AOP based sediment treatment and stabilization for Beneficial use

CHALLENGE

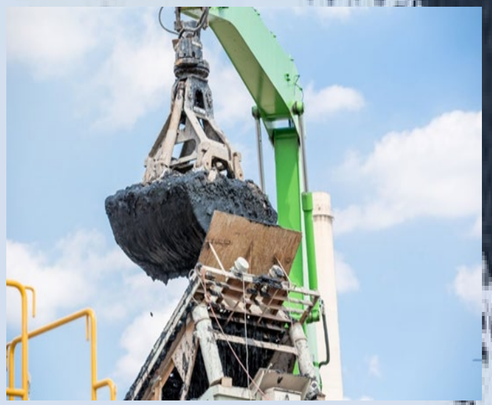
- Only 30-35% of dredged materials undergoes beneficial use
- Risk associated with contaminants in sediments
- Effective treatment techniques required to reduce/ eliminate risks to enhance beneficial use
- Change industry perception

SOLUTION

- Chemical treatment of sediment using advanced oxidation process (AOP) has potential to degrade pollutants
- AOP treated sediment can be combined binders used for construction for potentially viable beneficial use

IMPACT

- Enhancing beneficial use towards 70% goal by 2030
- Increase design flexibility into projects
- Expand final placement opportunities



November 2023

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APPLICATIONS

- Evaluate and identify ex-situ sediment treatment
- Promote wide application of treated sediment for beneficial use
- Develop partnership with sediment management stakeholders

STATUS

- Kickoff meeting with PI/Co-PIs and ERDC personnel
- Study Task-1 initiated – screening of contaminated sediments
- Initiate Task-2: AOP experiments – Q1 FY24
- Complete oxidation experiments and select optimal AOP – Q2/3 FY24
- Initiate Task-3: Stabilization experiments – Q4 FY24
- Final report – Q1/2 FY25

BENEFITS

- Development of next generation sediment processing and regional transloading facility
- Broadened spectrum of beneficial uses
- Lowered costs/Return on Investment

WHAT'S NEXT

With additional resources, we will evaluate technology scaling through a Pilot /Commercial-scale study