

## **Final Report**

Riprap on the face of the dam of the Kehmeier Reservoir  
WSRF grant PO/contract POGG1 2019-2026  
Approved by CWCB board May 24, 2018

The Kehmeier Reservoir is located on the Grand Mesa near the headwaters of Surface Creek. The reservoir has been in existence since the late 1800's. In the 1940's the reservoir was expanded giving its present capacity of approximately 300 acre feet. The water in the reservoir is used for late season irrigation of approximately 100 acres of fields on the Surface Creek Mesa, about 16 miles from the reservoir.

During the 1940's expansion of the some riprap was placed on the face of the dam, but it covered only a portion of the face. An inspection of the dam in 2013 by the State of Colorado dam inspector noted wave erosion on the face of the dam, mainly at the highwater line. Erosion on the crest of the dam was also noted. The dam received a Conditional Full Storage rating. The work described in this final report was conducted to correct the erosion problems with the goal of achieving a Full Storage Without Conditions rating on the next dam inspection.

The WSRF grant for this project contained 2 tasks. The completion of each task is described separately below.

### **Task 1 Riprap the face of the dam**

Description: Place 167 cubic yards of rip rap on upper part of the face of the dam of Kehmeier Reservoir to form a barrier against wave erosion.

Action Taken: Permits and authorization were obtained from the U.S. Forest Service and the U.S. Army Corps of engineers. A local contractor experienced in dam maintenance on public lands excavated 167 cubic yards of rocks near the dam and placed them as riprap on the upper part of the face of the dam. No obstacles of significance were encountered.

Grantee Deliverable: Approximately 5640 additional square feet of additional riprap on the face of the dam.

CWCB Deliverable: Before and after photos of the completed riprap. See photos at end of this report

### **Task 2 Grade the crest of the dam**

Description: Grade the crest of the dam to replace material lost to erosion, make the crest level, and to correct drainage so that runoff from the crest will go down the face of the dam rather than the back of the dam.

Action Taken: Permits and authorization were obtained from the U.S. Forest Service and the U.S. Army Corps of engineers. A local contractor experienced in dam maintenance on public lands excavated 70 cubic yards of fill material near the dam, placed it on the crest of the dam, and compacted it. The contractor then graded the crest to have slight slope towards the face of the dam. No obstacles of significance were encountered.

Grantee Deliverable: Approximately 560 linear feet of the dam crest (being approximately 10 feet wide) filled, compacted, leveled, and graded for appropriate drainage.

CWCB Deliverable: Before and after photos of the dam crest. See photos at end of this report

The proposed budget and actual budget were nearly identical. The proposed budget was \$10,500.23 and the actual cost was \$10,500.00. All matching commitments have been fulfilled, in that the entire project cost of \$10,500.00 has already been paid by the grantee. The WSRF payment of \$5000.00 will be reimbursement to the grantee's operating account. Cancelled checks and/or bank statements are available upon request.

Submitted by Paul Kehmeier, Project Manager 01/20/2020

(Please see photos on the following pages.)



Distance view before work started



Distance view after work was completed





West dam face before work started





West dam face after work was completed



Crest before work started



Crest after work was completed

