

DOER  
Environmental  
Resource  
Protection  
Focus Area



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# Purpose

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- **Situation**: USACE Districts are confronted by complex T&E Species issues that extend across District/Division boundaries, involving a very large number of target species. Many management practices intended to protect T&E and other sensitive species remain untested. Protecting the environment occurs against a backdrop of fewer acceptable dredged material placement options.
- **Barriers**: Opportunities to evaluate alternative management practices are constrained by both funding and logistics. Regulatory restrictions often prevent timely conduct of collaborative studies that address species with protected status.
- **Solution**: Provide tools for both proactive and retrospective evaluation of protection measures. Examine positive attributes of the dredging process (e.g., beneficial uses) that lead to increased flexibility and more options for environmental resource protection.

# Purpose

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- Focus Area consists of three topic areas
  - T&E Species protection
  - Beneficial uses for habitat restoration, creation, and enhancement
  - Environmental windows and other environmental resource protection practices

# Ongoing Research Projects

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- **T&E Species protection**

- Assessing effectiveness of rescue trawling in reducing incidental take of sea turtles
- – Improving management of avian habitat during coastal and inland during navigation project construction, operation, and maintenance
- Evaluate improved sea turtle deflector designs
- Develop improved technologies for sturgeon detection
- – Determine factors that govern risk of sturgeon entrainment

- **Beneficial uses of dredged material**

- Documentation of EFH attributes of coastal BU projects
- Develop testing procedures for BU applications of CDF sediment

- **Environmental windows**

- – Develop risk-informed decision tools specifically for non-contaminant stressors
- Document effectiveness of alternative management practices

# Future Research Projects

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- **T&E Species protection**
  - Apply advanced sensor technologies to detection of sea turtle and other T&E species
  - Document behavioral responses of target species that influence risk during encounters with dredging operations
  - Expand tools for evaluating potential impacts on T&E Species in a system wide/regional sediment management context
  - Fill knowledge gaps on high priority species
- **Beneficial uses of dredged material**
  - Improved project planning tools and monitoring methodologies
- **Environmental windows**
  - Customize comparative risk assessment approaches
  - Fully Integrate advanced modeling capabilities into evaluation of risks associated with dredging projects and management practices
  - Expand knowledge base concerning dose-response relationships of problematic species and life history stages