



AQUATIC INVASIVE SPECIES NEWS

01/07/22

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SPOTLIGHT:

[CALL BEFORE YOU HAUL](#)



In December of 2021, the four Columbia River Basin states (Washington, Oregon, Idaho, and Montana), launched a Call Before You Haul pilot program. The program has a toll-free number that commercial and other watercraft haulers can call before transporting a boat to Columbia River basin states. The caller provides information about the source and destination of the watercraft, and the four states (as well as Canada and British Columbia) are notified that the watercraft is being shipped. Destination, or through states, can then contact the hauler to obtain additional information, or make arrangements for the watercraft to be inspected, and decontaminated (if applicable).

The source states included in the pilot program are from the Great Lakes and Lower Colorado River regions (Arizona, Utah, Nevada, Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, and New York). If the pilot is successful, the program is intended to be expanded to all states and Canadian provinces.

As part of the program, information is being provided to each pilot state for uploading to its commercial hauler and overweight/oversize website and permit application system, which watercraft haulers will see when requesting transportation permits. In addition, direct outreach is being made to watercraft carriers and shippers online, boat dealerships and organizations, and boat brokers to inform them about the [program](#).

PUBLIC COMMENT

[Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Exempted Fishing Permit](#)

NMFS announces the receipt of an application for an exempted fishing permit (EFP) from the REEF Environmental Education Foundation (REEF). If granted, the EFP would authorize the deployment of non-containment and spiny lobster traps in the Federal waters of the South Atlantic by research and contracted commercial vessels to target lionfish. The project would seek to determine the effectiveness of these traps for attracting and collecting invasive lionfish while avoiding impacts to non-target species and habitats.

Written comments must be received on or before January 14, 2022.

USGS invasive carp strategic framework - call for partner input Jan 14, 2022

The USGS Biological Threats and Invasive Species program is developing its next 5-year strategic framework to guide research toward supporting management of bighead, black, grass, and silver carps and preventing expansion of bighead, black, and silver carp beyond the Mississippi River basin. We invite your input on the draft. We will be holding a "kickoff" meeting on development of the framework to date and to present how we will conduct the review process from 9:00-9:30 AM on 14 January 2022. Afterward, we will distribute a copy of the draft plan for comment.

The [link to the Teams meeting is here](#). Please share the link broadly with those within your organization who are involved in management and research on bighead, black, grass, and silver carps and who would like to participate in the review.

NEW SPECIES SIGHTINGS

Want to get more new species alerts?

USGS NAS: <https://nas.er.usgs.gov/AlertSystem/default.aspx>

IMAP INVASIVES: <https://www.imapinvasives.org>

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DREISSENIDS

[Minnesota] [Zebra mussels confirmed in Thunder Lake in Cass County \(12/27/21\)](#)

The Minnesota Department of Natural Resources has confirmed a report of zebra mussels in Thunder Lake, near Remer in Cass County.

A lake property owner contacted the DNR in late October after finding zebra mussels on a boat lift being removed from the water for the season. A subsequent DNR shoreline search did not reveal additional zebra mussels. Two DNR K9s trained to detect zebra mussels were brought in, with the cooperation of lake property owners, to search lake properties and equipment. K9s Storm and Brady, and their conservation officer handlers Hannah Mishler and Julie Siems, checked about 20 properties and 50 pieces of equipment. They found four zebra mussels attached to equipment adjacent to the site of the original report.

OTHER AIS

[Arizona] [Tilapia zillii \(Redbelly Tilapia\)](#) was found in Peoria, AZ [\[USGS NAS\]](#)

[Texas] [Pomacea maculata \(giant applesnail\)](#) was found in East Fork San Jacinto River, backwater at Lake Houston, TX [\[USGS NAS\]](#) and in Allens Creek, Sealy, TX [\[USGS NAS\]](#)

[Utah] [Oreochromis niloticus \(Nile Tilapia\)](#) was found in Great Salt Lake Desert, West Wendover, UT [\[USGS NAS\]](#)

WATCH LIST

[Canada] DFO wants people to report sightings of European Green Crabs in the Salish Sea. Sightings can be reported to AISPACIFIC@dfo-mpo.gc.ca

[Canada] [What the shell is out there? Columbia Shuswap Invasive Species Society wants help documenting what kinds of shells are out there.](#)

DREISSENID MUSSELS

[Tribe works to keep home of endangered fish free of invasive species \(1/3/22\)](#)

A small, unassuming two-inch mussel could stall the comeback of Nevada's threatened Lahontan cutthroat trout and endangered cui-ui sucker, but the Pyramid Lake Paiute Tribe, long time steward of the lake, has made it a mission to prevent invasive species from establishing themselves in the lake.

The Lahontan cutthroat trout were believed to have gone extinct in 1943, due to a dam that blocked their spawning ground, and the cui-ui were expected to follow.

But in a strike of luck, a fishery scientist eventually identified a remnant population of the Lahontan cutthroat trout surviving in a creek on the Nevada-Utah border. The remarkable find allowed the tribe to propagate the trout and successfully reintroduce it into Pyramid Lake.

BOAT INSPECTION/DECON/TECH NEWS

[\[Ontario\] New boating regs aim to reduce spread of invasive species \(12/23/21\)](#)

New provincial boating regulations focusing on “Clean, Drain, Dry” principles and practices aiming to reduce the spread of environmentally damaging invasive species come into effect on Jan. 1, 2022. Watercraft and watercraft equipment were regulated as carriers of invasive species after amendments to the Invasive Species Act following a 2021 review. A public comment period ran from April 21 to June 7.

BALLAST WATER/BIOFOULING

[Table: List of ballast water management systems that make use of Active Substances which received Basic Approval from IMO](#)

MARINE

[Invasive crab species at Lummi sea pond has experts, locals concerned \(1/5/22\)](#)

An explosion of an invasive species at the Lummi sea pond has experts concerned about what comes next. European Green Crab – a species that’s only been found in Washington since the late 1990s – don’t have any native predators, but they’re known to eat anything and everything, according to Lummi biologist Bobbie Buzzell.

[Building a Better Lionfish Trap \(12/24/21\)](#)

In Curaçao, some divers hunted for lionfish with birdcages. One diver would hold the cage door open while another tried to stick the fish inside—a cumbersome underwater feat that did little to protect divers from being stung. ElHage was not a diver, or even an inventor. He was an interior designer. But work was slow in the wake of the 2008–09 global recession, and he found himself in the hardware store looking for something a diver could use to hold a lionfish without getting stung. ElHage settled on a plastic tube and a flexible funnel cut in such a way that objects could go in but not easily come out.

AQUACULTURE

[Commentary: Theatre of aquaculture absurdities set for 2022 season \(1/2/22\)](#)

2021 was a year of living dangerously for many of us as we felt the impacts of climate change

and lived with the rampaging COVID-19 virus. If the past 365 days taught us anything, it is the value of making decisions based on science not activism. Unfortunately, the ‘denialism industry’ fed by a rabid and brainwashed ‘cancel culture’ is set to grow in 2022 as fear induced falsehoods keep trumping peer-reviewed facts.

[Growing Seaweed Fights Climate Change and Provides Food, Fertilizer and Fuel \(1/6/22\)](#)

Seaweed, a term for the diverse group of large, nonflowering marine organisms known as algae, has a wide range of uses, from food and fertilizer to fuel. It also absorbs carbon and is a potentially potent tool in fighting climate change. Seaweed is simple to grow, requiring only seawater and sunlight, and is beginning to be farmed more extensively all over the world... Seaweed farmers in California are frustrated by the permitting process, as seaweed farms in other states like Alaska, Maine and Hawaii flourish. Other than in a few local harbor or port areas, a new commercial aquaculture lease hasn't been issued in California for more than 25 years. Just last year, California's first commercial open-water seaweed farm opened in Humboldt Bay, where the local harbor district has the authority to grant its own permits.

[Tribe: Court of appeals ruling won't stop fish farm attempt \(12/22/21\)](#)

Jamestown S'Klallam Tribal Chairman Ron Allen vowed Tuesday to move forward with plans to establish a fish farm in Port Angeles Harbor despite a recent state Court of Appeals decision upholding the termination of its business partner's lease.

[Groups Again Sue Army Corps to Protect Washington's Coastal Areas and Endangered Species from Industrial Shellfish Operations \(12/20/21\)](#)

Today, Center for Food Safety (CFS) and Coalition to Protect Puget Sound Habitat filed a lawsuit in federal court to stop the U.S. Army Corps of Engineers (Corps) from continuing the excessive expansion of industrial shellfish operations without considering the cumulative impacts to Washington's rich and diverse coastal waters. Industrial shellfish operations adversely affect Washington's shorelines and estuaries by destroying critical habitat for numerous species, including endangered and threatened salmon and killer whales. These operations harm Washington's aquatic and nearshore areas by increasing plastic netting and debris, microplastics, pesticides, and disturbances in the environment.

FISH

[Meet the mosquitofish: California scientists debate whether it's menace or messiah \(1/4/22\)](#)

A key weapon in the war on disease-carrying mosquitoes, the invasive species also threatens biodiversity. Government officials warding off deadly diseases often praise the lowly mosquitofish as a public health messiah. But some environmentalists have dubbed it the “plague minnow” and the “fish destroyer.”

[Montana nonprofit is fighting to protect native fish on this historic reservation \(12/30/21\)](#)

Cindy Benson, a member of the Confederated Salish and Kootenai Tribes, has lived her entire life in or near the Flathead Indian Reservation in western Montana.

She says her family lineage can be traced back as far as Chief Looking Glass in the 1800s, so Benson and generations of her family have witnessed firsthand the declining numbers of native species in the area. "Our native species are disappearing everywhere. In fish, animals, plants and insects. We need to take a stand," said Benson.

[Recovery from pike infestation limits fish retention \(12/29/21\)](#)

Several lakes on the central Kenai Peninsula treated for invasive northern pike are showing signs of native fish recovery but fishing is still restricted in 2022.

[Invasive trout disrupting Glacier National Park's lakes \(12/28/21\)](#)

In civilization, invaders change the language, diet and customs of the places they conquer. Invasive fish don't ride on chariots or tanks, but their disruption leaves almost warlike marks on the ecology. That contest plays out right now between Montana's native bull trout and invasive lake trout in the Flathead River Basin. New research indicates that while the lakers have run like Genghis Khan, the bulls might hang on if they get help.

[Tennessee Valley Authority to Install "Fish Fences" to Stall Asian Carp Invasion \(12/20/21\)](#)

The Tennessee Valley Authority (TVA), a federally-owned electric utility company that operates throughout Tennessee, Alabama, Mississippi, and Kentucky, has released an environmental assessment that includes a unique proposal involving "fish fences" to help slow the spread of invasive carp up the Tennessee River watershed. The organization is proposing the installation of up to seven fish barriers at dams along the river.

AQUATIC PLANTS

[Invasive plant gets stranglehold at Minto Park in Salem, Oregon \(1/4/22\)](#)

At Minto Brown Island Park in Salem, you'll find ample of opportunities to recreate, but you will also find an invasive water plant growing out of control around the park. The city of Salem is working with the Willamette Riverkeeper to stop the spread of the aggressive and invasive plant that has gained a stranglehold on the Willamette Slough at Minto Brown. The Willamette Riverkeeper looks at water quality, habitat health, trash and other issues happening on the 187 miles of the river. Uruguayan water primrose, also called Ludwigia, forms dense mats in slow-moving backwater channels, oxbow lakes, and sloughs, according to the city.

[\[Watch\] Tahoe's Largest AIS Control Project Underway at Taylor/Tallac Creeks \(TRPA\)](#)

[Invasive plants are invading Tahoe. A debate rages over using herbicides to battle them \(12/22/21\)](#)

Desperate to control aquatic invasive species in a heavily traveled Lake Tahoe waterway, two regulatory agencies are considering allowing the use of aquatic herbicides in the Tahoe Basin, a treatment method that up until now has been prohibited. The Tahoe Regional Planning Agency Governing Board and the Lahontan Regional Water Quality Control Board will decide in January if herbicides should be used on 17 acres in the Tahoe Keys to control rapidly spreading underwater invasive plants. Aquatic invasive plants have the potential to devastate Tahoe by

impacting lake clarity, impeding boating, negatively affecting aquatic life and contributing to algae blooms.

FRESHWATER

[Invasive ‘Rock Snot’ Found In Upper Manistee River \(12/30/22\)](#)

An invasive algal species native to Lake Superior has been found in upper Manistee River in Kalkaska County.

CLIMATE CHANGE

[Tropical species could slither, crawl, and hop their way north as the climate warms \(1/5/22\)](#)

In parts of Florida, Burmese pythons gobble up rabbits and raccoons. Green iguanas destroy gardens and burrow under sidewalks. Cuban tree frogs prey on native frogs and climb into homes through windows and pipes. “I’ve had several people tell me stories about tree frogs coming out of a toilet or coming out of the drain in their sink,” says Hardin Waddle of the U.S. Geological Survey.

[Climate change, invasive species found to drive native trout declines \(1/4/22\)](#)

In a new [study](#) published in Science Advances, University of Montana researchers found that climate change drives native trout declines by reducing stream habitat and facilitating the expansion of invasive trout species.

[How Climate Change Amplifies Damage from Invasive Species \(12/23/21\)](#)

Economic and environmental damage to U.S. agriculture from the introduction of plant and animal species as well as insect pests and diseases from foreign countries has been an increasing concern to American farmers and ranchers in recent decades, and it seems likely to only get worse in the future as climate change expands the climatic zones vulnerable to these so-called invasive alien species (or IAS). The most comprehensive estimate of the economic impact of these IAS came in 2005, when several Cornell University scientists estimated that nearly \$120 billion in damages to the U.S. economy from invasive plants, pathogens, diseases, and animals, with about half of that damage accruing to U.S. agriculture. Other economic sectors that are impacted by IAS include maritime and river shipping, fishing, forestry, food processing, and recreation. Public health is also impacted, as some of the IAS are zoonotic pathogens which also affect humans, such as the Zika virus, parrot fever, West Nile fever, and influenza.

[Farmed seafood supply at risk if we don’t act on climate change \(12/13/21\)](#)

The supply of farmed seafood such as salmon and mussels are projected to drop 16 per cent globally by 2090 if no action is taken to mitigate climate change, according to a new study. Ocean-farmed seafood or mariculture is often seen as a panacea to the problems of depleted stocks of wild fish and growing human demand and is expected to grow substantially in the coming years. But the new modelling study highlights the industry is as vulnerable to the effects of climate change as any other. If we continue to burn fossil fuels at our current rate, the amount

of seafood such as fish or mussels able to be farmed sustainably will increase by only eight per cent by 2050, and decline by 16 per cent by 2090.

OTHER

[Scientists Pull Animal DNA Out of Thin Air \(1/6/22\)](#)

When geneticist Elizabeth Clare placed 70 small filters around England's Hamerton Zoo Park last year, there was an air of hope. Clare intended for the traps to collect DNA from the sky, allowing scientists to identify the animals present in each enclosure. What she hadn't caught wind of yet, however, was that another team of scientists, more than 500 miles away, was conducting a similar experiment in the Copenhagen Zoo. Independently, and surprisingly, both teams succeeded.

Two new proof-of-concept studies published today in the journal *Current Biology* are among the first to show that tiny fragments of DNA in the air can be used to detect different species. The non-invasive approach could be especially useful for detecting rare, invasive and otherwise hard-to-find animals. The discovery was made simultaneously by the two independent research groups, one based in Denmark, and the other based in the United Kingdom and Canada.

[Invasive species cost the US \\$21 billion per year, study finds \(1/4/22\)](#)

Invasive species are increasing worldwide due to mounting global trade, and a new study has found that these mammals, bugs and bacteria cost the US economy more than \$21 billion per year, with agriculture the sector most affected. "The biggest proportion of these costs are actual damages," said Drew Kramer, a biologist at the University of South Florida and co-author of [the study in the journal Science of the Total Environment](#). Researchers used a global database called InvaCost to assess only "observed, highly reliable costs related to invasive species," from 1960 to 2020, according to the study. Data showed that in the 1960s, annual costs of invasive species were \$2 billion. By 2010 to 2020, these costs were \$21.08 billion per year.

[One Way To Counter The Ill Effects Of Hawaii's Invasive Species: Eat Them \(1/3/22\)](#)

Hawaii's recent history of introducing species is laced with good intentions and negligence. Mongoose were introduced to control rat populations, taape as a food source to relieve the strain on ehu and onaga fish stocks. In both cases, the introduced species became malignant. So consuming them is doubly beneficial, according to University of Hawaii West Oahu environmental scientist Daniel Lipe. Given how invasives have broken the ecological balance, consuming them is an act of stewardship.

[The Top 10 Invaders in Washington: Wild Pigs, Monster Fish, Killer Flowers and More \(12/23/21\)](#)

Recent news stories told of the Lummi Nation, west of Bellingham, describing a tiny, invasive crab — about 3 inches across the shell — as an "environmental disaster" and "one of the most destructive" aquatic creatures in the world. The European green crab is on the list of the Top 10 Washington state invasive species, compiled by Justin Bush, executive coordinator at the Washington Invasive Species Council.

These are take-no-prisoners organisms, not native to the ecosystem and on the march. They've arrived by boat, uninvited passengers on cargo ships. They've been introduced by accident, and sometimes on purpose by sometimes-naïve types believing they're doing something good.

[Feral Hog Invasions Leave Coastal Marshes More Susceptible to Climate Change \(11/16/21\)](#)

Coastal marshes that have been invaded by feral hogs recover from disturbances up to three times slower than non-invaded marshes and are far less resilient to sea-level rise, extreme drought and other impacts of climate change, a new study led by scientists at Duke University and the University of Massachusetts Boston (UMB) finds. “Under normal circumstances, marshes can handle and recover from drought or sea level rise, given time, but there is no safety net in place for hog invasions,” said Brian Silliman, Rachel Carson Distinguished Professor of Marine Conservation Biology at Duke, who co-authored the study. “Marshes that are invaded by hogs recover slower from drought, are less resilient to erosion, and hemorrhage carbon dioxide back into the air as hogs turn vast areas of the marsh into mud pits,” Silliman said. “Based on data from our experiments, our disturbance-recovery model suggests full marsh recovery could take an extra 80 to 100 years,” he said.

OUTREACH AND EDUCATION

[Science News for Students - Explainer: What is an invasive species? \(1/6/22\)](#)

Feral pigs. Green iguanas. Red imported fire ants. Asian carp. Your pet cat. All of these critters have one thing in common. They’re troublemaking intruders, coming to a native habitat near you. Scientists call them invasive species.

JOBS/GRANTS

[Biologist/Ecologist \(Terrestrial Invasive Species Program Manager\)](#)

Department: Department of the Interior

Agency: Geological Survey

Number of Job Opportunities & Location(s): 1 vacancy - Location Negotiable After Selection, United States

Salary: \$108,885.00 to \$141,548.00 / PA

Series and Grade: GS-0401/0408-14

Open Period: Monday, January 3, 2022 to Friday, January 14, 2022

Position Information: Permanent - Full-time

Who May Apply: Career transition (CTAP, ICTAP, RPL), Open to the public

[The Coastal Oregon Marine Experiment Station \(COMES\) at Oregon State University invites applications for a tenure-track Assistant Professor in Marine Fisheries.](#) The successful candidate will develop and maintain an externally funded program conducting original and independent research and training in marine fisheries science, especially as related to the commercially exploited fish resources of Oregon and the Pacific Northwest. This person will be an Oregon State University professor who devotes 50% of their time to Oregon Department of Fish and Wildlife-related work and direct assistance to the agency. This position is also expected to contribute to the teaching mission of the Department of Fisheries, Wildlife, and Conservation Sciences. As a member of COMES, the successful candidate will be expected to work closely with coastal communities and with federal, state, and private organizations in support of the COMES mission to “understand, utilize, and sustain marine resources and coastal ecosystems in order to benefit the citizens of Oregon, the Pacific Northwest, the Nation, and the World.” The candidate will be expected to demonstrate a commitment to diversity, equity, and inclusion through annually reviewed activities and trainings. Please direct questions to Dr. Will White at will.white@oregonstate.edu Full information and application details at <https://jobs.oregonstate.edu/postings/110683>
Apply by 1/15/2022 for full consideration.

[Vertebrate Pest Management Advisor Applied Research and Extension](#)

Location Headquarters: Napa County

Serving Napa, Lake, and Solano Counties, California

PURPOSE: The Vertebrate Pest Management Advisor will implement an innovative extension education and applied research program to address high priority needs and problems related to vertebrate pest impacts in annual and perennial crops.

The advisor will be anticipated to work as a generalist with the ability to bring solutions for the broad variety of vertebrate pests impacting crops and production systems.

The Advisor will complement the existing Pest Vertebrate CE Specialist and Wildlife and Human Conflicts Advisor in the ANR network. Accordingly, the advisor will work closely with UC ANR Wildlife and Pest Program Team, UC ANR IPM program, and specific annual and perennial crop work groups and program teams.

HOW TO APPLY: If interested in this position, please review further details regarding major duties/responsibilities and qualifications at <https://ucanr.edu/about/jobs/>. To apply for this position, please visit: <https://recruit.ucanr.edu/> and choose “applicants” (refer to position #21-41). To assure full consideration, **application packets must be received by January 21, 2022; open until filled.**

[West Multnomah Soil & Water Conservation District](#) is looking for two uniquely talented and experienced individuals to join our team. We’re hiring one Field Conservation Intern and one GIS & Field Conservation Intern for the 2022 field season.

Both internships are part-time. [Visit our website](#) to learn more about the positions and how to apply. 1) Field Conservation Intern, and 2) GIS & Field Conservation Intern

Location: Portland, Oregon; Pay: \$17.31/hr; Work hours: 20 hrs/week, 2-3 days/week

Application deadline: 5:00pm PST Friday, January 28, 2022

[Wildlife Technicians. UW-Madison Sierra Nevada, California, United States](#)

Up to ten field technicians are needed to undertake field work for bioacoustics research projects throughout National Forests in the Sierra Nevada region in California. This monitoring program uses autonomous recording units (ARUs) to survey for avifauna and provide information for several research and management programs studying forest owls and songbirds.

This multi-year research project focuses largely on the distribution of California spotted owls and the invasive barred owl, in order to provide information vital to the successful management of both species at broad spatial scales in the Sierra Nevada. Additional research is being conducted on the distributions of forest owls and songbirds across the range.

Start and end dates for this position are dependent on snowpack, but the season will likely run mid-April to late-July. Target start date of April 18, with the end date in mid-late July. Pay is \$16-\$18/hour depending on experience, plus per diem (up to \$200/week) when fieldwork requires overnight camping.

[Now accepting applications: 2023 John A. Knauss Marine Policy Fellowship Program](#)

The Knauss Fellowship provides a unique educational experience to graduate students who have an interest in ocean, coastal, and Great Lakes resources and in the national policy decisions affecting those resources. The program, which is sponsored by the NOAA's National Sea Grant College Program, matches highly qualified graduate students with hosts in the legislative and executive branches of government located in the Washington, D.C. area for a one-year paid fellowship. Past fellows have developed successful careers in a variety of sectors, including government, academia, consulting, private companies, and nonprofit.

[NOAA Inclusive Fisheries Internship Program Seeks Undergraduate Applicants for 2022 Summer Program](#)

IN FISH! is an inclusive internship program sponsored by NOAA Fisheries and partners in academia and non-governmental research institutions.

Our IN FISH! interns take a two-credit course, work with a mentor on a science or management project, and participate in career-building workshops and symposia. At the end of the program, students present their project work in a symposium open to the public. Projects are tailored to meet the student's interests and career goals.

The 2022 program runs from June 6 through August 12. **Application deadline is 11:59 p.m. EST February 18, 2022.** Late applications may be considered; however, we will give priority to those submitted by the deadline. Applicants must be U.S. citizens. Participants receive a \$5,000 stipend and tuition is covered. Travel, housing, and food expenses are also covered when the program is residential.

GRANTS

[NOAA-NOS-NCCOS-2022-2006972](#)

[Understanding multi-stressor impacts on marine ecosystems under climate change](#)

Department of Commerce

Closing Date for Applications: Jan 18, 2022

The purpose of this document is to advise the public that NOAA/NOS/National Centers for Coastal Ocean Science (NCCOS)/Competitive Research Program (CRP) [formerly Center for Sponsored Coastal Ocean Research (CSCOR)/Coastal Ocean Program (COP)], the NOAA Climate Program Office (CPO), and the NOAA Ocean Acidification Program (OAP), in partnership with the NOAA Office of National Marine Sanctuaries (ONMS) and the NOAA Integrated Ocean Observing System (IOOS), are soliciting proposals to understand the combined impacts of multiple stressors on the function and health of marine ecosystems within the context of climate change. This information will be used to improve place-based management of marine protected areas and enable the proactive protection of these critical ecosystems under future climate scenarios. Climate change is exacerbating existing environmental stressors (e.g., hypoxia, harmful algal blooms, and ocean acidification) through changes to the fundamental drivers of ecosystems (e.g., temperature, precipitation, seasonal cycles, and biogeochemistry).

[NMFS-Sea Grant Fellowship Call for Applications](#)

The National Sea Grant College Program and the National Marine Fisheries Service (NMFS) support a Ph.D. graduate fellowship in two specific areas:

- Population and ecosystem dynamics
- Marine resource economics

The fellowships offered within this program are aimed at training the next generation of specialized experts in fisheries management.

Important Information:

Deadline: **Applications are due to California Sea Grant by January 27, 2022, 5 p.m. PST**

Funding Availability: \$54,166 per year for up to three years

Anticipated start date: August 1, 2022, with projects to be completed by July 31, 2025

[NOAA-NOS-NCCOS-2022-2007023](#)

[Harmful Algal Bloom Control Technologies Incubator](#)

Department of Commerce

The purpose of this document is to advise the public that NOAA/NOS/National Centers for Coastal Ocean Science (NCCOS)/Competitive Research Program (CRP) [formerly Center for Sponsored Coastal Ocean Research (CSCOR)/Coastal Ocean Program (COP)] is soliciting proposals from the Cooperative Ecosystems Studies Units (CESU) to implement a 5-year Harmful Algal Bloom (HAB) Control Technologies Incubator (HCTI) under the auspices of the NCCOS/CRP Prevention, Control and Mitigation of HAB Program (PCMHAB). This funding opportunity will provide support for one award to develop and administer a national program that accelerates the development and application of HAB control approaches. To accomplish this, the main objective of the HCTI will be to fund extramural proof of concept, innovative HAB control technology projects to assess their feasibility. Promising technologies will then be encouraged to apply to relevant future PCMHAB competitive funding announcements independent from the HCTI. In addition, the other objective of the HCTI will be to provide guidance to end users and stakeholders on navigating the relevant licensing and permitting processes (e.g., National Environmental Protection Act and Federal Insecticide, Fungicide, and Rodenticide Act requirements) relevant to the applicability of proven control methods during responses to ongoing HAB events. The proposals must address how the HCTI will accomplish these two objectives. This funding opportunity is intended to support the administration of the HCTI and is not intended to directly support individual research projects or short term activities on specific

local coastal HAB issues. Funding is contingent upon the availability of Fiscal Year 2022 Federal appropriations. If funds become available for this program, one project for a HCTI will be funded for approximately \$1.5M/year for 5 years, not to exceed \$7.5M over that period. If successful, the selected project may receive an additional \$7.5M for a second and final 5 year period of performance. It is anticipated that projects funded under this announcement will have a September 1, 2022 start date. **Current Closing Date for Applications: Jan 27, 2022**

[National Fish and Wildlife Foundation Emergency Coastal Resilience Fund 2021 Request for Proposals \(RFP\) Released](#)

NFWF's funding comes directly from the Extending Government Funding and Delivering Emergency Assistance Act, (PL 117-43) to support projects that increase the resilience of wildlife habitat and coastal communities impacted by hurricanes and wildfires in 2020 and 2021. Under the same authorities as NFWF's National Coastal Resilience Fund, NFWF will award approximately \$24 million in grants through this RFP for practices that help restore wetlands, build living shorelines, improve hydrologic flow, reduce hazardous fuels, and generally enhance natural systems. The Request for Proposals is officially launched November 17, 2021 and **will close on February 3, 2022**, when the Full Proposals are due. Due to the emergency nature of these funds, a non-federal match is not required. The RFP can be found here:

<https://www.nfwf.org/coastalresilience/emergency/Pages/home.aspx>

You can find additional application instructions on the webpage in the "Tip Sheet."

SAVE-THE-DATE GRANT ANNOUNCEMENT

California State Parks Division of Boating and Waterways (DBW) expects to open the application window for the 2022 [Quagga and Zebra Mussel Infestation Prevention Program Grant Cycle in March 2022](#), subject to available funds.

Minimum Eligibility Requirements:

1. Grant applicant must own/manage any aspect of the water in a reservoir;
2. The reservoir must be open to the public for recreation; and
3. Grant applicant must demonstrate that the reservoir is uninfested with dreissenid mussels.

To demonstrate that the reservoir is uninfested, applicants must provide mussel monitoring data collected since March 2021. Monitoring data can be from surface surveys, artificial substrates, and plankton tows.

[Partners for Fish and Wildlife FY22](#)

Department of the Interior
Fish and Wildlife Service

The Partners for Fish and Wildlife (PFW) Program is a voluntary, incentive-based program that provides direct technical assistance and financial assistance in the form of cooperative and grant agreements to private landowners to restore and conserve fish and wildlife habitat for the benefit of federal trust resources. The PFW Program is delivered through more than 250 full-time staff, active in all 50 States and territories. Partners for Fish and Wildlife Program staff coordinate with project partners, stakeholders and other Service programs to identify geographic focus areas and develop habitat conservation priorities within these focus areas. Geographic focus areas define where the program directs resources to conserve habitat for federal trust species. Project work plans are developed strategically, in coordination with partners, and with substantial involvement from Service field staff. The program has been in existence since 1987 and has over

30 years of successful delivery. Project selection will seek to align or support the Secretary's priorities. It also advance the Department of the Interior's mission, U.S. Fish and Wildlife Service's mission, and PFW's mission, promote biological diversity, and based upon sound scientific biological principles. Program strategic plans inform the types of projects funded under this opportunity.

FEDERAL/STATE/PROVINCIAL LEGISLATION, RULES, ACTIONS

Advocacy:

State/Province

Judicial

Executive

[Biden to deliver 1st State of the Union address in March \(1/7/22\)](#)

House Speaker Nancy Pelosi has invited President Joe Biden to deliver the State of the Union address -- the first of Biden's presidency -- on Tuesday, March 1, 2022.

Congressional

[Salmon Research Task Force Act sponsored by Alaska's U. S. Senators \(12/18/21\)](#)

Alaska U. S. Senators Lisa Murkowski and Dan Sullivan have introduced the Alaska Salmon Research Task Force Act. The legislation would form a panel of Alaska's salmon stakeholders and research experts to study Pacific salmon trends and create a coordinated research strategy for Pacific Salmon in Alaska to support salmon management, according to a joint release. It says a panel of 13 to 19 members is envisioned.

[Gearing Up For The Next WRDA \(1/6/21\)](#)

The House Transportation Water Resources and Environment Subcommittee will [meet next Wednesday \[1/12/22\]](#) to go over proposals for this year's Water Resources Development Act. The legislation's 2020 iteration invested in waterway infrastructure and community resilience and outlined oversight measures for the U.S. Army Corps of Engineers. The [Senate Environment and Public Works Committee](#) is also meeting Wednesday for an oversight hearing on the USACE's current water infrastructure projects. The hearing will probe into any legislative action that could help the Corps carry out its work.

APPROPRIATIONS

[Return to top](#)

[It's 2022. How does the BBB look now? \(1/3/22\)](#)

NEW YEAR, SO NOW WHAT? It's now been more than two weeks since Sen. [Joe Manchin](#) (D-W.Va.) basically pulled the plug on the version of President Joe Biden's Build Back Better agenda that passed the House.

An AIS federal legislative table is posted on the web on the www.westernais.org website. Go to <https://www.westernais.org/federal-provincial-regulations> and see *AIS Legislative Tracker*

TRAININGS, WEBINARS, CONFERENCES AND MEETINGS

[Archived Materials](#)

[Events: Webinars, Trainings, Conferences and Meetings](#)

Watercraft Inspection Training

Level 1 Virtual Training - February 22-23, 2022 (2 days) 8am-noon PST; [[Register Here](#)]

Level 1 Virtual Training - March 22-23, 2022 (2 days) 8am-noon PST; [[Register Here](#)]

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Level 2 Virtual Training - February 22-24, 2022 (3 days) 8am-noon PST; [[Register Here](#)]

Level 2 Virtual Training - March 22-24, 2022 (3 days) 8am-noon PST; [[Register Here](#)]

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Level 3 Virtual Training - March 8-10, 2022 (3 days) 8 am to 4 pm PST; [[Register Here](#)]

For more information go to <https://www.westernais.org/> (under the "Training" tab)

or contact

Quagga D @ (702)236-3814 or quaggadee@cox.net

Because of continued concerns due to COVID-19 upcoming meetings and events listed below may be postponed, cancelled or converted to teleconferencing events. Please check directly with the organizers of these events for the most up-to-date information.

[DOI Invasive Species Training Opportunities Spreadsheet](#)

2022

January

The next meeting of the 100th Meridian Initiative Columbia River Basin AIS Team will be Tuesday, January 11 and Wednesday, January 12, 2022. Contact Paula Hotaling for further information @ PHotaling@psmfc.org. See <https://www.westernais.org/coordination> for past meeting minutes and presentations. *****Updated Agenda Posted*****

[Oregon Invasive Species Council Virtual Meeting](#) January 11, 2022 | 1:00 - 4:30 PM

[Ballast Water Webinar Week:](#)

Beginning Tuesday 18 January, Riviera will be holding a series of webinars focused on deadlines, commissioning tests and shipowner requirements for 2022 and 2023. Each webinar is meticulously researched and speaks to a key industry challenge, headache or opportunity.

- BMWS 2022 and 2024 deadlines: what every operator needs to know
- Ballast water reception and treatment as a service in US waters
- Out of commission: how to respond to a negative BWMS commissioning test
- What shipowners want and need from the BWMS industry and its regulators in 2022

January 19, 1 p.m. CT - [History and Effectiveness of Injurious Wildlife Listing under the “Lacey Act”](#) Presented by: Susan Jewell Injurious Wildlife Listing Coordinator, U.S. Fish and Wildlife Service

Canadian Council on Invasive species presents: [National Phragmites Conference](#) January 20th, 2022; Virtual Event 11am – 4 pm EST

Michigan Invasive Species Program’s NotMISpecies Webinar Series:

January 25, 2022, 9:00 a.m. to 10:00 a.m. ET - [Dive into the gene pool: Using environmental DNA to detect invasive species](#)

Invasive Mussel Collaborative Webinar: [The role of dreissenid mussels in nutrient cycling](#) January 25, 11:00 a.m. – 12:30 p.m. ET. Presenters Sergei Katsev, University of Minnesota-Duluth and Derek Schlea, LimnoTech will present the latest research on the role dreissenid mussels play in nutrient cycling.

Minnesota Aquatic Invasive Species Research Center **January 27, 2022, 2- 3 pm EST - [Can small-scale removal of hybrid cattail improve fish habitat?](#)** Join University of Minnesota Sea Grant Fisheries and Aquaculture Extension Educator Amy Schrank for a webinar about cattail-

dominated shorelines. Learn about why cattails are so abundant on Minnesota shorelines and how they impact Minnesota lakes. Through research, the goal is to determine whether small-scale removal of hybrid cattail can increase water quality and plant diversity and benefit lake fish communities. Visit the Minnesota Sea Grant [Cattail-Dominated Shorelines](#) project page for information.

February

[Invasive Species Centre: Annual Invasive Species Forum](#). The virtual 2022 Invasive Species Forum is taking place on February 1-3, 2022. The theme is Action, Innovation, and Outreach. The Invasive Species Forum is an annual event that brings attention to invasive species issues, research, and advances in prevention and management occurring across Canada, and in neighbouring U.S. States. The Invasive Species Forum will showcase speakers from around the world, on a diverse array of topics

[2022 Midwest Fish and Wildlife Conference](#), February 13-16, Des Moines IA

[INVASIVES 2022 Virtual Forum & AGM](#)

February 15, 2022 - February 17, 2022

The INVASIVES Annual Forum & AGM is an exciting opportunity for non-profit organizations, government staff, Indigenous leaders, industry, stewardship groups, academics and more from across the Pacific Northwest region and beyond, to network and share their knowledge and expertise about invasive species. Everyone is welcome.

The INVASIVES 2022 Forum will incorporate a variety of workshops, keynote presentations, plenary and speedy sessions along with plenty of opportunities for networking throughout the event. See what was posted during last year's forum, INVASIVES 2021, on social media by searching the event hashtag #INVASIVES2021

Michigan Invasive Species Program's NotMISpecies Webinar Series:

February 16, 2022, 9:00 a.m. to 10:00 a.m ET. - [The AIS-Team: Conservation officers on a mission to prevent invasive species](#)

[National Invasive Species Awareness Week](#)

February 28, 2022 – March 4, 2022

March

[11th Annual Columbia Gorge Invasive Species & Exotic Pest Workshop](#)

We are excited to announce that our annual invasive species symposium is scheduled for March 3rd, 2022! It will be co-hosted by the Columbia Gorge Cooperative Weed Management Area (CWMA), USDA Animal and Plant Health Inspection Service, the Washington Invasive Species Council, and Washington State University Extension. The event will be held as a webinar, so you will be able to attend from the comfort of your own home or workspace. We will continue to offer thoughtful

content and dynamic speakers that you have come to expect from our annual event. So please join us on this special day to learn about pathways of ornamental weeds, spotted lanternfly, riparian restoration techniques, and more. You won't want to miss it! 2022 Invasive Species & Exotic Pest Workshop Thursday, March 3rd, 2022; 10am-3pm PST

[2022 Missouri River Natural Resource Conference](#)

Theme – Missouri River: Ebbs & Flows

Conference Dates: March 21-23, 2022

Conference Location: Lied Lodge Conference Center in Nebraska City, Nebraska

April

April 18-22 ICAIS Oostende Belgium: The [International Conference on Aquatic Invasive Species \(ICAIS\)](#) is the most comprehensive international forum to address new and emerging issues related to aquatic invasive species in freshwater, marine and estuarine environments. ICAIS provides an international platform for the presentation of aquatic invasive species research that pertains to species biology, risk assessment, prevention, management and control methods, ecological and ecosystem impacts and restoration, outreach and policy. Online Registration is available now! Early Registration ends 14-Jan-2022

May

Mark your calendars for the [Joint Aquatic Sciences Meeting](#) in Grand Rapids, Michigan, May 14-20, 2022. The meeting will be held at the DeVos Place convention center and it is organized by the Consortium of Aquatic Science Societies (CASS).

[11th International Conference on Marine Bioinvasions](#) May 15-19, 2022; Annapolis, Maryland

October

[Upper Midwest Invasive Species Conference 2022](#)

October 25-27, 2022; Green Bay, Wisconsin.

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TO UNSUBSCRIBE/SUBSCRIBE to the AIS NEWS email sphillips@psmfc.org AIS NEWS was compiled by Robyn Draheim (robindraheim@gmail.com) and Stephen Phillips. Past issues of AIS NEWS can be found @ <https://www.westernais.org/outreach>