

Final Report - Antelope Reservoir Rehabilitation

Overview

This report is to summarize the activity for the Antelope Reservoir Rehabilitation Project. The project was divided into 4 tasks described below. Description of work completed including the major issues and changes of the project are discussed below. A spreadsheet is included for additional details on the spending for the project. Matching funding from the Colorado River District grant was fulfilled in March 2019.

Task 1: Engineering and Reporting

Engineering and reporting is complete in regard to the scope of the grant. During submittal of the design to the state, a sand collar was required for approval of design. This scope addition required additional design and review which delayed the start of construction. The sand collar was added to the design, but has yet to be constructed. An interim report has been submitted for the lining of the pipe and elbow (task 2) and serves as the final engineering report for the purpose of this grant. Any additional reporting for the state dam inspector is regarding the installation of the sand collar and is out of the scope of the grant.

Task 2: Repair Discharge Pipe

The pipe was lined as planned. The main challenge encountered was that the liner could not be continued through the elbow and a steel elbow was not feasible to fabricate. Instead, the existing elbow was coated with an epoxy wear compound. The pipe functioned properly through the summer irrigation season and a fall inspection showed that both the pipe liner and elbow wear compound were in good shape.

Task 3: Replacing Stem Casing

This task only spent 3% of the budget. The casing was repaired rather than replaced. Angle iron was welded along the length of the casing around the break. This allowed the stem to travel freely and actuate the headgate. In a site discussion with Dana Miller, it was agreed that this is an acceptable fix as long as the gate can be actuated without issue or resistance. The gate will be fully actuated regularly and the weld will be inspected at least annually to ensure it continues to work. As long as there are no other issues this task will not require any other activity.

Task 4: Earthwork

The willows and other vegetation on the dam face were sprayed with an herbicide in October 2019 and appears to have been effective. Grading of the dam crest and scarping repairs on the upstream face was not accomplished due to an equipment breakdown, so will not be invoiced to the grant account. It can be completed at a later date and costs covered by the owner.

Summary

The project was completed under budget with total invoicing to the grant contract of \$24,088 out of a budget of \$30,000. The remaining cost of the project was funded by the owner and a grant from the Colorado River Water Conservation District. Any remaining work required on the reservoir will be discussed with the dam inspector and costs going forward will be covered by the owner.