



# Aquatic Invasive Species News

August 1, 2023

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## RECOMMENDED READING

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### When are environmental DNA early detections of invasive species actionable?

Environmental DNA (eDNA) sampling provides sensitive early detection capabilities for recently introduced taxa. However, natural resource managers struggle with how to integrate eDNA results into an early detection rapid response program because positive eDNA detections are not always indicative of an eventual infestation. We used a structured decision making (SDM) framework to evaluate appropriate response actions to hypothetical eDNA early detections of an introduced aquatic plant in Sebago Lake (Maine, USA). The results were juxtaposed to a recent study that used a similar SDM approach to evaluate response actions to hypothetical eDNA early detections of introduced mussels in Jordanelle Reservoir (Utah, USA). We found that eDNA early detections were not actionable in Sebago Lake because the plant's invasion potential was spatially constrained and the current management activities provided acceptable levels of mitigation. In Jordanelle Reservoir, eDNA detections were actionable due to high invasion potential and analyses supported management actions to contain the invasion. The divergent outcomes of the two case studies are related to the unique attributes of the habitats and species, highlighting the utility of the SDM approach when considering an eDNA monitoring program. We use these two case studies to present a general SDM framework and a set of heuristics that can be efficiently applied to eDNA early detection rapid response scenarios and other instances associated with indeterminate eDNA detections, especially when there is an imperative to make decisions as quickly as possible.

Adam J. Sepulveda, Christine E. Dumoulin, Denise L. Blanchette, John McPhedran, Colin Holme, Nathan Whalen, Margaret E. Hunter, Christopher M. Merkes, Catherine A. Richter, Matthew E. Neilson, Wesley M. Daniel, Devin N. Jones, David R. Smith. When are environmental DNA early detections of invasive species actionable?. *Journal of Environmental Management*, Volume 343, 2023. 118216, ISSN 0301-4797, <https://doi.org/10.1016/j.jenvman.2023.118216>

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## PUBLIC COMMENT

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Request for Information: The Office of Science and Technology Policy (OSTP) and the Council on Environmental Quality (CEQ), on behalf of the interagency Ocean Policy Committee (OPC), request input from all interested parties to inform the development of a National Strategy for a Sustainable Ocean Economy (National Strategy). The National Strategy will describe the vision, goals, and high-level actions for a robust, equitable, secure, sustainable ocean economy enabled by healthy, resilient ocean ecosystems. It will build on current Federal, Tribal, Territorial, State, and regional sustainable ocean management practices and identify needs and opportunities to enhance these efforts with new and emerging science, technology, knowledge, and policy. Through this request for information (RFI), the Ocean Policy Committee seeks public input on what the goals and outcomes of the National Strategy should be, and how the Federal Government can best advance sustainable management of ocean, coastal, and Great Lakes resources and ecosystems of the United States.

**Responses are due by 11:59 p.m. Eastern Time on August 28, 2023.** Submissions received after the deadline may not be taken into consideration.

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## NEW SPECIES SIGHTINGS

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Want to get more new species alerts?

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

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

[Arizona] *Potamopyrgus antipodarum* (New Zealand mudsnail) was found in Canyon Creek, near the intersection of E Forest Service Rd. 34 and N O W Ranch Rd. [[USGS NAS](#)]

[Nevada] *Apalone spinifera* (Texas Spiny Softshell) was found in a Clark County wetland park, west pond [[USGS NAS](#)] and *Craspedacusta sowerbyi* (freshwater jellyfish) was found in Baily Fishing Pond in Fuji Park [[USGS NAS](#)]

[South Dakota] *Dreissena polymorpha* (zebra mussel) was found in James River, at Hecla Day use area, upstream of Sand Lake Reservoir [[USGS NAS](#)]

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## WATCH LIST

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- Alaska: Report your sightings via the [ADF&G Invasive Species Reporter](#) or by calling the Invasive Species Hotline: 877-INVASIV (877-468-2748). If you locate invasive green crab on Annette Islands Reserve, you can call 907-886-FISH to make a report.
- British Columbia: Take a photo, put it back where you found it, and email the information about where you saw it and when to: [AISPACIoFIC@dfo-mpo.gc.ca](mailto:AISPACIoFIC@dfo-mpo.gc.ca)
- Washington: Take a photo, put it back where you found it, and report suspect crabs here <http://wdfw.wa.gov/greencrab>
- Oregon: Retain green crab caught in your gear - it is illegal to return them to state waters. They are part of your “Other Shellfish” daily catch limit. Try them as food with the rest of your catch. Do not mutilate or kill any crab while you are crabbing.

[5 invasive pests to look out for in WA and how to report sightings](#)

[Destructive forest pest, the emerald ash borer, arrives in Oregon; public asked to report sightings](#)  
[Cover your ash: Keep an eye out for the emerald ash borer in Washington](#)

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## DREISSENID MUSSELS

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[Nearly \\$1.2 billion spent at one site to deter invasive carp from Great Lakes; other entry sites still possible \(7/12/23\)](#) The \$1.146 billion project, paid for with 90 percent federal and 10 percent state funds from Illinois and Michigan, is meant to help prevent catastrophic damage to the \$7 billion Great Lakes fishery, and untold disruption to the \$15 billion boating industry, according to authorities.

Capelli, Camilla, Federica Mauri, Elisa Pianta, Federica Rotta, and Fabio Lepori. 2023. “Environmental DNA Survey Indicates Arrival of Quagga Mussel in Ticino River Basin”. *Journal of Limnology* 82 (1). <https://doi.org/10.4081/jlimnol.2023.2105>

[Volunteers wanted in Okanagan to monitor invasive mussels \(7/18/23\)](#) The Okanagan and Similkameen Invasive Species Society (OASISS) says this will be the third year it will be seeking out residents who own private docks on Kalamalka, Wood, Okanagan, Skaha and Osoyoos lakes.

[\[Nebraska\] Battling zebra mussels Beaver Lake Association decides to not drain the lake \(7/17/23\)](#) Deciding to not drain the lake comes down to a variety of factors. The first is that Beaver Lake is the community's source of drinking water which means chemicals can't be used to remove the mussels.

[Okanagan Water Board report shows high risk of infestation for invasive mussels \(7/30/23\)](#) Littley is recommending “stable, sufficient, and long-term funding,” for the mussel defence program to be successful.

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## BOAT INSPECTION/DECON

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[Inspections across North Dakota find 4 watercraft with dead zebra mussels \(7/15/23\)](#) Officials with the North Dakota Game and Fish Department found four watercraft that were transporting dead zebra mussels over the Fourth of July holiday period.

[Mussel infestation has changed boating life at Highline Lake State Park \(7/19/23\)](#) “As soon as we got the infested label that goes with the lake, at that point, we now have to inspect and decontaminate every boat for the next five years,” Martinez said. “That really is the biggest impacts for boaters.”

[Over 14,000 boats inspected for quagga mussels during Pioneer Day weekend in Utah \(7/25/23\)](#) Statewide, Aquatic Invasive Species technicians with the DWR, Utah State Parks, Arizona Game and Fish Department and the National Park Service inspected 14,885 boats and performed 355 decontaminations from Friday to Monday.

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## BALLAST WATER/BIOFOULING

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[First BWMS to feature Manta filter launched \(7/26/23\)](#) Wärtsilä Water and Waste has introduced a version of its Aquarius UV ballast water management system (BWMS) with the FilterSafe Manta filter

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## MARINE

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[Using Tiny, Affordable Submarines to Hunt Invasive Lionfish \(7/21/23\)](#) She’s cute, compact and yellow. Her name is “Great White,” and she was invented by Scott Cassell – a military veteran and expert submarine pilot who is turning a one-man submarine hull into a cutting-edge lionfish hunting machine that fits two (a pilot and a mission specialist).

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## GREEN (5-SPINED) CRAB

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[Green crabs are a staple on this Belfast restaurant’s menu \(7/31/23\)](#)

As the invasive European green crab has [continued to expand and ravage the New England coast](#) for years, marine researchers, ocean conservationists and some fishermen have long suggested getting them on restaurant menus to [cull the growing population](#).

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[Can we really eliminate invasive species by eating them? \(7/20/23\)](#) On restaurant menus across New England, green crabs are showing up in everything from bouillabaisse and bisques to croquettes and crudo.

[10-year green crab study links warming waters with continuing growth \(7/27/23\)](#) Long-term studies like Carlon's are important because they allow researchers to differentiate between short-term variations and verifiable trends.

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## AQUACULTURE

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[Fisheries Minister quits amidst aquaculture challenges in BC \(1/25/23\)](#) Joyce Murray's short and controversial tenure as Fisheries Minister leaves behind a legacy of unfinished business in BC's salmon farming industry.

Related: [Diane Lebouthillier replaces Joyce Murray as Canada's fisheries minister, inheriting plethora of controversies \(7/27/23\)](#)

[Aquaculture transition plan is an opportunity for BC's salmon farmers \(7/17/23\)](#) "My vision is for a future where local communities, First Nations, wild salmon and aquaculture are all thriving." – Jennifer Woodland, Chair of the BC Salmon Farmers Association

[Will Canadian aquaculture industry bet dollars on a donut? \(7/20/23\)](#) Newfoundland entrepreneur hopes to bring Norwegian system to East Coast

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## FRESHWATER

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[Invasive crawfish imports have pros and cons, CPW says \(7/21/23\)](#) Colorado Parks and Wildlife is weighing the pros and cons of allowing invasive crawfish imports.

Related: [These non-native crawfish may become legal to import in Colorado as wildlife officials consider rule change \(7/26/23\)](#)

[Invasive Species Surge as a Result of Winter/ Spring Storms \(7/21/23\)](#) Cal OES's Environmental-Historic Preservation (EHP) unit reminds affected residents of the possible surge of invasive species due to storm-related flooding. Californians can report sightings of invasive species online.

Ghannam, Sally, and Edward P. Levri. 2023. "Periphyton Growth on Allochthonous Input in Streams May Lead to Higher Individual Growth Rates of the Invasive New Zealand Mud Snail (*Potamopyrgus antipodarum*)". *Journal of Limnology* 82 (1). <https://doi.org/10.4081/jlimnol.2023.2092>

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Vaissi, S., Rezaei, S. Climatic niche dynamics in the invasive nutria, *Myocastor coypus*: global assessment under climate change. *Biol Invasions* 25, 2763–2774 (2023). <https://doi.org/10.1007/s10530-023-03070-y> [\$]

[WSU Vancouver research team finds high numbers of invasive clams in Columbia River \(7/17/23\)](#) Invasive Asian clams have appeared in the Columbia River in large numbers, according to a study by a team from Washington State University, Vancouver. [[video clip](#)]

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## FISH

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[Invasive Black Carp Fetches Bounty of \\$100 Per Carcass in Mississippi River \(7/12/23\)](#) The Illinois Department of Natural Resources may pay anglers a \$100 bonus per carcass if they take the effort to turn in any black carp caught, and payments are subject to the availability of funds and are restricted to ten grants per individual monthly.

[Biologists prepare for another potential threat to Columbia River salmon: invasive northern pike \(7/17/23\)](#) Right now, an invasive fish species is trapped behind Grand Coulee Dam in eastern Washington. If northern pike make it past the two giant cement dams in their way, it could spell trouble for salmon. That's why wildlife agencies are preparing for the worst-case scenario.

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## AQUATIC PLANTS

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[Collaborative effort tackles invasive yellow flag iris at White Lake, B.C. \(7/12/23\)](#) The Skw'lax Guardian Program and the Columbia Shuswap Invasive Species Society (CSISS) spearheaded the initiative, with support from the Shuswap Trails Alliance and the Invasive Species Society of British Columbia.

[Texas agencies monitor hydrilla growth in Canyon Lake \(7/17/23\)](#) The invasive plant species has been in Texas for decades, said Patrick Ireland, district supervisor for the inland fisheries division of the Texas Parks and Wildlife Department.

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## CLIMATE CHANGE

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[As temperatures grow hotter, cheatgrass, invasive species thrive in Montana, the West \(7/30/23\)](#) The annual grasses included in the study are a fine fuel, increasing the frequency and intensity of

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wildfire cycles. The grasses also reduce biodiversity and threaten native species like sage grouse, which depend on intact sagebrush habitat to thrive.

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## OUTREACH AND EDUCATION

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[A Look At How Invasive Species Are Reshaping Our EcoSystems: \[In the PBS series\] Human Footprint, Biologist Shane Campbell-Staton travels the world to explore our global impact. Episode: Strangers In Paradise – Invasive species are reshaping the world’s ecosystems, but who’s really to blame? Shane wrestles a python, hunts Hawaiian pigs, and gets sucker-punched by a carp to answer the question: in the Age of Humans, how does our species decide what belongs?](#)

[\[Wisconsin\] Snapshot Day to set sail statewide in a hunt for aquatic invasive species \(7/15/23\)](#)  
Aquatic invasive species are the focus of an upcoming statewide scavenger hunt, marking the tenth annual AIS Snapshot Day in Wisconsin. Slated for Saturday, Aug. 19, this event calls upon water enthusiasts of various ages to aid in the identification and mapping of invasive flora and fauna such as Eurasian watermilfoil, purple loosestrife and New Zealand mudsnails.

['Clean Up The Lake' to launch Environmental Dive Center on Aug 17 to Protect Lake Tahoe \(7/30/23\)](#) Aspiring divers will receive SCUBA instruction from instructors in the Professional Association of Diving Instructors and will learn about environmental subjects ranging from submerged litter issues freshwater and marine environments, aquatic invasive species and more, both in the classroom and underwater. These courses will also teach Clean Up The Lake’s submerged litter cleanup methods, AIS survey techniques, and other important approaches the organization uses in their conservation dive programs. The first certified students of the EDC were members of The Washoe Tribe of NV & CA

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## OTHER

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[Alien invasion: Study reveals alarming economic costs of biological invasions to the European Union \(7/13/23\)](#) Massive costs estimated to soar to more than €142.73 billion (US \$150 billion) by 2040 in the absence of effective management

Pub: Henry, M., Leung, B., Cuthbert, R.N. et al. Unveiling the hidden economic toll of biological invasions in the European Union. Environ Sci Eur 35, 43 (2023).

<https://doi.org/10.1186/s12302-023-00750-3>

[A record-breaking Burmese python — as long as a giraffe is tall — caught in Florida \(7/13/23\)](#) A 19-foot Burmese python — the longest ever recorded — was caught by local hunters in South Florida's Big Cypress National Preserve this week.

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## JOBS/GRANTS

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New:

- *The Office of Personnel Management launched a [new portal](#) as part of USAJOBS for students interested in applying for internships at federal agencies, billed as a “one-stop shop” for those interested in exploring a career in government.*
- *Are you ready to make a contribution to fisheries of the West Coast? Begin your job search and application process by searching for [specific jobs at PSMFC](#)*

### Jobs

#### Washington Department of Fish and Wildlife: Vessel Incidental Discharge Act (VIDA) Section Lead - Environmental Planner 5 - Perm - \*07699-23

Salary \$75,120.00 - \$101,052.00 Annually

Location Thurston County – Olympia, WA

Job Type Full Time - Permanent

Remote Employment Flexible/Hybrid

Job Number 2023-07699

Department Dept. of Fish and Wildlife

Opening Date 06/12/2023

**Closing Date: Continuous**

The [Smithsonian Environmental Research Center \(SERC\)](#) invites applications for a Supervisory Research Biologist with expertise in **Marine Biology and Ecology**, including a focus on biodiversity in coastal marine ecosystems to evaluate patterns and underlying mechanisms at multiple spatial, temporal, and ecological scales.

We are looking for a new colleague to:

- Serve as Managing Director and Research Scientist for the [Marine Invasions Research Laboratory](#).
- Develop and lead an innovative research program in the candidate’s area of expertise.
- Advance experimental, comparative, and long-term research across large spatial and temporal scales, by leveraging existing resources and partnerships and developing new opportunities.
- Conduct collaborative research, engage public, policy, and other audiences, mentor researchers at various career stages, and contribute to the scientific community.

We are interested in candidates with expertise in any of these areas, including but not limited to:

- Invasion biology, community ecology, biogeography, and/or conservation biology
- Research across multiple spatial, temporal, and/or ecological scales
- Large-scale and long-term field studies and experiments
- Quantitative modeling and/or genetic methods
- Restoration and/or ecosystem management

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- Research to evaluate and inform public policy
- Developing, advancing, and/or participating in collaborative networks

**Requirements for this position include:**

- Degree: biological sciences, agriculture, natural resource management, chemistry, or related disciplines appropriate to the position; or Combination of education and experience: Courses equivalent to a major, as shown above, plus appropriate experience or additional education.
- You qualify for this position if you possess one year of specialized experience equivalent to at least the GS-14 level in the federal service or comparable pay band system (be sure to list the duration of this experience in months and years, as well as the number of hours per week you worked, or your application may be rejected).
- Specialized experience (your application must describe your experience in each of the following):
  - o Research investigating marine biology and ecology, including areas such as environmental science, geography, biology, or other related subject
  - o Obtaining research funding from competitive internal and/or extramural funding sources
  - o Authoring data-rich papers with regional and/or national application and significance
  - o Presenting research results to scientific and other audiences
  - o Leading or managing coordination of research projects and teams

**Compensation:** GS-15 (\$155,700 per year plus federal benefits)

Appointment Type: This is a permanent full time Federal position with associated benefits. This position is open to all U.S. Citizens or U.S. Nationals.

Location: Smithsonian Environmental Research Center, Edgewater, Maryland

**Open Application Period: 7/13/2023-8/14/2023**

To apply: Apply through USA Jobs Vacancy Announcements:

For non-federal applicants: [23A-ST-309355-DEU-SERC](#)

For Federal applicants: [23A-ST-309355-MPA-SERC](#)

*Applications directly to SERC will not be accepted.*

**UDWR: Wildlife Technician I – Aquatic Invasive Species (6 positions)**

Opening date: July 13, 2023

**Closing date: When filled**

Salary: \$15.49 per hour; Location: Pineview Reservoir, Positions available: 6; Housing: Not provided. The Utah Department of Natural Resources, Division of Wildlife Resources, has seasonal positions (no benefits) available at Pineview Reservoir, Utah. This appointment will last from approximately July to September with a possible extension.

**Examples of duties**

The successful individual will work within the DWR's Aquatic Invasive Species Program, dealing primarily with quagga/zebra mussel interdiction and education. Educating the public is a large part of the job, so professionalism and the ability to communicate are important. Duties

include inspecting and interviewing boaters prior to launching at Pineview Reservoir and using a high-pressure sprayer to decontaminate boats when needed.

#### Job requirements and skills

Applicant must be 18 years of age or older and have a valid driver's license at the time of employment. Applicant should have the ability to work outdoors in a recreational environment. Preference may be given to applicants with an interest and educational background in natural resources, customer service or boat and equipment operation experience. A knowledge of aquatic invasive species and quagga mussels is preferred, but not required.

#### Other

Applicants must be willing to work in an outdoor setting and work weekends and holidays.

#### Applications

Interested applicants may apply by emailing a resume (please include previous work experience and a list of references) to: Josh Wright, A.I.S. Interdiction Specialist, Northern Region Utah Division of Wildlife Resources, 801-648-6315, [jtwright@utah.gov](mailto:jtwright@utah.gov)

#### [AmeriCorps: Invasive Plants Technician \(NPS Whiskeytown\)](#)

Great Basin Institute, Whiskeytown, California, United States (On-Site)

#### Description:

The Great Basin Institute (GBI) is working cooperatively with the National Park Foundation and the National Park Service (NPS) at Whiskeytown National Recreation Area (WHIS) to recruit 2 Vegetation Technicians to conduct invasive plant management.

The GBI vegetation technicians will work with NPS staff to monitor and control invasive plants in visitor use areas at WHIS to encourage native vegetation recovery. The crew season will run from late-May to late-August. The crew will work outdoors in a variety of environmental conditions (heat, cold, insects, etc.). Training will be provided for all crew members, as is an excellent entry-point into the world of fieldwork and conservation careers.

Field work will contribute to a multi-year effort to control invasive plants in the post-fire environment at WHIS.

#### [Fish Biologist – Student Trainee](#)

The US Geological Survey (USGS) Great Lakes Science Center (GLSC) in Ann Arbor, Michigan is seeking a graduate level student working towards a degree in Fishery Biology to gain practical experience as a fish biologist trainee supporting fisheries research related to assessment and field studies in Lakes Michigan and Huron. GLSC has two large vessels stationed in Cheboygan, MI that conduct multi-week research cruises on these two lakes. As part of the USGS Pathways Career Interns program, the successful candidate will work under the guidance of GLSC PhD level research biologists in preparation for a USGS research career in Great Lakes fishery science.

#### [MS Graduate Research Assistantship, Fisheries Ecology and Management: EIU](#)

Eastern Illinois University Charleston, Illinois

\$19,200 Per Year - Full Time

Two MS graduate research assistantships are available in the Center for Fisheries and Aquatic Sciences at Eastern Illinois University (EIU) with a potential start date in January of 2024.

One MS project will investigate Channel Catfish population dynamics and recruitment in Central Illinois impoundments. The research will include an outreach component involving local school

groups. The second MS project will focus on early life stage dynamics and sources of propagule pressure of invasive carp (*Hypophthalmichthys* spp.) in tributaries of the Illinois River and assist with a similar project in the free-flowing Wabash River. This will involve field research to collect invasive carp larvae and eggs, as well as lab identification of larvae and testing of various water quality metrics. Candidates will gain a diversity of experiences in aquatic sciences by assisting with additional graduate student projects and working with fisheries professionals throughout the state at multiple levels (state fisheries biologists, university).

### [Institute for Applied Ecology](#)

We are currently hiring for an [Assistant Branch Director](#) based in Santa Fe, New Mexico, an [Accountant I](#) based in Corvallis, Oregon (remote work possible) and a [Sagebrush in Prisons and Native Seed Partnership Coordinator](#) based in Lander/Riverton, Wyoming. Full job descriptions and application details can be found in the links on our website at [www.appliedeco.org/jobs](http://www.appliedeco.org/jobs).

## Grants

### [KGASF Accepting 2023 Scholarship Applications](#)

The Kurt Grinnell Aquaculture Scholarship Foundation (KGASF) is accepting scholarship applications from members of a Tribe or First Nation and/or are involved in education, fisheries, aquaculture, or natural resource management. Each year, depending on funding availability, the KGASF awards several \$5,000 (or more) scholarships. To qualify, students or prospective students must be:

- An enrolled member of a United States recognized Tribe or a member of a Canada First Nation, or Metis or Inuit group; and,
- Enrolled to study aquaculture, or a closely related field at a university, community college, or a technical or trade institution.

The 2023 Scholarship Application Period is now open. **Scholarship Applications are due by midnight on August 15, 2023** and will be accepted as set out via instructions on our web site where more information is available -- Scholarship - Application • Kurt Grinnell Aquaculture Scholarship Foundation ([kurtgrinnellscholarship.org](http://kurtgrinnellscholarship.org)).

The Washington State Recreation and Conservation Office, on behalf of the Washington Department of Fish and Wildlife, is soliciting proposals for interagency agreement funding to support response to the ongoing [European green crab emergency](#). Please visit <https://rco.wa.gov/about-us/employment-and-contracts/> for more information about the available funding for public agencies. **(Rolling deadline until funds fully allocated)**  
For more information on European green crab and the state response, please visit <https://wdfw.wa.gov/species-habitats/invasive/carcinus-maenas> and <https://wdfw.wa.gov/news/emergency-measures-deployed-control-invasive-european-green-crabs-washington-waters>

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## LEGISLATION

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### Advocacy

### State/Provincial

### Federal: Executive

### Federal: Congressional

#### [Chairman Carper's Opening Statement: Hearing on WRDA 2024 Development \(7/20/23\)](#)

"Today, in that same bipartisan spirit, we start WRDA 2024 by hearing from several stakeholders who work closely with the Corps to carry out that agency's mission. As we know, the Corps collaborates with non-federal sponsors and stakeholders, including states and tribes, industry associations, and local organizations. These partnerships maximize the benefits of Corps studies and projects and ensure that projects address community needs.

The hearing's archived webcast can be found [HERE](#)

#### **WHAT NEXT: According to [E&E Daily \(7/21/2023\)](#):**

While the most recent WRDA effort remains relatively fresh, lawmakers indicated a commitment to kick-starting the process quickly. "This is a process we're beginning very early so that we can be successful again," said ranking member Shelley Moore Capito (R-W.Va.). Capito also underscored that this WRDA effort is not intended to be a "policy-heavy bill," instead focusing on authorizing new and existing projects, along with technical changes.

Even though WRDA bills are usually bipartisan affairs, the permitting talks on Capitol Hill — involving both Carper and Capito — could complicate the equation. Capito repeatedly argued that the Army Corps needs to see an improved process, one that will allow for projects to move forward more swiftly. She pressed the issue with Chris Blanchard, executive director for the logistics and project firm Cooper Consolidated LLC, which has partnered with the agency. "Are you finding this issue as well?" Capito asked Blanchard, pointing to permitting hangups and the need to run approvals through multiple agencies, like the Fish and Wildlife Service. Blanchard responded in the affirmative, offering that "there are continued challenges when there's so many agencies involved in permitting process in general." Sen. Pete Ricketts (R-Neb.) laid out similar points. "Six years is way too long to get a permit done," he said, pointing to a levee

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project in his state that has followed a lengthy timeline. "So getting permits done in a timely manner is an important thing."

[Sen. Michael Bennet co-sponsors bill to fight spread of aquatic invasive species \(7/17/23\)](#) Sen. Michael Bennet of Colorado reintroduced a bill to stop the spread of aquatic invasive species in the West with Montana Sen. Steve Daines on July 5. Called the Stop the Spread of Invasive Mussels Act ( [S.2105](#) ), it would target species like zebra and quagga mussels.

[Murkowski Introduces "Improving ARCTIC Act" to Secure Wins for Alaska in Farm Bill \(7/24/23\)](#) U.S. Senator Lisa Murkowski (R-Alaska) introduced the Improving Agriculture, Research, Cultivation, Timber, and Indigenous Commodities (ARCTIC) Act, legislation that will strengthen a variety of Farm Bill provisions to better address needs in Alaska.

## Federal: Appropriations

[Members of Congress break for August with no clear path to avoiding a shutdown this fall \(7/29/23\)](#)

At a press conference at the Capitol this past week, some members of the House Freedom Caucus, a conservative faction within the House GOP, said that voters elected a Republican majority in that chamber to rein in government spending and it was time for House Republicans to use every tool available to get the spending cuts they want. "We should not fear a government shutdown," said Rep. Bob Good, R-Va. "Most of the American people won't even miss if the government is shut down temporarily." Many House Republicans disagree with that assessment. Rep. Mike Simpson, R-Idaho, called it an oversimplification to say most Americans wouldn't feel an impact. And he warned Republicans would take the blame for a shutdown. "We always get blamed for it, no matter what," Simpson said. "So it's bad policy, it's bad politics."

[Committee House Releases FY24 Interior, Environment, and Related Agencies Appropriations Bill \(7/12/23\)](#)

The Interior, Environment, and Related Agencies bill provides new non-defense discretionary spending totaling \$25.417 billion, which is \$13.433 billion (35%) below the Fiscal Year 2023 enacted level and \$21.371 billion below the President's Budget Request. The bill also rescinds \$9.373 billion in funding provided to the Environmental Protection Agency (EPA), the Presidio Trust, and the Council of Environmental Quality by the Inflation Reduction Act (IRA), bringing the program level to \$34.790 billion (10%) below the FY23 enacted level. Overall, the bill's allocation is below the FY18 enacted level. The bill fully funds the Payments in Lieu of Taxes (PILT) program and prioritizes funding for Tribes and Wildland Fire Management. In addition, the bill provides a \$2.65 billion fire suppression cap adjustment as authorized. The bill reduces funding for nearly every other appropriation in the bill, including a \$3.962 billion (39%) reduction to the EPA.

The Bill can be found [HERE](#)  
Bill Report language is [HERE](#)

Some of the AIS language in the report:

## UNITED STATES FISH AND WILDLIFE SERVICE

Page 19: The Committee notes that the **European green crab** is a globally damaging invasive species that can survive in a wide range of water temperatures and salinities and has become established in many temperate coastal zones in areas around the world. Preventing the spread and establishment of invasive European green crab will support Tribal, commercial, and recreational fisheries—including [for] Dungeness crab and Puget Sound chinook.

Page 21: Population Assessment and Cooperative Management. —The recommendation provides \$36,932,000, which includes \$6,000,000 for the Great Lakes Fish and Wildlife Restoration Act. The Great Lakes Fish and Wildlife Restoration Act is supplemented with funding from the Great Lakes Restoration Initiative. The recommendation includes \$1,000,000 for the Lake Champlain Sea Lamprey program. The recommendation provides \$1,000,000 for the Service to continue to work with the State of Maryland, National Oceanic and Atmospheric Administration, and other partners on eradication of invasive northern snakehead and to finalize their plan for eradication in the Chesapeake Bay Watershed..

Page 22 Aquatic Invasive Species. —The recommendation includes **\$50,143,000**, of which \$7,000,000 is to implement subsection 5(d)(2) of the Lake Tahoe Restoration Act which is supplemented by funding provided in Public Law 117–58 as outlined in the Service’s spend plan contained in the fiscal year 2024 budget justification the Committee continues to support the Service in working to prevent invasive carp from entering the Great Lakes, and to control and eradicate them from the Mississippi River, its six sub-basins, the Upper Mississippi River, Missouri River, Arkansas-Red White River, Lower Mississippi River, Tennessee Cumberland River, and Ohio River, and Kentucky Lake, and Lake Barkley. This recommendation includes \$29,000,000 for invasive carp, of which \$4,000,000 is for contract fishing and no less than \$500,000 is for a new university collaboration, \$3,500,000 is to prevent the spread of quagga and zebra mussels in the West, of which \$1,250,000 is for National Invasive Species Act State and Interstate plan. The Service is encouraged to pursue technologies to aid in the elimination, mitigation, or control of aquatic nuisance species and invasive species that do not result in the addition of chemical agents to the ecosystem that can lead to harmful by-products such as algal blooms.

The \$4,000,000 provided for contract fishing will advance efforts to combat invasive carp by expanding and perfecting the combined use of contract fishing, including on the Chicago Area Waterways system, and deterrents to extirpate invasive carp, including grass carp, where already established, pursuant to individual State laws and regulations and as called for in management plans. Contract fishing has proven to be an extremely effective management tool and it is not meant to develop a sustainable commercial fishery...

The Committee recognizes the importance of understanding the current economic situation as it relates to the removal and available uses of invasive carp. The Committee directs the Service to review how invasive carp that are removed through contract fishing or by other means are being utilized. To ensure best practices, the Committee directs the Service to collaborate with State Departments of Natural Resources to survey the current and potential uses, including human consumption, and shall report their findings to Congress within 120 days of enactment of this Act.

#### UNITED STATES GEOLOGICAL SURVEY

Page 34: Invasive Species Research Program. —The recommendation includes \$11,000,000 for research on invasive carp, of which \$3,000,000 is for research on containing or eradicating grass carp

Page 36: Water Resources Research Act programs. —The recommendation provides \$16,000,000, \$500,000 over the fiscal year 2023 level, for these programs, including no less than \$10,000,000 for annual base grants, \$1,500,000 for competitive grants for research on aquatic invasive species in the Upper Mississippi River region, and any remaining funds for national competitive grants.

#### OPERATION OF INDIAN PROGRAMS

Page 41: Invasive Species Program. —The Committee encourages BIA to continue to support the work done in fiscal year 2023 to address the problem of the European green crab which impacts marine resources for Tribal communities in the Northwest.

#### [Senate Appropriations Committee Approves Defense, Interior-Environment, LHHS, and Homeland Security Bills \(7/27/23\)](#)

“The bills before us today are the product of hard work from our Chairs and Ranking Members to make tough choices, under tough circumstances to address pressing challenges we face. They may not be what any one of us would have written on our own, but they are solid bills that provide necessary resources to keep our families safe and healthy, our military the best in the world, our economy strong, our communities growing and thriving, and to keep us moving forward—not back,” said Chair Patty Murray (D-WA) in her opening remarks.

A full summary of the bill is available [HERE](#).

Bill text, as amended, is available [HERE](#).

The bill report, as amended, is available [HERE](#).

Adopted amendments are available [HERE](#).

AIS items in the bill include:

## U.S. FISH AND WILDLIFE SERVICE

Page 25: Within the amount provided for the National Wildlife Refuge System, \$258,194,000 is provided for wildlife and habitat management. Funding of \$2,835,000 for the subsistence program is transferred to the Office of the Secretary and \$16,925,000 is continued for invasive species with an emphasis on invasive species Strike Teams to focus on high priority invasive species problems before they cause irreparable harm to the environment. The bill maintains \$500,000 to help improve water efficiency at the Quivira National Wildlife Refuge in order to maintain, improve, and replace and upgrade refuge infrastructure per the direction included in the accompanying statement in the Consolidated Appropriations Act, 2021 (Public Law 116–260). The bill also provides \$2,500,000 for the Marine National Monuments, and \$2,500,000 for nutria eradication.

Page 26: European Green Crab. —The Committee recognizes invasive European green crab is becoming an increasing problem and provides \$300,000 for European green crab eradication efforts at affected National Wildlife Refuges.

Page 31: —Aquatic Invasive Species. —The Committee recommends \$50,643,000 for aquatic invasive species activities, \$500,000 above the enacted level. Within these funds, \$5,038,000 has been maintained to implement section 5(d)(2) of the Lake Tahoe Restoration Act (Public Law 106–506). Funding for research on hydrilla, eel, and milfoil invasive grasses is maintained at \$1,500,000.

Non-Intrusive Zebra Mussel Elimination. —The Committee recommends \$3,500,000 for zebra mussel eradication, equal to the enacted level and budget request. The Committee is aware of the environmental and economic threat posed by invasive quagga and zebra mussels.

Invasive Carp. —The Committee recognizes the importance of the work conducted by the Service to combat the serious threat of invasive carp and recommends \$31,500,000 for invasive carp activities, \$500,000 above the enacted level across invasive carp and Contract Fishing subaccounts...

Funding provided should also be used to control invasive carp in the Mississippi River and its Sub-basins, including the Upper Mississippi River Sub-basin; Missouri River Sub-basin; Arkansas-Red-White River Sub-basin; Lower Mississippi River Sub-basin; Tennessee Cumberland Sub-basin; and Ohio River Sub-basin, including in Kentucky Lake, Lake Barkley, and the Ohio River. The Service should consider the utility of creating a dedicated funding source to increase the intensity and geographic scope of efforts to prevent entry into the Great Lakes and control in areas where invasive carp are currently located. The Service is directed to continue to work with those States with existing cooperative agreements, including non-profits, to develop and implement innovative solutions to reduce invasive carp populations.



The Committee encourages the Service to focus on invasive species removal as it relates to the eradication efforts for invasive Carp. While the Committee recognizes the importance of studying and understanding invasive carp patterns, the Service is encouraged to take action on a strategy that increases the focus on biomass removal. Additionally, \$4,400,000 is provided for implementation of State Aquatic Nuisance Species management plans to help control the spread of invasive carp.

Invasive Species Competitive Grants. —The Committee is aware that work is ongoing in several regions to address the threats posed by aquatic invasive species and directs the Service to continue to make available competitive grant funding for projects to eliminate these destructive, non-native species.

Prioritization of Combatting Invasive Plant and Animal Species. —Invasive plant and animal species are a pervasive problem affecting communities across the Nation. Invasives, such as the carp, European Green Crab, nutria, quagga and zebra mussels, emerald ash borer, Eurasian milfoil, elodea, and the Hemlock Woolly Adelgid threaten our natural resources and wreak havoc on the communities and industries that rely upon them. Preventing invasive species from gaining a foothold in our communities and suppressing established species is of utmost importance. The Committee makes several increases to programs designed to combat invasive species before and after they become a problem. The Committee encourages the Service to support research, monitoring, mitigation, and outreach efforts in all regions.

## THE NATIONAL PARK SYSTEM

Page 35: Resource Stewardship. —The Committee recommends \$403,140,000 for resource stewardship which is \$17,577,000 more than the enacted level (yet before accounting for internal transfers within the Service, \$1,240,000 more than the enacted level) and \$106,497,000 less than the budget request. Within the Resource Stewardship program, \$2,000,000 is provided to address active forest management at national parks, \$6,500,000 is provided to address quagga and zebra mussels, ...

## U.S. GEOLOGICAL SURVEY

Page 45: Biological Threats and Invasive Species Research Program. —The bill provides \$47,422,000 for the Biological Threats and Invasive Species Research Program. The bill provides \$11,000,000 to address Invasive Carp issues in the Great Lakes and Upper Mississippi River Basin. In order to effectively control the spread of Invasive Carp, the Committee expects all six sub-basins of the Mississippi River Basin will be included in funding opportunities. The bill provides \$800,000 for invasive European green crab research.

The Committee notes the grave ecological threats and public nuisance posed by many invasive species and directs the Survey to prioritize research, detection, and response efforts on invasive species with extremely high impacts on natural resources, native

wildlife populations, and public access and enjoyment, including Burmese Pythons in the Florida Everglades and Big Cypress Swamp, as well as Lionfish in the Gulf of Mexico, Caribbean, and South Atlantic waters.

## OPERATION OF INDIAN PROGRAMS

Page 58: Agriculture and Range Program. —The bill provides \$41,438,000 for the Agriculture and Range Program, \$2,000,000 above the enacted level. This includes \$14,291,000 for Invasive Species and \$27,147,000 for the Agriculture Program [TPA]. The program increase for invasive species is provided to address the spread of invasive **European Green Crab**, with further direction explained below.

European Green Crab. —The population of invasive European Green Crab in the Pacific Northwest continues to grow. This invasive species is resilient to rising water temperatures caused by climate change. This crab species preys on native vegetation which is important habitat for endangered salmon and other species that are critical to uphold Tribal treaty rights and Puget Sound recovery. **The Committee directs the Bureau of Indian Affairs and U.S. Fish and Wildlife Service to coordinate with the National Oceanic and Atmospheric Administration to ensure a comprehensive Federal approach to addressing the threat posed by European green crab, mitigate harm, and protect native crab and other shellfish populations.**

## ENVIRONMENTAL PROTECTION AGENCY

Page 89: Great Lakes and Lake Champlain Invasive Species Program. —The Committee appreciates the ongoing research to combat aquatic nuisance species transported by commercial shipping and ballast water operations in order to implement the Great Lakes and Lake Champlain Invasive Species Program as authorized by the Vessel Incident Discharge Act (Public Law 115–282). The Committee directs the Agency to use funds from the appropriate Geographic Program to build on these implementation efforts to reduce the risk of introduction of invasive species into the Great Lakes and Lake Champlain...

**NOW WHAT:** The House and Senate USFWS AIS program budget marks are similar as the House appropriators spared this line in their cost-cutting efforts. However, it does not appear that the House budget includes funding for National Park Service for quagga and zebra mussels (?), while the Senate budget has NPS \$6.5 million for quagga and zebras mussel prevention. Stay tuned...

[Senate Appropriations Committee Approves Legislative Branch, Commerce-Justice-Science, and Financial Services Bills \(7/13/22\)](#)

Washington, D.C. – Today, the Senate Appropriations Committee met and approved the fiscal year 2024 Legislative Branch; Commerce, Justice, Science, and Related Agencies; and Financial Services and General Government appropriations bills.

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A full summary of the bill is available [HERE](#).

Bill text, as amended, is available [HERE](#).

The bill report, as amended, is available [HERE](#).

Adopted amendments are available [HERE](#).

Congressionally Directed Spending projects included in the bill are available [HERE](#).

AIS language in the NOAA National Marine Fisheries Service portion of the bill:

Page 46: European Green Crab.—The Committee is concerned by the rapid and growing invasion of **European green crab** around the country, including in the Pacific Northwest. The Committee provides \$2,000,000 within Habitat Conservation and Restoration for management, intervention, and mitigation of invasive European green crab.

Page 59: NOAA SPECIAL PROJECTS: Invasive **European Green Crab Control** and Eradication Annette Islands Reserve, AK, Metlakatla Indian Community, \$1,000,000 [ Senator Murkowski (R-AK)]

[Senate Appropriations Committee Approves Energy and Water Development, State-Foreign Operations, and Transportation-HUD Bills \(7/30/23\)](#)

**Washington, D.C.** – Today, the Senate Appropriations Committee met and approved the fiscal year 2024 Energy and Water Development; State, Foreign Operations, and Related Programs; and Transportation, Housing and Urban Development, and Related Agencies appropriations bills.

A summary of the bill is available [HERE](#).

Bill text, as amended, is available [HERE](#).

The bill report, as amended, is available [HERE](#).

Adopted amendments are available [HERE](#).

Congressionally Directed Spending projects included in the bill are available [HERE](#).

Some of the AIS language in the report:

#### INVASIVE CARP

**Page 9:** The Corps is undertaking multiple efforts to stop invasive carp from reaching the Great Lakes. The Committee notes that Congress authorized a comprehensive suite of measures to counter invasive carp at the Brandon Road Lock and Dam, critical to keeping invasive carp out of the Chicago Area Waterways System, which is the only continuous connection between the Great Lakes and Mississippi River basins. The Committee is disappointed the budget request does not include funding for the Brandon Road Lock and Dam, Aquatic Nuisance Species Barrier project.

As the Corps prioritizes projects, it shall consider critical projects to prevent the spread of invasive species. The Corps is directed to provide quarterly updates to the Committee on the progress and status of efforts to prevent the further spread of invasive carp, including

the Brandon Road Recommended Plan and the second array at the Chicago Sanitary and Ship Canal; the location and density of carp populations; the use of emergency procedures previously authorized by the Congress; the development, consideration, and implementation of new technological and structural countermeasures; and progress on preconstruction, engineering, and design work.

The Corps shall continue to collaborate at levels commensurate with previous years with the U.S. Coast Guard, the U.S. Fish and Wildlife Service, the State of Illinois, and members of the Invasive Carp Regional Coordinating Committee, including identifying navigation protocols that would be beneficial or effective in reducing the risk of vessels inadvertently carrying aquatic invasive species, including invasive carp, through the Brandon Road Lock and Dam in Joliet, Illinois...

**Page 23: Aquatic Plant Control Program.** —Of the funding recommended for the Aquatic Plant Control Program, \$7,200,000 shall be for nationwide research and development to address invasive aquatic plants, within which the Corps is encouraged to support cost-shared aquatic plant management programs. Additionally, \$13,000,000 shall be for watercraft inspection stations and rapid response as authorized in section 104 of the River and Harbor Act of 1958, subsections (d)(1)(A)(i), (d)(1)(A)(ii), (d)(1)(A)(iii), and (d)(1)(A)(iv); and related monitoring. Finally, \$6,300,000 shall be to address infestations of hydrilla in Lake Champlain and the Connecticut River basins. The Corps is encouraged to consider the benefits of establishing a rapid response task force to cover the multistate watershed.

Aquatic Plant Control Program—Mississippi River Basin. —The Committee recognizes that the Corps is engaged in a multipronged effort to combat invasive species in our country’s waterways and protect the Mississippi River Basin, which is one of the most valued ecosystems in the world. The Committee recommends \$500,000 for the Corps, in partnership with other Federal partners, to continue planning, designing, initial engineering and project management activities for construction of carp barriers in the Mississippi River Basin and the Tennessee-Tombigbee waterway.

**Page 46: Aquatic Nuisance Control Research.** —The additional funding recommended in the Aquatic Nuisance Control Research remaining item is to supplement and advance Corps activities to address Harmful Algal Blooms including early detection, prevention, and management techniques and procedures to reduce the occurrence and impacts of harmful algal blooms in our Nation’s water resources. The Committee recommends \$5,000,000 to develop next generation ecological models to maintain inland and intracoastal waterways and \$5,000,000 to work with university partners to develop prediction, avoidance and remediation measures focused on environmental triggers in riverine ecosystems; and to advance state-of-the-art unmanned aerial system-based detection, monitoring, and mapping of invasive aquatic plant species.

**NOTE:** The House E&W appropriations bill, passed 6/22/23 [See [6/27/23 AIS News](#)], funds the “APC-WID” cost share program @ \$7 million for watercraft inspection stations; \$ 3 million for monitoring and \$ 1 million for flowering rush

and hydrilla. The Senate bill therefore provides \$ 3 million more for watercraft inspection and monitoring than the House bill. Stay tuned....

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## EVENTS

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### Archived Events:

### Ongoing Training Opportunities:

#### Watercraft Inspection Training

#### Virtual (TBA):

- Virtual WIT or Level 1 – Inspector Training (2 days - 8 am – Noon PST)  
<https://www.westernais.org/level-1-inspector-training>
- WIT or Level 2 – Inspector & Decon Training (3 days – 8 am – Noon PST)  
<https://www.westernais.org/level-2>
- WIT or Level 3 – Trainer Training (3 days- 9 am – 4pm PST)  
<https://www.westernais.org/le>

#### In-Person:

TBA

#### [DOI Invasive Species Training Opportunities Spreadsheet](#)

#### [PNW IPC Citizen Science Trainings](#)

[InvasivesU – NAISMA](#) - InvasivesU is NAISMA’s exclusive online learning library intended to provide professionals, students, and interested individuals with the knowledge and tools necessary to prevent and manage invasive species in North America. NAISMA experts have thoughtfully curated and developed this content, especially for you!

### Calendar of Events

#### August

[Ecological Society of America](#) 2023 Annual Meeting in Portland, Oregon August 6-11, 2023.

Fri, Aug 11 | Camas Center

#### [Pend Oreille Invasive Species Training](#)

Attend a free 3-hour training with a nature walk where you will learn how to identify priority invasive species, how to record basic data and how to report findings on EDDMapS, a national early detection reporting system.

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[Invasive Species Advisory Committee](#) August 15, 2023; Virtual

[Oregon Invasive Species Council](#) August 15-16<sup>th</sup>, Bend OR, hybrid

NAISMA Webinar Series

August 16, 2023 @ 1:00 pm - 2:00 pm CDT [Webinar: Introduced Plant Pathogens Threatening North American Forests](#)

[American Fisheries Society 153rd Annual Meeting](#) August 20-24, 2023 | Grand Rapids, Michigan

### September

The 2023 [Western Regional Panel Annual Meeting](#) will be September 20-21 in Salt Lake City, Utah.

[Association of Fish & Wildlife Agencies 113th Annual Meeting](#) September 24-27, 2023; Calgary, Alberta

### October

[North American Invasive Species Management Association's 31st Annual Conference](#) October 16-19, 2023; Lincoln, Nebraska

2023 Montana Lakes Conference, October 18-20. The theme for the conference is "[Montana Lakes at Risk; Challenges and Opportunities.](#)" Whitefish, MT

Save the date: 2023 Oregon Aquatic Invasive Species Summit which will be held on October 24th in Salem, OR. Oregon Department of Agriculture and Washington State Department of Agriculture recertification credits are anticipated for attendees (pending approval). Topics will include:

- Techniques and timing with treatments
- Aquatic planting strategies
- Ludwigia Synthesis study
- Economic impact of AIS on local communities
- Roundtable discussions on defining success and conversation with our contractors
- AIS case studies
- Mapping efforts and much more!

### November

[Coastal and Estuarine Research Federation \(CERF\) 2023: Resilience & Recovery](#) Portland, Oregon, USA | 12–16 November 2023

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## December

### Wild Spotter Invasive Species Ambassador Training Course December 5-7, 2023

This intensive training will include building relationships, partnerships and engaging stakeholders; branding and marketing programs; using innovative tools and technologies; and volunteer citizen-science coordination, recruitment, and retention to meet invasive species management goals and expand local community capacity for action. This gathering will have limited attendance through a merit selection process. Please apply at <https://invasivesfree.org>. Priority will be given to participants who can demonstrate their commitment to building invasive species management capacity within their community.

2024

## May

[Now accepting abstracts through 9/8/23] The 23rd International Conference on Aquatic Invasive Species will take place in Halifax, Nova Scotia, Canada, from May 12 – 16, 2024. The conference theme is ‘Meeting Challenges with Innovation’. The International Conference on Aquatic Invasive Species addresses emerging freshwater, marine and estuarine AIS issues by involving scientists, policymakers, practitioners, and industry professionals in the presentation of research, and opportunities for collaboration on research and management projects. Stay tuned for more details.

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