



Historical Implementation of RSM Practices: Quantifying Coastal Navigation Sediment Placement Challenges & Lessons Learned

May 17, 2016

Nicole Elko, Elko Coastal Consulting Quin Robertson, CB&I Zhifei Dong and Heather Vollmer, CB&I



A World of **Solutions**

155176-GN-PN-000002 Rev. 0 Issued for Information

Outline

GIS Database

67th CERB (1998) "Regional Sediment Management"

- Historical Implementation of RSM Practices: Coastal Navigation Sediment Placement
- RSM Implementation Survey
 - Challenges & Lessons Learned

RSM Phase 1: GIS Database

- Spatially convey the historic dredge and placement activities of USACE O&M dredging projects
- Utilize existing data don't reinvent the wheel
- Dredging Information System Data (DIS)
 - Project Name
 - Disposal Type
 - Volume
 - Year

CBI

- Cost
- Data Integration
 - Manual
 - Excel
 - Static Figures















Dredging Information System (DIS)

www.navigationdatacenter.us



Welcome to the US Army Corps of Engineers Navigation Data Center

Dredging Program

NDC Home Data



are

DREDGE

readsheet format for the current tion and the status of all Corps rtised in the designated fiscal n, district and the bid opening rmation on dates of anticipated timated quantity to be dredged.

Advertising Schedule (spreadsheet format) (updated on 10/06/2014) Current FY Previous FY

The report contains several Tabs each containing different sets of information including a list of all work remaining to be awarded in the fiscal year, a list of all proposed work (including work that has been awarded) in the fiscal year, and a list and chart of a 15 month window of hopper dredge work. The Advertising Schedule Legend, available as a separate file, contains the code description for job status, class of work, suggested dredge type, material units, type of disposal, dollar range of contract and



Modified from Childs 2015

DMM Categories for Tracking Beneficial Use

- Childs 2015
- Intent: Disposal vs. Beneficial Use



Coastal Navigation Sediment Placement 1998-2014



Refining Unknown Volumes

- QA/QC all 3,300 individual projects since 1998
- Excellent DIS data = no unknowns
 - SAC, LRB
- District databases
 - MVN, SPL, SPN, NWP, NAE
- Interviews discuss specific questions



Online GIS Display







Survey

Introduction

<u>Goal</u>: Understand the challenges & lessons learned of District RSM implementation

- Nov Dec 2015
- <u>Topics</u>:
 - Environmental
 - Operations
 - DIS
 - Stakeholders
 - Federal authority

- Regulations
- Federal Standard
- Planning & DMMPs
- Funding challenges/budget incentives
- Documentation





Q1 What District are you with?

Q4 Overall, how satisfied or dissatisfied are you with the present implementation RSM at your district?



What R&D do you need to better implement RSM?



Operations

Q9 What is your District's policy on the RSM approach of reuse of sediments once they are pumped into an upland disposal area?



Q10 What channel sediment characteristics describe desirable sediment for an RSM project?

Answered: 27 Skipped: 12



Q13 Has your District placed navigation sediment beneficially in open water? If so, in what form?

Answered: 23 Skipped: 16



Has your District leveraged RSM program funds to implement the construction of projects that incorporate RSM approaches?







Q24 How has your District leveraged RSM program funds to collaborate with stakeholders?



WRRDA 2014, Sec. 1030, Continuing Authority

WRRDA 2014, Sec. 1038, Reduction of Federal costs for hurricane and storm damage reduction projects

WRDA 2007, Sec. 2037, Regional Sediment Management

WRDA 2000, Sec. 202, Watershed and river basin assessments

WRDA 1999, Sec. 217, Placement of Dredged Material on Beaches

WRDA 1996, Sec. 227(d), State and Regional Plans

WRDA 1996, Sec. 516, Sediment Management

WRDA 1996, Sec. 207, Selection of Dredged Material Disposal Methods

I don't know

20%

10%

30%

40%

50%

60%

70%

80%

90%

100%

WRDA 1992, Sec. 204, Beneficial Uses of Dredged Material

WRDA 1986, Sec. 729, Watershed Planning

WRDA 1976, Sec. 148, Confined Disposal of Dredged Material

WRDA 1974, Sec. 22, Planning Assistance to States

Federal Authority



20







Q41 Implementing RSM projects that save the federal government money has this effect on our District budget

Answered: 12 Skipped: 27



Q46 If not, would you like to document projects' RSM success?

Answered: 17 Skipped: 22

