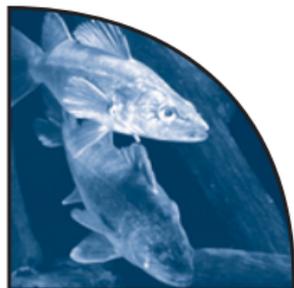


Mercury In Fish

**& Guidelines
For The Consumption
of Recreationally Angled
Fish In Manitoba**



This pamphlet provides updated information on the safe consumption of fish caught in Manitoba waters. It replaces the 1994 pamphlet titled "Mercury in Fish & Fish Consumption Guidelines for the Saskatchewan, Souris, Assiniboine, Red and Winnipeg River Systems," Water Quality Series Number 4.



Monitoring of Mercury

Although Manitoba has some of the cleanest waters in the world, all fish contain small amounts of mercury from natural sources. However, human activities can cause further increases in these natural mercury levels.

Manitoba Water Stewardship, Manitoba Hydro and Fisheries and Oceans Canada began monitoring mercury levels in fish from Manitoba's major water systems in the 1970s. Monitoring sites were located in or near industrial areas, urban centres, agricultural regions and reservoirs including those associated with hydro-electric development.

What Is Mercury?

Mercury is a naturally occurring metal that is found in low concentrations in the air, water and soil.

Where Does Mercury Come From?

Mercury often occurs in association with mineral deposits such as lead, silver and copper. Mercury is released through natural processes to the air, water and soil from these sources. Human activities can also contribute significant additional amounts.

In the past, large amounts of mercury were released to the environment by industrial activities such as the production of chlorine and caustic soda. Improved regulatory controls have reduced many of these mercury releases to the environment. However, mercury may still be found in products such as dental amalgams, thermometers, mirrors, batteries, electrical switches and fluorescent lights.

Smelting of metal ores and the burning of fossil fuels such as the use of coal for electricity, may continue to contribute mercury to the environment. Federal and provincial governments along with industries are working to further reduce these emissions.

Scientific evidence shows that long-term flooding of lands following construction of reservoirs accelerates the conversion of naturally occurring inorganic mercury to methyl-mercury, an organic and more toxic form of mercury that is readily accumulated in fish. Studies also show that elevated methyl-mercury levels observed in reservoir fish eventually decline to background concentrations after about 20 to 35 years.

Why Is Mercury In Fish A Problem?

Methyl-mercury is easily absorbed by fish either directly through their gills or indirectly from organisms they consume. Older, larger fish often have more mercury in their muscle tissue relative to younger, smaller fish. Fish such as walleye and northern pike that feed on other species of fish often contain higher concentrations of mercury than fish such as whitefish or common suckers which feed on insects or plankton.

Similarly, people ingest methyl-mercury from the fish they eat. Methyl-mercury is the main form of mercury in fish muscle tissue and is of the most concern for human consumption.

Since mercury is eliminated from both fish and people at a slow rate, concentrations in the body can gradually increase if the food being consumed

has elevated levels. If methyl-mercury concentrations increase beyond certain levels, health concerns in people begin to arise. Symptoms include reduced coordination, decreased sense of touch, numbness of lips and mouth, tunnel vision or night blindness.

The advice in the following sections will assure that safe levels of mercury are not exceeded while achieving the many nutritional benefits from the consumption of fish.

What Is A Safe Limit?

The acceptable daily intake for the general population is 0.47 micrograms of methyl-mercury for each kilogram of a person's body weight ($\mu\text{g}/\text{kg}$ bw).

Unborn children and small children are most sensitive to the effects of mercury. Because of this, additional restrictions are recommended for women of childbearing age and for children under 12 years old. The acceptable daily intake of methyl-mercury for this sensitive group is 0.2 $\mu\text{g}/\text{kg}$ bw.

These guidelines were derived from recommendations of Health Canada which in turn, were developed from advice of the World Health Organization.

Fish purchased from retail stores will also have some mercury. The federal government is responsible for ensuring that fish marketed in retail outlets contain safe levels of mercury. Information on the safe consumption of fish purchased from retail stores in Canada can be found on Health Canada's website at: www.hc-sc.gc.ca.

Mercury In Fish Consumption Guidelines

The guidelines in this document will help anglers determine the amount of various sizes of fish that can be safely consumed. Allowable consumption limits depend upon the level of mercury in fish and the amount of fish consumed each month.

In developing these fish consumption guidelines, it was assumed that the general population including women of childbearing age, were an average size of 60 kg (132 pounds) and that each person would consume an average meal size of 227 grams (8 ounces). Children under 12 years old were assumed to be 30 kg (66 pounds) in weight and would consume an average meal size of 114 grams (4 ounces). Meal sizes will be larger for larger individuals and smaller for smaller individuals.

Generally, large walleye and northern pike, which feed on other species of fish, are older and will have higher levels of mercury than smaller fish which are younger in age. For walleye and northern pike, it is recommended that smaller fish be consumed. Fish such as whitefish, cisco, goldeye, mooneye and sucker often have lower mercury levels. If fish are regularly consumed, these species should be consumed more frequently than fish such as walleye and northern pike.

How To Use The Consumption Guidelines:

- Check to see if your fishing location is listed in the accompanying Fish Consumption Guide Table on page 12 or use information from the nearest listed location. Locations are separated into southern and northern Manitoba and are listed in an upstream to downstream order within a river system.

(**Note:** Fish in flooded reservoirs often have elevated mercury values compared to lakes without flooding.)

- Check the fish species and measure the fish from the tip of the snout to the end of the tail.
- Refer to the Fish Consumption Guide Table to determine what consumption category applies to the length of your fish.
- Refer to the Meal Allowance Chart on page 9 to determine how many meals can be eaten in a month.
- Fish in the “No Consumption” category should be released unharmed.

Consumption Categories are as follows:

Women of childbearing age and children under 12 years old should only consume fish from Categories 1 and 2.

- **Category 1:** Fish in this category have mercury concentrations less than or equal to 0.2 micrograms per gram ($\mu\text{g/g}$). One $\mu\text{g/g}$ is equivalent to one part per million (ppm). Women of childbearing age and children under 12 years old may eat up to eight meals per month. An individual from the general population may consume up to 19 meals per month.

Consumption Categories *continued*:

- **Category 2:** Fish in this group have mercury concentrations between 0.2 to 0.5 µg/g. An individual from the general population may consume up to eight meals per month. Women of childbearing age and children under 12 years old may consume up to three meals per month.
- **Category 3:** Fish in this group have mercury concentrations between 0.5 to 1.0 µg/g. An individual from the general population may consume up to 4 meals per month. Women of childbearing age and children under 12 years old should not eat fish from this category.
- **Category 4:** Fish in this group have mercury concentrations between 1.0 to 1.5 µg/g. An individual from the general population may consume up to 3 meals per month. Women of childbearing age and children under 12 years old should not eat fish from this category.
- **No Consumption:** Fish should not be consumed from this category. Fish in this category have mercury concentrations greater than 1.5 µg/g.

Consumption of fish from different categories changes the recommended number of meals that can be eaten from any one category in a month. The Meal Allowance Chart helps determine how many meals in a month can be consumed when fish are eaten from a single or from a combination of categories. Examples on how to use the chart are on page 10.

Meal Allowance Chart

Population group		Consumption category					
		Category 1	Category 2	Category 3	Category 4	No Consumption	
Women of childbearing age and children under 12 years old	Meals per month	8	3	0	0	0	
	Percentage each meal represents for monthly total	12.5 %	33.3 %	0	0	0	
General population	Meals per month	19	8	4	3	0	
	Percentage each meal represents for monthly total	5.3 %	12.5 %	25 %	33.3 %	0	

How to use the Meal Allowance Chart:

The Meal Allowance Chart shows the percentage each meal from a consumption category represents for the monthly total. Keep the monthly total of percentages from all meals within 100 or less.

An example for the general population:

- each meal in Category 2 equals 12.5 per cent of the monthly total and each meal in Category 3 equals 25 per cent
- this means only four meals in Category 2 can be consumed when two meals are consumed from Category 3:
$$\begin{array}{r} 4 \text{ meals} \times 12.5 \text{ per cent} = 50 \text{ per cent} \\ + 2 \text{ meals} \times 25 \text{ per cent} = 50 \text{ per cent} \\ \hline = 100 \text{ per cent of the} \\ \text{monthly total} \end{array}$$

A second example from the general population:

- four meals from Category 1 and two meals from Category 2 can be consumed when two meals are consumed from Category 3
$$\begin{array}{r} 4 \text{ meals} \times 5.3 \text{ per cent} = 21.2 \text{ per cent} \\ + 2 \text{ meals} \times 12.5 \text{ per cent} = 25.0 \text{ per cent} \\ + 2 \text{ meals} \times 25 \text{ per cent} = 50.0 \text{ per cent} \\ \hline = 96.2 \text{ per cent of the} \\ \text{monthly total} \end{array}$$

A third example from the general population:

- five meals can be consumed from Category 2 when one meal is consumed from Category 4
$$\begin{array}{r} 5 \text{ meals} \times 12.5 \text{ per cent} = 62.5 \text{ per cent} \\ + 1 \text{ meal} \times 33.3 \text{ per cent} = 33.3 \text{ per cent} \\ \hline = 95.8 \text{ per cent of the} \\ \text{monthly total} \end{array}$$

An example for women of childbearing age and children under 12 years old:

- five meals can be consumed from Category 1 when one meal is consumed from Category 2
$$\begin{aligned} 5 \text{ meals} \times 12.5 \text{ per cent} &= 62.5 \text{ per cent} \\ + 1 \text{ meal} \times 33.3 \text{ per cent} &= \underline{33.3} \text{ per cent} \\ &= 95.8 \text{ per cent of the} \\ &\quad \text{monthly total} \end{aligned}$$

A second example for women of childbearing age and children under 12 years old:

- two meals can be consumed from Category 1 when two meals are consumed from Category 2
$$\begin{aligned} 2 \text{ meals} \times 12.5 \text{ per cent} &= 25.0 \text{ per cent} \\ + 2 \text{ meals} \times 33.3 \text{ per cent} &= \underline{66.6} \text{ per cent} \\ &= 91.6 \text{ per cent of the} \\ &\quad \text{monthly total} \end{aligned}$$

In general, use Category 2 to determine meal allowances for fish purchased from retail outlets and regularly consumed such as canned albacore tuna, fresh or frozen tuna, shark, walleye, sauger, or northern pike. Consumption of recreationally-angled fish should be reduced accordingly. Please check Health Canada's website at www.hc-sc.gc.ca for more information.

Please note: Consumption advice for each species from a water body is provided only up to the maximum size of fish that was tested. Higher mercury concentrations likely occur in larger fish.

The Fish Consumption Guide Table

Mercury concentrations in fish tissue	Category 1 Less than or equal to 0.2 µg/g	Category 2 Greater than 0.2 to 0.5 µg/g
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Location in Southern Manitoba

Assiniboine River System

Lake of the Prairies

Walleye	Under 34 cm	34 - 51 cm
Northern pike	Under 59 cm	59 - 84 cm
Yellow perch	Under 39 cm	-
White sucker	Under 50 cm	-
Shorthead redhorse sucker	Under 44 cm	-

Brandon

Walleye	Under 35 cm	35 - 59 cm
Northern pike	Under 35 cm	35 - 60 cm
Rock bass	Under 21 cm	-
Mooneye	Under 33 cm	-
White sucker	Under 39 cm	-
Shorthead redhorse sucker	Under 42 cm	-
Silver redhorse sucker	Under 49 cm	-

Portage la Prairie

Walleye	Under 31 cm	31 - 57 cm
Sauger	Under 20 cm	20 - 29 cm
Channel catfish	Under 44 cm	44 - 65 cm
Carp	Under 33 cm	-
White sucker	Under 46 cm	-
Bigmouth buffalo sucker	Under 27 cm	-
Shorthead redhorse sucker	Under 32 cm	32 - 43 cm
Quillback sucker	Under 32 cm	32 - 39 cm
Bullhead	Under 32 cm	-

Red River System

Emerson

Sauger	Under 21 cm	21 - 33 cm
Northern pike	Under 32 cm	32 - 50 cm
Goldeye	Under 26 cm	26 - 34 cm
Carp	Under 37 cm	37 - 44 cm
Shorthead redhorse sucker	Under 31 cm	31 - 38 cm
White sucker	Under 30 cm	-

St. Norbert

Walleye	Under 38 cm	38 - 57 cm
Sauger	Under 20 cm	20 - 33 cm
Northern pike	Under 20 cm	20 - 63 cm
Channel catfish	Under 67 cm	-
Freshwater drum	Under 37 cm	37 - 53 cm
Goldeye	Under 34 cm	-
Carp	Under 43 cm	43 - 50 cm
Shorthead redhorse sucker	Under 35 cm	35 - 58 cm
Bigmouth buffalo sucker	Under 47 cm	47 - 63 cm

NOTE: The consumption limits are references for health purposes only. Anglers must adhere to catch and possession limits listed in the current Manitoba Angler's Guide.

Category 3 Greater than 0.5 to 1.0 µg/g	Category 4 Greater than 1.0 to 1.5 µg/g	No Consumption Greater than 1.5 µg/g	Maximum Size of Fish Sampled
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51 - 68 cm	-	-	67.4 cm
84 - 87 cm	-	-	86.6 cm
-	-	-	39.0 cm
-	-	-	50.0 cm
-	-	-	43.8 cm
-	-	-	58.4 cm
-	-	-	59.7 cm
-	-	-	20.9 cm
-	-	-	32.3 cm
-	-	-	38.8 cm
-	-	-	41.5 cm
-	-	-	48.8 cm
-	-	-	56.4 cm
-	-	-	28.5 cm
65 - 73 cm	-	-	72.7 cm
-	-	-	33.0 cm
-	-	-	46.0 cm
-	-	-	26.7 cm
-	-	-	42.7 cm
-	-	-	39.0 cm
-	-	-	31.7 cm

33 - 36 cm	-	-	35.8 cm
50 - 61 cm	-	-	61.0 cm
-	-	-	34.0 cm
-	-	-	43.6 cm
-	-	-	37.5 cm
-	-	-	29.2 cm

57 - 75 cm	-	-	74.5 cm
33 - 37 cm	-	-	36.2 cm
63 - 91 cm	-	-	90.4 cm
-	-	-	67.0 cm
-	-	-	52.9 cm
-	-	-	33.4 cm
50 - 59 cm	-	-	58.7 cm
-	-	-	57.7 cm
-	-	-	62.2 cm

Check the “Meal Allowance Chart” in the section of the guidelines “How to Use The Consumption Guidelines” to determine how many meals can be consumed in a month when your fish catch comes from a single category or from multiple categories.

Mercury concentrations in fish tissue	Category 1 Less than or equal to 0.2 µg/g	Category 2 Greater than 0.2 to 0.5 µg/g
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Red River System *continued*

City of Winnipeg

Walleye	Under 15 cm	15 - 40 cm
Goldeye	Under 29 cm	29 - 34 cm
Carp	Under 45 cm	-
Channel catfish	Under 55 cm	55 - 66 cm
Shorthead redhorse sucker	Under 36 cm	36 - 42 cm
White sucker	Under 36 cm	36 - 47 cm

Selkirk

Walleye	Under 34 cm	34 - 49 cm
Sauger	Under 24 cm	24 - 37 cm
Northern pike	Under 54 cm	54 - 64 cm
Channel catfish	Under 71 cm	-
Freshwater drum	Under 37 cm	-
Goldeye	Under 30 cm	30 - 34 cm
White bass	Under 30 cm	30 - 37 cm
Black crappie	Under 30 cm	-
Shorthead redhorse sucker	Under 42 cm	-
White sucker	Under 47 cm	-
Quillback sucker	Under 43 cm	-
Bigmouth buffalo sucker	Under 28 cm	-

Winnipeg River System

Eaglenest Lake

Walleye	Under 34 cm	34 - 47 cm
Sauger	Under 23 cm	23 - 30 cm
Northern pike	Under 37 cm	37 - 62 cm
Mooneye	Under 37 cm	-
White sucker	Under 49 cm	-
Bullhead	Under 34 cm	-

Point du Bois

Walleye	Under 34 cm	34 - 63 cm
Northern pike	Under 26 cm	26 - 67 cm
Smallmouth bass	Under 31 cm	31 - 37 cm
Mooneye	Under 34 cm	-
Whitefish	Under 43 cm	-
White sucker	Under 47 cm	-

Lac du Bonnet

Walleye	Under 28 cm	28 - 59 cm
Sauger	Under 23 cm	23 - 33 cm
Northern pike	Under 42 cm	42 - 75 cm
Yellow perch	Under 30 cm	-
Smallmouth bass	Under 33 cm	33 - 40 cm
Whitefish	Under 48 cm	-
Cisco	Under 30 cm	-
Mooneye	Under 33 cm	-
Shorthead redhorse sucker	Under 46 cm	-
White sucker	Under 49 cm	-

NOTE: The consumption limits are references for health purposes only. Anglers must adhere to catch and possession limits listed in the current Manitoba Angler's Guide.

Category 3 Greater than 0.5 to 1.0 µg/g	Category 4 Greater than 1.0 to 1.5 µg/g	No Consumption Greater than 1.5 µg/g	Maximum Size of Fish Sampled
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-	-	-	40.0 cm
-	-	-	34.0 cm
-	-	-	45.0 cm
-	-	-	66.0 cm
-	-	-	42.0 cm
-	-	-	47.0 cm

-	-	-	48.7 cm
-	-	-	36.2 cm
-	-	-	64.0 cm
-	-	-	70.5 cm
-	-	-	36.4 cm
-	-	-	34.0 cm
-	-	-	36.4 cm
-	-	-	30.0 cm
-	-	-	41.3 cm
-	-	-	47.0 cm
-	-	-	42.2 cm
-	-	-	27.2 cm

47 - 65 cm	-	-	65.0 cm
-	-	-	29.5 cm
62 - 83 cm	-	-	82.5 cm
-	-	-	37.0 cm
-	-	-	48.8 cm
-	-	-	33.3 cm

63 - 70 cm	-	-	69.7 cm
67 - 100 cm	-	-	100.0 cm
-	-	-	36.9 cm
-	-	-	33.5 cm
-	-	-	43.0 cm
-	-	-	47.0 cm

59 - 66 cm	-	-	65.7 cm
33 - 63 cm	-	-	62.6 cm
75 - 78 cm	-	-	77.8 cm
-	-	-	29.7 cm
-	-	-	39.8 cm
-	-	-	47.8 cm
-	-	-	30.0 cm
-	-	-	32.2 cm
-	-	-	46.0 cm
-	-	-	49.0 cm

Check the “Meal Allowance Chart” in the section of the guidelines “How to Use The Consumption Guidelines” to determine how many meals can be consumed in a month when your fish catch comes from a single category or from multiple categories.

Mercury concentrations in fish tissue	Category 1 Less than or equal to 0.2 µg/g	Category 2 Greater than 0.2 to 0.5 µg/g
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Souris River System

Souris

Walleye	Under 39 cm	39 - 47 cm
Northern pike	Under 45 cm	45 - 67 cm
White sucker	Under 37 cm	37 - 46 cm
Bullhead	Under 20 cm	20 - 36 cm

Pembina River System

Pelican Lake

Walleye	Under 58 cm	-
Northern pike	Under 85 cm	-
Yellow perch	Under 32 cm	-
White sucker	Under 48 cm	-

Rock Lake

Walleye	Under 58 cm	58 - 67 cm
Northern pike	Under 84 cm	84 - 89 cm
Yellow perch	Under 29 cm	-
White sucker	Under 55 cm	-
Bullhead	Under 32 cm	-

Little Saskatchewan River System

Lake Wahtopanah

Walleye	Under 22 cm	22 - 55 cm
Northern pike	Under 44 cm	44 - 70 cm
White sucker	Under 53 cm	-
Shorthead redhorse sucker	Under 45 cm	45 - 50 cm

Plum River System

Oak Lake

Walleye	Under 59 cm	-
Northern pike	Under 59 cm	59 - 90 cm
White sucker	Under 54 cm	-
Yellow perch	Under 23 cm	-

Lake Winnipeg

North Basin

Walleye	Under 50 cm	-
Sauger	Under 45 cm	-
Northern pike	Under 65 cm	-
Whitefish	Under 43 cm	-
White sucker	Under 54 cm	-

South Basin and Narrows

Walleye	Under 40 cm	40 - 51 cm
Sauger	Under 31 cm	31 - 44 cm
Yellow perch	Under 23 cm	-
Whitefish	Under 48 cm	-
Cisco	Under 27 cm	-
Freshwater drum	Under 58 cm	-
White sucker	Under 47 cm	-

NOTE: The consumption limits are references for health purposes only. Anglers must adhere to catch and possession limits listed in the current Manitoba Angler's Guide.

Category 3 Greater than 0.5 to 1.0 µg/g	Category 4 Greater than 1.0 to 1.5 µg/g	No Consumption Greater than 1.5 µg/g	Maximum Size of Fish Sampled
-	-	-	46.6 cm
67 - 94 cm	-	-	94.0 cm
-	-	-	45.3 cm
-	-	-	35.1 cm
-	-	-	57.6 cm
-	-	-	84.2 cm
-	-	-	31.4 cm
-	-	-	47.4 cm
-	-	-	66.8 cm
-	-	-	88.8 cm
-	-	-	29.0 cm
-	-	-	54.4 cm
-	-	-	31.6 cm
55 - 62 cm	-	-	62.0 cm
70 - 90 cm	-	-	90.0 cm
-	-	-	53.0 cm
-	-	-	50.0 cm
-	-	-	58.2 cm
-	-	-	89.2 cm
-	-	-	53.6 cm
-	-	-	23.0 cm
-	-	-	50.0 cm
-	-	-	44.5 cm
-	-	-	64.5 cm
-	-	-	42.4 cm
-	-	-	53.4 cm
-	-	-	50.4 cm
-	-	-	43.4 cm
-	-	-	22.6 cm
-	-	-	48.0 cm
-	-	-	26.8 cm
-	-	-	58.0 cm
-	-	-	46.9 cm

Check the “Meal Allowance Chart” in the section of the guidelines “How to Use The Consumption Guidelines” to determine how many meals can be consumed in a month when your fish catch comes from a single category or from multiple categories.

Mercury concentrations in fish tissue	Category 1 Less than or equal to 0.2 µg/g	Category 2 Greater than 0.2 to 0.5 µg/g
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Location in Northern Manitoba

Saskatchewan River System

The Pas

Walleye	Under 51 cm	-
Sauger	Under 40 cm	-
Northern pike	Under 75 cm	-
Goldeye	Under 37 cm	-
Mooneye	Under 39 cm	-
Shorthead redhorse sucker	Under 40 cm	-
White sucker	Under 43 cm	-
Longnose sucker	Under 45 cm	-

Rat-Burntwood River System

Issett Lake

Walleye	Under 25 cm	25 - 44 cm
Northern pike	Under 33 cm	33 - 58 cm
Whitefish	Under 55 cm	-
Cisco	Under 44 cm	-

Suwannee Lake

Walleye	Under 47 cm	-
Northern pike	Under 68 cm	-

West Mynarski Lake

Walleye	Under 38 cm	38 - 50 cm
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Rat Lake

Walleye	Under 19 cm	19 - 34 cm
Northern pike	Under 28 cm	28 - 54 cm
Whitefish	Under 57 cm	-
Cisco	Under 44 cm	-

Notigi Lake

Walleye	Under 16 cm	16 - 33 cm
Northern pike	Under 27 cm	27 - 46 cm
Yellow perch	Under 24 cm	-
Whitefish	Under 56 cm	-
Cisco	Under 46 cm	-
White sucker	Under 48 cm	-

Wapisu Lake

Walleye	Under 19 cm	19 - 33 cm
Northern pike	Under 32 cm	32 - 51 cm
Whitefish	Under 45 cm	45 - 54 cm
Cisco	Under 40 cm	40 - 44 cm

Osik Lake

Walleye	Under 20 cm	20 - 51 cm
Northern pike	Under 26 cm	26 - 61 cm
Whitefish	Under 52 cm	-
Cisco	Under 37 cm	37 - 41 cm

Leftrook Lake

Walleye	Under 38 cm	38 - 52 cm
Northern pike	Under 52 cm	52 - 75 cm
Whitefish	Under 49 cm	-
Cisco	Under 36 cm	-

NOTE: The consumption limits are references for health purposes only. Anglers must adhere to catch and possession limits listed in the current Manitoba Angler's Guide.

Category 3 Greater than 0.5 to 1.0 µg/g	Category 4 Greater than 1.0 to 1.5 µg/g	No Consumption Greater than 1.5 µg/g	Maximum Size of Fish Sampled
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-	-	-	50.4 cm
-	-	-	40.0 cm
-	-	-	75.0 cm
-	-	-	36.9 cm
-	-	-	38.5 cm
-	-	-	40.0 cm
-	-	-	43.0 cm
-	-	-	45.0 cm
44 - 51 cm	-	-	51.0 cm
58 - 84 cm	-	-	84.0 cm
-	-	-	54.2 cm
-	-	-	43.3 cm
-	-	-	46.7 cm
-	-	-	67.2 cm
-	-	-	49.3 cm
34 - 52 cm	52 - 56 cm	-	55.4 cm
54 - 84 cm	-	-	83.9 cm
-	-	-	56.2 cm
-	-	-	43.9 cm
33 - 54 cm	-	-	53.5 cm
46 - 69 cm	69 - 87 cm	87 - 101 cm	100.2 cm
-	-	-	23.2 cm
-	-	-	55.3 cm
-	-	-	45.8 cm
-	-	-	47.8 cm
33 - 49 cm	49 - 59 cm	-	58.7 cm
51 - 73 cm	73 - 89 cm	89 - 103 cm	103.0 cm
-	-	-	53.7 cm
-	-	-	43.3 cm
51 - 58 cm	-	-	58.0 cm
61 - 84 cm	-	-	83.5 cm
-	-	-	51.5 cm
-	-	-	40.1 cm
-	-	-	51.2 cm
75 - 78 cm	-	-	78.0 cm
-	-	-	48.8 cm
-	-	-	36.0 cm

Check the “Meal Allowance Chart” in the section of the guidelines “How to Use The Consumption Guidelines” to determine how many meals can be consumed in a month when your fish catch comes from a single category or from multiple categories.

Mercury concentrations in fish tissue	Category 1 Less than or equal to 0.2 µg/g	Category 2 Greater than 0.2 to 0.5 µg/g
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Rat-Burntwood River System *continued*

Footprint Lake

Walleye	Under 23 cm	23 - 34 cm
Northern pike	Under 24 cm	24 - 47 cm
Whitefish	Under 50 cm	-
Cisco	Under 33 cm	33 - 41 cm

Threepoint Lake

Walleye	Under 20 cm	20 - 33 cm
Northern pike	Under 22 cm	22 - 51 cm
Whitefish	Under 50 cm	-
Cisco	Under 41 cm	-

Wuskwatim Lake

Walleye	Under 30 cm	30 - 60 cm
Northern pike	Under 39 cm	39 - 59 cm
Whitefish	Under 52 cm	52 - 54 cm
Cisco	Under 47 cm	-

Opegano Lake

Walleye	Under 26 cm	26 - 43 cm
Northern pike	Under 30 cm	30 - 50 cm
Whitefish	Under 45 cm	45 - 51 cm
Cisco	Under 38 cm	-

Birch Tree Lake

Walleye	Under 24 cm	24 - 38 cm
Northern pike	Under 35 cm	35 - 53 cm
Whitefish	Under 58 cm	-
Cisco	Under 38 cm	38 - 50 cm

Apussigamasi Lake

Walleye	Under 20 cm	20 - 43 cm
Northern pike	Under 34 cm	34 - 56 cm

Mystery Lake

Walleye	Under 24 cm	24 - 47 cm
Northern pike	Under 39 cm	39 - 60 cm

Churchill River System

Eldon Lake

Northern pike	Under 75 cm	75 - 89 cm
White sucker	Under 53 cm	-

Cockeram Lake

Northern pike	Under 72 cm	72 - 75 cm
Whitefish	Under 50 cm	-

Southern Indian Lake

Walleye	Under 36 cm	36 - 47 cm
Northern pike	Under 41 cm	41 - 65 cm
Whitefish	Under 53 cm	-
Cisco	Under 45 cm	-
Longnose sucker	Under 52 cm	-
Burbot	Under 67 cm	-

NOTE: The consumption limits are references for health purposes only. Anglers must adhere to catch and possession limits listed in the current Manitoba Angler's Guide.



Category 3 Greater than 0.5 to 1.0 µg/g	Category 4 Greater than 1.0 to 1.5 µg/g	No Consumption Greater than 1.5 µg/g	Maximum Size of Fish Sampled
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34 - 44 cm	44 - 52 cm	-	51.6 cm
47 - 81 cm	81 - 83 cm	-	82.2 cm
-	-	-	50.0 cm
-	-	-	40.6 cm

33 - 47 cm	47 - 51 cm	-	50.4 cm
51 - 94 cm	-	-	93.1 cm
-	-	-	49.2 cm
-	-	-	40.6 cm

-	-	-	59.4 cm
59 - 81 cm	81 - 90 cm	-	89.2 cm
-	-	-	54.0 cm
-	-	-	47.0 cm

43 - 60 cm	-	-	59.9 cm
50 - 71 cm	71 - 80 cm	-	80.0 cm
-	-	-	50.2 cm
-	-	-	38.0 cm

38 - 54 cm	54 - 63 cm	-	62.8 cm
53 - 73 cm	73 - 88 cm	88 - 96 cm	95.1 cm
-	-	-	57.5 cm
-	-	-	49.7 cm

43 - 63 cm	-	-	62.2 cm
56 - 81 cm	81 - 90 cm	-	89.6 cm

47 - 54 cm	-	-	53.2 cm
60 - 83 cm	-	-	82.8 cm

-	-	-	88.2 cm
-	-	-	52.2 cm

-	-	-	74.8 cm
-	-	-	49.2 cm

-	-	-	46.3 cm
65 - 69 cm	-	-	68.6 cm
-	-	-	53.0 cm
-	-	-	44.6 cm
-	-	-	51.7 cm
-	-	-	66.7 cm

Check the “Meal Allowance Chart” in the section of the guidelines “How to Use The Consumption Guidelines” to determine how many meals can be consumed in a month when your fish catch comes from a single category or from multiple categories.

Mercury concentrations in fish tissue	Category 1 Less than or equal to 0.2 µg/g	Category 2 Greater than 0.2 to 0.5 µg/g
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Nelson River System

Aiken River

Walleye	Under 38 cm	38 - 47 cm
Northern pike	Under 50 cm	50 - 99 cm
White sucker	Under 48 cm	48 - 54 cm

Assean Lake

Walleye	Under 43 cm	43 - 56 cm
Northern pike	Under 57 cm	57 - 90 cm
Whitefish	Under 55 cm	-
Cisco	Under 38 cm	-

Split Lake

Walleye	Under 40 cm	40 - 62 cm
Northern pike	Under 55 cm	55 - 80 cm
Whitefish	Under 57 cm	-
Cisco	Under 39 cm	-
Smelt	Under 14 cm	-

Clark Lake

Northern Pike	Under 56 cm	56 - 93 cm
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Gull Lake

Walleye	Under 38 cm	38 - 55 cm
Northern pike	Under 53 cm	53 - 77 cm
Whitefish	Under 59 cm	-
Cisco	Under 38 cm	-
Rainbow smelt	Under 14 cm	-

Moose Nose Lake

Northern Pike	Under 91 cm	91 - 97 cm
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Stephens Lake

Walleye	Under 30 cm	30 - 48 cm
Northern pike	Under 44 cm	44 - 67 cm
Whitefish	Under 57 cm	-
Cisco	Under 40 cm	-
Smelt	Under 13 cm	-

Limestone Forebay

Walleye	Under 37 cm	37 - 57 cm
Northern pike	Under 58 cm	58 - 81 cm
Whitefish	Under 52 cm	-
Cisco	Under 30 cm	-

NOTE: The consumption limits are references for health purposes only. Anglers must adhere to catch and possession limits listed in the current Manitoba Angler's Guide.

Footnote: To convert centimetres (cm) to inches multiply by 0.3937 (e.g., 30 cm x 0.3937 = 11.81 inches).

Quick reference table for imperial (inches) to metric (cm) conversion:

Approximate number of centimetres for specific length in inches.

Inches	10	12	14	16	18
Approximate Centimetres	25	31	36	41	46

Category 3 Greater than 0.5 to 1.0 µg/g	Category 4 Greater than 1.0 to 1.5 µg/g	No Consumption Greater than 1.5 µg/g	Maximum Size of Fish Sampled
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-	-	-	46.4 cm
-	-	-	98.5 cm
-	-	-	53.7 cm
-	-	-	56.0 cm
90 - 109 cm	-	-	109.0 cm
-	-	-	54.2 cm
-	-	-	37.1 cm
-	-	-	61.1 cm
80 - 100 cm	-	-	99.2 cm
-	-	-	56.5 cm
-	-	-	38.9 cm
-	-	-	13.5 cm
-	-	-	92.5 cm
55 - 67 cm	-	-	66.1 cm
77 - 102 cm	-	-	101.7 cm
-	-	-	58.5 cm
-	-	-	37.5 cm
-	-	-	13.5 cm
-	-	-	96.6 cm
48 - 63 cm	-	-	62.7 cm
67 - 89 cm	89 - 100 cm	-	99.8 cm
-	-	-	56.8 cm
-	-	-	39.8 cm
-	-	-	12.9 cm
57 - 62 cm	-	-	61.5 cm
81 - 91 cm	-	-	90.9 cm
-	-	-	51.6 cm
-	-	-	29.2 cm

Check the “Meal Allowance Chart” in the section of the guidelines “How to Use The Consumption Guidelines” to determine how many meals can be consumed in a month when your fish catch comes from a single category or from multiple categories.

To convert inches to cm multiply by 2.54
(e.g., 12 inches x 2.54 = 30.48 cm).

Centimetres values have been rounded to nearest whole number.

20	22	24	26	28	30	32
51	56	61	66	71	76	81

Further information may be obtained from:

Manitoba Water Stewardship
Water Quality Management Section
Suite 160, 123 Main Street
Winnipeg, MB R3C 1A5
Telephone: 204-945-7100
Toll free: 1-800-282-8069 ext. 7100
Fax: 204-948-2357
Website: manitoba.ca/waterstewardship

