

Eat Safe St. Clair River Muskrat

In 2014, by the request of the St. Clair River Binational Public Advisory Council, the Michigan Department of Environmental Quality (MDEQ) funded the Michigan Department of Community Health (MDCH) to test muskrats from the St. Clair River delta to see if there were chemicals in the meat that could be harmful to human health.

Trappers from Walpole Island and Harsens Island provided 13 muskrat to MDCH to be tested. Thirteen samples is not a lot when looking at large population, so it's important to note that this information only provides a small snapshot of the overall muskrat population in the area.

Many chemicals that the MDCH Laboratory looks for were not found in the muskrat; however, five chemicals were found in one or more muskrat samples:

- DDT (dichlorodiphenyltrichloroethane)
- mercury
- hexachlorobenzene
- octachlorostyrene
- PCBs (polychlorinated biphenyls)



Most of the chemicals were found in very small amounts and would not cause health problems at these levels. However, PCBs were found at a slightly higher amount in one of the muskrats that was tested. To see the full report on St. Clair River delta muskrat, please contact MDCH at 1-800-648-6942 or visit www.michigan.gov/eatsafefish and click on "Find Your Area" and choose "St. Clair River."

What does this mean?

MDCH will not issue official eating guidelines for muskrat because we only have a limited amount of information. However, based on the highest PCB amounts measured in the meat of these muskrats, MDCH calculates that people can safely eat 24 servings each year of muskrat from this area. The serving size depends on how much the person eating the muskrat weighs. There may be more than one serving of muskrat in your full meal; don't forget to count each serving.

Weight of Person	How much muskrat per serving?	How many servings can be eaten each year?
45 pounds	2 ounces	24
90 pounds	4 ounces	24
180 pounds	8 ounces	24

ESTIMATE

So what are PCBs?

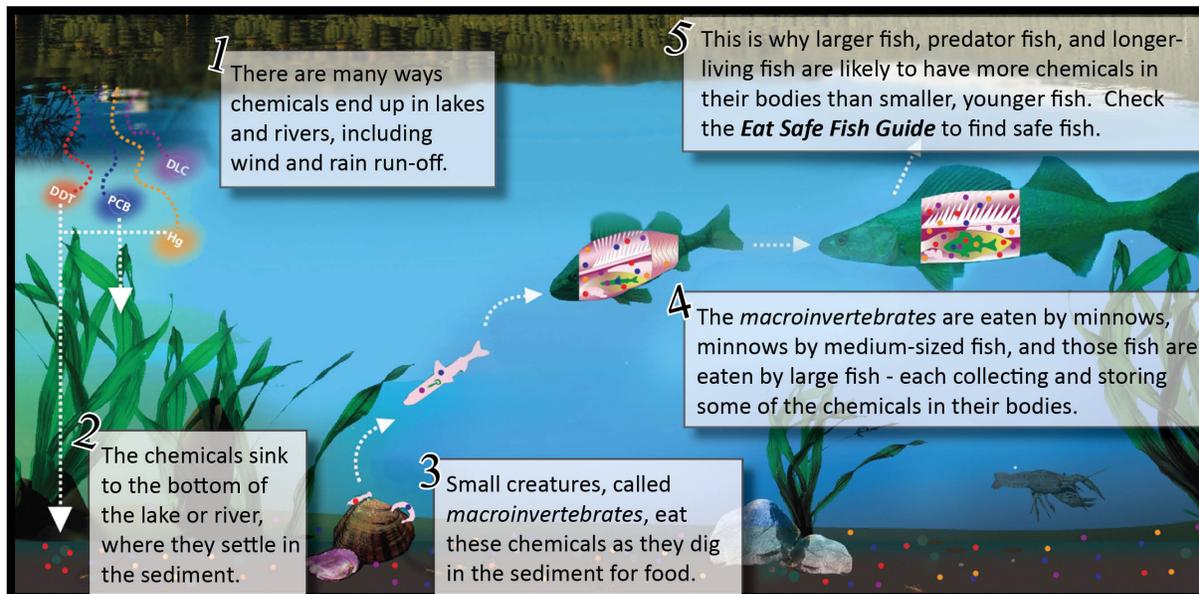
PCBs (also known as polychlorinated biphenyls):

- were used in electrical equipment - like transformers
- were found in hydraulic oils
- were banned from new use in the 1970s
- can harm brain development in fetuses and children
- linked to the development of cancer
- linked to the development of diabetes
- can harm the immune system

Not everyone will get sick from these chemicals. Over time, some people might get sick, and others will not. It depends on your body, how much you eat, and how often. All of the MDCH fish and wildlife guidelines are set to make sure you don't eat too many of these chemicals, too often.

How do chemicals end up in muskrat & fish?

Muskrat are mostly vegetarians, eating cattails and other plants. Sometimes, though, they'll also eat mussels, frogs, salamanders, crayfish, or small fish. Although plants generally have few chemicals in them, the small critters that are eaten may have more chemicals. Muskrats eat a lot. It's estimated that they eat enough food to equal a third to half of their body weight every day! This means even small amounts of chemicals can build up in their bodies quickly.



Learn more about choosing safe locally-sourced foods:

The Michigan Department of Community Health (MDCH) does issue eating guidelines for fish from Michigan and our surrounding Great Lakes. The regional MDCH *Eat Safe Fish Guides* list the fish that have been tested and how much is safe to eat.

The MDEQ and Michigan Department of Natural Resources (DNR) collect fish from lakes and rivers around the state, including Lake Huron, the St. Clair River, and Lake St. Clair. The MDCH Laboratory tests the filets of those fish for chemicals. The results of the tests are printed in the *Eat Safe Fish Guides*.

Unfortunately, chemicals in fish are a problem worldwide and not just limited to Michigan. But no worries - the MDCH *Buy Safe Fish* brochure helps you choose store-bought fish that are low in mercury and high in omega-3s. And you can also find links to the fish consumption guidelines for other Great Lakes states by clicking on **Find your Area** at www.michigan.gov/eatsafefish.

The *Guides*, the *Buy Safe Fish* brochure, and other fact sheets are free and available to download to your computer or smartphone at www.michigan.gov/eatsafefish. You can also request free print copies by calling MDCH at 1-800-648-6942.

Special thanks to the Bkejwanong Territory/Walpole Island First Nation and Environment Canada for facilitating the collection of muskrat from Walpole Island (Ontario) and to Tom Korthals for collecting the muskrat from Harsens Island (Michigan).



If you have questions about safely eating fish or other wildlife, please call MDCH at 1-800-648-6942 or visit www.michigan.gov/eatsafefish.

If you have questions about trapping muskrat or other wildlife regulations, please call your local DNR Operations Center.

Michigan Department
of Community Health

