US Army Corps of Engineers®
Engineer Research and Development Center

Regional Sediment Management Program
Reservoir Sustainability/ Sediment Continuity Scoping

Description

Sedimentation in USACE reservoirs decreases available storage which has a detrimental effect on all the authorized purposes, including navigation. Reservoir sedimentation problems are severe in reservoirs on the Kansas River, where expanding water demand due to population increases must be satisfied by shrinking storage volume due to decades of ongoing reservoir sedimentation. Correspondingly, downstream channels are degrading and sediment-dependent aquatic species are suffering for a lack of sediment. The purpose of this project is to lay the groundwork for a pilot implementation project for sediment bypass, hydrosuction, or other "low-energy" management alternative at a Corps of Engineer reservoir in Kansas.

Issue/Challenges

The Corps of Engineers has not implemented a project of this type before. To fill the expertise gap, two international experts will join with local experts for a reservoir sediment management charrette. The international experts along with local sedimentation experts will examine three reservoirs and develop an array of potential solutions.

Successes Lessons Learned

Lessons learned through this process will be documented and available for application in other districts.

Expected Products

- Documentation of existing reservoir information
- Charrette synopsis and description of the most promising management ideas for each reservoir.
- Documentation required for a proposal for a federal implementation project.
- Documentation of lessons learned and presentation at 2013 RSM IPR

Potential Users

USACE Kansas City District, USACE Omaha District, Kansas Water Office

Projected Benefits

Application of reservoir sediment management strategies can have a tremendous cost savings and ancillary environmental benefits when compared to dredging or the construction of new reservoirs.

Leveraging Opportunities

A majority of the funding for this effort, including the contracting of the two reservoir sedimentation experts, comes from the Section 204 program. The Kansas Water Office will coordinate participation by other state technical experts.

Points of Contact

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Participating Partners

This work supports the Kansas Reservoir Sustainability Initiative with participation by the Kansas Water Office and other state technical and regulatory agencies.