

# EWN FY15 IPR



## Portfolio Framework for Beneficial Use of Dredged Material

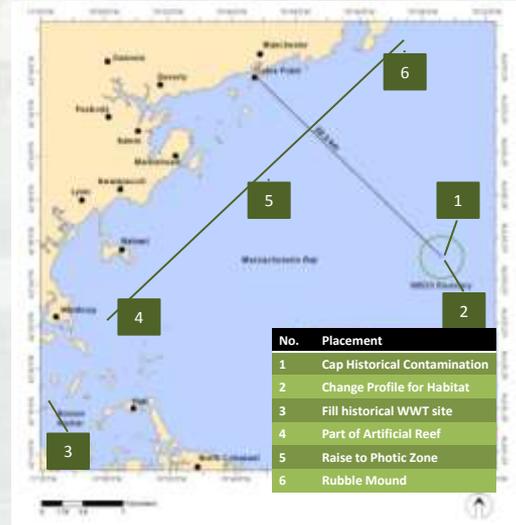
C.M. Foran, I. Linkov, B. Suedel, J. Corbino and S. Wolf

### ■ Problem

- Promote the consideration and development of BU projects through the quantification of potential gains from a set of projects
- Identify those benefits which will be the most important to characterize

### ■ Objective

- Develop a portfolio approach to valuing beneficial use projects
- Consider the potential ecosystem goods and services created from different placement/design features
- Provide a quantitative comparison of different placement options



### ■ Approach

- Development and verification of a matrix of attributes and benefits (Child et al. 2014)
- Characterize uncertainty and temporal variability
- Mathematical optimization
- Case studies: Boston Harbor, Atchafalaya



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### ■ Project Funding by Year

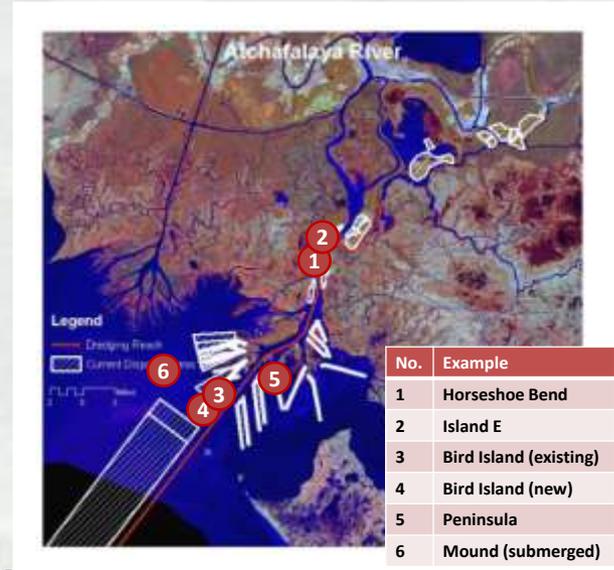
FY13: 113K

FY14: 120K

FY15: 80K

### ■ Major Project Deliverables

- Matrix of benefits (Childs et al 2014)
- TN on uncertainty (Co-author review)
- Temporal quantification (Complete)
- New England Case (January 2016)
- Atchafalaya Comparison (Suedel, Dec 2015)
- Atchafalaya Basin (December 2016)



### ■ Value Statement

- Anticipating differences in the gains from alternative beneficial use placements, as well as the uncertainty in achieving those gains, allows for more efficient investment in dredged material placement projects.



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- FY15 Products
  - Galveston District Collaborative Meeting (Foran et al. 2014)
  - Society for Risk Assessment (Linkov et al. 2014)
  - ERDC Technical Note, “Estimating the variability in beneficial use of dredged material” (co-author review)

