



Stewardship

news

Volume 3, Issue 3: September 2020

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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Your Stewardship HQ Update

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

Over the past several months the Natural Resources Management Program continued to face challenges ranging from COVID-19 impacts and responses to devastating wildfires and new infestations of the invasive spotted lanternfly. Just recently on September 14, 2020, the Council of Environmental Quality finalized an update to the Code of Federal Regulations (CFRs) that support administration of the National Environmental Policy Act. This is the first update to the CFRs related to NEPA in decades and will subsequently trigger similar updates to USACE internal regulations that manage and support our implementation of NEPA. Look for more to come on the NRM Gateway on how we will share these updates.

Welcome Mike Riegert, Environmental Compliance Program Manager, to the HQ Natural Resource Management Team!



Note: To ensure the safety of our workforce and allow maximum participation, the 2021 NRM Workshop will be postponed until 2022. Stay tuned for more information!

Project Spotlight: National Initiatives Viewer Launched

POC: Ben Silvernail, Benjamin.J.Silvernail@usace.army.mil

The Environmental Stewardship National Initiatives viewer is now available for use by USACE staff, and accessible via the NRM Gateway. The Natural Resource Management technical support team delivered a webinar to 103 attendees on 18 August 2020, which covered site content and training on using the interface. The intent of the National Initiatives viewer is to provide staff with targeted content based on location, with relevancy at multiple administrative levels. It includes information about the spatial relationships between USACE projects and the whooping crane migratory corridor, monarch butterfly habitat along the I-35 migration range, and the National Fish Habitat Partnership. The viewer is a CAC-enabled Qlik site, which was developed by the Natural Resource Management technical support team and the Mobile District GIS Branch, in coordination with the Stewardship Advisory Team and consultation with NRM program staff and members of the ERDC Environmental Lab. *Article continued on page 2.*

National Initiatives



Click here to access information about natural resource management and conservation initiatives developed for USACE Environmental

Photo Left: National Initiatives Viewer—Website Entry Page



Coastal California Gnatcatcher

In March of 1993, the Coastal California Gnatcatcher was listed as threatened by the U.S. Fish and Wildlife Service. This subspecies has a restricted distribution along the coast of California and is found in habitat highly coveted for land development.

The explosive human population growth of the last 50 years has resulted in the reduction and fragmentation of coastal sage scrub habitat. Moreover, as habitat has become more fragmented, parasitization by Brown-headed Cowbirds has increased.

The USFWS designated revised final critical habitat for the Coastal California Gnatcatcher under the Endangered Species Act of 1973. In total, approximately 197,303 acres of habitat in San Diego, Orange, Riverside, San Bernardino, Los Angeles, and Ventura Counties, California, were designated as critical habitat for the Coastal California Gnatcatcher.

Photo above: Coastal California Gnatcatcher, USFWS

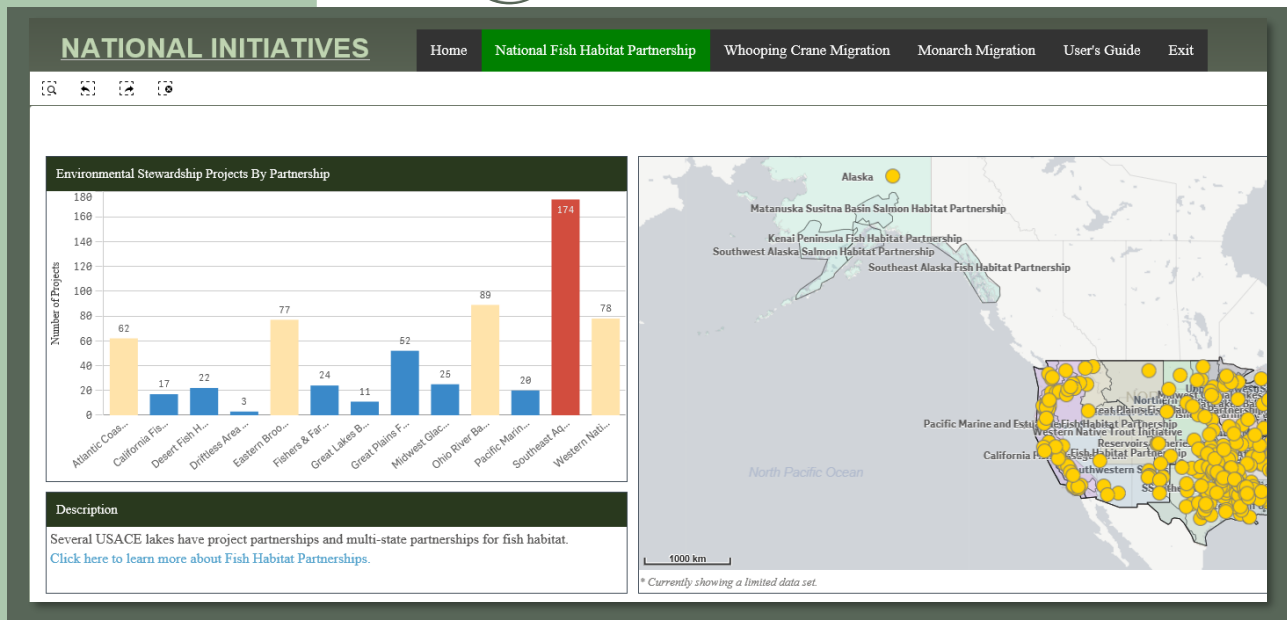
To access the webinar delivered on 18 August 2020, visit the “Archived Web Meetings” section located on the “Learning” tab of the NRM Gateway. Users are encouraged to send comments, questions, and suggestions to Ben Silvernail at the USACE Institute for Water Resources (Benjamin.J.Silvernail@usace.army.mil). User feedback will be compiled and provided to the Stewardship Advisory Team for consideration. Be sure to check in for new content that will be added to the viewer!

To access the viewer, follow these steps:

- 1 Go to the NRM Gateway.
- 2 Click the “Env Stewardship” tab.
- 3 Navigate to “Stewardship Tools.”
- 4 Click the link titled “Environmental Stewardship National Initiatives Module.”



[Click here to access the viewer!](#)



Harmful Algal Bloom (HAB) Resources

The Environmental Protection Agency has provided key resources and tools to support planning for and responding to cyanobacterial blooms and cyanotoxins in recreational waters.

1 Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin. <https://www.epa.gov/wqc/recommended-human-health-recreational-ambient-water-quality-criteria-or-swimming-advisories> [Click link here!](#)

2 Monitoring and Responding to Cyanobacteria and Cyanotoxins in Recreational Waters. <https://www.epa.gov/cyanohabs/monitoring-and-responding-cyanobacteria-and-cyanotoxins-recreational-waters> [Click link here!](#)

3 Communicating about Cyanobacterial Blooms and Toxins in Recreational Waters. <https://www.epa.gov/cyanohabs/communicating-about-cyanobacterial-blooms-and-toxins-recreational-waters> [Click link here!](#)

Los Angeles District Projects: Conserving the Least Bell's Vireo and the Coastal California Gnatcatcher

POC: Jon Rishi, 626-720-7087, Los Angeles District

Southern California is home to millions of people as well as two federally listed songbird species, the Least Bell's Vireo (listed endangered) and the Coastal California Gnatcatcher (listed threatened). In 1994, the USFWS designated critical habitat for the Least Bell's Vireo which includes 10 areas encompassing approximately 38,000 acres. Federal land within the critical habitat consists of approximately 10,979 acres of which 3,338 acres are under the jurisdiction of USACE.

Known Least Bell's Vireo occupied USACE Projects include Carbon Canyon Dam, Hansen Dam, Mojave River Reservoir, Prado Dam, San Antonio Dam, Santa Fe Dam, Sepulveda Dam, and Whittier Narrows Dam Basins, and Chino Creek Levee, all located in southern California within the Los Angeles District. In an effort to monitor the Least Bell's Vireo population on USACE operated lands, Los Angeles District staff perform and routinely contract surveys for the Least Bell's Vireo, the Coastal California Gnatcatcher, as well as for other listed species.

The Whittier Narrows Dam Basin is currently undergoing a major habitat restoration project for the vireo and gnatcatcher. The project entails restoration of approximately 60-acres of the species' habitat (riparian willow scrub habitat) and 286-acres of invasive plant removal to aid in recovery.

Least Bell's Vireo

Least Bell's Vireo was listed as an endangered species wherever found in 1986. In the U.S. this species is only known to be found in California. Once one of California's most common birds, the dramatic decline of the species to only 300 pairs in 1986 was driven by both the loss of habitat and brood parasitism by the Brown-headed Cowbird.

The invasion of exotic plant species into the severely fragmented and degraded riparian habitat further decreases suitable nesting habitat. Invasive plant species found in Least Bell's Vireo habitat include castor bean, cocklebur, tamarisk, and giant reed to name a few.

Least Bell's Vireos winter in southern Mexico leaving summer habitat by September and returning in March.

Photo Top: Mojave Dam Least Bell's Vireo survey area. Photo credit: USGS 2019. San Bernardino County, CA

Photo Middle: Least Bell's Vireo nest parasitized by a brown-headed cowbird, a brood parasite, at Carbon Canyon Dam, Orange County, CA. The red arrow points to the cowbird egg, which was removed after the photo was taken. Photo taken June 4, 2019. Photo credit: Melanie Madden, USGS.

Photo Bottom: Los Angeles River upstream of Sepulveda Dam Least Bell's Vireo survey area. Photo taken March 12, 2019. Photo credit: Jon Rishi, USACE (SPL). Los Angeles County, CA.



Photo Right: Least Bell's Vireo (Vireo bellii pusillus), public domain photo USGS.

Invasive Species Summer Webinar Series

UF IFAS
UNIVERSITY of FLORIDA

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CENTER FOR AQUATIC
AND INVASIVE PLANTS

ERDC (Engineer Research Development Center) held a series of webinars regarding research and management to help minimize invasive species' impact to USACE missions. The following sessions were provided:

- **June 10:** Aquatic Plant Management: A Florida Perspective (by Dr. Ben Sperry, UF/IFAS)
- **June 10:** New Aquatic Herbicide Treatment for Hydrilla: Efficacy of an Operational Treatment in Florida (by Dr. James Leary, UF/IFAS)
- **June 17:** Mechanical Harvesting—Large-scale field trials (by Dr. James Leary, UF/IFAS)
- **June 17:** Aquatic Weed Control: Myths and Misconceptions (by Dr. Ben Sperry, UF/IFAS)
- **June 24:** Wild Pigs on USACE Projects: management Challenges, Research Opportunities and Lessons Learned (by Dr. Nathan Beane, ERDC; Eric Lemons, MVS; Stacy Dunkin, SWT; and Brandon Randig, SWF)
- **July 1:** The Triclopyr Shift to Trycera (by Dr. Stephen Enloe, UF/IFAS)
- **July 8:** Herbicide Residues in Lake Sediments: Understanding Herbicide Fate (by Dr. Jason Ferrell, UF/IFAS)
- **July 15:** Identification and Management of Invasive Grasses (by Dr. Candice Prince, UF/IFAS)

You can access the recorded webinar and slides on the NRM Gateway!

 [Click here to access the webinars!](#)

Some Interesting Reading & Viewing

1 Asian Gypsy Moth Pest Alert: From the Armed Forces Pest Management Board: A recent USDA pest alert provides education on the biology and available resources related to the various subspecies of gypsy moth. Although this insect was first imported to US in the 1860's, over the last six months there have been notable reported instances of inadvertently importing military shipping containers infested with the quarantined Asian gypsy moth into North Carolina and California. Recent press reports show an increasing number and expansion of USDA and State Department of Agriculture trapping programs in the Washington State and Wisconsin related to gypsy moth surveillance and control efforts. There are likely other impacted states with potentially impacted military installations. <https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/gypsy-moth>

 [Click here to access more info!](#)

2 Invasive Lizards Threaten Native Georgia Wildlife: From the Armed Forces Pest Management Board: The Georgia Department of Natural Resources and partners are working to eradicate a wild population of Argentine black and white tegus lizards in Toombs and Tattnall counties in southeast Georgia. Growing up to 4 feet long and weighing 10 pounds or more, this lizard native to South America is an invasive species that threatens Georgia wildlife. Tegus will eat the eggs of ground-nesting birds and other reptiles in addition to small animals. <https://georgiawildlife.com/tegu>

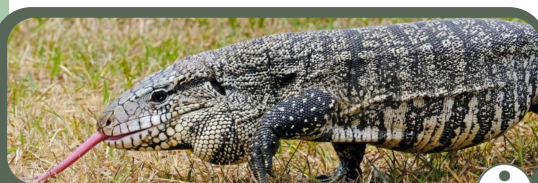


Photo Credit: [Georgiawildlife.com](https://georgiawildlife.com)

 [Click here to access more info!](#)

Upcoming Webinar

North American Invasive Species Management Association.

Mark your calendars for the 3rd Wednesday of every month! September 16th—Leaps and Bounds-How to jump over the barriers to preventing the spread of invasive species.



 [Click here for NAISMA!](#)

Publication

What to do when invaders are out of control?
Dunham et.al. 2020

 [Click here for article!](#)

Control or eradication of established invaders is particularly difficult and, even if ecologically feasible, it may not be socially desirable. Here we propose a new alternative to managing invasive species: managing impact modifiers (MIM). The MIM approach focuses on managing impacts, rather than controlling the invader directly. We reviewed the literature for the world's worst invasive fishes in freshwaters to show there is strong evidence to support the potential for MIM as an effective means of managing impacts of invasions.

Some Interesting Reading & Viewing

4 Catalog of Federal EDRR Invasive Species Databases and Tools: Version 2.0 of the Catalog has been released by USGS and is available as an excel spreadsheet on ScienceBase at <https://www.sciencebase.gov/catalog/item/5bf87027e4b045bfcae2ece6>. It is also available in a user-friendly format as a USGS Library Guide at <https://usgs.libguides.com/edrrinvasive>. Version 3.0 is anticipated to be released by the end of 2020.

5 NISC Crosscut Budget: In 1999, Executive Order 13112 established the National Invasive Species

 [Click here to access the site!](#)

 [Click here to access the report!](#)

Council (NISC) to support coordination across the invasive species programs of federal agencies. The NISC Crosscut Budget is intended to provide a foundation of information related to the financial resources NISC member agencies dedicate to invasive species. USACE is a NISC member agency. In July, the Crosscut Budget report was released and is available <https://www.doi.gov/sites/doi.gov/files/uploads/nisc-2020-crosscut-budget-summary-final-7-7-2020.pdf>

6 The Sustainable Rivers Program: A new blog post on the Sustainable Rivers Program (SRP) profiles three success stories in Kentucky, North Carolina and Iowa. The blog discusses how USACE is involved in the efforts of the Sustainable River Program. <https://blog.nature.org/science/2020/06/16/expanding-the-successful-sustainable-rivers-program/>

 [Click here to access the blog!](#)

7&8


ERDC Publications by Dr. Nathan Harms: The Aquatic Plant Control Research Program recently had a publication released related to flowering rush competitive interactions. Dr. Nathan Harms recently published a journal article on flowering rush. The invited article was a part of the special issue, "Ecology of Invasive Aquatic Plants", which is the first collection of papers in recent years that focus solely on this topic. His article titled, "Competitive interactions of flowering rush (*Butomus umbellatus* L.) cytotypes in submersed and emergent experimental aquatic plant communities," describes the results of a series of greenhouse mesocosm experiments designed to test for the importance of invader genetics on competitive interactions with native or other invasive species under different water depth conditions. Link to article: <https://doi.org/10.3390/d12010040>.

Additionally, a new publication by Dr. Nathan Harms (ERDC) is now available. The article titled, "Host specificity of the *Liothrips ludwigii*, a candidate biological control agent of invasive *Ludwigia* spp. in the USA," describes the results of dietary host-range studies to determine safety of a candidate biological control agent for the South American weed, Uruguayan water primrose (*Ludwigia hexapetala*). Link to article: <https://doi.org/10.1080/09583157.2020.1778637>

 [Click here for flowering rush article!](#)

 [Click here for Ludwigia article!](#)

9 U.S. Army Corps of Engineers and Cleveland Museum of Natural History Execute Agreement. The U.S. Army Corps of Engineers, Buffalo District and the Cleveland Museum of Natural History executed a Project Partnership Agreement, August 10, 2020 to begin a project that will control flowering rush at Mentor Lagoons Nature Preserve and Mentor Marsh State Nature Preserve. <https://www.dvidshub.net/news/376131/us-army-corps-engineers-and-cleveland-museum-natural-history-execute-agreement>

 [Click here for article!](#)

“Kryptonite For Invasive Species”

USDA Invasive Plant Research Laboratory

The cost of invasive plants to the United States exceeds \$35 billion annually. Despite diligent efforts, invasive species still enter. Research scientists at the USDA Invasive Plant Research Laboratory (<https://www.ars.usda.gov/southeast-area/fort-lauderdale-fl/iprl/>) in Florida scour the world to find "coevolved" natural enemies of the target weed, which they then ensure do not become invaders through years of testing in quarantine to make sure the

insects only attack the target weed. They are then released into infested areas to suppress the invasive species. This classical biological control method is the most effective way to bring about the recovery of native habitats, "like

finding Kryptonite for each invasive species." Whereas developing a new pesticide costs more than \$286 million, takes 11-12 years, always produces collateral damage and weed resistance, requires large markets, and returns \$3 to \$6.50 for every \$1 invested, biological control usually costs about \$5 million per weed, takes as few as 5 years to develop, is specific to the targeted weed, is environmentally friendly, and returns \$16 - \$35 for every \$1 invested. For more visit: <https://www.usda.gov/media/blog/2020/06/11/florida-lab-front-lines-battle-against-invasive-species>.





FALL SERIES 2020



USACE INVASIVE SPECIES WEBINARS

The USACE Invasive Species Leadership Team in collaboration with the Aquatic Plant Management Society will summarize the latest research and technical information on management strategies for a variety of invasive aquatic plants and harmful algal blooms. Topics include:

- **MONOECIOUS HYDRILLA MANAGEMENT**
- **HARMFUL ALGAL BLOOMS**
- **INVASIVE WATERMILFOILS**
- **FLOWERING RUSH**
- **"TOUGH EMERGENTS"**
- **GIANT SALVINIA AND OTHER FLOATING WEEDS**

7 OCTOBER - 11 NOVEMBER
WEDNESDAYS @ 1:00ET

The final seminar schedule including technical presenters will be provided shortly.



The online programs are planned to have 45 - 60 minutes of live presentations by multiple technical experts with potential for short recorded video content from relevant field projects. There will also be up to 30 minutes available for moderated Q&A/discussion with our technical contributors.

Aquatic Plant Management Society

The Aquatic Plant Management Society, Inc. is an international organization of scientists, educators, students, commercial pesticide applicators, administrators, and concerned individuals interested in the management and study of aquatic plants. The membership reflects a diversity of federal, state, and local agencies; universities and colleges around the world; corporations; and small businesses.

Regional Chapters:

- Florida Aquatic Plant Management Society,
- MidSouth Aquatic Plant Management Society,
- Midwest Aquatic Plant Management Society,
- Northeast Aquatic Plant Management Society,
- South Carolina Aquatic Plant Management Society,
- Texas Aquatic Plant Management Society,
- Western Aquatic Plant Management Society

www.apms.org

