

# Fish Tumors or Other Deformities in Michigan's Areas of Concern

## Areas of Concern (AOCs)

In the 1980s, the United States and Canadian governments identified 43 places in the Great Lakes region that had severe, long-term environmental problems. These places are called *Areas of Concern*.

People in federal, state, and provincial government environmental remediation programs are working to address the problems in these areas. Funding and expert guidance are provided to AOCs to help local groups, known as Public Advisory Councils (PACs), work on these environmental problems, as well.

## Beneficial Use Impairments (BUIs)

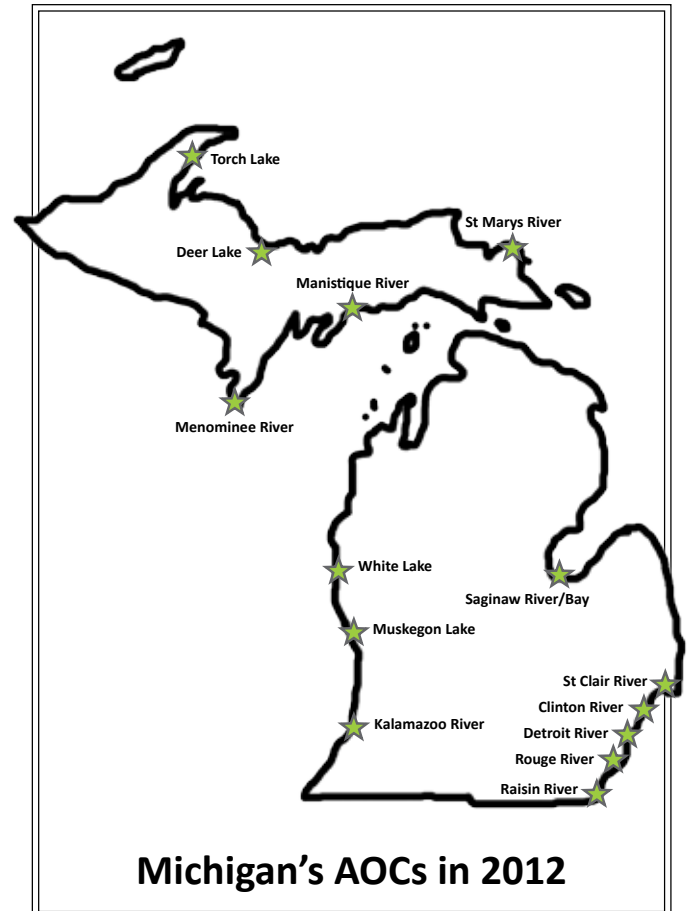
These environmental problems are called *beneficial use impairments*. There are 14 categories of BUIs, originally named in the U.S.-Canadian Great Lakes Water Quality Agreement. However, a place does not have to have all 14 problems to be called an AOC.

Each BUI has goals that need to be met in order to be removed from the AOC's list of problems. Once all BUIs are removed from the list, the AOC is considered to be no longer impaired and can be *delisted*, or removed from the list of AOCs.

## The 14 BUIs that an AOC can have are:

- Restrictions on Fish and Wildlife Consumption
- Tainting of Fish and Wildlife Flavor
- Degraded Fish and Wildlife Populations
- Fish Tumors or Other Deformities
- Loss of Fish and Wildlife Habitat
- Degradation of Benthos
- Degradation of Aesthetics
- Beach Closings
- Added Costs to Agriculture or Industry
- Restrictions on Dredging Activities
- Eutrophication or Undesirable Algae
- Restrictions on Drinking Water Consumption or Taste and Odor Problems
- Bird or Animal Deformities or Reproductive Problems
- Degradation of Phytoplankton and Zooplankton Populations

Over the years, several BUIs have been removed from Michigan's AOCs, as citizens, industries, and government joined together to improve our state's environmental health. In fact, after decades of hard work, some Michigan AOCs only have one or two BUIs remaining and are getting closer to being delisted.



## Fish Tumors or Other Deformities BUI

If an AOC has a ***Fish Tumors or Other Deformities BUI***, it means that the fish from the affected lake or river once had a higher rate of tumors, possibly caused by chemicals.

Fish tumors aren't only caused by chemicals, however. There are diseases that can cause tumors in fish, just like in humans. For this reason, even after the ***Fish Tumors or Other Deformities BUI*** has been removed from an AOC, there still might be fish with tumors in the river.

There are two ways to remove the ***Fish Tumors or Other Deformities BUI***. The first is by reviewing MDEQ and Michigan Department of Natural Resources (MDNR) records for confirmed reports of fish tumors in the past five years. If there are none, the BUI may be removed. If tumors have been reported, then a number of fish that typically have more tumors, like bullheads or suckers, are collected from the river. These fish are then examined by scientists at the MDEQ for tumors or lesions. The same types of fish are also collected from an area outside of the AOC, called a reference site. These fish are also examined for tumors or lesions. The two groups are then compared. If the group of fish from the AOC shows the same number or fewer tumors or lesions than the fish from the reference site, the BUI can be removed.

It is important to note that:

- **Tumors can occur naturally in fish. Catching a fish with a tumor is not always a sign that there are problems with the water or fish population.**
- **Spots and other lesions on fish can be caused by viruses, lampreys, or even scrapes during the fight on your fishing line.**
- **People can't get sick from most fish diseases (except tapeworms), but it's good practice to wash your hands after handling a fish and to cook your freshwater fish filets completely.**

If you are concerned about a fish that you caught that seems sick or is deformed, or if you see a large number of dead fish, you can report it to your local Michigan Department of Natural Resources (MDNR) office: **Rouge River area / Detroit area - (248) 359-9040 • St Marys River area - (906) 293-5131.**

### You can't see chemicals in fish. Use the ***Eat Safe Fish Guide***.

- You can't always see the chemicals in fish that can cause health problems in people. In fact, the chemicals that cause the Michigan Department of Community Health's (MDCH) fish eating guidelines and the ***Fish Tumors or Other Deformities BUI*** to be issued can't be seen at all.
- The ***MDCH Eat Safe Fish Guide*** can help you choose safer fish to eat from many of Michigan's lakes and rivers, not just the ones in the AOCs. MDCH tests filets of fish for chemicals from locations all around the state.



Even when the ***Fish Tumors or Other Deformities BUI*** is removed from an AOC's list of problems, fish from the lake or river will still be tested and listed in the ***MDCH Eat Safe Fish Guide*** for some time after. This is because different chemicals cause different problems. None of the chemicals listed in the ***MDCH Eat Safe Fish Guide*** will ever change the taste or the look of the fish.

Michigan lakes and rivers are improving thanks to federal and state environmental rules, and the hard work of the US Environmental Protection Agency, the MDEQ, and the PACs. However, it will take many years for these chemicals to leave the ecosystem and the fish.

#### To learn more about AOCs & BUIs:

MDEQ - Office of the Great Lakes

517-335-3168

<http://www.michigan.gov/deqaocprogram>



#### To learn more about eating safe fish:

MDCH - Division of Environmental Health

1-800-648-6942

<http://www.michigan.gov/eatsafefish>

