INCORPORATING WETLANDS INTO WATERSHED PLANNING

WETLANDS SUPPLEMENT to the WATERSHED HANDBOOK

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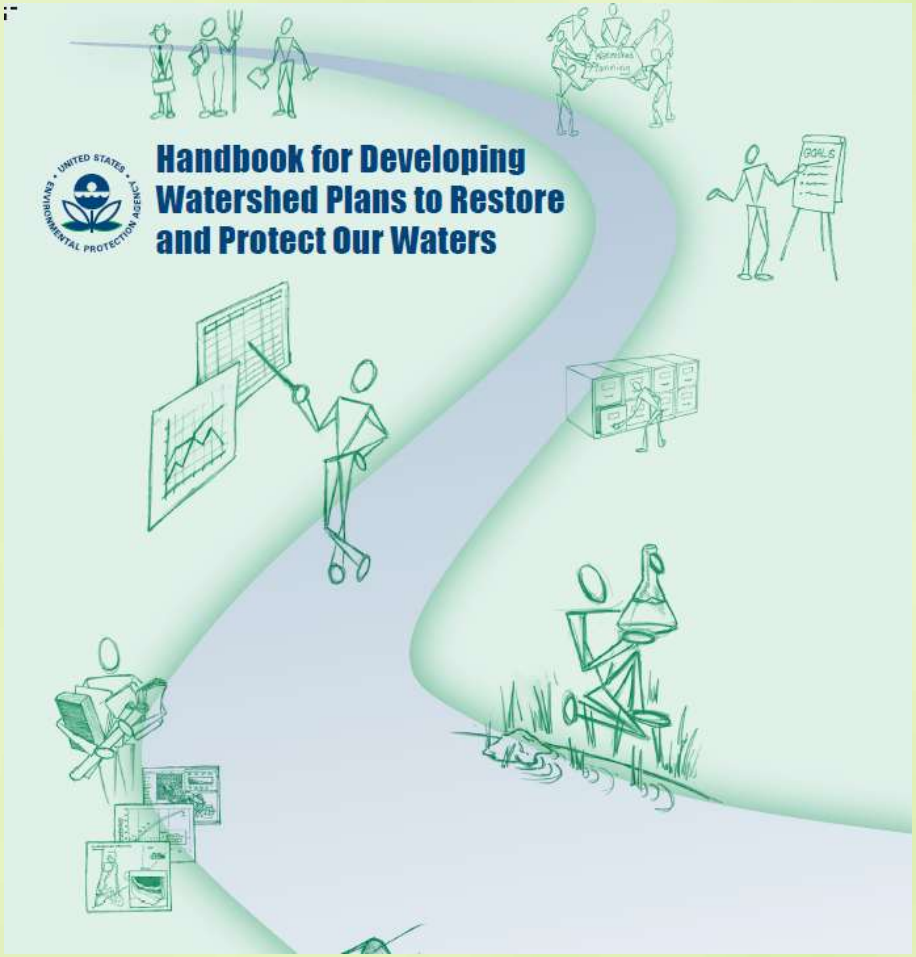
Watershed Handbook - 2008



*Poll Questions

Purpose

Encourage inclusion of proactive wetland management into watershed plans

Wetlands and watershed health

Landscape level approach

Achieving water management goals

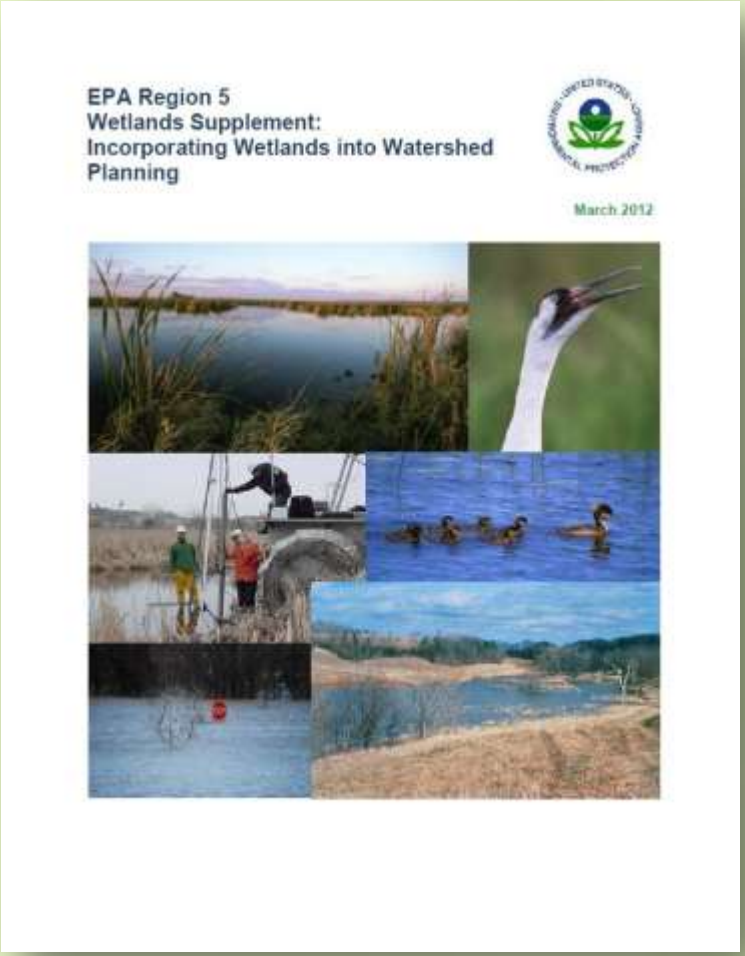
Watershed organizations & local/state agencies

Photo: PG Environmental, LLC

Photo: Staff, Michigan Dept of Natural Resources

Photo: PG Environmental, LLC

Region 5 Supplement



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.

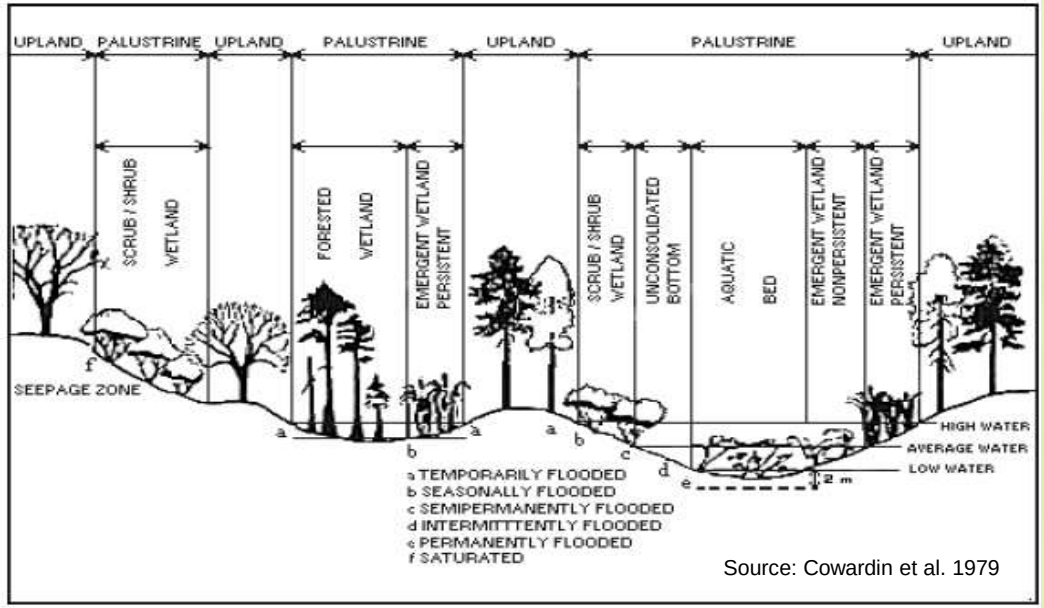
Sources: Novitzki et al. 1997; Sheldon et al. 2005.

Wetland Basics

Wetland definition

Wetland types

- Forested
- Emergent
- Scrub/shrub



Source: Cowardin et al. 1979

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

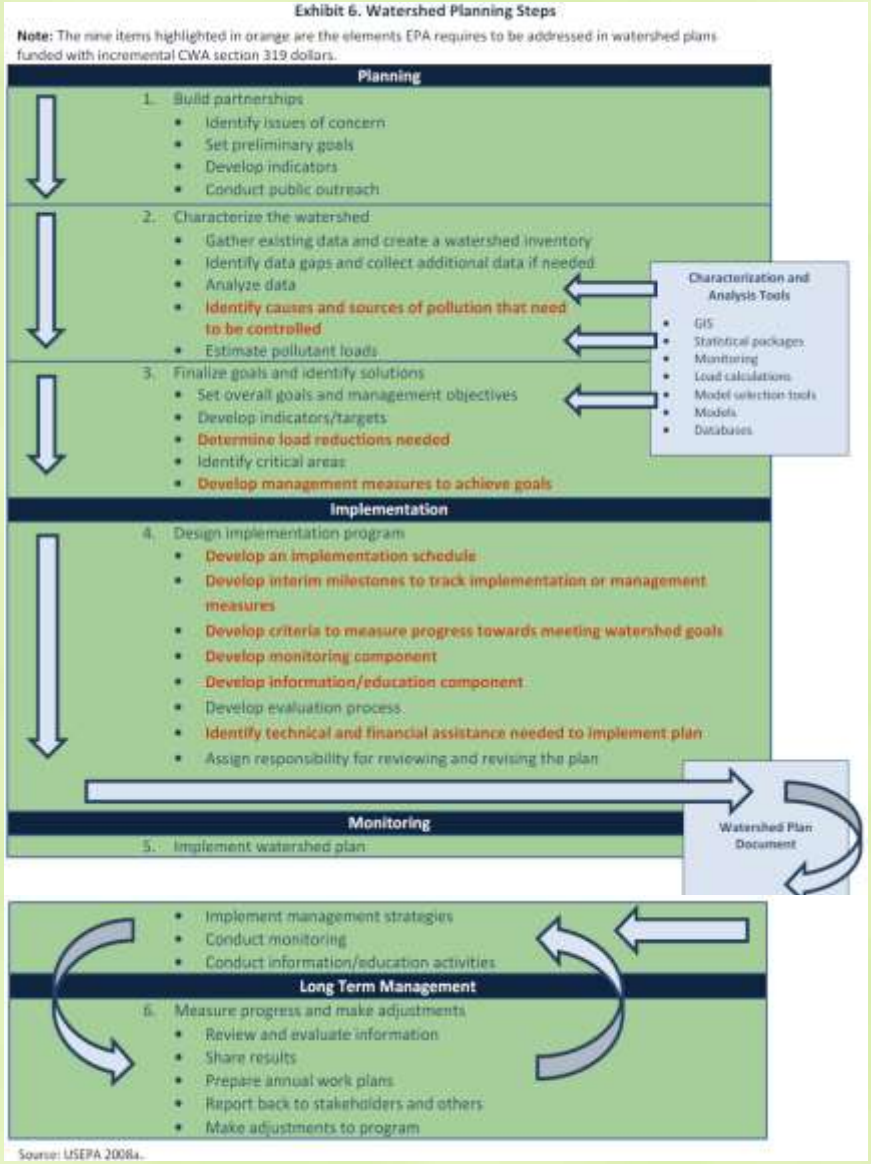
Steps

Planning
- Setting goals
- Characterizing watershed

Implementation
- Design strategies
- R/C/E Techniques

Monitoring
- Progress

Long term management
- Perpetuity

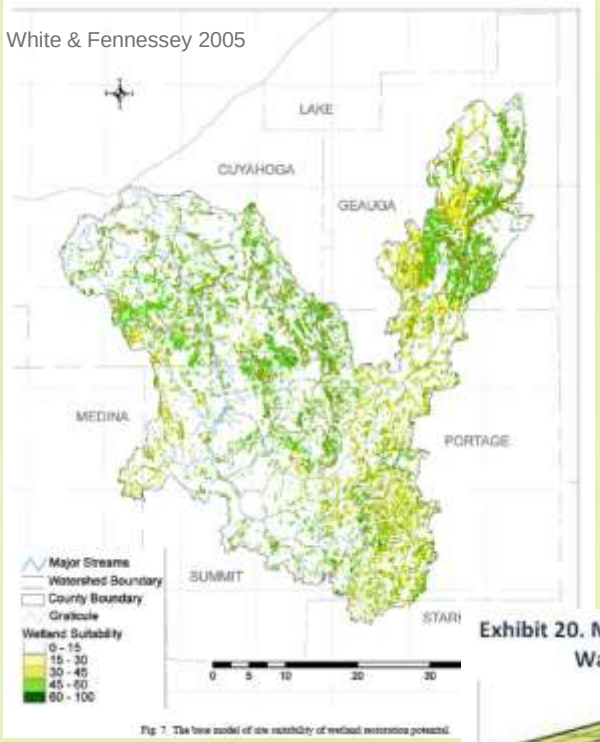


Case Studies

Ohio

Restoration Potential

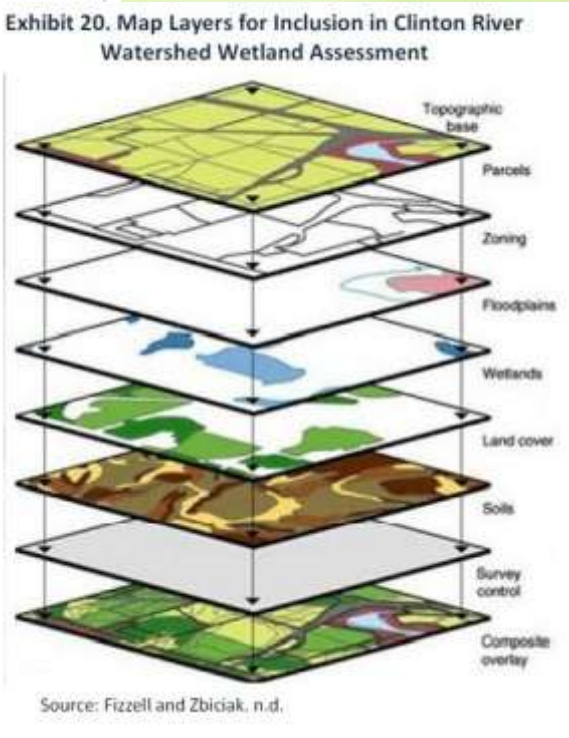
- Resource phase
- Filter phase



Michigan

Landscape Level Wetland Functional Assessment (LLWFA)

- Enhance
- Prioritize
- Utilize



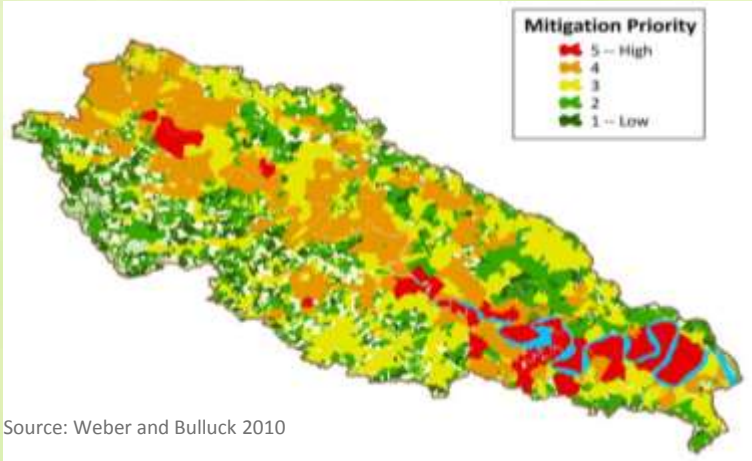
Case Studies

Virginia

Pamunkey River

Virginia Wetland Restoration Catalog

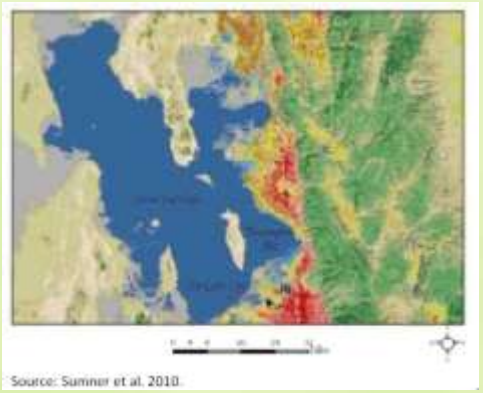
Pamunkey River Watershed Wetland Priorities by Parcel



Source: Weber and Bulluck 2010

Utah

Farmington Bay - Great Salt Lake Ecosystem Alternatives Futures Analysis



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

Finding the Supplement

http://water.epa.gov/polwaste/nps/handbook_index.cfm

http://www.epa.gov/region5/agriculture/pdfs/wetlands-in-watershed-planning-supplement-region-5-201302.pdf

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*Watershed Academy – September 17 12 – 2pm CST
www.epa.gov/watershedwebcasts