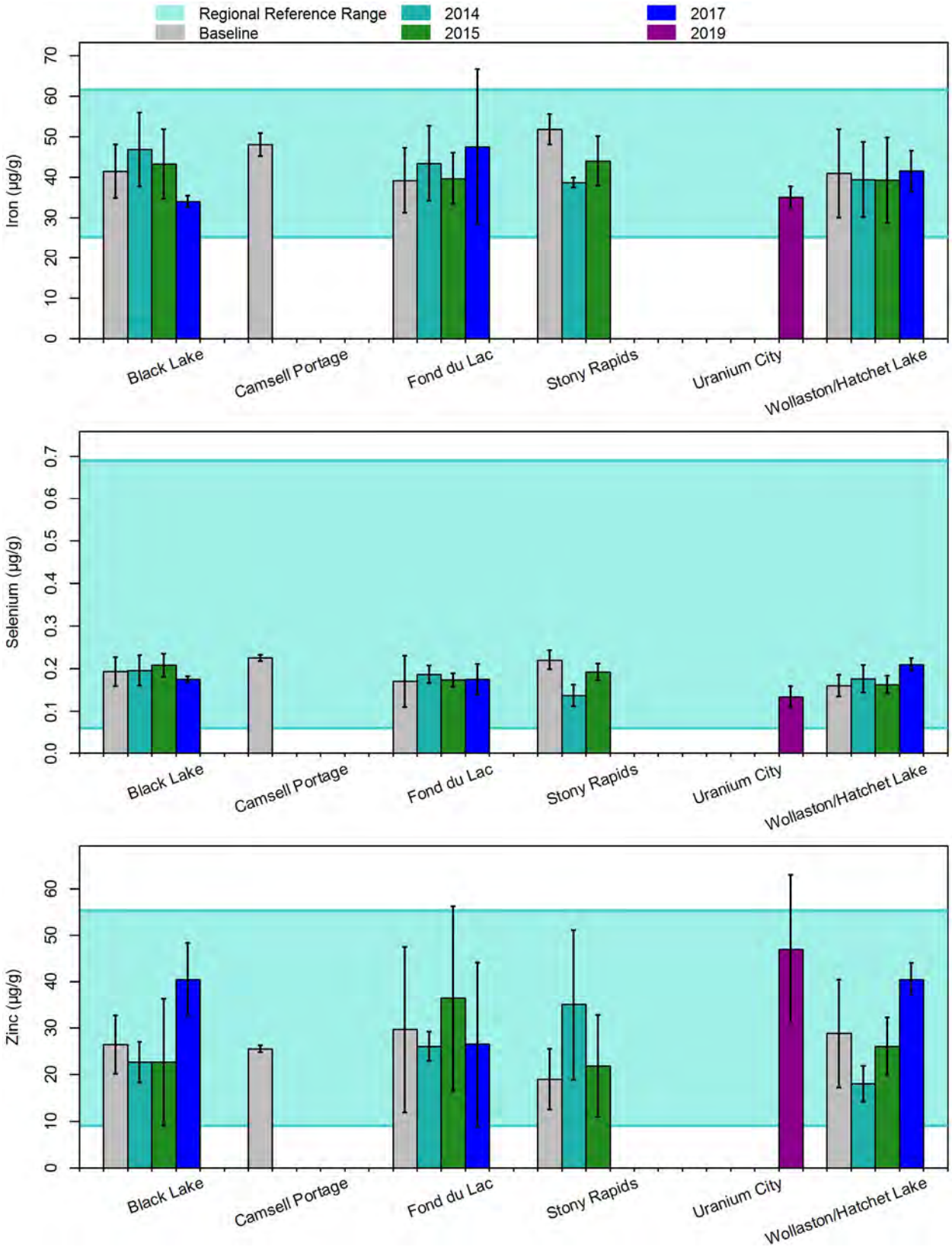
Appendix B, Figure 7
Chemicals in cranberries from the EARMP community study areas, 2011 to 2018.



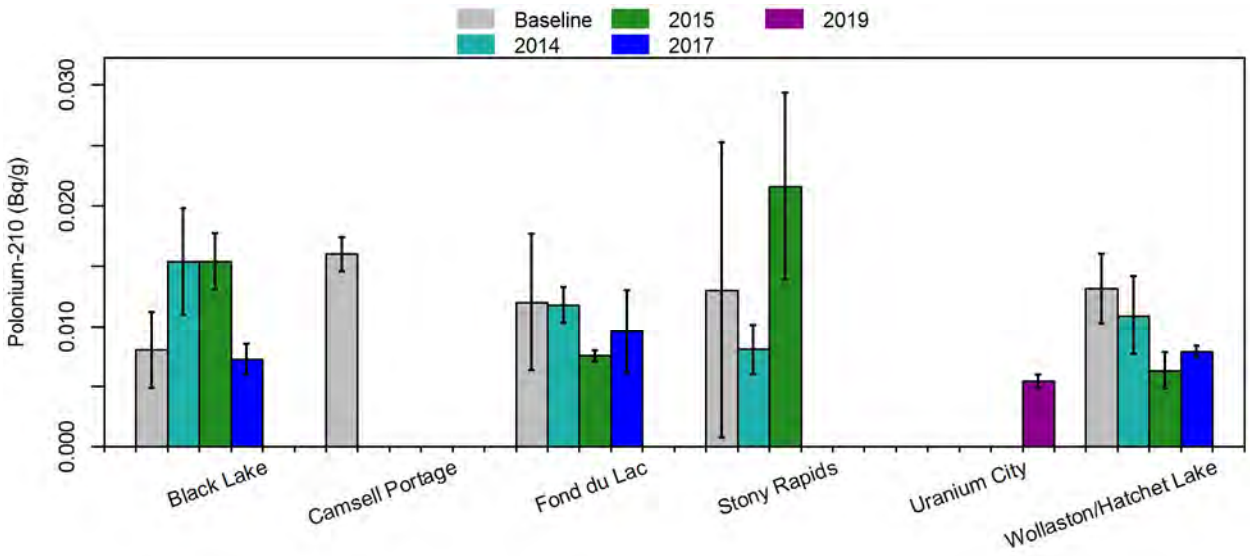
Appendix B, Figure 7
Chemicals in cranberries from the EARMP community study areas, 2011 to 2018.



Appendix B, Figure 8
Chemicals in barren-ground caribou from the EARMP community study areas, 2012 to 2019.



Appendix B, Figure 8
Chemicals in barren-ground caribou from the EARMP community study areas, 2018 to 2019.



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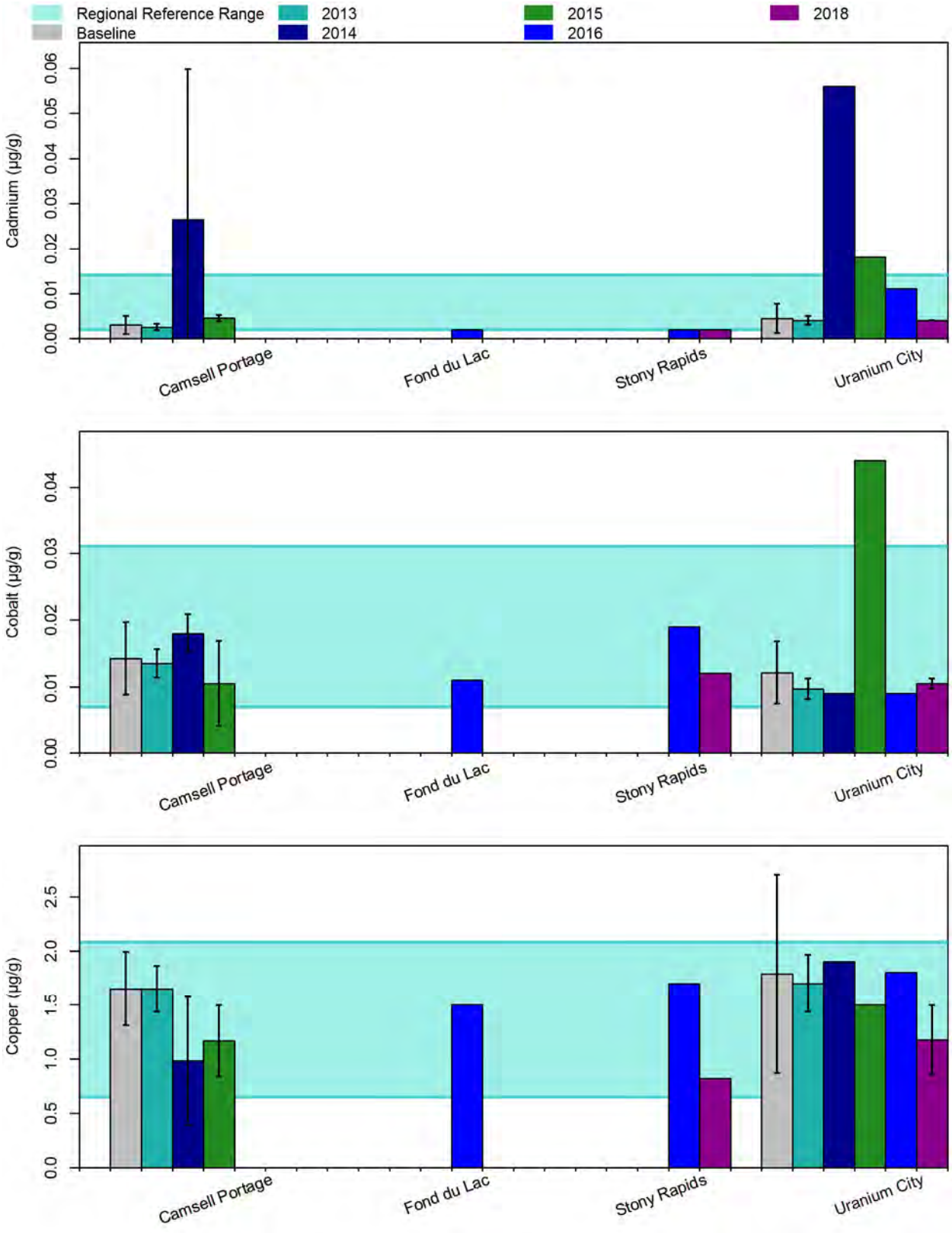
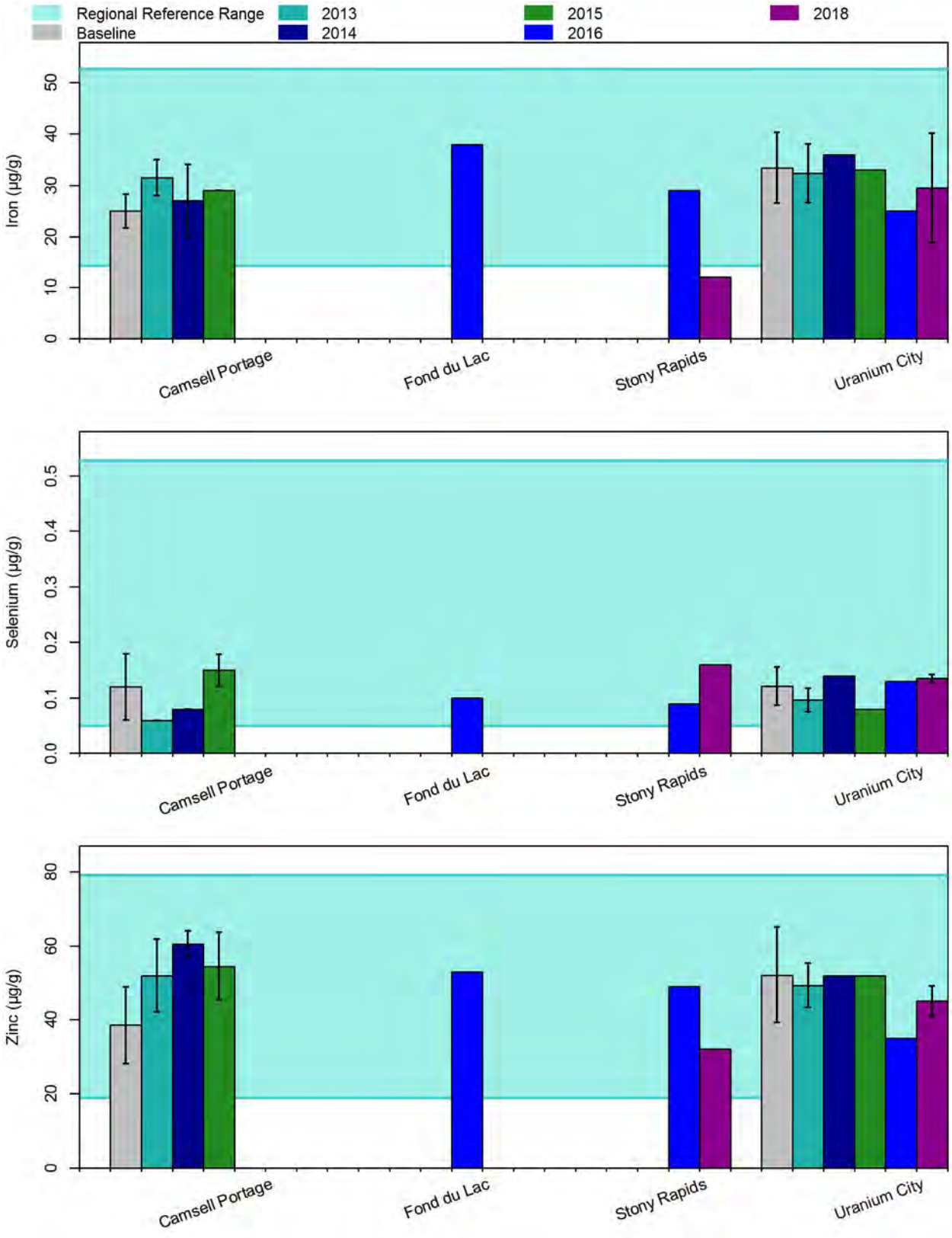
Chemicals in barren-ground caribou from the EARMP community study areas, 2012 to 2019.



Appendix B, Figure 9
Chemicals in moose from the EARMP community study areas, 2011 to 2018.



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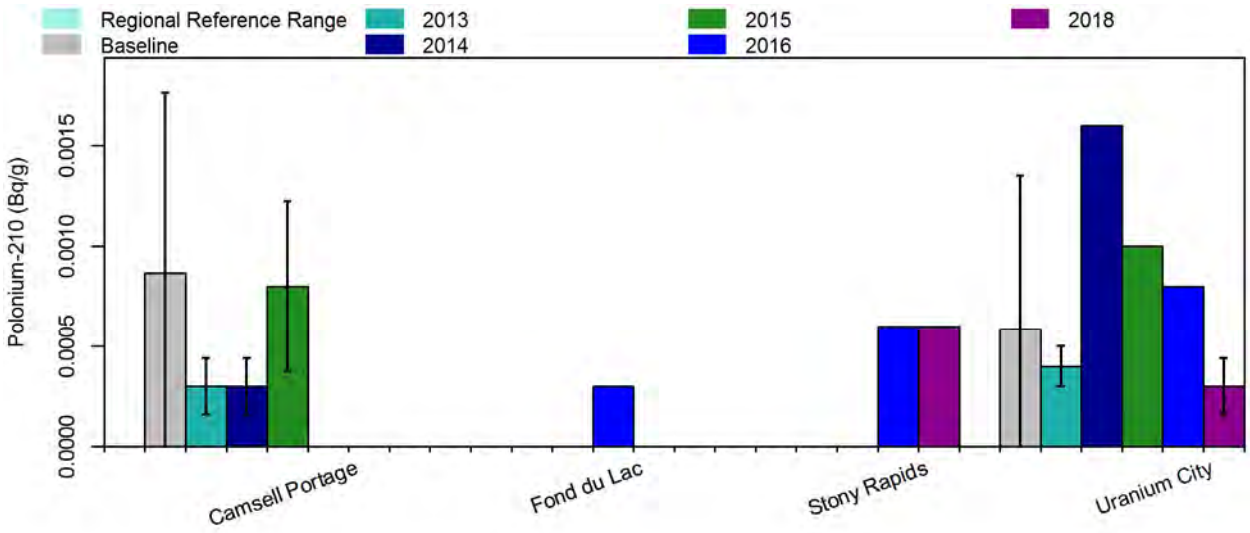
Chemicals in moose from the EARMP community study areas, 2011 to 2018.



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Appendix B, Table 4 Summary bog cranberry chemistry results for the EARMP community program, 2011 to 2018.

Appendix B, Table 5 Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2018.

Appendix B, Table 6 Summary moose flesh chemistry results for the EARMP community program, 2011 to 2018.

Appendix B, Table 7 Summary barren-ground caribou and moose organ chemistry results for the EARMP community program, 2014 to 2019.

Appendix B, Table 1
Fall water chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	SEQG[2]	CDWQ[3]	Black Lake						Camsell Portage					Fond du Lac					
			Black Lake						Ellis Bay, Lake Athabasca					Fond du Lac River					
			2011	2012	2013	2014	2017	2018	2011	2012	2013	2014	2017	2011	2012	2013	2014	2017	2018
Metals																			
Aluminum[4]	0.1	0.1	0.002	0.0026	0.0026	0.0027	0.0061	0.0073	0.0016	0.001	0.0044	0.0022	0.0027	0.014	0.02	0.011	0.019	0.011	0.011
Arsenic (µg/L)	5	10	0.1	0.1	0.2	0.2	<0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Cadmium[5]	0.00004 to 0.00009	0.005	0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	0.00001	<0.00001	<0.00001	0.00001	0.00002	<0.00001	0.00001	<0.00001	0.00003	0.00001
Copper[5]	0.002	1	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	0.0005	<0.0002	0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Iron	0.3	0.3	0.026	0.013	0.022	0.021	0.022	0.17	0.0049	0.0044	0.0078	0.0056	0.0054	0.023	0.03	0.017	0.023	0.021	0.023
Lead[5]	0.001	0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001
Mercury (µg/L)	0.026	1	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001
Molybdenum[6]	31	-	0.0002	0.0001	0.0001	0.0001	0.0001	<0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	<0.0001	0.0001	0.0001
Nickel[5]	0.025	-	0.0002	0.0001	0.0001	<0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002	0.0001	0.0002
Selenium	0.001	0.05	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Uranium (µg/L)	15	20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vanadium[7]	0.12	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Zinc	0.03	5	0.0018	<0.0005	<0.0005	<0.0005	<0.0005	0.0019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0009
Nutrients																			
Ammonia as N[8]	5.74 to 12.6	-	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.04	0.02	<0.01
Physical Properties																			
pH (pH units)	6.5-9.0	7.0-10.5	7.12	7.18	7.38	6.76	7.34	7.48	7.46	7.5	7.71	7.26	7.7	7.22	7.14	6.86	6.88	7.32	7.48
Sp. Cond. (uS/cm)	-	-	40	38	38	43	29	28	66	69	69	73	66	39	44	42	44	32	28
Total Hardness	-	-	14	13	29	14	12	13	26	26	47	27	26	14	15	15	15	13	13
Radionuclides																			
Lead-210 (Bq/L)	-	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Polonium-210 (Bq/L)	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Radium-226 (Bq/L)	0.11	0.5	<0.005	0.009	<0.005	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005	<0.005	0.005	<0.005
Thorium-230 (Bq/L)	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Appendix B, Table 1
Fall water chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	SEQG[2]	CDWQ[3]	Stony Rapids						Uranium City						Wollaston Lake/Hatchet Lake					
			Fond du Lac River						Fredette River						Welcome Bay, Wollaston Lake					
			2011	2012	2013	2014	2017	2018	2011	2012	2013	2014	2017	2018	2011	2012	2013	2014	2017	2018
Metals																				
Aluminum[4]	0.1	0.1	0.018	0.0084	0.012	0.012	0.014	0.0099	0.0051	0.0051	0.0057	0.0033	0.004	0.0033	0.0047	0.014	0.0074	0.0069	0.0058	0.005
Arsenic (µg/L)	5	10	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1
Cadmium[5]	0.00004 to 0.00009	0.005	0.00002	<0.00001	0.00001	<0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	0.00014	<0.00001
Copper[5]	0.002	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Iron	0.3	0.3	0.074	0.045	0.037	0.034	0.05	0.06	0.031	0.041	0.05	0.027	0.045	0.028	0.014	0.035	0.043	0.034	0.046	0.013
Lead[5]	0.001	0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mercury (µg/L)	0.026	1	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001
Molybdenum[6]	31	-	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0004	0.0004	0.0004	0.0004	0.0005	0.0004	0.0012	0.0012	0.001	0.0009	0.0008	0.0007
Nickel[5]	0.025	-	0.0002	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	<0.0001	0.0001	0.0001	0.0001	0.0001	<0.0001	<0.0001	0.0001
Selenium	0.001	0.05	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Uranium (µg/L)	15	20	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.5	1.3	1.4	1.7	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vanadium[7]	0.12	-	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Zinc	0.03	5	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	0.0014	<0.0005	0.0013	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nutrients																				
Ammonia as N[8]	5.74 to 12.6	-	<0.01	<0.01	0.05	0.04	0.01	<0.01	<0.01	0.03	0.05	0.07	0.06	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.08
Physical Properties																				
pH (pH units)	6.5-9.0	7.0-10.5	7.3	7.3	7.38	6.89	7.39	7.53	7.75	7.72	7.94	7.46	8	8.11	7.1	7.12	7.37	6.91	7.38	7.53
Sp. Cond. (uS/cm)	-	-	39	40	36	38	28	25	114	112	113	114	102	98	34	37	34	36	32	27
Total Hardness	-	-	13	14	31	13	12	12	49	52	80	53	49	52	13	13	28	12	12	12
Radionuclides																				
Lead-210 (Bq/L)	-	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Polonium-210 (Bq/L)	-	-	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Radium-226 (Bq/L)	0.11	0.5	<0.005	0.01	<0.005	<0.005	<0.005	<0.005	0.008	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005	<0.005
Thorium-230 (Bq/L)	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

[1]All values are in mg/L (total), unless specified otherwise.

[2]SEQG = Saskatchewan Environmental Quality Guidelines for freshwater aquatic life (GS 2019).

[3]Guidelines for Canadian drinking water quality (HC 2017).

[4]Canadian Council of Ministers of the Environment (CCME) guidelines was used, as the SEQG is for dissolved aluminum. The Al guidelines are based on lab pH measurements (0.005 mg/L if pH < 6.5 or 0.1 mg/L if pH ≥ 6.5).

[5]Cadmium, copper, lead, and nickel guidelines were calculated using the site-specific hardness.

[6]Molybdenum guideline is based on the Saskatchewan Surface Water Quality Objectives (WSA 2018).

[7]No SEQG exists, therefore, the guideline is based on the Federal Environmental Quality Guidelines (GC 2018).

[8]Site-specific temperature and lab pH were used to derive guideline.

Appendix B, Table 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Regional Reference Range[2, 3]							
	Lake Trout				Lake Whitefish			
	Lower Limit	Median	Upper Limit	n	Lower Limit	Median	Upper Limit	n
Metals								
Aluminum	0.05	0.2	0.7	10	<0.01	0.08	0.6	28
Arsenic	0.010	0.030	0.35	59	<0.01	0.034	0.14	69
Cadmium	-	-	-	54	-	-	-	69
Cobalt	<0.002	<0.002	0.005	54	0.002	0.002	0.03	69
Copper	0.15	0.29	0.91	59	0.10	0.20	0.43	69
Iron	1.3	3.5	12	59	0.56	2.4	6.9	69
Lead	<0.002	<0.002	0.01	54	<0.002	<0.002	0.02	69
Mercury	<0.04	0.2	0.5	44	<0.01	0.05	0.3	59
Molybdenum	-	-	-	54	-	-	-	69
Nickel	-	-	-	54	<0.01	<0.01	0.04	69
Selenium	0.14	0.22	0.48	59	0.091	0.27	0.63	69
Uranium	<0.001	<0.001	0.005	54	<0.001	<0.001	0.005	69
Vanadium	-	-	-	54	-	-	-	69
Zinc	2.3	4.2	10	59	2.4	4.2	9.4	69
Radionuclides								
Lead-210 (Bq/g)	<0.001	<0.001	0.03	54	-	-	-	69
Polonium-210 (Bq/g)	-	-	-	44	<0.0002	0.0009	0.007	42
Radium-226 (Bq/g)	0.00005	0.00006	0.0002	44	0.00005	0.00006	0.0001	64
Thorium-230 (Bq/g)	-	-	-	45	-	-	-	47

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Black Lake (Black Lake)													
	Lake Trout													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.5	-	5	0.5	0.09	4	0.6	0.1	1	0.5	-	5
Arsenic	0.072	0.028	0.048	0.0084	0	0.064	0.025	0	0.080	0.017	0	0.066	0.015	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3	0.002	-	5
Cobalt	0.002	0.0003	0.002	-	5	0.004	0.002	1	0.003	0.001	1	0.003	0.001	1
Copper	0.37	0.23	0.24	0.016	0	0.33	0.11	0	0.25	0.040	0	0.29	0.094	0
Iron	2.9	1.4	1.8	0.23	0	2.6	1.0	0	2.9	0.61	0	4.1	1.5	0
Lead	0.002	0.0008	0.002	-	5	0.003	0.002	3	0.004	0.001	0	0.002	0	4
Mercury	0.31	0.11	0.40	0.084	0	0.44	0.073	0	0.35	0.045	0	0.44	0.08	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	-	0.01	-	5	0.02	0.01	2	0.01	0.006	1	0.01	-	5
Selenium	0.15	0.026	0.14	0.024	0	0.15	0.019	0	0.15	0.0058	0	0.12	0.01	0
Uranium	0.001	0.0003	0.001	-	5	0.001	0	2	0.001	-	3	0.001	-	5
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	4.1	1.4	3.4	0.42	0	3.7	1.3	0	4.6	1.1	0	4.0	1.2	0
Radionuclides														
Lead-210 (Bq/g)	0.001	0.0004	0.001	-	5	0.001	0	4	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0002	0	0.0002	-	5	0.0002	-	5	0.0002	-	3	0.0002	-	5
Radium-226 (Bq/g)	0.00006	0.00002	0.00007	0.00002	4	0.00005	-	5	0.00006	-	3	0.00006	0.000005	5
Thorium-230 (Bq/g)	0.00011	0.00003	0.0001	0.00004	5	0.00009	-	5	0.0001	-	3	0.0001	-	5

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Black Lake (Black Lake)													
	Lake Whitefish													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.5	-	5	0.5	-	5	0.5	-	3	0.5	0	4
Arsenic	0.18	0.14	0.024	0.0089	0	0.17	0.056	0	0.22	0.17	0	0.14	0.12	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3	0.002	-	5
Cobalt	0.003	0.0009	0.003	0.001	2	0.004	0.003	2	0.003	0.002	0	0.003	0.001	1
Copper	0.19	0.051	0.11	0.088	0	0.26	0.19	0	0.14	0.036	0	0.29	0.19	0
Iron	2.1	0.93	1.5	0.61	0	2.3	1.2	0	3.0	0.87	0	4.6	2.6	0
Lead	0.002	0.0004	0.002	-	5	0.002	0.0004	4	0.003	0.001	0	0.002	-	5
Mercury	0.12	0.059	0.058	0.026	0	0.10	0.024	0	0.090	0.030	0	0.11	0.02	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	0	0.01	-	5	0.01	0.005	3	0.02	0.02	1	0.01	-	5
Selenium	0.27	0.065	0.22	0.048	0	0.30	0.047	0	0.40	0.067	0	0.21	0.06	0
Uranium	0.001	0.0003	0.001	-	5	0.001	-	5	0.001	-	3	0.001	-	5
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	4.6	1.1	3.9	0.52	0	3.8	0.68	0	4.6	0.35	0	4.2	0.9	0
Radionuclides														
Lead-210 (Bq/g)	0.002	0.001	0.001	0	4	0.001	-	5	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0004	0.0003	0.0004	0.0002	0	0.0002	0.00005	2	0.0005	0.0001	0	0.0003	0.0001	1
Radium-226 (Bq/g)	0.0004	0.0007	0.0002	0.0001	3	0.00009	0.00006	4	0.00006	-	3	0.000054	0.000005	5
Thorium-230 (Bq/g)	0.0005	0.0008	0.0001	0.00004	4	0.0001	-	5	0.0001	-	3	0.0001	-	5

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage (Ellis Bay)										
	Lake Trout										
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals											
Aluminum	0.5	-	0.5	-	5	0.5	0.09	4	0.5	-	3
Arsenic	0.11	0.071	0.076	0.038	0	0.086	0.032	0	0.10	0.027	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.002	0.0004	0.002	0	4	0.003	0.0008	2	0.002	0.0006	1
Copper	0.34	0.15	0.28	0.063	0	0.31	0.083	0	0.39	0.12	0
Iron	2.8	1.5	2.1	0.45	0	3.4	1.2	0	3.1	0.92	0
Lead	0.002	-	0.002	-	5	0.002	0.0009	3	0.003	0.001	1
Mercury	0.15	0.070	0.23	0.12	0	0.34	0.031	0	0.14	0.032	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	0.006	0.02	0.02	4	0.02	0.02	2	0.01	0.006	2
Selenium	0.16	0.024	0.16	0.015	0	0.18	0.023	0	0.19	0.021	0
Uranium	0.002	0.004	0.001	-	5	0.001	0	4	0.001	0	2
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	5.0	3.1	3.3	0.36	0	4.6	1.4	0	5.0	1.3	0
Radionuclides											
Lead-210 (Bq/g)	0.001	-	0.001	-	5	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0003	0.0002	0.0002	-	5	0.0002	-	5	0.0002	-	3
Radium-226 (Bq/g)	0.0001	0.00005	0.00007	0.00002	3	0.00005	-	5	0.00006	-	3
Thorium-230 (Bq/g)	0.0001	-	0.00010	0.00001	5	0.0001	-	5	0.0001	-	3

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage (Ellis Bay)										
	Lake Whitefish										
	Baseline (n = 7)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals											
Aluminum	0.5	-	0.5	-	5	0.7	0.3	2	0.5	-	3
Arsenic	0.30	0.081	0.29	0.14	0	0.18	0.14	0	0.13	0.093	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.003	0.002	0.003	0.001	2	0.006	0.002	0	0.005	0.001	0
Copper	0.18	0.092	0.17	0.063	0	0.24	0.068	0	0.23	0.042	0
Iron	2.2	1.1	2.6	0.75	0	3.2	0.95	0	2.4	0.53	0
Lead	0.002	0.0004	0.002	-	5	0.006	0.002	1	0.002	-	3
Mercury	0.050	0.019	0.08	0.058	0	0.055	0.0070	0	0.039	0.0038	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	0.004	0.01	-	5	0.04	0.03	1	0.01	-	3
Selenium	0.26	0.030	0.26	0.019	0	0.24	0.026	0	0.27	0.015	0
Uranium	0.001	0.0004	0.003	0.001	1	0.002	0.0005	2	0.001	-	3
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	3.2	0.55	3.7	1.1	0	4.5	1.2	0	4.1	0.9	0
Radionuclides											
Lead-210 (Bq/g)	0.001	0.0004	0.001	-	5	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0002	0.0001	0.0002	-	5	0.0005	0.0004	1	0.0004	0.0004	1
Radium-226 (Bq/g)	0.0001	0.00010	0.00010	0.00006	3	0.00006	-	5	0.00006	-	3
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	5	0.0001	-	5	0.0001	-	3

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac (Fond du Lac River)													
	Lake Trout													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.5	-	5	0.5	0.04	4	0.5	-	3	0.5	-	5
Arsenic	0.1	0.04	0.07	0.03	0	0.08	0.04	0	0.06	0.01	0	0.13	0.06	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3	0.002	-	5
Cobalt	0.002	-	0.002	-	5	0.003	0.0005	1	0.0057	0.0055	1	0.0022	0.0004	4
Copper	0.28	0.081	0.30	0.087	0	0.27	0.10	0	0.29	0.064	0	0.38	0.05	0
Iron	2.4	0.90	1.7	0.43	0	2.9	0.53	0	3.4	1.4	0	4.0	0.8	0
Lead	0.002	0.0007	0.003	0.003	4	0.004	0.002	1	0.002	0.0006	0	0.0026	0.0013	4
Mercury	0.22	0.073	0.08	0.030	0	**0.59**	**0.18**	0	0.18	0.084	0	0.16	0.03	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	-	0.01	0.005	3	0.02	0.004	1	0.01	0.006	2	0.01	-	5
Selenium	0.15	0.019	0.16	0.017	0	0.11	0.035	0	0.17	0.012	0	0.16	0.02	0
Uranium	0.001	0.0003	0.001	-	5	0.001	0.0004	4	0.001	-	3	0.001	-	5
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	3.7	0.47	3.3	0.55	0	3.9	1.6	0	4.2	1.6	0	4.6	0.6	0
Radionuclides														
Lead-210 (Bq/g)	0.001	0.0004	0.001	-	5	0.001	-	5	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0002	-	0.0002	-	5	0.0002	-	5	0.0002	-	3	0.0002	-	5
Radium-226 (Bq/g)	0.00006	-	0.00006	0.000004	5	0.00006	0.00001	4	0.00006	-	3	0.00006	0.000007	5
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	5	0.0001	-	5	0.0001	-	3	0.0001	-	5

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac (Fond du Lac River)													
	Lake Whitefish													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.6	0.3	0.5	-	5	0.5	0.04	4	0.5	0.06	2	0.5	-	5
Arsenic	0.24	0.14	0.06	0.034	0	0.11	0.11	0	0.19	0.14	0	0.26	0.021	0
Cadmium	0.002	0.001	0.002	0	4	0.002	-	5	0.002	-	3	0.002	0	3
Cobalt	0.0040	0.0039	0.0054	0.0049	1	0.010	0.0067	0	0.010	0.0060	0	0.003	0.001	0
Copper	0.18	0.057	0.20	0.085	0	0.16	0.024	0	0.18	0.080	0	0.23	0.073	0
Iron	2.2	1.5	2.4	1.4	0	2.0	0.64	0	2.1	0.44	0	3.2	0.61	0
Lead	0.002	0.0007	0.002	-	5	0.003	0.003	3	0.004	0.002	1	0.003	0.001	3
Mercury	0.090	0.068	0.028	0.0084	0	0.083	0.035	0	0.088	0.029	0	0.071	0.0046	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	0.003	0.01	0	4	0.04	0.04	1	0.02	0.006	1	0.01	0	4
Selenium	0.22	0.048	0.20	0.052	0	0.16	0.052	0	0.25	0.090	0	0.26	0.039	0
Uranium	0.001	0.0007	0.001	-	5	0.002	0.001	4	0.001	0.0006	2	0.001	0.0004	4
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	3.9	0.94	4.1	0.74	0	4.0	0.55	0	4.3	0.64	0	3.4	0.3	0
Radionuclides														
Lead-210 (Bq/g)	0.004	-	0.001	-	5	0.001	-	5	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0004	0.0003	0.0002	-	5	0.0002	-	5	0.0002	-	3	0.0002	-	5
Radium-226 (Bq/g)	0.0004	0.0007	0.00007	0.00002	4	0.00007	0.00001	4	0.00006	-	3	0.00006	-	5
Thorium-230 (Bq/g)	0.002	-	0.0001	-	5	0.0001	0.00004	4	0.0001	-	3	0.0001	-	5

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Stony Rapids (Fond du Lac River)													
	Lake Trout													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.5	-	5	0.5	-	5	0.5	-	3	0.5	-	5
Arsenic	0.07	0.044	0.13	0.080	0	0.080	0.044	0	0.10	0.020	0	0.13	0.037	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3	0.002	-	5
Cobalt	0.002	0	0.002	-	5	0.004	0.002	1	0.004	0.0006	0	0.002	-	5
Copper	0.29	0.19	0.35	0.068	0	0.46	0.27	0	0.59	0.15	0	0.36	0.053	0
Iron	2.8	2.3	3.8	1.3	0	5.3	3.9	0	4.8	1.2	0	4.3	0.7	0
Lead	0.002	-	0.002	-	5	0.004	0.004	2	0.002	-	3	0.002	0	4
Mercury	0.33	0.16	0.18	0.072	0	0.20	0.052	0	0.17	0.031	0	0.10	0.0057	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	0	0.01	0	4	0.02	0.02	3	0.01	0.006	2	0.01	-	5
Selenium	0.14	0.037	0.17	0.018	0	0.15	0.011	0	0.17	0.012	0	0.16	0.018	0
Uranium	0.001	0.0003	0.001	-	5	0.001	-	5	0.001	-	3	0.001	-	5
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	3.7	0.86	3.6	0.46	0	4.0	0.88	0	3.5	0.30	0	4.6	0.34	0
Radionuclides														
Lead-210 (Bq/g)	0.001	0	0.001	0	4	0.001	-	5	0.001	-	3	0.001	0.0004	4
Polonium-210 (Bq/g)	0.0002	0.00007	0.0002	0.00004	3	0.0002	-	5	0.0002	-	3	0.0002	0	4
Radium-226 (Bq/g)	0.00006	-	0.00007	0.00002	4	0.00007	-	5	0.00006	-	3	0.00006	0.000004	5
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	5	0.0001	-	5	0.0001	-	3	0.0001	-	5

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Stony Rapids (Fond du Lac River)													
	Lake Whitefish													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.50	-	5	0.5	-	5	0.5	0.06	2	0.5	-	5
Arsenic	0.04	0.02	0.03	0.007	0	0.03	0.03	0	0.04	0.02	0	0.12	0.035	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3	0.003	0.001	4
Cobalt	0.0060	0.0031	0.0046	0.00089	0	0.005	0.0021	0	0.014	0.0082	0	0.007	0.005	1
Copper	0.20	0.083	0.22	0.064	0	0.21	0.025	0	0.16	0.046	0	0.25	0.050	0
Iron	2.1	0.98	2.5	1.3	0	1.9	0.22	0	1.8	0.10	0	3.4	0.51	0
Lead	0.002	-	0.002	-	5	0.002	0.001	4	0.003	0.001	0	0.002	-	5
Mercury	0.13	0.10	0.06	0.021	0	0.093	0.027	0	0.041	0.0062	0	0.057	0.030	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	0.01	0.01	-	5	0.01	0.004	4	0.02	0.02	1	0.01	-	5
Selenium	0.15	0.049	0.13	0.013	0	0.12	0.029	0	0.13	0.036	0	0.17	0.056	0
Uranium	0.001	0	0.001	-	5	0.002	0.003	4	0.001	-	3	0.001	-	5
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	4.9	1.7	4.3	0.61	0	3.7	0.53	0	4.6	0.26	0	4.6	0.74	0
Radionuclides														
Lead-210 (Bq/g)	0.001	-	0.001	-	5	0.001	-	5	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0003	-	0.0002	0	4	0.0002	0	4	0.0002	-	3	0.0002	0.00009	4
Radium-226 (Bq/g)	0.0002	0.0003	0.00007	0.00002	3	0.00006	-	5	0.00006	-	3	0.00006	-	5
Thorium-230 (Bq/g)	0.0003	0.0006	0.0001	-	5	0.0001	-	5	0.0001	-	3	0.0001	-	5

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City (Prospector Bay)													
	Lake Trout													
	Baseline (n = 5)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.5	-	5	0.5	-	5	0.6	0.1	0	0.5	-	5
Arsenic	0.08	0.03	0.06	0.02	0	0.084	0.07	0	0.12	0.061	0	0.12	0.11	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3	0.002	-	5
Cobalt	0.002	-	0.002	-	5	0.002	0	2	0.003	0.001	2	0.003	0.001	2
Copper	0.24	0.029	0.22	0.042	0	0.29	0.027	0	0.36	0.24	0	0.30	0.11	0
Iron	2.8	1.1	3.0	2.6	0	2.7	0.62	0	3.4	2.6	0	2.7	1.3	0
Lead	0.002	-	0.003	0.002	1	0.002	0.0005	3	0.002	0	2	0.002	-	5
Mercury	0.20	0.046	0.14	0.056	0	0.17	0.069	0	0.15	0.031	0	0.17	0.080	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	-	0.01	0.004	4	0.01	0.004	3	0.01	-	3	0.01	-	5
Selenium	0.17	0.005	0.15	0.019	0	0.15	0.0055	0	0.15	0.036	0	0.18	0.0089	0
Uranium	0.001	-	0.001	-	5	0.002	0.002	4	0.001	-	3	0.001	-	5
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	4.3	0.65	3.0	0.48	0	4.8	2.0	0	4.2	1.7	0	4.1	1.6	0
Radionuclides														
Lead-210 (Bq/g)	0.001	-	0.001	-	5	0.001	-	5	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0002	-	0.0002	0	4	0.0002	-	5	0.0002	-	3	0.0002	-	5
Radium-226 (Bq/g)	0.00006	0.000004	0.00009	0.000061	3	0.00006	0.00001	4	0.00006	-	3	0.00006	0.00001	5
Thorium-230 (Bq/g)	0.0001	-	0.0001	0.00004	4	0.0001	-	5	0.0001	-	3	0.00012	0.00004	5

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City (Prospector Bay)													
	Lake Whitefish													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.5	-	3	0.5	0.04	4	0.5	0	2	0.5	-	5
Arsenic	0.07	0.029	0.19	0.026	0	0.10	0.075	0	0.070	0.044	0	0.076	0.049	0
Cadmium	0.002	-	0.002	0	2	0.002	0	4	0.002	-	3	0.002	-	5
Cobalt	0.006	0.005	0.009	0.006	0	0.008	0.005	0	0.004	0.001	0	0.005	0.001	0
Copper	0.15	0.026	0.26	0.11	0	0.29	0.11	0	0.20	0.032	0	0.26	0.055	0
Iron	1.6	0.38	2.3	0.55	0	3.0	1.3	0	1.8	0.23	0	2.2	0.5	0
Lead	0.002	-	0.002	0.0006	1	0.005	0.004	2	0.003	0.002	2	0.002	-	5
Mercury	0.090	0.036	0.03	0.017	0	0.039	0.012	0	0.058	0.019	0	0.036	0.0080	0
Molybdenum	0.02	-	0.02	-	3	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	-	0.01	0	2	0.02	0.02	0	0.01	-	3	0.01	-	5
Selenium	0.26	0.040	0.25	0.012	0	0.24	0.031	0	0.27	0.036	0	0.59	0.73	0
Uranium	0.001	-	0.001	-	3	0.002	0.0009	2	0.001	-	3	0.001	0.0004	4
Vanadium	0.02	-	0.02	-	3	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	4.8	1.6	4.3	1.7	0	4.6	0.74	0	4.6	1.5	0	5.1	0.7	0
Radionuclides														
Lead-210 (Bq/g)	0.001	-	0.001	-	3	0.001	-	5	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0003	0.0002	0.0002	0.00006	2	0.0007	0.0003	0	0.0002	0.0001	2	0.0005	0.000296648	0
Radium-226 (Bq/g)	0.00006	-	0.00006	0	2	0.00008	0.00002	3	0.00006	-	3	0.00006	-	5
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	3	0.0001	-	5	0.0001	-	3	0.0001	0	4

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Wollaston Lake/Hatchet Lake (Wollaston Lake)													
	Lake Trout													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.50	-	5	0.5	-	5	0.5	-	3	0.5	-	5
Arsenic	0.04	0.02	0.03	0.02	0	0.03	0.01	0	0.05	0.04	0	0.08	0.03	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3	0.002	-	5
Cobalt	0.002	-	0.002	-	5	0.003	0.002	2	0.003	0.001	1	0.002	-	5
Copper	0.45	0.15	0.34	0.030	0	0.31	0.077	0	0.28	0.072	0	0.42	0.16	0
Iron	3.0	1.3	2.4	0.36	0	2.0	0.43	0	2.7	1.1	0	3.5	1.1	0
Lead	0.002	-	0.003	0.001	4	0.002	0.0009	4	0.002	-	3	0.002	0.0009	4
Mercury	0.16	0.035	0.12	0.038	0	0.24	0.083	0	0.20	0.035	0	0.15	0.041	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	0.003	0.01	-	5	0.02	0.02	3	0.01	-	3	0.01	-	5
Selenium	0.21	0.036	0.20	0.011	0	0.19	0.019	0	0.23	0.017	0	0.20	0.056	0
Uranium	0.001	-	0.001	0.0004	4	0.001	0	4	0.001	-	3	0.001	-	5
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	4.4	1.3	4.4	0.83	0	3.2	0.83	0	3.0	0.85	0	4.9	1.0	0
Radionuclides														
Lead-210 (Bq/g)	0.001	0	0.001	-	5	0.001	-	5	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0002	-	0.0002	-	5	0.0002	-	5	0.0002	-	3	0.0002	-	5
Radium-226 (Bq/g)	0.00009	0.00008	0.00009	0.00006	2	0.00005	-	5	0.00006	-	3	0.00006	0.000004	5
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	5	0.0001	-	5	0.0001	-	3	0.0001	-	4

Appendix B, Table 2
Summary fish flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Wollaston Lake/Hatchet Lake (Wollaston Lake)													
	Lake Whitefish													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	0.5	-	0.5	-	5	0.5	-	5	0.5	0	2	0.5	-	5
Arsenic	0.16	0.042	0.15	0.035	0	0.11	0.035	0	0.11	0.076	0	0.11	0.034	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3	0.003	0.002	2
Cobalt	0.002	0.0010	0.002	0	4	0.003	0.001	1	0.003	0.0006	0	0.003	0.001	0
Copper	0.16	0.045	0.14	0.015	0	0.15	0.016	0	0.26	0.16	0	0.24	0.048	0
Iron	1.7	0.79	2.1	0.59	0	1.9	0.57	0	3.8	1.9	0	4.2	1.5	0
Lead	0.002	0	0.002	0	4	0.003	0.001	2	0.002	-	3	0.005	0.002	0
Mercury	0.050	0.019	0.040	0.023	0	0.088	0.015	0	0.081	0.034	0	0.083	0.014	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Nickel	0.01	-	0.01	0.004	3	0.01	0.004	1	0.01	0	2	0.01	0.004	4
Selenium	0.45	0.10	0.36	0.046	0	0.38	0.039	0	0.55	0.40	0	0.42	0.032	0
Uranium	0.001	-	0.001	-	5	0.001	0	4	0.001	-	3	0.002	0.0009	2
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3	0.02	-	5
Zinc	4.1	0.67	4.0	0.88	0	3.6	0.89	0	4.9	2.4	0	5.0	1.7	0
Radionuclides														
Lead-210 (Bq/g)	0.002	-	0.0009	0.0003	4	0.001	-	5	0.001	-	3	0.001	-	5
Polonium-210 (Bq/g)	0.0005	0.0004	0.0004	0.0004	3	0.0003	0.0001	1	0.0004	0.0003	1	0.0007	0.0002	0
Radium-226 (Bq/g)	0.0005	0.0008	0.0003	0.0004	2	0.00007	0.00002	4	0.00006	-	3	0.00006	0.000005	5
Thorium-230 (Bq/g)	0.0007	-	0.0001	-	5	0.0001	-	5	0.0001	-	3	0.0001	-	5

[1]All concentrations are reported on a µg/g wet weight basis, except when specified otherwise.

[2]Regional reference data are from reference lakes north of Point's North sampled between 2006 and 2014. The median corresponds to the 50th percentile, while the lower and upper limits are the 2.5th and 97.5th percentiles that delimit the 95% range of the reference data.

[3]Regional reference ranges could not be computed when all or nearly all values were lower than the reported detection limit (RDL).

S.D. = Standard deviation; standard deviations of 0 signify "no variance between samples", not "a very small variance"; while "-" indicates insufficient data to calculate S.D.

<RDL = less than the laboratory reported detection limit.
Values less than the RDL were set equal to the RDL when calculating summary statistics.
Bolded values exceed the lowest Health Canada fish consumption guideline for mercury of 0.5 µg/g.

Appendix B, Table 3

Summary blueberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Regional Reference Range[2, 3]			
	Lower Limit	Median	Upper Limit	n
Metals				
Aluminum	4.9	12.1	97.7	43
Arsenic	-	-	-	22
Cadmium	-	-	-	22
Cobalt	<0.01	0.01	0.03	22
Copper	2.1	3.6	6.9	43
Iron	7.9	15.3	68.6	43
Lead	<0.01	0.01	0.05	22
Molybdenum	<0.1	0.1	0.3	43
Nickel	0.1	0.57	1.12	43
Selenium	-	-	-	22
Uranium	<0.002	0.003	0.017	21
Vanadium	-	-	-	22
Zinc	3.6	6.9	10.6	43
Radionuclides				
Lead-210 (Bq/g)	<0.001	0.004	0.02	19
Polonium-210 (Bq/g)	<0.002	0.003	0.014	8
Radium-226 (Bq/g)	0.001	0.003	0.009	30
Thorium-230 (Bq/g)	-	-	-	8

Appendix B, Table 3
Summary blueberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Black Lake													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2015 (n = 3)			2016 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	7.9	2.1	9.2	1.8	0	14	3.2	0	23	20	0	9.2	3.4	0
Arsenic	0.05	-	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3
Cadmium	0.01	-	0.01	0.004	3	0.01	-	5	0.01	-	3	0.01	-	3
Cobalt	0.01	0.01	0.01	0	4	0.01	0.005	0	0.02	0.01	1	0.02	0.006	0
Copper	3.2	0.46	2.0	0.65	0	3.8	0.20	0	3.4	0.060	0	3.0	0.55	0
Iron	11	3.5	7.4	1.9	0	21	5.8	0	28	21	0	13	2.6	0
Lead	0.027	0.024	0.016	0.0055	2	0.022	0.0084	1	0.010	0.0058	1	0.053	0.067	1
Molybdenum	0.1	0.05	0.1	0.04	1	0.2	0.05	2	0.1	0.06	0	0.2	0.06	0
Nickel	0.55	0.12	0.42	0.095	0	0.62	0.13	0	0.52	0.22	0	0.54	0.12	0
Selenium	0.05	0.01	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3
Uranium	0.01	-	0.01	0	4	0.02	0.008	1	0.01	-	3	0.01	-	3
Vanadium	0.1	-	0.1	-	5	0.1	-	5	0.1	-	3	0.1	-	3
Zinc	5.3	0.90	5.9	1.3	0	6.7	1.3	0	5.2	0.40	0	6.3	0.46	0
Radionuclides														
Lead-210 (Bq/g)	0.005	0.004	0.001	0.0005	3	0.001	0.0004	4	0.002	0.001	0	0.001	0.0006	1
Polonium-210 (Bq/g)	0.0015	0.00053	0.0007	0.0001	0	0.0007	0.0002	0	0.0015	0.00017	0	0.0007	0.0001	0
Radium-226 (Bq/g)	0.002	0.001	0.003	0.0008	0	0.001	0.0006	0	0.005	0.002	0	0.002	0.0006	0
Thorium-230 (Bq/g)	0.002	0.0005	0.002	-	5	0.001	-	5	0.001	0	2	0.001	-	3

Appendix B, Table 3
Summary blueberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage							
	Baseline (n = 5)		2013 (n = 5)			2014 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals								
Aluminum	7.0	0.57	7.1	0.39	0	11	2.2	0
Arsenic	0.05	-	0.05	-	5	0.05	-	3
Cadmium	0.01	-	0.01	-	5	0.01	-	3
Cobalt	0.01	0.004	0.01	-	5	0.01	0	2
Copper	3.2	0.39	2.2	0.089	0	3.7	0.17	0
Iron	12	3.7	10	1.9	0	16	1.0	0
Lead	0.016	0.013	0.022	0.0084	1	0.013	0.0058	0
Molybdenum	0.1	0.05	0.2	0.04	0	0.2	0	0
Nickel	0.53	0.17	0.15	0.019	0	0.37	0.017	0
Selenium	0.05	-	0.05	-	5	0.05	-	3
Uranium	0.02	0.03	0.01	-	5	0.01	0	0
Vanadium	0.1	-	0.1	-	5	0.1	-	3
Zinc	8.5	2.8	6.6	1.1		7.4	0.47	0
Radionuclides								
Lead-210 (Bq/g)	0.002	0.001	0.007	0.004	2	0.002	0	0
Polonium-210 (Bq/g)	0.0014	0.00027	0.0010	0	4	0.0014	0.00032	0
Radium-226 (Bq/g)	0.003	0.001	0.003	0.0008	0	0.003	0.0006	0
Thorium-230 (Bq/g)	0.001	-	0.002	-	5	0.001	-	3

Appendix B, Table 3
Summary blueberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac															
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2015 (n = 3)			2016 (n = 3)			2018 (n = 5)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals																	
Aluminum	9.4	4.9	15	4.0	0	25	12	0	29	16	0	20	12	0	11	3.0	0
Arsenic	0.05	-	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3	0.05	-	5
Cadmium	0.01	-	0.01	-	5	0.01	-	5	0.01	-	3	0.01	-	3	0.01	-	5
Cobalt	0.01	0.005	0.02	0.005	1	0.04	0.01	0	0.02	0.006	0	0.02	0.01	1	0.01	0	0
Copper	3.3	0.49	2.2	0.43	0	5.3	0.27	0	3.6	0.44	0	4.2	0.45	0	2.4	0.21	0
Iron	12	3.9	15	5.5	0	35	12	0	31	20	0	21	8.1	0	10	0.48	0
Lead	0.02	0.008	0.02	0.01	0	0.08	0.07	0	0.03	0.02	0	0.02	0.006	0	0.03	0.02	0
Molybdenum	0.26	0.13	0.26	0.055	0	0.52	0.084	0	0.30	0.060	0	0.97	0.51	0	0.1	0	0
Nickel	0.66	0.16	0.55	0.12	0	1.7	0.72	0	0.90	0.33	0	1.3	0.38	0	0.59	0.10	0
Selenium	0.06	0.01	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3	0.05	-	5
Uranium	0.01	0.003	0.01	-	5	0.01	0	1	0.01	-	3	0.01	-	3	0.01	-	5
Vanadium	0.1	-	0.1	-	5	0.1	-	5	0.1	-	3	0.1	-	3	0.1	-	5
Zinc	6.4	1.6	7.0	0.87	0	7.7	0.79	0	6.9	0.46	0	7.4	0.81	0	5.6	0.34	0
Radionuclides																	
Lead-210 (Bq/g)	0.004	0.004	0.004	0.003	2	0.001	0	3	0.004	0.0006	0	0.001	0.0006	2	0.001	0	3
Polonium-210 (Bq/g)	0.0016	0.00092	0.0023	0.0025	1	0.0011	0.00043	0	0.0021	0.0011	0	0.00080	0.00040	0	0.0014	0.00034	0
Radium-226 (Bq/g)	0.003	0.001	0.004	0.001	0	0.002	0.001	1	0.003	0.0008	0	0.003	0.001	0	0.0038	0.0011	0
Thorium-230 (Bq/g)	0.001	-	0.002	-	5	0.001	-	5	0.001	0.00	2	0.001	-	3	0.001	-	5

Appendix B, Table 3
Summary blueberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Stony Rapids													
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2015 (n = 3)			2016 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	15	10	244	43		8.9	0.86	0	17	6.4	0	16	2.5	0
Arsenic	0.05	-	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3
Cadmium	0.01	0.003	0.01	-	5	0.01	-	5	0.01	-	3	0.01	-	3
Cobalt	0.02	0.02	0.01	-	5	0.03	0.04	1	0.01	0	2	0.01	0	0
Copper	2.5	0.49	2.4	0.25		4.3	0.19	0	3.4	0.21	0	3.3	0.23	0
Iron	15	7.2	11	0.91		14	0.84	0	17	3.5	0	19	2.6	0
Lead	0.03	0.03	0.01	0.004	3	0.01	0.004	2	0.1	0.1	0	0.03	0.03	0
Molybdenum	0.2	0.1	0.1	0.04	2	0.2	0	0	0.1	0	2	0.1	0	0
Nickel	0.59	0.19	0.33	0.073		1.0	0.31	0	0.70	0.080	0	0.61	0.064	0
Selenium	0.05	0	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3
Uranium	0.01	0.004	0.01	-	5	0.01	0.009	3	0.01	-	3	0.01	-	3
Vanadium	0.1	-	0.1	-	5	0.1	-	5	0.1	-	3	0.1	-	3
Zinc	4.7	1.0	6.3	0.75		5.5	0.38	0	5.4	0.20	0	6.3	0.67	0
Radionuclides														
Lead-210 (Bq/g)	0.008	0.003	0.005	0.001	4	0.001	0	3	0.002	0	0	0.002	0	1
Polonium-210 (Bq/g)	0.0016	0.00070	0.0010	0	3	0.0006	0.0002	1	0.0013	0.00012	0	0.0010	0.00010	0
Radium-226 (Bq/g)	0.003	0.002	0.014	0.0015		0.004	0.005	0	0.003	0.001	0	0.002	0.0006	0
Thorium-230 (Bq/g)	0.002	-	0.002	-	5	0.001	-	5	0.001	0.0	2	0.001	-	3

Appendix B, Table 3
Summary blueberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City							
	Baseline (n = 5)		2014 (n = 3)			2018 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals								
Aluminum	5.9	1.6	9.3	1.7	0	4.5	0.31	0
Arsenic	0.05	-	0.05	-	3	0.05	-	3
Cadmium	0.01	-	0.01	-	3	0.01	-	3
Cobalt	0.01	0.004	0.03	0.03	2	0.01	0.01	0
Copper	3.5	0.4	4.1	0	0	3.3	0.058	0
Iron	10	1.3	14	0	0	9.2	0.20	0
Lead	0.01	0.004	0.03	0.03	1	0.03	0.03	1
Molybdenum	0.2	0.1	0.2	0	0	0.3	0.06	0
Nickel	0.51	0.055	0.43	0.067	0	0.31	0.012	0
Selenium	0.05	-	0.05	-	3	0.05	-	3
Uranium	0.01	-	0.01	0	2	0.01	-	3
Vanadium	0.1	-	0.1	-	3	0.1	-	3
Zinc	5.8	0.9	6.5	0.15	0	4.9	0.20	0
Radionuclides								
Lead-210 (Bq/g)	0.006	0.008	0.003	0.002	0	0.001	-	3
Polonium-210 (Bq/g)	0.00276	0.0014	0.0030	0.00015	0	0.0009	0.0001	0
Radium-226 (Bq/g)	0.022	0.044	0.002	0.001	0	0.0003	-	3
Thorium-230 (Bq/g)	0.0012	0.0004	0.001	-	3	0.001	-	3

Appendix B, Table 3
Summary blueberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Wollaston Lake/Hatchet Lake												
	Baseline (n = 10)		2013 (n = 5)			2014 (n = 5)			2015 (n = 3)			2016 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	12	7.77	7.0	0.32	0	11	0.84	0	19	7.9	0	13	2.5	0
Arsenic	0.05	-	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3
Cadmium	0.01	-	0.01	-	5	0.01	-	5	0.01	-	3	0.01	-	3
Cobalt	0.01	0.003	0.01	0	3	0.08	0.09	0	0.02	0.01	0	0.01	0.006	0
Copper	2.8	0.51	1.8	0.21	0	4.5	0.15	0	3.5	0.15	0	3.5	0.36	0
Iron	13	5.5	9.4	0.55	0	17	0.55	0	20	7.6	0	13	1.2	0
Lead	0.02	0.01	0.02	0.009	3	0.02	0.005	2	0.02	0.006	0	0.03	0.02	0
Molybdenum	0.1	0.07	0.1	0.04	3	0.4	0.05	0	0.1	0.06	0	0.2	0.06	0
Nickel	0.56	0.13	0.22	0.026	0	1.2	0.22	0	1.1	0.42	0	0.61	0.068	0
Selenium	0.05	0	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3
Uranium	0.01	0.003	0.01	-	5	0.01	0.009	3	0.01	-	3	0.01	-	3
Vanadium	0.1	-	0.1	-	5	0.1	-	5	0.1	-	3	0.1	-	3
Zinc	5.7	1.5	5.9	0.45		7.5	0.33	0	6.6	0.53	0	5.6	0.29	0
Radionuclides														
Lead-210 (Bq/g)	0.005	0.004	0.006	0.004	2	0.001	0	4	0.002	0	1	0.004	0.0006	0
Polonium-210 (Bq/g)	0.0022	0.0013	0.0012	0.00045	4	0.0007	0.00019	0	0.0013	0.00031	0	0.0015	0.00040	0
Radium-226 (Bq/g)	0.003	0.002	0.006	0.002	0	0.004	0.0011	0	0.005	0.0008	0	0.002	0.001	1
Thorium-230 (Bq/g)	0.002	-	0.002	-	5	0.001	-	5	0.001	-	3	0.001	-	3

[1]All concentrations are in µg/g on a dry weight basis, unless specified otherwise.

[2]Regional reference data are from the AWG program (2000 to 2010) and the Uranium City Country Foods program (2011). Data are not available from all communities in all years. The median corresponds to the 50th percentile, while the lower and upper limits are the 2.5th and 97.5th percentiles that delimit the 95% range of the reference data.

[3]Regional reference ranges could not be computed when all or nearly all values were lower than the reported detection limit (RDL).

S.D. = Standard deviation; S.D. of 0 signify "no variance between samples"; "-" indicates insufficient data to calculate S.D.

<RDL = less than the laboratory reported detection limit.

Values less than the RDL were set equal to the RDL when calculating summary statistics.

Appendix B, Table 4

Summary bog cranberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Regional Reference Range[2, 3]			
	Lower Limit	Median	Upper Limit	n
Metals				
Aluminum	6.5	21.1	79.9	18
Arsenic	-	-	-	55
Cadmium	<0.01	<0.01	0.03	18
Cobalt	<0.01	<0.01	0.02	18
Copper	2.4	3.7	5.7	55
Iron	8.4	12.1	87.6	55
Lead	<0.01	0.02	0.05	18
Molybdenum	<0.1	<0.1	0.2	55
Nickel	<0.1	0.35	0.79	55
Selenium	-	-	-	55
Uranium	0.001	0.003	0.029	37
Vanadium	-	-	-	55
Zinc	4.9	7.2	10.5	55
Radionuclides				
Lead-210 (Bq/g)	<0.0003	0.0015	0.0045	17
Polonium-210 (Bq/g)	-	-	-	0
Radium-226 (Bq/g)	<0.0003	0.0018	0.01	55
Thorium-230 (Bq/g)	-	-	-	0

Appendix B, Table 4
Summary bog cranberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage													
	Baseline (n = 5)		2014 (n = 2)			2015 (n = 3)			2016 (n = 3)			2018 (n = 3)		
	Average	SD	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals														
Aluminum	18	1.3	17	-	0	19	2.5	0	22	0.58	0	22	2.5	0
Arsenic	0.05	0	0.05	-	2	0.05	-	3	0.05	-	3	0.1	-	3
Cadmium	0.01	0	0.01	-	2	0.01	0	1	0.01	-	3	0.01	0.01	1
Cobalt	0.01	0	0.01	-	0	0.02	0	0	0.01	0	2	0.01	-	3
Copper	4.4	0.52	4.2	-	0	4.3	0.50	0	3.6	0.058	0	3.3	0.15	0
Iron	10	0.54	15	-	0	14	2.1	0	9.0	0.25	0	9.1	0.46	0
Lead	0.01	0.004	0.02	-	1	0.02	0.01	2	0.01	0.006	1	0.02	0.02	0
Molybdenum	0.1	0.05	0.1	-	2	0.2	0	0	0.1	-	3	0.1	-	3
Nickel	0.49	0.10	0.53	-	0	0.38	0.029	0	0.27	0.045	0	0.34	0.025	0
Selenium	0.05	0	0.05	-	2	0.05	-	3	0.05	-	3	0.05	-	3
Uranium	0.01	0.004	0.01	-	1	0.02	0	2	0.01	-	3	0.0	-	3
Vanadium	0.1	0	0.1	-	2	0.1	-	3	0.1	-	3	0.1	-	3
Zinc	6.3	0.57	6.2	-	0	7.9	0.12	0	7.0	0.15	0	6.7	0.40	0
Radionuclides														
Lead-210 (Bq/g)	0.013	0.006	0.001	-	1	0.002	0	0	0.003	0.001	0	0.001	0.0006	0
Polonium-210 (Bq/g)	0.0022	0.00084	0.0011	-	0	0.001	0	0	0.0010	0.00010	0	0.0021	0.00025	0
Radium-226 (Bq/g)	0.004	0.002	0.0007	-	1	0.001	0.0006	0	0.002	0	0	0.0013	0.00036	0
Thorium-230 (Bq/g)	0.002	0	0.001	-	2	0.001	-	3	0.001	-	3	0.0007	-	3

Appendix B, Table 4
Summary bog cranberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac			Stony Rapids			Wollaston Lake		
	2018 (n = 3)			2018 (n = 3)			2018 (n = 2)		
	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
Metals									
Aluminum	25	0	0	91	5.1	0	56	-	0
Arsenic	0.05	-	3	0.05	-	3	0.05	-	2
Cadmium	0.01	-	3	0.03	0.01	0	0.05	-	0
Cobalt	0.02	0	0	0.02	0.01	0	0.02	-	1
Copper	2.9	0	0	3.1	0.1	0	3.4	-	0
Iron	13	0.58	0	46	1.2	0	27	-	0
Lead	0.02	0.01	1	0.1	0.02	0	0.04	-	0
Molybdenum	0.1	0	2	0.1	0	2	0.1	-	2
Nickel	0.23	0.0058	0	0.53	0.10	0	0.5	-	0
Selenium	0.05	-	3	0.05	-	3	0.05	-	2
Uranium	0.01	-	3	0.01	-	3	0.01	-	2
Vanadium	0.1	-	3	0.1	0	2	0.1	-	2
Zinc	6.9	0.25	0	7.0	0.20	0	8.45	-	0
Radionuclides									
Lead-210 (Bq/g)	0.001	0	0	0.003	0.002	1	0.0035	-	0
Polonium-210 (Bq/g)	0.0012	0.00036	0	0.0033	0.0017	0	0.00285	-	0
Radium-226 (Bq/g)	0.0011	0.00021	0	0.0017	0.00025	0	0.0026	-	0
Thorium-230 (Bq/g)	0.0007	-	3	0.0007	-	3	0.0007	-	2

Appendix B, Table 4
Summary bog cranberry chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City												
	Baseline (n = 5)		2013 (n = 5)			2014 (n = 2)			2015 (n = 1)		2016 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Value	<RDL	Average	S.D.	<RDL
Metals													
Aluminum	22	5.8	40	15	0	23	-	0	20	0	20	4.4	0
Arsenic	0.05	-	0.05	-	5	0.05	-	2	0.05	1	0.05	-	3
Cadmium	0.01	-	0.02	0.004	1	0.01	-	2	0.01	1	0.01	-	3
Cobalt	0.04	0.05	0.02	0.004	0	0.05	-	0	0.01	1	0.02	0.006	0
Copper	3.6	1.4	2.5	0.42	0	6.0	-	0	3.4	0	4.6	0.69	0
Iron	15	3.9	18	7.2	0	13	-	0	12	0	12	2.1	0
Lead	0.01	0.004	0.06	0.08	0	0.04	-	0	0.02	0	0.053	0.051	0
Molybdenum	0.1	-	0.1	0	1	0.2	-	0	0.1	0	0.5	0.3	0
Nickel	0.62	0.33	0.34	0.11	0	0.59	-	0	0.74	0	0.48	0.21	0
Selenium	0.05	-	0.05	-	5	0.05	-	2	0.05	1	0.05	-	3
Uranium	0.01	0.004	0.01	0.009	4	0.02	-	1	0.01	1	0.01	-	3
Vanadium	0.1	-	0.1	-	5	0.1	-	2	0.1	1	0.1	-	3
Zinc	6.8	1.5	7.5	0.80	0	6.7	-	0	5.3	0	7.0	0.55	0
Radionuclides													
Lead-210 (Bq/g)	0.010	0.006	0.007	0.005	3	0.004	-	0	0.003	0	0.003	0.002	0
Polonium-210 (Bq/g)	0.0052	0.0045	0.0012	0.00045	1	0.0038	-	0	0.0027	0	0.0017	0.00060	0
Radium-226 (Bq/g)	0.002	0.003	0.002	0.0008	1	0.003	-	0	0.003	0	0.0008	0.0001	0
Thorium-230 (Bq/g)	0.002	-	0.002	-	5	0.001	-	2	0.001	1	0.001	-	3

[1]All concentrations are in µg/g on a dry weight basis, unless specified otherwise.

[2]Regional reference data are from the AWG program (2000 to 2010) and the Uranium City Country Foods program (2011). Data are not available from all communities in all years. The median corresponds to the 50th percentile, while the lower and upper limits are the 2.5th and 97.5th percentiles that delimit the 95% range of the reference data.

[3]Regional reference ranges could not be computed when all or nearly all values were lower than the reported detection limit (RDL).

S.D. = Standard deviation; S.D. of 0 signify "no variance between samples"; "-" indicates insufficient data to calculate S.D.

<RDL = less than the laboratory reported detection limit.

Values less than the RDL were set equal to the RDL when calculating summary statistics.

Appendix B, Table 5

Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Regional Reference Range[2, 3]			
	Lower Limit	Median	Upper Limit	n
Metals				
Aluminum	0.02	0.3	1.1	11
Arsenic	0.01	0.04	0.18	32
Cadmium	0.002	0.004	0.01	13
Cobalt	0.001	0.004	0.009	13
Copper	1.7	2.9	4.9	30
Iron	25	39	62	32
Lead	0.003	0.003	0.39	13
Molybdenum	-	-	-	32
Nickel	0.01	0.02	0.04	32
Selenium	0.06	0.28	0.69	32
Uranium	0.001	0.001	0.003	32
Vanadium	-	-	-	32
Zinc	9	29	55	32
Radionuclides				
Lead-210 (Bq/g)	0.001	0.001	0.003	32
Polonium-210 (Bq/g)	-	-	-	0
Radium-226 (Bq/g)	0.00003	0.00006	0.00011	25
Thorium-230 (Bq/g)	-	-	-	0

Appendix B, Table 5
Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Black Lake										
	Baseline (n = 10)		2013/2014 (n = 5)			2014/2015 (n = 5)			2016/2017		
	Average	S.D.	Average	S.D.	< RDL	Average	S.D.	< RDL	1	2	Average
Metals											
Aluminum	0.5	0	0.7	0.3	2	0.5	-	5	<0.5	<0.5	0.5
Arsenic	0.02	0.008	0.01	0	2	0.03	0.009	0	0.03	0.02	0.03
Cadmium	0.003	0.002	0.003	0.001	1	0.002	-	4	0.003	0.005	0.004
Cobalt	0.004	0.002	0.002	0	3	0.010	0.0038	3	0.004	0.006	0.01
Copper	3.3	0.54	3.6	0.96	0	4.1	1.0	0	2.5	2.6	2.6
Iron	41	6.6	47	9.1	0	43	8.5	0	35	33	34
Lead	0.084	0.17	0.12	0.25	1	0.008	0.004	1	0.043	0.006	0.025
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	<0.02	<0.02	0.02
Nickel	0.01	0.005	0.01	-	5	0.02	0.02	5	0.01	<0.01	0.01
Selenium	0.19	0.034	0.20	0.036	0	0.21	0.027	0	0.17	0.18	0.18
Uranium	0.001	0	0.001	-	5	0.001	-	5	<0.001	<0.001	0.001
Vanadium	0.02	-	0.02	-	5	0.02	-	5	<0.02	<0.02	0.02
Zinc	26	6.2	23	4.4	0	23	13.6	0	35	46	41
Radionuclides											
Lead-210 (Bq/g)	0.001	0	0.001	-	5	0.001	-	5	<0.001	<0.001	0.001
Polonium-210 (Bq/g)	0.0080	0.0032	0.015	0.0044	0	0.015	0.0023	0	0.0081	0.0063	0.007
Radium-226 (Bq/g)	0.003	0.003	0.0002	0.0001	2	0.0001	0.00007	2	<0.00007	<0.00005	0.00006
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	5	0.0001	0.00005	5	<0.0001	<0.0001	0.0001

Appendix B, Table 5
Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac												
	Baseline (n = 11)		2013/2014 (n = 5)			2014/2015 (n = 3)			2015/2016 (n = 2)		2016/2017		
	Average	S.D.	Average	S.D.	< RDL	Average	S.D.	< RDL	Average	< RDL	1	2	Average
Metals													
Aluminum	0.5	-	0.5	0	4	0.5	0.06	2	0.5	2	<0.5	<0.5	0.5
Arsenic	0.01	0.005	0.01	0.009	4	0.01	0	1	0.01	0	0.03	<0.01	0.02
Cadmium	0.02	0.04	0.003	0.001	1	0.005	0.002	0	0.01	0	0.004	0.004	0.004
Cobalt	0.005	0.003	0.004	0.001	1	0.005	0.001	0	0.005	0	0.005	0.003	0.004
Copper	3.2	0.84	3.9	0.71	0	2.7	0.80	0	2.8	0	2.4	3.4	2.9
Iron	39	8.0	43	9.2	0	40	6.4	0	42	0	34	61	48
Lead	0.005	0.004	0.002	0.0004	3	0.003	0.001	2	0.007	1	0.004	0.005	0.005
Molybdenum	0.02	-	0.02	-	5	0.02	-	3	0.02	2	<0.02	<0.02	0.02
Nickel	0.02	0.02	0.01	-	5	0.01	0	2	0.01	2	<0.01	<0.01	0.01
Selenium	0.17	0.060	0.19	0.021	0	0.17	0.015	0	0.16	0	0.15	0.20	0.18
Uranium	0.001	0.0004	0.001	-	5	0.001	-	3	0.001	2	<0.001	<0.001	0.001
Vanadium	0.02	-	0.02	-	5	0.02	-	3	0.02	2	<0.02	<0.02	0.02
Zinc	30	18	26	3.2	0	36	20	0	36	0	39	14	27
Radionuclides													
Lead-210 (Bq/g)	0.002	0.002	0.001	-	5	0.001	-	3	0.001	2	<0.001	<0.001	0.001
Polonium-210 (Bq/g)	0.012	0.0057	0.012	0.0015	0	0.0075	0.00045	0	0.0016	0	0.0071	0.012	0.0096
Radium-226 (Bq/g)	0.00008	0.00004	0.00007	0.000009	3	0.00007	0.00001	2	0.00008	0	<0.00008	<0.00009	0.00008
Thorium-230 (Bq/g)	0.0001	0.00007	0.0001	-	5	0.0001	-	3	0.0001	2	<0.0002	<0.0002	0.0002

Appendix B, Table 5
Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Stony Rapids							
	Baseline (n = 8)		2013/2014 (n = 3)			2014/2015 (n = 5)		
	Average	S.D.	Average	S.D.	< RDL	Average	S.D.	< RDL
Metals								
Aluminum	0.6	0.31	0.5	-	3	0.5	-	5
Arsenic	0.01	0.004	0.02	0.01	0	0.02	0.006	0
Cadmium	0.003	0.0008	0.004	0.004	1	0.004	0.002	2
Cobalt	0.004	0.001	0.003	0.001	0	0.004	0.001	0
Copper	4.1	0.56	2.5	0.81	0	3.5	0.62	0
Iron	52	3.7	39	1.2	0	44	5.5	0
Lead	0.017	0.027	0.030	0.024	0	0.004	0.003	2
Molybdenum	0.02	-	0.020	-	3	0.02	-	4
Nickel	0.01	0	0.08	0.087	1	0.01	-	5
Selenium	0.22	0.022	0.14	0.025	0	0.19	0.017	0
Uranium	0.001	0.0004	0.001	-	3	0.001	0.0004	4
Vanadium	0.02	-	<0.02	-	3	0.02	-	5
Zinc	19	6.5	35	16.1	0	22	9.8	0
Radionuclides								
Lead-210 (Bq/g)	0.001	0.0004	0.001	0.0006	2	0.001	-	4
Polonium-210 (Bq/g)	0.013	0.0123	0.008	0.0021	0	0.022	0.0069	0
Radium-226 (Bq/g)	0.001	0.0005	0.00006	-	3	0.00008	0.00001	2
Thorium-230 (Bq/g)	0.002	-	0.0001	-	3	0.0002	-	5

Appendix B, Table 5
Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City		
	2018 (n = 3)		
	Average	S.D.	< RDL
Metals			
Aluminum	0.5	-	3
Arsenic	0.01	0	2
Cadmium	0.005	0.003	0
Cobalt	0.004	0.001	0
Copper	1.8	0.56	0
Iron	35	2.6	0
Lead	0.003	0.001	2
Molybdenum	0.020	-	3
Nickel	0.01	-	3
Selenium	0.13	0.025	0
Uranium	0.001	-	3
Vanadium	0.02	-	3
Zinc	47	16	0
Radionuclides			
Lead-210 (Bq/g)	0.001	-	3
Polonium-210 (Bq/g)	0.0054	0.00056	0
Radium-226 (Bq/g)	0.0002	-	3
Thorium-230 (Bq/g)	0.0005	-	3

Appendix B, Table 5
Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Wollaston Lake/Hatchet Lake										
	Baseline (n = 10)		2013/2014 (n = 5)			2014/2015 (n = 4)			2016/2017		
	Average	S.D.	Average	S.D.	< RDL	Average	S.D.	< RDL	1	2	Average
Metals											
Aluminum	0.52	0.063	0.5	0.04	4	0.5	-	4	<0.5	<0.5	0.5
Arsenic	0.01	0.005	0.01	0.005	2	0.01	0.005	2	0.03	0.03	0.03
Cadmium	0.004	0.002	0.002	0.0004	0	0.010	0.012	0	0.004	0.004	0.004
Cobalt	0.005	0.002	0.004	0.002	1	0.009	0.006	0	0.003	0.004	0.004
Copper	3.2	0.68	3.3	0.59	0	3.2	0.48	0	3.0	3.6	3.3
Iron	41	11	39	9.2	0	39	11	0	45	38	42
Lead	0.015	0.018	0.003	0.001	3	0.28	0.55	3	0.52	0.014	0.27
Molybdenum	0.02	-	0.02	-	5	0.02	-	4	<0.02	<0.02	0.02
Nickel	0.01	0.003	0.01	-	5	0.01	-	4	<0.01	<0.01	0.01
Selenium	0.16	0.026	0.18	0.032	0	0.16	0.021	0	0.20	0.22	0.21
Uranium	0.001	-	0.001	-	5	0.001	-	4	<0.001	<0.001	0.001
Vanadium	0.02	-	0.02	-	5	0.02	-	4	<0.02	<0.02	0.02
Zinc	29	11.6	18	3.8	0	26	6.2	0	43	38	41
Radionuclides											
Lead-210 (Bq/g)	0.001	0.0003	0.001	-	5	0.001	-	4	<0.001	<0.001	0.001
Polonium-210 (Bq/g)	0.013	0.0029	0.011	0.0032	0	0.0063	0.0015	0	0.0075	0.0082	0.0079
Radium-226 (Bq/g)	0.00007	0.00001	0.0001	0.00006	3	0.00007	0.00002	3	<0.00007	<0.00007	0.00007
Thorium-230 (Bq/g)	0.0001	-	0.0001	0.00005	5	0.0001	-	4	<0.0001	<0.0001	0.0001

[1]All concentrations are reported in µg/g wet weight basis, except when specified otherwise.

[2]Regional reference data are from the AWG program (2000 to 2010) and the Uranium City Country Foods program (2011). Data are not available from all communities in all years. The median corresponds to the 50th percentile, while the lower and upper limits are the 2.5th and 97.5th percentiles that delimit the 95% range of the reference data.

[3]Regional reference ranges could not be computed when all or nearly all values were lower than the reported detection limit (RDL).

S.D. = Standard deviation; S.D. of 0 signify "no variance between samples"; "-" indicates insufficient data to calculate S.D.

<RDL = less than the laboratory reported detection limit.

Values less than the RDL were set equal to the RDL when calculating summary statistics.

Appendix B, Table 6
Summary moose flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Regional Reference Range[2, 3]			
	Lower Limit	Median	Upper Limit	n
Metals				
Aluminum	0.2	0.5	10.9	40
Arsenic	0.01	0.02	0.21	37
Cadmium	0.002	0.004	0.014	10
Cobalt	0.007	0.015	0.031	10
Copper	0.7	1.3	2.1	40
Iron	14	30	53	40
Lead	0.002	0.010	0.032	10
Molybdenum	-	-	-	-
Nickel	0.01	0.01	0.10	38
Selenium	0.05	0.23	0.53	37
Uranium	0.001	0.001	0.011	36
Vanadium	-	-	-	-
Zinc	19	48	79	40
Radionuclides				
Lead-210 (Bq/g)	0.0001	0.0002	0.0013	35
Polonium-210 (Bq/g)	-	-	-	-
Radium-226 (Bq/g)	0.00005	0.00005	0.00009	35
Thorium-230 (Bq/g)	-	-	-	-

Appendix B, Table 6
Summary moose flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage								Fond Du Lac	Stony Rapids	
	Baseline (n = 4)		2013/2014 (n = 2)		2014/2015 (n = 2)		2015/2016 (n = 2)		2016 (n = 1)	2016 (n = 1)	2018 (n = 1)
	Average	S.D.	Average	<RDL	Average	<RDL	Average	<RDL			
Metals											
Aluminum	2.2	1.5	0.5	2	2.5	0	2.8	0	0.6	0.5	<0.5
Arsenic	0.01	-	0.01	2	0.01	2	0.01	2	<0.01	0.01	<0.01
Cadmium	0.003	0.002	0.003	0	0.027	0	0.005	0	0.002	0.002	<0.002
Cobalt	0.014	0.0054	0.014	0	0.018	0	0.011	0	0.011	0.019	0.012
Copper	1.7	0.34	1.7	0	1.0	0	1.2	0	1.5	1.7	0.82
Iron	25	3.3	32	0	27	0	29	0	38	29	12
Lead	0.010	0.010	0.003	1	0.020	0	0.003	0	0.01	0.01	<0.002
Molybdenum	0.02	-	0.02	2	0.02	2	0.02	2	<0.02	<0.02	<0.02
Nickel	0.02	0.006	0.01	2	0.01	2	0.02	1	<0.01	0.02	<0.01
Selenium	0.12	0.059	0.06	0	0.08	0	0.15	0	0.1	0.09	0.16
Uranium	0.001	-	0.001	2	0.002	1	0.002	1	<0.001	<0.001	<0.001
Vanadium	0.02	-	0.02	2	0.02	2	0.02	2	<0.02	<0.02	<0.02
Zinc	39	10	52	0	61	0	55	0	53	49	32
Radionuclides											
Lead-210 (Bq/g)	0.0008	-	0.001	2	0.001	2	0.001	2	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.0009	0.00090	0.0003	1	0.0003	1	0.0008	0	0.0003	0.0006	0.0006
Radium-226 (Bq/g)	0.00010	0.000066	0.00007	0	0.00006	2	0.00007	0	<0.00005	<0.00007	<0.00007
Thorium-230 (Bq/g)	0.0001	0.00006	0.0001	2	0.0001	2	0.00010	2	<0.0001	<0.0001	<0.0001

Appendix B, Table 6
Summary moose flesh chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City									
	Baseline (n = 7)		2013/2014 (n = 3)			2014/2015 (n = 1)	2015/2016 (n = 1)	2016 (n = 1)	2018 (n = 2)	
	Average	S.D.	Average	S.D.	<RDL				Average	<RDL
Metals										
Aluminum	0.8	0.76	0.5	0.1	2	0.6	<0.5	0.5	<0.5	2
Arsenic	0.01	0	0.01	-	3	<0.01	<0.01	<0.01	<0.01	2
Cadmium	0.005	0.0030	0.004	0.001	0	0.056	0.018	0.011	0.004	0
Cobalt	0.012	0.0047	0.010	0.0015	0	0.009	0.044	0.009	0.011	0
Copper	1.8	0.92	1.7	0.26	0	1.9	1.5	1.8	1.2	0
Iron	33	6.9	32	5.7	0	36	33	25	30	0
Lead	0.003	0.001	0.01	0.01	0	0.003	0.002	0.01	0.004	1
Molybdenum	0.02	-	0.02	-	3	<0.02	<0.02	<0.02	<0.02	2
Nickel	0.01	0.005	0.01	-	3	<0.01	<0.01	0.02	<0.01	2
Selenium	0.12	0.034	0.10	0.021	0	0.14	0.08	0.13	0.14	0
Uranium	0.001	0.0008	0.001	-	3	<0.001	<0.001	<0.001	<0.001	2
Vanadium	0.02	-	0.02	-	3	<0.02	<0.02	<0.02	<0.02	2
Zinc	52	13	49	6.1	0	52	52	35	45	0
Radionuclides										
Lead-210 (Bq/g)	0.0007	0.0007	0.001	-	3	<0.001	<0.001	<0.001	<0.001	2
Polonium-210 (Bq/g)	0.0006	0.0008	0.0004	0.0001	0	0.0016	0.001	0.0008	0.0003	0
Radium-226 (Bq/g)	0.00007	-	0.00008	0.00003	1	<0.00005	0.00006	<0.00009	<0.00007	2
Thorium-230 (Bq/g)	0.0001	0.00005	0.0001	-	3	<0.0001	<0.0001	<0.0002	<0.0003	2

[1]All concentrations are reported on a µg/g wet weight basis, except when specified otherwise.

[2]Regional reference data are from the AWG program. Data used are from 2000 to 2010. However, data are not available from all communities in all years.
[3]Regional reference ranges could not be computed when all or nearly all values were lower than the reported detection limit (RDL).

S.D. = Standard deviation; S.D. of 0 signify "no variance between samples"; "-" indicates insufficient data to calculate S.D.

<RDL = less than the laboratory reported detection limit.

Values less than the RDL were set equal to the RDL when calculating summary statistics.

Appendix B, Table 7

Summary barren-ground caribou and moose organ chemistry results for the EARMP community program, 2014 to 2019.

Chemical[1]	Caribou												
	Black Lake			Fond du Lac				Uranium City				Wollaston Lake	
	Heart (n = 1)	Kidney (n = 2)		Heart (n = 1)	Kidney (n = 5)		Liver (n = 1)	Heart (n = 3)		Liver (n = 3)		Liver (n = 3)	
		Average	<RDL		Average	<RDL		Average	<RDL	Average	<RDL	Average	<RDL
Metals													
Aluminum	<0.5	0.6	1	<0.5	0.5	5	<0.5	0.5	3	0.5	3	0.6	1
Arsenic	0.01	0.02	0	0.01	0.01	2	<0.01	0.01	3	0.01	2	0.02	0
Cadmium	0.004	5.8	0	0.002	8.0	0	0.004	0.003	1	1.2	0	1.2	0
Cobalt	0.014	0.049	0	0.02	0.036	0	0.013	0.011	0	0.061	0	0.088	0
Copper	4.5	4.3	0	4.5	4.2	0	3.3	4.5	0	30	0	40	0
Iron	55	31	0	59	46	0	37	62	0	243	0	165	0
Lead	0.005	0.056	0	0.01	0.086	0	0.003	0.002	2	0.07	0	0.087	0
Molybdenum	<0.02	0.18	0	<0.02	0.13	0	<0.02	0.02	3	0.37	0	0.87	0
Nickel	<0.01	0.02	1	0.01	0.01	3	0.02	0.01	3	0.01	3	0.01	2
Selenium	0.27	0.97	0	0.26	1.3	0	0.18	0.25	0	0.30	0	0.40	0
Uranium	<0.001	0.001	2	<0.001	0.001	5	<0.001	0.001	3	0.001	3	0.004	3
Vanadium	<0.02	0.02	2	<0.02	0.02	5	<0.02	0.02	3	0.02	3	0.02	3
Zinc	19	24	0	20	26	0	37	18	0	24	0	30	0
Radionuclides													
Lead-210 (Bq/g)	<0.001	0.036	0	<0.001	0.064	0	<0.001	0.002	3	0.084	0	0.029	1
Polonium-210 (Bq/g)	0.012	0.070	0	0.0092	0.081	0	0.0088	0.012	0	0.18	0	0.12	0
Radium-226 (Bq/g)	<0.00006	0.0003	1	<0.00007	0.0005	0	<0.00006	0.0005	3	0.001	3	0.0001	2
Thorium-230 (Bq/g)	<0.0001	0.0003	2	<0.0001	0.0004	4	<0.0001	0.001	3	0.002	3	0.0002	3

Appendix B, Table 7

Summary barren-ground caribou and moose organ chemistry results for the EARMP community program, 2014 to 2019.

Chemical[1]	Moose								
	Camsell Portage				Stony Rapids	Uranium City			
	Liver (n = 3)		Kidney (n = 4)		Kidney (n = 1)	Liver (n = 3)		Kidney (n = 3)	
	Average	<RDL	Average	<RDL		Average	<RDL	Average	<RDL
Metals									
Aluminum	0.7	1	0.7	3	<0.5	0.8	2	0.5	3
Arsenic	0.01	3	0.01	4	0.01	0.01	2	0.01	2
Cadmium	1.2	0	6.7	0	0.73	0.64	0	12.2	0
Cobalt	0.21	0	0.14	0	0.29	0.067	0	0.15	0
Copper	33	0	3.1	0	13.2	18.9	0	2.7	0
Iron	137	0	61	0	200	313	0	35	0
Lead	0.003	1	0.003	2	0.004	0.009	1	0.005	1
Molybdenum	1.0	0	0.33	0	1.1	0.49	1	0.20	0
Nickel	0.01	3	0.05	0	0.02	0.01	3	0.05	0
Selenium	0.45	0	0.87	0	0.24	0.30	0	0.69	0
Uranium	0.007	3	0.001	4	<0.001	0.004	3	0.001	3
Vanadium	0.02	3	0.02	4	<0.02	0.02	3	0.02	3
Zinc	18	0	21	0	27	17	0	24	0
Radionuclides									
Lead-210 (Bq/g)	0.001	2	0.002	2	0.001	0.001	1	0.001	0
Polonium-210 (Bq/g)	0.01	0	0.01	0	0.0042	0.0032	0	0.0044	0
Radium-226 (Bq/g)	0.0001	1	0.0002	1	<0.00008	0.0002	0	0.0001	2
Thorium-230 (Bq/g)	0.0002	3	0.0002	4	<0.0002	0.0001	3	0.0001	3

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

<RDL = less than the laboratory reported detection limit.

Values less than the RDL were set equal to the RDL when calculating summary statistics.

APPENDIX C

DETAILED DATA

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Appendix C, Table 3 Detailed blueberry chemistry results from the EARMP community program, 2011 to 2018

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Appendix C, Table 5 Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2018.

Appendix C, Table 6 Detailed moose flesh chemistry results from the EARMP community program, 2011 to 2018.

Appendix C, Table 7 Detailed barren-ground caribou and moose organ chemistry results from the EARMP community program, 2014 to 2019.

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APPENDIX C, TABLE 1

Fall water chemistry results for the EARMP community program, 2011 to 2018.

Chemical[1]	Black Lake						Camsell Portage					Fond du Lac						Stony Rapids						Uranium City						Wollaston Lake/Hatchet Lake					
	Black Lake						Ellis Bay, Lake Athabasca					Fond du Lac River						Fond du Lac River						Fredette River						Welcome Bay, Wollaston Lake					
	2011	2012	2013	2014	2017	2018	2011	2012	2013	2014	2017	2011	2012	2013	2014	2017	2018	2011	2012	2013	2014	2017	2018	2011	2012	2013	2014	2017	2018	2011	2012	2013	2014	2017	2018
Inorganic Ions																																			
Bicarbonate	20	26	16	15	28	16	35	30	34	38	35	18	27	28	17	8	8	21	20	16	16	12	15	63	60	63	65	61	57	17	20	15	15	17	10
Calcium	3.5	3.3	3.4	3.4	2.7	3.1	6.9	7.1	7.4	7.3	7	3.7	3.9	3.8	3.7	3.1	3.2	3.4	3.4	3.3	3.2	2.9	3	15	16	17	16	15	16	3.4	3.5	3.5	3.3	3.3	3.3
Carbonate	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloride	3.6	2	4	4.2	1.8	3.2	3.1	2.9	3.4	3	3.1	2.8	2.8	2.9	2.9	2.2	2.1	3.2	2.8	2.8	2.4	1.5	1.6	1.5	1.2	2.3	1.2	1.1	1.2	0.4	0.5	0.4	0.3	0.4	0.3
Hydroxide	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Magnesium	1.3	1.2	1.3	1.3	1.2	1.2	2.1	2.1	2.1	2.2	2.1	1.3	1.4	1.4	1.4	1.2	1.2	1.1	1.3	1.2	1.2	1.1	1.2	2.9	3	3.2	3.2	2.9	3	1.1	1.1	1	1	0.9	1
Potassium	0.8	0.7	0.8	0.6	0.8	0.7	0.9	0.9	0.8	0.7	1	0.8	0.8	0.8	0.6	0.8	0.8	0.8	0.7	0.8	0.6	0.7	0.7	0.9	1	1.1	0.9	1.1	1	0.7	0.6	0.7	0.5	0.7	0.6
Sodium	1.8	1.5	1.7	1.8	1.4	1.6	2.5	2.5	2.6	2.6	2.7	1.6	1.7	1.7	1.6	1.5	1.5	1.7	1.6	1.6	1.5	1.3	1.4	1.9	1.6	1.8	1.7	1.6	1.6	1.4	1.4	1.4	1.3	1.4	1.3
Sulfate	1.4	1.0	1.2	1.1	1.3	1.1	3.6	3.3	3.7	3.8	3.7	1.5	1.5	1	1.4	1.3	1.3	1.4	1.2	1.4	1.3	1.2	1.2	4.5	3.8	4.1	5.5	4.3	4.2	4	4.0	3.9	4.0	4.0	4.0
Metals																																			
Aluminum	0.002	0.0026	0.0026	0.0027	0.0061	0.0073	0.0016	0.001	0.0044	0.0022	0.0027	0.014	0.02	0.011	0.019	0.011	0.011	0.018	0.0084	0.012	0.012	0.014	0.0099	0.0051	0.0051	0.0057	0.0033	0.004	0.0033	0.0047	0.014	0.0074	0.0069	0.0058	0.005
Barium	0.0044	0.0044	0.0043	0.0043	0.0048	0.0038	0.01	0.01	0.011	0.011	0.011	0.0051	0.0055	0.0052	0.0053	0.0046	0.0045	0.0046	0.0043	0.0044	0.0043	0.0045	0.0041	0.032	0.031	0.032	0.028	0.03	0.026	0.0041	0.0042	0.0042	0.0039	0.0043	0.004
Boron	0.01	<0.01	<0.01	0.01	<0.01	0.02	<0.01	0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	0.00001	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001	0.00001	<0.00001	<0.00001	0.00001	0.00002	<0.00001	0.00001	<0.00001	0.00003	0.00001	0.00002	<0.00001	0.00001	<0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	0.00014	<0.00001
Chromium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	0.0005	<0.0002	0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Iron	0.026	0.013	0.022	0.021	0.022	0.17	0.0049	0.0044	0.0078	0.0056	0.0054	0.023	0.03	0.017	0.023	0.021	0.023	0.074	0.045	0.037	0.034	0.05	0.06	0.031	0.041	0.05	0.027	0.045	0.028	0.014	0.035	0.043	0.034	0.046	0.013
Lead	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Manganese	0.036	0.0068	0.021	0.017	0.017	0.032	0.0008	0.0008	0.0006	0.0006	0.0008	0.003	0.0027	0.0034	0.0037	0.0036	0.003	0.027	0.013	0.014	0.01	0.015	0.014	0.014	0.024	0.026	0.017	0.023	0.012	0.0047	0.0087	0.0066	0.0053	0.0068	0.0047
Mercury (µg/L)	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001
Molybdenum	0.0002	0.0001	0.0001	0.0001	0.0001	<0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	<0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0004	0.0004	0.0004	0.0004	0.0005	0.0004	0.0012	0.0012	0.001	0.0009	0.0008	0.0007
Nickel	0.0002	0.0001	0.0001	<0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002	0.0001	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	0.0001	0.0002	0.0001	<0.0001	0.0001	0.0001	0.0001	0.0001	<0.0001	0.0001	0.0001
Selenium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silver	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Thallium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.0002	0.0002	0.0002	<0.0002	0.0008	0.0008	0.0004	0.0016	0.0008	0.0004	0.0016	0.0007	0.0012	0.0006	0.0006	0.0005	0.0003	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium (µg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.5	1.3	1.4	1.7	1	1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	0.0018	<0.0005	<0.0005	<0.0005	<0.0005	0.0019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	0.0014	<0.0005	0.0013	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nutrients																																			
Ammonia as nitrogen	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.04	0.02	<0.01	<0.01	<0.01	<0.01	0.05	0.04	0.01	<0.01	<0.01	0.03	0.05	0.07	0.06	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.08
Nitrate	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.13	0.18	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Nitrate+Nitrite as nitrogen	-	-	-	-	<0.01	<0.01	-	-	-	-	<0.01	-	-	-	-	<0.01	<0.01	-	-	-	-	0.01	<0.01	-	-	-	-	0.01	<0.01	-	-	-	-	<0.01	<0.01
Organic carbon	2.5	3.8	2.9	3	3.6	3.6	2.8	3.5	3.2	3.4	3.3	2.7	1.9	3.2	3.4	3.6	4	2.7	3.8	4.1	3.4	3.8	4.2	7.4	9.9	7.6	7.7	7.4	2.8	2.5	3	2.8	2.8	2.8	8.1
Phosphorus	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Kjeldahl nitrogen	0.27	0.2	0.26	0.22	0.19	0.31	0.23	0.21	0.22	0.19	0.17	0.26	0.22	0.21	0.13	0.18	0.22	0.28	0.23	0.49	0.18	0.21	0.22	0.41	0.37	0.43	0.32	0.29	0.15	0.28	0.21	0.2	0.17	0.33	0.31
Total nitrogen	0.27	0.2	0.26	0.22	0.19	0.31	0.23	0.23	0.22	0.19	0.17	0.26	0.22	0.21	0.13	0.18	0.22	0.28	0.23	0.49	0.2	0.22	0.22	0.41	0.37	0.46	0.36	0.3	0.15	0.28	0.21	0.2	0.17	0.33	0.31
Physical Properties																																			
P. alkalinity	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
pH (pH units)	7.12	7.18	7.38	6.76	7.34	7.48	7.46	7.5	7.71	7.26	7.7	7.22	7.14	6.86	6.88	7.32	7.48	7.3	7.3	7.38	6.89	7.39	7.53	7.75	7.72	7.94	7.46	8	8.11	7.1	7.12	7.37	6.91	7.38	7.53
Specific conductivity (µS/cm)	40	38	38	43	29	28	66	69	69	73	66	39	44	42	44	32	28	39	40	36	38	28	25	114	112	113	114	102	98	34	37	34	36	32	27
Sum of ions	32	36	28	28	37	27	54	49	54	58	55	30	39	40	29	18	18	33	31	27	26	21	24	90	87	93	94	87	84	28	31	26	25	28	21
Total alkalinity	16	21	13	12	23	13	29	25	28	31	29	15	22	23	14	7	7	17	16	13	13	10	12	52	49	52	53	50	47	14	16	12	12	14	8
Total dissolved solids	30	30	14	31	26	32	40	44	27	46	41	28	32	34	33	25	29	32	33	13	28	21	34	72	76	56	83	67	81	24	28	13	25	24	33
Total hardness	14	13	29	14	12	13	26	26	47	27	26	14	15	15	15	13	13	13	14	31	13	12	12	49	52	80	53	49	52	13	13	28	12	12	12
Total suspended solids	<1	1	2	1	<1	2	<1	<1	<1	1	<1	<1	2	1	2	<1	1	5	2	2	2	2	2	2	1	<1	<1	<1	1	<1	2	2	1	<1	2
Turbidity (NTU)	0.6	0.7	0.7	0.7	0.5	0.5	0.3	0.4	0.4	0.4	0.4	1	1.1	0.8	1.1	0.6	0.4	1.3	1.2	1	0.7	0.6	0.5	0.3	0.6	0.4	0.3	0.5	0.3	0.3	0.8	0.7	0.4	0.3	0.3
Radionuclides																																			
Lead-210 (Bq/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Polonium-210 (Bq/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Radium-226 (Bq/L)	<0.005	0.009	<0.005	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005	<0.005	0.008	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005	<0.005
Thorium-230 (Bq/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trace Elements																																			
Antimony	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic (µg/L)	0.1	0.1	0.2	0.2	<0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	<0.1	<0.1	0.1	0.1	0.1	<0.1
Beryllium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoride	0.04	0.07	0.07	0.06	0.03	0.07	0.06	0.07	0.08	0.07	0.04	0.05	0.07	0.05	0.06	0.06	0.07	0.04	0.06	0.08	0.06	0.03	0.07	0.1	0.13	0.12	0.12	0.09	0.14	0.05	0.07	0.08	0.07	0.03	0.08
Strontium	0.047	0.033	0.049	0.058	0.031	0.066	0.051	0.05	0.054	0.059	0.052	0.043	0.04	0.042	0.045	0.034	0.032	0.044	0.04	0.039	0.04	0.027	0.028	0.049	0.045	0.047	0.049	0.043	0.042	0.012	0.012	0.012	0.013	0.012	0.012
Vanadium	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[1]All values are in mg/L (total), unless specified otherwise.

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Black Lake (Black Lake)																											
	Lake Trout																											
	2011					2012					2013					2014					2016			2018				
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1
	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT01	LT02	LT03	LT04	LT05
Metals																												
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	0.7	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.05	0.06	0.07	0.05	0.10	0.06	0.14	0.07	0.06	0.06	0.05	0.04	0.04	0.05	0.06	0.07	0.1	0.04	0.04	0.07	0.1	0.07	0.07	0.07	0.06	0.06	0.09	0.05
Barium	0.02	0.03	0.01	<0.01	0.03	<0.01	0.01	0.01	0.02	0.01	0.01	<0.01	<0.01	0.01	0.02	0.01	0.03	0.01	<0.01	<0.01	0.04	0.16	0.18	0.04	0.09	<0.01	0.05	0.04
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.3
Cobalt	<0.002	<0.002	<0.002	0.002	0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.005	0.003	0.002	0.006	<0.002	0.003	0.004	<0.002	0.003	0.002	<0.002	0.003	0.003
Copper	0.27	0.41	0.31	0.22	1	0.31	0.31	0.43	0.18	0.25	0.22	0.24	0.26	0.25	0.23	0.42	0.35	0.19	0.45	0.23	0.29	0.24	0.21	0.35	0.39	0.24	0.3	0.15
Iron	1.9	3.3	2	4.5	6	2.2	2	2.6	1.5	2.9	1.7	2	2	1.6	1.5	3.9	3.3	1.4	2.8	1.8	3.6	2.8	2.4	3.1	6.1	2.3	4.4	4.4
Lead	<0.002	0.004	<0.002	<0.002	<0.002	0.002	<0.002	0.002	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	0.007	<0.002	<0.002	<0.002	0.003	0.004	0.005	<0.002	<0.002	<0.002	0.002	<0.002
Manganese	0.06	0.08	0.08	0.08	0.09	0.08	0.06	0.05	0.07	0.1	0.08	0.06	0.09	0.09	0.06	0.1	0.12	0.07	0.08	0.09	0.12	0.14	0.08	0.09	0.1	0.09	0.1	0.09
Mercury	0.45	0.41	0.37	0.33	0.37	0.16	0.16	0.18	0.36	0.35	0.42	0.5	0.45	0.37	0.28	0.37	0.53	0.37	0.45	0.5	0.4	0.31	0.35	0.48	0.37	0.56	0.36	0.43
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.04	0.01	<0.01	<0.01	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.11	0.15	0.15	0.11	0.13	0.15	0.18	0.17	0.18	0.16	0.13	0.11	0.13	0.17	0.16	0.18	0.14	0.13	0.15	0.16	0.15	0.16	0.15	0.1	0.12	0.12	0.12	0.14
Silver	<0.002	<0.002	<0.002	<0.002	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.10	0.07	0.09	0.05	0.13	0.07	0.21	0.27	0.2	0.8	0.05	0.03	0.23	0.27	0.07	0.15	0.12	0.08	0.3	0.06	0.19	0.68	0.1	0.44	0.11	0.07	0.2	0.07
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.09	0.08	0.07	0.08	0.07	0.07	0.08	0.07	0.08	0.01	0.01	0.01	0.02	0.01	0.09	0.09	0.08	0.07	0.08	0.01	0.03	0.01	<0.01	<0.01	<0.01	0.01	<0.01
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	2.9	4.7	2.5	2.2	5.9	3.6	4.7	4.4	3.6	6.3	3	3.2	4.1	3.5	3.3	5.5	4.1	2.5	4	2.5	5.8	4.2	3.7	4.5	5.4	2.6	4.5	2.9
Physical Properties																												
Moisture (%)	77.19	77.72	73.93	76.78	77.42	73.79	71.07	77.81	77.02	76.28	75.03	76.5	74.42	74.85	72.4	73.77	75.34	76.29	75.02	73.38	76.61	69.74	66.98	80.57	78.5	79.94	79.39	76.88
Length (cm)	44.9	51.2	48.7	48.3	50.5	51.3	52.7	51.2	62.5	65.2	54.0	56.0	53.2	54.8	49.6	52.6	53.2	53.5	50.5	54	48	52.4	50.5	53.3	51.2	55.0	56.5	59.5
Weight (g)	1730	1710	1480	1450	1740	1360	1740	1180	2060	2410	1940	2200	1720	1880	1760	1920	2240	1965	1900	2190	1580	1920	1580	1610	1680	1640	1590	2250
Sex	F	M	M	F	M	F	M	M	F	M	F	F	M	M	M	M	F	F	M	M	M	M	M	F	M	F	F	M
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U
Age (years)	12	10	7	10	10	7	7	6	27	19	12	17	13	13	13	14	14	9	14	14	15	14	16	12	18	19	23	22
Radionuclides																												
Lead-210 (Bq/g)	0.002	<0.001	0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Radium-226 (Bq/g)	<0.00004	<0.00006	<0.00007	<0.00005	<0.00006	<0.00006	<0.0001	<0.00005	0.00005	<0.00006	<0.00006	0.0001	<0.00008	<0.00006	<0.00006	<0.00006	<0.00004	<0.00005	<0.00003	<0.00005	<0.00006	<0.00006	<0.00007	<0.00005	<0.00006	<0.00006	<0.00005	<0.00006
Thorium-230 (Bq/g)	<0.00009	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.00009	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.00007	<0.0001	<0.00007	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical	Black Lake (Black Lake)																											
	Lake Whitefish																											
	2011					2012					2013					2014					2016			2018				
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1
	LW06	LW07	LW08	LW09	LW10	LW06	LW07	LW08	LW09	LW10	LW06	LW07	LW08	LW09	LW10	LW06	LW07	LW08	LW09	LW10	LW01	LW02	LW03	LW01	LW02	LW03	LW04	LW05
Metals																												
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.25	0.27	0.40	0.14	0.37	0.04	0.05	0.08	0.14	0.04	0.01	0.03	0.03	0.03	0.02	0.2	0.16	0.2	0.07	0.2	0.04	0.38	0.24	0.02	0.17	0.33	0.06	0.12
Barium	0.06	0.13	0.09	<0.01	0.02	0.02	0.01	0.02	<0.01	0.02	0.02	0.02	0.02	0.01	0.01	<0.01	0.02	<0.01	<0.01	0.02	0.06	0.06	0.01	0.04	0.02	0.04	0.24	0.14
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1
Cobalt	0.003	0.005	<0.002	0.003	0.003	<0.002	0.002	<0.002	<0.002	0.003	<0.002	0.002	<0.002	0.005	0.002	<0.002	<0.002	0.005	0.003	0.009	0.006	0.002	0.002	<0.002	0.003	0.004	0.003	0.004
Copper	0.24	0.21	0.12	0.17	0.14	0.16	0.19	0.25	0.28	0.18	0.06	0.27	0.09	0.08	0.07	0.14	0.12	0.58	0.27	0.21	0.1	0.17	0.15	0.36	0.18	0.59	0.17	0.14
Iron	2.3	2.9	2.5	1.4	1.5	1	2	2.7	4	1.1	1.8	2.5	1.2	1.1	1.1	1.1	1.3	4	2.8	2.4	2.4	4	2.6	7	2.9	7.6	3.3	2
Lead	<0.002	0.002	<0.002	<0.002	<0.002	0.002	<0.002	0.003	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	0.002	0.004	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese	0.18	0.39	0.22	0.06	0.09	0.06	0.07	0.11	0.06	0.06	0.08	0.07	0.07	0.05	0.04	0.08	0.11	0.09	0.09	0.1	0.1	0.17	0.13	0.14	0.1	0.13	0.12	0.1
Mercury	0.16	0.13	0.14	0.06	0.21	0.13	0.16	0.15	0.02	0.05	0.05	0.09	0.03	0.04	0.08	0.097	0.13	0.068	0.1	0.12	0.061	0.12	0.088	0.11	0.14	0.1	0.1	0.1
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	<0.01	0.02	0.04	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.30	0.35	0.25	0.36	0.31	0.28	0.24	0.26	0.15	0.2	0.2	0.23	0.3	0.18	0.19	0.27	0.34	0.29	0.25	0.36	0.32	0.44	0.43	0.13	0.26	0.2	0.17	0.28
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.79	0.24	1.20	0.28	0.22	0.27	0.31	0.25	0.16	0.17	0.55	0.45	0.47	0.47	0.42	0.27	0.49	0.25	0.21	0.28	0.69	0.15	0.31	0.27	0.15	0.12	0.15	0.22
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.09	0.08	0.08	0.08	0.07	0.08	0.09	0.08	0.08	0.02	0.01	0.02	0.01	<0.01	0.07	0.08	0.07	0.09	0.08	0.02	<0.01	0.01	<0.01	<0.01	0.01	0.03	<0.01
Uranium	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	3.9	4.6	3.5	4.7	3.3	6.7	6.2	4.6	4.4	4.4	3.4	4.7	4	3.5	4	3.6	3.1	4.9	3.5	3.7	4.8	4.2	4.8	4.5	4.8	5.2	3	3.6
Physical Properties																												
Moisture (%)	75.22	76.01	76.93	75.27	75.79	74.3	72.89	75.74	78.39	76.9	79.98	78.5	79.92	79.2	78.64	75.64	76.94	77.68	75.67	75.1	75.55	80.28	76.47	76.92	82.85	80.16	80.48	80.51
Length (cm)	38.3	41.8	45.5	48.0	45.2	46.0	45.7	45.5	40.2	46.2	43.9	41.5	38	43.2	45.6	39.5	42.4	38	41	40.7	50.6	47.1	39.9	47.0	44.5	39.0	42.2	45.7
Weight (g)	840	1060	1360	890	1450	980	1020	920	760	1140	1200	920	660	1100	1320	950	1060	805	895	950	1580	1280	940	1420	1170	720	1000	1140
Sex	F	M	M	F	F	M	M	M	M	F	M	M	F	F	F	F	F	M	M	M	F	F	M	F	M	M	F	F
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	U	U	U
Age (years)	21	21	26	10	27	9	15	15	7	10	12	10	10	11	15	15	16	10	14	15	16	27	16	18	18	21	11	18
Radionuclides																												
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.004	<0.004	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g	0.0002	<0.0002	0.0005	0.0007	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.0002	0.0004	0.0006	0.0003	0.0003	0.0002	0.0003	<0.0002	0.0003	<0.0002	0.0002	0.0004	0.0004	0.0006	<0.0002	0.0004	0.0002	0.0004	0.0002
Radium-226 (Bq/g)	<0.00006	<0.00006	0.00009	<0.00007	<0.00006	<0.00006	<0.00006	0.001	0.002	<0.00006	0.0002	<0.00007	0.0004	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00005	0.0002	<0.00006	<0.00005	<0.00006	<0.00006	<0.00005	<0.00005	<0.00006	<0.00005
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.002	<0.002	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

GN = gill net; LT = lake trout; LW = lake whitefish; M = male; F = female; A = adult, U = unknown.

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City (Prospectors Bay)																						
	Lake Trout																						
	2012					2013					2014					2016			2018				
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	AN1-1	AN1-1	AN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1
	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT01	LT02	LT03	LT04	LT05
Metals																							
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.07	0.07	0.08	0.07	0.13	0.07	0.04	0.04	0.07	0.07	0.06	0.04	0.07	0.05	0.2	0.09	0.08	0.19	0.06	0.04	0.04	0.16	0.29
Barium	0.01	0.03	0.02	0.02	0.03	<0.01	<0.01	<0.01	0.04	0.01	0.03	0.06	0.02	0.03	0.04	0.01	0.04	0.03	0.04	0.06	0.04	0.05	0.03
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	0.002	0.002	<0.002	<0.002	0.004	0.003	0.003	<0.002	0.003	<0.002
Copper	0.27	0.21	0.21	0.26	0.26	0.18	0.19	0.22	0.28	0.25	0.29	0.27	0.3	0.25	0.32	0.25	0.2	0.63	0.23	0.43	0.23	0.4	0.21
Iron	2.2	4.5	2.0	3.3	1.9	1.2	1.6	2.7	7.5	1.9	2.1	2.1	2.7	3.6	2.8	2.4	1.4	6.4	2.4	5	1.7	2.4	2.1
Lead	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	0.004	0.002	0.006	0.003	0.003	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese	0.08	0.07	0.05	0.05	0.05	0.07	0.06	0.07	0.12	0.08	0.08	0.08	0.08	0.07	0.06	0.05	0.08	0.11	0.1	0.08	0.09	0.08	0.08
Mercury	0.17	0.24	0.23	0.21	0.13	0.13	0.15	0.23	0.09	0.1	0.16	0.11	0.14	0.29	0.16	0.12	0.14	0.18	0.12	0.24	0.1	0.11	0.27
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.18	0.17	0.17	0.18	0.17	0.15	0.14	0.18	0.15	0.13	0.15	0.15	0.14	0.15	0.14	0.11	0.16	0.18	0.17	0.19	0.17	0.18	0.17
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.17	0.11	0.13	0.25	0.32	0.05	0.04	0.07	0.18	0.16	0.15	0.12	0.26	0.08	0.16	0.3	0.08	0.14	0.14	0.14	0.12	0.14	0.2
Thallium	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.07	0.07	0.07	0.07	0.06	0.04	0.02	0.03	0.03	0.03	0.08	0.08	0.1	0.08	0.07	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	4.3	4.0	3.7	5.4	4.1	2.7	2.7	3.1	3.8	2.7	7.2	3.4	3.6	3.2	6.8	3.2	3.2	6.1	2.9	6.6	3.8	4.6	2.7
Physical Properties																							
Moisture (%)	74.73	78.66	78.14	75.87	76.3	76.09	74.75	77.52	77.24	77.69	74.48	72.13	75.17	78.5	73.75	70.91	72.53	72.2	75.87	78.1	76.49	75.43	77.39
Length (cm)	55.6	60.2	59.1	61.8	63.4	46.8	50.1	52.3	51.5	54.2	54.9	52	52.1	56.7	55.1	59.6	50.7	54.7	56.3	57.4	51.6	53.5	51.0
Weight (g)	1380	1700	1520	1840	2140	1500	1580	1580	1540	1900	1940	1710	1605	2305	2010	2840	1760	2140	2120	2060	1500	1750	1620
Sex	M	M	M	M	M	F	M	F	M	F	F	M	M	F	M	F	M	M	F	M	M	M	F
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	U	U	U	U
Age (years)	12	24	25	19	11	12	11	21	13	12	13	12	13	13	22	15	16	21	18	19	13	13	18
Radionuclides																							
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Radium-226 (Bq/g)	<0.00005	<0.00006	<0.00006	<0.00006	0.00006	<0.00006	0.0002	<0.00006	0.00009	<0.00006	<0.00006	<0.00006	0.00008	<0.00005	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00005	<0.00006	<0.00008	<0.00006
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City (Prospectors Bay)																				
	Lake Whitefish																				
	2012					2013			2014					2016			2018				
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1
	LW06	LW07	LW08	LW09	LW10	LW01	LW02	LW03	LW01	LW02	LW03	LW04	LW05	LW01	LW02	LW03	LW01	LW02	LW03	LW04	LW05
Metals																					
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.08	0.03	0.09	0.05	0.1	0.17	0.18	0.22	0.23	0.06	0.07	0.05	0.07	0.04	0.12	0.05	0.08	0.16	0.05	0.04	0.05
Barium	0.01	0.02	0.01	0.01	0.01	0.02	<0.01	0.02	0.01	0.1	0.02	0.09	0.03	0.11	0.04	0.02	0.05	0.1	0.05	0.05	0.09
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Cobalt	<0.002	0.003	0.013	0.009	<0.002	0.004	0.006	0.016	0.004	0.004	0.007	0.016	0.008	0.005	0.003	0.004	0.004	0.004	0.004	0.006	0.007
Copper	0.12	0.13	0.17	0.18	0.14	0.22	0.18	0.39	0.48	0.22	0.28	0.26	0.23	0.21	0.22	0.16	0.23	0.3	0.21	0.33	0.21
Iron	1.0	2.0	1.8	1.6	1.4	2.3	1.8	2.9	4.3	1.8	2	4.4	2.4	1.9	1.5	1.9	2	2.6	2.3	2.5	1.4
Lead	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	0.003	<0.002	0.003	<0.002	0.005	0.011	0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese	0.07	0.06	0.07	0.07	0.12	0.1	0.06	0.11	0.09	0.12	0.12	0.1	0.08	0.09	0.1	0.09	0.08	0.09	0.13	0.07	0.14
Mercury	0.05	0.13	0.06	0.12	0.11	0.05	0.02	0.02	0.051	0.033	0.053	0.026	0.034	0.063	0.037	0.074	0.041	0.04	0.043	0.026	0.028
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.01	0.01	0.05	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.28	0.22	0.23	0.32	0.26	0.26	0.24	0.26	0.24	0.27	0.23	0.19	0.26	0.28	0.3	0.23	0.26	0.26	0.26	1.9	0.26
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.22	0.19	0.4	0.4	0.25	0.25	0.23	0.25	0.26	1.8	0.29	0.65	0.31	0.21	0.48	0.31	0.24	0.31	0.33	0.4	0.4
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.07	0.08	0.08	0.08	0.03	0.03	0.04	0.08	0.1	0.08	0.11	0.11	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.002	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	4.3	4.5	7.6	4.3	3.3	3.2	3.4	6.3	4	4.1	4.7	5.8	4.2	6.3	3.8	3.6	5.7	4.1	4.5	5.4	5.6
Physical Properties																					
Moisture (%)	79.31	78.4	75.72	73.83	76.89	79.25	76.91	72.22	74.04	74.06	76.04	75.15	76.82	68.43	76.07	73.75	75.53	75.03	73.1	78.38	77.34
Length (cm)	46.7	49.6	48.8	55.0	50.0	46.9	47	42.9	47.2	41.5	45.9	41.7	36.5	57.8	43.6	53.1	41.1	38.4	37.7	46.0	46.5
Weight (g)	640	980	1140	1520	1080	1480	1520	1300	1780	1090	1620	1310	750	3380	1280	2440	1010	800	810	1520	1360
Sex	M	M	F	F	F	M	M	F	M	F	M	F	M	M	M	F	F	M	M	F	M
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	U	U	U	U
Age (years)	12	29	14	17	21	23	14	11	19	10	15	10	10	18	13	32	11	5	5	13	7
Radionuclides																					
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	<0.0002	0.0006	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	0.0006	0.0005	0.0004	0.0011	0.0007	<0.0002	0.0003	<0.0002	0.0002	0.0006	0.0004	0.0005	0.001
Radium-226 (Bq/g)	<0.00006	<0.00007	<0.00005	<0.00006	<0.00008	0.00006	<0.00006	<0.00006	0.0001	<0.00006	<0.00006	<0.00007	0.0001	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

GN = gill net; LT = lake trout; LW = lake whitefish; M = male; F = female; A = adult, U = unknown.

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage (Ellis Bay)																						
	Lake Trout																						
	2011					2012					2013					2014					2016		
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	AN1-1	AN1-1	AN1-1
	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03
Metals																							
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.12	0.08	0.12	0.08	0.12	0.06	0.14	0.04	0.06	0.29	0.07	0.12	0.11	0.05	0.03	0.06	0.07	0.13	0.11	0.06	0.11	0.07	0.12
Barium	0.04	0.01	<0.01	<0.01	<0.01	0.05	0.08	0.02	0.04	0.02	<0.01	0.01	<0.01	0.22	0.04	<0.01	<0.01	0.04	0.02	0.02	0.02	0.03	0.04
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.003	0.003	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	0.003	<0.002	0.004	0.002	<0.002	0.003
Copper	0.52	0.52	0.11	0.32	0.28	0.24	0.28	0.33	0.58	0.21	0.22	0.28	0.38	0.23	0.28	0.29	0.2	0.39	0.29	0.4	0.49	0.26	0.42
Iron	4.5	3.0	1.0	2.2	2.0	1.5	2.7	3.5	5.8	1.6	1.4	2.1	2.1	2.6	2.4	4.7	1.5	3	3.8	4	2.6	2.6	4.2
Lead	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	0.004	<0.002	0.004	0.003
Manganese	0.1	0.09	0.09	0.07	0.08	0.06	0.09	0.6	0.08	0.06	0.09	0.06	0.08	0.08	0.09	0.08	0.06	0.07	0.08	0.07	0.07	0.13	0.07
Mercury	0.13	0.2	0.28	0.07	0.18	0.17	0.08	0.06	0.21	0.14	0.19	0.24	0.09	0.41	0.24	0.37	0.33	0.32	0.37	0.3	0.12	0.13	0.18
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.03	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	0.01	<0.01	0.03	<0.01	0.06	<0.01	<0.01	0.02
Selenium	0.14	0.18	0.15	0.16	0.18	0.15	0.16	0.15	0.18	0.1	0.17	0.14	0.16	0.17	0.18	0.17	0.15	0.19	0.21	0.17	0.21	0.17	0.2
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.3	0.19	0.26	0.2	0.15	0.06	0.13	0.07	0.68	0.65	0.1	0.09	0.21	0.09	0.12	0.12	0.08	0.15	0.31	0.14	0.18	0.43	0.26
Thallium	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.01	0.01	0.02	0.01	0.01	0.02
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.07	0.15	0.06	0.07	0.06	0.01	0.02	0.02	0.01	<0.01	0.03	0.08	0.06	0.04	0.05	0.08	0.08	0.08	0.09	0.09	<0.01	<0.01	0.01
Uranium	0.014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	11	3.8	2.9	3.8	3.5	2.6	3.2	2.6	10	6.3	3	2.8	3.6	3.3	3.6	4	2.5	5	5.1	6.3	3.7	5.2	6.2
Physical Properties																							
Moisture (%)	73.73	71.7	74.1	70.34	67.36	73.93	76.07	75.33	76.29	72.6	69.45	68.65	72.36	78.67	79.54	78.57	74.76	75.37	77.41	77.04	71.70	72.13	74.82
Length (cm)	49.8	48.6	53.9	48.5	55.6	62.2	69.1	53.0	60.3	63.5	55.0	56.1	55.2	55.9	55.6	58.8	56.8	51.5	52.2	59.1	56.2	49.8	56.1
Weight (g)	1490	1480	1920	1420	2480	3640	2920	1420	1760	2560	2200	1920	1720	1920	1740	2245	2200	1750	1450	2360	2120	1660	1960
Sex	M	M	F	F	F	F	M	M	M	F	M	F	M	M	M	M	M	M	M	M	M	M	M
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Age (years)	12	8	23	8	11	19	13	9	20	18	15	15	10	25	17	23	17	13	14	17	12	12	16
Radionuclides																							
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0007	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Radium-226 (Bq/g)	<0.00007	<0.00006	0.0002	0.00009	0.0001	<0.00007	<0.00007	<0.00006	<0.00005	<0.00004	0.0001	<0.00004	<0.00006	<0.00006	0.00009	<0.00006	<0.00003	<0.00003	<0.00005	<0.00006	<0.00006	<0.00006	<0.00006
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00008	<0.0001	<0.0001	<0.0001	<0.0001	<0.00007	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage (Ellis Bay)																							
	Lake Whitefish																				Northern Pike			
	2011					2012		2013					2014					2016			2012			
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	AN1-1	AN1-1	AN1-1	AN1-1	AN1-1
	LW06	LW07	LW08	LW09	LW10	LW06	LW07	LW06	LW07	LW08	LW09	LW10	LW06	LW07	LW08	LW09	LW10	LW06	LW07	LW08	NP01	NP02	NP03	NP04	NP05
Metals																									
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.38	0.24	0.36	0.31	0.17	0.37	0.24	0.14	0.31	0.34	0.17	0.48	0.25	0.26	0.33	0.03	0.05	0.24	0.09	0.07	0.09	0.15	0.09	0.12	0.1
Barium	<0.01	0.04	0.06	<0.01	<0.01	0.03	0.02	0.04	0.05	0.05	0.02	0.02	0.09	0.02	0.04	0.02	<0.01	0.02	0.01	0.03	0.02	0.02	0.02	0.02	<0.01
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	<0.002	<0.002	0.007	0.002	0.002	<0.002	0.003	0.004	0.005	0.002	<0.002	<0.002	0.006	0.004	0.007	0.008	0.003	0.006	0.004	0.004	0.003	0.003	<0.002	<0.002	0.003
Copper	0.12	0.15	0.38	0.11	0.15	0.18	0.18	0.27	0.14	0.13	0.18	0.11	0.36	0.23	0.19	0.21	0.22	0.26	0.24	0.18	0.39	0.45	0.16	0.17	0.28
Iron	1.5	1.2	3.6	1.1	2.2	1.8	3.9	2.9	2.5	3.6	1.6	2.2	4.5	2.3	3.8	2.4	2.9	2.8	2.6	1.8	2.8	3.2	1.3	0.6	3.2
Lead	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	0.008	0.005	0.008	0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese	0.12	0.19	0.13	0.12	0.1	0.11	0.11	0.17	0.32	0.14	0.1	0.13	0.16	0.07	0.1	0.07	0.08	0.11	0.09	0.07	0.08	0.09	0.08	0.08	0.08
Mercury	0.07	0.06	0.03	0.03	0.02	0.05	0.06	0.17	0.07	0.04	0.02	0.08	0.051	0.06	0.06	0.044	0.058	0.037	0.043	0.036	0.19	0.13	0.08	0.17	0.24
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	0.03	0.08	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.29	0.25	0.25	0.22	0.25	0.31	0.25	0.27	0.26	0.24	0.29	0.25	0.25	0.23	0.27	0.2	0.24	0.28	0.27	0.25	0.2	0.17	0.22	0.18	0.19
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.15	0.74	1	0.18	0.24	0.15	0.23	0.51	0.64	0.43	0.2	0.25	0.92	0.24	0.28	0.71	0.21	0.24	0.22	0.27	0.16	0.2	0.18	0.11	0.14
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.07	0.07	0.06	0.06	0.07	0.02	<0.01	0.04	0.03	0.04	0.04	0.05	0.11	0.11	0.16	0.1	0.12	<0.01	<0.01	<0.01	0.02	0.02	0.02	0.01	0.01
Uranium	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.003	0.002	<0.001	0.003	0.002	0.002	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	3	2.8	4.4	3.3	3.1	2.8	3.2	5.5	3.3	2.5	3.9	3.3	4.9	3.6	6.4	3.8	4	3.9	3.3	5.1	4.2	9.8	5.4	4.9	6.5
Physical Properties																									
Moisture (%)	74.81	78.24	73.86	77.91	76.16	74.12	74.97	77.14	77.18	76.99	75.03	77.45	75.83	74.78	76.26	77.59	74.18	72.23	74.17	76.38	76.89	77.35	76.06	77.29	79.91
Length (cm)	32.0	43.2	40.0	39.5	38.6	49.1	48.5	40.2	44.8	37.9	37.4	44.6	41.3	44	47.6	38.2	43.5	45.4	45.0	49.6	76.0	67.7	67.8	72.3	89.5
Weight (g)	1250	1260	1380	1120	880	1180	1120	840	1120	820	720	1380	980	1280	1460	880	1400	1560	1540	1880	2800	2760	1660	2760	4860
Sex	M	M	F	F	F	M	M	F	F	F	M	M	F	F	F	F	F	M	M	F	F	M	F	F	F
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Age (years)	31	27	22	18	11	30	33	30	25	25	9	28	14	14	14	8	14	15	15	11	6	9	5	7	16
Radionuclides																									
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	0.0002	0.0007	0.0012	<0.0002	0.0009	0.0002	0.0002	0.0004	0.0008	0.0003	0.0003
Radium-226 (Bq/g)	<0.00006	<0.00006	<0.0002	<0.00006	0.0003	<0.00007	<0.00006	0.0001	<0.00006	<0.00006	<0.00008	0.0002	<0.00006	<0.00007	<0.00006	<0.00005	<0.00005	<0.00006	<0.00006	<0.00006	<0.00006	<0.00007	<0.00008	<0.00006	0.00008
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0003	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.003

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

GN = gill net, AN = angling; LT = lake trout; LW = lake whitefish, NP = northern pike; M = male; F = female; A = adult.

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac (Fond du Lac River)																											
	Lake Trout																											
	2011					2012					2013					2014					2016			2018				
	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT04	GN1-1 LT05	GN1-1 LT06	GN1-1 LT07	GN1-1 LT08	GN1-1 LT09	GN1-1 LT10	GN1-1 LT06	GN1-1 LT07	GN1-1 LT08	GN1-1 LT09	GN1-1 LT10	GN1-1 LT06	GN1-1 LT07	GN1-1 LT08	GN1-1 LT09	GN1-1 LT10	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT04	GN1-1 LT05
Metals																												
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.17	0.08	0.10	0.05	0.12	0.05	0.06	0.1	0.14	0.08	0.05	0.04	0.08	0.11	0.06	0.07	0.04	0.11	0.13	0.05	0.05	0.05	0.07	0.16	0.1	0.12	0.21	0.05
Barium	<0.01	0.02	0.01	0.66	0.01	0.02	0.02	0.02	<0.01	<0.01	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.01	0.01	0.01	0.04	0.03	0.06	0.07	0.61	0.36	0.22	0.25	0.44
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	0.003	0.002	0.003	<0.002	0.003	0.012	<0.002	<0.002	<0.002	0.003	<0.002
Copper	0.17	0.31	0.4	0.19	0.4	0.31	0.26	0.23	0.28	0.21	0.36	0.25	0.24	0.43	0.24	0.2	0.17	0.4	0.22	0.36	0.22	0.33	0.33	0.41	0.34	0.45	0.35	0.33
Iron	2.1	2.1	3.2	1.8	2.8	3.4	1.8	1.4	4.0	1.4	2.2	1.3	1.6	2.1	1.3	2.6	2.3	3.3	2.8	3.6	3	2.2	5	4	3	4.4	3.5	5
Lead	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	0.008	<0.002	<0.002	0.003	<0.002	0.002	0.004	0.007	0.002	0.002	0.003	<0.002	<0.002	<0.002	0.005	<0.002
Manganese	0.09	0.08	0.09	0.1	0.08	0.07	0.04	0.07	0.06	0.08	0.05	0.06	0.07	0.07	0.05	0.09	0.04	0.12	0.14	0.1	0.07	0.08	0.08	0.07	0.09	0.1	0.08	0.09
Mercury	0.26	0.30	0.24	0.1	0.23	0.17	0.14	0.14	0.26	0.31	0.09	0.11	0.09	0.05	0.04	0.83	0.46	0.49	0.74	0.44	0.19	0.085	0.25	0.15	0.19	0.11	0.16	0.18
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.02	<0.01	<0.01	0.02	<0.01	0.02	0.02	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.17	0.12	0.16	0.16	0.13	0.16	0.14	0.18	0.15	0.13	0.18	0.14	0.14	0.16	0.16	0.13	0.07	0.16	0.09	0.12	0.16	0.18	0.16	0.17	0.14	0.16	0.14	0.17
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.11	0.16	0.18	0.20	0.18	0.12	0.09	0.21	0.16	0.15	0.1	0.09	0.11	0.04	0.08	0.19	0.05	0.13	0.15	0.13	0.08	0.14	0.09	0.57	0.33	0.28	0.47	0.51
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.01	0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01	0.01	0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.09	0.09	0.1	0.08	0.08	0.07	0.08	0.08	0.08	0.01	<0.01	0.01	0.01	<0.01	0.09	0.04	0.1	0.08	0.09	<0.01	<0.01	0.01	0.01	0.01	0.01	<0.01	0.01
Uranium	<0.001	0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	3	3.7	4.2	3.2	3.9	4.2	3.4	3.8	4.4	3.4	4.2	3.3	2.9	3.3	2.8	3.8	1.8	3.6	6.3	3.8	6.1	3	3.6	5.6	4.3	4.1	4.9	4.3
Physical Properties																												
Moisture (%)	76.91	76.77	74.35	75.75	71.88	77.01	75.5	69.03	77.64	68.66	74.35	74.57	75.49	72.33	73.93	81.13	73.27	76.95	79.64	74.4	77.54	71.06	72.59	73.29	74.63	77.43	64.88	76.64
Length (cm)	49.6	46.4	53.9	49.1	49.2	60.5	55.6	61.2	63.4	63.5	48.5	52.7	56.8	51.5	50.1	54.5	57.1	60.2	55.7	58.5	58.9	57.6	54	55.9	58.2	51.1	59.3	58.0
Weight (g)	1430	1310	2020	1230	1530	1680	1420	1940	1840	2280	1520	1940	2200	1640	1620	1405	2205	2860	1670	2410	2160	2060	1740	1790	1950	1150	2300	2190
Sex	M	F	F	F	M	M	M	F	F	F	M	M	M	M	M	F	M	F	F	F	F	F	M	M	F	M	F	M
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	A	U	U	U
Age (years)	12	10	15	9	8	17	11	15	-	14	9	11	12	9	8	29	20	16	21	13	18	11	21	15	17	11	15	21
Radionuclides																												
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Radium-226 (Bq/g)	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00005	<0.00006	<0.00005	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00005	<0.00006	<0.00004	0.00007	<0.00005	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00005	<0.00006	<0.00007
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00008	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac (Fond du Lac River)																											
	Lake Whitefish																											
	2011					2012					2013					2014					2016			2018				
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1
	LW06	LW07	LW08	LW09	LW10	LW01	LW02	LW03	LW04	LW05	LW01	LW02	LW03	LW04	LW05	LW01	LW02	LW03	LW04	LW05	LW04	LW05	LW06	LW01	LW02	LW03	LW04	LW05
Metals																												
Aluminum	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.40	0.19	0.20	0.52	0.29	0.02	0.22	0.22	0.18	0.19	0.04	0.04	0.11	0.08	0.03	0.16	0.02	0.04	0.28	0.04	0.03	0.29	0.26	0.16	0.1	0.12	0.21	0.05
Barium	0.06	0.04	0.02	<0.01	0.03	0.02	0.04	0.01	0.07	0.02	0.01	<0.01	0.02	0.03	0.01	0.14	<0.01	0.04	0.06	0.05	0.06	0.21	0.01	0.61	0.36	0.22	0.25	0.44
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	0.002	<0.002	<0.002	<0.002	0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.003	0.005	0.003	0.003	0.015	0.003	0.002	0.003	0.003	<0.002	0.004	0.014	0.003	0.004	<0.002	0.007	0.006	0.02	0.003	0.012	0.016	0.011	0.004	<0.002	<0.002	<0.002	0.003	<0.002
Copper	0.14	0.18	0.12	0.22	0.28	0.27	0.16	0.16	0.15	0.13	0.22	0.16	0.15	0.34	0.13	0.13	0.14	0.19	0.16	0.17	0.19	0.1	0.26	0.41	0.34	0.45	0.35	0.33
Iron	1.7	2.9	1.3	2.6	6.0	2.0	1.0	1.4	1.4	1.3	2.1	3.1	1.3	4.4	1.1	1.8	1.4	3.1	1.8	2	1.8	1.9	2.6	4	3	4.4	3.5	5
Lead	<0.002	0.002	<0.002	<0.002	<0.002	0.003	0.004	0.003	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	0.008	<0.002	<0.002	0.004	0.005	<0.002	<0.002	<0.002	<0.002	0.005	<0.002
Manganese	0.17	0.13	0.07	0.14	0.08	0.05	0.08	0.14	0.19	0.08	0.08	0.09	0.06	0.1	0.07	0.21	0.07	0.19	0.1	0.1	0.08	0.22	0.09	0.07	0.09	0.1	0.08	0.09
Mercury	0.14	0.12	0.14	0.18	0.18	0.02	0.05	0.02	0.02	0.03	0.03	0.02	0.02	0.03	0.04	0.086	0.14	0.051	0.081	0.059	0.079	0.12	0.065	0.15	0.19	0.11	0.16	0.18
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.04	<0.01	0.1	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.25	0.15	0.22	0.20	0.29	0.17	0.28	0.2	0.16	0.23	0.22	0.13	0.27	0.21	0.18	0.15	0.11	0.12	0.24	0.17	0.34	0.24	0.16	0.17	0.14	0.16	0.14	0.17
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	1.00	0.88	0.55	0.15	0.36	0.51	0.24	0.27	1.6	0.2	0.19	0.26	0.19	0.61	0.15	2.2	0.33	1.2	0.68	0.33	0.21	1.4	0.31	0.57	0.33	0.28	0.47	0.51
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.08	0.09	0.07	0.1	0.07	0.08	0.07	0.08	0.07	0.02	0.01	0.02	0.02	0.02	0.1	0.09	0.1	0.07	0.09	0.02	0.01	<0.01	0.01	0.01	0.01	<0.01	0.01
Uranium	0.002	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	3	4.2	3.2	3	4.2	6.2	3.8	3.5	4	3.4	3.8	4	3.9	5.4	3.5	3.3	4.6	4.4	4.2	3.6	5	4	3.8	5.6	4.3	4.1	4.9	4.3
Physical Properties																												
Moisture (%)	73.98	78.34	76.86	75.56	75.69	75.73	71.01	74.93	73.77	76.15	75.67	78.03	73.18	76.28	78.04	78.86	77.96	76.51	77.23	76.57	74.6	81.27	73.88	73.29	74.63	77.43	64.88	76.64
Length (cm)	38.5	44.9	36.4	41.1	42.2	44.4	43.8	46.6	42.8	36.5	46.5	43.4	40.5	40.1	42.3	42.5	45	41.3	41.9	39.4	47.0	38.6	47.4	38.0	40.6	39.3	37.0	38.3
Weight (g)	900	1340	805	1100	1120	940	1040	1100	860	520	1420	1120	980	820	1000	965	1240	910	965	875	1540	840	1360	840	1110	850	800	760
Sex	M	M	F	F	M	M	F	M	F	M	F	M	F	M	M	F	F	M	F	M	F	M	F	M	M	M	M	M
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	U	U	U	U
Age (years)	30	26	31	33	38	7	27	20	15	27	14	12	13	13	8	19	9	15	17	11	11	33	16	25	30	23	37	26
Radionuclides																												
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.004	<0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.001	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Radium-226 (Bq/g)	<0.00008	<0.00006	<0.00006	<0.00006	<0.00007	<0.00007	<0.00008	<0.00009	<0.001	0.002	<0.00009	0.0001	<0.00006	<0.00006	<0.00006	0.00008	<0.00006	<0.00007	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00005	<0.00006	<0.00007
Thorium-230 (Bq/g)	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.002	<0.002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

GN = gill net; LT = lake trout; LW = lake whitefish; M = male; F = female; A = adult, U = unknown, - = data not available.

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Stony Rapids (Fond du Lac River)																											
	Lake Trout																											
	2011					2012				2013					2014					2016			2018				
	GN1-1	GN1-1	GN1-1	GN1-1	SP01-01	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1
	LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT04	LT05	LT01	LT02	LT03	LT01	LT02	LT03	LT04	LT05
Metals																												
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.02	0.06	0.05	0.06	0.09	0.07	0.18	0.06	0.07	0.06	0.18	0.25	0.09	0.08	0.14	0.11	0.04	0.07	0.04	0.1	0.12	0.08	0.11	0.14	0.12	0.08	0.18
Barium	<0.01	<0.01	0.01	<0.01	0.01	0.01	0.01	0.02	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.1	0.09	<0.01	0.07	0.03	0.02	0.05	0.03	0.11	0.15	0.06	0.1	0.19
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Cobalt	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.006	0.005	<0.002	0.004	0.003	0.004	0.004	0.003	<0.002	<0.002	<0.002	<0.002	<0.002
Copper	0.28	0.2	0.22	0.22	0.17	0.21	0.78	0.2	0.36	0.39	0.45	0.32	0.32	0.28	0.43	0.93	0.34	0.3	0.3	0.43	0.73	0.61	0.28	0.41	0.4	0.36	0.33
Iron	1.9	1.7	1.5	1.6	1.2	2.3	8.6	2.6	4.0	3.6	3.3	6.1	3.1	2.7	10	8.9	3	2.3	2.1	4	6.1	4.2	3.2	5	4.4	4.4	4.3
Lead	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.011	0.003	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002
Manganese	0.09	0.09	0.08	0.12	0.06	0.09	0.08	0.1	0.07	0.11	0.07	0.06	0.06	0.07	0.13	0.09	0.06	0.07	0.06	0.05	0.05	0.08	0.08	0.07	0.06	0.08	0.06
Mercury	0.27	0.46	0.57	0.38	0.49	0.12	0.19	0.18	0.27	0.17	0.12	0.13	0.3	0.16	0.11	0.24	0.23	0.21	0.19	0.14	0.2	0.16	0.1	0.11	0.1	0.11	0.099
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.06	<0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.10	0.11	0.09	0.14	0.16	0.15	0.19	0.17	0.19	0.16	0.19	0.15	0.18	0.15	0.13	0.15	0.16	0.15	0.14	0.18	0.16	0.16	0.15	0.14	0.17	0.18	0.14
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.10	0.09	0.21	0.23	0.09	0.13	0.14	0.14	0.14	0.08	0.14	0.30	0.14	0.10	0.26	0.15	0.2	0.34	0.28	0.22	0.25	0.17	0.3	0.24	0.21	0.24	0.14
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01	0.01	0.01	0.01	<0.01	0.02	0.01	<0.01	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.07	0.08	0.08	0.08	0.07	0.08	0.08	0.08	0.04	0.03	0.04	0.03	0.03	0.14	0.09	0.09	0.09	0.08	0.02	<0.01	0.01	0.02	0.02	0.01	0.02	0.05
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	4.7	3.1	3.4	3.3	2.5	3.8	5.4	3.6	3.8	3.1	4	4	3.8	3.1	3.3	5.2	4.3	4.3	3	3.5	3.8	3.2	5.1	4.4	4.9	4.3	4.5
Physical Properties																												
Moisture (%)	77.77	77.9	77.43	76.77	73.64	78.8	76.77	78.11	78.05	73.56	74.02	75.29	75.06	73.99	73.76	75.09	76.3	76.67	75.55	70.53	75.35	72.93	77.9	76.77	74.99	78.64	74.12
Length (cm)	54.9	55.9	57.2	64.9	69.6	57.2	62.8	61.0	59.8	52.0	52.5	55.0	57.0	51.2	49.5	51.9	44.7	54	48.7	55	55.7	52.1	47.6	53.9	56.2	52.5	61.0
Weight (g)	1750	2060	2180	2840	3720	1520	2060	1840	1820	1720	1680	1940	2060	1600	1580	1640	1100	1670	1440	2080	1960	1920	1130	1640	1680	1660	2480
Sex	F	F	F	F	M	M	M	M	M	F	M	F	M	F	F	M	M	M	F	F	F	F	F	F	M	F	F
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	U	U	U	U
Age (years)	10	15	16	17	15	14	22	21	22	12	12	11	16	13	11	14	12	12	11	15	11	15	13	13	13	12	11
Radionuclides																												
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002
Radium-226 (Bq/g)	<0.00007	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00007	<0.00006	<0.00008	<0.00006	0.0001	<0.00006	<0.00006	<0.00008	<0.00006	<0.00007	<0.00006	<0.00005	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00005
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Stony Rapids (Fond du Lac River)																											
	Lake Whitefish																											
	2011					2012					2013					2014					2016			2018				
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1
	LW06	LW07	LW08	LW09	LW10	LW01	LW02	LW03	LW04	LW05	LW06	LW07	LW08	LW09	LW10	LW06	LW07	LW08	LW09	LW10	LW04	LW05	LW06	LW01	LW02	LW03	LW04	LW05
Metals																												
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.06	0.03	0.03	0.07	0.02	0.02	0.06	0.05	0.03	0.04	0.03	0.02	0.04	0.03	0.03	0.01	0.01	0.01	0.02	0.09	0.02	0.06	0.04	0.14	0.13	0.17	0.1	0.08
Barium	0.01	0.01	0.09	<0.01	0.02	0.01	0.05	0.01	0.01	0.02	<0.01	0.02	<0.01	<0.01	0.02	0.07	<0.01	0.08	0.03	0.04	<0.01	0.04	0.05	0.03	0.22	0.07	0.14	0.04
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.005	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.005	0.009	0.012	0.004	0.008	<0.002	0.009	0.005	0.007	0.003	0.004	0.004	0.006	0.004	0.005	0.003	0.005	0.003	0.004	0.008	0.012	0.023	0.007	0.009	0.014	0.003	0.006	<0.002
Copper	0.36	0.15	0.14	0.26	0.19	0.24	0.14	0.3	0.14	0.11	0.31	0.15	0.17	0.23	0.25	0.19	0.2	0.25	0.23	0.2	0.17	0.11	0.2	0.18	0.26	0.24	0.24	0.32
Iron	3.5	2.0	2.0	2.2	1.7	1.3	1.4	4.2	1.9	1.1	4.7	1.9	1.2	2.2	2.4	1.9	1.8	1.6	2.2	2	1.9	1.7	1.8	3	3.2	3.2	4.3	3.5
Lead	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	0.004	0.004	0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Manganese	0.09	0.1	0.18	0.08	0.1	0.08	0.22	0.08	0.1	0.1	0.09	0.12	0.08	0.12	0.19	0.09	0.09	0.1	0.18	0.09	0.12	0.08	0.08	0.1	0.11	0.11	0.11	0.08
Mercury	0.23	0.06	0.15	0.37	0.06	0.05	0.05	0.14	0.06	0.13	0.09	0.04	0.04	0.07	0.06	0.13	0.098	0.08	0.1	0.056	0.036	0.048	0.039	0.03	0.032	0.052	0.073	0.1
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.05	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.02	0.04	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.13	0.10	0.15	0.27	0.12	0.18	0.12	0.14	0.18	0.13	0.14	0.13	0.15	0.12	0.12	0.11	0.08	0.11	0.12	0.16	0.12	0.17	0.1	0.08	0.16	0.19	0.22	0.21
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.23	0.26	2.00	0.12	0.24	0.28	1.8	0.3	0.23	0.24	0.27	0.22	0.17	0.22	0.25	0.36	0.1	0.18	0.3	0.29	0.5	0.5	0.34	0.28	0.45	0.4	0.46	0.29
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.07	0.08	0.08	0.07	0.09	0.06	0.07	0.07	0.06	0.06	0.03	0.03	0.03	0.03	0.03	0.09	0.06	0.09	0.09	0.08	<0.01	<0.01	0.01	0.01	0.02	0.01	0.02	0.03
Uranium	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	4.0	4.0	4.1	8.3	4.7	6.1	7.0	3.6	3.4	3.4	4.0	4.6	3.4	4.9	4.7	3.8	2.8	3.6	4.2	3.9	4.5	4.9	4.4	4.6	4.6	5.6	3.5	4.5
Physical Properties																												
Moisture (%)	76.78	78.07	78.94	77.19	75.5	74.99	80.97	76.82	80.22	79.53	76.95	78.07	73.93	75.51	76.73	74.28	79.2	76.81	75.18	76.08	76.94	75.08	76.91	79.48	75.79	73.45	77.61	78.27
Length (cm)	47.8	44.8	48.1	51.4	42.5	48.0	47.0	50.6	50.8	49.5	44.5	42.2	43.3	39.9	40.5	44	43.2	44.2	41.8	49.6	42.0	47.4	41.0	41.4	48.7	44.0	40.6	48.2
Weight (g)	1490	1640	1730	2060	1410	1420	980	1680	1360	1520	1180	940	1100	1000	960	1300	1120	1120	1130	1560	1160	1520	1040	1070	1420	1080	850	1420
Sex	F	F	F	F	M	F	F	M	F	F	M	F	F	M	M	F	F	F	M	F	F	F	F	F	F	M	M	F
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	U	U	U	U
Age (years)	27	14	13	29	8	9	14	18	15	18	18	8	11	11	10	11	9	9	8	11	8	12	12	10	11	13	13	10
Radionuclides																												
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002
Radium-226 (Bq/g)	<0.00008	0.0001	0.00006	0.0001	<0.00006	<0.00005	0.001	<0.00006	<0.00007	<0.00005	<0.00006	<0.00006	0.0001	0.00009	<0.00006	<0.00007	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006
Thorium-230 (Bq/g)	<0.0002	<0.00009	<0.00008	<0.0002	<0.0001	<0.0001	<0.002	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

GN = gill net; LT = lake trout; LW = lake whitefish; M = male; F = female; A = adult, U = unknown.

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Wollaston Lake/Hatchet Lake (Welcome Bay, Wollaston Lake)																												
	Lake Trout																												
	2011					2012					2013					2014					2016			2018				
	GN1-1	GN1-1	GN1-1	SP01-01	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	SP01-01	GN1-1
	LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT10	LT07	LT08	LT09	LT10	LT11	LT07	LT08	LT09	LT10	LT11	LT01	LT02	LT03	LT01	LT02	LT03	LT04	LT05
Metals																												
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.06	0.03	0.04	0.02	0.04	0.05	0.04	0.04	0.08	0.02	0.02	0.04	0.03	0.06	0.02	0.01	0.03	0.02	0.03	0.05	0.03	0.02	0.09	0.08	0.09	0.04	0.12	0.06
Barium	0.02	0.02	0.02	0.02	<0.01	0.02	0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	0.02	0.02	0.03	0.02	0.01	0.03	<0.01	<0.01	<0.01	0.13	0.14	0.09	0.03	0.01
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	0.006	0.002	0.004	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002
Copper	0.62	0.48	0.53	0.31	0.3	0.52	0.39	0.4	0.69	0.24	0.35	0.38	0.34	0.3	0.32	0.44	0.25	0.29	0.26	0.29	0.32	0.33	0.2	0.62	0.31	0.32	0.29	0.56
Iron	6.0	4.0	2.6	1.8	1.9	3.1	2.8	2.2	3.8	1.6	2.3	3	2.6	2.2	2.1	2	1.9	1.7	1.6	2.7	3.2	3.4	1.4	4.6	2.3	3.4	4.7	2.7
Lead	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.005	-0.002	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.004
Manganese	0.1	0.1	0.07	0.06	0.07	0.08	0.06	0.08	0.07	0.05	0.08	0.09	0.1	0.1	0.09	0.08	0.11	0.06	0.1	0.09	0.11	0.09	0.1	0.09	0.1	0.08	0.11	0.12
Mercury	0.15	0.16	0.16	0.20	0.12	0.24	0.15	0.13	0.16	0.14	0.14	0.1	0.09	0.1	0.18	0.18	0.26	0.2	0.19	0.38	0.16	0.22	0.22	0.22	0.14	0.14	0.11	0.16
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.17	0.28	0.19	0.18	0.19	0.27	0.21	0.22	0.22	0.21	0.21	0.2	0.2	0.18	0.2	0.19	0.18	0.2	0.21	0.16	0.21	0.24	0.24	0.17	0.19	0.14	0.2	0.29
Silver	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.09	0.22	0.09	0.15	0.05	0.19	0.09	0.07	0.11	0.03	0.19	0.1	0.05	0.04	0.05	0.12	0.24	0.08	0.04	0.16	0.06	0.03	0.02	0.24	0.3	0.36	0.1	0.14
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.09	0.09	0.09	0.09	0.07	0.07	0.07	0.07	0.08	0.07	0.03	0.03	0.03	0.07	0.04	0.08	0.08	0.07	0.08	0.08	0.01	<0.01	0.01	0.02	0.01	0.01	<0.01	0.02
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	-0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	5.5	6.6	3.9	3.1	3.3	5.8	3.6	3.8	4.8	3.1	5.7	4.2	3.8	4.8	3.7	3.6	3	2.5	2.6	4.5	4	2.7	2.4	6.2	5.4	5	4.3	3.7
Physical Properties																												
Moisture (%)	78.93	75.5	76.46	75.65	75.48	75.41	73.15	73.02	79.09	75.73	76.78	72.75	72.82	71.52	74.12	78.37	75.48	75.05	77.38	74.92	75.2	77.38	77.09	76.68	75.09	76.32	76.31	76.97
Length (cm)	51.5	46.3	46.8	47.9	46.6	55.6	50.5	50.8	50.5	52.0	45.3	46.5	44.1	45.4	48.5	48.4	49.8	52.2	50.6	55.9	48.0	52.0	52.4	58.0	47.0	53.4	54.1	51.0
Weight (g)	1730	1220	1440	1410	1430	1760	1420	1360	1400	1520	1200	1340	1060	1060	1400	1580	1610	1850	1780	2020	1600	1800	1980	2360	1520	1860	1840	1900
Sex	F	M	M	F	M	M	M	M	M	M	M	M	F	F	F	M	F	M	M	F	F	F	F	F	M	F	F	F
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	A	U	U
Age (years)	7	7	7	8	6	6	7	7	9	7	8	7	8	8	8	8	9	9	9	12	11	9	11	13	12	12	10	9
Radionuclides																												
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Radium-226 (Bq/g)	<0.00006	<0.00006	<0.00006	0.0003	0.00009	<0.00006	<0.00006	<0.00005	<0.00007	<0.00005	0.0002	0.00007	<0.00006	<0.00006	0.00008	-0.00004	<0.00006	<0.00005	<0.00005	<0.00005	<0.00006	<0.00006	<0.00005	<0.00007	<0.00006	<0.00006	<0.00006	<0.00006
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-0.00008	<0.0001	<0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001

APPENDIX C, TABLE 2

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2018.

Chemical[1]	Wollaston Lake/Hatchet Lake (Welcome Bay, Wollaston Lake)																											
	Lake Whitefish																											
	2011					2012					2013					2014					2016			2018				
	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	GN1-1	SP01-01	GN1-1
	LW06	LW07	LW08	LW09	LW10	LW01	LW02	LW03	LW04	LW05	LW01	LW02	LW03	LW05	LW06	LW01	LW02	LW03	LW05	LW06	LW04	LW05	LW06	LW01	LW02	LW03	LW04	LW05
Metals																												
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.24	0.13	0.17	0.09	0.18	0.19	0.12	0.17	0.16	0.13	0.15	0.18	0.17	0.09	0.14	0.14	0.15	0.11	0.11	0.06	0.13	0.18	0.03	0.13	0.08	0.11	0.16	0.08
Barium	0.11	0.01	0.01	0.02	0.02	0.02	0.02	0.04	0.02	0.02	0.02	0.01	0.12	0.05	0.03	0.02	0.02	0.04	0.08	0.02	<0.01	<0.01	<0.01	0.26	0.29	0.28	0.23	0.16
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	0.006	0.003
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	<0.002	<0.002	<0.002	0.005	<0.002	<0.002	<0.002	0.002	<0.002	0.003	<0.002	<0.002	<0.002	0.002	<0.002	0.004	0.002	0.005	<0.002	0.002	0.003	0.004	0.003	0.004	0.004	0.002	0.004	0.003
Copper	0.26	0.16	0.18	0.12	0.14	0.12	0.18	0.13	0.14	0.21	0.13	0.16	0.16	0.14	0.13	0.17	0.17	0.14	0.14	0.14	0.15	0.45	0.19	0.27	0.29	0.22	0.26	0.17
Iron	2.2	1.3	1.5	3.1	1.4	1.1	1.0	1.5	1.0	3.0	1.8	1.7	2.5	3.0	1.7	1.7	1.5	2	2.9	1.6	2.9	5.9	2.5	3.3	5.5	4.2	5.7	2.2
Lead	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	0.002	0.004	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.007	0.004	0.008	0.004	0.002
Manganese	0.15	0.09	0.09	0.12	0.1	0.09	0.07	0.14	0.1	0.13	0.11	0.09	0.1	0.25	0.11	0.12	0.1	0.11	0.24	0.1	0.12	0.11	0.1	0.29	0.09	0.11	0.14	0.13
Mercury	0.06	0.05	0.05	0.05	0.08	0.03	0.02	0.07	0.03	0.05	0.02	0.02	0.06	0.07	0.03	0.086	0.094	0.11	0.07	0.082	0.063	0.059	0.12	0.061	0.086	0.093	0.08	0.095
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01	0.01	0.02	0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.02	<0.01
Selenium	0.39	0.41	0.34	0.38	0.38	0.5	0.53	0.38	0.68	0.51	0.31	0.34	0.32	0.41	0.4	0.44	0.34	0.36	0.39	0.36	1	0.41	0.24	0.38	0.45	0.45	0.4	0.44
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.47	0.08	0.11	0.24	0.14	0.11	0.13	0.25	0.15	0.18	0.16	0.12	0.14	0.62	0.21	0.15	0.15	0.16	0.54	0.11	0.1	0.09	0.14	1.1	0.2	0.28	0.41	0.38
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.07	0.08	0.08	0.11	0.08	0.07	0.07	0.07	0.07	0.07	0.04	0.04	0.03	0.03	0.04	0.1	0.07	0.08	0.09	0.08	0.02	0.01	0.01	0.02	0.02	0.03	0.02	<0.01
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.002	<0.001	0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	5.1	3.0	3.8	4.7	4.3	3.7	4.5	3.2	4.5	4.0	3.7	3.7	5.5	3.3	3.6	4.9	3.3	4.1	2.8	2.9	3.5	3.6	7.7	3.9	7.6	4.6	5.8	3.2
Physical Properties																												
Moisture (%)	73.6	75.29	75.27	76.01	73.6	73.9	70.19	74.68	71.83	76.61	73.91	73.39	75.49	79.53	78.4	71.26	72.78	76.4	76.45	79.18	77.36	76.23	77.69	79.62	80.94	81.17	82.01	79.00
Length (cm)	36.5	38.0	40.6	36.9	39.2	47.9	43.3	46.2	44.4	43.6	36.2	37.4	37.5	39.5	40.1	43.4	37.9	42.4	38.6	41.9	38.7	40.5	39.7	42.8	42.0	41.0	44.2	44.0
Weight (g)	780	820	940	810	825	1380	880	1060	860	840	620	620	640	700	720	1230	850	930	950	1010	700	920	1020	880	820	910	940	980
Sex	M	M	M	M	F	M	F	F	F	M	M	F	F	F	M	M	F	M	F	M	M	M	M	F	F	M	M	M
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	U	U	U	U	U
Age (years)	16	16	14	12	17	19	11	21	12	18	12	12	15	13	18	12	13	18	13	10	17	14	9	17	22	25	27	22
Radionuclides																												
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.004	<0.001	<0.004	<0.004	0.0003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.0003	0.0004	<0.0002	0.0002	0.0004	<0.0002	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0002	<0.0002	0.0002	0.0006	0.0005	<0.0002	0.0004	0.0002	0.0003	0.0008	<0.0002	0.0002	0.0008	0.0004	0.0008	0.0005	0.0008
Radium-226 (Bq/g)	<0.00006	<0.00006	<0.00008	<0.00006	<0.00006	<0.00006	0.001	<0.00005	0.002	0.002	<0.001	0.0001	<0.0001	0.0001	0.0001	<0.00006	<0.00006	<0.00006	<0.00006	0.0001	<0.00006	<0.00006	<0.00006	<0.00005	<0.00006	<0.00005	<0.00006	<0.00006
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.002	<0.0001	<0.002	<0.002	<0.00002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

GN = gill net; LT = lake trout; LW = lake whitefish; M = male; F = female; A = adult, U = Unknown.

APPENDIX C, TABLE 3

Detailed blueberry chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Black Lake																									
	2011					2012					2013					2014					2015			2016		
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	1	2	3
Metals																										
Aluminum	6	8.6	7.9	8.6	6	13	6	7.1	7.9	7.7	11	7.1	11	8.9	7.8	19	16	12	12	12	45	19	5.7	6.8	13	7.7
Antimony	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	12	15	13	11	15	13	14	17	15	15	11	12	14	14	7	21	18	24	22	24	14	15	12	16	18	12
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron	6	5	5	3	5	6	8	5	5	7	8	4	7	5	13	4	4	4	4	4	4	4	6	5	4	3
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.05	0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.01	0.01	0.01	0.03	0.02	<0.01	0.02	0.02	0.01
Copper	3.3	3.2	2.5	2.6	3.1	2.8	3.8	3.5	3.4	3.8	3.2	1.8	1.8	1.8	1.6	3.7	3.6	4	3.6	4	3.5	3.4	3.4	2.7	3.6	2.6
Iron	8.4	11	8.6	11	10	20	10	8.1	8.8	9.8	10	6	8	8	5	31	21	18	18	17	51	22	10	11	16	12
Lead	0.07	0.02	0.02	0.07	<0.01	0.03	<0.01	<0.01	0.02	<0.01	0.02	0.02	<0.01	0.02	<0.01	0.03	0.03	0.02	0.02	<0.01	0.02	0.01	<0.01	0.13	0.02	<0.01
Manganese	160	130	120	180	220	100	100	170	170	120	160	220	200	250	160	220	200	89	98	83	300	390	200	150	139	182
Molybdenum	0.2	0.2	0.1	0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.2	0.1	<0.1	<0.1	<0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.2
Nickel	0.66	0.68	0.54	0.56	0.38	0.32	0.56	0.58	0.66	0.54	0.58	0.38	0.41	0.37	0.34	0.47	0.55	0.78	0.59	0.72	0.69	0.6	0.28	0.49	0.68	0.46
Selenium	<0.05	0.08	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Strontium	2.1	4.4	3.5	2.1	1.2	1.1	1.7	1.7	2	1.8	1.7	1.8	3	2	2	3.7	3.6	11	9.8	9.9	1.5	1.6	0.9	1.5	3	1.2
Thallium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tin	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium	<0.05	0.08	0.06	0.1	0.15	0.1	0.05	0.05	0.08	<0.05	0.11	<0.05	0.12	0.07	0.06	0.69	0.52	0.23	0.22	0.34	3.4	0.98	0.2	0.1	0.29	0.1
Uranium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.03	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	4.8	6.1	5	3.9	5.5	3.9	6.1	6	5.3	6.4	5.8	6.2	6.7	7	3.6	8.8	7.1	6.2	5.7	5.7	5.6	5.1	4.8	6.4	6.7	5.8
Physical Properties																										
Moisture (%)	86.24	86.69	85.12	86.04	87.39	86.19	85.89	84.95	84.99	84.86	84.23	83.47	84.32	83.26	84.73	85.74	85.93	87.13	86.97	87.28	85.47	85.47	84.86	84.76	85.97	84.71
Radionuclides																										
Lead-210 (Bq/g)	0.009	0.005	0.007	0.009	0.012	0.002	0.002	<0.001	0.002	<0.001	0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	0.003	0.001	0.002	<0.001	0.002	0.001
Polonium-210 (Bq/g)	0.001	0.002	0.001	0.002	<0.0009	0.0015	0.002	0.0024	0.0014	0.0012	0.0008	0.0008	0.0005	0.0008	0.0008	0.0007	0.0007	0.0011	0.0005	0.0007	0.0017	0.0014	0.0014	0.0008	0.0006	0.0007
Radium-226 (Bq/g)	0.002	0.004	0.004	0.002	0.002	<0.00003	0.0012	<0.00003	0.0028	0.001	0.0025	0.0042	0.0029	0.0028	0.0022	0.002	0.0008	0.001	0.001	0.002	0.0059	0.0066	0.0022	0.002	0.002	0.001
Thorium-230 (Bq/g)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.0009	<0.0005	<0.0005	<0.001	<0.001	<0.001

APPENDIX C, TABLE 3

Detailed blueberry chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac																														
	2011					2012					2013					2014					2015			2016			2018				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	1	2	3	1	2	3	4	5
Metals																															
Aluminum	4.4	9.5	6.2	7	6.2	14	20	7.3	13	5.9	10	21	13	14	15	29	13	33	12	39	47	18	23	34	15	11	16	10	9.5	8.9	9
Antimony	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	12	12	13	13	12	12	9.9	14	11	11	14	14	16	18	15	20	16	22	14	29	18	14	18	16	27	19	14	15	15	16	17
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron	8	6	7	8	6	14	6	5	8	5	6	4	5	4	6	6	7	6	5	7	5	5	6	4	5	4	7	5	6	5	6
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.02	<0.01	<0.01	0.02	0.02	0.02	0.01	0.05	0.03	0.05	0.03	0.06	0.03	0.02	0.02	0.03	0.01	<0.01	0.01	0.01	0.01	0.01	0.01
Copper	2.7	3	3.6	3.2	3.9	2.8	3.9	3.3	3.9	2.8	1.8	2.4	2.8	1.8	2.1	5.2	5	5.6	5.2	5.6	3.9	3.8	3.1	4.6	4.2	3.7	2.8	2.3	2.4	2.3	2.4
Iron	10	8.2	9.7	11	9.3	14	21	12	16	10	10	23	17	17	10	48	23	40	22	44	54	18	22	30	20	14	11	10	10	10	9.8
Lead	<0.01	0.02	<0.01	0.03	0.01	0.03	0.01	<0.01	0.01	<0.01	0.04	0.02	0.02	0.01	0.02	0.02	0.03	0.17	0.14	0.04	0.04	0.01	0.03	0.03	0.02	0.02	0.03	0.02	0.06	0.03	0.02
Manganese	140	150	140	140	130	280	460	240	370	310	460	410	660	700	460	400	380	400	390	390	290	340	480	336	94	113	227	202	210	197	204
Molybdenum	0.4	0.2	0.4	0.4	0.4	0.2	0.2	<0.1	0.2	<0.1	0.2	0.3	0.3	0.3	0.2	0.5	0.5	0.6	0.4	0.6	0.3	0.3	0.2	0.4	1.4	1.1	0.1	0.1	0.1	0.1	0.1
Nickel	0.97	0.67	0.75	0.8	0.74	0.48	0.55	0.54	0.6	0.5	0.4	0.7	0.62	0.53	0.48	2.2	0.89	2.3	0.89	2.1	1.3	0.69	0.77	1.7	1.2	0.96	0.77	0.51	0.55	0.55	0.55
Selenium	<0.05	<0.05	<0.05	0.08	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Strontium	1.3	1.3	1.4	1.6	1.3	2.8	1.8	1.8	2.6	1.6	1.8	2.4	1.8	1.8	2	6.4	2.5	6.3	1.9	5	4.4	2.6	2.5	3.1	3.8	2.5	1.4	1.2	1.2	1.2	1.2
Thallium	1.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tin	1.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium	1.3	0.08	0.08	0.08	0.1	0.35	0.88	0.07	0.42	0.05	0.21	0.86	0.43	0.4	0.21	1.5	0.46	2	0.33	1.7	3.3	0.76	0.77	1.2	0.49	0.19	0.08	0.14	0.11	0.19	0.08
Uranium	1.3	0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	1.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	1.3	6	7.5	7	7.1	4.4	5.1	10	5.4	5.8	6.7	6.2	7.1	8.4	6.4	7.7	7.7	8.6	6.5	8.2	6.6	6.6	7.4	7.9	7.9	6.5	6.1	5.2	5.4	5.6	5.7
Physical Properties																															
Moisture (%)	87.10	85.50	86.68	84.60	86.31	83.99	83.87	84.56	83.79	84.11	84.33	83.47	84.18	84.47	83.71	84.83	82.79	84.76	82.2	84.79	86.12	86.14	86.17	83.54	82.53	82.76	85.32	84.42	84.34	84.54	84.55
Radionuclides																															
Lead-210 (Bq/g)	<0.004	0.007	0.01	0.011	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.004	0.002	<0.001	0.009	0.005	<0.001	<0.001	0.001	0.001	<0.001	0.003	0.004	0.004	0.002	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001
Polonium-210 (Bq/g)	0.001	0.002	0.001	0.004	0.002	0.0012	0.0009	0.0015	0.0012	0.0014	0.001	0.0066	0.0008	0.002	<0.001	0.001	0.001	0.0008	0.0007	0.0018	0.001	0.0021	0.0032	0.0012	0.0007	0.0005	0.0018	0.0011	0.0011	0.0012	0.0017
Radium-226 (Bq/g)	0.002	0.004	0.003	0.001	0.005	0.0023	0.0018	0.0026	0.0021	0.0026	0.003	0.0033	0.0038	0.006	0.005	0.001	0.004	<0.0005	0.002	0.003	0.0022	0.0031	0.0038	0.003	0.002	0.004	0.0046	0.0034	0.0032	0.0026	0.0052
Thorium-230 (Bq/g)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.0004	<0.001	<0.0003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.0009	<0.0009	<0.0009	0.002	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007

APPENDIX B, TABLE 3

Detailed blueberry chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Stony Rapids																									
	2011					2012					2013					2014					2015			2016		
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	1	2	3
Metals																										
Aluminum	21	8	27	37	10	9.6	8.9	7	11	7.6	300	180	250	240	250	7.8	9.3	10	8.3	8.9	22	18	9.5	13	16	18
Antimony	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	15	15	16	8.9	13	14	12	12	10	13	10	9	13	14	13	22	21	21	18	21	13	15	15	14	15	15
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron	12	5	4	3	4	5	4	11	14	6	4	4	4	5	5	4	5	5	5	16	5	5	7	12	5	5
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.01	0.07	0.01	0.02	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.1	<0.01	0.02	<0.01	<0.01	0.01	0.01	0.01	0.01
Copper	2.9	3.2	3	2.4	2.9	1.9	2	2.3	2.1	2	2.4	2.8	2.1	2.5	2.4	4.5	4.2	4.2	4	4.4	3.6	3.3	3.2	3	3.4	3.4
Iron	16	12	23	32	11	12	12	11	10	9.9	9.9	10	10	11	12	14	15	14	13	15	19	19	13	22	17	18
Lead	0.01	<0.01	0.02	0.04	<0.01	0.1	<0.01	0.03	0.03	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01	0.01	<0.01	0.02	0.01	0.26	0.02	0.02	0.06	0.01	0.03
Manganese	140	100	130	70	180	290	250	230	240	260	210	200	270	340	300	130	150	140	270	140	130	150	220	229	337	357
Molybdenum	0.1	0.2	<0.1	<0.1	<0.1	0.1	<0.1	0.4	0.3	0.3	0.2	0.1	<0.1	<0.1	0.1	0.2	0.2	0.2	0.2	0.2	<0.1	<0.1	0.1	0.1	0.1	0.1
Nickel	0.75	0.68	0.84	0.82	0.74	0.39	0.48	0.47	0.37	0.4	0.38	0.42	0.24	0.3	0.29	1.1	1.1	1.4	0.54	1	0.68	0.65	0.8	0.68	0.57	0.57
Selenium	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Strontium	2.6	1.7	2.9	2.5	2	1.7	1.5	2.9	2.6	2.4	3.4	3	3.5	4.5	3.8	2.5	2.5	2.2	5.3	2.6	1.6	1.7	3.1	3	1.7	1.8
Thallium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tin	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05
Titanium	0.26	0.12	1.6	1.4	0.19	0.2	0.23	0.09	0.26	0.11	0.08	0.14	0.07	0.06	0.06	0.12	0.3	0.17	0.08	0.26	0.7	0.81	0.28	0.29	0.37	0.47
Uranium	<0.01	<0.01	0.02	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	5.8	6.4	5.1	4.9	5.3	3.3	3.7	4.9	3.4	4	5.9	5.8	5.9	7.6	6.4	5.2	5.2	5.5	6.1	5.3	5.2	5.4	5.6	5.5	6.7	6.6
Physical Properties																										
Moisture (%)	85.84	85.47	84.14	85.08	86.57	85.35	85.14	84.42	85.08	84.82	85.92	85.78	86.59	86.18	86.45	86.37	86.04	86.1	86.52	86.16	86.67	86.62	86.11	85.76	83.59	83.88
Radionuclides																										
Lead-210 (Bq/g)	<0.004	0.005	0.012	0.006	<0.004	<0.01	<0.01	<0.01	<0.01	<0.01	0.007	<0.004	<0.004	<0.004	<0.004	0.001	0.001	<0.001	<0.001	<0.001	0.003	0.002	0.002	0.002	<0.001	0.002
Polonium-210 (Bq/g)	0.002	0.002	0.002	0.003	0.002	0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.001	<0.0002	0.0008	0.0007	0.0008	0.0006	0.0012	0.0014	0.0012	0.0011	0.0009	0.001
Radium-226 (Bq/g)	0.003	0.006	0.001	<0.0009	0.001	0.003	<0.001	0.003	0.003	0.004	0.015	0.014	0.016	0.012	0.015	0.003	0.002	0.002	0.013	0.002	0.004	0.0039	0.0018	0.002	0.002	0.001
Thorium-230 (Bq/g)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0009	<0.001	<0.001	<0.001	<0.001	<0.0005	0.0007	<0.0005	<0.0009	<0.0009	<0.001

APPENDIX B, TABLE 3

Detailed blueberry chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Wollaston Lake/Hatchet Lake																									
	2011					2012					2013					2014					2015			2016		
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	1	2	3
Metals																										
Aluminum	6.1	3.9	8.7	6.2	5.9	14	20	12	26	22	7.4	6.8	6.8	6.7	7.3	11	11	10	12	12	28	13	16	13	10	15
Antimony	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	16	17	15	14	15	10	9.9	7.7	16	16	13	13	11	12	10	21	19	15	22	18	17	13	14	20	13	22
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron	7	4	7	13	6	5	7	17	7	8	4	5	4	5	5	5	5	8	6	5	6	7	6	5	4	6
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.02	0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01	0.02	0.01	0.2	0.03	0.14	0.03	0.01	0.01	0.01	0.02	0.01
Copper	2.9	1.7	3	3	2.6	3.4	2.9	2.5	2.6	3.5	1.8	1.7	2.1	1.6	1.6	4.5	4.4	4.5	4.8	4.5	3.5	3.3	3.6	3.4	3.9	3.2
Iron	6.8	5.4	12	9.5	9	17	17	15	21	20	10	9	10	9	9	17	18	18	17	17	29	15	17	12	14	12
Lead	0.04	<0.01	0.01	<0.01	<0.01	<0.01	0.01	0.03	0.02	0.02	0.03	<0.01	0.02	<0.01	<0.01	<0.01	0.02	0.02	<0.01	0.02	0.02	0.02	0.03	0.02	0.01	0.05
Manganese	270	290	300	290	260	150	160	110	180	190	150	140	150	140	150	100	81	90	84	59	160	170	180	88	317	118
Molybdenum	<0.1	<0.1	<0.1	0.1	0.1	0.3	0.1	0.1	0.2	0.2	0.1	<0.1	0.2	<0.1	<0.1	0.3	0.4	0.3	0.4	0.4	0.2	0.1	0.1	0.2	0.3	0.2
Nickel	0.66	0.28	0.59	0.5	0.59	0.66	0.44	0.68	0.5	0.68	0.23	0.19	0.24	0.19	0.24	1.1	0.92	1.2	1.3	1.5	1.6	0.82	0.94	0.69	0.59	0.56
Selenium	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Strontium	3.4	1.2	3.1	3.8	3.6	1.3	1.2	1.1	1.4	2.8	1.8	2.3	1.6	1.8	1.5	2.6	3.7	1.5	2.6	5.4	3.1	1.4	1.6	5.4	2.6	4.2
Thallium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tin	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium	<0.05	0.07	0.13	0.09	0.09	0.38	1.3	0.4	0.91	0.51	0.1	0.05	0.05	0.11	0.09	0.16	0.17	0.14	0.17	0.25	1.1	0.34	0.88	0.1	0.19	0.14
Uranium	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	5.7	3	5.5	5.1	4.4	6.6	7.7	4.7	6.7	8	6.4	6	6.2	5.6	5.3	7.3	8.1	7.3	7.5	7.4	6	6.8	7	5.8	5.3	5.8
Physical Properties																										
Moisture (%)	85.31	84.46	84.79	84.44	85.11	84.44	84.81	84.13	85.40	84.17	85.61	85.47	85.66	85.56	85.51	86.34	86.99	86.93	87.01	86.51	88	84.22	84.43	85.72	86.66	86.27
Radionuclides																										
Lead-210 (Bq/g)	0.005	0.009	0.008	0.01	0.004	<0.001	0.001	0.001	<0.001	<0.01	0.008	0.002	<0.002	0.012	<0.004	0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.002	<0.001	0.004	0.004	0.003
Polonium-210 (Bq/g)	0.002	0.002	0.004	0.004	0.004	0.0012	0.0012	0.0008	0.0017	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.0006	0.001	0.0005	0.0008	0.0007	0.0016	0.001	0.0014	0.0018	0.0011	0.0015
Radium-226 (Bq/g)	<0.001	0.001	<0.001	0.006	<0.001	0.0024	0.0032	0.0032	0.0057	0.004	0.008	0.005	0.006	0.009	0.004	0.004	0.002	0.004	0.005	0.004	0.006	0.0046	0.0045	0.002	<0.0005	0.003
Thorium-230 (Bq/g)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.0009	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.0009	<0.0006	<0.0005	<0.0005	<0.0009	<0.001	<0.001

APPENDIX C, TABLE 3

Detailed blueberry chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage													Uranium City										
	2012					2013					2014			2012					2014			2018		
	1	2	3	4	5	1	2	3	4	5	1	2	3	1	2	3	4	5	1	2	3	1	2	3
Metals																								
Aluminum	7.2	7.3	7	7.4	6	6.8	7.7	6.7	7.1	7.2	10	13	8.6	5.3	5.6	8.7	4.4	5.4	9.2	7.7	11	4.6	4.2	4.8
Antimony	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	12	24	20	22	20	11	13	12	12	13	22	24	20	12	11	12	12	9.9	14	14	14	11	11	11
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron	5	8	8	8	6	4	4	4	4	4	5	6	5	8	8	9	6	7	3	4	3	6	5	5
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	0.02	<0.01	<0.01	0.06	0.01	0.01	0.02
Copper	3.5	3	3.4	3.5	2.6	2.2	2.2	2.2	2.2	2.4	3.8	3.8	3.5	3.9	3.4	3.7	3.5	2.9	4.1	4.1	4.1	3.3	3.4	3.3
Iron	11	8.7	9.7	18	13	8	10	10	13	9	15	17	16	11	9.7	10	12	8.7	14	14	14	9.4	9.2	9
Lead	<0.01	0.04	<0.01	<0.01	<0.01	0.03	0.02	0.03	<0.01	0.02	0.01	0.02	0.01	0.01	0.01	0.02	0.01	<0.01	<0.01	0.06	0.01	<0.01	0.01	0.07
Manganese	280	490	490	480	580	350	390	360	380	360	430	470	370	280	330	280	200	140	430	440	450	530	460	550
Molybdenum	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	<0.1	0.2	0.2	0.2	0.3	0.4	0.3
Nickel	0.44	0.37	0.6	0.79	0.44	0.12	0.17	0.16	0.14	0.14	0.36	0.36	0.39	0.54	0.47	0.58	0.44	0.51	0.37	0.41	0.5	0.32	0.3	0.32
Selenium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Strontium	1.4	1.4	1.4	1.6	1.5	0.9	1	1	1	1.1	1.9	1.8	2	1.3	1.1	1.4	1.3	1.6	1.3	1.3	1.4	1.5	1.5	1.5
Thallium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tin	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	0.15	0.21	0.14	<0.05	<0.05	<0.05	0.05	0.05	0.17	0.13	0.21	<0.05	<0.05	<0.05
Uranium	0.01	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	13	6.5	8.9	8	5.9	6	6.7	5.6	8.4	6.2	7.6	7.8	6.9	6.3	5.9	6.2	6.3	4.2	6.7	6.5	6.4	5.1	4.9	4.7
Physical Properties																								
Moisture (%)	83.98	85.16	84.30	84.62	85.57	84.78	84.99	84.99	84.76	84.82	84.37	84.9	83.77	84.40	83.99	84.04	85.06	84.43	89.62	89.29	89.56	81.8	81.73	81.57
Radionuclides																								
Lead-210 (Bq/g)	0.001	0.004	<0.001	0.001	0.002	<0.004	0.013	0.004	0.008	<0.004	0.002	0.002	0.002	0.002	0.004	0.003	0.002	0.02	0.001	0.005	0.002	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.0014	0.0017	0.0013	0.001	0.0016	<0.001	0.001	<0.001	<0.001	<0.001	0.0018	0.0013	0.0012	0.0021	0.005	0.0032	0.0015	0.002	0.0031	0.003	0.0028	0.001	0.0009	0.0008
Radium-226 (Bq/g)	0.0025	0.0028	0.0025	0.0049	0.0045	0.003	0.002	0.002	0.004	0.003	0.003	0.004	0.003	0.0014	0.006	0.0016	0.1	0.001	0.0007	0.003	0.001	<0.0003	<0.0003	<0.0003
Thorium-230 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.0009	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.0007	<0.0007	<0.0007

[1]All concentrations are in µg/g dry weight, unless specified otherwise.

APPENDIX C, TABLE 4

Detailed bog cranberry chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage															
	2011					2014		2015			2016			2018		
	1	2	3	4	5	1	2	1	2	3	1	2	3	1	2	3
Metals																
Aluminum	17	17	19	19	16	17	16	16	19	21	22	21	22	20	25	22
Antimony	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	14	13	14	15	9.1	15	15	18	19	19	7.6	8.5	8.6	8.1	9	8.2
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron	9	8	8	10	9	6	5	10	6	6	6	7	6	9	8	9
Cadmium	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01
Chromium	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	4.5	4.2	4.8	4.9	3.6	4	4.3	4.3	3.8	4.8	3.6	3.6	3.7	3.3	3.5	3.2
Iron	9.7	9.7	10	10	11	15	14	16	12	13	9.3	8.8	9	9	9.6	8.7
Lead	<0.01	<0.01	<0.01	0.01	0.02	0.02	<0.01	0.03	<0.01	<0.01	<0.01	0.02	0.01	0.04	0.01	0.01
Manganese	110	120	100	100	80	170	170	140	200	220	171	124	155	116	126	127
Molybdenum	0.1	0.1	0.2	0.2	<0.1	<0.1	<0.1	0.2	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	0.46	0.46	0.49	0.65	0.37	0.54	0.52	0.36	0.36	0.41	0.23	0.32	0.27	0.36	0.34	0.31
Selenium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Strontium	2.3	2	2.1	2.5	1.8	2.3	2.3	3.1	3.8	4.5	1	1.2	1.1	1.5	1.7	1.5
Thallium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tin	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.9	<0.05	1.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium	0.06	0.06	<0.05	0.08	0.17	0.08	0.08	0.1	0.11	0.12	0.07	0.22	<0.05	0.07	0.11	0.08
Uranium	0.01	<0.01	0.01	<0.01	0.02	<0.01	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	6.6	6.4	6.5	6.7	5.3	6.2	6.2	7.8	7.8	8	7.2	7	6.9	6.5	7.2	6.5
Physical Properties																
Moisture (%)	87.53	87.36	87.13	86.87	86.78	86.06	86.2	87.73	87.24	87.37	85.66	85.54	85.58	84.77	84.84	84.79
Radionuclides																
Lead-210 (Bq/g)	0.007	0.006	0.020	0.013	0.018	0.001	<0.001	0.002	0.002	0.002	0.002	0.004	0.003	0.001	0.001	0.002
Polonium-210 (Bq/g)	0.003	0.002	0.001	0.002	0.003	0.0011	0.0011	0.0015	0.0014	0.0015	0.0009	0.0011	0.001	0.0024	0.0021	0.0019
Radium-226 (Bq/g)	0.004	0.002	0.006	0.004	0.002	0.0008	<0.0005	0.0016	0.0017	0.0007	0.002	0.002	0.002	0.0014	0.0016	0.0009
Thorium-230 (Bq/g)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.0006	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0007	<0.0007	<0.0007

APPENDIX C, TABLE 4

Detailed bog cranberry chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Fond du Lac			Stony Rapids			Wollaston Lake	
	2018			2018			2018	
	1	2	3	1	2	3	1	2
Metals								
Aluminum	25	25	25	87	90	97	84	28
Antimony	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	9.7	10	9.7	16	16	16	16	10
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron	10	11	5	16	14	9	8	9
Cadmium	<0.01	<0.01	<0.01	0.03	0.04	0.03	0.06	0.03
Chromium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.02	0.02	0.02	0.02	0.02	0.03	0.02	<0.01
Copper	2.9	2.9	2.9	3	3.2	3.2	3.9	2.8
Iron	12	13	13	45	45	47	44	10
Lead	<0.01	0.01	0.03	0.09	0.13	0.13	0.06	0.02
Manganese	157	164	157	133	129	127	139	114
Molybdenum	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Nickel	0.23	0.22	0.23	0.46	0.48	0.65	0.68	0.32
Selenium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Strontium	1.8	1.8	1.9	3.9	3.7	3.2	2.6	2.1
Thallium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tin	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium	0.38	0.36	0.37	2.2	2.4	2.9	2.6	0.41
Uranium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Zinc	6.7	6.9	7.2	7.2	7	6.8	11	5.9
Physical Properties								
Moisture (%)	84.4	84.42	84.37	86.12	86.09	85.23	85.36	84.56
Radionuclides								
Lead-210 (Bq/g)	0.001	0.001	0.001	<0.001	0.004	0.005	0.004	0.003
Polonium-210 (Bq/g)	0.0015	0.0008	0.0013	0.0015	0.0035	0.0049	0.0034	0.0023
Radium-226 (Bq/g)	0.0013	0.0009	0.001	0.0019	0.0017	0.0014	0.0021	0.0031
Thorium-230 (Bq/g)	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007	<0.0007

APPENDIX C, TABLE 4

Detailed bog cranberry chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City															
	2011					2013					2014		2015	2016		
	1	2	3	4	5	1	2	3	4	5	1	2	1	1	2	3
Metals																
Aluminum	20	29	15	19	27	21	56	50	45	28	22	23	20	18	25	17
Antimony	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Barium	13	9.1	11	9.4	13	10	12	14	12	10	13	12	15	11	10	10
Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Boron	10	9	8	14	10	18	16	15	7	5	6	6	9	6	4	7
Cadmium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
Cobalt	0.02	0.14	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.05	0.04	<0.01	0.02	0.03	0.02
Copper	5.9	3.6	2.6	2.6	3.2	2.6	2.1	2.3	2.4	3.2	5.6	6.4	3.4	4.2	5.4	4.2
Iron	16	20	9.5	13	14	13	12	26	26	14	12	14	12	11	14	10
Lead	0.01	0.01	0.01	0.01	0.02	0.02	0.2	0.03	0.02	0.03	0.04	0.03	0.02	0.11	0.04	0.01
Manganese	150	110	300	210	220	210	150	100	81	100	160	160	90	158	103	120
Molybdenum	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.7	0.1	0.7
Nickel	1.1	0.8	0.28	0.5	0.42	0.2	0.28	0.42	0.46	0.36	0.59	0.59	0.74	0.34	0.72	0.38
Selenium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Strontium	3.4	2.5	2.5	2.4	1.8	2.1	2.2	2.2	2.1	1.5	1.6	1.5	3.7	1.9	1.3	2
Thallium	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tin	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Titanium	0.07	0.47	0.06	0.18	0.14	0.11	0.56	0.6	0.7	0.33	0.16	0.11	0.19	0.1	0.14	<0.05
Uranium	0.01	0.02	<0.01	0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zinc	8.9	7.3	5.7	5.2	6.8	7.2	8.9	7.4	7	7	6.2	7.1	5.3	6.7	7.6	6.6
Physical Properties																
Moisture (%)	88.39	87.69	87.22	86.9	87.44	84.89	85.4	85.63	85.57	85.84	86.38	86.63	85.92	85.2	86.48	84.88
Radionuclides																
Lead-210 (Bq/g)	0.005	0.005	0.016	0.010	0.016	0.016	0.009	<0.004	<0.004	<0.004	0.005	0.002	0.003	0.005	0.002	0.003
Polonium-210 (Bq/g)	0.003	0.003	0.013	0.002	0.005	0.002	0.001	0.001	<0.001	0.001	0.0039	0.0036	0.0027	0.0024	0.0015	0.0013
Radium-226 (Bq/g)	0.002	0.007	<0.0009	<0.0009	<0.0009	<0.001	0.002	0.003	0.002	0.003	0.003	0.002	0.0034	0.0008	0.0008	0.0009
Thorium-230 (Bq/g)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001

[1]All concentrations are in µg/g dry weight, unless specified otherwise.

APPENDIX C, TABLE 5

Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2018.

Chemical[1]	Black Lake																					
	2012					2013					2014					2015					2017	
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2
Metals																						
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	0.06	0.04	0.38	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.02	0.01	0.02	0.02	0.02	0.04	0.02	0.03	0.02	0.02	0.01	0.01	0.01	<0.01	<0.01	0.02	0.03	0.02	0.04	0.02	0.03	0.02
Barium	0.2	0.03	0.04	0.03	0.25	0.04	0.02	0.02	0.01	<0.01	0.02	0.05	0.11	0.33	0.02	0.04	0.03	0.02	0.03	0.02	0.21	0.17
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	0.7	0.2	0.6	<0.2	0.9	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	0.002	0.004	0.002	<0.002	<0.002	0.004	0.003	0.002	0.006	0.005	0.002	<0.002	0.003	0.005	0.004	0.002	<0.002	<0.002	<0.002	<0.002	0.003	0.005
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Cobalt	0.005	0.004	0.003	0.003	0.003	0.008	0.005	0.004	0.004	0.005	<0.002	0.002	0.002	<0.002	0.002	0.009	0.006	0.009	0.008	0.016	0.004	0.006
Copper	4.3	2.6	3.0	3.0	3.3	3.3	4.2	3.4	3.0	3.1	4.6	3.3	3.2	2.4	4.6	4.9	3.5	4.6	4.8	2.5	2.5	2.6
Iron	43	29	40	38	45	33	49	44	50	43	49	38	58	37	52	46	32	53	48	37	35	33
Lead	0.013	<0.002	0.008	<0.002	0.005	0.003	0.31	0.003	0.48	0.013	<0.002	0.008	0.56	0.028	0.004	0.015	0.009	0.007	0.005	0.006	0.043	0.006
Manganese	0.45	0.29	0.35	0.38	0.42	0.28	0.53	0.34	0.3	0.26	0.48	0.56	0.48	0.34	0.42	0.49	0.34	0.54	0.48	0.3	0.24	0.32
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.01	<0.01	<0.01	0.02	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	0.04	0.04	0.01	<0.01
Selenium	0.15	0.2	0.21	0.19	0.2	0.15	0.27	0.18	0.2	0.18	0.24	0.15	0.21	0.17	0.21	0.22	0.18	0.24	0.22	0.18	0.17	0.18
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.03	0.03	0.02	0.02	0.03	0.05	0.04	0.03	0.03	0.03	0.03	0.06	0.12	0.27	0.05	0.04	0.03	0.02	0.02	0.03	0.07	0.04
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.08	0.07	0.07	0.08	0.09	0.11	0.08	0.08	0.08	0.06	0.1	0.07	0.1	0.09	0.07	0.07	0.07	0.07	0.06	<0.01	<0.01
Uranium	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	17	31	21	16	29	26	29	33	30	32	19	21	23	30	20	14	23	15	15	46	35	46
Physical Properties																						
Moisture (%)	74.06	74.11	74.21	73.58	72.53	76.52	73.84	75.07	75.5	74.1	70.87	67.93	65.21	69.85	71.08	73.58	73.63	72.12	72.03	73.79	75.45	72.45
Radionuclides																						
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.011	0.0095	0.0083	0.01	0.011	0.0007	0.0052	0.0065	0.0085	0.0094	0.023	0.014	0.013	0.015	0.012	0.019	0.014	0.015	0.016	0.013	0.0081	0.0063
Radium-226 (Bq/g)	<0.00006	<0.00006	<0.00006	<0.00006	<0.00006	0.008	<0.005	<0.005	<0.005	<0.005	<0.00006	0.0003	<0.00006	0.0003	0.0001	0.0002	0.0002	<0.00008	0.0001	<0.00006	<0.00007	<0.00005
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001

APPENDIX C, TABLE 5

Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2018.

Chemical[1]	Fond du Lac																				
	2012					2013						2014					2015			2017	
	1	2	3	4	5	1	2	3	4	5	6	1	2	3	4	5	1	2	3	1	2
Metals																					
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	0.6	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	<0.01	<0.01	<0.01	0.02	0.02	0.01	0.01	0.02	0.02	0.02	0.01	<0.01	<0.01	0.03	<0.01	<0.01	0.01	<0.01	0.01	0.03	<0.01
Barium	0.08	0.02	0.03	0.04	0.02	0.05	0.14	0.11	0.08	0.12	0.32	0.01	<0.01	0.02	0.02	0.04	<0.01	<0.01	0.18	0.04	0.17
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	0.4	0.5	0.3	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	0.004	0.002	0.003	0.002	<0.002	0.004	0.002	0.005	<0.002	0.003	0.14	0.004	0.004	<0.002	0.003	0.002	0.004	0.004	0.008	0.004	0.004
Chromium	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.004	0.006	0.006	0.003	0.003	0.003	<0.002	0.003	0.002	0.006	0.013	0.005	0.004	0.005	0.004	<0.002	0.004	0.004	0.006	0.005	0.003
Copper	3.9	2.3	2.2	4.1	3.1	1.8	2.6	3.2	3.3	3.9	4.3	4.2	4.3	2.6	4	4.2	3.5	2.6	1.9	2.4	3.4
Iron	48	31	29	48	32	30	36	43	50	39	45	46	47	27	48	49	47	36	36	34	61
Lead	0.008	<0.002	<0.002	<0.002	<0.002	0.006	0.006	0.008	<0.002	0.014	0.004	0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	0.004	0.004	0.005
Manganese	0.39	0.26	0.25	0.43	0.32	0.24	0.26	0.33	0.37	0.53	0.8	0.38	0.35	0.32	0.39	0.44	0.41	0.33	0.29	0.21	0.31
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.08	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Selenium	0.15	0.15	0.15	0.18	0.15	0.12	0.13	0.16	0.2	0.14	0.34	0.19	0.17	0.17	0.18	0.22	0.19	0.17	0.16	0.15	0.2
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.07	0.05	0.06	0.05	0.03	0.06	0.07	0.07	0.05	0.08	0.14	0.04	0.04	0.03	0.05	0.05	0.03	0.04	0.07	0.04	0.09
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin						0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.08	0.07	0.08	0.09	0.08	0.05	0.09	0.08	0.08	0.08	0.06	0.13	0.12	0.05	0.13	0.07	0.07	0.08	<0.01	0.02
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	22	56	59	16	49	40	15	23	12	16	18	28	22	30	26	24	22	28	59	39	14
Physical Properties																					
Moisture (%)	71.24	76.19	74.05	73.91	73.77	71.94	71.95	72.9	73.46	71.99	68.45	62.73	71.46	75.61	72.28	70.81	73.17	73	71.99	76.17	73.17
Radionuclides																					
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.002	0.002	<0.001	<0.001	0.008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.0042	0.0084	0.0098	0.0096	0.0021	0.015	0.015	0.015	0.016	0.016	0.021	0.012	0.012	0.011	0.01	0.014	0.0071	0.008	0.0075	0.0071	0.012
Radium-226 (Bq/g)	<0.00005	0.0002	0.0001	<0.00004	0.00008	<0.00006	<0.00006	<0.00006	<0.00007	<0.00007	0.00009	<0.00006	<0.00006	<0.00006	0.00007	0.00008	<0.00006	0.00008	<0.00006	<0.00008	<0.00009
Thorium-230 (Bq/g)	<0.0001	0.0003	<0.0002	<0.00008	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002

APPENDIX C, TABLE 5

Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2018.

Chemical[1]	Camsell Portage		Stony Rapids												Uranium City		
	2013		2013					2014			2015				2018		
	1	2	1	2	3	4	5	1	2	3	1	2	3	4	5	1	2	3
Metals																		
Aluminum	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	<0.01	<0.01	0.01	0.01	0.01	0.02	0.01	0.03	0.02	0.01	0.02	0.02	0.03	0.02	0.01	<0.01	<0.01	0.01
Barium	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.04	0.12	0.03	0.01	0.02	0.02	0.01	0.05	0.1	0.03
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	0.004	0.003	0.003	0.004	0.002	0.003	0.002	<0.002	0.002	0.008	0.007	<0.002	<0.002	0.006	0.003	0.003	0.008	0.003
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1
Cobalt	0.002	<0.002	0.006	0.003	0.004	0.004	0.003	0.004	0.002	0.003	0.005	0.004	0.002	0.005	0.004	0.004	0.004	0.005
Copper	3.7	3.7	4.0	4.6	4.7	3.3	4.1	2.4	3.4	1.8	2.4	4.3	3.6	3.8	3.5	1.7	1.3	2.4
Iron	50	46	52	55	46	51	55	38	38	40	34	43	46	47	50	37	32	36
Lead	<0.002	<0.002	0.002	0.065	0.009	0.003	0.004	0.005	0.052	0.032	0.004	0.002	<0.002	0.009	<0.002	<0.002	0.004	<0.002
Manganese	0.35	0.26	0.46	0.55	0.42	0.44	0.44	0.3	0.28	0.36	0.21	0.47	0.41	0.42	0.51	0.21	0.17	0.32
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.18	<0.01	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.23	0.22	0.21	0.26	0.21	0.21	0.21	0.16	0.14	0.11	0.17	0.18	0.22	0.2	0.19	0.13	0.11	0.16
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.04	0.04	0.02	0.03	0.02	<0.02	<0.02	0.05	0.04	0.17	0.03	0.02	0.03	0.04	0.03	0.04	0.06	0.04
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.07	0.03	0.12	0.2	0.09	0.11	0.13	0.04	0.08	0.07	0.07	0.06	0.08	0.07	<0.01	<0.01	0.01
Uranium	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	26	25	22	13	16	29	15	40	17	48	41	15	15	18	20	53	29	59
Physical Properties																		
Moisture (%)	72.15	72.11	70.86	70.2	70	70.4	71	74.41	74.78	67.52	73.27	73.71	72.62	72.05	71.78	75.66	66.73	75.99
Radionuclides																		
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	0.001	<0.002	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.017	0.015	0.026	0.001	<0.001	0.012	0.025	0.0083	0.01	0.0059	0.013	0.017	0.025	0.033	0.02	0.0055	0.0059	0.0048
Radium-226 (Bq/g)	<0.00008	<0.0001	0.002	<0.001	<0.001	0.002	0.001	<0.00006	<0.00006	<0.00005	<0.00007	0.0001	0.00008	<0.00007	0.0001	<0.0002	<0.0002	<0.0002
Thorium-230 (Bq/g)	<0.0002	<0.0002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0005	<0.0005	<0.0005

APPENDIX C, TABLE 5

Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2018.

Chemical[1]	Wollaston Lake/Hatchet Lake																				
	2012					2013					2014					2015				2017	
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2
Metals																					
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	0.02	<0.02
Arsenic	<0.01	<0.01	0.01	0.02	0.02	0.02	0.02	0.01	0.01	<0.01	0.02	<0.01	0.01	0.02	<0.01	<0.01	0.01	0.02	<0.01	0.03	0.03
Barium	0.04	0.09	0.03	0.04	0.09	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.05
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	0.4	<0.2	0.4	0.3	0.4	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	0.005	0.008	0.002	0.004	0.002	0.008	0.003	<0.002	0.004	0.003	0.002	0.002	<0.002	<0.002	0.003	0.003	0.003	0.005	0.027	0.004	0.004
Chromium	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.003	0.003	0.007	0.005	0.004	0.008	0.006	0.006	0.004	0.006	0.003	0.006	<0.002	0.003	0.004	0.017	0.006	0.003	0.008	0.003	0.004
Copper	3.1	3.2	2.5	3.9	3.1	4.4	2.3	2.4	3.6	3.5	3.6	3.3	2.3	3.8	3.5	3.1	3	2.8	3.9	3	3.6
Iron	37	35	26	45	29	63	36	43	52	43	42	43	23	44	45	42	36	27	52	45	38
Lead	0.013	0.002	<0.002	0.046	0.051	0.006	0.003	0.013	0.014	<0.002	<0.002	<0.002	0.003	0.005	<0.002	<0.002	1.1	<0.002	<0.002	0.52	0.014
Manganese	0.35	0.29	0.25	0.53	0.33	0.46	0.27	0.29	0.5	0.44	0.31	0.37	0.21	0.37	0.41	0.39	0.29	0.29	0.4	0.33	0.39
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.15	0.17	0.17	0.19	0.13	0.18	0.13	0.12	0.19	0.17	0.21	0.13	0.16	0.2	0.18	0.14	0.16	0.16	0.19	0.2	0.22
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.04	0.03	0.03	0.02	0.03	0.05	0.03	0.03	0.02	<0.02	0.02	0.04	0.05	0.03	0.04	0.02	0.03	0.02	0.03	0.04	<0.02
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.07	0.07	0.07	0.07	0.07	0.11	0.09	0.11	0.08	0.09	0.03	0.06	0.06	0.07	0.11	0.06	0.06	0.06	0.06	0.01	<0.01
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	33	30	30	20	29	16	52	42	20	16	16	20	18	13	23	33	29	23	19	43	38
Physical Properties																					
Moisture (%)	74.5	73.6	75.2	74.14	75.2	72.82	78.45	77.45	73.98	72.58	75.58	74.52	75	74.43	73.43	76.77	73.74	74.44	68.86	74.15	74.87
Radionuclides																					
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.016	0.013	0.011	0.015	0.011	0.011	0.012	0.0095	0.019	0.014	0.0082	0.0083	0.012	0.016	0.01	0.0079	0.0072	0.0047	0.0053	0.0075	0.0082
Radium-226 (Bq/g)	<0.00006	<0.00007	<0.00006	<0.00006	<0.00005	<0.00008	<0.00006	<0.00006	0.0001	<0.00007	<0.00008	<0.00009	0.0002	<0.00006	0.00007	<0.00006	<0.00005	<0.00006	0.0001	<0.00007	<0.00007
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

- = data not available

APPENDIX C, TABLE 6

Detailed moose flesh chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Camsell Portage Study Area										Fond du Lac	Stony Rapids	
	2011				2013		2014		2015			2016	2018
	1	2	3	4	1	2	1	2	1	2	2016	1	1
Metals													
Aluminum	1.5	3	<0.5	3.8	<0.5	<0.5	0.6	4.4	5.1	0.5	0.6	0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Barium	0.04	0.15	0.03	0.02	0.05	0.02	0.07	0.04	0.05	0.02	0.05	0.06	0.02
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.3
Cadmium	<0.002	0.006	0.002	<0.002	0.002	0.003	0.003	0.05	0.005	0.004	0.002	0.002	<0.002
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.014	0.011	0.022	0.01	0.012	0.015	0.02	0.016	0.015	0.006	0.011	0.019	0.012
Copper	2.0	1.2	1.8	1.6	1.5	1.8	0.56	1.4	0.93	1.4	1.5	1.7	0.82
Iron	21	25	25	29	29	34	22	32	29	29	38	29	12
Lead	0.018	0.019	<0.002	0.002	0.004	<0.002	0.029	0.011	0.004	<0.002	0.01	0.01	<0.002
Manganese	0.2	0.18	0.21	0.13	0.13	0.16	0.38	0.27	0.2	0.18	0.22	0.24	0.15
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01
Selenium	0.2	0.06	0.1	0.12	0.06	0.06	0.08	0.08	0.17	0.13	0.1	0.09	0.16
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.1	0.06	0.03	0.02	0.06	0.04	0.06	0.09	0.06	0.02	0.06	0.03	0.03
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.09	0.25	0.09	0.08	0.07	0.07	0.1	0.22	0.14	<0.01	0.05	0.06	0.02
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	24	38	47	45	59	45	63	58	61	48	53	49	32
Physical Properties													
Moisture (%)	75.01	73.92	75.02	75.12	73.27	72.65	73.14	70.99	73.2	74.63	75.66	73.9	74.12
Radionuclides													
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.0003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.0019	0.0004	0.0003	-	0.0004	0.0002	0.0004	<0.0002	0.0011	0.0005	0.0003	0.0006	0.0006
Radium-226 (Bq/g)	<0.00008	<0.00007	0.0002	<0.00006	0.00006	0.00007	<0.00006	<0.00006	0.00005	0.00008	<0.00005	<0.00007	<0.00007
Thorium-230 (Bq/g)	<0.0002	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.0001	<0.0001	<0.0001	<0.0001

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

APPENDIX C, TABLE 6

Detailed moose flesh chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Uranium City Study Area														
	2011				2012			2013			2014	2015	2016	2018	
	Mackintosh Bay	Deadman Channel	Melville Lake	Orbit Bay	Ace Creek	Gunnar	Milliken Lake	1	2	3	1	1	1	1	2
Metals															
Aluminum	2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	0.6	<0.5	0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Barium	0.03	0.02	<0.01	0.02	0.04	0.22	0.08	0.02	0.09	0.02	<0.01	0.04	0.1	0.03	0.04
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	0.003	<0.002	0.002	0.004	0.011	0.006	0.003	0.004	0.005	0.003	0.056	0.018	0.011	0.004	0.004
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.013	0.014	0.003	0.017	0.016	0.01	0.012	0.01	0.011	0.008	0.009	0.044	0.009	0.01	0.011
Copper	1.3	1.8	3.8	1.7	1.2	1.4	1.3	1.6	2	1.5	1.9	1.5	1.8	1.4	0.95
Iron	30	25	42	42	35	34	26	34	37	26	36	33	25	37	22
Lead	<0.002	<0.002	<0.002	<0.002	0.005	0.004	0.003	0.003	0.025	0.003	0.003	0.002	0.01	<0.002	0.006
Manganese	0.16	0.16	0.33	0.14	0.17	0.18	0.15	0.14	0.24	0.14	0.22	0.23	0.16	0.19	0.2
Molybdenum	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.01	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
Selenium	0.11	0.16	0.18	0.09	0.1	0.11	0.1	0.09	0.12	0.08	0.14	0.08	0.13	0.14	0.13
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	<0.02	<0.02	0.04	0.03	0.08	0.05	0.05	0.02	0.03	0.03	0.04	0.03	0.06	0.04	0.02
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Titanium	0.14	0.08	0.1	0.13	0.08	0.08	0.06	0.06	0.06	0.06	0.09	0.01	0.11	0.02	0.03
Uranium	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	50	49	31	49	75	56	55	44	48	56	52	52	35	48	42
Physical Properties															
Moisture (%)	74.42	72.36	72.74	73.84	69.87	74.09	74.28	74.01	71.23	74.71	75.54	76.93	76.46	75.89	76.73
Radionuclides															
Lead-210 (Bq/g)	0.002	<0.001	<0.001	<0.001	<0.00002	<0.00001	<0.00002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	<0.0002	0.0005	0.0023	0.0003	0.0002	0.0004	<0.0002	0.0004	0.0005	0.0003	0.0016	0.001	0.0008	0.0004	0.0002
Radium-226 (Bq/g)	<0.00006	<0.0001	<0.00006	<0.00007	<0.00009	<0.00006	<0.00008	0.00008	0.0001	<0.00005	<0.00005	0.00006	<0.00009	<0.00006	<0.00007
Thorium-230 (Bq/g)	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0005

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

APPENDIX C, TABLE 7

Detailed barren-ground caribou and moose organ chemistry results from the EARMP community program, 2014 to 2019.

Chemical[1]	Black Lake			Camsell Portage							Fond du Lac							Stony Rapids
	Barren-ground Caribou			Moose							Barren-ground Caribou							Moose
	Kidney		Heart	Liver			Kidney				Kidney					Heart	Liver	Kidney
	2016	2018	2018	2014		2015	2014		2015		2014			2015		2018	2018	2017
	1	1	1	1	2	1	1	2	1	2	1	2	3	1	2	1	1	1
Metals																		
Aluminum	<0.5	0.6	<0.5	<0.5	1.1	0.6	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.01	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	<0.01	0.01	<0.01	0.01
Barium	0.2	1	0.11	0.1	0.12	0.11	0.23	0.44	0.12	0.13	0.58	0.45	0.41	0.43	0.43	0.06	0.12	0.14
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Cadmium	6.9	4.7	0.004	1.7	1.1	0.66	8.6	6.5	6.8	4.9	6.2	9.6	6.8	10	7.3	0.002	0.004	0.73
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1	<0.1	<0.5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.035	0.062	0.014	0.25	0.2	0.18	0.12	0.2	0.18	0.058	0.029	0.044	0.046	0.036	0.025	0.02	0.013	0.29
Copper	5	3.5	4.5	38	47	15	2.1	3.8	3.8	2.6	3.6	4.9	4.3	4.4	3.6	4.5	3.3	13.2
Iron	37	24	55	100	150	160	70	90	52	30	40	60	60	28	40	59	37	200
Lead	0.07	0.041	0.005	<0.002	0.003	0.003	<0.002	0.002	<0.002	0.004	0.073	0.068	0.078	0.12	0.089	0.01	0.003	0.004
Manganese	1.8	1.4	0.55	1.3	2.2	2.1	1.2	2	2.7	1.5	1.8	2	1.8	1.7	1.5	0.52	0.33	4.1
Molybdenum	0.15	0.21	<0.02	0.9	1	1.1	0.21	0.42	0.45	0.25	0.12	0.11	0.14	0.16	0.12	<0.02	<0.02	1.1
Nickel	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.05	0.06	0.03	0.04	<0.01	0.01	0.01	<0.01	<0.01	0.01	0.02	0.02
Selenium	1	0.94	0.27	0.22	0.21	0.92	0.71	0.78	1.2	0.78	1.3	1.6	1.4	1.2	1.1	0.26	0.18	0.24
Silver	<0.002	<0.002	<0.002	0.009	0.014	0.033	<0.002	<0.002	<0.002	<0.002	0.003	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	0.014
Strontium	0.1	0.11	0.05	0.06	0.07	0.05	0.17	0.13	0.11	0.09	0.18	0.18	0.16	0.11	0.12	0.04	0.06	0.08
Thallium	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.02	<0.01	0.03	0.01	0.02	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.02	0.08	<0.01	<0.5	<0.5	0.03	0.03	0.08	<0.01	<0.01	0.06	0.08	0.07	0.05	0.04	<0.01	0.01	0.02
Uranium	<0.001	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	24	24	19	15	20	20	16	23	26	20	23	28	27	26	25	20	37	27
Physical Properties																		
Moisture (%)	69.25	76.39	75	74.05	70.38	68.14	76.94	78.33	78.43	82.17	48.56	66.49	42.82	54.43	54	74.89	71.08	68.77
Radionuclides																		
Lead-210 (Bq/g)	0.049	0.023	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.002	0.002	0.072	0.054	0.042	0.077	0.073	<0.001	<0.001	0.001
Polonium-210 (Bq/g)	0.064	0.076	0.012	0.0036	0.0024	0.026	0.0018	0.0023	0.027	0.0076	0.088	0.081	0.086	0.083	0.066	0.0092	0.0088	0.0042
Radium-226 (Bq/g)	0.0005	<0.0001	<0.00006	0.0001	<0.0001	0.0002	<0.00006	0.0005	0.0001	0.0003	0.0003	0.0009	0.0005	0.0003	0.0003	<0.00007	<0.00006	<0.00008
Thorium-230 (Bq/g)	<0.0003	<0.0002	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0004	<0.0001	<0.0001	<0.0003	<0.0006	<0.0005	0.0005	<0.0003	<0.0001	<0.0001	<0.0002

APPENDIX C, TABLE 7

Detailed barren-ground caribou and moose organ chemistry results from the EARMP community program, 2014 to 2019.

Chemical[1]	Uranium City												Wollaston Lake		
	Moose						Barren-ground Caribou						Barren-ground Caribou		
	Liver			Kidney			Heart			Liver			Liver		
	2014	2015	2017	2014	2015	2017	2019			2019			2015	2018	
	1	1	1	1	1	1	1	2	3	1	2	3	1	1	2
Metals															
Aluminum	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	<0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.02	0.01
Barium	0.1	0.48	0.14	0.27	0.16	0.26	0.08	0.1	0.04	0.18	0.24	0.17	0.02	0.36	0.27
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.7	<0.2
Cadmium	0.48	0.054	1.4	8	20	8.6	0.004	<0.002	0.002	1.3	0.96	1.3	0.65	1.8	1.6
Chromium	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.054	0.068	0.078	0.097	0.25	0.11	0.008	0.012	0.012	0.06	0.07	0.052	0.075	0.1	0.071
Copper	28	0.55	28.1	3	2.2	2.9	4.4	4.5	4.7	38.8	24	26.6	26	54.6	31.7
Iron	120	680	140	41	33	31	56	79	52	380	200	150	140	190	170
Lead	0.008	<0.002	0.018	0.002	<0.002	0.012	<0.002	0.003	<0.002	0.074	0.067	0.072	0.097	0.076	0.055
Manganese	1.4	0.09	2.4	1	0.8	1.2	0.53	0.64	0.57	2.5	2.9	3.3	3.6	3.3	3.8
Molybdenum	0.65	<0.02	0.81	0.24	0.17	0.2	<0.02	<0.02	<0.02	0.31	0.38	0.43	1	0.74	0.57
Nickel	<0.01	<0.01	<0.01	0.04	0.02	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01
Selenium	0.2	0.18	0.53	0.67	0.53	0.88	0.23	0.26	0.26	0.34	0.26	0.31	0.4	0.4	0.4
Silver	0.01	<0.002	0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.34	0.18	0.17	0.12	0.19	0.097
Strontium	0.1	0.06	0.04	0.11	0.1	0.08	0.05	0.05	0.04	0.07	0.07	0.06	0.04	0.07	0.05
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	<0.5	<0.01	0.02	0.04	<0.01	0.02	0.02	<0.01	<0.01	0.03	0.03	0.03	<0.5	0.08	0.03
Uranium	<0.01	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	14	15	23	25	24	23	18	19	18	31	18	24	24	36	41
Physical Properties															
Moisture (%)	58.58	72.88	61.03	78.25	83.14	82.38	76.88	77.14	76.74	70.63	72.87	72.64	71.23	70.73	71.4
Radionuclides															
Lead-210 (Bq/g)	0.001	0.002	<0.001	0.001	0.002	<0.001	<0.002	<0.002	<0.002	0.082	0.086	0.085	<0.001	0.056	0.04
Polonium-210 (Bq/g)	0.0021	0.0018	0.0057	0.0032	0.0037	0.0063	0.012	0.014	0.011	0.22	0.16	0.15	0.0093	0.24	0.18
Radium-226 (Bq/g)	0.00007	0.0003	0.0001	<0.00006	0.00007	0.0003	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	0.0002	<0.00007	<0.00007
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.0001	<0.0005	<0.0001

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

RDL for chromium decreased from 0.5 µg/g to 0.1 µg/g between 2014 and 2015.

APPENDIX C, TABLE 8

Detailed snowshoe hare flesh chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Black Lake				Camsell Portage								Fond Du Lac		
	2017				2011					2014			2017		
	1	2	3	4	1	2	3	4	5	1	2	3	1	2	3
Metals															
Aluminum	0.9	<0.5	<0.5	1.4	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Barium	<0.01	<0.01	<0.01	<0.01	0.09	0.04	0.08	0.03	0.08	0.18	0.1	0.12	0.01	<0.01	<0.01
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Cadmium	0.038	0.004	0.002	0.005	0.003	0.004	0.01	<0.002	0.002	<0.002	0.004	0.006	0.008	0.009	0.003
Chromium	0.2	<0.1	0.1	0.2	0.003	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	0.2	0.1
Cobalt	0.011	0.011	0.013	0.007	0.003	0.006	0.007	0.003	0.004	<0.002	0.005	0.032	0.021	0.014	0.019
Copper	2.2	4	1.8	1.9	0.003	2.4	1.5	1.8	1.5	1.9	2.1	1.8	1.4	2	2.6
Iron	44	38	30	31	0.003	28	24	22	24	19	25	20	36	35	38
Lead	0.005	0.003	0.003	0.004	0.003	<0.002	0.006	<0.002	<0.002	0.003	0.002	0.002	0.004	0.003	0.002
Manganese	1.7	0.91	0.21	0.54	0.003	0.46	0.32	0.22	0.22	0.36	0.28	0.39	0.46	0.64	0.44
Mercury	0.007	0.002	0.002	0.002	-	-	-	-	-	-	-	-	0.002	<0.001	0.001
Molybdenum	<0.02	<0.02	<0.02	<0.02	0.003	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.06	<0.01	0.06	0.06	0.003	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	0.07	0.08	0.05
Selenium	0.44	0.28	0.23	0.34	0.003	0.03	0.13	0.02	0.06	0.03	0.08	0.14	0.3	0.19	0.16
Silver	<0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.08	0.07	0.07	0.1	0.003	0.07	0.22	0.05	0.09	0.2	0.1	0.29	0.11	0.06	0.08
Thallium	<0.01	<0.01	<0.01	<0.01	0.003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	0.003	<0.01	0.04	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.1	0.08	0.08	0.003	0.07	0.05	0.08	0.04	0.09	0.06	0.09	0.07	0.05	0.01
Uranium	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	0.003	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	19	13	22	17	0.003	11	23	13	13	13	11	16	23	16	21
Physical Properties															
Moisture (%)	75.64	76.72	77.46	78.3	77.61	76.53	75.79	77.6	78.45	71.24	75.39	73.89	74.03	75.58	77.68
Radionuclides															
Lead-210 (Bq/g)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.001	<0.001
Polonium-210 (Bq/g)	0.001	0.0009	0.0011	0.0007	0.0011	0.0018	0.0021	0.0013	0.0012	0.0017	0.002	0.0018	0.0006	0.0012	0.0008
Radium-226 (Bq/g)	<0.0002	<0.0002	0.0003	<0.0002	0.0001	<0.00007	0.0001	0.0001	0.0002	0.0001	<0.00006	0.0001	<0.0002	<0.0002	<0.0002
Thorium-230 (Bq/g)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005

APPENDIX C, TABLE 8

Detailed snowshoe hare flesh chemistry results from the EARMP community program, 2011 to 2018.

Chemical[1]	Stony Rapids			Uranium City							Wollaston Lake		
	2017			2011					2014		2017		
	1	2	3	1	2	3	4	5	1	2	1	2	3
Metals													
Aluminum	1.6	<0.5	<0.5	0.6	<0.5	<0.5	0.5	<0.5	<0.5	0.5	0.6	<0.5	<0.5
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Barium	<0.01	<0.01	<0.01	0.27	0.05	0.09	0.04	0.05	0.13	0.28	<0.01	<0.01	<0.01
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	0.14	0.014	0.008	0.004	<0.002	0.003	0.003	<0.002	<0.002	0.005	0.009	0.014	0.012
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1
Cobalt	0.013	0.005	0.022	0.007	0.005	0.004	0.004	0.006	0.005	0.004	0.006	0.009	0.01
Copper	1.8	1.8	1.1	1.5	1.5	1	1.4	1.1	2.4	2.1	1.8	2.1	2.5
Iron	57	36	25	27	22	22	14	20	21	31	24	36	31
Lead	0.008	0.005	<0.002	<0.002	0.003	<0.002	<0.002	0.003	0.002	<0.002	0.007	0.009	<0.002
Manganese	0.42	0.25	0.21	0.27	0.2	0.37	0.29	0.18	0.24	1.1	0.26	0.57	0.33
Mercury	0.004	0.001	0.002	-	-	-	-	-	-	-	0.002	<0.001	0.002
Molybdenum	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	0.04	<0.01	0.03	0.01	0.02	<0.01	<0.01	<0.01	0.02	0.05	0.03	<0.01	0.04
Selenium	0.14	0.21	0.22	0.13	0.05	0.1	0.12	0.06	0.15	0.07	0.15	0.14	0.13
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.07	0.06	0.06	0.39	0.1	0.28	0.1	0.19	0.14	0.19	0.03	0.04	0.04
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	0.02	<0.01	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.08	0.05	0.03	0.07	0.04	0.07	0.08	0.15	0.05	0.1	0.06	0.01	0.02
Uranium	0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	21	32	19	25	24	17	10	19	10	16	16	17	16
Physical Properties													
Moisture (%)	76.38	75.35	75.67	77.55	77.14	77.49	78.65	78.51	70.07	65.8	73.26	75.8	73.05
Radionuclides													
Lead-210 (Bq/g)	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
Polonium-210 (Bq/g)	0.0026	0.0012	0.001	0.0014	0.0013	0.0015	0.00003	0.0016	0.0022	0.0015	0.0008	0.0008	0.0016
Radium-226 (Bq/g)	<0.0002	<0.0002	<0.0002	<0.00006	0.00009	0.0001	0.0001	0.00009	0.0001	0.00007	<0.0002	<0.0002	<0.0002
Thorium-230 (Bq/g)	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0005	<0.0005

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

- = data not available

APPENDIX C, TABLE 9

Detailed spruce grouse flesh chemistry results from the EARMP community program, 2017.

Chemical	Black Lake			Fond Du Lac			Stony Rapids				Uranium City			Wollaston Lake		
	1	2	3	1	2	3	1	2	3	4	1	2	3	1	2	3
Metals																
Aluminum	3.6	1.8	<0.5	1.3	0.5	0.6	4.9	2.8	1.4	1.5	1.7	0.6	0.8	0.7	0.6	<0.5
Antimony	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	0.23	<0.02	<0.02	<0.02	0.03	<0.02
Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Barium	0.04	0.02	<0.01	0.04	<0.01	0.03	0.06	0.08	0.02	0.02	0.18	<0.01	<0.01	0.05	0.03	<0.01
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.4	0.4	0.2	<0.2	<0.2	0.3	<0.2	<0.2
Cadmium	0.006	0.009	0.005	0.013	0.006	0.028	0.005	0.009	0.004	0.026	0.004	0.014	0.003	0.006	0.002	<0.002
Chromium	0.2	<0.1	<0.1	0.1	<0.1	<0.1	0.1	<0.1	0.3	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.005	0.036	0.019	0.006	0.004	0.009	0.004	0.002	0.005	0.004	0.003	0.004	<0.002	0.006	0.002	0.004
Copper	2.5	3.6	3.3	2.5	4.1	2.9	2	1.0	2.2	2.3	2.2	2.8	0.98	1.7	2.9	1.7
Iron	50	99	49	54	64	46	34	41	43	46	59	52	33	33	41	26
Lead	4.2	0.36	0.9	0.34	0.027	0.004	4	0.046	0.22	0.084	2.4	0.19	0.1	0.006	0.35	0.08
Manganese	0.51	0.74	0.4	1.2	1.2	3.4	1.6	1.1	2.8	10	0.87	0.42	0.34	0.71	0.42	0.4
Mercury	0.001	0.001	0.002	<0.001	0.002	0.002	0.001	<0.001	<0.001	<0.001	0.002	0.001	<0.001	<0.001	0.001	<0.001
Molybdenum	<0.02	0.06	0.03	0.03	0.07	0.02	0.04	0.08	<0.02	0.03	0.05	0.02	0.03	<0.02	<0.02	<0.02
Nickel	0.07	0.03	0.02	0.04	<0.01	0.01	0.03	0.04	0.02	<0.01	0.02	<0.01	<0.01	0.03	<0.01	0.01
Selenium	0.28	0.27	0.24	0.24	0.36	0.29	0.2	0.18	0.16	0.18	0.32	0.16	0.1	0.29	0.22	0.26
Silver	<0.002	<0.002	<0.002	0.004	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.09	0.06	0.03	0.08	0.05	0.13	0.14	0.15	0.14	0.09	0.52	0.03	0.03	0.05	0.08	0.12
Thallium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Tin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium	0.11	0.11	0.02	0.06	0.03	0.04	0.23	0.13	0.05	0.04	0.08	0.03	0.04	0.05	0.04	0.02
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	0.002	0.001	<0.001	<0.001	<0.001
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	13	18	7.5	13	18	23	10	22	14	27	19	7	13	7.2	7.3	7
Physical Properties																
% Moisture	76.49	74.28	77.38	72.2	73.87	73.88	77.87	74.13	73.9	72.95	73.35	72.07	74.9	72.63	72.86	74.13
Radionuclides																
Polonium-210 (Bq/g)	0.0004	0.0003	0.0003	0.0007	0.001	0.0007	0.0003	<0.0002	0.0002	0.0004	0.0003	0.0006	<0.0002	<0.0002	0.0006	<0.0002
Radium-226 (Bq/g)	<0.0002	<0.0002	0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thorium-230 (Bq/g)	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

[1]All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.