

# Media FAQ: Fish consumption advisory, PFOS and Lake Elmo fish 2018

## Health, fish advisories and PFAS

### What are perfluoroalkyl substances?

Perfluoroalkyl Substances (PFAS), also known as perfluorochemicals (PFCs), are a family of manmade chemicals that have been used for decades to make products that resist heat, oil, stains, grease and water. PFAS have been found in the groundwater in Minnesota.

Common uses of PFAS include 1) nonstick cookware, stain-resistant carpets and fabrics, 2) coatings on some food packaging (especially microwave popcorn bags and fast food wrappers), 3) components of fire-fighting foam, and 4) many industrial applications.

PFAS are “emerging contaminants.” This term describes contaminants about which we have a new awareness or understanding about how they move in the environment or affect public health. PFASs, like other emerging contaminants, are the focus of active research and study which means that new information is released periodically.

### What are the health risks of PFAS, especially PFOS?

Scientists are actively studying whether PFAS cause health problems in people. Researchers have found links between PFAS and some human health outcomes. In some studies, higher levels of PFAS in a person’s body were associated with higher cholesterol, changes to liver function, reduced immune response, thyroid disease, and increased kidney and testicular cancer. More work needs to be done to determine if PFAS or other factors caused the adverse health outcomes. Perfluorooctane sulfonate (PFOS) is the PFAS that accumulates to levels of concern in fish.

#### **PFOS -**

Scientists are still studying whether PFOS causes health problems in workers, people living in communities with PFOS in their drinking water, and the general public. In some studies, higher levels of PFOS in a person’s body were associated with higher cholesterol, changes to liver function, changes in thyroid hormone levels, and reduced immune response.

In laboratory animal studies, effects of PFOS exposure included developmental changes such as decreased body weight, changes in liver function and liver weight, reduced immune response, and decreased thyroid hormone levels.

## What are fish consumption advisories? Why do you do them?

Minnesota Department of Health (MDH) Safe-Eating Guidelines are developed to help consumers to minimize their exposure to contaminants in fish while promoting the benefits of eating fish. The developing fetus and child, and people who eat a lot of fish that are high in contaminants are most likely to be harmed from exposure to contaminants in fish.

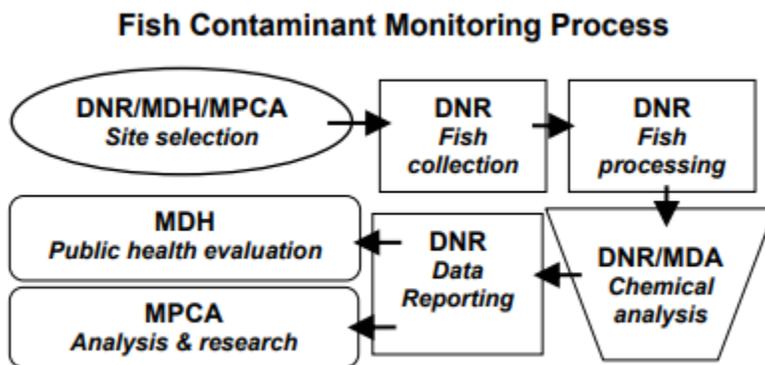
Through the [Minnesota’s Fish Contaminant Monitoring Program \(FCMP\)](#), MDH works in partnership with the Minnesota Departments of Natural Resources (DNR), Agriculture (MDA) and the Minnesota Pollution Control Agency (MPCA) to select lakes and rivers for fish collection and analysis.

Using FCMP data, primarily for Mercury and PCBs, MDH develops science-based fish consumption guidelines that encourage people to eat fish while keeping their exposure to contaminants in fish below a level that could cause adverse health effects. MDH uses [U.S. Food and Drug Administration \(FDA\) data](#) on mercury in fish to determine consumption guidelines for purchased fish.

[Fish Consumption Resources, Reports and Technical Information](http://www.health.state.mn.us/divs/eh/fish/techinfo/index.html)  
(<http://www.health.state.mn.us/divs/eh/fish/techinfo/index.html>)

## What is the role of PCA, the role of DNR, and the role of MDH in fish consumption advisories?

The FCMP is a successful partnership of the Minnesota Departments of Natural Resources (DNR), Health (MDH), and Agriculture (MDA) and the Minnesota Pollution Control Agency (MPCA). Each year these agencies jointly select lakes and rivers for fish collection and analysis, in a continuing effort to meet FCMP objectives while remaining within budget. This interagency approach of shared responsibilities for obtaining and interpreting data is a cost-effective method for tracking fish contaminant status and trends.



[Minnesota’s Fish Contaminant Monitoring Program](https://www.pca.state.mn.us/sites/default/files/p-p2s4-05.pdf)  
(<https://www.pca.state.mn.us/sites/default/files/p-p2s4-05.pdf>)

## When did the agencies first become aware that fish had PFAS in them?

In the early 2000s, soon after we began finding PFAS in bodies of water and in groundwater.

## **MDH recently lowered its Health Based Value for PFOS. How does that change relate to this advice?**

The two are not directly related. Our HBV for PFOS is for consuming drinking water, which is different from consuming fish. However, both are based on a newer understanding of the potential health effects of PFOS. Based on current science that indicates a more conservative approach to limiting PFOS exposure is needed to protect public health, MDH recently lowered the level at which it begins to advise to not eat the fish at all – from 800 ng/g (nanograms per gram) to 200 ng/g.

Applying this lower threshold resulted in more restrictive advice for some species in the six lakes, **including advice to not eat fish from Lake Elmo and to not eat largemouth bass from Lake Harriet in Minneapolis.**

## **Why are you making this change now? Why didn't you do it when you changed your advice for drinking water?**

It's important to understand that exposure to PFOS from eating fish is not the same as exposure through drinking water. With fish, the sources are varied and intermittent, while drinking water exposure is from a single, consistent source and typically occurs daily.

MDH is taking interim action now based on a weight of scientific evidence that indicates a more conservative approach to limiting PFOS exposure is needed to protect public health. Over the next year, MDH will finalize an assessment of the benefits of eating fish in combination with the risks associated with eating fish containing PFOS. In addition, DNR, MPCA and MDH will work to collect and analyze fish from previously tested waters and untested waters to update the data on PFOS levels in fish over the next year. The fish consumption advice will then be updated, if necessary, by May 2019.

## **I ate fish from Lake Elmo for years and now you're telling me it's unsafe to eat. Am I going to get sick? Could this explain my health problems?**

It's difficult to make generalizations about individual exposures, but generally our health guidelines have margins of safety built into them to provide adequate protection for most people in most circumstances. If you were following our previous guidelines for eating fish from Lake Elmo, your risk of health effects from those exposures would be minimal.

## **How has the advice changed in the other five lakes you tested recently?**

Applying this lower threshold resulted in more restrictive advice for some species in the lakes. Some advice is less restrictive due to declines in fish PFOS concentrations over time. Changes in the advice varies by lake and species. The best thing to do is to look at the site-specific advice for the lakes you fish.

## **Environmental: Sources, testing, sampling, remediation**

### **What do we know about the Lake Elmo contamination source?**

There are likely two sources contributing to PFC contamination in Lake Elmo — the 3M Oakdale Disposal Site and the Washington County Landfill, with the Oakdale site the source of PFOS. PFC-impacted surface water and stormwater runoff from these two sites not only affects area lakes, including Lake Elmo, but also groundwater in the region.

### **Can the 3M settlement money be used for Lake Elmo?**

The 3M settlement requires the MPCA to conduct a study regarding the Valley Branch Water District's project known as Project 1007. The MPCA will assess whether the project is the source of the contamination and the possible role of the project in moving PFCs in the environment, including to Lake Elmo. Funds can also be used to restore and enhance aquatic and fishery resources, plus lost outdoor recreational opportunities, due to PFCs in the east metropolitan area.

### **When was PFC contamination identified in Bde Maka Ska (Lake Calhoun)?**

Contamination in Bde Maka Ska (Lake Calhoun) was first discovered by water quality researchers from the University of Minnesota in 2004. Researchers from the MPCA found high levels of PFCs in bluegill/sunfish in 2007. Investigations to find the source began in 2007.

### **When was the source of the contamination in Lake Calhoun identified and what is being done to clean it up?**

Initially, there was no obvious direct source of PFCs to Lake Calhoun and it took the MPCA until 2010 to identify the source. The Douglas Corporation, a metal plating company in St. Louis Park, is the source of the PFCs in Lake Calhoun.

The company used a PFC-containing product in its production process, and as part of that process, PFCs were vented into the air and deposited on the roof. From there, PFCs entered stormwater when it rained or snow melted.

Douglas Corporation has changed its production process to largely eliminate the use of PFCs, and has also installed a stormwater collection and water reuse system. These changes have greatly reduced the amount of PFCs entering the lake.

## **General issues**

### **Is it safe to swim in Lake Elmo?**

MDH has determined that exposure to PFAS through swimming is not of concern. PFAS are poorly absorbed through skin and swallowing small amounts of water while swimming will not result in significant exposure. Also, because there is little evaporation of PFAS from water into the air, breathing them in while swimming or bathing is not a health concern.