**ERDC Environmental Laboratory presents Characterization of Biological Effects of Open Water Placement research to the Western Lake Erie Basin Urban Waters Federal Partnership, 21 March 2025**

*Impact Statement: Participation in the Western Lake Erie Basin (WLEB) Urban Waters Federal Partnership quarterly meeting provides opportunity for the ERDC Environmental Laboratory (ERDC-EL) researchers, in conjunction with their USACE Buffalo District (LRB) collaborators, to explain their research efforts to a key group of Federal, state, and local agency stakeholders. The characterization of potential environmental benefits from the bathymetric relief created by open water placement of dredged sediment in Lake Erie could improve cost efficiency of dredging operations, but stakeholder support, especially in Ohio, will be crucial to ensure research outcomes are implemented.* 5

The Western Lake Erie Basin (WLEB) Urban Waters Federal Partnership is based in Toledo, Ohio. It is one of 21 Urban Waters Federal Partnerships resulting from a 2010 national initiative to encourage Federal agencies to work more effectively and efficiently with each other in restoring and protecting local waterways. Over 40 Federal, state, and local agencies participate in the WLEB Urban Waters Federal Partnership (Figure 1), including several of USACE Buffalo District's dredged material management stakeholders (e.g., Ohio Environmental Protection Agency, Ohio Lake Erie Commission, and Lucas County Soil and Water Conservation District). In 2020, the Ohio Environmental Protection Agency (EPA) promulgated a law effectively "banning" the practice of open water placement of dredged material in Lake Erie, unless the aquatic placement was for beneficial purposes.

Anectodical evidence from fishermen indicate that some of the dredged material open water placement sites are good fishing spots. This research task attempts to understand and verify if fish may be attracted to these dredged material open water placement sites. If so, these dredged material placement sites may be considered aquatic beneficial use placements, greatly improving cost efficiency for dredged material management and contributing to the Chief of Engineer's goal of beneficially using 70% of all dredged material by 2030. A draft manuscript currently under review summarizes recent studies in the literature corroborating the fact that the creation of shoals on the lakebed or ocean floor consistent with dredged sediment placement could enhance fish habitat. Plans are underway to monitor use of the Great Lakes dredged sediment placement sites by benthic macroinvertebrates and fish.

Dr. Karen Keil, along with colleagues Dr. Andrew McQueen and Mr. Brett Hayhurst (all of ERDC Environmental Laboratory [ERDC-EL]), and USACE Buffalo District (LRB) collaborator (Mr. Richard Ruby) presented a talk "Characterization of Biological Effects of Open Water


Figure 1. List of Federal agencies involved in the Urban Waters Federal Partnership. Note that the Western Lake Erie Basin (WLEB) chapter is co-led by USACE Buffalo District (Ms. Ashley Binion-Zuccaro) and also involves state and local partners.

Placement Sites" (Figures 2 and 3) to the WLEB Urban Waters Federal Partnership. This virtual quarterly meeting of the Partnership provided an opportunity for the agency members to engage in peer-to-peer learning, share knowledge, and celebrate collaborative advancements across the WLEB. This presentation is just one step in the process of garnering stakeholder support of the USACE Dredging Operations and Environmental Research (DOER) Program task outcomes.

Funding for this study was provided by the USACE Dredging Operations and Environmental Research (DOER) Program through the Environmental Resource Management Focus Area.

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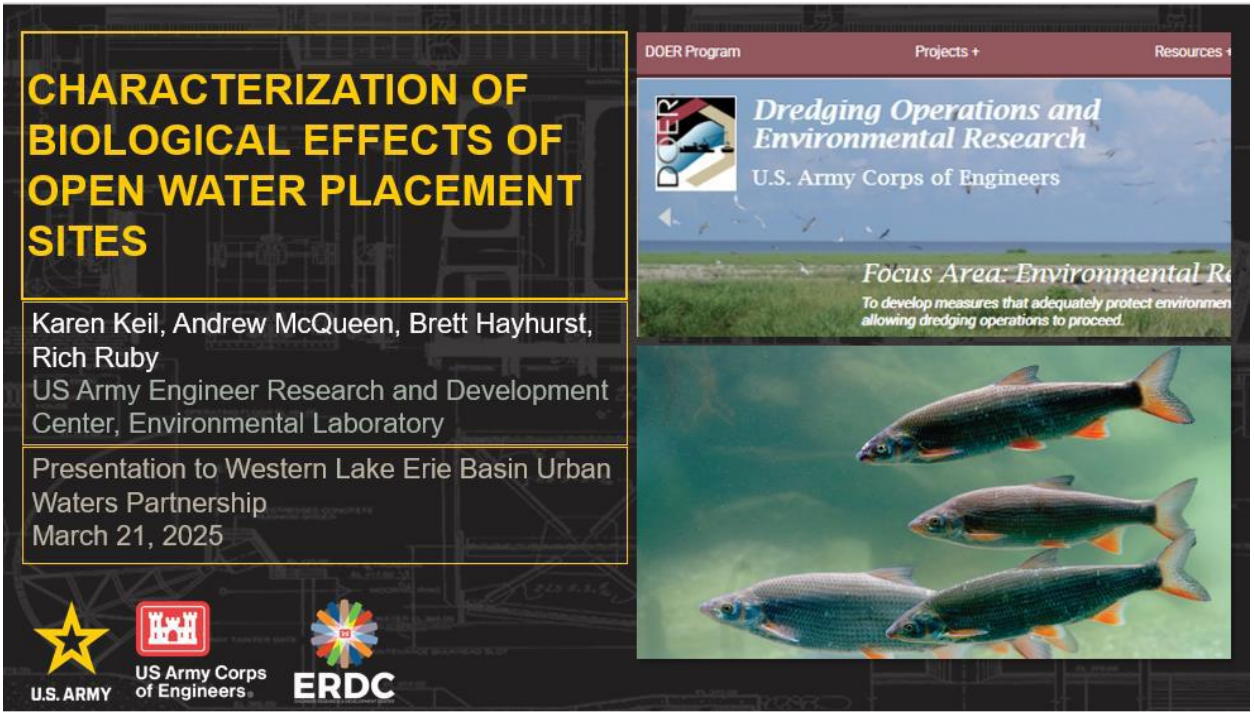


Figure 2. Slide from Dr. Karen Keil's (ERDC-EL) presentation to Western Lake Erie Basin (WLEB) Urban Waters Federal Partnership. 7

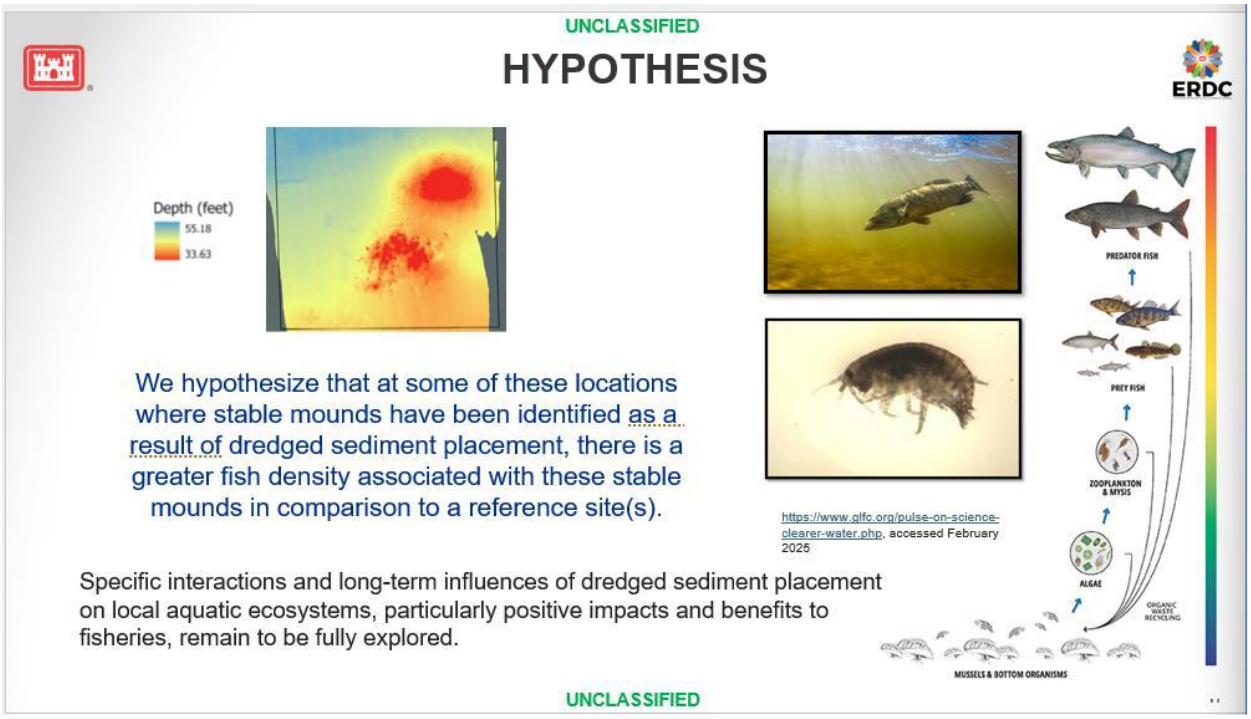


Figure 3. Slide from Dr. Karen Keil's (ERDC-EL) presentation to the Western Lake Erie Basin (WLEB) Urban Waters Federal Partnership.