

USACE/NOAA-NOS NNBF Workbook Opportunity Discovery

Collaborative Opportunity Discovery Exercise

NAME: _____

Recall the Following:

Workshop Purpose: Explore and establish common interests for partnering on Natural and Nature-Based Features (NNBF) projects, which lead to the timely infusion of innovative technical products that support lifecycle coastal infrastructure systems, promote coastal preparedness and risk reduction, and enhance management decisions, in practice.

Workshop Objectives:

- Strengthen and broaden collaboration among represented organizations;
- Assemble USACE-ERDC, USACE-SWG, and NOAA-NOS leaders/technical staff to identify opportunities to leverage each agency's investments and capabilities with respect to design, development, implementation, monitoring, adaptive management of NNBF and associated ecosystem services;
- **Identify high-priority NNBF projects of common interest through use of plenary and breakout sessions. Categorize and prioritize projects that are identified for future collaboration; and**
- **Identify other opportunities for crossover, working relationships in coastal science and engineering**

SWG is an EWN Proving Ground: EWN Program supports more sustainable practices, projects, and outcomes by working to *intentionally align natural and engineering processes to efficiently and sustainably deliver economic, environmental and social benefits through collaborative processes* (www.engineeringwithnature.org). EWN's focus on developing practical methods provides an achievable path toward an ecosystem approach to infrastructure development and operations. Four elements critical to the success of EWN Projects:



Advancing sound science and engineering to improve operational efficiency



Using natural systems and processes to maximize the benefits



Broadening the benefits of the project – social, environmental, economic



Using collaborative processes to engage stakeholders throughout the project

USACE/NOAA-NOS NNBF Workbook Opportunity Discovery

Participants Identify NNBF Opportunities for Collaboration along Texas Coast

Today, you are learning more about the organizations that are represented and their associated missions, expertise, priorities and/or project inventories. Knowing what you do about NOAA-NOS, SWG, and ERDC, what are 3 possible NNBF-related opportunities along the Texas Coast that we should consider for future collaboration?

- (1) Leveraging existing SWG projects is one approach to consider. However, creative ideas focused on innovative, “yet-to-be-seen” demo projects are highly encouraged. **We request at least one of each type (i.e., leverage existing project or new demo) be provided from each of the participants in a breakout group.** We also request that you describe your project ideas and how it captures the four, “EWN Elements of Success”.

- (2) When describing a project opportunity, **please include information that highlights the crossover/working relationships that will be needed in coastal science and/or engineering along the Texas Coast.** Crossover can be defined as, “a combination of two elements that makes something more appealing (n),” or “having two pieces that cross especially one over the other (adj).”

- (3) What are the key steps required to initiate your project opportunity?

- (4) What resources are required to initiate your project opportunity?

Each participant will use the three tables below to describe their project ideas. In turn, project ideas will be shared with others in the breakout group.

**USACE/NOAA-NOS NNBF Workbook
Opportunity Discovery**

Identify Opportunities

Specific Project Opportunity #1 - Name of Project: CSEC Collaboration Integration of NOAA

Leverage Existing SWG Project or New Demo Project:

(1) Description of opportunity: CSEC model already exists along TX coasts. Opportunity to integrate NOAA-NOS into the SWG, ERDC, TAMU, USGS, TGLO Network. Use this collaborative framework with all expertise to target the larger initiatives identified by the group.

(2) Crossover/working relationships needed: Crossover relationships already exist in this collaborative model.

(3) Key steps to initiate opportunity: Build upon existing relationship/partnering initiatives. Have NOAA-NOS participate in the next CSEC meeting.

(4) Resources required: Initially, would require NOAA-NOS personnel time and travel dollars to link into existing resources that bring together collaborative team. Future projects would be derived based on smaller working groups.

USACE/NOAA-NOS NNBF Workbook Opportunity Discovery

Identify Opportunities

Specific Project Opportunity #2 – Name of Project: Living Breakwaters Study

Leverage Existing SWG Project or New Demo Project:

(1) **Description of opportunity:** SWG is preparing to develop a protective structure for disposal facilities, which would include a variety of living breakwaters measures. Oyster castles, reef balls, rock, etc. Need to better understand the health/productivity of such a system. What approaches work best; what is the best design approach; long-term monitoring, Determine what if any mitigation credits can be gleaned from such work?

(2) **Crossover/working relationships needed:** SWG and ERDC bring engineering and design concepts. Also can model/study the protective/engineering benefits associated with such a system. NOAA-NOS can study ecosystem associated science needs. Also, mapping interest and growth/productivity associated with oysters, fish populations, habitat, productivity, etc.

(3) **Key steps to initiate opportunity:** Continued dialogue and exchange of information. Integrate NOAA-NOS staff into project design phase. ERDC develops SON to obtain RD funds for match in pursuit of this work. NOAA-NCCOS includes this project in discretionary process to include long term monitoring and associated research.

(4) **Resources required:** R&D funding by ERDC and NOS; fed labor, travel, etc.

**USACE/NOAA-NOS NNBF Workbook
Opportunity Discovery**

Specific Project Opportunity #3 – Name of Project: DEEP Holes in Galveston Bay Project

Leverage Existing SWG Project or New Demo Project:

(1) Description of opportunity:

(2) Crossover/working relationships needed:

(3) Key steps to initiate opportunity:

(4) Resources required:

USACE/NOAA-NOS NNBF Workbook Opportunity Discovery

Facilitated Discussion: NNBF Project Opportunities along the Texas Coast

- Group members go around the table and describe their 3 ideas for NNBF collaboration. Each participant will then be asked to rank their three opportunities: High, Medium, or Low and provide a rationale. Keep going around the table until you have elicited information from all participants. **All of the opportunities (and workbooks) will be collected and included in the Workshop Report.**
- Define the timeframe for the high-ranked opportunities (i.e., Immediate: now -3 years; Short Term: 3-5 years; Long-Term: 5-10 years). **For High Ranked Opportunities: Seek group concurrence on the timeframe and identify key steps for initiating project.**
- **For High Ranked Opportunities:** Identify individuals within the group that would like to serve as POCs, have an interest in refining the idea, and/or developing a preliminary project scope. Record the names of interested participants (At least one POC from USACE and NOAA).

Name of Project Opportunity; Key Steps to Initiate Project	Existing Project or New Demo Project	High (H), Medium (M), or Low (L) Priority- Reason for Priority	Estimated Timeframe	POCs and Interested Contributors
Justify Monetarily these Projects. Ecosystem Services Evaluations of the EWN and NNBF Projects	Existing Project	High	1-yr if requiring NCCOS Discretionary Funds	Jenny Davis

USACE/NOAA-NOS NNBF Workbook Opportunity Discovery

Name of Project Opportunity; Key Steps to Initiate Project	Existing Project or New Demo Project	High (H), Medium (M), or Low (L) Priority-Reason for Priority	Estimated Timeframe	POCs and Interested Contributors
Vegetation of the Mud Dikes; Siting tool to look at living shorelines. Where you need vegetation and where you need more; Apply and expand the existing tool to another system, which is applicable here. Transfer, expansion and replicability of existing tool.	Existing/New would align with existing vegetation studies on dikes	Medium	Requires a lot of data and running model ~ 1-year	Jenny Davis Tosin Sekoni; Jamie Schubert
Create breakwaters along GIWW; complete living shorelines behind breakwater. SWG and ERDC include design, construction and engineering benefits. NOAA-NOS provides ecosystem analysis, monitoring, etc. 8-12 miles online in next few years. 14 miles right now. Carbon accumulation rates in association with Ecosystem Services. Solution that is cost effective and still supports living shoreline initiatives.	Existing Project	Low Jenny; High Seth	Ongoing now; some permitted and waiting for funding	Jenny Davis; Seth Jones
NOS Data Collection: Digital Coast Data; Identify Data Gaps between USACE and NOAA and then transfer of that data.	Existing Project/Study-Used within Existing Study	High	Immediate; Data already exist.	Sharon Tirpak

USACE/NOAA-NOS NNBF Workbook Opportunity Discovery

Name of Project Opportunity; Key Steps to Initiate Project	Existing Project or New Demo Project	High (H), Medium (M), or Low (L) Priority-Reason for Priority	Estimated Timeframe	POCs and Interested Contributors
Marsh Restoration/Eroded Shoreline and work that can help with design and possible consulting of this. Refer to maps that illustrate problem areas.	Existing Project	Medium	Once we have project identified, then help is needed By May 2018	Sharon Tirpak
Beach Restoration; Coast is sand starved, Does NOAA-NOS have this kind of information? Beach or dune restoration...must find sand and maintain it. How do you continue to maintain it. Development of dunes and how to design, study timeline for colonization with plants, biota, etc.	New Demo Project	Low	Done at anytime; Start after May 18 to coincide with Coastal Texas	Sharon Tirpak
Restoring GIWW barrier island; eroded and need to be reestablished and shoring up these areas. Use and protect navigation and design to produce more marsh and sea grasses; Example: West Galveston Bay – design can be done with O&M. GO BIG OR GO HOME!	Existing/New- hasn't been done yet.	High	Need actual design; ready to go within 6 months.	Seth Jones

USACE/NOAA-NOS NNBF Workbook Opportunity Discovery

Name of Project Opportunity; Key Steps to Initiate Project	Existing Project or New Demo Project	High (H), Medium (M), or Low (L) Priority-Reason for Priority	Estimated Timeframe	POCs and Interested Contributors
<p>Aransas NWR BU sites Mission Aransas NERRs – Beneficial Use sites for whooping crane habitat area. Rip-rap breakwaters and marsh cells behind. Are there alternatives to rock in this location?</p> <p>Linking Beneficial Use and EWN with Mission Aransas NEERs – Linking USACE benefits.</p> <p>Started construction of 3 or 4 of them. This FY another 3 miles of breakwater. Look at engineering and ecosystem services function.</p>	Existing/New Pilot Project	High	Ongoing ; build as we get funding	Seth Jones; Jamie Schubert
Thin-Layer Placement – How does that facilitate adaption to SLR? Does it improve marsh health? How often do you have to return to add additional sediment placement?	Existing	High	Ongoing work in this area;	Jamie Schubert; Seth Jones
CSEC Integration Teaming	Existing	Medium	Immediate	Jeff King
Living Breakwater Study	Existing	High	Another 1 year NCCOS Discretionary	Tom White, Tim Clarkin

**USACE/NOAA-NOS NNBF Workbook
Opportunity Discovery**

Name of Project Opportunity; Key Steps to Initiate Project	Existing Project or New Demo Project	High (H), Medium (M), or Low (L) Priority- Reason for Priority	Estimated Timeframe	POCs and Interested Contributors

**USACE/NOAA-NOS NNBF Workbook
Opportunity Discovery**

Name of Project Opportunity; Key Steps to Initiate Project	Existing Project or New Demo Project	High (H), Medium (M), or Low (L) Priority- Reason for Priority	Estimated Timeframe	POCs and Interested Contributors