



# Stewardship

## news

Volume 6, Issue 1: March 2023

### 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](mailto: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.*

## Your Stewardship HQ Update

**POC: Michael Richards, Land Use Program Manager**

On Feb. 27, 2023, Mr. Michael Connor, Assistant Secretary of the Army, signed the updated USACE Invasive Species Policy Guidance in fulfillment of WRDA 2020 Section 501. This guidance replaces the USACE Invasive Species Policy dated Jun. 12, 2009, and it is applicable to Headquarters and all Divisions, Districts, and Field Offices of USACE with Civil Works responsibilities. The intent is to integrate the Invasive Species Policy into all projects and programs to effectively manage invasive and nonnative species, including harmful algal blooms.

The policy can be found on the NRM Gateway at <https://corpslakes.erdc.dren.mil/employees/cecwon/pdfs/23Feb21-WRDA20-Section501InvasiveSpecies.pdf>

## Raystown Lake Receives National Acclaim for Fisheries Work

**Article from <https://www.ydr.com/story/sports/outdoors/2022/11/30/raystown-lake-shoreline-improvements-for-boaters-anglers-in-pa/69684864007/>**

The National Fish Habitat Partnership named Raystown Lake one of 10 “Waters to Watch” for 2022, and it's the only waterway in Pennsylvania to be selected this year. The annual list represents a collection of strategic conservation efforts implemented on rivers, streams, estuaries, and lakes to protect, restore, or enhance fish habitat. To make it on the Waters to Watch list, the National Fish Habitat Partnership looks for efforts like habitat planting, stream bank restoration, and lake shore restoration, according to Ryan Roberts, National Fish Habitat Partnership program manager. The Pennsylvania Fish and Boat Commission has been leading the projects.

“We’ve been working hard to execute a fish habitat improvement plan there, specifically shoreline erosion. If you are familiar with Raystown Lake, it gets a lot of boat traffic, and that creates a lot of waves,” said Ben Page, lake habitat section chief for the commission. The waves erode the shoreline and degrade fish habitat, so the partners involved in the project stabilized the shores with rock material that breaks the waves and creates a habitat for baitfish and gamefish.

*Photo: Students from Juniata College release wooden fish habitat structure in to Raystown Lake. Photo by Ben Page.*



### Environmental Stewardship Training Opportunities

**Mar. 21-22, 2023:** Aquatic Invasive Training in partnership with the University of Florida @ Sam Rayburn Lake (SWF)

**May 1-5, 2023:** ENS 102 @ Rivers Project Office, National Great Rivers Museum (MVS)

**Aug. 21-25, 2023:** ENS 101 @ Raystown Lake (NAB)

**Sep. 12-13, 2023:** Aquatic Invasive Training in partnership with the University of Florida @ Raystown Lake (NAB)

*To request additional information on any course or to register, please reach out to [Tara.J.Whitsel@usace.army.mil](mailto:Tara.J.Whitsel@usace.army.mil)*



## Raystown Lake Continued

In addition, the commission worked with USACE and Juniata College to build wooden structures and place them in deeper waters. “A lot of flats are completely bare and don’t have any habitat features, so you’re creating an artificial stump field where fish will utilize those wood structures,” Page said.

The work included a new fishing pier, part of a plan to improve access from the shore for people to fish. The Friends of Raystown Lake received a \$24,000 grant from the PA Lake Management Society and a \$75,000 grant from the Reservoir Fisheries Habitat Partnership. Both of which are to be used to stabilize the eroding shoreline, construct fish habitat, and help fund volunteer scale projects, including fish structure building and tree felling. Roberts said the National Fish Habitat Partnership provided roughly \$200,000 on this project. Page indicated the work also includes \$1.15 million from a consent order between the Department of Environmental Protection and Sunoco which is administered by Friends of Reservoirs.

### The 2022 Waters to Watch list includes:

- Deshka River, Alaska – Mat-Su Basin Salmon Habitat Partnership
- Grandpa’s Farm Road Bridge, Alaska – SE Alaska FHP
- Huzzah, Curtis, Shoal Creek Wetlands, Missouri – Fishers and Farmers Partnership
- Neskowin Fish Passage Improvement Project, Oregon – Pacific Marine and Estuarine Partnership
- **Raystown Lake, Pennsylvania—Reservoir Fish Habitat Partnership**
- Susitna River, Alaska – Pacific Lamprey Conservation Initiative
- Tin Cup Creek, Idaho – Western Native Trout Initiative/Desert Fish Habitat Partnership (Retrospective)
- White River, Vermont – Eastern Brook Trout Joint Venture (Retrospective)
- Wildcat Creek, California – California Fish Passage Forum
- Williamsburg off-channel wetland, Ohio – Reservoir Fish Habitat Partnership

A variety of partners played a part, including the Pennsylvania Fish and Boat Commission, Friends of Raystown Lake, USACE, Juniata College, Student Conservation Association, Huntington Visitors Bureau, and the Pennsylvania Striped Bass Association.



*Photo above: Crews unload rocks along the shoreline of Raystown Lake to create better fishing habitat and reduce shoreline erosion. Photo provided by Ben Page, PAFBC.*

## Jacksonville District Implements EWN Practices

The Jacksonville District has implemented ideas and designs inspired by Engineering with Nature, an initiative of USACE.

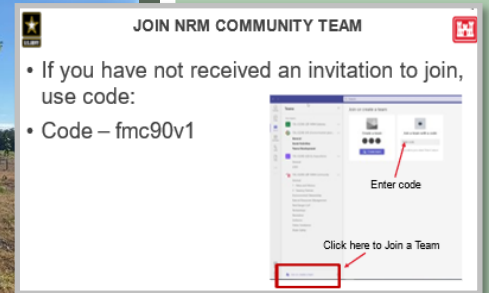
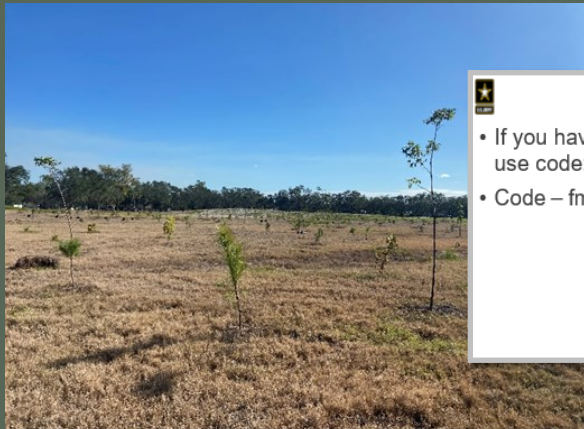
The first phase of this project entailed reforestation of 8.5-acres of grassy field at W.P. Franklin South Recreation Area in Alva, FL, converting the site into a native, hardwood hammock ecosystem with an ephemeral wetland and trail. The restoration of this area aims to prevent invasive species establishment, reduce lawn maintenance and mowing costs, provide habitat for native wildlife, and support the introduction of pollinators.

On September 24, 2022, a large-scale planting day was held on National Public Lands Day, which included a wide variety of participants (e.g., USACE volunteers, USACE rangers, USACE employees, local students, community gardening clubs, Coast Guard Auxiliary, etc.). To date, approximately 2,800 trees and shrubs have been planted, and we are expecting another large-scale planting day at the end of March 2023 to plant about 24,000 understory plants and wildflowers.

## Jacksonville District Continued

Later, in the new year, park rangers aim to begin Phase II of this EWN project which will consist of restoring W.P. Franklin South's 5-acre eastern field. This side will feature another interpretive trail as well as an outdoor classroom.

The W.P. Franklin rangers would like to thank everyone who has contributed and volunteered to make this major project a success. The continuation and maintenance of our new forest wouldn't be possible without the daily efforts from our USACE volunteers. This project will provide recreational and educational opportunities for many years to come with the support of our local community.



*Photos clockwise:  
Before reforestation.  
After reforestation.  
Park Ranger Megan Meyer with EWN volunteers.*

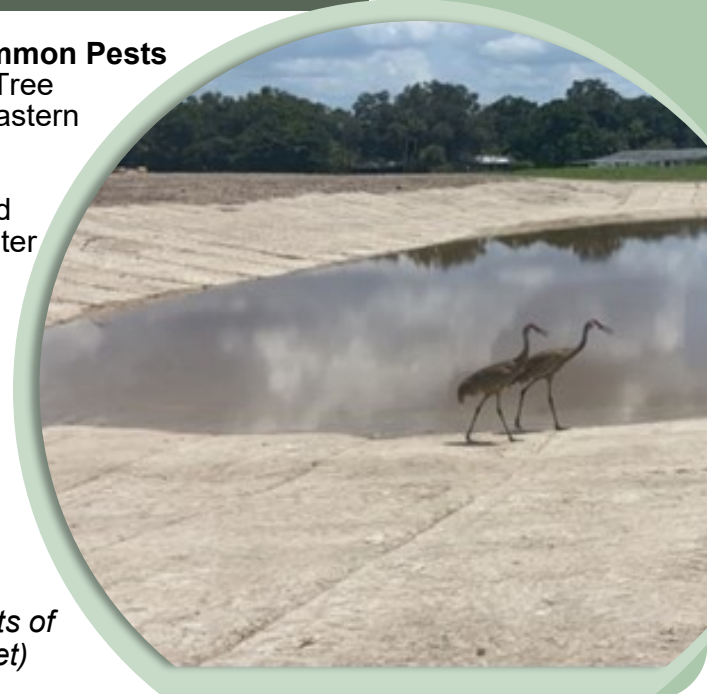


*Photo below: A pair of sandhill cranes walking along the newly constructed wetland. As part of the EWN project.*

**Webinar: Integrated Pest Management of the Most Common Pests of Urban Trees.** Dr. Kevin Chase (Entomologist – Bartlett Tree Experts) will discuss urban tree health issues in the southeastern U.S.

Urban forests provide a variety of ecological, economic, and social benefits. These include oxygen production, storm water management, impacts on property value, and aesthetics to name a few. But, just like trees in more rural areas, urban trees can be the target of damaging pests. Management can be critical in protecting urban trees and preserving green areas within suburban communities. But how do we know what to look for or how to care for trees within our communities? In this webinar, Dr. Kevin Chase will cover broad pest identification and management of urban or high value trees and some of the pre-disposing factors that also lead to insect attack.

- Mar. 22, 2023 1:00 pm US/Eastern.
- *Integrated Pest Management of the Most Common Pests of Urban Trees — The Webinar Portal (forestrywebinars.net)*



## Stewardship Around USACE

**1 Crooked Creek Steambank Stabilization, Tioga-Hammond & Cowanesque Lakes**— Crooked Creek flows into Hammond Lake and is subject to high flows and severe erosion. A 500 foot, highly eroded section was stabilized by placing large stone and re-sloping the streambank. Trees were strategically placed and anchored to improve fish habitat. After rock placement and sloping, a riparian buffer consisting of 300 native tree saplings was created. The work was completed by USACE maintenance and park ranger staff. Partners included the Pennsylvania Game Commission and First Energy, who contributed a total of \$5,500 in equipment and materials.

Similarly, at Cowanesque Lake, portions of the South Shore Recreation Areas were stabilized due to severe degradation after multiple high water events, particularly those associated with Tropical Storm Fred in 2021. The South Shore Recreation Area serves as the main public access point for Cowanesque Lake, offering boat ramps, picnic shelters, and a disc golf course. Approximately 400 feet of shoreline between the main boat ramp and the accessible fishing pier were stabilized to reduce erosion. Cowanesque Project staff partnered with the Pennsylvania Fish and Boat Commission (PAFBC) Lake Habitat Division to complete the project. PAFBC contributed approximately \$13,000, supplying equipment and equipment operators during the project. The PAFBC also designed features to improve aquatic habitat. The Cowanesque Project purchased approximately \$10,000 of material.



*Photo Top Circle: Natural Resources Specialist Molly Wilson installs tree tubes to protect the recently planted saplings as part of the Crooked Creek Steambank Stabilization Project.*

*Photos Clockwise: Crooked Creek bank before restoration efforts. Performing work. PAFBC design for the South Shore Recreation Area at Cowanesque Lake. Bend Way Weirs help to stabilize the shoreline at Crooked Creek.*



**2 Lake Red Rock, MVR**— Red Rock Lake Association (RRLA) successfully obtained a grant from Mossback/Friends of Reservoirs Grant Program to purchase fish habitat structures. RRLA and USACE Lake Red Rock coordinated with local anglers to assemble and place the structure kits, including one “Safe Haven,” three “Trophy Trees XL Laydowns,” and a “Predator Prey Combo Tree”. The structure kit locations were marked by GPS for inclusion in future fish habitat management plans and for angler reference. Partners involved included USACE, Iowa DNR, RRLA, and avid lake anglers/supporters. A win for all!



# Stewardship Around USACE

**3 Coralville Lake, MVR**— Coralville Lake Park Rangers are working to find ways to better communicate with adjacent landowners as boundary walking season approaches. This year a letter will be sent in advance of boundary inspections to inform landowners about the boundary management program and what they may see happening on public lands near them. To accompany the letter, project staff revised a brochure to enhance communication efforts associated with USACE boundary management.

## Communication Efforts:

- Letting Coralville Lake neighbors know what USACE is doing and why. This type of communication improves accessibility to USACE and transparency in our activities.
- Clearly communicating the requirements allows neighbors to proactively resolve potential issues without additional government intervention.
- Updating the brochure's formatting and design to better align with accessibility standards.

## World Migratory Bird Day 2023 to Focus on Water

Environment for the Americas—Home of World Migratory Bird Day, is pleased to announce that 2023's World Migratory Bird Day campaign will focus on the topic of water and its importance for migratory birds.

As noted in their press release: "Water is fundamental to life on our planet. The vast majority of migratory birds rely on aquatic ecosystems during their life cycles. Inland and coastal wetlands, rivers, lakes, streams, marshes, and ponds are all vital for feeding, drinking, or nesting, and also serve as places to rest and refuel during their long journeys.



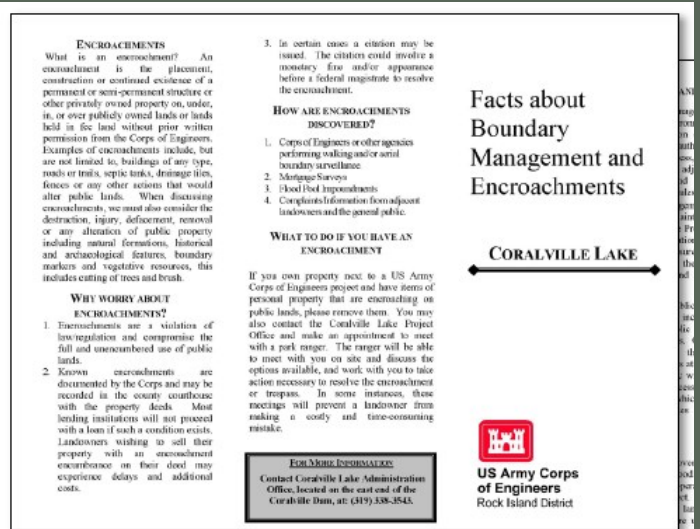
Unfortunately, aquatic ecosystems are becoming increasingly threatened around the world and so are the migratory birds that depend on them. The increasing human demand for water, as well as pollution and climate change, are having a direct impact on the availability of clean water and the conservation status of many migratory birds.

2023's World Migratory Bird Day campaign will highlight the importance of water for migratory birds and identify key actions for

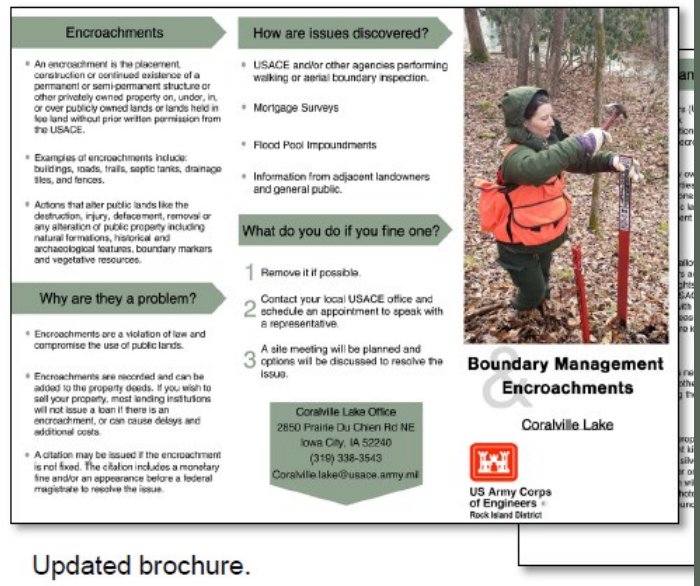
protecting water resources and aquatic ecosystems.

Graphics are available in French, English, Spanish, and Portuguese. You may also visit their social media sites on Facebook, Instagram, Twitter, and their posts.

Photo: Prothonotary Warbler. Photo by Douglas Burkett, DoD



Original brochure.



Updated brochure.

## SRP Revealing Interesting Science on the Des Moines River, Iowa

*POC: Perry Thostenson, Sustainable River Program, Lake Red Rock, Iowa*



The Sustainable Rivers Program (SRP) is a national partnership between USACE and The Nature Conservancy (TNC). The mission of SRP is to improve the health and life of rivers by changing dam operations to restore and protect ecosystems, while maintaining or enhancing authorized uses and other project benefits. SRP began in 1998 with an initial collaboration to improve the ecological condition of Green River in Kentucky. The program was formally established in 2002 and involved eight river systems.

At the end of FY 2022, SRP involved work in seven USACE Divisions and twenty-three Districts. Individual projects are impacting 90 USACE reservoirs, in 44 river systems, affecting approximately 12,069 river miles. It is the largest scale and most comprehensive program for implementing Environmental Pool Management (EMP) and Environmental Flows (E-flows). SRP follows a multi-step process of **advancing** evaluation of opportunities, **implementing** and testing environmental actions, and **incorporating** achievable environmental actions into regular operations of USACE facilities.

SRP on the Des Moines River got its start in 2016 with a stakeholder workshop at Central College in Pella, Iowa. More than 50 scientists, biologists, resource managers and others from state and federal agencies, universities, and conservation-oriented private organizations participated. As a result of that workshop, the stakeholders identified eight goals for the Des Moines River, and the Red Rock Lake and Dam. These include (1) reduce nitrate levels, (2) reduce mussel mortality, (3) reduce sturgeon mortality, (4) reduce gas bubble trauma in fish, (5) improve conditions for migrating water birds, (6) improve conditions for reptiles and amphibians, (7) reduce stream-bank erosion, and (8) improve conditions for river recreation. These eight goals were further described in the Des Moines River Adaptive Management and Monitoring Plan (AMMP). This plan also included EMP strategies for Saylorville Lake, a USACE reservoir 70 miles upstream from Red Rock that operates in tandem with Red Rock for the Des Moines River basin. Planning for revision of Lake Red Rock and Saylorville Lake regulating Water Control Plans coincided with the creation of the AMMP. Flexibility to adopt SRP prescriptions were incorporated into the new Saylorville Lake and Lake Red Rock Water Control Manuals (WCM) provided that hydrologic conditions were permitting and prescriptions did not hinder the primary flood risk management mission. The reservoirs' WCM now includes seasonal conservation bands for pool and outflows that will support aspects of the natural flow regime. Therefore, the process of updating the WCM and creating the AMMP at the same time allowed for reservoirs to sequentially perform the three phases of the SRP process to **Advance, Implement and Incorporate** E-flows and E-pool management into good practice.

SRP supported activities on the Des Moines River included partnerships with stakeholders, such as the United States Geological Survey (USGS), Iowa State University (ISU), the University of Iowa/Iowa Geological Survey, Iowa Department of Natural Resources (DNR) fisheries, Rock Island District Operations, the District Water Control Center, the Engineer Research and Development Center (ERDC), Ecosystem Management and Restoration Research Program, and the Engineering with Nature (EWN) program. The Des Moines River SRP team pursued collaborative efforts with the Natural Resources Conservation Service (NRCS) and others to reduce nutrient inputs to the Des Moines River system. The Rock Island District and NRCS utilized the Agricultural Conservation Planning Framework for all 33 HUC 12 watersheds surrounding Saylorville Lake and Lake Red Rock. The goal of that effort was to identify ideal locations to construct soil conservation structures or agricultural practices to help reduce nitrification and sedimentation to the reservoirs. A demonstration workshop, Watershed Resilience and Nutrient Reduction, for this tool was presented in March 2023 at the Neal Smith National Wildlife Refuge. The workshop was targeted for managers of USACE-owned land in the reservoir watersheds, although other land managers and biologists also attended. The workshop was focused on the evaluation of best management practices in reservoir watersheds and improving natural soil health. See <https://www.mvr.usace.army.mil/Missions/Environmental-Stewardship/Sustainable-Rivers/Des-Moines-River-SRP/Watershed-Resilience/>

To facilitate downstream and lake pool research, coordination meetings were held with stakeholders in the spring of 2021 and 2022. Coordination meetings led to two "spring pulses," an intentional pulse of flow from the Red Rock Dam to stimulate downstream fish spawning and freshwater mussel recruitment. The planning (**Implementing** SRP) was timed to coincide with ideal water temperature, river flow, flood risk management, and seasonality. **Article continued on page 7.**

## SRP Continued

On the upstream side of the dam, the team partnered with ISU to evaluate waterbird use, feeding, and resting in the reservoir delta. The first waterbird surveys and vegetation sampling were conducted during 2021 on 14 occasions, during the summer drawdown. Efforts evaluated waterbird use, feeding, and resting in the vast delta as water levels are slowly lowered during migration. In 2022, the 2021 research was repeated and 44 waterbird species were documented on 13 surveys. The field biologists also conducted vegetation changes of the delta at the same time to document the diversity and relative abundance of the emerging plant species. An average of nine plant species were found per survey; albeit low diversity, they are important wildlife food sources. Shorebird stopover ecology analysis began last fall. Initial results of this research have inspired next steps to survey shorebird interstate migration in Minnesota and Missouri via satellite telemetry.



SRP efforts for the Des Moines River also focuses on better understanding the effects of E-flows on downstream fish and mussel dynamics. One research project includes a two-year field study on mussel assemblages and impacts from the dam. ISU mussel researchers completed quadrat sampling and visual/tactile searches at 26 sites along the Des Moines River during 52 sampling occasions. Thirteen sites were located both above and below Red Rock Dam. At each site, 25 random quadrats were excavated for live mussels and a suite of environmental data was recorded (e.g., flow, depth, temperature, and dissolved oxygen). During these searches, 1,439 live mussels of 21 different species were collected. In addition, the researchers conducted 190.6 hours of visual/tactile searches to assess reproductive success in relation to river discharge. Select species will be evaluated for age analysis. No endangered species or species of special concern were found. They also collected relict shells of 28 different species.

Researchers from ISU sought to assess the effects of experimental flows on fish reproduction on the Lower Des Moines River. This included two events at three locations on the Iowa River (reference section) for larval fishes, zooplankton, and juvenile fishes below the dam. During the first event, larval fishes and zooplankton were sampled fifteen times. Researchers captured 14,520 larval fishes comprised of nine taxa. Zooplankton samples were processed, larval fish diets were analyzed (factors affecting growth rates), and hatch dates were estimated. During the summer, the second sampling occurred during two seining events in both the Des Moines (224 seine hauls) and Iowa Rivers (142 seine hauls).

The goal was to collect fish that may have hatched during the experimental pulse period. Once results are assessed, fish recruitment associated with pulse characteristics can be incorporated in an adaptive management framework to manipulate flows from Red Rock Dam to benefit fish reproductive success.

The University of Iowa/Geological Survey completed a literature review on reservoir nutrients and collected sediment and water quality samples. Early research on the denitrification ability of Lake Red Rock from 1974-2019 has shown that the reservoir has reduced nitrates 12.4% from incoming flow to its release through the dam. A second phase to collect and analyze sediment and core samples was funded by USACE's EWN program. The Geological Survey team is drafting a report that characterizes the delta geomorphology with the goal of gaining knowledge of how to help reduce the nitrate load in the reservoirs, rivers, and eventually the hypoxia zone of the Gulf of Mexico.

SRP supported activities on the Des Moines River have generated considerable interest in how the SRP phases of **Advance, Implement and Incorporate** can make huge, positive environmental impacts that benefit aquatic ecology just through minor changes in dam and water regulation.



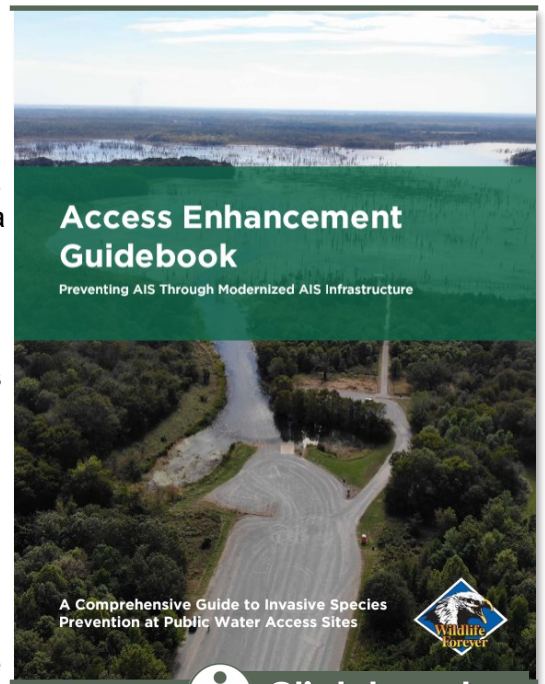
# Some Interesting Reading & Viewing



**1 Wildlife Forever Unveils the Access Enhancement Guidebook to Prevent Aquatic Invasive Species.** Wildlife Forever announces a new, innovative approach to aquatic invasive species (AIS) prevention designed to evaluate watercraft access sites and integrate tools to help boaters and anglers. The Clean Drain Dry Access Enhancement Guidebook outlines a new program

that takes a comprehensive review and evaluation process to determine the best suited cleaning stations, hand tools, and modernized signage to engage, educate, and empower.

<http://www.wildlifeforever.org/wp-content/uploads/2017/05/AccessEnhancement-Guidebook.pdf>



 **Click here !**

## Upcoming Webinars

March 15, 2023 @ 1:00 pm - 2:00 pm CDT

**Webinar:** Preventing the Spread of Invasive Species through PlayCleanGo and WorkCleanGo <https://naisma.org/event/webinar-preventing-the-spread-of-invasive-species-through-playcleango-and-workcleango/>

"PlayCleanGo®: Stop Invasive Species In Your Tracks® is NAISMA's official, branded, registered, trademark-protected education and outreach program aimed at stopping the spread of invasive species through outdoor recreational pathways. The international campaign is grounded in a Community Based Social Marketing (CBSM) strategy. NAISMA partners and PlayCleanGo supporters share prevention communication through social channels, as this proven outdoor recreation focused campaign aims to prevent the spread of invasive species by effecting behavior change and reminding recreationists to clean their gear every time they go to their favorite or a new recreation area. This is achieved through positive messaging that resonates with recreationists' and field workers' values, and includes a clear call to action to clean boots, boats, and other outdoor gear."

 **Click here!**

**2 DoD PARC Podcast Series.** DoD PARC has started a new podcast series titled *Herpetofaunal Project Highlights and Successes*. The purpose of our podcast series is to highlight amphibian and reptile conservation, management, and research projects being conducted on military lands. The focus of the first episode is on the Gopher Tortoise recovery project at Eglin Air Force Base. Jeremy Preston (Endangered Species Biologist at Eglin AFB) and Vivian Porter (Texas A&M Natural Resource Institute Project Manager) discuss the purpose, goals, and results of this large-scale project to establish new populations of Gopher Tortoise on Eglin AFB. Additionally, they expand on the benefits the recovery project has on at-risk species and how it supports military readiness.

Listen to the podcast on YouTube here:

<https://youtu.be/FPQVNViltm4>

 **Click here !**

**3 Estimating Present Value Cost of Invasive Emerald Ash Borer (*Agilus planipennis*) on USACE Project Lands.** Report Number: ERDC/EL TN-23-1 by Nathan E. Pfisterer and Nathan R. Beane

Since the early 2000s, non-native and invasive Emerald Ash Borer (EAB) has killed hundreds of millions of ash trees in the US, becoming the most destructive and costly invasive forest insect in North America. This research effort estimates the cost of managing EAB damage to USACE projects including treatment, removal, or removal and replacement of dying/dead ash trees. The results suggest potential impact to more than 122,800 USACE project acres in currently infested counties including 181,000 ash trees. While not all damaged trees require removal, many USACE recreation sites have ash trees that pose an increased risk to humans and structures, thus requiring removal of EAB infected trees. The widespread and pervasive impacts of EAB will have significant costs associated with removal and replacement of ash trees that could be hazardous to recreational users at the projects. Data from the United States Department of Agriculture (USDA), Forest Inventory and Analysis (FIA) database, and methods developed by Kovacs et al. (2010) were utilized to calculate yearly present value costs of EAB to USACE projects from 2006-2026. Overall, EAB impacts are estimated at \$121.6 million across 201 USACE projects evaluated in this study. Increased efforts to limit EAB spread and perform measures of control are warranted to reduce potential cost to USACE. Link: <http://dx.doi.org/10.21079/11681/46475>



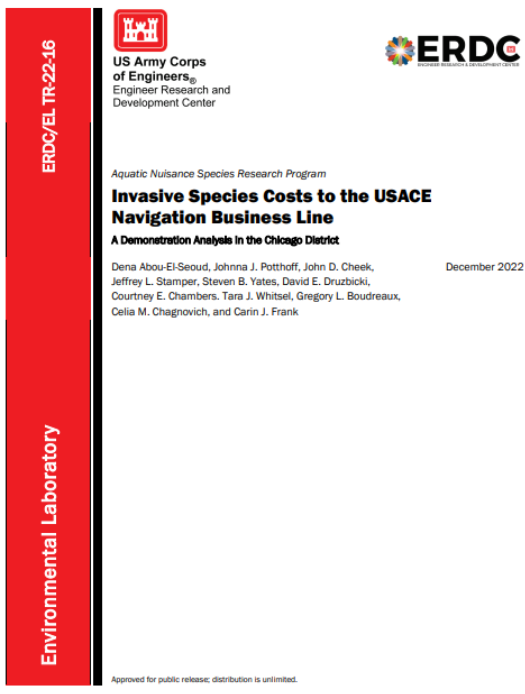
# Some Interesting Reading & Viewing

## 4 Invasive Species Costs to the USACE Navigation Business Line: A

### Demonstration Analysis in the Chicago District.

Report Number: ERDC/EL TR-22-16 by Dena Abou-El-Seoud, Johnna J. Potthoff, John D. Cheek, Jeffrey L. Stamper, Steven B. Yates, David E. Druzbecki, Courtney E. Chambers, Tara J. Whitsel, Gregory L. Boudreaux, Celia M. Chagnovich, and Carin J. Frank

Executive Order 13112 requires federal agencies to report invasive species costs to the National Invasive Species Counsel (NISC) annually. NISC then reports to Congress to increase awareness of invasive species and encourage inter-agency cooperation. Since 2005, USACE has provided an annual estimate for the Civil Works (CW) business lines. Traditionally, USACE estimates have been informed by broad assumptions, as many invasive species costs are not itemized. This study sought to develop a method to improve these estimates. A demonstration analysis was conducted for the Chicago District Navigation Business Line and was used to inform recommendations for a nation-wide analysis. The demonstration revealed invasive species-related costs represent about 0.2% (\$64,000) of the district's Navigation Business Line. Invasive species costs are subject to many variables, such as the type, prevalence, and impact of invasive species, as well as the number and type of navigation projects. The Chicago District results are not presumed to be indicative of other districts' invasive species costs. Rather, the demonstration informed the development of an invasive species cost estimating method that can be adapted for each CW business line, as well as variations in invasive species and projects across geographic regions. This report describes the demonstration analysis and presents a defensible framework for quantifying the costs of invasive species to the USACE CW program. Link: <http://dx.doi.org/10.21079/11681/46223>



## Incase You Missed It...

### 1 Northeast Aquatic Plant Management Society's Autumn Webinar Series: Recordings Now Available

*"The Communication Challenges of Aquatic Invasive Species Management. Many aquatic plant control projects employ herbicide treatments. Public stakeholder support is often key to moving these projects forward. Presenters will talk about strategies for stakeholder communication and several case studies with varying outcomes."*

Webinar Part 1 from 12/5/22:

<https://www.neapms.org/news/autumn-webinar-day-1>

Webinar Part 2 from 12/12/22:

<https://www.neapms.org/news/autumn-webinar-day-2>

### 2 Wetland Regulatory Assistance Program (WRAP)

The CCO-developed WRAP video is now live at the link below! This introductory video is intended to provide an overview of WRAP and its support of Regulatory.

<https://www.dvidshub.net/video/871055/wetlands-regulatory-assistance-program-with-branding>

### 3 DoD PARC

The Eastern Diamond-backed Rattlesnake is the largest rattlesnake species (both in length and weight). It is a DoD mission-sensitive species and is confirmed present on 28 military sites. Recommended best management practices for this species can be downloaded from the DoD PARC DENIX website ([https://www.denix.osd.mil/dodparc/parc-resources/materials-for-installation-personnel/bmp-eastern-db-rattlesnake/EDB%20Rattlesnake%20BMP\\_Final\\_508\\_v3.pdf](https://www.denix.osd.mil/dodparc/parc-resources/materials-for-installation-personnel/bmp-eastern-db-rattlesnake/EDB%20Rattlesnake%20BMP_Final_508_v3.pdf)).

Check out the new species profile video on the Eastern Diamond-backed Rattlesnake.

YouTube: <https://youtu.be/Jpni-FrU8EA>

**Wildlife Forever Leads The War on Carp™ campaign with support from AFTCO.** Wildlife Forever is excited to announce new leadership of the War on Carp campaign raising awareness of invasive carps and needs for enhanced management and control. Invasive carps such as Silver, Bighead, and Black, are expanding their range and have proven to wreak havoc on lakes, rivers, and local economies. Through renewed conservation marketing and public outreach efforts, Wildlife Forever and AFTCO (American Fishing Tackle Company) plan to expand the War on Carp education campaign, providing new tools and resources to educate the public in support of increased state and federal management. <https://www.wildlifeforever.org/2023/01/30/wildlife-forever-leads-the-war-on-carp-campaign-with-support-from-aftco/>



# Invasive Species Webinars



## U.S. Geological Survey Open Webinars

USGS Nonindigenous Aquatic Species (NAS) Database is holding two open webinars to discuss upcoming improvements to the Database. During this webinar, the NAS team will present ideas on modernizing the Database. Then, the floor will be open to comments and suggestions from users and stakeholders on any new features they want to see on the website. Please use this link to register for either webinar time.

- Mar. 23, 2023 at 3pm (EST)
- Mar. 24, 2023 at 2pm (EST)  
<https://forms.office.com/g/4picXW4pSp>



NAS - Nonindigenous Aquatic Species



Photo top circle: Hydrilla at Millwood Lake. Photo above: Phragmites on the MKARNS. Photos by Cherrie-Lee Phillip

**1 2023 Invasive Species Workshop and Webinars for Tribal Audiences.** The events are organized by Washington State University, The Washington Invasive Species Council (<https://invasivespecies.wa.gov/projects/pest-ready/>), USDA APHIS (<https://www.aphis.usda.gov/aphis/home/>), and Bureau of Indian Affairs (<https://www.bia.gov/>).

The schedule is tentative and may change. Updates will be emailed to registrants as the event date approaches. More information can be found at <https://extension.wsu.edu/invasive-species/workshops/>.



**Click here to register !**

Tentative schedule (all sessions online):

- **Mar. 28, 2023 (8:00am—12:00pm)** – Online Workshop – Impacts, Management, and Resources for Tribes – Day 1
  - Session 1 – Invasive species overview and priorities in the PNW
  - Session 2 – Impacts of invasive species on cultural resources
- **Mar. 30, 2023 (8:00am—12:00pm)** – Online Workshop – Impacts, Management, and Resources for Tribes – Day 2
  - Session 3 – Invasive species management in the PNW
  - Session 4 – Resources and funding for Tribal Nations
- **Apr. 4, 2023 (9:00am—10:30am)** – Webinar 1 – Wildlife
- **Apr. 11, 2023 (9:00am—10:30am)** – Webinar 2 – Aquatic Invasive species of Tribal concern in the Pacific Northwest
- **Apr. 18, 2023 (9:00am—10:30am)** – Webinar 3 – Invasive insect pests of Tribal concern in the Pacific Northwest

## 2

**EDDMapS Summit - Apr. 20, 2023.** Hosted by the North American Invasive Species Management Association and Organized by the University of Georgia - Center for Invasive Species and Ecosystem Health.



Overview: The University of Georgia - Center for Invasive Species and Ecosystem Health, in collaboration with its partner organizations, is providing a comprehensive one-day training (<https://naisma.org/event/eddmads-summit-2023/>) and update. This free summit is open to everyone from beginners to experienced users. The Summit will have presentations that cover EDDMapS' smartphone apps, website, tools, and projects. This will be an update to the last two year's Summit, and attendees are encouraged to review the recordings from last years prior to this year's Summit or attend the two pretraining sessions. The pretraining sessions will run live through the links below, and the recordings are available for use at <https://www.eddmads.org/training/>.

- EDDMapS 101 was held Feb. 24, 2023 view recording at <https://www.youtube.com/watch?v=pGy1Wbn-bmo>
- EDDMapS 102—Mar. 17, 2023 11:00 AM (Eastern). Register at [https://zoom.us/webinar/register/WN\\_06AhW1jUTUWGNcvLvmCGHw](https://zoom.us/webinar/register/WN_06AhW1jUTUWGNcvLvmCGHw)