For waterbodies near the former Wurtsmith Air Force Base

What chemicals are in the fish?

There are plenty of fish that are safe to eat. But some fish shouldn't be eaten as often because there are harmful chemicals in them.

How do chemicals get into the fish?

The chemicals that cause the guidelines for eating fish from the area are PFCs, mercury, PCBs, and dioxins.

PFCs

Perfluorinated chemicals (PFCs) are used in nonstick cookware, waterproof and stain-resistant fabrics, chrome plating, and fire-fighting foams. One PFC, perfluorooctane sulfonate or PFOS, was used in fire-fighting foams at the former Wurtsmith Air Force Base in Oscoda.

Mercury

Although mercury occurs naturally in the environment, most of the mercury in our air comes from the smokestacks of coal-fired power plants and other industries. Mercury particles in air can travel far from where they started. After landing on the ground, the mercury particles are carried by rain run-off into our rivers and lakes where the mercury can get into the fish. There are statewide guidelines for eating fish because of mercury.

PCBs

Polychlorinated biphenyls (PCBs) were used in many products including electrical equipment and hydraulic oils. While PCBs are no longer made in the U.S., some of these old PCB-containing products are still used. PCBs can be spilled into the environment from these old products, from old or poorly contained waste sites, or from intentional dumping. Once in the environment, PCBs can be carried by rain run-off and storm drains into our rivers and lakes where they can get into the fish.

Dioxins

Dioxins are not made on purpose. They're created when chlorine chemicals are made or used, and when things containing chlorine - like paper and plastics - are burned. Dioxins from smokestacks can enter our water from the air like mercury does. Dioxins can also get into the environment from old or poorly contained waste sites or from intentional dumping. Like PCBs, dioxins can be carried by rain run-off and storm drains into our rivers and lakes.

Many of these chemicals were put into our environment before we knew the long-term health problems they caused. It was also before the U.S. Clean Water and Clean Air Acts and other laws were put into place to protect the environment. Sometimes companies would dump chemical waste into lakes and rivers to get rid of it. Other times, accidental chemical spills happened. PFOS was used in fire-fighting foams at the former Wurtsmith Air Force Base. At the time, no one knew that PFOS could harm human health.

The Clean Water and Air Acts have cut back on a lot of this pollution. This is why the amount of PCBs and dioxins in our fish are slowly going down. Mercury is still a growing problem in some areas in the state. The PFOS contamination in the Oscoda area has not been cleaned up yet. Plans are underway to remove it. Fish from Clark's Marsh and the lower Au Sable River will continue to be tested until PFOS is no longer a problem.

What can these chemicals do to my health?

Not everyone will get sick from eating fish with these chemicals in them. Some people will be fine after years of eating these fish. Others could have serious health problems. It's best to choose fish that are safe to eat. This will reduce your chance of getting sick.

Chemical in fish	Possible health problems
PFOS	• liver can be harmed • immune system can be harmed • thyroid can be harmed
Mercury	• brain development can be harmed in fetuses and children • heart function can be harmed in older adults • immune system can be harmed
PCBs	• brain development can be harmed in fetuses and children • linked to development of cancer • linked to development of diabetes • immune system can be harmed
Dioxins	• linked to development of cancer • linked to development of diabetes • fertility can be harmed • thyroid can be harmed

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

No. You cannot see or smell the chemicals in the fish or in the water. To find the chemicals, MDCH tests the fish in a laboratory. MDCH tests only the filet of the fish, the part most people eat, for chemicals.

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

Yes, it is safe. The chemicals will not absorb through your skin.

How long will the chemicals be in the water and sediment?

Once the chemicals are in the water, they become part of the food chain. They build up in the fish and animals that eat the fish. It will take many years for these chemicals to leave the ecosystem, even after clean-up. The Michigan Department of Community Health will continue to test the fish to determine if the eating advice can be changed. Check the ***Eat Safe Fish Guide*** to find fish that are safe to eat. It is updated after the fish testing results are in and analyzed.