

FY17 RSM IPR

RSM RCX, Sediment Sorting during the Dredging and Placement Process, Clay McCoy

BLUF: The objective of this study is to quantify sediment sorting and the corresponding changes in sediment characteristics during dredging and placement operations. These objectives are motivated by a desire to better inform sediment compatibility analyses and subsequent management of sediment resources.

Challenge/Objectives

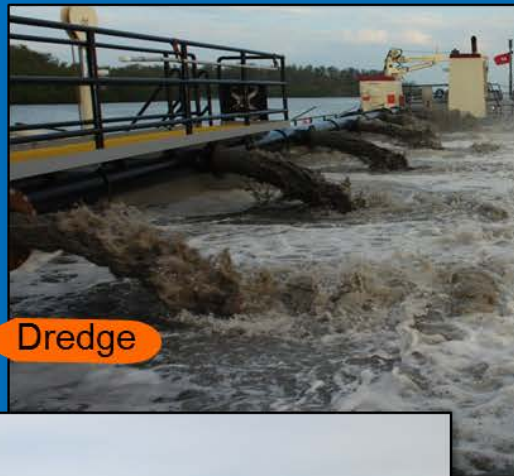
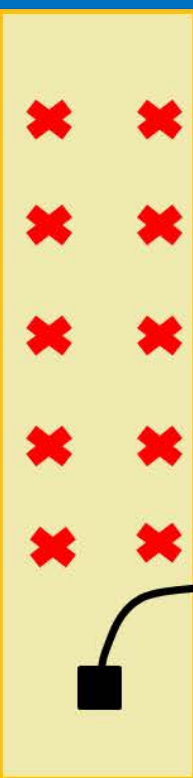
- Perform extensive literature review of previous studies
- Determine best practices for sampling during the dredging process
- Quantify changes in sediment sorting through the dredging process

Approach

- Complete conceptual model/literature review on sediment sorting through the dredging process
- Laboratory testing of weir sampling methods
- Field study on dredge to identify loss points and quantify sediment sorting



Beach

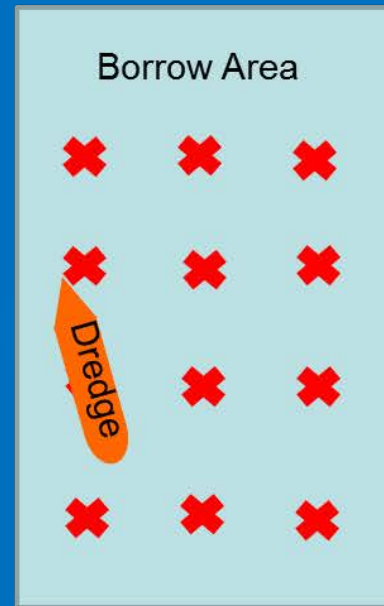


Dredge



❌ Core Location

Borrow Area



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District/Other USACE PDT Members

- Jackie Keiser (SAJ)
- Jarrell Smith (ERDC CHL)
- Katie Brutsche (ERDC CHL)
- Anthony Priestas (ERDC CHL)
- Duncan Bryant (ERDC CHL)

Stakeholders and Partners

- Bureau of Ocean Energy Management
 - Doug Piatkowski
 - Leighann Brandt
 - Paul Knorr
 - Mike Miner
- Great Lakes Dredge and Dock

Leveraging/Collaborative Opportunities

- Interagency agreement with BOEM
- Funded by SAD, SAJ, BOEM, RSM
- Input from dredging industry



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Accomplishments/Deliverables

Lessons Learned/Actions-construction

- Completed conceptual model and literature review (in review)
 - Weir tank model constructed
 - Weir tank testing complete
 - Sample method testing in progress
 - Field experiment scheduled for August 2017
 - Regular PDT meetings with BOEM
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- Outreach
 - Meeting with dredging industry
 - FSBPA Presentation
 - Poster presentation at many workshops/meetings
 - ASBPA Abstract submitted



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What is working? Ups? Success?

- Flexible project – able to modify approaches to answering fundamental questions based on research and concurrence with PDT (USACE, BOEM)
- Engagement with Federal partners and Private Industry – BOEM and GLDD active participants in development and project design and methodology
- On schedule

What is not working? Downs? Issues?

- Flexible project – budget and end date set.



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How is this project benefiting the USACE and Nation (efficiency, monetary, technical, relationship building, outreach, etc)

- Better estimation of loss of fines could expand beneficial use of Navigation dredged sediment as well as offshore borrow sites. This will lead to cost savings and sustainable use of sediment resources that would benefit the Navigation, Flood Risk Management, and Ecosystem business lines.

