Title: Developing a historical dredged material placement database for the Upper Mississippi River: Implications for current BU practices

Abstract: USACE has constructed dozens of ecosystem restoration projects in the Upper Mississippi River System (UMRS) through the beneficial use (BU) of sediment to restore floodplain forests. Achieving restoration objectives has proven difficult, however, with numerous sites failing to achieve levels of vegetative function observed in natural forests. A retrospective analysis of project outcomes in restored sites could provide critical information on the trajectory of floodplain forest development in the UMRS. Though prior to official BU practices, there are records for 70+ years of sediment placement in the UMRS with a wide array of forest development, but no analysis of outcomes, leaving a significant gap in our knowledge on the long-term outcomes of BU sites. The development of a historical dredged sediment placement database in the UMRS provides an opportunity to document long-term benefits provided by BU floodplain forest sites and inform current guidance to improve floodplain forest restoration projects.

Presenters:

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Bio: Nia Hurst is a Research Biologist in the Wetlands and Coastal Ecology Branch of the USACE-ERDC. With an emphasis in wetland biogeochemistry, her research broadly focuses on using wetland restoration, creation, and management to enhance ecosystem resiliency and develop applied solutions to emerging environmental problems. Nia earned an M.S. in Oceanography and Coastal Sciences with an emphasis in Wetland Biogeochemistry from Louisiana State University and a B.S. in Environmental Science from DePaul University.

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Bio: Aaron McFarlane is a professional biologist with the St. Paul District of the U.S. Army Corps of Engineers (USACE). He serves within the Regional Planning and Environment Division North, where his work focuses heavily on river ecology, environmental management, and navigation infrastructure.