



April 13, 2021

Mr. John Batka, P.E.
Dam Safety Engineer
State of Colorado
Division of Water Resources
810 9th Street, Suite 200
Greeley, CO 80631

*RE: JOHNSTOWN DAM, DAMID: 040132 Water Division 1, Water District 4
Information for Construction of Buttress on Upstream Side of Existing Outlet
Pipe/Structure and Modification Request to Existing Storage Restriction*

Dear Mr. Batka,

J&T Consulting, Inc. is pleased to confirm that the construction of the buttress slope for the intermediate repair of the Johnstown Dam is complete. We also reviewed the amount of seepage water in the outlet pipe before and after the construction and the water volume was much smaller after the construction of the buttress slope.

We have provided attached construction photos with materials testing results for the construction of the buttress slope.

Below is the previous plan for construction and monitoring that we have also provided dates when items were completed and the monitoring of the outlet pipe seepage will continue as proposed.

Construction and Monitoring Plan

1. Video inspection of the existing 15” diameter vitrified clay pipe (VCP) that enters the existing downstream outlet box from the west, video inspection of the existing 6”-8” diameter toe drain that enters the existing downstream outlet box from the south, and video inspection of the existing 24” diameter reinforced concrete pipe (RCP) that exits the existing downstream outlet box to the north. This will give us a visual condition assessment of the existing pipelines. – **Completed on February 18, 2021**
2. Use earthen fill for the buttress construction that has the following gradation characteristics:

Earthen Fill Gradation	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
2 in	100
#200	Greater than 30

3. Placement of earthen fill by using loader/dozer to place/push material down existing slope until material is 2 feet above the current water surface. Once 2 feet above current water surface utilize small sheep’s foot vibratory compactor to compact buttress. The material should be compacted to 95% standard proctor at moisture content of +1% over to -2% under the optimum moisture content as determined by the proctor on the earthen fill. – **Completed on April 12, 2021**



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4. Placement of riprap by using loader/dozer and/or trackhoe to place/push material down the earthen fill slope to armor the buttress to protect from wave erosion. – **Completed on April 12, 2021**
5. The schedule for the buttress construction will be late February or early March when temperatures warrant construction (i.e. greater than 32 degrees during earthfill placement). The video inspection would occur prior to construction of the buttress. – **Completed on April 12, 2021**
6. Monitoring of outlet pipe – The Town of Johnstown checks the outlet pipe daily to see if water is flowing from the outlet pipe. This monitoring will continue after construction of the buttress. If there becomes an issue where more water begins to flow from the outlet pipe (pipe flowing at a depth of 6 inches or more) the Town of Johnstown would decrease the amount of water flowing into the reservoir and utilize their existing pump station to draw down the water level in the reservoir. If more drawdown is required than the flows being pumped through the existing pump station a dewatering pump could be utilized to pump into the downstream outlet box to discharge through the existing 24” diameter concrete pipe bringing the level of the reservoir down by no more than 1 foot per day. – **Monitoring will continue at the same frequency.**

Request for Modification of Existing Storage Restriction

The Town of Johnstown would like to request an increase of the water level to 1-ft below the normal full level or G.H. 5 on the staff gauge once the buttress is constructed and once higher potable water demands start which is usually around April 15th. – **Now that construction is completed the Town would like to store water to 1-ft below the normal full level or G.H. 5 on the staff gauge.**

Thank you for your consideration of the information provided for the construction of the buttress slope and the request for modification of the existing storage restriction. Please feel free to contact me with any questions or if you need additional information.

Sincerely,



J.C. York, P.E.

J&T Consulting, Inc.

Cc: Marco Carani, Public Works Director

Attachments:

Buttress Construction Photos

Materials Testing Information

