Leveraging Engineering With Nature®: Collaborations to Achieve Mutually Desirable Outcomes for the USACE and NOAA

Cathy Tortorici
Office of Protected Resources
Cathy.tortorici@noaa.gov
301.427.8495
NOAA and Engineering With Nature®

- NOAA’s Mission: Science, Service & Stewardship
  - To conserve and manage coastal and marine ecosystems and resources

- Agencies within NOAA working on EWN®
  - NOAA National Ocean Service
    - Provides data, tools and services that support coastal economies
    - Preparedness and risk reduction (storms and flooding)
  - NOAA Fisheries (NMFS – National Marine Fisheries Service)
NOAA Fisheries: Mission

- NMFS is the nation’s federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources
  - Responsible for the stewardship of the nation’s ocean resources and their habitat
  - Protect and restore habitat & maintain coastal ecosystems

conservation = protection + restoration
NOAA Fisheries Office of Protected Resources

- **Mission** - Conserve, protect, and recover species under the Endangered Species Act and the Marine Mammal Protection Act

- **Partners** – NMFS Regional Offices/Science Centers, Federal and state agencies, non-governmental organizations, academia, industry, and the public
NOAA Fisheries Office of Habitat Conservation

- Mission - Protect, restore, and promote stewardship of marine, estuarine, and riverine habitat to support our nation’s fisheries for future generations
- Partners - National and Regional program works with a variety of federal, state and non-governmental partners
Why does Engineering With Nature® Matter?

- The Cost of Infrastructure Development - Conserving and restoring coastal reefs, wetlands, and mangroves can prevent flooding and save hundreds of millions of dollars in storm damage

- Habitat Improvement – Using natural features or processes in project development that might otherwise be provided by engineered structures
  - Avoid/minimize impacts to species/habitat
  - Support species recovery
  - Implement ecosystem services valuation

- Permitting – Improve process and reduce consultation timelines and enhancing Federal partnerships
NOAA and EWN®: Current Efforts

- NOAA Living Shorelines
- Systems Approach to Geomorphic Engineering (SAGE)
  - Promote green-gray approaches for shoreline resistance
  - Broaden science, engineering, policy, and marketing activity
  - Engage community partners in this work
NOAA and EWN®: Current Efforts

• Natural and Nature-Based Features (NNBF) Guidelines
  • Participation across NOAA in document development

• Collaborative Monitoring and Modeling of Restored Islands
  • NCCOS Partnering to Study Performance of Restored Islands
    • Examples: Mordecai Island and Swan Island

• Collaboration Meetings – USACE projects potential to co-occur with NOAA trust resources
  • USACE Districts, NMFS Regional Offices, OPR

• Integrate EWN® practices into Permitting
  • Essential Fish Habitat and ESA Section 7 consultations
EWN® Examples – NOAA Trust Resources

- Coastal Protection and Habitat Restoration
  - Barrier Island Restoration - Barataria Basin, LA
  - Marsh habitat creation
- Flow Corridor Restoration
  - Tillamook Bay, OR
  - Habitat conservation for salmonids
- Seattle Seawall
  - Creation of nearshore salmonid habitat
EWN® Benefits: Regulatory Processes

• **Efficiencies to Consultation Process**
  • Implement low-impact techniques that reduce consultation times

• **Reduced Mitigation**
  • Incorporate practices into project design that benefit species and habitat

• **Comprehensive Implementation**
  • Integrating the NNBF Guidelines document as regular part of the project development process
  • Discussions on projects for the USACE Emergency Supplemental Funding and project funding in general
Questions?