Incorporating Wetlands into Watershed Planning

Wetlands Supplement to the Watershed Handbook

Presented by Kerryann Weaver
Wetlands Branch, Region 5 EPA

November 26, 2014
3:00 pm Eastern Time
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.
Webinar Agenda

Welcome and Introductions (5 minutes)

Presentation (45 minutes)

Question and Answer Session (10 minutes)
Today’s Presenter

Kerryann Weaver
Environmental Scientist
Wetlands Branch
Region 5
US Environmental Protection Agency
Webinar Moderator

Brenda Zollitsch
Policy Analyst
Association of State Wetland Managers
Webinar Tech Check-in

If you are using the telephone to listen to the webinar, please mute both your computer's microphone and speakers.

Please submit your questions for the presenters via the question box.
WEBINAR INFORMATION
Webinar Schedule/Recordings
THE BENEFITS OF ASWM MEMBERSHIP

Members’ Webinar Series on technical wetland topics

*Wetland News*
Online Newsletter

Weekly *Insider’s Edition* news bulletin and blogs

Fee reductions for webinars, workshops and training sessions

Participation in ASWM activities

ASWM’s Wetland Bookshelf

Online Wetland References
Latest Members’ Webinars Posted

September 24, 2014

Ecosystem Service Valuation for Wetland Restoration: What it is, How to do it and Best Management Practice Recommendations

Presented by Marla Stelk, ASWM Policy Analyst

October 20, 2014


Presented by Nicholas Miller and Mark Smith, The Nature Conservancy
Upcoming ASWM MEMBERS’ Webinars

Member’s webinars are generally held each month on the third Wednesday of the month at 3:00 p.m. eastern, 2:00 central, 1:00 mountain, and 12:00 pacific.

December
Science Videography (Two-part Webinar)
Part 1 - Science Communication
Part 2 - Science Video Making for Beginners
Karen McGee, PhD – Scientist Emeritus, USGS

January
Turning Ponds into Wetlands
Tom Biebighauser,
The Wetland Restoration and Training Center

February
Topic TBD – Staten Island Bluebelt Project or UNH Stormwater Center Research?

March
Live Broadcast from the ASWM State-Tribal-Federal Coordination Workshop

April
Results of the Massachusetts Wetland Mitigation Study
Lisa Rhodes - Life Scientist, Mass DEP
INCORPORATING WETLANDS INTO WATERSHED PLANNING

WETLANDS SUPPLEMENT to the WATERSHED HANDBOOK

EPA Region 5, Wetlands Branch
Kerryann Weaver
Purpose

Encourage inclusion of proactive wetland management into watershed plans

Wetlands and watershed health

Landscape level approach

Achieving water management goals

Watershed organizations & local/state agencies
Wetland Functions versus Wetland Values

Wetland Functions

Wetland functions relate to a process or series of processes (the physical, biological, chemical, and geologic interactions) that take place within a wetland. Major wetland functions include those that change the water regime in a watershed (hydrologic function), improve water quality (biochemical function), and provide habitat for plants and animals (food web and habitat functions).

Wetland Values

Values are generally associated with goods and services that society recognizes. Wetlands can have ecological, economic, and social values. It is important to note that not all environmental processes are recognized or valued.

Wetland Basics

Wetland definition

Wetland types
- Forested
- Emergent
- Scrub/shrub

Wetland classification systems
- National Wetland Inventory (NWI)
- Hydrogeomorphic (HGM)
- NWIPlus

What is the NWI?
The National Wetlands Inventory is a database of information used to identify the status of wetlands across the United States. The system contains wetland data in map and digital formats (i.e., geographic information systems, or GIS). Wetlands are classified in the system according to the Cowardin system.

Source: USFWS 2010.
When to Include Wetlands in Watershed Plans

Steps

Planning
- Setting goals
- Characterizing watershed

Implementation
- Design strategies
- R/C/E Techniques

Monitoring
- Progress

Long term management
- Perpetuity
Case Studies

Ohio
Restoration Potential
– Resource phase
– Filter phase

Michigan
Landscape Level Wetland Functional Assessment (LLWFA)
– Enhance
– Prioritize
– Utilize
Enhance

- Create Pre-settlement wetland data
- Enhancing NWI for LLWFA
Prioritize

- Evaluate wetland functions
- W-PAWF

FUNCTIONS:

Flood Water Storage
Streamflow Maintenance
Nutrient Transformation
Sediment and other particulate retention
Shoreline Stabilization
Fish Habitat
Stream Shading
Waterfowl and Waterbird Habitat
Shorebird Habitat
Interior Forest Bird Habitat
Amphibian Habitat
Conservation of Rare and Imperiled Wetlands and Species
Groundwater influence
Utilize Wetlands at Work
Protecting & Restoring Wetlands for Clean Water

WETLANDS WORK FOR US: they filter pollutants, absorb floodwater, provide habitat, and perform a number of other functions that keep our lakes and rivers clean.

YOU ARE INVITED to learn about programs, tools and financial incentives for landowners and public officials to protect existing wetlands and restore degraded or destroyed wetlands.

Join staff from these organizations:
- Natural Resources Conservation Service (NRCS)
- Michigan Department of Environmental Quality
- U.S. Fish & Wildlife Service
- Southwest Michigan Land Conservancy
- Conservation District
- Van Buren County Drain Commission
- Two Rivers Coalition
- And more!

This event will be offered at two times and locations:

Thursday, January 31, 2013
3-5 p.m. at Sorens Nature Center, Benton Harbor
7-9 p.m. at Lake Michigan College, South Haven

Sponsored by the Van Buren Conservation District
www.VanBurenCD.org • 269-657-4030 x5

Dear Landowner:

Over the last century, Michigan has lost more than 50% of its wetlands. As a result, we have seen increased flooding, degraded water quality and threats to public health and safety. The Van Buren Conservation District is leading a local effort to safeguard our area by targeting wetland restorations and protection.

Why You Received This Letter: As part of our project, a study was completed which found extraordinary wetland resources on land that appears to be owned by you or the organization you represent. We invite you to join us for a short program on Thursday, January 31st to discuss protection and restoration options.

Why You Should Attend: There can be financial advantages to protecting or restoring wetlands on your property. Programs exist that cover restoration costs and pay you for each acre of wetland restored. There can be significant tax benefits to protecting wetlands with a permanent conservation easement. Learn more about these opportunities and bring this letter to be eligible to win a local foods gift basket!

What is the Study? A Landscape Level Wetland Functional Assessment (information enclosed) was completed to rank current and historic wetlands based on the significance of the functions they provide (for example, soil retention, floodwater storage, fish habitat, etc.). These functions protect our agricultural resources, our water quality and, ultimately, our livelihoods.

Please join us at one of the following times on Thursday, January 31st to learn more:

- 3-5:00 p.m. at Sorens Nature Center (3300 North Benton Center Road, Benton Harbor)
- 7:00-9:00 p.m. at Lake Michigan College (125 Veterans Boulevard, South Haven)

Representatives from key organizations/agencies will be present to answer questions. There will be no admission fee and light refreshments will be provided. If you’re unable to make it but would like information about wetland restoration or protection, please don’t hesitate to contact us.

Thank you for your time. We hope to see you there!

Sincerely,

Matt Meetsma and Erin Fuller
Waterhed Coordinators
Van Buren Conservation District
1093 S. Michigan Avenue, Paw Paw, Michigan 49079
Phone: 269-657-4030 x5 • Fax: 269-657-4813
www.VanBurenCD.org
Successful Watershed Applications

• Galien River Watershed
  – Functional data used to identify areas where restoration can benefit the reduction of nonpoint source pollutants.

• Black River and Paw Paw River Watersheds
  – Inventory of natural features includes wetlands and ecological services.
  – Selection of priority protection and restoration areas based in part on wetland function for watershed improvement.

• North Branch Clinton River
  – Functional data used to identify areas where restoration can benefit the reduction of nonpoint source pollutants. Location has been found for restoration and a 319 grant awarded for the project.
Case Studies

Virginia
Pamunkey River
Virginia Wetland Restoration Catalog

Utah
Farmington Bay - Great Salt Lake Ecosystem Alternatives Futures Analysis

Pamunkey River Watershed Wetland Priorities by Parcel

Source: Weber and Bulluck 2010

Source: Sumner et al. 2010.
Appendices

A: Federal Programs and Acts Affecting Wetlands in the United States

B: Example Assessment Data and Sources

C: Level 1-3 Assessment Methods

D: Restoration, Creation and Enhancement Techniques
Next Steps

• Good representation but not fully inclusive
• Providing more implementation examples
  – Identification of a specific restoration project
  – Implementation of restoration projects
  – Highlight benefits to water quality, quantity or habitat
• Additional watershed plans incorporating wetlands in Region 5
  – Pike River (WI)
  – Milwaukee River (WI)
  – Root River (WI)
  – Duck-Pensaukee River (WI)
Finding the Supplement

Watershed Handbook (includes a link to the Supplement)
http://water.epa.gov/polwaste/nps/handbook_index.cfm

Wetlands Supplement (direct link to PDF file)

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