



**US Army Corps
of Engineers®**



AGENDA

Great Lakes Engineering With Nature® (EWN®) Natural and Nature-based Features Playbook Workshop

Date: 24-25 January 2023

**Location: Central Standard Building
231 S La Salle St, Chicago, IL 60604
Basement Conference Center**

Virtual Option: <https://usace1.webex.com/meet/jennifer.miller>

Join by phone

+1-844-800-2712 US Toll Free

+1-669-234-1177 US Toll

Access code: 2763 294 8822

Workshop Purpose:

The key objective of the workshop is to integrate engineering with nature (EWN) concepts as part of the overall Great Lakes Coastal Resiliency Study (GLCRS), so that specific guidance and protocols can be provided to the practitioner. 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. Recent historic high lake levels illustrate the widespread vulnerabilities along the coast. Natural and Nature Based Features (NNBF) are measures and techniques that can be incorporated into shoreline protection to reduce flood risk and improve resilience of coastal and inland water systems. However, current understanding of NNBF and Multiple Lines of Defense (MLD) coastal resiliency measures is mostly limited to ocean coast, resulting in lack of confidence on the applicability and cost-benefit of these measures in the Great Lakes. Engagements and discussions with Great Lakes Communities revealed the need for NNBF guidance specific to 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 GLCRS and related follow-on studies.

Workshop Outcomes:

- ◆ Strengthen application and facilitate implementation of EWN and NNBF along Great Lakes coastlines.

- ◆ Review and advance specific project opportunities along the Great Lakes where EWN/NNBF principles can be applied and identify next steps to take projects from concept design to construction.

Workshop Objectives:

- ◆ Provide an opportunity for subject matter experts to share their ideas for designing and constructing Great Lakes coastal projects incorporating EWN/NNBF for maximizing flood risk management (FRM), economic, environmental, and social value.
- ◆ Work with partners to identify existing EWN/NNBF projects designed and constructed 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 EWN/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.

Day 1

Time (CST)	Action	Lead or Speaker
8:00 – 8:30	Arrive & check in (Basement Conference Center)	All
8:30 – 8:45	Welcome/Quick Introductions	LTC Broderick, King/Suedel
8:45 – 9:15	Engineering with Nature (EWN) for Great Lakes Coastal Systems – Application to NNBF and development of the Playbook	King/Suedel
9:15 – 9:30	Initial Thoughts	All (Suedel facilitates)
Plenary Session Begins: Setting the Stage		
9:30 – 10:15	EWN Project Ideas Handbook - A Review of Process, Tools, and Lessons Learned	Ram Mohan (Anchor QEA) Sean Burkholder (DRC/U. Penn)
10:15 – 10:30	Break	
10:30 – 11:00	Overview of USACE Work with Linkages to EWN	Josh Unghire (Buffalo) Samantha Belcik (Chicago) Jim Selegean (Detroit)
11:00 – 11:15	Overview of EWN/NNBF projects around the Great Lakes (Survey 123 output)	Joe Miller
11:15 – 11:45	Discussion of EWN/NNBF project ideas	All (Ram Mohan & Sean Burkholder facilitates)
11:45 – 12:30	Lunch Catered by Naf Naf Grill	All
Plenary Session Continues: Setting the Stage with EWN Partners		
12:30 – 12:55	Applied Research to Guide Engineering with Nature on the Great Lakes	Enda Murphy/Scott Baker, NRC Canada
12:55 – 1:20	What Does Successful EWN in the Great Lakes Look Like?	Brian Majka, GEI
1:20 – 1:45	Examples of Nature-Based Solutions in Ohio; Regional Approaches – Projects, Education and Training	Scudder Mackey/Debi Beck, ODNR
1:45 – 2:10	Nature-based Shorelines on Wisconsin’s Great Lakes Coasts	Adam Bechle, U Wisconsin
2:10 – 2:25	Break	
2:25 – 2:50	A Perspective on Great Lakes EWN	Craig Taylor, LimnoTech
2:50 – 3:15	Advancing Nature-based Solutions in the Great Lakes	Becky Nicodemus, NOAA

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3:15 – 3:30	Plenary: Introduction of Breakout Group Process	Suedel
3:30 – 4:45	Breakout Session 1 – Identifying EWN/NNBF priorities and the current state of practice	All (Team POCs to lead)
4:45 – 5:00	Summarize and Adjourn Day 1	Suedel
Evening	Tentative no host social opportunity: Elephant and Castle, 111 W. Adams St. (one block north).	Bucaro to take an interest poll

Day 2

Time (CST)	Action	Lead or Speaker
8:00 – 8:30	Arrive	All
Breakout Session Begins: Focused Coastal Applications of EWN		
8:30 – 9:30	Plenary: Session 1 Report Out & Discussion of Results (10 mins per group including Q&A)	Suedel, Team POCs
9:30 – 10:30	Breakout Session 2 – Understanding what exists to support EWN/NNBF and associated challenges	All (Team POCs to lead)
10:30 – 10:45	Break	
10:45 – 11:45	Plenary: Session 2 Report Out & Discussion of Prioritization Results (10 mins per group including Q&A)	Suedel, Team POCs
11:45 – 12:00	Plenary: Instructions for Breakout Session 3	Suedel
12:00 – 2:30	Working Lunch (Catered by Giordano’s) & Breakout Session 3 – Prioritization of team ideas and defining next steps for the Playbook	All (Team POCs to lead)
2:30 – 2:45	Break	
2:45 – 4:00	Plenary: Voting Exercise to Prioritize Proposed Projects & Day 2 Recap	Suedel, All
4:00 – 4:30	Closing Thoughts & Next Steps	Suedel
4:30	Meeting Adjourns (Dinner on your Own)	

Breakout Groups:

Team 1 – in person group

Facilitator – Burton Suedel
 Notetaker – Alyssa Calomeni
 Location – Large Conference Room

Team 3 – Virtual group A

Facilitator – David Bucaro
 Notetaker – Joe Miller
 Location – Lobby

Team 2 – in person group

Facilitator – Ram Mohan
 Notetaker – Sam Belcik
 Location – Small conference room

Team 4 – Virtual group B

Facilitator – Jen Miller
 Notetaker - Anna Coval
 Location – large conference room back corner

Breakout sessions

As part of the workshop, we will divide into three breakout sessions and focus on the following general themes:

- Breakout Session 1: Identifying EWN/NNBF priorities and the current state of practice
 - What is our current state of understanding of EWN/NNBF principles?
 - What aspect of EWN/NNBF do you think requires more emphasis?
 - How do we apply EWN/NNBF to existing or new projects, and what, if any, limits us?
 - What specific conditions do you seek to improve using NNBF/EWN?
- Breakout Session 2: Understanding what exists to support EWN/NNBF and associated challenges
 - What criteria do you use to measure the success of EWN/NNBF?
 - Should long-term monitoring and adaptive management be “presumed” in EWN/NNBF projects, and to what extent?
 - What is the trade-off between use of EWN/NNBF and protection from higher force natural events?
 - Are EWN/NNBF projects less protective than hard structures and how do we justify that?
- Breakout Session 3: Prioritization of team ideas and defining next steps for the Playbook
 - What are the knowledge gaps that must be resolved for more frequent use of EWN/NNBF projects?
 - What are the challenges/barriers to EWN project implementation?
 - What are your thoughts on the potential use of EWN/NNBF in a non-habitat-focused project?
 - Can EWN/NNBF principles be applied to modify 'grey' infrastructure projects (i.e., to benefit local ecology)?

Discussion Rules:

Please silence all WMDs (weapons of mass distraction)

Share the Air

Limit Acronyse (explain first time used)

Respect Time Allotments

Avoid Sidebar Conversations

Minimize “Bunny Trails”, Stay Focused on Topic

Limit War Stories – Use Headline Version

Focus on the Quality Few versus the Mediocre Many

Disagree without being disagreeable

ELMO Empowerment (enough, let’s move on)

Thumbs Voting for Quick Consensus, Dots for Other

OTRs (on time video rewards)

Have Some Fun!