shment performance metrics

US Army Corps of Engineers • Engineer Research and Development Center

FY20 RSM IPR ERDC, Improving Communications of Nearshore Nourishment Benefits, Brian McFall, Doug Krafft

BLUF: The goal of this project is to improve the understanding and perception of nearshore nourishment projects for improved stakeholder and public engagement.

Challenge

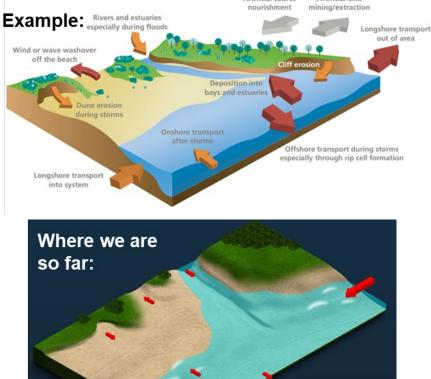
 Negative perceptions continue to inhibit nearshore placement opportunities

Objectives

- Develop simple graphics of coastal processes at Nearshore nourishments
- Synthesize input on nearshore
 nourishment performance metrics

Approach

- Collaborating with a graphic designer from the ITL Media Team
- Contacted all 21 Coastal and Lake Districts for input on nearshore nourishment performance metrics





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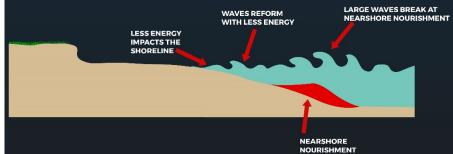
District/Other USACE PDT Members

- Lisa Winter (NAE)
- Hande McCaw (NAE)
- Monica Chasten (NAP)
- Kevin Hodgens (SAJ)
- Rod Moritz (NWP)
- Austin Hudson (NWP)



CIRP: Nearshore Nourishment

- Challenges, Inlet Geomorphology Work Unit
- DOER: Beneficial Use of Dredged Sediment to Support Nearshore Nourishment



NEARSHORE



FY20 RSM IPR

ERDC, Improving Communications of Nearshore Nourishment Benefits

Accomplishments/Deliverables

- Nearshore Placement Workshop SR
 - Published
- **Explanatory Figures**
 - Draft in revision process with graphic designer
- Performance Metrics TN •
 - All 21 Coastal and Lake **Districts contacted**
 - Draft White Paper begun •
 - Draft TN begun

Lessons Learned

Every District is Unique



Nourishment

rishment projects are commonplace in the USACE, but information techniques, monitoring data, and construction plans, etc. Nave never been compiled for the entire USACE. The goal of this project and associated whitepaper is to compile data on nearshore nourishment projects

with placements outside the surfoone to convey lessons learned, create scoping level tools, and generate

guidance. This project will compile historical information (construction plans, financial analysis, and putance. This project will compare some the projects to improve screening level tools and create a best

practices document. The research team is contacting Districts individually to collect construction plans financial analysis, and monitoring. Data is being compiled to a single source and will be synthesized and

A Teleconference call including Lisa Winter and Ben Loyd at NAE and Brian McFall, Doug Kraffs, Victor Gonzalez, and Fabian Garcia was conducted on 01/06/2020.

Environmental concerns often effect nearshore placements. Eelgrass and juvenile lobster concerns are examples. Green Harbor was mentioned as an example of a site with environmental concerns shortening

the window of time available. Specific requirements vary from project to project, but often include

formal regulations of fines content are not often encountered, but effort is made to match 'surfue'

protecties. Material with more than 13 % fines is investigated much more closely and contaminated soliment is disposed of in a 404 or Aquetic Disposal Cell.

Dredged sediment is regularly in used beneficial use placements outside of the surface but within the epth of Cosure. Depth of Closure can be as deep as 30" but shallower depths are preferred. Deep placement related to canals are made and sediment is still considered to be within the active zone. A 24' deep placement at Nantucket East was mentioned as an example of a relatively deep placement. The Kennyback placement was designed for the McFarland to place safely. The hope is to keep sediment in the littoral zone for storms and keep in the sediment budget as "semi-beneficial use". Dispersive sixtements are often selected rather than defined berms to limit navigation risks. Various state DEP's and

rarity sand placements in the nearshore generally do not have as many environmental concerns as direct placements. Beach nourishments can involve a 2 - 3 year planning process but nearshore

Performance Metrics of Nearshore Nourishment Projects Constructed with Dredged Sediment

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Abstract

- 1 The abstract should be a single paragraph (150-175 words long) written in plain
- 2 language that includes a summary of the key conclusions of the manuscript

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5 Introduction

- 6 The U.S. Army Corps of Engineers dredged more than 170 million m3 of sediment from
- navigation channels in fiscal year 2018 (USACE, 2019). 7
- This sediment is a valuable asset
- Can be used to nourish the beach profile as a beach nourishment
- All 21 USACE coastal and great lakes districts have contacted to determine the
- 11 performance metrics
- 12 Differentiate between performance metrics and quantification of benefits

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Nearshore

published as appropriate.

New England District (NAE)

ental analyses with SAV and Shellfish surveys.

Iseital Zone Management Groups request dispersive placement

shments can be accomplished with substantially shorter lead times

Whitepaper 2020



FY20 RSM IPR ERDC, Improving Communications of Nearshore Nourishment Benefits



How is this project benefiting the USACE and Nation?

Efficiently communicating the benefits and positive outcomes of nearshore nourishment projects can increase support of stakeholders and the public for these projects.

- Effective and simple depictions of the role of sediment placed in the nearshore within the broader regional sediment system could help gather support.
- Identifying quantifiable performance metrics can help convey the success of nearshore placement projects more effectively.
- Clearly defined goals and metrics for projects will set clear expectations and will lead to long-term support of local stakeholders and the public

This project intends to help Districts seek support for and convey the success of projects placing sediment in the nearshore.