Chicago Park District (Park 564)
Wetland Restoration at Big Marsh

IAFSM 2016
• Regional Overview
• Site History & Industrial Legacy
• Current Conditions
• Project Goals
• Restoration Challenges
• Project Status
CALUMET OPEN SPACE RESERVE PLAN

LAND MANAGEMENT
- COSR Management Units
- Other Open Space
- Municipal Boundaries

Legend:
- Scale: 1:200 Feet

Management Units:
- Calumet Prairie
- Calumet Wetlands
- Lake Calumet
- Little Calumet River
- Wolf Lake
- Grand Calumet River
Calumet Open Space Properties

- Van Vlissingen Prairie (~135 acres)
- Big Marsh (~300 acres)
- Indian Ridge Marsh
- Hegewisch Marsh
• 1980’s-Waste Management Proposed Landfill
• 1985-Black-crowned Night Heron Rookery Discovered
• 2008-Purchased by City of Chicago
• 2011-Transferred to Chicago Park District
2012 Conditions

- Open Water (98 Ac.)
- Emergent Wetland (68 Ac.)
- Wooded Upland (64 Ac.)
  (Buckthorn & Cottonwoods)
- Degraded Wet Meadow (16 Ac.)
- Wet Meadow (7 Ac.)
- Old Field (26 Ac.)
- Exposed Slag (25 Ac.)
Big Marsh Habitat Restoration

- 190 acres of wetland, open water, and upland.
- Plan includes trails, amenities, and second entrance/parking lot.
- Assumes control of Big Marsh water levels.
Big Marsh Bike Park

- 50 acres
- Maximize use of exposed slag areas
Project Goals

• Stabilize Wetland Hydrology
• Removal of Invasive Vegetation
• Wetland and Upland Habitat Restoration
• Establish hemi-marsh conditions
• Nature & People Compatibility
• Eco-recreation: (Bike Park and Trails)
Restoration Challenges
Drainage from adjacent properties: Railroad Marsh (North) Coke Plant (East) Landfill (South)

Breached dam, ditch and old control structure, Stony Island culvert, and blocked outlet channel to Lake Calumet

High water levels: open water, little emergent wetland
Invasive Species

- Phragmites EVERYWHERE.
- Loosestrife, sweetclover, knapweed throughout.
- Buckthorn dominating wooded upland areas

Photo courtesy of Thomas Photography
Exposed Slag & Alkaline Leachate

- Low permeability, High pH
- Phyto-remediation experiments
Challenges (continued)

• Poor (absent) soils / planting medium
• Sensitive / T&E Species
• Environmental Contamination – human health & ecotoxicological risks
• Funding
Project Status

• Greencorps Clearing of Buckthorn (Winter 2014-2015)
Project Status

• Hydrology Restoration
• Design (May 2015)
• Construction (October 2015)
Existing Hydrologic Profile

Fixing Big Marsh Hydrology
Fixing Big Marsh Hydrology

Proposed Hydrologic Profile
Project Status

• Aerial Spraying of Invasive Species (September 2015)
• Prescribed Burns (Spring/Fall 2016)
Project Status

• Habitat Restoration Design (July 2015)
Habitat Restoration

Wetland Communities
Habitat Restoration

Heron Rookery
Habitat Restoration

Prairie Communities

Keith Jones
Habitat Restoration

Slag Wetland
Native Grass Prairie

(Within Bike Park Trails)
Habitat Restoration

Woodland & Savannah Communities
Habitat Restoration

Shrub & Willow Thicket Communities
## Project Partners:

Chicago Park District | V3 Companies | The Wetlands Initiative

## Contributing Stakeholders:

| Alliance for the Great Lakes | Argonne National Lab | Audubon Chicago Region |
| Bird Conservation Network | Chicago Audubon Society | Forest Preserves of Cook County |
| Greencorps | Hitchcock Design Group | Illinois Department of Natural Resources |
| IDNR Coastal Program | Openlands | Southeast Environmental Task Force |
| The Field Museum | The Nature Conservancy | Trails for IL |
| University of Illinois Chicago | Urban Wildlife Institute | US Forest Service |
| US Fish & Wildlife Service | US Geological Survey | |