



Connecting Wetland
Restoration and
Community Engagement
to Stormwater
Management

BRADFORD KASBERG ||
AUDUBON GREAT LAKES

Introduce:

- **Our vision + purpose**
- **Community engagement efforts**
- **Wetland restoration successes**

Explore:

- **How to connect wetland restoration to stormwater planning, projects, agencies**
- **How to connect community engagement to CSC**

114 years of conservation impact





Wild Indigo Nature Explorations

Building lasting relationships between urban communities of color and their local natural areas.

- Engages multigenerational communities of color with outdoor recreation, environmental education, and stewardship opportunities
- Employs local, culturally competent, program coordinators and docents.
- Facilitates culturally relevant, co-designed programs
- Identifies and mitigates barriers for engaging in natural areas (language, transportation, gear, special needs, etc.)



Wild Indigo Nature Explorations

- Builds genuine relationships with community leaders.
- Provides professional development or compensated opportunities for community members to take action in organizing/implementing outdoor education, recreation or stewardship activities.
- Aims to empower participants to move from awareness to action.

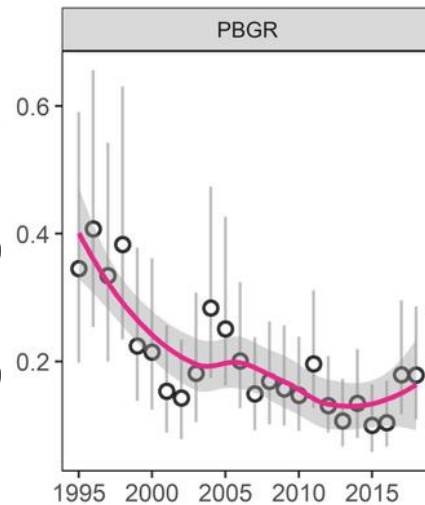
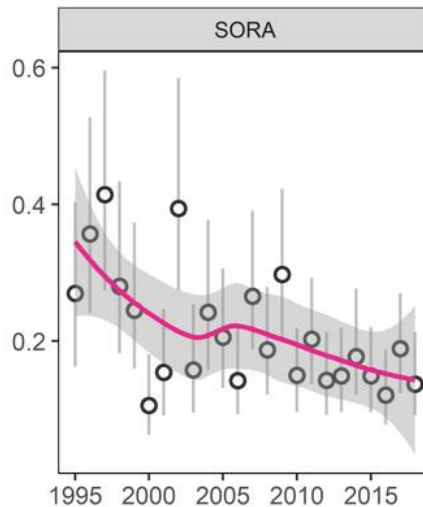
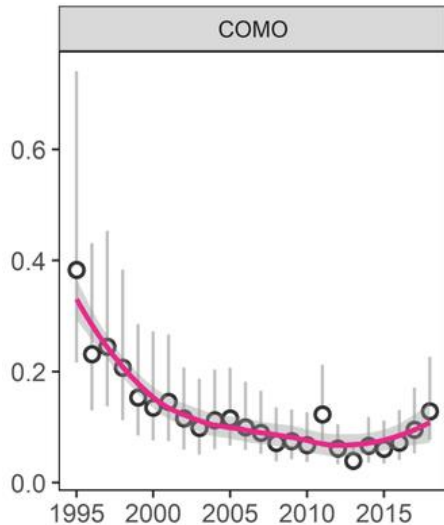
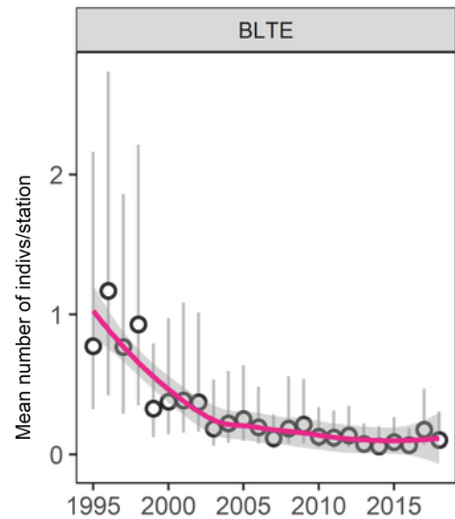


Where birds thrive, people prosper

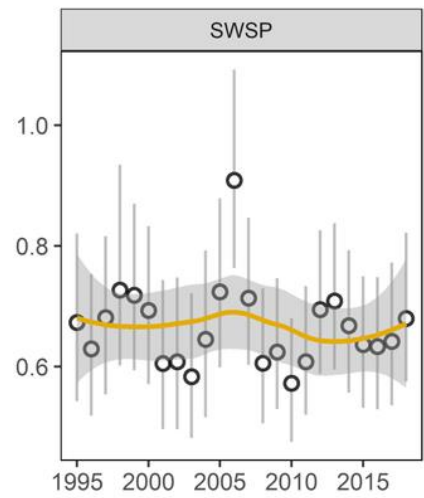
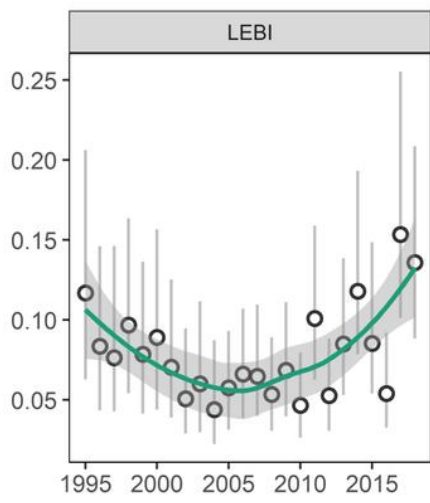
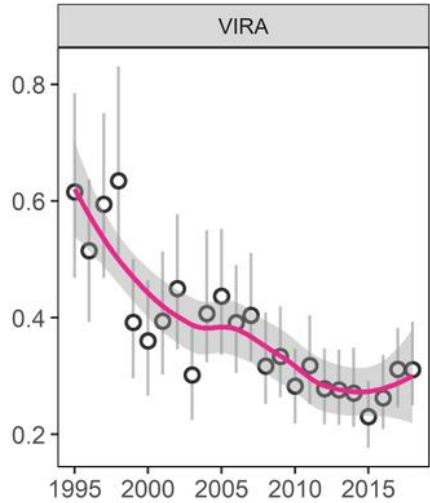
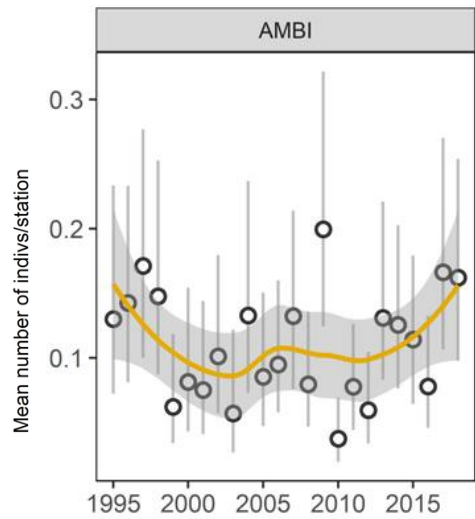
Protect birds and the places they need now and in the future

Conservation informed by science and owned by local communities

Translational ecology: directly serves natural resource managers and decision makers



Pink indicates significantly declining trend



Pink indicates sig. declining trend; yellow indicates stable trend; green indicates sig. increasing trend



**Black-crowned
Night Heron**



Least Bittern



Virginia Rail



Sora



King Rail



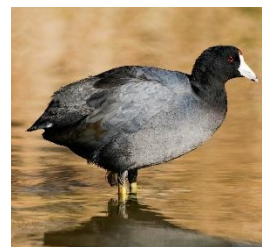
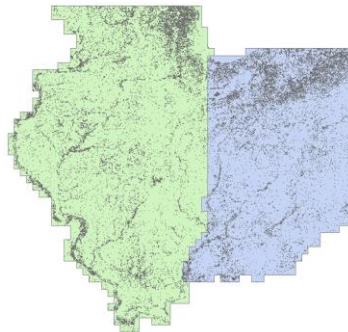
**Little Blue
Heron**



**Yellow-headed
Blackbird**



**Common
Gallinule**



American Coot



Snowy Egret



Black Tern



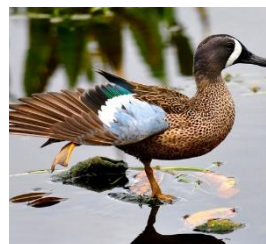
**Yellow-crowned
Night Heron**



**Pied-billed
Grebe**



**Swamp
Sparrow**



**Blue-winged
Teal**



**American
Bittern**



Marsh Wren



IL Endangered
IN Endangered

**Black-crowned
Night Heron**



IL Threatened
IN Endangered

Least Bittern



IN Endangered

Virginia Rail



Sora



IL Endangered
IN Endangered

King Rail



**Little Blue
Heron**



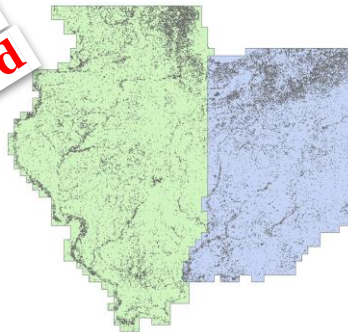
IL Endangered
IN Endangered

**Yellow-headed
Blackbird**



IL Endangered
IN Endangered

**Common
Gallinule**



American Coot



Snowy Egret



IL Endangered
IN Extirpated

Black Tern



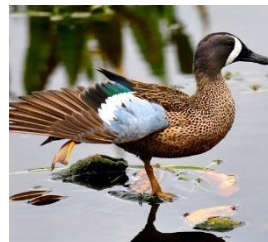
**Yellow-crowned
Night Heron**



**Pied-billed
Grebe**



**Swamp
Sparrow**



**Blue-winged
Teal**



IL Endangered
IN Endangered

**American
Bittern**



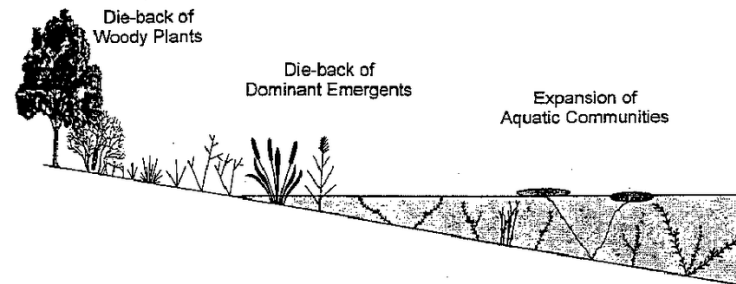
IN Endangered

Marsh Wren

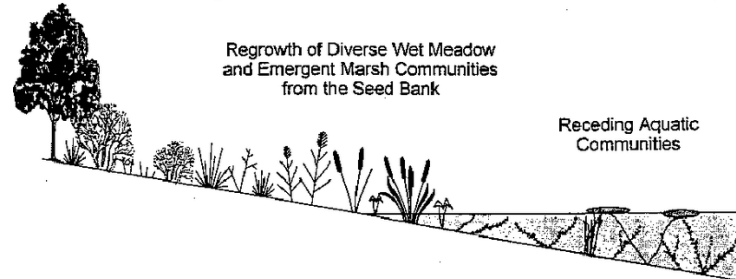
Creating hemi-marsh conditions

- **Wetlands are inherently dynamic systems**
- **Seasonal, annual fluctuations of water are key**
- Restoring urban hydrology and drainage patterns is high priority
- **Herbivory (muskrats, beaver) keep patches of open water**

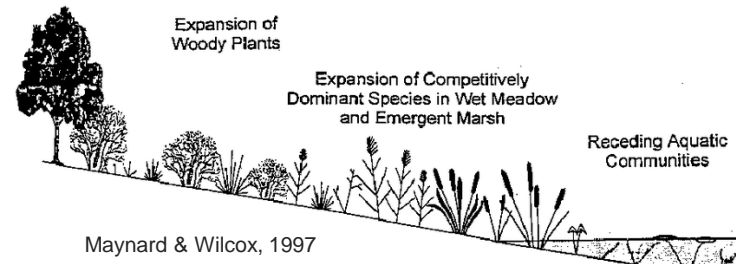
Year 1 - High Water Levels



Year 2 - Receding Water Levels






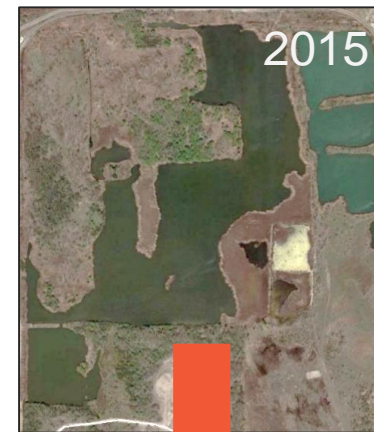
Year 3 - Low Water Levels



Restoration Works

Big Marsh – Species Detected During Surveys

		2015	2016	2017	2018	2019
	American Bittern				X	X
	American Coot			X	X	
	Black-crowned Night-Heron	X			X	X
	Blue-winged Teal			X	X	X
	Common Gallinule			X	X	X
	Least Bittern			X	X	X
	Marsh Wren	X	X	X	X	X
	Pied-billed Grebe				X	
	Sora			X	X	X
	Swamp Sparrow			X	X	X
	Virginia Rail			X	X	X





Great Lakes Restoration Projects



Underway



Coming online in 2020

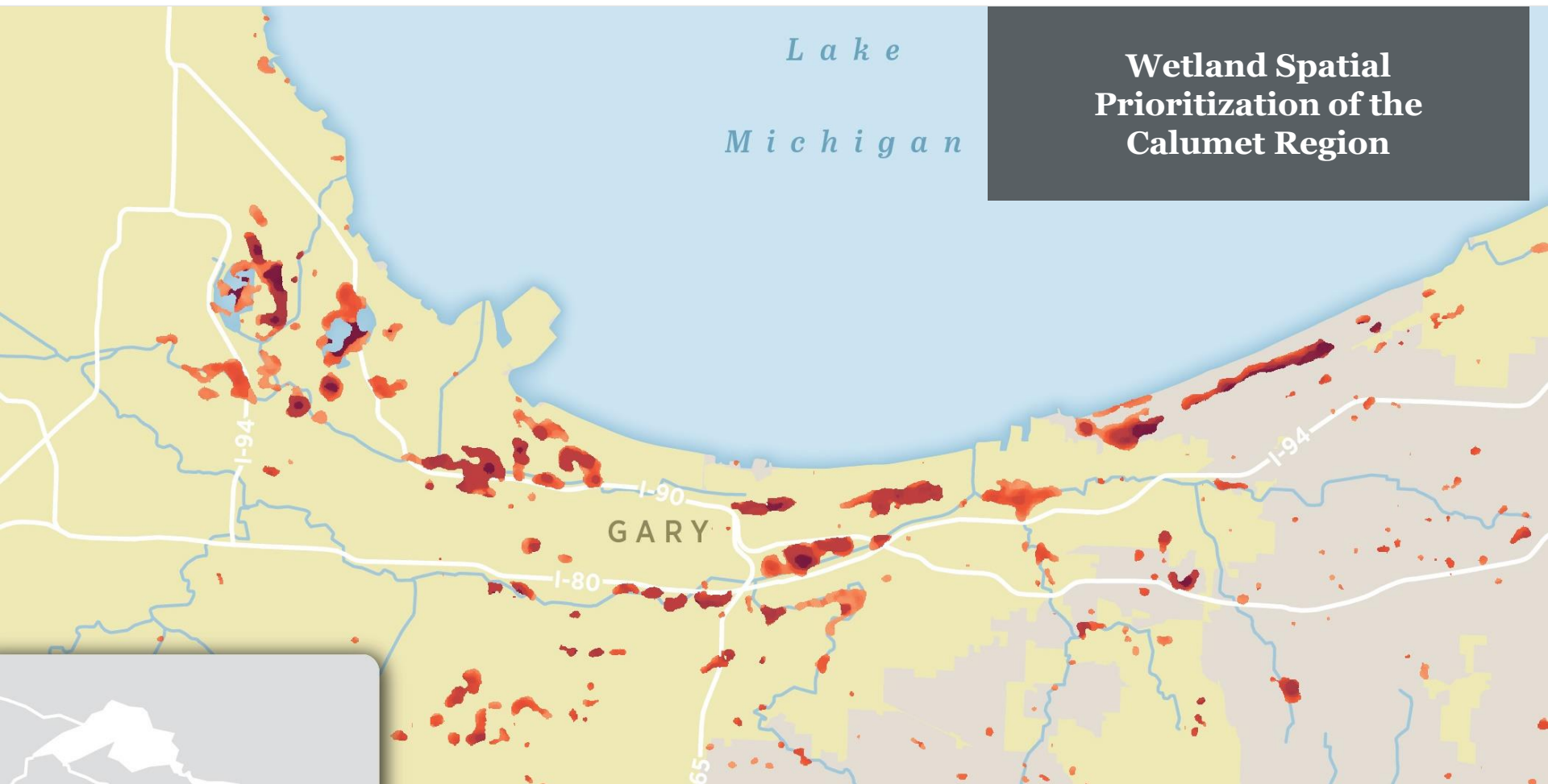


Highest future priority



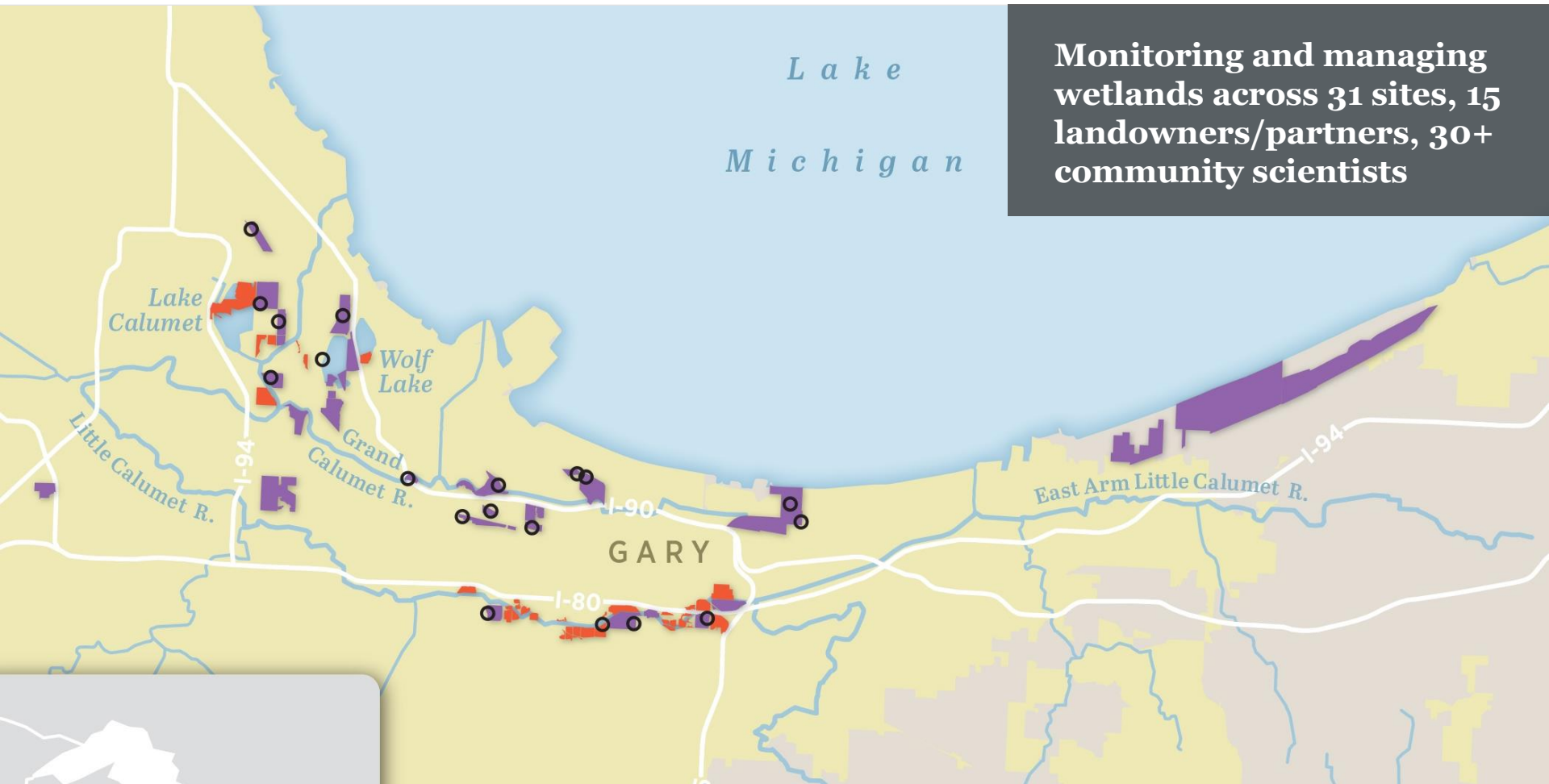
Lake
Michigan

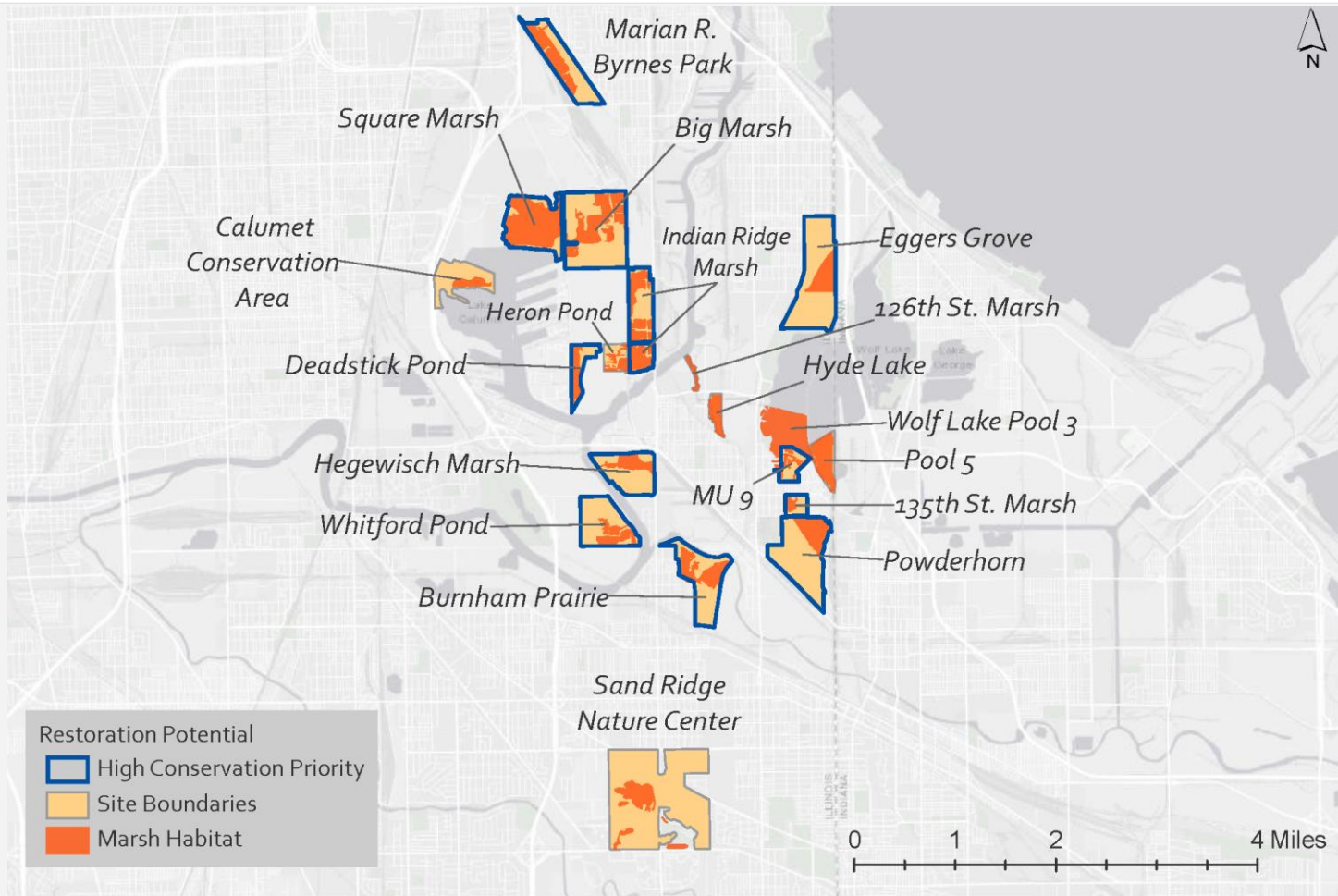
Wetland Spatial Prioritization of the Calumet Region

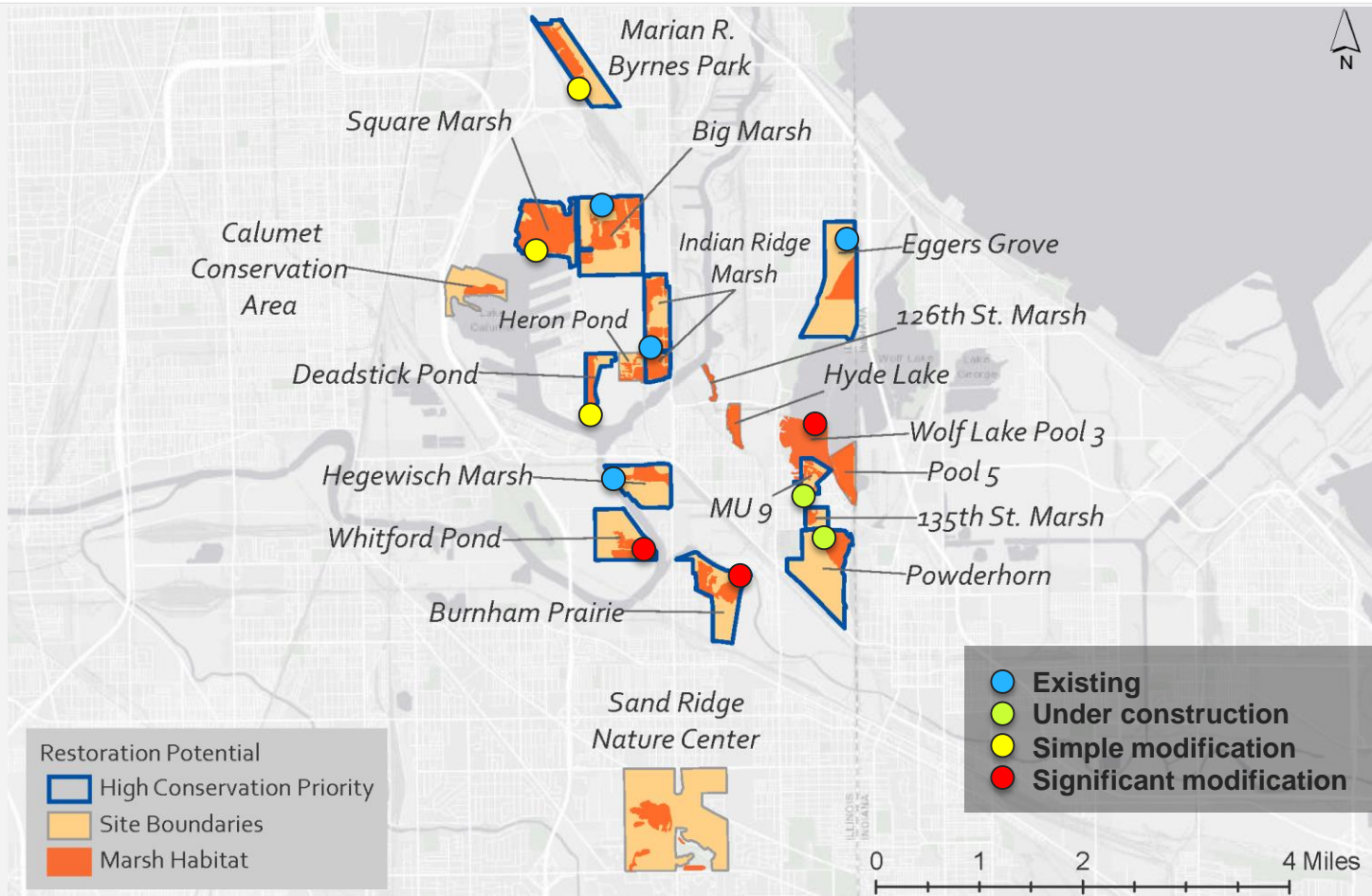


L a k e
M i c h i g a n

**Monitoring and managing
wetlands across 31 sites, 15
landowners/partners, 30+
community scientists**





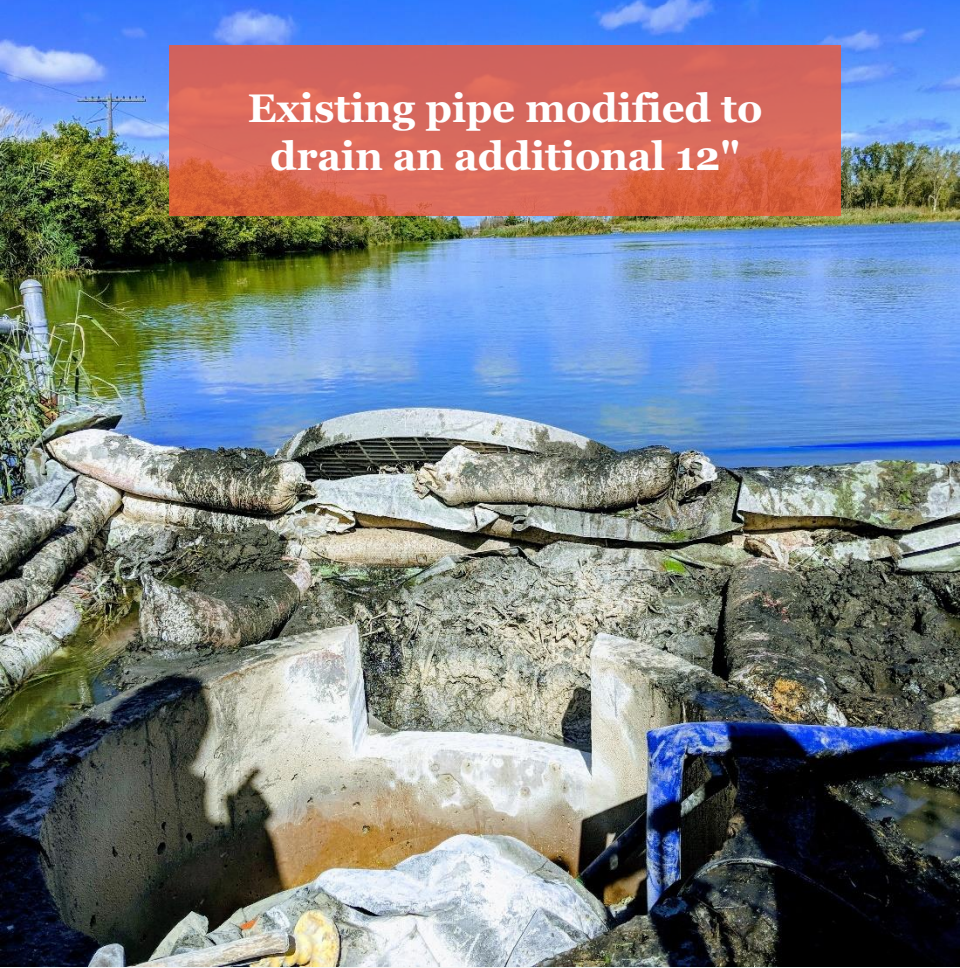


A construction site showing a deep, narrow trench being excavated. The trench is filled with a layer of gravel and a large blue pipe is visible. A yellow excavator is positioned at the top of the trench. The surrounding area is dirt and brush.

**Eggers Grove:
reconstructed drainage to
improve water control**

A wide, shallow waterway with a yellow excavator in the background. The waterway is bordered by dirt and brush. In the distance, there are power lines and a body of water under a blue sky.

**3-tiered gate system to
drain + maintain wetlands
at varying levels**



Existing pipe modified to
drain an additional 12"



December 2018: Marsh
drained by 7"

Wolf Lake and
Powderhorn Marsh
1939



FPCC 2018 analysis @ Powderhorn:

- Hydrologic study to explore restoration options of the park
- 90% completion of engineering, design for restoration-

NOAA-GLC grant:

- \$980k
- Final 10% design documentation
 - Adjustments to design, improve fish passage
- Construction of the project



Wolf Lake

Vacant land (bought by FPCC)

136th St Marsh

Dune Swale habitat

55 acre shallow pool

Powderhorn Lake

William W. Powers State Recreation Area

Burnham Woods

Powderhorn Marsh and Prairie

Powderhorn Lake Forest Preserve

Burnham Prairie Nature Preserve

Grand Calumet River

INDIANA

Olympia Lanes

Pulaski Park

rd (Toll road)

912

90

Powder Horn Lake

**Strategies for aligning
work more closely with
CSC?**

**How to frame bird-focused
natural area work as
urban stormwater
improvement, and vice
versa?**





Thank you!