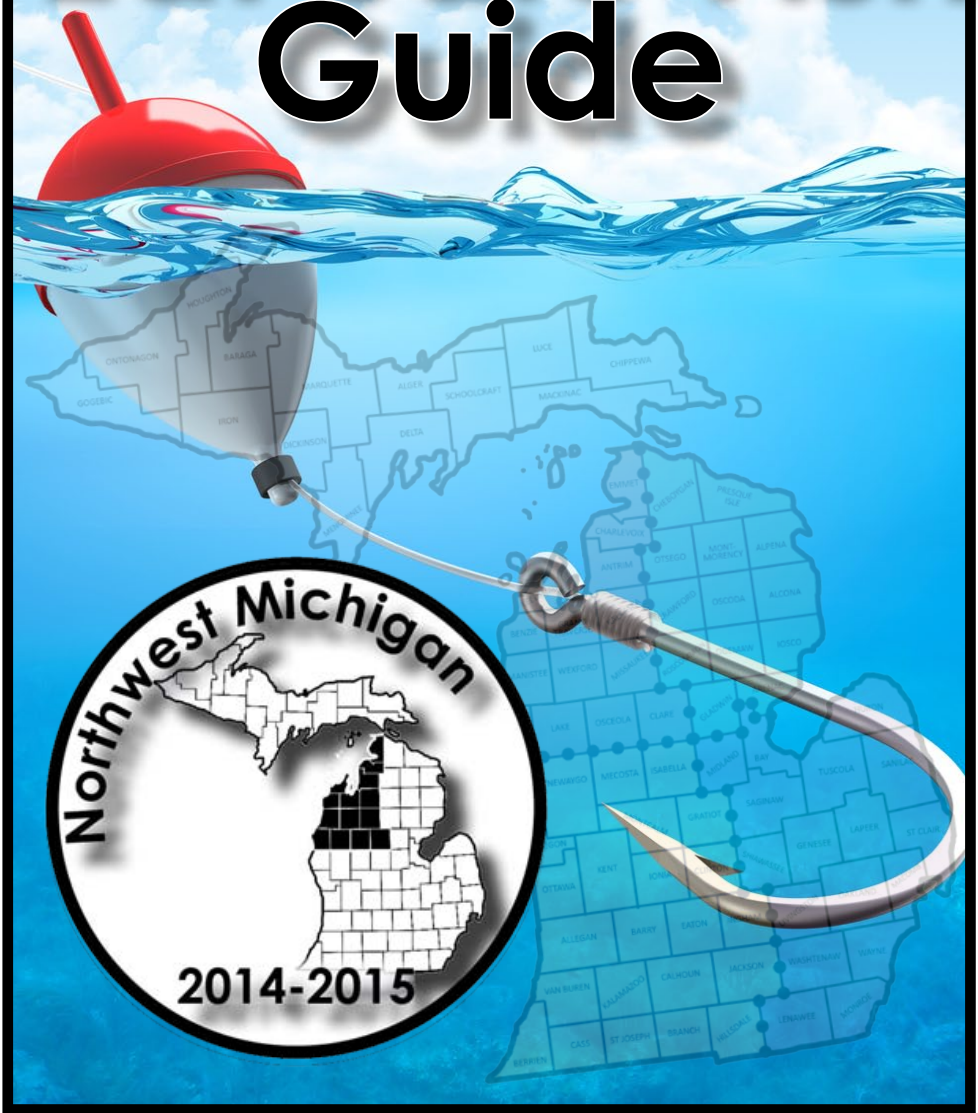
Michigan Department of Community Health's

Eat Safe Fish Guide



Some fish contain chemicals that can harm your health. MDCH tests filets of fish taken from Michigan's lakes and rivers to learn which fish are safer to eat. The *Eat Safe Fish Guide* lists the fish that have been tested and how much is safe to eat.

eat safe fish

Michigan Department of Community Health

MDCH

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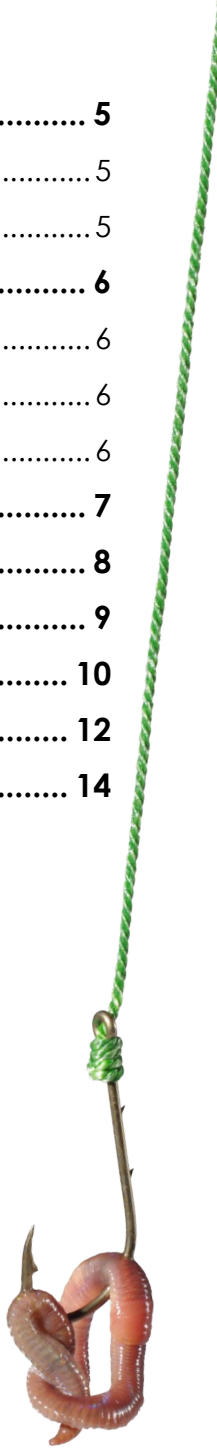

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About the Guide

The *Eat Safe Fish Guide (ESF Guide)* is provided by the Michigan Department of Community Health (MDCH).

- The fish listed under each lake or river in the ***ESF Guide*** have been tested for chemicals.
- **Scientists from MDCH test ONLY the filet of the fish - the part that you would eat - to determine the guidelines included in the *ESF Guide*.**
- MDCH uses the test results from the fish filets to find the average amount of chemicals in the fish species from that lake or river. They use this information to determine how much fish is safe to eat per month.
- The ***ESF Guide*** is not a rulebook. These are only guidelines to help you make safer choices for you and your family. You are not required to use it.
- The ***ESF Guide*** does not include rules and regulations about catching or keeping legally-sized fish.
- The ***ESF Guide*** provides advice for the size range of fish that are typically caught and eaten.

Michigan DNR Fishing Laws

You should get a copy of the ***DNR Michigan Fishing Guide*** when you purchase your fishing license. If you lost your ***Fishing Guide*** or have other questions about fishing legally, please call the Michigan Department of Natural Resources at 1-517-373-1230 or visit www.michigan.gov/fishing.

Questions About Eating Safe Fish?

If you have questions about choosing safer fish to eat or would like the *ESF Guide* for another region, please call the Michigan Department of Community Health at 1-800-648-6942 or visit www.michigan.gov/eatsafefish.

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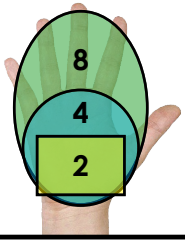
Choosing Safer Fish

The guidelines in the *ESF Guide* are set to be safe for everyone. **This includes children, pregnant or breastfeeding women, and people who have health problems, like cancer or diabetes.**

But the *ESF Guide* is also for healthy adults who want to avoid getting too many chemicals in their bodies. Chemicals like PCBs and dioxins are linked to cancer, diabetes, and other illnesses. Mercury can cause damage to your brain and nerves. MDCH uses chemical limits in the *ESF Guide* that will protect everyone who eats fish.

My Michigan, *MI Serving* Size

- ☑ 8 ounces of fish = size of an adult's hand (large oval)
- ☑ 4 ounces of fish = size of the palm of an adult's hand (small circle)
- ☑ 2 ounces of fish = size of half a palm of an adult's hand (rectangle)



How much is *MI Serving*?

Weight of Person	*MI Serving* Size
45 pounds	2 ounces
90 pounds	4 ounces
180 pounds	8 ounces

Weigh Less?

For every 20 pounds <u>less</u> than the weight listed in the table, subtract 1 ounce of fish.

For example, a 70 pound child's *MI Serving* size is 3 ounces of fish.
90 pounds - 20 pounds = 70 pounds
4 ounces - 1 ounce = a *MI Serving* size of 3 ounces

Weigh More?

For every 20 pounds <u>more</u> than the weight listed in the table, add 1 ounce of fish.

For example, a 110 pound person's *MI Serving* size is 5 ounces of fish.
90 pounds + 20 pounds = 110 pounds
4 ounces + 1 ounce = a *MI Serving* size of 5 ounces

Are you pregnant?

Fish is good for you and your baby! Use your pre-pregnancy weight to find your *MI Serving* size. It is best to avoid eating fish labeled as "Limited" if you're pregnant or breastfeeding.

Special *MI Serving* Categories

Limited

If you:

- are under the age of 15,

- or -

- have health problems, like cancer or diabetes,

- or -

- are planning on having children in the next several years, currently pregnant, or breastfeeding,

MDCH suggests you **avoid eating all fish listed as "*Limited*"** because of higher levels of chemicals.

If **NONE** of the above apply to you, it is usually OK to eat fish listed as "*Limited*" **1 or 2 times each year**.

Do Not Eat

No one should eat fish listed as Do Not Eat, regardless of age or health.

When these fish were tested, MDCH found very high levels of chemicals. Eating even one meal of these fish could possibly lead to health problems in the future, regardless of age or health.

Finding a Balance

Sometimes a child might eat more than 2 ounces of fish, or a 180 pound adult might eat more than 8 ounces of fish in one sitting. It's OK, just count the number of *MI Servings* you eat in that meal.

For example, let's say the 180 pound adult ate 16 ounces of fish during one meal. That is 2 *MI Servings* of fish for a person of that size. If the fish is listed as *2, 4, or 12 MI Servings* in the *ESF Guide*, they're still within their range. If the fish is listed as *1 meal per month* or *Limited*, they might want to avoid eating other meals of fish for a while to give their body time to process the chemicals.

No one should eat any amount of fish listed as Do Not Eat in the *ESF Guide*.

Get to know the 3Cs

Choose, Clean, Cook

Choose

If you eat fish often, you can use the *ESF Guide* to choose the safest fish to keep and eat from any Michigan lake or river. Is that fish limited to 1 or 2 meals per month in the *ESF Guide*? Use the map to find another lake or river nearby where you can eat more!

Clean

When you clean your fish, try trimming away as much of the fat as you can see. Some chemicals, like PCBs and dioxin, are stored in the fat. If you cut out the fat, you cut down on the chemicals in your fish. Just note, you can't remove mercury from your fish by trimming. Mercury is stored in the meat of the fish.

Cook

Not only is grilling or broiling your fish healthier than frying, it also helps to get rid of more chemical-carrying fat. When you cook a fish on a grate, any fat hiding inside the filet can melt and drip away from the fish. This removes even more of those harmful chemicals.

If you follow the 3Cs carefully, you can remove up to half of the chemicals in your fish.

That means you can double the number of *MI Servings* per month, if:

- Mercury is **not listed** in the **"Chemical of Concern"** column.
- The *MI Serving* is not listed as **"Limited".**

For example:

Type of Fish	Chemical of Concern	Size of Fish (length in inches)	MI Servings per Month*	Can you double?
Brown Trout	Dioxin	Any Size	Limited▲	No, it is "Limited."
Burbot	PCBs	Any Size	12	Yes! 24 meals are OK, if you follow the 3Cs.
Carp	Mercury	Any Size	4	No, mercury is listed as a chemical in the fish.

Use the Statewide Safe Fish Guidelines ONLY if:

- **your lake or river is not listed in the regional *Eat Safe Fish Guide*, OR**
- **your lake or river is listed in the *Eat Safe Fish Guide*, but the fish species is not listed.**

Statewide Safe Fish Guidelines

Type of Fish	Chemical of Concern	Size of Fish (length in inches)	MI Servings per Month*
Black Crappie	Mercury	Any Size	4
Bluegill	Mercury	Any Size	8
Carp	PCBs	Any Size	2
Catfish	PCBs & Mercury	Any Size	4
Largemouth Bass	Mercury	Under 18”	2
		Over 18”	1
Muskellunge	Mercury	Any Size	1
Northern Pike	Mercury	Under 30”	2
		Over 30”	1
Rock Bass	Mercury	Any Size	4
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1
Suckers	Mercury	Any Size	8
Sunfish	Mercury	Any Size	8
Walleye	Mercury	Under 20”	2
		Over 20”	1
White Crappie	Mercury	Any Size	4
Yellow Perch	Mercury	Any Size	4

These guidelines are based on the typical amount of chemicals found in fish filets tested from around the state. Some fish may be higher or lower. If any of these fish are listed in the guidelines for the lake or river you are fishing in, use **those** guidelines instead of statewide guidelines. The *MI Servings* recommendation will be more exact for that lake or river because those filets have been tested.

* See page 6

▲ See page 7

Best Choice! =

FAQs

How often is the Eat Safe Fish Guide (ESF Guide) updated?

The *ESF Guide* is updated regularly, but due to time and funding not all fish from all bodies of water listed in the *ESF Guide* are tested every year. If there are special problems in the area, fish may be tested more often or sooner than planned.

PCBs, dioxin, mercury, and other chemicals that can be found in fish stay in our environment for a very long time. The amount of chemicals found in the fish is not expected to change a lot from year to year.

What part of the fish is tested for the ESF Guide?

Only the filets of the fish are tested for chemicals. The skin is left on or taken off depending on common practice when cooking the fish. The organs and head are not tested for the *ESF Guide*. Internal organs (liver, fish eggs, etc.) typically have higher levels of chemicals than the filet and shouldn't be eaten.

Can I review the data myself?

Yes. All of the data, procedures, and scientific reports used to create the *ESF Guide* are available online at www.michigan.gov/eatsafefish (click on Science & Reports). If you do not have internet access, call MDCH at 1-800-648-6942, and we'll be happy to provide you with the information.

Why does MDCH always test carp?

Carp tend to eat everything in their path. MDCH can use the test results from the carp to find out if there are chemicals in that lake or river, which ones, and how much. If tests on carp come back clean, it is likely other fish are also clean. If the carp have a lot of chemicals in them, then it is likely other species of fish will also have chemicals. MDCH will then test other species of fish to see if they are safe to eat.

Will I be able to tell if the fish are safe to eat by looking at them?

No. You will not be able to see any of the chemicals, even mercury, in the fish. You also can't taste or smell the chemicals listed in the *ESF Guide*. To find the chemicals, MDCH tests the fish in a laboratory. MDCH only tests the filet of the fish - the part most people eat - for chemicals.

You can't see these chemicals in the water, either. Some very clear lakes or rivers can still have fish with higher levels of chemicals. If you eat a lot of Michigan fish, you can check the *ESF Guide* to find the safest options from the lake or river that you're fishing.

Is it safe to touch a fish that has chemicals in it?

Yes. You do not need to wear gloves or worry about getting the chemicals on you. They will not absorb into your skin from the fish.

Catch and release is almost always safe in Michigan regardless of where you're fishing. However, sometimes your local health department may issue a temporary warning against touching the water - including the fish that live in the water - because of problems like sewage overflow or harmful algae blooms.

You can contact your local health department or visit http://www.deq.state.mi.us/beach/ for local warnings about water quality.

Why should I use the Eat Safe Fish Guide?

If you eat fish, you might also be eating chemicals - like mercury, PCBs, or dioxins. These chemicals can stay in your body for a long time.

The *ESF Guide* is designed to protect everybody - men, women, and children - who eats fish on a regular basis.

Using the *ESF Guide* and following the MI Serving suggestions will keep you from getting too many chemicals in your body at once. Scientists set the limits in the *ESF Guide* so that you are protected from possible health problems from the chemicals, no matter how long they stay in your body.

The *ESF Guide* is designed to protect any person who eats fish on a regular basis. If you are a healthy adult who is not pregnant and only eats Michigan fish once or twice a year from waters that are not posted with MDCH signs, then you don't *need* to use the *ESF Guide* .

The S.A.F.E. fishing tips and the 3Cs in the *MDCH Eat Safe Fish in Michigan* brochure will help the occasional Michigan fish eater avoid eating too many chemicals. Call 1-800-648-6942 to get a free copy of the brochure.

You may choose to eat more fish than the *ESF Guide* recommends. These guidelines are not rules; it is your choice. And not everyone will get sick from eating too many of these chemicals. The chemicals in the fish won't make you sick right away, either. Some people will be fine after years of eating fish with these chemicals in them. Others can have health problems. It is difficult to know who might get sick from the chemicals in fish and who won't. The *ESF Guide* makes it easy for you to make safer choices for you and your family and avoid eating too many chemicals in fish.

I don't see a fish species listed in the ESF Guide. I don't see my favorite fishing hole. What does this mean?

Michigan is lucky to have over 11,000 lakes, rivers, and streams. Because of that huge number, it is not possible to test every fish species from every body of water in the state.

If you don't see the fish species you're going after listed in the *ESF Guide* for your lake or river OR you don't see the lake or river listed at all, see page 9 for the **Statewide Safe Fish Guidelines**.

Common Michigan Fish

The fish listed here can be found in lakes and rivers around Michigan. Once you ID your fish, you can use the guidelines in this booklet to see how often the fish is safe to eat.

Black Crappie

Bluegill

Brook Trout

Brown Trout

Burbot

Carp

Channel Catfish

Chinook Salmon
(aka King Salmon)

Coho Salmon

Lake Herring

Lake Trout

Largemouth Bass
(aka Green Bass)

Northern Pike

Muskellunge
(aka Muskie)

Fish are not to scale.

Common Michigan Fish
(continued)

Pumpkinseed
(aka Sunfish)

Rainbow Trout

Rock Bass

Siscowet

Sheepshead
(aka Freshwater Drum)

Smallmouth Bass

Sucker

Walleye

White Bass
(aka Silver Bass)

White Crappie

Whitefish

Yellow Perch

If you need more help finding out what kind of fish you caught, please visit **www.michigan.gov/fishid** or call your local DNR Operations Center.

Fish are not to scale.

Fish Eating Guidelines by County

The fish species listed on the following pages have been tested for chemicals by the Michigan Department of Community Health (MDCH).

The guidelines issued by MDCH are based only on the amount of chemicals in the filet of the fish - the part that you would eat.

All fish listed here are not tested every year. Because the chemicals found in fish don't break down quickly, the amount of chemicals in the fish will not change that much from year to year and neither will the guidelines.

If you would like to see the data collected to support these guidelines, they are available at www.michigan.gov/eatsafefish. If you do not have access to the internet or have additional questions, we are available at 1-800-648-6942, Monday-Friday, 8am-5pm.

www.michigan.gov/
eatsafefish

eat safe fish

Michigan Department of Community Health

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See page 44 for an alphabetical list of all lakes and rivers included in this booklet.

Lake Michigan

Filets of fish from Lake Michigan, Green Bay, and Little Bay de Noc have been tested for chemicals.

Lake Michigan guidelines should also be used for rivers that flow into the lake, up to the first dam.

Bluegill, yellow perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brown Trout	PCBs	Any	Limited▲
Burbot	PCBs	Any	1[2x]
Carp	PCBs	Any	Do Not Eat▲
Chinook Salmon	PCBs	Any	6 Per Year[2x]
Coho Salmon	PCBs	Any	1[2x]
Lake Trout	Dioxins	Under 24"	6 Per Year[2x]
		Over 24"	Limited▲
Lake Whitefish	PCBs & Dioxins	Any	Limited▲
Rainbow Trout	PCBs	Under 20"	2[2x]
		Over 20"	6 Per Year[2x]

(continued on the next page)

* See page 6 ▲ See page 7 [2x] See page 8 Best Choice! =

Lake Michigan (continued)

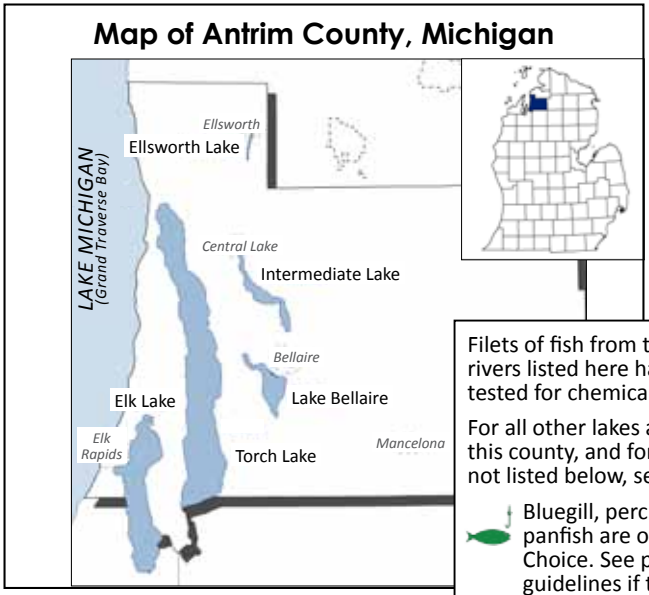
Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Smelt	PCBs	Any	2[2x]
Sucker	PCBs	Any	6 Per Year[2x]
Walleye	PCBs & Mercury	Under 18”	2
	PCBs	Over 18”	Limited▲
Yellow Perch	PCBs	Under 10”	4[2x]
	PCBs & Mercury	Over 10”	4

Green Bay & Little Bay de Noc

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Carp	PCBs	Any	Do Not Eat▲
Largemouth Bass	PCBs & Mercury	Under 16”	2
		Over 16”	1
Northern Pike	Mercury	Any	1
Rock Bass	Mercury	Any	8
Smallmouth Bass	PCBs & Mercury	Under 16”	2
		Over 16”	1
Sucker	PCBs	Any	6 Per Year[2x]

Use the Lake Michigan guidelines on page 16 for any fish species not listed above.

Antrim County



Filets of fish from the lakes and rivers listed here have been tested for chemicals.

For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Elk Lake

Type of Fish	Chemical of Concern	Size of Fish (length in inches)	MI Servings per Month*
Lake Trout	Mercury	Under 30"	2
	PCBs	Over 30"	1[2x]
Northern Pike	Mercury	Under 28"	2
		Over 28"	1
Walleye	Mercury	Under 24"	1
		Over 24"	6 Per Year

Ellsworth Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1
Northern Pike	Mercury	Under 30"	1
		Over 30"	6 per year

(continued on the next page)

Ellsworth Lake

(continued from page 18)

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1
Sucker	Mercury	Any	8

Intermediate Lake

Type of Fish	Chemical of Concern	Size of Fish (length in inches)	MI Servings per Month*
Rock Bass	Mercury	Under 9”	4
		Over 9”	2
Walleye	Mercury	Under 20”	2
		Over 20”	1

Lake Bellaire

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Splake	Mercury	Any	2
Walleye	Mercury	Under 22”	2
		Over 22”	1

Torch Lake

Type of Fish	Chemical of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brown Trout	PCBs & Toxaphene	Under 20”	2[2x]
	PCBs	Over 20”	1[2x]
Lake Trout	Dioxins	Under 28”	Limited▲
		Over 28”	Do Not Eat▲
Lake Whitefish	PCBs & Dioxins	Any	1[2x]

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Antrim County (continued)

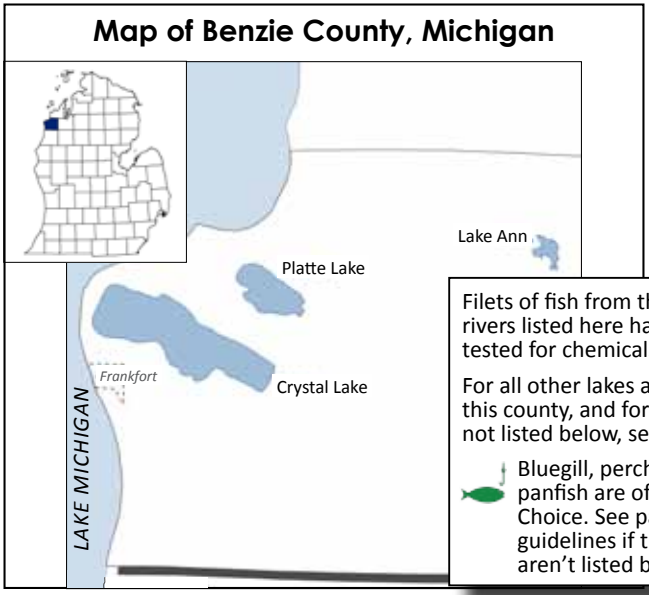
Torch Lake

(continued from page 19)

Type of Fish	Chemical of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18”	1
		Over 18”	6 per year
Smallmouth Bass	Mercury	Under 18”	1
		Over 18”	6 per year
Yellow Perch	Mercury	Under 9”	4
		Over 9”	2

See which fish are safe to eat from Lake Michigan on Page 16.

Benzie County



Filets of fish from the lakes and rivers listed here have been tested for chemicals.

For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Crystal Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Lake Trout	PCBs	Under 18"	2[2x]
		Over 18"	1[2x]
Sucker	PCBs	Any	2[2x]
Yellow Perch	Mercury	Any	4

Lake Ann

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1
Northern Pike	Mercury	Any	1
Smallmouth Bass	Mercury	Under 18"	2
		Over 18"	1

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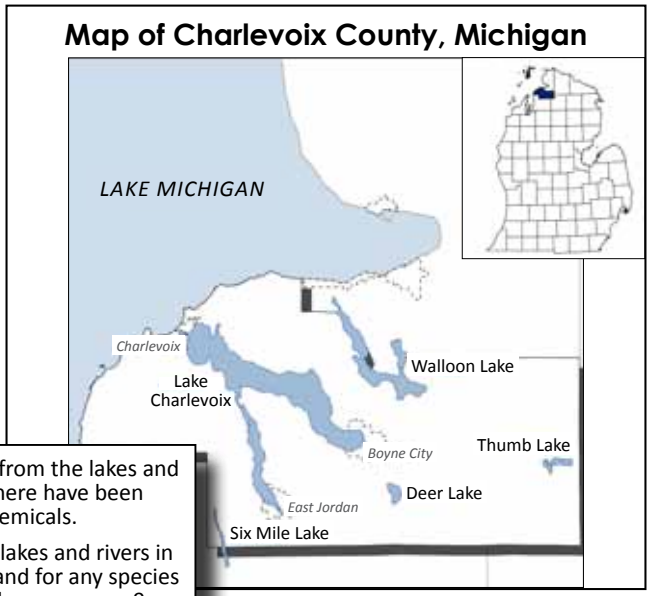
Benzie County (continued)

Platte Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18”	2
		Over 18”	1
Rock Bass	Mercury	Under 9”	8
		Over 9”	2
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1
Walleye	Mercury	Any	2

See which fish are safe to eat from Lake Michigan on Page 16.

Charlevoix County



Filets of fish from the lakes and rivers listed here have been tested for chemicals.

For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Deer Lake

Type of Fish	Chemical of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	1
		Over 18"	6 per year
Northern Pike	Mercury	Under 30"	1
		Over 30"	6 per year
Smallmouth Bass	Mercury	Under 18"	1
		Over 18"	6 per year

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Charlevoix County (continued)

Lake Charlevoix

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brown Trout	PCBs	Any	Limited▲
Lake Trout	PCBs	Any	Limited▲
Sucker	PCBs & Mercury	Any	4
Walleye	Mercury	Under 20”	4
		Over 20”	2

Six Mile Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 30”	1
		Over 30”	6 per year

Thumb Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18”	2
		Over 18”	1
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1

Walloon Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Bullhead	Mercury	Any	8
Largemouth Bass	Mercury	Under 18”	2
		Over 18”	1
Northern Pike	Mercury	Under 30”	2
		Over 30”	1

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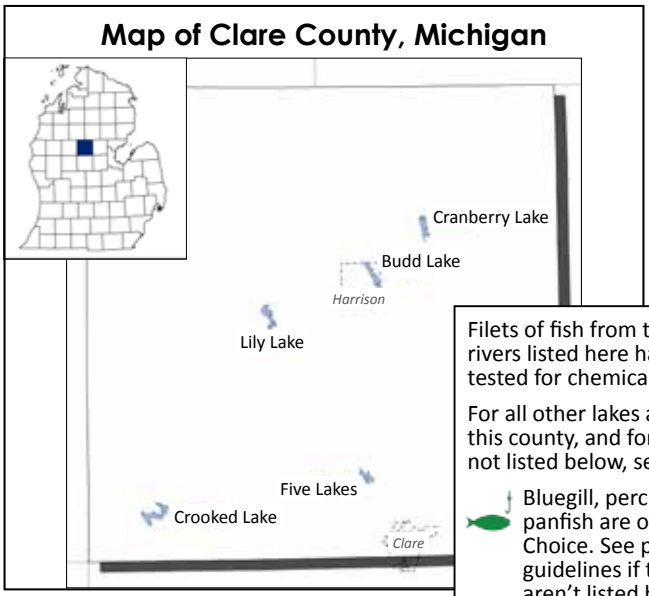
Walloon Lake

(continued from page 24)

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Rainbow Trout	Mercury & PCBs	Any	4
Rock Bass	Mercury	Any	4
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1
Sucker	Mercury	Any	4
Walleye	Mercury	Under 22”	2
		Over 22”	1
Yellow Perch	Mercury	Any	4

See which fish are safe to eat from Lake Michigan on Page 16.

Clare County



Filets of fish from the lakes and rivers listed here have been tested for chemicals.

For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Budd Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	4
		Over 18"	2
Smallmouth Bass	Mercury	Under 18"	4
		Over 18"	2

Cranberry Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	1
		Over 18"	6 per year
Smallmouth Bass	Mercury	Under 18"	1
		Over 18"	6 per year

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Crooked Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18”	2
		Over 18”	1
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1

Five Lakes

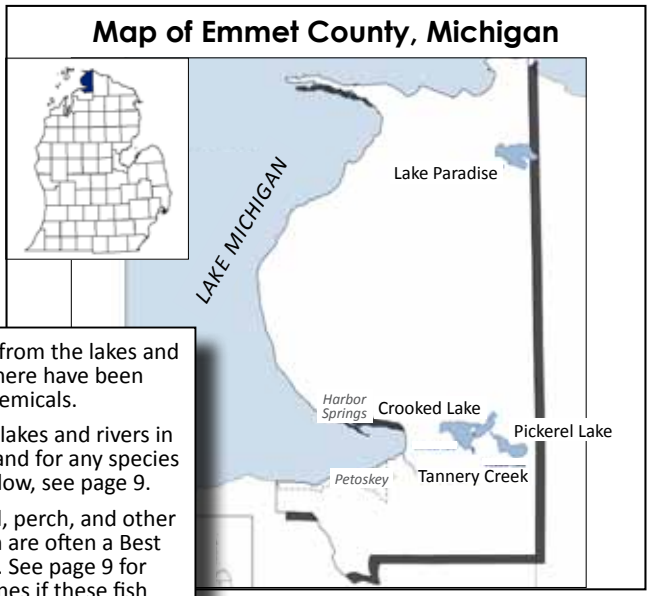
Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18”	2
		Over 18”	1
Northern Pike	Mercury	Under 30”	2
		Over 30”	1
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1

Lily Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 30”	1
		Over 30”	6 per year

* See page 6 ▲ See page 7 2x See page 8 Best Choice! =

Emmet County



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For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Crooked Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	1
		Over 18"	6 per year
Smallmouth Bass	Mercury	Under 18"	1
		Over 18"	6 per year
Walleye	Mercury	Under 20"	1
		Over 20"	6 per year

Lake Paradise

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1

(continued on the next page)

* See page 6 ▲ See page 7 2x See page 8 Best Choice! =

Lake Paradise

(continued from page 28)

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1
Sucker	Mercury	Any	12

Pickerel Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18”	2
		Over 18”	1
Smallmouth Bass	Mercury	Under 18”	2
		Over 18”	1
Walleye	Mercury	Under 20”	1
		Over 20”	6 per year

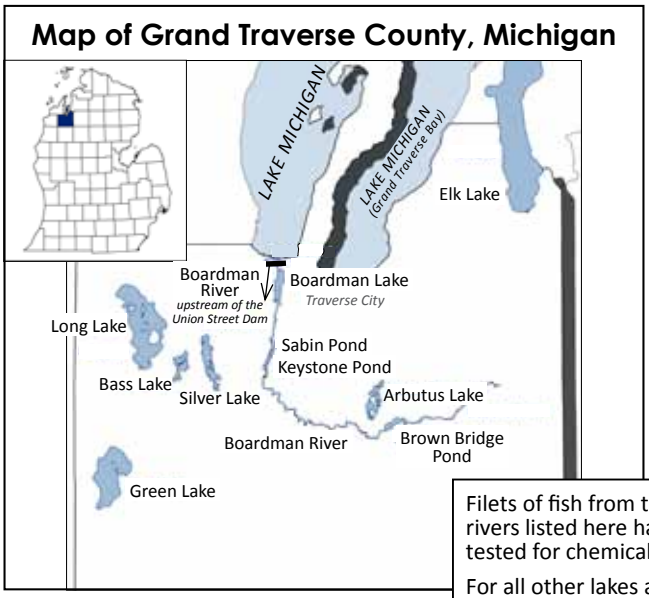
Tannery Creek

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brook Trout	Mercury	Any	4

When fishing the creek near Lake Michigan (page 16), please check the lake guidelines, too.

See which fish are safe to eat from Lake Michigan on Page 16.

Grand Traverse County



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Arbutus Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 28"	1
		Over 28"	6 Per Year

Bass Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Bluegill	Mercury	Under 9"	8
		Over 9"	4

(continued on the next page)

Bass Lake

(continued from page 30)

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 30”	1
		Over 30”	6 per year
Sunfish	Mercury	Under 9”	8
		Over 9”	4

Boardman River

(upstream of the Union Street Dam - includes Brown Bridge Pond, Boardman Lake, Sabin Pond, and Keystone Pond)

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 30”	2
		Over 30”	1
Walleye	Mercury	Under 20”	2
		Over 20”	1
Sucker	Mercury	Any	2

When fishing the river near Lake Michigan (page 16), please check the lake guidelines, too.

Elk Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Lake Trout	Mercury	Under 30”	2
	PCBs	Over 30”	1[2x]
Northern Pike	Mercury	Under 28”	2
		Over 28”	1
Walleye	Mercury	Under 24”	1
		Over 24”	6 Per Year

(continued on the next page)

Grand Traverse County (continued)

Green Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Lake Trout	PCBs, Dioxins, & Mercury	Any	1
Northern Pike	Mercury	Under 30”	1
		Over 30”	6 per year
Sucker	Mercury	Any	4

Long Lake

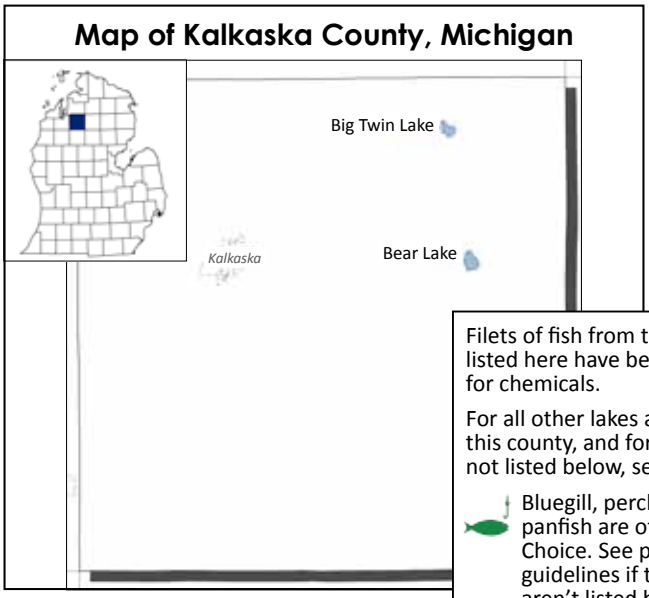
Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Walleye	Mercury	Under 20”	2
		Over 20”	1

Silver Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Walleye	Mercury	Under 18”	2
		Over 18”	1

See which fish are safe to eat from Lake Michigan on Page 16.

Kalkaska County



Filets of fish from the lakes listed here have been tested for chemicals.

For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Bear Lake

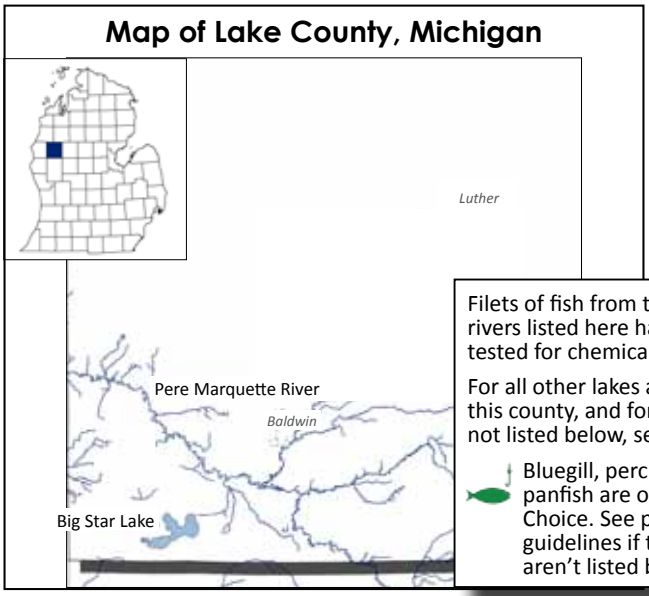
Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1
Smallmouth Bass	Mercury	Under 18"	2
		Over 18"	1

Big Twin Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Lake Herring	Mercury	Any	2

* See page 6 ▲ See page 7 2x See page 8 Best Choice! =

Lake County



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Big Star Lake

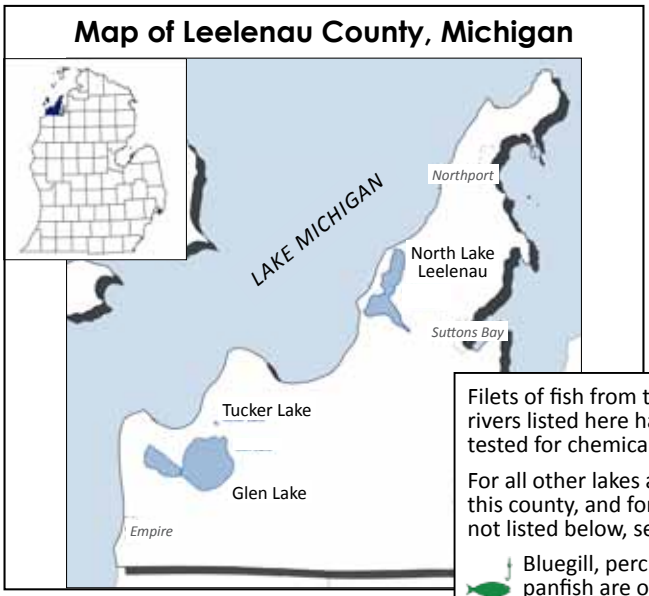
Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1
Smallmouth Bass	Mercury	Under 18"	2
		Over 18"	1

Pere Marquette River

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brown Trout	PCBs	Any	6 Per Year[2x]
Northern Pike	PCBs & Mercury	Under 30"	2
	PCBs	Over 30"	6 Per Year[2x]
Sucker	PCBs & Mercury	Under 18"	4
	PCBs	Over 18"	6 Per Year[2x]

* See page 6 ▲ See page 7 [2x] See page 8 Best Choice! =

Leelenau County



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For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Glen Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Lake Trout	PCBs, Dioxins, & Toxaphene	Under 32"	6 per year[2x]
	PCBs, Dioxins, Toxaphene, & Mercury	Over 32"	6 per year
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1
Rainbow Trout	PCBs & Mercury	Under 22"	4
	Mercury	Over 22"	2
Smallmouth Bass	Mercury	Under 18"	2
		Over 18"	1

(continued on the next page)

Leelanau County (continued)

North Lake Leelanau

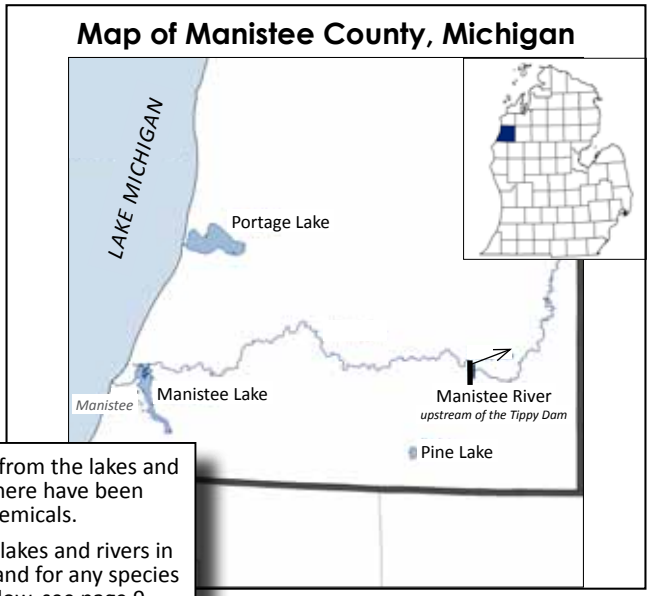
Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Lake Trout	PCBs & Dioxins	Under 26”	1[2x]
		26 to 32”	6 per year[2x]
		Over 32”	Limited
Sucker	PCBs	Any	2[2x]

Tucker Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Bullhead	Mercury	Any	16

See which fish are safe to eat from Lake Michigan on Page 16.

Manistee County



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For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Manistee Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Black Crappie	PCBs	Any	2[2x]
Bluegill	PCBs	Any	2[2x]
Largemouth Bass	PCBs	Any	6 per year[2x]
Rock Bass	Mercury	Any	2
Smallmouth Bass	PCBs	Any	6 per year[2x]
Sunfish	PCBs	Any	2[2x]
White Crappie	PCBs	Any	2[2x]

Use the Lake Michigan guidelines on page 16 for any fish species not listed above.

(continued on the next page)

Manistee County (continued)

Manistee River
(upstream of Tippy Dam)

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 30”	1
		Over 30”	6 Per Year

Pine Lake

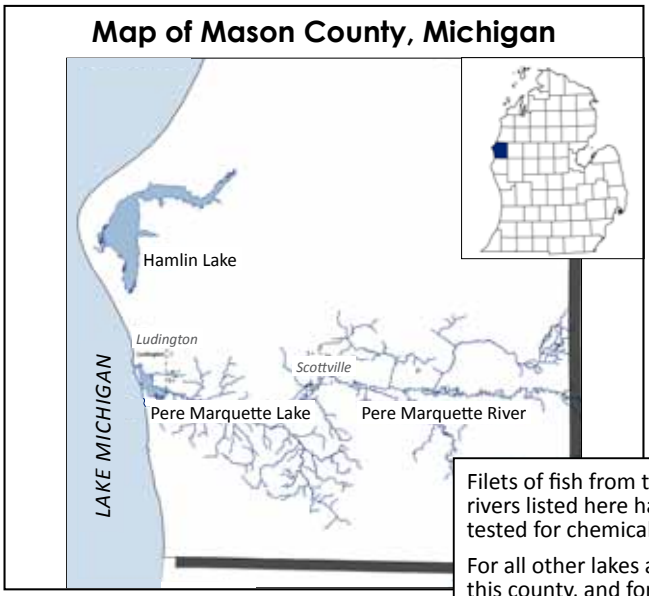
Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Rock Bass	Mercury	Under 9”	2
		Over 9”	1

Portage Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Carp	PCBs & Mercury	Under 24”	4
	PCBs	Over 24”	1[2x]
Largemouth Bass	PCBs & Mercury	Under 18”	2
		Over 18”	1
Northern Pike	PCBs & Mercury	Under 30”	4
	Mercury	Over 30”	2
Smallmouth Bass	PCBs & Mercury	Under 18”	2
		Over 18”	1

See which fish are safe to eat from Lake Michigan on Page 16.

Mason County



Filets of fish from the lakes and rivers listed here have been tested for chemicals.

For all other lakes and rivers in this county, and for any species not listed below, see page 9.

Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Pere Marquette Lake and River

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brown Trout	PCBs	Any	6 Per Year[2x]
Northern Pike	PCBs & Mercury	Under 30"	2
	PCBs	Over 30"	6 Per Year[2x]
Sucker	PCBs & Mercury	Under 18"	4
	PCBs	Over 18"	6 Per Year[2x]

When fishing the river or lake near Lake Michigan (page 16), please check the lake guidelines, too.

(continued on the next page)

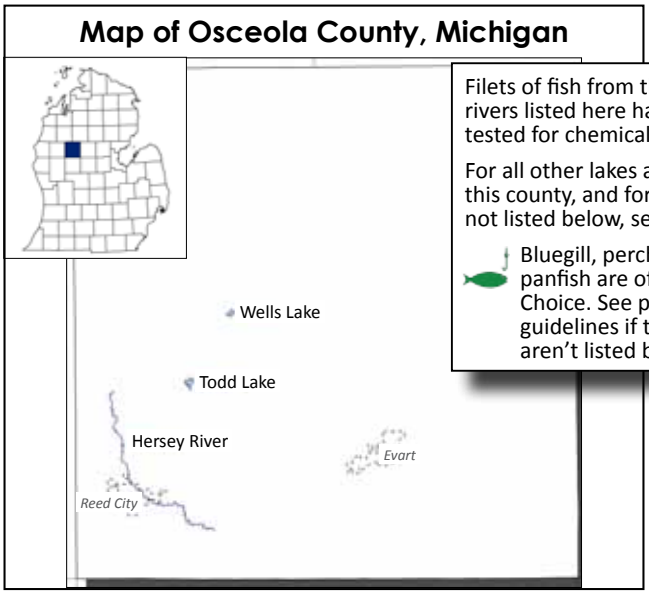
Mason County (continued)

Hamlin Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Black Crappie	Mercury	Any	8
Largemouth Bass	Mercury	Under 18”	1
		Over 18”	6 per year
Northern Pike	Mercury	Under 30”	1
		Over 30”	6 per year
Smallmouth Bass	Mercury	Under 18”	1
		Over 18”	6 per year
Walleye	Mercury	Under 18”	2
		Over 18”	1
White Crappie	Mercury	Any	8

See which fish are safe to eat from Lake Michigan on Page 16.

Osceola County



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Hersey River

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brown Trout	PCBs & Mercury	Any	4
Sucker	Mercury	Any	4

Todd Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	1
		Over 18"	6 per year
Northern Pike	Mercury	Any	6 per year
Smallmouth Bass	Mercury	Under 18"	1
		Over 18"	6 per year

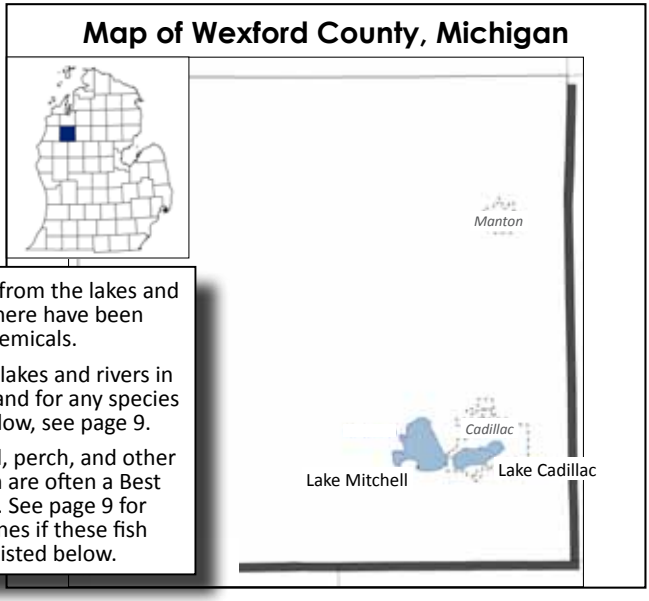
(continued on the next page)

Osceola County (continued)

Wells Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 20”	4
		Over 20”	2

Wexford County



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Bluegill, perch, and other panfish are often a Best Choice. See page 9 for guidelines if these fish aren't listed below.

Lake Cadillac

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1
Northern Pike	Mercury	Under 30"	4
		Over 30"	2
Smallmouth Bass	Mercury	Under 18"	2
		Over 18"	1

Lake Mitchell

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	Mercury	Under 18"	2
		Over 18"	1
Smallmouth Bass	Mercury	Under 18"	2
		Over 18"	1
Walleye	Mercury	Any	1

* See page 6 ▲ See page 7 2x See page 8 Best Choice! =

Northwest Michigan Lakes & Rivers

Don't see a certain lake or river listed?
For the guidelines to all other lakes and rivers in Northwest Michigan, please see page 9. To get an *ESF Guide* for another region, visit www.michigan.gov/eatsafefish or call 1-800-648-6942.

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What Are the Chemicals of Concern?

Chemicals that cause Michigan's Eat Safe Fish guidelines are DDT, dioxins, mercury, PCBs, PFOS, selenium, and toxaphene. A lot of these chemicals were put into our environment before we knew the long-term problems these chemicals caused.

Even though many of these chemicals are no longer used, they still remain in our environment. These chemicals can travel through the air and be carried by rain run-off and storm drains into our lakes, rivers, and wetlands. Once these chemicals are in the water, they sink to the bottom and become a part of the fish food chain.

The U.S. Clean Water Act and U.S. Clean Air Act have cut back on a lot of this pollution. In fact, the amount of DDT, dioxins, PCBs, and toxaphene in our fish are slowly going down. However, mercury continues to be a worldwide problem and newer chemicals, like PFOS, may continue to be found in the environment for a long time.

Chemical of Concern	What is it?	Potential Health Problems
DDT (dichlorodiphenyl-trichloroethane)	• was one of the first modern insecticides • was banned in 1972	• linked to the development of cancer • linked to the development of diabetes
Dioxins	• are not made on purpose • are created when chlorine chemicals are made or used • can be released when things that have chlorine in them - like paper or plastic - are burned • also can be released from old or poorly contained waste sites or intentional dumping	• linked to the development of cancer • fertility can be harmed • thyroid function can be harmed

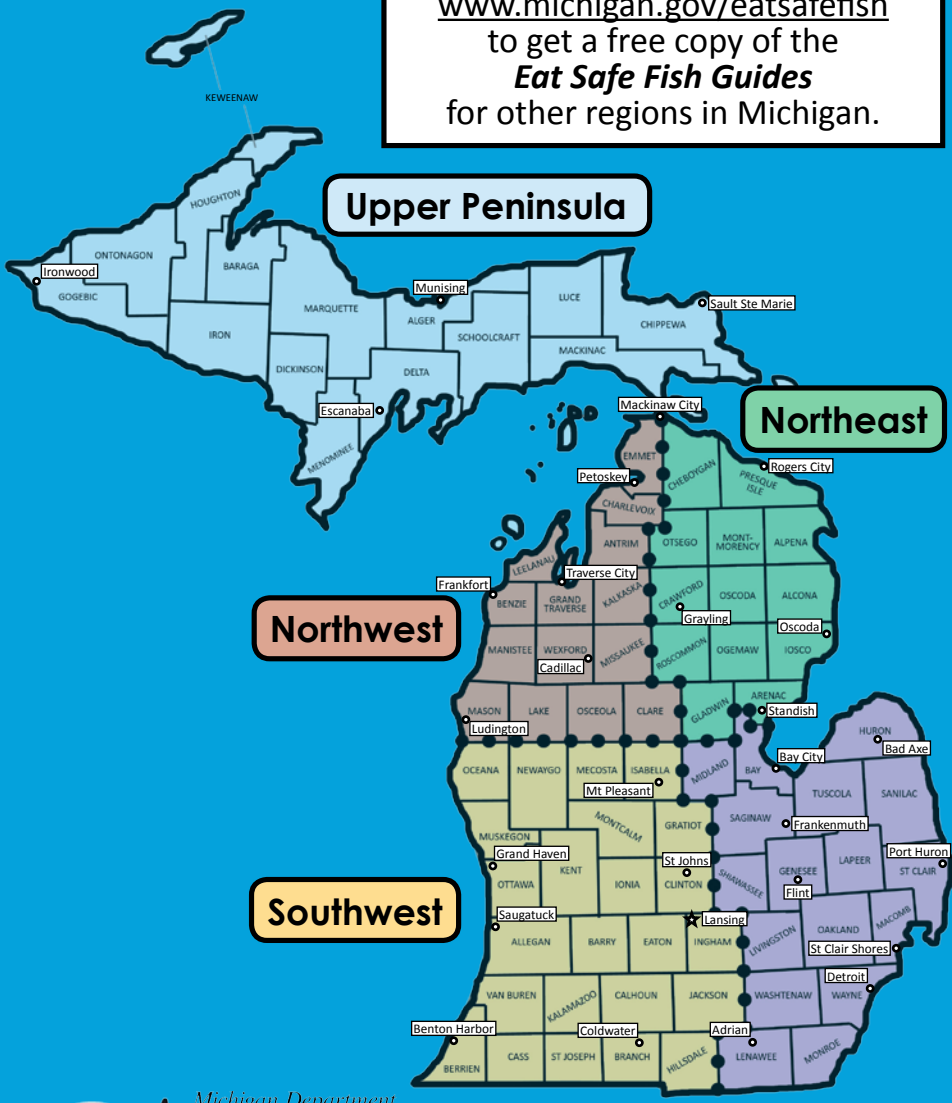
(continued on the next page)

Chemicals of Concern (continued from page 46)

Chemical of Concern	What is it?	Potential Health Problems
Mercury	• is a natural element • can be released from smokestacks of coal-fired power plants and other industry	• brain development can be harmed in fetuses and children • heart function can be harmed in older adults • immune system can be harmed
PCBs (polychlorinated biphenyls)	• were used in electrical equipment - like transformers • were found in hydraulic oils	• brain development can be harmed in fetuses and children • linked to the development of cancer • linked to the development of diabetes • immune system can be harmed
PFOS (perfluorooctane sulfonate)	• is used for waterproofing clothes, in fire-fighting foams, papers and packaging, cleaning products, and pesticides • is not used as often anymore in the United States	• thyroid function can be harmed • brain development can be harmed in fetuses and children
Selenium	• is a natural element • is needed for your body to function, but too much is harmful • through mining activites, selenium-rich rock and water got into lakes and rivers	• hair loss • loss of fingernails • fatigue • irritability • mild nerve damage
Toxaphene	• was an insecticide for cotton and vegetables and on livestock and poultry • was sometimes added to lakes to kill unwanted fish • was banned in 1990	• immune system can be harmed

Other Regional Eat Safe Fish Guides

Call 1-800-648-6942 or visit
www.michigan.gov/eatsafefish
to get a free copy of the
Eat Safe Fish Guides
for other regions in Michigan.



eat safe fish

Michigan Department of Community Health

MDCH