



# Fish and Shellfish Program NEWSLETTER

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

# **Recent Advisory News**

# Connecticut Department of Public Health Issues Consumption Advisories for Certain Fish Species in 11 Waterbodies in Connecticut

# Connecticut Department of Public Health issues consumption advisories for certain fish species in 11 waterbodies in Connecticut

On June 15, 2023, the Connecticut Department of Public Health (DPH) issued new or modified consumption advisories for certain fish species caught in several waterbodies in Connecticut. DPH is taking this action in close coordination with the Connecticut Department of Energy and Environmental Protection (DEEP).

Upon evaluating perfluorooctane sulfonic acid (PFOS) concentrations in fish tissue sampled in 2017-2022 from 14 waterbodies using DPH's recently derived PFOS health risk values, DPH has updated or issued new consumption advisories in 11 waterbodies as shown in the table below. These updated consumption advisories are for the general population and are also protective of sensitive populations.

New or modified consumption advisories are issued for the following rivers: Connecticut, Lower Farmington, Housatonic (near O'Sullivan's Island in Derby), Natchaug, Willimantic, Shetucket, Naugatuck, Pequabuck, Still (Winchester), Scantic, and Quinnipiac.

"These consumption advisories are necessary to protect public health while allowing for community members to benefit from the nutritional benefits of eating fish," said DPH Commissioner Manisha Juthani, MD. "PFOS is one of a group of related chemicals known as per- and polyfluoroalkyl substances (PFAS). This group of chemicals is commonly used in a wide range of industrial processes and is found in many consumer products. Longterm exposure to PFAS may be associated with increased levels of cholesterol and liver enzymes, a change in immune response, developmental effects, increased chance of high blood pressure and/or increased chance of pre-eclampsia during pregnancy, and an increased chance of thyroid disease."

Commissioner Juthani added that it was not necessary to modify the current advisories for the Hockanum, Tankerhoosen, and the Upper Housatonic Rivers. Additionally, there

are no new or existing advisories in place for the Quinebaug River other than the statewide freshwater advisory described below. Working closely with DEEP—whose fisheries staff have expertise and knowledge of the rivers and fisheries habitat—both state agencies have determined the locations where the fish advisories will apply.

"Assessing food-related PFAS exposures, including fish and shellfish consumption, is a key recommendation of the Connecticut Interagency PFAS Action Plan," DEEP Commissioner Katie Dykes said. "Evaluating PFAS levels in fish collected from these 14 waterbodies represents significant progress towards protecting the health of our angling community. Our agencies will continue to work together to identify opportunities to conduct additional monitoring, particularly at popular fishing locations and within our Environmental Justice communities."

It also is important to note that there is a pre-existing statewide advisory that is in place.

**Freshwater fish:** The advice for <u>freshwater fish</u> caught in Connecticut for pregnant women, women who could become pregnant, and children under 6 years old (high risk groups) is to eat no more than one meal per month. For all other groups, the advice is to eat no more than one meal per week of freshwater fish. This statewide advice is due to mercury contamination found in Connecticut freshwater fish. This statewide advisory <u>does not apply to sunfish or trout</u> as there are no consumption limits for these fish species, except otherwise noted.

Additional information on DPH fish consumption advisories can be found at: <u>https://portal.ct.gov/fish</u> or by calling a DPH staff person at 1-877-458-FISH (3474). More information on PFAS can be found at https://portal.ct.gov/DPH/Environmental-Health/PFAS/PFAS

Waterbody	Species	Updated Consumption Recommendations	Previous Consumption Recommendation
Connecticut River	All except for Shad <sup>b</sup>	1 Meal Per Month due to PFOS levels	1 Meal Per Month (High Risk), 1 Meal Per Week (Low Risk <sup>c</sup> Advisory for Catfish Due to PCB <sup>d</sup> Levels
Lower Farmington River <sup>e</sup>	Yellow Perch and Bass <sup>f</sup>	1 Meal Per Month due to PFOS levels	No Specific Advisory
Hockanum and Tankerhoosen Rivers <sup>g</sup>	All	No Change	Do Not Eat-Everyone, due to PFOS <sup>h</sup> levels
Housatonic River (Near O'Sullivan's Island) <sup>i</sup>	All	1 Meal Per Month due to PFOS levels	No Specific Advisory
Housatonic River (Upper, above Lake Lillinonah)	Bass	No Change	Do Not Eat (High Risk), 1 Meal/2 Months (Low Risk) due to PCB Levels
Natchaug, Willimantic and Shetucket Rivers <sup>1</sup> (Willimantic and Manfield)	Bass	Do Not Eat due to PFOS levels	1 Meal Per Month-Everyone, due to PFOS levels
Natchaug, Willimantic and Shetucket Rivers <sup>j</sup> (Willimantic and Manfield)	All Species Except for Bass	1 Meal Per Month due to PFOS levels	No Specific Advisory
Naugatuck <sup>k</sup> River	Bass	1 Meal Per Month due to PFOS levels	No Specific Advisory
Pequabuck River	American Eel	1 Meal Per Month due to PFOS levels	No Specific Advisory
Quinnipiac River (Gorge south of Meriden through Wallingford to Long Island Sound)	All	1 Meal Per Month (Existing advisory extended to Gorge south of Meriden through Wallingford to Long Island Sound) (due to PCB and PFOS levels)	1 Meal Per Month-Everyone due to PCB levels
Quinebaug River	NA	No Change	No Specific Advisory

#### Consumption Advisory History for Fish Caught in 14 Waterbodies in Connecticut<sup>a</sup>

Waterbody	Species	Updated Consumption Recommendations	Previous Consumption Recommendation
Scantic River <sup>1</sup>	American Eel	1 Meal Per Month due to PFOS levels	No Specific Advisory
Still River (Winchester)	Bass	1 Meal Per Month due to PFOS levels	No Specific Advisory

<sup>a</sup>All modified or new consumption advisories are for the general population, however it is important to note that they are also protective of sensitive groups such as children under 6 years old, pregnant and nursing women and women who could become pregnant.

<sup>b</sup>Shad only travel to the Connecticut River to spawn, are only in the river for a short period of time, have low contamination and are not included in the advisory.

eHigh Risk group includes children under 6 years old, pregnant women, nursing women, and women who could become pregnant. Low risk group includes everyone else.

<sup>d</sup>Polychlorinated biphenyls

Downstream from the Rainbow Dam in the town of Windsor to the confluence with the Connecticut River.

fincludes both large and smallmouth bass.

<sup>g</sup>Hockanum River from the outlet of Shenipsit Lake (Tolland Ave., Vernon) to the Connecticut River, including several riverine impoundments of Papermill Pond, including Pitney Park (Vernon), Union Pond (Manchester), small impoundments and ponds (East Hartford) and the Tankerhoosen River (upstream to dam at Main Street, Vernon).

<sup>h</sup>Perfluorooctane sulfonic acid.

The Housatonic River upstream to the Derby Dam and downstream to the Rt. 15 Bridge. Upstream on the Naugatuck River to the Kinneytown Dam. The Natchaug River from the dam at the Willimantic Reservoir (northern boundary) downstream to where it forms the Shetucket River. The advisory extends a  $\frac{1}{2}$  mile down the Shetucket River to Plains Road. Willimantic River from where it meets the Shetucket and Natchaug Rivers upstream to the dam at Pine Street.

<sup>k</sup>Includes the entire Naugatuck River as well as the West Branch Naugatuck River downstream of Stillwater Pond, Torrington. <sup>1</sup>Upstream boundary is the Somersville Pond Dam.

For more information, contact Chris Boyle at <u>christopher.boyle@ct.gov</u>.

Source: https://portal.ct.gov/DPH/Press-Room/Press-Releases---2023/fish-advisory

# Montana State Agencies Issue Consumption Advisory for All Fish Species on Yellowstone River Near Train Derailment

On September 19, 2023, the Fish Consumption Advisory Board, consisting of representatives from Montana Department of Public Health & Human Services (DPHHS), Montana Department of Environmental Quality (DEQ) and Montana Fish, Wildlife & Parks (FWP), issued a consumption advisory on all fish species in the Yellowstone River from Montana's Indian Fort Fishing Access Site (FAS) near Reed Point to the Highway 212 bridge in Laurel. Various polycyclic aromatic hydrocarbons, or PAHs, were detected at levels high enough to warrant this advisory for all fish species, both game and nongame.

#### **Sampling Results**

FWP crews collected longnose suckers, shorthead redhorse, rainbow trout, brown trout and mountain whitefish from areas upstream and downstream of the June 24 train derailment site at Twin Bridges Road railroad bridge. Multiple species showed levels of various PAHs high enough to warrant an advisory to avoid all consumption. Specific PAHs found in these fish include naphthalene, found in multiple species, and 1- and 2-methylnapthalene and acenaphthylene found only in mountain whitefish. Fish were collected 6.5 river miles upstream of the derailment site near Indian Fort FAS, and 6.2 river miles downstream near Holmgren FAS.

FWP crews previously collected rainbow trout and mountain whitefish from the Yellowstone River below the derailment site to assess human consumption restrictions as a follow-up to the train derailment. This sampling showed elevated levels of phenanthrene, another PAH, in mountain whitefish and a consumption advisory was put

in place on August 11, to avoid all consumption of this fish species and motivated the agency to conduct additional sampling. Phenanthrene was not found in any fish during the most recent sampling.

Many species of fish, especially brown and rainbow trout, found in this section of the Yellowstone River migrate seasonally for spawning and to find colder water in the warmer summer months. Out of an abundance of precaution and unknown conditions in adjacent sections of the river, people with specific concerns may want to avoid consuming all species of fish from the Yellowstone River at any location until more is known on the severity and prevalence of this contamination.

#### **Next Steps**

The source of the PAHs remains unknown. Determining a specific source could be challenging, as PAHs, including those found in these fish, are present in many common materials. Some PAHs occur naturally in the environment, especially in the shale rock common in the Yellowstone River Basin. PAHs are also found in products such as oil, gas, plastics, and pesticides—and are produced through combustion of these products.

Further testing is still needed to determine the potential contamination source and long-term guidance. FWP plans to expand sampling on the Yellowstone River to further understand the extent of PAHs for human consumption concerns. Final plans for this additional sampling are still being discussed by FWP, DEQ, and DPHHS, but will include sampling fish from locations on the Yellowstone River further upstream and further downstream of the derailment site.

The U.S. Environmental Protection Agency and the International Agency for Research on Cancer have classified naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene as possibly cancer-causing in humans. The other two PAHs that have been detected in fish tissue samples, phenanthrene and acenaphthene, have not been classified as cancer-causing chemicals. Other health effects from ingesting high levels of PAHs that have been shown in animal studies include effects on the gastrointestinal system, immune system, reproductive system, kidneys and skin. These effects from eating fish have not been recorded in humans.

For more information on PAHs, including the specific PAHs found in the fish tissue samples, visit: www.atsdr.cdc.gov/csem/polycyclic-aromatic-hydrocarbons/health\_effects.html.

For more information, contact Trevor Selch at TSelch@mt.gov.

Source: <u>https://news.mt.gov/Department-of-Environmental-Quality/State-Agencies-Issue-Consumption-Advisory-for-All-Fish-Species-on-Yellowstone-River-Near-Train-Derailment</u>

## Tennessee Department of Environment and Conservation Extends Precautionary Fish Consumption Advisory for Catfish on Cheatham Reservoir

On September 7, 2023, the Tennessee Department of Environment and Conservation (TDEC) announced an extension of a precautionary fish consumption advisory due to polychlorinated biphenyls (PCBs) for all catfish species on Cheatham Reservoir in Davidson and Cheatham counties.

TDEC advises that pregnant women, nursing mothers, and children avoid eating the catfish and that all others limit consumption to one meal per month. Other recreational activities such as boating, kayaking, swimming, wading, and catch-and-release fishing carry no risk.

In 2022, TDEC collected catfish, freshwater drum, spotted bass, and largemouth bass from the reservoir at two stations – the Lytle Farms area and near Pardue Pond Wildlife Refuge. Based on the fish tissue results that document catfish species now significantly exceeding Tennessee's trigger point of 0.047 mg/kg for PCBs, TDEC has extended the precautionary advisory for catfish. The precautionary advisory applies to the entire Cheatham Reservoir, consistent with TDEC's responsibilities under the Tennessee Water Quality Control Act.

"We provide these advisories so the community can make informed decisions about whether or not to consume the fish they catch," said TDEC Deputy Commissioner Greg Young. "Unlike 'do not consume' advisories that warn the general population to avoid eating fish from a particular body of water altogether, precautionary fish consumption advisories are specifically directed to sensitive populations such as children, pregnant women, nursing mothers and those who may eat fish frequently from the same body of water."

TDEC will post warning signs at primary public access points and will work with the Tennessee Wildlife Resources Agency and United States Army Corps of Engineers to communicate this information to the public.

### **About Fish Consumption Advisories**

The Tennessee Water Quality Control Act identifies the commissioner of the TDEC as having the authority and responsibility to issue advisories for either water contact hazards like pathogens or excessive health risks due to the accumulation of contaminants in fish or shellfish. Tennessee's General Water Quality Criteria provide additional guidance regarding the conditions under which advisories may be warranted.

Where new advisories have been issued, TDEC will immediately begin the process of putting up signs at primary public access points. TDEC works in partnership with the Tennessee Wildlife Resources Agency to communicate information about fishing advisories.

For a complete listing of Tennessee's current fishing advisories plus additional information about the advisory issuance process, <u>visit this link</u>.

For more information, contact Debbie Arnwine at Debbie.Arnwine@tn.gov.

Source: <u>https://www.tn.gov/environment/news/2023/9/7/extends-precautionary-fish-consumption-advisory-catfish-cheatham-reservoir.html</u>

### **EPA News**

### **EPA Grants Tribal Petition to Protect Salmon from Lethal Chemical**

On November 2, 2023, in support of its mission to protect human health and the environment, the EPA granted a petition from the Yurok Tribe, the Port Gamble S'Klallam Tribe, and the Puyallup Tribe of Indians to address the use of the chemical N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine (6PPD) in tires. The chemical 6PPD has been used in motor vehicle tires for more than six decades to make them more durable. It can also be found in other rubber products such as footwear, synthetic turf infill, and playgrounds.

6PPD reacts with ozone pollution in the air to form a byproduct called 6PPD-quinone, which may be present in stormwater runoff from parking lots and streets due to the presence of tire wear particles. Runoff may be washed into streams and other bodies of water during rain events. As a result, aquatic organisms can be exposed to 6PPD-quinone. Concentrations of 6PPD-quinone in stormwater in the Pacific Northwest were found to be lethal to coho salmon after only a few hours of exposure.

"The EPA is responding to our Tribal partners by taking action to protect the coho salmon, which are a key part of the Tribes' cultural identity and economic security," **said Assistant Administrator for the Office of Chemical Safety and Pollution Prevention Michal Freedhoff**. "These salmon and other fish have suffered dramatic decreases in population over the years. Addressing 6PPD-quinone in the environment, and the use of its parent, 6PPD, is one way we can work to reverse this trend."

In August 2023, the Yurok Tribe, the Port Gamble S'Klallam Tribe, and the Puyallup Tribe of Indians submitted a petition under TSCA Section 21 asking the EPA to consider establishing regulations prohibiting the manufacturing, processing, use and distribution of 6PPD in tires.

The EPA responded by granting this petition to consider a prohibition. The EPA intends to publish an advanced notice of proposed rulemaking under Section 6 of the Toxic Substances Control Act (TSCA) by Fall 2024 in order to gather more information that could be used to inform a subsequent regulatory action.

For example, there are data showing that 6PPD-quinone is toxic to fish, with coho salmon being the most sensitive species studied to date. However, there are still uncertainties about the potential impacts of 6PPD-quinone on human health, as well as the potential for exposure from other sources of 6PPD-quinone.

The EPA also plans to finalize a rule under Section 8(d) of TSCA to require manufacturers (including importers) of 6PPD to report lists and copies of unpublished health and safety studies to the EPA by the end of 2024.

### **EPA's Work on 6PPD**

It was the EPA-funded research that first established the link between 6PPD-quinone and salmon deaths in the Puget Sound region in 2020. Since then, the EPA has been engaged in ongoing efforts with other federal agencies, states, Tribes, industry, and other stakeholders to address information gaps and address concerns regarding the use of 6PPD and the risks of 6PPD-quinone.

The EPA is continuing to fund research activities to expand its understanding of the impacts of 6PPD-quinone, and to fill data gaps. For example, the EPA's Office of Research and Development is continuing further investigation of 6PPD-quinone, including work on fate and transport, ecotoxicity, and green infrastructure solutions for stormwater contamination. The EPA's Office of Water is currently developing an analytical method for detection of 6PPD-quinone in surface and stormwater and is developing draft screening values for 6PPD-quinone and 6PPD to protect sensitive salmon and other aquatic life. The Agency is also coordinating with the National Science and Technology Council's Joint Subcommittee on Environment, Innovation and Public Health on potential cross-governmental research on human health effects.

To learn more about this effort, visit the EPA's new <u>6PPD-quinone webpage</u> developed to keep the public and stakeholders updated as research progresses, alternatives to 6PPD are identified, and ways to mitigate the effects of 6PPD-quinone on the environment are implemented.

#### Read EPA's response to the petition.

Source: https://www.epa.gov/newsreleases/epa-grants-tribal-petition-protect-salmon-lethal-chemical

# EPA \$6.3 Million Grant to Salmon-Safe Expands Agricultural Certification Program Across Columbia Basin and Yakama Nation Receives \$4 Million for Yakima, Klickitat River Cleanup

On October 3, 2023, the EPA announced that Portland-based <u>Salmon-Safe</u> will receive a \$6.3 million grant from the Columbia River Basin Restoration Program to expand its conservation program in the Yakima Valley and Columbia Basin.

Salmon-Safe works around the Pacific Northwest to incentivize the transition to farming practices and urban development that protect water quality, maintain watershed health and restore habitat. Salmon-Safe is one of the nation's leading environmental certification programs with more than 100,000 acres of farm and urban lands certified in Oregon, Washington, Idaho and British Columbia.

"Salmon-Safe is doing innovative work to grow our agricultural economy and expand voluntary efforts for a cleaner, healthier environment for fish and for people," **said the EPA Region 10 Administrator Casey Sixkiller**. "Consumers are seeking food products they can trust are supporting salmon recovery and the health of our river systems. The EPA is proud to fund an expansion of this critical effort."

The grant will scale up Salmon-Safe's work to engage new farmers, ranchers, developers and other land managers in voluntary actions to protect water quality, reduce toxics and enhance climate resiliency in the Columbia Basin.

Salmon-Safe will provide subawards to partners across the Columbia Basin—from conservation districts working with farmers in the Yakima Valley, to Tribal partners working to transition leased land to practices more protective of water quality and conservation organizations working on agricultural stream restoration projects in upper Snake

River tributaries. These partners will deliver outreach, certification and technical assistance to over 5,000 farmers and other land managers in key Columbia River tributaries.

"The grant accelerates a market-based movement of partnering organizations and conservation districts and Tribes working together to inspire water quality protection actions and climate resiliency efforts far into the future," **said Dan Kent, Salmon-Safe co-founder and executive director**.

Farmers, growers and ranchers benefit from Salmon-Safe certification through expanded connections to highervalue markets in return for reduced polluted runoff, improved habitat and increased water quality.

"Roy Farms is committed to the health of the Yakima River," **said Michael Roy, president and CEO**. "Salmon-Safe provides us with the science-backed framework to ensure that we're doing our part to protect water quality and downstream fish. And we appreciate that the craft breweries that our customers value and seek out Salmon-Safe certified hops."

The EPA also announced \$4 million in grants from the Columbia River Basin Restoration Program to the Confederated Tribes and Bands of the Yakama Nation. "Cleanup of our rivers is critical to protecting Tribal treaty resources and human health," said Sixkiller. "The EPA is proud to fund efforts by the Yakama Nation to address contamination and restore fishing grounds that have been used for generations."

The Tribe will use the funds to remove waste materials from two separate locations - a 12-mile reach of the Yakima River and the Lyle Falls traditional Tribal fishing area on the Klickitat River. The projects will help improve community health, protect 'First Foods' and traditional medicines.

The cleanup projects will identify impacts to human health, remove garbage and support salmon recovery.

"Since Time Immemorial, Yakama oral traditions teach us that the 'choosh' (water) is the blood of our Mother, the Land. That in order for all things to grow healthy as the Creator had intended, especially our Sacred First Foods, choosh must be pure of any harmful effects for everything, including ourselves as human beings. The river clean-up moves in that direction of a healthy river for all living things," **said Davis "Yellowash" Washines, Elder of Klickitat Tribe of the Yakama Nation.** 

#### About the Columbia River Basin Restoration Program

Congress amended the Clean Water Act in 2016 to establish the EPA's <u>Columbia River Basin Restoration Program</u> to engage Tribal and underserved communities in efforts to identify and reduce threats to their environment and community health. The EPA developed a voluntary, competitive grant program to fund environmental protection and restoration projects throughout the Basin. Eligible entities include state, Tribes, and local governments, regional water pollution control organizations, nongovernmental organizations, and soil and water conservation districts.

The Columbia River Basin Restoration Program received \$79 million in the Biden Administration's Bipartisan Infrastructure Law in 2021. This increase in competitive grants throughout the Basin will help reduce toxics in fish and water using agricultural best management practices, green stormwater infrastructure, pollution prevention, contaminated sites cleanup and community education and engagement.

The Columbia River Basin covers 260,000 square miles in Idaho, Oregon, Washington and Montana; and smaller portions of Wyoming, Nevada and Utah, including lands of 16 federally recognized Tribes. Human activities contributed toxic contaminants to the environment that pose a risk to human health and threaten important species and habitats in the Basin. Toxics in fish are a primary health concern for Tribal people in the Columbia River Basin and other high fish consumers.

For more information, contact U.S. EPA Region 10 Public Affairs at <u>r10 press team@epa.gov</u>.

Source: <u>https://www.epa.gov/newsreleases/epa-63m-grant-salmon-safe-expands-agricultural-certification-program-across-columbia</u>

# **Other News**

### **Omega-3 Fatty Acids Appear Promising for Maintaining Lung Health**

#### NIH-funded study supports new role for nutrient found in fish, dietary supplements.

On July 20, 2023, the National Institutes of Health (NIH) reported that omega-3 fatty acids, which are abundant in fish and fish oil supplements appear promising for maintaining lung health, based on new evidence from a large, multi-faceted study in healthy adults supported by NIH. The study provides the strongest evidence to date of this association and underscores the importance of including omega-3 fatty acids in the diet, especially given that many Americans do not meet current guidelines. Funded largely by the National Heart, Lung, and Blood Institute (NHLBI), part of NIH, the study results were published in the *American Journal of Respiratory and Critical Care Medicine*.

"We know a lot about the role of diet in cancer and cardiovascular diseases, but the role of diet in chronic lung disease is somewhat understudied," said corresponding author Patricia A. Cassano, Ph.D., director of the Division of Nutritional Sciences at Cornell University in Ithaca, New York. "This study adds to growing evidence that omega-3 fatty acids, which are part of a healthy diet, may be important for lung health too."

There's increased interest in trying to understand whether nutritional interventions could contribute to lung disease prevention efforts. Past studies have suggested that omega-3 fatty acids may help, due largely to their established anti-inflammatory actions. However, robust studies of this association have been lacking, until now.

To learn more, researchers developed a two-part study investigating the link between omega-3 fatty acid levels in the blood and lung function over time. In the first part, the researchers conducted a longitudinal, observational study involving 15,063 Americans from the <u>NHLBI Pooled Cohorts Study</u> — a large collection of NIH-funded studies that helps researchers study determinants of personalized risk for chronic lung disease.

The participants studied were generally healthy when the study began, and the majority had no evidence of chronic lung disease. They comprised a racially diverse group of adults, with an average age of 56 years, and 55% were female. The researchers followed participants for an average of seven years and up to 20 years.

The longitudinal study showed that higher levels of omega-3 fatty acids in a person's blood were associated with a reduced rate of lung function decline. The researchers observed the strongest associations for docosahexaenoic acid (DHA), an omega-3 fatty acid that is found at high levels in fatty fish such as salmon, tuna, and sardines. DHA is also available as a dietary supplement.

In the second part, the researchers analyzed genetic data from a large study of European patients (over 500,000 participants) from the United Kingdom Biobank. They studied certain genetic markers in the blood as an indirect measure, or proxy, for dietary omega-3 fatty acid levels to see how they correlated with lung health. The results showed that higher levels of omega-3 fatty acids — including DHA — were associated with better lung function.

One caveat of the current study is that it only included healthy adults. As part of this ongoing project, researchers are collaborating with the <u>COPDGene study</u> to examine blood levels of omega-3 fatty acids in relation to the rate of decline in lung function among people with chronic obstructive pulmonary disease or <u>COPD</u> — including heavy smokers — to determine if the same beneficial associations are found.

"We're starting to turn a corner in nutritional research and really moving toward precision nutrition for treating lung diseases," said study first author Bonnie K. Patchen, Ph.D., a nutritionist and member of Cassano's research team at Cornell. "In the future, this could translate into individualized dietary recommendations for people at high risk for chronic lung disease."

For now, the researchers point out that the U.S. Department of Agriculture's <u>*Dietary Guidelines for Americans*</u> recommends that people eat at least two servings of fish per week, which most Americans fall far short. In addition to fish and fish oil, other sources of <u>omega-3 fatty acids</u> include nuts and seeds, plant oils, and fortified foods.

"This large population-based study suggests that nutrients with anti-inflammatory properties may help to maintain lung health," said James P. Kiley, Ph.D., director of the NHLBI's Division of Lung Diseases. "More research is needed, since these findings raise interesting questions for future prospective studies about the link between omega-3 fatty acids and lung function."

This study was supported by NHLBI award R01HL149352 and the National Institute of Diabetes and Digestive and Kidney Diseases award T32DK007158. The NHLBI Pooled Cohorts Study was supported by NIH/NHLBI awards R21HL121457, R21HL129924, and K23HL130627. For full details on funding information, please see the published journal article.

**About the National Heart, Lung, and Blood Institute (NHLBI)**: NHLBI is the global leader in conducting and supporting research in heart, lung, and blood diseases and sleep disorders that advances scientific knowledge, improves public health, and saves lives. For more information, visit <u>www.nhlbi.nih.gov</u>.

**About the National Institutes of Health (NIH):** NIH, the nation's medical research agency, includes 27 Institutes and Centers and is a component of the U.S. Department of Health and Human Services. NIH is the primary federal agency conducting and supporting basic, clinical, and translational medical research, and is investigating the causes, treatments, and cures for both common and rare diseases. For more information about NIH and its programs, visit <u>www.nih.gov</u>.

#### Study

Investigating associations of omega-3 fatty acids, lung function decline, and airway obstruction. *Am J Respir Crit Care Med.* 2023; doi: <u>10.1164/rccm.202301-0074OC</u>.

For more information, contact NHLBI Engagement and Media Relations Branch at nhlbi news@nhlbi.nih.gov.

Source: <u>https://www.nih.gov/news-events/news-releases/omega-3-fatty-acids-appear-promising-maintaining-lung-health</u>

# **Tech and Tools**

### New Interactive Tool Consolidates Data from Climate Vulnerability Assessments

### National Oceanic and Atmospheric Administration Fisheries has launched its new Climate Vulnerability Assessment Tool, providing information on the vulnerability of hundreds of species in one convenient location.

On September 21, 2023, NOAA Fisheries launched its new <u>Climate Vulnerability Assessment Tool.</u> It provides easy access to vulnerability information from all of the current <u>Climate Vulnerability Assessments</u> in one convenient location. Previously, these assessments were only available as individual reports on the NOAA Fisheries website or via scientific journals.

As part of its commitment to addressing the impacts of <u>climate change</u>, NOAA Fisheries conducts Climate Vulnerability Assessments on fish stocks, protected species, habitats, and fishing communities. The Climate Vulnerability Assessment Tool provides an easy way for scientists, academia, and decision makers to find vulnerability information on nearly 400 marine-related species and habitats.

Climate Vulnerability Assessments provide decision makers with information on which species, habitats, and communities may be most susceptible to climate change. They also show where action may be needed to help reduce impacts and increase resilience to changing ocean conditions. The information is also being used to guide research on possible climate impacts and solutions. The assessments estimate vulnerability to climate change based on:

- Level of exposure to projected changes in the environment (such as increased ocean temperatures)
- Sensitivity to these changes based on life history characteristics (such as diet and reproductive rate)

Currently, the Climate Vulnerability Assessment Tool pulls data from seven completed assessments:

- <u>Atlantic Marine Mammal Climate</u> <u>Vulnerability Assessment</u>
- <u>Northeast Fish and Shellfish Stock</u> <u>Climate Vulnerability Assessment</u>



- Bering Sea Fish Stock Climate Vulnerability Assessment
- West Coast Fish Stock Climate Vulnerability Assessment
- <u>Pacific Islands Marine Life Climate Vulnerability Assessment</u>
- Northeast Habitat Climate Vulnerability Assessment

The Climate Vulnerability Assessment Tool will be regularly updated as data from new assessments are made available. Several other Climate Vulnerability Assessments are in progress, including assessments for <u>sea turtles</u>, Atlantic highly migratory species, and Gulf of Mexico fish stocks.

For more information, contact NOAA Fisheries Office of Science and Technology at (301) 427-8100

Source: <u>https://www.fisheries.noaa.gov/feature-story/new-interactive-tool-consolidates-data-climate-vulnerability-assessments</u>



Sockeye salmon are one of nearly 400 species included in NOAA Fisheries' Climate Vulnerability Assessments. Data from all available Climate Vulnerability Assessments can now be seamlessly accessed with a new tool. (*Photo courtesy* of Ryan Hagerty/U.S. Fish and Wildlife Services)

### **Recent Publications**

### **Journal Articles**

The list below provides a selection of research articles.

Fish of the Northeastern USA. Environmental Modeling and Assessment.

Updated Data on Mercury and DDE in Striped Bass (Morone Saxatilis) in Relation to Consumption Advisories for the Saint John River, New Brunswick, Canada

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### **Upcoming Meetings and Conferences**

Freshwater Science: Testing Waters and Fish for Pharmaceuticals and PFAS Contamination On-Site

November 29, 2023 Virtual 9th World Fisheries Congress March 3-9, 2024 Seattle, WA

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 <a href="https://fishadvisoryonline.epa.gov/Contacts.aspx">https://fishadvisoryonline.epa.gov/Contacts.aspx</a>.

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