



Huntley Meadows Central Wetland Restoration

May 30, 2007
Public Forum



Project Understanding

- Why Restoration Considered Now?
 - Change in Beaver Activity
 - Drought
 - Canada Goose Overgrazing
 - Historic Sedimentation
 - Decreased Species Diversity



A Dead Forest Brings New Life

Beavers built dams and flooded this area. Rising water drowned once-healthy trees, creating a haven for wildlife among the holes, snags, and fallen logs.

Pileated Woodpecker

Barred Owl

Wood Duck Nest Box

Tree cavities are in great demand. Nesting boxes enhance habitat for wood ducks.

Dead trees near trails are
open for visitors' safety

Painted Turtle

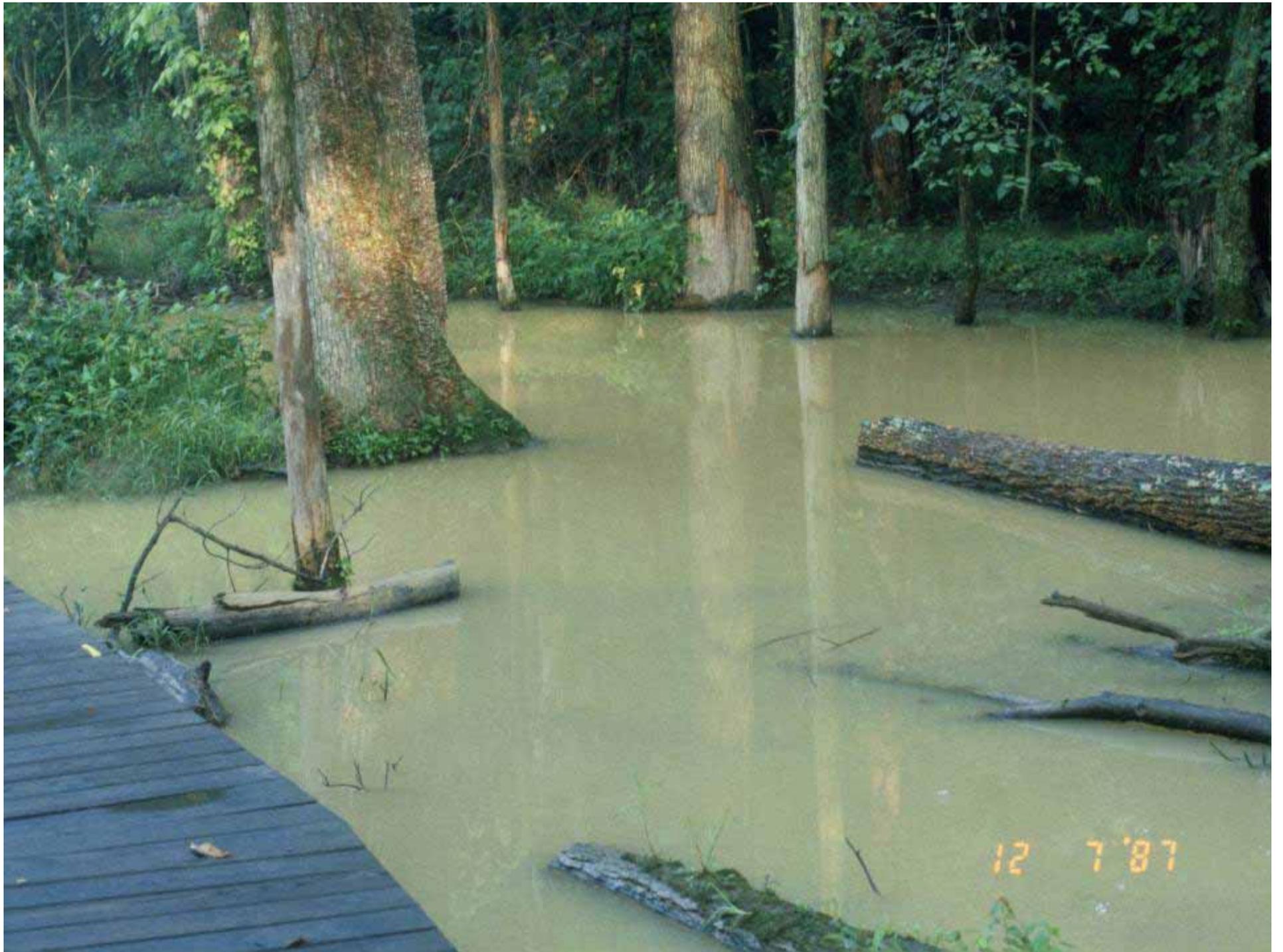
Yellow-Crowned Night Heron

Northern Water Snake













Project Understanding

- Beginning Communications
 - System and Land Use History
 - Hydrology
 - Vegetation
 - Species Diversity and Population Numbers
- Site Walks
 - Informal Conversations





Project Process

- Brainstorming
 - Guidelines/Concepts for Restoration Ideas
 - Past Reports and Data
 - Potential Restoration Components
- Data Collection
- Concept Development



Data Collection

- Initial Tasks

- Topography

- One Foot Contours
 - Barnyard Run Meander Evident
 - Open Area/Mudflat
 - Very Flat with Little Topographic Relief

- Geotechnical Analysis of Sedimentation

- Silt Layer Over Grass/Topsoil Layer
 - Ranged Generally From 1" – 7" in Thickness
 - Average 4" Thickness
 - Up to 18" by Beaver Dam
 - Not Structurally Useable/Useful to Backfill Dam



Data Collection

- Vegetation Mapping
 - In Process
 - Increased Aggressive/Invasive Species
- Hydrology
 - In Process
 - Rain Gauge
 - Stream Flow Logger



Concept Development



- No Action – Water Levels Managed by Beaver and Vegetation Will Undergo Changes Without Human Interference
- Complete Silt Removal, Dam Construction, Plantings
- Selective Silt Removal, Low/Wide Dam Construction, Plantings



Concept Development



- Keystone Species Habitat
 - Animals: Crayfish, Muskrat, Beaver, Canada Goose
 - Plants: Cattail, Soft Rush, Buttonbush thickets and Others
- Special Interest Species Habitat
 - Animals: Least Bittern, American Bittern, King Rail, Pied-billed Grebe, Yellow Crowned Night Heron, River Otter
 - Plants: Marsh Mallow, Swamp Rose and Others



















Concept Development

- Design Elements
 - Water Control Structure
 - Dam: Low and Wide, Earthen Composition, Structural Core, Planted, Visually Unobtrusive
 - Water Control Device
 - Partial Silt Removal
 - Multiple Off-line Pools up to 5-feet Deep
 - Silt Disposal in Upland Meadow Area







Concept Development

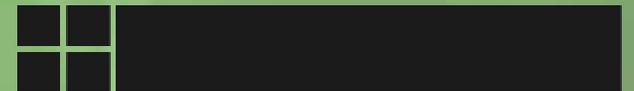
- Design Elements
 - Habitat Features
 - Haul-Out Logs
 - Coarse Woody Debris/Logs
 - Pools
 - Nest Boxes
 - Plantings
 - Variable Water Level
 - Silt Retention/Habitat Pond on Barnyard Run

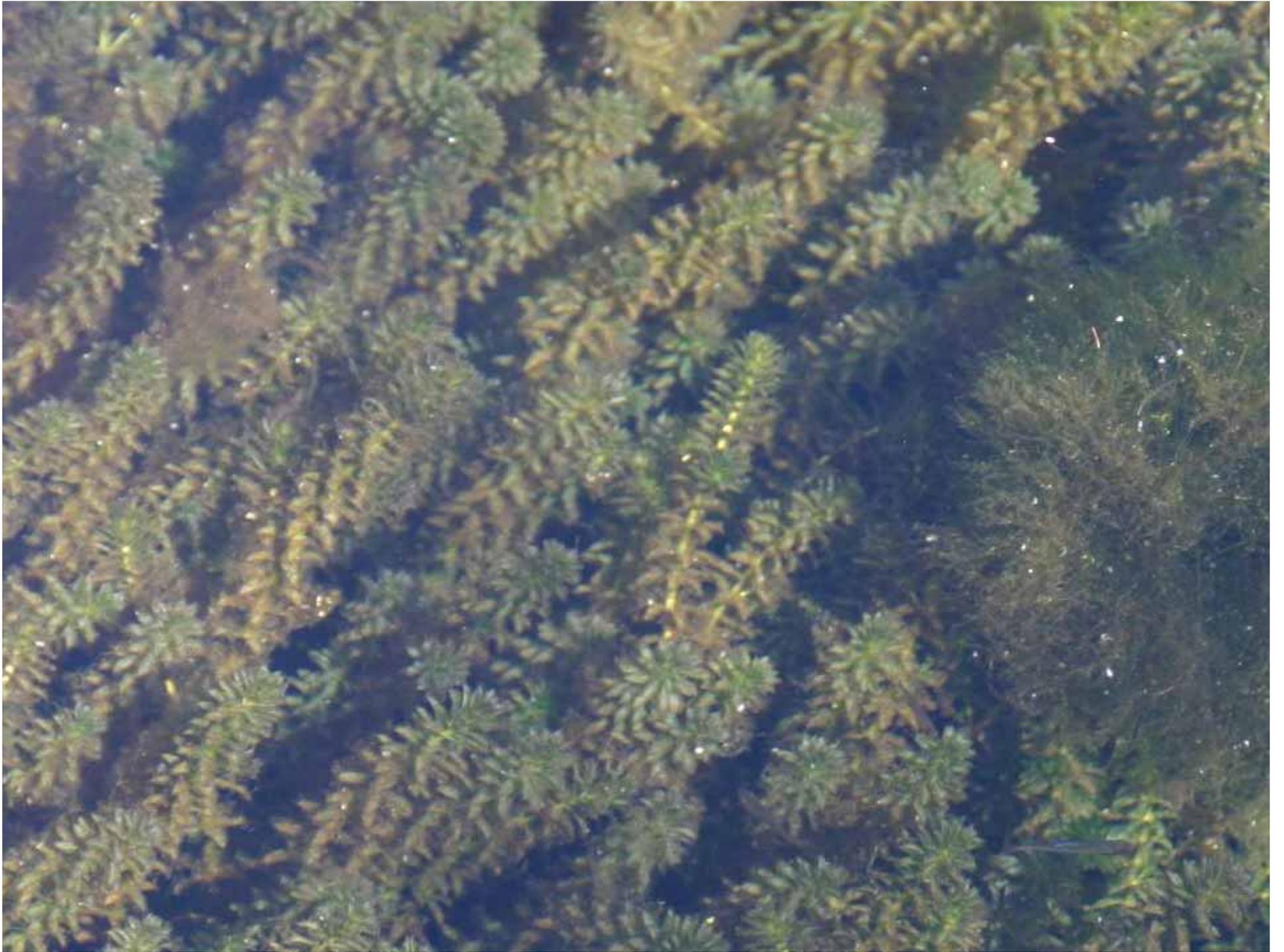




Management Plan

- Low Maintenance/Natural as Possible
- Hydrology Drawdown - Irregular
 - Yearly
 - Long Term Cycling
- Aggressive/Invasive Vegetation
 - Hydrilla, Rice Cut-Grass, Cattail, Phragmites
- Aggressive/Invasive Animals
 - Canada Geese, Deer, Snakehead Fish











Summary

- Loss of Habitat
 - Uncontrolled Water Depth
 - Siltation
 - Canada Goose Grazing







Summary

- Restoration of Habitat
 - Water Control
 - Silt Removal
 - Revegetation
 - Vegetation and Wildlife Management





- OVERALL SITE ACTIVITIES:**
- WETLAND RESTORATION PLANTINGS
 - AGGRESSIVE / INVASIVE SPECIES MANAGEMENT

Huntley Meadows

Wetland Restoration Concepts









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