



Coastal Navigation Portfolio Development

Need The coupling of the Channel Portfolio Tool (CPT), AIS Analysis Package (AISAP), and Channel Shoaling Analysis Tool (CSAT) with other navigation related tools/datasets (i.e., eHydro and CSMART) provide enterprise capability that will support research efforts aimed at understanding and quantifying channel optimization, jetty functional performance metrics, and other opportunities to connect within CIRP models/tools. These tools as well as research efforts as part of this work unit help advance objective, quantitative, and systems-based approaches to management of the Corps' large coastal navigation portfolio of projects. Objective, consistent data analytics for the Corps' coastal navigation infrastructure portfolio will help ensure that limited resources are rationally allocated across portions of the system with the greatest need.

- Approach**
- Districts are required to use CPT for annual O&M budget formulation, as outlined in the annual Budget Engineering Circular (EC) and the recent Dredge Project Selection memo further emphasizes the need for having these enterprise datasets and tools (CPT, CSAT) coupled for efficient transfer of data between the tools.
 - AISAP is at the forefront of an emerging analysis capability that significantly enhances the quantitative rigor that District users are able to bring to a wide range of problems facing the Navigation business line.
 - CPT and AISAP must be hosted in a production environment on the ACE-IT managed Corpsnet so that they will be readily available to all USACE personnel.

Technical Advancements This work seeks to develop the framework for modularized component of each tool to connect between the navigation tools for CSAT, CPT, CSMART, and AISAP for efficient transfer of data between the tools and explore updates to the USACE Navigation Portal.

Leveraging Opportunities These tools in the Coastal Navigation Portfolio workunit leverage existing data, user-friendly tools, and robust analytical approaches to develop objective, quantitative, and systems-based approaches for management of the Corps' large coastal navigation project portfolio. Additionally, this research leverages and informs work being done by the Dredging Innovations Group (DIG) and Asset Management programs to optimize dredging project selection.

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