

Expertise

- Beneficial / productive uses
- Coastal engineering
- Contaminated sediments
- Dredging / disposal
- GIS application
- Hydraulics / hydrodynamics
- Physical, chemical, biological disciplines
- Risk-based management
- Sediment transport
- Threatened and endangered species

Capabilities

The U.S. Army Engineer Research and Development Center maintains world-class laboratories and computational infrastructure, as well as facilities.

the balance



**US Army Corps
of Engineers**

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Dredging Operations and Environmental Research



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Program Notes

The Dredging Operations and Environmental Research (DOER) Program supports the U.S. Army Corps of Engineers Operation and Maintenance Navigation Program. Research is designed to balance operational and environmental initiatives and to meet complex economic, engineering, and environmental challenges of dredging and disposal in support of the navigation mission. Research results will provide dredging project managers with technology for cost-effective operation, evaluation of risks associated with management alternatives, and environmental compliance.

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Objective

Ensure a successful navigation program by resolving complex economic, engineering, and ecological challenges through continued excellence in operational and environmental applications.



Dredged Material Management

Develop dredged material handling, transport, and placement options which are operationally efficient, environmentally sound, and cost-effective.

Work Areas:

- Dredging Model, Data, and Project Interfaces
- Dredging and Aquatic Placement Operations and Management
- Confined Disposal Facility Placement, Management, and Reclamation
- Beneficial Uses of Dredged Material



Risk

Apply a comparative risk-based framework in the assessment and management of contaminated or non-contaminated dredged material and to develop logical decision support tools that quantify uncertainty and facilitate efficient decision-making.

Work Areas:

- Exposure Assessment Methods and Approaches
- Effects Assessment Procedures and Tools
- Risk Characterization Approaches and Methods Development
- Risk Management in the Dredging Program



Operations Technologies

Identify (or develop where necessary), evaluate, and promote the use of effective technologies that improve design, operation, and management of Corps navigation dredging projects.

Work Areas:

- Diffusion of Innovative Technologies (DoIT)
- Dredging Technologies and Operations

Environmental Resource Protection

Address problematic environmental resource issues using a combination of innovative engineering and scientific approaches.

Work Areas:

- Threatened and Endangered Species Protection
- Habitat Protection
- Environmental Windows

