



Beneficial Use Comprehensive Benefits Tool

Dredging Operations Environmental Research (DOER) Program

U.S. ARMY CORPS OF ENGINEERS

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Focus Area

Dredged Material Management

Problem

WRDA Section 125 requires comprehensive benefits assessment specifically for dredging and sediment management projects. Therefore, there is a need to identify and standardize the range of benefits considered for sediment placement site alternative analysis. To address this need, the USACE Ecosystem Goods and Services (EGS) Planning Framework provides a comprehensive set of social, environmental, and economic benefits that can be integrated into the Corps' existing 6-step planning process. By incorporating the EGS Framework and integrating it with standard sediment placement methods defined in EM 1110-2-5025 (the manual for Dredging and Dredged Material Management), a comprehensive benefit analysis can be conducted as an enabler to increase beneficial use of dredged sediment through a Beneficial Use Comprehensive Benefits Tool (BUCBT).



Hypothetical beneficial use alternatives that the tool is designed to analyze.

Study Description

The objective of this research task is to develop an approach that addresses the requirements of Section 125 and provides a simple tool for dredge operations managers to screen alternative placement sites. To address this need, the USACE EGS Planning Framework, provides a comprehensive set of social, environmental, and economic benefits that can be integrated into the Corps' existing 6-step planning process will be incorporated and integrated with standard sediment placement methods defined in EM 1110-2-5025 (the manual for Dredging and Dredged Material Management). Combined, these will enable a comprehensive benefit analysis to be conducted for the beneficial use of dredged sediment.

Products

This research will develop a BUCBT in both Excel spreadsheet and web-based formats for widest potential use by the USACE field. The results of this research will be documented in several ways, including a Technical Report, a journal article, and multiple conference presentations. The final version of both tools will be uploaded onto the DOER and other websites.

Summary

This project will address the USACE 70/30 beneficial use goal by providing systematic, large-scale opportunities for beneficial use of dredged material. Simultaneously, this project will support the USACE navigation mission. The BU Comprehensive Benefits Tool will provide methods for sediment placement alternative analysis that satisfies the needs of EM 1110-2-5025 and Sec. 125. The BUCBT will take a qualitative approach to fit the fast pace of dredging planning and execution. The BUCBT serves to provide evidence for the benefits of potential increased costs associated with beneficial use alternatives. As part of the development process, since January 2023 as funded by the DOTS program, the BUCBT (originally developed in spreadsheet form) has been incrementally improved in response to valuable input by HQ and MSCs.



Balancing operational and environmental initiatives and meeting complex challenges of dredging and dredged material placement in support of the navigation mission.



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