FINAL PROJECT REPORT- POGG1 2020-2979

PROJECT SUMMARY

REPORT DATE	PROJECT NAME	PREPARED BY
February 7, 2022	WSRF Grant – Arkansas-Cottonwood Irrigation Ditch #2 Project	Gracy Goodwin Project Manager
	Grantee: St. Charles Mesa Water District	David Simpson

STATUS SUMMARY

Year over year St. Charles Mesa Water District (SCMWD) was having to make repairs or rebuild their wingwall on their diversion on Cottonwood Creek. Eventually enough erosion occurred around the headgate causing it to move and lift during the winter months that SCMWD was not being able to receive their full decreed diversion during low flows.

This grant is for the replacement of the headgate and repair of the Parshall flume on the Cottonwood Irrigating Ditch #2 (CID2) Diversion. It also includes the addition of a new telemetry station which both St. Charles Mesa and Upper Arkansas Water Conservancy District will both utilize to measure their water.

The infrastructure has been completed. A coffer dam was created, the old structure removed, and the new headgate was poured. They found damage to the existing pipe and replaced a 10' portion of the piping. Next large boulders were grouted in place for stabilization and the creation of the wingwall. Then they removed the flume and reinstalled it with concrete to increase stabilization. Next, the water was diverted to the other side and grouted large rock installed along the bank. Lastly, the telemetry station was installed and integrated on UAWCD's reporting platform.

BUDGET OVERVIEW

Total WSRF Budget **= $110,400.00**
Reimbursement Request #1 **= $98,396.00**
Final Reimbursement **=$11,929.41**
WSRF Remaining Balance **=$74.59**

Task	% Complete	Funding Source	Grant	Match	Total
1-Construction	100%	WSRF	$103,405	$56,600	$160,005
2- Telemetry Station	100%	WSRF	$6,995	$7,000	$13,955
3- Project/Grant Management	100%	WSRF	$0	$10,000	$10,000

CONCLUSIONS AND NEXT STEPS

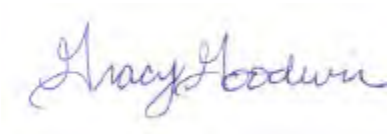
- **Engineering- ACA Construction**
  - **Completed Tasks**
    - Engineering design/Survey/Mobilization/Site Prep
    - Excavation and the removal of the existing headgate
    - Excavation and removal of the existing flume and measuring equipment
    - Right (South)- Channel Work Including Grouted Riprap, New Headwall, and Flume Stabilization
    - Re-install flume and measuring equipment
    - Left (North) Channel Work Including Grouted Riprap
    - Site Restoration and demobilization of equipment
    - Final walk-thru on completed construction
    - Minor rock modifications to improve channel flow

- **Hydrology- UAWCD/ Source Water**
  - **Completed/ Current Tasks**
    - Ordering and gathering equipment for new telemetry station
    - Installation of new telemetry station
    - Programming and integration of station onto UAWCD's reporting platform
    - Verification of station properly reporting to UAWCD database

- **Project & Grant Management- UAWCD**
  - **Completed/ Current Tasks**
    - UAWCD Project Manager has coordinated site visits, engineering, and hydrology tasks with the engineering companies.
    - Providing continued communication and progress updates to partners.
    - Project Manager continues to work with the fiscal agent and partners to manage grant tasks.
    - Management of match (cash/in-kind). 100% of the match requirement has been met.
    - This is the final report for this project.

Thank you for your time and continued support of water projects in the Upper Arkansas Valley. Please contact Gracy Goodwin at (719) 539-5425 with any questions.

Sincerely,

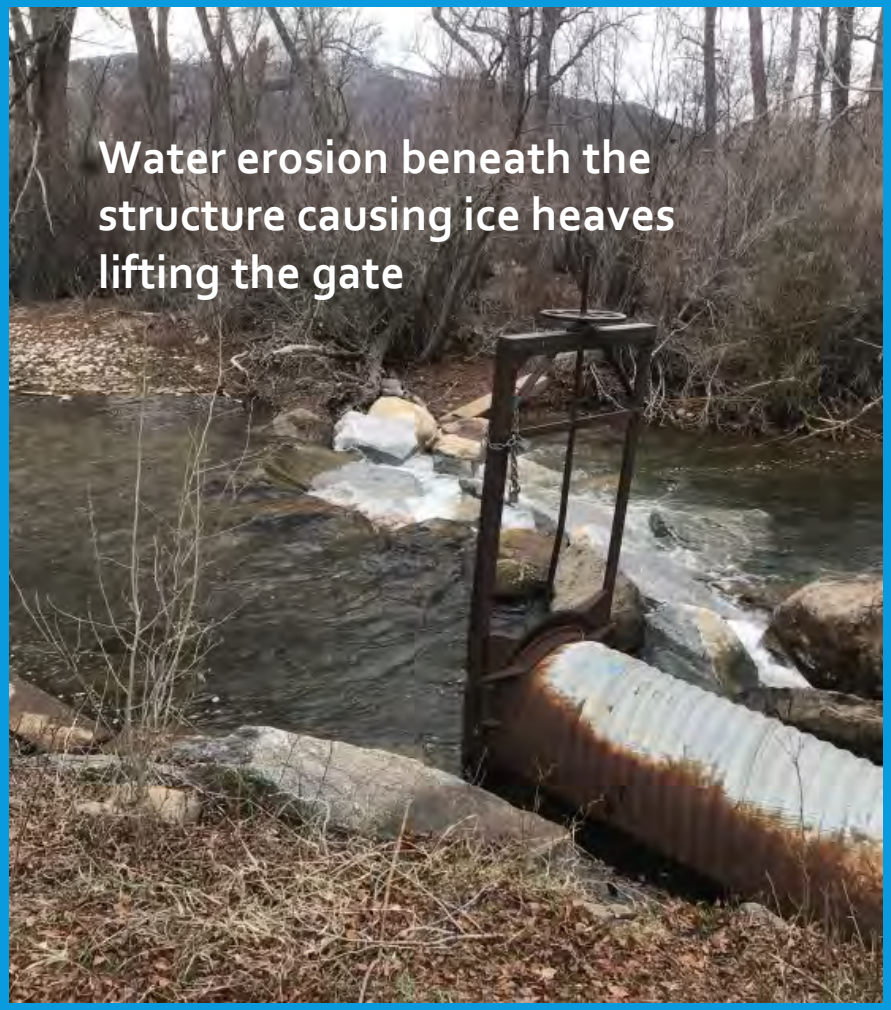


Gracy Goodwin
UAWCD Project Manager

ST. CHARLES MESA COTTONWOOD IRRIGATING DITCH #2 HEADGATE/ AUGMENTATION STATION

ISSUES

Wing wall failing causing a drop in water level at the headgate.



The channel substrate is such that it moves during high flows and pushes the larger riprap down stream or makes it sink changing water levels.

Goal: Looking for a permanent fix, more accurate water measuring, and better utilization of resources.

TASKS 1 & 2

Task 1

- Mobilization of equipment and materials.
- Site preparation and debris cleanup

Task 2 (Right – South Side of diversion)

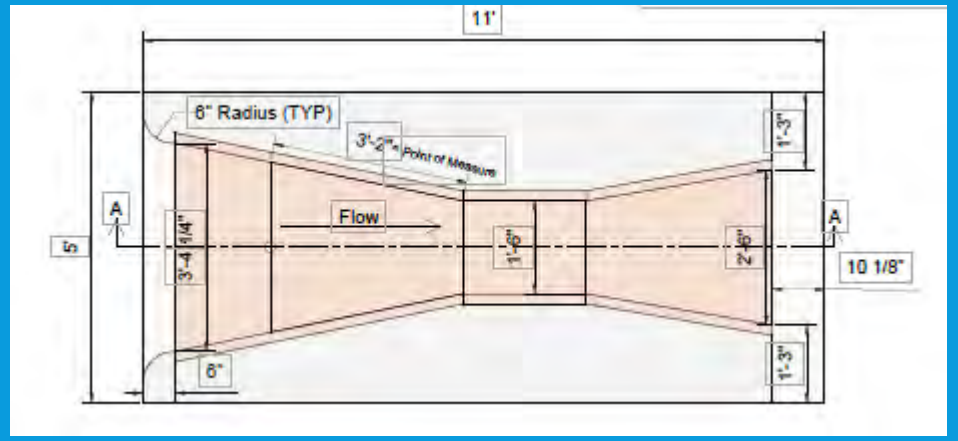
- Installation of bulk bags to dewater the area of construction and divert flows to the North side of the creek.
- Install Cast-in-place headwall and new slide gate

WORK IN PROGRESS

TASK 2 (continued)

<u>Task 2</u> – Parshall Flume

- Existing flume and measuring equipment to be removed and flume re-installed with a concrete foundation.
- Create more stability and better grading.



FINISHED FLUME

TASKS 3 & 4

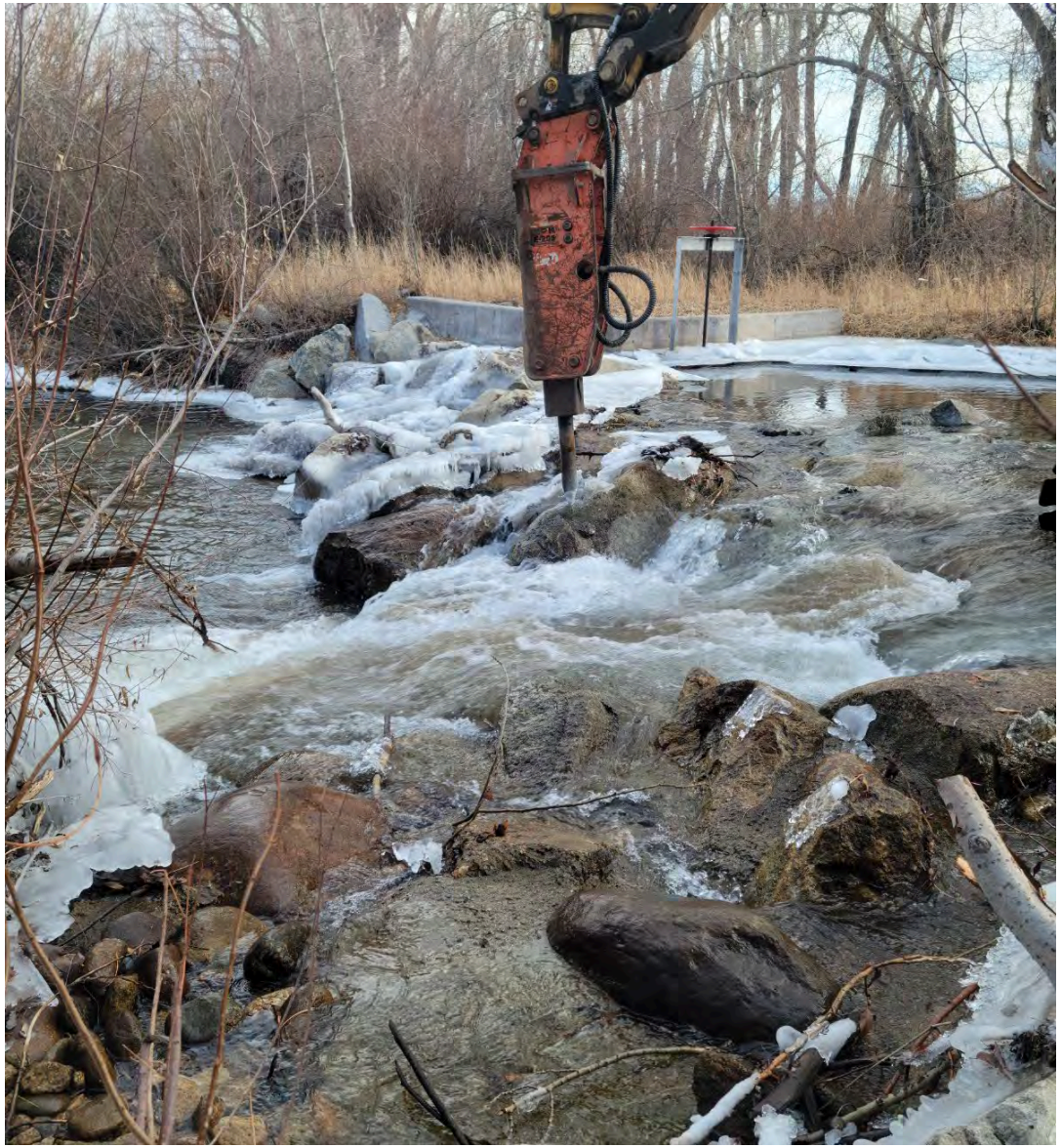
Task 3 (Left- North side of diversion)

- Installation of bulk bags to dewater the construction area
- Installation and grouting of riprap
- Reinforcement for erosion control
- Preservation of floodwall and protection of fishery flow

Task 4

- De-mobilization of equipment and materials.
- Site restoration of disturbed area

WORK IN PROGRESS



TASK 5

Task 5 – Telemetry Station

- Installation and verification of all equipment and programing
- Integrating previous equipment into upgraded station
- Database management to ensure proper and timely reporting on the UAWCD website
- Provides alert system for predetermined threshold values

DIVERSION COMPLETED