CE-DREDGE DECISION SUPPORT TOOL (DST)

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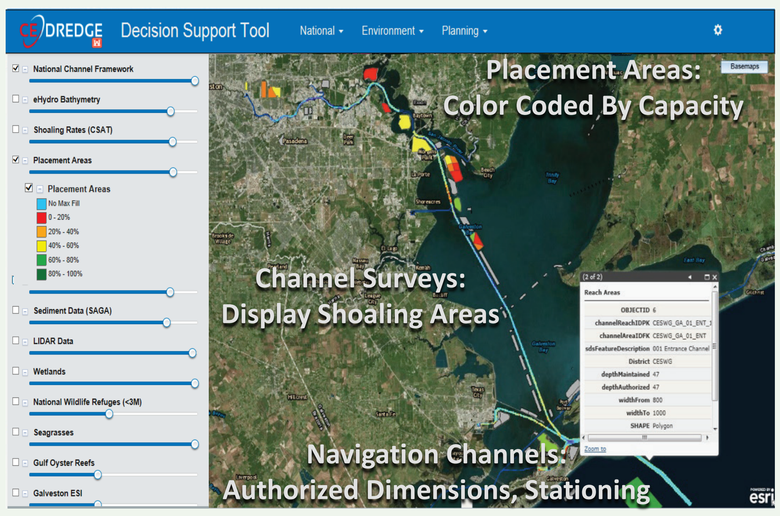
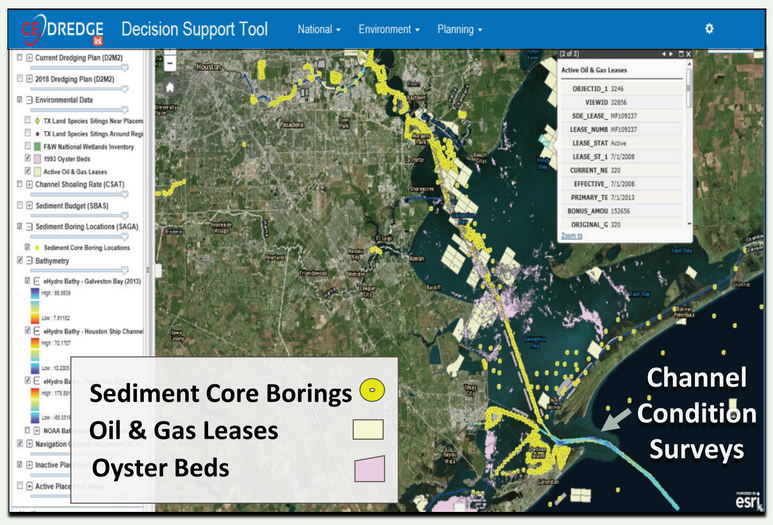
- A web-based viewer that enables dynamic, highly visual, collaborative, and interactive decision-making throughout the dredging and placement process.
- Integrates databases, tools, and methods into practice for dredged material life cycle management (planning, analysis, environmental compliance, operations)
- Provides easy access to data and allows stakeholder engagement throughout project development and execution.

DST Web-Based Viewer:
Galveston District Pilot - Houston Ship Channel and Gulf Intracoastal Waterway, Texas



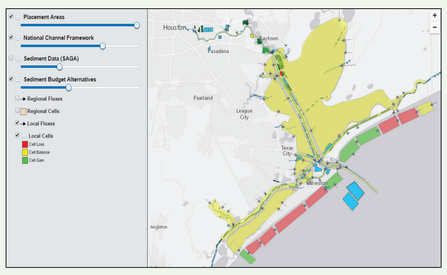


What tools are available on the DST viewer?

Key elements of the tools include understanding placement area locations and capacities; displaying channel shoaling conditions and predicting potential future shoaling patterns; portraying relevant environmental conditions; and estimating placement options based on historical dredging costs. The pilot and resulting technologies will aid in facilitating beneficial use of dredged sediments, improve the management of dredging and placement operations, and reduce the cost and time for Preliminary Assessments and Dredged Material Management Plan development and execution.

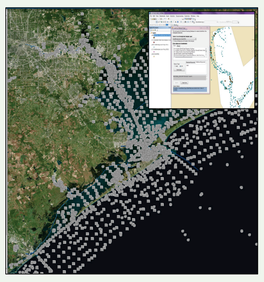
Sediment Budget Analysis System

Identifies sediment sources, needs, and transport patterns and pathways



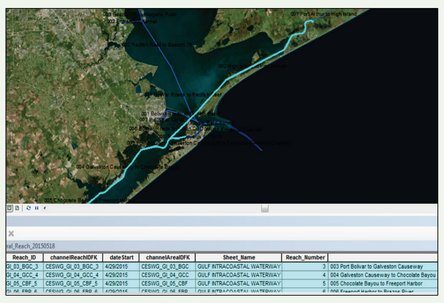
Sediment Analysis & GeoApp

Sediment database & analysis tools



Nat'l Channel Framework

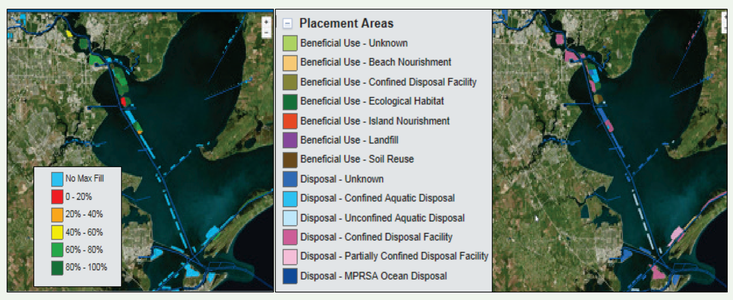
Navigation channel locations, dimensions



Tools and Databases

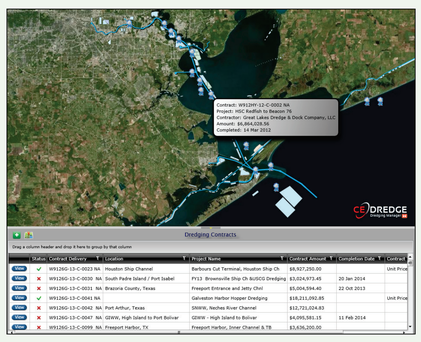
Sediment Budget Analysis System (SBAS)
Sediment Analysis and Geo-App (SAGA)
Corps Shoaling Analysis Tool (CSAT)
Channel Portfolio Tool (CPT)
CE-Dredge Dredging Manager
Ecological Data Synthesis Tool
BU Aquatic Dredged Material Mgmt (BUADMM)
Dredged Material Management Decisions (D2M2)
JALBTCX Toolbox
National Channel Framework Database
eHydro Surveys Database
National Placement Area Database
Sediment Database
National Coastal Mapping Program Data
CE-Dredge Dredging Manager Database

Nat'l Placement Area Database



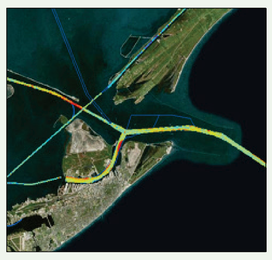
Identifies placement areas, capacities, beneficial use type

CE-Dredge Dredging Manager



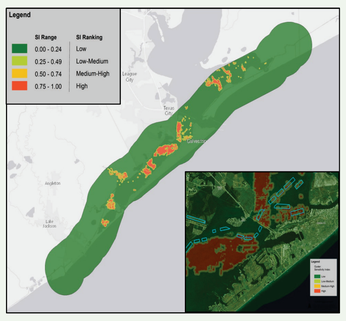
Dredging and placement histories Placement area capacities

Corps Shoaling and Analysis Tool



Predicts future channel shoaling

Ecological Data Synthesis Tool

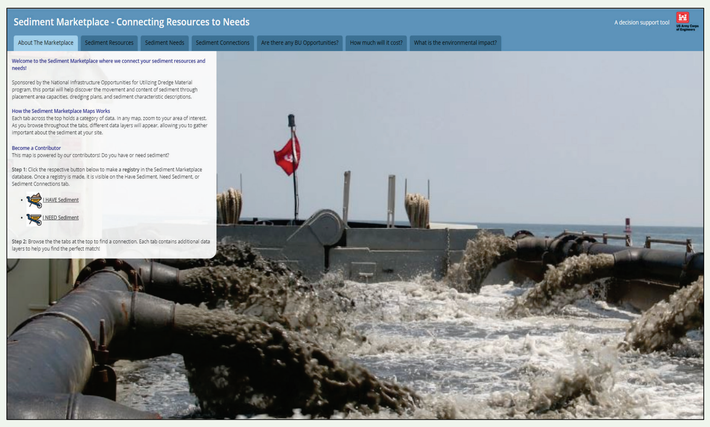


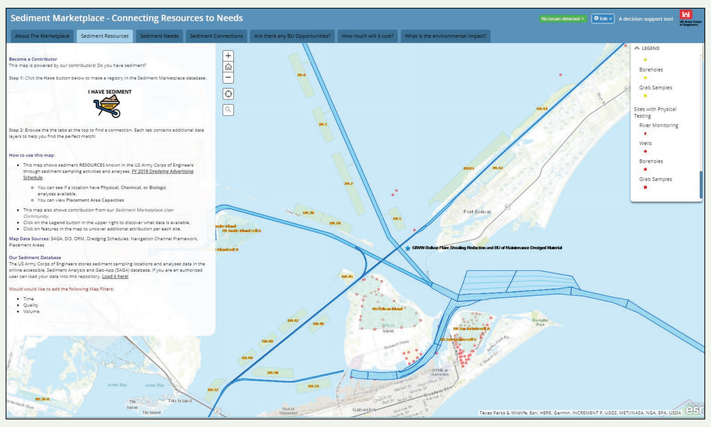
Addresses sensitivity of ecological habitat in dredge/ placement areas

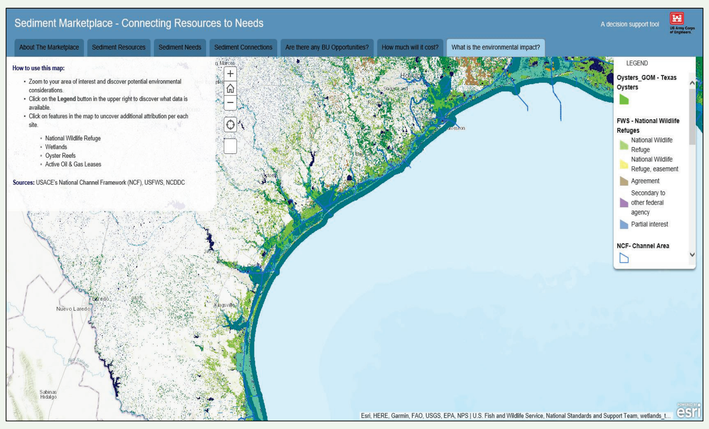
What's next?

- Final product applicable to other USACE Districts seeking to optimally and sustainably manage dredged materials.
- Additional tools and pilot sites.
- Public facing *Sediment Marketplace* web-viewer, in collaboration with the Natural Infrastructure Initiative Group, which focuses on identifying beneficial use opportunities.

Natural Infrastructure Initiative Sediment Marketplace







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