



NOAA
FISHERIES

NOAA National Marine Fisheries Service Office of Protected Resources

Engineering with Nature and Benefits to NOAA Trust Resources

Western Dredging Association Gulf Coast
Chapter Meeting

November 14, 2018

NOAA's Mission

NOAA's Mission: Science, Service & Stewardship

- To conserve and manage coastal and marine ecosystems and resources

NOAA Fisheries (NMFS)

- Responsible for the stewardship of the nation's ocean resources and their habitat
- Protect and restore habitat & maintain coastal ecosystems

NOAA National Ocean Service

- Provides data, tools and services that support coastal economies
- Preparedness and risk reduction (storms and flooding)



NOAA Trust Resources



Engineering with Nature® and NOAA's Priorities

- USACE: Engineering with Nature (EWN®)
 - Leveraging nature for engineering value
- NOAA: Mission Priorities
 - Protecting coastlines
 - Benefits to trust resources
 - Promoting Federal partnerships



NOAA: 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



NOAA: Current Efforts

- Address Science Gaps
 - Understanding habitat trade-offs
 - Wave energy modeling
 - Coastal risk assessment
- Community Engagement
 - Outreach to landowners, public officials
 - Training for marine contractors, realtors
 - Information exchange; SAGE, Workshops



NOAA and EWN[®]: Current Cooperation

- Impact: USACE projects potential to co-occur with NOAA trust resources
- Research and Monitoring
 - USACE-led project: Mordecai Island, NJ
- Natural and Nature-Based Features Guidelines
 - Participation across NOAA
- Collaboration Meetings
 - USACE Districts, NOAA Regional Offices, and State Partners
 - Emergency Supplemental Funding
- Efforts to use EWN[®] practices
 - ESA Section 7 consultations



EWN[®], Habitat, and Applicable Statutes

- Endangered Species Act
 - Section 7 consultations
- Magnuson Stevens Act
 - Essential Fish Habitat consultations



Value: Trust Resources

- Coastal Protection and Habitat Restoration
 - Barrier Island Restoration
 - Barataria Basin, LA
 - Creating marsh habitat
 - Beach Nourishment
 - Thompsons Beach, NJ
 - Benefits to shorebirds, horseshoe crabs
- Partnerships



Value: Trust Resources

- Seattle Seawall: Creation of nearshore habitat for salmonids
 - (Toft et al. 2013)
- Artificial Reefs: Foraging opportunities for Nassau grouper and hawksbill sea turtles
 - (Beets and Hixon 1994; Gorham et al. 2014)
- Dredge Material Islands: Brown pelican nesting habitat
 - (Robinson and Dindo 2011)



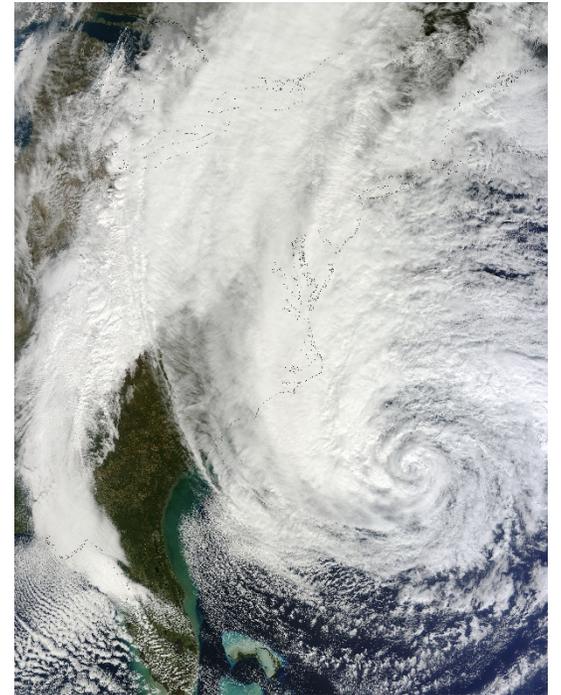
Benefits: Regulatory Processes

- Efficiencies to Consultation Process
 - Familiar, low-impact techniques, less time during consultation
- Reduced Mitigation
 - Incorporating practices with possible benefits to species and habitat
- Ease of Implementation
 - USACE District “proving grounds”; NNBF Guidelines
- Environmental Compliance
 - Aid Federal Agencies in responsibilities (ESA Section 7)
- Additional Support



Near-term and Future Work

- Collaboration with Regions, Districts, Partners
 - NNBF Guidelines Development
 - Discussions on Projects for the Emergency Supplemental Funding
- Institutional Familiarity
 - NNBF Guidelines: Process for EWN[®] Projects
 - Place at the Table during Project Development
- EWN[®] Projects for Trust Resources Benefits
 - Opportunities for Species, Habitat
 - Mutually beneficial mission goals



EWN[®]: Partnerships, Benefits

- Partnerships
- Project Expansion and Collaboration
- EWN[®] Techniques and Multiple Benefits
 - Coastal resiliency, flood risk reduction
 - Restoring habitat and ecological function
 - Avenue to environmental compliance
 - Habitat-related recovery goals



Questions?

