

COLORADO RIVER RECOVERY PROGRAM
FY 2014 ANNUAL PROJECT REPORT

RECOVERY PROGRAM
PROJECT NUMBER: C-9

I. Project Title: O&M for Elkhead Releases and Elkhead Lease

II. Bureau of Reclamation Agreement Number(s): 05-WC-40-420

Project/Grant Period: Start date : 02/17/05
End date: ongoing
Reporting period end date: 09/30/14
Is this the final report? Yes _____ No XX

III. Principal Investigator(s): Ray Tenney
Colorado River Water Conservation District
P.O. Box 1120
Glenwood Springs, CO 81602
Telephone: (970)945-8522
Cell: (970)379-1492
Fax: (970)945-8799
Email: rtenney@crwcd.org

IV. Abstract:

5,940 acre-feet of Elkhead Reservoir water was available to the Recovery Program in 2014. This includes 5,000 acre-feet available to the Recovery Program each year, plus 940 acre-feet carried over from 1,000 acre-feet the Recovery Program leased in 2013 from the River District.

The Recovery Program released 1,627 acre feet from Elkhead in late July to maintain flows above 850 cfs on a descending hydrograph in the lower Yampa, in order to “float boats” for Parks and Wildlife efforts to remove non-natives. Due to late season rains in the Yampa basin no additional water was released.

Of the 1,627 acre-feet released 940 acre-feet came from the 2013 carry-over water which can be carried over only one year. The Recovery Program will have available in 2015 the normal 5,000 acre-foot pool and any additional water leased in 2015.

Elkhead was operated for the third year in a row with minimal discharge over the unscreened spillway. Other than two brief periods May 5&6 and May 25th to 27th in 2014 resulting in approximately 600 acre-feet, operations over the last 3 years have assured all releases were through fish screens with ¼” openings. Sampling by CPW reportedly confirmed escape of fish during the brief spillway operation in 2014, including northern pike and small mouth bass.

- V. Study Schedule: Deliveries began in 2007 and will continue as requested.
- VI. Relationship to RIPRAP: Relationship to RIPRAP: Green River Action Plan: Yampa and Little Snake Rivers, I.B.2.a.(2)(b), Deliver water for endangered fish.
- VII. Accomplishment of FY 2014 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

The Recovery Program called for release of 1,627 acre feet of the 5,940 acre-feet available from Elkhead in late July to maintain flows above 850 cfs on a descending hydrograph in the lower Yampa, in order to “float boats” for Parks and Wildlife efforts to remove non-natives. Due to late season rains in the Yampa basin no additional water was released.

Of the 1,627 acre-feet released 940 acre-feet came from the 2013 carry-over water which can be carried over only one year. The Recovery Program will have available in 2015 the normal 5,000 acre-foot pool and any additional water leased in 2015.

Wetland mitigation areas continue to develop. The constructed mitigation areas on the reservoir shoreline are beyond the required 5 year monitoring period. Field review with the USACE and delineation of the wetlands around the enlarged reservoir, including outside the mitigations areas, supports a request to the USACE for relief from further detailed monitoring except in the “delta” at the inflow to the reservoir. The upstream “delta” mitigation area is accumulating sufficient sediment to support vegetation. This “delta” area requires 3 more years of monitoring under the USACE Section 404 permit, providing sufficient soil accumulates and becomes vegetated.

Some maintenance items were identified in the annual dam safety inspection including repainting of some of the valves. Valves were repainted in 2014. Otherwise the dam is performing well.

The recreational aspects of Elkhead Reservoir are managed by Colorado Parks and Wildlife through an agreement between CPW and the City of Craig and the River District, supported by a \$30,000 annual subsidy. The facilities are well maintained and well used by the public. CPW conducts 100 percent inspections of all motorized water craft entering Elkhead Reservoir under Colorado Aquatic Nuisance Species program.

Operations in 2014 allowed two brief periods of unscreened spillway operation as shown on the attached operations graph and described above. CPW staff were able to sample the stilling basin below the reservoir during these two periods and detected fish, including small mouth bass and northern pike.

Impressed current cathodic protection was installed on lower and upper discharge gates in the outlet tower at Elkhead. Passive cathodic protection was installed with the original

construction on the outlet tower gates to counter the potential difference between the stainless steel fish screens and the plain steel in the outlet gates and the rebar in the structure. The passive system was not adequate to maintain the necessary potential difference (picture a giant flashlight battery) to avoid long term corrosion damage to the gates which range in size from 24" to 72". The first season of operation yielded good results until some of the wiring to the upper gate anodes failed. This wiring will be repaired in 2015.

VIII. Additional noteworthy observations:

Recreational use is apparently increasing at Elkhead with the 2013-14 winter the first time notable ice fishing use was observed.

Operations to avoid spillway operation were overwhelmed by brief spikes in inflow. Outlet works were at full discharge during this time. See Appendix B.

IX. Recommendations:

Complete the repairs to the impressed current cathodic protection system.

Arrange for cutting and planting of willows around the margins of the wetland mitigation areas to increase the habitat value to support the adequacy of the mitigation wetlands.

Consider investment in some cottonwood trees in the mitigation areas. These trees were included in the mitigation plan but not in the original mitigation area plantings. The trees will require watering and volunteer Boy Scout troop watering may be available.

IX. Project Status: *"on track and ongoing"*

X. FY 2014 Budget Status

A. Funds Provided: \$64,600 budgeted in 2014 SOW submitted

B. Funds Expended: \$70,670.71 for operations

\$3,167.74 for fish screen operations

C. Difference: + \$ 9,238.44 (under spent in FFY 2013 by \$ 26,304.08 due to rescheduling of work into 2014)

D. Percent of the FY 2014 work completed, and projected costs to complete: 100%

E. Recovery Program funds spent for publication charges: none

XI. Status of Data Submission (Where applicable): N/A

XII. Signed:

Principal Investigator

Date: January 15, 2015

APPENDICES:

A- FFY 2014 Operational costs spreadsheet

B- FFY 2014 Operations Memo