Integrated strategy for beneficial use of dredged materials in Great Lakes commercial ports

Gene Clark, PE
Coastal Engineering Specialist
University of Wisconsin Sea Grant

Dave Knight, LLC
Consultant
Great Lakes Commission
Who or What is CFIRE???

- UW-Madison Institute Funds Research & Outreach of Sustainable Freight Transportation Infrastructure & Systems
- Includes All Four Transportation Modes
  - CFIRE Funded Our Recent BU Summit Project
  - This Project an Outcome From the BU Summit With DOT’s

• Project PI’s:
  • Dr. Bill Likos, Ph.D.
    University of Wisconsin - Madison
    Geo-technical Engineering Professor
  • Dave Knight LLC, GLC
  • Gene Clark, PE UW Sea Grant
• Task #1: Laboratory and Field Characterization of Material in Representative Great Lakes CDFs (Bill Likos lead)

• Determined Best Ways to Characterize CDF Material in Actual CDFs

• Lab Tests Completed of CDF Material to Determine Physical Characteristics & Suggested Possible Uses

• Lab Tested Methods To Amend Material with Fly Ash & Determine Resulting Characteristics and Uses
Task #1: Laboratory and Field Characterization of Material in Representative Great Lakes CDFs (Bill Likos lead)
Task #2: Enhancement of Existing GLC/GLDT CDF Web-based Screening Tool (Dave Knight lead)

- Tool Highlights CDF Material (types & amounts)
- Tool is Several Years Old & Needs Updating
• Task #3: Project Outreach to Promote BU of Dredged Materials and CDF to PRF Conversions
  (Gene Clark lead)
  • Brochure Update “Converting Existing Great Lakes Confined Disposal Facilities (CDFs) into Processing and Reuse Facilities (PRFs) – Scheduled Completion End of December, 2015
    • Define CDF to PRF Transformation Techniques
    • Present Three (3) WI Case Study CDF’s
      – Milwaukee CDF (standard “Box”)
      – Green Bay CDF (cell design)
      – Duluth/Superior Erie Pier CDF (Converted to PRF)
• Task #3: Project Outreach to Promote BU of Dredged Materials and CDF to PRF Conversions (Gene Clark lead)

• Project Webinar For USACOE and CDF Managers in Early 2016

• Presentation at National Conference (2016?)
Questions or Comments???

Gene Clark (WI Sea Grant)
gclark1@uwsuper.edu

Dave Knight, LLC
dknight050@gmail.com