

## PROBLEM

- River regulation alters natural hydrology
- Sediment dynamics are altered leading to infilling and delta formation
- Floodplain and riparian plant communities are impacted as a result

## SOLUTION

- Innovative environmental pool management (EPM) in river navigation pools or flood control reservoirs
- Emulate natural hydrologic processes/cycles for increased wildlife abundance and wetland habitat
- Monitor responses and communicate outcomes for others to copy

## IMPACT

- Gain more environmental and other benefits for little cost (planning and stakeholder communication).
- Enables USACE water operations infrastructure multi-functional
- Builds strong stakeholder partnerships

# Environmental Pool Management: An EWN Innovation for Advancing USACE Water Operations Practice (ERT 21-06)



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## WHAT'S NEXT

With additional resources, we will add water quality and sediment monitoring to ongoing work.

## APPLICATIONS

- EPM established in MVS in 1997 and applied in MVP in 2000
- Applied to Lake Red Rock FRM reservoir in 2016
- Prior river experience combined with ongoing monitoring at Lake Red Rock will quantify multiple benefits achieved on 10,000 acres of delta wetlands

## STATUS

- EPM ArcGIS StoryMap completed
- CESU contract with Univ. of Iowa for sediment and 3 years of ice-free season water quality sampling
- Sediments to be collected and analyzed in Fall 2021 by Iowa State Univ.

## BENEFITS

- Tech transfer for EWN best practice
- Broadly communicating benefits and shared authorities and mandates with partner agencies
- Substantial program integration/partnership (EWN/SRP/EMRRP/MVR/TNC/ISU/UI)
- “Free” environmental, economic, and social benefits (i.e., no new infrastructure)

