

A photograph showing a man in a yellow t-shirt and sunglasses, and a young child with long blonde hair, sitting on a boat and fishing. The man is on the left, looking out at the water. The child is on the right, also looking out. A fishing rod is visible between them. The background is a body of water with small waves.

Eat Safe Fish and Wild Game – Wolverine CAG

Presenter:
Laura Gossiaux

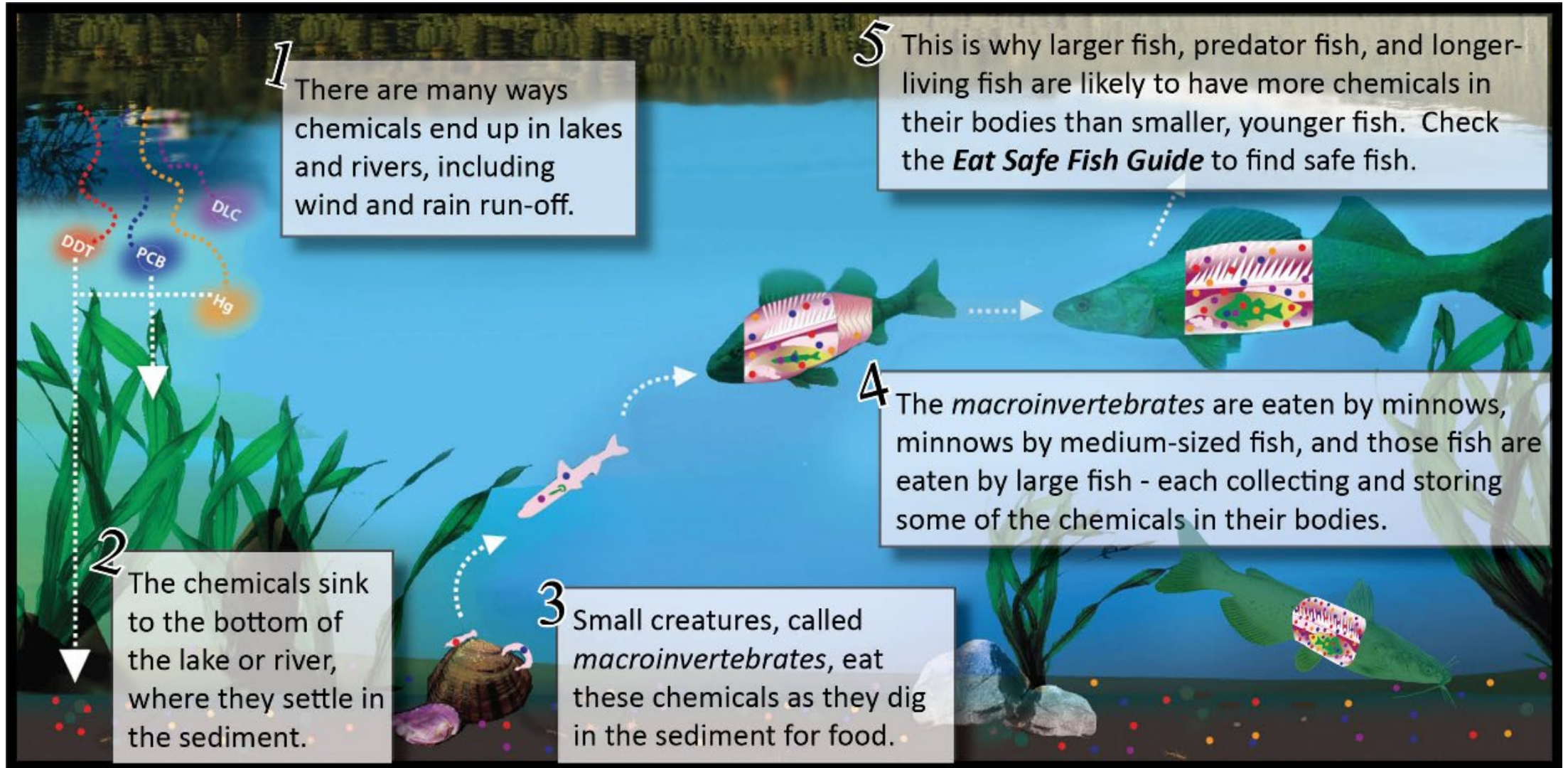
Outline

- Description of Eat Safe Fish and Wild Game program
 - History
 - What we do
 - What we test
- Current guidelines for this area
 - Waterbody specific
 - Statewide
- Where to find more information

History

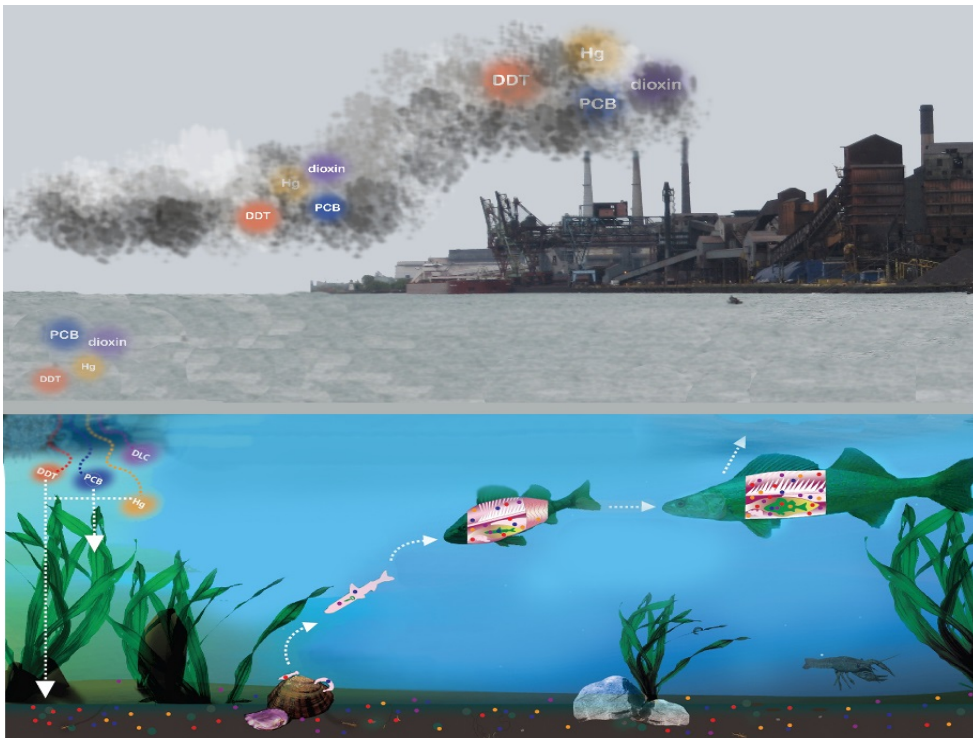
- First advisories issued in the 1970s
- Chemicals we typically test for in fish:
 - **Mercury** (coal-fired industries)
 - **PCBs** (used in transformers and capacitors, banned in the late '70s)
 - **Dioxin** (chlorine manufacturers, industrial incineration practices)
 - **Toxaphene** (insecticide)
 - **DDT** (pesticide, discontinued in early '70s)
 - **Selenium** (mining industry)
 - **PFOS** (fire-fighting foams, waterproofing)

The Chemicals: Bioaccumulative

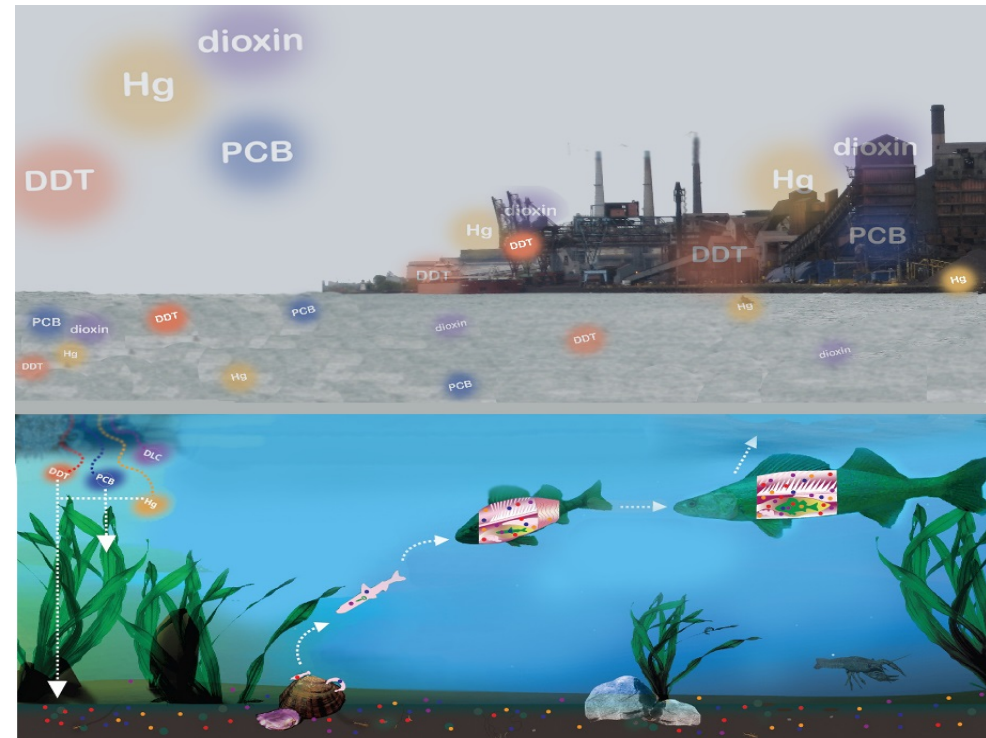


The Chemicals: Persistent

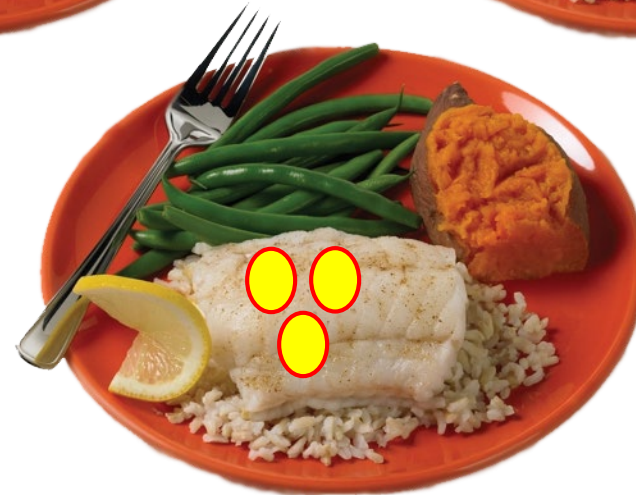
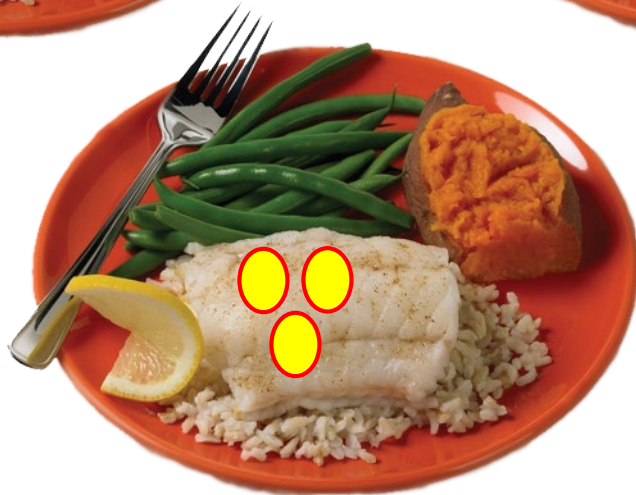
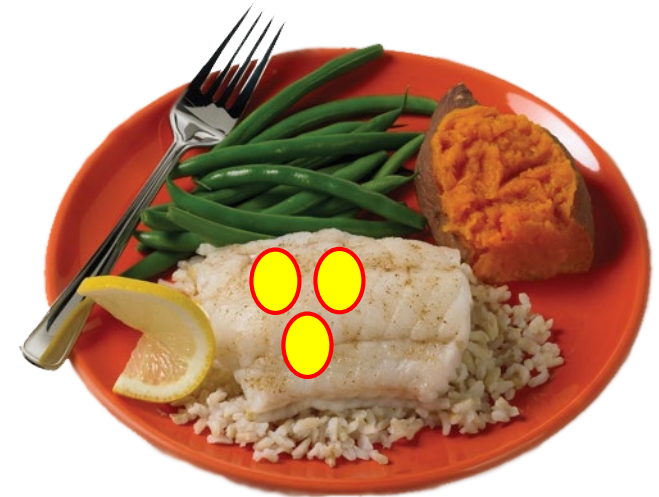
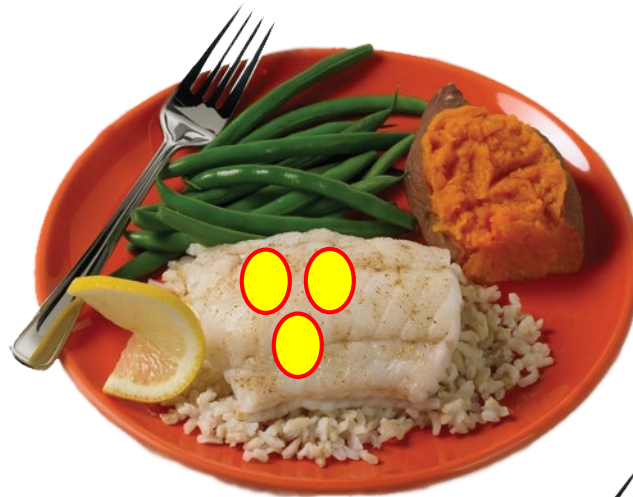
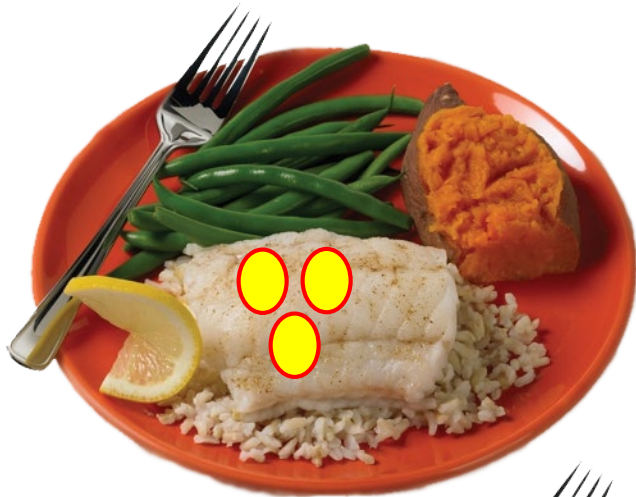
In the 1970's, factories released a lot of persistent chemicals through their smoke stacks.



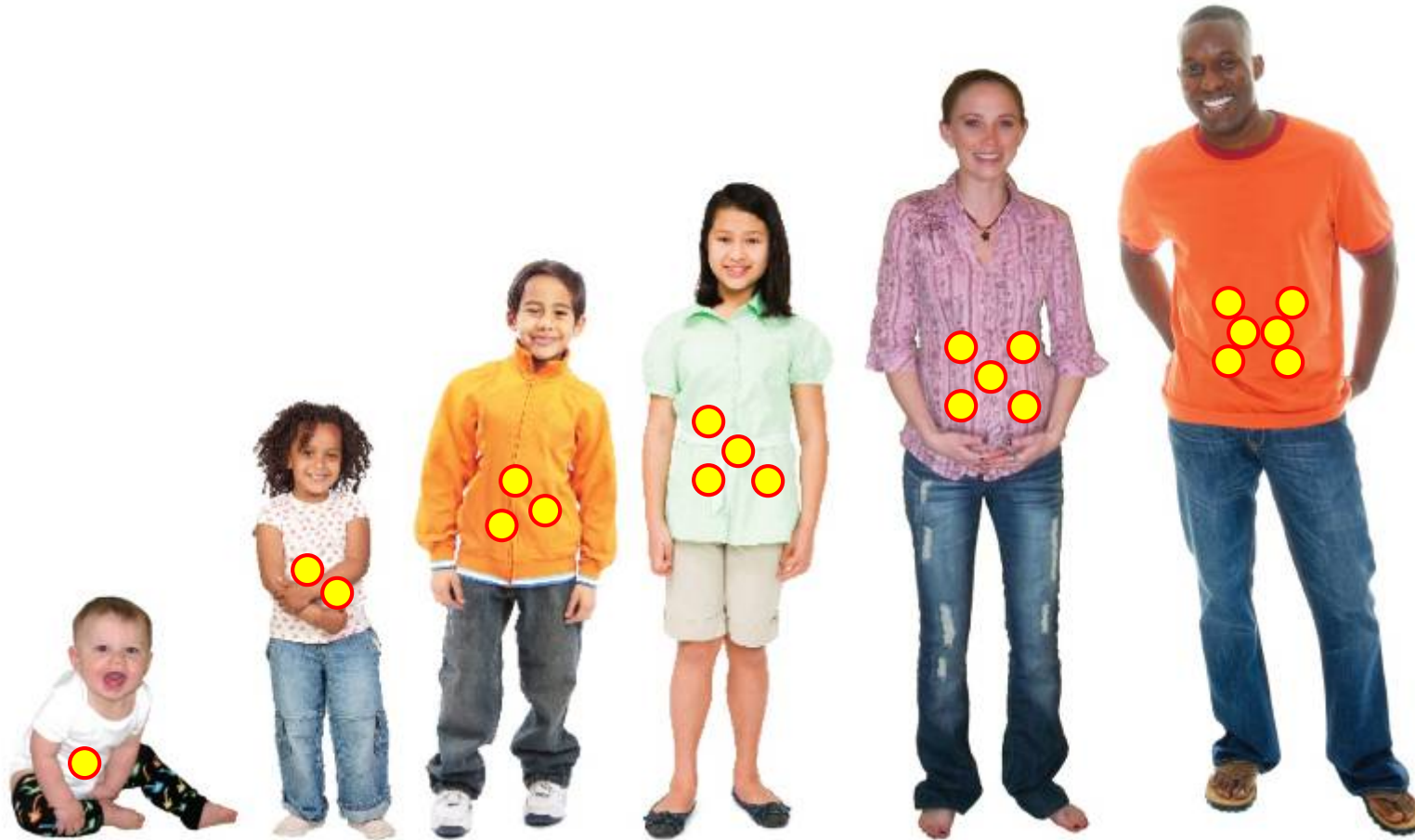
Today, factories have pollution control devices on their smoke stacks. But the chemicals released in the past are still there.



Bioaccumulative & Persistent



Bioaccumulative & Persistent in Humans



Eat Safe Fish Program

- Scientific data combined with health education
- Health advisories
- Health benefits
- Tips for choosing fish to buy and catch



Click on any of the boxes below to learn more about choosing and eating safe fish!

 Going Fishing?	 Health Benefits	 Buying Fish?
 Find Your Area	 Eat Safe Wild Game	 Kids' Corner
 Order, Save, Print	 Provider Page	 Reports & Science
<p>Click to email us! Contact Us Or Call: 1-800-648-6942</p>		

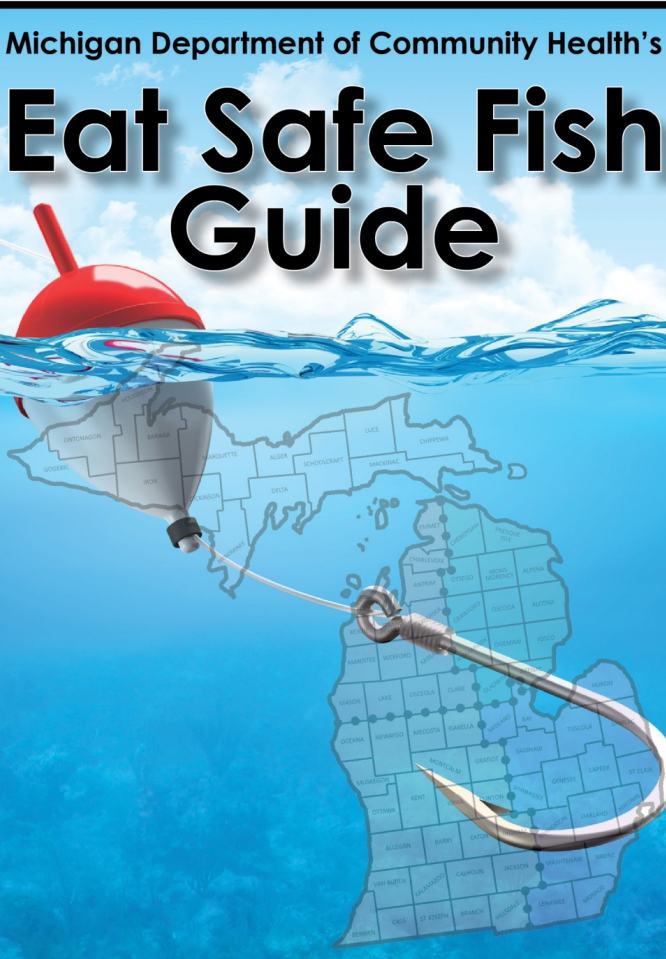
Factors considered in deciding what fish to test:

- Known environmental contaminants
 - Mercury, PCBs, dioxins
- Awareness of ongoing investigations
- High fishing use



The *Eat Safe Fish Guide*

Michigan Department of Community Health's

Eat Safe Fish Guide

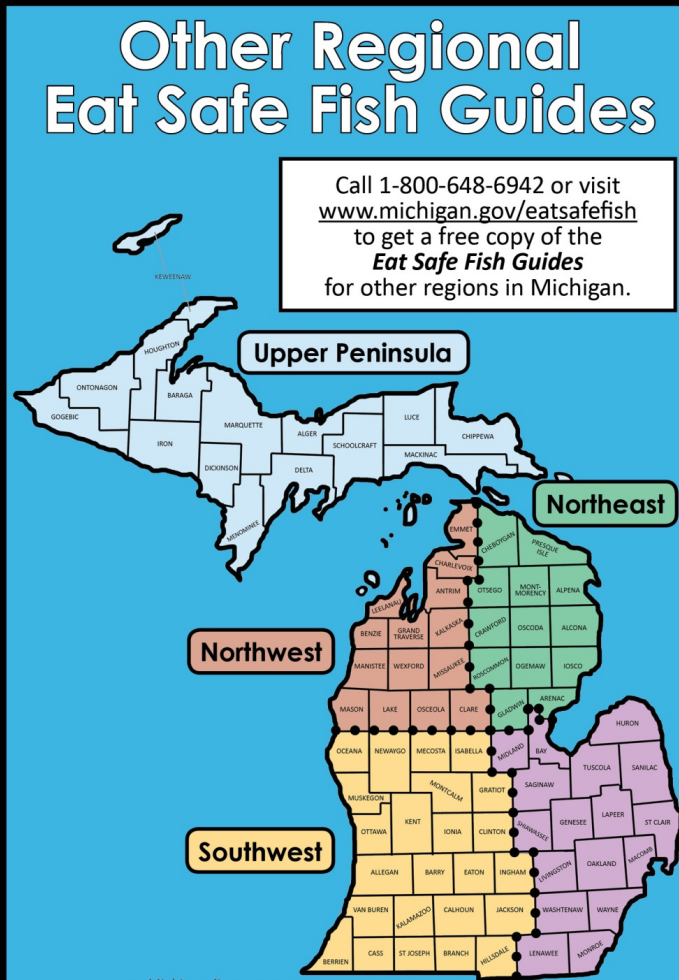


Some fish contain chemicals that can harm your health. To help you choose fish that are safer to eat from Michigan's lakes and rivers, MDCH tests fish filets from around the state. The *Eat Safe Fish Guide* lists the results of these tests.

 Michigan Department of Community Health 

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.





Upper Peninsula

Northwest

Southwest

Southeast

Northeast

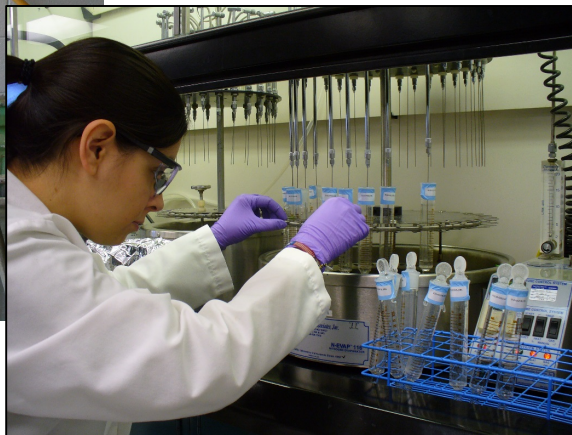
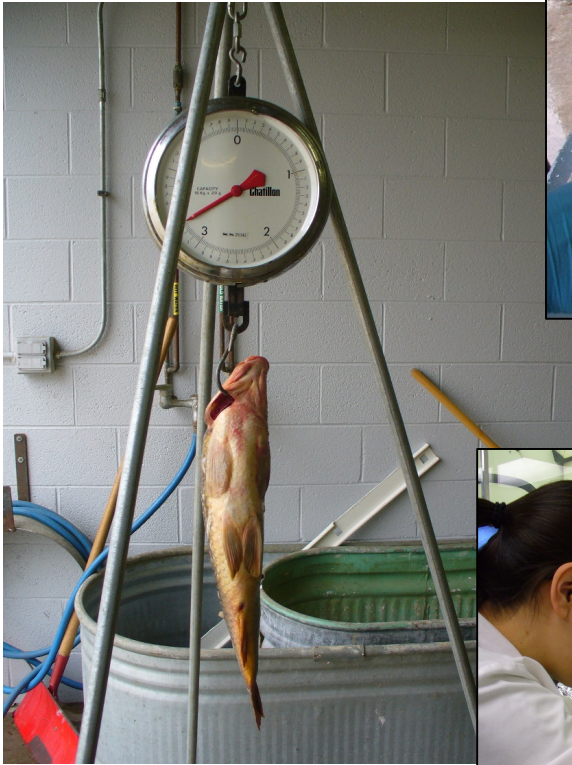
 Michigan Department of Community Health 

How We Make the *Eat Safe Fish Guide*: Collection



- Collection of fish through partnerships
- Department of Environment, Great Lakes, and Energy (EGLE)
- Department of Natural Resources (DNR)
- This generally happens in the spring, summer, and fall.

How We Make the Eat Safe Fish Guide: Preparation and Testing



- During the summer and fall, the fish are measured, weighed, and fileted by EGLE.
- If the skin is typically removed before eating, EGLE will remove the skin. If it isn't, they'll leave it on.
- The prepared filets are then sent to the MDHHS Laboratory for testing.
- Each individual fish filet is tested for chemicals.

How We Make the *Eat Safe Fish Guide*: Guidelines

- EGLE aquatic biologists and MDHHS toxicologists review fish test results and update the Eat Safe Fish Guide with the new information.
- Since MDHHS can't test every kind of fish from every lake and river in the state every year, the guidelines for a waterbody won't necessarily change in every Eat Safe Fish Guide.
- These kinds of chemicals stay in the environment for a while.
- Changes happen very slowly over time.
- Even if the data are a few years old, the Eat Safe Fish Guide can still help you choose safer fish for you and your family to eat.

MI Serving Basics

- MI Serving is a way of communicating the amount of fish that's safe to eat
- System based on risk assessment calculations
- Customizable for each person
- Meals are not the same as MI Servings



MI Serving

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 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.
 $90 \text{ pounds} - 20 \text{ pounds} = 70 \text{ pounds}$
 $4 \text{ ounces} - 1 \text{ ounce} = \text{a MI Serving size of 3 ounces}$

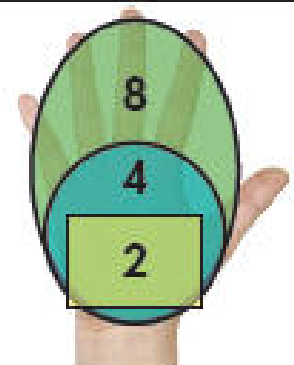
Weigh More?

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.
 $90 \text{ pounds} + 20 \text{ pounds} = 110 \text{ pounds}$
 $4 \text{ ounces} + 1 \text{ ounce} = \text{a MI Serving size of 5 ounces}$

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)



Guidelines for this area

Bostwick Lake

- Fish were collected in 2018
- The filets were tested for PFAS, including PFOS, and mercury.

Type of Fish Tested	Chemical Causing MI Serving Recommendation	Size of Fish	Recommended MI Servings per Month
Bluegill	Mercury	Any	12
Largemouth and Smallmouth Bass	Mercury	Under 17"	2
Largemouth and Smallmouth Bass	Mercury	Over 17"	1
Sunfish	Mercury	Any	12

Freska Lake

- Fish were collected in 2017.
- The filets were tested for PFAS, including PFOS, and mercury.
- PFOS and mercury was found in all the fish species.

Type of Fish Tested	Chemical Causing MI Serving Recommendation	Size of Fish	Recommended MI Servings per Month
Bluegill	Mercury & PFOS	Any	2
Sunfish	Mercury & PFOS	Any	2
Largemouth and Smallmouth Bass	Mercury	Under 18"	2
Largemouth and Smallmouth Bass	Mercury	Over 18"	1

Myers Lake

- Fish were collected in 2018.
- The filets were tested for PFAS, including PFOS, and mercury.

Type of Fish Tested	Chemical Causing MI Serving Recommendation	Size of Fish	Recommended MI Servings per Month
Black Crappie	Mercury	Any	8
Bluegill	Mercury	Any	12
Sunfish	Mercury	Any	12
White Crappie	Mercury	Any	8

Ponds at 4300 Cannonsburg Rd., Belmont Northeast Gravel Ponds

- No fish filets tested yet
- Emergency advisory was based on:
 - Surface water sample test results
 - Knowledge of how PFOS bioaccumulates in fish

Type of Fish Tested	Chemical Causing MI Serving Recommendation	Size of Fish	Recommended MI Servings per Month
All species	PFOS	Any	Do Not Eat

Rogue River (upstream of Rockford Dam)

- Fish were collected in 2013
- Tested for mercury, PFAS, including PFOS, PCBs, DDT, chlordane, toxaphene
- PFOS and mercury were found in the fish.

Type of Fish Tested	Chemical Causing MI Serving Recommendation	Size of Fish	Recommended MI Servings per Month
Largemouth and Smallmouth Bass	Mercury & PFOS	Under 18"	2
Largemouth and Smallmouth Bass	Mercury	Over 18"	1
Suckers	Mercury & PFOS	Any	4

Versluis Lake

- Northern pike were collected in 2017.
- Tested for PFAS, including PFOS, mercury, PCBs, DDT, chlordane, and toxaphene.
- PFOS and mercury were found in the fish

Type of Fish Tested	Chemical Causing MI Serving Recommendation	Size of Fish	Recommended MI Servings per Month
Northern Pike	Mercury	Under 30"	2
Northern Pike	Mercury	Over 30"	1

Upcoming information

- More fish have been collected, data are being evaluated
 - Belmont Creek-Brook trout
 - Lake Bella Vista-Yellow perch
 - Myers Lake-Largemouth and smallmouth bass
 - Versluis Lake-Walleye, largemouth bass and smallmouth bass

Statewide guidelines

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
Bullhead	Mercury	Any Size	4
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

Venison

- 128 deer
 - 80 deer from four targeted areas
 - 48 samples from hunter-harvested deer
 - 1 deer with elevated PFOS in muscle; *Do Not Eat* advisory issued within 5-mile radius of Clark's Marsh (Oscoda, MI)



More information at Michigan.gov/eatsafefish

- MDHHS Fish Consumption Guidelines Guidance Document
- Michigan Fish Consumption Data & Recommendation Sheets
- All of our materials



Contact information

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- Division of Environmental Health Hotline: 800-648-6942