



IN REPLY REFER TO:

# United States Department of the Interior

## BUREAU OF RECLAMATION

Snake River Area Office  
214 Broadway Avenue  
Boise, Idaho 83702-7298

March 7, 1996

SRA-1200

Mr. David R. Tuthill, Jr., P.E.  
Manager, Western Region Office  
Idaho Department of Water Resources  
2735 Airport Way  
Boise ID 83705-5082

Subject: Black Canyon Dam and Reservoir Flow Regulation

Dear Mr. Tuthill:

We have completed, as requested, a review of the study needs for accomplishing a detailed study for raising the Black Canyon operating water surface 6-inches. The 6-inch water surface raise would increase the reservoir water volume about 500 acre-feet. To accomplish this change requires Black Canyon dam crest gates' structural modifications.

The proposed solution would involve:

- \* the removal of the existing flashboards from the gates,
- \* the installation of new flashboards, and
- \* modification of the existing Black Canyon Canal headgate

The preliminary study that we completed had an estimated construction cost for this solution to be \$230,000 for the structural work.

A detailed study cost would range from \$47,000 to \$62,000 with the most likely cost being closer to \$47,000. The description of work and associated costs are summarized below:

1. Designs and Estimates \$32,000
- \* This estimate assumes that all investigative and design work will be accomplished by the Bureau of Reclamation and the design given to the project sponsor(s).
- \* The structural integrity of existing concrete below the crest gate pin points appears to have sufficient strength to carry the additional load of the structure modifications.

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WATER RESOURCES  
WESTERN REGION

However, the existing crest gates could require investigation and analysis as to their structural adequacy in doing this work. This estimate does not include time related with an in-depth analysis and testing. We have assumed that these gates are satisfactory.

- \* This estimate includes costs for the possibility of a limited amount of work required for the railroad and highway embankments.
- \* A brief investigation of the existing irrigation pumps taking water out of the reservoir will be required. We are assuming that the pumps will be able to float with the 6-inch rise in the reservoir level and not require structural changes.
- \* The detailed reporting effort would probably contain a minimum of 5 engineering drawings along with specification paragraphs. This information would be given to the project sponsors in the form of a small reporting document.

2. Environmental Activities \$9,000

- \* We are assuming that the environmental assessment will result in a categorical exclusion rather than an Environmental Assessment/Finding of No Significant Impact (EA/FONSI).
- \* If issues surface from the U.S. Fish and Wildlife Service or other analysis and an EA is needed additional costs would occur.

3. Cultural and Historical Activities \$6,000

- \* Effects upon historic structure  
  
Black Canyon Dam and powerplant are most likely eligible for the National Register of Historic Places because of association with significant historic events in the development of southwestern Idaho.

It appears that the structural changes would

have no effect upon the historic integrity of the dam. If the Idaho State Historic Preservation Officer (SHPO) agrees, this means that we would need to do no documentation as part of the project. If the SHPO believes it would be an adverse effect, it should be minimal, which could be reasonably mitigated through collection of large-format current view photos of the dam, and a commitment to complete full historic documentation in association with a future project that would have a greater effect upon the dam.

\* Archeological

It appears that an archeological survey may not be needed.

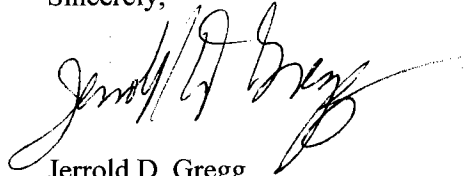
Worst case would entail an archeological survey of the rim of the pool areas where there could be significant horizontal expanse of the shoreline that would be inundated or eroded. The survey could cost up to \$15,000.

If archeological sites were found, then it would be necessary to assess if the 6-inch raise could have a likely effect (increased erosion until a new slope stabilizes, or degradation from actual inundation). If that was the situation, then test excavations to determine if it could be a National Register eligible site would likely be needed, and mitigation might ultimately prove necessary. There would be a significant cost associated with this type of mitigation.

The detailed study cost would require 50 percent cost sharing from the project sponsor(s). If the detailed study cost \$47,000 the project sponsor(s) cost share portion would be \$23,500.

If you have questions, please contact Ron Golus at telephone number (208)334-1751.

Sincerely,



Jerrold D. Gregg  
Area Manager

cc: Mr. Mark Limbaugh

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Sincerely,

Jerrold D. Gregg  
Area Manager

cc: Mr. Mark Limbaugh  
102 N. Main  
Payette ID 83661

Rgolus:vf PRJ-1.10

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