

Overview of EWN/NNBF projects around the Great Lakes

Survey123 Crowdsource Output

Joseph P. Miller, USACE LRC



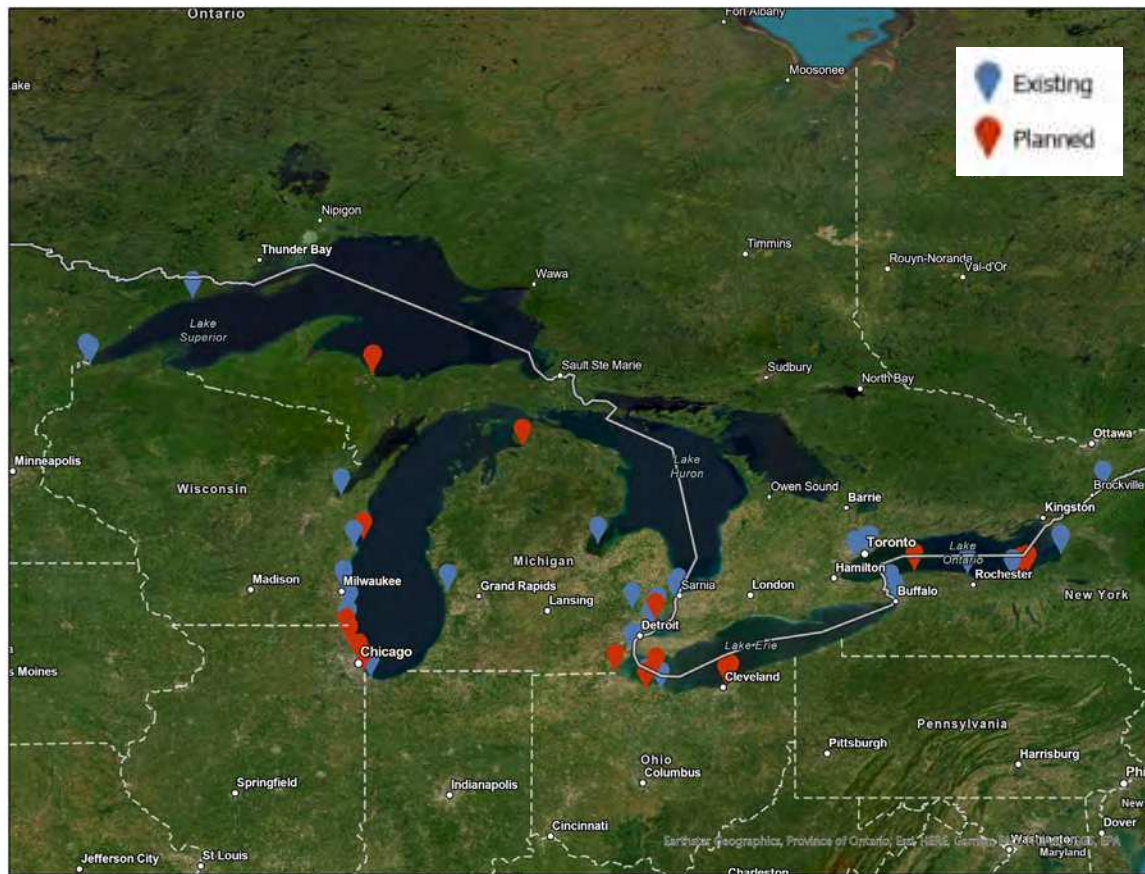
The Benefits of Collaboration and Crowdsourcing

- Build a Network for advice and feedback
- Consolidate information
- Lessons Learned
- Innovate and expand based on what has been accomplished

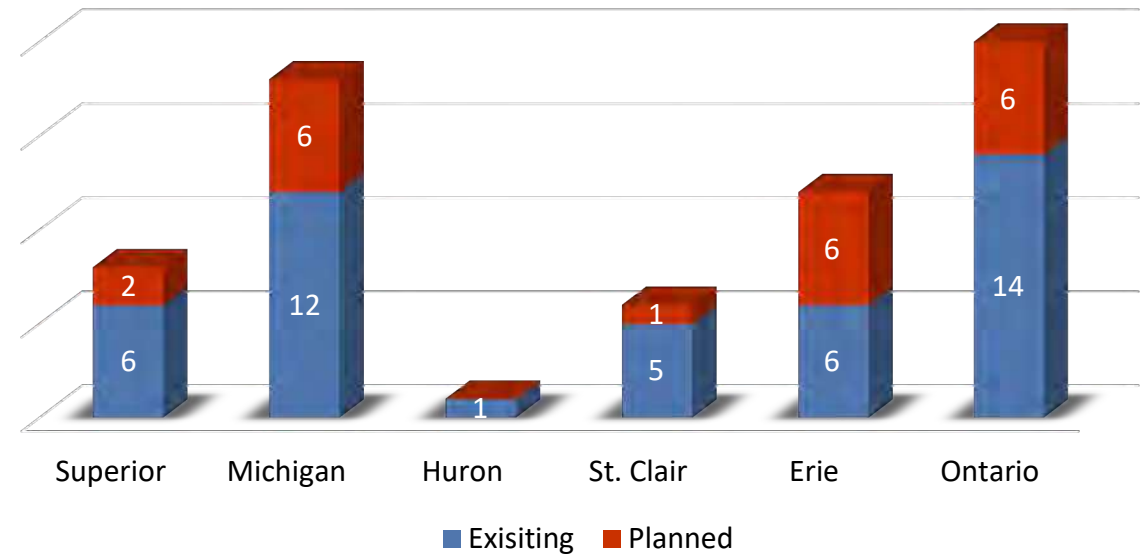


Survey Results

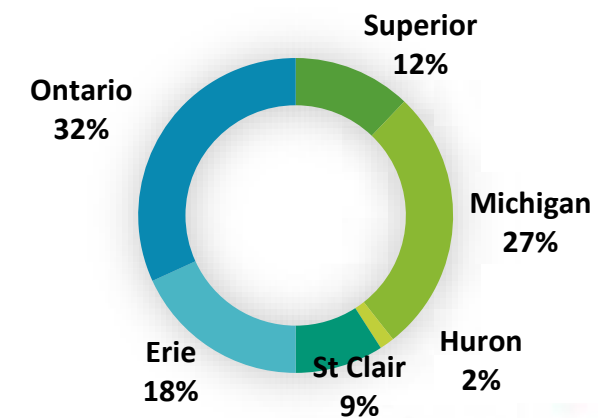
We received 65 project submissions in the Great Lakes.



Project Distribution

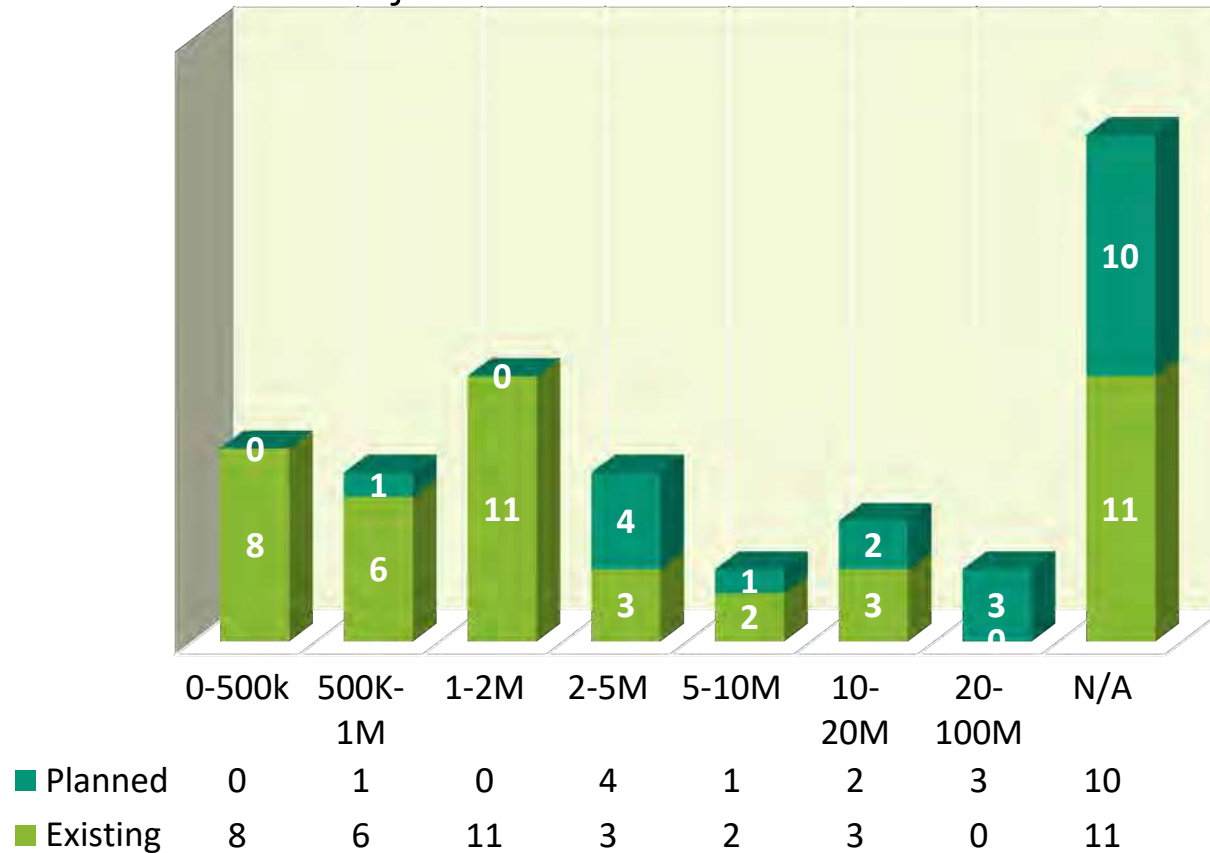


Project Percentage by Lake

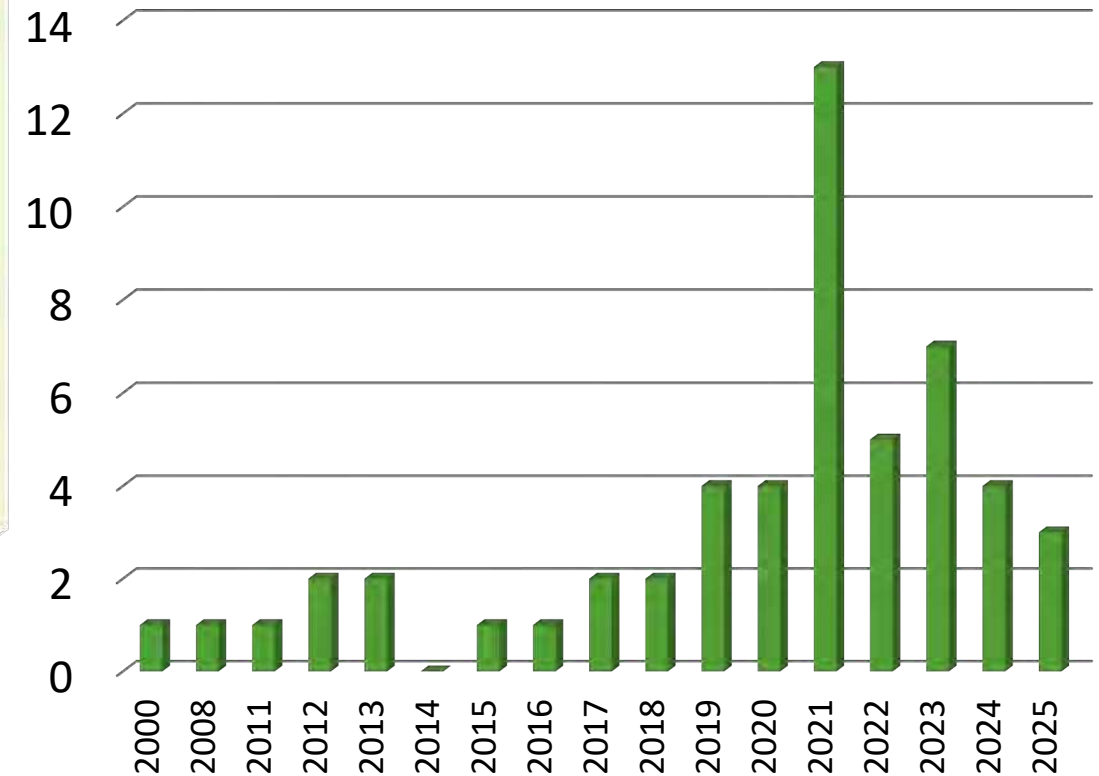


Survey Results

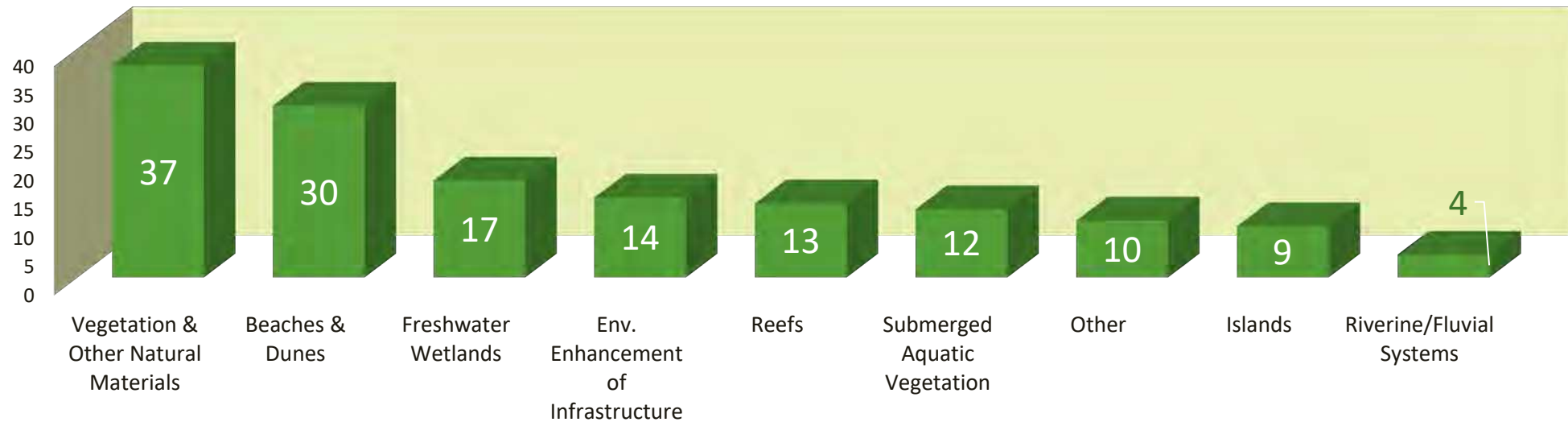
Project Cost Distribution



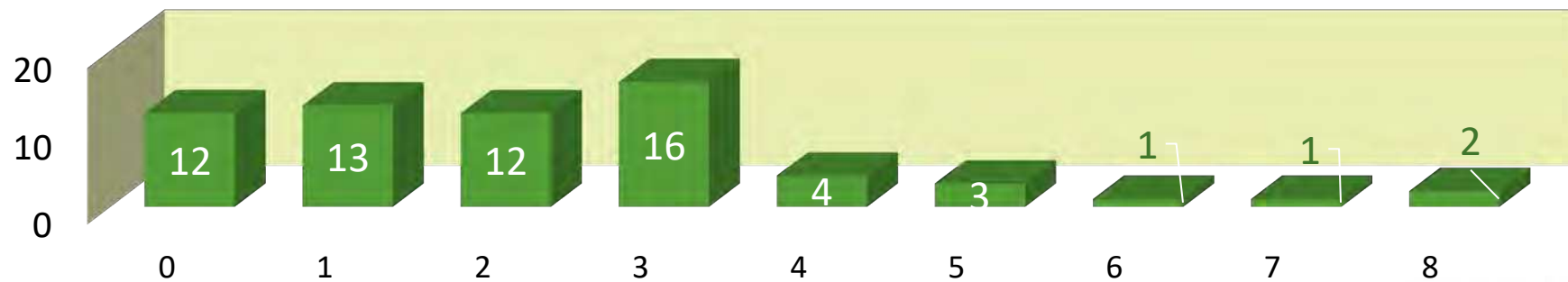
EWN Projects By Year



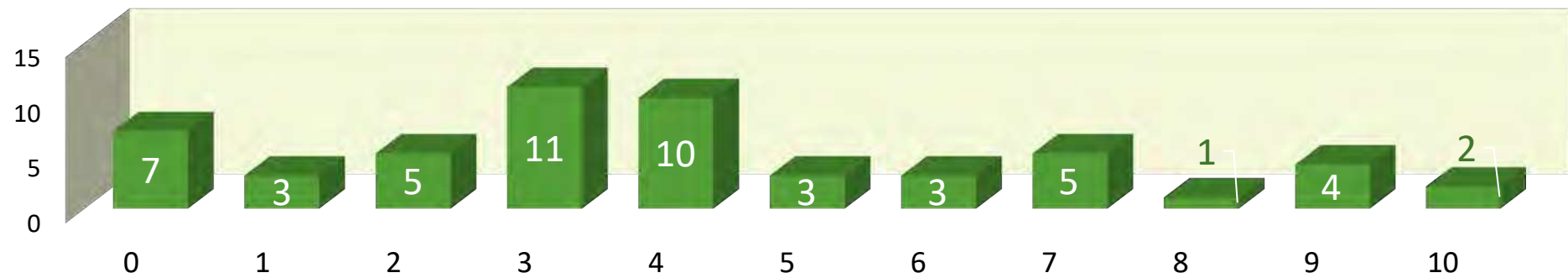
Project Categories



Categories Reported Per Project



Project Benefits





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ERDC
Engineered Research and Development Center



Engineering With Nature Geographic Project Mapping Tool (EWN ProMap)

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The Engineering With Nature Project Mapper (EWN ProMap) is a geography-based data viewer, or interactive on-line catalog, for projects that fit within the EWN context. The aim of the mapper is to allow users to explore information that can be helpful in developing EWN ideas during the planning of their own projects (see Figure 1). Projects can be viewed based upon infrastructure type (e.g., dredging project, breakwater, lock & dam) or by their intended environmental or social benefits (e.g., beach nourishment, habitat creation).

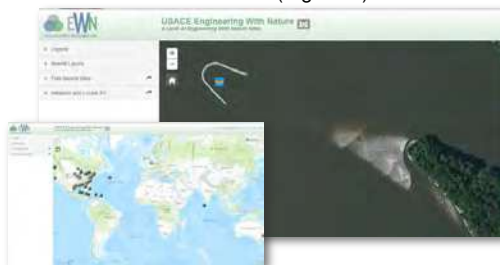
EWN ProMap Content and Capabilities:

- Over 175 projects; includes PIANC Working with Nature certified projects
- Most projects are in the United States with growing international representation
- Project display ranges from global scale to project scale (Figure 2)
- Projects can be displayed by the associated infrastructure project type (AIPT) or by the intended EWN benefits (EWNB1, EWNB2, EWNB3) (Table 1)
- Pop-up boxes provide project details, related project web links, and project pictures where available (Figure 3)
- Filter projects by using project name or keywords (Figure 4)
- Determine project longitude and latitude measurements (Figure 5)
- Determine project area (square miles) or distance (miles) between multiple projects (Figure 6)
- Users can submit new case studies for approval to be included in the database (Figure 7)

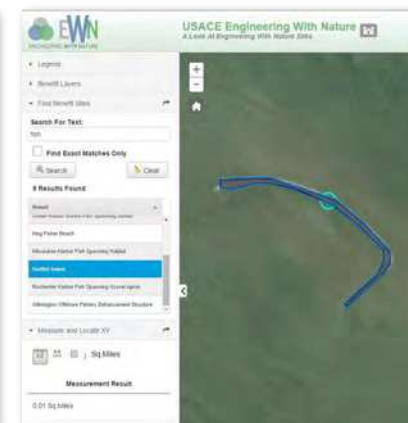
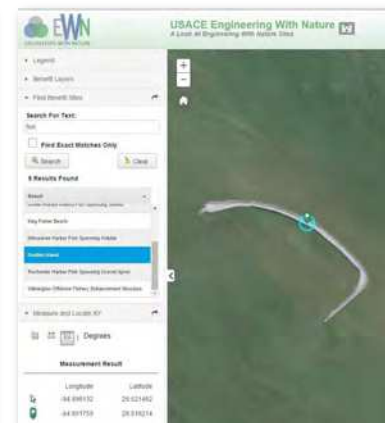
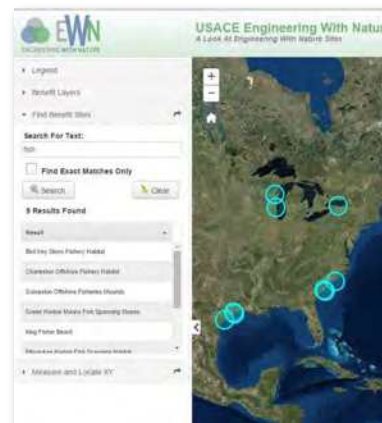


Table 1: AIPT and EWNB Selections in the Tool Panel

Available AIPT Selections	Available EWN Benefit Selections
Breakwater	Aesthetics
Bulkhead	Beach nourishment
Chevron	Bird habitat
Dike	Fish habitat
Groin	Invertebrate habitat
Jetty	Island restoration
Multiple round point	Mammal habitat
Navigation dredging	Recreation
Pier/wharf	Reptile habitat
Revetment	Shore protection
Seawall	Vegetated habitat
Shore protection	



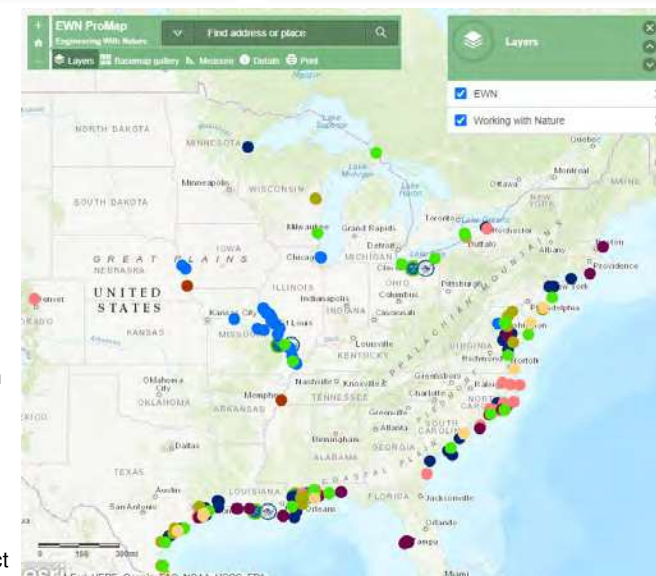
https://ewn.erdcdren.mil/?page_id=601



Do you have a project that you think should be included in our EWN ProMap?

Consider the EWN essential ingredients which have been rephrased as criteria that can be used to describe the degree to which a project applies the EWN concept. These criteria are:

- Extent to which natural processes are used to produce benefits and outcomes.
- Extent to which the project and its configuration broaden the base of benefits provided (economic, social, and environmental).
- Extent to which the project makes use of collaborative processes to organize and focus interests, stakeholders, and partners.
- Extent to which the project produces and makes use of efficiencies to contribute to sustainable delivery of project benefits, including consideration of how the project function is sustainable in the broader systematic context (e.g., regional watershed or sediment



<http://155.82.160.6/applications/opj/v013/>



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<https://arcg.is/0vv80a>

Website Demonstration

Great Lakes EWN Playbook

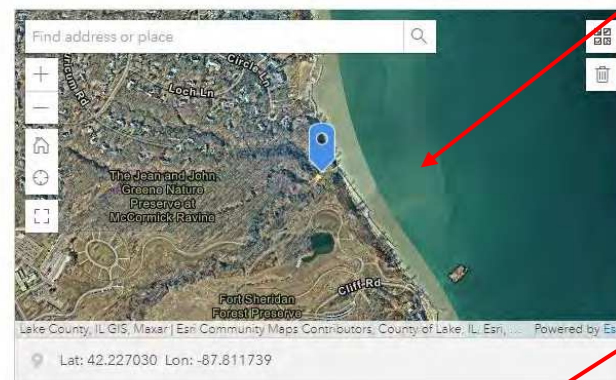
Directions:

Ahead of the USACE Engineering With Nature Workshop, we would like to collect and consolidate any existing or ongoing efforts. Please zoom to your location and leave a pin on the project site.

The first three fields must be entered prior to submission, all other fields are optional.

Please note, the output from this crowdsourcing may be shared on the Engineering With Nature Project Mapper (ProMap). Thank you for your time & participation!

Location*



Please state the name of the project?*

Fort Sheridan Ravine and Coastal GLFER Project

What is the status of the project?*

Existing

Existing

Planned

1

Zoom to area on map or find location via search bar and click on location of interest. If pin is not in the correct location, click on the preferred location or click on trash icon to delete pin.

2

Enter the project name.

3

Select whether this is an existing or a planned/future project.

What year was construction completed? If planned, when is the expected start of construction?

2020

4

Provide the year of the project.

5

Provide a description of the project.

Please provide a brief description of the Project.

The restoration project is located in Lake County, IL along the Lake Michigan Shoreline. The Phase 1 portion of the Fort Sheridan Ravine and Coastal Section 506 GLFER project includes restoring 75 acres within four main ravines (McCormick, Hutchinson, Schenk, and Scott), 40 acres of bluff and 12 acres of dune along the coastline, and about 60 acres of riparian woodland. The goal is to bring resilience and connectivity to coastal natural habitats and restore historical native plant communities along 1.5 miles of Lake Michigan. In September 2019, Phase 2 was initiated for the installation of underwater reefs in Lake Michigan. These native stone and large woody debris reefs were placed nearshore along the Fort Sheridan Forest Preserve land of the Lake County Forest Preserve District. The intent of the reefs is to provide structural and hydrodynamic habitat for fishes, mudpuppy salamander, and migratory water birds by mimicking the natural reefs found on Chicago's coastline.

6

Provide the funding sponsors, landowners, etc.

Who is the Project Owner?

USACE, Lake County Forest Preserve District, Openlands, City of Lake Forest, Lake Forest C

7

Provide the project area in acres.

Project area (Acres)

207

8

Provide the best estimate of the construction cost.

What is the estimated Total Cost of Project implementation?

\$14M



Website Demonstration

Project Category (Select all that apply)

<input checked="" type="checkbox"/>	Beaches & dunes
<input type="checkbox"/>	Environmental enhancement of existing infrastructure
<input type="checkbox"/>	Islands
<input type="checkbox"/>	Levee setbacks & floodplains
<input checked="" type="checkbox"/>	Reefs
<input checked="" type="checkbox"/>	Riverine/fluvial systems
<input checked="" type="checkbox"/>	Use of vegetation & other natural materials
<input type="checkbox"/>	Freshwater wetlands
<input type="checkbox"/>	Estuarine & marine wetlands
<input type="checkbox"/>	Submerged aquatic vegetation
<input checked="" type="checkbox"/>	Other
	Bluffs and Ravines

9

Select all applicable project categories and benefits. Note: if category/benefit is not represented, please select 'Other' to create a fillable field.

Project Benefits (Please select all that apply)

<input checked="" type="checkbox"/>	Aesthetics
<input type="checkbox"/>	Beach nourishment
<input checked="" type="checkbox"/>	Bird habitat
<input checked="" type="checkbox"/>	Fish habitat
<input type="checkbox"/>	Flood management
<input checked="" type="checkbox"/>	Invertebrate habitat
<input type="checkbox"/>	Island restoration
<input type="checkbox"/>	Mammal habitat
<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Shore Protection
<input checked="" type="checkbox"/>	Vegetated habitat
<input checked="" type="checkbox"/>	Other
	Shoreline Resiliency

Website Demonstration

10

Please grade the current project condition?

Excellent

How well has the project performed based on it's intended purpose? One goal is to identify success stories and lessons learned from underperforming projects. If it is too early to determine success, please select Not Applicable.

Is this a Beneficial Use of sediment Project

☐ YES

☒ NO

Comments

Please provide any additional notes.

Any affiliation: USACE, Nature Project, EcoShape, etc. Provide related hyperlinks.

USACE Great Lakes Fishery and Ecosystem Restoration Project
<https://www.lrc.usace.army.mil/Missions/Civil-Works-Projects/Fort-Sheridan-IL/>

11

Is this project the product of dredged or upcycled material?

12

Provide any additional comments or files related to your project

Photos



Ft.Sheridan_Aerial1.jpg

516.6KB

Please attach any supporting documents, drawings, or reports.



Ft.Sheridan_ReefPlans.pdf

6.9MB

Email

Contact information not to be shared publicly. Maintained by USACE for potential follow up.



13

Provide your email address. Note: your email will not be publicly shared. The field is optional. Contact may be maintained for potential follow up.

Submit

Great Lakes EWN Playbook



Thank you.

Your response was submitted successfully.

Press [here](#) to submit another response.

14

Upon submission, the screen above will appear. Please click the hyperlink to return to the previous screen for additional submissions. Please note, your submission will not be visible to other participants. Information will be maintained by USACE.

Thank you for you participation.



Conclusion

- The benefit in grading project conditions
 - There are as many lessons to be learned through underperforming projects as excellent projects
- What criteria do you use to measure the success of EWN? How do you measure the success of a project using NNBF?

