



# CanNorth

**Canada North Environmental Services Limited Partnership**

*A First Nation Environmental Services Company*

**EASTERN ATHABASCA REGIONAL  
MONITORING PROGRAM  
2017/2018 COMMUNITY REPORT**

*Final Report*

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Ottawa, Ontario

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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. The EARMP community program was established to monitor the safety of traditionally harvested country foods by collecting and testing representative water, fish, berry, and mammal samples from the seven communities located in the region. Harvesting and consuming traditional country foods (berries, fish, birds, and wild game) are an important part of the culture in northern Saskatchewan and contribute to an overall healthy lifestyle through physical activity and healthy eating. The intent of the EARMP community program is to provide confidence to community members that their traditional country foods are safe to eat today and will remain safe for future generations.*

*From September 2017 to December 2017 samples of water, snowshoe hare, and spruce grouse were collected from the EARMP communities. All samples were collected independently by, or with the aid of, community members from Black Lake Denesuline First Nation, Camsell Portage, Fond du Lac Denesuline First Nation, Stony Rapids, Uranium City, Wollaston Lake, and Hatchet Lake Denesuline First Nation.*

*Concentrations of chemicals in water and country foods submitted for testing were generally low and were similar to baseline and regional levels. An updated Human Health Risk Assessment was completed in 2018 using all water chemistry and country foods chemistry data collected from the last 7 years in the region. The country foods ingestion pathways and intake rates were derived from the Hatchet Lake dietary survey and the Uranium City country foods assessment. The results of the risk assessment, which also considered food bought in the supermarket, indicate that the consumption of local surface water and country foods does not present health risks to Athabasca Basin residents and is safe for consumption.*

## **1.0 INTRODUCTION**

### **1.1 Background**

The Eastern Athabasca Regional Monitoring Program (EARMP) is a joint, long-term environmental monitoring program established in 2011 under the Province of Saskatchewan's Boreal Watershed Initiative. The current program is supported by contributions from several stakeholders including Cameco Corporation, Orano Canada Inc., the Saskatchewan Ministry of Environment, and the Canadian Nuclear Safety Commission. One of the primary goals of the Boreal Watershed Initiative was to assess the ecological integrity of Saskatchewan's northern watersheds in order 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).

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.

Extensive amounts of environmental monitoring are completed near each uranium mining and milling operation in northern Saskatchewan, which are regulated by both federal and provincial agencies including Environment and Climate Change Canada, the Canadian Nuclear Safety Commission, and the Saskatchewan Ministry of Environment. In addition, community sampling occurred through the Athabasca Working Group (AWG) Environmental Monitoring Program for 18 years (2000-2017). The EARMP was designed to complement other monitoring programs and allows a more comprehensive evaluation of potential cumulative effects from industry in northern Saskatchewan.



Figure 1  
Study location.

The EARMP framework includes two programs: a community program and a technical program. The technical 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 program is presented in a separate report and sampling was last completed in 2015 ([www.earmp.com](http://www.earmp.com)). The community program was established to monitor the safety of traditionally harvested country foods by collecting and testing water, fish, berry, and mammal samples from the seven communities located in the Athabasca region. The community program results for the last seven years (2011-2017) can be viewed on the website at [www.earmp.com](http://www.earmp.com).

The objective of this document is to present a summary of the results of the monitoring program in 2017 with the incorporation of an updated Human Health Risk Assessment (HHRA) that was completed in 2018. A HHRA 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. Through the completion of a HHRA it is possible to answer one of the questions of the EARMP community program: are country foods safe to eat?

### **1.1.1 Uranium Mining and Milling Operations in the Region**

There are four active uranium mines in the Eastern Athabasca region. These include Key Lake, McArthur River, McClean Lake, and Cigar Lake. 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 in the local study areas generally includes testing the air, soil, vegetation, water, sediment, benthic invertebrates, and fish (Arcadis 2015; AREVA 2016; CanNorth 2016; EcoMetrix 2015a, 2015b). These sampling programs are designed specifically for each mine and are a requirement under the provincial operating licence and the CNSC License Condition Handbook.

### **1.1.2 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 community study areas.

## **1.2 EARMP Community Program Objectives**

The EARMP community program was developed to address potential concerns about the safety of country foods that community members routinely consume. Country 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). Country food studies in Hatchet Lake and Uranium City have established that fish, berries, and wild game are important food sources for communities located in northern Saskatchewan (CanNorth 1999, 2011). In this way, the EARMP community program provides important information to the residents of northern Saskatchewan.

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 as well as 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.

## **1.3 Summary of EARMP Community Program Framework**

### **1.3.1 Community Involvement**

The community monitoring program relies on the participation of community members for the selection of sampling locations and 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 foods sampling for the EARMP. Community members were selected from each community and provided training in the collection 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 could be determined.



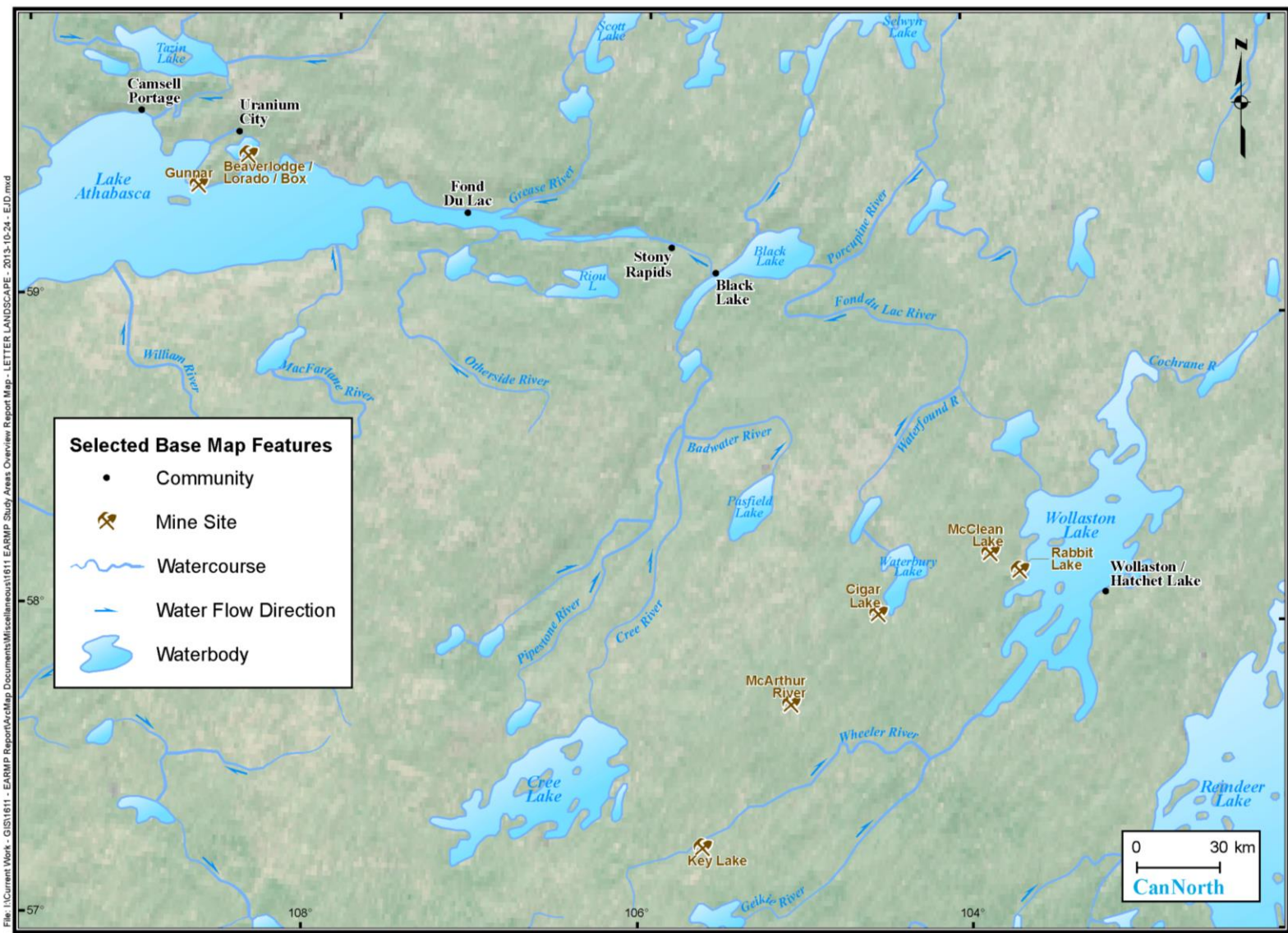


Figure 2  
Study area overview.

The collection of country food samples is carried out in one of two ways: either independently by the community member or in conjunction with a representative of CanNorth, who is responsible for the management of the program.

### **1.3.2 Communications Program**

Communicating the yearly monitoring results is one of the primary goals of the EARMP community program. In order to accomplish this communication and engagement strategies are implemented yearly and are summarized below.

#### **EARMP Promotions**

The EARMP website continues to be the primary promotional strategy used to inform community members on upcoming events and reports that are available. The website is routinely updated with any new event pictures, information on community visits, sampling programs, and maps. The website ([www.earmp.ca](http://www.earmp.ca)) also contains a wealth of information about the project objectives, contact information, downloads and data files, as well as links to other websites such as the stakeholders. Promotional materials including hats, toques, fish hooks, coffee mugs, and water bottles are often shipped to communities for fish derbies and community events.

Additional promotional materials include free EARMP calendars in English, Cree, and Dene that are shipped to the Athabasca communities and other northern communities once a year and circulated through the band offices, community health centers, post offices, and schools. Ads are also posted in Opportunity North magazine throughout the year, which is distributed throughout the north and includes information about the program as well as contact information for those who have any questions or concerns. In early 2017, EARMP participated in an interview on MBC radio to discuss the program. MBC radio reaches over 70 communities across northern Saskatchewan.

#### **Northern Saskatchewan Environmental Quality Committee (NSEQC)**

As an advisory committee of the provincial government, the NSEQC gives northerners a voice on environmental, socio-economic, and Occupational Health and Safety (OH&S) issues in regards to the northern Saskatchewan uranium industry (from exploration to decommissioning) as well as other industries as the need arises. Although not a

regulatory body, the NSEQC is a well informed and well respected group which assists in the free flow of information and understanding among communities, industry, and government. The committee is composed of trusted and knowledgeable people each nominated by his/her community, and are a bridge between northerners, government, and industries operating in northern Saskatchewan. The main responsibility of NSEQC representatives is to bring community issues, concerns, and recommendations to this forum and in turn to bring information, decisions, and directions back to their communities.

The EARMP results were presented to the NSEQC members from 2012 to 2015 and most recently in 2017 at a Uranium 101 workshop in La Ronge. The presentation provided an opportunity to facilitate the communication of the results of the program and to answer any questions, concerns, or suggestions of community members in relation to the monitoring program.

Moving forward EARMP is committed to engaging with the NSEQC membership in order to update community representatives on the results of the program.

### **Science Ambassador Program**

Over the years additional engagement activities have included the sponsorship of the Science Ambassador Program through the University of Saskatchewan (U of S). The Science Ambassador Program pairs senior university science, engineering, and health science students with rural and remote Aboriginal community schools, to support creative and culturally-relevant science teaching and learning. Science Ambassadors work alongside teachers to present hands-on science activities, facilitate class discussions, and mentor students exploring possibilities for careers and continuing science education.

From 2014 to 2016, EARMP sponsored the communities with schools in the Athabasca region. With the permission of the local school principal/teacher and working with the U of S Science Ambassador Program, a science lesson was developed around the environmental monitoring that currently takes place across northern Saskatchewan. EARMP worked with the program by working with elders in three communities providing lake trout for classroom fish dissections. EARMP also sponsored the purchase of digital field microscopes for three Athabasca Basin communities involved in the

Science Ambassador Program (for more details on the program visit [www.artsandscience.usask.ca/scienceoutreach/](http://www.artsandscience.usask.ca/scienceoutreach/)).

### **1.3.3 Study Design and Objectives of the 2017/2018 Program**

The specific objective of the 2017/2018 EARMP community monitoring program was to focus on collecting country foods to fill in gaps in country food types from previous monitoring years. The samples gathered by community members in the fall and winter of 2017 along with data collected since 2011 was utilized to update the Human Health Risk Assessment (HHRA) that was last completed using the available 2011 and 2012 data for the Athabasca region. A full description of the EARMP community monitoring framework is provided in CanNorth 2015 ([www.earmp.com](http://www.earmp.com)).

In 2017, samples collected included water, snowshoe hare, and spruce grouse chemistry from the Athabasca communities. As discussed above, sample selection and collection was completed directly by, or with the assistance of, community residents. 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, local stakeholders, as well as other monitoring programs (see Table 1 below).

A summary of the chemistry results from the country foods tested over the years are compared to available guidelines, regional reference range, and to levels of chemicals measured as part of the baseline. Comparing the results of the EARMP community program to available guidelines and regional reference data is valuable because although most foods contain detectable levels of environmental chemicals, they are not necessarily a concern to human health. For some country food types (mammal organs, snowshoe hare, and spruce grouse) there are no available guidelines, baseline, or regional reference ranges available for comparison. The HHRA considers these country foods types as well as all of the EARMP data gathered between 2011 and 2017 in an updated HHRA and is presented in Appendix C.

**Table 1**  
Chemicals assessed for the EARMP community program.

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 uranium mining and milling operations.

## 1.4 Report Structure

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

- 1.0 Introduction
- 2.0 Water Chemistry
- 3.0 Fish Chemistry
- 4.0 Berry Chemistry
- 5.0 Mammal Chemistry
- 6.0 Other Chemistry
- 7.0 Summary

Appendix A presents a summary of the chemistry results, while the detailed raw data are provided in Appendix B. The detailed HHRA is provided in Appendix C.

## 2.0 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) and 2013, 2014, and 2017. 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 (SRC) analytical laboratory for chemical analysis. The summary water quality data is presented in Appendix A, Figure 1; Table 1 and summarized below. The raw water quality data is presented in Appendix B, Table 1.

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 (HC 2012) and the Canadian Water Quality guidelines for the protection of freshwater aquatic life (CCME 2018). The only exception was cadmium in the water from Wollaston Lake in 2017 which slightly exceeded the CCME guideline for aquatic life yet remained well below the drinking water quality guideline. Additionally, the majority of the chemical concentrations were within the range of concentrations expected for the region and the baseline assessment.

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 for consumption.



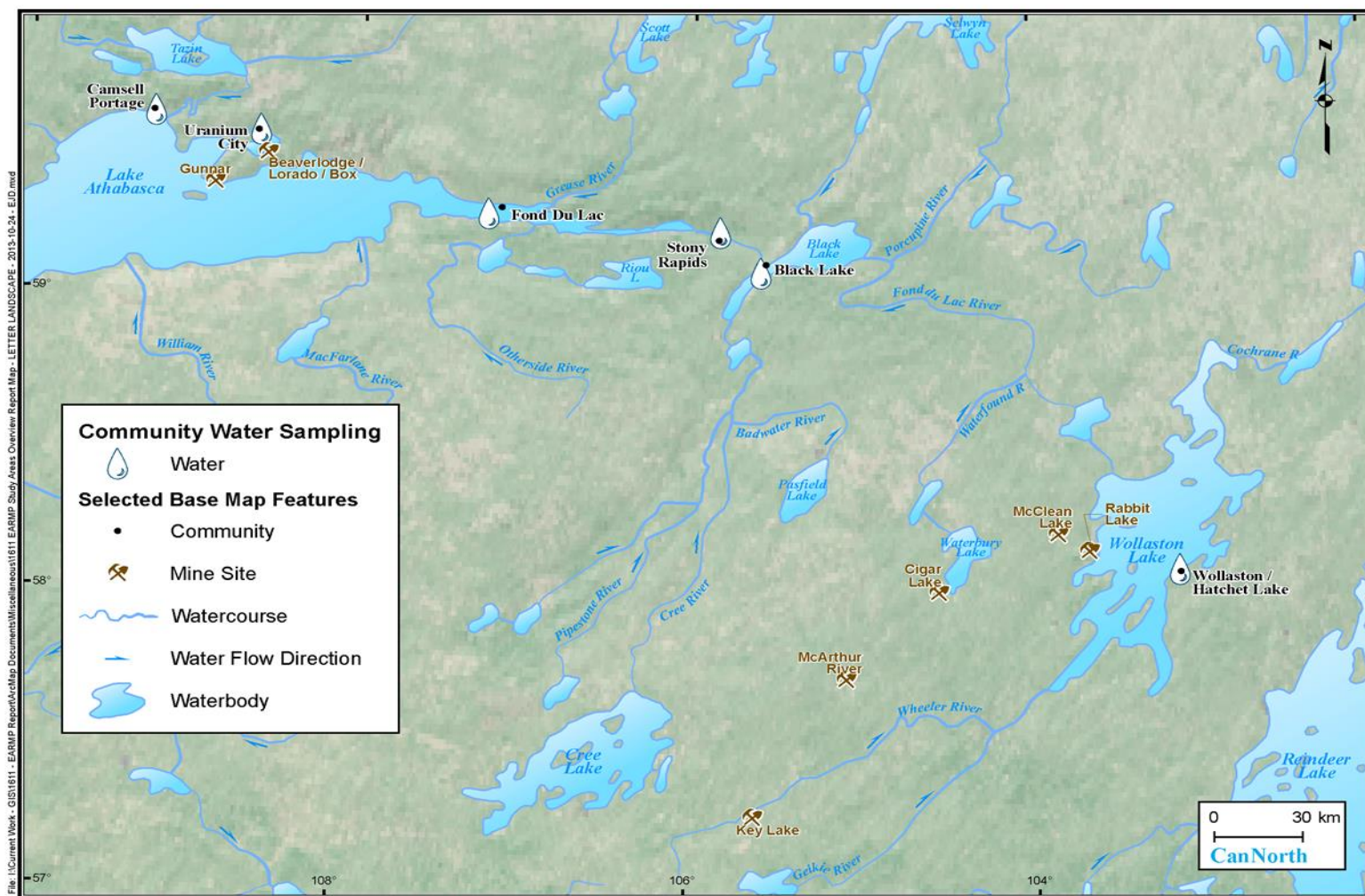


Figure 3.  
Water quality sampling areas, 2011 to 2017.

### 3.0 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 from the all communities included lake trout, lake whitefish, and northern pike from two communities (Figure 4). Fish chemistry samples were collected in 2011-2012 (baseline) and in 2013, 2014, and 2016, but not in 2017.

Ageing structures (otoliths<sup>1</sup>) were removed and submitted to North Shore Environmental to determine the age of the fish. The fish flesh was then submitted to SRC for chemical analysis. The summary data is presented in Appendix A, Figures 2 to 4. The summary of the raw fish chemistry data is provided in Appendix B, Table 2.

Overall, the levels of chemicals assessed in the fish collected from the communities over the years are considered low, and based on the HHRA the consumption of fish does not present health risks to Athabasca Basin residents and are safe to eat.

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<sup>1</sup>Otoliths are calcified structures that fish use for balance and orientation. They can be used to age some species of fish.



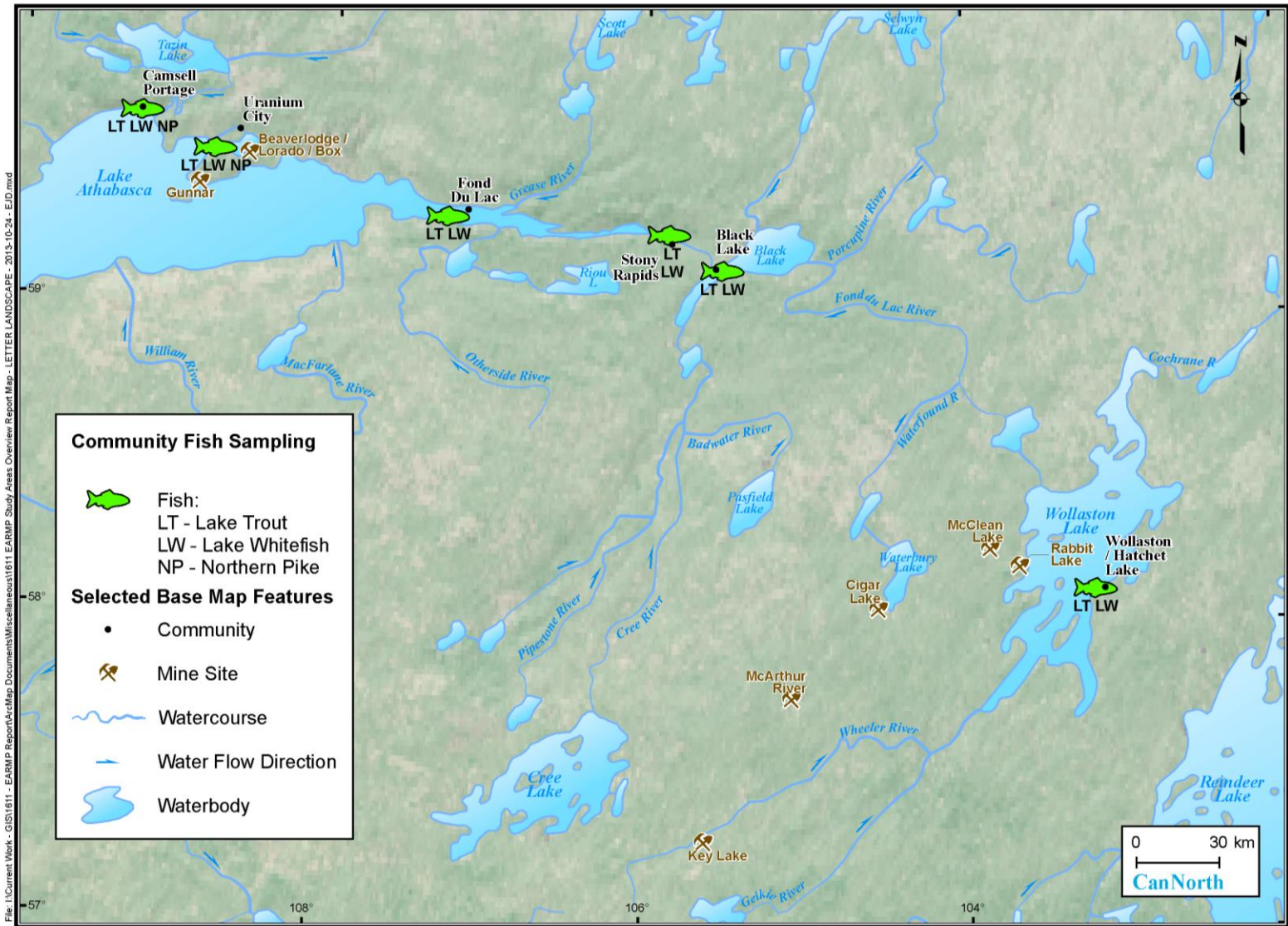


Figure 4  
Fish chemistry sampling areas, 2011 to 2017

#### **4.0 BERRY CHEMISTRY**

Near each study community, berry samples are hand-collected by local community members independently or with the aid of CanNorth personnel. 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, but not in 2017.

A summary of the EARMP community program berry chemistry results is presented in Appendix A, Figures 6 and 7; Table 3 and 4 and the raw chemistry is provided in Appendix B, Tables 3 and 4.

Overall, the levels of chemicals assessed in blueberries and bog cranberries collected from the communities are considered low, and based on the HHRA the consumption of berries do not present health risks to Athabasca Basin residents and are safe to eat.

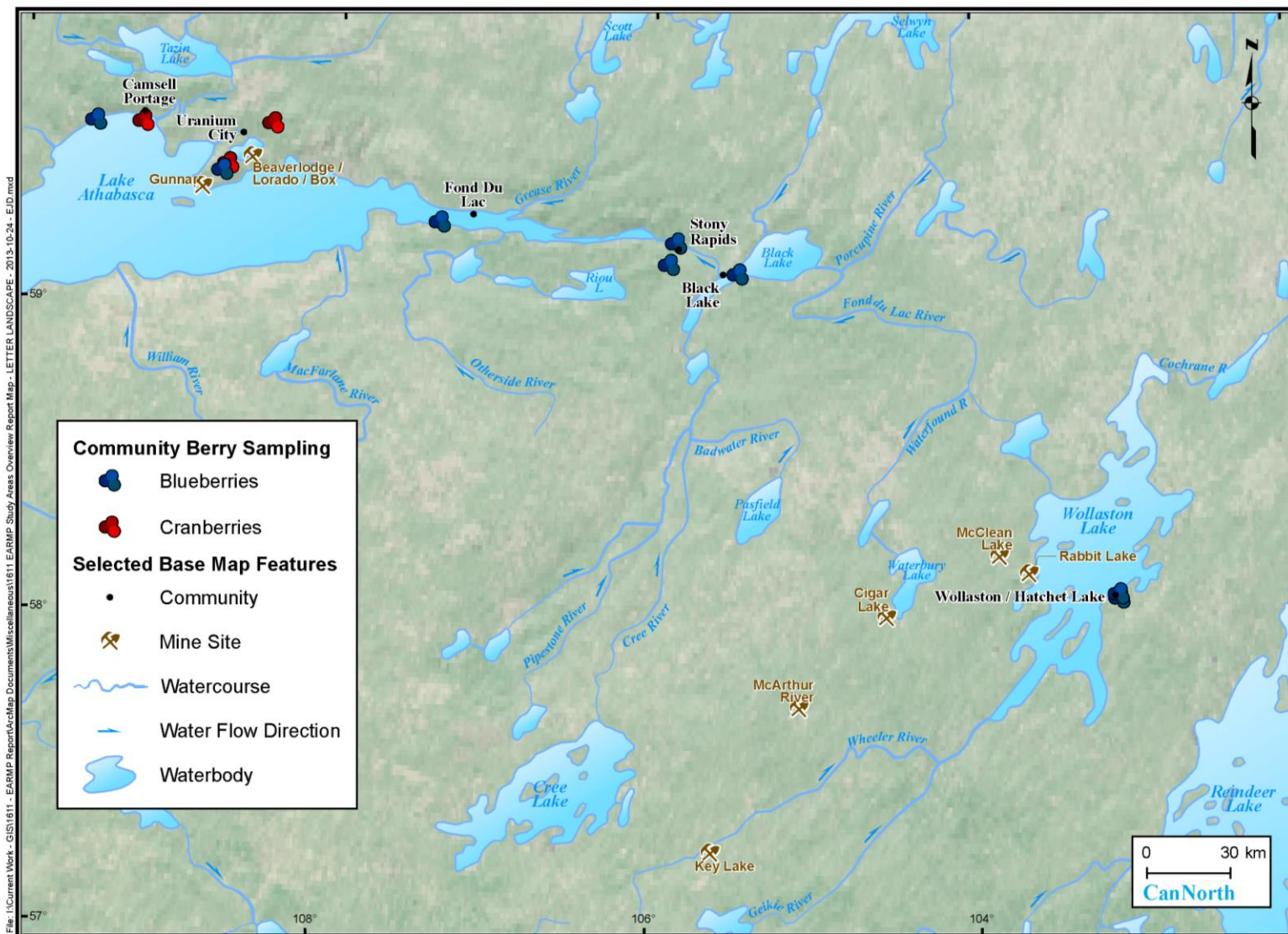


Figure 5  
Berry chemistry sampling areas, 2011 to 2017.

## 5.0 MAMMAL CHEMISTRY

Mammal samples have been collected by local community members during their routine hunting activities for the EARMP program. Two main species that are commonly hunted and consumed in northern Saskatchewan are targeted; barren-ground caribou and moose. Once samples were received from the communities they were submitted by CanNorth to SRC for chemical analysis.

Although barren-ground caribou samples were collected from most communities, it should be noted that several communities hunt in the same general area but hunting locations do vary from year to year and with species availability. The moose flesh samples that have been collected since the program began are primarily from the communities of Uranium City and Camsell Portage (Figure 6). Mammal chemistry samples were collected in 2011-2012 (baseline), and in 2013, 2014, 2015, and 2016, but not in 2017.

A summary of the past EARMP community program mammal chemistry results is presented in Appendix A, Figures 8 and 9; Tables 5 and 6 and the raw chemistry is provided in Appendix B, Tables 5 and 6.

Overall, the levels of chemicals assessed in moose and barren-ground caribou collected from the communities over the years are considered low, and based on the HHRA their consumption does not present health risks to Athabasca Basin residents and is safe to eat.



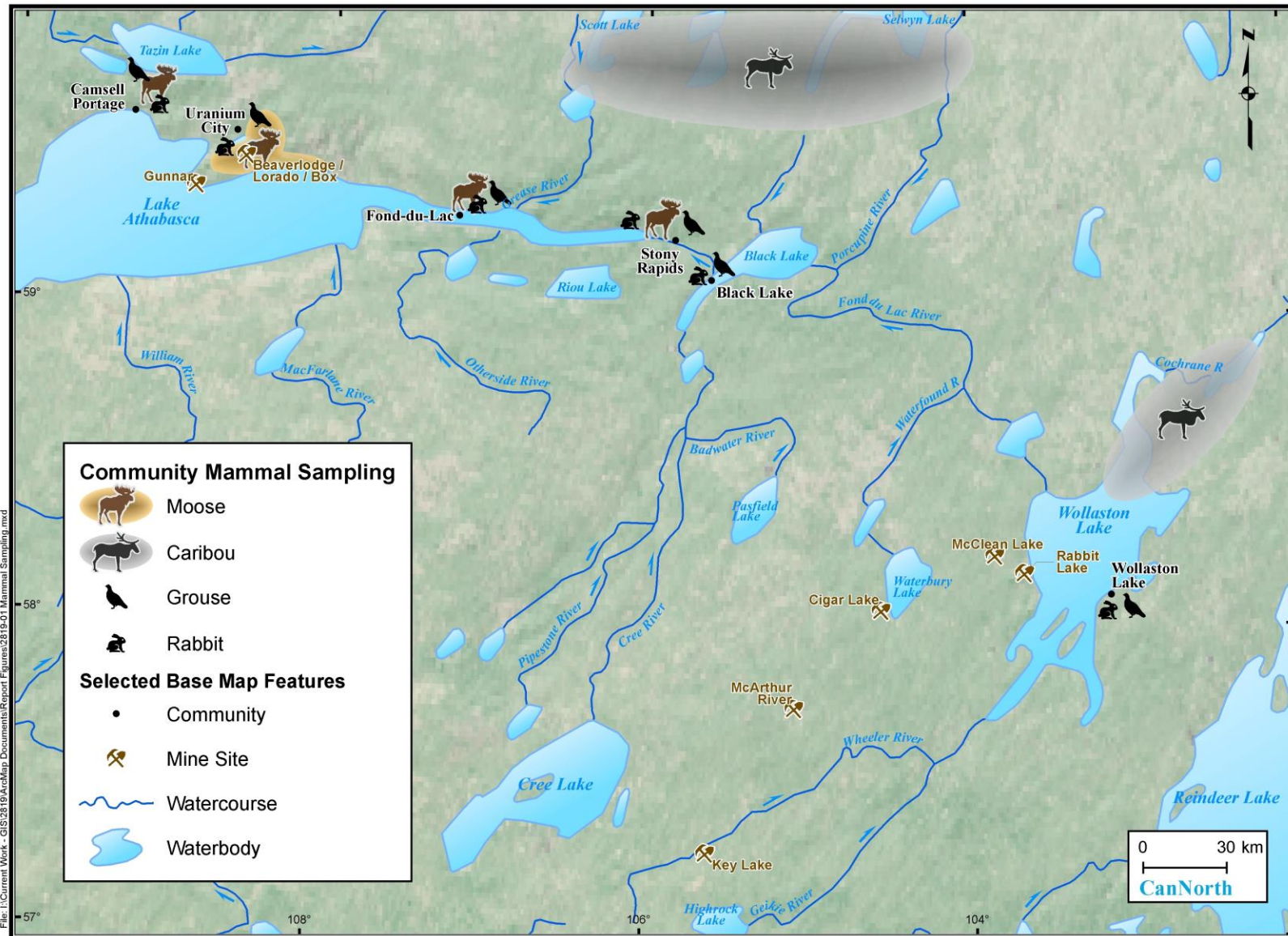


Figure 6  
Mammal and bird chemistry sampling areas, 2011 to 2017.

## 6.0 OTHER CHEMISTRY

During past monitoring years, samples have focused on mammals including moose and barren-ground caribou flesh samples. Beginning in 2014, EARMP started collecting moose and barren-ground caribou organ samples (heart, liver, and kidney) as requested by some communities as they are also consumed. Over the years (2014-2016) a total of thirteen barren-ground caribou and fourteen moose organ samples were submitted for analysis. These data have been utilized in the HHRA as they form part of the diet of Athabasca basin residents. These data are presented in Appendix A, Table 6 and the detailed data are presented in Appendix B, Table 7.

Spruce grouse and snowshoe hare were also cited an important country food for Athabasca basin residents, and limited chemistry data were available for the region. To fill these country foods data gaps for the HHRA spruce grouse samples and additional snowshoe hare samples were collected from the communities in 2017 (Figure 6). All of the samples were acquired from local residents who obtained these samples during routine hunting activities in and surrounding their communities in the fall of 2017. Samples were shipped frozen to CanNorth in Saskatoon and then submitted to SRC Analytical Laboratories for analysis. No comparisons are available to regional reference or baseline due to the limited number of samples available in the region. Additional details regarding chemical exposure to people that consume ungulate organs, snowshoe hare, and spruce grouse is included in the HHRA presented in Appendix C.

In addition, to the ungulate mammal chemistry, snowshoe hare samples were submitted by community members in 2011 (baseline), 2014 and 2017. These data are presented in Appendix A, Tables 8 and 9 and Appendix B, Table 8. Generally they indicate low levels of most chemicals (near or below detection limits) and are comparable between the communities.

A total of sixteen spruce grouse samples were submitted in 2017 from four of the six communities. Elevated lead levels in multiple spruce grouse samples (Appendix B, Table 9) illustrate the importance of using steel shot for hunting, rather than lead shot, to limit exposure to lead contamination. Lead shot for hunting most migratory game birds (waterfowl) is banned in Saskatchewan; however, lead shot remains legal for grouse, ptarmigan, and other upland species, and lead ammunition continues to be used commonly for hunting large game in Saskatchewan. It is recommended that hunters use

ammunition alternatives that are not prone to fragment (non-lead) including steel, copper or bismuth, or other high-weight retention ammunition alternatives.

Based on the HHRA completed in 2018 the consumption of ungulate organs, snowshoe hare, and spruce grouse collected from the communities do not present health risks to Athabasca Basin residents and are safe to eat.

## 7.0 SUMMARY

The 2011 through 2017 EARMP community programs included sampling water and country foods (fish, berries, mammals, organs, and birds) from the six Athabasca communities. The levels of chemicals were generally found to be low in the majority of the samples, within the regional reference range and similar to baseline levels.

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). Several health benefits of consuming traditional country foods have been documented across northern Canada and Saskatchewan. 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). Fish are an important part of a healthy diet containing high-quality protein, Vitamin B, Vitamin D, omega-3 fatty acids, other essential nutrients (PHU AHA 2014). In addition, northern Saskatchewan fish have substantially lower levels of saturated fat, compared to store bought chicken and ground beef (PHU AHA 2014). Wild game meat such as moose and caribou are an important source of vitamins, minerals, and protein and has less saturated fat than store bought meats (PHU AHA 2005; 2014). Overall, northern Saskatchewan caribou, moose, and rabbit are low calorie, nutrient dense, healthy servings of meat and meat alternatives (PHU AHA, 2014).

An updated HHRA was completed (Appendix C) to evaluate the risks associated with eating country foods and drinking water based on samples collected from EARMP from 2011 through 2017. The detailed results of the risk assessment, which also considered food bought in the supermarket, indicate that traditional harvesting of country foods does not present health risks to Athabasca Basin residents. Water and country foods sampled and assessed as part of the last seven years of the EARMP community program are considered safe for consumption.



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## APPENDICES

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Appendix B Detailed Data

Appendix C Human Health Risk Assessment

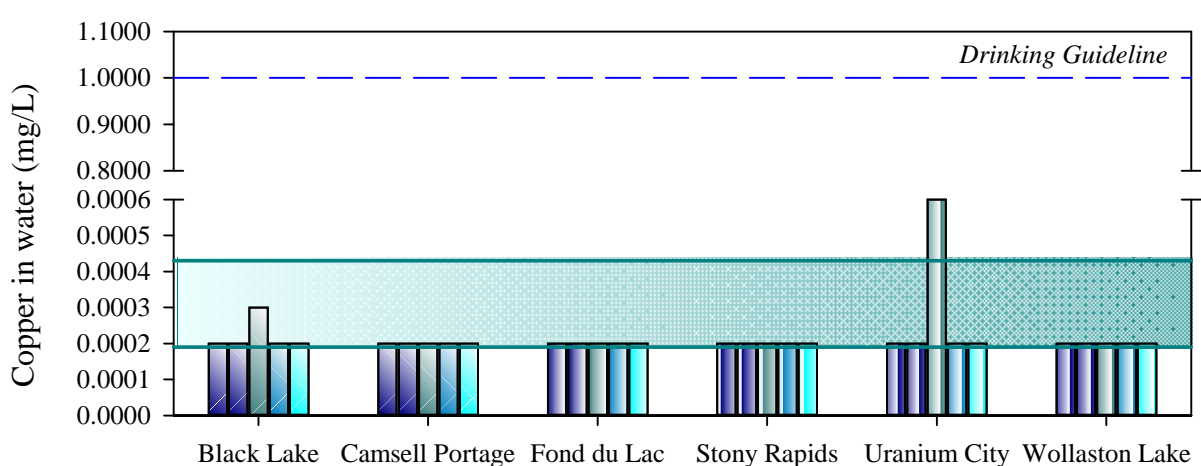
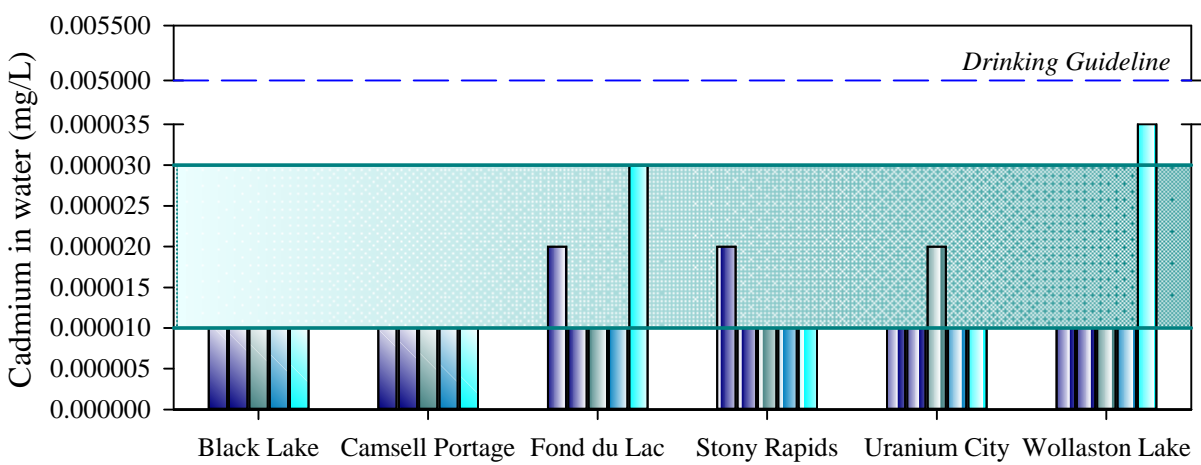
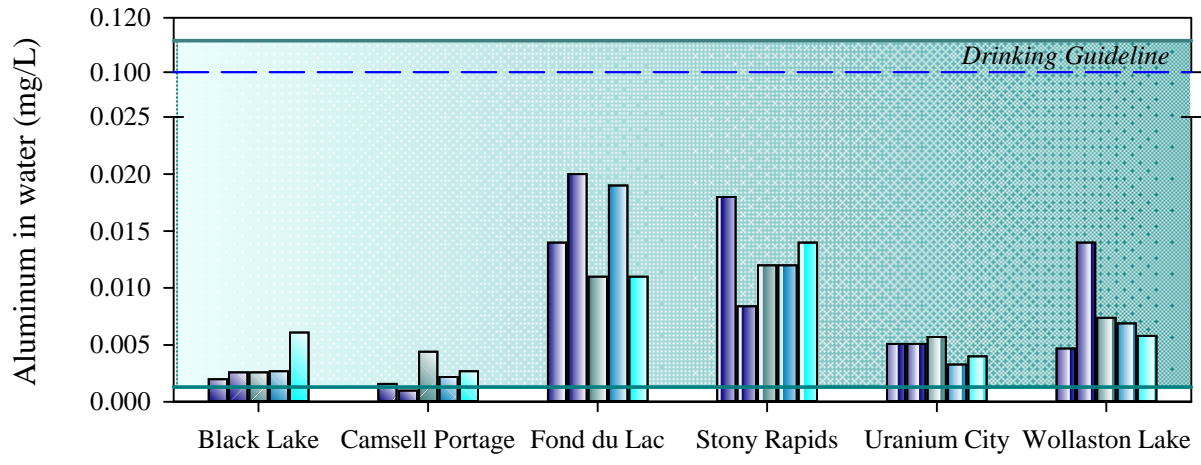
APPENDIX A

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SUMMARY DATA

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- Figure 8. Chemicals in barren-ground caribou from the EARMP community study area, 2011 to 2017.
- Figure 9. Chemicals in moose from the EARMP community study area, 2011 to 2017.



Baseline
  2013
  2014
  2017
  Regional Reference Range

Figure 1. Chemicals in water from the EARMP community study areas, 2011 to 2017.

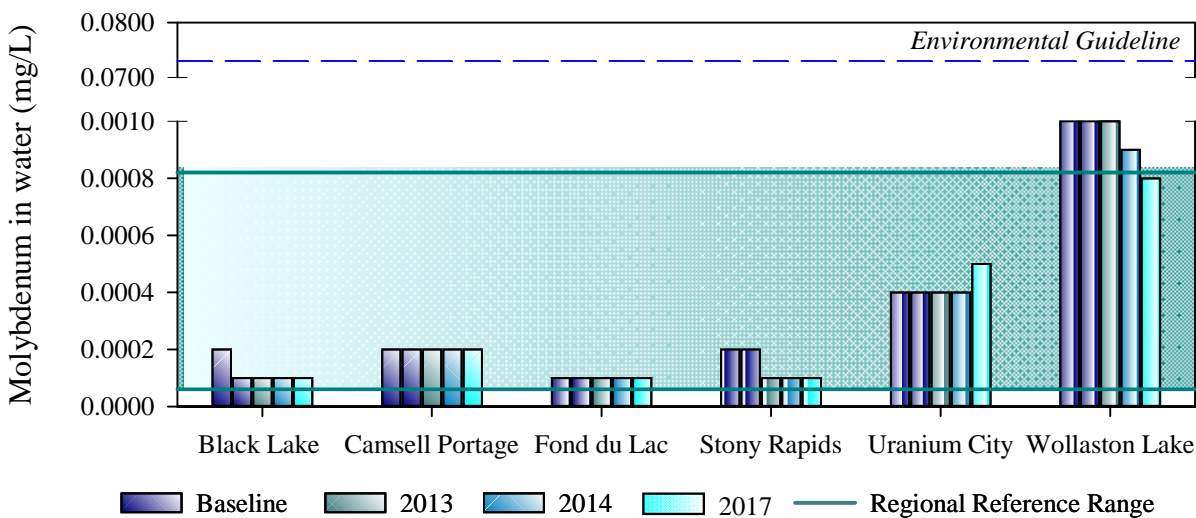
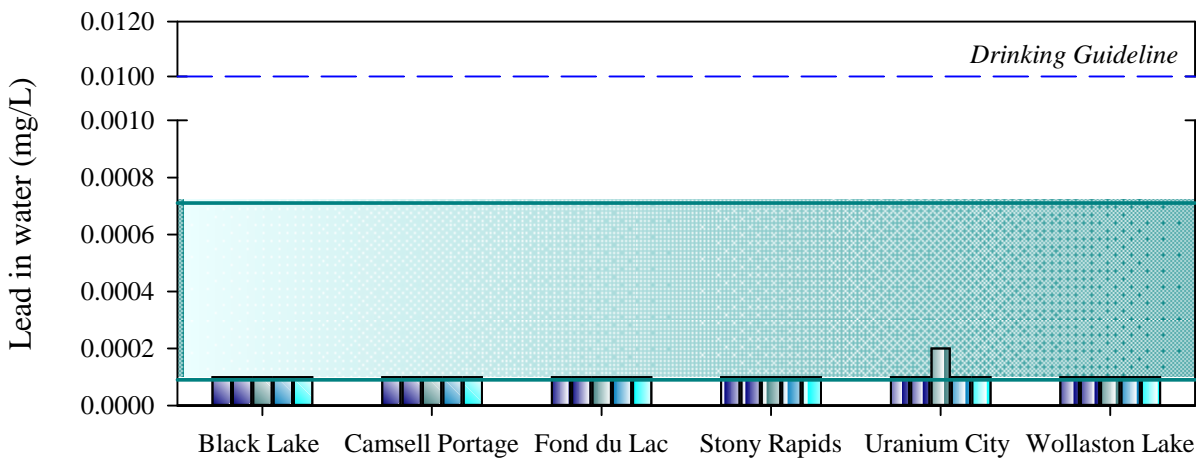
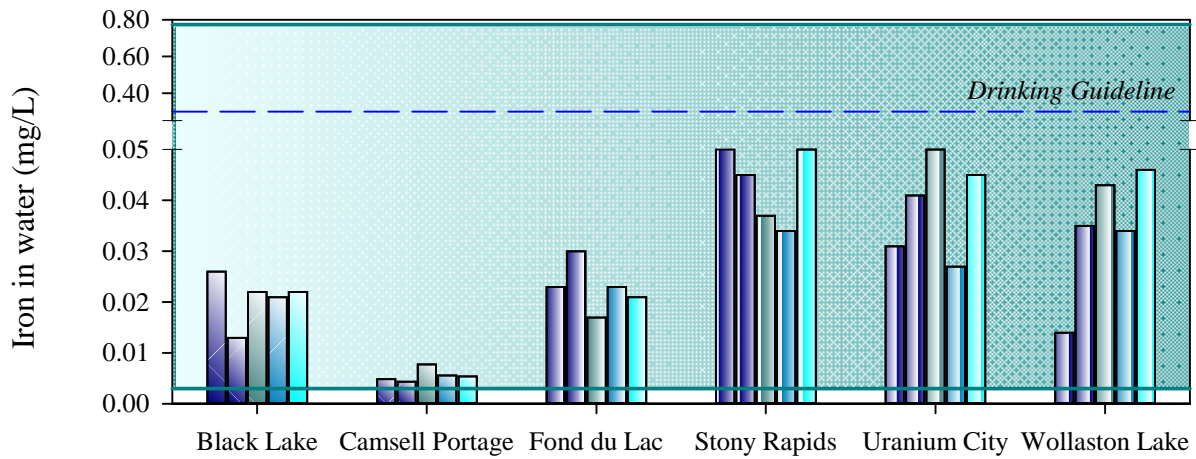


Figure 1.

Chemicals in water from the EARMP community study areas, 2011 to 2017.



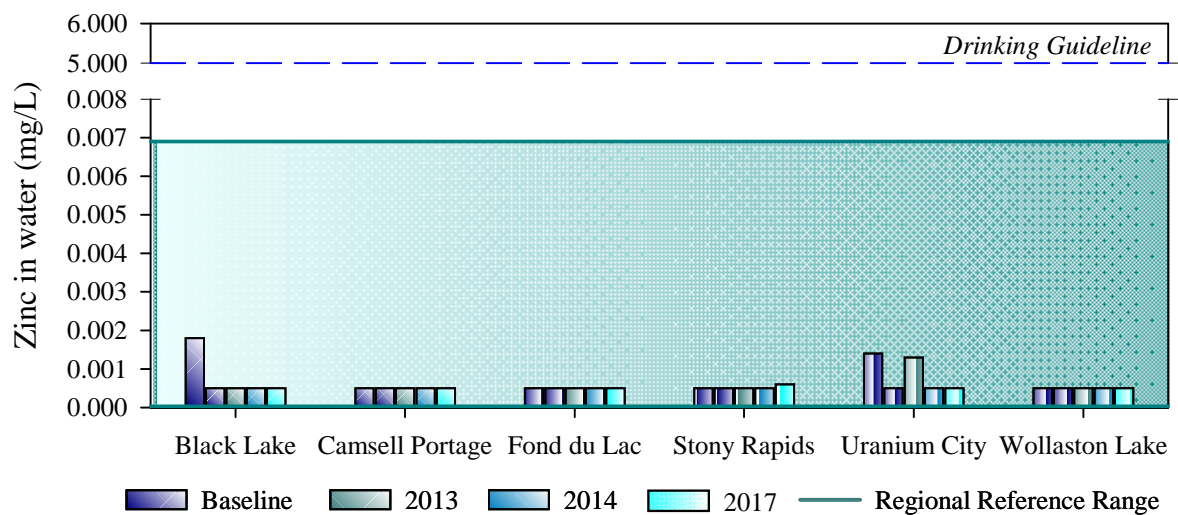
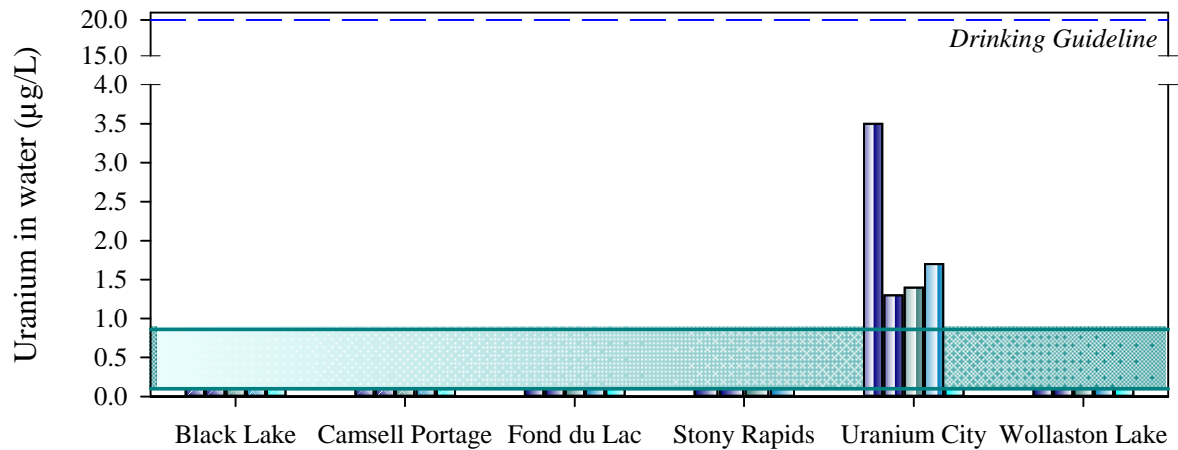
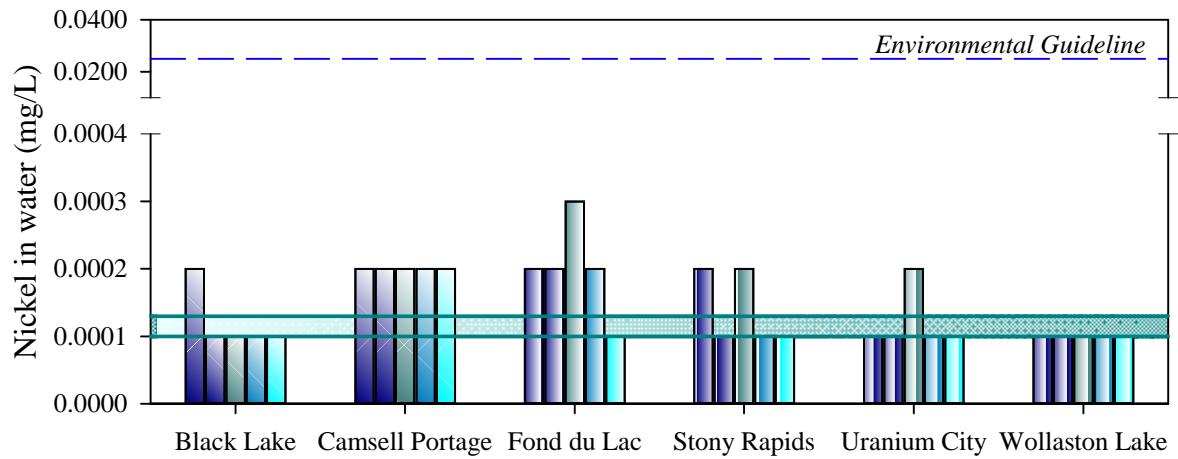


Figure 1. Chemicals in water from the EARMP community study areas, 2011 to 2017.

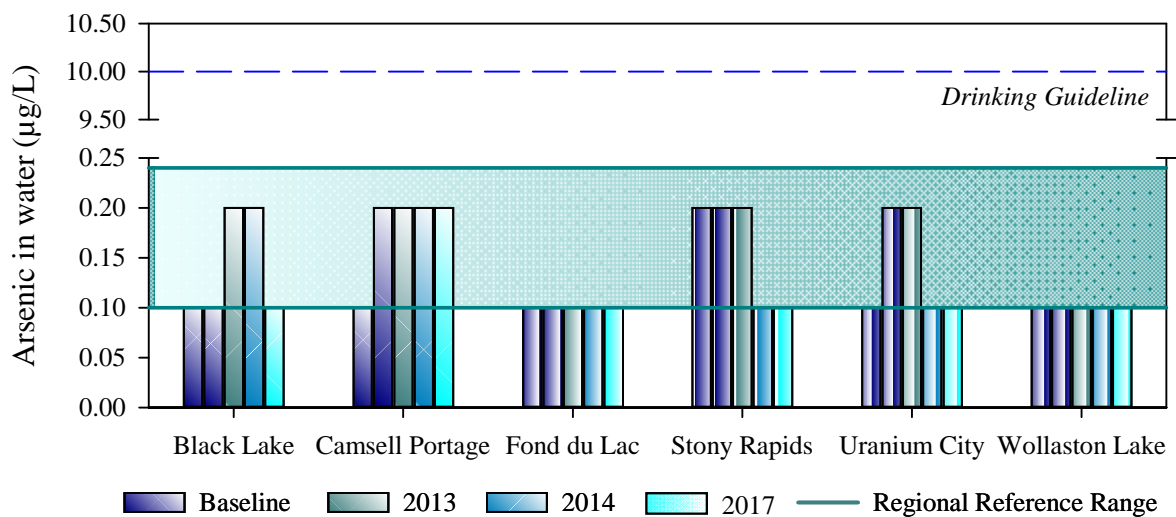
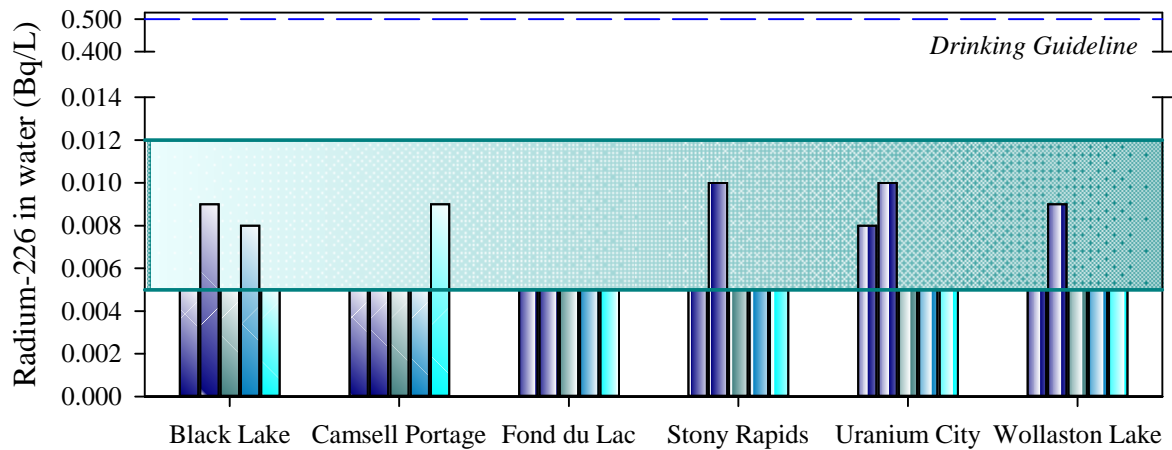
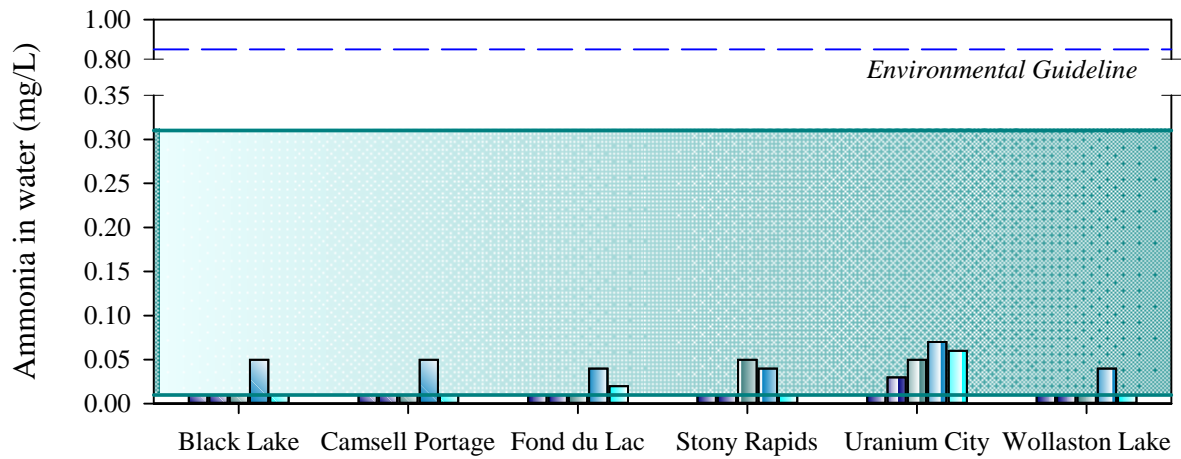


Figure 1. Chemicals in water from the EARMP community study areas, 2011 to 2017.

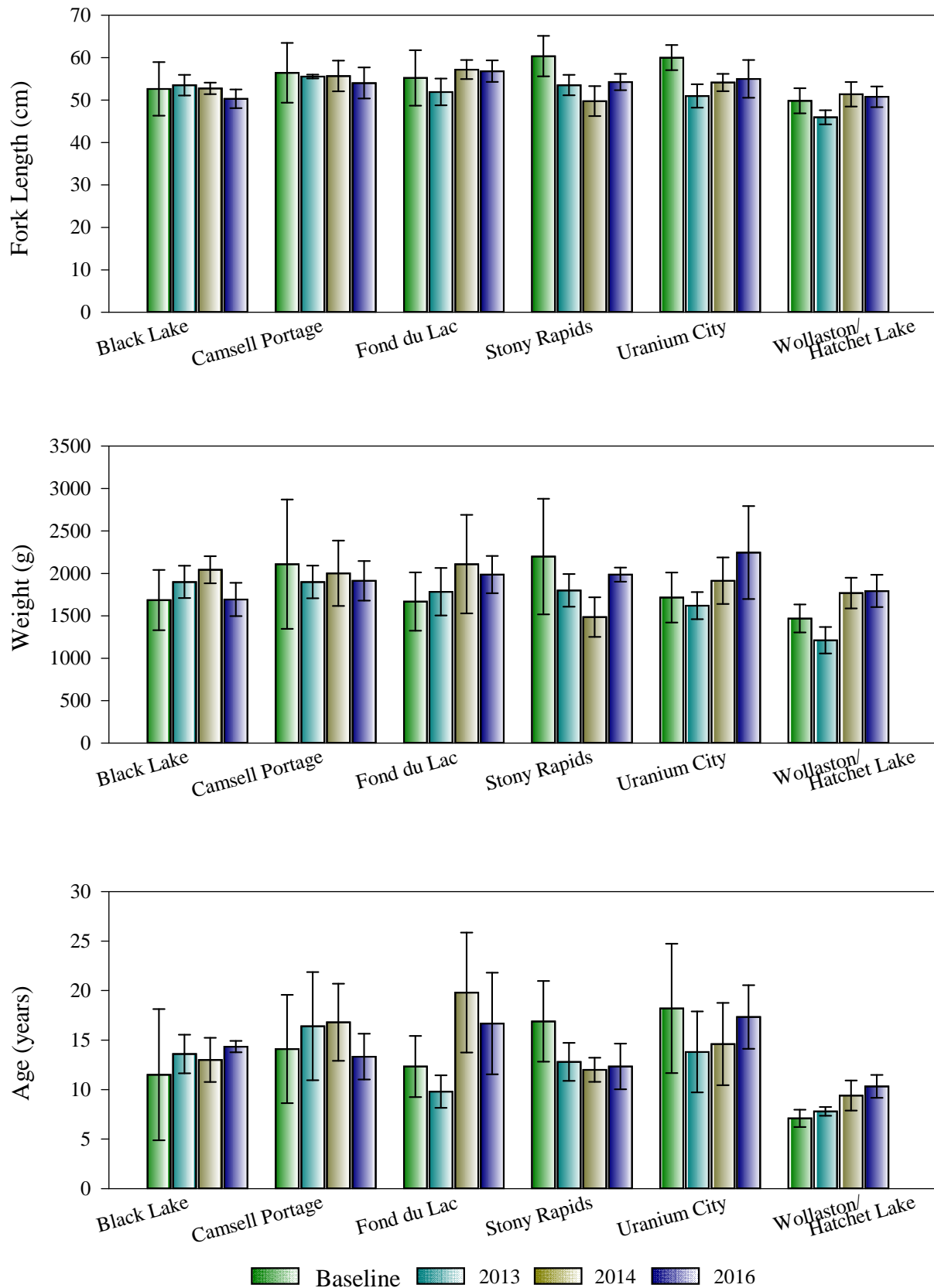


Figure 2. Lake trout length, weight, and age, 2011 to 2017.

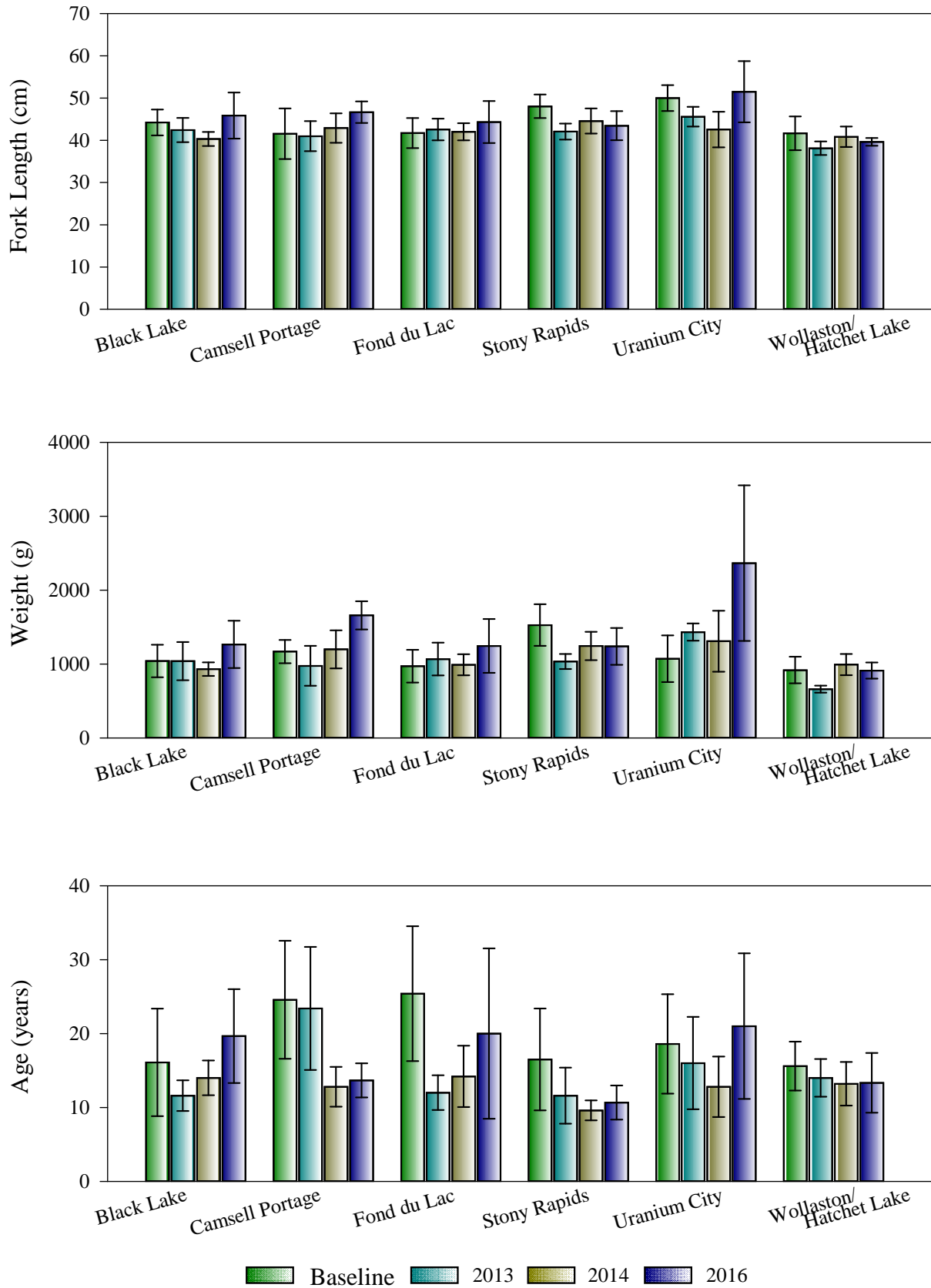


Figure 3. Lake whitefish length, weight, and age, 2011 to 2017.

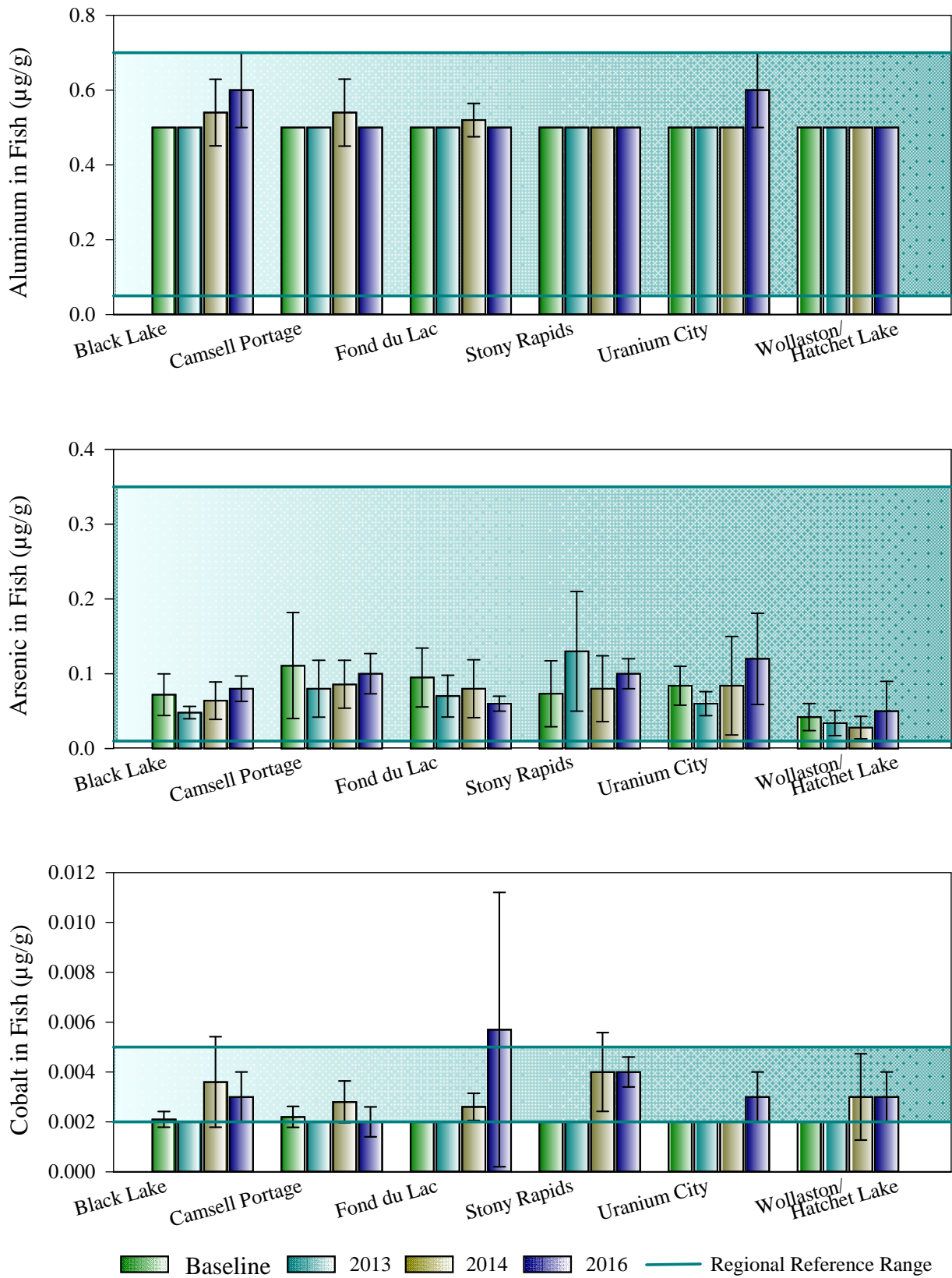


Figure 4. Chemicals in lake trout from the EARMP community study areas, 2011 to 2017.



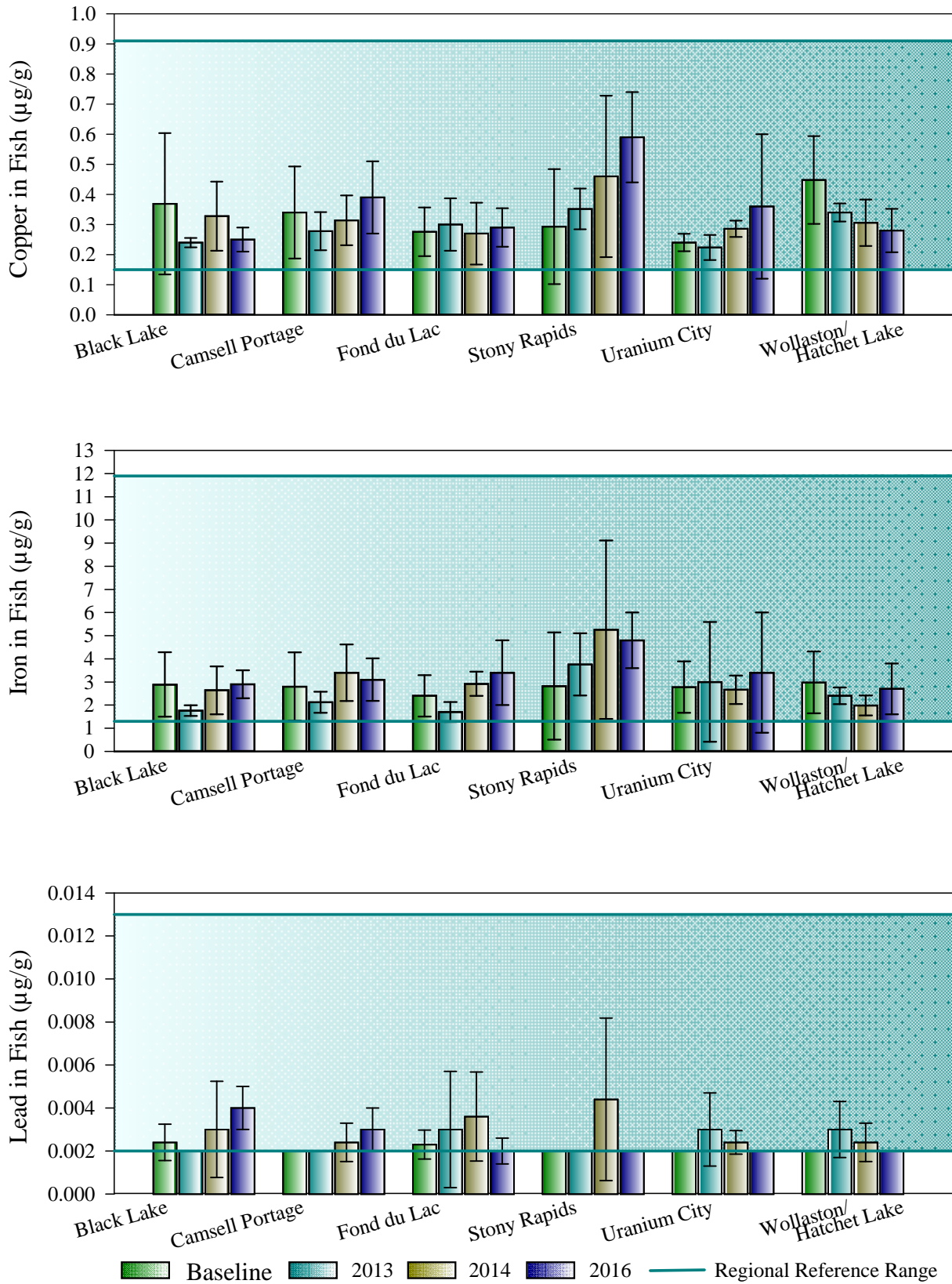


Figure 4. Chemicals in lake trout from the EARMP community study areas, 2011 to 2017.

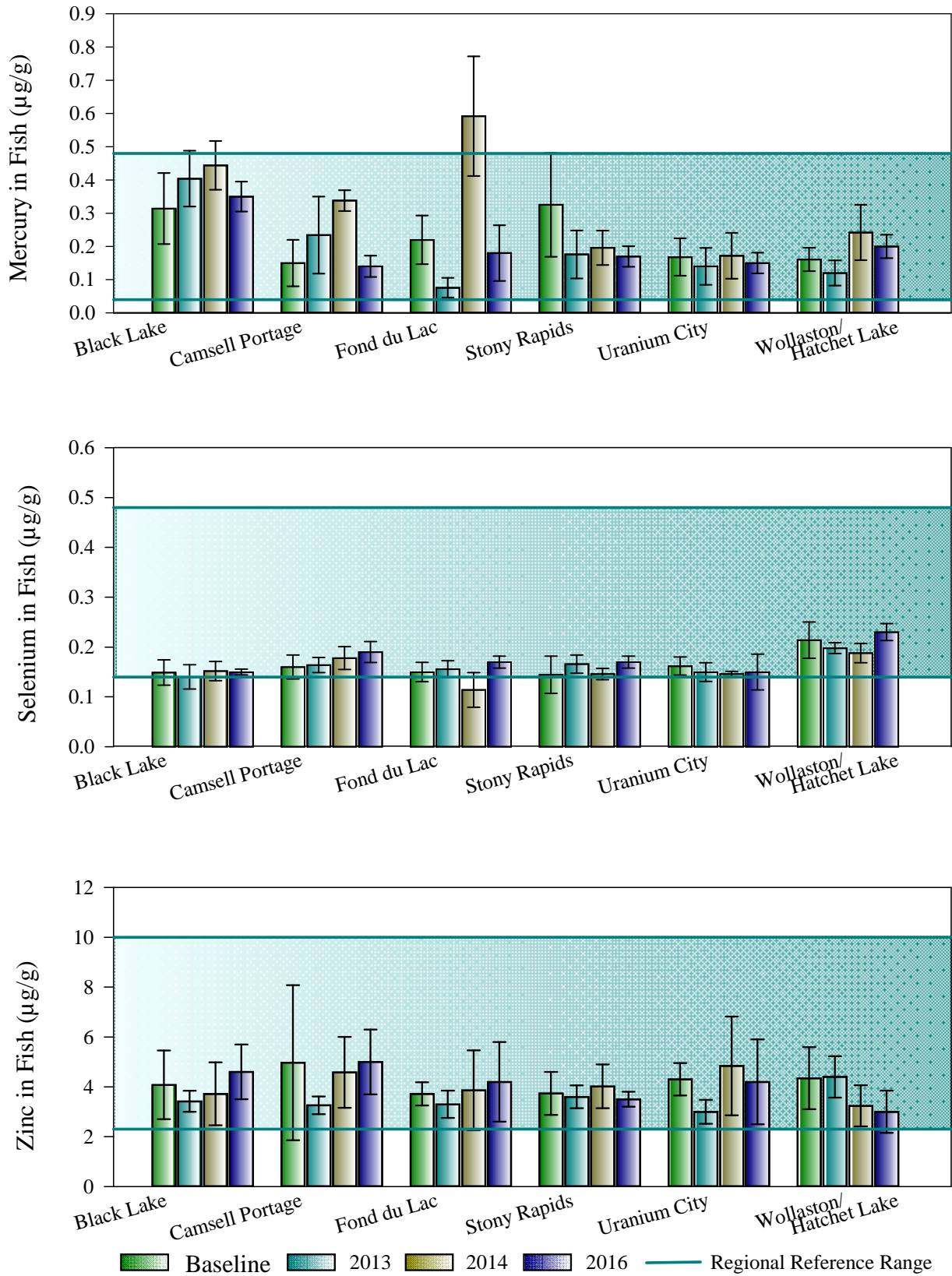


Figure 4. Chemicals in lake trout from the EARMP community study areas, 2011 to 2017.

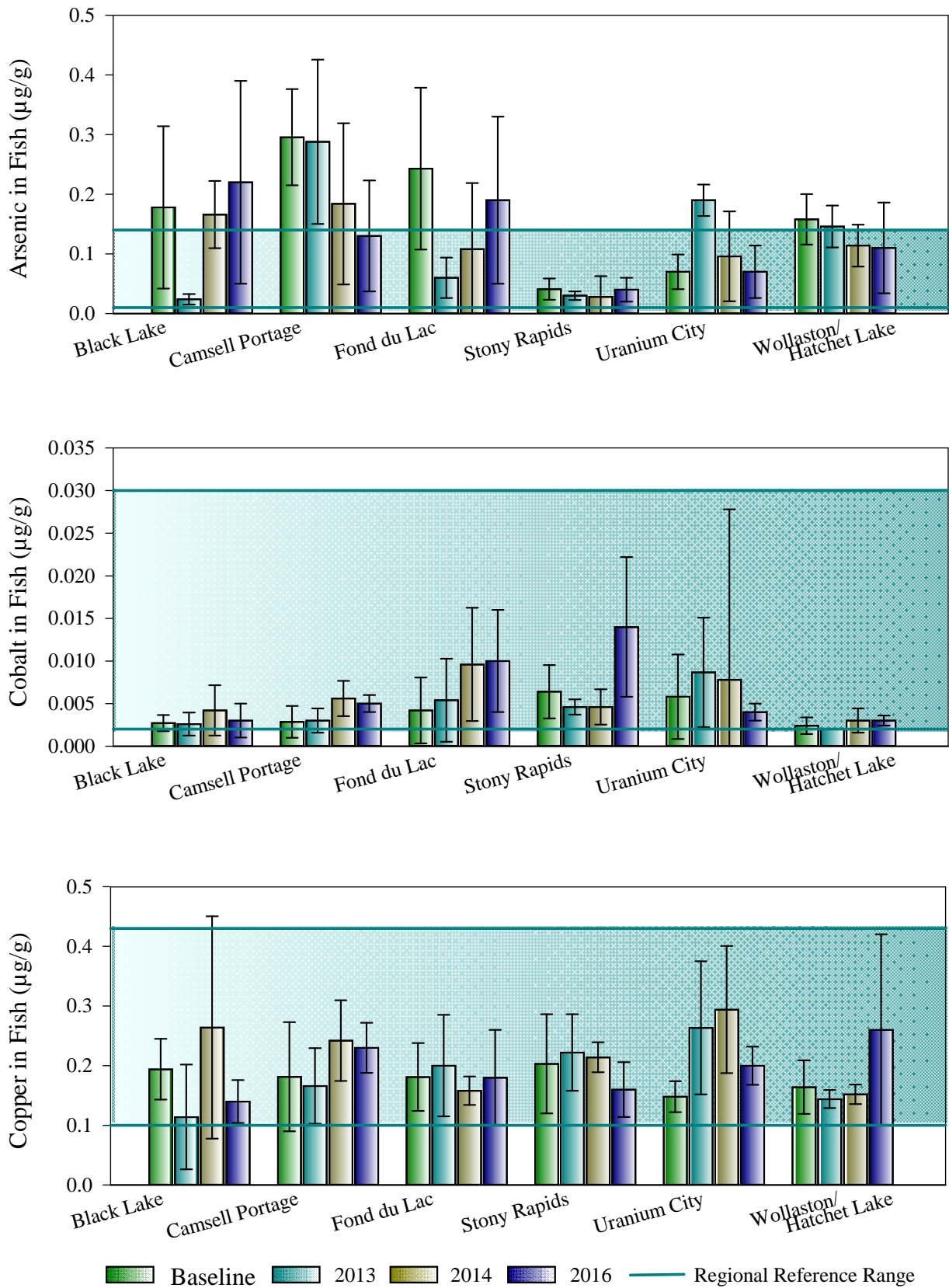
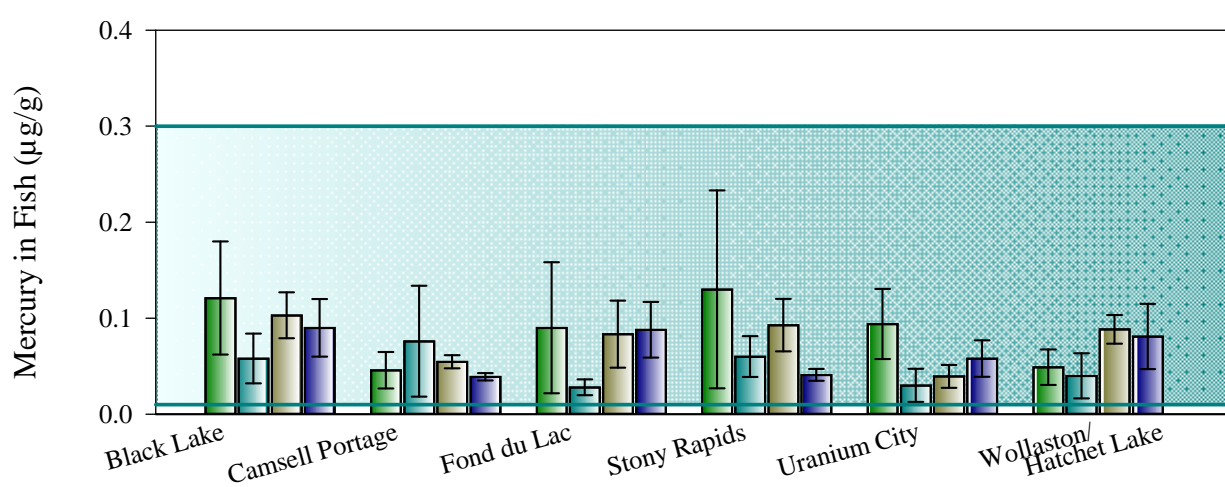
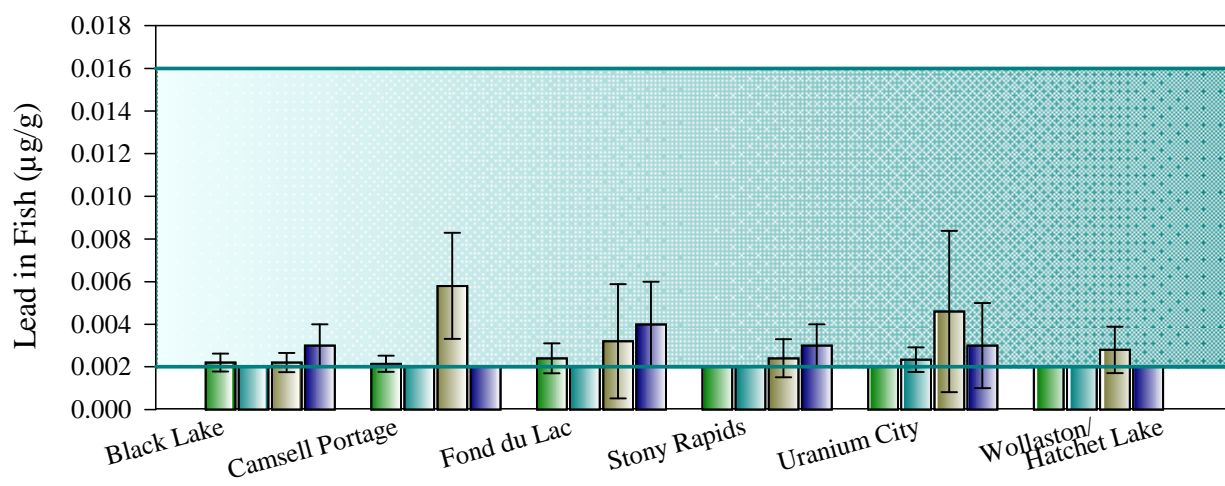
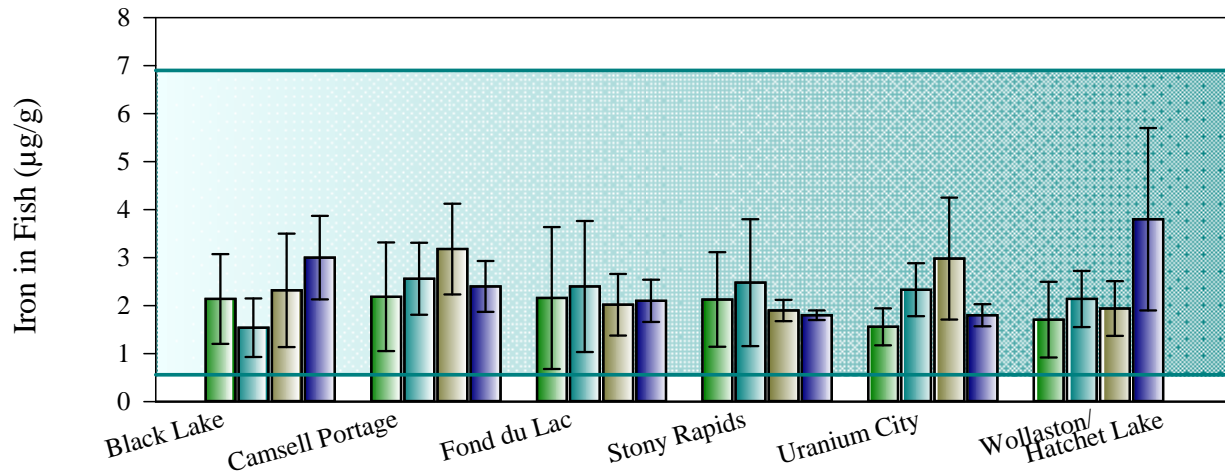


Figure 5

Chemicals in lake whitefish from the EARMP community study area, 2011 to 2017.





Baseline
  2013
  2014
  2016
  Regional Reference Range

Figure 5  
 Chemicals in lake whitefish from the EARMP community study area, 2011 to 2017. Page 2 of 4

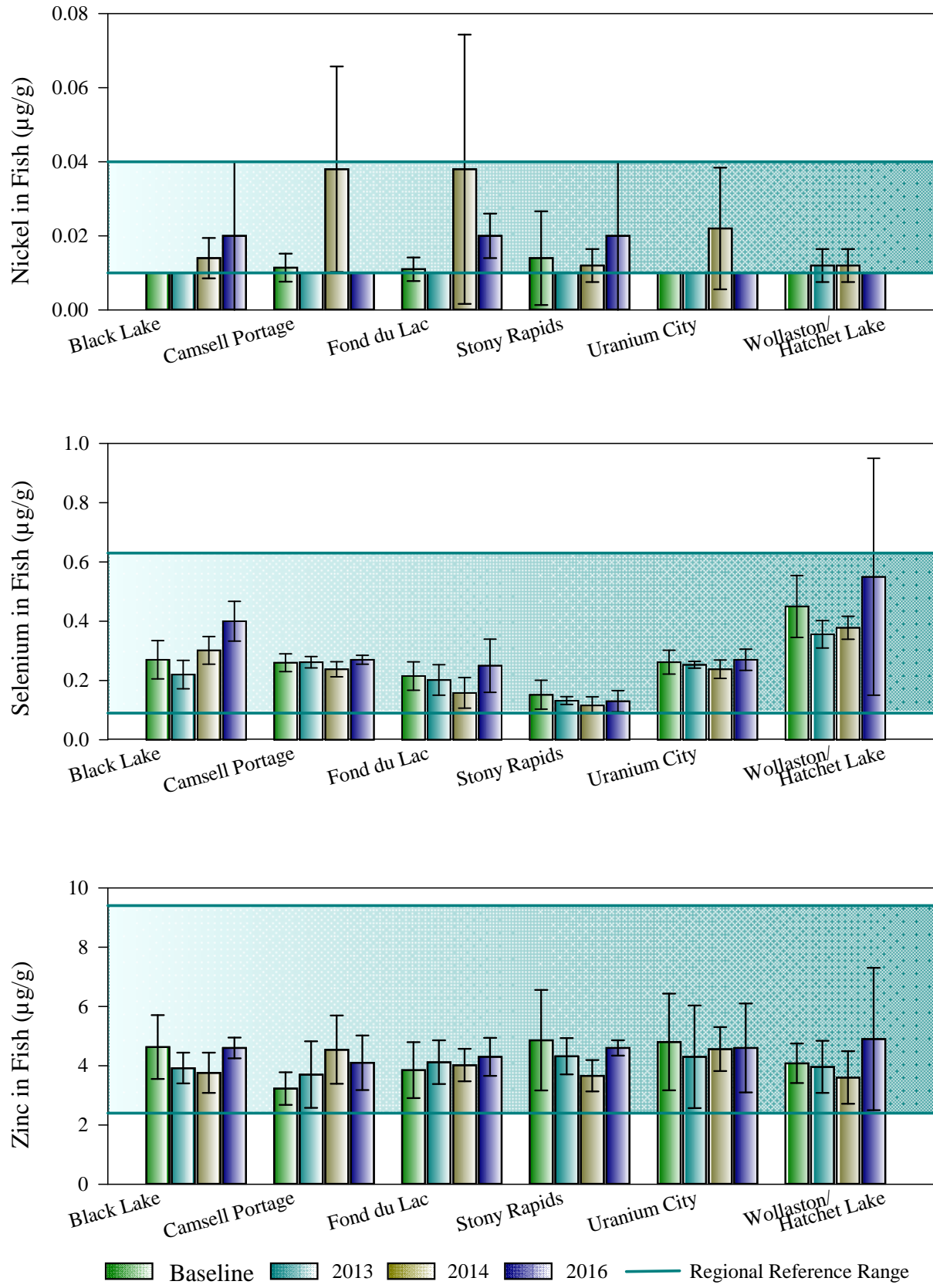


Figure 5

Chemicals in lake whitefish from the EARMP community study area, 2011 to 2017.

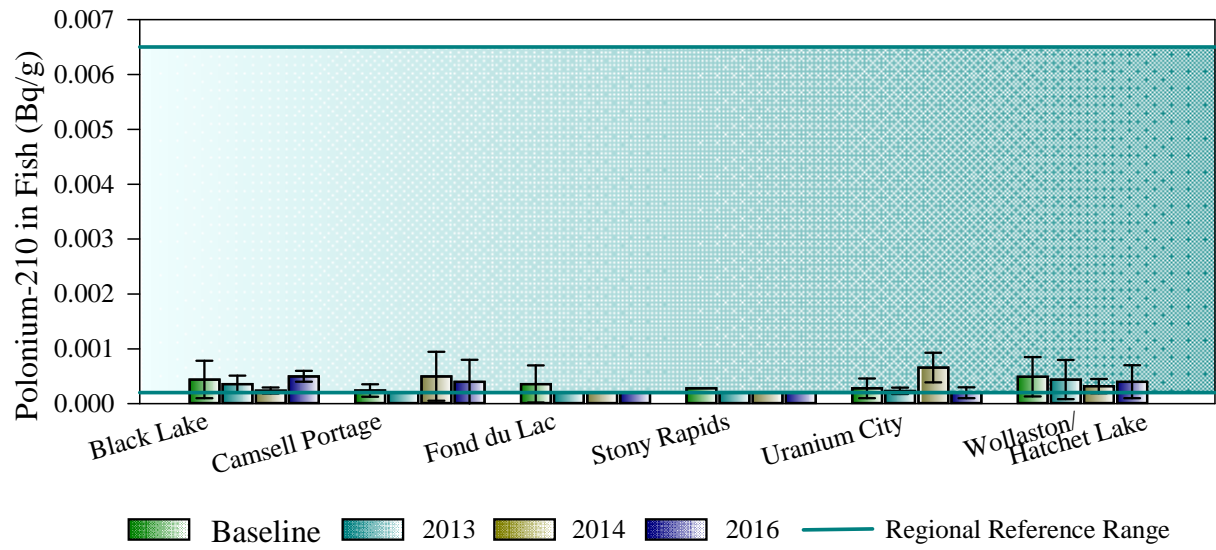
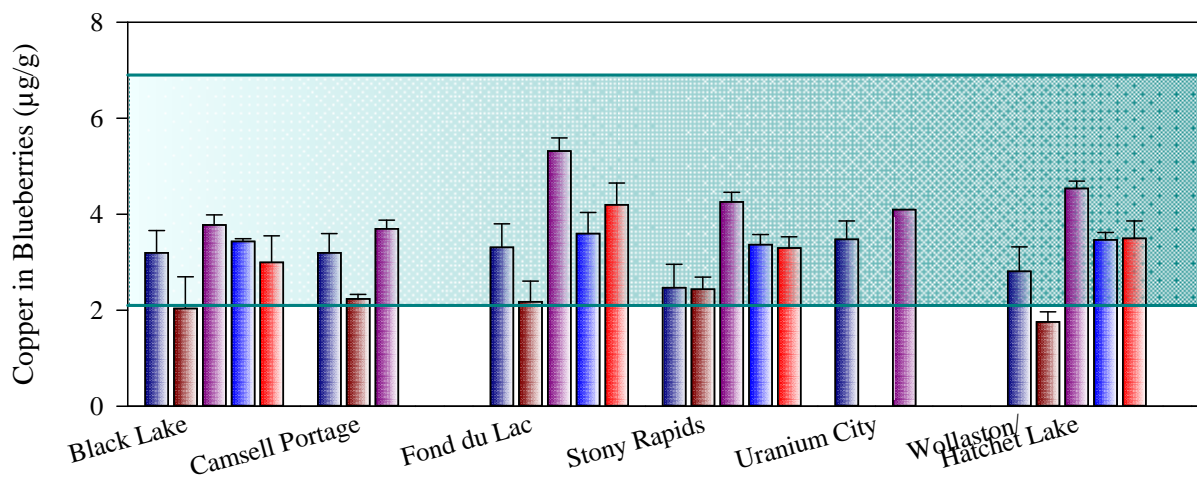
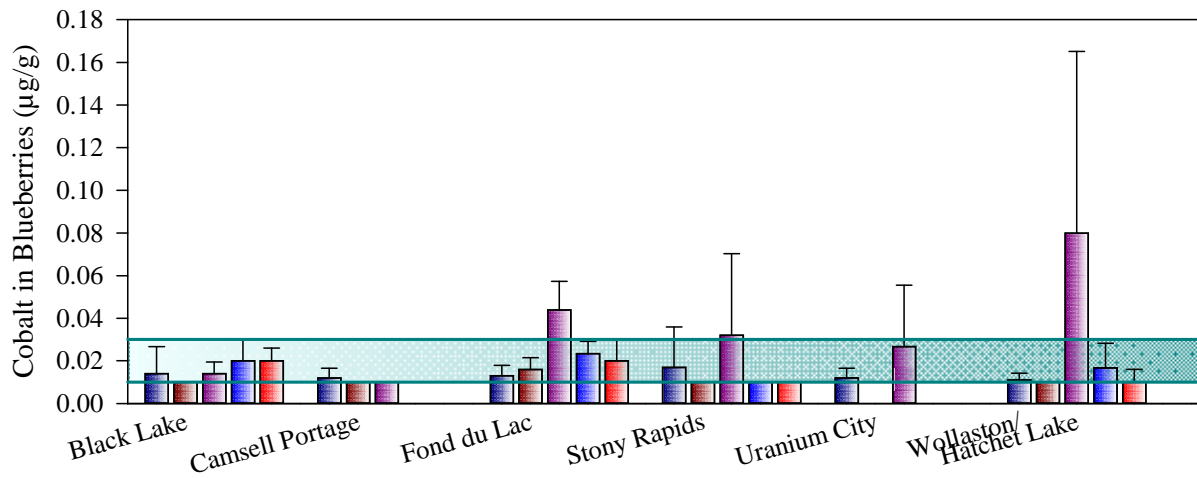
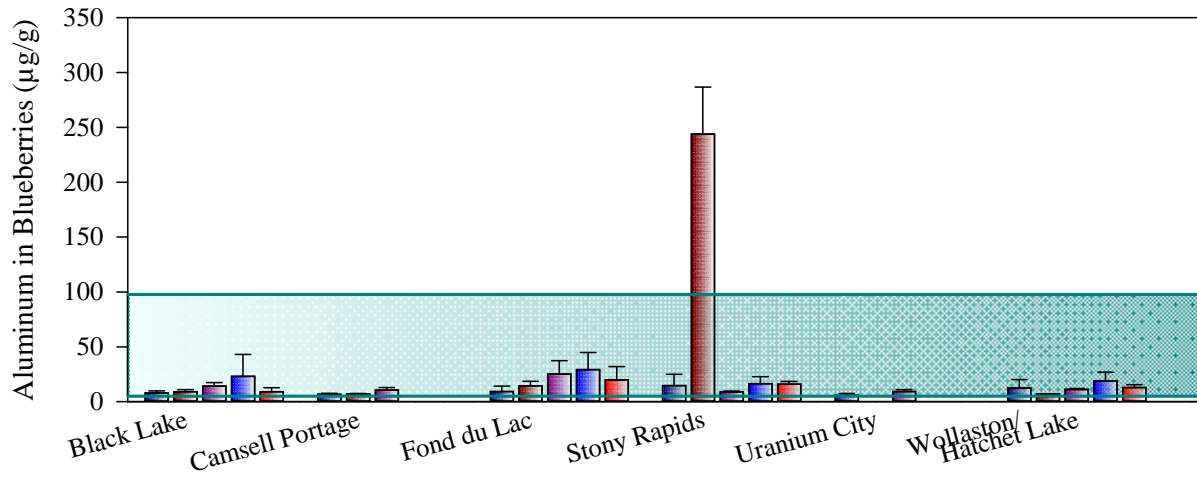


Figure 5  
 Chemicals in lake whitefish from the EARMP community study area, 2011 to 2017. Page 4 of 4

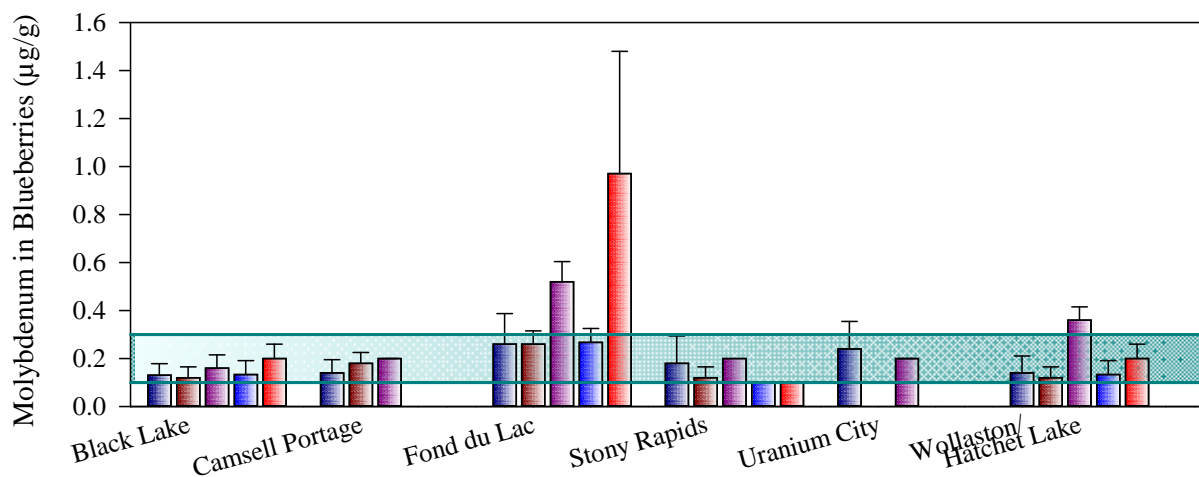
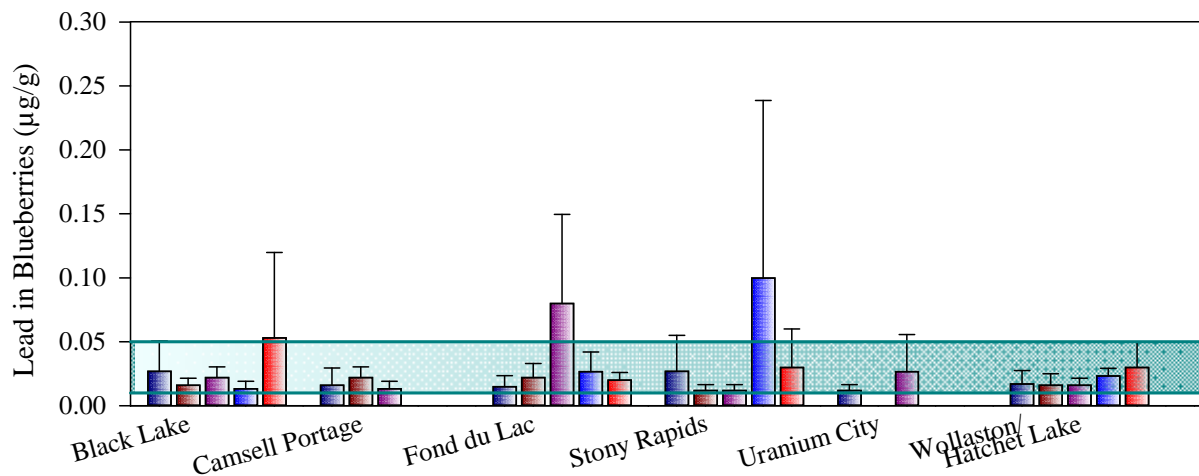
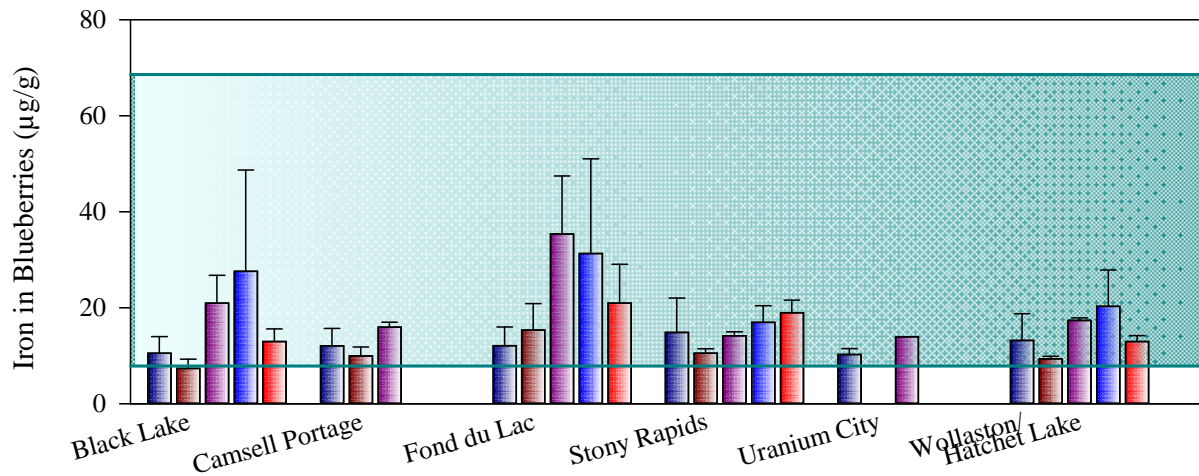




Baseline
  2013
  2014
  2015
  2016
  Regional Reference Range

Figure 6.

Chemicals in blueberries from the EARMF community study area, 2011 to 2017.



Baseline
  2013
  2014
  2015
  2016
  Regional Reference Range

Figure 6.

Chemicals in blueberries from the EARMF community study area, 2011 to 2017.

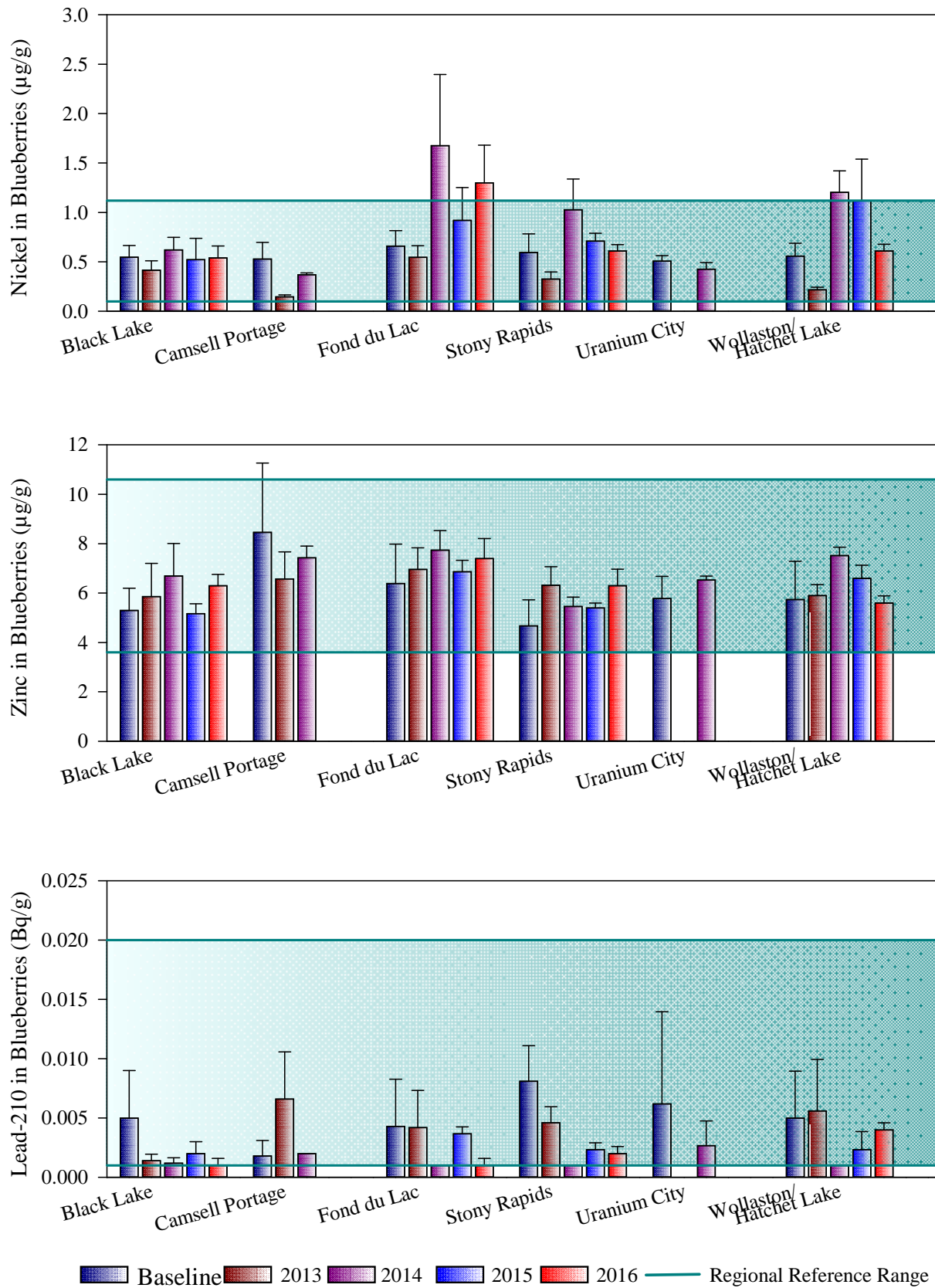


Figure 6.

Chemicals in blueberries from the EARMF community study area, 2011 to 2017.



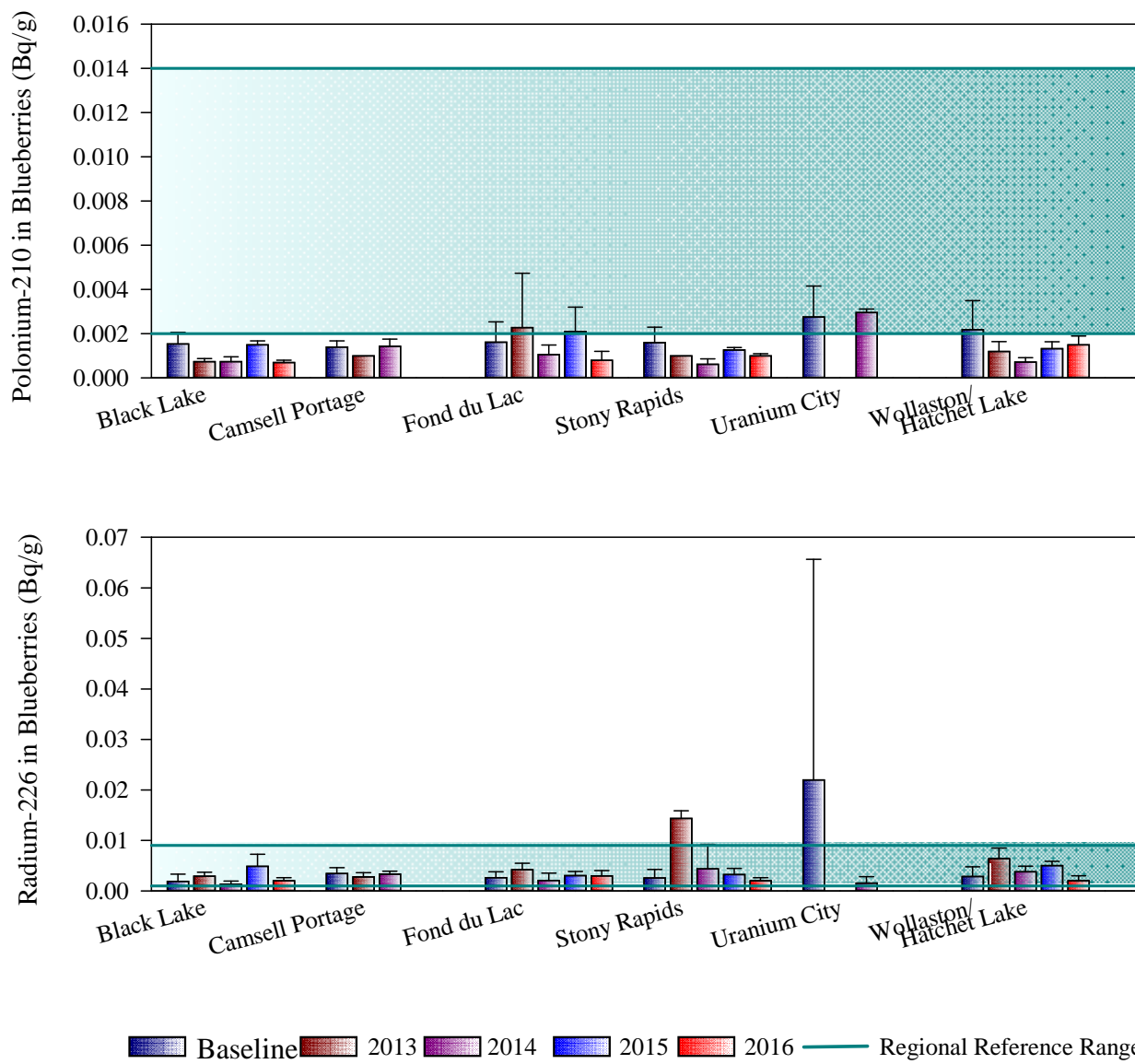


Figure 6. Chemicals in blueberries from the EARMP community study area, 2011 to 2017.



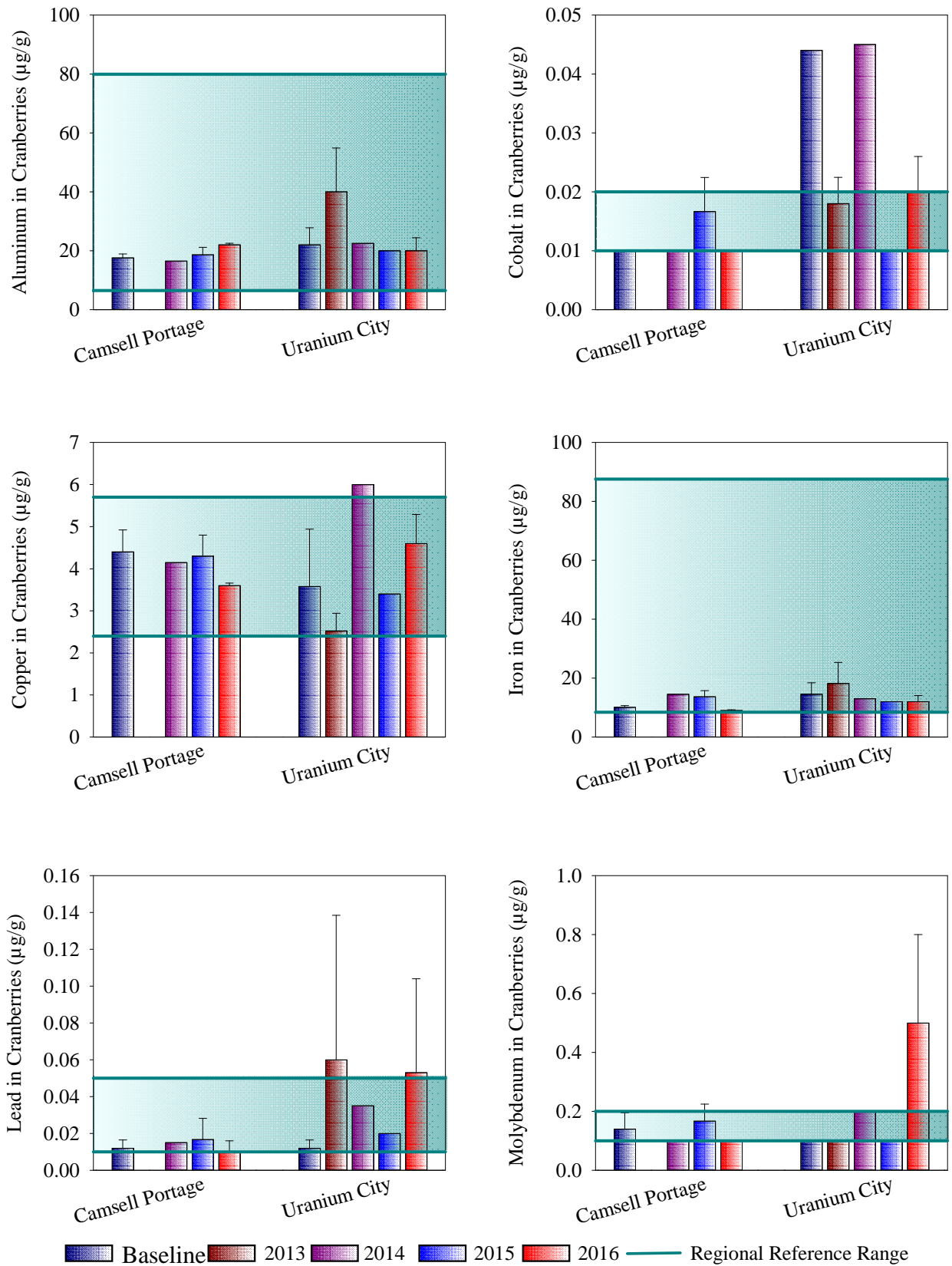


Figure 7. Chemicals in cranberries from the EARMP community study area, 2011 to 2017.

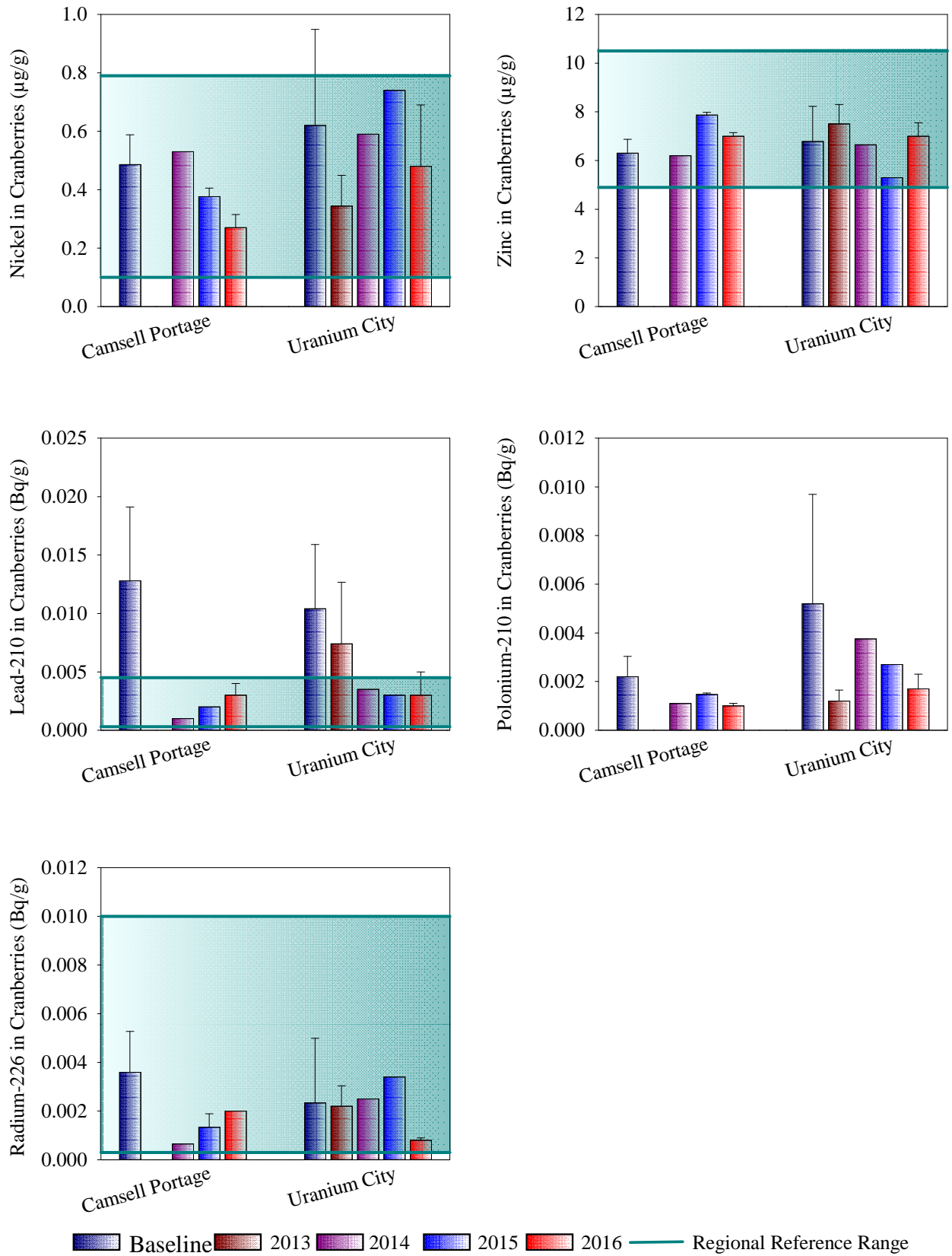
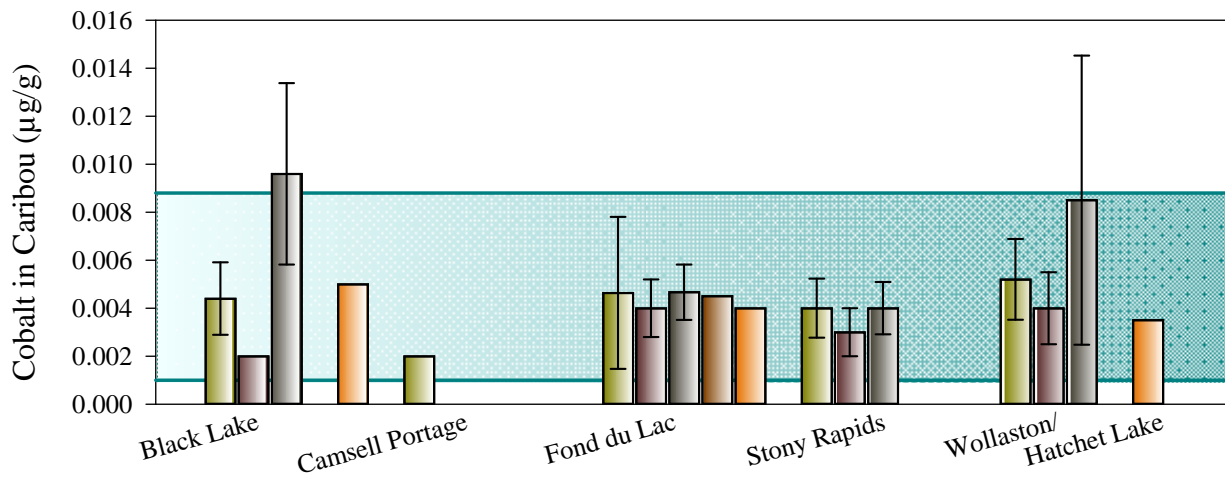
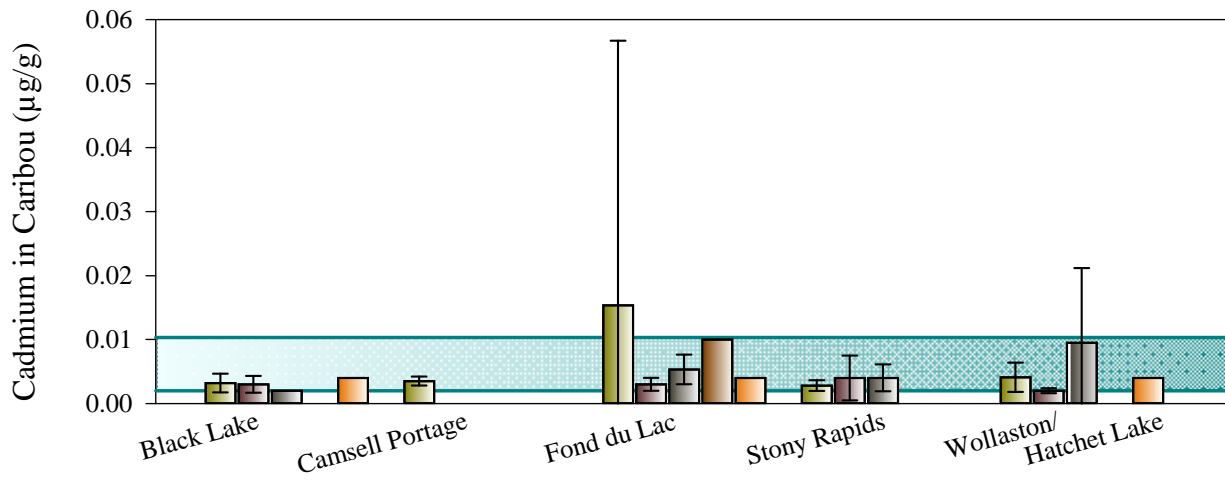
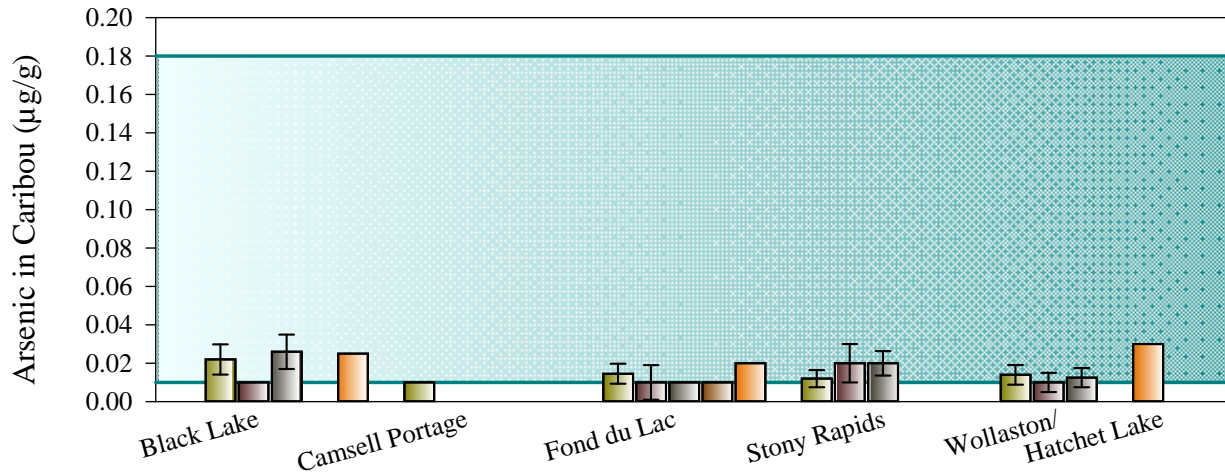


Figure 7.

Chemicals in cranberries from the EARMP community study area, 2011 to 2017.



Baseline
  2014
  2015
  2016
  2017
  Regional Reference Range

Figure 8.

Chemicals in barren-ground caribou from the community study area, 2011 to 2017.



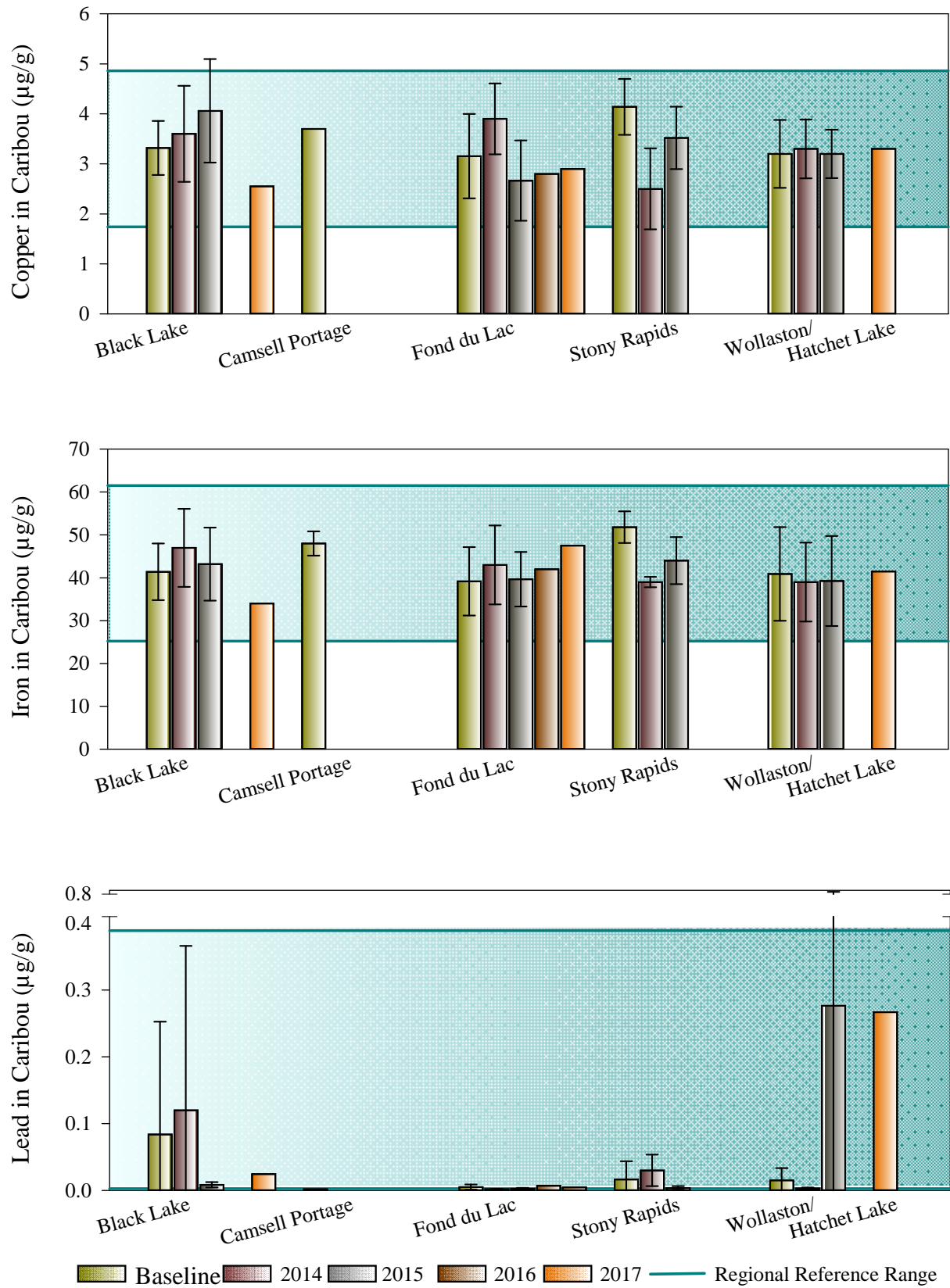


Figure 8. Chemicals in barren-ground caribou from the community study area, 2011 to 2017. Page 2 of 3

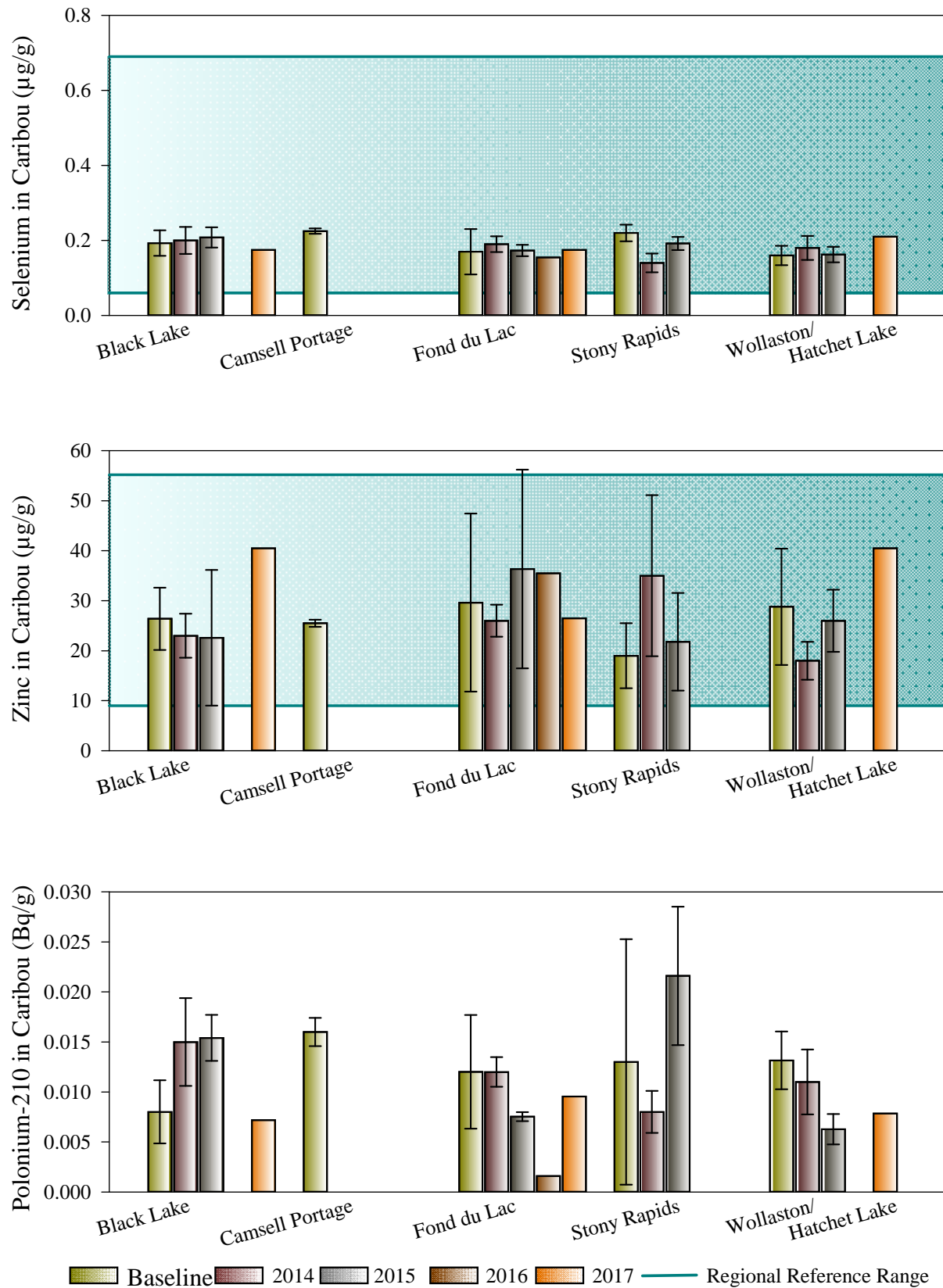


Figure 8.

Chemicals in barren-ground caribou from the community study area, 2011 to 2017.

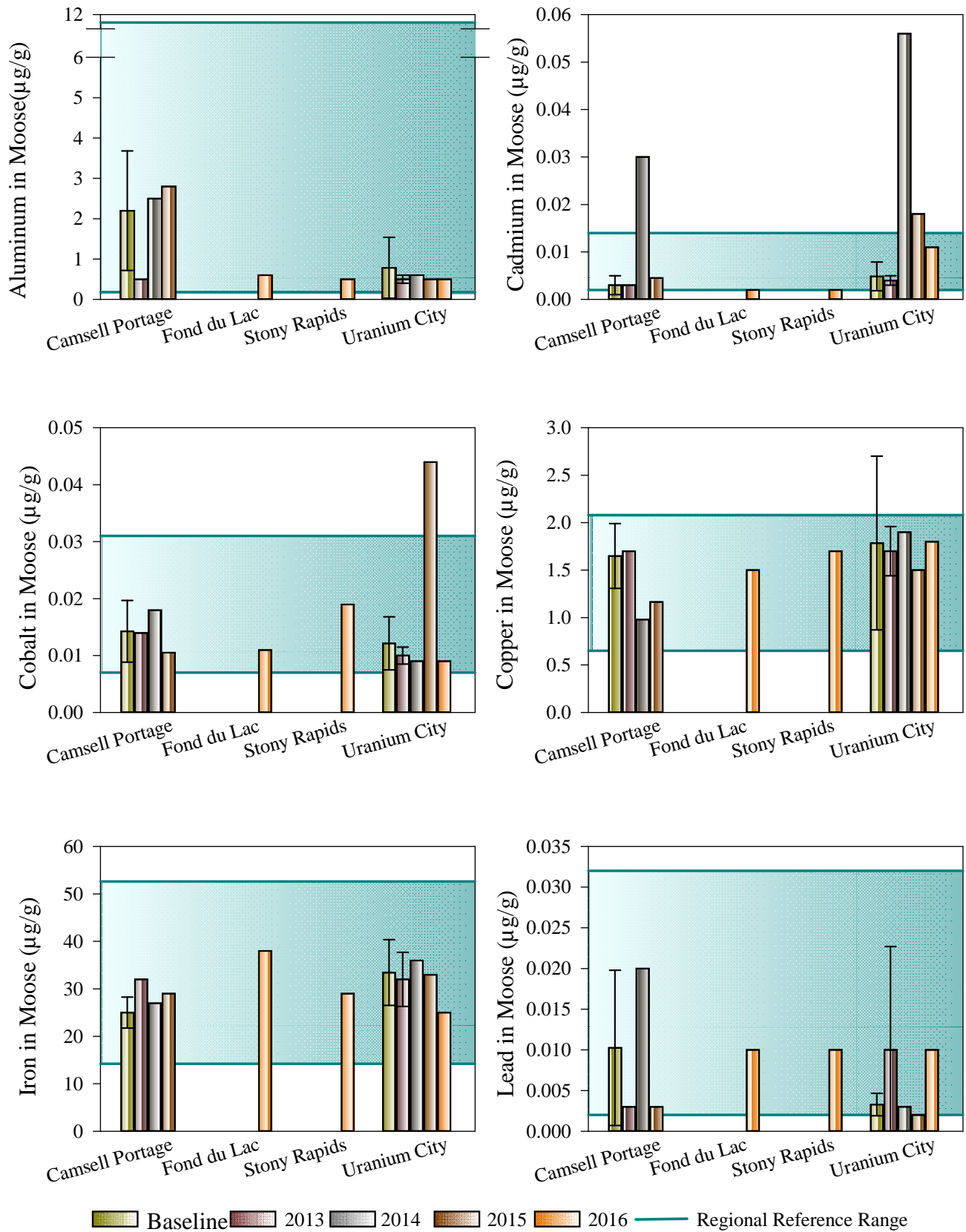


Figure 9. Chemicals in moose from the community study area, 2011 to 2017.



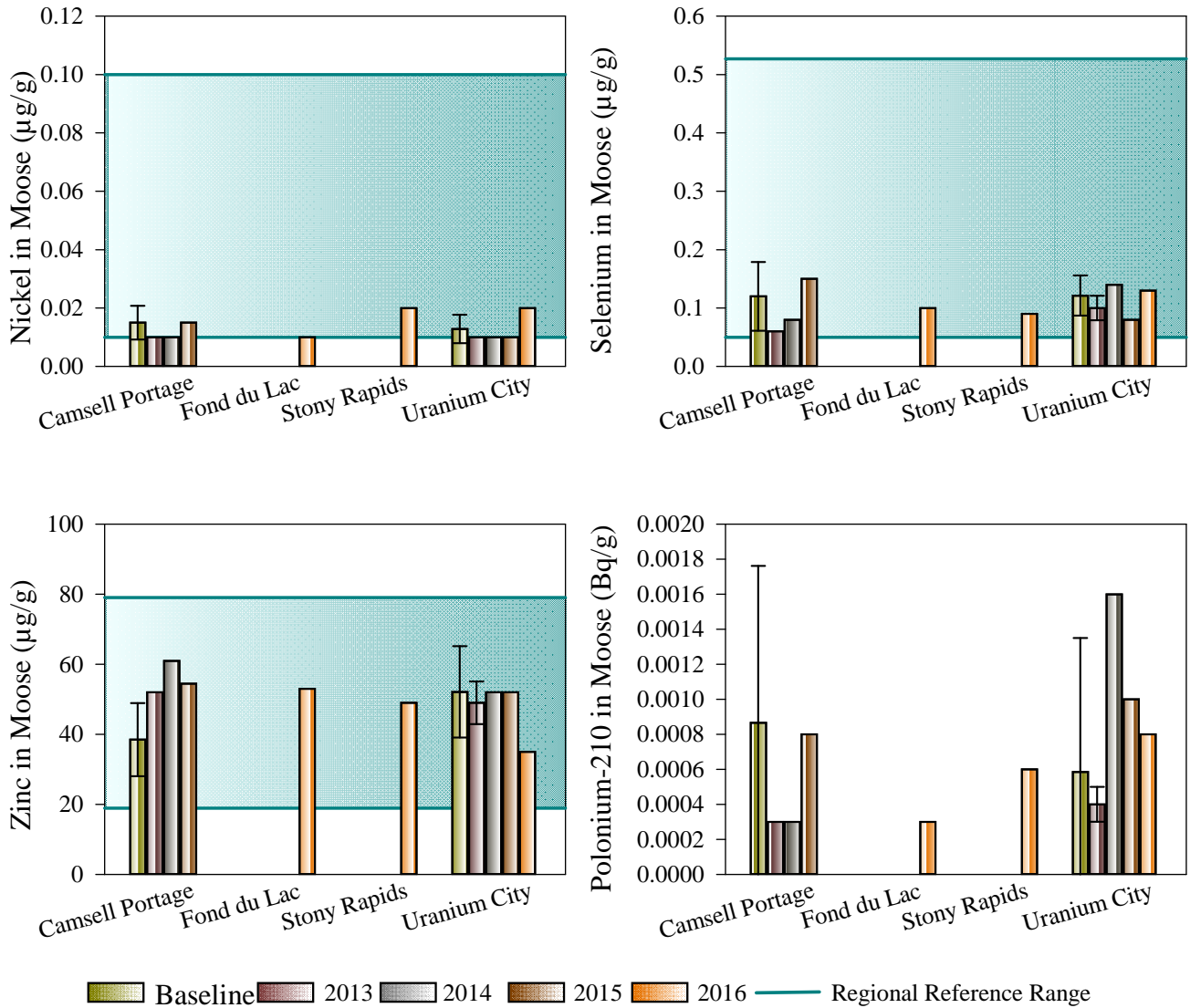


Figure 9. Chemicals in moose from the community study area, 2011 to 2017.

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**APPENDIX A, TABLE 1**

Fall water chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	SEQG <sup>2</sup>	CDWQ <sup>3</sup>	Black Lake					Camsell Portage					Fond du Lac				
			Black Lake					Ellis Bay, Lake Athabasca					Fond du Lac River				
			2011	2012	2013	2014	2017	2011	2012	2013	2014	2017	2011	2012	2013	2014	2017
<b>Metals</b>																	
Aluminum <sup>4</sup>	0.1	0.1	0.002	0.0026	0.0026	0.0027	0.0061	0.0016	0.001	0.0044	0.0022	0.0027	0.014	0.02	0.011	0.019	0.011
Arsenic (µg/L)	5	10	0.1	0.1	0.2	0.2	<0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Cadmium <sup>5</sup>	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	0.00002	<0.00001	0.00001	<0.00001	0.00003
Copper <sup>5</sup>	0.002	1	<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
Iron	0.3	0.3	0.026	0.013	0.022	0.021	0.022	0.0049	0.0044	0.0078	0.0056	0.0054	0.023	0.03	0.017	0.023	0.021
Lead <sup>5</sup>	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
Mercury (µg/L)	0.026	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Molybdenum	0.073	-	0.0002	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
Nickel <sup>5</sup>	0.025	-	0.0002	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
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
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
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
Zinc	0.03	5	0.0018	<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
<b>Nutrients</b>																	
Ammonia as N <sup>6</sup>	0.58 to 1.83	-	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.04	0.02
<b>Physical Properties</b>																	
pH (pH units)	6.5-8.5	-	7.12	7.18	7.38	6.76	7.34	7.46	7.5	7.71	7.26	7.7	7.22	7.14	6.86	6.88	7.32
Sp. Cond. (µS/cm)	-	-	40	38	38	43	29	66	69	69	73	66	39	44	42	44	32
Total Hardness	-	-	14	13	29	14	12	26	26	47	27	26	14	15	15	15	13
<b>Radionuclides</b>																	
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
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
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	0.009	<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	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

**APPENDIX A, TABLE 1**

Fall water chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	SEQG <sup>2</sup>	CDWQ <sup>3</sup>	Stony Rapids					Uranium City					Wollaston Lake/Hatchet Lake				
			Fond du Lac River					Fredette River					Welcome Bay, Wollaston Lake				
			2011	2012	2013	2014	2017	2011	2012	2013	2014	2017	2011	2012	2013	2014	2017
<b>Metals</b>																	
Aluminum <sup>4</sup>	0.1	0.1	0.018	0.0084	0.012	0.012	0.014	0.0051	0.0051	0.0057	0.0033	0.004	0.0047	0.014	0.0074	0.0069	0.0058
Arsenic (µg/L)	5	10	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	<0.1	<0.1	0.1	0.1	0.1
Cadmium <sup>5</sup>	0.00004 to 0.00009	0.005	0.00002	<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	0.00014
Copper <sup>5</sup>	0.002	1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	<0.0002	<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	0.031	0.041	0.05	0.027	0.045	0.014	0.035	0.043	0.034	0.046
Lead <sup>5</sup>	0.001	0.01	<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
Mercury (µg/L)	0.026	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Molybdenum	0.073	-	0.0002	0.0002	0.0001	0.0001	0.0001	0.0004	0.0004	0.0004	0.0004	0.0005	0.0012	0.0012	0.001	0.0009	0.0008
Nickel <sup>5</sup>	0.025	-	0.0002	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
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
Uranium (µg/L)	15	20	<0.1	<0.1	<0.1	<0.1	<0.1	3.5	1.3	1.4	1.7	1	<0.1	<0.1	<0.1	<0.1	<0.1
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
Zinc	0.03	5	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	0.0014	<0.0005	0.0013	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<b>Nutrients</b>																	
Ammonia as N <sup>6</sup>	0.58 to 1.83	-	<0.01	<0.01	0.05	0.04	0.01	<0.01	0.03	0.05	0.07	0.06	<0.01	<0.01	<0.01	0.04	<0.01
<b>Physical Properties</b>																	
pH (pH units)	6.5-8.5	-	7.3	7.3	7.38	6.89	7.39	7.75	7.72	7.94	7.46	8	7.1	7.12	7.37	6.91	7.38
Sp. Cond. (uS/cm)	-	-	39	40	36	38	28	114	112	113	114	102	34	37	34	36	32
Total Hardness	-	-	13	14	31	13	12	49	52	80	53	49	13	13	28	12	12
<b>Radionuclides</b>																	
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
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
Radium-226 (Bq/L)	0.11	0.5	<0.005	0.01	<0.005	<0.005	<0.005	0.008	0.01	<0.005	<0.005	<0.005	<0.005	0.009	<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

<sup>1</sup>All values are in mg/L, unless specified otherwise.

<sup>2</sup>SEQG = Saskatchewan Environmental Quality Guidelines for freshwater aquatic life (GS 2018).

<sup>3</sup>Guidelines for Canadian drinking water quality (HC 2012).

<sup>4</sup>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).

<sup>5</sup>Cadmium, copper, lead, and nickel guidelines were calculated using the site-specific hardness.

<sup>6</sup>Site-specific temperature and lab pH were used to derive guideline.

## APPENDIX A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Regional Reference Range <sup>2,3</sup>							
	Lake Trout				Lake Whitefish			
	Lower Limit	Median	Upper Limit	n	Lower Limit	Median	Upper Limit	n
<b>Metals</b>								
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
<b>Radionuclides</b>								
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 A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Black Lake (Black Lake)										
	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
<b>Metals</b>											
Aluminum	0.5	-	0.5	-	5	0.5	0.09	4	0.6	0.1	1
Arsenic	0.072	0.028	0.048	0.0084	0	0.064	0.025	0	0.080	0.017	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.002	0.0003	0.002	-	5	0.004	0.002	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
Iron	2.9	1.4	1.8	0.23	0	2.6	1.0	0	2.9	0.61	0
Lead	0.002	0.0008	0.002	-	5	0.003	0.002	3	0.004	0.001	0
Mercury	0.31	0.11	0.40	0.084	0	0.44	0.073	0	0.35	0.045	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	-	0.01	-	5	0.02	0.01	2	0.01	0.006	1
Selenium	0.15	0.026	0.14	0.024	0	0.15	0.019	0	0.15	0.0058	0
Uranium	0.001	0.0003	0.001	-	5	0.001	0	2	0.001	-	3
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	4.1	1.4	3.4	0.42	0	3.7	1.3	0	4.6	1.1	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.001	0.0004	0.001	-	5	0.001	0	4	0.001	-	3
Polonium-210 (Bq/g)	0.0002	0	0.0002	-	5	0.0002	-	5	0.0002	-	3
Radium-226 (Bq/g)	0.00006	0.00002	0.00007	0.00002	4	0.00005	-	5	0.00006	-	3
Thorium-230 (Bq/g)	0.00011	0.00003	0.0001	0.00004	5	0.00009	-	5	0.0001	-	3



**APPENDIX A, TABLE 2**

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Black Lake (Black Lake)										
	Lake Whitefish										
	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
<b>Metals</b>											
Aluminum	0.5	-	0.5	-	5	0.5	-	5	0.5	-	3
Arsenic	0.18	0.14	0.024	0.0089	0	0.17	0.056	0	0.22	0.17	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.003	0.0009	0.003	0.001	2	0.004	0.003	2	0.003	0.002	0
Copper	0.19	0.051	0.11	0.088	0	0.26	0.19	0	0.14	0.036	0
Iron	2.1	0.93	1.5	0.61	0	2.3	1.2	0	3.0	0.87	0
Lead	0.002	0.0004	0.002	-	5	0.002	0.0004	4	0.003	0.001	0
Mercury	0.12	0.059	0.058	0.026	0	0.10	0.024	0	0.090	0.030	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	0	0.01	-	5	0.01	0.005	3	0.02	0.02	1
Selenium	0.27	0.065	0.22	0.048	0	0.30	0.047	0	0.40	0.067	0
Uranium	0.001	0.0003	0.001	-	5	0.001	-	5	0.001	-	3
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	4.6	1.1	3.9	0.52	0	3.8	0.68	0	4.6	0.35	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.002	0.001	0.001	0	4	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0004	0.0003	0.0004	0.0002	0	0.0002	0.00005	2	0.0005	0.0001	0
Radium-226 (Bq/g)	0.0004	0.0007	0.0002	0.0001	3	0.00009	0.00006	4	0.00006	-	3
Thorium-230 (Bq/g)	0.0005	0.0008	0.0001	0.00004	4	0.0001	-	5	0.0001	-	3

## APPENDIX A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>											
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
<b>Radionuclides</b>											
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 A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>											
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
<b>Radionuclides</b>											
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 A, TABLE 2**

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Fond du Lac (Fond du Lac River)										
	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
<b>Metals</b>											
Aluminum	0.5	-	0.5	-	5	0.5	0.04	4	0.5	-	3
Arsenic	0.1	0.04	0.07	0.03	0	0.08	0.04	0	0.06	0.01	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.002	-	0.002	-	5	0.003	0.0005	1	0.0057	0.0055	1
Copper	0.28	0.081	0.30	0.087	0	0.27	0.10	0	0.29	0.064	0
Iron	2.4	0.90	1.7	0.43	0	2.9	0.53	0	3.4	1.4	0
Lead	0.002	0.0007	0.003	0.003	4	0.004	0.002	1	0.002	0.0006	0
Mercury	0.22	0.073	0.08	0.030	0	0.59	0.18	0	0.18	0.084	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	-	0.01	0.005	3	0.02	0.004	1	0.01	0.006	2
Selenium	0.15	0.019	0.16	0.017	0	0.11	0.035	0	0.17	0.012	0
Uranium	0.001	0.0003	0.001	-	5	0.001	0.0004	4	0.001	-	3
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	3.7	0.47	3.3	0.55	0	3.9	1.6	0	4.2	1.6	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.001	0.0004	0.001	-	5	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0002	-	0.0002	-	5	0.0002	-	5	0.0002	-	3
Radium-226 (Bq/g)	0.00006	-	0.00006	0.000004	5	0.00006	0.00001	4	0.00006	-	3
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	5	0.0001	-	5	0.0001	-	3

## APPENDIX A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Fond du Lac (Fond du Lac River)										
	Lake Whitefish										
	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
<b>Metals</b>											
Aluminum	0.6	0.3	0.5	-	5	0.5	0.04	4	0.5	0.06	2
Arsenic	0.24	0.14	0.06	0.034	0	0.11	0.11	0	0.19	0.14	0
Cadmium	0.002	0.001	0.002	0	4	0.002	-	5	0.002	-	3
Cobalt	0.0040	0.0039	0.0054	0.0049	1	0.010	0.0067	0	0.010	0.0060	0
Copper	0.18	0.057	0.20	0.085	0	0.16	0.024	0	0.18	0.080	0
Iron	2.2	1.5	2.4	1.4	0	2.0	0.64	0	2.1	0.44	0
Lead	0.002	0.0007	0.002	-	5	0.003	0.003	3	0.004	0.002	1
Mercury	0.090	0.068	0.028	0.0084	0	0.083	0.035	0	0.088	0.029	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	0.003	0.01	0	4	0.04	0.04	1	0.02	0.006	1
Selenium	0.22	0.048	0.20	0.052	0	0.16	0.052	0	0.25	0.090	0
Uranium	0.001	0.0007	0.001	-	5	0.002	0.001	4	0.001	0.0006	2
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	3.9	0.94	4.1	0.74	0	4.0	0.55	0	4.3	0.64	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.004	-	0.001	-	5	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0004	0.0003	0.0002	-	5	0.0002	-	5	0.0002	-	3
Radium-226 (Bq/g)	0.0004	0.0007	0.00007	0.00002	4	0.00007	0.00001	4	0.00006	-	3
Thorium-230 (Bq/g)	0.002	-	0.0001	-	5	0.0001	0.00004	4	0.0001	-	3

## APPENDIX A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Stony Rapids (Fond du Lac River)										
	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
<b>Metals</b>											
Aluminum	0.5	-	0.5	-	5	0.5	-	5	0.5	-	3
Arsenic	0.07	0.044	0.13	0.080	0	0.080	0.044	0	0.10	0.020	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.002	0	0.002	-	5	0.004	0.002	1	0.004	0.0006	0
Copper	0.29	0.19	0.35	0.068	0	0.46	0.27	0	0.59	0.15	0
Iron	2.8	2.3	3.8	1.3	0	5.3	3.9	0	4.8	1.2	0
Lead	0.002	-	0.002	-	5	0.004	0.004	2	0.002	-	3
Mercury	0.33	0.16	0.18	0.072	0	0.20	0.052	0	0.17	0.031	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	0	0.01	0	4	0.02	0.02	3	0.01	0.006	2
Selenium	0.14	0.037	0.17	0.018	0	0.15	0.011	0	0.17	0.012	0
Uranium	0.001	0.0003	0.001	-	5	0.001	-	5	0.001	-	3
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	3.7	0.86	3.6	0.46	0	4.0	0.88	0	3.5	0.30	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.001	0	0.001	0	4	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0002	0.00007	0.0002	0.00004	3	0.0002	-	5	0.0002	-	3
Radium-226 (Bq/g)	0.00006	-	0.00007	0.00002	4	0.00007	-	5	0.00006	-	3
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	5	0.0001	-	5	0.0001	-	3



**APPENDIX A, TABLE 2**

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Stony Rapids (Fond du Lac River)										
	Lake Whitefish										
	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
<b>Metals</b>											
Aluminum	0.5	-	0.50	-	5	0.5	-	5	0.5	0.06	2
Arsenic	0.04	0.02	0.03	0.007	0	0.03	0.03	0	0.04	0.02	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.0060	0.0031	0.0046	0.00089	0	0.005	0.0021	0	0.014	0.0082	0
Copper	0.20	0.083	0.22	0.064	0	0.21	0.025	0	0.16	0.046	0
Iron	2.1	0.98	2.5	1.3	0	1.9	0.22	0	1.8	0.10	0
Lead	0.002	-	0.002	-	5	0.002	0.001	4	0.003	0.001	0
Mercury	0.13	0.10	0.06	0.021	0	0.093	0.027	0	0.041	0.0062	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	0.01	0.01	-	5	0.01	0.004	4	0.02	0.02	1
Selenium	0.15	0.049	0.13	0.013	0	0.12	0.029	0	0.13	0.036	0
Uranium	0.001	0	0.001	-	5	0.002	0.003	4	0.001	-	3
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	4.9	1.7	4.3	0.61	0	3.7	0.53	0	4.6	0.26	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.001	-	0.001	-	5	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0003	-	0.0002	0	4	0.0002	0	4	0.0002	-	3
Radium-226 (Bq/g)	0.0002	0.0003	0.00007	0.00002	3	0.00006	-	5	0.00006	-	3
Thorium-230 (Bq/g)	0.0003	0.0006	0.0001	-	5	0.0001	-	5	0.0001	-	3

## APPENDIX A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

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

**APPENDIX A, TABLE 2**

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Uranium City (Prospector Bay)										
	Lake Whitefish										
	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
<b>Metals</b>											
Aluminum	0.5	-	0.5	-	3	0.5	0.04	4	0.5	0	2
Arsenic	0.07	0.029	0.19	0.026	0	0.10	0.075	0	0.070	0.044	0
Cadmium	0.002	-	0.002	0	2	0.002	0	4	0.002	-	3
Cobalt	0.006	0.005	0.009	0.006	0	0.008	0.005	0	0.004	0.001	0
Copper	0.15	0.026	0.26	0.11	0	0.29	0.11	0	0.20	0.032	0
Iron	1.6	0.38	2.3	0.55	0	3.0	1.3	0	1.8	0.23	0
Lead	0.002	-	0.002	0.0006	1	0.005	0.004	2	0.003	0.002	2
Mercury	0.090	0.036	0.03	0.017	0	0.039	0.012	0	0.058	0.019	0
Molybdenum	0.02	-	0.02	-	3	0.02	-	5	0.02	-	3
Nickel	0.01	-	0.01	0	2	0.02	0.02	0	0.01	-	3
Selenium	0.26	0.040	0.25	0.012	0	0.24	0.031	0	0.27	0.036	0
Uranium	0.001	-	0.001	-	3	0.002	0.0009	2	0.001	-	3
Vanadium	0.02	-	0.02	-	3	0.02	-	5	0.02	-	3
Zinc	4.8	1.6	4.3	1.7	0	4.6	0.74	0	4.6	1.5	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.001	-	0.001	-	3	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0003	0.0002	0.0002	0.00006	2	0.0007	0.0003	0	0.0002	0.0001	2
Radium-226 (Bq/g)	0.00006	-	0.00006	0	2	0.00008	0.00002	3	0.00006	-	3
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	3	0.0001	-	5	0.0001	-	3

## APPENDIX A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Wollaston Lake/Hatchet Lake (Wollaston Lake)										
	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
<b>Metals</b>											
Aluminum	0.5	-	0.50	-	5	0.5	-	5	0.5	-	3
Arsenic	0.04	0.02	0.03	0.02	0	0.03	0.01	0	0.05	0.04	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.002	-	0.002	-	5	0.003	0.002	2	0.003	0.001	1
Copper	0.45	0.15	0.34	0.030	0	0.31	0.077	0	0.28	0.072	0
Iron	3.0	1.3	2.4	0.36	0	2.0	0.43	0	2.7	1.1	0
Lead	0.002	-	0.003	0.001	4	0.002	0.0009	4	0.002	-	3
Mercury	0.16	0.035	0.12	0.038	0	0.24	0.083	0	0.20	0.035	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	0.003	0.01	-	5	0.02	0.02	3	0.01	-	3
Selenium	0.21	0.036	0.20	0.011	0	0.19	0.019	0	0.23	0.017	0
Uranium	0.001	-	0.001	0.0004	4	0.001	0	4	0.001	-	3
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	4.4	1.3	4.4	0.83	0	3.2	0.83	0	3.0	0.85	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.001	0	0.001	-	5	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0002	-	0.0002	-	5	0.0002	-	5	0.0002	-	3
Radium-226 (Bq/g)	0.00009	0.00008	0.00009	0.00006	2	0.00005	-	5	0.00006	-	3
Thorium-230 (Bq/g)	0.0001	-	0.0001	-	5	0.0001	-	5	0.0001	-	3

## APPENDIX A, TABLE 2

Summary fish flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Wollaston Lake/Hatchet Lake (Wollaston Lake)										
	Lake Whitefish										
	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
<b>Metals</b>											
Aluminum	0.5	-	0.5	-	5	0.5	-	5	0.5	0	2
Arsenic	0.16	0.042	0.15	0.035	0	0.11	0.035	0	0.11	0.076	0
Cadmium	0.002	-	0.002	-	5	0.002	-	5	0.002	-	3
Cobalt	0.002	0.0010	0.002	0	4	0.003	0.001	1	0.003	0.0006	0
Copper	0.16	0.045	0.14	0.015	0	0.15	0.016	0	0.26	0.16	0
Iron	1.7	0.79	2.1	0.59	0	1.9	0.57	0	3.8	1.9	0
Lead	0.002	0	0.002	0	4	0.003	0.001	2	0.002	-	3
Mercury	0.050	0.019	0.040	0.023	0	0.088	0.015	0	0.081	0.034	0
Molybdenum	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Nickel	0.01	-	0.01	0.004	3	0.01	0.004	1	0.01	0	2
Selenium	0.45	0.10	0.36	0.046	0	0.38	0.039	0	0.55	0.40	0
Uranium	0.001	-	0.001	-	5	0.001	0	4	0.001	-	3
Vanadium	0.02	-	0.02	-	5	0.02	-	5	0.02	-	3
Zinc	4.1	0.67	4.0	0.88	0	3.6	0.89	0	4.9	2.4	0
<b>Radionuclides</b>											
Lead-210 (Bq/g)	0.002	-	0.0009	0.0003	4	0.001	-	5	0.001	-	3
Polonium-210 (Bq/g)	0.0005	0.0004	0.0004	0.0004	3	0.0003	0.0001	1	0.0004	0.0003	1
Radium-226 (Bq/g)	0.0005	0.0008	0.0003	0.0004	2	0.00007	0.00002	4	0.00006	-	3
Thorium-230 (Bq/g)	0.0007	-	0.0001	-	5	0.0001	-	5	0.0001	-	3

<sup>1</sup>All concentrations are reported on a µg/g wet weight basis, except when specified otherwise.

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

<sup>3</sup>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.

### APPENDIX A, TABLE 3

Summary blueberry chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Regional Reference Range <sup>2,3</sup>			
	Lower Limit	Median	Upper Limit	n
<b>Metals</b>				
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
<b>Radionuclides</b>				
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 A, TABLE 3**

Summary blueberry chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>														
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
<b>Radionuclides</b>														
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 A, TABLE 3**

Summary blueberry chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Camsell Portage							
	Baseline (n = 5)		2013 (n = 5)			2014 (n = 3)		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL
<b>Metals</b>								
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
<b>Radionuclides</b>								
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 A, TABLE 3

Summary blueberry chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Fond du Lac													
	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
<b>Metals</b>														
Aluminum	9.4	4.9	15	4.0	0	25	12	0	29	16	0	20	12	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	0.005	0.02	0.005	1	0.04	0.01	0	0.02	0.006	0	0.02	0.01	1
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
Iron	12	3.9	15	5.5	0	35	12	0	31	20	0	21	8.1	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
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
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
Selenium	0.06	0.01	0.05	-	5	0.05	-	5	0.05	-	3	0.05	-	3
Uranium	0.01	0.003	0.01	-	5	0.01	0	1	0.01	-	3	0.01	-	3
Vanadium	0.1	-	0.1	-	5	0.1	-	5	0.1	-	3	0.1	-	3
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
<b>Radionuclides</b>														
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
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
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
Thorium-230 (Bq/g)	0.001	-	0.002	-	5	0.001	-	5	0.001	0.00	2	0.001	-	3

**APPENDIX A, TABLE 3**

Summary blueberry chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>														
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
<b>Radionuclides</b>														
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 A, TABLE 3

Summary blueberry chemistry results for the EARMP community program, 2011 to 2017.

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

### APPENDIX A, TABLE 3

Summary blueberry chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>														
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
<b>Radionuclides</b>														
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

<sup>1</sup>All concentrations are in µg/g on a dry weight basis, unless specified otherwise.

<sup>2</sup>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 50<sup>th</sup> percentile, while the lower and upper limits are the 2.5<sup>th</sup> and 97.5<sup>th</sup> percentiles that delimit the 95% range of the reference data.

<sup>3</sup>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 A, TABLE 4

Summary bog cranberry chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Regional Reference Range <sup>2,3</sup>			
	Lower Limit	Median	Upper Limit	n
<b>Metals</b>				
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
<b>Radionuclides</b>				
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 A, TABLE 4

Summary bog cranberry chemistry results for the EARMP community program, 2011 to 2017.

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

## APPENDIX A, TABLE 4

Summary bog cranberry chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Uranium City												
	Baseline (n = 5)		2013 (n = 5)			2014 (n = 2)			2015 (n = 1)		2016		
	Average	S.D.	Average	S.D.	<RDL	Average	S.D.	<RDL	Value	<RDL	Average	S.D.	<RDL
<b>Metals</b>													
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
<b>Radionuclides</b>													
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

<sup>1</sup>All concentrations are in µg/g on a dry weight basis, unless specified otherwise.

<sup>2</sup>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 50<sup>th</sup> percentile, while the lower and upper limits are the 2.5<sup>th</sup> and 97.5<sup>th</sup> percentiles that delimit the 95% range of the reference data.

<sup>3</sup>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 A, TABLE 5

Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Regional Reference Range <sup>2,3</sup>			
	Lower Limit	Median	Upper Limit	n
<b>Metals</b>				
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
<b>Radionuclides</b>				
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 A, TABLE 5**

Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>											
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
<b>Radionuclides</b>											
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 A, TABLE 5**

Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>													
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
<b>Radionuclides</b>													
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 A, TABLE 5**

Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Stony Rapids							
	Baseline (n = 8)		2013/2014 (n = 3)			2014/2015 (n = 5)		
	Average	S.D.	Average	S.D.	< RDL	Average	S.D.	< RDL
<b>Metals</b>								
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
<b>Radionuclides</b>								
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 A, TABLE 5**

Summary barren-ground caribou flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>											
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
<b>Radionuclides</b>											
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

<sup>1</sup>All concentrations are reported in µg/g wet weight basis, except when specified otherwise.

<sup>2</sup>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 50<sup>th</sup> percentile, while the lower and upper limits are the 2.5<sup>th</sup> and 97.5<sup>th</sup> percentiles that delimit the 95% range of the reference data.

<sup>3</sup>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 A, TABLE 6**

Summary moose flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Regional Reference Range <sup>2,3</sup>			
	Lower Limit	Median	Upper Limit	n
<b>Metals</b>				
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
<b>Radionuclides</b>				
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 A, TABLE 6**

Summary moose flesh chemistry results for the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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)
	Average	S.D.	Average	<RDL	Average	<RDL	Average	<RDL		
<b>Metals</b>										
Aluminum	2.2	1.5	0.5	2	2.5	0	2.8	0	0.6	0.5
Arsenic	0.01	-	0.01	2	0.01	2	0.01	2	<0.01	0.01
Cadmium	0.003	0.002	0.003	0	0.027	0	0.005	0	0.002	0.002
Cobalt	0.014	0.0054	0.014	0	0.018	0	0.011	0	0.011	0.019
Copper	1.7	0.34	1.7	0	1.0	0	1.2	0	1.5	1.7
Iron	25	3.3	32	0	27	0	29	0	38	29
Lead	0.010	0.010	0.003	1	0.020	0	0.003	0	0.01	0.01
Molybdenum	0.02	-	0.02	2	0.02	2	0.02	2	<0.02	<0.02
Nickel	0.02	0.006	0.01	2	0.01	2	0.02	1	<0.01	0.02
Selenium	0.12	0.059	0.06	0	0.08	0	0.15	0	0.1	0.09
Uranium	0.001	-	0.001	2	0.002	1	0.002	1	<0.001	<0.001
Vanadium	0.02	-	0.02	2	0.02	2	0.02	2	<0.02	<0.02
Zinc	39	10	52	0	61	0	55	0	53	49
<b>Radionuclides</b>										
Lead-210 (Bq/g)	0.0008	-	0.001	2	0.001	2	0.001	2	<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
Radium-226 (Bq/g)	0.00010	0.000066	0.00007	0	0.00006	2	0.00007	0	<0.00005	<0.00007
Thorium-230 (Bq/g)	0.0001	0.00006	0.0001	2	0.0001	2	0.00010	2	<0.0001	<0.0001

## APPENDIX A, TABLE 6

Summary moose flesh chemistry results for the EARMP community program, 2011 to 2017.

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

<sup>1</sup>All concentrations are reported on a µg/g wet weight basis, except when specified otherwise.

<sup>2</sup>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.

<sup>3</sup>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 A, TABLE 7**

Summary barren-ground caribou and moose organ chemistry results for the EARMP community program, 2014 to 2017.

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

**APPENDIX A, TABLE 7**

Summary barren-ground caribou and moose organ chemistry results for the EARMP community program, 2014 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>									
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
<b>Radionuclides</b>									
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

<sup>1</sup>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 A, TABLE 8

Summary of mammal chemistry (snowshoe hare) collected from Uranium City and Camsell Portage, 2013/2014.

Chemical <sup>1</sup>	Camsell Portage						Uranium City					
	Baseline <sup>2</sup>			2013/2014			Baseline <sup>2</sup>			2013/2014		
	Average	S.D.	n	1	2	3	Average	S.D.	n	1	2	
<b>Metals</b>												
Aluminum	0.5	0.04	5	<0.5	<0.5	<0.5	0.5	0.04	5	<0.5	0.5	
Arsenic	0.01	-	5	<0.01	<0.01	<0.01	0.01	-	5	0.02	<0.01	
Cadmium	0.002	-	5	<0.002	0.004	0.006	0.004	0.0033	5	<0.002	0.0050	
Cobalt	0.004	0.0008	5	<0.002	0.005	0.032	0.006	0.0027	5	0.005	0.0040	
Copper	1.8	0.38	5	1.9	2.1	1.8	1.8	0.37	5	2.4	2.10	
Iron	26	6.6	5	19	25	20	26	3.6	5	21	31.0	
Lead	0.003	0.0005	5	0.003	0.002	0.002	0.003	0.0017	5	0.002	<0.002	
Molybdenum	0.02	-	5	<0.02	<0.02	<0.02	0.02	-	5	<0.02	<0.02	
Nickel	0.01	0	5	<0.01	<0.01	0.07	0.02	0.009	5	0.02	0.050	
Selenium	0.06	0.012	5	0.03	0.08	0.14	0.06	0.044	5	0.15	0.070	
Uranium	0.001	-	5	<0.001	<0.001	<0.001	0.001	-	5	<0.001	<0.001	
Vanadium	0.02	-	5	<0.02	<0.02	<0.02	0.02	-	5	<0.02	<0.02	
Zinc	13	3.2	5	13	11	16	15	4.7	5	10	16.0	
<b>Radionuclides</b>												
Lead-210 (Bq/g)	0.001	-	5	<0.001	<0.001	<0.001	0.001	-	5	<0.001	<0.001	
Polonium-210 (Bq/g)	0.002	0.0007	5	0.002	0.002	0.002	0.002	0.0004	5	0.002	0.00150	
Radium-226 (Bq/g)	0.00017	0.000097	5	0.00010	<0.00006	0.00010	0.00011	0.000050	5	0.00010	<0.00007	
Thorium-230 (Bq/g)	0.0001	-	5	<0.0001	<0.0001	<0.0001	0.0001	-	5	<0.0002	<0.0001	

<sup>1</sup>All concentrations are reported on a µg/g wet weight basis, except when specified otherwise.

<sup>2</sup>Baseline data for snowshoe hare were collected in 2011 as part of the Uranium City County Foods Program (CanNorth and SENES 2012).

S.D. = Standard deviation; standard deviations of 0 signify "no variance between samples", not "a very small variance".

<RDL = less than the laboratory reported detection limit.

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

## APPENDIX A, TABLE 9

Summary of additional snowshoe hare chemistry collected from EARMP community program, 2017.

Chemical <sup>1</sup>	Black Lake (n = 4)			Fond du Lac (n = 3)			Stony Rapids (n = 3)			Wollaston Lake (n = 3)		
	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
<b>Metals</b>												
Aluminum	0.83	0.43	2	0.5	-	3	0.87	0.64	2	0.53	0.06	2
Arsenic	0.01	0.005	2	0.01	-	3	0.01	0.006	2	0.01	-	3
Cadmium	0.012	0.0172	0	0.007	0.0032	0	0.054	0.0745	0	0.012	0.0025	0
Cobalt	0.011	0.0025	0	0.018	0.0036	0	0.013	0.0085	0	0.008	0.0021	0
Copper	2.5	1.03	0	2.0	0.60	0	1.6	0.40	0	2.1	0.35	0
Iron	36	6.6	0	36	1.5	0	39	16.3	0	30	6.0	0
Lead	0.004	0.0010	0	0.003	0.0010	0	0.005	0.0030	1	0.006	0.0036	1
Molybdenum	0.02	-	4	0.02	-	3	0.02	0	2	0.02	-	3
Nickel	0.05	0.025	1	0.07	0.015	0	0.03	0.015	1	0.03	0.015	1
Selenium	0.32	0.09	0	0.22	0.07	0	0.19	0.04	0	0.14	0.01	0
Uranium	0.001	-	4	0.001	-	3	0.001	0	2	0.001	-	3
Vanadium	0.02	-	4	0.02	-	3	0.02	-	3	0.02	-	3
Zinc	18	3.8	0	20	3.6	0	24	7.0	0	16	0.6	0
<b>Radionuclides</b>												
Lead-210 (Bq/g)	0.001	-	4	0.0017	0.0012	1	0.001	0	1	0.0013	0.0006	2
Polonium-210 (Bq/g)	0.0009	0.00017	0	0.0009	0.00031	0	0.0016	0.00087	0	0.0011	0.00046	0
Radium-226 (Bq/g)	0.000225	0	3	0.0002	-	3	0.0002	-	3	0.0002	-	3
Thorium-230	0.0005	-	4	0.0005	-	3	0.0005	-	3	0.0005	-	3

<sup>1</sup>All concentrations are reported on a µg/g wet weight basis, except when specified otherwise.

S.D. = Standard deviation; standard deviations of 0 signify "no variance between samples", not "a very small variance".

<RDL = less than the laboratory reported detection limit.

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



**APPENDIX A, TABLE 10**

Summary of spruce grouse chemistry collected from EARMP community program, 2017.

Chemical	Black Lake = 3			Fond Du Lac =3			Stony Rapids = 4			Uranium City = 3			Wollaston Lake = 3		
	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL	Average	S.D.	<RDL
<b>Metals</b>															
Aluminum	2.0	1.6	1	0.8	0.4	-	2.7	1.6	-	1.0	0.6	-	0.6	0.1	1
Arsenic	0.01	-	3	0.01	-	3	0.01	-	4	0.01	-	3	0.01	-	3
Cadmium	0.007	0.002	-	0.016	0.011	-	0.011	0.010	-	0.007	0.006	-	0.003	0.002	1
Cobalt	0.020	0.016	-	0.006	0.003	-	0.004	0.001	-	0.003	0.001	1	0.004	0.002	-
Copper	3.1	0.6	-	3.2	0.8	-	1.9	0.6	-	2.0	0.9	-	2.1	0.7	-
Iron	66	29	-	55	9	-	41	5	-	48	13	-	33	8	-
Lead	1.8	2.1	-	0.12	0.19	-	1	2	-	0.9	1.3	-	0.15	0.18	-
Molybdenum	0.04	0.02	1	0.04	0.03	-	0.04	0.03	1	0.03	0.02	-	0.02	-	3
Nickel	0.04	0.03	-	0.02	0.02	1	0.03	0.01	1	0.01	0.01	2	0.02	0.01	1
Selenium	0.26	0.02	-	0.30	0.06	-	0.18	0.02	-	0.19	0.11	-	0.26	0.04	-
Uranium	0.001	-	3	0.001	-	3	0.001	-	4	0.002	0.001	-	0.001	-	3
Vanadium	0.02	-	3	0.02	-	3	0.02	-	4	0.02	-	3	0.02	-	3
Zinc	13	5	-	18	5	-	18	8	-	13	6	-	7	0	-
<b>Radionuclides</b>															
Lead-210 (Bq/g)	0.001	-	3	0.001	0.001	1	0.001	-	4	0.001	0.001	2	0.001	-	3
Polonium-210 (Bq/g)	0.0003	0.0001	-	0.0008	0.0002	-	0.0003	0.0001	1	0.0004	0.0002	1	0.0003	0.0002	2
Radium-226 (Bq/g)	0.0002	0	2	0.0002	0	2	0.0002	-	4	0.0002	-	3	0.0002	-	3
Thorium-230 (Bq/g)	0.0005	-	3	0.0005	-	3	0.0005	-	4	0.0005	-	3	0.0005	-	3

<sup>1</sup>All concentrations are reported on a µg/g wet weight basis, except when specified otherwise.

S.D. = Standard deviation; standard deviations of 0 signify "no variance between samples", not "a very small variance".

<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

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DETAILED DATA

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**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical	Black Lake (Black Lake)																						
	Lake Whitefish																						
	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	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	
<b>Metals</b>																							
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	
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	
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
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
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	0.005	<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
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
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
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
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
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
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	<0.01	<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
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
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	0.79	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
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	0.08	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
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
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	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
<b>Physical Properties</b>																							
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
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
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
Sex	F	M	M	F	F	M	M	M	M	F	M	M	F	F	F	F	F	M	M	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
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
<b>Radionuclides</b>																							
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
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
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
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

<sup>1</sup>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.

**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Uranium City (Prospectors Bay)																	
	Lake Trout																	
	2012					2013					2014					2016		
	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT04	GN1-1 LT05	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT04	GN1-1 LT05	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT04	GN1-1 LT05	AN1-1 LT01	AN1-1 LT02	AN1-1 LT03
<b>Metals</b>																		
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
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	0.07	0.07	0.08	0.07	0.13	0.07	0.04	0.04	0.07		0.06	0.04	0.07	0.05	0.2	0.09	0.08	0.19
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
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	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<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
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
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
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
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
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
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
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	<0.01	0.02	<0.01	<0.01	<0.01	0.01	0.02	<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
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	0.17	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
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	0.07	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
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
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	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
<b>Physical Properties</b>																		
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
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
Weight (g)	1380	1700	1520	1840	2140	1500	1580	1580	1540	1900	1940	1710	1605	2305	2010	2840	1760	2140
Sex	M	M	M	M	M	F	M	F	M	F	F	M	M	F	M	F	M	M
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Age (years)	12	24	25	19	11	12	11	21	13	12	13	12	13	13	22	15	16	21
<b>Radionuclides</b>																		
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
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
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
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



**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Uranium City (Prospectors Bay)															
	Lake Whitefish															
	2012					2013			2014					2016		
	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	GN1-1 LW09	GN1-1 LW10	GN1-1 LW01	GN1-1 LW02	GN1-1 LW03	GN1-1 LW01	GN1-1 LW02	GN1-1 LW03	GN1-1 LW04	GN1-1 LW05	GN1-1 LW01	GN1-1 LW02	GN1-1 LW03
<b>Metals</b>																
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
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
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
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
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	<0.2	<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
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
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
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
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
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
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
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
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
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
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
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
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
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	0.02	<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
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
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	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
<b>Physical Properties</b>																
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
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
Weight (g)	640	980	1140	1520	1080	1480	1520	1300	1780	1090	1620	1310	750	3380	1280	2440
Sex	M	M	F	F	F	M	M	F	M	F	M	F	M	M	M	F
Maturity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Age (years)	12	29	14	17	21	23	14	11	19	10	15	10	10	18	13	32
<b>Radionuclides</b>																
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
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
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
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

<sup>1</sup>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.

**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	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	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	
<b>Metals</b>																							
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
<b>Physical Properties</b>																							
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
<b>Radionuclides</b>																							
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 B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Camsell Portage (Ellis Bay)																													
	Lake Whitefish																				Northern Pike									
	2011					2012					2013					2014					2016					2012				
	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	GN1-1 LW09	GN1-1 LW10	GN1-1 LW06	GN1-1 LW07	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	GN1-1 LW09	GN1-1 LW10	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	GN1-1 LW09	GN1-1 LW10	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	AN1-1 NP01	AN1-1 NP02	AN1-1 NP03	AN1-1 NP04	AN1-1 NP05					
<b>Metals</b>																														
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					
<b>Physical Properties</b>																														
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	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					
<b>Radionuclides</b>																														
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	<0.0003					

<sup>1</sup>All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Fond du Lac (Fond du Lac River)																						
	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	GN1-1	GN1-1
LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT10	LT06	LT07	LT08	LT09	LT10	LT06	LT07	LT08	LT09	LT10	LT01	LT02	LT03	
<b>Metals</b>																							
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
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	0.17	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
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
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	0.003	<0.002	0.003	0.002	0.003	<0.002	0.003	0.012
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
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
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
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
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
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	<0.01	<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
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
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	0.11	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
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
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	0.08	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
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
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	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
<b>Physical Properties</b>																							
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
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
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
Sex	M	F	F	F	M	M	M	F	F	F	M	M	M	M	M	F	M	F	F	F	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
Age (years)	12	10	15	9	8	17	11	15	-	14	9	11	12	9	8	29	20	16	21	13	18	11	21
<b>Radionuclides</b>																							
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
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)	<0.00006	<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
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

**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Fond du Lac (Fond du Lac River)																								
	Lake Whitefish																								
	2011					2012					2013					2014					2016				
	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	GN1-1 LW09	GN1-1 LW10	GN1-1 LW01	GN1-1 LW02	GN1-1 LW03	GN1-1 LW04	GN1-1 LW05	GN1-1 LW01	GN1-1 LW02	GN1-1 LW03	GN1-1 LW04	GN1-1 LW05	GN1-1 LW01	GN1-1 LW02	GN1-1 LW03	GN1-1 LW04	GN1-1 LW05	GN1-1 LW04	GN1-1 LW05	GN1-1 LW06		
<b>Metals</b>																									
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	<0.5	<0.5	<0.5	0.6	<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	
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	0.03	0.29	0.26	
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	0.06	0.21	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	
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	
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	
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	
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		
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		
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		
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		
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		
Mercury	0.14	0.12	0.14	0.18	0.18	0.02	0.05	0.02	0.02	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		
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	
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	0.01	0.02	0.04	<0.01	0.1	0.02	0.02	<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		
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	
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		
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	
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	
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		
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		
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	
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		
<b>Physical Properties</b>																									
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		
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		
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		
Sex	M	M	F	F	M	M	F	M	F	M	F	M	F	M	M	F	F	M	F	M	F	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	A	
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		
<b>Radionuclides</b>																									
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	
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	
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	
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	

<sup>1</sup>All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

GN = gill net; LT = lake trout; LW = lake whitefish.

**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Stony Rapids (Fond du Lac River)																					
	Lake Trout																					
	2011					2012					2013					2014					2016	
	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT04	SP01-01 LT05	GN1-1 LT06	GN1-1 LT07	GN1-1 LT08	GN1-1 LT09	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT04	GN1-1 LT05	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	GN1-1 LT04	GN1-1 LT05	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03
<b>Metals</b>																						
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
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
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
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
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	<0.2	<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
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	<0.002	<0.002	<0.002	<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
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
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
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
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
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
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	<0.01	<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
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
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
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
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
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
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
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
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	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
<b>Physical Properties</b>																						
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
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
Weight (g)	1750	2060	2180	2840	3720	1520	2060	1840	1820	1720	1680	1940	2060	1600	1580	1640	1100	1670	1440	2080	1960	1920
Sex	F	F	F	F	M	M	M	M	M	F	M	F	M	F	F	M	M	M	F	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
Age (years)	10	15	16	17	15	14	22	21	22	12	12	11	16	13	11	14	12	12	11	15	11	15
<b>Radionuclides</b>																						
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
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
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
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

**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Stony Rapids (Fond du Lac River)																						
	Lake Whitefish																						
	2011					2012					2013					2014					2016		
	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	GN1-1 LW09	GN1-1 LW10	GN1-1 LW01	GN1-1 LW02	GN1-1 LW03	GN1-1 LW04	GN1-1 LW05	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	GN1-1 LW09	GN1-1 LW10	GN1-1 LW06	GN1-1 LW07	GN1-1 LW08	GN1-1 LW09	GN1-1 LW10	GN1-1 LW04	GN1-1 LW05	GN1-1 LW06
<b>Metals</b>																							
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
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	0.06	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
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
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	0.005	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
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
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
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
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
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
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	0.05	<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
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
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	0.23	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
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	0.08	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
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
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	4.0	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
<b>Physical Properties</b>																							
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
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
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
Sex	F	F	F	F	M	F	F	M	F	F	M	F	F	M	M	F	F	F	M	F	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
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
<b>Radionuclides</b>																							
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	<0.001	<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
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
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

<sup>1</sup>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.

**APPENDIX B, TABLE 2**

Detailed fish flesh chemistry data from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Wollaston Lake/Hatchet Lake (Welcome Bay, Wollaston Lake)																						
	Lake Trout																						
	2011					2012					2013					2014					2016		
	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03	SP01-01 LT04	GN1-1 LT05	GN1-1 LT06	GN1-1 LT07	GN1-1 LT08	GN1-1 LT09	GN1-1 LT10	GN1-1 LT07	GN1-1 LT08	GN1-1 LT09	GN1-1 LT10	GN1-1 LT11	GN1-1 LT07	GN1-1 LT08	GN1-1 LT09	GN1-1 LT10	GN1-1 LT11	GN1-1 LT01	GN1-1 LT02	GN1-1 LT03
<b>Metals</b>																							
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
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	0.06	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
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
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	0.003	<0.002	<0.002	0.006	0.002	0.004	<0.002	0.003
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
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
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
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
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
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	0.02	<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
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
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
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
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	0.09	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
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	0.002	<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
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
<b>Physical Properties</b>																							
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
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
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
Sex	F	M	M	F	M	M	M	M	M	M	M	M	F	F	F	M	F	M	M	F	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
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
<b>Radionuclides</b>																							
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)	<0.00006	<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	<0.00005	<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	<0.00009	<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





**APPENDIX B, TABLE 3**

Detailed blueberry chemistry results from the EARMF community program, 2011 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>																										
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
<b>Physical Properties</b>																										
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
<b>Radionuclides</b>																										
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 B, TABLE 3**

Detailed blueberry chemistry results from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Camsell Portage												Uranium City								
	2012					2013					2014		2012					2014			
	1	2	3	4	5	1	2	3	4	5	1	2	3	1	2	3	4	5	1	2	3
<b>Metals</b>																					
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
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
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
Barium	12	24	20	22	20	11	13	12	12	13	22	24	20	12	11	12	12	9.9	14	14	14
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
Boron	5	8	8	8	6	4	4	4	4	4	5	6	5	8	8	9	6	7	3	4	3
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
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
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
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
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
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
Manganese	280	490	490	480	580	350	390	360	380	360	430	470	370	280	330	280	200	140	430	440	450
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
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
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
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
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
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
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
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
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
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
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
<b>Physical Properties</b>																					
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
<b>Radionuclides</b>																					
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
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
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
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

<sup>1</sup>All concentrations are in µg/g dry weight, unless specified otherwise.

### APPENDIX B, TABLE 4

Detailed bog cranberry chemistry results from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Camsell Portage												
	2011					2014		2015			2016		
	1	2	3	4	5	1	2	1	2	3	1	2	3
<b>Metals</b>													
Aluminum	17	17	19	19	16	17	16	16	19	21	22	21	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
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
Barium	14	13	14	15	9.1	15	15	18	19	19	7.6	8.5	8.6
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
Boron	9	8	8	10	9	6	5	10	6	6	6	7	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
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
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
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
Iron	9.7	9.7	10	10	11	15	14	16	12	13	9.3	8.8	9
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
Manganese	110	120	100	100	80	170	170	140	200	220	171	124	155
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
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
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
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
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
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
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
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
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
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
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
<b>Physical Properties</b>													
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
<b>Radionuclides</b>													
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
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
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
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

**APPENDIX B, TABLE 4**

Detailed bog cranberry chemistry results from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Uranium City															
	2011					2013					2014		2015	2016		
	1	2	3	4	5	1	2	3	4	5	1	2	1	1	2	3
<b>Metals</b>																
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
<b>Physical Properties</b>																
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
<b>Radionuclides</b>																
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

<sup>1</sup>All concentrations are in µg/g dry weight, unless specified otherwise.



**APPENDIX B, TABLE 5**

Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>																						
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
<b>Physical Properties</b>																						
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
<b>Radionuclides</b>																						
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 B, TABLE 5**

Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>																					
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
<b>Physical Properties</b>																					
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
<b>Radionuclides</b>																					
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 B, TABLE 5**

Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2017.

Chemical <sup>1</sup>	Camsell Portage		Stony Rapids												
	2013		2013					2014			2015				
	1	2	1	2	3	4	5	1	2	3	1	2	3	4	5
<b>Metals</b>															
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
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	0.02	0.01	0.03	0.02	0.01	0.02	0.02	0.03	0.02	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
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	0.8	<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
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
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
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
Iron	50	46	52	55	46	51	55	38	38	40	34	43	46	47	50
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
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
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	<0.01	<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
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
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	0.04	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
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	0.08	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
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
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	26	25	22	13	16	29	15	40	17	48	41	15	15	18	20
<b>Physical Properties</b>															
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
<b>Radionuclides</b>															
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
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
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
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

**APPENDIX B, TABLE 5**

Detailed barren-ground caribou flesh chemistry results from the EARMP community program, 2012 to 2017.

Chemical <sup>1</sup>	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
<b>Metals</b>																					
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	
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
<b>Physical Properties</b>																					
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
<b>Radionuclides</b>																					
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

<sup>1</sup>All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

**APPENDIX B, TABLE 6**

Detailed moose flesh chemistry results from the EARMP community program, 2011 to 2017.

Chemical <sup>1</sup>	Fond Du Lac	Stony Rapids	Uranium City Study Area												Camsell Portage Study Area										
	2016	2016	2011				2012			2013			2014	2015	2016	2011				2013		2014		2015	
			Mackintosh Bay	Deadman Channel	Melville Lake	Orbit Bay	Ace Creek	Gunnar	Milliken Lake	1	2	3	1	1	1	1	2	3	4	1	2	1	2	1	2
<b>Metals</b>																									
Aluminum	0.6	0.5	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	1.5	3	<0.5	3.8	<0.5	<0.5	0.6	4.4	5.1	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	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<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	0.05	0.06	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	0.04	0.15	0.03	0.02	0.05	0.02	0.07	0.04	0.05	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	<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	0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	0.002	0.002	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	<0.002	0.006	0.002	<0.002	0.002	0.003	0.003	0.05	0.005	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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt	0.011	0.019	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	0.014	0.011	0.022	0.01	0.012	0.015	0.02	0.016	0.015	0.006
Copper	1.5	1.7	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	2.0	1.2	1.8	1.6	1.5	1.8	0.56	1.4	0.93	1.4
Iron	38	29	30	25	42	42	35	34	26	34	37	26	36	33	25	21	25	25	29	29	34	22	32	29	29
Lead	0.01	0.01	<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	0.018	0.019	<0.002	0.002	0.004	<0.002	0.029	0.011	0.004	<0.002
Manganese	0.22	0.24	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	0.2	0.18	0.21	0.13	0.13	0.16	0.38	0.27	0.2	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
Nickel	<0.01	0.02	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	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Selenium	0.1	0.09	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	0.2	0.06	0.1	0.12	0.06	0.06	0.08	0.08	0.17	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	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Strontium	0.06	0.03	<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	0.1	0.06	0.03	0.02	0.06	0.04	0.06	0.09	0.06	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	<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
Titanium	0.05	0.06	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	0.09	0.25	0.09	0.08	0.07	0.07	0.1	0.22	0.14	<0.01
Uranium	<0.001	<0.001	<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	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.002	<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	53	49	50	49	31	49	75	56	55	44	48	56	52	52	35	24	38	47	45	59	45	63	58	61	48
<b>Physical Properties</b>																									
Moisture (%)	75.66	73.9	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	75.01	73.92	75.02	75.12	73.27	72.65	73.14	70.99	73.2	74.63
<b>Radionuclides</b>																									
Lead-210 (Bq/g)	<0.001	<0.001	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	<0.001	<0.0003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.0003	0.0006	<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	0.0019	0.0004	0.0003	-	0.0004	0.0002	0.0004	<0.0002	0.0011	0.0005
Radium-226 (Bq/g)	<0.00005	<0.00007	<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	<0.00008	<0.00007	0.0002	<0.00006	0.00006	0.00007	<0.00006	<0.00006	0.00005	0.00008
Thorium-230 (Bq/g)	<0.0001	<0.0001	<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	<0.0002	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.0001

<sup>1</sup>All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

**APPENDIX B, TABLE 7**

Detailed barren-ground caribou and moose organ chemistry results from the EARMP community program, 2014 to 2017.

Chemical <sup>1</sup>	Fond du Lac			Uranium City		Camsell Portage				Wollaston Lake
	Caribou Kidney			Moose Liver	Moose Kidney	Moose Liver		Moose Kidney		Caribou Liver
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 1	Sample 1	Sample 2	Sample 1	Sample 2	Sample 1
<b>Metals</b>										
Aluminum	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	1.1	<0.5	1.2	0.7
Barium	0.58	0.45	0.41	0.1	0.27	0.1	0.12	0.23	0.44	0.02
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	6.2	9.6	6.8	0.48	8	1.7	1.1	8.6	6.5	0.65
Chromium	<0.5	<0.5	<0.5	<0.1	<0.5	<0.1	<0.1	<0.5	<0.5	<0.1
Copper	3.6	4.9	4.3	28	3	38	47	2.1	3.8	26
Iron	40	60	60	120	41	100	150	70	90	140
Lead	0.073	0.068	0.078	0.008	0.002	<0.002	0.003	<0.002	0.002	0.097
Manganese	1.8	2	1.8	1.4	1	1.3	2.2	1.2	2	3.6
Molybdenum	0.12	0.11	0.14	0.65	0.24	0.9	1	0.21	0.42	1
Nickel	<0.01	0.01	0.01	<0.01	0.04	<0.01	<0.01	0.05	0.06	<0.01
Selenium	1.3	1.6	1.4	0.2	0.67	0.22	0.21	0.71	0.78	0.4
Silver	0.003	0.003	<0.002	0.01	<0.002	0.009	0.014	<0.002	<0.002	0.12
Thallium	0.02	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.02	<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
Titanium	0.06	0.08	0.07	<0.5	0.04	<0.5	<0.5	0.03	0.08	<0.5
Uranium	<0.001	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.001	<0.001	<0.01
Zinc	23	28	27	14	25	15	20	16	23	24
<b>Physical Properties</b>										
Moisture (%)	48.56	66.49	42.82	58.58	78.25	74.05	70.38	76.94	78.33	71.23
<b>Radionuclides</b>										
Lead-210 (Bq/g)	0.072	0.054	0.042	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Polonium-210 (Bq/g)	0.088	0.081	0.086	0.0021	0.0032	0.0036	0.0024	0.0018	0.0023	0.0093
Radium-226 (Bq/g)	0.0003	0.0009	0.0005	0.00007	<0.00006	0.0001	<0.0001	<0.00006	0.0005	0.0002
Thorium-230 (Bq/g)	<0.0003	<0.0006	<0.0005	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0004	<0.0001
<b>Trace Elements</b>										
Antimony	<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	0.02
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cobalt	0.029	0.044	0.046	0.054	0.097	0.25	0.2	0.12	0.2	0.075
Strontium	0.18	0.18	0.16	0.1	0.11	0.06	0.07	0.17	0.13	0.04
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

**APPENDIX B, TABLE 7**

Detailed barren-ground caribou and moose organ chemistry results from the EARMP community program, 2014 to 2017.

Chemical <sup>1</sup>	Black Lake	Fond du Lac		Uranium City		Camsell Portage		
	Caribou Kidney			Moose Liver	Moose Kidney	Moose Liver	Moose Kidney	
	Sample 1	Sample 1	Sample 2	Sample 1	Sample 1	Sample 1	Sample 1	Sample 2
<b>Metals</b>								
Aluminum	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5
Barium	0.2	0.43	0.43	0.48	0.16	0.11	0.12	0.13
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cadmium	6.9	10	7.3	0.054	20	0.66	6.8	4.9
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Copper	5	4.4	3.6	0.55	2.2	15	3.8	2.6
Iron	37	28	40	680	33	160	52	30
Lead	0.07	0.12	0.089	<0.002	<0.002	0.003	<0.002	0.004
Manganese	1.8	1.7	1.5	0.09	0.8	2.1	2.7	1.5
Molybdenum	0.15	0.16	0.12	<0.02	0.17	1.1	0.45	0.25
Nickel	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.03	0.04
Selenium	1	1.2	1.1	0.18	0.53	0.92	1.2	0.78
Silver	<0.002	<0.002	<0.002	<0.002	<0.002	0.033	<0.002	<0.002
Thallium	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
Titanium	0.02	0.05	0.04	<0.01	<0.01	0.03	<0.01	<0.01
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	24	26	25	15	24	20	26	20
<b>Physical Properties</b>								
Moisture (%)	69.25	54.43	54	72.88	83.14	68.14	78.43	82.17
<b>Radionuclides</b>								
Lead-210 (Bq/g)	0.049	0.077	0.073	0.002	0.002	0.001	0.002	0.002
Polonium-210 (Bq/g)	0.064	0.083	0.066	0.0018	0.0037	0.026	0.027	0.0076
Radium-226 (Bq/g)	0.0005	0.0003	0.0003	0.0003	0.00007	0.0002	0.0001	0.0003
Thorium-230 (Bq/g)	<0.0003	0.0005	<0.0003	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001
<b>Trace Elements</b>								
Antimony	<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
Beryllium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cobalt	0.035	0.036	0.025	0.068	0.25	0.18	0.18	0.058
Strontium	0.1	0.11	0.12	0.06	0.1	0.05	0.11	0.09
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

## APPENDIX B, TABLE 7

Detailed barren-ground caribou and moose organ chemistry results from the EARMP community program, 2014 to 2017.

Chemical <sup>1</sup>	Fond Du Lac		Wollaston Lake		Black Lake		Uranium City		Stony Rapids
	Caribou Heart	Caribou Liver	Caribou1 Liver	Caribou2 Liver	Caribou Heart	Caribou Kidney	Moose Liver	Moose Kidney	Moose Kidney
	Sample 1	Sample 1	Sample 1	Sample 2	Sample 1	Sample 1	Sample 1	Sample 1	Sample 1
<b>Metals</b>									
Aluminum	<0.5	<0.5	0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
Barium	0.06	0.12	0.36	0.27	0.11	1	0.14	0.26	0.14
Boron	<0.2	<0.2	0.7	<0.2	<0.2	<0.2	<0.2	<0.2	0.2
Cadmium	0.002	0.004	1.8	1.6	0.004	4.7	1.4	8.6	0.73
Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Copper	4.5	3.3	54.6	31.7	4.5	3.5	28.1	2.9	13.2
Iron	59	37	190	170	55	24	140	31	200
Lead	0.01	0.003	0.076	0.055	0.005	0.041	0.018	0.012	0.004
Manganese	0.52	0.33	3.3	3.8	0.55	1.4	2.4	1.2	4.1
Molybdenum	<0.02	<0.02	0.74	0.57	<0.02	0.21	0.81	0.2	1.1
Nickel	0.01	0.02	0.02	<0.01	<0.01	0.03	<0.01	0.08	0.02
Selenium	0.26	0.18	0.4	0.4	0.27	0.94	0.53	0.88	0.24
Silver	<0.002	<0.002	0.19	0.097	<0.002	<0.002	0.01	<0.002	0.014
Thallium	<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
Titanium	<0.01	0.01	0.08	0.03	<0.01	0.08	0.02	0.02	0.02
Uranium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Zinc	20	37	36	41	19	24	23	23	27
<b>Physical Properties</b>									
Moisture (%)	74.89	71.08	70.73	71.4	75	76.39	61.03	82.38	68.77
<b>Radionuclides</b>									
Lead-210 (Bq/g)	<0.001	<0.001	0.056	0.04	<0.001	0.023	<0.001	<0.001	0.001
Polonium-210 (Bq/g)	0.0092	0.0088	0.24	0.18	0.012	0.076	0.0057	0.0063	0.0042
Radium-226 (Bq/g)	<0.00007	<0.00006	<0.00007	<0.00007	<0.00006	<0.0001	0.0001	0.0003	<0.00008
Thorium-230 (Bq/g)	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002
<b>Trace Elements</b>									
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Arsenic	0.01	<0.01	0.02	0.01	0.01	0.02	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
Cobalt	0.02	0.013	0.1	0.071	0.014	0.062	0.078	0.11	0.29
Strontium	0.04	0.06	0.07	0.05	0.05	0.11	0.04	0.08	0.08
Vanadium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

<sup>1</sup>All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.





**APPENDIX B, 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		
	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3	Sample 4	Sample 1	Sample 2	Sample 3	Sample 1	Sample 2	Sample 3
<b>Metals</b>																
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	<b>0.036</b>	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	<b>4.2</b>	0.36	<b>0.9</b>	0.34	0.027	0.004	<b>4</b>	0.046	0.22	0.084	<b>2.4</b>	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
<b>Physical Properties</b>																
% 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
<b>Radionuclides</b>																
Polonium-210 (Bq/g)	0.0004	0.0003	0.0003	0.0007	<b>0.001</b>	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

<sup>1</sup>All concentrations are presented on a µg/g wet weight basis, unless specified otherwise.

APPENDIX C

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HUMAN HEALTH RISK ASSESSMENT