You can’t control what you can’t find: Detecting invasive species while they’re still scarce
(1/24/19)

Most of the 10,000 ships lost to the bottom of the Great Lakes in wrecks over the past 400 years are still lost – hidden somewhere in 6 quadrillion gallons of water. Finding anything in a lake is a lesson in humility, so life as a freshwater biologist is always humbling. If we can’t account for huge steel freighters, imagine the challenge of finding a single tiny organism.

But it is crucial to detect invasive species as early as possible. Aquatic invasive species cause billions of dollars in economic damages, and regulators base multimillion-dollar management decisions on scientists’ and managers’ ability to detect them. It is much more cost-effective to invest in prevention measures than to react after a species becomes established. And low-density populations are easier to manage than species that have taken over an ecosystem… [continued]

Just Because: YouTubers Film Silver Carp Leaping in Slow Motion

PUBLIC COMMENT

- Atlantic salmon net pen individual permit: [Washington Department of Ecology] have updated four draft water quality permits in response to applications for net pen permits in Puget Sound. Until Atlantic salmon farming is officially banned from Puget Sound starting in 2022, companies are required to have water quality permits. These permits
allow us to continue to protect state waters and ensure the companies are operating under the strongest water quality protections. The pens already have current National Pollutant Discharge Elimination System (NPDES) permits in addition to multiple other state, federal, and local permits. Specifically, the NPDES permits are for four of Cooke Aquaculture's Atlantic salmon net pens — one near Hope Island, and three in Rich Passage near Bainbridge Island. See locations below. The draft NPDES permits are now available for comment. We invite comments on the draft permit documents beginning Dec. 27, 2018 until 11:59 p.m. on Feb. 25, 2019. We will publish a response to comments to address comments submitted during the comment period. How to provide comments We will accept comments from Dec. 27, 2018 until 11:59 p.m. on Feb. 25, 2019. Online (preferred): Submit your comments through our online comments form.

- The U.S. Army Corps of Engineers has extended the review period of “The Great Lakes and Mississippi River Interbasin Study (GLMRIS) - Brandon Road Integrated Feasibility Study and Environmental Impact Statement (EIS) - Will County, Illinois.” The end of the review changed from January 7, 2019 to February 22, 2019. The report is posted to the project website at https://www.mvr.usace.army.mil/GLMRIS-BR. For additional information, contact U.S. Army Corps of Engineers, Rock Island District, ATTN: GLMRIS-Brandon Road EIS, Clock Tower Building, P.O. Box 2004, Rock Island, IL 61204-2004.

NEW SPECIES SIGHTINGS

DRESISSENIDS

OTHER AIS

[USGS NAS Report]

DREISSENIID MUSSELS

[Texas] City of Austin: Zebra mussels to blame for downtown's smelly water (2/7/19)
If you live in downtown or south Austin and your water smells funny, Zebra mussels are the reason why, according to Austin Water. Thursday afternoon, Austin Water responded to complaints from several residents reporting water containing an unusual odor. According to the release, routine test results indicate that the odor issues were likely caused by the presence of Zebra mussels in a raw water pipeline at the Ullrich Water Treatment Plant. Related: Still Have Fishy-Tasting Water? Call 3-1-1, Austin Water Says (2/10/19)
Montana Fish, Wildlife & Parks has released the 2018 Watercraft Inspection Station Annual Report. FWP also released the 2018 AIS Early Detection and Monitoring Report, which outlines monitoring methods, survey locations and inspection results from the past year.

Related: MISC Report: Enumeration Of Potential Economic Costs Of Dreissenid Mussels Infestation In Montana (1/24/19)

110 Kansas Lakes Free Of Zebra Mussels (2/3/19)
Annual testing showed 110 lakes in Kansas were free of zebra mussel larvae. “These results are encouraging, and I hope this success means that lake users in Kansas are more aware of how to prevent the movement of zebra mussels by cleaning, draining, and drying their boats and equipment before recreating at another lake,” said Chris Steffen, KDWPT aquatic nuisance species coordinator... In Kansas, 30 lakes with zebra mussels have been identified. This includes Cheney Reservoir, Lake Afton, and El Dorado Lake. Several rivers have also been found to have the mussels.

Other states must join our environmental efforts [Opinion] (1/25/19)
…Currently in our home state of Montana we will contribute upwards of $6.5 million per year to protect the rivers and waterways, which flow to the west and east of us, from aquatic invasive species (AIS)... Much of our efforts and tax dollars spent in preventing the introduction and spread contributes to the well-being of our neighboring states’ rivers and waterways. Nevertheless, the states we share those rivers with contribute a fraction of the cost, while at the same time hindering our ability to generate revenue through responsible resource development. Oregon and Washington not only refuse to purchase Montana coal (which is some of the cleanest in the world) but also chose to hinder our ability to ship coal from their ports…

Water craziness in the Flathead (1/28/19)
The Bullock administration and Montana legislators have one more chance to protect the waters of the Flathead Basin and ensure their availability for future generations. In regard to both aquatic invasive species (AIS) and the water compact with the Confederated Salish and Kootenai Tribes (CSKT), wise and workable solutions are at hand. Unfortunately, key Democrats are fouling the AIS fight, while some Republicans are trying to sabotage the water agreement…

BOAT INSPECTION/DECON/TECH NEWS

Invasive zebra, quagga mussels were Kootenay bound (2/9/19)
The 2018 interim report on the Provincial Mussel Defence Program revealed that out of the 38,000 watercraft inspected during the 2018 operating season 25 boats were
confirmed to have highly invasive zebra and/or quagga mussels (ZQM). The stations were open from April until October 2018 and luckily they stopped mussel-fouled boats.

MARINE

BALLAST WATER/BIOFOULING

ATBs scrapped as ballast water treatment rules kick in (2/5/19)
North American tugboat owners are retiring ageing articulated tank barges (ATB) instead of installing ballast water treatment systems to national and international rules. One of the leaders in North American inland and coastal towage, Kirby Corp, says that it will take its units out of service instead of paying for treatment systems. “Investing to meet this requirement in these ageing barges would be financially unattractive,” Kirby president and chief executive David Grzebinski says. He explains that these need to be removed from the fleet in the next four years. “We expect we will early retire these ATBs at their next shipyard dates which range between 2020 and 2023,” he explains.

ABS Focuses on BWMS (2/4/19)
ABS and industry collaboration identify key challenges with ballast water management systems (BWMS) and provide insight into installation and operational best practices. ABS recently issued questionnaires and hosted Ballast Water Management (BWM) Workshops, receiving feedback from across the globe from shipowners and operators with BWM systems installed onboard their vessels.

Marine Safety Center receives 23rd application for Ballast Water Management System type approval (2/11/19)
The Marine Safety Center received its 23rd application for Ballast Water Management System type approval for the HK-S(E) Ballast Water Management System manufactured by Miura Co., Ltd.

Marine Safety Center issues Ballast Water Management System Type Approval Certificate to Envirocleanse, LLC (2/1/19)
The Marine Safety Center issued the 16th U.S. Coast Guard Ballast Water Management System Type Approval Certificate to Envirocleanse, LLC, after a detailed review of the manufacturer’s type approval application determined the system met the requirements of 46 CFR 162.060.

With Shutdown Over, USCG's Compliance Operations Fully Resume (2/1/19)
Now that the federal government shutdown is over, the U.S. Coast Guard is catching up on a backlog of regulatory paperwork for vessels, shipowners and mariners. It is also beginning the task of taking over enforcement of the EPA's Vessel General Permit (VGP) program, as required by the Vessel Incidental Discharge Act (VIDA) of 2018.
[Idaho] Prize money being offered to thin Snake River rainbow trout (2/12/19)
The Idaho Department of Fish and Game has placed a bounty on rainbow trout in the South Fork of the Snake River in hopes of reducing the population of the invasive species. Prize money ranging from $50 to $1,000 is awarded to any angler who turns in a rainbow trout head containing a coded wire tag.

You Shall Not Pass: Using Selective Barriers to Block Invasive Species (2/4/19)
Scientists have spent a lot of time trying to help fish get across barriers, but the authors of this paper turned the concept on its head. By assessing attributes that prevent fish from being able to cross a barrier, they categorized differences among fish species that might be used to make selective barriers. The concept of selective fragmentation is based on the idea of “filtering” fish. A “filter” refers to ecological challenges that fish have had to evolve to overcome, which under natural circumstances may include things like waterfalls, shallow areas, or predators. Often, non-native fish have evolved traits to address challenges in their native habitats that differ from the habitats where they have been introduced.

Experts: Minnesota lakes can benefit from subzero weather (2/2/19)
Minnesota's bitterly cold weather this week may have driven many residents to stay cooped up indoors, but environmental experts say the frigid temperatures are good for the state's many lakes. Extended cold weather covers lakes with thick ice, keeping water temperatures cooler in the spring as the ice slowly thaws out. Lakes often see fewer harmful algal blooms in the summer because snow-covered ice blocks the sun and slows the growth of plants and algae, Minnesota Public Radio News reported. Some native fish species benefit from lower temperatures, such as Lake Superior's lake trout, brook trout and lake herring, said Cory Goldsworthy, an area fisheries supervisor with the Minnesota Department of Natural Resources. The recent extreme cold weather can also help reduce some invasive species that don't thrive in cold waters, such as alewife and sea lamprey, Goldsworthy said.

Purina Wants to Feed Your Dog Crickets and Fish Heads (1/29/19)
Fill Rover’s bowl with crickets and Asian carp, and keep the grass-fed beef steaks for yourself -- it’s better for the environment. So says Nestle SA’s Purina, which is experimenting with a new line of pet food featuring untapped ingredients like insects and invasive fish species. The menu goes against the grain in the $90 billion business, whose growth has been driven by dog and cat owners serving up meals that increasingly resemble their own -- including organic, grain-free, vegan and even “human-grade” options.

An invasive black carp with human-like molars is threatening the Mississippi River Basin (1/29/19)
The only thing more dreadful than a five-foot long black carp—an invasive species of fish that chomps up mouthfuls of endangered mussels with its human-like molars—is a
baby one. Unfortunately, a striving and thriving juvenile black carp is exactly what the state of Kentucky has recently discovered in its waters along the Ohio River. (As with humans, “juvenile” is a technical way of saying “not fully-grown yet.”)

AQUACULTURE

[California] Massive Fish Farm Proposed for Pulp Mill Site (2/10/19)
The Humboldt Bay Harbor, Recreation and Conservation District and Norwegian company Nordic Aquafarms are set to formally sign a lease Monday for the development of a massive fish farm at the former Samoa Pulp Mill… A land-based aquaculture facility – likely producing salmon or steelhead – the venture will serve as the West Coast base of operations for Nordic Aquafarms, which is currently in the process of developing an East Coast equivalent in Belfast, Maine, according to the company.

[Alaska] Go big or go home: Investors are backing Southeast’s largest oyster farms (2/8/19)
Silver Bay recently chartered a boat to take a group of local business people, academics and seafood industry boosters to see the site of its oyster venture about 13 miles from Sitka’s harbor. It’s in a cove near rocky shoreline. Not much to see – yet. “If this were to go through, what you’d see here would be a series of rafts that we’d use to suspend oysters from,” Sheridan tells the group. At this point it’s still if. Silver Bay has been working on securing a 10-year lease from the state’s Department of Natural Resources since 2017. Alaska has produced oysters for decades. But never on the scale being proposed here.

British Columbia PRV report to land at pivotal time for salmon farms (2/6/19)
“We need to stop arguing about the impacts of diseases,” Orr said. On Monday, a federal judge in Vancouver ruled that fish farms must test their young salmon for contagious viruses before transferring them into open-net pens. Justice Cecily Strickland’s 199-page decision gave DFO four months to develop a new policy that considers the threat PRV poses to wild salmon and to comply with the country's preferred precautionary approach.

Related: British Columbia report finds PRV from farms poses ‘minimal risk’ to Fraser River sockeye (2/7/19)

Cullen calls federal ruling a “huge win for wild salmon” (2/6/19)
Fisheries and Oceans Canada has four months to begin testing for piscine orthoreovirus, or PRV, in fish farms following the federal court ruling on Monday, Feb. 5. The virus causes heart and skeletal muscle inflammation and is often found in farmed Atlantic salmon along the B.C. coast. In March 2018, new research linked the disease to wild B.C. chinook. Nathan Cullen, Skeena-Bulkley Valley MP, welcomes the federal court ruling that demands DFO test for the PRV virus before farmed salmon is transferred or released. An existing DFO policy allowed fish farms to move young salmon into open-net pens before testing for PRV.
US Offshore Aquaculture: Will We Fish or Cut Bait – Proceedings Document (1/2019)

On October 26, 2018, the Consortium for Ocean Leadership, in partnership with Meridian Institute, hosted its third annual Industry Forum in Washington, D.C., entitled U.S. Offshore Aquaculture: Will We Fish or Cut Bait? The objectives of the Forum were to:

• Develop a clear, shared understanding of the current state of offshore finfish aquaculture globally and the present opportunities and challenges for establishing such an industry in the United States.
• Illuminate the scientific and technical capacities, environmental safeguards, and investment opportunities needed for responsible offshore finfish aquaculture to be deployed in the U.S.
• Identify specific areas of action that the science and technology community, government, aquaculture industry, and civil society organizations can implement to advance informed decision making in this emerging industry.

WEEDS

[Indiana] State passes invasive plant rule (1/26/19)

The state of Indiana is now one step closer to getting rid of invasive plants after the Natural Resources Commission voted Jan. 15 to make dozens of invasive plant species illegal in the state… Some commonly known plants on the list include garlic mustard, the common name for *Alliaria petiolata*; poison hemlock, *Conium maculatum*; Dame’s rocket, *Hesperis matronalis*; and purple loosestrife, *Lythrum salicaria*.

CLIMATE CHANGE

Living Sustainably: It’s all about global ‘weirding’ (2/11/19)

While it is true that the planet is warming on average, it is the ever-increasing rate of change and values outside of acceptable climate variability that are concerning. The U.S. Global Climate Change Research Program conducted an evaluation and concluded the following about what types of changes to expect in the Midwest over the next century:

Water: Our Great Lakes are not receiving the annual ice cover that we are used to seeing, allowing evaporation to occur year-round (with summer evaporation rates increasing). Changes in water level and temperature can stress native species, creating opportunities for invasive species and toxic algal blooms.

OTHER

How Invasive Species Threaten Salmon – Interactive Story Map (WA RCO)

…Salmon and the species that depend upon them face many threats, including invasive species…
Invader Detectives: EDRR Pilot Project

Invader Detectives has been conceptualized as a national program to facilitate the detection of invasive species in urban environments. The majority of invasive species enter the country through the large commercial sea ports and airports located in our Nation’s cities. If we can rapidly detect and respond to potentially harmful non-native species at or near our borders, we can prevent them from spreading to natural areas and agricultural landscapes. Ultimately, this Contractor’s Report is intended to serve as the conceptual framework for developing and implementing Invader Detectives on a national scale through a chapter-based (regional) model. It is a living document and should not be regarded as final guidance. We welcome your input at mailto:invasive_species@ios.doi.gov.

[California] They’re big, furry and could destroy the Delta. California has a $2 million plan to kill them (2/11/19)

California’s San Joaquin River Delta is in danger of being overrun by voracious beagle-sized rodents. The state has a plan to deal with them, but it’s going to take a lot of time and money.

[Columbia] Pablo Escobar's hippos keep multiplying and Colombia doesn’t know how to stop it (2/9/19)

Fishing villages, small boats and children at play dot the landscape along the shallow waterways of Colombia's Magdalena River. But an invasive species left behind by one of the country's most infamous figures is threatening the ecosystem and, possibly, a way of life. That species? Hippos.

[Hawaii] Coqui frog has impacts beyond being a noisy nuisance (2/10/19)

But while the ear-splitting call of this tiny tree frog is what they are famous for, problems with the coqui frog go beyond noise. Like us, these invasive frogs from Puerto Rico also find our island habitat and climate to be paradise. Coqui in Hawaii reach population densities greater than any terrestrial amphibian species elsewhere in the world. At over 20,000 frogs per acre in an environment that evolved without frogs, there is bound to be an impact.

[Hawaii] "Rolling the Dice" on Invasive Species During Shutdown (1/28/19)

The effort to control non-native species in Hawaii was dealt a significant setback by the 35-day partial shutdown of the federal government. Inspectors at ports of entry remained on duty, but research and mitigation efforts into previously established invasive species saw major reductions in available resources. In contrast to more obvious effects of the shutdown, like cancelled flights and a freeze on federal loans, the impact on invasive species mitigation was less apparent. Agriculture inspectors from Customs and Broder Protection and the Department of Agriculture were still on duty at air and seaports, although it is unclear if workloads and effectiveness were impacted as they were with TSA agents. State inspectors are responsible for clearing goods coming from the mainland United States and were not affected.
[Hawaii] Infestation of little fire ants, among world's worst invasive species, found in Kaneohe (1/24/19)
A woman on Alokahi Street found the stinging creatures at her home in December 2018, and alerted the Hawaii Department of Agriculture. The woman told the Department of Agriculture she had just come back from the Big Island, where little fire ants have been an issue since 1999. "The thing is early detection. So it was good that this resident called it in because we did survey, we checked this one resident. We found it on the borders of her property, and then we extended it out to neighboring properties, said Becky Azama, agricultural pest control manager.

Invasive species with charisma are harder to eradicate (2/4/19)
Charismatic invaders are harder to expel, according to a new study of animal experts. In an effort to improve the efficacy of management and eradication plans for invasive and introduced species, scientists set out to understand why people are more accepting of certain introduced species, and how public perception of a species is often at odds with its ecological impact.

Drones unleashed against invasive rats in the Galapagos (1/24/19)
…The project might be the first of its kind, but Campbell and others in the field expect drones to play an increasing role in culling non-native animals that threaten rare species. Especially on small, remote islands, far from helicopter companies, drones could be a much cheaper way to spread poison. Poisoning rats requires dropping bait twice, 21 days apart, Campbell says. “You have to have a helicopter for a month, sometimes shipped by boat. Your expenses very quickly add up.”

China's $1 trillion infrastructure project could encourage the spread of invasive bird and reptile species (2/1/19)
Few infrastructure projects are grander or more ambitious than China's Belt and Road initiative, which involves building a complex web of roads, railways, and sea routes across four continents and more than 70 different countries. With a price tag of around $1 trillion, the project is more than an infrastructure investment. It's a global play to integrate the economies of Asia, Europe, and Africa, with China at the helm. Once finished, it could alter the landscape of international trade, forming stronger alliances outside powerhouses like the US. It could also cause major damage to the environment, including the spread of invasive species of birds, reptiles, amphibians, and mammals.

Ex-customs agent gets house arrest for lying about inspecting hundreds of ships in Portsmouth (2/1/19)
Did a U.S. Customs and Border Protection agent let invasive species into the country? Maybe. But because of the man's "sheer laziness" we will never know, according to federal prosecutors.
JOBS/GRANTS

JOBS

**Director of the Western IPM Center (application review begins on February 15)**

This is a unique opportunity. One of the most interesting aspects of our work is its regional nature. Often in integrated pest management, folks focus on one geographic area, one category of pest or even one particular crop. But because the Western Region encompasses 17 Western states and territories, from the Northern Mariana Islands to Alaska to New Mexico, we work across state lines, across academic disciplines and across land-use patterns. We promote IPM in agriculture, natural areas and communities, with an overall vision of creating a healthier West with fewer pests. The [link to the job posting](#) lists the minimum and preferred qualifications for the job. Generally, the director needs a strong background in integrated pest management to be able to help identify needs and establish IPM priorities in the West, but this is not a research job. It’s a connections job – a people job – and a successful candidate is going to have demonstrated experience working in collaborative teams, connecting people and managing professional staff. The Western IPM Center plays an important coordinating and support role for the IPM research and extension efforts conducting by state programs, tribal entities and individual labs across the region. Our job is to add value and be helpful, and our director should have that mentality. The staff the director will manage are career professionals who don’t need hand-holding and do appreciate collaborative leadership. We’re a pretty easy group to get along with (even me, I promise…) and we all value the opportunity to do good work and make a difference.

To learn more about the position, you can contact either of our past two directors: [Jim Farrar](mailto:), Director of the University of California Statewide IPM Program, or [Amanda Crump](mailto:), UC Davis Teaching Professor in International Ag Development

**Seasonal Natural Resources Technician – Invasive Species-Alaska**

Agency: Fairbanks Soil and Water Conservation District  
Location: Fairbanks, Alaska  
Job Category: Temporary/Seasonal Positions  
Salary: $17-19 / hour  
Start Date: 03/18/2019  
**Last Date to Apply: 02/15/2019**  
Website: [http://www.fairbankssoilwater.org/](http://www.fairbankssoilwater.org/)  

**Description**

The Fairbanks Soil & Water Conservation District (FSWCD) is an outreach and technical assistance organization whose mission is to serve its cooperators, private landowners, and all citizens of the district by promoting wise development and conservation of natural resources. The person who is selected for this position will assist the Invasive Species Specialist in a variety of technical tasks associated with terrestrial invasive plant management in interior Alaska. The position includes organizing outreach events, assisting landowners with invasive plant issues, preparing invasive plant outreach materials, and conducting invasive plant control in the greater Fairbanks area. The position also includes assisting with aquatic invasive plant surveying and control activities.

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The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) is currently seeking fellows in natural science, social science, policy, and/or indigenous and local knowledge systems to serve as experts for two new initiatives: an assessment of invasive alien species, and the IPBES expert group dedicated to scenarios and models of biodiversity and ecosystem services. Federal employees are encouraged to contact NCASC researcher Sarah Weiskopf at mailto:sweiskopf@usgs.gov for more information on the U.S. government application process. The deadline to apply is February 15. For more information click HERE.

Wildlife Biologist Program Manager
Mountain View, CA, USA Req #930
Posted: Thursday, February 7, 2019
SpecPro Professional Services (SPS) is seeking an experienced Wildlife Biologist Program Manager to support the environmental division of the U.S. Army Reserve (USAR) 63rd Regional Support Command (RSC) in Mountain View, California. The 63rd manages over 200 USAR facilities located in Arkansas, Oklahoma, Texas, New Mexico, Arizona, Nevada, and California. Responsibilities (quantities are estimated on an annual basis) include:

- Manage the 63d RSC Natural Resources Program to include compliance with the Endangered Species Act (ESA).
- Provide expert advice on flora and fauna management including compliance with the ESA.
- Maintain database of listed species within the 63d RSC.
- Assist Geographic Information Systems (GIS) PM in maintaining 63d RSC protected flora and fauna GIS maps.
- Use GIS and Global Positioning System (GPS) to improve location mapping accuracy of new and existing 63d RSC natural resources.
- Create maps to support the Environmental Division’s environmental compliance and environmental review process. PM will submit draft maps for approval by the Conservation Branch Chief or the Environmental Division Chief.
- Provide direct support to the Environmental Division Chief and NEPA Program Manager in completing NEPA documents. Site visits may be required to assess all environmental impacts of a project. Number of site visits will vary depending on the complexity of the project but are limited to available travel funds. The PM should plan to travel on average once a month up to 5 nights.
- Write up to 24 U.S. Fish and Wildlife Service (USFWS) consultation letters.
- Revise the Integrated Natural Resources Management Plan (INRMP).

GRANTS

California State Parks Division of Boating and Waterways (DBW) will open the application window for the 2018/19 Quagga and Zebra Mussel Infestation Prevention Grant Program in February 2019. To receive future QZ Grant notices, click here.

NEW DATES:
The application window for the 2018/19 Quagga and Zebra Mussel Infestation Prevention Grant Program has been deferred to: April 2, 2019 - May 10, 2019

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A Solicitation Notice containing additional information regarding the workshop date (expected in March 2019), the posting of the Guidelines and other pertinent grant documents, and the accessibility of the On-Line Grant (OLGA) Application system, will be sent prior to opening of the grant application window stated above. The Notice will also be posted on the DBW website.

Minimum Eligibility Requirements:
Grant applicant must own/manage any aspect of the water in a reservoir where recreational activities are permitted; Grant applicant must demonstrate that the reservoir is uninfested with dreissenid mussels; and the reservoir must be open to the public.

What’s New?
☐ SB 790 broadened the eligibility of implementation grants to entities that own or manage any aspect of the water in a reservoir.
☐ To demonstrate that the reservoir is uninfested, applicants must provide mussel monitoring data collected since March 2018. Monitoring data can be from surface surveys, artificial substrates, and plankton tows.

**Tech prize encourages solutions to threats from invasive species:**
- The second round of the [Con X Tech Prize](#) offers 20 awards of $3,500 each, plus the chance to win the $20,000 grand prize, to help beginning inventors develop their ideas for solving conservation problems into prototypes.
- The challenge particularly encourages interdisciplinary teams to generate technological ideas to address the threats to economies and ecosystems from invasive species, though it welcomes submissions to help other conservation challenges as well.
- Teams must submit their proposals by March 13, 2019 to the Conservation X Labs Digital Makerspace.

Through the [Asian Carp Market Value Program (MVP)](http://www.ifishillinois.org/), Illinois Department of Natural Resources offers grant funding for current Asian carp processors and product-makers to support development of new markets and sales opportunities for Asian carp products. MVP’s intent is to assist the State of Illinois in meeting invasive species management goals by encouraging demand for Asian carp through business growth. Up to $8,000 per applicant is available, to be matched 20% by the applicant for business travel expenses and attendance at trade shows and conferences associated with market development and sales of Asian carp products. (For an applicant to receive the maximum $8,000, the applicant must spend $10,000 on travel and/or trade show/conference-related costs, $8,000 of which must be for eligible expenses.) **This funding is provided on a reimbursement basis, once the travel and/or event has occurred.** For further program information or to request an application, please contact the staff person below, or visit [http://www.ifishillinois.org/](http://www.ifishillinois.org/)

Gina Behnfeldt, VP Economic Development Services
Tetra Tech
One Oxford Valley, Suite 200 Langhorne, PA 19047
Direct: 215.702.4094; Cell: 215.584.3180 E-mail: mailto:gina.behnfeldt@tetratech.com

The [Legislative-Citizen Commission on Minnesota Resources (LCCMR)](#) welcomes proposals for projects of all sizes that address the priorities and requirements described within this RFP and
that aim to protect, conserve, preserve, and enhance Minnesota’s air, water, land, fish, wildlife, and other natural resources. The LCCMR reviews applications and makes funding recommendations to the Minnesota Legislature from the Environment and Natural Resources Trust Fund (ENRTF). Approximately $53 million is anticipated to be available from the Trust Fund through this RFP for projects beginning July 1, 2020. Most projects funded are 2-3 years in duration. Applicants are encouraged to submit draft proposals by March 15, 2019 to receive staff feedback. Final proposals must be submitted online at www.lccmr.leg.mn by April 15, 2019.

Funding Priorities Include: Aquatic and Terrestrial Invasive Species

"Invasive species" includes any plants, animals, worms, insects, microbes, and diseases that are non-native, introduced species in the state and that are currently having, or pose a threat to have, significant adverse impacts on Minnesota’s native ecosystems and biodiversity. All research proposals related to invasive species research must consider the research priorities established by the University of Minnesota’s (UMN) Minnesota Invasive Terrestrial Plant Center or Minnesota Aquatic Invasive Species Center. All UMN proposals and others should apply to the Centers when applicable.

FEDERAL/STATE/PROVINCIAL LEGISLATION, RULES, ACTIONS

NEW: An AIS legislative table is now up on the web on the www.westernais.org website... go to https://www.westernais.org/regulations and scroll all the way to the bottom [2019 legislation coming soon]

Advocacy

State/Province

OREGON
Current invasive species related bills that have been introduced:

SB47: (Oregon State Marine Board) Requires person operating non-motorized boat to have waterway access permit.
SB445: (Senator Roblan) Revises membership of Invasive Species Council and reporting requirements. Appropriates moneys to council for specified purposes.
HB2062: (Oregon Department of Agriculture) Requires Invasive Species Council to biennially report to interim committee of Legislative Assembly.
HB2076: (Oregon State Marine Board) Requires boat operators to remove or open devices used to drain water from boat before transporting boat within the state.

WASHINGTON

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House Bill 1579 Implementing recommendations of the southern resident killer whale task force related to increasing chinook abundance -- seeks to increase prey for endangered southern resident orcas, and would implement some of the recommendations made by the Southern Resident Orca Task Force.

Related: Bill To Reclassify Bass, Walleye To Help Orcas Considered By Washington House Committee (2/4/19)

HAWAII

Bill would allow more leeway to fight invasive species on private property (2/12/19)
Introduced by Rep. Nicole Lowen, D-North Kona, House Bill 201 would change language in an existing law allowing access to private property upon which invasive species are known to exist. Lowen’s bill would expand that authority to include private lands on which invasive species can be “reasonably suspected” to exist “based on the results of systematic surveys or reports or proximity to known populations.”
Legislative Debate Over Aquatic Invasive Species Funding Begins (2/4/19)
Anglers, boaters, farmers and conservationists are all backing a new proposal at the state Legislature to spend $6.5 million fighting aquatic invasive species, but they disagree over who should foot the bill. The measure had its first hearing Monday. Funding sunsets this year for the state’s boat inspection stations and lake monitoring program that aim to keep costly invasive species like quagga and zebra mussels, Eurasian water milfoil and whirling disease out of Montana. Missoula Democratic Representative Willis Curdy is carrying a new funding mechanism on behalf of the Environmental Quality Council that would add a prevention fee to motorized and non-motorized boat licenses, continue an existing fee on fishing licenses, and dip into the general fund to secure about $6.5 million each year.

Invasive mussels: Missoula legislator proposes funding plan for boat inspections (2/5/19)
Everyone in Montana appears to support a program that prevents invasive mussels, but few agree on how to pay for it. That was as evident in public comments made to a legislative committee on Monday afternoon as it was two years ago when the Aquatic Invasive Species program was created in response to a zebra mussel scare. But Rep. Willis Curdy, D-Missoula, tried to defend House Bill 32 as the proposal that the Environmental Quality Council passed 15-1 last fall… Similar to the past two years, HB 32 would give the AIS program about $6.5 million annually. Unlike the last two years, the money would be collected from three main sources: fees of $2 to $7.50 on fishing licenses, watercraft registration fees of $5 to $60, and as much as $3.3 million a year out of the state general fund.

NOTE: From Stephanie Hester (MISC): (2/8/19)

Today is Day 26 of the 2019 Legislative Session. Here is your weekly update on the status of invasive species-related legislation. All hearings are open to the public, and interested persons are able to provide comment during the public comment portion of the hearing agenda. Written comments may also be submitted to the committee staff.

Please note that not all of these bill title requests are active and hearings may be rescheduled at any time. Visit the Montana State Legislature website for the most current information on bill status and hearing dates.

Click here for legislative updates from the Montana Association of Conservation Districts.

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<td>(D) HD 98</td>
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[To look up bill language go [HERE.]]
Bipartisan “lands package” passes Senate (2/12/1)

U.S. Sen. Lisa Murkowski, R-Alaska, chairman of the Senate Committee on Energy and Natural Resources, today led the Senate’s strong bipartisan approval of S. 47, her Natural Resources Management Act. The Senate passed the legislation this afternoon on a final vote of 92 to 8, and it will now head to the House of Representatives... S. 47 is a bipartisan package of more than 100 public lands, natural resources, and water bills. Murkowski and former ENR Ranking Member Maria Cantwell, D-Wash., introduced the bill in January 2019.

S 47 Policy Highlights

The bill, passed by a vote of 92-8, some invasive species highlights of the bill are as follows:

**TITLE VII—Wildlife Habitat and Conservation**

“(b) Control and management.—Each Secretary concerned shall plan and carry out activities on land directly managed by the Secretary concerned to protect water and wildlife by controlling and managing invasive species—

“(c) Strategic plan.—

“(1) IN GENERAL.—Each Secretary concerned shall develop a strategic plan for the implementation of the invasive species program to achieve, to the maximum extent practicable, a substantive annual net reduction of invasive species populations or infested acreage on land or water managed by the Secretary concerned.

“(d) Cost-effective methods.—In selecting a method to be used to control or manage an invasive species as part of a specific control or management project conducted as part of a strategic plan developed under subsection (c), the Secretary concerned shall prioritize the use of methods that—
“(e) Comparative economic assessment.—To achieve compliance with subsection (d), the Secretary concerned shall require a comparative economic assessment of invasive species control and management methods to be conducted.

“(f) Expedited action.—
   “(1) IN GENERAL.—The Secretaries concerned shall use all tools and flexibilities available (as of the date of enactment of this section) to expedite the projects and activities described in paragraph (2).

“(g) Allocation of funding.—Of the amount appropriated or otherwise made available to each Secretary concerned for a fiscal year for programs that address or include protection of land or water from an invasive species, the Secretary concerned shall use not less than 75 percent for on-the-ground control and management of invasive species, which may include—

“(h) Investigations, outreach, and public awareness.— Of the amount appropriated or otherwise made available to each Secretary concerned for a fiscal year for programs that address or include protection of land or water from an invasive species, the Secretary concerned may use not more than 15 percent for investigations, development activities, and outreach and public awareness efforts to address invasive species control and management needs.

“(i) Administrative costs.—Of the amount appropriated or otherwise made available to each Secretary concerned for a fiscal year for programs that address or include protection of land or water from an invasive species, not more than 10 percent may be used for administrative costs incurred to carry out those programs, including costs relating to oversight and management of the programs, recordkeeping, and implementation of the strategic plan developed under subsection (c).


(4) THEODORE ROOSEVELT GENIUS PRIZE FOR MANAGEMENT OF INVASIVE SPECIES.—
   (A) DEFINITIONS.—In this paragraph:
   (i) BOARD.—The term “Board” means the Management of Invasive Species Technology Advisory Board established by subparagraph (C)(i).
   (ii) PRIZE COMPETITION.—The term “prize competition” means the Theodore Roosevelt Genius Prize for the management of invasive species established under subparagraph (B).
   (B) AUTHORITY.—Not later than 180 days after the date of enactment of this Act, the Secretary shall establish under section 24 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3719) a prize competition, to be known as the “Theodore Roosevelt Genius Prize for the management of invasive species”—
(i) to encourage technological innovation with the potential to advance the mission of the United States Fish and Wildlife Service with respect to the management of invasive species; and
(ii) to award 1 or more prizes annually for a technological advancement that manages invasive species.
(i) IN GENERAL.—The Secretary shall offer to enter into an agreement under which the National Fish and Wildlife Foundation shall administer the prize competition.

Now What: House Natural Resources Chairman Raúl Grijalva (D-Ariz.) told E&E News yesterday before the Senate vote that he hoped to move the lands package swiftly through the lower chamber, preferably on suspension, a more expedited legislative process in the House that requires two-thirds support in the chamber for passage. Congress is scheduled to go on recess next week. If that happens, the earliest the House would take up the package would be the week of Feb. 25. The Arizona Democrat also said it is important to "keep intact" the package the Senate sends over. [Source: Reprinted from E&E Daily, 2/13/19, with permission from Environment & Energy Publishing, www.eenews.net; 202/628-6500].

Related:

Senate approves measure to reduce Asian Carp population (2/12/19)
The legislation includes a provision calling for federal agencies to plan to reduce or eliminate invasive species populations such as Asian Carp. The measure supported by Senator Mitch McConnell requires agencies to develop cost effective measures to combat the invasive species and ensures funding is directed to on-the-ground activities in impacted communities like those around Lake Barkley and Kentucky Lake.

The Senate just passed the decade’s biggest public lands package. Here’s what’s in it. (2/12/19)
The Senate on Tuesday passed the most sweeping conservation legislation in a decade, protecting millions of acres of land and hundreds of miles of wild rivers across the country and establishing four new national monuments honoring heroes including Civil War soldiers and a civil rights icon.

To reauthorize the Partners for Fish and Wildlife Program and certain wildlife conservation funds, to establish prize competitions relating to the prevention of wildlife poaching and trafficking, wildlife conservation, the management of invasive species, and the protection of endangered species, to amend the Marine Turtle Conservation Act of 2004 to modify the protections provided by that Act, and for other purposes.

Related: Carper, bipartisan senators introduce wildlife conservation legislation (1/30/19)
Archived Hearing: The Invasive Species Threat: Protecting Wildlife, Public Health, and Infrastructure (2/13/19)
WASHINGTON, D.C. — Today, U.S. Senator John Barrasso (R-WY), chairman of the Senate Committee on Environment and Public Works (EPW), delivered the following remarks at a hearing titled “The Invasive Species Threat: Protecting Wildlife, Public Health, and Infrastructure.” The hearing featured testimony from Slade Franklin, weed and pest state coordinator for the Wyoming Department of Agriculture; Terry Steinwand, director of the North Dakota Fish and Game Department; and Joseph Rogerson, program manager for wildlife species conservation and research of the Delaware Division of Fish & Wildlife.


[H.R. 414] To amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act to include algal blooms in the definition of a major disaster, and for other purposes. Rep. Rooney, Francis [R-FL-19] (Introduced 01/09/2019) [Text Here]


H.R.1103 — To amend the market name of genetically altered salmon in the United States, and for other purposes. Sponsored by Rep. Young, Don [R-AK-At Large] (Introduced 02/07/2019) [Text available here]

Related: Cantwell, Bipartisan Senators Reintroduce ‘Frankenfish’ Labeling Bill; Mandatory labeling necessary “to protect consumers and promote environmental sustainability” (1/31/19)
The Genetically Engineered Salmon Labeling Act would require that any genetically engineered salmon products sold in the U.S. market are clearly labeled “genetically engineered” in the market name. Last month, the U.S. Department of Agriculture published labeling guidelines for genetically engineered foods, including “frankenfish,” with weak requirements that could confuse consumers and pave the way for genetically engineered salmon products to be sold to consumers without clear labels.

APPROPRIATIONS

Appropriators push back on relocation plans (1/29/19)
Agriculture Secretary Sonny Perdue's plan to relocate two Department of Agriculture agencies away from the nation's capital continues to hit potential obstacles in Congress…

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Congress rushes to finish spending deal (2/13/19)
The House is expected to vote Thursday, amid hopeful signs Trump will back the agreement.

3 Things to Watch: ‘Trump Show, Shutdown II’ heads to climactic scene (2/13/19)
Will he or won’t he? Not even GOP lawmakers, WH staff seem to know....

TRAININGS, WEBINARS, CONFERENCES AND MEETINGS

Events: Archived Materials

The Upper Midwest Invasive Species Conference (UMISC) and North American Invasive Species Management Association (NAISMA) 2018 joint conference presentations are now available for download as PDF files. You can scroll through by day directly on MIPN's website or view/search a comprehensive PDF that includes links to all available presentations.

Events: Webinars, Trainings, Conferences and Meetings

Watercraft Inspection and Decontamination Trainings

The Pacific States Marine Fisheries Commission and its 100th Meridian Initiative partners are announcing and sponsoring several types of WIT Trainings.

WIT I - https://www.westernais.org/level-1-inspector-training

March 12th – Lake LBJ – Marble Falls, TX
March 14th – Lake Lewisville, Lewisville, TX
May 7th – Lake Mission Viejo, Mission Viejo, CA
May 8th – Lake Mission Viejo, Mission Viejo, CA

WIT II - https://www.westernais.org/level-2-inspection-and-decon

March 26-27 – Lake Mead, NV
April 9-10 – Lake Sonoma, CA
April 23-24 – Lake Mead, NV

WIT III - https://www.westernais.org/level-3-trainer-training

If you are interested in Trainer Training, register on website and when enough qualified individuals register, will put another class together – Have 3 waiting list

Advanced Decontamination - https://www.westernais.org/advanced-decon
May 21-22 - Elephant Butte Lake, New Mexico

For more information, go to website links or contact Quagga D @ (702)236-3814 or quaggadee@cox.net

Openings are limited!!! Availability will close when class becomes full.

TO REGISTER: Go to http://www.westernais.org for more information. There are different registrations for Advanced Decontamination and Trainer Training (WIT III) classes. Click on the training tab of class you are interested in attending and register on that page link. These trainings do cost money and it is important that we fill all available openings. Please try to make sure that when you sign up for the class that you can attend so that we don’t end up paying for empty seats that could be used by others.

QUESTIONS? Should you have any questions or would like to host a training, please contact WIT Trainer Quagga D Davis at (702) 236-3814 or quaggadee@cox.net

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FEBRUARY

The Oregon Invasive Species Council (OISC) will be hosting a short winter business meeting on February 19, 2019 (1-4 PM). You can join online or choose to join one of 2 optional video conference hubs set up in Portland and Salem. View/download our most up-to-date agenda by visiting the OISC Meetings Page. RSVP is not required, but appreciated so we can plan accordingly. RSVP online or contact Jalene Littlejohn (mailto:coordinator@oregoninvasivespeciescouncil.org | 971-998-0573) to let us know if you will be able to participate remotely or at one of the video conference hubs.

UPPER COLUMBIA CONSERVATION COMMISSION (UC3) MEETING
Wednesday, February 20th, 2019 Montana Fish, Wildlife & Parks - Region 1 office 490 N. Meridian Rd., Kalispell, MT

NAISMA WEBINAR: February 20th at 1:00 pm CST:
The ABCs of Invasive Species Organizations. Presented by Chuck Bargeron, Associate Director for Invasive Species and Information Technology, University of Georgia
Sometimes invasive species organizations can be as invasive as the organizations that they are trying to protect us from and educate us about. This presentation will give an overview of the major national organizations and what their individual focus is. It will highlight their scope, membership and the taxa that they concentration on.

Webinar: Overview of Canadian Research on Asian Carp Prevention. Presented by: Paul Bzonek, University of Toronto and Tej Heer, University of Toronto
This webinar will provide an overview of research in Canada directly related to the prevention of an Asian carp invasion. Examples of current research efforts include the development of models to determine which Canadian tributaries would be suitable to Asian carp spawning, and an evaluation of whether non-physical barriers would be effective in deterring the movement of Asian carps throughout high-risk tributaries. Additionally, risk assessments are being developed

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to inventory all potential paths of introduction, and their relative threat level. Canadian research
forms a vital component of larger collaborative efforts to prevent the establishment of Asian
carps in the Great Lakes. Thursday, February 21st, 2019 11:00 AM EST

CDFW Webinar Announcement - Watercraft Inspection and Decontamination Data Collection
System Webinar The Regional Watercraft Inspection and Decontamination Data Collection
System is a data sharing application developed by Colorado Parks and Wildlife that can be used
in conjunction with a quagga/zebra mussel prevention program. It is a free, customizable data
collection solution for watercraft inspection and decontamination programs and is used in several
western states. Staff from Colorado Parks and Wildlife and California Department of Fish and
Wildlife will cohost a webinar describing the system and its applications Friday, February 22,
2019 from 1:30 - 2:30 p.m. (PST). To register for the webinar please contact Rich Bireley at
mailto:Richard.Bireley@wildlife.ca.gov for webinar information. If you are unable to participate
on this date please contact Rich to be notified directly about additional webinars later this year.

National Invasive Species Awareness Week: February 25 - March 1, 2019;

Meeting of the Invasive Species Advisory Committee: Tuesday, February 26, 2019, 8:30 a.m.-
5:00 p.m.; Wednesday, February 27, 2019, 8:30 a.m.-5:00 p.m.; Thursday, February 28, 2019,
8:30 a.m.-3:00 p.m. Smithsonian Institution National Museum of the American Indian, 4th and
Independence Avenue SW, Washington, DC 20560. The general session will be held in the
Conference Center (4th Floor). NOTE: All meeting participants and interested members of the
public must register their attendance online at http://www.invasivespecies.gov/. Attendees must
pass through security screening upon entering the facility.

The Pacific Northwest as an emerging beachhead of crayfish invasions. Wed, Feb 27, 2019
11:00 AM - 12:00 PM PST Speaker: Julian D. Olden | School of Aquatic and Fishery Sciences |
University of Washington, Seattle
Crayfish are among the most widely introduced freshwater taxa worldwide, yet still have a
relatively recent history in parts of western North America. Following their introduction,
invasive crayfish can impart ecological impacts across entire ecosystems due to their poly-
trophic feeding habits and potential to spread rapidly and reach extremely high local abundances.
However, despite continued invasion and mounting ecological impacts, effective management of
nonnative crayfish is still challenged by limited funding and inadequate forecasting tools. Here I
review the current state of knowledge on nonnative crayfish distributions and impacts in western
states, and describe known and emergent approaches for monitoring, forecasting, and managing
their invasion. To illustrate the risks, challenges, and opportunities involved in managing
invasive crayfish, I highlight one notable case: the invasion of rusty crayfish, Faxonius rusticus,
in the John Day River, Oregon, a major tributary of the Columbia River. Register here

MARCH

Registration is open for the 84th North American Wildlife and Natural Resources Conference.
We invite you to join us in Denver, Colorado on March 4-8, 2019.

Venue: Marriott New Orleans

*Last Call for Papers* 2019 MRNRC Missouri River Conference “Missouri River: The Ever Evolving Riverscape” March 5-7, 2019 Ramkota Conference Center, Pierre, SD

Montana Lakes Conference, March 13 -15, 2019. The Montana Lakes Conference will gather diverse resource professionals to exchange information, scientific advancements, and management strategies that promote clean and healthy lake and reservoir ecosystems.

Join Crab Team! Washington Sea Grant's Crab Team monitors are gearing up for the fourth full season of early detection and monitoring of invasive European green crab. The evidence collected by Crab Team volunteers and partners to date suggests that green crab have arrived in the Salish Sea, but still remain extremely rare. Intervention at this stage is the most critical for reducing harm by this globally-damaging invasive species, and an important piece of that plan is continued monitoring and early detection.
Crab Team could use a few new recruits to help reinforce existing monitoring teams. What is being a Crab Team member like? Read about our Boots in the Mud. To find out if an opportunity to join a team is available near you, contact us.

If all that sounds good, join us for a full day training workshop, and we'll provide everything you need to join a Crab Team crew and help protect Washington shorelines. We are holding three workshops in March for new volunteers (below), and you can attend whichever is most convenient for you. RSVP on the event page to register. Please note that if you have not previously monitored with Crab Team, you should attend one of these new volunteer training workshops listed here - rather than a "refresher training" - even if you have attended a workshop before. Contact crabteam@uw.edu with any questions.

- Tacoma March 18 @ 9:30 am - 3:30 pm
- Padilla Bay March 20 @ 9:00 am - 3:00 pm
- Port Townsend March 21 @ 9:00 am - 3:00 pm

NAISMA WEBINAR: March 20th at 1:00 pm CST:
Boot Brush Stations: Are they an Effective Tool for Preventing Invasive Species and Raising Awareness? Presented by Chris Evans, Extension Forester, University of Illinois. Boot brushes stations are a popular tool used to raise awareness about invasive species and reduce the spread and establishment of new infestations. This webinar will discuss the boot brush stations, review a cooperative program in southern Illinois that installed boot brushes throughout the region, and highlight research that investigated if these stations were actually effective at removing seeds.

Washington Invasive Species Council: March 28, 2019, Olympia, Natural Resources Building Room 172.

Invasive Species and Exotic Pest Workshop
March 29, 2019 8:00 am – 3:15 pm Bellingham Ferry Terminal, Bellingham WA

April
The next meeting of the Pacific Ballast Water Group will be held April 2-3 in Vallejo, CA at Cal Maritime (California State University Maritime Academy, 200 Maritime Academy Drive; Vallejo, CA 94590). We anticipate the meeting starting at ~9:00 am on 4/2 and ending early/mid afternoon 4/3. For further information contact Susan Anderson @ sanderson@psmfc.org

The Washington State Salmon Recovery Funding Board will hold its seventh biennial conference April 8-9, 2019 at the Greater Tacoma Convention Center in Tacoma, WA. Abstracts for presentations and posters are being accepted December 21, 2018 — January 31, 2019

**NAISMA WEBINAR:** April 17th at 1:00 pm CST: Catching the "Unicorn:" Using Public, Private and Non-Profit Partnerships to Help Tackle AIS. Presented by Ed Rudberg, Ph. D., CEO CD3, General Benefit Corporation. Due to the high cost of high pressure, heated water decontamination, reducing the spread of aquatic invasive species (AIS) often relies upon the adoption of best management practices at the individual level. However, until CD3’s 2017-2018 Waterless Cleaning Station Pilot, tools to implement best management practices were unavailable to boaters. The process for developing these tools was an example of how we caught a “unicorn,” via the elusive private, public and non-profit partnership. This presentation will outline the results of the pilot including usage rates, lessons learned, adoption rate, increases in compliance, and outline the future direction of the project.

Please mark your calendars and plan to attend the next Missouri River Basin Panel Coordination meeting and an Asian carp field sampling workshop April 16-18, 2019, at Lake Barkley State Park Resort near Cadiz, Kentucky. We are tentatively planning for the coordination meeting on April 16 and the morning of April 17. The workshop will be all day April 17 and 18. The morning of April 17 will likely be a session of talks focused on Asian carp management and control that will transition us from the coordination meeting to the field sampling workshop.

**June**

The next meeting of the 100th Meridian Initiative Columbia River Basin Team is scheduled for Tuesday and Wednesday, June 4 & 5, 2019 in Spokane, WA at Northern Quest. Further meeting details will be forthcoming in the near future. Leah Elwell will be putting the meeting agenda together. Please contact her if you have an agenda recommendation @ leah@stopais.org

Washington Invasive Species Council: June 6, 2019, Olympia, Natural Resources Building Room 172.

**July**

2019 Western Aquatic Plant Management Society and Aquatic Plant Management Society Joint Meeting Date: Jul 13, 2019 to Jul 19, 2019 Venue: Double Tree Hilton Hotel Location: San Diego, California

Join PNWER in Saskatoon, Saskatchewan for our 29th Annual Summit, July 21-25, 2019 Registration is Now Open for the 2019 PNWER Annual Summit in Saskatoon, Saskatchewan!
Over 500 regional business leaders, legislators, and key decision makers attend the Annual Summit to explore shared challenges in the region, discuss best practices, promote regional relationships, and develop an action plan to address challenges in the coming year.

August

2019 104th Ecological Society of America Annual Meeting
Date: Aug 11, 2019 to Aug 16, 2019 Venue: Kentucky International Convention Center
Location: Louisville, Kentucky

September

Washington Invasive Species Council: September 26, 2019, Olympia, Natural Resources Building Room 172.

Join Columbia Basin Trust and the Northwest Power and Conservation Council from September 26 to 28, 2019 in Kimberley, B.C. to connect and collaborate on the future of the Columbia River. The conference will cover topics including:

- Renegotiation of the Columbia River Treaty
- Reintroduction of salmon to the Columbia River above Grand Coulee Dam in Washington and British Columbia
- **Impacts of and response to invasive species including northern pike and invasive freshwater mussels**
- Energy issues including: hydropower, energy efficiency, transmission and renewable resources in the United States and British Columbia
- Climate change-related impacts on Columbia River water resources and resulting impacts on communities, ecosystems, the economy and hydropower generation.

The conference themes and agenda will include the interests and issues of First Nations and US Native American Tribes, as well as art, culture and history as it relates to the Columbia River. The conference format will be interactive with workshop formats encouraging participants to actively explore a wide range of technical, environmental, political and community issues.

Watch for more details in early 2019 about how to register and information on speakers. For more information, contact Caitlin Hinton, Columbia Basin Trust, at 1.250.344.2445 or chinton@cbt.org

2019 26th Annual Wildlife Society Conference Date: Sep 29, 2019 to Oct 03, 2019 Location: Reno, Nevada

The 2019 North American Invasive Species Management Association - New York Invasive Species Research Institute Joint Conference will be held September 30 - October 3, 2019 at the Saratoga Hilton, Saratoga Springs, NY. This year's conference theme is Connecting Science to Action. The organizing committee is especially interested in presentations that provide examples of: (1) how science is being used by invasive species managers and related professionals to inform and improve management decisions, (2) how managers can inform, and are currently
informing research on invasive species and (3) information on new policies, methods and technologies being used to prevent, detect, or manage invasive species. All general session abstracts must be submitted by the abstract deadline of April 3, 2019.

October

The Western Regional Panel on ANS invites you to join them at their Annual Meeting October 9-11, 2019 in Missoula, Montana. The meeting will be hosted by Montana Fish, Wildlife & Parks.

The 21st International Conference on Aquatic Invasive Species (ICAIS) will be held at Le Centre Sheraton Montreal, Montreal, Canada. October 27-31, 2019.

December

Call for Presentations: Innovations in Invasive Species Management Conference and Training, December 10-12th, 2019. Coeur d’Alene, Idaho. The conference hosts people from throughout the US and World looking for new techniques and inspiration from successes to manage a wide range of invasive species We are working to include more animal, marine and insect content as well this year. Be ready for some exciting new topics and demonstrations in 2019. The 2019 innovations Conference is being hosted by the Pacific Northwest Invasive Plant Council https://www.pnw-ipc.org/ The Northern Rockies Invasive Plant Council http://www.nripc.org/ and Invasive Plant Control, Inc. http://www.invasiveplantcontrol.com/

Washington Invasive Species Council: December 19, 2019, Olympia, Natural Resources Building Room 172.

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