



# Fish and Shellfish Program NEWSLETTER

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

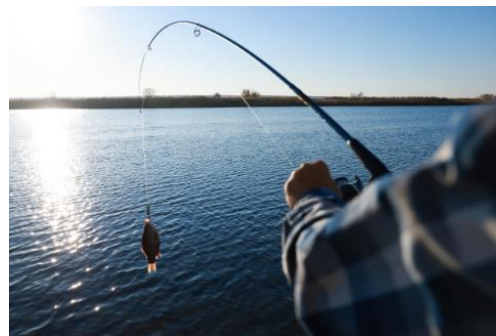
## Recent Advisory News



### 2024 Sport Fishing – New Change to the 2023 West Virginia Fish Consumption Advisories

On January 1, 2024, the West Virginia Department of Health (WVDH) announced an update to the West Virginia Sport Fish Consumption Advisory for 2024. The 2024 advisory updates are the result of reviewing the recent data of fish tissues and re-analysis of historical data. The current West Virginia Sport Fish Consumption Advisory can be reviewed at <https://oehs.wvdhhr.org/fish>.

WVDH partners with the West Virginia Department of Environmental Protection and the West Virginia Division of Natural Resources (WVDNR) to develop consumption advisories for fish caught in West Virginia waters. Fish consumption advisories are updated each year to help West Virginia anglers and their families make educated choices about eating the fish they catch.



*(Photo courtesy of West Virginia Department of Health)*

One change has been implemented in the 2024 West Virginia Fish Consumption Advisories: A fish consumption limit of “one meal a week” is advised for largemouth bass, white crappie, bluegill, and green sunfish in Upper Mud Reservoir due to the selenium levels detected. The 2024 WVDNR fishing regulation and consumption advisories can be reviewed at [https://wvdnr.gov/wp-content/uploads/2024/01/Pub\\_Regs\\_2024Fishing\\_DNR\\_WILD\\_DIGITAL\\_hires\\_pp.pdf](https://wvdnr.gov/wp-content/uploads/2024/01/Pub_Regs_2024Fishing_DNR_WILD_DIGITAL_hires_pp.pdf).

Low levels of chemicals such as polychlorinated biphenyls (PCBs), mercury, dioxin, and selenium have been found in some fish from certain waters. The West Virginia Sport Fish Consumption Advisory is advice and should not be viewed as law or regulation. It is intended to help anglers and their families decide where to fish, what types of fish to eat, the frequency at which the fish are consumed, and how to prepare and cook fish to reduce

contaminants. Women of childbearing age, children, and people who regularly eat fish are particularly susceptible to contaminants that build up over time. Individuals falling into one of those categories should be especially careful to follow the guidelines within the West Virginia Sport Fish Consumption Advisory.

The West Virginia Sport Fish Consumption Advisory covers only sport fish caught in West Virginia waters. Safety regulations and advisories for fish in the marketplace are the responsibility of the United States Food and Drug Administration (FDA).

For more information, please visit <https://www.epa.gov/fish-tech/epa-fda-advice-about-eating-fish-and-shellfish> or contact [DHCommunications@wv.gov](mailto:DHCommunications@wv.gov).

Source: <https://dhhr.wv.gov/News/2024/Pages/2024-Sport-Fishing---New-Change-to-the-2023-West-Virginia-Fish-Consumption-Advisories.aspx>



## Wisconsin Department of Natural Resources (WDNR) and Wisconsin Department of Health Services (WDHS) Issue Updated Safe Fish Consumption Guidelines

On February 6, 2024, the WDNR, in partnership with the WDHS, announced the online publication of the [2024–2026 Choose Wisely booklet](#), which outlines guidelines for safe fish consumption.

Fish are full of important nutrients like omega-3s and are a great source of lean protein. However, fish may also contain pollutants from their environment and the food that fish consume that can cause health risks for humans.

To address this, WDNR fisheries staff routinely sample fish from areas with suspected pollution or contamination as well as from heavily fished areas. Based on the levels of contaminants found, like [PCBs](#), [mercury](#), and [perfluorooctane sulfonate \(PFOS\)](#), experts are able to determine the amount of fish that is safe to consume over a person's lifetime to avoid negative health impacts.

“We test for contaminants in fish from a number of locations each year and use those new results, along with past testing, to update the advice for those newly tested waters,” said Sean Strom, WDNR environmental toxicologist. “It’s important for anglers who frequently eat fish to be aware of advisory updates.”

This updated version of the Choose Wisely booklet identifies new advisories for Wisconsin waterbodies that have either elevated or decreased levels of contaminants, including:

- Removing of PFOS-based guidance for Black Earth Creek (Dane County) and the mercury-based guidance for Kentuck Lake (Vilas County) based on additional monitoring which showed consistently low enough levels to rescind the advisories
- Adding a PFOS-based advisory for the Hat Rapids Flowage on the Wisconsin River (Oneida County)
- New PFOS-based consumption advice for all species in the Moen Chain of Lakes (Oneida County)

- Modifications to consumption advice for certain species of Lake Michigan fish
- Adding a PFOS-based advisory for the La Crosse River from Angelo Pond to the Neshonoc Dam, including Perch and Neshonoc lakes (Monroe and La Crosse counties)

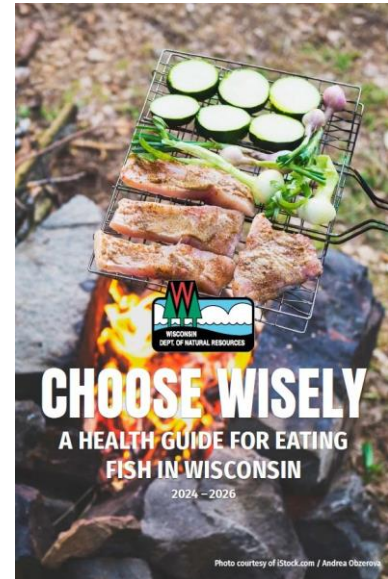
The WDNR encourages the public to follow the safe-eating guidelines outlined in the Choose Wisely booklet to reduce the risk of exposure to unwanted contaminants.

“When you follow Wisconsin’s fish consumption advice, you are still able to enjoy the many health benefits from eating fish while limiting your contact with contaminants that can build up in them,” said Dr. Sheryl Bedno, WDHS Chief Medical Officer for Environmental and Occupational Health.

Waterbody-specific consumption advice can be found in the updated online booklet and by using the WDNR’s [online query tool](#).

For more information, contact the WDNR Office of Communications at [DNRPress@wisconsin.gov](mailto:DNRPress@wisconsin.gov).

Source: <https://dnr.wisconsin.gov/newsroom/release/87806>



*(Photo courtesy of the WDNR)*

## EPA News

### Biden-Harris Administration Finalizes First-Ever National Drinking Water Standard to Protect 100 Million People from PFAS Pollution

**As part of the Administration’s commitment to combating PFAS pollution, EPA announces \$1 Billion investment through President Biden’s Investing in America agenda to address PFAS in drinking water**

On April 10, 2024, the Biden-Harris Administration issued the first-ever national, legally enforceable drinking water standard to protect communities from exposure to harmful PFAS, also known as ‘forever chemicals.’ Exposure to PFAS has been linked to deadly cancers, impacts to the liver and heart, and immune and developmental damage to infants and children. This final rule represents the most significant step to protect public health under [EPA’s PFAS Strategic Roadmap](#). The final rule will reduce PFAS exposure for approximately 100 million people, prevent thousands of deaths, and reduce tens of thousands of serious illnesses. This announcement complements [President Biden’s government-wide action plan](#) to combat PFAS pollution.

Through President Biden’s Investing in America agenda, EPA is also making unprecedented funding available to help ensure that all people have clean and safe water. EPA has also announced nearly [\\$1 billion in newly available funding](#) through the Bipartisan Infrastructure Law to help states and territories implement PFAS testing and treatment at public water systems and to help owners of private wells address PFAS contamination. This is part of a \$9 billion investment through the Bipartisan Infrastructure Law to help communities with drinking water impacted

by PFAS and other emerging contaminants — the largest-ever investment in tackling PFAS pollution. An additional \$12 billion is available through the Bipartisan Infrastructure Law for general drinking water improvements, including addressing emerging contaminants like PFAS.

EPA Administrator Michael Regan joined White House Council on Environmental Quality Chair Brenda Mallory to announce the final standard on April 10 at an event in Fayetteville, North Carolina. In 2017, area residents learned that the Cape Fear River, the drinking water source for 1 million people in the region, had been heavily contaminated with PFAS pollution from a nearby manufacturing facility. These announcements will help protect communities like Fayetteville from further devastating impacts of PFAS.

“Drinking water contaminated with PFAS has plagued communities across this country for too long,” said EPA Administrator Michael S. Regan. “That is why President Biden has made tackling PFAS a top priority, investing historic resources to address these harmful chemicals and protect communities nationwide. Our PFAS Strategic Roadmap marshals the full breadth of EPA’s authority and resources to protect people from these harmful forever chemicals. Today, I am proud to finalize this critical piece of our Roadmap, and in doing so, save thousands of lives and help ensure our children grow up healthier.”

EPA is taking a signature step to protect public health by establishing legally enforceable levels for several PFAS known to occur individually and as mixtures in drinking water. This rule sets limits for five individual PFAS: perfluorooctanoic acid (PFOA), PFOS, perfluorononanoic acid (PFNA), perfluorohexanesulfonic acid (PFHxS), and hexafluoropropylene oxide dimer acid (HFPO-DA, also known as “GenX Chemicals”). The rule also sets a limit for mixtures of any two or more of four PFAS: PFNA, PFHxS, perfluorobutane sulfonate (PFBS), and “GenX chemicals.” By reducing exposure to PFAS, this final rule will prevent thousands of premature deaths, tens of thousands of serious illnesses, including certain cancers and liver and heart impacts in adults, and immune and developmental impacts to infants and children.

This final rule advances President Biden’s commitment to ending cancer as we know it as part of the Biden Cancer Moonshot, to ensuring that all Americans have access to clean, safe, drinking water, and to furthering the Biden-Harris Administration’s commitment to environmental justice by protecting communities that are most exposed to toxic chemicals.

EPA estimates that between about 6% and 10% of the 66,000 public drinking water systems subject to this rule may have to take action to reduce PFAS to meet these new standards. All public water systems have three years to complete their initial monitoring for these chemicals. They must inform the public of the level of PFAS measured in their drinking water. Where PFAS is found at levels that exceed these standards, systems must implement solutions to reduce PFAS in their drinking water within five years.

The new limits in this rule are achievable using a range of available technologies and approaches including granular activated carbon, reverse osmosis, and ion exchange systems. For example, the Cape Fear Public Utility Authority, serving Wilmington, NC — one of the communities most heavily impacted by PFAS contamination — has effectively deployed a granular activated carbon system to remove PFAS regulated by this rule. Drinking water systems will have flexibility to determine the best solution for their community.

EPA will be working closely with state co-regulators in supporting water systems and local officials to implement this rule. In the coming weeks, EPA will host a series of webinars to provide information to the public, communities, and water utilities about the final PFAS drinking water regulation. To learn more about the webinars, please visit EPA's [PFAS drinking water regulation webpage](#). EPA has also published a [toolkit of communications resources](#) to help drinking water systems and community leaders educate the public about PFAS, where they come from, their health risks, how to reduce exposure, and about this rule.

### **More details about funding to address PFAS in Drinking Water**

Through the Bipartisan Infrastructure Law, EPA is making an unprecedented \$21 billion available to strengthen our nation's drinking water systems, including by addressing PFAS contamination. Of that, \$9 billion is specifically for tackling PFAS and emerging contaminants. The financing programs delivering this funding are part of President Biden's [Justice40 Initiative](#), which set the goal that 40% of the overall benefits of certain federal investments flow to disadvantaged communities that have been historically marginalized by underinvestment and overburdened by pollution.

Additionally, EPA has a nationwide Water Technical Assistance program to help small, rural, and disadvantaged communities access federal resources by working directly with water systems to identify challenges like PFAS; develop plans; build technical, managerial, and financial capacity; and apply for water infrastructure funding. Learn more about [EPA's Water Technical Assistance programs](#).

More details about the final PFAS drinking water standards:

- For PFOA and PFOS, EPA is setting a Maximum Contaminant Level Goal (MCLG), a non-enforceable health-based goal, at zero. This reflects the latest science showing that there is no level of exposure to these contaminants without risk of health impacts, including certain cancers.
- EPA is setting enforceable Maximum Contaminant Levels (MCLs) at 4.0 parts per trillion for PFOA and PFOS, individually. This standard will reduce exposure from these PFAS in our drinking water to the lowest levels that are feasible for effective implementation.
- For PFNA, PFHxS, and "GenX Chemicals," EPA is setting the MCLGs and MCLs at 10 parts per trillion.
- Because PFAS can often be found together in mixtures, and research shows these mixtures may have combined health impacts, EPA is also setting a limit for any mixture of two or more of the following PFAS: PFNA, PFHxS, PFBS, and "GenX Chemicals."

EPA is issuing this rule after reviewing extensive research and science on how PFAS affects public health, while engaging with the water sector and with state regulators to ensure effective implementation. EPA also considered 120,000 comments on the proposed rule from a wide variety of stakeholders.

### **Background:**

PFAS, also known as 'forever chemicals,' are prevalent in the environment. PFAS are a category of chemicals used since the 1940s to repel oil and water and resist heat, which makes them useful in everyday products such as

nonstick cookware, stain resistant clothing, and firefighting foam. The science is clear that exposure to certain PFAS over a long period of time can cause cancer and other illnesses. In addition, PFAS exposure during critical life stages such as pregnancy or early childhood can also result in adverse health impacts.

Across the country, PFAS contamination is impacting millions of people's health and wellbeing. People can be exposed to PFAS through drinking water or food contaminated with PFAS, by coming into contact with products that contain PFAS, or through workplace exposures in certain industries.

Since EPA Administrator Michael S. Regan announced the [PFAS Strategic Roadmap](#) in October 2021, EPA has taken action — within the Biden-Harris Administration's whole-of-government approach — by advancing science and following the law to safeguard public health, protect the environment, and hold polluters accountable. The actions described in the PFAS Strategic Roadmap each represent important and meaningful steps to protect communities from PFAS contamination. Cumulatively, these actions will build upon one another and lead to more enduring and protective solutions. In December 2023, the EPA released its [second annual report on PFAS progress](#). The report highlights significant accomplishments achieved under the EPA's PFAS Strategic Roadmap.

For more information, contact EPA Press Office at [press@epa.gov](mailto:press@epa.gov).

Source: <https://www.epa.gov/newsreleases/biden-harris-administration-finalizes-first-ever-national-drinking-water-standard>

## Other News

### New Wetland Monitoring Guidelines in San Francisco Bay Leverage Data to Improve Science and Restoration

#### Collecting consistent wetland data supports large-scale insights.

There are new [guidelines](#) for monitoring fish and habitat in wetlands throughout the San Francisco Bay Estuary. The new guidelines, announced April 5, 2024, will improve scientific understanding and apply lessons learned to make future restoration even more successful and cost-effective. The guidelines were developed for the [San Francisco Wetlands Regional Monitoring Program](#).

San Francisco Bay includes the sprawling estuaries of numerous rivers that provide nursery habitat for salmon and many other species that depend on the Estuary for habitat, food, and much more. About 85 percent of the Bay's [original vegetated tidal wetlands have disappeared](#). The remaining wetlands face further development pressures as well as rising sea levels and other impacts of climate change.

The erosion and disappearance of the wetlands and other natural features can also put surrounding communities at risk. The new guidelines are designed to collect and channel monitoring data into meaningful lessons learned. They can help accelerate and strengthen a regional goal of protecting and [restoring 100,000 acres of wetlands by 2030](#).

### Standardizing Regional Data

“Instead of disconnected project-specific surveys that cannot be integrated and are often forgotten, the new guidelines aim to standardize the collection and archival of data that...will have broader and longer-lasting value,” said Dr. Levi Lewis, one of the leaders of the workgroup that developed the guidelines. “An example of this is the University of California-Davis long-term Suisun Marsh Fish Study which has been replicated by shorter-term studies to provide the first regional comparison of aquatic wetland communities across the Estuary (see our collaborative [Center for Watershed Sciences’ Incubator Project](#)).”

“By working collectively and across disciplines, we can better inform our understanding at the landscape level and use that information to make better decisions about restoration,” said Alison Weber-Stover, the National Oceanic and Atmospheric Administration (NOAA) Fisheries co-leader of the workgroup that developed the guidelines. “That will give us new insight into what works and why, at a time when we need it most.”

The Wetlands Regional Monitoring Program draws on the strengths of a broad community of restoration practitioners, scientists, and resource agencies. They collaborate to standardize procedures and share data, Weber-Stover said. Together, this standardization and integration of monitoring across the Estuary will significantly advance our understanding of wetland ecology and restoration.

### More Information

- [Estuary Habitat](#)
- [Essential Fish Habitat on the West Coast](#)

For more information, contact NOAA Fisheries at [lauren.gaches@noaa.gov](mailto:lauren.gaches@noaa.gov).

Source: <https://www.fisheries.noaa.gov/feature-story/new-wetland-monitoring-guidelines-san-francisco-bay-leverage-data-improve-science-and>



Dungeness crabs inhabit wetlands. (Photo courtesy of NOAA)

## Microplastics, algal blooms, seafood safety are public health concerns addressed by new Oceans and Human Health Centers

**The National Institutes of Health (NIH) and the National Science Foundation (NSF) jointly fund new research centers to better understand how ocean-related exposures affect people's health.**

To address plastics and other problems that could affect human health, on April 16, 2024, NIH and NSF announced the joint funding of four new Centers for Oceans and Human Health and renewal of two centers as part of a marine-related health [research program](#). Each Center will focus on a different aspect of the interplay between environmental science, climate change, and human health in the ocean or Great Lakes. Together the two agencies plan to invest more than \$42 million over five years for the centers program, continuing a two-decade long collaboration. The National Institute of Environmental Health Sciences (NIEHS) administers the centers at the NIH and supports individual research projects that focus on the ocean and the Great Lakes and their impact on human health.

Millions of tons of small pieces of plastic, referred to as microplastics are finding their way into the world's oceans. These microplastics, ranging from the size of a width of a pencil to smaller than a sesame seed, often get eaten by fish and shellfish and are passed to humans through seafood consumption. They also act as microscopic sponges, attracting, concentrating, and carrying pollutants into new environments. These plastic particles and other factors, including a warming climate and more extreme weather events, are affecting the health of our waterways, and, in turn, the health of our citizens.

“We know very little about what these microplastics or even smaller pieces of plastics, known as nanoplastics, can do to human health in the short-or long-term, or even what they can do to the health of the sea turtles and other animals that live in the ocean,” said Anika Dzierlenga, Ph.D., program lead at the NIEHS.

Nanoplastics measure under one micrometer in length, the width of a spider web or virus, making it very easy for them to enter the human body through eating, breathing, and absorption through the skin. Once inside the body, they may leach harmful chemicals that may impact development, reproduction, and immune system responses.

“The connection among ocean pollution, climate change, and human health are problems that we are only beginning to understand,” said Dzierlenga. “People rely on oceans and lakes for jobs, food, tourism, recreation. These centers will help bring researchers and community groups together to study and take action to protect public health in coastal regions and around the Great Lakes.”

“We're excited to continue this long-standing partnership with NIEHS. Bringing geoscientists, health scientists, and community partners together to address these important questions has far-ranging impacts beyond what either agency can support alone,” said Henrietta Edmonds, Ph.D., a program manager in NSF's Division of Ocean Sciences.



## **NIEHS-NSF Oceans and Human Health Center Awardees**

The centers foster interdisciplinary collaborations among biomedical researchers, physical and oceanographic scientists, and community partners. The following institutions, listed alphabetically along with the project name, lead researcher, and brief description of project, are newly funded.

### **North Carolina State University, Raleigh**

#### **[North Carolina Center for Coastal Algae, People, and Environment \(NC C-CAPE\)](#)**

Principal Investigator: Astrid Schnetzer

This center, awarded at the end of February, will help lay the groundwork for how cyanobacterial (blue-green algae) blooms in estuaries or coastal waters impact seafood safety and public health. This research will help inform guidelines for the safe consumption of water and seafood. NC C-CAPE will also actively engage with community experts and stakeholders to guide the translation and application of research findings.

### **University of California San Diego**

#### **[Scripps Center for Oceans and Human Health: Advancing the science of marine contaminants and seafood safety](#)**

Principal Investigator: Bradley Moore

The Scripps Center for Oceans and Human Health will evaluate the factors contributing to seafood safety concerns including impact from climate and weather, distribution of toxic chemicals across the aquatic food source chain, the role of the marine microbiome in toxin metabolism, and animal and human response to toxic chemicals. The grantees will consider both risks and benefits to seafood consumption and will help to develop messaging to seafood consumers.

### **University of Rochester and Rochester Institute of Technology, New York**

#### **[Lake Ontario Center for Microplastics and Human Health in a Changing Environment](#)**

Principal Investigators: Katrina Smith Korfmacher (University of Rochester) and Christy Tyler (Rochester Institute of Technology)

This new center will be the first center within the Oceans and Human health Centers to focus solely on plastic pollution and microplastics. The Research organizations will collaborate to study the life cycle of plastic in Lake Ontario as it pertains to ecological and human health. The aim is to engage diverse local partners to prevent negative health effects of microplastics in the context of climate change in the Great Lakes region. The Great Lakes are the largest surface freshwater system in the world and are a critical resource for more than 30 million people.

### **Woods Hole Oceanographic Institution, Massachusetts**

#### **[Woods Hole Center for Oceans and Human Health](#)**

Principal Investigator: Dennis McGillicuddy

Funding for this center has been renewed in 2024 and will build off its prior research to address how a changing climate could influence harmful algal bloom (HAB) dynamics and human exposure to HAB toxins, a serious and global human health threat. The center will also work to improve awareness of emerging HAB issues for the public health community and develop new educational materials and interactive activities for K-12 classrooms, and for health care providers.

NIEHS and NSF expect to make two additional awards soon.

For more information about NIH and its programs, visit [www.nih.gov](http://www.nih.gov).

Source: <https://www.nih.gov/news-events/news-releases/microplastics-algal-blooms-seafood-safety-are-public-health-concerns-addressed-new-oceans-human-health-centers>

## Recently Awarded Research

### \$3.85 Million Awarded for Fish and Wildlife Restoration in the Great Lakes Basin

On March 4, 2024, the U.S. Fish and Wildlife Service (FWS) announced that \$3.85 million in 2023 federal funding has been awarded under the Great Lakes Fish and Wildlife Restoration Act grant program to restore sustainable populations of fish and wildlife resources, and their habitats, in the Great Lakes Basin. Sixteen research and restoration grant proposals will provide more than \$1.73 million in non-federal partner match contributions. Additionally, these proposals are partially supported with \$941,748 from Great Lakes Restoration Initiative funding.

Since 1998, the Great Lakes Fish and Wildlife Restoration Act has provided approximately \$39.6 million in federal funds to 226 research and restoration and regional project proposals. Combined with the required matching monies from more than 145 non-federal partners, funding to benefit Great Lakes fish, wildlife and habitats tops \$57.6 million.

Research and restoration grant proposals funded in fiscal year 2023 include:

- Climate-driven uncertainty in the suitability of Great Lakes shoreline habitat for Michigan's at-risk species; Michigan Natural Features Inventory of the Michigan State University Extension, MI \$168,838.
- Defining movements and spatial distribution of lake whitefish in northern Green Bay and Lake Michigan; University of Wisconsin - Stevens Point campus, WI \$257,468.
- Predation risk assessments for the wood turtle in the Great Lakes Region; Grand Valley State University, MI \$281,071.
- Comprehensive evaluation of unionid habitats in lower tributaries of Lake Michigan; Central Michigan University, MI \$384,342.

- Enhancing Great Lakes lake sturgeon restoration via the development of novel lake sturgeon herpesvirus detection and transmission prevention methods; Michigan State University, MI \$349,962.
- Understanding Klondike Reef ecotypes for lake trout restoration in the lower Great Lakes; University of Wisconsin - Milwaukee campus, WI \$179,250.
- Documenting the response of breeding bird communities to a decade of remedial actions in a Great Lakes Area of Concern; University of Minnesota - Duluth campus, MN \$299,164.
- Enhancing our understanding of Kirtland's warbler population dynamics through improved parameter estimation and use of a full-annual-cycle integrated population model; Smithsonian Institution, Washington D.C. \$316,521.
- Filling knowledge gaps and increasing the capacity of Michigan Land Conservancies to restore ecosystems; Little Traverse Conservancy of the Northern Michigan Land Trust, MI \$150,000.
- Restore wetlands for marsh birds, waterfowl, and other fish and wildlife in the Cuyahoga River Area of Concern; The Nature Conservancy, OH \$498,000.
- Saginaw River Headwaters Rec Area habitat restoration and reclamation; Michigan Department of Natural Resources, MI \$234,363.
- Movements and habitat use of native brook trout and nonnative salmonids in two Lake Superior watersheds; University of Wisconsin - Stevens Point campus, WI \$227,038.
- Broad-based partnership to evaluate lake sturgeon in the Grand River Watershed, Michigan; Grand Rapids Public Museum, MI \$149,597.
- Restoring coastal stream and estuary habitat functions of Silver Creek; City of Manitowoc, WI \$175,000.
- Identifying potential sources of natural recruitment of muskellunge in Green Bay, Lake Michigan; University of Wisconsin - Stevens Point campus, WI \$147,339.
- Spy Run Dam removal in the Maumee River Basin; Fort Wayne City Utilities, IN \$33,794.

For more information, contact Rick Westerhof at [rick\\_westerhof@fws.gov](mailto:rick_westerhof@fws.gov) or at (231)-282-2736.

Source: <https://www.fws.gov/press-release/2024-03/385-million-awarded-fish-and-wildlife-restoration-great-lakes-basin>

## Tech and Tools

### Interactive StoryMaps Highlight Research from Sea Grant American Lobster Initiative

On October 24, 2023, NOAA released the final installment in a collection of web-based StoryMaps that highlighting scientific research on the American lobster. The StoryMaps cover 24 of 31 research projects funded through the National Sea Grant College Program's American Lobster Initiative (ALI), which aims to increase the American lobster industry's resilience to the biological, economic, and social impacts of ecosystem change in the Northeast. The collection is produced by Woods Hole Oceanographic Institution (WHOI) Sea Grant staff Jennie Rheuban, Stephanie Murphy and Simonne Dodge, a student intern with WHOI Sea Grant from the University of Miami who led the project.

The American lobster fishery is one of the largest and most economically valuable single-species fisheries in the United States. Yet it is a fishery in a sea of change – with many outstanding questions about how the changing environment will impact it as well as those who rely upon it for their livelihoods.

To look for answers to these questions, the NOAA Sea Grant American Lobster Initiative is funding research aimed at understanding the physical and chemical changes affecting the American lobster. Scientists funded through the project are investigating pressing questions about American lobster's life history, predation and other stressors, spatial distribution, as well as gear technologies and the industry socio-economics.

The StoryMaps group the first 24 funded projects into six thematic categories: Reproduction, Larvae and Juveniles, Growth, Predation and Pressures, Socioeconomic Shifts, and Gear. The StoryMaps provide a highly visual overview of this important research and will help raise awareness and understanding of the state of this iconic fishery, asking questions like:

- Is the stress of warming water causing female lobsters' ability to reproduce to decline in southern New England?
- Are postlarval lobsters undercounted in zones where two surface currents collide?
- Which marine species may be feeding on lobsters?
- Despite rising numbers of spawners and early-stage larvae, do declines of late-stage larvae and settlers come down to a limited food supply?

The research also investigates the socioeconomic components of the industry to support the fishery's sustainability and explores non-traditional indicators for assessing the wellbeing of the lobster industry. It further explores potential gear modifications and ways to implement new technologies for the benefit of fishermen, managers, conservation groups, and the scientific community.

With the projects still underway, the StoryMap Collection will be updated as the researchers continue to produce results and analysis and expanded to include the newly funded projects.

“The goal of the ALI is to increase the American lobster industry’s resilience to the biological, economic, and social impacts of ecosystem change,” said Rheuban, the research coordinator at WHOI Sea Grant. “The research is addressing critical knowledge gaps about American lobster and its iconic fishery in a dynamic and changing environment.”

The StoryMap Collection also includes a context-setting StoryMap produced in 2022 called “A Fishery in a Sea of Change.” The full collection can be found at <https://arcg.is/1CHT1j>. See a complete list of the [ALI-funded research projects](#) on the ALI website.

### About the ALI

The [ALI](#) supports [scientific research](#) about the American lobster and its iconic fishery through funding from the National Oceanic and Atmospheric Administration’s National Sea Grant College Program. This Initiative began in 2019 with the goal of increasing the American lobster industry’s resilience to the biological, economic, and social impacts of ecosystem change in the Gulf of Maine, Georges Bank, and southern New England.

For more information, contact Jennie Rheuban at [jrheuban@whoi.edu](mailto:jrheuban@whoi.edu).

Source: <https://seagrant.noaa.gov/News/Article/ArtMID/1660/ArticleID/2928/Interactive-StoryMap-highlights-research-from-Sea-Grant-American-Lobster-Initiative>

## Recent Publications

### Journal Articles

The list below provides a selection of research articles.

- ▶ [Synthesis of Effects and Feedbacks from Artificial Reefs on Socioecological Systems in Recreational Fisheries.](#)  
Chong, L., Z.A. Siders, K. Lorenzen, R.N.M. Ahrens, and E.V. Camp. 2024. Global Synthesis of Effects and Feedbacks from Artificial Reefs on Socioecological Systems in Recreational Fisheries. *Fish and Fisheries* 25(2):303-319.
- ▶ [Characteristics and Species Composition of a Small-Scale Shark Fishery in Puerto Rico: Jurisdictional Issues Enable Legal Landings of Prohibited and Endangered Species.](#)  
Espinoza, R., D. Chapman, J. Morris, S.N. Schoen, V. Hagan, R. Hueter, M. Soto, R. Abrams, and P. Sotomayor. 2024. Characteristics and Species Composition of a Small-Scale Shark Fishery in Puerto Rico: Jurisdictional Issues Enable Legal Landings of Prohibited and Endangered Species. *Fisheries Research* 272:106936.
- ▶ [Hatchery Capacity Needed to Support Large-Scale Atlantic Surfclam Fishery Enhancement.](#)  
Gilsinan, C.B., S. Borsetti, D.M. Munroe, and A.M. Scheld. 2024. Hatchery Capacity Needed to Support Large-Scale Atlantic Surfclam Fishery Enhancement. *Aquaculture, Fish and Fisheries* 4(1):e144.
- ▶ [Development of Climate Informed Management Scenarios for Fisheries in the Eastern Bering Sea.](#)  
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## Upcoming Meetings and Conferences

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### [Capitol Hill Ocean Week](#)

June 4–6, 2024  
Washington, DC

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### [154<sup>th</sup> American Fisheries Society Annual Meeting](#)

September 15–19, 2024  
Honolulu, Hawaii

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### [Responsible Seafood Summit](#)

October 21–24, 2024  
St. Andrew's, Scotland

### 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>.