



Stewardship

news

YOUR Thoughts

We are looking for contributors and ideas.

✖ If you have a topic, success story, lesson learned, or helpful suggestion—let us know.

Send to: Tara.J.Whitsel@usace.army.mil

Stewardship News is an unofficial publication of the U.S. Army Corps of Engineers (USACE). This online publication is produced quarterly with the purpose of providing its readers information about the USACE Stewardship Program. Editorial views and opinions expressed are not necessarily those of the Department of the Army. Mention of specific vendors does not constitute endorsement by the Department of the Army or any element thereof.

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Volume 3, Issue 1: March 2020

Your Stewardship HQ Update

POC: Jeremy Crossland, Program Manager for Land Use, HQUSACE, 202-761-4259

The Natural Resource Management community and the world as we know it has changed quite significantly since the last issue of Stewardship News. First and foremost we hope everyone is managing the changes that COVID 19 has brought to our family and friends and that all remain safe and healthy.

In this issue of Stewardship News there are some great articles on protecting a few of our most valued bugs and improving habitat for them. Improving habitat for pollinators and other native insects serves to build great baseline habitat for all species. Additionally, we continue to work on the development of a tool to place fish and wildlife information resources in one location for our natural resource managers. Please check out the article on the ENS National Initiatives Viewer. Last, but not least, for those of us managing Shoreline Management Programs, we are continuing to work on a new policy to support the program.



Pollinator habitat development at Raystown Lake, Baltimore District. Photo by Alicia Palmer.

Project Spotlight: Tulsa District

Story Provided By: Stacey Reese, Tulsa District.

POC: Stacy Dunkin, Stacy.W.Dunkin@usace.army.mil

How does a 1.5 inch insect help cut down on disease and eliminate pests? The American Burying Beetle feeds and shelters its larvae in the carcass of small animals, known as carrion. The male and female work in unison to bury the carcass and remove all of the fur or feathers from the body. This use of small animal carcasses makes them an efficient natural recycler, returning nutrients into the soil while simultaneously cutting down on food sources for flies.

The beetles have been on the endangered species list since 1989. The primary threat to the beetle is loss of natural habitat through human development. Historical records show this beetle once lived in 35 states, the District of Columbia and three Canadian provinces. Now, natural populations are known to occur in only four states: Rhode Island, Oklahoma, Arkansas and Nebraska.

Tulsa District Corps of Engineers, in partnership with the Oklahoma Department of Wildlife Conservation, conducts two surveys each year to track the relative abundance of the American Burying Beetle.

Article continued on page 2.



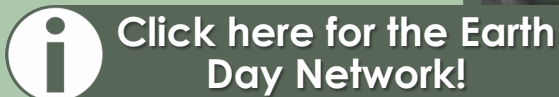
Photo by Oklahoma Wildlife Dept.



EARTH DAY 2020!

Did you know that 22 April 2020 will be the 50th Anniversary of Earth Day? The Earth Day Network (earthday.org) has designated this year's environmental priority as "Climate Action".

The first Earth Day, 22 April 1970, is credited with launching the modern environmental movement.



Click here for the Earth Day Network!

The annual event is now recognized as the planet's largest civic event! While events at parks may be limited this year, we can still promote environmental sustainability in many ways!

NRM ASSESSMENT DATA!

The data entered into the NRM Assessment Tool for 2019 is now available. To access the information, simply go the NRM Gateway website and select the NRM Assessment Tool link. Then, click once again on the NRM Assessment Tool link below the Corps castle. This will take you to the tool login page where the FY19 reports are posted.



Click here for the NRM Assessment Tool



Click here for ISLT link!

American Burying Beetle continued.

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"The population monitoring program began in 2014," said Stacy Dunkin, American Burying Beetle recovery program manager. "In response to increasing regulation from US Fish and Wildlife Service for impacts to the beetle," he added.

Members of the environmental staff trap the beetles using large buckets, baited with rotten meat. Each trap can attract beetles over a 570 acre area. According to Dunkin, his team has seen fluctuations in population over the years, but overall beetle numbers are increasing.

The 2019 surveys netted a total of 18 beetles. The beetles are measured, checked for sex, photographed and the photographs are further analyzed by a computer program. "The program gives us the ability to measure difference in size and color patterns and even identify individuals" said Kevin Stubbs, fish and wildlife biologist with USFWS.

In Oklahoma, there is a 2,000 acre mitigation offset area dedicated to the beetle's survival near Wagoner and Cherokee counties. In addition to the surveys conducted each year, the district also conducts a prescribed fire burn on this property.



Photo By Stacey Reese | Lee Kirkpatrick, a natural resource specialist from Little Rock District, baits a Burying Beetle trap. The trap is set with rotten meat to attract Burying Beetles. Once collected, the team will count, catalogue, record and measure the beetles for size, sex and maturity.

NRM Gateway: Invasive Species

POC: Elizabeth Watt, Elizabeth.G.Watt@usace.army.mil

Invasive species articles are found in every issue of Stewardship news. Do you find yourself asking, "Where can I get more information about invasive species or this project?" Look no further. The NRM Gateway Invasive Species page is an information hub implemented to assist and educate any USACE employee involved in management and prevention of terrestrial and aquatic invasive species. Browse the Invasive Species Gateway page for: ERDC research, publications, databases, news articles, webinars, USACE policy, interpretive materials (Traveling trunk), signage, treatment recommendations, and more. Maybe you have visited the site but didn't find what you need. You can always click on the link for the Invasive Species Leadership Team (ISLT) and find your area contact. That is the team's objective, "To establish a network for the exchange and sharing of information on invasive species challenges, action being taken by others, lessons learned and best management practices."

Do you have a lessons learned, district level policy, an integrated pest management plan, contract or project you would like to share? Do you have feedback or recommendations on the content? Please submit information, feedback, and questions in regards the NRM Gateway Invasive Species page to Elizabeth.G.Watt@usace.army.mil. The ISLT is dedicated in updating the page regularly to provide the most current information and tools to assist you with all things invasive.

Jennings Randolph Lake & the Maryland Conservation Corps

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POC: Tony Shillingburg, Tony.S.Shillingburg@usace.army.mil



Photo Top: Vernal pool along the Jennings Randolph Lake Songbird Trail.

Photo Middle: Maryland Conservation Crew joined by Deep Creek Lake State Park, and Park Ranger Tony Shillingburg. Photo Bottom: Park Ranger Tony Shillingburg and an MCC crew member armor a portion of the Songbird Trail.

The Maryland Conservation Corps (MCC) is an award-winning AmeriCorps program that engages young adults in extensive natural resource management and park conservation projects. The mission of the program is to provide both skills training and opportunities for young adults to serve Maryland's conservation needs. There are seven crews in various areas around the state of Maryland.

In January, staff from Jennings Randolph Lake were joined by five MCC members, a crew leader from Deep Creek Lake State Park, and the son of former Jennings Park Ranger Norm Dennis to assist in an exciting project. Over the course of two days, this determined crew completed three tasks on the project's Songbird Trail which included clearing and rock armoring a small section of the trail and conserving an existing vernal pool. Vernal pools are small wetland areas that fill with winter snow melt and rains during the spring; providing great habitat for amphibians. Spring peepers, spotted salamanders,



NATIONAL INVASIVE SPECIES AWARENESS WEEK

PART II LOCAL EVENTS AND AWARENESS MAY 16-23, 2020

National Invasive Species Awareness Week (Part II) is scheduled for May 16-23, 2020!

Hold an event to raise awareness and identify

solutions to invasive species issues at local,

state, tribal, regional, and national scales. The NISAW website provides a toolkit to help with your planning needs!



Click here for NISAW!

Photo Below: Hydrilla at Millwood Lake. Photo courtesy of Cherrie-Lee Phillip,



green frogs, tree frogs, wood frogs, marbled salamanders, numerous insects and wetland grasses can all be found in the vernal pool along the Songbird Trail. In Maryland, many vernal pools are at risk due to over development, pollution and run-off from agriculture. Numerous species require a wetland vernal pool area for reproduction and the completion of their life cycle. Therefore, it was imperative that the vitality of the vernal pool was protected. This particular vernal pool had a tree uproot which redirected the flow of water away from the vernal pool. The Conservation Corps crew assisted with redirecting water flow back to the vernal pool, while ensuring that the wetland was not disturbed.



POC: Ben Silvernail, Institute for Water Resources, 703-659-3587

The vast footprint of USACE projects marks the agency's environmental mission as a vital component in fish and wildlife habitat networks nationwide. Across the nation, a diverse array of landscapes fall under the purview of USACE's environmental mission. These landscapes require conservation actions which impact USACE managed areas, but also extend beyond the bounds of any single projects.

In order to make effective progress in tackling environmental challenges with large geographic impact, organizations must utilize cohesive management strategies. When the right tools for filtering large amounts of data and information are available at the program level, individual projects are empowered to aid in the advancement of larger conservation goals. The intent of the ENS National Initiatives Viewer is to provide staff with targeted content based on location, which has relevancy at multiple administrative levels. The viewer will include information about the spatial relationships between USACE projects, the whooping crane migratory corridor, monarch butterfly habitat along the I-35 migration range, and the National Fish Habitat Partnership. Access to this information is intended to improve communication and facilitate a better understanding about how stewardship at USACE projects impacts landscape scale conservation issues, without requiring specialized knowledge of geographic information systems and spatial analytical methods. In addition to providing capabilities to the natural resource managers at the project level, the tool will support USACE's ability to influence regional goals and initiatives as well as direct work toward targeted species, habitat type, or geographic region.

The ENS National Initiatives viewer is in development now, with a planned rollout to the field in FY20.

Amphibian Week: June 1-7

This will be the first year for Amphibian Week. Developed for the education, conservation and protection of amphibians across the U.S and around the world.

There are many ways to participate in this activity at the District or Project level from an outreach approach to interpretation.

Anyone interested in any aspect of this project please contact Jim Castle, James.H.Castle@usace.army.mil (509) 543-6069

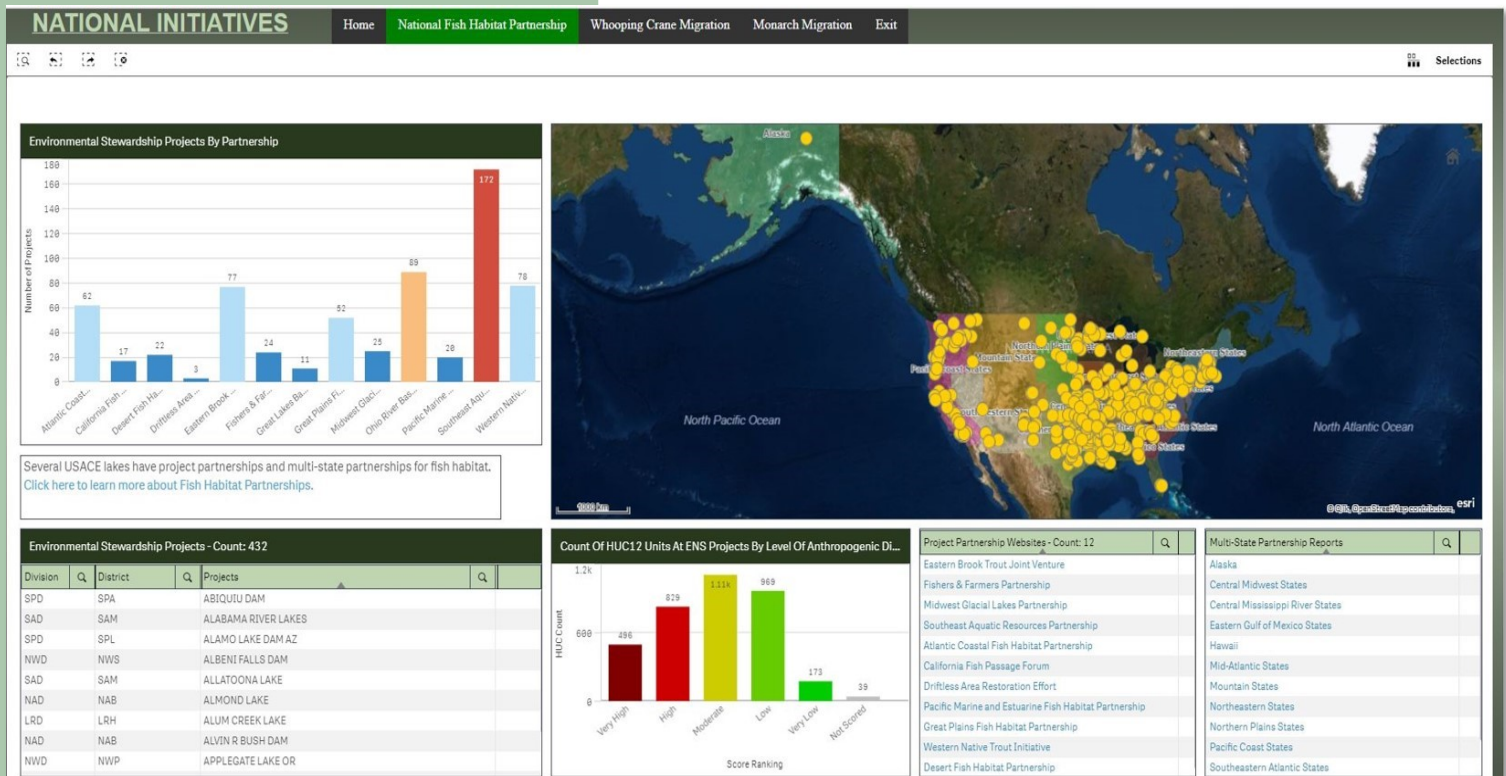


Photo Top: Mike Champagne (SWF) holds a streamside salamander during an ENS 101 field session. Image above: National Initiative Viewer related to the National Fish Habitat Partnership



PROJECT WINGSPAN: Landscape Enhancement for Imperiled Pollinators of the Midwest

Press release provided by Pollinator Partnership

Project Wingspan (PW) is a two-year project supported by a grant from the National Fish and Wildlife Foundation (NFWF) to the non-profit the Pollinator Partnership which is leading a coalition of partners in an effort to enhance land across the Midwest to support our imperiled pollinators.

The iconic monarch butterfly (*Danaus plexippus*) and its spectacular migration are in jeopardy. Their North American numbers have suffered a steep decline of approximately 90% over the past

two decades, and in 2014 the U.S. Fish and Wildlife Service was petitioned to protect the monarch butterfly under the Endangered Species Act (with a listing decision expected for December 15, 2020). Like the monarch, the rusty patched bumble bee (RPBB) was a common species 20 years ago, with a range across 28 states and two Canadian provinces. RPBB (*Bombus affinis*) populations have also seen a swift decline since the 1990s, which earned it placement on the endangered species list in 2017 – with a distinction of becoming the first bee in the contiguous 48 states to be declared endangered. The species has now only been observed as a few small patches of populations across what is estimated to be only 0.1% of its historical range.

Project Wingspan seeks to increase monarch and Rusty Patched Bumble Bee (RPBB) habitat by building off the success of PP's last NFWF grant funded project (Monarch Wings Across the Eastern Broadleaf Forest – MWAEBF) and by engaging public land managers and private land stewards throughout the 8-state target region of Arkansas, Illinois, Indiana, Michigan, Missouri, Ohio, Pennsylvania, and Wisconsin through a series of monarch habitat enhancement activities with the goal of enhancing and securing 10,000 acres of high-quality monarch and RPBB habitat.

 [Click here for Project Wingspan link!](#)

Project Wingspan is designed to address the habitat needs of monarchs, RPBBs, and other rare pollinators by increasing quality habitat that will provide resources for imperiled pollinators while increasing citizen scientist's interest, skills in, and knowledge of appropriate native seed collection protocols and provide resources for in-state seed services. To successfully achieve the 10,000 habitat acre goal the following tasks will be performed:

- Facilitate a regional seed collecting program for IL, IN, MI, OH, PA, and WI to help meet the increased and immediate needs for regionally adapted monarch and RPBB resources.
- Establish and enhance long-term monarch and RPBB habitat.
- Provide technical assistance to public and private land managers in the Midwest.

FINAL TARGET NATIVE PLANT LIST

Listed below are 29 native plant species which serve as a mixture of valuable forage and host plants for monarchs, RPBBs, and other pollinators. These species are commonly found throughout Project Wingspan's seed collection region and have been included on the Final Target Native Plant Species List. The list will be used to focus the seed collection efforts on a catalogue of specific target plants, which volunteer seed collectors will be trained to identify and from which they will collect seed. This final list was developed after several rounds of feedback and vetting from project partners and advisors. The full list is available on the Pollinator Partnership website.

**POLLINATOR
PARTNERSHIP**

Botanical Name	Common Name
<i>Asclepias exaltata</i>	poke milkweed
<i>Asclepias incarnata</i>	swamp milkweed
<i>Asclepias syriaca</i>	common milkweed
<i>Asclepias tuberosa</i>	butterfly milkweed
<i>Asclepias verticillata</i>	whorled milkweed
<i>Cephalanthus occidentalis</i>	buttonbush
<i>Chamaecrista fasciculata</i>	partridge pea
<i>Cirsium discolor</i>	field thistle
<i>Coreopsis tripteris</i>	tall coreopsis
<i>Echinacea purpurea</i>	eastern purple coneflower
<i>Eupatorium perfoliatum</i>	common boneset
<i>Eutrochium purpureum</i>	sweet joe pye weed
<i>Euthamia graminifolia</i>	grass-leaved goldenrod
<i>Geranium maculatum</i>	wild geranium
<i>Heliopsis helianthoides</i>	ox eye sunflower
<i>Liatris aspera</i>	tall blazing star
<i>Liatris spicata</i>	den
<i>Monarda fistulosa</i>	
<i>Penstemon digitalis</i>	
<i>Pycnanthemum tenuifolium</i>	
<i>Pycnanthemum virginianum</i>	
<i>Ratibida pinnata</i>	
<i>Rudbeckia hirta</i>	
<i>Symphyotrichum laeve</i>	
<i>Symphyotrichum novae</i>	
<i>Tradescantia ohiensis</i>	
<i>Vernonia gigantea</i>	
<i>Veronicastrum virginicum</i>	
<i>Zizia aurea</i>	

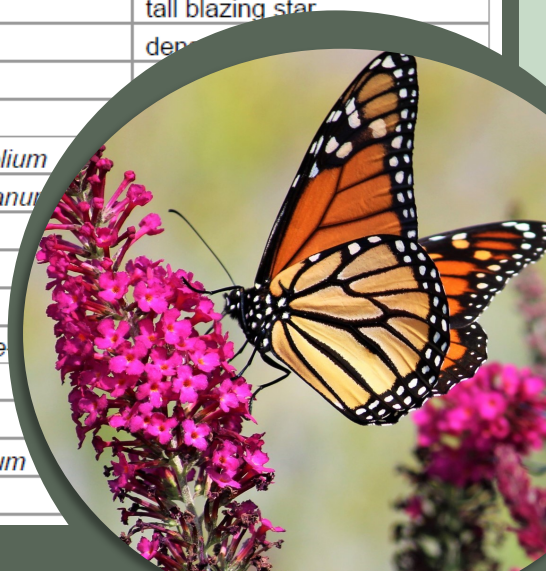


Photo (Right) by Alicia Palmer

Some Interesting Reading & Viewing



HABs INFO!

The University of Florida (UF) has unveiled a new website to address the public's confusion surrounding harmful algal blooms (HABs). The website addresses causes of such events, effects and attempts to combat future blooms. Scientists from several University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) departments and affiliated groups teamed up to provide expertise for the site, which is hosted on the UF/IFAS Extension website for water programs. Through the Florida Sea Grant program, UF/IFAS also teams with 17 Florida universities to better understand and address the issues related to HABs. Other collaborative UF/IFAS work includes coordinating with entities such as water management districts, state and federal agencies, local governments, agricultural commodity groups and industries. The new website is:

[https://
wa-
ter.ifas.ufl.edu/
harmful-algal-
blooms/](https://water.ifas.ufl.edu/harmful-algal-blooms/)

 [Click here for website!](https://water.ifas.ufl.edu/harmful-algal-blooms/)

1 GIANT SALVINIA. The Arkansas Game & Fish Commission confirm giant salvinia (*Salvinia molesta*) has been found in Lake Columbia, Arkansas. Watch out, Arkansas Projects!

FYSA - ERDC has conducted a lot of research on giant salvinia biology

and management over the years with funding from the Aquatic Plant Control Research Program (APCRP). You can search for Technical Reports, Technical Notes and Journal articles on the topic by typing "giant salvinia" in the search feature found on the APCRP website under Technology Transfer. Click on each type of report (Technical Report, Technical Note....etc.) and the search engine box will show up - here is the link to the APCRP Technology Transfer page: <https://apcrp.el.erd.c.dren.mil/>

 [Click here for Giant Salvinia news article!](#)

2 ERDC HAB RESEARCH. A new ERDC Technical Report has been published and released. This research was

funded by the Aquatic Nuisance Species Research Program (ANSRP) and was one of four projects initiated with special congressional funding in FY19 for HAB research. This is the second report from a project led by Molly Reif (ERDC-Environmental Lab), to develop remote sensing capabilities to assist USACE with water quality monitoring and early detection of HAB development.

 [Click here APCRP Technology Transfer Page!](#)

3 ERDC ZEBRA MUSSEL RESEARCH.

"Incidence of Zebra Mussels on US Army Corps of Engineers Structures" is a new report developed as part of an ANSRP-funded research project to identify and evaluate new anti-fouling coatings for infrastructure impacted by invasive mussels.

Abstract: Zebra mussels (*Dreissena polymorpha*) are invasive/nuisance species first introduced into the Great Lakes region in the late 1980s. Since their introduction efforts have been underway to prevent and/or control their spread. Zebra mussel infestations can occur on submerged critical structure. For the U.S. Army Corps of Engineers (USACE) it is essential that hydraulic infrastructure are effectively and efficiently maintained to ensure proper water control and navigation. A study was conducted to determine the extent of the zebra mussel invasion on USACE districts and the impact zebra mussels have on USACE infrastructure. Consistent with available U.S. Geological Survey (USGS) data, it was found that zebra mussels are present within 24 of the 36 continental United States USACE district boundaries, although San Francisco and Galveston Districts have only isolated populations in non-USACE waters. Albuquerque and Omaha Districts appear to be the two districts most at risk for invasion. While infestations are common, 62% of the districts with USACE infested waters reported no or minimal impacts on the infrastructure or operation/maintenance costs. Those districts with impacts did not normally have cost figures readily available. It was also found that 12 districts have or have had zebra mussel monitoring programs in place.

 [Click here for Report.](#)

 [Click here for Report.](#)

Spotlight on Algal Blooms

Stay up-to-date with the latest research findings from UF/IFAS experts.

[READ WATER QUALITY BLOGS](#)

[MEET THE TASK FORCE](#)

Training Opportunities

4 eDNA Training—USFWS—National Conservation Training Center. eDNA Workshop. This workshop is designed to provide resource professionals at both staff and management levels with the background and tools needed to evaluate issues where environmental DNA data play a role in the management of plants and animals.

Instruction on environmental DNA Best Management Practices, terminology, concepts, and case histories will be provided throughout the workshop. May 18-20, 2020, Shepherdstown, WV Cost \$1,195.00 To register Register online using DOI Talent, the Department of the Interior's Learning Management System at: <https://doitalent.ibc.doi.gov/>



U.S. Fish & Wildlife Service



DOI Learning Management

National Conservation Training Center

Training Announcement

eDNA Workshop

Workshop Description

This workshop is designed to provide resource professionals at both staff and management levels with the background and tools needed to evaluate issues where environmental DNA data play a role in the management of plants and animals. Instruction on environmental DNA Best Management Practices, terminology, concepts, and case histories will be provided throughout the workshop.



Date
May 18 – 22, 2020

Location
NCTC, Shepherdstown, WV

Who Should Attend
Resource professionals who work with issues where environmental DNA data have implications for the management of plant or animal populations, especially those in aquatic habitats.

Course Length
4.5 days

College Credit
2 semester hours

Tuition
Tuition for FWS, NPS, and BLM is prepaid. Tuition is \$1,195.00 for participants from other agencies and organizations.

To Register
Register online using DOI Talent, the Department of the Interior's Learning Management System at: <https://doitalent.ibc.doi.gov/>

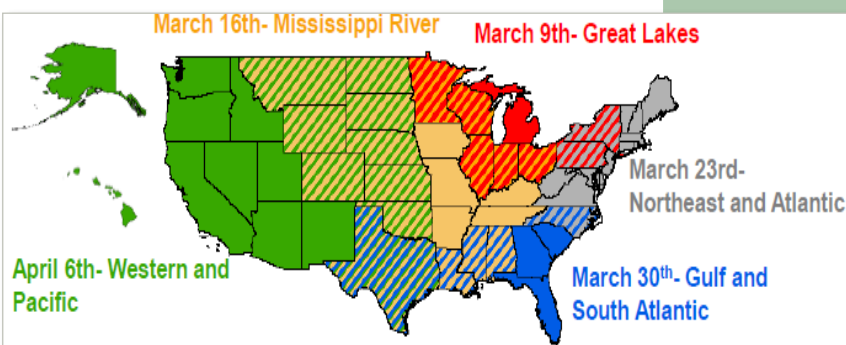
Workshop Contact
Matthew Patterson, 304/876-7473
matthew_patterson@fws.gov

Reasonable Accommodation

USGS—Biosurveillance of Invasive Species: A webinar series for adding eDNA data to the NAS Database.....The USGS Nonindigenous Aquatic Species (NAS)

5 Database (nas.er.usgs.gov) tracks occurrences of >1290 non-native and invasive fish, invertebrates, amphibians, reptiles, and plants throughout the United States and its territories. NAS scientists are working with top interagency environmental (e)DNA experts to develop consensus on community data standards for integrating eDNA data. The combination of traditional specimen observations and eDNA detections could provide more complete distribution of occurrences and significantly improve the response time to new invasions as part of an early detection rapid response (EDRR) system.

To register for a webinar or for more information contact Wesley Daniel, Wdaniel@usgs.gov



ENS 101: NEXT CLASSES

Are you new to USACE or new to the role of Environmental Stewardship? Do you have a need or desire to develop a better understanding of your role in the responsible management and conservation of USACE land and water resources?

If so, learn more about “ENS-101” and consider registering for the course.

Course Dates:

- **August 24—27, 2020** Location: Lower Granite NRM Office, 100 Fair St, Clarkston, WA, 99403
- **February 8—11, 2021** Location: Waco Lake, Regional Training Building, 2330 West Highway 6, Waco Texas 76712
- **August 23-26, 2021** Location: Raystown Lake Visitor Center, 6145 Seven Points Road, Hesston, PA 16647

Tuition: There is no tuition cost for this training. However, labor and travel are the responsibility of each student's organization. For more information or to register, email Tara Whitsel at Tara.J.Whitsel@usace.army.mil

Photo Top: Students participating in ENS 101, held at J. Strom Thurmond Lake, February 3-6, 2020, had the opportunity to observe a demonstration prescribed burn as part of a class field session on fire management.

Thank You J. Strom Thurmond Staff!