Portfolio Framework for Beneficial Use of Dredged Material

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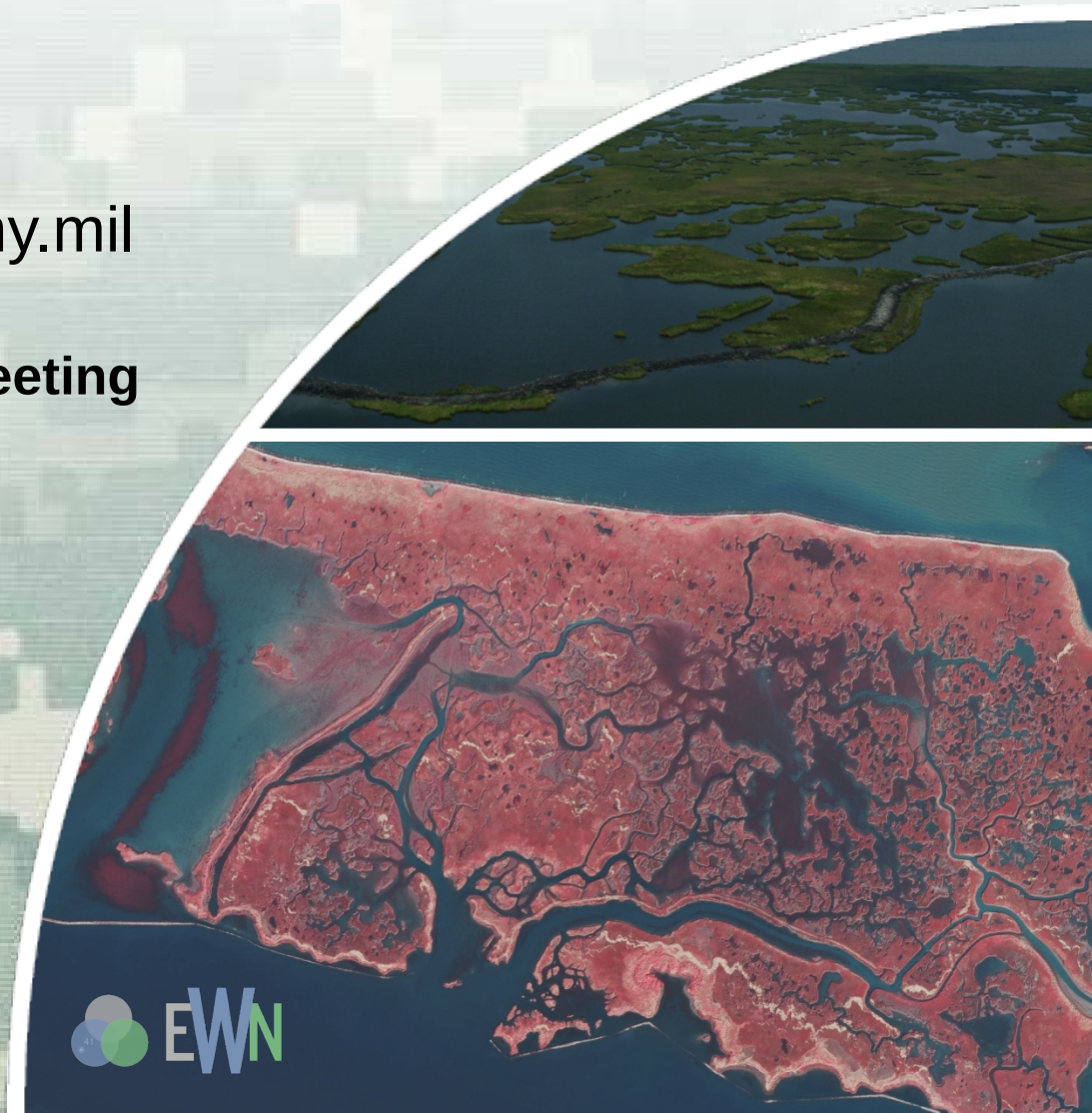

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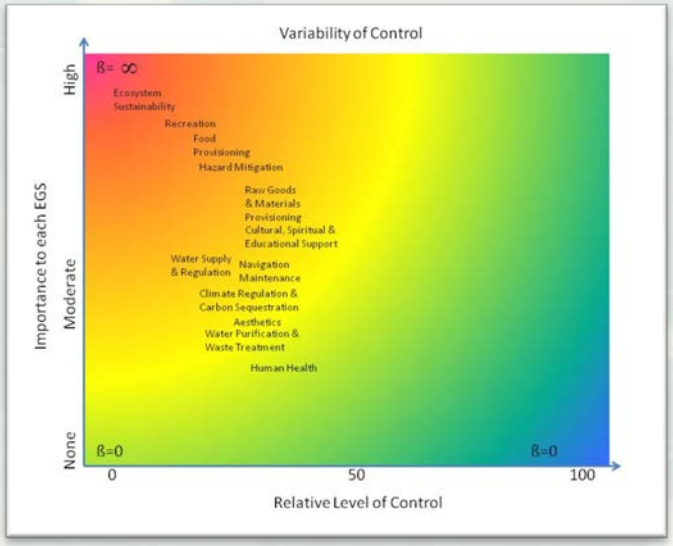

- Problem
  - To promote consideration of a range of BU placement by characterization of the benefits in native units
  - Optimize benefits from available resource across multiple projects

- Objectives
  - Develop a portfolio approach to valuing beneficial use projects
  - Consider the potential ecosystem goods and services - and implementation risk - created from different placement/design features
  - Utilize Districts, RSM, and other research (C. Piercy) to characterize potential placement sites

- Approach
  - Development and verification of a matrix of attributes and benefits (temporal)
  - Case studies (NAE, MVN)
  - Variability in functionality as a result of DM placement features
  - Mathematical optimization of benefits

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- **Project Funding by Year**
  - FY13: 113K
  - FY14: 120K
  - FY15: 80K

Major Project Deliverables

- Model parameter matrix of BU functions by March 2014
- Portfolio optimization model by October 2014
- Case studies with New England and New Orleans Districts by September 2015

Benefits to Navigation Program

- The approach necessitates the quantitative consideration of BU.
- The model can serve as an archive of the most up-to-date understanding of BU, incorporating cases.
- It provides a platform for calculating the collective utility of alternative BU projects.

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- FY14 Products
  - (Childs TN) Development of a matrix of EGS across placement types
  - (Childs, PIANC) Presentation of “Measuring Ecological Benefits from Dredged material Management” at 33rd PIANC World Congress
  - Draft TN of variability in benefits (risk) related to DM placement factors with MVN
  - Initial characterization benefits from placements sites with MVN

*The listing of products provided on this slide should be supported with a one-page Word document that provides a description and the particulars for each product. An electronic version of this document should be provided along with the PPT file to Cynthia Banks by Friday, 18 July. Collaborations and interactions with others (internal and especially external to ERDC, should be described, when relevant, for all products.