

Reference Wetlands and Field Indicators of Wetland Functions

Reference Wetlands

Representative of wetlands in the area where restoration is planned

- Different levels of stress
- Realistic expectation

Reference standard

- The best of the bunch
- Least stress
- Minimally disturbed
- ~Best attainable condition

Reference Wetlands

Classify wetland type

- NWI type
- LLWW type – landscape position, landform, water flow path, waterbody type
- Assess wetland condition
 - Condition of surrounding area
 - Landscape context (land cover/land use)
 - Width of vegetated “buffer”
 - Distance from road
 - Water quality of water source
 - Stressors (ditches, etc.)

Field Evaluation for This Afternoon

Classify the wetland

- NWI Type
- LLWW Type

Characterize properties

- Vegetation
- Soils
- Hydrology

Identify stressors (not for this class)

Look for signs of performance of functions

Field Indicators of Functions

Surface Water Detention

- Standing water
- Water-stained leaves
- Water marks
- Silt marks
- Sediment deposits
- Algal deposits
- Iron deposits
- Pit and mound topography
- Aquatic biota

Stream Flow Maintenance

- Source of stream

Nutrient Transformation

- Organic soil
- Histic epipedon
- Mineral soil with thick dark surface
- Wetland is seasonally flooded or longer

Carbon Sequestration

- Like Nutrient Transformation
- Woody plants
- Perennial herbs


Sediment/Particulate Retention

- Sediment deposits
- Silt marks
- Water-carried debris

Bank and Shoreline Stabilization

- Borders a waterbody
- Dominated by woody plants or persistent emergent

Provision of Habitat for Fish and Aquatic Invertebrates

- Wetland along a waterbody with depth >2m at low water and is semipermanently or permanently flooded
 - Known fish nursery or spawning area
 - Evidence of fish or aquatic inverts
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Provision of Habitat for Waterfowl and Waterbirds

- Freshwater marsh
- Swamp adjacent to waterbody
- Direct observations of bird use

Provision of Habitat for Other Wildlife

- Vernal pools
 - Wetland complex of two or more types
 - Logs in water
 - Direct observations
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