



ABSTRACTS

(Listed in Order of Presentation. Please note not all speakers submitted an abstract.)

Day 1 Monday, August 15

3:00pm – 3:30pm: A History of WOTUS: Past is Prologue

Donna Downing, Senior Legal Policy Advisor, NAWM

For decades, EPA and the Army Corps of Engineers have defined “water of the United States” (WOTUS) in regulation, focusing on specific issues as they emerged from the policy debate. At various points since the 1970s, the relevance of interstate commerce, protection of geographically isolated waters, the role of science, and statutory-driven policies have all been a particular focus. Why should the evolution of WOTUS should be of interest to observers today? The policy tensions in past WOTUS definitions remain, and knowing their origins helps predict where future definitions may be heading. Simply put, the past is prologue, *deja vu* all over again.

3:30pm – 4:15pm: Implementing WOTUS in a Time of Change Panel

Moderator: Donna Downing, NAWM. Panelists - Ken Norton, Chair of the National Tribal Water Council and Director of the Hoopa Valley Tribal Environmental Protection Agency; Brian Wolff, Indiana Department of Environmental Management; Whitney Beck, U.S. Environmental Protection Agency; Andy Beaudet, U.S. Army Corps of Engineers

The regulatory definition of “Waters of the United States” (WOTUS) has changed several times in recent years, creating a substantial challenge for states, tribes, and the federal government, as they implement programs designed to protect WOTUS. This panel will discuss challenges and responses faced when operating water quality programs on a day-to-day basis, as well as field tool development, training, and outreach to the public in response to an evolving WOTUS.

4:15pm – 5:00pm : Wetland Mitigation Beyond Clean Water Act Jurisdiction

Mike Ruth, Federal Highway Administration; Richard Darden, Federal Highway Administration; Dan Redgate, Virginia Dept. of Transportation; Becky Pierce, Colorado Dept. of Transportation

Since 2001 the definition of “waters of the U.S.” has been influenced by a roller coaster of Supreme Court opinions and Presidential decisions. Executive Order 11990, *Protection of Wetlands*, was issued by Jimmy Carter in 1977 and has remained in force and unchanged. EO 11990 states, “*Each agency shall provide leadership and shall take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities...*”. The EO is unique from Clean Water Act legislation and guidance because “wetland” is a habitat type unchanged by volatile federal jurisdiction.

Although the Presidential directive remains unchanged after 45 years, interpretation of its intent by the Federal Highway Administration and Departments of Transportation (DOT) has been inconsistent across the Nation. Is the inconsistent interpretation an issue? The panel will begin to tackle that question with a discussion on the noteworthy text of EO 11990 and offer insight into why DOTs nationwide have different interpretations. The discussion will move into how a few states have incorporated EO 11990 into their programs by compensating for wetland losses beyond the jurisdiction of the Clean Water Act (distinct from existing state regulatory requirements).

After the current practice has been presented, the panel will discuss opportunities and challenges to establishing a consistent nationwide interpretation of EO 11990, which could ultimately lead to expanded alternatives analyses and wetland mitigation practices by DOTs nationwide. The panel would invite audience participation in exploring potential benefits to nationally-consistent wetland compensation and potential challenges to broadening those responsibilities.

Day 2 Tuesday, August 16

10:30am – 11:00am: Protecting Waters and Wetlands in Indian Country: A Guide for Developing Tribal Wetland Management Programs

Kathleen Kutschenreuter, Office of Wetlands, Oceans and Watersheds, U.S. Environmental Protection Agency

Tribes can use this new guide at all stages of wetlands and water resource protection—from the earliest identification of wetlands and program priorities to a fully developed program with ongoing monitoring and assessment—to identify protection, restoration, and long-term management approaches. The guide provides information about how to begin program planning, addresses EPA’s core elements framework for a comprehensive wetlands program, provides information about funding and other sources of support, suggests collaboration approaches, and highlights the importance of tribal community cultural values in wetland management. A Tribal Roundtable of 16 tribal representatives from around the country supported the guide’s development, helping to ensure that it reflects tribal needs, knowledge, and perspectives. At the Roundtable’s suggestion, the guide includes the role of Traditional Ecological Knowledge, photographs, and wetland program examples and case studies from Indian Country. The guide

augments the 2013 Wetland Program Plans Handbook (produced in partnership with the National Association of Wetland Managers), which provides a sound foundation and contains much information that may also be useful to tribes.

11:00am – 11:30am: Cultural Competency in work with Latinx and Indigenous Communities

Alexes Juarez, Kickapoo Tribe in Kansas

In their 2022-2026 strategic plan, the EPA released a new commitment to Environmental Justice and Civil Rights aimed at promoting activities that aid disenfranchised communities. As Federal, State, and Tribal managers begin to follow suit in prioritizing underserved communities, environmental managers at all levels need to be trained in the cultural competence needed to achieve much needed collaborations.

This project aims to provide STEM communication tools for working in Latinx and indigenous communities. These communities share similar histories in terms of connection to land, and usage of non-westernized forms of knowledge. Although both groups portray a cultural connection to land and ecosystem, community input in restoration projects are often lacking due to educational and language gaps between community members and land managers. This project presents methods for land managers to utilize and celebrate oral histories in future restoration projects and methods to educate communities on current restoration activities.

This methodology was developed via a combination of literature review and community surveys and will be used in developing a wetland restoration plan for a Tribal Nation within the midwestern United States. Methodology to communicate with cultural competency is the first step in achieving Environmental equity within disenfranchised communities and should be at the forefront of all restoration endeavors.

11:30am – 12:00pm: Amplifying Tribal Peer-to-Peer Networks for Wetland Protection, Restoration and Management in Times of Change

Linda Storm, U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency's Region 10 (AK, ID, OR, WA) partners with Tribes to support wetland and aquatic ecosystem management. Of the 574 federally recognized tribes, 271 are in EPA's Region 10. Since 2010 the Pacific Northwest Tribal Wetland Working Group (TWIG) has met twice annually, providing peer-to-peer learning workshops and trainings. In 2015 TWIG identified the need for EPA to better recognize tribal needs, including Tribes cultural diversity, governance structures, and other aspects of tribal communities, and to provide flexibility in EPA's Core Elements Framework for developing Wetland Program Plans (WPPs). In 2018 to meet this need EPA R10 and EPA HQs contracted the development of a visually rich Tribal Wetland Program Plan Guide titled *Protecting Water and Wetlands in Indian Country: A Guide for Developing Tribal Wetland Management Programs*. Sixteen Tribal representatives from across the United States participated in a roundtable to provide input to the guide's development. The guide has seventeen Tribal case studies highlighting tribal programs. Tribal WPPs reflect tribal traditional resource rights, including treaty rights, for protecting wetlands and aquatic ecosystems both on and off reservations. Tribal wetland monitoring programs help identify ways to prioritize wetland protection and restoration, to focus development with least impacts, and serve as the foundation to implement tribal ordinances, codes, and/or wetland

water quality standards. While EPA's WPDGs help Tribes develop initial wetland programs, Tribes have voiced concerns that the limited amount of WPDG funding is not enough to sustain ongoing wetland programs. This presentation will share examples of Pacific Northwest tribes WPPs, how they've addressed cultural values and indigenous knowledge, the value of peer-to-peer tribal networks, and the critical need for greater Tribal wetland program funding.

2:00pm – 2:30pm: State Role and Involvement in Determining Wetland Mitigation Monitoring and Performance Standards Protocols

Jessica Bryzek, West Virginia University

Authors: Jessica Bryzek, Christopher Rota, Walter Veselka, Elizabeth Byers (WVDEP), James Anderson (Clemson University)

Wetland mitigation compensates for impacts to wetland ecosystems encountered during development by restoring previously degraded wetlands. Federal policies and guidance drive the process of wetland mitigation, but there has been an increased focus on implementing a multi-level governance approach. State involvement has increased, which provides opportunities to customize requirements based on knowledge of local conditions, but unique challenges and barriers exist in implementation. Federal policies require agencies to use performance standards to validate restored wetland functions and regulate the final credit release of a project. This research evaluates the role and involvement of state governments in determining wetland mitigation performance standards using a mixed-method approach, including semi-structured interviews with state agency personnel and online legislative database reviews. Monitoring and performance standard requirements at the state level were classified and ranked according to complexity. While state-driven recommendations and requirements vary across the nation, a combination of guidance/technical documents and state legislation are used. An interactive toolkit demonstration will explore state requirements and example performance standards to provide managers with an interactive database. This study synthesizes the role of states in establishing monitoring and performance standards criteria into a nationwide perspective to improve our understanding of the dynamic interplay between wetland mitigation science, practice, and policy.

2:30pm – 3:00pm Wetlands and water quality: Relationships with watershed land-use, land cover, soils, and water inputs.

Sindupa De Silva, West Virginia University

Authors: Sindupa De Silva¹ - sd0131@mix.wvu.edu
Jason A. Hubbard¹ - jason.hubbart@mail.wvu.edu
Mike P. Strager¹ - mstrager@wvu.edu
Elizabeth A. Byers² - elizabeth.a.byers@wv.gov
Christopher T. Rota¹ - christopher.rota@mail.wvu.edu
James T. Anderson³ - jta6@clemson.edu

Affiliations: ¹ West Virginia University, Morgantown, West Virginia
² West Virginia Department of Environmental Protection, Elkins, West Virginia
³ James C. Kennedy Waterfowl and Wetlands Conservation Center, Clemson University, Georgetown, South Carolina

Wetland ecosystems play fundamental roles in regulating our freshwater resources. Yet they are not comprehensively protected from degradation and loss, particularly from watershed-scale anthropogenic land-use practices. West Virginia, USA contains freshwater wetlands across a diverse landscape that drain into two ecologically and economically vital watersheds: the Chesapeake Bay and the Gulf of Mexico. West Virginia's landscape is also utilized for an assortment of anthropogenic land-use practices. We evaluated 200 wetlands to study how watershed-scale anthropogenic land-use practices impact wetland ecosystem health. To do this, we measured representative wetland water quality using a modified pore-water sampling method, surveyed wetland vegetation diversity and abundance, assessed relative macroinvertebrate diversity and abundance, and evaluated representative wetland soil characteristics. These data were then related to the contributing watershed's land-use practices, land cover types, soils, and water inputs. Preliminary results for select water quality parameters indicated that watersheds with larger areas of development had higher conductivity ($p = 0.01$), *E. Coli* ($p = 0.0001$), and Total Dissolved Solids ($p = 0.01$) concentrations in wetland water quality, compared to watersheds with smaller areas of development. We also used these data to determine if anthropogenic land-use practices had an impact on a wetland's ability to perform its functions and ecosystem services. The results of this project will be used to develop wetland water quality standards for West Virginia and help advance more comprehensive wetland regulations.

3:30pm – 4:15pm: Nationwide Permits Panel

Moderator: Portia Osborne, NAWM. Panelists – Andy Beaudet, U.S. Army Corps of Engineers; Rick Mraz, Washington State Dept. of Ecology; Adam Riggsbee, Riverbank Conservation & Ecological Restoration Business Assoc. Executive Board)

This panel will provide an overview of the current status of Nationwide Permits, including the 2021 re-issuance of permits and issuance of new permits. Panelists will discuss implementation challenges and opportunities associated with the Nationwide Permits and the panel will provide an opportunity for audience members to share their experiences implementing the NWP.

4:15pm – 5:00pm: 401 Certification Panel: Surviving the Pendulum

Moderator: Brenda Zollitsch, NAWM. Panelists – Lauren Kasperek, U.S. Environmental Protection Agency; Andy Beaudet, U.S. Army Corps of Engineers; Julia Anastasio, Association of Clean Water Administrators; Kirk Tjelmeland, Kansas Water Office; Ted LaGrange, Nebraska Game and Parks Commission

States and tribes strive to manage permitting programs and protect their water quality in ways that comply with the Clean Water Act 401 Certification Rule. This has been challenging considering the strong pendulum swings in rule content over the last several years. This panel will begin with ACWA sharing concerns they have heard from states about the 2020 401 Rule and its impact on state programs. ACWA will then share ideas from states about what could be changed to improve efficiency in the new rule. Next, two states (Kansas and Nebraska) will share their experience working to implement the 401 Rule and changes they have seen at the state agency level in permitting requests. Representatives from the Corps and EPA will be the final panelists - sharing their insights on the Rule and leading into an opportunity for the audience to discuss both the challenges they faced with the 2020 Rule rollout and what products could be helpful for the new 401 Rule rollout.

Day 3: Wednesday, August 17

9:00am – 9:30am: Meeting Multiple Priorities for Wetland

Elisabeth Cianciola, Massachusetts Department of Fish & Game

Many of the freshwater wetland resources in southeastern Massachusetts have historically been altered by the cranberry industry. Recent trends in the industry are leading many growers to consolidate the footprints of their farms or shut down their operations altogether. These economic shifts have created an opportunity for wetland restoration on abandoned cranberry bogs. The Massachusetts Department of Fish and Game In-Lieu Fee Program has awarded funds to the Town of Mashpee to restore a 6-acre retired cranberry farm to a natural, self-sustaining wetland condition. As an in-lieu fee mitigation project, the Town is required to permanently protect the restoration site from direct adverse impacts associated with human activities. The Town purchased the land in 2019 and has chosen to partner with the Native Land Conservancy to hold a conservation restriction on the site. The restoration design is underway, and implementation is anticipated to occur in 2023. This presentation will discuss how the priorities of the agricultural sector; municipal, state, and federal government agencies; and the Mashpee-Wampanoag Tribe are being met in a wetland restoration project.

10:30am – 11:00am Shaping a wetlands outreach and education project in Nebraska wired for today's audience

Ted LaGrange, Nebraska Game and Parks Commission

Information will be shared about a collaborative project to produce and distribute integrated and innovative outreach and education products to increase awareness of the importance of wetlands in Nebraska and an understanding of the need for their conservation. A series of short films, an array of interactive web content, and printed publications designed for adults and students alike will provide up-to-date information in a format that is favorable to today's audiences. We will discuss why the project was initiated, how it is being implemented, and the partners involved. We will address the importance of defining our audience, understanding how people learn, and our approach of designing content that uses education to motivate positive conservation actions. One of these methods is aligning products with the state's education standards to ensure that they are dynamic and usable within a classroom setting. A highlight will be showing some examples of the innovative audio-visual products being generated which showcase the diverse types of wetlands across Nebraska. A major focus of this project is to discuss the benefits wetlands provide and share stories from people working in wetlands that inspire people to think about what makes wetlands valuable and why they should care about conserving them. Partners include: The Nebraska Game and Parks Commission, Platte Basin Timelapse project at the University of Nebraska–Lincoln, Nebraska Cooperative Fish and Wildlife Research Unit, U.S. Environmental Protection Agency, and Ducks Unlimited.

11:00am – 11:30am Wetland Management in the Jemez River Headwaters, New Mexico: Realizing Cumulative Returns from Stakeholder Engagement, Multi-Agency Funding and Nature-Based Solutions

Karen Menetrey, Rio Grande Return; Andy Robertson, Saint Mary's University of Minnesota

The Jemez River headwaters in New Mexico, part of the larger Rio Grande Watershed, have supported diverse wetland, vegetation, wildlife and human populations for millennia. This mid-montane landscape is a mix of wetland community types (fen, slope, riverine, riparian, depressional) interspersed within upland forest and meadow habitats. Wetlands play a critical role in this region for downstream municipal and agricultural water supply and water quality, as well as supporting wildlife, recreation, plant diversity, cattle-grazing, indigenous cultural uses, groundwater recharge and stream baseflow.

During the early 2000s, drought, pine bark beetle infestation and two high intensity wildfires (1996 and 2000) led natural resource managers to realize that climate change was already an issue in the Jemez River headwaters. Multiple agencies and organizations began to collaborate and develop plans to manage the watershed with an emphasis on fire-adapted ecosystems and enhanced wetland and riparian habitats. Two key early efforts engaged stakeholders, increased awareness and laid foundations for subsequent funding: the 2005 Jemez Watershed Restoration Action Strategy (developed by Jemez Watershed Group); and the 2009 Jemez Mountain Climate Change Adaptation Project (led by The Nature Conservancy). Climate warming, changes in precipitation patterns and resulting drought contributed to subsequent extensive wildfires in 2011 and 2013, further exacerbating wetland impacts and spurring the need for intervention focused on wetland restoration and preservation.

This presentation documents some of the responses that have been undertaken in the headwaters to address changing hydrography, anthropogenic impacts and climate resiliency. Over the past two decades, numerous wetland and riparian restoration projects have improved water quality, water supply, and riparian habitats in Jemez River sub-watersheds. Restoration techniques using locally available natural materials (rocks, wetland sod, plants) have been developed and refined here, expanding the nature-based solution toolbox available to practitioners. The re-establishment of beaver habitat has been a priority. In particular, a project conducted by Rio Grande Return on San Antonio Creek used fenced grazing exclosures, willow planting, beaver dam analogs, and embedded logs to raise the water table and increase riverine wetlands along three miles of creek. This project highlights the value of stakeholder-driven, cross-agency funded, public/private partnerships to address local impacts. Repeated on multiple streams, these restoration initiatives create cumulative returns across the larger watershed and demonstrate a model of an evolving climate adaptation strategy.

1:30pm – 2:00pm: Beaver-related Restoration Cost-Share Approaches

Michael Callahan, Beaver Institute, Inc.

The North American beaver is a Keystone species that builds dams and valuable freshwater wetland ecosystems. Beaver-created wetlands also build climate resilience by storing water, reducing wildfire damage and increasing biodiversity.

Once plentiful across North America, beavers were trapped to near extinction by European colonists, resulting in degraded streams from coast to coast. Now we better understand the value of these wetlands. So beavers are increasingly being viewed as a valuable watershed restoration partner, who work cheaper and better than we do.

As climate change and funding challenges increase, the need and interest in low-cost wetland restoration with beavers is skyrocketing. Yet, landowners with beaver-related conflicts, or with streams in need of restoration are often reluctant to keep beavers on their land and often destroy beavers and their dams when their wetlands negatively impact human land uses.

Cost-share grants and education have proven to be very effective tools for incentivizing landowners to coexist beavers and their wetlands. Mike Callahan, Beaver Institute President, will discuss his experiences with three different beaver management cost-share programs. The audience will learn what has worked, what hasn't worked, and how to structure a successful cost-share program to engage landowners and promote wetland restoration successes.

2:00pm – 2:30pm: Improving Water Quality One Dam Project After Another

Thomas Harcarik, Ohio Environmental Protection Agency

Dam removal can be one the most effective methods to restore the aquatic life uses of long sections of rivers and streams. Using funds from its innovative Water Resource Restoration Sponsor Program (WRRSP), Ohio EPA has funded the removal of twelve dams, approved funding for the removal of an additional five dams and is currently reviewing proposals for the removal of an additional four dams for a combined total of \$46,191,064. Since 2000, the WRRSP has provided over \$250,000,000 for stream and wetland restoration and protection projects throughout Ohio, including dam removals. Funds for the WRRSP are generated by interest on loans awarded through Ohio EPA's state revolving loan fund.

This presentation will briefly describe how the WRRSP works, and through examples and case studies, present some the key lessons learned regarding the planning, design, removal and post-implementation monitoring for dam removal projects. Among the many challenges facing dam removal projects are securing funding, determining ownership of both the dam and the property on which the dam is located, site characterization, dealing with unexpected surprises when the dam is removed, finding and involving all stakeholders not only within the vicinity of the dam up both up- and downstream that may be affected and implementing a meaningful public participation process to address concerns about lower water levels, changed aesthetics, and establishing realistic expectations regarding the recovery period for an active construction site and restored dam pool.

2:30pm – 3:00pm: A New Home for Wading Birds-Funds for Wetland Creation

Anisa Pjetrovic, U.S. Environmental Protection Agency

The presentation will discuss various ways to fund wetland creation. National projects that have occurred with the Clean Water State Revolving Fund as the source, will be detailed and described. A connection to resilience and the ecosystem benefits of wetlands will be discussed as the philosophy of connecting habitat creation and funding to advance similar goals in different fields and the importance of collaboration.

Background

“The CWSRF was established by the 1987 amendments to the Clean Water Act (CWA) as a financial assistance program for a wide range of water infrastructure projects, under 33 U.S. Code §1383. The program is a powerful partnership between EPA and the states that replaced EPA's Construction Grants program. States have the flexibility to fund a range of projects that address their highest priority water quality needs. The program was amended in 2014 by the Water Resources Reform and Development Act.

Using a combination of federal and state funds, state CWSRF programs provide loans to eligible recipients to:

- construct municipal wastewater facilities,
- control nonpoint sources of pollution,
- build decentralized wastewater treatment systems,
- create green infrastructure projects, restoration, habitat creation, wetlands
- protect estuaries, and
- fund other water quality projects project mitigation.

Building on a federal investment of \$43.3 billion, the state CWSRFs have provided \$133 billion to communities through 2018. States have provided 39,948 low-interest loans to protect public health, protect valuable aquatic resources, and meet environmental standards benefiting hundreds of millions of people.”

4:00pm – 4:45pm Infrastructure & Nature-Based Solutions Panel

Moderator – Marla Stelk, NAWM. Panelists – Eileen Shader, American Rivers; Alison Souders, U.S. Environmental Protection Agency; Don Waye, U.S. Environmental Protection Agency; Jacob Blandford, Association of Fish & Wildlife Agencies

Nature’s primary mission is to maintain balance. NBS solutions have been around us since the beginning of time – we just have look closely at how these natural systems work, identify the multiple benefits that they can provide, and create innovative ways in which we can restore, mimic, or create collaborative systems that work along side them in order to solve many of today’s environmental crises. This panel will explore challenges and opportunities for implementing nature-based solutions on the ground.

4:45pm – 5:30pm River-Corridor Restoration Panel

Moderator – Brenda Zollitsch, NAWM. Panelists – Erik Michelsen, Anne Arundel County, MD; Staci Pomeroy, Vermont Agency of Natural Resources; Denise Clearwater, Maryland Department of the Environment

This panel will introduce participants to the growing implementation of integrated stream and wetland restoration efforts and share emerging thinking about approaches, barriers, and opportunities to their common practice. The panel will represent different perspectives and experiences with this restoration work and end with an opportunity for dialogue with the audience.

Day 4: Thursday, August 18

10:30am – 11:00am Updating Michigan’s NHD and NWI: A vision for the future

Chad Fizzell, Michigan Department of Environment, Great Lakes, and Energy; Robert Goodwin; Robb Macleod, Ducks Unlimited; Mat Halliday, Ducks Unlimited

The State of Michigan is currently working on updating its National Wetlands Inventory (NWI) and National Hydrographic Dataset (NHD) for the state. Both data sets are extremely important in managing the state’s water resources. When these projects started, both the NWI and NHD mapping efforts were mapping the same linear rivers and streams as well as water bodies using different standards. Initially, the two organizations working on the updates (RS&GIS at Michigan State University updating NHD and Ducks Unlimited updating NWI) traded data layers as they were being developed with limited success due to the different standards. Currently, with the release of NWI version 3 and optional stream delineation within the NWI product, as well as the recently completed elevation-derived hydrography (EDH) specifications, we are working together to produce NWI and NHD products simultaneously to save time and costs, as well as improve compatibility. This presentation will describe the efforts and difficulties with past efforts and describe our thoughts as to how we plan to move forward combining the efforts and standards to produce compatible products, while at the same time lower costs for both projects.

11:00am – 11:30am Advancing wetlands mapping in the New York City Water Supply Watershed using an automated approach informed by LiDAR-derivatives and high resolution orthoimagery

Laurie Machung, New York City Department of Environmental Protection

In 2015, the New York City Department of Environmental Protection (DEP) completed a pilot study demonstrating that incorporation of high-resolution Light Detection and Ranging (LiDAR) data and orthoimagery into automated modeling protocols greatly increased the accuracy and completeness of wetland mapping and connectivity assessment. In 2022, DEP completed a project to update and expand the pilot methodology to the 2,000 square-mile watershed that provides drinking water to New York City and several upstate communities. Automated feature extraction, informed largely by a LiDAR-derived topographic index and high resolution orthoimagery, was followed by manual editing to identify and correct errors of omission, commission, and classification. Next, all mapped wetlands were evaluated for their connectivity to streams and rivers in the local resolution National Hydrography Dataset. Previously undetected connections were mapped, and all wetlands were then attributed as connected or unconnected. Similar to the pilot, mapped vegetated wetland acreage nearly doubled as compared to the NWI in portions of the watershed west of the Hudson River (WOH) and increased by approximately 70% east of the Hudson (EOH). Automated feature extraction protocols appear to map wetlands more accurately EOH than WOH, as significantly more manual editing was required WOH. The connectivity assessment identified over 400 miles of new connecting features, and the percentage of wetlands estimated to be connected to the stream network increased from 90 to 98% EOH, and from 92 to 97% WOH. While the wetland mapping datasets produced from this effort are more complete than the 2005 NWI, errors remnant of automated feature extraction undoubtedly remain. DEP will complete a full accuracy assessment to determine the extent of additional revision required and how to best incorporate these data into watershed protection programs.

11:30am – 12:00pm National Wetlands Inventory Difference Products: Supporting Conservation Through Innovation

Megan Lang, U.S. Fish and Wildlife Service, National Wetlands Inventory and Jeff Ingebritsen

The U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) Program provides users with information on wetland and deepwater habitat location, extent, type and change to promote the understanding and conservation of America's wetlands. The NWI Geospatial Dataset, commonly known as NWI maps, supports a wide array of applications, including those related to climate change resilience, infrastructure planning, habitat and species conservation, energy production and clean drinking water. The American public frequently relies on the dataset, as illustrated by nearly a million website views and 40,000 dataset downloads annually, but resources have not been available to regularly update the entire dataset. To help address this challenge the NWI Program is working with partners to leverage the best of different datasets and techniques to enhance dataset utility and production efficiency. One example of this is NWI's newly developed Difference Product Line, which provides information on where land cover change has most likely occurred since NWI data production. This product line: 1) supports effective investment in the Geospatial Dataset by allowing stakeholders to strategically target geographies in greatest need of updates; 2) empowers dataset users to make critical decisions regarding dataset suitability; and 3) enables more effective coordination with the NWI Program. This presentation will provide an overview of the Difference Product Line, including production methods, suggested applications and data access points. The NWI Program welcomes feedback on this new product line and how it can be refined to best meet your needs.

1:30pm – 2:30pm: Transitions Among Sectors and Retirement: Planning for Institutional Continuity in Wetland Programs

Moderator: Donna Downing, NAWM. Mike McDavit, Retired EPA; Dave Fowler, ASFPM; Karen Menetrey, Rio Grande Return.

This panel explores how organizations and individuals can plan for transitions, where staff either move to another position or retire. The panel will discuss how organizations can plan for continuity as staff and their knowledge departs, as well as how individuals can help ensure they have a satisfying personal transition.

3:30pm – 3:45pm: Mentoring the Future Panel

Moderator: Marla Stelk, NAWM. Matt Schweisberg, Wetland Strategies & Solutions; Donna Downing, NAWM; Jessica Bryzek, WVU; Sindupa De Silva; WVU; Andrew MacKenzie, WVU

This panel will engage both mentors and mentees in an open and honest discussion regarding mentorship experiences, mentorship program needs, and opportunities for shaping and nurturing the incoming wetland management workforce. The audience will have the opportunity to engage in these discussions and share their experiences and recommendations as well as ask questions of the panelists.

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