



AQUATIC INVASIVE SPECIES NEWS

07/06/2018

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ALERT: LAKE POWELL MUSSEL STATUS

Colleagues,

I wanted to provide a quick update on the quagga mussel status at Lake Powell. The National Park Service, Arizona Game & Fish, and the Utah Division of Wildlife Resources continue to work together to implement containment measures for boats departing Glen Canyon National Recreation Area.

This season has provided a challenge that I don't think any of us expected. We are beginning to see several boats per day exit the water with mussels onboard. Some mussels are attached by way of their byssal threads, others stick themselves to the boat as the boat is being retrieved ("hydrostatic mussels"), and some are being found in sea strainers.

The mussel population seems to have increased significantly, and combined with the extremely low water levels, the chance that boats will encounter mussels has skyrocketed. It is now common to observe mussels floating in the water column around many of the marina areas.

Collectively, we are doing our best to stay on top of the situation. However, we are at full capacity in every respect. The inspection and decontamination lines are often hours long, and inspections are much more difficult now given the greater likelihood of seeing mussels on even day-use boats. We have reached the point that we almost expect to find mussels on nearly every boat or anchor retrieved from the water.

With that said, we would like to encourage you to treat every boat coming from Lake Powell, regardless of inspection or decontamination history, as a high-risk boat worthy of a very careful inspection.

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We are continuing to log these boats into the ANS App so the records can be accessed and will continue to send out Movement Notices for boats found with mussels on them. We are exploring additional steps and strategies that can be implemented to alleviate some of these issues and will notify the group of any changes made to our containment program.

If you have any questions, please feel free to contact me. Please remain vigilant and safe out there.

Nate

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SUMMER READING – LONGFORM



[It All Started With a Few Trout. Now Yellowstone’s Iconic Birds Face ‘Collapse.’ National Geographic \(7/18\)](#)

“For all of the attention that gets paid to this park’s geothermal features and its famous large mammals, what we’re seeing with birds is as dramatic as anything making headlines with wolves, grizzlies, and bison” ... Three converging forces have set off a lethal chain reaction: the rippling impacts of an exotic fish—lake trout—that have decimated what used to be the last major stronghold for native Yellowstone cutthroat trout; climate change altering habitat; and humans haphazardly displacing sensitive species...

NEW SPECIES SIGHTINGS

DREISSENIDS

[\[Nebraska\] Young zebra mussels detected at Cunningham Lake \(7/2/18\)](#)

Microscopic young zebra mussels, known as veligers, recently were detected by the Nebraska Game and Parks Commission in a water sample collected at Glenn [Cunningham Lake](#) in late May. No adult zebra mussels were found in the lake. Field sampling for adult zebra mussels will be completed on the Omaha lake’s boat ramps, rocks and other hard structures over the next several weeks. Until an

adult is found, Glenn Cunningham Lake will be considered a suspect water body...

[\[Texas\] Invasive Zebra Mussels Found in Grapevine Lake \(6/29/18\)](#)

Invasive zebra mussels were discovered in [Grapevine Lake](#) by a team from the Texas Water Science Center. On June 22, Christopher Churchill, Ph.d, from the United States Geological Society and his team found a juvenile zebra mussel attached to a sampler on the southern end of the reservoir. Plankton samples collected in May also revealed the presence of a microscopic larva.

[\[Minnesota\] Lone zebra mussel found in Lake Minnewashta \(7/3/18\)](#)

Invasive species specialists with the Carver County Water Management Organization (CCWMO) and Minnehaha Creek Watershed District (MCWD) confirmed the presence of a single adult zebra mussel in [Lake Minnewashta](#) during a zebra mussel survey on June 28, according to a press release. [\[USGS NAS Report\]](#)

Related: [Lake Minnewashta is the latest Twin Cities lake to use copper to try to kill off zebra mussels \(9/13/16\)](#)

[\[Minnesota\] Zebra mussels confirmed in Norway Lake and Diamond Lake in Kandiyohi County \(6/18/18\)](#)

The Minnesota Department of Natural Resources has confirmed reports of zebra mussels in [Norway Lake](#), just west of New London, and [Diamond Lake](#), southeast of Spicer, in Kandiyohi County. All connected waters from Norway Lake downstream to Lake Andrew will also be added to the infested waters list.

[\[Minnesota\] Zebra mussels confirmed in Jewett Lake in Otter Tail County, Floyd Lake in Becker County \(7/2/18\)](#)

Zebra mussels have been confirmed in Jewett Lake in Otter Tail County and Floyd Lake in adjacent Becker County, according to the Minnesota Department of Natural Resources. Watershed district staff alerted the DNR to the discovery of an adult zebra mussel attached to a native clam in Floyd Lake. DNR invasive species specialists found several adult zebra mussels in three areas of the lake. Swimmers reported finding two adult zebra mussels on Jewett Lake. DNR invasive species specialists found several adult zebra mussels in three areas of the lake.

OTHER

[California] [Chinese mystery snail](#) was found in the [San Diego River](#), west of Qualcomm Way, San Diego, CA. [\[USGS NAS Report\]](#)

[California] [Red Swamp Crayfish](#) was found in Snake Creek, [Lake Nacimiento](#), Paso Robles, CA [\[USGS NAS Report\]](#)

[Arizona] [red-rim melania](#) was found in [Lake Havasu](#), Cattail Cove State Park [\[USGS NAS Report\]](#)

[Lake Tahoe] [Ginbuna crucian carp](#) was found in Lake Tahoe, CA [\[USGS NAS Report\]](#)

[Texas] [Cuban Treefrog](#) was found in Shadowbend YMCA off [Research Forest Drive](#) in The Woodlands, Montgomery TX. [\[USGS NAS Report\]](#)

[Texas] [Amazon Molly](#) was found in Coletto Creek, Lower Guadalupe drainage, TX [\[USGS NAS Report\]](#)

[Texas] [red-rim melania](#) was found in the [South Fork San Gabriel River](#), TX [\[USGS NAS Report\]](#)

DREISSENID MUSSELS

[Bureau of Reclamation allocates more than \\$4 million to combat quagga and zebra mussels in the West \(7/28/18\)](#)

The Bureau of Reclamation has allocated more than \$4 million for federal, state, and tribal projects to prevent, contain, control, and monitor invasive quagga and zebra mussels in the West. This funding advances actions announced by Secretary of the Interior Ryan Zinke in June 2017 as part of the initiative called "Safeguarding the West: Actions to Strengthen Federal, State, and Tribal Coordination to Address Invasive Mussels." This funding builds on \$1 million in 2017 to support initiatives by the federal government, as well as work by the Western Governors' Association, western states, and tribes to protect western ecosystems, water infrastructure, and hydroelectric facilities from invasive mussels.

[University of Montana researcher's new device could make detecting invasive mussels more affordable \(6/21/18\)](#)

A device built at the University of Montana Flathead Lake Biological Station and developed by one of UM's researchers can detect the DNA of invasive mussels from water samples... It's small and affordable, he said, some \$50,000 and the size of a small suitcase, compared to \$250,000 and the heft of a chest freezer for a more traditional tracker... UM noted research Professor Cody Youngbull invented the device... Tom Woolf, aquatic invasive species bureau chief with Montana Fish, Wildlife and Parks, said the science has potential, but scientific methods still need to be standardized and questions answered before managers can incorporate such a gadget on the ground. "It's a science that holds a heckuva lot of promise," Woolf said. "There's still some questions out there that need to be addressed before something like that can be integrated into operational programs."

[\[Montana\] MISC issues recommendations for E-DNA testing \(6/25/18\)](#)

The Montana Invasive Species Council (MISC) today issued recommendations to guide the use and development of environmental DNA testing for the early detection of invasive mussels. The recommendations address both policy development and scientific

protocols for eDNA sampling, analysis, communications, and verification of test results, said MISC Chair Bryce Christiaens. “At this time, the use of eDNA as a tool to detect the presence of mussels holds both promise and uncertainty. The technology is evolving rapidly, and invasive species managers across the West have struggled with how best to utilize or interpret test results,” Christiaens said.

[\[Montana\] Flathead Basin Commission shifts mission from direct action to catalyst \(6/20/18\)](#)

... at its meeting Monday, the 11 members present foresaw a smaller role in the state’s mussel fight moving forward. “Our role in the AIS [issue] has changed,” said Dean Sirucek, who represents the Flathead County Conservation District on the Commission. “We want to still be engaged in the AIS” — aquatic invasive species — “in the basin, but ... I think we are no longer within a leadership role.”...

[\[British Columbia\] Fight to keep potentially devastating invasive mussels out of Okanagan gains momentum \(6/19/18\)](#)

Okanagan Basin Water Board spokesperson Corinne Jackson says after years of making the request, the province has agreed to dedicate \$1 million annually to fund an inspection program as part of the fight against invasive quagga and zebra mussels. Another \$750,000 has been made available from the Conservation Officer service in 2018-19, in addition to funding from the board's partners.

Related: [Burns Lake council raises concern over zebra and quagga mussels \(7/4/18\)](#)

[Central Texas cities work to prevent zebra mussels from spreading into water pipes \(6/26/18\)](#)

"They're very prolific breeders and they're going to be very happy in Lake Travis. So what we're trying to do is prevent zebra mussels from getting established in the raw water system," said Aaron Archer, the project manager with Walker Partners.

Related: [Walker Partners Interview: Helping Texas Stop Zebra Mussels from Jeopardizing Drinking Water \(6/26/18\)](#)

[Cedar Park and Leander flex muscles against zebra mussels in Lake Travis \(6/21/18\)](#)

[New Concerns Arise over Walker Lake Following Heavy Rain \(6/28/18\)](#)

[Montana's Most Unwanted: A New Monitoring Season Begins for Aquatic Invasive Species \(AIS\) \(6/28/18\)](#)

...For the second straight year, SVC has joined forces with Blackfoot Challenge, Clearwater Resource Council and the Missoula County Weed District to monitor our lakes for veligers, the free-swimming, microscopic larvae of zebra and quagga mussels...

[Saginaw Bay's rebounding walleye population on display for pro fishing tourney \(6/15/18\)](#)

...Both VanDyke and Claramunt said Saginaw Bay walleye also feed on round goby, an invasive fish. Claramunt said the zebra mussel, another invasive species, actually created an improved environment for walleye here by filtering Saginaw Bay water...

[Scientific Publication] Densmore, C.L., Iwanowicz, L.R., Henderson, A.P., Blazer, V.S., Reed-Grimmett, B.M., and Sanders, L.R., 2018, [An evaluation of the toxicity of potassium chloride, active compound in the molluscicide potash, on salmonid fish and their forage base: U.S. Geological Survey Open-File Report 2018-1080](#), 33 p.,

BOAT INSPECTION/DECON/TECH NEWS

['Boatbuster!' video targets spread of invasive aquatic species: Quagga mussels, Eurasian water milfoil, spiny water fleas ... and a catchy tune \(6/21/18\)](#)

It can be daunting to try to get the AIS message out," said Brad Steckart, aquatic invasive species coordinator for Washington and Waukesha counties. "I think it can help if there's an element of fun attached to it." [\[video\]](#)

[\[California\] Intercepted Lake Mendocino boat had invasive quagga mussels aboard \(6/28/18\)](#)

DNA analysis confirmed this week that stowaway shellfish intercepted at the Lake Mendocino boat ramp early this month were invasive quagga mussels, as initially feared... But for the moment, it appears the crisis was averted, thanks to a sweet-faced, blond Labrador named Noah. The mussel-sniffing dog and his handler have been showered with gratitude from recreational boaters since they detected tiny quagga mussels aboard a vessel about to be launched into Lake Mendocino on June 2.

[\[Colorado\] Boats Carrying Invasive Mussels Intercepted At Ruedi \(6/28/18\)](#)

Inspectors at Ruedi Reservoir have spotted invasive mussels on two boats so far this summer, and officials think there are more to come.

[\[Idaho\] Invasive species inspections focus on watercraft \(7/5/18\)](#)

Last year, the ISDA inspection program performed over 93,000 watercraft inspections and intercepted 31 mussel-fouled watercraft. In 2018, so far, the inspections have looked at 41,000 boats and intercepted 36 mussel-fouled watercraft.

Related: [Showing Muscle On Mussels \(7/5/18\)](#)

[\[Utah\] Quagga Mussels found by Jordanelle technicians on four boats \(7/25/18\)](#)

The Utah Department of Natural Resources announced Monday that Quagga Mussels have been found at Jordanelle on four boats since Friday. The boats inspected did not touch the waters in Jordanelle State Park and were immediately quarantined.

[\[Washington\] Mussel sniffing dog highlights WDFW emphasis on aquatic invasive species inspections \(6/20/18\)](#)

Officials from the Washington Department of Fish and Wildlife gathered near the Idaho state line on Friday, showing off the state's first permanent watercraft inspection and decontamination station. Highlighting the gathering was Popeye the mussel sniffing dog. He was able to smell and inspect boats much quicker than the usual technicians...

Popeye was only at the station for the day, but after seeing him in action WDFW officials say they are planning to add their own dog to the station.

[\[British Columbia\] Preventing invasive mussels in the Shuswap \(6/28/18\)](#)

In 2018 the Invasive Mussel Defence Program has stopped 11 boats carrying mussels, most destined for the Lower Mainland with others coming to the Okanagan. They work

closely with the Canadian Border Services Agency to inspect boats crossing the Canadian border and reportedly have outright refused entry to boats suspected of harbouring mussels.

[Inspectors find Quagga mussels on 3 boats in northern Utah \(6/17/18\)](#)

The Division of Wildlife Resource says it discovered three boats in northern Utah that were infested with quagga mussels. The division's Lieutenant Scott Dalebout says the recent discoveries illustrate the importance of cleaning, draining and drying boats after every boating trip.

Related: [All boaters must be vigilant in mussel prevention \(6/19/18\)](#)

[Quagga Mussels invasion big concern for boating hot spots in Southern Utah \(6/17/18\)](#)

["Idaho Needs Strong Borders to Protect Our Public Waterways" \(6/21/18\)](#)

...Summer boating in Idaho is a generations-long tradition. But please understand the threat Idaho faces and support our border inspectors. You don't want to make the news as the person who brought invasive species into Idaho...

[\[Oregon\] Boaters: "Clean, drain and dry" to protect waterways \(6/14/18\)](#)

"Recreational boaters, whether propelled by paddle, oar or motor, can help protect our waterways by draining all water within any interior compartments and letting everything thoroughly dry. If every boater embraces this practice, it will go a long way in preventing the spread of invaders that are already in Oregon."

[Scientific Publication] Ellen Cole, Reuben P. Keller, Kelly Garbach. 2018. [Risk of invasive species spread by recreational boaters remains high despite widespread adoption of conservation behaviors](#). Journal of Environmental Management

MARINE

[\[Washington\] Neah Bay European green crab total nearly 10 times more than Dungeness \(6/13/18\)](#)

As resource managers continue to catch European green crab in the Sequim area, the invasive species seems to have its pinchers clamped down tight in Neah Bay. Adrienne Akmajian, marine ecologist with Makah Fisheries Management in Neah Bay, reported that she, fellow staffers and volunteers have caught 392 green crab as of Tuesday.

[\[Washington\] European green crab spring 2018: big finds near Neah Bay \(6/18/18\)](#)

As of mid-June 2018, the Makah Tribe had trapped 392 crab in the Wa'atch and Tsooyess rivers. That is more than were found in 2017 in all of Puget Sound, the San Juan Islands and Strait of Juan de Fuca combined, which was about 100 crab. A large-scale Puget Sound green crab early detection monitoring program began in 2015. Makah joined the effort in October 2017, after a green crab was reported on the Washington coast in August.

Related: [Shell of invasive crab found in Fidalgo Bay \(6/30/18\)](#)

BALLAST WATER/BIOFOULING

[ASEAN countries launch project to protect marine environment \(6/28/18\)](#)

Seven member states of the Association of Southeast Asian Nations (ASEAN) have launched an initiative for marine environment improvement in the region by implementing major International Maritime Organization (IMO) marine environment protection treaties. The countries are Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam.

[Ballast water systems for OSVs - sector update \(6/19/18\)](#)

Barges, OSVs and other craft with variable operating patterns could use mobile systems, according to one manufacturer. Mobile ballast water management systems (BWMSs) could save some ship operators up to 80% of their compliance costs, according to UK-based Ballast Water Containers (BWC) chief executive Richard Lawson.

[Ballast Water Treatment at Muddy Water Ports \(6/15/18\)](#)

India has been advocating for port-based mobile treated ballast water delivering facilities called BWTBoats since 2013. Given the recent real-world experiences with the challenges of ballast water treatment at muddy water ports and the forthcoming financial burden for ship owners to comply with the 2020 sulfur cap, a port-based treatment model - BWTBoats - could be a viable solution to avoid the cost of retrofitting ballast treatment systems aboard ships.

[Posidonia 2018 – Ballast water management regulations, global trends in the 21st Century \(6/20/18\)](#)

... I'd like to take a few moments now to look ahead at how global trends will affect the maritime industry. There are limitless opportunities out there, but with that comes risk and vulnerabilities, particularly when it comes to technology...

[Marine Safety Center issues ballast water management system type approval certificate to Samsung Heavy Industries Co., Ltd. \(6/15/18\)](#)

The Marine Safety Center issued the eighth U.S. Coast Guard Ballast Water Management System Type Approval Certificate to Samsung Heavy Industries Co., Ltd., after a detailed review of the manufacturer's type approval application determined the system met the requirements of 46 CFR 162.060. The treatment principle of the Samsung Purimar BWMS consists of filtration with electrolysis during uptake and neutralization at discharge. This approval covers models with maximum treatment rated capacities between 250 m³/h and 10,000 m³/h.

[Marine Safety Center issues Ballast Water Management System type approval certificate to BIO-UV Group \(6/20/18\)](#)

The Marine Safety Center issued the ninth Coast Guard Ballast Water Management System type approval certificate to BIO-UV Group, after a detailed review of the manufacturer's type approval application determined the system met the requirements of 46 CFR 162.060. The treatment principle of the BIO-SEA B BWMS consists of filtration with UV treatment at uptake and discharge. This approval covers models with maximum treatment rated capacities between 55 m³/h and 1,400 m³/h.

FISH

[\[Washington\] Council Approves \\$4.5 Million for Five-Year Program to Suppress, Monitor Invasive Pike in Lake Roosevelt \(6/15/18\)](#)

A proposal to beef up suppression and monitoring of invasive northern pike in Lake Roosevelt was approved this week by the Northwest Power and Conservation Council. An average of over \$901,088 of Council fish and wildlife money will fund the project each year for five years beginning in fiscal year 2019... As they approved the funding, Council staff and members also encouraged the partners to seek funding from other entities. Dr. Brent Nichols, manager of the Spokane Tribal Fisheries, assured the Council that they already are seeking funding from such agencies as the Bureau of Reclamation, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers and others. Related: [TVW Video: The current state of invasive Northern Pike in Washington](#)

[Searching for 60-pound mussels \[aka carp\] \(6/17/18\)](#)

It is hard to say how many mussels are in the Great Lakes, but one estimate that has been published says 750 trillion. Luckily, they do not get to be 60 pounds, but some species of Asian carp do. Two of the four species, namely the Silver carp and Bighead carp filter feed on the same algae and zooplankton as the mussels are quite effectively doing already.

[\[Tennessee\] Asian Carp Harvest Incentive Program Planned For Fall 2018 \(6/15/18\)](#)

In an effort to combat to the invasive Asian carp species, a commercial harvest incentive program will be developed in the fall of 2018. The Tennessee Wildlife Resources Agency's request of \$500,000 budget expansion from the Marine Fuel Tax Fund was approved at the May meeting of the Tennessee Fish and Wildlife Commission. This will provide two years of funding for the program.

[Bay Area men's plan to market invasive fish from Mexico hits snag in U.S. \(7/2/18\)](#)

... As a visiting Fulbright scholar at the Juarez Autonomous University of Tabasco, a Mexican state where the pez diablo is rampant, Mitchell came up with what seemed like the perfect mission-based business plan: He would help get rid of the pest by exporting it to a U.S. market eager for sustainable protein...

AQUACULTURE

[\[British Columbia\] It's wild salmon health vs. money and jobs as B.C.'s fish farm fight comes to a head \(6/18/18\)](#)

The government is currently reviewing the leases of 20 fish farms that expire on June 20. Alfred and other opponents are upping the pressure on the NDP leadership in hopes they will commit to ending fish farming in the ocean. But supporters of the farms say that would be a huge blow to an industry worth billions of dollars to the province.

[B.C. government gets mixed reviews on fish farm policy \(6/20/18\)](#)

The B.C. government has unveiled sweeping changes for the province's fish farming industry, but they don't come into effect until four years down the road. Starting in June 2022, the provincial government is requiring fish farm operators to get clearance from the federal Department of Fisheries and Oceans that they are not adversely affecting wild salmon populations. The B.C. government will also only renew or issue permits to companies that have negotiated agreements with the First Nation in whose territory the company would operate.

Related: [B.C. fish farms will require Indigenous consent \(6/19/18\)](#)

OTHER

[Bsal Rapid Response Plan Now Available \(6/19/18\)](#)

The Association of Fish and Wildlife Agencies (AFWA) is pleased to announce a new [Bsal Rapid Response Plan](#) developed to address the emerging threat posed by the amphibian fungal pathogen *Batrachochytrium salamandrivorans* or Bsal. Although this lethal pathogen has not yet been detected in North America, experts believe that the chance of a future outbreak is high and may severely impact many of our nearly 200 species of salamanders and the ecosystems they inhabit.

[USDA and Partners Work to Eliminate Invasive Nutria From Maryland's Eastern Shore \(7/5/18\)](#)

With the voluntary cooperation of both public and private landowners, the CBNEP employs multiple techniques as they work through the stages of eradication: conducting surveys to understand the extent of the population; removing the invasive rodents; verifying that the nutria are gone; and finally, conducting long-term monitoring to prevent re-infestation. Eradication tools include ground surveys, shoreline or boat surveys, trail cameras, monitoring platforms, hair snares, and reports from the public.

[PANEL DISCUSSION: Making the Delta a Better Place for Native Fishes \(6/27/18\)](#)

In March of 2018, the UC Davis Center for Watershed Sciences on behalf of Orange County Coastkeeper released an innovative report titled, Making the Delta a Better Place for Native Fish, which focused on ecosystem-wide restoration and reconciliation ecology. The paper recommends 17 actions which can be taken to improve conditions for fish, including some that can be implemented immediately and others that will take longer. The science-driven fish-oriented report provides a fresh and realistic perspective to promote and expedite the restoration of native fish species in the Delta.

[Chinese offer to eat US' invasive crab problem \(7/2/18\)](#)

Chinese social media users are offering to help the US with an invasive crab species that for years has choked rivers and lakes along the eastern seaboard - by eating them. Environmental authorities recently asked local residents to keep an eye out for Chinese mitten crabs - also known as hairy crabs - and not to throw them back alive if caught.

[Montana Invasive Species Council hosts tribal issue forum \(6/14/18\)](#)

The Montana Invasive Species Council (MISC) hosted a tribal issue in Great Falls on Thursday. Participants discussed emerging species and species of concern across the state.

[Building resilience to the economic threat of invasive species \(6/7/18\)](#)

This recently published report investigates the impact of invasive species on private industries, public utilities, and local governments. The focus is on the challenges and efforts to prevent, detect, control, and eradicate invasive species in the United States and Canada. The report "[Building resilience to the economic threat of invasive species](#)" was written by students of the Johns Hopkins University School of Advanced International Studies (SAIS) and supported by the Swiss Re Institute.

[\[video\] Florida man saves alligator from python attack \(6/17/18\)](#)

Jack Hubbard said he his friend and professional trapper, Mike Kimmel of Indiantown were driving around Everglades National Park Friday when they encountered a python and noticed something was off. Kimmel soon realized the snake was attacking an alligator and jumped into action. [Warning – video contains profanity]

[Scientific Publication] João F.Gomes, Ana Lopes, Daniel Gonçalves, Cristina Luxo, Marta Gmurek, RaquelCosta, Rosa M. Quinta-Ferreira, Rui C. Martins, Ana Matos. 2018. [Biofiltration using *C. fluminea* for *E.coli* removal from water: Comparison with ozonation and photocatalytic oxidation](#). Chemosphere. Volume 208, October 2018, Pages 674-681

WEEDS

[\[Indiana\] DNR grants helping lakes to fight invasive plants \(6/13/18\)](#)

DNR grants totaling nearly \$660,000 will be used to fight invasive aquatic plants in 63 of Indiana's lakes and reservoirs, including Geist and Lake Lemon. The money comes from boat registration fees.

[\[Missouri\] 'We aggressively go after it': Missouri biologists work to control invasive hydrilla plant \(6/26/18\)](#)

... The herbicide slowly fans out across the surface of the lake, as Creasy, a fisheries technician with the Missouri Department of Conservation, peels off his protective gloves. The target, an invasive aquatic plant known as hydrilla, is a tenacious adversary that takes years to eradicate...

JOBS/GRANTS

JOBS

[River Restoration and Invasive Species Program Coordinator – Benton County OR](#)

The River Restoration and Invasive Species Program Coordinator (RRISPC) for Benton Soil and Water Conservation District works with local landowners and a variety of conservation partners and technical experts to assess, prioritize, and coordinate stewardship activities along the mainstem Willamette River. This person coordinates Benton SWCD's invasive species program and provides support to other initiatives in collaboration with team members and partners.

Position open until filled

Tahoe Resource Conservation District in South Lake Tahoe, California is seeking Watercraft Inspectors to facilitate the ongoing implementation of the Aquatic Invasive Species Prevention Program throughout the Lake Tahoe Basin. This is a full-time seasonal position available immediately. Part-time employment will also be considered. To apply, send e-mail with "Last Name - Aquatic Invasive Species Watercraft Inspector" in the subject line and attach cover letter, resume, and 3 professional references to: Trevor Smith, AIS Prevention Project Coordinator - tsmith@tahoercd.org. **Positions open until filled.** [See full job description here:](#)

The USFWS Pacific Region is recruiting to fill our Regional Aquatic Invasive Species Coordinator position, duty station of Portland, Oregon. The position coordinates monitoring, detection, and control of aquatic invasive species in Oregon, Idaho, Washington, and Hawaii. Challenges and opportunities abound, engaged partners are numerous, and the job is dynamic and rewarding. The position is now announced on USA Jobs. It is open government-wide for Merit Promotion, and is also open to the general public to apply.

Merit Promotion: <https://www.usajobs.gov/GetJob/ViewDetails/503031400>

DE (Public): <https://www.usajobs.gov/GetJob/ViewDetails/503034800>

Closes July 11, 2018

The Nisqually NWR Complex is recruiting for two (2) positions stationed in Olympia, WA:

1. Park Ranger (GS-0025-7) with visitor services duties including volunteer coordination, oversight of the Norm Dicks Visitor Center, and interpretive programs.
2. Wildlife Biologist (GS-486-11) to oversee the Biological Program for the 2 refuges and 1 unit within the Complex.

Vacancy Announcement - Park Ranger (VS), GS-0025-07

R1-18-10249330-BP-MP <https://www.usajobs.gov/GetJob/ViewDetails/503831600/>

R1-18-10250097-BP-DE <https://www.usajobs.gov/GetJob/ViewDetails/503830700/>

The announcement is open **Friday, June 29, 2018 thru Friday, July 13, 2018.**

Vacancy Announcement – Wildlife Biologist, GS-0486-11

R1-18-10250493-BP-DE <https://www.usajobs.gov/GetJob/ViewDetails/503891500/>

R1-18-10249835-BP-MP <https://www.usajobs.gov/GetJob/ViewDetails/503878800/>

The announcement is open **Monday, July 2, 2018 thru Monday, July 16, 2018.**

[Wisconsin Department of Natural Resources, Invasive Species Projects Coordinator – LTE](#)

This position is a critical member of the WDNR Department Invasive Species Team and the staff supporting the Wisconsin Invasive Species Council. They will take the lead on a wide range of administrative, coordination and outreach tasks. They will facilitate meetings for the DIST and WISC and lead the coordination of Invasive Species Action Month. They will compile the annual and biennial invasive species reports to the legislature and coordinate revisions of content for the WISC and DNR invasive species web pages. They will coordinate the review and dispersal of funds for control of invasive species on DNR lands and provide instructions for use and tracking of funds. They will participate in the Invasive Species Prioritization Team and will coordinate the review, revision and staff training for the prioritization framework. **Closes July 16, 2018**

[Director of California Sea Grant](#) **Application Deadline: August 24, 2018**

Scripps Institution of Oceanography (SIO), University of California San Diego (UCSD), seeks a vibrant, accomplished, and collaborative leader to serve as the Director of California Sea Grant (CASG). The Director assumes overall responsibility for leadership and programmatic oversight of CASG, and has national, state-wide, and university-wide responsibilities. Working with a team that includes 18 staff members, 9 extension specialists and an extension director (each of whom holds an academic position), the Director secures financial support for the program and builds successful partnerships across numerous and diverse constituencies within and beyond the state of California. The Director facilitates high-impact research, outreach, fellowship and communications activities to increase the understanding of, responsible interaction with, and use of California's ocean and coastal resources. The Director leads the CASG Management Team that also includes the extension director, business manager, and communications coordinator.

GRANTS

The Lake Tahoe AIS Program is soliciting proposals from qualified entities to [implement aquatic invasive species inspections and decontaminations of watercraft](#). The selected entity will work closely with Tahoe Regional Planning Agency (TRPA) staff to ensure program protocols are strictly adhered to, and will be trained and certified by TRPA as the entity responsible for sound implementation of the ANSTF approved AIS Inter-state Management Plan. **Deadline for submission 8/3/2018**

FEDERAL/STATE/PROVINCIAL LEGISLATION, RULES, ACTIONS

[Western Governors' Association](#)

[WGA Chair Hawaii Gov. David Ige announces Biosecurity and Invasive Species Initiative \(6/27/18\)](#)

Hawaii Gov. David Ige, 2019 WGA Chair, has announced the Western Governors' Biosecurity and Invasive Species Initiative will be his Chairman's Initiative. The Chairman's Initiative of Gov. Ige will focus on the impacts that nuisance species, pests and pathogens have on ecosystems, forests, rangelands, watersheds, and infrastructure in the West, and examine the role that biosecurity plays in addressing these risks. The goal of the Initiative is to identify emerging issues in biosecurity and invasive species management in the West and develop policy recommendations, best practices and technical tools to address those issues. The initiative will pursue this goal through a series of workshops across the West and utilize webinars and other tools to engage experts, opinion leaders and stakeholders in a deeper examination of biosecurity and invasive species issues.

Additional details about the Initiative, including the location of four upcoming workshops, will be announced by Gov. Ige during a webinar on July 12 (1:30-3 p.m. MT). [Register Here](#)

[State](#)

[Michigan ballast water rules face backlash amid invasive species fight \(6/17/18\)](#)

Michigan would drop its own stringent ballast water discharge rules and adopt federal regulations for oceangoing freighters that transport goods in the Great Lakes under legislation approved this week by the Republican-led Legislature.

Related: [Ship ballast bill would raise invasive species threat, critics say \(6/21/18\)](#)

[Snyder vetoes ballast water legislation \(6/29/18\)](#)

The Republican governor wrote in a letter to lawmakers Friday that the bill language is "ambiguous at best" and "there can be no ambiguity when it comes to the safety of our Great Lakes." He says the measure potentially could have increased the risk of new aquatic invasive species in the Great Lakes.

[Colorado lawmakers go mussel-free \(6/17/18\) \[overview of CO mussel laws\]](#)

As Colorado moved into yet another drought year, lawmakers were at the ready with a slew of bills this year to put recycled water to use for irrigating hemp, marijuana, edible crops and even for flushing toilets. They also took aim at the growing problem of zebra mussels and other nuisance aquatic species that threaten reservoirs and water supplies...

[Montana Exploring Aquatic Invasive Species Program Funding Options \(7/2/18\)](#)

...Libby Senator Chas Vincent chairs the EQC, which is considering what he calls a "buffet of options." "While it seems on its face like an easy task, once you start getting into where these sources are going to come from, it gets complicated very quick," Vincent said. "The issue of fairness is really what we're trying to strike a balance on." The EQC is proposing a combination of state general fund money, gas taxes on motorboats, and angler and boat fees, which would apply to canoes and kayaks as well as motorboats. Depending on public feedback the Council receives through July 9, it may recommend its proposal during the 2019 legislative session...

Related: [Hydropower out, boating fees in as invasive mussels prevention funding source \(7/3/18\)](#)

Congressional

[Capitol hill briefing highlights wildlife crisis and the Recovering America's Wildlife Act \(6/22/18\)](#)

The American Fisheries Society (AFS), The Wildlife Society (TWS), and the National Wildlife Federation (NWF) hosted a Congressional briefing on the status of U.S. fish and wildlife, along with a new funding mechanism that could address the current wildlife crisis. The event focused on a recently released report, [Reversing America's Wildlife Crisis](#), which shows that as many as one-third of U.S. wildlife species are at increased risk of extinction. However, the report also highlights the conservation successes made possible by State Wildlife Action Plans (SWAPs), and calls for a dramatic increase in their funding through the [Recovering America's Wildlife Act \(HR 4647\)](#).

[Wicker Introduces Bill to Advance American Aquaculture \(6/26/18\)](#)

U.S. Senator Roger Wicker, R-Miss., today introduced the "Advancing the Quality and Understanding of American Aquaculture (AQUAA) Act." The legislation would streamline the permitting process for aquaculture farms in federal waters, and fund research and development to advance the aquaculture industry. The bill is cosponsored by U.S. Senator Marco Rubio, R-Fla.

Related: [Marine aquaculture development bill generates doubts \(6/29/18\)](#)

WRDA REAUTHORIZATION

[Congress and the Asian carp \[Editorial\] \(6/24/18\)](#)

Better than a letter is a provision inserted by Senator Portman in the America's Water Infrastructure Act of 2018, still awaiting congressional approval, requiring the Corps to complete its Chief's Report for the Brandon Road Study by February, 2019.

BUDGET

[Senate passes first 2019 funding bill \(6/25/18\)](#)

The Senate on Monday passed its first funding bill for the 2019 fiscal year as lawmakers try to avoid a high-profile shutdown fight heading toward the fall. Senators voted 86-5 to approve a "minibus," which merged funding for energy and water, the legislative branch and military construction and veterans affairs... Monday's minibus includes approximately \$146.6 billion in spending, an increase of roughly \$5.7 billion from 2018, and represents a quarter of the 12 annual appropriations bills. [The bill now heads to conference,]... The Senate will now turn to more controversial spending bills. The Appropriations Committee has already sent to the full chamber funding bills for agriculture; commerce, justice and science; interior environment; transportation and Department of Housing and Urban Development (HUD).

Related: [Conferees Named For “Mini-Bus” Appropriations Bill \(6/28/18\)](#)

THE JOURNEY BEGINS: Rep. Mike Simpson and other appropriators will meet today with Speaker Paul Ryan about next steps in getting the first spending bill of the year to President Donald Trump's desk, but Simpson predicted it would take "a while" to resolve differences between the House and Senate energy and water titles. The Senate passed its first minibus spending package, [H.R. 5895](#) (115) , on Monday evening and the House passed its own version earlier this month. Now it's time for the two chambers to reconcile their differences. Policy riders are among the biggest points of departure between the two bills. Where House Republicans' bill, which passed along party lines, would have blocked implementation of the Waters of the U.S. rule (saving the Trump administration a messy court fight), the Senate jettisoned that language in order to bring Democrats on board. The Senate also sought more funding for clean energy programs and the popular ARPA-E program, which the Trump administration has proposed to eliminate. "We can conference 99 percent of it," Simpson told ME. "There's about 1 percent that we'll have some disagreement on."

[Senate appropriators wrap up 2019 markups \(6/28/18\)](#)

The Senate Appropriations Committee wrapped up its markups of all twelve 2019 spending bills Thursday, advancing the goal of a return to “regular order” in a budgetary process that has been widely derided for decades as dysfunctional... Still, challenges lay ahead to avoid a government shutdown when the 2019 fiscal year begins in October.

[S.3073 - 115th Congress \(2017-2018\): Department of the Interior, Environment, and Related Agencies Appropriations Act, 2019](#) [[S.3073 Full Text Here](#)]

[FY2019 Interior, Environment Appropriations Bill Approved by Committee \(6/14/18\)](#)

The Senate Committee on Appropriations today considered and approved a \$35.853 billion measure to fund the U.S. Department of the Interior, U.S. Forest Service, Environmental Protection Agency, Bureau of Indian Affairs, and other agencies. The bill was approved 31-0.

U.S. Department of the Interior – \$13.109 billion overall for the Interior Department, including full funding for the Payment in Lieu of Taxes program.

Bureau of Land Management (BLM) – \$1.34 billion for the BLM, an increase of \$11 million above the FY2018 enacted level.

National Park Service (NPS) – \$3.21 billion for the NPS, an increase of \$13.4 million above the FY2018 enacted level.

U.S. Fish and Wildlife Service (FWS) – \$1.57 billion for the FWS, which is \$19.7 million below the FY2018 enacted level.

Bill report language can be found [HERE](#) and included the following AIS related provisions:

MULTI-AGENCY DIRECTIVES, Page 8:

Invasive Species.—The Committee recognizes the critical importance of early detection and rapid response [EDRR] of invasive species as a strategy to mitigate the threats and impacts of invasive species and expects the Department of the Interior and the Forest Service to prioritize EDRR and control of invasive species that imperil endangered, threatened, or candidate species. In particular, the Committee supports efforts to prioritize EDRR in areas with large populations of invasive species. Within 180 days of the date of enactment of this act, the agencies shall provide the Committee with a report on their efforts to prioritize EDRR as part of their expected program of work for fiscal year 2019, including detail on how the agencies plan to protect specific native species and natural resource values on public lands across the Nation.

U.S. FISH AND WILDLIFE SERVICE, Page 22

National Wildlife Refuge System.—\$491,180,000 is provided for the National Wildlife Refuge System, an increase of \$4,423,000 above the fiscal year 2018 level. Within that amount, \$237,467,000 has been provided for wildlife and habitat management, an increase of \$4,075,000 over fiscal year 2018. A general program increase of \$4,000,000 has been provided so that the Service can focus on its highest priority needs within the Refuge system. Funding for the subsistence program is at \$2,835,000, and \$10,000,000 has been provided for invasive species with an emphasis on invasive species activities within the Everglades. Additionally, the bill provides \$1,500,000 for the Pacific Marine National Monuments and the enacted level for nutria eradication in the Chesapeake Bay.

U.S. FISH AND WILDLIFE SERVICE, Page 25:

Aquatic Invasive Species.—\$22,348,000 is provided for aquatic invasive species activities, an increase of \$600,000 above the fiscal year 2018 enacted level. Within these funds, \$3,088,000 has been provided to implement section 5(d)(2) of the Lake Tahoe Restoration Act.

Asian Carp.—The Committee recognizes the importance of the work conducted by the Service to combat the serious threat of Asian carp and provides \$11,000,000 for Asian carp activities, an increase of \$600,000 above the enacted level. Funding should be used to control Asian carp in the Mississippi and Ohio River Basins—including in Kentucky Lake, Lake Barkley and the Ohio River—and to prevent them from entering and establishing in the Great Lakes. 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.

Invasive Species.—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, which include Asian carp, quagga-zebra mussels, and variable-leaf watermilfoil. The Committee encourages the Service to support research, monitoring, and mitigation efforts, as well as efforts to disseminate such work, in all regions.

U.S. GEOLOGICAL SURVEY, PAGE 38

The Committee also 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 public lands and natural resources, including Burmese Pythons in the Florida Everglades and Big Cypress Swamp.

TRAININGS, WEBINARS, CONFERENCES AND MEETINGS

Recently Archived

Events: Webinars, Trainings, Conferences and Meetings

JULY

[First Detector Webinar on Invasive European Green Crab](#) July 10 After three decades on the coast, European green crab was first spotted on Washington's inland shorelines in 2016. This globally damaging invasive crab is still very rare in Washington's Salish Sea, and keeping it rare relies on finding new populations while they are still small. By participating in this webinar, and learning about green crab, you can join Washington Sea Grant's network of "Eyes on the Beach" of those who know what to look for and how to report this species, enhancing our ability to protect these shorelines. [Webinar Registration Here](#)

WGA Chair Hawaii Gov. David Ige announces Biosecurity and Invasive Species Initiative, July 12 webinar [Register here](#) The goal of the Initiative is to identify emerging issues in biosecurity and invasive species management in the West and develop policy recommendations, best practices and technical tools to address those issues.

[The First International Snakehead Symposium](#) July 17-19, Old Town Alexandria, VA.

[The National Invasive Species Council \(NISC\)](#), sponsored by the Department of the Interior (DOI), will meet via teleconference on 19 July. 83 Fed. Reg. 27342 (6/12/18)

The 28th Annual PNWER Summit and [Invasive Species Working Group](#) Session will be held July 25th, 2018 in Spokane, WA. Visit www.pnwer.org/2018summit to learn more and register for the PNWER Annual Summit. For further information contact Kate Wilson Kate.Wilson@mt.gov

[Pacific Northwest Northern Pike Forum and Coordination Meeting](#)

Time and Date: July 24, 2018 1:00 pm to 4:00 pm Pacific Standard Time

Location: Meeting Room 10, Davenport Grand Hotel, 333 West Spokane Falls Blvd., Spokane, WA. Background: Following the 27th Annual Pacific NorthWest Economic Region (PNWER) Summit, the PNWER Invasive Species Working Group submitted an action item to identify the economic threat of northern pike (*Esox lucius*) to salmon/steelhead recovery and harvest within the Pacific Northwest region (States of Alaska, Idaho, Oregon, Montana, Washington and the Canadian provinces of British Columbia, Alberta, Saskatchewan, and the Yukon and Northwest Territories) where northern pike is non-native. Please direct questions or comments to Justin Bush (justin.bush@rco.wa.gov) and Nate Weigel (nate.weigel@pnwer.org).

AUGUST

If you are interested in building up your malacology muscles, Celeste A. Searles Mazzacano, Ph.D. will be teaching a 2-day class at Portland State University on Aug. 6 & 7, 2018:

[Freshwater Mussels of the Pacific Northwest](#). Morning classroom sessions will cover mussel ecology, life history, ecosystem services, habitat needs, identification, and survey techniques, and afternoon sessions will be in the water practicing field surveys. The class is an elective in the PSU Environmental Professional Program; available professional credit is 1.4 CEU, 14 PDH.

[2018 Invasive Species Cook-off](#) Saturday, August 11, 2018 | 5-8 pm Philomath, OR. The beautiful Harris Bridge Vineyard near Wren, Oregon, will host the festivities to raise awareness of invasive species that threaten native habitats. Enjoy live music from the Red Oak Rounders, games, raffle prizes, and a delicious catered Mediterranean buffet from Kalamata Bistro featuring invasive species. Bring the kids for lawn games and a piñata! Enjoy a local libation, and watch the river go by at this lovely venue. If you enjoy cooking, enter our Cook-off contest - your entry could win a prize!

[The American Fisheries Society 148th Annual Meeting August 19-23 Atlantic City, New Jersey.](#)

Symposium: Competing Mandates of Managing for Introduced Fishes; Balancing Stakeholder Needs We are actively soliciting participants to give an oral presentation for this symposium. Please contact Bill Stewart (wstewart@usbr.gov) before March 31, 2018 if you are interested in contributing to this symposium. Final abstracts are due April 3, 2018. If you are selected to present in this symposium, submit your abstract using the following link and provide the symposium title

SEPTEMBER

The Level [1 Noxious Weed Management Certification Workshop](#) will be held September 11-13, 2018, in Bozeman, MT. This is the first workshop in a 3-part series that provides information on weed identification, biology, ecology, and integrated management.

[2018 OLA/WALPA Joint Conference](#) Join us for workshops, presentations, a field trip, and meeting with friends and colleagues at the 2018 Joint Oregon Lakes Association/Washington

State Lakes Protection Association Conference at the DoubleTree by Hilton in Portland, Oregon. September 26-28, 2018

OCTOBER

The 2018 Upper Midwest Invasive Species Conference will be a Joint Conference with the [North American Invasive Species Management Association](#): October 15-18, 2018 - Mayo Civic Center - Rochester, MN Abstract Submission Is Open. **Deadline to Submit an Abstract for Presentation: Wednesday, April 11, 2018 at 11:00pm Central**

The Society for the Study of Marine Bioinvasions and the Grupo de Ecología en Ambientes Costeros invites you to participate in the [10th International Conference on Marine Bioinvasions \(ICMB-X\)](#), in Puerto Madryn (Patagonia Argentina, between the 16-18 October 2018).

PNW Society for Ecological Restoration & Society for Wetland Scientists [2018 Joint Conference](#). October 15-19, 2018 in Spokane, Washington. [Early Registration is now open](#)

Join the [Western Regional Panel](#) in Tacoma, Washington this fall. The WRP will hold their annual meeting October 24-26, 2018 in Tacoma, Washington. Washington Department of Fish and Wildlife will be our local host for the event. • Meeting attendees can take advantage of the special rate at Hotel Murano of \$117 plus taxes and fees. You may book your room online here [The Western Regional Panel on ANS is accepting presentation suggestions for their upcoming Annual Meeting.](#) <mailto:leah@stopais.org>

NOVEMBER

[21st Ballast Water Management Conference](#). November 7th - 8th 2018, Rotterdam - The Netherlands

Save the Date: [Fish and Wildlife Health Forum](#), Reston VA November 13-16

Save the date: 2018 [Governor's Summit on Invasive Species](#) [Montana] Colonial Radisson Hotel, Helena. November 15-16

DECEMBER

Save the Date [Oregon Interagency Noxious Weed Symposium](#) December 4-6 at OSU's LaSells Stewart Center.

SAVE THE DATE: [Innovations in Invasive Species Management Conference](#) and Workshop December 12th-14th, 2018 Nashville, TN. As we prepare the 2018 Conference Website please consider presenting at the 2018 meeting. Suggested topics and a call for papers will go out soon. In the meantime if you have any questions please give Steven Manning a call at 615-969-1309 or send an email at <mailto:steve@ipc-inc.org>.

MARCH

[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.



MIT Sea Grant

Photo MIT Sea Grant

[Chinese Mitten Crab Watch:](#)

The absence of recent records of Chinese Mitten Crabs on the East and West Coasts is puzzling. Are the crabs now gone from the U.S. east or west coast? Or, are they just in low abundance and hard to detect? We need your help to solve this mystery! Please help SERC detect live mitten crabs by reporting any sighting in North America to the online tracking system [Mitten Crab Watch](#) or hotline (443-482-2222)



Photo: Emily Grayson

[European Green Crab Watch:](#)

If you believe you have found a European green crab in Washington waters please follow these steps to notify us: [Reference our webpage on how to identify European green crabs](#), and distinguish them from native species. There are several native species of similar size and color. Take several pictures from different angles and distances to aid in confirming the identification. Be sure to place a common object or indicator of scale in the photo, so we can tell how large the crab is. Pictures are necessary and sufficient for verifying the crab's identity. Leave the crab in place. It is illegal to possess a green crab in the State of Washington without a

special permit. But don't worry, we will follow up quickly if it is a European green crab. Email your photos and detailed location information, geographic coordinates if you have them, to <mailto:crabteam@uw.edu>. We will contact you to if we need additional information.

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AIS NEWS was compiled by Stephen Phillips and Robyn Draheim

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