



Update on Design of the Bayou Chico Remedial Action

Escambia County, Florida

Bayou Chico Sediment Remediation Project
July 10, 2024

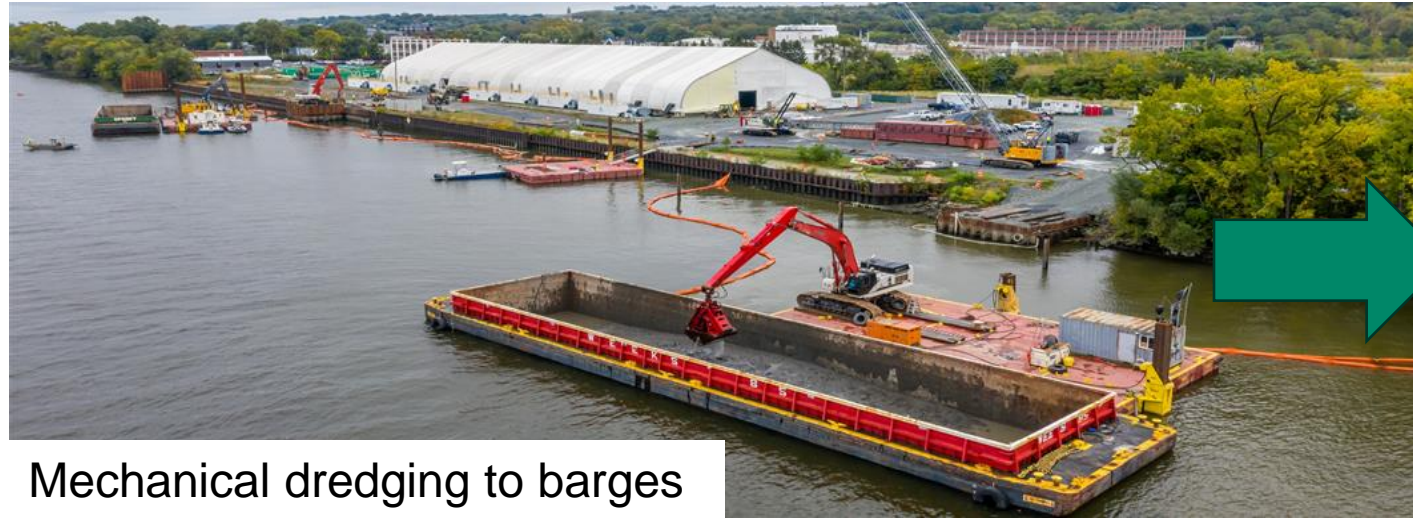
Terri Berry, Escambia County
Amy Mixon, AECOM

Dioxins and furans – risk driver

- **Multiple investigations 2019-2023**
- **Exceedances of FDEP screening level for Dioxins/Furans (Probable Effect Level - 21.5 ng/kg) in majority of surficial sediment samples**
 - Highest concentrations in central part of the Bayou
 - Highest concentrations typically within the top 2 feet
 - Concentrations generally decrease with depth
- **Dioxin/furan correlated to fine-grain sediment**
- **Fine-grain sediment surveyed in top 0-2 feet**



Recommendation: Mechanical Dredging with Amended Gravity Stacking



Mechanical dredging to barges



Barge transport to SDA

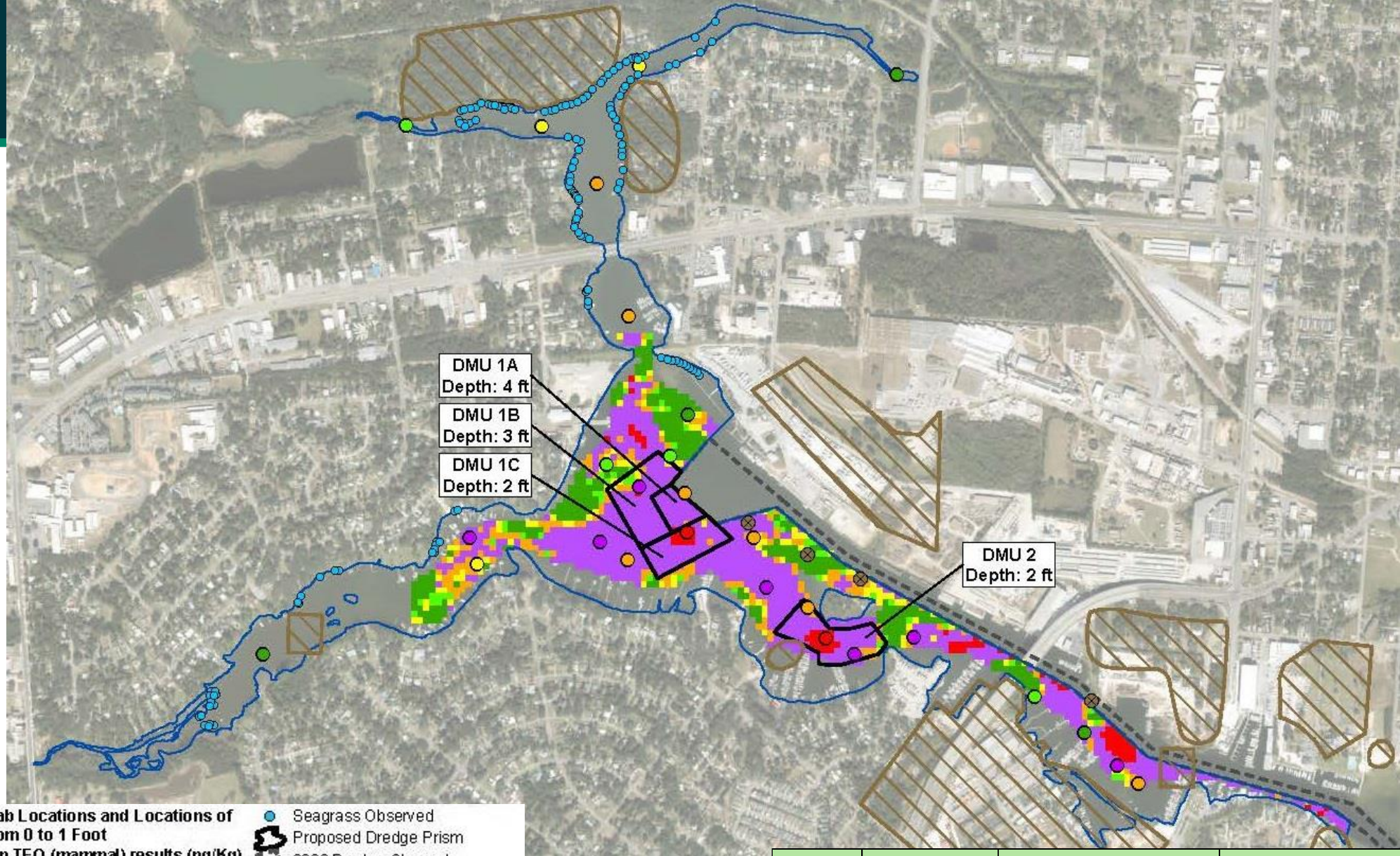


Ex-situ amendment mixing



Transloading to SDA

Phase 1 Dredge Management Units



Legend

Interpolated Areas of Dioxin/Furan TEQ (mammal) results (ng/Kg)



Surface Grab Locations and Locations of Dioxin/Furan TEQ (mammal) results (ng/Kg)



- Seagrass Observed
- Proposed Dredge Prism
- 2008 Dredge Channel
- Locations of Historical Artifacts
- Areas of Historical Artifacts
- Study Area Boundary

DMU	Dredge Prism Volume (CY)	Average Dioxin/Furan Concentration (ng/kg)	Mass Dioxin/Furan (ng)
1	44,303	192.5	2,969,267,255
2	17,569	220.1	1,365,131,444
Total (Phase 1)	61,872		4,334,398,699

Phase 1 - Sediment Targeted for Removal

Lines of Evidence

- Targeted sediment with highest human health risk
- Highest average dioxin/furan concentrations
- Co-located contaminants including PCBs
- Used an estimated Phase 1 construction budget to calculate dredge volume
- Considered constructability, safety, quality of life impacts and cost/benefit analysis

Next Steps: Design/Permitting

Sediment Dewatering Area Selection

- Select and secure SDA location
- Hours of operation
- Equipment sizing
- Best Management Practices
- Quality of life impacts

Permitting

- Application to be submitted with 60% design
- Pre-application meetings conducted, and no show-stoppers identified
- Will include a whole-Bayou project approach with subsequent phases identified
- Working with agencies to secure 10-year permit to allow for subsequent phases of dredging



Questions?

Project Team is also currently
accepting questions and comments at
BayouChicoTeam@myescambia.com