



# Fish and Shellfish Program NEWSLETTER

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<https://www.epa.gov/fish-tech>

## Recent Advisory News



### Fish Consumption Advisory for PFOS Issued for Several King County Lakes

#### High perfluorooctane sulfonate (PFOS) levels may make some fish unsafe to eat

On December 14, 2022, the Washington State Department of Health (WSDOH) issued a [fish consumption advisory](#) for Lake Washington, Lake Meridian, and Lake Sammamish after finding PFOS in several types of fish. PFOS comes from a family of chemicals known as [per- and polyfluoroalkyl substances \(PFAS\)](#), sometimes called “forever chemicals” in the news.

There is strong evidence from animal studies and growing evidence from human studies that chemicals in the PFAS family, like PFOS, can harm human health. For people, having PFAS chemicals in your body could:

- Interfere with your immune system and make some vaccinations less effective.
- Increase your risk for:
  - Kidney cancer
  - Lower birth weight for your baby
  - High cholesterol

New human studies show PFAS chemicals may also increase your risk for:

- Other cancers (like testicular cancer)
- Thyroid disease
- High blood pressure during pregnancy and other reproductive issues

Your risk of developing health problems depends on how much, how often, and how long you were exposed. Age, lifestyle, and overall health can impact how your body responds to PFOS exposure. The best way to protect yourself and your family is to lower your exposure.

WSDOH recommends continuing to eat fish because it has many health benefits. Follow the updated guidelines to limit your PFOS exposure and safely eat fish caught in Lake Washington, Lake Sammamish, and Lake Meridian.

### Lake Washington:

[Lake Washington has existing advisories for polychlorinated biphenyls \(PCBs\) and mercury.](#) WSDOH is now adding the following recommendations for PFOS.

- **Common carp:** Do not eat<sup>†</sup>
- **Cutthroat trout:** Do not eat
- **Largemouth bass:** Do not eat
- **Smallmouth bass:** Do not eat
- **Northern pikeminnow:** Do not eat<sup>†</sup>
- **Yellow perch:** Up to 1 meal\* per month
- **Brown bullhead:** Up to 4 meals per month
- **Pumpkinseed:** Healthy choice ( $\geq 8$  meals per month) <sup>†</sup>
- **Rainbow trout:** Healthy choice ( $\geq 8$  meals per month) <sup>†</sup>
- **Sockeye salmon:** Healthy choice ( $\geq 8$  meals per month) <sup>†</sup>

### Lake Sammamish:

- **Largemouth bass:** Do not eat
- **Northern pikeminnow:** Do not eat<sup>‡</sup>
- **Yellow perch:** Up to 1 meal per month
- **Smallmouth bass:** Up to 2 meals per month<sup>‡</sup>
- **Brown bullhead:** Healthy choice ( $\geq 8$  meals per month)

### Lake Meridian:

- **Northern pikeminnow:** Do not eat<sup>‡</sup>
- **Smallmouth bass:** Do not eat
- **Yellow perch:** Up to 1 meal per month
- **Largemouth bass:** Up to 1 meal per month
- **Kokanee:** Up to 2 meals per month
- **Brown bullhead:** Healthy choice ( $\geq 8$  meals per month)

\*One meal for an adult is equivalent to one 8-ounce uncooked fillet, or a piece of fish approximately the same size and thickness as your palm.

<sup>†</sup>Prior Lake Washington advisory

<sup>‡</sup>Statewide advisory



Map showing Lake Washington, Lake Sammamish, and Lake Meridian (Photo courtesy of WSDOH).

Fish advisory signs at the lakes will be updated by the start of the spring fishing season.

Currently, there are no PFOS advisories on saltwater fish or other lakes in Washington. The Department of Ecology (ECY) collected fish samples from Lake Washington, Lake Sammamish, and Lake Meridian first because those lakes were identified as higher concern for PFOS in previous sampling. ECY is monitoring for other types of PFAS chemicals, and WSDOH anticipates receiving more data from ECY and other partners over the next several years.

For more information on advisories, visit [WSDOH's fish webpage](#) or email [doheheha@doh.wa.gov](mailto:doheheha@doh.wa.gov). Talk to your healthcare provider if you have concerns about how PFOS or fish may affect you.

Additional PFOS Resources: [Factsheet](#), [Q&A](#), [Washington Tracking Network](#)

For more information, contact the current public information officer at [doh-pio@doh.wa.gov](mailto:doh-pio@doh.wa.gov).

Source: <https://doh.wa.gov/newsroom/fish-consumption-advisory-issued-several-king-county-lakes>



## Michigan Releases New Fish Consumption Guidelines for PFOS and PCBs for Rainbow Smelt and Carp Caught in Various Lakes

On January 12, 2023, the Michigan Department of Health and Human Services (MDHHS) released new Eat Safe Fish guidelines for rainbow smelt and carp from seven different lakes across the state.

The updated Eat Safe Fish guidelines recommend limiting the consumption of certain locally caught smelt and carp based on levels of chemicals found in the commonly eaten parts of the fish.

The new rainbow smelt guidelines are based on elevated levels of PFOS found in the smelt. PFOS is a chemical in the family of PFAS and can build up in fish and in people who eat these fish.

The new Eat Safe Fish consumption guidelines for PFOS for rainbow smelt are as follows:

- Lake Huron: 6 servings per year.
- Lake Michigan: 1 serving per month.
- Portage Lake in Houghton County: 1 serving per month.
- Gull Lake in Kalamazoo County: 2 servings per month.
- Higgins Lake in Roscommon County: 4 servings per month.
- Lake Superior: 1 serving per month.

MDHHS is also releasing two new guidelines for carp based on elevated levels of PCBs. Like PFOS, PCBs take a very long time to break down in the environment and can build up in fish and in people who eat these fish.

The new Eat Safe Fish consumption guidelines for PCBs for carp are as follows:

- Thompson Lake in Livingston County: Do Not Eat advisory.
  - This means everyone should avoid eating carp from Thompson Lake.
- Earl Lake in Livingston County: Limited advisory.
  - This means individuals under age 15, those with health problems such as cancer or diabetes and those who might have children in the next several years, are pregnant or are breastfeeding should avoid eating carp from Earl Lake. All other individuals should limit their consumption of carp from Earl Lake to one or two servings per year.

These new guidelines and others previously published in the MDHHS *Eat Safe Fish Guides* for lakes and rivers statewide can help Michiganders find safer fish to eat and reduce exposure to chemicals that can cause harmful health effects.

The *Eat Safe Fish Guides* are currently being updated for 2023 and will include these new carp and smelt guidelines along with others pending analysis. To view the regional 2022 *Eat Safe Fish Guides*, visit [Michigan.gov/EatSafeFish](https://Michigan.gov/EatSafeFish) and click on “Find Your Area.”

It is important to note that fish from some areas in Michigan are more contaminated than others. By using the *Eat Safe Fish Guides*, Michigan fish consumers can be confident they are making informed choices about eating the fish they catch from their local lake or river. Eat Safe Fish guidelines are not laws or regulations, and no one is required to follow them.

For more information on where to find, prepare, eat or buy safe fish, visit [Michigan.gov/EatSafeFish](https://Michigan.gov/EatSafeFish) or call MDHHS Division of Environmental Health Hotline at 800-648-6942.

For more information, contact Lynn Sutfin at [SutfinL1@michigan.gov](mailto:SutfinL1@michigan.gov).

Source: <https://www.michigan.gov/mdhhs/inside-mdhhs/newsroom/2023/01/12/eat-safe-fish>

## EPA News

### 2023 U.S. EPA Fish Forum Attendance Largest to Date

The 13th National Forum on Contaminants in Fish (Fish Forum) was held, virtually, on February 28 and March 2, 7, and 9. EPA sponsors the National Forum on Contaminants in Fish to bring together states, tribes, federal agencies, local governments, academia, industry, environmental groups, and healthcare organizations to discuss the many issues related to contaminants in fish. This was the largest Fish Forum ever with between 501 and 931 individual participants depending on the day. There were 62 presentations and 15 posters.

For more information about the 2023 National Fish Forum, as well as past National Fish Forums, visit <https://www.epa.gov/fish-tech/national-forum-contaminants-fish>

For more information, contact Sharon Frey at [frey.sharon@epa.gov](mailto:frey.sharon@epa.gov).

## Per- and Polyfluoroalkyl Substances (PFAS)

### Proposed PFAS National Primary Drinking Water Regulation

On March 14, 2023, EPA announced the proposed National Primary Drinking Water Regulation (NPDWR) for six PFAS including perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX Chemicals), perfluorohexane sulfonic acid (PFHxS), and perfluorobutane sulfonic acid (PFBS). The proposed PFAS NPDWR does not require any actions until it is finalized. EPA anticipates finalizing the regulation by the end of 2023. EPA expects that if fully implemented, the rule will prevent thousands of deaths and reduce tens of thousands of serious PFAS-attributable illnesses.

EPA is requesting public comment on the proposed regulation. The public comment period will open following when the proposed rule is published in the Federal Register. Public comments can be provided at that time at [www.regulations.gov](http://www.regulations.gov) under Docket ID: EPA-HQ-OW-2022-0114. Information on submitting comments to EPA dockets can be found [here](#).

EPA will hold a public hearing on May 4, 2023, where members of the public can provide verbal comments to EPA on the proposed rule. Registration is required to attend and the last day to register to speak at the hearing is April 28, 2023. For questions related to the public hearing, contact [PFASNPDWR@epa.gov](mailto:PFASNPDWR@epa.gov).

- [May 4, 2023 Proposed PFAS NPDWR Public Hearing Registration](#)

For more information, visit <https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas>.

## Biden-Harris Administration Announces Action to Help Protect Bristol Bay Salmon Fisheries

On January 31, 2023, EPA issued a Final Determination under the Clean Water Act to help protect Bristol Bay, the most productive wild salmon ecosystem in the world. With this action, the Biden-Harris Administration is protecting certain waters that are important to sustaining Southwest Alaska's salmon resources from disposal of dredged or fill materials associated with developing the Pebble deposit.

Protecting Bristol Bay builds on a series of recent actions the Biden-Harris Administration has taken to conserve and restore some of America's most cherished lands and waters, many of which are sacred to Tribal Nations. In late January, the Administration finalized protections for the Tongass National Forest in Alaska and the Boundary Waters Area Watershed in Minnesota.



“The Bristol Bay watershed is a vital economic driver, providing jobs, sustenance, and significant ecological and cultural value to the region,” **said EPA Administrator Michael Regan**. “With this action, EPA is advancing its commitment to help protect this one-of-a-kind ecosystem, safeguard an essential Alaskan industry, and preserve the way of life for more than two dozen Alaska Native villages.”

“After reviewing the extensive scientific and technical record spanning two decades, EPA has determined that specific discharges associated with developing the Pebble deposit will have unacceptable and adverse effects on certain salmon fishery areas in the Bristol Bay watershed,” **said EPA Assistant Administrator for Water, Radhika Fox**. “Our Final Determination helps prevent those adverse effects while helping protect a vibrant and magnificent watershed. It’s also important to note that EPA’s action does not apply to current or future resource development projects in Alaska.”

The Bristol Bay watershed’s fishery resources are a thriving economic driver for the region, generating significant nutritional, cultural, economic, and recreational value. The total economic value, including subsistence uses of the Bristol Bay watershed’s salmon resources, was estimated at more than \$2.2 billion in 2019 and results in 15,000 jobs annually. The Bristol Bay Watershed is home to 25 Alaska Native villages and communities and supports one of the last intact, sustainable salmon-based cultures in the world. Salmon provides more than half of the subsistence harvest for some Alaska Native communities in the Bristol Bay region.

After reviewing the [Recommended Determination](#) provided by EPA’s Region 10 office, including the scientific and technical information spanning nearly two decades, EPA has determined that the discharges evaluated in the Final Determination will have unacceptable adverse effects on salmon fishery areas in the South Fork Kaktuli River, North Fork Kaktuli River, and Upper Talarik Creek watersheds of Bristol Bay. Ecologically valuable streams, wetlands, and other aquatic habitats, like those found in these watersheds, provide the foundation for the productive fishery areas in the region.

## Final Determination

The Final Determination prohibits certain waters of the United States in the South Fork Kaktuli River and North Fork Kaktuli River watersheds from being used as disposal sites for the discharge of dredged or fill material from the construction and routine operation of Pebble Limited Partnership’s mine plan described in its June 8, 2020, CWA Section 404 permit application. It also prohibits future proposals to construct and operate a mine to develop the Pebble deposit that would result in the same or greater levels of loss or change to aquatic resources. The Final Determination also restricts the use of certain waters of the United States in the South Fork Kaktuli River, North Fork Kaktuli River, and Upper Talarik Creek watersheds as disposal sites for the discharge of dredged or fill material associated with future proposals to develop the Pebble deposit that would result in adverse effects similar or greater in nature and magnitude to those associated with the 2020 Mine Plan.

In the 50-year history of the Clean Water Act, EPA has used its Section 404(c) authority judiciously. This action marks the third time in 30 years, and only the 14th time in the history of the Clean Water Act, that EPA has used this authority. This highlights the value of the Bristol Bay watershed’s fishery resources.

The federal government, the State of Alaska, federally recognized Tribal governments, the Pebble Limited Partnership, and many interested stakeholders have devoted significant resources over many years of study, engagement, and review. Considering the extensive record, it is not reasonable or necessary to engage in additional multi-year National Environmental Policy Act or Clean Water Act Section 404 processes for future proposals to develop the Pebble deposit involving discharges of dredged or fill material that would result in adverse effects that EPA has already determined are unacceptable in this Final Determination. By acting now, based on an extensive and carefully considered record, EPA promotes regulatory certainty for all stakeholders and avoids unnecessary expenditure of additional resources by all stakeholders.

The prohibition and restriction in EPA's Final Determination only apply to certain discharges of dredged or fill material associated with developing the Pebble deposit. This action does not apply to any current or future resource development projects in the state of Alaska.

A copy of the Final Determination is available on EPA's Bristol Bay website at: [www.epa.gov/bristolbay](http://www.epa.gov/bristolbay).

## Background

The Pebble deposit, a large, low-grade deposit containing copper-, gold-, and molybdenum-bearing minerals, is located at the headwaters of the pristine Bristol Bay watershed in Southwest Alaska. The Pebble deposit underlies portions of the South Fork Koktuli River, North Fork Koktuli River, and Upper Talarik Creek watersheds, which drain into two of the largest rivers in the Bristol Bay watershed, the Nushagak and Kvichak Rivers.

Efforts to evaluate the effects of developing a mine at the Pebble deposit have been underway for more than a decade. The Pebble Limited Partnership's 2020 Mine Plan underwent the CWA Section 404 permit review process with the U.S. Army Corps of Engineers (USACE) and was evaluated in the context of an Environmental Impact Statement pursuant to the National Environmental Policy Act. In November 2020, USACE denied Pebble Limited Partnership's permit application; Pebble Limited Partnership appealed the permit denial with USACE, and review of the appeal is ongoing.

The diverse, abundant, and high-quality streams, wetlands, and other aquatic habitats in the South Fork Koktuli River, North Fork Koktuli River, and Upper Talarik Creek watersheds provide important spawning and rearing habitat for Coho, Chinook, and Sockeye salmon and provide high-quality habitat for other fishes, such as rainbow trout, dolly varden, arctic grayling, and northern pike. The aquatic habitats of the South Fork Koktuli River, North Fork Koktuli River, and Upper Talarik Creek watersheds also provide critical support for downstream habitats. By contributing water, organic matter, and macroinvertebrates to downstream systems, these headwater areas help maintain downstream habitats and fuel their fish productivity. Together, these functions — direct provision of high-quality habitat and indirect provision of other resources to downstream habitats — support the valuable fisheries of the Bristol Bay watershed.

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. EPA and USACE share responsibilities for implementing Section 404 of the Clean Water Act. Section 404(a) of the Clean Water Act requires a permit from the Corps of Engineers to discharge dredged or fill material into waters of the United States. Section 404(c) of the Clean Water Act authorizes EPA to prohibit the

specification of or restrict the use for specification of any defined area as a disposal site for the discharge of dredged or fill material whenever it determines that such discharges will have an unacceptable adverse effect on fishery areas (including spawning and breeding areas).

For more information, contact Erin Seyfried at [seyfried.erin@epa.gov](mailto:seyfried.erin@epa.gov) or Palmer Hough at [hough.palmer@epa.gov](mailto:hough.palmer@epa.gov).

Source: <https://www.epa.gov/newsreleases/biden-harris-administration-announces-action-help-protect-bristol-bay-salmon-fisheries>

## Other News

### National Oceanic and Atmospheric Administration (NOAA) Announces Five Year Strategic Plan for Aquaculture

On November 02, 2022, NOAA published its first-ever five year [Strategic Plan for Aquaculture](#) to guide the agency's work from 2023–2028 to enhance the growth of sustainable U.S. aquaculture. The Strategic Plan was developed by the NOAA Aquaculture Program, which includes the NOAA Fisheries [Office of Aquaculture](#), the Office of Oceanic and Atmospheric Research's [National Sea Grant Program](#), and the National Ocean Service's [National Centers for Coastal Ocean Science](#).

“Through this plan, NOAA will support a thriving, resilient, and inclusive U.S. aquaculture industry as part of a competitive domestic seafood sector,” said NOAA Fisheries Assistant Administrator Janet Coit. “This plan will act as a framework to guide NOAA's Aquaculture Program, set priorities to achieve our mission, and support NOAA's vision of healthy and resilient ecosystems, communities, and economies.”

The Strategic Plan articulates a vision for an industry that supports jobs, expands access to nutritious domestic seafood, and reinforces healthy coastal and ocean ecosystems in a changing environment. This is supported by the Program's mission of providing science, services, and policies that create conditions for opportunity and growth of sustainable U.S. aquaculture.

The Strategic Plan is designed to support collaboration and align goals and objectives across the NOAA Aquaculture Program and with our partners. It includes four key goals, which outline our top priorities over the next five years:

- **Goal 1. Manage Sustainably and Efficiently** – Improve the regulatory processes for sustainable coastal and marine aquaculture through collaboration with partners.



The NOAA Aquaculture Strategic Plan (2023–2028) includes goals and objectives to sustainably develop the aquaculture industry in the United States. (Photo courtesy of NOAA Aquaculture Program)



- **Goal 2. Lead Science for Sustainability** – Use world-class science expertise to meet management and industry needs for a thriving seafood production sector and share this knowledge broadly.
- **Goal 3. Educate and Exchange Information** – Build awareness and support for coastal, marine, and Great Lakes aquaculture through two-way communication with diverse stakeholders and partners.
- **Goal 4. Support Economic Growth and Viability** – Facilitate a robust aquaculture industry that thrives as a key component of a resilient seafood sector.

“Sustainable aquaculture encompasses the “triple bottom line” of economic viability, environmental stewardship, and social responsibility,” said David O’Brien, Acting Director of the Office of Aquaculture. “As the demand for seafood continues to increase, and climate change continues to pose a threat to food security, NOAA will continue supporting efforts to grow seafood on land, in coastal waters, and the open ocean in harmony with a healthy and resilient environment.”

The Strategic Plan was developed collaboratively by the NOAA Aquaculture Program and the public. Input was sought through public listening sessions, and feedback was incorporated to ensure the plan reflects the needs of a diverse range of users and stakeholders. This is the first Strategic Plan developed by all three Line Offices in the NOAA Aquaculture Program, highlighting the strong shared goal to support resilient U.S. aquaculture.

The NOAA Aquaculture Program consists of:

- [NOAA Fisheries Aquaculture](#)
- [National Centers for Coastal Ocean Science Aquaculture](#)
- [NOAA Sea Grant Aquaculture](#)

“Our aquaculture team strives to advance sustainable aquaculture development in the United States through [science, service, and stewardship](#). We will seek to provide ongoing opportunities for public input to ensure results that are community-driven,” said O’Brien.

For more information, contact Ken Riley at [ken.riley@noaa.gov](mailto:ken.riley@noaa.gov).

Source: <https://coastalscience.noaa.gov/news/noaa-announces-five-year-strategic-plan-for-aquaculture/>

## Sowing the Seeds to Educate and Train the Next Generation of Maine’s Aquaculture Workforce

On February 17, 2023, the U.S. Department of Agriculture (USDA) announced that Maine Community College students can enroll in a workforce training program for the aquaculture sector (thanks to the Aquaculture Vocational Education and Training (VET) pathways program developed by the Maine Aquaculture Innovation

Center at Washington County Community College) and thanks to funding from USDA's National Institute of Food and Agriculture (NIFA).

The program aims to meet the growing need for tech-savvy skilled workers in four of the largest aquaculture subsets: land-based recirculating aquaculture; marine fin-fish aquaculture; cold-water coastal shellfish aquaculture; and marine macroalgae aquaculture. Students will graduate with either a workforce training certificate or an associate's degree.

"By providing coastal communities the knowledge to farm the sea, we can simultaneously support the sustainable expansion of marine aquaculture (farmed seafood), reduce the U.S. seafood trade deficit, improve U.S. food security, increase the resilience of coastal communities, and maintain coastal cultural and economic traditions associated with the working waterfront," said Maine Aquaculture Innovation Center Project Manager Dr. Anne Langston Noll.



Participants in the workforce training program in the field (*Photo courtesy of the USDA NIFA*)

Since 2007, the total economic impact of aquaculture in Maine has almost tripled from \$50 million to \$137 million. In 2016, the industry employed 571 people with most aquaculture production-focused jobs being full-time, year-round positions. As of 2022, Maine has 152 aquaculture farms, with 67 with pending lease applications, Langston Noll said. "All of these farms require employees. Employees require training."

The state's aquaculture industry employed about 622 people in 2020. By 2030, it's likely to exceed 1,000 in direct employment, and 2,000 including the supply chain and downstream markets, according to a report published by the Gulf of Maine Research Institute.

"As the numbers of commercial fishermen decline, working waterfronts and the supporting infrastructure are also declining," Langston Noll said. "Coastal communities whose culture and societies were traditionally centered on the ocean and the commercial exploitation of its resources are experiencing fundamental sociological change."

The community college aquaculture program launched its second class in late January. Students hail from across the state, and include adult learners, students directly from high school, individuals who are justice involved (both incarcerated and in communities) and individuals in recovery. This year the project team will pilot the aquaculture program at other Maine community colleges.

"Together with our education colleagues across the state, we are raising awareness of aquaculture and seafood as a career path," Langston Noll said. "We are working with colleagues to connect our vocational training to apprenticeship and internship programs. These programs all contribute to aquaculture becoming a key component of a resilient, sustainable seafood sector in Maine, that supports resilient coastal communities."

Additional information about this research was presented at a [NIFA education session](#) at Aquaculture America 2023 Feb. 23–26 in New Orleans. NIFA national program leader Dr. Tim Sullivan, who provides leadership for programs in aquaculture, animal health and biotechnology, moderated a session highlighting the breadth and impact of NIFA-funded aquaculture research and outreach.

For more information, contact Lori Tyler Gula at [lori.gula@usda.gov](mailto:lori.gula@usda.gov).

Source: <https://www.nifa.usda.gov/about-nifa/blogs/sowing-seeds-educate-train-next-generation-maines-aquaculture-workforce>

## Recently Awarded Research

### Alaska Tribes to Receive \$1.3 Million in Tribal Wildlife Grants

On November 7, 2022, the U.S. Fish and Wildlife Service announced that it was awarding more than \$5.9 million to federally recognized Native American and Alaska Native Tribes through its Tribal Wildlife Grants Program to benefit fish and wildlife resources and their habitats. Nearly a quarter of those funds will support Alaska projects focused on salmon, moose, seabirds, blue mussels, and invasive species.

**Chickaloon Native Village** is receiving funds to better understand salmon runs and water quality in Moose Creek and other tributaries of the Matanuska River and build program capacity for additional fisheries projects in the future.

**Tyonek Tribal Conservation District** will put funds towards ongoing efforts including continuing to identify priority habitats, as well as establish baseline monitoring on systems important to Chinook salmon.

The **Native Village of Eklutna** will use the funds to continue river assessment work in the upper sections of the Eklutna River including defining and evaluating spawning bed potential, better understanding water inputs, and collecting information about salmon.

The **Qawalangin Tribe of Unalaska** will develop a restoration plan and pilot study for blue mussel habitat in Unalaska Bay to increase cultural and tribal subsistence food security, reduce paralytic shellfish poisoning in wildlife and people, and implement a nature-based technique for improving water quality and aquatic ecosystem health.

**Central Council Tlingit & Haida Indian Tribes of Alaska** is seeking to obtain an accurate scope of the invasive and recolonizing species on Native Allotment lands, create an Invasive Species on Native Allotments report and management plan.



Seven black-legged kittiwakes in Alaska. (Photo courtesy of the U.S. Fish and Wildlife Service National Digital Library)

For more information, contact Katrina Liebich through the U.S. Fish & Wildlife Service [contact page](#).

Source: <https://www.fws.gov/press-release/2022-11/alaska-tribes-receive-13-million-tribal-wildlife-grants>

## Tech and Tools

### EPA Releases New PFAS Analytic Tools

On January 5, 2023, the U.S. EPA released a new interactive webpage, called the “[PFAS Analytic Tools](#),” which provides information about per- and polyfluoroalkyl substances (PFAS) across the country. This information will help the public, researchers, and other stakeholders better understand potential PFAS sources in their communities. The PFAS Analytic Tools bring together multiple sources of information in one spot with mapping, charting, and filtering functions, allowing the public to see where testing has been done and what level of detections were measured.

“EPA’s PFAS Analytic Tools webpage brings together, for the first time, data from multiple sources in an easy to use format,” said **John Dombrowski, Director of EPA’s Office of Compliance**. “This webpage will help communities gain a better understanding of local PFAS sources.”

EPA’s PFAS Analytic Tools draws from multiple national databases and reports to consolidate information in one webpage. The PFAS Analytic Tools includes information on PFAS discharges from Clean Water Act permitted sources, reported spills containing PFAS constituents, facilities historically manufacturing or importing PFAS, federally owned locations where PFAS is being investigated, transfers of PFAS-containing waste, PFAS detection in natural resources such as fish or surface water, and drinking water testing results. The tools cover a broad list of PFAS and represent EPA’s ongoing efforts to provide the public with access to the growing amount of testing information that is available.

Because the regulatory framework for PFAS chemicals is emerging, data users should pay close attention to the caveats found within the site so that the completeness of the data sets is fully understood. Rather than wait for complete national data to be available, EPA is publishing what is currently available while information continues to become available. Users should be aware that some of the datasets are complete at the national level whereas others are not. For example, EPA has included a national inventory for drinking water testing at larger public water utilities. That information was provided to EPA between 2013–2016. To include more recent data, EPA also compiled other drinking water datasets that are available online in select states. For the subset of states and tribes publishing PFAS testing results in drinking water, the percentage of public water supplies tested varied significantly from state to state. Because of the differences in testing and reporting across the country, the data should not be used for comparisons across cities, counties, or states.

EPA has also taken multiple actions to improve the availability of the data in the future. EPA has published [its fifth Safe Drinking Water Act Unregulated Contaminant Monitoring Rule](#) to expand on the initial drinking water data reporting that was conducted in 2013–2016. Beginning in 2023, these additional data will bring the number of drinking water PFAS samples collected by regulatory agencies into the millions. EPA also significantly expanded the

[Toxics Release Inventory reporting requirements](#) in recent years to more than 175 PFAS substances — and more information should be received in 2023. Additionally, EPA's [proposal to designate PFOA and PFOS as Hazardous Substances](#) could also improve data on spill or release incidents reported to the Emergency Response Notification System. The interactive webpage will continue to be updated as rulemakings pertaining to PFAS data reporting enhancements are finalized. EPA will continue working toward the expansion of data sets in the PFAS Analytic Tools as a way to improve collective knowledge about PFAS occurrence in the environment.

[See the new PFAS Analytic Tools.](#)

[Learn more about EPA's work to address PFAS.](#)

For more information, contact Nicholas Spalt at [Spalt.Nicholas@epa.gov](mailto:Spalt.Nicholas@epa.gov).

Source: <https://www.epa.gov/newsreleases/epa-releases-new-pfas-analytic-tools>

## Recent Publications

### Journal Articles

The list below provides a selection of research articles.

- ▶ [Assessment of Mercury Concentrations in Water and Fish Tissue Analysis in Kaw Lake, Oklahoma.](#)  
Alemayehu, D., P. Rudra, S. Mathews, E. Douglas, and C. Regnier. 2023. Assessment of Mercury Concentrations in Water and Fish Tissue Analysis in Kaw Lake, Oklahoma, 2022. *Journal of Environmental Protection* 14:50-65.
- ▶ [Locally Caught Freshwater Fish Across the United States are Likely a Significant Source of Exposure to PFOS and Other Perfluorinated Compounds.](#)  
Barbo, N., T. Stoiber, O.V. Naidenko, and D.Q. Andrews. 2023. Locally Caught Freshwater Fish Across the United States are Likely a Significant Source of Exposure to PFOS and Other Perfluorinated Compounds. *Environmental Research* 220:115165.
- ▶ [Bone Mass Density Following Developmental Exposures to Perfluoroalkyl Substances \(PFAS\): A Longitudinal Cohort Study.](#)  
Blomberg, A., J. Mortensen, P. Weihe, and P. Grandjean. 2022. Bone Mass Density Following Developmental Exposures to Perfluoroalkyl Substances (PFAS): A Longitudinal Cohort Study. *Environmental Health* 21(1):113.
- ▶ [Social Equity in Shore-Based Fisheries: Identifying and Understanding Barriers to Access.](#)  
Furman, K.L., S.L. Harlan, L. Barbieri, and S.B. Scyphers. 2023. Social Equity in Shore-Based Fisheries: Identifying and Understanding Barriers to Access. *Marine Policy* 148:105355.
- ▶ [Oregon Shellfish Farmers: Perceptions of Stressors, Adaptive Strategies, and Policy Linkages.](#)  
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## Upcoming Meetings and Conferences

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### [13<sup>th</sup> National Monitoring Conference](#)

April 24–28, 2023  
Virginia Beach, VA

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### [17<sup>th</sup> International Conference on Fisheries and Aquatic Sciences \(ICFAS\)](#)

June 5–6, 2023  
New York City, NY

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### [9<sup>th</sup> World Fisheries Congress](#)

March 3–9, 2024  
Seattle, WA

### Additional Information

This bimonthly newsletter highlights current information about fish and shellfish.

For more information about specific advisories within the state, territory, or tribe, contact the appropriate state agency listed on EPA's National Listing of Fish Advisories website at <https://fishadvisoryonline.epa.gov/Contacts.aspx>.

For more information about this newsletter, contact Sharon Frey ([Frey.Sharon@epa.gov](mailto:Frey.Sharon@epa.gov), 202-566-1480).

Additional information about advisories and fish and shellfish consumption can be found at <https://www.epa.gov/fish-tech>.