



# Healthy Wetlands, Healthy Watersheds: leveraging state wetland restoration and protection programs to improve watershed health

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# Project Team

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# Project Advisory Workgroup

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- ▶ Rebecca Dils, U.S. EPA Office of Water
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- ▶ Lisa Hair, U.S. EPA Office of Water
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- ▶ Jennifer Henaghan, American Planning Association
- ▶ Jennifer Johnson, New England Water Environmental Association
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- ▶ Nicholas Miller, The Nature Conservancy
- ▶ Jack Morgan, National Association of Counties
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- ▶ Doug Norris, Minnesota Department of Natural Resources
- ▶ Jim Pendergast, ASWM Advisor (former EPA Wetlands Division Deputy Director)
- ▶ Andrew Robertson, Saint Mary's University of Minnesota
- ▶ Jessica Turba, Iowa Homeland Security and Emergency Management Division
- ▶ Brian Wolff, Indiana Department of Environmental Management



# Wetland Restoration: Contemporary Issues & Lessons Learned

## #5: Separation of Wetland & Stream Restoration

- Wetland and stream restoration are still largely addressed separately
- Wetland projects determined to be a “success” by all wetland scientists can have serious negative impacts on stream and floodplain function - the same occurs for stream restoration projects



# Healthy Wetlands as Part of Healthy Watersheds

## STARTING POINT

- ▶ Wetlands provide essential ecosystem services
- ▶ Roles for wetland protection, restoration, enhancement and creation in improving overall watershed health
- ▶ Roles for both traditional and innovative projects
- ▶ Increasing use of hybrid systems
- ▶ Need for integrated approaches
- ▶ Need to “Lift up the hood” on integration successes



*Photos in this presentation are from Wikimedia Commons*

## Association of State Wetland Managers' HWHW Project

- ▶ Developed Eight State Program Integration Case Studies
- ▶ Completed Nine Watershed Project Data Inventories and One Page Fact Sheets
- ▶ Delivered 7 Webinars via NFFA
- ▶ External Watershed Project Planning Resources
- ▶ Coming Soon: Additional Resource on Considerations for Measures of Integration Value



## Selection Criteria for HWHW Case Studies

- ▶ State wetland programs actively integrating with one or more additional resource management programs operating within their state.
- ▶ Watershed projects including wetlands; involving multiple partners; at least 50 acres in size; addressing a regional or statewide watershed issue; designed to achieve multiple benefits



- Demonstrable direct or indirect impacts of integration on planning/implementation
- Outcomes documented using formal or informal performance measures.
- Preference for ability to provide cost-benefit insights

# Distribution of State Program Integration Case Studies



State	Type of Wetland Program Integration
Missouri	Cross-Agency Planning to Include Wetlands
Nebraska	Wetland Restoration as Part of Basin Rehabilitation for Fisheries
Minnesota	Wetlands in Watershed Planning: Minnesota's One Watershed, One Plan
New Mexico	Wetlands Integrated into NPS Planning and 319 Projects
Minnesota	Groundwater Appropriations and Surface Water Permitting
Vermont	Wetland Restoration as Part of TMDL/319 Work
Vermont	Statewide Integrated Water Quality Monitoring Program
Indiana	Stormwater-Wetland Joint Permitting

*Increasing  
level of  
integration*



# Distribution of Watershed Integration Projects

- ▶ Iowa (Beaver Creek Watershed)
- ▶ Oregon (Johnson Creek Watershed)
- ▶ Maryland (Anacostia Watershed)
- ▶ Florida (Upper St. John's River Basin)
- ▶ Minnesota (Vermillion River Watershed)
- ▶ Texas (Lewisville Lake Watershed)
- ▶ New Mexico (Jemez River Watershed)
- ▶ Washington State (Yakima River Basin)
- ▶ New York/New Jersey/ Pennsylvania/ Delaware (Delaware River Basin)

11k acres



8m acres



# Initial Findings

- ▶ Wetlands frequently not the driver
- ▶ Wetlands often not the priority
- ▶ Wetlands get in on the fringe
- ▶ Add value to other projects and initiatives
- ▶ Importance of policy, administrative and regulatory supports to create context for integration to occur
- ▶ Look for places to add on wetlands



# Capturing the Benefits of Integration

- ▶ Improved environmental outcomes
  - ▶ Improved habitat, water quality, abundance and size of species, biodiversity
  - ▶ Increased water quality, reduced impairment (nitrates, stormwater)
- ▶ Flood/drought control and improved hydrologic conditions
- ▶ Improved restoration potential and ability to more accurately identify high need areas for protection or restoration
- ▶ Increased use of public resources and recreational activity





## Additional Benefits

- ▶ Increased ability to achieve agency/watershed goals
  - ▶ More efficient and effective shared permitting processes
  - ▶ Greater resource sharing → larger quantities/higher quality projects/greater reach/impact
  - ▶ Increased access to expertise
  - ▶ Greater efficiency in use of field staff
  - ▶ Shared learning leading to professional development and career opportunities
  - ▶ Innovation
- ▶ Increased public/stakeholder awareness and appreciation for watershed issues

# Understanding the Return on Investment

## Costs

- ▶ Start-up and meeting costs
- ▶ Staff time reallocation
- ▶ Creation of shared or complementary systems
- ▶ Cross-training
- ▶ Incentives or paying into shared funds for integrated activities

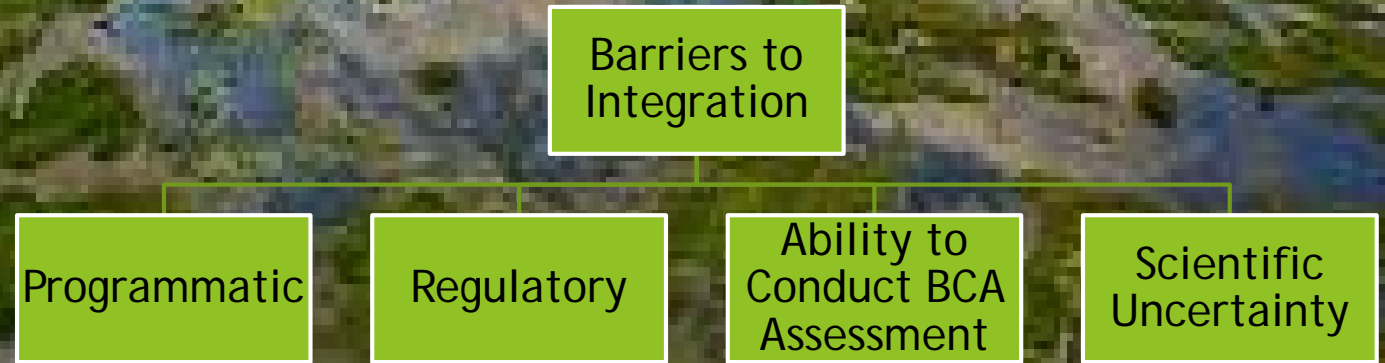


## Benefits

- ▶ Environmental outcomes
- ▶ Improved efficiency
- ▶ Better products/services
- ▶ Increased reach/depth
- ▶ Ability to address larger, watershed-level goals
- ▶ Increased access to resources
- ▶ More buy-in
- ▶ Stronger relationships, resiliency
- ▶ Increased public awareness of and appreciation for watershed-level work
- ▶ Innovations
- ▶ Economic activity

# Common Barriers to Integration

1. Need for programmatic accommodation of integration
2. Regulatory compliance systems not structured for integration activities
3. Challenges of conducting BCA for integration and nature-based solutions
4. Scientific uncertainty



# Best Practices/ Lessons Learned

- ▶ Adopt an integration mindset
- ▶ Develop necessary legislative/ administrative supports
- ▶ Invest in partnership building
- ▶ Start small, build on successes
- ▶ Take the time to conduct careful planning (short- and long-term)
- ▶ Maintain regular and coordinated communications
- ▶ Engage stakeholders early and often
  - ▶ Social component
- ▶ Identify/secure sustainable funding for life of the integration project
- ▶ Secure funding from multiple sources

# Best Practices/ Lessons Learned

- ▶ Provide formalization and structure to fit the scope of the project
- ▶ Develop formal systems for prioritization decisions
- ▶ Build-in programmatic adaptability and flexibility
- ▶ Invest in creating public understanding
- ▶ Manage expectations
- ▶ Build in strong evaluation
- ▶ Work towards greater understanding and use of benefit-cost analysis
- ▶ Use formal measures of integration to demonstrate value



HWWH Project

# Project Products on ASWM Website

1. HWWH White Paper
2. State integration case studies (8)
3. One-page watershed project integration intro factsheets (9)
4. Datasheets for each watershed project in the study (9)
5. Capturing the Value of Integration Document (Soon)
6. Links to watershed project planning resources

[www.aswm.org/watersheds](http://www.aswm.org/watersheds)

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



**ASWM Upcoming Webinars**

- **Members' Wetland Webinar:** Healthy Wetlands, Healthy Watersheds: Helping States and Tribes Develop Watershed-level Wetland Projects and Integrated Programs - 5/15/19

[ASWM's Past Webinars here.](#)

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**Watersheds**

Healthy wetlands are an integral component of healthy watersheds and provide many essential ecosystem services. As defined by the EPA, a [watershed](#) is the land area that drains to one stream, lake or river, affects the water quality in the water body that it surrounds. Individual watersheds share similarities but also differ in many ways. Every inch of the United States is part of a watershed – in other words, all land drains into a lake, river, stream or other water body and directly affects its quality. Because we all live on the land, we all live in a watershed — thus watershed condition is important to everyone.



Increasingly efforts to protect, restore, enhance and create wetlands are being employed to improve overall watershed health and to support climate change adaptation. Both traditional and innovative wetland protection and restoration projects - including hybrid systems using green infrastructure - are being increasingly employed to provide critical ecosystem services and benefits, such as increased flood and drought protection, clean drinking water, and habitat.

*In 2019, ASWM completed a two-year project, entitled **Healthy Wetlands, Healthy Watersheds** to help states and tribes build their capacity around integration efforts that leverage state wetland restoration and protection programs to improve watershed health. The products of this project are listed below under **ASWM Resources for States and Tribes** and include a white paper, state program integration case studies, watershed project integration case studies, and other support resources.*

**ASWM Resources for States and Tribes**

**Healthy Wetlands, Healthy Watersheds: Leveraging State Wetland Restoration and Protection Programs to Improve Watershed Health** (ASWM, 2019)

**State Wetland Program Integration Case Studies** (ASWM, 2019)

ASWM State Wetland Program Integration Case Study: Indiana: Improving Program Efficiency for Wetland and Stormwater Permitting through Joint Management in Indiana

ASWM State Wetland Program Integration Case Study: Minnesota: Integration of Groundwater Appropriations Permitting and Surface Water Permits, Including Wetlands

ASWM State Wetland Program Integration Case Study: Minnesota: "One Watershed, One Plan": An Initiative to Leverage Data to Get Better Results for Clean Water in Minnesota

ASWM State Wetland Program Integration Case Study: Missouri: Cross-Program Wetland Coordination in Missouri

ASWM State Wetland Program Integration Case Study: Nebraska: Incorporating Wetlands into Reservoir Rehabilitation Projects for Fisheries and Other Benefits in Nebraska





# Questions?

For more information:

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