

From: Bret Dixon
To: ecc@emerytelcom.net; Hess, Pete
Date: 4/5/2006 3:14:53 PM
Subject: Re: Grassy Trail Dam

Pete,

According to limited information we have on file, the outlet has a capacity of 20 cfs. Depending on the time of the year and spring runoff, this rate may or may not be effect in lowering the reservoir water level. Currently, a fully opened outlet should be affective in lowering the reservoir water level. However, as spring melt/runoff continues to increase, the inflows into the reservoir basin may exceed the outlet's outflow capacity. This would result in a net filling and possible spilling over the morning glory spillway.

As indicated in your last email and your discussion with Mayor Orlando LaFontaine, the city's Water Department has fully opened the outlet gates. Mayor LaFontaine assured me that no downstream flooding will occur with the gates fully opened. Apparently, East Carbon City routinely (at least once a year) opens the gates to the full open position so they did not appear too alarmed or concerned with the request to release water nor the potential for downstream flooding. According to discharge capacity curves for the morning glory spillway, a head of only a few inches over the spillway crest will result in flows greater than 20 cfs. This confirms that the downstream channel frequently sees flows greater than what the outlet can produce.

East Carbon City's biggest concern is how far down they have to draw the reservoir level. This may be a mute issue with the potential of heavy spring runoff which would prevent the outlet from effectively lowering the reservoir level. At least the City is showing good faith that they are trying to do their part. In the event the outlet is successful at lowering the reservoir water level, I discussed with Mayor LaFontaine that we don't expect that the reservoir would have to be lowered too more than 10 feet below the spillway crest. However, depending upon the monitoring data and performance of the dam, greater drawdown may be required.

I'm sure everyone will be keeping a close eye on the monitoring data.

If the City has different information than what is listed above, we would appreciate such information.

Bret

>>> Pete Hess 04/05/06 1:13 PM >>>

Bret...

Will ECC determine the flow rate needed to meet the controlled dewatering requirement, or did your Agency make a recommendation here ? I am unaware of the flow rates reporting to the reservoir from the left and right forks of Whitmore Canyon, so I have no idea as to what kind of discharge rate they should implement...thanks.

>>> Bret Dixon 04/05/06 11:55 AM >>>

As you are aware, instrumentation data collected at the Grassy Trail dam shows movement in the inclinometers with potential lateral displacement on the order 1.5-inches in inclinometer I-2. Survey data collected on the monuments established at the site is in the process of being compiled by West Ridge Resources, Inc. to substantiate this movement and to identify the lateral extent of the potentially affected area.

In light of the above information, the following actions have been agreed to be implemented by those parties involved:

1. East Carbon City (Owner of the dam): Is to begin lowering the reservoir water level by a controlled

release through the outlet conduit. The controlled release should be at a rate to not result in an upstream slope instability of the dam embankment due to a rapid drawdown condition nor result in flooding in the downstream channel.

2. West Ridge Resources, Inc.: Is to continue their weekly monitoring and drain flow readings. However, daily visit will be performed to observe for any changes in seepage flows readings and to visually observe for any new signs of seepage and/or surface cracking. Particular attention will be made to, but not limited to, the western (right - looking downstream) portion of the dam, groin, and abutment.

The above actions will continue until the number of seismic activity on the dam has decreased and the rate of movement in the inclinometers has ceased to a stable condition.

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