

# Wetland Mapping Consortium Presents:

## Mapping Thirty Years of Wetland Surface Water Dynamics Using Landsat Satellite Imagery: Implications for Climate Change and Species Management

Presented By:

Meghan Halabisky, Ph.D. with Conservation Science Partners  
and The University of Washington

Amanda Kissel, Ph.D. with Conservation Science Partners



Hosted by the Association of State Wetland Managers  
Supported by the U.S. Fish & Wildlife Service







# Agenda

- **Welcome, General Info & Introductions** - 10 minutes
- **Webinar Presentation** – 40 minutes
  - Meghan Halabisky - 25 minutes
  - Amanda Kissel - 15 minutes
- **Question & Answer** - 20 minutes





# Welcome!

If you have any technical difficulties during the webinar you can send us a question in the webinar question box or call Laura at (207) 892-3399.

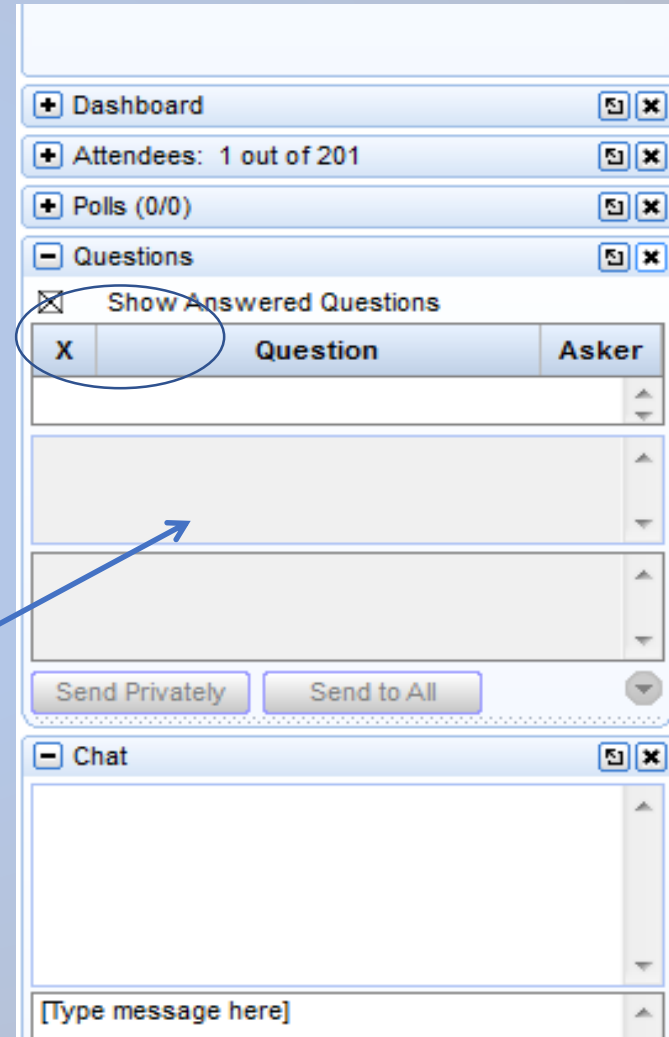
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# Webinar Schedule and Recordings

## Association of State Wetland Managers - Protecting the Nation's Wetlands.



### ASWM Upcoming Webinars

- **Wetland Mapping Consortium (WMC) Webinar: Mapping Thirty Years of Wetland Surface Water Dynamics Using Landsat Satellite Imagery: Implications for Climate Change and Species Management** - 6/20/19
- **EPA Region 10 Tribal Wetland Training Webinar: Balancing Tribal Economic Development, Sustainable Cultural Uses and Wetland/Aquatic Resource Protection and Restoration** - 6/25/19
- **For a complete list of ASWM Webinars, [go here.](#)**

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### Clean Water Act Section 401 Comment Letters Submitted

The Association of State Wetland Managers (ASWM) submitted a comment letter regarding pre-proposal recommendations to the U.S. Environmental Protection Agency as they examine the Section 401 Handbook as directed by Executive Order 13868, Promoting Energy Infrastructure and Economic Growth. ASWM recommends no changes to the scope of water quality review for §401 certifications and no restrictions on the types of conditions that states or tribes may judge to be reasonably appropriate to include in a certification. ASWM also rejects overly restrictive review times. The full comment letter can be read [here](#). ASWM also signed on to a group comment letter regarding EPA's review of the Section 401 Handbook, along with 9 other state associations and non-governmental organizations that can be [accessed here](#).

### New Pipeline Permitting Resources For States and Tribes

ASWM announces the availability of a range of new tools and resources designed to help states and tribes build program capacity related to aquatic resource permitting of oil and gas pipeline projects. Though mostly focused on ASWM's findings and products, the web resource also



**Improving State and Tribal Permitting of Pipeline Projects in the United States**  
ASWM Resources



### ASWM RECENT PUBLICATIONS

- **Wetland Restoration: Contemporary Issues & Lessons Learned**
- **ASWM Wetland Communications Case Studies Project Report**
- **Government Liability for**



# Webinar Schedule and Recordings

## ASWM Pipeline Permitting Project Webinar Series



List of Past Pipeline Permitting Webinars

Future Webinars

Past Webinars

## Natural Floodplain Functions Alliance Webinar



List of Past NFFA Webinars

Future Webinars

Past Webinars

## Wetland Mapping Consortium Webinar (WMC) ←



List of Past WMC Webinars

Future Webinars

Past Webinars



# Future Schedule

- **Wednesday, August 14, 2019 – 3:00 PM Eastern**
  - **Mapping Wetland Inundation and Wetland Change using NAIP and Landsat Imagery and Google Earth Engine**
    - Qiusheng Wu, Ph.D., University of Tennessee, Knoxville
    - Dr. Melanie Vanderhoof, USGS
- **Wednesday, September 11, 2019 – 3:00 PM Eastern**
  - **Minnesota Wetland Inventory Update: Lessons Learned and Future Directions**
    - Steve Kloiber, Minnesota Department of Natural Resources





# Webinar One-Stop Mapping

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## WETLANDS ONE-STOP MAPPING

The Association of State Wetland Managers in collaboration with Virginia Tech's Conservation Management Institute (CMI) and the U.S. Fish and Wildlife Service's Northeast Region created Wetlands One-Stop Mapping to provide easy online access to geospatial data on wetlands and soils produced by federal and state agencies. The U.S. Fish and Wildlife Service (FWS), through its National Wetlands Inventory (NWI), has produced wetland geospatial data for most of the country. While some states post data on their own sites, there is not a single place to go for these data. Wetlands One-Stop Mapping provides links to these and other websites. It provides online access to classification tools for adding hydrogeomorphic-type to wetland inventory data and the results of NWI+ projects (maps and reports). The geospatial information is linked to aerial imagery (and topographic maps) through ESRI's ArcGIS (including ArcGIS Explorer) for easy viewing of wetlands, their characteristics, and functions for areas where NWI+ data are available.



The website also provides links to other federal and state websites that contain information on wetlands and geospatial wetland data. Among the national datasets accessible via Wetlands One-Stop Mapping are the NWI's wetlands mapper, USDA's web soil survey, USGS's national hydrography data and hydrologic units (HUCs). Links are also provided to NaturaServe Explorer and the U.S. National Vegetation Classification Hierarchy Explorer along with guidance on how to extract descriptions of wetland plant communities from those sites for specific areas of interest.

## Wetlands One-Stop Mapping Links by Subject

### NWI

- National Wetlands Inventory (NWI)
- FWS Wetlands Mapper
- Wetland Primer
- Federal Standards & Funding for Wetland Mapping
- National Data Sets & Information

### NWI+

- NWI+ Data & Information
- LL/WW Classification
- NWI+ Data Layers
- NWI+ Mapper
- NWI+ Reports

### States

- State Wetland Mapping Summaries
- State Wetland Program Websites & Data

### Training

- Wetland Mapping Training

### Reports and Publications

- Reports & Publications

### What is NWI+?

NWI+ was a regional initiative by the Northeast Region of the U.S. NWI+ Fish and Wildlife Service's NWI Program. It was supported by the NWI through regional mapping projects funded by the U.S. Fish and Wildlife Service and federal and state cooperators from the mid-1990s to 2015. It began as a regional demonstration initiative in how NWI data could be enhanced with hydrogeomorphic attributes for landscape position, landform, water flow path, and waterbody type (LLWW descriptors) to increase the functionality of NWI data for better characterizing wetlands, for predicting wetland functions at the landscape or watershed level, and for assessing the impact of wetland changes on wetland functions. The expanded database and its outputs were called NWI+ data as the results go beyond the standard NWI mapping. Production of NWI+ data was a special project of the NWI with work mostly in the Northeast Region but also undertaken by some states (e.g., Colorado, Georgia, Montana, and New Mexico) in other Regions when they were updating NWI data. While the demonstration was successful and NWI+ or similar data

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- NWI+ Mapper
- NWI+ Reports

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- State Wetland Program Websites & Data

### Training

- Wetland Mapping Training

### Reports and Publications

- Reports & Publications
- Other Mapping & Wetland Resources

### Other Resources

- Wetland Plant Community Information
- Wetland Mapping Consortium
- Wetland Classification Image Gallery





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- Certificates are free for members and **\$25 per certificate for non-members** if claimed no later than 60 days from the live presentation. After 60 days, certificates are \$25 regardless of membership status. Certificates must be requested within one year of the live presentation.
- For assistance , please contact **Laura Burchill** [laura@aswm.org](mailto:laura@aswm.org) or (207) 892-3399.



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- For a detailed description of benefits, [click here](#).

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<https://www.aswm.org/join-aswm>





# Today's Moderators

**Bill Dooley**

**Policy Analyst**

**Association of State  
Wetland Managers**



# Presenters



Meghan Halabisky, Ph.D.  
Conservation Science  
Partners and The  
University of Washington



Amanda Kissel, Ph.D.  
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# Changing Over to Presenter's Computer



# Questions?



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**Thank you for your  
participation!**

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