



Wetland News Digest

Editor's Note

Dear Wetlanders,

I just returned from a trip to Nebraska where I had the immense pleasure of witnessing hundreds of thousands of sandhill cranes enjoying some well needed rest, play, and forage during their migration. The dances of the cranes and the sound of their calls are something everyone should experience. Thank you to Ted LaGrange from the Nebraska Parks and Game Commission for the amazing tour of Grand Island and the Crane Trust Nature Center!

I was in Nebraska primarily to visit and meet with our sales manager in preparation for our annual [State/Tribal/Federal Coordination Meeting](#) that we are hosting at the Arbor Day Farm Lied Lodge, in Nebraska City, NE from May 2-4, 2023. This year marks NAWM's 40th anniversary, and we are excited to celebrate with all of you at this beautiful facility! May will also be American Wetlands Month and Migratory Bird month – two more great reasons to join us our annual meeting. Standard registration rates end March 31 so be sure to register soon!

In this month's edition of *Wetland News Digest*, I have highlighted the most recent legal action regarding the [Waters of the U.S. rule](#), which went into effect in 48 states yesterday. You'll also find an article on the potential for more legal action in response to the [Biden Administration's recent PFAS rule](#). I would also like to call your attention to a new report that just came out on [The Time it Takes for Restoration](#) (found in the Resources & Publications section) – which is already causing a stir and some well deserved attention.

I hope to see many of you at our annual meeting in May – happy spring!

Best regards,

Marla Stelk, Editor
Wetland News Digest
NAWM

In this Issue

[Editor's Note](#)

[Editor's Choice](#)

[National News](#)

[State and Tribal News](#)

[Wetland Science News](#)

[Resources and Publications](#)

[Potpourri](#)

[Calendar of Events](#)



Arbor Day Farm Lied Lodge, NE
Photo Credit: Marla Stelk, NAWM

**This issue of WND is
sponsored by**

ecobot

Editor's Choice



Welcome to our 40th year of protecting wetlands!

Over the next few months, we will be celebrating our history, from ASWM to NAWM. We began the celebration in our January/February membership publication, **Wetland News**, with our lead article: *NAWM at 40: Reflections on the Early Days of the Association* by co-founder, Scott Hausmann.

We look forward to sharing highlights from the past and looking ahead to the future plans of the association. If you have recollections, pictures, or information to share about your experience with NAWM (formerly ASWM) please send them to Sharon Weaver sharon@nawm.org.

Judge freezes Biden WOTUS rule in 2 states

By E.A. Crunden – E&E News Greenwire – March 20, 2023
A federal judge in Texas has put the Biden administration's signature water regulation on hold in two states amid a mounting push from White House critics, who want the rule stalled until a much-anticipated Supreme Court ruling lands later this year. Judge Jeffrey Brown on Sunday handed the states of Texas and Idaho a victory in their fight to head off the new "waters of the United States," or WOTUS, rule. Two separate lawsuits in the U.S. District Court for the Southern District of Texas had argued that EPA and the Army Corps of Engineers should have to wait for the upcoming *Sackett v. EPA* decision before implementing the new regulation. One was brought by state officials and one by industry members. [Read more.](#)

PFAS rule sets up sprawling legal war

By Pamela King and E.A. Crunden – E&E News Greenwire – March 15, 2023
EPA's historic move to regulate "forever chemicals" in drinking water has set the stage for a multi-pronged courtroom slugfest among the agency, water utilities that must comply with the rule and multinational conglomerates that have flooded the environment with the toxicants linked to a long list of health problems, including cancer. Case law on the topic is limited: EPA's proposal marks the agency's first enforceable standard of its kind for PFAS and its first effort to regulate a drinking water contaminant in over 25 years. [Read more.](#)

US coastal wetlands are rapidly disappearing. Here's what it'll take to save them

By Clarisa Diaz, Kelly Van Baalen, John Upton – Quartz – March 1, 2023
As the effects of heat-trapping pollution continue to raise sea levels, wetlands dotting American coastlines could drown — or they could flourish. Their fate will depend upon rates of sea-level rise, how quickly the plants can grow, and whether there's space inland into which they can migrate. [Read more.](#)



National Association of Wetland Managers

Annual State/Tribal/Federal Coordination Meeting

Protecting and Restoring Wetlands for People and Wildlife

May 2 - 4, 2023

*Optional field trip on May 5th.

Arbor Day Farm's Lied Lodge
Nebraska City, NE



Image by Mariah Lundgren
Platte Basin Timelapse

www.nawm.org

We invite you to join us for NAWM's Annual State/Tribal/Federal Coordination (STFC) Meeting, to be held at the Arbor Day Farm's Lied Lodge in Nebraska City, NE from Tuesday, May 2nd through Thursday, May 4th, 2023, with an optional field trip available on Friday, May 5th. The purpose of this annual meeting is to support state and tribal wetland program managers, and other wetland professionals as they respond to challenges in the coming year.

Jon A. Kusler Student Scholarship Award deadline is Monday, April 10, 2023

Are you / do you know a U.S.-based undergraduate or graduate student with a declared major in wetland (or other aquatic resource) science, policy, law, or related fields? We have an opportunity to learn from and network with peers: apply for the [Jon A. Kusler Student Scholarship Award](#). Applications will be accepted on a rolling basis until April 10, 2023.

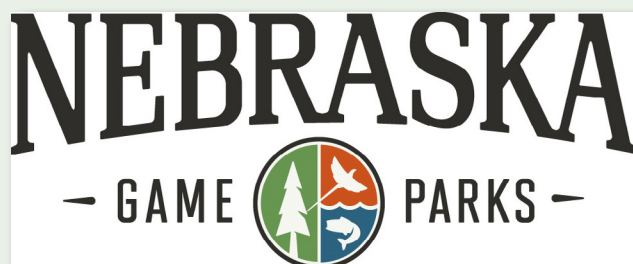
Sponsor this Great Event!

Be a part of this great event – secure your spot as a sponsor today! The earlier that you become a sponsor, the more visibility will be available to you via our website, NAWM publications and social media channels. For more information and to become a sponsor, please go here. Sponsorship deadline is Friday, March 31, 2023.

Silent Auction and Raffle: See information on next page.

Visit the meeting website for more information.

Host Sponsor



Kingfisher Sponsors



Calling all Silent Auction and Raffle Enthusiasts!

As part of our fundraising goals for 2023, NAWM is hosting two events during our annual [State/Tribal/Federal Coordination Meeting](#):

- Silent Auction for in-person attendees
- Raffle for both in-person and virtual participants

Support NAWM by donating a silent auction or raffle item. You or your company will be recognized for your generosity! If you are looking for inspiration, we have suggested "Wish List" items below. You are also welcome to make a cash donation and we'll do the shopping for you!

Wish List:

- Gift Cards (nationally / regionally available)
- Membership to your favorite Association
- Art
- Memorabilia
- Learning Experiences
- Lied Lodge items (gift shop, spa, etc.)
- Themed gift basket
- New Electronics
- Hotel Accommodations
- Jewelry
- Specialty Items
- Wetland inspired items

Proceeds support future wetlanders and NAWM's ability to respond to time-sensitive issues as they arise. Thank you for your generosity!

For more information, contact: Dawn Smith at dawn@nawm.org.



National News

Seeking comments on updates to FERC Plan and Procedures

Federal Energy Regulatory Commission – March 10, 2023

FERC staff has issued a **Notice of Intent to Update the Upland Erosion Control, Revegetation and Maintenance Plan (Plan) and the Waterbody Construction and Mitigation Procedures (Procedures) and Request for Comments** to determine if there are appropriate updates or improvements required at this time (docket AD23-6). Commission staff are asking for public input and suggestions for modifications to the Plan and Procedures from stakeholders and practitioners, including federal, state and local agencies, environmental consultants, inspectors, the natural gas industry, construction contractors, and other interested parties with special expertise with respect to environmental issues associated with natural gas pipeline projects. The Notice is available [here](#) and see the Notice for instructions on how to provide comments. The comment period is open until **May 9, 2023**.

Large Coalition of Nonprofit Organizations, Scientists, and Advocates Call on President Biden to Protect Beaver on Federal Public Lands

Rewilding – February 28, 2023

Yesterday, this [letter](#) was delivered to President Biden requesting an executive order protecting beaver on federally managed public lands. “In order to fully realize the wide array of social, ecological, and economic benefits that beavers provide to human and wild communities, the federal government must take bold and decisive action,” said Adam Bronstein of Western Watersheds Project. “This executive order would provide clear direction and is needed because state wildlife agencies are too narrowly focused on the interest of hunters and trappers, leading to their continued failure to protect this critical keystone species. Anxieties are high and cut across state boundaries and addressing them requires a national strategy rather than a piecemeal approach.” [Read more](#).

States with fracking disclosure rules have higher water quality: study

By Zack Budryk – The Hill – February 13, 2023

Increasing transparency requirements around fracking activity and the specific fluids used in the process are associated with lower pollution levels from that activity, [new research shows](#). A [recent study](#) from the University of Chicago’s Energy Policy Institute examined water quality in watersheds where fracking occurred. Specifically, researchers analyzed salt concentration, a common indicator for fracking impact due to its associated health and development hazards. [Read more](#).

‘A national scandal’: how US climate funding could make water pollution worse

By Keith Schneider – The Guardian – February 8, 2023

The \$369bn Inflation Reduction Act (IRA) was applauded by a chorus of US organizations and activists enthusiastic about the generous funding earmarked for projects designed to mitigate climate change and improve environmental health. But some researchers and activists are raising concerns that several provisions of the new law will actually worsen a growing environmental disaster in the nation’s heartland by increasing the tide of farm-related pollution washing into waterways and groundwater. [Read more](#).

Members' Only Webinar Series

Mitigating Environmental Impacts of the Abandoned Interstate I-95 Embankment across Rumney Marsh

Wednesday, March 22, 2023 - 3:00 p.m.-4:30 p.m. Eastern

Presenter



Ed Reiner
Senior Wetland Scientist
USEPA, New England Regional Office

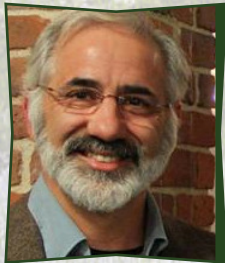
[Register](#)

[More Information](#)

Developing a Statewide Hydraulic Modeling Tool

Wednesday, April 26, 2023 - 3:00 p.m.-4:30 p.m. EDT

Presenters



Scott Jackson
Extension Professor
Department of Environmental
Conservation
University of Massachusetts
Amherst



Gardner Bent
Surface-Water Specialist
New England Water
Science Center



David Hilgeman
Senior Environmental
Engineer, MassDEP

[Register](#)

[More Information](#)

Hot Topics Webinars

Introduction to the new national manual on the Ordinary High Water Mark

Wednesday, March 29, 2023 - 2:00 p.m.-3:00 p.m. EDT

Presenter



Gabrielle C. L. David, Ph.D.
Research Physical Scientist
U.S. Army Corps of Engineers
Research Development Center

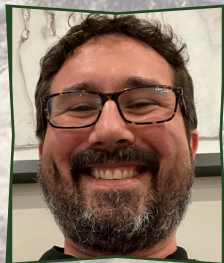
[Register](#)

[More Information](#)

Development of Rapid Streamflow Duration Assessment Methods for Nationwide Coverage

Thursday, April 13, 2023 - 3:00 p.m. - 4:30 p.m. EDT

Presenters



Brian Topping
U.S. Environmental Protection Agency
Office of Wetlands, Oceans and Watersheds

[Register](#)



Tracie Nadeau
U.S. Environmental Protection Agency
Region 10

[More Information](#)

Upcoming Tribal Wetland Programs Webinars

Monitoring and Assessment Data: Collection and Applications for Tribal Wetland Programs

Thursday, April 20, 2023 - 3:00 p.m.-4:30 p.m. EDT

Presenters



Kerryann Weaver
Wetlands Section Supervisor
U.S. Environmental Protection Agency



Michelle Bahnick
Wetland Biologist
Tulalip Tribes of Washington
Natural and Cultural Resources Division



Buddy Gopher
Wetland Coordinator
Chippewa Cree Tribe



Laurel Wilson
Wetlands Specialist
Grand Portage Band of Lake
Superior Chippewa

[Register](#)

[More Information](#)

Geospatial Mapping Tools and Techniques for Tribal Wetland Programs

Thursday, June 15, 2023 - 3:00 p.m.-4:30 p.m. EDT

[Register](#)

Upcoming Tribal Wetland Programs Webinars

Education and Outreach Efforts to Support Tribal Wetland Programs

Thursday, September 21, 2023 - 3:00 p.m.-4:30 p.m.

[Register](#)

Approaches to Sustainable Funding for Tribal Wetland Programs

Thursday, November 2, 2023 - 3:00 p.m.-4:30 p.m. EDT

[Register](#)

More Information

A **Certificate of Attendance** to be used toward Continuing Education Credits is available when participating in NAWM's live webinars. All NAWM members receive free Certificates of Attendance for webinars. Non-Members who request a certificate will be charged a processing fee of \$25.00. You will have up to 60 days to retrieve your certificate. Certificates are not available for viewing recorded webinars. [More information can be found here](#). Membership information can be [found here](#).

Peeping
Out to Wish
All our
Wetland
Friends a
Very Happy
Spring!!



State and Tribal News

CA: Newsom suspends environmental laws to store more Delta water

By Alastair Bland – Cal Matters – February 14, 2023

Facing an onslaught of criticism that water was “wasted” during January storms, Gov. Gavin Newsom on Monday suspended environmental laws to give the go-ahead to state officials to hold more water in reservoirs. In January, after floodwaters surged into the bay, farm groups, Central Valley legislators and urban water providers complained that people and farms were being short-changed to protect fish. [Read more.](#)

CO: Invasive Fish May Swarm Colorado River as Water Levels Decline

By Robyn White – Newsweek – March 6, 2023

An invasive fish species could begin swarming more areas of the Colorado River, officials have warned. In a report released in February by the Bureau of Reclamation, concerns are raised that smallmouth bass—an invasive species established in Colorado River reservoir Lake Powell—could escape into other reaches of the river, below the dam. [Read more.](#)

CO: New Colorado River Senate caucus takes shape

By Alex Hager – KUNC – February 14, 2023

Senators from the seven Western states that use water from the Colorado River have been convening to discuss its future. John Hickenlooper, a Democrat from Colorado, spearheaded the caucus and said the group has been meeting for “about a year,” though news of its existence only recently became public. The caucus meets as a growing supply-demand imbalance threatens the water supply for 40 million people in the Southwest and a multibillion-dollar agricultural industry. Climate change has shrunk the amount of water in the Colorado River’s largest reservoirs, and states have struggled to agree on plans to reduce demand. [Read more.](#)

DE: Carper Introduces Legislation to Reauthorize the Delaware River Basin Conservation Act

U.S. Senate Committee on Environment & Public Works – March 6, 2023

U.S. Senator Tom Carper, Chairman of the Senate Environment and Public Works Committee, and Congresswoman Lisa Blunt Rochester (both D-Del.), today reintroduced bicameral legislation to reauthorize the Delaware River Basin Conservation Act (DRBCA). “The Delaware River Basin Conservation Act has been a tremendous success story in bringing all levels of government together with community partners to restore and protect vital wetlands, habitats, and waterways,” said Senator Carper. “My hope is that we can build on this track record by reauthorizing this legislation and expanding the tools at our disposal to be better stewards of the Delaware River Basin. Enacting our bill would benefit our environment and economy by cleaning up an important source of drinking water, protecting wildlife in the watershed, and providing a boost to local tourism.” [Read more.](#)



Photo Credit: © [By Scenic Corner] / AdobeStock

FL: As Florida's legislative session begins today, here are the water bills we're watching

By Max Chesnes – Tampa Bay Times – March 7, 2023

There's no shortage of water issues Florida lawmakers could attempt to tackle as the state's legislative session kicks off today. Seagrass is declining across the state, from Tampa Bay to the Indian River Lagoon; manatees have died recently in record numbers as their ecosystem degrades; an ongoing red tide is leaving tons of dead fish scattered on popular Southwest Florida beaches; and polluted Lake Okeechobee freshwater discharges threaten coastal estuaries. [Read more.](#)

FL: USACE and SFWMD Break Ground on Critical Everglades Agricultural Area (EAA) Reservoir Project

WQCS – February 22, 2023

The U.S. Army Corps of Engineers (USACE) and the South Florida Water Management District (SFWMD), broke ground Thursday on the crown jewel of Everglades restoration, the reservoir component of the Comprehensive Everglades Restoration Plan that will reconnect Lake Okeechobee to the central Everglades. The project is the most important Everglades restoration project for reducing harmful releases to the estuaries and sending more clean water south to the Everglades. [Read more.](#)

FL: A Silver Lining for Invasive Species

U.S. Geological Survey – February 22, 2023

Burmese pythons are one of the well-known, sensationalized invasive species in the U.S.—some might even call them notorious. While the story of giant snakes gobbling up anything that moves in the Florida Everglades offers a dramatic cautionary tale about invasive species, there's a deeper drama to share. It's the inspiring story of the determination and ingenuity of invasive species scientists who are devoted to understanding and solving this issue. Burmese pythons are easy for most people to villainize because they are creepy crawlies that, under certain conditions, could be dangerous. It is easy to imagine the impacts a giant snake could have on a unique wetland ecosystem like the Everglades, which was already struggling because of the activities of people by the time pythons showed up in the late 20th century. The USGS is a leader in invasive species science, so when it became clear that the Everglades had a python problem, USGS scientists were brought in to help develop methods for detecting, understanding and controlling them. [Read more.](#)

LA: Supreme Court keeps wetland damage lawsuits in state courts

By Associated Press – U.S. News – March 1, 2023

A lawsuit against oil and gas companies over damage to [Louisiana's](#) wetlands will remain in state court, the U.S. Supreme Court said, rejecting an appeal by major energy companies who wanted to get the case moved to a federal court. It's the latest development in connection with dozens of lawsuits filed in Plaquemines, Jefferson, St. Bernard, St. John the Baptist, Vermilion and Cameron parishes between 2012 and 2017. The suits claim the defendant oil companies have failed to comply with state law governing coastal resources. [Read more.](#)

MA: Inside a protected wetland, a landfill nears capacity

By Darryl C. Murphy, Katelyn Harrop, and Frannie Monahan – wbur – March 1, 2023

Rumney Marsh is a protected wetland in Saugus. It's also home to a landfill that's close to reaching its 50-foot height capacity. While activists say it's about time to lock down the landfill, the operator of the facility, WIN Waste, wants to expand landfill capacity, regardless of state regulations. [Read more.](#)

MA: Excess nutrients lead to dramatic ecosystem changes in Cape Cod's Waquoit Bay; the bay is a harbinger for estuaries worldwide, say researchers

EurekAlert – February 21, 2023

When the Covid-19 pandemic hit in 2020 with associated travel restrictions, Matthew Long thought his students could shift their overseas research projects to instead study the seagrass meadow ecosystem in Waquoit Bay. It's a shallow, micro-tidal estuary on the south side of Cape Cod in Massachusetts, near the Woods Hole Oceanographic Institution (WHOI) where Long is an associate scientist in the Marine Chemistry and Geochemistry Department. However, when Long and his students looked for seagrass meadows where he had seen them in previous years, there were only a few shoots of dying *Zostera marina* eelgrass, a type of seagrass. [Read more.](#)

MT: Rivers Run Through UM BIO Station Ecosystem Metabolism Research

By Ian Withrow – University of Montana – March 6, 2023

Rivers are critical for Earth's ability to sustain life. They serve as the connective transport system, much like the circulatory system in the human body, delivering water, energy and matter from the mountains to the oceans. But our understanding of the role of rivers in the global carbon cycle remains limited, making it difficult for scientists to predict how global change may alter the future health of not only our rivers but the planet itself. Robert Hall, a stream ecologist with the University of Montana's Flathead Lake Biological Station, recently joined an international team of scientists to review the state of river ecosystem metabolism research and synthesize the best available estimates of river ecosystem metabolism. Their work was published in a [new paper in the prestigious scientific journal Nature](#). [Read more.](#)



Photo Credit: © [By Jessica Kirk] / AdobeStock

MT: Landmark Court Ruling Will Protect Water Sources, Ranchers Near Bull Mountains Underground Coal Mine

Contacts: Perry Wheeler, Anne Hedges, Melissa Hornbeinand, and Noah Rott – Earthjustice – February 13, 2023

A federal judge in Montana District Court has [halted the mining of federal coal at Signal Peak Energy's Bull Mountains Underground Coal Mine](#) near Roundup, pending a thorough analysis of the mine's impacts on ranchers, vital water sources, and the surrounding environment. The decision will require the Office of Surface Mining (OSM) to prepare an environmental impact statement to determine whether to allow a proposed 175-million-ton expansion to proceed. In approving the expansion, the Trump administration's OSM largely ignored the impacts. [Read more.](#)

NY: Historical dredging and wetland loss in New York City's Jamaica Bay increase flooding

By American Geophysical Union – PHYS.org – February 23, 2023

Historical dredging and wetland loss in New York City's Jamaica Bay have increased high-tide flooding in the area, according to a new study. Jamaica Bay is an estuary that lies between Long Island and New York City's Brooklyn and Queens boroughs. Over the past 150 years, landscape changes and sea level rise have increased high-tide levels in the bay by 55 centimeters (1.8 feet). As a result, hundreds of thousands of residents experience chronic, damaging floods. [Read more.](#)

NC: After more than 20 years of work, a North Carolina wetland is brought back to life

By Celeste Cgracia – WUNC – February 28, 2023

The North River Wetlands Preserve in Carteret County used to be flat agricultural land with rows and rows of crops like soybean and potatoes. Now it's 6,000 acres of trees, water, and marsh, with some occasional fire ants, bears and snakes. The North Carolina Coastal Federation has worked on restoring this land since 1999. Todd Miller, the executive director of the federation, has been overseeing this project since the beginning. [Read more.](#)

OH: How environmental disasters affect ecosystems: Ohio train derailment could affect local ecosystem for years, experts say

WSJM – March 7, 2023

Scientists will be likely monitoring the ecosystem surrounding the areas affected by a massive chemical spill in Ohio for years to come. The tens of thousands of aquatic life that have died as a result could potentially point to whether ecosystems are safe enough for human activity to persist nearby, experts tell ABC News. Health officials immediately began testing the soil, air and land to ensure humans were safe to return. While the evacuation order was lifted on Feb. 8, the Ohio Department of Natural Resources announced on Feb. 14 that at least 3,500 aquatic animals along the Ohio River had died as a result of pollutants from the controlled burn seeping into the streams. [Read more.](#)

OH: EPA lists additional chemicals released in East Palestine train derailment

By Julie Grant – WESA – February 13, 2023

The Environmental Protection Agency sent a letter to the railroad company, Norfolk Southern, Friday, documenting contaminants that could have been released into the environment, including three that had not previously been reported. The agency also notified the company that it is potentially liable for the cleanup costs under the federal Superfund program. [Read more.](#)

PA: West Creek Wetland promotes education, environmentalism in St. Marys

By Brianne Fleming – The Courier Express – March 1, 2023

In recognition of World Wetlands Day, celebrated in early February, the Elk County Conservation District has been highlighting one of the area's "hidden gems" — the West Creek Wetland Learning Center in St. Marys. The ECCD utilizes the WCWLC for educational purposes, such as hosting school trips, and trout and butterfly release events for students. [Read more.](#)

Recorded Wetland Mapping Consortium Webinar

Mapping Wetland Probabilities: Tools, Models, and Applications Held Wednesday, February 8, 2023

Presenters:



Meghan Halabisky
University of Washington
Remote Sensing and
Geospatial Analysis Lab



Anthony Stewart
PhD Student,
University of Washington



Andy Robertson
GeoSpatial Services at
Saint Mary's University of
Minnesota

[View Recording](#)

Recorded Hot Topics Webinar

Recommendations for Reducing Wetland Loss in Coastal Watersheds of the United States

Held Tuesday, January 31, 2023

Presenters:



Amanda Santoni
U.S. Environmental
Protection Agency



Jonathan Phinney
National Wetland
Inventory



Marla Stelk
National Association of
Wetland Managers

[View Recording](#)

Support NAWM

MEMBERSHIP



NAWM has a long history of blazing trails in advocating for sound wetland science and sensible water policy. By joining NAWM, your membership carries many benefits including our Members' Webinar Series, Federal Policy Tracker, opportunities for involvement on committees, and exclusive publications.

DONATIONS



Your private donations directly support NAWM's (501(c)(3) nonprofit) ability to respond to time-sensitive issues as they arise and allow us to provide information, expert analysis, and recommendations regarding the impacts of potential policy and law on wetland protection programs and efforts. You may also opt to support the Jon A. Kusler Student Scholarship.

SPONSORSHIP



Take advantage of one of NAWM's many sponsorship opportunities and reach thousands of engaged webinar audience members, publication readers, and attendees at our Annual State/Tribal/Federal Coordination Meeting.

NAWM Learning Options Available

We have three online training modules readily available to you:



The recordings are free to view, anytime/anywhere. There is an option to take a quiz to test your knowledge and earn a Certificate of Completion. NAWM Members may access this free membership benefit by logging on to your [Membership Portal](#). Non-members may also access the quizzes on a fee basis.

Our fourth training series - [USDA-NRCS Conservation Planners Training Webinar](#) - is available to view and build knowledge. The quiz/certificate options for this series will be added at a later date.



Wetland Science News

New study focusing on 750,000 acres of US coastal areas finds mussels act as ecosystem engineers

By Ken Best – PHYS.org – March 7, 2023

Faunal organisms such as the humble mussel often play an underappreciated yet important role in protecting and building coastal ecosystems, according to a new study led by the Carbon Containment Lab at the Yale School of the Environment. Mussels (*Geukensia demissa*) serve as “ecosystem engineers”—organisms that directly or indirectly drive habitat construction and control the availability of resources to other organisms, according to the study’s findings. Mussels are considered indicators of water quality, helping to keep streams and rivers clean by absorbing heavy metals and filtering harmful silt and particulates as they feed and breathe in aquatic ecosystems. [Read more.](#)

From Wildfire Recovery to Wetland Conversions, There’s a Growing Pain in Eco-Restoration Projects: Not Enough Native Seed

By Patty Wetli – wttw – February 22, 2023

Eco-restoration projects come in all shapes and sizes, from healing tens of thousands of acres charred by wildfires to converting patches of non-productive farmland back to wetland. But a common problem shared by those doing the work, regardless of the form it takes, is the lack of available native seeds. [Read more.](#)

Fracking Wastewater Causes Lasting Harm to Key Freshwater Species

By Liza Gross – Inside Climate News – February 21, 2023

Extracting fossil fuels from underground reservoirs requires so much water a Chevron scientist once referred to its operations in California’s Kern River Oilfield “as a water company that skims oil.” Fracking operations use roughly 1.5 million to 16 million gallons per well to release oil and gas from shale, according to the U.S. Geological Survey. All that water returns to the surface as wastewater called flowback and produced water, or FPW, contaminated by a complex jumble of hazardous substances in fluids injected to enhance production, salts, metals and other harmful elements once sequestered deep underground, along with their toxic breakdown products. [Read more.](#)



NAWM Jobs Boards

Wetland Field Technician

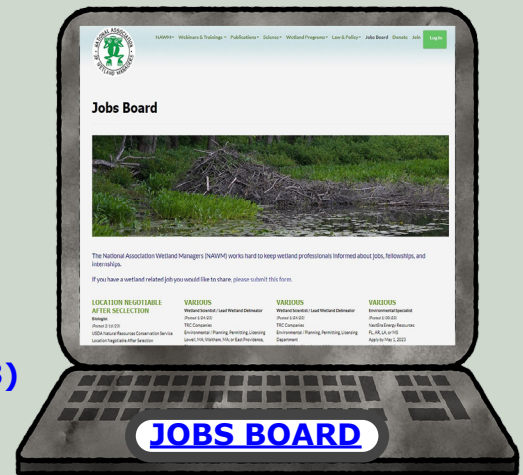
DNREC - Delaware Dept. of Natural Resources and Environmental Control, Dover, DE
Apply by April 12, 2023

Visiting Scientific Specialist, Wetlands Geology

Illinois State Geological Survey, Champaign, IL
Apply by April 30, 2023

Statewide Project Hydrogeologist (Hydrogeologist 3)

Washington State Department of Ecology
Multiple Locations Statewide, WA
Apply by April 17, 2023



Visit the NAWM Website

[About NAWM](#)

[Webinars](#)

[Online Trainings](#)

[Publications](#)

[Science](#)

[Wetland Programs](#)

[Law & Policy](#)



[Follow NAWM](#)



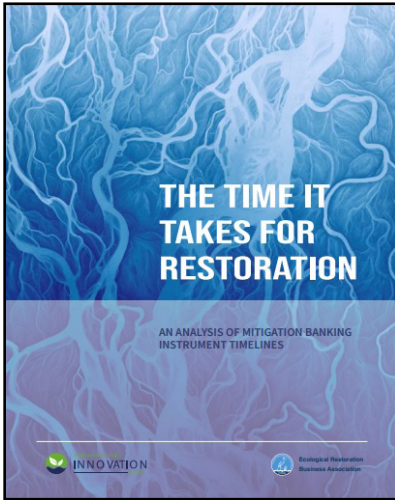
Wetland Photos

We are always looking for new wetland photos. If you'd like to share your wetland views in our publications and social streams, [submit your photo\(s\) here.](#)

Photo Credit: Donna Downing, NAWM



Resources and Publications



The Time it Takes for Restoration

The 2008 Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (herein 2008 Rule) provides an approval process for mitigation banks and in-lieu fee programs (ILFs). The 2008 Rule stipulated required timelines for the regulator to both account for regulator workload and ensure that the process did not arbitrarily drag on. In total, the 2008 Rule requires the regulator's side of the approval process to take no more than 225 days. To date, conversations among stakeholders about timelines have largely been based on anecdotal evidence that timelines are not being met. This research aims to provide a rigorous quantitative analysis of the most complete dataset available as a foundation for fruitful dialogue. [Read report.](#)

Funding Opportunities

[2024 National Coastal Wetlands Conservation Grant Program](#)

U.S. Fish and Wildlife Service; Apply by June 23, 2023; Search: F24AS00005

[WaterSMART Environmental Water Resources Projects for Fiscal Year \(FY\) 2023](#)

U.S. Bureau of Reclamation; Apply by March 28, 2023; Search: R23AS00089

[Evaluating Restored Wetland Biogeochemical Cycling Following Thin-layer Sediment Introduction](#)

Department of Defense, Engineer Research and Development Center; Apply by May 15, 2023; Search: W81EWF-23-SOI-0003

Photo Credit: © [By Anna Photography] / Adobe Stock

Potpourri

A hidden gem of wetland near the Texas border fence

By Danielle Prokop – Source NM – February 24, 2023

More than 300 acres of Rio Grande wetland is tucked away at the edge of El Paso city limits, abutting the border fence. Even with decades of effort, much of the park remains dry most of the year. But within the reach of the wells, a small stream feeds a grove of coyote willows, water gurgling under the bridge, joined by the trills of frogs and a cotton rat moving in the deep shade. That's the work of a man, nicknamed by some as "the father of the bosque." [Read more.](#)

'They aren't mean and they aren't trying to get you': saving the copperbelly water snake

By Ryan Wagner – The Guardian – February 14, 2023

At the intersection of Ohio, Michigan and Indiana, the corn monoculture melts away to reveal green rolling hills and deep gorges. The lush forest is pockmarked by steep-banked ponds, carved out by retreating glaciers 10,000 years ago. Standing waist-deep in a forest pool, Megan Seymour scans the shrubby banks with binoculars. A slight change in colour and texture spotted in the tangled buttonbush swamp reveals her quarry: a thick, glossy, copperbelly water snake (*Nerodia erythrogaster neglecta*). Seymour hoists up her waders and ties back her hair as she prepares to grab the water snake before it can disappear into the murky water, taking with it one of the last chances to save the species. [Read more.](#)

Podcasts

National Geographic Podcast: [March of the beaver](#)

NEIWPC: [Wetlands Watchers Podcast Series](#)

NOAA Ocean Podcast: [Equity and Justice in Coastal Planning](#)

Photo Credit: © [Shrky Photography] / Adobe Stock

Calendar of Events

WEBINARS

March

March 22, 2023 3:00 p.m.-4:30 p.m. EDT	National Association of Wetland Managers Members' Webinar: Mitigating Environmental Impacts of the Abandoned Interstate I-95 Embankment across Rumney Marsh
March 28, 2023 12:00-1:00 p.m. EDT	Pew Webinar: How Can Seagrasses U.S. States, Island Nations Boost Blue Carbon Climate Strategies
March 29, 2023 2:00 p.m.-3:00 p.m. EDT	National Association of Wetland Managers Members' Webinar: Introduction to the new national manual on the Ordinary High Water Mark
March 29, 2023 4:00 p.m. EDT	Northeast Climate Adaptation Science Center Webinar: Gulf of Maine Flood Hazard: From Theoretical to Community-Collaborative Research

April 2023

April 13, 2023 3:00 p.m.-4:30 p.m. EDT	National Association of Wetland Managers Members' Webinar: Development of Rapid Streamflow Duration Assessment Methods for Nationwide Coverage
April 19, 2023 4:00 p.m. EDT	Northeast Climate Adaptation Science Center Webinar: Localizing Forest Adaptation Strategies to Diverse Northeastern Forest Ecosystems and Threats
April 20, 2023 3:00 p.m.-4:30 p.m. EDT	National Association of Wetland Managers: Tribal Wetland Programs Webinar: Monitoring and Assessment: Data Collection and Applications for Tribal Wetland Programs
April 21, 2023 11:30 a.m. EDT	Wisconsin Wetlands Association Webinar: Karst hydrogeology & wetlands

May 2023

May 10, 2023 4:00 p.m. EDT	Northeast Climate Adaptation Science Center Webinar: The Status of Tribes and Climate Change Report and the NE CASC Region
-------------------------------	--

WEBINARS Continued

June 2023

June 10, 2023 1:00 p.m. EDT	Coastside Land Trust Webinar: The Ecology of Soil
June 15, 2023 3:00 p.m.-4:30 p.m. EDT	National Association of Wetland Managers: Tribal Wetland Programs Webinar: Geospatial Mapping Tools and Techniques for Tribal Wetland Programs

September 2023

September 21, 2023 3:00 p.m.-4:30 p.m. EDT	National Association of Wetland Managers: Tribal Wetland Programs Webinar: Education and Outreach Efforts to Support Tribal Wetland Programs
---	--

November 2023

November 2, 2023 3:00 p.m.-4:30 p.m. EDT	National Association of Wetland Managers Tribal Wetland Programs Webinar: Approaches to Sustainable Funding for Tribal Wetland Programs
---	---



Photo Credit: Marla Stelk, NAWM

CONFERENCES/EVENTS

March 2023

March 24, 2023 Montpelier, VT	Vermont Association for Wetland Science (VAWS) Annual Meeting
March 25, 2023 Middletown, CT	Connecticut Land Conservation Council Conference

April 2023

April 12-13, 2023 Saratoga Springs, NY	NEIWPC Annual Nonpoint Source Conference: Environmental Justice, Equity & Climate Change
April 20-21, 2023 Vancouver, Canada	Fifteenth International Conference on Climate Change: Impacts & Responses
April 21-23, 2023 Burlington, VT	Eagle Hill Institute 2023 Northeast Natural History Conference
April 22, 2023	Earth Day 2023: Invest in Our Planet
April 24-27, 2023 Anchorage, AK	National American Fish and Wildlife Society: 2023 Annual National Conference
April 24-27, 2023 San Diego, CA	Centre for Watershed Protection: 2023 National Watershed and Stormwater Conference
April 24-28, 2023 Virginia Beach, VA	North American Lake Management Society: 13th National Monitoring Conference: Working Together for Clean Water
April 27-28, 2023 Meredosia, IL	Save The Frogs! Day (15th Annual) Wetland Workshop
April 28-29, 2023 Suffolk, VA	Great Dismal Swamp National Wildlife Refuge: Birding Festival
April 29, 2023 Las Vegas, NV	Clark County Wetlands Park Bio Blast: Celebrate World Migratory Bird Day



Photo Credit: © [By Khaleel] / AdobeStock

May 2023	
May 2-4, 2023 Field Trip: May 5, 2023 Nebraska City, NE	National Association of Wetland Managers: State/Tribal Federal Coordination Meeting: Protecting and Restoring Wetlands for People and Wildlife
May 5-6, 2023 Thompsonville, MI	Michigan Lakes & Streams Association 62nd Annual Conference: Protecting and Restoring Michigan's Lakes and Stream
May 7-11, 2023 Raleigh, NC	Association of State Floodplain Managers Conference
May 8-11, 2023 Jacksonville, FL/Virtual	National Mitigation & Environmental Markets Conference: Invest in the Environment
May 8-12, 2023 Toronto, Ontario Canada	IAGLR's 66th Annual Conference on Great Lakes Research
May 10-12, 2023 Sandusky, OH	Ohio Stormwater Association 2023 Ohio Stormwater Conference
May 14-19, 2023 Bonita Springs, FL	University of Florida Conference: Species on the Move
May 20, 2023 Coos Bay, OR	Coos Watershed Association: Mayfly Festival
May 22-25, 2023 Winter Harbor, ME	Schoodic Institute 2023 Spring Birds of Acadia, with Puffin Cruise
May 31-June 3, 2023 Las Vegas, NV	Ducks Unlimited National Convention
June 2023	
June 3-7, 2023 Brisbane, Australia	Society for Freshwater Sciences Annual Meeting: Freshwater Sciences 2023
June 5-7, 2023 Arizona State University / Virtual	Digital Data 2023: Leveraging Digital Data in Service to Conservation, Ecology, Systematics, Phylogenetics, and Novel Biodiversity Research
June 11-14, 2023 Tahoe City, CA	2023 CUAHSI Biennial Colloquium
June 26-29, 2023 Des Moines, IA	2023 North American Prairie Conference
June 27-30, 2023 Spokane, WA	Society of Wetland Scientists Annual Meeting: Wetland adaptation from floodplains to ridgelines

July 2023	
July 17-19, 2023 Denver, CO	American Water Resources Association 2023 Summer Conference: Connecting Land & Water for Healthy Communities
July 24-27, 2023 Seattle, WA	National Association of Flood and Stormwater Management Agencies (NAFSMA) 45th Annual Meeting
August 2023	
August 6-11, 2023 Portland, OR	2023 ESA Annual Meeting: For All Ecologist
September 2023	
September 26-30, 2023 Darwin Australia	Society of Ecological Restoration: 2023 10th World Conference on Ecological Restoration
October 2023	
October 27, 2023 Las Vegas, NV	Clark County Wetlands Park: Haunt the Wetlands
November 2023	
November 6-8, 2023 Cary, NC	American Water Resources Association: 2023 Annual Water Resources Conference



TRAINING COURSES

March 2023

March 27-31, 2023
Atlanta, GA - Piedmont

Duncan & Duncan West Course: [Basic Wetland Delineation](#)
[Other dates offered](#).

NAWM Members receive a 15% Discount.

April 2023

April 13, 2023
Chelsea, MI

Michigan Wetlands Association Training: [Introduction to Wetland Mosses \(And a Few Upland Ones Too\)](#)

April 17-21, 2023
Humble, TX

Whitenton Group Course: [Wetland Delineation & Corps Permitting](#)

April 18-19, 2023
Virtual

National Park Service Course: [Interpreting Climate Change](#)

April 19-21, 2023
Folsom, CA

Wetland Training Institute, Inc. Course: [Plant Identification for Central and/or Southern California](#)

May 2023

May 1-4, 2023
Aliquippa, PA

Swamp School: [Wetland Delineation Training](#)
[Also August 21-24, 2023](#).

NAWM members receive a 10% Discount.

May 8, 2023
San Diego, CA

Wetland Training Institute, Inc. Course: [Beginners Plant ID for Wetland Delineation](#)

May 14-20, 2023
Steuben, ME

Eagle Hill Institute Course: [Lichen Biology, Ecology, & Identification](#). *NAWM Members receive a 20% Discount.*

May 15-19, 2023
Lansing/Charlotte, MI

Michigan Wetlands Association Training: [Wetland Delineation Training](#)

May 21-27, 2023
Steuben, ME

Eagle Hill Institute Course: [Marine Macroalgae: Ecology, Identification, Distribution, and Importance](#).

NAWM Members receive a 20% Discount.

May 22-23, 2023
Charleston, SC

Duncan & Duncan West Course: [Hydrophytic Vegetation](#)
NAWM members receive a 15% Discount.

May 31-June 2, 2023
Shepherdstown, WV

The Conservation Fund Course: [2023 Balancing Nature and Commerce](#)

June 2023	
June 5, 2023 Online	Swamp School Course: National Ordinary High Water Mark Field Delineation for Rivers and Streams <i>NAWM members receive a 10% Discount.</i>
June 6, 2023 Charleston, SC	Duncan & Duncan West Course: Endangered Species Identification . <i>NAWM members receive a 15% Discount.</i>
June 12-13, 2023 Northern Lower Peninsula, MI	Michigan Wetlands Association Training: Hyrdic Soils Identification
June 12-15, 2023 Seattle, WA	Richard Chinn Environmental Training, Inc. Course: Wetland Delineation Training . Other dates and locations available.
June 14-15, 2023 Seattle, WA	Richard Chinn Environmental Training, Inc. Course: Regional Supplement Wetland Delineation Training . Other dates and locations available.
June 21-23, 2023 St. Michaels, MD	Environmental Concern Course: Wetland Plant ID
June 26-30, 2023 Shepherdstown, WV	The Conservation Fund Course: Compensatory Mitigation Training Course
July 2023	
July 9-15, 2023 Steuben, ME	Eagle Hill Institute Course: Wetland Identification, Delineation, and Ecology <i>NAWM Members receive a 20% Discount.</i>
July 13, 2023 Various Locations Marquette County, MI	Michigan Wetlands Association Training: Fern Identification Workshop
July 19-20, 2023 Jackson, MI	Michigan Wetlands Association Training: Wetland Grass Identification
July 27-28, 2023 Atlanta, GA - Piedmont	Duncan & Duncan West Course: Hydrophytic Vegetation <i>NAWM members receive a 15% Discount.</i>

August 2023	
August 2-3, 2023 Oakland County, MI	Michigan Wetlands Association Training: General Wetland Plant Identification
August 6-12, 2023 Steuben, ME	Eagle Hill Institute Course: Aquatic Flowering Plants, with a Review of the Potamogetonaceae <i>NAWM Members receive a 20% Discount.</i>
August 8, 2023 Lowell, MI	Michigan Wetlands Association Training: Freshwater Mussel Identification
August 13-19, 2023 Steuben, ME	Eagle Hill Institute Course: EPT Taxa: Ephemeroptera, Plecoptera, and Trichoptera <i>NAWM Members receive a 20% Discount.</i>
August 21-24, 2023 Aliquippa, PA	Swamp School: Wetland Delineation Training Also August 21-24, 2023 <i>NAWM members receive a 10% Discount.</i>
August 23-24, 2023 Lansing, MI	Michigan Wetlands Association Training: Wetland Shrub Identification
September 2023	
September 11-15, 2023 St. Michaels, MD	Environmental Concern Course: Basic Wetland Delineation
September 21-22, 2023 Charleston, SC	Duncan & Duncan West Course: Identification of Grasses, Sedges, and Rushes <i>NAWM members receive a 15% Discount.</i>
October 2023	
September 21-22, 2023 St. Michaels, MD	Environmental Concern Course: Evaluating Hydric Soils in the Field



Photo Credit: © [By Brendan] / AdobeStock

Wetland News Digest

The National Association of Wetland Managers' *Wetland News Digest* (WND) is a monthly compilation of wetland-related stories and announcements submitted by readers and gleaned from listservs, press releases and news sources from throughout the United States. WND chronicles the legislative, national, state and tribal news relevant to wetland science, policy, practice and law. It also links to new publications, tools and resources available to wetland professionals as well as events and training opportunities for those working in water resources and related fields. *Wetland News Digest* (formerly "Wetland Breaking News") has been published for over twenty years and NAWM has been a nationally recognized resource for information on wetland science and policy since 1983. The items presented in *Wetland News Digest* do not necessarily reflect the views of the editor or of the National Association of Wetland Managers. Send your news items, comments, corrections, or suggestions to news@nawm.org.



Photo Credit: © [By taviphoto] / AdobeStock

Compiled and Edited by:

- **Marla Stelk, Executive Director, NAWM and**
- **Justin Farino, Administrative Assistant**

Assistant Editors:

- **Laura Burchill, Office Manager**
- **Sharon Weaver, Webmaster**
- **Dawn Smith, Communications Specialist**

Contact Us:

NAWM
500 Washington Avenue, Suite 201
Portland, ME 04103
(207) 892-3399
laura@nawm.org

Photo Credit: © [By Brendan] / AdobeStock