



Fish and Shellfish Program NEWSLETTER

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

EPA News

EPA Takes a Step Forward in Environmental Progress with Removal of Mercury Refining Superfund Site from Superfund National Priorities List

On March 5, 2025, the EPA took a step forward by announcing the deletion of the Mercury Refining Superfund site in the towns of Colonie and Guilderland, New York, from the Superfund National Priorities List (NPL). The EPA added the site to the NPL in 1983 due to mercury and polychlorinated biphenyls (PCBs) contamination. The site has since undergone extensive cleanup, with long-term monitoring in place to safeguard public health and the environment moving forward.

“After a successful cleanup and years of thorough monitoring, EPA is confident that the site does not pose a risk to people or the surrounding environment,” **said EPA Deputy Regional Administrator, Alyssa Arcaya.**” This Superfund site deletion reflects years of hard work and collaboration with state and local partners to restore the site.”

From 1956 to 1998, Mercury Refining Company, Inc. operated an industrial facility that recovered mercury from various materials, which left the soil, groundwater and sediment contaminated with toxic mercury and PCBs. Over the years, the New York State Department of Environmental Conservation (NYSDEC) and later, the EPA oversaw the cleanup. Work included the removal of approximately 5,700 tons of mercury-contaminated soil and sediment, and the solidification and stabilization of remaining contaminated soil including soil and groundwater below the water table. The EPA worked with the site owner to allow continued and safe use of the property during and after cleanup. The Mercury Refining Company currently uses an on-site building as an office and to process materials containing precious metals.

The EPA completed all cleanup actions at the site in 2014. Since then, the site has been subject to long-term monitoring, including regular reviews of groundwater, surface water, sediment and fish tissue sampling, ensuring that the cleanup continues to protect the community and the environment. The EPA will continue to monitor the site every five years to ensure the ongoing protection of public health and the environment.

Background

The National Priorities List (NPL) includes the nation's most contaminated hazardous waste sites and poses the most risk to human health and the environment. The EPA deletes sites or parts of sites from the NPL when no further cleanup is required to protect human health or the environment. Years, and sometimes decades, of complex investigation and cleanup work have gone into getting these sites to where they are today.

Visit the [Mercury Refining Superfund site profile page](#) for additional background and site documents.

For a copy of the pre-publication notice and more information and more information about the EPA's NPL deletions, visit the [EPA's Deleted National Priorities List webpage](#).

[Learn more about the EPA's proposed water quality standards for the Delaware River.](#)

For more information, contact Stephen McBay at mcbay.stephen@epa.gov or 929-243-0417.

Source: <https://www.epa.gov/newsreleases/epa-takes-step-forward-environmental-progress-removal-mercury-refining-superfund-site>

EPA's Region 4 Marks 15th Anniversary of Deepwater Horizon Oil Spill

Regional Administrator McOmber and staff visit coastal restoration initiatives on the Gulf Coast

On April 17, 2025, EPA Regional Administrator Kevin McOmber, leadership from the Florida Department of Protection, Escambia County, Gulf Coast Ecosystem Restoration Council (RESTORE Council) Executive Director Mary Walker, and senior advisors visited restoration projects along the Gulf Coast to mark the 15th anniversary of the Deepwater Horizon oil spill and learn about ongoing efforts to restore the impacted coastal areas.

One such restoration project is the Pensacola Bay Living Shoreline Project, a large-scale project funded by the RESTORE Council, the U.S. Department of Defense, the State of Florida, and the National Fish and Wildlife Federation, to address erosion and habitat loss across three sites near the Naval Air Station in Pensacola, Florida.

"We are pleased to be part of the efforts to restore areas along the Gulf of America Coast, an area that not only serves as a recreational resource but also an economic driver for the area," **said EPA Regional Administrator Kevin McOmber.** "We are grateful for this opportunity to see firsthand the important efforts of the RESTORE Council, Escambia County, and Florida Department of Environmental Protection to restore this vital coastline."

"We are excited to be part of the work that is taking place here in Escambia County and in communities across the Gulf Coast to restore and protect the region's beautiful natural resources. The Pensacola Living Shoreline project is an excellent example of the priority that RESTORE Council members place on maximizing the benefits of investments by working collaboratively and leveraging funds with other restoration partners," **said Mary Walker, RESTORE Council Executive Director.** "Through partnership and collaboration, we are making significant

strides in restoring the Gulf Coast's invaluable ecosystems, ensuring that the region will be resilient and vibrant for future generations."

The EPA, in coordination with federal, state and local partners, will continue to provide a wide range of expertise in water quality, marine debris, wetland restoration, and non-point source nutrient reduction to support the Deepwater Horizon Planning efforts and long-term restoration projects.

Background

The Pensacola Bay Living Shorelines Project seeks to reverse damage and restore the coastal area by using nature-based measures to prevent erosion and flooding. It will use sediment, marsh plants, and breakwaters to beef up a coastline rather than concrete or metal structures, and these natural measures can double as habitats for fish, oysters, sea turtles, birds, and other native wildlife.

Please see additional information on the [Deepwater Horizon Oil Spill](#) and efforts to [restore the Gulf of America](#). Additional information on the Pensacola Bay Living Shoreline Project is available on a Gulf Coast Ecosystem Restoration Council [Fact Sheet](#) and at the [Escambia County website](#).

For more information, contact EPA Region 4 Press Office at region4press@epa.gov or (404) 562-8400.

Source: <https://www.epa.gov/newsreleases/epa-region-4-marks-15th-anniversary-deepwater-horizon-oil-spill>

EPA Order Protects Guam Water Resources

Agency action prevents future oil spills at fuel storage facility

On May 27, 2025, the EPA announced a settlement with South Pacific Petroleum Corporation Inc. over claims of violations of the Clean Water Act at the company's facility located in Piti, Guam. Under the terms of the settlement, the company will take actions to improve operations and maintenance at the petroleum storage facility.

"Under the Clean Water Act, oily wastewater cannot go in island waterways. Guam's waters must be protected," said EPA Pacific Southwest Regional Administrator Josh F.W. Cook. "This Order will stop contamination from reaching Guam's coastal waters used for recreation and fishing. As the U.S. expands our national defense in the Pacific, Guam environmental issues will be at the top of the list."

The South Pacific Petroleum Cabras Island Terminal is a bulk petroleum storage and wholesale distribution facility that receives, stores, and distributes gasoline, diesel, and jet fuel. The facility is authorized to discharge treated oily wastewater and stormwater under a National Pollutant Discharge Elimination System permit.

In February 2025, an EPA inspector performed an on-site inspection and found that the facility had not properly operated and maintained treatment units, which led to inadequate treatment and excess oily wastewater leaving the facility and flowing into Apra Harbor.

Under the Order, South Pacific Petroleum has agreed to:

- Complete maintenance to remove oily waste and materials within the oil water separators and the oily waste storage area, and ensure materials are properly disposed.
- Complete maintenance to ensure oil water separator treatment systems are functioning properly.
- Clean the trench drains surrounding the loading rack area and ensure materials are properly disposed.
- Clean all spills within the loading rack area.
- Minimize any potential spillage for all liquid storage tanks within the loading rack area.
- Update the facility's Pollution Prevention Plan to address the noncompliance, including a cleaning schedule to remove oily waste and debris from the oil water separators at least once per year.
- Develop a Capital Improvement Project plan to upgrade, repair, and/or replace all corroded, damaged, and leaking equipment within the loading rack area, including pipes, pumps, fuel lines, switches, valves, and other components which have the potential to cause spills.

South Pacific Petroleum Corporation will be able to continue daily operations at the facility as it carries out the Order.

The National Pollution Discharge Elimination System permit program, created in 1972 by the Clean Water Act, helps address water pollution by regulating sources that discharge pollutants to waters of the United States.

Read about the EPA's enforcement program and how to report possible violations of environmental laws and regulations.

For more information, contact Alejandro Diaz at diaz.alejandro@epa.gov or (808) 284-7084.

Source: <https://www.epa.gov/newsreleases/epa-order-protects-guam-water-resources>

Recent Advisory News



South Dakota Department of Health Issues New Fish Consumption Advisories Following Comprehensive Sampling 2025

South Dakota Department of Health Issues New Fish Consumption Advisories Following Comprehensive Sampling

On May 5, 2025, the South Dakota Department of Health (SDDOH) reported that, in partnership with the Department of Agriculture and Natural Resources (DANR) and Game, Fish and Parks (GFP), has completed its annual fish collection and sampling program. This joint effort aims to assess the safety of fish consumption in various water bodies across the state.

“Our commitment to public health and safety drives the annual fish sampling program,” said Department of Health Secretary, Melissa Magstadt. “The collaboration between the SDDOH, SDDANR, and SDGFP ensures that South Dakotans have the most up-to-date information regarding fish consumption advisories.”

The SDDOH encourages the public to stay informed about these advisories and take necessary precautions to ensure the health and well-being of themselves and their families.

New advisories for 2025 are as follows:

- Dry Lake #1 (Clark County) — Limit consumption of Walleye over 21”
- Lake Henry (Kingsbury County) — Limit consumption of Walleye over 24”

These advisories are based on Mercury concentrations found in the fish samples and are aimed at providing the public with essential information to make informed decisions about their dietary choices. The mercury found in fish tissue is mostly from atmospheric deposition from sources outside of South Dakota.

“We encourage everyone to check the SDDOH website for the latest advisories and take necessary precautions when enjoying locally caught fish,” continued Secretary Magstadt.

For more information and the complete list of Fish Consumption Advisories, please visit the [SDDOH website](#).

For more information, contact Tia Kafka at DOHMedia@state.sd.us.

Source: <https://doh.sd.gov/news/south-dakota-department-of-health-issues-new-fish-consumption-advisories-following-comprehensive-sampling-2025/>



Virginia Health Officials Issues Fish Consumption Advisory for Chickahominy Watershed

Virginia Health Officials Issues Fish Consumption Advisory for Chickahominy Watershed

Contaminants Identified in Creek Chubsucker, Chain Pickerel, Largemouth Bass and Sunfish Species

On May 9, 2025, and effective immediately, the Virginia Department of Health (VDH) issued a fish consumption advisory for the Chickahominy Watershed due to elevated [perfluorooctane sulfonate](#) (PFOS) levels in specific fish species. The affected species include creek chubsucker, chain pickerel, largemouth bass, and sunfish.

Fish tissue samples show elevated PFOS levels in certain fish species. These amounts exceed the amount considered safe for long-term human consumption. The samples, collected from November 2021 through September 2023, are from the Chickahominy River and White Oak Swamp.

VDH advised eating no more than two fish meals per month from the Chickahominy River. VDH advised against eating any of the specified fish meals from White Oak Swamp. See the table below for consumption recommendations by species.

The advisory is for the Chickahominy River/Lake and the White Oak Swamp and all tributaries. For the Chickahominy River, the advisory extends from the

confluence of the Chickahominy River with the James River, upstream to the State Route 360 bridge at the

Waterbody	Creek Chubsucker	Chain Pickerel	Largemouth Bass	Sunfish
Chickahominy River	N/A	≤ 2 Meals*/Month	≤ 2 Meals/Month	≤ 2 Meals/Month
White Oak Swamp	No Meals	No Meals	N/A	No Meals
*Meal is defined as 8 ounces of fish.				

Henrico-Hanover County line near Mechanicsville. For the White Oak Swamp, the advisory extends from the confluence of White Oak Swamp and the Chickahominy River, upstream to the headwaters of White Oak Swamp and White Oak Swamp Creek near the Richmond International Airport.

The health effects of PFOS exposure can include increased cholesterol or changes in liver enzymes. It can also lower antibody response to some vaccines. It can cause pregnancy-induced hypertension and preeclampsia, and a decrease in birth weight.

Fish consumption advisories alert people to contaminants present in affected fish species. They do not prohibit people from eating fish. Children and women who are pregnant or who may become pregnant have an increased health risk. Nursing mothers and young children should not eat fish from this advisory area.

Currently, this advisory area poses no health risk for recreational activities. Swimming, water skiing, and boating can continue in the advisory area.

Cleaning or cooking fish does not remove or reduce PFOS. To reduce potential harmful effects, VDH recommends the following precautions:

- Eat smaller, younger fish (within the legal limits). Younger fish are less likely to contain harmful levels of contaminants.
- Eat fewer or smaller servings of fish.
- Try to eat different species of fish from a variety of sources (i.e., different creeks, rivers and streams).

For more information, visit the VDH [Fish Consumption Advisory page](#) or contact Brookie Crawford at brookie.crawford@vdh.virginia.gov.

Source: <https://www.vdh.virginia.gov/news/2024-regional-news-releases/virginia-health-officials-issues-fish-consumption-advisory-for-chickahominy-waterhead/>



Alabama Department of Public Health Issues 2025 Fish Consumption Advisories

On May 14, 2025, the Alabama Department of Public Health (ADPH) reported their annual updates to fish consumption advisories based on data collected the preceding fall by the Alabama Department of Environmental Management (ADEM).

ADEM, the Tennessee Valley Authority (TVA), and the Alabama Department of Conservation and Natural Resources (ADCNR) collected samples of specific fish species for analysis from various waterbodies throughout the state during the fall of 2024 (492 samples: 42 collection stations). ADPH assessed the analytical results to determine whether any of the tested contaminants in the fish may give rise to potential human health effects.

Fish consumption advisories are issued for specific waterbodies and specific species taken from those areas. In reservoirs, advisories apply to waters as far as a boat can be taken upstream in a tributary, that is, to full pool elevations.

Newly issued advisories will be represented as the safe number of meals of that species of fish that can be eaten in a given period of time, such as meals per week, meals per month or do not eat any. A meal portion consists of 6 ounces of cooked fish or 8 ounces of raw fish.

New and updated consumption advisories issued for the 42 bodies of water tested can be found on the [ADPH Toxicology website](#).

The advice contained in this release and complete listings of the posted fish consumption advisories are offered as guidance to individuals who wish to eat fish they catch from various waterbodies throughout the state. No regulations ban the consumption of any of the fish caught within the state, nor is there a risk of an acute toxic episode that could result from consuming any of the fish containing the contaminants for which the state has conducted analyses.

A fish consumption advisory can be issued for one or more specific species of fish within a waterbody or an advisory can be extended to include all fish species within that waterbody. When excess levels of a contaminant are found in a specific species of fish, an advisory is issued for that specific species. For example, if an advisory had been issued for largemouth bass and not for channel catfish, it would be advised that individuals should not eat largemouth bass, but consumption of channel catfish is permissible without endangering health. When excess levels of a contaminant are found in multiple fish species sampled from a specific waterbody, a Do Not Eat Any advisory is issued. Consumption of any fish from a specific waterbody under a Do Not Eat Any advisory may place the consumer at risk for harm from the contaminant.

If a species is listed in the advisory, it is prudent to assume that similar species with similar feeding habits should be consumed with caution. For example, if black crappie is listed and white crappie is not, because they are in the same family, all crappie would fall under the listed advisory.

For more information, contact John Guarisco at (334) 206-5973.

Source: <https://www.alabamapublichealth.gov/blog/2025/05/nr-14.html>

Other News

New Sea Grant Report Helps Great Lakes Fish Farmers Navigate Aquaculture Regulations

This Sea Grant publication will serve as a valuable resource for fish farmers and policymakers navigating the complex legal environment of aquaculture.

On March 31, 2025, the National Oceanic and Atmospheric Administration (NOAA) wrote that fish farmers across the Great Lakes states can face a confusing web of permits, policies and regulations that can hinder the growth of their operations. A new Sea Grant publication, [Aquaculture Regulation in the Great Lakes](#), offers much-needed clarity.

The report breaks down complex legal frameworks and provides practical insights to help aquaculture producers understand and navigate state and regional requirements with greater confidence. It was developed by the [National Sea Grant Law Center](#) (NSGLC) in partnership with the [Minnesota Sea Grant](#)-led [Great Lakes Aquaculture Collaborative](#) (GLAC), which formed to support aquaculture in the eight Sea Grant programs that border the Great Lakes and Lake Champlain Sea Grant.

“Understanding the regulatory landscape is crucial for the growth and sustainability of aquaculture in the Great Lakes region,” said Amy Schrank, MNSG extension leader, fisheries and aquaculture extension educator, and GLAC project lead. “This publication serves as a valuable resource for fish farmers and policymakers to navigate a complex legal environment and identify opportunities for harmonization and improvement.”

The comprehensive report offers an in-depth analysis of the legal frameworks governing aquaculture across the eight Great Lakes states and Lake Champlain and aims to support the development of an environmentally responsible and sustainable aquaculture industry in the region. The report and appendices provide an overview of each state’s existing aquaculture laws, regulations and policies.

The report involved an examination of state laws, permitting requirements, approved and prohibited species and health requirements relating to aquaculture. The report also included select state environmental laws, regulations and permits that may implicate aquaculture production, including water withdrawal, pollutant discharge, wetlands and right-to-farm laws.

The report’s analysis identified commonalities, differences and potential gaps that may present challenges to aquaculture operations across the Great Lakes region. The findings are intended to enhance understanding and facilitate informed decision-making among fish farmers, regulators, stakeholders, policymakers and others involved in aquaculture.

This report on aquaculture regulations and other Great Lakes aquaculture resources are available on Sea Grant’s Great Lakes Aquaculture Collaborative [resources](#) webpage.

For more information, contact Amy Schrank at aschrank@umn.edu, Terra Bowling at tmharget@olemiss.edu or 662-915-7775, or Marie Thoms at methoms@d.umn.edu.

Source: <https://seagrant.umn.edu/articles/nsglc-aq-reg-report> and reposted <https://seagrant.noaa.gov/new-sea-grant-report-helps-great-lakes-fish-farmers-navigate-aquaculture-regulations/>

Hawai'i Fishermen Reel in Data With Local Tagging Project

On June 2, 2025, NOAA reported that Hawai'i anglers are tagging popular game fish with Pacific Islands Fisheries Group to power informed and abundant fisheries.

In Hawai'i, fishing isn't the only thing passed down through generations. Kaua'i fisherman Cory Olores grew up watching his father carefully tag and release his catch. He's continuing that legacy through the Pacific Islands Fisheries Group's Tag It project. The program has harnessed the capacity of anglers across Hawai'i and led to more than 20,000 tagged fish. The tagged fish provide critical data for scientists to understand and ensure abundant fish populations.



Anglers with the Tag It program use numbered dart tags to mark their catch before releasing it. (Photo courtesy of NOAA Fisheries).

For Fish, Fishermen, and the Future

NOAA Fisheries works to expand access to U.S. recreational fishing through science-based conservation and management. And no one wants to preserve their way of living and pastime more than fishermen.

The Tag It program empowers local anglers to be part of improving their fisheries. "Everyone's so passionate about our resource, about access to it, and about perpetuating that for future generations," said Alex Min, Tag It project coordinator, "That's why we're involved with tagging."

Tags Tell a Story

Scientists use data to understand how fish populations are doing. That's where partnerships between fishermen and scientists are vital. Tag It participants collect and share key data from tagged fish like length, date and time of catch, and location. (Don't worry — the program uses general location to compare capture locations, so it doesn't reveal secret fishing spots.)

"Whatever type of information I can give them, I'll give them," Olores said of the ulua he tags and releases. "I'm trying to save the fish — to get information to preserve the fish for future generations." Olores first witnessed his father tag fish as a kid on Kaua'i and has always been curious about how he can help maintain fishing opportunities in Hawai'i.

Each time someone tags a fish, it adds a detail to the storyline. This helps scientists piece together how fish live, move, and change over time. The more data collected, the clearer the story becomes. And this helps anglers, too.

“It’s actually making me open my eyes more to figuring out the way they live,” Olores said. “I’ll take a picture; I’ll jot down what time I caught it; and I look at the tide ... [and see] they actually bite better at this tide. I’m actually recording my catches and seeing what’s working better.”

Year-Round Fishing Tournament Open to All

According to Min, Tag It is such a great program because it’s fishermen-led, and anyone can join. One way to get started is the 2025 Tagging Tournament, a year-long event that NOAA Fisheries is supporting to enhance public-private partnerships in recreational fishing. Active taggers take on different challenges each month. Whether it’s the most tagged fish in a day or a species-focused challenge — there’s an opportunity for every angler.

“I love the people. We have some of the best anglers and fishermen in the ranks tagging fish,” Min said. “It’s just incredible ... we’re really fortunate to have that kind of talent and capacity tagging fish for the future.”



Releasing a tagged fish allows other anglers to catch the fish again and can lead to more data on fish growth and movement over time. (Photo courtesy of NOAA Fisheries).

For more information, contact the Pacific Islands Regional Office at piro.info@noaa.gov.

Source: <https://www.fisheries.noaa.gov/feature-story/hawaii-fishermen-reel-data-local-tagging-project>

Your Recreational Catch Information Helps Assess the Health of our Fisheries

On June 2, 2025, experts at NOAA Fisheries, in consultation with states and regional partners, perform stock assessments using a wide range of available data. These assessments assure our shared fisheries resources remain productive, sustainable, and economically viable.

Recreational fishing is one of the great American pastimes — fostering connections to nature, family, and friends. It’s also a [national economic driver](#), supporting 700,000 jobs and generating \$138 billion in sales.

Experts at NOAA Fisheries’ regional science centers, in consultation with states and regional partners and through a public process, perform [stock assessments](#). These assessments determine species’ abundance and health to inform subsequent fisheries management plans. They assure our shared fisheries resources remain productive, sustainable, and economically viable.

To learn more about stock assessments, data from the [Marine Recreational Information Program](#) (MRIP), and data limitations and uncertainties, please see the full article on the [NOAA Fisheries website](#).

For more information, contact the NOAA Greater Atlantic Regional Fisheries Office at nmfs.gar.garfo@noaa.gov.

Source: <https://www.fisheries.noaa.gov/feature-story/your-recreational-catch-information-helps-assess-health-our-fisheries>

Casting a Conservation Legacy and 75 Years of the Sport Fish Restoration Act

On June 5, 2025, the U.S. Fish and Wildlife Service announced that this year, the Sport Fish Restoration Act turns 75. This milestone marks three-quarters of a century ensuring that sport fish populations and aquatic habitats are healthy, sustainable, and accessible for all. No other funding method has had the same longevity, consistency, and significance for fisheries management in the United States.

The Sport Fish Restoration Act, also known as the Dingell-Johnson Act, was signed into law at a time when the country was reshaping its identity after World War II. While industry reached new heights and suburbia sprawled, aquatic wild places — our rivers, lakes, and estuaries — were at risk of becoming afterthoughts. Fish stocks were in trouble, waterway access was an issue, and communities were losing their connection to nature. Representative John Dingell Sr. and Senator Edwin C. Johnson sought to change this and modeled new legislation after the successful Pittman-Robertson Act of 1937, which funded wildlife conservation through federal excise taxes on firearms and ammunition.

The congressmen applied the same principle to sportfishing, a federal excise tax paid by the manufacturers of most fishing equipment that would support state and territorial fish and wildlife agency fisheries management efforts, habitat restoration, angling opportunities, and waterway access.

A Watershed Investment

Sport Fish Restoration Act funding, administered by the U.S. Fish and Wildlife Service's Office of Conservation Investment, provides Americans with the best sport fisheries in the world. Every state, territory, and commonwealth benefits, from Alaska, with its trout fishing in the Kenai River, to Florida, with its productive estuaries. The act supports the maintenance and operation of over 9,000 public boating and fishing access areas, provides aquatic education and an introduction to fishing to nearly 850,000 individuals annually, allows state biologists to manage and monitor over 200 species of sport fish, and funds the operations of more than 320 state fish hatcheries that stock more than 1 billion fish annually into American waterways.

All of this is accomplished through the act's authorization of a 10% federal excise tax on fishing equipment, a 3% tax on electric boat motors and tackle and fly boxes, import duties on tackle, pleasure boats and yachts, and a portion of the federal gas tax that is attributable to motorboats and small engines. To date, eligible state, commonwealth and territory agencies have received more than \$12 billion in federal funds, matched by billions of dollars in state license funds to foster fisheries conservation and connect people with the outdoors.

The state-industry-federal partnership created by the act has turned aging boat ramps into sturdy concrete launches and eroding banks into thriving angling streams. It has helped restore species like cutthroat trout, lake sturgeon, and striped bass. If you have ever watched a kid hook a bluegill in a suburban pond, been amazed by the gargantuan largemouth bass caught in a fishing tournament, or launched your boat from a public access point, chances are the Sport Fish Restoration Act had something to do with it.

More Than Just Fish and Outdoor Access

The Sport Fish Restoration Act isn't just about sport fish and waterways, it's about people. It's about the grandparents teaching their grandchildren to tie a clinch knot, the family enjoying a day on the water, and the communities that share meals of freshly harvested fish. There is an intimate link between stewardship and the intrinsic, utilitarian, and cultural value of America's fisheries. These fisheries and waterways connect us, to resources, to memories, to each other, and to something larger and longer lasting than ourselves.

Adapting for Tomorrow

As it celebrates its 75th anniversary, the Sport Fish Restoration Act faces a modern world that looks much different than the one Dingell and Johnson knew. But the framework they built on an industry-state-federal partnership remains remarkably resilient and ready to address challenges and opportunities for decades to come. As anglers make their way to their favorite fishing spots and bait hooks in this 75th year, most won't think about the legislation behind the water they float or the fish they catch. The Sport Fish Restoration Act was never about credit, it is about conserving fisheries resources and continuing outdoor access.

Still, it's worth pausing — maybe while tying on a new lure or rinsing off your boat — to remember that thriving fish stocks and clean accessible waterways didn't happen by accident. It happened because Americans decided that sport fish and healthy waterways were worth investing in and that a shared partnership could lead to a collective legacy.

For more information, contact Cynthia Sandoval of the FWS Office of Conservation Investment at Cynthia_d_sandoval@fws.gov.

Source: <https://www.fws.gov/story/2025-06/casting-conservation-legacy-75-years-sport-fish-restoration-act>

Recently Awarded Research

U.S. Fish and Wildlife Service and Partners Announce More Than \$23.4 Million for Fish Habitat Conservation in 2025

On June 11, 2025, the U.S. Fish and Wildlife announced through the National Fish Habitat Partnership (NFHP), that the U.S. Fish and Wildlife Service and partners are providing more than \$23.4 million to support 53 on-the-ground fish habitat conservation projects in 29 states. The Service is providing \$5.9 million this year, with non-governmental organizations, state resource agencies, and other partners contributing an additional \$20.4 million. This represents a 6.7:1 leveraged funding match for NFHP funding.

These projects empower and boost locally led conservation efforts that restore and reconnect habitats to create more robust fish populations, improved fishing opportunities, and healthier waterways. Twenty individual Fish Habitat Partnerships across the nation make up our national efforts and work with a variety of partners, including private landowners, farmers and ranchers, Tribes, non-profit organizations, state, federal, and local government agencies, and many others to achieve fish habitat conservation goals that protect, restore, and enhance habitat conditions locally for fish.



River herring returning up the Merrimack River in New England. The National Fish Habitat Partnership works to conserve fish habitat nationwide, leveraging federal, state, Tribal, and private funding resources to achieve the greatest effect on fish populations through priority conservation projects. (Photo courtesy of U.S. Fish and Wildlife Service).

In 2025, project types include removing barriers to fish passage, reducing erosion from farm and ranchlands, restoring stream banks, combating the impacts of drought, and conducting monitoring and assessment work to identify conservation needs for fish and their habitats. This year's projects meet local priorities through partnerships that span from restoring urban and suburban streams to reconnecting tidal wetlands, in states across the country from Alaska to Vermont. Projects target and address limiting factors to improve habitat, water quality, and benefit our nation's fisheries resources. This funding will also support the coordination of individual Fish Habitat Partnerships and the operations of the National Fish Habitat Board to help establish national priorities under NFHP.

"Annually, the National Fish Habitat Partnership focuses on putting priority conservation projects on-the-ground through partnerships, which benefit both fish and the American people," said **Tim Schaeffer, Executive Director of the Pennsylvania Fish and Boat Commission and Chair of the National Fish Habitat Board**. "These locally-driven projects are designed to leave a conservation legacy for the protection, restoration and enhancement of fish habitat for future generations to enjoy in the outdoors."

NFHP uses a nationally focused aquatic conservation strategy to maximize the reach of limited fish habitat conservation dollars. Under NFHP, federal, state, Tribal, and privately raised funds are leveraged through regional Fish Habitat Partnerships to address the nation's biggest fish habitat challenges. The Service is a key partner in implementing the partnership, providing leadership and technical expertise on the local, regional, and national levels, as well as financial assistance directly to partners for on-the-ground conservation projects. Since 2006, the Service has provided over \$65.6 million to conservation projects which leveraged at a 5:1 ratio to provide over \$335 million in funding support for fish habitat conservation projects that improve angling and recreational opportunities across the nation.

NFHP assembles the collective expertise of federal, state, and non-governmental organizations to identify and prioritize conservation work to achieve significant benefits for fish and other aquatic resources for the American people.

About the National Fish Habitat Partnership

Since 2006, NFHP has supported over 1,500 projects benefitting fish habitat throughout all 50 states. This effort works to conserve fish habitat nationwide, leveraging federal, state, Tribal, and private funding resources to achieve the greatest effect on fish populations through priority conservation projects of 20 Fish Habitat Partnerships that are organized around key fish species, geographic areas, or important fish habitats. In 2020, NFHP was recognized by Congress as part of the America's Conservation Enhancement Act and was reauthorized in 2024 through passage of the America's Conservation Enhancement Reauthorization Act. NFHP guidance and policies are developed in conjunction with our partnerships and National Fish Habitat Board.

To learn more about the partnership, please visit: [National Fish Habitat Partnership](#).

To learn more about past projects and accomplishments, please visit: [NFHP Projects and Accomplishments Dashboard](#).

For more information, contact Robyn Carlo at robyn_carlo@fws.gov.

Source: <https://www.fws.gov/story/2025-06/us-fish-and-wildlife-service-and-partners-announce-more-234-million-fish-conservation>

Tech and Tools

Advancing Fish Disease Research Through CRISPR-Cas Genome Editing: Recent Developments and Future Perspectives

In their review article published to *Fish and Shellfish Immunology* on February 21, 2025, authors Huria Marnis and Khairul Syahputra wrote that CRISPR-Cas genome editing technology has transformed genetic research by enabling unprecedented precision in modifying DNA sequences across various organisms, including fish. This review explores the significant advancements and potential uses of CRISPR-Cas technology in the study and management of fish diseases, which pose serious challenges to aquaculture and wild fish populations. Fish diseases cause significant economic losses and environmental impacts, therefore effective disease control is a top priority. The review highlights the pivotal role of CRISPR-Cas in identifying disease-associated genes, which is critical to comprehending the genetic causes of disease susceptibility and resistance. Some studies have reported key genetic factors that influence disease outcomes, using targeted gene knockouts and modifications to pave the way for the development of disease-resistant fish strains. The creation of such genetically engineered fish holds great promise for enhancing aquaculture sustainability by reducing the reliance on antibiotics and other conventional disease control measures. In addition, CRISPR-Cas has facilitated in-depth studies of pathogen-host interactions, offering new insights into the mechanisms by which pathogens infect and proliferate within their hosts. By manipulating both host and pathogen genes, this technology provides a powerful tool for uncovering the molecular underpinnings of these interactions, leading to the development of more effective treatment strategies. While CRISPR-Cas has shown great promise in fish research, its application remains limited to a few species, primarily model organisms and some freshwater fish. In addition, challenges such as off-target effects, ecological risks, and ethical concerns regarding the release of genetically modified organisms into the environment must be carefully addressed. This

review also discusses these challenges and emphasizes the need for robust regulatory frameworks and ongoing research to mitigate risks. Looking forward, the integration of CRISPR-Cas with other emerging technologies, such as multi-omics approaches, promises to further advance our understanding and management of fish diseases. This review concludes by envisioning the future directions of CRISPR-Cas applications in fish health, underscoring its potential for growing use in the field.

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Source: <https://doi.org/10.1016/j.fsi.2025.110220>

Two-Year Follow-Up on an Environmental Health Literacy Software Intervention for Anishinaabe Native Americans

On April 2, 2025, a team of academic and Anishinaabe scientists co-developed a fish consumption advisory for the Anishinaabe using software that can be accessed via mobile phones and the internet. The researchers conducted a randomized control trial to test changes in environmental health literacy including fish consumption behaviors, published in [September 2022](#), and then conducted a two-year follow up on the study published in [April 2025](#). The EPA previously featured this work in the [January 2023 Fish and Shellfish Program Newsletter](#).

For more information, contact Matthew Dellinger at mdellinger@mcw.edu.

Eyes in the Sky for Aquaculture Farmers: Location Scouting Using Satellite Data

On May 6, 2025, NOAA reported that scientists at NOAA Fisheries and CoastWatch leverage remote sensing technology for aquaculture.



The Visible and Infrared Imager/Radiometer Suite is a NOAA satellite sensor that collects valuable data used by fisheries scientists (Photo courtesy of NASA).

When you're looking to start an oyster farm, there are a lot of environmental factors to consider. How cold is the water? What kinds of algae are found there, and how abundant are they? How do weather and water conditions change throughout the year? All of these factors influence how fast an oyster can grow, how much they have to eat, their likelihood of survival — and your farm's bottom line.

Determining these factors and finding the best farm location can take a great deal of time and money. However, using satellite data, a dedicated team of researchers aims to help aquaculture growers.

NOAA's National Environmental Satellite Data and Information Service's CoastWatch and NOAA Fisheries partnered to adapt a new satellite-derived Habitat Suitability Index to identify productive regions for seafood

farming. Using satellite imagery, they can collect data on a number of water quality parameters quickly and efficiently.

Satellites are uniquely valuable because they routinely collect large amounts of data over vast areas. These kinds of data are only available from space.

“Remote sensing helps take the guesswork out of shellfish farming, providing ocean intelligence to guide better siting decisions,” said Ken Riley, science branch chief for the Office of Aquaculture. “By peering down from space, we can monitor water quality, temperature, and ocean conditions, ensuring shellfish farms are placed in optimal locations.”

Studying Shellfish Suitability from Space

Scientists analyzed data from two satellites, [NASA’s Landsat-8](#) and the [European Space Agency’s Sentinel-2](#), for the Damariscotta River in the Gulf of Maine. They followed the methods of a [published study](#) from the University of Maine. The Damariscotta River estuary has a thriving oyster industry, making it an ideal place to conduct this study.

The satellites measured sea surface temperature, plankton abundance, and water clarity. All of these factors impact how quickly oysters grow, their likelihood of survival, and when they spawn. These data were used to calculate an oyster habitat suitability index based on the ecology and life cycle of Eastern oysters.

The researchers then used the habitat suitability index to generate seasonal maps of growing conditions for the oysters. These highlighted both suitable and unsuitable regions to grow oysters. They also went back in time to 2016, giving farmers a historic look at environmental conditions relevant to their oysters. This data-driven method is more efficient than trial-and-error approaches, giving farmers the best available information with which to make decisions.

Even beyond site selection, the index continues to be useful in farm management. Farmers are able to use satellite data to [monitor environmental conditions](#) and take proactive measures to protect their shellfish.

“Growing” American Seafood Security

While the United States is a world leader in aquaculture science and technology, we rank 20th in production. In 2022, the U.S. imported more than \$29 billion in seafood from abroad.

Growing the domestic aquaculture industry can help address the increasing demand for seafood and reduce the seafood trade deficit.

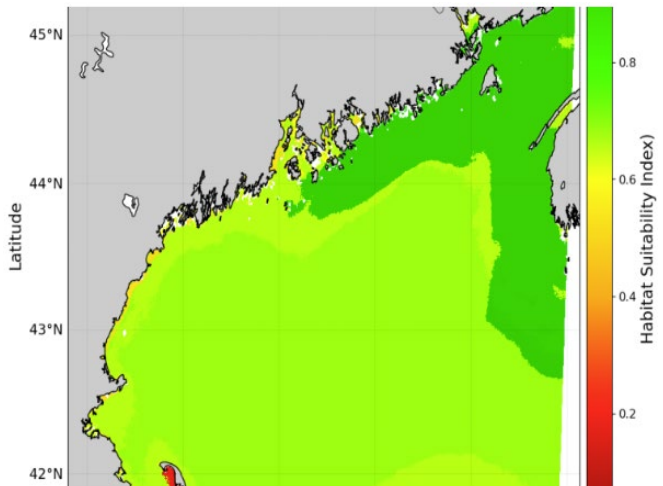
Habitat suitability indices have the potential to be adapted for offshore aquaculture development and the identification of Aquaculture Opportunity Areas. These indices could be adapted to include different farmed seafood species such as mussels, scallops, seaweeds, and finfish.

For example, NOAA CoastWatch researchers have worked with farmers and ecologists to formulate a habitat suitability index for blue mussels, an economically valuable species with very different growing conditions than oysters. The blue mussel habitat suitability index product was developed using additional satellite sensors to enhance spatial coverage in the offshore region. It includes more than a decade of data and shows that the offshore regions of the Gulf of Maine are ideal for mussel farming.

The goal is to make all this data available to the public, helping to ease the burden of data collection and location scouting for growers. This cutting-edge technology, which uses satellites to expand domestic aquaculture, is a powerful demonstration of NOAA's science and contribution to the American economy.

For more information, contact the NOAA Greater Atlantic Regional Fisheries Office at nmfs.gar.garfo@noaa.gov.

Source: <https://www.fisheries.noaa.gov/feature-story/eyes-sky-aquaculture-farmers-location-scouting-using-satellite-data>



Scientists used satellite data to create the blue mussel Habitat Suitability Index for the Gulf of Maine (Photo courtesy of NOAA).

Recent Publications

Journal Articles

- ▶ [Chemical Mixtures of Mercury, PCBs, PFAS, and Pesticides in Freshwater Fish in the U.S. and the Risks They Pose for Fish Consumption.](#)
Wu, P., C. Foley, W. Heiger-Bernays, and C. Chen. 2025. Chemical Mixtures of Mercury, PCBs, PFAS, and Pesticides in Freshwater Fish in the U.S. and the Risks They Pose for Fish Consumption. *Environmental Research* 266:120381.
- ▶ [Cleaner Cuts: Farmed Fish and Skin-Off Fillets Are Lower in Per-and Polyfluoroalkyl Substances \(PFAS\)](#)
Figueroa-Muñoz, G., C.A. Murphy, K. Whittum, and J. Zydlewski. 2025. Cleaner Cuts: Farmed Fish and Skin-Off Fillets Are Lower in Per-and Polyfluoroalkyl Substances (PFAS). *Science of The Total Environment* 959:178266.
- ▶ [Ecological Drivers of Mercury Accumulation in Oceanic Apex Predators: A Human Consumption Advisory](#)
Alencar Goyanna, F.A. de, M.F. Bezerra, G.B. da Silva, C.E. de Rezende, W.R. Bastos, and L.D. de Lacerda. 2025. Ecological Drivers of Mercury Accumulation in Oceanic Apex Predators: A Human Consumption Advisory. *Science of The Total Environment* 970:178994.
- ▶ [Evaluating the Environmental Occurrence of Per-and Polyfluoroalkyl Substances \(PFAS\) and Potential Exposure Risk for Recreational Shellfish Harvesters in the Great Bay Estuary, New Hampshire](#)
Gardiner, C.L., J.M. Petali, C.Y. Chen, N.G. Giffard, S. Fernando, T.M. Holsen, J.R. Varghese, M.E. Romano, and K.A. Crawford. 2025. Evaluating the Environmental Occurrence of Per-and Polyfluoroalkyl Substances (PFAS) and Potential Exposure Risk for Recreational Shellfish Harvesters in the Great Bay Estuary, New Hampshire. *Science of The Total Environment* 986:179747.
- ▶ [Fish Consumption Advice Is Depriving Children of Neurolipids and Other Nutrients Essential to Brain and Eye Development.](#)
Spiller, P., J.T. Brenna, S.E. Carlson, J. Golding, M.A. Crawford, J.R. Hibbeln, B.V. Koletzko, J. Columbo, P. Kris-Etherton, and S.L. Connor. 2025. Fish Consumption Advice Is Depriving Children of Neurolipids and Other Nutrients Essential to Brain and Eye Development. *NeuroToxicology*.
- ▶ [Fish Gut Microbiome and its Application in Aquaculture and Biological Conservation](#)
Kanika, N.H., N. Liaqat, H. Chen, J. Ke, G. Lu, J. Wang, and C. Wang. 2025. Fish Gut Microbiome and its Application in Aquaculture and Biological Conservation. *Frontiers in Microbiology* 15:1521048.
- ▶ [Past, Current and Future Techniques for Monitoring Paralytic Shellfish Toxins in Bivalve Molluscs](#)
Finch, S.C., and D.T. Harwood. 2025. Past, Current and Future Techniques for Monitoring Paralytic Shellfish Toxins in Bivalve Molluscs. *Toxins* 17(3):105.
- ▶ [Research Advances on Fish Feeding Behavior Recognition and Intensity Quantification Methods in Aquaculture.](#)
Zhang, S., D. Li, J. Zhao, M. Yao, Y. Chen, Y. Huo, X. Liu, and H. Wang. 2025. Research Advances on Fish Feeding Behavior Recognition and Intensity Quantification Methods in Aquaculture. *arXiv preprint arXiv:250215311*.
- ▶ [Spatial Trends and Health Risks of Per-and Polyfluoroalkyl Substances in San Francisco Bay Fish from 2009 to 2019](#)
Méndez, M.A., J. Davis, E.L. Miller, R. Grace, and R. Sutton. 2025. Spatial Trends and Health Risks of Per-and Polyfluoroalkyl Substances in San Francisco Bay Fish from 2009 to 2019. *ACS Es&t Water*.
- ▶ [Surveying Urban Anglers with Community Partner Input to Assess Contamination Risk and Inform Environmental Management.](#)
Meadows-McDonnell, M., F. Gigliotti, J.I. Espinosa, and R.D. Flamenco. 2025. Surveying Urban Anglers with Community Partner Input to Assess Contamination Risk and Inform Environmental Management. *Environmental Challenges*:101179.
- ▶ [Two-Year Follow-up on an Environmental Health Literacy Software Intervention for Anishinaabe Native Americans.](#)
Dellinger, M.J., S. Reed-Thryselius, B. Sieloff, S. Keller, A. Visotcky, T. Chelius, and O. Wichmann. 2025. Two-Year Follow-up on an Environmental Health Literacy Software Intervention for Anishinaabe Native Americans. *Journal of Great Lakes Research* 51(2):102543.

Upcoming Meetings and Conferences

American Fisheries Society

August 10–14, 2025

San Antonio, TX

118th Annual Meeting of the NSA

March 22–26, 2026

Portland, OR

SETAC North America 46th Annual Meeting

November 16–20, 2025

Portland, OR

Additional Information

This bimonthly newsletter highlights recent news about fish and shellfish.

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

For more information about this newsletter, email Fish_Advisory@epa.gov.

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