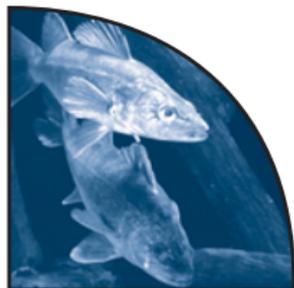
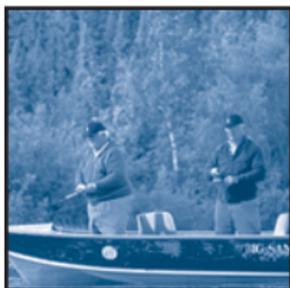


# Mercury In Fish

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**& 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](http://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](http://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

| <b>Mercury concentrations in fish tissue</b> | <b>Category 1</b><br>Less than or equal to 0.2 µg/g | <b>Category 2</b><br>Greater than 0.2 to 0.5 µg/g |
|--|---|---|
|--|---|---|

### 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.**

| <b>Category 3</b><br>Greater than<br>0.5 to 1.0 µg/g | <b>Category 4</b><br>Greater than<br>1.0 to 1.5 µg/g | <b>No Consumption</b><br>Greater than<br>1.5 µg/g | <b>Maximum<br/>Size of Fish<br/>Sampled</b> |
|--|--|---|---|
|--|--|---|---|

|            |   |   |         |
|------------|---|---|---------|
| 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.

| <b>Mercury concentrations<br/>in fish tissue</b> | <b>Category 1</b><br>Less than or equal<br>to 0.2 µg/g | <b>Category 2</b><br>Greater than<br>0.2 to 0.5 µg/g |
|--|--|--|
|--|--|--|

### 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.**

| <b>Category 3</b><br>Greater than<br>0.5 to 1.0 µg/g | <b>Category 4</b><br>Greater than<br>1.0 to 1.5 µg/g | <b>No Consumption</b><br>Greater than<br>1.5 µg/g | <b>Maximum<br/>Size of Fish<br/>Sampled</b> |
|--|--|---|---|
|--|--|---|---|

|   |   |   |         |
|---|---|---|---------|
| - | - | - | 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.

| <b>Mercury concentrations in fish tissue</b> | <b>Category 1</b><br>Less than or equal to 0.2 µg/g | <b>Category 2</b><br>Greater than 0.2 to 0.5 µg/g |
|--|---|---|
|--|---|---|

### 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.**

| <b>Category 3</b><br>Greater than<br>0.5 to 1.0 µg/g | <b>Category 4</b><br>Greater than<br>1.0 to 1.5 µg/g | <b>No Consumption</b><br>Greater than<br>1.5 µg/g | <b>Maximum<br/>Size of Fish<br/>Sampled</b> |
|--|--|---|---|
| -  | -  | -   | 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.

| <b>Mercury concentrations<br/>in fish tissue</b> | <b>Category 1</b><br>Less than or equal<br>to 0.2 µg/g | <b>Category 2</b><br>Greater than<br>0.2 to 0.5 µg/g |
|--|--|--|
|--|--|--|

## 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 |
|---------|-------------|------------|

#### 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.**

| <b>Category 3</b><br>Greater than<br>0.5 to 1.0 µg/g | <b>Category 4</b><br>Greater than<br>1.0 to 1.5 µg/g | <b>No Consumption</b><br>Greater than<br>1.5 µg/g | <b>Maximum<br/>Size of Fish<br/>Sampled</b> |
|--|--|---|---|
|--|--|---|---|

|            |            |             |          |
|------------|------------|-------------|----------|
| -          | -          | -           | 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.

| <b>Mercury concentrations<br/>in fish tissue</b> | <b>Category 1</b><br>Less than or equal<br>to 0.2 µg/g | <b>Category 2</b><br>Greater than<br>0.2 to 0.5 µg/g |
|--|--|--|
|--|--|--|

### **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.**



| <b>Category 3</b><br>Greater than<br>0.5 to 1.0 µg/g | <b>Category 4</b><br>Greater than<br>1.0 to 1.5 µg/g | <b>No Consumption</b><br>Greater than<br>1.5 µg/g | <b>Maximum<br/>Size of Fish<br/>Sampled</b> |
|--|--|---|---|
|--|--|---|---|

|            |            |   |         |
|------------|------------|---|---------|
| 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<br>Less than or equal to 0.2 µg/g | Category 2<br>Greater than 0.2 to 0.5 µg/g |
|---------------------------------------|--|--|
|---------------------------------------|--|--|

## 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 |
|---------------|-------------|------------|

### 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 |
|---------------|-------------|------------|

### 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<br>Greater than<br>0.5 to 1.0 µg/g | Category 4<br>Greater than<br>1.0 to 1.5 µg/g | No Consumption<br>Greater than<br>1.5 µg/g | Maximum<br>Size of Fish<br>Sampled |
|---|---|--|------------------------------------|
|---|---|--|------------------------------------|

|             |             |   |          |
|-------------|-------------|---|----------|
| -           | -           | - | 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](http://manitoba.ca/waterstewardship)

