

# 2019

## Fish Consumption Guidance Mercury in Fish



## About this document:

*This technical report was prepared to provide summary information about the fish consumption advice available for Alberta water bodies and to present new data collected from 2013 to 2016 (inclusive) along with attendant advice. The information in this report may be of interest to researchers, public health professionals, or members of the public who are interested in fish consumption advice in Alberta and want additional information. This document has been produced using methods described in past reports – as such, the information contained herein is a summary of available data related to mercury in fish and human health advice. More fulsome descriptions of laboratory and risk calculation methods are available in previous reports that are available at: <http://open.alberta.ca/publications>.*

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**Fish consumption advice is available at <http://mywildalberta.ca>**  
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## Acknowledgments

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*The methods employed in the evaluation of human health risk and derivation of recommended fish consumption limits have been reviewed and refined by past membership of the Science Advisory Committee: those committee members are named in previous reports referenced within this document. As no new methods have been employed in the production of this document, it has not been reviewed by the Science Advisory Committee.*

*The interpretation of new fish tissue monitoring results, creation of subsequent advice, and compilation of existing historical advice has been reviewed.*

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## List of Abbreviations

AEP:	Alberta Environment and Parks
AH:	Alberta Health
JOSMP:	Joint Oil Sands Monitoring Program
RAMP:	Regional Athabasca Monitoring Program
THg:	Total mercury
ww:	Wet weight

# 1. Introduction

Mercury is a heavy metal that enters the environment via various natural processes and human activities. Humans are typically exposed to very low levels of mercury in the air, water and food. Inorganic mercury can be transformed into methylmercury by micro-organisms in bottom sediment. Methylmercury can accumulate in fish, and people who eat fish may be exposed to relatively higher levels of methylmercury than those who do not. Methylmercury is a neurotoxin that can accumulate in the human body over time. To avoid potential health risks, it is necessary to limit the consumption of fish containing high levels of mercury. Fish consumption advice for Alberta, issued by Alberta Health (AH), indicates that:

1. Pregnant and breastfeeding women and young children *should eat* fish with lower levels of mercury in order to obtain high quality protein from fish for nutritional benefits. This supports foetal growth and development in early infancy for breastfed infants; and
2. Where higher levels of mercury are measured in fish, consumption of these fish *should be limited* in order to reduce potential health risks.

To manage the health risk posed by contaminated fish, recommended consumption limits have been derived based on measured mercury levels in fish in Alberta water bodies. The recommended consumption limits are voluntary guidelines that allow local fish consumers to make informed decisions about how much fish can be safely consumed. This contrasts other mandatory measures, such as catch and release regulations or outright fishing bans, which restrict consumer actions. The criteria for issuing fish consumption advice include:

1. Mercury levels higher than 0.5 µg/g (commercial fishing guideline) will result in an “avoid consuming fish” recommendation for women of reproductive age and children under 12 years old;
2. Mercury levels between 0.2 – 0.5 µg/g (Health Canada’s recommendation for subsistence consumers) will result in “consumption limit” advice;
3. Mercury levels less than 0.2 µg/g will not result in any consumption recommendations;
4. If the number of fish collected from a water body is less than five, fish consumption advice will not be issued (due to insufficient sample size); and
5. If the lakes are used for commercial fishing, fish consumption advice will not be issued until consulting with the Canadian Food Inspection Agency.

From 2013 to 2016, AH and Alberta Environment and Parks (AEP) surveyed mercury levels in fish from selected water bodies in Alberta that are extensively accessed by the public for recreational activities. This report presents: (1) mercury concentrations in fish; (2) fish consumption limits based on the results; and (3) a summary of current fish consumption advice for Alberta, based on all test data obtained over the course of the mercury in fish monitoring program and other special projects.

Mercury in fish test data for years prior to 2013 are available in earlier reports (Government of Alberta, 2009a, 2009b, 2009c, 2009d, 2016). These reports may be referenced for detailed

information about the methodology used in this report. Technical questions regarding derivation of consumption advice may be addressed through the contacts provided on page ii.

## 2. Methods

### 2.1 Field Collection

Between September 2013 and September 2016, field collection was conducted at 35 water bodies by AEP or Environment Canada. Sampling sites included:

1. Amisk Lake
2. Arm Lake
3. Athabasca River (between Hinton and Whitecourt)
4. Berry Creek Reservoir (Carolside)
5. Brazeau Canal
6. Brazeau Reservoir
7. Burnstick Lake
8. Chain Lakes (nearby Ponoka)
9. Chenal des Quatre Fourches (Peace Delta)
10. Christina Lake
11. Clear Lake
12. Cold Lake
13. Dore Lake
14. Fickle Lake
15. Fork Lake
16. Gods Lake
17. Gull Lake
18. Haig Lake
19. Lac Bellevue
20. Lac La Biche
21. Lake Athabasca
22. Long Lake
23. Marie Lake
24. May Lake
25. Muskwa Lake
26. Namur Lake
27. North Buck Lake
28. North Saskatchewan River (sampling locations: Drayton Valley Bridge, Waskatenau Bridge, Genesee Bridge on Hwy 770, Hwy 15 Bridge, Elk Point and Lea Park Bridge)
29. Orloff Lake
30. Pine Coulee Reservoir
31. Red Deer River (sampling locations: downstream of Dickson Dam, between Dickson Dam and Innisfail Bridge crossing, Hwy 585 Crossing - Tolman Bridge, between Bleriot Ferry and downstream of Drumheller)
32. Seibert Lake
33. Shiningbank Lake
34. Skeleton Lake



### 35. Tucker Lake

Fish species collected for mercury analysis included:

1. Burbot (*Lota lota*)
2. Goldeye (*Hiodon alosoides*)
3. Lake trout (*Salvelinus namaycush*)
4. Lake whitefish (*Coregonus clupeaformis*)
5. Longnose sucker (*Catostomus catostomus*)
6. Mooneye (*Hiodon tergisus*)
7. Mountain whitefish (*Prosopium williamsoni*)
8. Northern pike (*Esox lucius*)
9. Sauger (*Sander canadensis*)
10. Shorthead redhorse (*Moxostoma macrolepidotum*)
11. Walleye (*Sander vitreus*)

Fish were collected by gill-netting, angling and electrofishing. Each sample was kept on ice, and then frozen flat before shipment.

## 2.2 Laboratory Analysis

Fish samples were shipped to the Alberta Centre for Toxicology at the University of Calgary, and analysed for mercury using the protocols described in USEPA method 7473 (USEPA, 2007). The limit of quantitation for total mercury (THg) levels in fish tissue was 5 ng/g. Results are expressed on a wet weight (ww) basis in fillet.

## 2.3 Calculation of Consumption Limits

The methods used to calculate consumption limits have been described previously (Government of Alberta, 2016).

## 3. Results

Table 1: Fish Sampling Summary, 2013–2016 lists the number fish collected from each site, average fish length (total length or fork length) and average fish mass.

Table 2: Total Mercury Levels in Fish, 2013–2016 presents the THg concentrations (arithmetic mean) found in the fish samples. THg concentrations exceeding the 0.5 µg/g commercial fish limit are shown in **bold**.

Table 3: Recommended Fish Consumption Limits (2013–2016 data) presents the calculated consumption limits for 26 of the 35 water bodies based on the above results.



**Table 1: Fish Sampling Summary, 2013–2016**

Water Body and Fish Species	Year Sampled	Sample Size	Mean Total Length <sup>a</sup> (cm)	Mean Mass (g)
<u>Amisk Lake</u>				
Northern pike	2013	16	54	988
Walleye	2013	13	47	882
<u>Arm Lake</u>				
Northern pike	2014	8	53	748
<u>Athabasca River (between Hinton and Whitecourt)</u>				
Mountain whitefish	2014	80	38 <sup>b</sup>	672
<u>Berry Creek Reservoir</u>				
Northern pike	2015	15	61	1,582
<u>Brazeau Canal</u>				
Northern pike	2015	15	52	935
<u>Brazeau Reservoir</u>				
Northern pike	2015	15	69	2,272
<u>Burnstick Lake</u>				
Northern pike	2015	15	62	1,429
Walleye	2015	15	61	2,382
<u>Chain Lakes (nearby Ponoka)</u>				
Northern pike	2014	39	55	1,161
<u>Chenal des Quatre Fourches</u>				
Goldeye	2014	16	36	534
Lake whitefish	2014	15	44	1,339
Northern pike	2014	26	67	2,555
Walleye	2014	20	50	1,261
<u>Christina Lake</u>				
Northern pike	2013	8	72	2,578
Walleye	2013	10	57	1,711
<u>Clear Lake</u>				
Northern pike	2014	9	65	1,541
Walleye	2014	15	49	1,027
<u>Cold Lake</u>				
Lake trout	2016	14	55	1,721
Lake whitefish	2016	15	50	1,280
<u>Dore Lake</u>				
Northern pike	2014	8	66	2,758
Walleye	2014	21	46	1,048
<u>Fickle Lake</u>				
Lake whitefish	2014	31	47 <sup>b</sup>	1,804
<u>Fork Lake</u>				
Northern pike	2014	15	60	1,253
<u>Gods Lake</u>				
Lake whitefish	2014	20	63 <sup>b</sup>	2,739
Northern pike	2014	20	74 <sup>b</sup>	2,660
Walleye	2014	20	59 <sup>b</sup>	2,089
<u>Gull Lake</u>				
Lake whitefish	2014	15	46	915

Water Body and Fish Species	Year Sampled	Sample Size	Mean Total Length <sup>a</sup> (cm)	Mean Mass (g)
Northern pike	2014	15	73	2,805
<u>Haig Lake</u>				
Lake whitefish	2014	20	60 <sup>b</sup>	2,289
Walleye	2014	20	48 <sup>b</sup>	929
<u>Lac Bellevue</u>				
Walleye	2015	22	45	862
<u>Lac La Biche</u>				
Lake whitefish	2014	10	49	1,319
Northern pike	2014	10	81	3,453
Walleye	2014	12	59	1,916
<u>Lake Athabasca</u>				
Burbot	2013	21	58 <sup>b</sup>	1,727
Lake trout	2013	20	65	2,827
Northern pike	2013	20	61	1,997
Walleye	2013	20	53	1,938
<u>Lake Athabasca</u>				
Burbot	2014	20	54 <sup>b</sup>	1,131
Lake trout	2014	22	72	3,276
Northern pike	2014	20	67	2,306
Walleye	2014	20	52	1,583
<u>Long Lake</u>				
Northern pike	2014	10	48	706
Walleye	2014	10	47	1,204
<u>Marie Lake</u>				
Northern pike	2015	15	82	4,275
Walleye	2015	13	50	1,258
<u>May Lake</u>				
Lake whitefish	2013	14	51	2,113
Northern pike	2013	16	57	1,530
Walleye	2013	15	45	989
<u>Muskwa Lake</u>				
Northern pike	2015	26	60	1,718
Walleye	2015	8	50	1,369
<u>Namur Lake</u>				
Lake trout	2013	18	57	2,029
Lake whitefish	2013	20	35	654
<u>North Buck Lake</u>				
Lake whitefish	2015	11	49	1,199
Northern pike	2015	17	58	1,425
<u>North Saskatchewan River (between Drayton Valley Bridge and Lea Park Bridge)</u>				
Goldeye	2016	7	38	457
Mooneye	2016	17	34	410
Sauger	2016	5	43	681
Walleye	2016	23	38	870
<u>Orloff Lake</u>				
Lake whitefish	2015	10	54	1,976
Northern pike	2015	10	68	1,834
Walleye	2015	10	47	896

Water Body and Fish Species	Year Sampled	Sample Size	Mean Total Length <sup>a</sup> (cm)	Mean Mass (g)
<u>Pine Coulee Reservoir</u>				
Walleye	2014	17	38	469
<u>Red Deer River<sup>c</sup> (from downstream of Dickson Dam to downstream of Drumheller)</u>				
Goldeye	2014/15	43	38	532
Longnose sucker	2014/15	25	45	1,020
Mountain whitefish	2014/15	30	39	646
Northern pike	2014/15	8	76	3,001
Sauger	2014/15	16	36	385
Shorthead redhorse	2014/15	25	46	1,094
Walleye	2014/15	30	58	2,155
<u>Seibert Lake</u>				
Northern pike	2015	12	70	4,410
Walleye	2015	20	49	1,023
<u>Shiningbank Lake</u>				
Lake whitefish	2014	15	51 <sup>b</sup>	2,018
Northern pike	2014	13	46 <sup>b</sup>	739
Walleye	2014	30	45 <sup>b</sup>	1,086
<u>Skeleton Lake</u>				
Lake whitefish	2015	12	54	1,614
Northern pike	2015	13	58	1,055
Walleye	2015	18	54	1,654
<u>Tucker Lake</u>				
Northern pike	2013	15	54 <sup>b</sup>	1,165

<sup>a</sup> Total length: the maximum length of the fish with the mouth closed and the tail fin pinched together.

<sup>b</sup> Fork length: the length measured from the tip of the snout to the end of the middle caudal fin rays.

<sup>c</sup> Average sample size, total length and mass of all Red Deer River sampling locations.

**Table 2: Total Mercury Levels in Fish, 2013–2016**

Water Body and Fish Species	Mean THg <sup>a</sup> (µg/g, ww)	Minimum THg (µg/g, ww)	Maximum THg (µg/g, ww)
<u>Amisk Lake</u>			
Northern pike	0.49	0.12	0.92
Walleye	<b>0.99</b>	0.49	1.59
<u>Arm Lake</u>			
Northern pike	0.48	0.36	0.69
<u>Athabasca River (between Hinton and Whitecourt)</u>			
Mountain whitefish	0.05	0.02	0.13
<u>Berry Creek Reservoir</u>			
Northern pike	0.25	0.16	0.40
<u>Brazeau Canal</u>			
Northern pike	0.12	0.04	0.37
<u>Brazeau Reservoir</u>			
Northern pike	0.31	0.11	0.98
<u>Burnstick Lake</u>			
Northern pike	<b>0.60</b>	0.36	0.85
Walleye	<b>1.04</b>	0.40	1.57
<u>Chain Lakes (nearby Ponoka)</u>			
Northern pike	0.28	0.09	0.56
<u>Chenal des Quatre Fourches</u>			
Goldeye	0.33	0.14	0.45
Lake whitefish	0.08	0.05	0.21
Northern pike	0.23	0.11	0.38
Walleye	0.49	0.10	1.00
<u>Christina Lake</u>			
Northern pike	0.44	0.20	0.75
Walleye	0.45	0.09	0.73
<u>Clear Lake</u>			
Northern pike	<b>0.72</b>	0.49	1.09
Walleye	<b>0.98</b>	0.38	1.39
<u>Cold Lake</u>			
Lake trout	0.12	0.03	0.23
Lake whitefish	0.05	0.03	0.06
<u>Dore Lake</u>			
Northern pike	<b>1.09</b>	0.27	2.10
Walleye	0.42	0.24	0.96
<u>Fickle Lake</u>			
Lake whitefish	0.11	0.07	0.21
<u>Fork Lake</u>			
Northern pike	0.20	0.11	0.32
<u>Gods Lake</u>			
Lake whitefish	0.14	0.02	0.26
Northern pike	<b>0.58</b>	0.39	0.83
Walleye	<b>0.75</b>	0.18	1.55
<u>Gull Lake</u>			
Lake whitefish	0.14	0.05	0.32
Northern pike	0.41	0.26	0.80

Water Body and Fish Species	Mean THg <sup>a</sup> (µg/g, ww)	Minimum THg (µg/g, ww)	Maximum THg (µg/g, ww)
Walleye	<b>0.89</b>	0.55	1.16
<u>Haig Lake</u>			
Lake whitefish	0.06	0.03	0.13
Walleye	0.13	0.06	0.42
<u>Lac Bellevue</u>			
Walleye	0.39	0.17	1.21
<u>Lac La Biche</u>			
Lake whitefish	0.12	0.01	0.03
Northern pike	0.17	0.08	0.27
Walleye	0.13	0.07	0.34
<u>Lake Athabasca (2013)</u>			
Burbot	0.11	0.06	0.19
Lake trout	0.27	0.14	0.41
Northern pike	0.22	0.13	0.34
Walleye	0.33	0.15	0.56
<u>Lake Athabasca (2014)</u>			
Burbot	0.12	0.06	0.23
Lake trout	0.33	0.18	0.78
Northern pike	0.26	0.15	0.37
Walleye	0.35	0.13	1.05
<u>Long Lake</u>			
Northern pike	0.27	0.14	0.51
Walleye	0.46	0.17	0.80
<u>Marie Lake</u>			
Northern pike	0.37	0.16	0.54
Walleye	0.25	0.15	0.54
<u>May Lake</u>			
Lake whitefish	0.06	0.03	0.10
Northern pike	0.28	0.07	0.61
Walleye	0.32	0.13	0.69
<u>Muskwa Lake</u>			
Northern pike	0.22	0.04	0.91
Walleye	0.16	0.06	0.35
<u>Namur Lake</u>			
Lake trout	0.35	0.14	0.59
Lake whitefish	0.04	0.02	0.06
<u>North Buck Lake</u>			
Lake whitefish	0.03	0.01	0.05
Northern pike	0.30	0.08	0.65
<u>North Saskatchewan River (between Drayton Valley Bridge and Lea Park Bridge)</u>			
Goldeye	0.37	0.20	0.53
Mooneye	0.30	0.15	0.74
Sauger	<b>0.85</b>	0.49	1.14
Walleye	0.36	0.20	0.91
<u>Orloff Lake</u>			
Lake whitefish	0.04	0.02	0.06
Northern pike	0.28	0.14	0.54
Walleye	0.19	0.07	0.37
<u>Pine Coulee Reservoir</u>			

Water Body and Fish Species	Mean THg <sup>a</sup> (µg/g, ww)	Minimum THg (µg/g, ww)	Maximum THg (µg/g, ww)
Walleye	<b>0.70</b>	0.26	0.97
<i>Red Deer River (from downstream of Dickson Dam to downstream of Drumheller)</i>			
Goldeye	0.48	0.31	0.77
Longnose sucker	0.22	0.09	0.48
Mountain whitefish	0.16	0.06	0.35
Northern pike	<b>0.55</b>	0.20	1.07
Sauger	<b>0.67</b>	0.22	1.49
Shorthead redhorse	0.44	0.23	0.62
Walleye	<b>0.82</b>	0.22	2.12
<i>Seibert Lake</i>			
Northern pike	0.33	0.24	0.47
Walleye	0.23	0.10	0.47
<i>Shiningbank Lake</i>			
Lake whitefish	0.21	0.11	0.29
Northern pike	0.19	0.10	0.52
Walleye	<b>0.57</b>	0.41	0.84
<i>Skeleton Lake</i>			
Lake whitefish	0.02	0.005	0.08
Northern pike	0.11	0.05	0.27
Walleye	0.18	0.05	0.40
<i>Tucker Lake</i>			
Northern pike	0.14	0.06	0.33

<sup>a</sup> Mean THg concentrations exceeding the 0.5 µg/g commercial fish limit are shown in **bold**.

**Table 3: Recommended Fish Consumption Limits (2013–2016 data)**

Water Body and Fish Species	For Fish Heavier Than (lb)	Recommended Consumption Limit (servings per week)			
		Women	Children (5–11 y)	Children (1–4 y)	Adults
<i>Amisk Lake</i>					
Northern pike	2	2	1	0.5	no limit
Walleye	2	avoid	avoid	avoid	3
<i>Arm Lake</i>					
Northern pike	2	3	1	0.5	no limit
<i>Berry Creek Reservoir</i>					
Northern pike	5	5	2	1	no limit
<i>Brazeau Reservoir</i>					
Northern pike	5	4	2	1	no limit
<i>Burnstick Lake</i>					
Northern pike	3	avoid	avoid	avoid	5
Walleye	5	avoid	avoid	avoid	3
<i>Chain Lakes</i>					
Northern pike	3	4	2	1	no limit
<i>Chenal des Quatre Fourches</i>					
Goldeye	1	4	2	1	no limit
Northern pike	6	5	2	1	no limit
Walleye	3	2	1	0.5	no limit
<i>Christina Lake</i>					
Northern pike	6	3	1	0.5	no limit
Walleye	4	3	1	0.5	no limit
<i>Clear Lake</i>					
Northern pike	3	avoid	avoid	avoid	4
Walleye	2	avoid	avoid	avoid	3
<i>Dore Lake</i>					
Northern pike	6	avoid	avoid	avoid	3
Walleye	2	3	1	0.5	no limit
<i>Fork Lake</i>					
Northern pike	3	6	2.5	1.5	no limit
<i>Gods Lake</i>					
Northern pike	6	avoid	avoid	avoid	6
Walleye	5	avoid	avoid	avoid	4
<i>Gull Lake</i>					
Northern pike	6	3	1	0.5	no limit
Walleye	6	avoid	avoid	avoid	4
<i>Lake Athabasca</i>					
Lake trout	7	4	2	1	no limit
Northern pike	5	5	2	1	no limit
Walleye	3	3	1	0.5	no limit
<i>Long Lake</i>					
Northern pike	2	5	2	1	no limit
Walleye	3	3	1	0.5	no limit
<i>Marie Lake</i>					
Northern pike	9	3	1	0.5	no limit
Walleye	3	5	2	1	no limit
<i>May Lake</i>					
Northern pike	2	4	2	1	no limit



Water Body and Fish Species	For Fish Heavier Than (lb)	Recommended Consumption Limit (servings per week)			
		Women	Children (5–11 y)	Children (1–4 y)	Adults
Walleye	3	4	2	1	no limit
<i><u>Muskwa Lake</u></i>					
Northern pike	4	6	2.5	1.5	no limit
<i><u>Namur Lake</u></i>					
Lake trout	4	3	1	0.5	no limit
<i><u>North Buck Lake</u></i>					
Northern pike	3	4	2	1	no limit
<i><u>North Saskatchewan River</u></i>					
Goldeye	1	3	1	0.5	no limit
Mooneye	1	4	2	1	no limit
Sauger	2	avoid	avoid	avoid	4
Walleye	2	3	1	0.5	no limit
<i><u>Orloff Lake</u></i>					
Northern pike	4	4	2	1	no limit
<i><u>Pine Coulee Reservoir</u></i>					
Walleye	1	avoid	avoid	avoid	5
<i><u>Red Deer River</u></i>					
Longnose sucker	3	6	2.5	1.5	no limit
Goldeye	1	3	1	0.5	6
Northern pike	4	avoid	avoid	avoid	5
Sauger	1	avoid	avoid	avoid	4
Shorthead redhorse	2	3	1	0.5	no limit
Walleye	7	avoid	avoid	avoid	4
<i><u>Seibert Lake</u></i>					
Northern pike	10	4	2	1	no limit
Walleye	2	5	2	1	no limit
<i><u>Shiningbank Lake</u></i>					
Lake whitefish	4	6	2.5	1.5	no limit
Walleye	2	avoid	avoid	avoid	6

## 4. Current Fish Consumption Advice for Alberta

Table 4: Current Fish Consumption Advice for Alberta Water Bodies summarizes the current fish consumption advice that is supported by all the testing data obtained by AH and AEP over the course of the mercury in fish monitoring program. Readers are advised to review the instruction graphic (Figure 1: Understanding Table 4) to help with the interpretation of Table 4: Current Fish Consumption Advice for Alberta Water Bodies.

Table 5: Mercury Levels in Fish in Alberta Water Bodies lists the average levels of mercury in fish for the water bodies, including fish species, year of sampling and additional notes. In some cases, test data were provided by other agencies such as Environment Canada or the Regional Athabasca Monitoring Program (RAMP)<sup>1</sup>. All data obtained from other agencies are marked with the letters ‘d’ through ‘i’ in the Notes column of Table 5. A summary of the data obtained from RAMP for 2008–2014 is included in the Appendix: Mercury in Fish, RAMP 2008–2014.

Table 6: Water Body Location Information, with a map of all tested water bodies presented in Figure 2: Sampling Locations up to 2016. Detailed water body location information (i.e., section/township, longitude/latitude, Google Maps hyperlink) is given.

*As only those water bodies indicated in Tables 4–6 and Figure 2 have been tested, no information can be provided regarding the safety or risk associated with consumption of fish from other water bodies.*

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<sup>1</sup> RAMP was implemented in 1997 as a “multi-stakeholder aquatics monitoring program that assessed the health of rivers and lakes within the oil sands region, and to assess potential cumulative effects of oil sands development” (Hatfield Consultants, 2015). In 2012, the Canada and Alberta governments developed the Joint Oil Sands Monitoring Program (JOSMP) in efforts to “enhance these monitoring activities and work to integrate environmental monitoring across all environmental components” (Hatfield Consultants, 2015). Between 2012 and 2014, the aquatics monitoring activities of RAMP were incorporated into the JOSMP, with the process completed by April 1, 2014.

Figure 1: Understanding Table 4

**Fish length:** "Fish size longer than (cm)" refers to fish total length, defined as the maximum length of the fish with the mouth closed and the tail fin pinched together. In some cases, fork length may be used. Fork length is measured from the tip of the snout to the end of the middle caudal fin rays. The recommended consumption limits apply only to fish larger than the indicated length and/or weight.

**Fish weight:** "Fish size heavier than (lb)" refers to fish weight. Recommended consumption limits apply only to fish larger than the indicated length and/or weight. Fish weight, rather than fish length, is the preferred indicator of fish size, as mercury concentrations in fish are measured on weight basis.

**Recommended Consumption Limits:** the recommended number of servings per week for each consumption group. Based on the Canada Food Guide, 1 serving is equal to 75 g, 1/2 cup or 2.5 oz, which is roughly equivalent to a piece of cooked fish that fits into the palm of your hand.

**Year sampled:** year that fish were sampled from the selected water body.

**Water body:** name of surveyed water body. Additional location details are provided in Table 6 and Figure 2 (sampling site map).

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)			
			Longer than (cm)	or Heavier than (lb)	Women	Children (5-11 yr)	Children (1-4 yr)	Adults
Amisk Lake*	NRPK	2014	54	2	2	1	0.5	no limit
	WALL	2014	47	1	avoid	avoid	avoid	4
Athabasca River** (downstream of Fort McMurray)	GOLD	1998	-	-	-	-	-	-
	LKWH	2014	-	-	-	-	-	-
Bow River*** (below Bassano Dam)	NRPK	n/a	n/a	n/a	avoid	avoid	avoid	avoid
	WALL	n/a	n/a	n/a	avoid	avoid	avoid	avoid

**Consumption group definitions:**

- **Women:** women of reproductive age (15-49 yr) and pregnant women.
- **Children (5-11 yr):** children between 5 and 11 years old.
- **Children (1-4 yr):** children between 1 and 4 years old.
- **Adult:** individuals 12 years old and older (excluding women of reproductive age and pregnant women).

"-" means no advisories

**Species:** fish species (common name).

- BNTR = Brown trout
- BURB = Burbot
- BKTR = Brook trout
- GOLD = Goldeye
- LKTR = Lake Trout
- LKWH = Lake Whitefish
- LNSC = Longnose sucker
- MOON = Mooneye
- MTWH = Mountain Whitefish
- NRPK = Northern Pike
- RNTR = Rainbow trout
- SAUG = Sauger
- STRH = Shorthead redhorse
- TRPR = Trout perch
- WALL = Walleye
- YLPR = Yellow perch

**Interpretation examples:**

\* **Water body with consumption limits (e.g., Amisk Lake):** a row with entries in all cells indicates that recommended consumption limits are advised.

\*\* **Water body without consumption limits (e.g., Athabasca River):** a row marked with "-" in the columns for Fish Size and Recommended Consumption Limits indicates that measured mercury levels were < 0.2 mg/kg and consumption limits are not required.

\*\*\* **Water body with marked with "n/a" and "avoid" (e.g., Bow River):** Mercury levels in fish were measured in the 1980s by Alberta Environment, and fish consumption advice to "avoid" consumption was issued by Health Canada. Details from these tests are no longer available. Fish consumption advice will be updated when new data from these water bodies becomes available.

**Table 4: Current Fish Consumption Advice for Alberta Water Bodies**

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)			
			Longer than (cm)	or Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
<b>Amisk Lake</b>	NRPK	2013	54	2	2	1	0.5	no limit
	WALL	2013	47	2	avoid	avoid	avoid	3
<b>Arm Lake</b>	NRPK	2014	53	2	3	1	0.5	no limit
<b>Athabasca River (downstream of Fort McMurray)</b>	GOLD	1998	-	-	-	-	-	-
	LKWH	2014	-	-	-	-	-	-
	WALL	2014	45	2	3	1	0.5	no limit
<b>Athabasca River (between Hinton and Whitecourt)</b>	MTWH	2014	-	-	-	-	-	-
	WALL	2014	-	-	-	-	-	-
<b>Baptiste Lake</b>	LKWH	2012	-	-	-	-	-	-
	NRPK	2012	67	4	3	1	0.5	no limit
	WALL	2012	43	2	avoid	avoid	avoid	6
<b>Beaver Lake</b>	LKWH	2011	-	-	-	-	-	-
	NRPK	2011	67	5	3	1	0.5	no limit
	WALL	2011	51	3	3	1	0.5	no limit
<b>Berry Creek Reservoir</b>	NRPK	2015	61	3	5	2	1	no limit
<b>Big Island Lake</b>	LKWH	2008	-	-	-	-	-	-
	NRPK	2008	-	-	-	-	-	-
	WALL	2008	-	-	-	-	-	-
<b>Bitscho Lake</b>	NRPK	2011	-	-	-	-	-	-

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)			
			Longer than (cm)	or Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
	WALL	2011	-	-	-	-	-	-
Bourque Lake	LKWH	2011	-	-	-	-	-	-
	NRPK	2011	n/a	3	4	2	1	no limit
	WALL	2011	n/a	4	3	1	0.5	no limit
Bow River (downstream of Hwy 22x)	BNTR	2006	-	-	-	-	-	-
Bow River (downstream of Bearspaw Dam)	MTWH□	2006	-	-	-	-	-	-
Bow River (Hwy 22x and Bearspaw Dam)	RNTR	2006	-	-	-	-	-	-
Bow River (below Bassano Dam)	NRPK	n/a	n/a	n/a	avoid	avoid	avoid	avoid
	WALL	n/a	n/a	n/a	avoid	avoid	avoid	avoid
Brazeau Canal	NRPK	2015	-	-	-	-	-	-
Brazeau Reservoir	NRPK	2015	69	5	4	2	1	no limit
Brutus Lake	LKWH	2010	-	-	-	-	-	-
	NRPK	2010	56	3	3	1	0.5	no limit
	WALL	2010	37	1	4	2	1	no limit
Burnstick Lake	NRPK	2015	62	3	avoid	avoid	avoid	5
	WALL	2015	61	5	avoid	avoid	avoid	3
Calling Lake	NRPK	2011	-	-	-	-	-	-

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)				
			Longer than (cm)	or	Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
	WALL	2011	-		-	-	-	-	
<b>Chain Lakes (nearby Ponoka)</b>	NRPK	2014	55		3	4	2	1	no limit
<b>Chenal des Quatre Fourches</b>	GOLD	2014	36		1	4	2	1	no limit
	LKWH	2014	-		-	-	-	-	-
	NRPK	2014	67		6	5	2	1	no limit
	WALL	2014	50		3	2	1	0.5	no limit
<b>Chinchaga River</b>	WALL	2010	42		2	3	1	0.5	no limit
<b>Christina Lake</b>	LKWH	2003	-		-	-	-	-	-
	NRPK	2013	72		6	3	1	0.5	no limit
	WALL	2013	57		4	3	1	0.5	no limit
<b>Chrystina Lake</b>	BKTR	2009	33		-	-	-	-	-
<b>Clear Lake</b>	NRPK	2014	65		4	avoid	avoid	avoid	4
	WALL	2014	49		2	avoid	avoid	avoid	3
<b>Clearwater River</b>	NRPK	2012	47		2	-	-	-	-
	WALL	2004	44		2	4	2	1	no limit
<b>Cold Lake</b>	LKTR	2016	-		-	-	-	-	-
	LKWH	2016	-		-	-	-	-	-
<b>Cowoki Reservoir</b>	NRPK	2009	75		8	avoid	avoid	avoid	5
	WALL	2009	-		-	-	-	-	-

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)				
			Longer than (cm)	or	Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Crawling Valley Reservoir	NRPK	2009	63		3	3	1	0.5	no limit
	WALL	2009	48		2	avoid	avoid	avoid	6
Cross (Steele) Lake	NRPK	2011	66		4	6	2.5	1.5	no limit
Dore Lake	NRPK	2014	66		6	avoid	avoid	avoid	3
	WALL	2014	46		2	3	1	0.5	no limit
Eagle Lake	NRPK	2012	-		-	-	-	-	-
	WALL	2012	48		3	6	2.5	1.5	no limit
Edith Lake	EBTR	2009	-		-	-	-	-	-
Edwards Lake	NRPK	n/a	n/a		n/a	avoid	avoid	avoid	avoid
Elinor Lake	LKWH	2013	-		-	-	-	-	-
	NRPK	2013	73		4	avoid	avoid	avoid	5
	WALL	2012	53		4	avoid	avoid	avoid	4
Ethel Lake	LKWH	2012	-		-	-	-	-	-
	NRPK	2012	54		2	3	1	0.5	no limit
	WALL	2012	48		2	3	1	0.5	no limit
Fickle Lake	LKWH	2014	-		-	-	-	-	-
Fork Lake	NRPK	2014	60		3	6	2.5	1.5	no limit
Gardiner Lake	LKWH	2008	-		-	-	-	-	-
	NRPK	2008	-		-	-	-	-	-
	WALL	2008	46		3	4	2	1	no limit
Gods Lake	LKWH	2014	-		-	-	-	-	-



Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)				
			Longer than (cm)	or	Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Gods Lake	NRPK	2014	74		6	avoid	avoid	avoid	6
	WALL	2014	59		5	avoid	avoid	avoid	4
Goodfish Lake	NRPK	2012	63		3	3	1	0.5	no limit
	WALL	2012	50		3	4	2	1	no limit
Gregoire Lake (Willow Lake)	LKWH	2012	-		-	-	-	-	-
	NRPK	2012	-		-	-	-	-	-
	WALL	2012	-		-	-	-	-	-
Gull Lake	LKWH	2014	-		-	-	-	-	-
	NRPK	2014	73		6	3	1	0.5	no limit
	WALL	2014	64		6	avoid	avoid	avoid	4
Haig Lake	LKWH	2014	-		-	-	-	-	-
	WALL	2014	-		-	-	-	-	-
Hay River	WALL	2009	-		-	-	-	-	-
Heart Lake	LKWH	2011	-		-	-	-	-	-
	NRPK	2011	-		-	-	-	-	-
	WALL	2011	-		-	-	-	-	-
Helena Lake	NRPK	n/a	n/a		n/a	avoid	avoid	avoid	avoid
	WALL	n/a	n/a		n/a	avoid	avoid	avoid	avoid
Hilda Lake	NRPK	2012	59		2	2	1	0.5	6
	WALL	2012	19		2	avoid	avoid	avoid	5
Hutch Lake	WALL	2011	-		-	-	-	-	-

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)				
			Longer than (cm)	or	Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Ironwood Lake	NRPK	n/a	n/a		n/a	avoid	avoid	avoid	avoid
	WALL	n/a	n/a		n/a	avoid	avoid	avoid	avoid
Isle Lake	LKWH	2010	-		-	-	-	-	-
	NRPK	2012	-		-	-	-	-	-
	WALL	2009	50		3	6	2.5	1.5	no limit
Jackson Lake	LKWH	2009	-		-	-	-	-	-
	WALL	2009	43		2	6	2.5	1.5	no limit
Kehiwin Lake	NRPK	2009	64		4	3	1	0.5	no limit
	WALL	2009	45		2	4	2	1	no limit
Keho Lake	LKWH	2012	-		-	-	-	-	-
	NRPK	2012	-		-	-	-	-	-
	WALL	2012	58		4	5	2	1	no limit
Keith Lake	LKWH	2010	-		-	-	-	-	-
	NRPK	2010	-		-	-	-	-	-
Kinnaird Lake	NRPK	2010	56		3	3	1	0.5	no limit
	WALL	2010	48		2	avoid	avoid	avoid	5
Kirby Lake	LKWH	2011	-		-	-	-	-	-
	NRPK	2011	-		-	-	-	-	-
Lac Bellevue	WALL	2015	45		2	3	1	0.5	no limit
Lac La Biche	LKWH	2014	-		-	-	-	-	-

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)			
			Longer than (cm)	or Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Lac La Biche	NRPK	2014	-	-	-	-	-	-
	WALL	2014	-	-	-	-	-	-
Lac la Nonne	LKWH	2012	-	-	-	-	-	-
	NRPK	2012	55	2	4	2	1	no limit
	WALL	2012	41	2	avoid	avoid	avoid	6
	YLPR	2012	-	-	-	-	-	-
Lac Ste. Anne	NRPK	2008	-	-	-	-	-	-
	WALL	2012	-	-	-	-	-	-
Lake Athabasca	BURB	2014	-	-	-	-	-	-
	GOLD	1981	-	-	-	-	-	-
	LKTR	2014	72	7	4	2	1	no limit
	LKWH	2014	-	-	-	-	-	-
	NRPK	2014	67	5	5	2	1	no limit
	WALL	2014	52	3	3	1	0.5	no limit
Lake Newell	LKWH	2006	-	-	-	-	-	-
	NRPK	2006	72	2	5	2	1	no limit
	WALL	2006	57	3	3	2	1	no limit
Laurier Lake	NRPK	2011	-	-	-	-	-	-
Lesser Slave Lake (East and West)	NRPK	2010	69	5	3	1	0.5	no limit
	WALL	2010	52	3	4	2	1	no limit
Little Bow Reservoir	NRPK	2010	63	3	3	1	0.5	no limit

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)			
			Longer than (cm)	or Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Little Bow River (downstream of Twin Valley Reservoir)	NRPK	2006	55	3	2	1	0.5	no limit
	YLPR	2004	-	-	-	-	-	-
Little Bow River (upstream of Twin Valley Reservoir)	NRPK	2006	58	3	5	2	1	no limit
Long Lake	NRPK	2013	51	2	5	2	1	no limit
	WALL	2013	46	2	3	1	0.5	no limit
Loon River	WALL	2011	55	2	4	2	1	no limit
Marie Lake	LKWH	2012	-	-	-	-	-	-
	NRPK	2015	82	9	3	1	0.5	no limit
	WALL	2015	50	3	5	2	1	no limit
May Lake	LKWH	2013	-	-	-	-	-	-
	NRPK	2013	57	2	4	2	1	no limit
	WALL	2013	45	3	4	2	1	no limit
McGregor Lake	NRPK	2009	-	-	-	-	-	-
	WALL	2009	58	4	avoid	avoid	avoid	5
McLeod Lake	RNTR	2012	-	-	-	-	-	-
McMillan Lake	NRPK	2011	70	4	3	1	0.5	no limit
Meander River	NRPK	2010	-	-	-	-	-	-
	WALL	2010	-	-	-	-	-	-
Milk River Ridge Reservoir	LKWH	2006	-	-	-	-	-	-
	NRPK	2006	68	3	6	2.5	1.5	no limit

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)				
			Longer than (cm)	or	Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Milk River Ridge Reservoir	WALL	2006	51		3	3	1	0.5	no limit
Moonshine Lake	RNTR	2012	-		-	-	-	-	-
Moose Lake	LKWH	2012	-		-	-	-	-	-
	NRPK	2012	66		5	4	2	1	no limit
	WALL	2012	55		4	2	1	0.5	no limit
	YLPR	2012	-		-	-	-	-	-
Muskwa Lake	NRPK	2015	60		4	6	2.5	1.5	no limit
	WALL	2015	-		-	-	-	-	-
Muskeg River	NRPK	2004	-		-	-	-	-	-
Namur Lake	LKTR	2013	57		4	3	1	0.5	no limit
	LKWH	2013	-		-	-	-	-	-
Net Lake	NRPK	2010	52		2	3	1	0.5	no limit
	WALL	2010	36		1	avoid	avoid	avoid	5
Nipisi Lake	NRPK	2012	-		-	-	-	-	-
North Buck Lake	LKWH	2015	-		-	-	-	-	-
	NRPK	2015	58		3	4	2	1	no limit
North Saskatchewan River (between Drayton Valley Bridge and Lea Park Bridge)	GOLD	2016	38		1	3	1	0.5	no limit
	MOON	2016	34		1	4	2	1	no limit

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)			
			Longer than (cm)	or	Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)
<b>North Saskatchewan River (between Drayton Valley Bridge and Lea Park Bridge)</b>	MTWH	2011	-		-	-	-	-
	NRPK	n/a	n/a		n/a	avoid	avoid	avoid
	SAUG	2016	43		2	avoid	avoid	4
	WALL	2016	38		2	3	1	0.5
<b>North Wabasca Lake</b>	NRPK	2010	82		9	4	2	1
	WALL	2010	57		4	4	2	1
<b>Oldman River (Lethbridge – the weir)</b>	NRPK□	2006	-		-	-	-	-
<b>Orloff Lake</b>	LKWH	2015	-		-	-	-	-
	NRPK	2015	68		4	4	2	1
	WALL	2015	-		-	-	-	-
<b>Peerless Lake</b>	LKTR	2011	-		-	-	-	-
<b>Pigeon Lake</b>	LKWH	2012	-		-	-	-	-
	WALL	2012	-		-	-	-	-
<b>Pine Coulee Reservoir</b>	NRPK	2007	-		-	-	-	-
	WALL	2014	38		1	avoid	avoid	avoid
<b>Pine Lake</b>	NRPK	2012	58		3	5	2	1
	WALL	2012	48		2	4	2	1
<b>Pinehurst Lake</b>	NRPK	2010	55		3	avoid	avoid	avoid
	WALL	2010	54		4	avoid	avoid	avoid

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)				
			Longer than (cm)	or	Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Pitchimi Lake	LKTR	2011	79		10	avoid	avoid	avoid	4
Red Deer River (between downstream of Dickson Dam and downstream of Drumheller)	GOLD	2014/15	38		1	3	1	0.5	No limit
	LNSC	2014/15	45		3	6	2.5	1.5	no limit
	MTWH	2014/15	-		-	-	-	-	-
	NRPK	2014/15	76		4	avoid	avoid	avoid	6
	SAUG	2014/15	36		1	avoid	avoid	avoid	5
	STRH	2014/15	46		2	3	1	0.5	no limit
	WALL	2014/15	58		7	avoid	avoid	avoid	4
Richardson Lake	LKWH	2010	-		-	-	-	-	-
	NRPK	2010	76		9	4	2	1	no limit
	WALL	2010	47		3	5	2	1	no limit
Rock Island Lake	NRPK	2012	-		-	-	-	-	-
	WALL	2012	-		-	-	-	-	-
Rolling Hills Reservoir	NRPK	2010	80		8	avoid	avoid	avoid	3
	WALL	2010	61		6	avoid	avoid	avoid	3
Seibert Lake	NRPK	2015	70		10	4	2	1	no limit
	WALL	2015	49		2	5	2	1	no limit
Shiningbank Lake	LKWH	2014	51		2	6	2.5	1.5	no limit
	NRPK	2014	-		-	-	-	-	-
	WALL	2014	45		2	avoid	avoid	avoid	6



Water Body	Species	Year Sampled	Fish Size			Recommended Consumption Limits (servings per week)			
			Longer than (cm)	or	Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Skeleton Lake	LKWH	2015	-		-	-	-	-	-
	NRPK	2015	-		-	-	-	-	-
	WALL	2015	-		-	-	-	-	-
Snipe Lake	NRPK	2010	-		-	-	-	-	-
	WALL	2010	-		-	-	-	-	-
South Saskatchewan River (Bindloss Ferry and Medicine Hat)	GOLD□	2006	39		1	avoid	avoid	avoid	6
	LKWH□	2006	-		-	-	-	-	-
	NRPK	2006	61		3	4	2	1	no limit
	SAUG□	2006	41		3	avoid	avoid	avoid	4
	WALL	2006	46		2	avoid	avoid	avoid	5
Sturgeon Lake	LKWH	2009	-		-	-	-	-	-
	NRPK	2009	-		-	-	-	-	-
	WALL	2009	-		-	-	-	-	-
Sylvan Lake	LKWH	2012	-		-	-	-	-	-
	WALL	2012	37		1	6	2.5	1.5	no limit
Touchwood Lake	LKWH	2009	-		-	-	-	-	-
	NRPK	2009	86		10	avoid	avoid	avoid	4
	WALL	2009	63		5	avoid	avoid	avoid	3
Twin Valley Reservoir	NRPK	2006	52		2	avoid	avoid	avoid	5
Tucker Lake	NRPK	2013	-		-	-	-	-	-

Water Body	Species	Year Sampled	Fish Size		Recommended Consumption Limits (servings per week)			
			Longer than (cm)	or Heavier than (lb)	Women	Children (5–11 yr)	Children (1–4 yr)	Adults
Wabamun Lake	LKWH	2010	-	-	-	-	-	-
	NRPK	2010	74	7	3	1	0.5	no limit
Whitefish Lake	LKWH	2012	-	-	-	-	-	-
	NRPK	2012	66	4	avoid	avoid	avoid	5
	WALL	2012	55	4	avoid	avoid	avoid	4
Willow Creek ( up- and down-streams)	BURB	2007	35	1	4	2	1	no limit
	NRPK	2007	50	2	4	2	1	no limit
	TRPR	2003	-	-	-	-	-	-
Winefred Lake	LKWH	2004	-	-	-	-	-	-
	NRPK	2004	-	-	-	-	-	-
	WALL	2004	-	-	-	-	-	-
Winigami Lake	NRPK	2010	-	-	-	-	-	-
	WALL	2010	-	-	-	-	-	-
Wizard Lake	NRPK	2012	50	2	6	2.5	1.5	no limit
Wolf Lake	LKWH	2011	-	-	-	-	-	-
	NRPK	2011	n/a	3	4	2	1	no limit
	WALL	2011	n/a	2	avoid	avoid	avoid	5

**Table 5: Mercury Levels in Fish in Alberta Water Bodies**

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
Amisk Lake	Northern pike	2010	0.54	
		2013	0.49	
	Walleye	2010	0.86	
		2013	0.99	
Arm Lake	Northern pike	2014	0.48	
Athabasca River (downstream of Fort McMurray)	Goldeye	1998	0.17	e
	Lake whitefish	1998	0.09	e
		2001	0.11	e
		2002	0.13	e
		2003	0.10	e
		2005	0.09	e
		2008	0.04	d
		2011	0.10	d
	2014	0.10	d	
	Walleye	1998	0.28	e
		2001	0.41	e
		2002	0.36	e
		2003	0.39	e
		2005	0.47	e
2008		0.27	d,e	
2011		0.34	d,e	
2014	0.42	d		
Athabasca River (upstream of Hinton)	Mountain whitefish	2014	0.05	
	Walleye	2014	0.33	a
Baptiste Lake	Lake whitefish	2012	0.19	
	Northern pike	2011	0.40	
		2012	0.35	
	Walleye	2011	0.22	
		2012	0.53	
Beaver Lake	Lake whitefish	2011	0.10	
	Northern pike	2011	0.45	
	Walleye	2011	0.37	
Berry Creek Reservoir	Northern pike	2015	0.25	
Big Island Lake	Lake whitefish	2008	0.03	d
	Northern pike	2008	0.08	d
	Walleye	2008	0.08	d
Bitscho Lake	Northern pike	2011	0.08	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
Bitscho Lake	Walleye	2011	0.12	
Bourque Lake	Lake whitefish	2011	0.07	
	Northern pike	2011	0.30	
	Walleye	2011	0.36	
Bow River (downstream of Hwy 22x)	Brown trout	2006	0.03	
Bow River (downstream of Bears paw Dam)	Mountain whitefish □	2006	0.06	
Bow River (Hwy 22x and Bears paw Dam)	Rainbow trout □	2006	0.08	
Bow River (below Bassano Dam)	Northern pike	-	-	c
	Walleye	-	-	c
Brazeau Canal	Northern pike	2015	0.12	
Brazeau Reservoir	Northern pike	2015	0.31	
Brutus Lake	Lake whitefish	2010	0.11	d
	Northern pike	2010	0.36	d
	Walleye	2010	0.30	d
Burnstick Lake	Northern pike	2015	0.60	
	Walleye	2015	1.04	
Calling Lake	Northern pike	2009	0.10	
		2011	0.17	
	Walleye	2009	0.15	
		2011	0.14	
Chain Lakes (nearby Ponoka)	Northern pike	2014	0.28	
Chenal des Quatre Fourches	Goldeye	2014	0.33	i
	Lake whitefish	2014	0.08	i
	Northern pike	2014	0.23	i
	Walleye	2014	0.49	i
Chinchaga River	Walleye	2010	0.44	
Christina Lake	Lake whitefish	2003	0.09	e
	Northern pike	2003	0.42	e
		2013	0.24	d
		2013	0.44	
	Walleye	2003	0.42	e
		2013	0.28	d
2013		0.45		
Chrystina Lake	Brook trout	2009/10	0.20	b
Clear Lake	Northern pike	2014	0.72	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
Clear Lake	Walleye	2014	0.98	
Clearwater River	Northern pike	2004	0.23	e
		2006	0.18	e
		2007	0.15	e
		2009	0.13	d
	Walleye	2012	0.15	d
Cold Lake	Lake trout	2016	0.12	
	Lake whitefish	2016	0.05	
Cowoki Reservoir	Northern pike	2010	0.59	
	Walleye	2009	0.47	a
Crawling Valley Reservoir	Northern pike	2009	0.38	
	Walleye	2009	0.54	
Cross (Steele) Lake	Northern pike	2011	0.21	
Dore Lake	Northern pike	2010	0.34	i
		2014	1.09	i
	Walleye	2010	0.57	i
		2014	0.42	i
Eagle Lake	Northern pike	2012	0.07	
	Walleye	2012	0.21	
Edith Lake	Brook trout	2009	0.12	
Edwards Lake	Northern pike	-	-	c
Elinor Lake	Lake whitefish	2012	0.11	
	Northern pike	2012	0.70	
	Walleye	2012	0.73	
Ethel Lake	Lake whitefish	2012	0.04	
	Northern pike	2012	0.40	
	Walleye	2012	0.45	
Fickle Lake	Lake whitefish	2014	0.11	
Fork Lake	Northern pike	2013	0.20	
Gardiner Lake	Lake whitefish	2008	0.07	e
	Northern pike	2008	0.19	e
	Walleye	2008	0.29	e
Gods Lake	Lake whitefish	2014	0.14	
	Northern pike	2014	0.58	
	Walleye	2014	0.75	
Goodfish Lake	Northern pike	2012	0.48	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
<b>Goodfish Lake</b>	Walleye	2012	0.28	
<b>Gregoire Lake (Willow Lake)</b>	Lake whitefish	2002	0.04	e
		2007	0.04	e
		2012	0.05	d
	Northern pike	2002	0.15	e
		2007	0.21	e
		2012	0.14	d
	Walleye	2002	0.13	e
		2007	0.16	e
		2012	0.13	d
2012		0.19		
<b>Gull Lake</b>	Lake whitefish	2014	0.14	
	Northern pike	2014	0.41	
	Walleye	2014	0.89	
<b>Haig Lake</b>	Lake whitefish	2014	0.06	
	Walleye	2014	0.13	
<b>Hay River</b>	Walleye	2009	0.61	a
<b>Heart Lake</b>	Lake whitefish	2011	0.02	
	Northern pike	2011	0.16	
	Walleye	2011	0.11	
<b>Helena Lake</b>	Northern pike	-	-	c
	Walleye	-	-	c
<b>Hilda Lake</b>	Northern pike	2012	0.50	
	Walleye	2012	0.67	
<b>Hutch Lake</b>	Walleye	2011	0.11	
<b>Ironwood Lake</b>	Northern pike	-	-	c
	Walleye	-	-	c
<b>Isle Lake</b>	Lake whitefish	2010	0.03	
	Northern pike	2009	0.12	
	Northern pike	2012	0.07	
	Walleye	2009	0.20	
<b>Jackson Lake</b>	Lake whitefish	2009	0.04	d
	Northern pike	2009	0.21	d
<b>Kehiwin Lake</b>	Northern pike	2009	0.39	
	Walleye	2009	0.29	
<b>Keho Lake</b>	Lake whitefish	2006	0.10	
	Lake whitefish	2012	0.11	
	Northern pike	2006	0.22	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
Keho Lake	Northern pike	2012	0.14	
	Walleye	2006	0.27	
		2012	0.22	
Keith Lake	Lake whitefish	2010	0.04	d
	Northern pike	2009	0.39	
	Northern pike	2010	0.08	d
	Walleye	2009	0.29	
Kinnaird Lake	Northern pike	2010	0.43	
	Walleye	2010	0.67	
Kirby Lake	Lake whitefish	2011	0.02	
	Northern pike	2011	0.13	
Lac Bellevue	Walleye	2011	0.35	
		2015	0.39	
Lac la Biche	Lake whitefish	2014	0.02	
	Northern pike	2014	0.17	
	Walleye	2014	0.13	
Lac la Nonne	Lake whitefish	2012	0.07	
	Northern pike	2008	0.56	h
		2012	0.31	
	Walleye	2008	0.63	h
		2012	0.55	
Yellow perch	2012	0.08		
Lac Ste. Anne	Northern pike	2008	0.13	h
	Walleye	2008	0.14	h
		2012	0.14	
Lake Athabasca	Burbot	2010	0.11	i
		2012	0.18	i
		2013	0.11	i
		2014	0.12	i
	Goldeye	1970	0.24	h
		1981	0.21	h
	Lake trout	1971	0.19	h
		1976	0.13	h
		1978	0.22	f
		2000	0.27	g
		2007	0.31	g
		2008	0.30	g
		2009	0.24	
2010	0.21	i		



Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
Lake Athabasca	Lake trout	2010	0.27	i
		2011	0.25	i
		2013	0.27	i
		2014	0.33	i
	Lake whitefish	1970	0.23	h
		1975	0.10	h
		1981	0.05	f
		2003	0.06	h
	Northern pike	1970	0.19	h
		1971	0.28	h
		1972	0.24	h
		1975	0.19	g
		1981	0.28	f
		1985	0.29	f
		2003	0.26	h
		2009	0.21	
		2012	0.25	i
		2013	0.22	i
	Walleye	1970	0.30	h
		1971	0.26	h
		1972	0.13	h
		1977	0.52	f
		1981	0.29	f
		1988	0.34	f
		1989	0.34	f
		1991	0.33	f
		1992	0.31	f
1993		0.42	f	
1998		0.27	h	
2001		0.28	h	
2003		0.19	h	
2004	0.23	h		
2009	0.26			
2012	0.43	i		
2013	0.33	i		
2014	0.35	i		
Lake Newell	Lake whitefish	2006	0.13	
	Northern pike	2006	0.23	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
Lake Newell	Walleye	2006	0.39	
Laurier Lake	Northern pike	2011	0.44	a
Lesser Slave Lake (East and West)	Northern pike	2010	0.40	
	Walleye	2010	0.33	
Little Bow Reservoir	Northern pike	2010	0.47	
Little Bow River (downstream of Twin Valley Reservoir)	Northern pike	2004	0.27	
		2005	0.59	
		2006	0.49	
	Yellow perch	2004	0.23	a
Little Bow River (upstream of Twin Valley Reservoir)	Northern pike	2005	0.29	
		2006	0.23	
Long Lake	Northern pike	2010	0.31	
		2013	0.27	
	Walleye	2010	0.43	
		2013	0.46	
Loon River	Walleye	2011	0.34	
Marie Lake	Lake whitefish	2012	0.04	
	Northern pike	2012	0.24	
		2015	0.37	
	Walleye	2012	0.19	
2015		0.25		
May Lake	Lake whitefish	2013	0.06	
	Northern pike	2013	0.28	
	Walleye	2013	0.32	
McGregor Lake	Northern pike	2009	1.00	a
	Walleye	2009	0.62	
McLeod Lake	Rainbow trout	2012	0.05	
McMillan Lake	Northern pike	2011	0.39	
Meander River	Northern pike	2010	0.19	
	Walleye	2010	0.17	
Milk River Ridge Reservoir	Lake whitefish	2006	0.14	
	Northern pike	2006	0.21	
	Walleye	2006	0.43	
Moonshine Lake	Rainbow trout	2012	0.07	
Moose Lake	Lake whitefish	2012	0.06	
	Northern pike	2011	0.34	
		2012	0.38	
	Walleye	2011	0.48	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
<b>Moose Lake</b>	Walleye	2012	0.49	
	Yellow perch	2012	0.05	
<b>Muskwa Lake</b>	Northern pike	2015	0.22	
	Walleye	2015	0.16	
<b>Muskeg River</b>	Northern pike	2001	0.13	e
		2002	0.11	e
		2004	0.15	e
<b>Namur Lake</b>	Lake trout	2007	0.45	g
		2013	0.35	i
		2013	0.44	d
	Lake whitefish	2013	0.04	i
		2013	0.05	d
<b>Net Lake</b>	Northern pike	2010	0.44	d,e
	Walleye	2010	0.66	d,e
<b>Nipisi Lake</b>	Northern pike	2012	0.11	
<b>North Buck Lake</b>	Lake whitefish	2015	0.03	
	Northern pike	2015	0.30	
<b>North Saskatchewan River (between Drayton Valley Bridge and Lea Park Bridge)</b>	Goldeye	2011/12	0.44	
		2016	0.37	
	Mooneye	2016	0.30	
	Mountain whitefish	2011	0.12	
	Sauger	2011/12	0.71	
		2016	0.85	
	Walleye	2011	0.47	
2016		0.36		
<b>North Wabasca Lake</b>	Northern pike □	2010	0.31	
	Walleye	2010	0.27	
<b>Oldman River (Lethbridge – the weir)</b>	Northern pike □	1982/83	0.25	
		2006	0.18	
<b>Orloff Lake</b>	Lake whitefish	2015	0.04	
	Northern pike	2015	0.28	
	Walleye	2015	0.19	
<b>Peerless Lake</b>	Lake trout	2011	0.15	
<b>Pigeon Lake</b>	Lake whitefish	2012	0.04	
	Walleye	2012	0.14	
<b>Pine Coulee Reservoir</b>	Northern pike	2007	0.13	a
	Walleye	2003	0.52	
		2004	0.67	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
Pine Coulee Reservoir	Walleye	2005	0.79	
		2007	0.57	
		2014	0.70	
Pine Lake	Northern pike	2012	0.22	
	Walleye	2012	0.27	
Pinehurst Lake	Northern pike	2010	0.81	
	Walleye	2010	0.6	
Pitchimi Lake	Lake trout	2011	0.75	
Red Deer River (between downstream of Dickson Dam and downstream of Drumheller)	Goldeye	2014/15	0.48	
	Longnose sucker	2014/15	0.22	
	Mountain whitefish	2006	0.12	
		2014/15	0.16	
	Northern pike □	1982/83	0.20	
		2006	0.27	
		2014/15	0.55	
	Sauger	2014/15	0.67	
	Shorthead redhorse	2014/15	0.44	
	Walleye	1982/83	0.68	
2006		0.79		
2014/15		0.82		
Richardson Lake	Lake whitefish	2011	0.07	
	Northern pike	2010	0.28	i
	Walleye	2010	0.23	i
Rock Island Lake	Northern pike	2012	0.08	
	Walleye	2012	0.11	
Rolling Hills Reservoir	Northern pike	2010	1.04	
	Walleye	2010	1.13	
Seibert Lake	Northern pike	2015	0.33	
	Walleye	2015	0.23	
Shininingbank Lake	Lake whitefish	2014	0.21	
	Northern pike	2014	0.19	
	Walleye	2014	0.57	
Skeleton Lake	Lake whitefish	2015	0.02	
	Northern pike	2010	0.12	
		2015	0.11	
	Walleye	2010	0.16	
		2015	0.18	
Snipe Lake	Northern pike	2010	0.05	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
<b>Snipe Lake</b>	Walleye	2010	0.04	
<b>South Saskatchewan River (Bindloss Ferry and Medicine Hat)</b>	Goldeye□	2006	0.51	
	Lake whitefish□	2006	0.13	
	Northern pike	1982/83	0.33	
	Northern pike	2006	0.35	
	Sauger□	1982/83	0.64	
		2006	0.75	
	Walleye	1982/83	0.21	
2006		0.62		
<b>Sturgeon Lake</b>	Lake whitefish	2009	0.03	
	Northern pike	2009	0.15	
	Walleye	2009	0.18	
<b>Sylvan Lake</b>	Lake whitefish	2012	0.12	
	Walleye	2012	0.21	
<b>Touchwood Lake</b>	Lake whitefish	2009	0.11	
	Northern pike	2009	0.86	
	Walleye	2009	0.94	
<b>Twin Valley Reservoir</b>	Northern pike	2004	0.44	
		2005	0.68	
		2006	0.56	
<b>Tucker Lake</b>	Northern pike	2013	0.14	
<b>Wabamun Lake</b>	Lake whitefish	2010	0.03	
	Northern pike	2010	0.38	
<b>Whitefish Lake</b>	Lake whitefish	2009	0.72	
	Lake whitefish	2012	0.12	
	Northern pike	2009	0.64	
	Northern pike	2012	0.66	
	Walleye	2009	0.87	
	Walleye	2012	0.78	
<b>Willow Creek (downstream)</b>	Burbot	2003	0.40	
		2004	0.23	
		2007	0.29	
	Northern pike	2003	0.49	
		2004	0.31	
		2007	0.27	
	Trout perch	2003	0.08	
<b>Willow Creek (upstream)</b>	Burbot	2003	0.24	
		2004	0.29	
		2007	0.20	

Water Body	Fish Species	Year Sampled	Average THg (µg/g, ww)	Note *
<b>Winefred Lake</b>	Lake whitefish	2004	0.08	e
	Northern pike	2004	0.09	e
	Walleye	2004	0.13	e
<b>Winigami Lake</b>	Northern pike	2010	0.12	
	Walleye	2010	0.19	
<b>Wizard Lake</b>	Northern pike	2012	0.20	
<b>Wolf Lake</b>	Lake whitefish	2011	0.10	
	Northern pike	2011	0.34	
	Walleye	2011	0.59	

**\* Notes**

- a:** When fewer than five fish are sampled for a given fish species, water body and year, consumption advice is not issued. This is because the sample size is too small to have confidence in the generalizability of the risk calculation.
- b:** Existing fish consumption advice is based on levels of polychlorobiphenyls (PCBs), polychlorinated dibenzo-*p*-dioxins (dioxins) and/or polychlorinated dibenzofurans (furans).
- c:** Mercury levels in fish in these water bodies were measured in the 1980s by Alberta Environment, and fish consumption advice to “avoid” consumption was issued by Health Canada. Details from these tests are no longer available. Fish consumption advice will be updated when new data from these water bodies becomes available.
- d:** Data obtained from RAMP. Source for 2008–2014 data: [www.ramp-alberta.org/data/Fisheries/Tissue/Tissue.aspx](http://www.ramp-alberta.org/data/Fisheries/Tissue/Tissue.aspx). See the Appendix: Mercury in Fish, RAMP 2008–2014 for a summary of the data obtained from this source.
- e:** Data obtained from RAMP. Sources for 1971–2007 data: Evans and Talbot (2012) or Government of Alberta (2009d).
- f:** Data from Department of Fisheries and Oceans, Canada. Source: Evans and Talbot (2012).
- g:** Data from research article. Source: Evans and Talbot (2012).
- h:** Data from other groups such as Alberta Health Services and the Canadian Food Inspection Agency.
- i:** Data from Environment Canada. Sources: Government of Alberta (2016) or Table 2: Total Mercury Levels in Fish, 2013–2016 of the current report.

**Table 6: Water Body Location Information**

Water Body Latitude Name	Meridian	Range	Township	Section	Quarter Section	Latitude	Longitude
<a href="#">Amisk Lake</a>	4	18	65	3	NE	54.609200	-112.635500
<a href="#">Arm Lake</a>	4	5	43	36	SE	52.748500	-110.588100
<a href="#">Athabasca River</a> between Hinton and Whitecourt 1	5	23	52	32	SE	53.53166389	-117.35189
<a href="#">Athabasca River</a> between Hinton and Whitecourt 2	5	22	54	34	SW	53.70279	-117.16263
<a href="#">Athabasca River</a> between Hinton and Whitecourt 3	5	21	57	6	SE	53.891639	-117.109237
<a href="#">Athabasca River</a> between Hinton and Whitecourt 4	5	20	58	12	NW	54.00267111	-116.84444
<a href="#">Athabasca River</a> between Hinton and Whitecourt 5	5	18	60	2	SW	54.153205	-116.59309
<a href="#">Athabasca River</a> between Hinton and Whitecourt 6	5	15	60	33	NE	54.237075	-116.17816
<a href="#">Athabasca River</a> downstream of Fort McMurray 1	4	9	89	29	NE	56.75046613	-111.3898368
<a href="#">Athabasca River</a> downstream of Fort McMurray 2	4	9	90	4	NW	56.7817765	-111.3868267
<a href="#">Athabasca River</a> downstream of Fort McMurray 3	4	9	91	8	NW	56.88085751	-111.4202721
<a href="#">Athabasca River</a> downstream of Fort McMurray 4	4	9	92	19	SW	56.99167222	-111.4527671
<a href="#">Athabasca River</a> downstream of Fort McMurray 5	4	10	93	15	NW	57.0682557	-111.5247042
<a href="#">Athabasca River</a> downstream of Fort McMurray 6	4	10	93	21	NE	57.08431085	-111.5376159
<a href="#">Athabasca River</a> downstream of Fort McMurray 7	4	10	94	31	NE	57.19979778	-111.5991007
<a href="#">Athabasca River</a> downstream of Fort McMurray 8	4	10	95	7	NE	57.23150362	-111.6106516
<a href="#">Athabasca River</a> downstream of Fort McMurray 9	4	11	96	14	NE	57.33031603	-111.6676564
<a href="#">Baptiste Lake</a>	4	24	66	33	NE	54.756700	-113.562700
<a href="#">Beaver Lake</a>	4	12	66	18	SW	54.733541	-111.861076
<a href="#">Berry Creek Reservoir</a>	4	12	27	3	NE	51.279147	-111.610611
<a href="#">Big Island Lake</a>	4	16	99	23	NE	57.60923389	-112.5037781
<a href="#">Bistcho Lake</a>	6	5	124	1	NW	59.744634	-118.719635
<a href="#">Bourque Lake</a>	4	4	65	33	NE	54.668900	-110.549100
<a href="#">Bow River</a> at Bearspaw Dam	5	3	25	1	SE	51.10101306	-114.2826731
<a href="#">Bow River</a> downstream of Bearspaw Dam	5	3	25	20	NW	51.14988909	-114.3937512

Water Body Latitude Name	Meridian	Range	Township	Section	Quarter Section	Latitude	Longitude
<a href="#">Bow River</a> downstream of Hwy 22x	5	4	25	34	NW	51.18071611	-114.483295
<a href="#">Bow River</a> downstream of Bassano Dam	4	19	20	13	NW	50.69794611	-112.5197261
<a href="#">Brazeau Canal</a>	5	10	45	30	SE	52.909698	-115.430214
<a href="#">Brazeau Reservoir</a>	5	12	46	13	NW	52.967097	-115.620406
<a href="#">Brutus Lake</a>	4	7	103	36	SE	57.977165	-111.0128319
<a href="#">Burnstick Lake</a>	5	7	35	11	SE	51.986944	-114.881389
<a href="#">Calling Lake</a>	4	22	72	15	NW	55.244684	-113.307495
<a href="#">Chain Lakes</a> nearby Ponoka	4	24	42	6	SE	52.587000	-113.443900
<a href="#">Chain Lakes Reservoir</a> (Provincial Park)	5	2	14	26	SW	50.245009	-114.210777
<a href="#">Chenal des Quatre Fourches</a>	4	8	110	35	NE	58.890833	-111.601917
<a href="#">Chinchaga River</a>	5	24	103	30	NE	57.971701	-117.960205
<a href="#">Christina Lake</a>	4	6	76	29	NW	55.6202	-110.8993
<a href="#">Chrystina Lake</a>	5	8	67	8	NW	54.786621	-115.194771
<a href="#">Clear Lake</a>	4	5	44	1	NW	52.7670	-110.6025
<a href="#">Clearwater River</a> 1	4	8	89	1	SE	56.68363583	-111.1252484
<a href="#">Clearwater River</a> 2	4	7	88	33	NW	56.68162634	-111.061271
<a href="#">Clearwater River</a> 3	4	5	89	6	SW	56.68866489	-110.7965968
<a href="#">Clearwater River</a> 4	4	5	89	8	SE	56.69919144	-110.7597414
<a href="#">Clearwater River</a> 5	4	4	89	34	SE	56.75845944	-110.5457677
<a href="#">Clearwater River</a> 6	4	4	89	25	NW	56.74910474	-110.5039982
<a href="#">Cold Lake</a>	4	2	64	13	SE	54.530700	-110.119600
<a href="#">Cowoki Reservoir</a>	4	13	19	2	NW	50.583891	-111.690445
<a href="#">Crawling Valley Reservoir</a>	4	17	22	31	SW	50.912125	-112.353058
<a href="#">Cross (Steele) Lake</a>	4	25	65	30	SW	54.648810	-113.776646
<a href="#">Dore Lake</a>	4	7	113	12	SW	58.792840	-111.043887
<a href="#">Eagle Lake</a>	4	24	23	32	SE	50.996700	-113.316400



Water Body Latitude Name	Meridian	Range	Township	Section	Quarter Section	Latitude	Longitude
<a href="#">Edith Lake</a>	5	10	67	13	NE	54.801922	-115.382710
<a href="#">Edward's Lake</a>	4	8	104	3	SW	57.99172	-111.240935
<a href="#">Elinor Lake</a>	4	11	65	31	SW	54.672441	-111.652336
<a href="#">Ethel Lake</a>	4	3	64	14	NE	54.53184	-110.351486
<a href="#">Fickle Lake</a>	5	19	51	32	NW	53.446111	-116.784722
<a href="#">Fork Lake</a>	4	10	63	21	SW	54.470600	-111.569000
<a href="#">Gardiner Lake</a>	4	16	98	21	NE	57.5258034	-112.53016
<a href="#">Gods Lake</a>	5	2	90	20	SW	56.819722	-114.289167
<a href="#">Goodfish Lake</a>	4	13	61	24	SW	54.286673	-111.822624
<a href="#">Gregoire Lake (Willow Lake)</a>	4	8	86	14	NE	56.46362894	-111.1400989
<a href="#">Gull Lake</a>	5	1	41	25	NE	52.465596	-113.958920
<a href="#">Haig Lake</a>	5	13	91	18	NE	56.898333	-116.098333
<a href="#">Hay River</a>	6	2	113	33	SE	58.8528	-118.2678
<a href="#">Heart Lake</a>	4	10	70	5	NE	55.029301	-111.492691
<a href="#">Helena Lake</a>	4	11	66	4	SE	54.67836694	-111.6004089
<a href="#">Hilda Lake</a>	4	3	64	8	SW	54.522277	-110.425644
<a href="#">Hutch Lake</a>	5	20	112	27	SW	58.759209	-117.330723
<a href="#">Ironwood Lake</a>	4	11	65	12	SE	54.602735	-111.5187761
<a href="#">Isle Lake</a>	5	5	53	31	NW	53.628500	-114.726600
<a href="#">Jackson Lake</a>	4	6	103	21	NW	57.95898194	-110.9248019
<a href="#">Kehiwin Lake</a>	4	7	58	36	SE	54.05611105	-110.9041665
<a href="#">Keho Lake</a>	4	22	11	31	SW	49.950041	-113.000069
<a href="#">Keith Lake</a>	4	7	103	9	SW	57.91688889	-111.092715
<a href="#">Kinnaird Lake</a>	4	10	67	18	SW	54.767622	-111.516724
<a href="#">Kirby Lake</a>	4	5	75	6	NW	55.477102	-110.768623
<a href="#">Lac Bellevue</a>	4	9	56	6	NW	53.811300	-111.334200

Water Body Latitude Name	Meridian	Range	Township	Section	Quarter Section	Latitude	Longitude
<a href="#">Lac La Biche</a>	4	15	68	22	SE	54.794691	-111.956731
<a href="#">Lac La Nonne</a>	5	3	57	24	SW	53.937000	-114.319800
<a href="#">Lac Ste Anne</a>	5	3	54	33	NW	53.712558	-114.400978
<a href="#">Lake Athabasca</a>	4	3	115	19	SE	58.724025	-110.928955
<a href="#">Lake Newell</a>	4	15	17	24	SW	50.422956	-111.94725
<a href="#">Laurier Lake</a>	4	4	56	27	SW	53.859600	-110.515800
<a href="#">Lesser Slave Lake</a> East	5	6	73	28	NE	55.35754994	-114.8543802
<a href="#">Lesser Slave Lake</a> West	5	13	75	4	SE	55.46347642	-115.9460746
<a href="#">Little Bow</a> downstream	4	20	13	21	SW	50.09460849	-112.6814854
<a href="#">Little Bow Reservoir</a>	4	21	14	24	NW	50.196023	-112.673035
<a href="#">Little Bow</a> upstream	4	22	14	20	NW	50.18788686	-112.9795942
<a href="#">Long Lake</a>	4	19	63	11	NW	54.432914	-112.754556
<a href="#">Loon Lake</a>	5	9	87	7	SW	56.52944438	-115.4324999
<a href="#">Marie Lake</a>	4	2	65	19	SW	54.630928	-110.301361
<a href="#">May Lake</a>	4	3	66	21	SE	54.716900	-110.390600
<a href="#">McGregor Lake</a>	4	21	17	8	NE	50.499889	-112.876282
<a href="#">McLeod Lake</a>	5	11	61	30	SW	54.298200	-115.651300
<a href="#">McMillan Lake</a>	5	4	78	22	SE	55.781207	-114.473419
<a href="#">Meander River</a>	5	22	116	7	NW	59.063154	-117.748718
<a href="#">Milk River Ridge Reservoir</a>	4	20	5	11	NE	49.368066	-112.524033
<a href="#">Moonshine Lake</a>	6	8	79	29	NW	55.886600	-119.227400
<a href="#">Moose Lake</a>	4	7	61	1	NE	54.242800	-110.921100
<a href="#">Muskeg River</a>	4	10	95	3	SW	57.213055	-111.5459431
<a href="#">Muskwa Lake</a>	5	5	82	36	NE	56.145823	-114.6338967
<a href="#">Namur Lake</a>	4	17	97	15	NW	57.415378	-112.723846
<a href="#">Net Lake</a>	4	5	105	21	SW	58.12774389	-110.7725411

Water Body Latitude Name	Meridian	Range	Township	Section	Quarter Section	Latitude	Longitude
<a href="#">Nipisi Lake</a>	5	7	78	23	NW	55.790473	-114.980164
<a href="#">North Buck Lake</a>	4	17	66	6	NW	54.644774	-112.522422
<a href="#">North Wabasca Lake</a>	4	25	81	31	SW	56.040062	-113.927627
<a href="#">North Saskatchewan River</a> at Drayton Valley	5	7	49	3	NE	53.20597389	-114.9311389
<a href="#">North Saskatchewan River</a> at Genessee Bridge	5	2	51	6	NE	53.377	-114.278
<a href="#">North Saskatchewan River</a> at Fort Saskatchewan	4	22	54	31	SW	53.706	-113.234
<a href="#">North Saskatchewan River</a> at Waskatenau	4	19	58	32	NE	54.059	-112.78
<a href="#">North Saskatchewan River</a> at Elk Point	4	7	56	25	SE	53.861	-110.898
<a href="#">North Saskatchewan River</a> near Heinsburg	4	4	55	13	SW	53.75149384	-110.4679712
<a href="#">North Saskatchewan River</a> at Lea Park	4	3	54	14	SE	53.66	-110.337
<a href="#">Oldman River</a> at Lethbridge weir	4	25	8	22	NE	49.683298	-112.856122
<a href="#">Orloff Lake</a>	4	23	73	32	NE	55.37	-113.5
<a href="#">Peerless Lake</a>	5	5	88	11	SE	56.663774	-114.677696
<a href="#">Pigeon Lake</a>	5	1	47	3	SE	53.028000	-114.068300
<a href="#">Pine Coulee Reservoir</a>	4	27	14	30	NW	50.168300	-113.736400
<a href="#">Pine Lake</a>	4	25	36	13	SE	52.089229	-113.443892
<a href="#">Pinehurst Lake</a>	4	10	65	34	SW	54.657350	-111.437759
<a href="#">Pitchimi Lake</a>	5	5	115	21	SW	59.005920	-114.790649
<a href="#">Red Deer River</a> at Blindman River mouth	4	27	39	13	NE	52.355054	-113.756733
<a href="#">Red Deer River</a> downstream of Dickson Dam	5	2	36	2	NW	52.059597	-114.209506
<a href="#">Red Deer River</a> at Bleriot Ferry	4	21	30	15	NW	51.573042	-112.884879
<a href="#">Red Deer River</a> at Twp Rd 372	4	28	37	16	SE	52.17292998	-113.9377791
<a href="#">Richardson Lake</a>	4	7	108	23	NW	58.394500	-111.068100
<a href="#">Rock Island Lake</a>	4	1	56	18	NE	53.84583327	-110.1313888
<a href="#">Rolling Hills Reservoir</a>	4	14	16	17	NW	50.359918	-111.902618
<a href="#">Seibert Lake</a>	4	9	66	21	SW	54.723352	-111.318874

Water Body Latitude Name	Meridian	Range	Township	Section	Quarter Section	Latitude	Longitude
<a href="#">Shiningbank Lake</a>	5	14	56	28	SW	53.869600	-116.028900
<a href="#">Skeleton Lake</a>	4	19	65	13	SE	54.619798	-112.730713
<a href="#">Snipe Lake</a>	5	18	71	7	NW	55.139640	-116.762695
<a href="#">South Saskatchewan River</a> near Hwy 41	4	1	21	22	SW	50.79100456	-110.064015
<a href="#">South Saskatchewan River</a> near Redcliff	4	7	13	2	NE	50.06103695	-110.8552145
<a href="#">Sturgeon Lake</a>	5	24	70	34	SE	55.111372	-117.532425
<a href="#">Sylvan Lake</a>	5	2	39	13	NE	52.367600	-114.174800
<a href="#">Touchwood Lake</a>	4	10	67	23	SE	54.829766	-111.398964
<a href="#">Tucker Lake</a>	4	4	64	18	SW	54.532300	-110.605300
<a href="#">Twin Valley</a>	4	26	15	8	NW	50.24908111	-113.5470911
<a href="#">Wabamun Lake</a>	5	4	52	31	NE	53.549691	-114.557877
<a href="#">Whitefish Lake</a>	4	13	62	16	NW	54.369800	-111.896200
<a href="#">Willow Creek</a> downstream	4	28	13	12	NW	50.07392194	-113.7030169
<a href="#">Willow Creek</a> upstream	4	28	13	31	NW	50.12877806	-113.812615
<a href="#">Winagami Lake</a>	5	18	76	32	NE	55.631679	-116.742439
<a href="#">Winefred Lake</a>	4	4	75	15	SW	55.49329849	-110.5454264
<a href="#">Wizard Lake</a>	4	27	48	5	SW	53.111600	-113.879100
<a href="#">Wolf Lake</a>	4	7	66	2	SE	54.685542	-110.948868

Figure 2: Sampling Locations up to 2016



## 5. References

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## Appendix: Mercury in Fish, RAMP 2008–2014

The mercury in fish data obtained from RAMP for 2008 through 2014 are summarized in the table below (source: [www.ramp-alberta.org/data/Fisheries/Tissue/Tissue.aspx](http://www.ramp-alberta.org/data/Fisheries/Tissue/Tissue.aspx)). These data are included in Table 5: Mercury Levels in Fish in Alberta Water Bodies, and have been used for developing fish consumption advice (Table 4: Current Fish Consumption Advice for Alberta Water Bodies).

Water Body and Fish Species	Year	Sample Size	Mean Fork Length (cm)	Mean Mass (g)	Mean THg <sup>a</sup> (µg/g)
<i>Athabasca River (downstream of Fort McMurray)</i>					
Lake whitefish	2008	20	39	931	0.04
	2011	25	43	1,227	0.10
	2014	29	48	1,327	0.10
Walleye	2008	26	42	896	0.27
	2011	30	46	1,034	0.34
	2014	34	41	858	0.42
<i>Big Island Lake</i>					
Lake whitefish	2008	16	38	929	0.03
Northern pike	2008	12	57	1,454	0.08
Walleye	2008	20	38	991	0.08
<i>Brutus Lake</i>					
Lake whitefish	2010	11	35	554	0.11
Northern pike	2010	9	56	1,164	0.36
Walleye	2010	19	37	586	0.30
<i>Christina Lake</i>					
Northern pike	2013	14	54	1,690	0.24
Walleye	2013	20	36	662	0.28
<i>Clearwater River</i>					
Northern pike	2009	30	47	833	0.13
	2012	35	47	947	0.15
<i>Gardiner Lake</i>					
Lake whitefish	2008	14	41	1,159	0.07
Northern pike	2008	11	64	2,040	0.19
Walleye	2008	31	46	1,538	0.29
<i>Gregoire Lake</i>					
Northern pike	2012	11	47	891	0.14
Walleye	2012	15	42	888	0.13
<i>Jackson Lake</i>					
Lake whitefish	2009	17	39	1,261	0.04
Walleye	2009	22	43	1,106	0.21
<i>Keith Lake</i>					
Lake whitefish	2010	8	32	420	0.04
Northern pike	2010	4	53	973	0.08
<i>Namur Lake</i>					
Lake trout	2013	18	57	2,090	0.44
Lake whitefish	2013	20	35	654	0.05
<i>Net Lake</i>					
Northern pike	2010	10	52	923	0.44
Walleye	2010	20	36	636	<b>0.66</b>

<sup>a</sup> Mean THg concentrations exceeding the 0.5 µg/g commercial fish limit are shown in **bold**.