

Here's your map, recipes, & local  
Eat Safe Fish guidelines, too!



The map lists several lakes and  
rivers in the Western UP that  
have had filets of fish tested  
for chemicals.

To get the *Eat Safe Fish Guides*  
for other areas, please  
call MDHHS at 1-800-648-6942  
or visit [www.michigan.gov/](http://www.michigan.gov/eatsafefish)  
[eatsafefish](http://www.michigan.gov/eatsafefish).

## Legacy of the First Fisherman

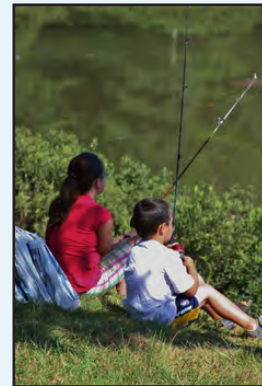
Fishing in Keweenaw Bay has a lineage centuries long. Although humans have lived in the Great Lakes region for thousands of years, recorded Great Lakes legacy extends back to the 16th and 17th centuries when European explorers, tradesmen, and missionaries came



to the region. From their descriptive writings shaped the glory of the Lakes as well as the image of the Indian living in the Great Lakes region: he was a fisherman.

## A Fishing Community

There is a social order for Fish Clans—sturgeon, bullhead, muskie, northern pike, walleye and then sucker. They all maintain the health of the water for water spirits and each has specific roles to play in that protection. Presently, each and every family is woven to fishing in some way. As their ancestors did before them, subsistence fishermen continue harvesting for their families and community members as well as provide for both ceremonial and communal feasts. Fishing is the strand of the cultural core that ties history to present day to future; it is a vital foundation for cultural beliefs and values, traditional lifeways, and even individual identity.



## Anooj Dinowag Giigoonyag (Fish) & the Environment

Fish play an important role in the entire ecosystem food webs including essential consumption for humans and other species, ecological community dynamics, socioeconomic impacts, and health. Lake Superior and nearby lands have provided bountiful sources of food for the Anishinaabe over time. Settlement on its shores has allowed tribal fishermen to harvest many fish including lake trout, whitefish, and sturgeon.

### Some Popular Native Fish of Lake Superior



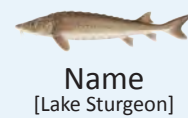
Adikaameg  
[Lake Whitefish]



Chinamekos  
[Lake Trout and Siscowet]



Adikamig  
[Lake Herring]



Name  
[Lake Sturgeon]



Namekos  
[Brook trout]



Ogaa  
[Walleye]

### Anooj Dinowag Giigoonyag Habitat:

Quality fish habitat requires healthy waters where fish can feed, spawn, breed, and grow to maturity. Although Lake Superior supports fewer fish per surface area than the other Great Lakes, the improved health of the fishery in the past 40 years has enabled a large 74 suite of native fish species to thrive. Lake Superior waters and the whole ecosystem can be affected by threats from many sources and requires vigilant monitoring and environmental protection of the Lake Superior basin. GLIFWC and its member bands work with the Lake Superior Binational Program and the International Joint Commission to protect and preserve Lake Superior as an Outstanding Resource Water (ORW), and keep a watchful eye on any threat that could adversely impact the lake's water quality and surrounding land to preserve this precious resource habitat for the future.



## What Can You Do?

There are many things you can do at home to help keep our local waters clean and our fish healthy.

### Reduce, Reuse, Recycle!

Wait! Think before you throw things away. Can you reuse it? Can it be recycled? If not, make sure it ends up in the garbage, not on the ground.



Please do not burn your trash. Burning releases chemicals into the air. Plus, the smoke is not healthy for anyone to breathe.

Protect our storm drains! Storm drains lead directly to our lakes and streams. The water does not get filtered or cleaned first. Whatever goes down the drain comes out in Mother Superior.

### Conserve!

In the Western UP, we're surrounded by water, so it's hard to imagine life without it. However, it's easy to install a rain barrel. You can use the saved rain to water your garden and flowers. Water in the evening so less water evaporates. Also, consider using native plants in your landscaping. They depend on Mother Earth for their nutrients and usually need less water to grow.

### Grow!

You can grow and gather delicious and nutritious native foods to feed your family cheaply, as well as keep our heritage alive and thriving. Participating in the People's Garden in L'Anse is a great way to get started. Call the Keweenaw Bay Indian Community Natural Resources Department at (906) 524-5757 for more information.

### You can get involved!

There are a lot of ways to get involved and keep our community and environment healthy. Call the Keweenaw Bay Indian Community Natural Resources Department at (906) 524-5757 to learn more!

Would you like to volunteer with the Torch Lake Area of Concern Public Advisory Council? Contact the Michigan Department of Environmental Quality's Office of the Great Lakes for more information at (517) 284-5035.

### Catching fish • Buying fish • Eating fish

For more information on safe fish,  
call MDHHS at 1-800-648-6942  
or visit us online at [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish).



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This section courtesy of the KBIC Natural Resources  
Department and the 2014 KBIC Wildlife Stewardship Plan.

## FREE LOCAL FISHING MAP & MDHHS Eat Safe Fish Guidelines

# eat safe fish

## Mino Wiisinidaa!



[www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish)



# Get to know the 3Cs

By choosing the right fish and then cleaning and cooking it the right way, you can reduce some of the chemicals in the fish **by nearly half!**

Choose, Clean, Cook

## 1 Choose

Some fish contain chemicals that can harm your health. MDHHS tests filets of fish taken from Michigan's lakes and rivers to learn which fish are safer to eat. The **Eat Safe Fish Guides** make it easy to find out which fish have been tested and easy to choose fish that are safe to eat.

The Eat Safe Fish Guide:

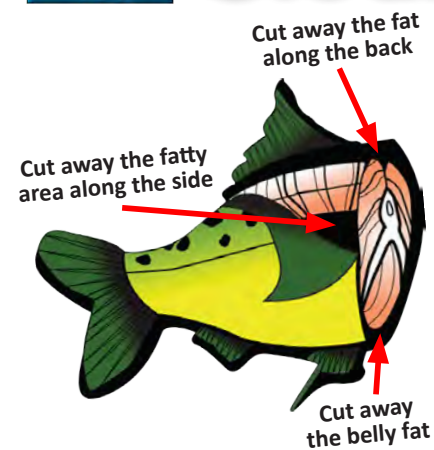
- ☑ lists fish species that have had filets tested for chemicals by MDHHS.
- ☑ protects people who eat Michigan fish often.
- ☑ protects anyone who has health problems, is young, is pregnant, or is planning on having children in the future.



Other lakes and rivers have been tested in the Western UP. You can find some of these guidelines on the flyer in the back of this brochure. To get the guidelines for others, visit [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish) or call 1-800-648-6942.

## 2 Clean

Some chemicals, like PCBs and dioxins, collect in the fat of the fish.



- ☑ When cleaning the fish, trim away any of the fat you can see.
- ☑ Remove and throw away the organs, too.

Careful cleaning and cooking can get rid of up to half of these chemicals from the fish.

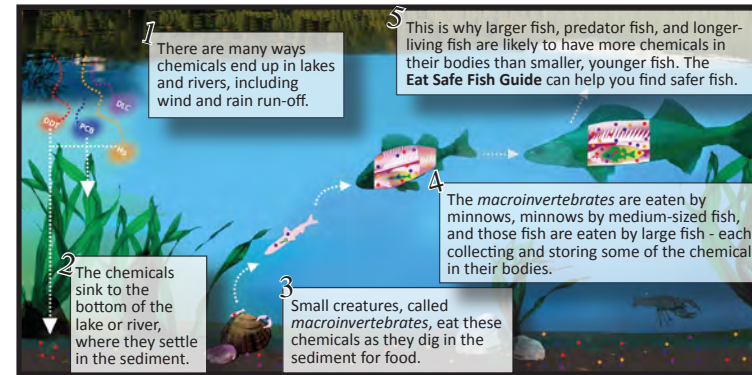
## 3 Cook



- ☑ Poke holes in the skin or remove it completely so that more fat can drip away from the fish filet as it cooks.
- ☑ Cook your fish on a grill or on a broiler pan in the oven. More of the fat and chemicals left behind can now drip away from the fish through the grates.
- ☑ If you choose to fry your fish, it's best to pan fry and throw away the oil. Please note that frying does not get rid of any of the chemicals that may be in the fish.

You can't remove mercury or PFOS from fish by cleaning and cooking. Always choose your fish wisely!

## Why are there chemicals in some fish?



- ☑ PCBs, dioxins, and mercury are the most common chemicals found in filets of Michigan fish.
- ☑ These chemicals are *persistent* and *bioaccumulative*. This means the chemicals not only stay in the environment, they also build up in living things.
- ☑ Because of this, they have become part of the food chain for fish, as you can see in the picture above.
- ☑ Some chemicals, like PCBs and dioxins, build up in the fat of the fish. Mercury and PFOS build up in the muscle, or filet, of the fish.
- ☑ If you choose fish lower in mercury and PFOS and follow the 3Cs, you can keep these chemicals from building up in your body, too.
- ☑ You can't see or taste these chemicals. They do not change how clear or dirty the water looks. The only way to know if these chemicals are in the fish is by testing for them in a laboratory.

"We turn our thoughts to the Fish life in the water. They were instructed to cleanse and purify the water. They also give themselves to us as food."

- R. Wall Kimmerer 2013



## Using the Eat Safe Fish Guidelines

MDHHS tests only the filets of the fish for chemicals to set these guidelines. *MI Servings* are set to be safe for everyone. This includes **children, pregnant or breastfeeding women, and people who have health problems like cancer or diabetes.**

### How much is *MI Serving*?

Weight of Person	<i>MI Serving Size</i>
45 pounds	2 ounces
90 pounds	4 ounces
180 pounds	8 ounces

Weigh Less?

For every 20 pounds **less** 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 **more** 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 plus 1 ounce =  
a *MI Serving* size of 5 ounces

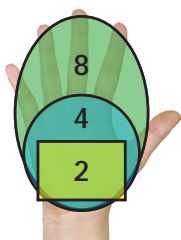
You might eat more than one *MI Serving* in a meal. That's OK, just keep track so you don't have too much.



### Are you pregnant?

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

### 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)

## What are 'safe' fish?

*Safe fish* are fish that are low in chemicals. If you use the **Eat Safe Fish Guide** when you choose fish to catch and eat, you will protect yourself and your family from chemicals that could someday make you sick.

### If there are chemicals in the fish, why should I still eat it?

Fish have a lot of great health benefits.

- ☑ Fish can be a great low-fat source of protein.
- ☑ Fish are brain food.
- ☑ Some fish have heart-healthy omega-3s.



Plus, fishing is a fun way to get outside and enjoy Michigan's 11,000 lakes, rivers, and streams!



If you **follow the 3Cs** and go after fish that have **fewer chemicals** in them, you can get a lot of health benefits and have **very little risk**.

### Catching fish • Buying fish • Eating fish

For more information on safe fish, call MDHHS at 1-800-648-6942 or visit us online at [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish).



The MDHHS guidelines in this brochure are from the MDHHS **2015 Eat Safe Fish Guide**. For updates, visit [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish) or call 1-800-648-6942 and ask for a free **Guide**.

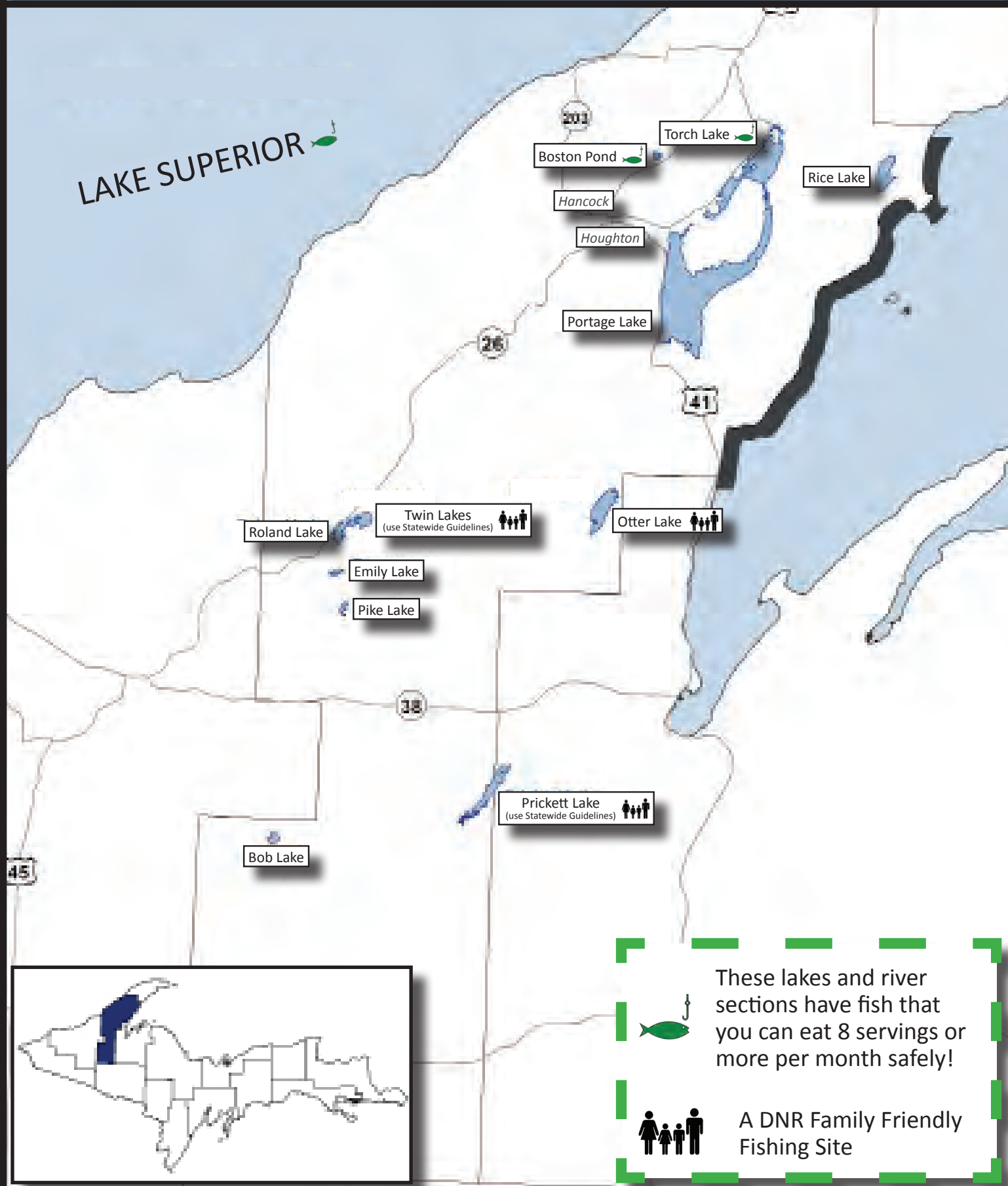
# Map & 2015 Eat Safe Fish Guidelines for Houghton County



[www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish)

# Map of Houghton County, Michigan

Check the 2015 Eat Safe Fish Guidelines on the inside of this brochure for the lakes on this map.  
For all other lakes and rivers in Houghton County, please use the Statewide Guidelines.



# Eat Safe Fish Guidelines

These guidelines are from the 2015 *Upper Peninsula Eat Safe Fish Guide*.  
To get the most up-to-date guidelines for lakes and rivers in Houghton County and other areas in Michigan, please visit [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish) to download a copy of the *Eat Safe Fish Guide* to your smartphone or call 1-800-648-6942 to get a print copy!

## Bob Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Walleye	Mercury	Any	1

## Boston Pond

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Suckers	None	Any	16 <sup>2x</sup>
Yellow Perch	Mercury	Under 12" Over 12"	12 8

## Emily Lake

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

## Lake Superior

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brown Trout	PCBs	Any	1 <sup>2x</sup>
Burbot	PCBs	Any	Limited <sup>▲</sup>
Chinook Salmon	PCBs	Any	6 Per Year <sup>2x</sup>
Coho Salmon	PCBs & Toxaphene	Any	4 <sup>2x</sup>
Lake Herring	Mercury	Any	8
Lake Trout	PCBs & Toxaphene	Under 24"	2 <sup>2x</sup>
	PCBs	24" to 28" Over 28"	1 <sup>2x</sup> 6 Per Year <sup>2x</sup>
Lake Whitefish	PCBs, Dioxins, Toxaphene	Any	2 <sup>2x</sup>
Northern Pike	Mercury	Any	2
Rainbow Trout	PCBs	Any	2 <sup>2x</sup>
Siscowet	PCBs & Toxaphene	Any	Limited <sup>▲</sup>
Steelhead	PCBs	Any	2 <sup>2x</sup>
Suckers	Toxaphene	Any	2 <sup>2x</sup>
Walleye	Mercury	Any	2
Yellow Perch	Mercury	Any	2

## Offer Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Suckers	Mercury	Any	2
Walleye	Mercury	Under 20" Over 20"	1 6 Per Year

## Pike Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 30" Over 30"	6 Per Year Do Not Eat <sup>▲</sup>

## Portage Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Brown Trout	Mercury	Under 20"	2
	PCBs & Mercury	Over 20"	2
Northern Pike	Mercury	Any	2
Walleye	Mercury	Under 24"	2
		24" to 28"	1
		Over 28"	6 Per Year

## Rice Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Northern Pike	Mercury	Under 24"	4
		Over 24"	2
Walleye	Mercury	Under 22"	2
		Over 22"	1

## Roland 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

## Torch Lake

Type of Fish	Chemicals of Concern	Size of Fish (length in inches)	MI Servings per Month*
Largemouth Bass	PCBs & Mercury	Under 18"	2
		Over 18"	1
Northern Pike	PCBs	Any	2 <sup>2x</sup>
Smallmouth Bass	PCBs & Mercury	Under 18"	2
		Over 18"	1
Suckers	PCBs & Mercury	Under 16"	12
		Over 16"	4
Walleye	PCBs & Mercury	Under 22"	1
		Over 22"	6 Per Year

**2x** See the **2x** box on the back of this page to learn how you can eat more of these fish safely.

**▲** See the **Limited** and **Do Not Eat** boxes on the back of this page for more information.



To get the guidelines for other regions in Michigan and nearby states, please visit [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish) or call MDHHS at 1-800-648-6942.



# Statewide Guidelines & More




Don't see a certain Houghton County lake or river listed in this brochure?  
Then the Statewide Safe Fish Guidelines can help you find safer fish to eat.

Only use the Statewide Guidelines if...



- the Houghton County lake or river you are fishing in is not listed in this brochure, OR
- your lake or river is listed in this brochure, 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*	Type of Fish	Chemical of Concern	Size of Fish (length in inches)	MI Servings per Month*
Black Crappie	Mercury	Any Size	4	Rock Bass	Mercury	Any Size	4
 Bluegill	Mercury	Any Size	8	Smallmouth Bass	Mercury	Under 18"	2
Carp	PCBs	Any Size	2			Over 18"	1
Catfish	PCBs & Mercury	Any Size	4	 Suckers	Mercury	Any Size	8
Largemouth Bass	Mercury	Under 18"	2	 Sunfish	Mercury	Any Size	8
		Over 18"	1			Under 20"	2
Muskellunge	Mercury	Any Size	1	Walleye	Mercury	Over 20"	1
Northern Pike	Mercury	Under 30"	2	White Crappie	Mercury	Any Size	4
		Over 30"	1	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 the statewide guidelines. The *MI Servings* recommendation will be more exact for that lake or river because those filets have been tested. For other counties in Michigan, please visit [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish) to get the *Eat Safe Fish Guide* for that region.

## 2x, Best Choice, Limited, and Do Not Eat

2x

### Remove the fat; double the *MI Servings*!

PCBs and dioxins are in the fat of the fish. You can double the number of *MI Servings* if you:

- trim away the fat that you can see from the filet,
- cook the fish on a grill or broiling pan so more fat can drip away
- Note, you can't remove mercury, selenium, or PFOS from the fish.** Do not double the *MI Servings* for fish with those chemicals listed as a Chemical of Concern.



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,



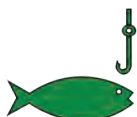
MDHHS suggests you **avoid eating all fish listed as "Limited"** because of higher levels of chemicals.

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

Best Choice

### Do you eat fish at least twice a week?

When using the MDHHS *Eat Safe Fish Guide*, watch for this MDHHS "Best Choice" symbol. The hook and fish mark species that you and your family can safely eat 8 *MI Servings* or more each month!



Do Not Eat

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

When these fish were tested, MDHHS 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.



# Walleye Soup

Original concept from Laura and Tom Maulson, Lac du Flambeau; Mino Wiisinidaa Cookbook

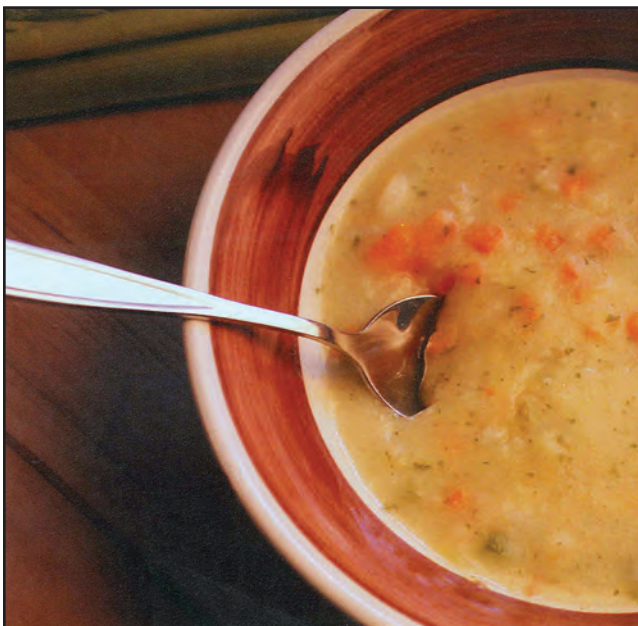
Prep Time: 30 minutes • Cook Time: 1 hour

Total Time: 1 hour 30 minutes

Serving Size: 1 cup • Yield: 7

## Ingredients

- 1 tablespoon sunflower seed oil
- 3 cloves garlic, minced
- 2 ribs celery, diced (about 1 cup)
- 3 medium carrots, diced (about 1 cup)
- 1 medium red bell pepper, diced
- 2 quarts low sodium chicken stock
- 1 tablespoon dried sweet fern, ground
- 1 teaspoon salt
- 1/2 teaspoon black pepper, ground
- 1 1/2 pound skinless, boneless walleye filet, cut into 1/2" cubes
- 1 quart cream of celery soup
- 1/4 cup wild rice slurry, if needed



## Directions

1. In a medium stock pot, heat oil over medium high heat.
2. Add garlic and saute for 2 minutes. Add the remaining vegetables and saute until vegetables begin to soften, about 10 minutes
3. Pour in stock, sweet fern, salt, and pepper. Bring to a boil, reduce to a simmer and continue to cook until vegetables are soft, about 25 minutes.
4. Add fish and continue to simmer until fish is opaque and cooked through, about 10 minutes.
5. Take off heat and vigorously whisk in "cream" soup, a little at a time until combined. If soup is not thickened to your taste add in the wild rice slurry.
6. Serve hot.

## Chef Notes

If you prefer thicker soup, make a wild rice slurry by combining 2 teaspoons of cornstarch, 4 teaspoons of wild rice flour, and 2 tablespoons of warm water. Soup can be thickened more by adding a can of evaporated milk.

Soup should be properly cooled within 2 hours of cooking. Refrigerate in small batches in covered, air tight containers for up to 4 days. This recipe can be frozen but may separate when reheated. To discourage separation, stir well when reheating. Always reheat food to 165°F before eating.

## Catching fish • Buying fish • Eating fish

For more information on safe fish, call MDHHS at 1-800-648-6942 or visit us online at [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish).



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**MICHIGAN**  
Department of Health & Human Services

Photos from the Mino Wiisinidaa Cookbook

Mino Wiisinidaa

Anooj Dinowag Giigoonyag!

# Let's Eat Good Fish!

Traditional Fish Recipes from the Anishinaabe people



Recipes adapted with sincere gratitude from the Mino Wiisinidaa! Let's Eat Good! Cookbook available at <http://www.glifwc.org/>

# Lemon Baked Fish

Original concept from biskakone Greg Johnson,  
Lac du Flambeau

Prep Time: 20 minutes • Cook Time: 15 minutes  
Total Time: 35 minutes  
Serving Size: 4 ounces / Yield: 4

## Ingredients

- 1 tablespoon sunflower seed oil, divided
- 2 lemons, cut into 1/4" slices, divided
- 2 shallots, diced, divided
- 1 tablespoon fresh chives, minced, divided
- 1 tablespoon fresh dill, divided
- 1 pound skinless, boneless lake trout filets, divided

## Directions

1. Using a 9x13 baking dish, layer half the oil, lemon, shallot, herbs, and one filet and repeat.
2. Position the oven rack so that the fish will be 4-5 inches below the broiler.
3. Broil on high heat for 10-15 minutes or until fish flakes easily.

## Chef Notes

If you're using an electric oven, preheat the broiler for 5-10 minutes before broiling the fish. If you're using a gas oven, there is no need to preheat the oven.



## Local Fish, Local Guide

If you eat fish caught in Michigan or any of the Great Lakes often, **please call MDHHS to request the *Eat Safe Fish Guide*.**

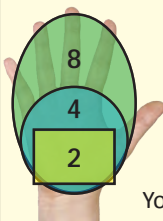
The ***Eat Safe Fish Guide*** lists Michigan fish that have been tested for mercury and other harmful chemicals, like PCBs and dioxins. Only the parts of the fish that are commonly eaten are tested for chemicals and included in this booklet.



Call 1-800-648-6942 to request a free copy of the ***Eat Safe Fish Guide*** for the Upper Peninsula, or visit [www.michigan.gov/eatsafefish](http://www.michigan.gov/eatsafefish) to download the ***Eat Safe Fish Guide*** to your smartphone.

## What is 'MI Serving'?

MI Serving depends on who you are:



- ✓ For an adult, **MI Serving is: 8 ounces of cooked fish** = size of an adult's hand (large oval)
- ✓ For a child, **MI Serving is: 2-4 ounces of cooked fish** = size of the palm on an adult's hand (small circle/rectangle)

You might eat more than one MI Serving in a meal. That's OK, just keep track so you know!

## Other Resources

Sustainable & Planet-Friendly Fish  
Monterey Bay Aquarium Seafood Watch  
<http://bit.ly/McxPS> or 1-877-229-9990

## Cooking & Food Safety

Fresh & Frozen Seafood -  
Selecting & Serving It Safely (FDA)  
<http://1.usa.gov/qYLtL> or 1-888-723-3366

# Eat 8!

A Guide to Help You Choose  
Fish Low in Mercury from  
Restaurants and Grocery Stores



High in heart-healthy omega-3 fatty acids  
Is the fish you're buying caught in Michigan waters? If so, please check the ***Eat Safe Fish Guide*** for advice.

Per MI Serving  
**1**  
Point

Anchovies	Pollock
Catfish (farm-raised)	Salmon (canned, frozen, fresh)
Crab	Sardines
Crawfish	Scallops
Flatfish (flounder, sole)	Shrimp
Herring	Squid
Mullet	Tilapia
Oysters	Trout (freshwater)
Perch (ocean or freshwater)	Whitefish

Per MI Serving  
**2**  
Points

Cod	Mahi Mahi
Freshwater Drum (aka Sheephead)	Snapper
Jack Smelt	Tuna (canned light)

Per MI Serving  
**4**  
Points

Bass (sea, striped, rockfish)	Scorpion Fish
Bluefish	Tuna (Albacore, canned white)
Halibut	Tuna (fresh, frozen)
Lobster	Weakfish (sea trout)
Sablefish	

Per MI Serving  
**8**  
Points

Grouper	Marlin
Mackerel	Orange Roughy



**Do not eat these fish:**  
Shark, Swordfish, Tilefish, King Mackerel

Questions? Call MDHHS at 1-800-648-6942.



Great choices to go...You can cut the list out & take it with you!