

-NEWS RELEASE-

Recent findings prove that testing errors were to blame for reports of elevated PFOS levels in Lake Superior's Smelt

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April 29, 2025

Springtime has once again returned to the Great Lakes region and so has the seasonal smelt run. The annual smelt run provides the opportunity for not only fishermen to harvest Great Lakes smelt but also provides many others a chance to simply enjoy eating these tasty fish offered by local restaurants and fish markets.

Rainbow smelt are one of the first fishes to be sought after each spring by anglers, and commercial fishermen alike. For decades the tradition of fishing for smelt and having them available at grocers and restaurants has been a staple of the early season Great Lakes fish market. Although still highly available in the spring and continually sought after by many, the last few years has seen these small but tasty fish, particularly those from Lake Superior, come under much scrutiny due to various levels of criticism that suggests that these fish were highly contaminated with the contaminant known as PFOS. In this article we will explain what PFOS is and explain the background for the recent reports that have suggested that PFOS was at high levels in smelt, and how these previous conclusions have since been determined to have been the result of using inadequate testing procedures.

Firstly, what exactly is PFAS/PFOS and why the concern for these chemicals?

Perfluorooctane -sulfonate, also known by the acronym of PFOS, is a specific substance from a classification of man made chemical substances that are known as Per/Polyfluoralkyl substances (PFAS). These substances can be commonly found in a variety of industrial and everyday products, with the most notable use of PFAS being found as an ingredient in what is known as Aqueous Film Forming Foam or AFFF.

The use of AFFF has primarily been as a fire fighting agent and is associated with widespread PFAS contamination being found at military bases, aviation installations and fire-fighter training grounds throughout the country. In recent decades, PFAS has become a concern following numerous studies that have indicated that these substances may cause an array of human health impacts and that these chemicals are also resistant to degradation and have become ubiquitous within the environment which can lead to chronic exposure. Due to these ongoing concerns, the EPA recently changed the status of two of the more pre-dominant PFAS substances known as PFOA and PFOS from a level of “emerging concern” to one that now considers them as “Hazardous Substances”. Of these two substances, PFOS has long been considered to be one of the most prevalent PFAS substances found to persist within the environment (and within fish) and has been studied widely in relation to its impact upon human health.

Who is responsible for protecting the fishery and monitoring contaminants in the Great Lakes?

When considering the health and protection of smelt or Great lakes fish in general, there are many federal and state agencies that are charged with natural resources management within the Great Lakes basin. In addition, there are several inter-tribal natural resource agencies in the Great Lakes Region that are charged with the co-managing and protection of resources that are found within Treaty Ceded territories that can often include Great Lakes waters. One of these tribal agencies is the Chippewa Ottawa Resource Authority (CORA), which serves as the inter-tribal natural resource managing and regulatory body representing five of Michigan’s federally recognized tribes that hold court affirmed treaty rights to hunt, fish and gather upon the 1836 Treaty Ceded lands and waters of Michigan . CORA’s five member tribes are; Bay Mills Indian Community, Little River Band of Ottawa Indians, Grand Traverse Band of Ottawa and Chippewa Indians, Little Traverse Bay Bands of Odawa Indians and the Sault Tribe of Chippewa Indians.

The lands and waters of Michigan that are managed by CORA for the protection and conservation of natural resources are known as the 1836 Treaty Ceded Territories. More specifically, the 1836 Treaty Ceded waters are located within the U.S waters of northwest Lake Huron, the eastern portion of Lake Superior and within portions of the State of Michigan waters that include the northern and eastern waters of Lake Michigan.

One of CORA's primary roles is to manage and carry out the provisions set forth within the Great Lakes Fishing Decree in which CORA's five member tribes, the state of Michigan and the U.S. Department of Interior have agreed to the co-management and protection of resources within the 1836 fishery. The collective efforts of the parties to the Decree help to ensure that necessary actions and decisions are made for the conservation and protection of the natural resources which includes actions that maintain the health of the 1836 fishery. One such protective action taken by CORA is to facilitate and maintain a contaminants monitoring program. CORA's program is not only used to assess and monitor for the presence of contaminants, but also serves to inform the public as to contaminants found in fish such as PFOS, which recently and erroneously, has been reported by the state of Michigan and other government agencies to be of serious public health concern for those who may choose to consume smelt harvested from Lake Superior.

CORA had recognized early on that contaminants in the Great Lakes fish populations need to be monitored and have been engaged in such monitoring since the early 1990's. More recently both PFAS and particularly PFOS, have been on the forefront of an effort by the environmental and health protection community to establish regulation for their use, deposition and remediation of contaminated sites throughout the Great Lakes basin and beyond. As such, beginning in 2021, CORA included monitoring for PFOS in its fish contaminant monitoring program and will continue to do so in future testing cycles.

What were the concerns being reported in regards to PFOS levels in smelt?

During early 2021, CORA had become aware that both the states of Wisconsin and later Michigan, were reporting unusually high concentrations of PFOS being found in Lake Superior smelt and that by consuming these smelt would pose a risk to humans. This prompted both states to issue strict meal limitation/ guidance for those choosing to consume Lake Superior smelt.

Following the announcement of these heightened restrictions, CORA recognized that these reports being made about smelt were not in alignment with expectations for what levels of PFOS were being found in testing performed by other agencies nor did they appear to align with PFOS being found in other species from the lakes. It was also apparent that the state level guidance being released unfairly targeted smelt from Lake Superior, which by weight is the source of almost all smelt harvested for subsistence and commercial sale by CORA fishers.

What actions were considered to address findings of elevated PFOS in smelt?

By the spring of 2023, and in response to the ongoing recommendations on restricting smelt consumption, CORA sought to have the Michigan Dept of Health and Human Services (MDHHS) consider using other testing results or to further consider regionalizing their consumption guidance to better align with other independent results that had showed lower findings of PFOS in Lake Superior's smelt. In response, MDHHS countered that current data did not warrant a regionalizing of smelt guidance at that time.

As of early 2024, with the one meal per month restrictions still being advised by MDHHS, several agencies including the EPA, EGLE and others, had already converged on this issue of the anomaly in high PFOS findings for smelt being reported by state agencies. In April 2024, the MDHHS made an announcement that they would be presenting the results of their finding as to the cause of the previously reported high levels of PFOS in the smelt population (MDHHS Tribal listening session-April, 2024).

What was identified as the driver for the unusually high PFOS levels being reported in smelt?

In their findings, MDHHS reported that the testing methods they had used were in fact **not accurate** due to their testing method not being able to differentiate the molecular similarity of bile acids found in smelt from that of what is known as "branched PFOS". The inability to recognize this similarity during testing procedures led to the result of a false positive when quantifying total PFOS in smelt.

It was further indicated by the MDHHS that additional testing of smelt had taken place, and had employed a new testing method that was able to account for the interference of the bile acid. The new results were found to have indicated that PFOS levels in Lake Superior smelt are actually *much lower* than was previously being reported and were now being found at similar levels to that of PFOS levels found in many other Great Lakes Fish.

How did CORA respond to these new findings showing inaccurate PFOS testing was to blame?

By the time the new findings were being released by MDHHS, CORA had already been preparing to mount a challenge to the previously high levels of PFOS being reported in smelt. As part of this effort, CORA had already collected Lake Superior smelt samples during the spring of 2023 and was preparing to have these samples tested at a lab contracted by CORA. These samples were eventually tested by a lab that was utilizing testing methods that were able to separate the contributions of smelt bile acid from the quantification of total PFOS.

*The results of CORA's analysis was able to confirm that PFOS in Lake Superior smelt harvested from the 1836 Treaty Waters (Sampled in 2023) was very low at <3-parts per billion (ppb), and when applying these levels to current MDHHS screening values for fish, there are "**No Restrictions**" recommended for consuming smelt due to PFOS....*

Since April 2024, has the MDHHS taken steps to publish updated Eat Safe Fish Guides to reflect these new findings?

The short answer is no. Although as part of their April 2024 announcement of findings, the MDHHS has acknowledged that the laboratory methods they had relied upon to determine total PFOS in smelt were inadequate and led to the erroneous findings and reports of high levels of PFOS residing in Lake Superior's smelt, the current iteration of on-line Eat Safe Fish guides published by MDHHS *does not* yet contain these findings (MDHHS-Eat Safe Fish Guides website-April, 2025). Similarly, the meals per day recommendations for smelt that are found within these same ESF guides published by MDHHS, have also *not yet been updated* to align with the *actual level* (low levels) of PFOS that were confirmed by their recent findings and were since corroborated by other agencies, as is the case with CORA's findings cited above.

What does CORA plan to do in the future to ensure that more accurate and timely information on contaminants in fish from the 1836 waters can be provided to the public?

In response to the concerns of state agencies having not yet updated relevant changes to their guidance nor the related meals per day recommendations to the public, such as was the case with PFOS in smelt as referred to above, the Chippewa Ottawa Resource Authority has opted to explore future independent publication of news releases and other media designed to further inform the public as to the most current data regarding consumption of Great Lakes fish. Similar publications or news releases will not only be intended to provide timely and accurate data on contaminants in fish from the 1836 Waters, but will also be used to further educate the public on the risks vs. health benefits derived from consuming Great Lakes fish.

For additional information on CORA's fish contaminants monitoring program you may email your questions to; mlangendorf@chippewaottawa.org