Great Lakes Engineering With Nature® Natural and Nature-based Features Playbook

MULTI-AGENCY KICKOFF WORKSHOP
JANUARY 24-25, 2023
FACT SHEET

Illinois State Park (Healthy Port Futures)

Above: Overview of in-person discussion of applying EWN in the Great Lakes
Below: Burton Suedel leads a breakout group discussion on how to advance EWN practices in the Great Lakes

Background

Great Lakes communities along the Great Lakes coastline are experiencing increased frequency in coastal flooding and erosion, causing property damage, putting lives at risk, and disrupting local economies. Current understanding of Natural and Nature-based Features (NNBF) and Multiple Lines of Defense (MLD) coastal resiliency measures is lacking; this lack of confidence on the applicability and cost-benefit of these measures limits their implementation in the Great Lakes. Without greater understanding and guidance, a paradigm shift from traditional flood risk management (FRM) practices to NNBF will not occur. USACE also needs this guidance to confidently consider these types of measure as part of the Great Lakes Coastal Resiliency Study (GLCRS) and related follow-on studies.

As part of this EWN research, a multi-agency kickoff workshop was conducted on January 24-25, 2023. The workshop brought together subject matter experts who are actively conducting EWN research in the Great Lakes region to share their Big Ideas for designing and constructing Great Lakes coastal projects incorporating NNBF for maximizing FRM, economic, environmental, and social value.

The workshop was conducted and facilitated by the USACE's EWN and Chicago District staff. Workshop participants included a diverse group of USACE and ERDC personnel, resource managers, scientists, engineers, and stakeholders across the Great Lakes region.

The goal of the workshop was to integrate EWN concepts as part of the overall GLCRS, so that specific guidance and protocols can be provided to the practitioner. A pre-workshop portal was developed online and was utilized by multiple workshop participants who shared information about existing NNBF projects designed and constructed under a range of conditions in the Great Lakes. USACE needs this guidance to confidently consider these types of measure as part of the GLCRS and related follow-on studies.

Select Guest speakers

Adam Bechle University of Wisconsin

Sean Burkholder University of Pennsylvania

Enda Murphy and Scott Baker National Research Council of Canada

Becky Nicodemus National Oceanic and Atmospheric Administration

Multi-agency workshop participants

- Michigan Coastal Program
- Ohio Coastal Program
- New York Coastal Program
- Illinois Coastal Program
- Wisconsin Sea Grant
- Canada National Research Council
- National Oceanic and Atmospheric Administration
- USACE Great Lakes & Ohio River Division and Buffalo, Chicago, and Detroit Districts
- Purdue University
- University of Illinois
- Auburn University
- Tribal Nations including 1854 Treaty Authority, Sokaogon Chippewa Community, and others
- Anchor QEA
- LimnoTech
- GEI Consultants

For more information

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https://ewn.erdc.dren.mil/?p= 10807

Workshop outcomes/ research approaches

- Provide an opportunity for subject matter experts to share their Big Ideas for designing and constructing Great Lakes coastal projects incorporating NNBF for maximizing FRM, economic, environmental, and social value
- Work with partners to identify existing NNBF projects designed and constructed under a range of conditions in the Great Lakes
- Work with partners to assess and quantify performance and cost of existing NNBF projects under a range of conditions in the Great Lakes
- Determine next steps including follow-on opportunities to continue collaborative discussions to develop content for an NNBF Playbook for the Great Lakes
- Develop fact sheet summarizing the results of the workshop that discusses purpose, objectives, outcomes, and tangible next steps towards developing the Playbook

Vision

This project seeks to develop a Great Lakes specific guide ("playbook") to NNBF and MLD to improve future coastal resiliency. The guide will advance understanding of NNBF and MLD emerging technologies as applied to the entire region. The guide will provide added confidence to federal, state, and local government agencies to plan, design, and implement sustainable, adaptable and cost-effective NNBF measures for advancing FRM practices.

What's next?

The EWN team will use information discussed during the workshop to focus data collection, modeling, and analysis efforts in partnership with multiple federal, state, NGO, Tribal Nations, and University collaborators. This information will lay the groundwork for developing the Playbook.