

From: [Rappuhn, Doug H., OSE](#)
To: [Ennis, David, EMNRD](#)
Cc: [Musharrafiieh, Ghassan R., OSE](#); [Thompson, Charles, OSE](#); [Valentine, Lloyd, OSE](#)
Subject: MMD GR058MN Permit Modification 20-1; Billali Mine, Grant County; T16S-R21W-Sections 21, 22, 26, 27
Date: Wednesday, June 10, 2020 3:53:14 PM
Attachments: [2020-05-04RequestforAgencyComments_Mod20-1_Billali_GR058MN.pdf](#)
[EvaluationOfNonJurisdictionalDams.pdf](#)

David Ennis, PG - Permit Lead
Mining Act Reclamation Program
NMEMNRD

Hi DJ -

In re-shuffling piles of work-at-home assignments, I found that I have missed the NMOSE agency response deadline for comments on the Billali Mine dewatering MMD GR058MN modification application. Twenty-day comments were due to you by approximately May 25, so unfortunately, it was a rather large miss at that.

I had looked to the MMD website early-on to download additional materials on the project but found no actual application and only a close-in map of the mine / pipeline / infiltration pond locations, so expected additional filings would be provided. The matter slipped my mind in the interim, but a check of the MMD website again today still reflected no application form or supporting materials other than the location map.

From the overview provided in your May 4, 2020 request for review (attached; Pages 4 and 6), it sounds like an approximate one-acre surface-area infiltration pond is proposed. The attached brief by our Dam Safety Bureau suggests that the proposed impoundment appears unlikely to constitute a jurisdictional dam, but without a better-detailed statement from the Applicant, I will defer to a suggestion that he follow the suggestion on page 2 of the Dam Safety Bureau attachment and propose his design to our Dam Safety Bureau for official response if NMOSE jurisdiction is uncertain. Charles Thompson, PE, NMOSE Dam Safety Bureau Chief is copied on this e-mail.

Regarding the matter of diverting groundwater from a mine for the purpose of dewatering, this sounds like an activity that should be proposed to our Water Rights Division for evaluation of the need for a water right. Even if piped to an infiltration pond for discharge and desired percolation, the discharge sounds exposed to evaporative loss (a form of consumptive use), resulting in lack of the full amount of discharge recharging the groundwater system (the southwest New Mexico Summit Mountains area is among the highest in the state for net "lake" evaporation per the NMISC / NMOSE New Mexico Water Resource Atlas (2002)). There remains the potential that shallow, downstream percolation of the discharge from a deeper, upstream groundwater source does not constitute return flow to the aquifer system the water

is extracted from.

Water Rights exist in the area of Billali Mine, and would be senior to a new application for groundwater appropriation. In the event Water Right Division regulations allow a junior mining activity to affect senior local water rights in the promotion of beneficial use, it has been my experience that some manner of offset or attenuation of hydrologic effects is still required for beneficial mining activities. Therefore if the proposed dewatering is not already covered by a NMOSE Water Rights approved application or permit, it is my understanding that by law the proposal must be applied for through our Water Rights Division. Lloyd Valentine, Water Rights District 3 Manager is copied on this e-mail.

Since these comments come to you beyond the June 3 date of comment conveyance to the Applicant, I'm not sure that they may be forwarded through your review process. Please let me know if that is the case, and I will reach out to the Applicant directly, since obtaining the requested MMD permit does not disallow the need for required approvals from the NMOSE in order to proceed.

Thanks; I hope you've been well and I apologize again for this late communication on the matter.

Doug

Douglas H. Rappuhn, PG
NMOSE Hydrology Bureau
doug.rappuhn@state.nm.us
505-383-4018

OFFICE OF THE STATE ENGINEER
Dam Safety Bureau
Evaluation of Non-Jurisdiction Dams
December 7, 2009

The Office of the State Engineer (OSE) Dam Safety Bureau receives requests to evaluate whether a proposed impoundment is a jurisdictional dam. Section 72-5-32 NMSA defines a jurisdictional dam as 25 feet or greater in height and storing more than 15 acre-feet or a dam that stores 50 acre-feet or greater and is 6 feet or more in height. Figure 1 graphically shows the size requirements for a jurisdictional dam. The OSE provides design requirements for jurisdictional dams that are described in Title 19, Chapter 25, Part 12 of the New Mexico Administrative Code (19.25.12 NMAC). The OSE recommends that 19.25.12 NMAC be followed for non-jurisdictional dams that are not subject to review and permitting by the OSE to ensure that non-jurisdictional dams are designed and constructed in a safe manner.

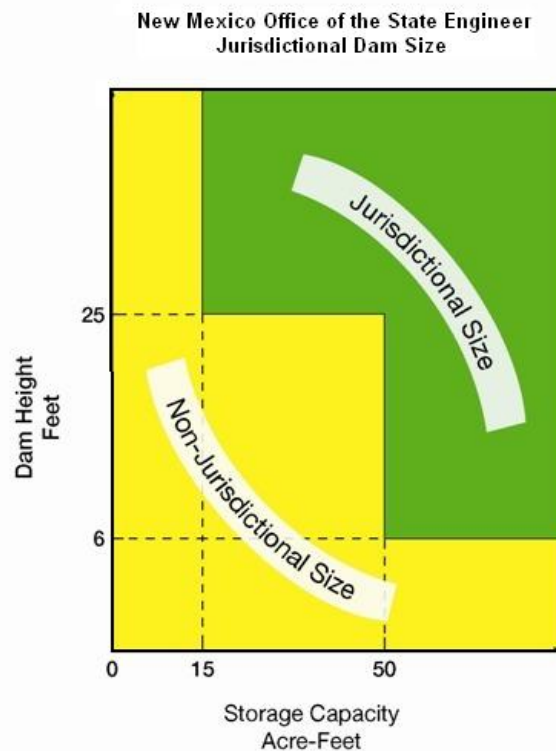


Figure 1

Section 7 of 19.25.12 NMAC contains definitions for height and storage to determine the jurisdictional status. Subsection K of 19.25.12.7 NMAC defines dam height as the vertical distance from the lowest point on the downstream toe to the dam crest. Where construction drawings identify cosmetic fill to be placed on the downstream slope of a dam, the OSE will measure properties of the dam and reservoir based on the engineered fill dimensions. The engineered fill shall be stable without relying on the buttressing benefits of the cosmetic fill. Engineered fill consisting of upstream slopes no steeper than 3 horizontal to 1 vertical, downstream slopes no steeper than 2 horizontal to 1 vertical and the dam crest width no less than dam height in feet divided by 5 plus 8 feet ($H/5 + 8$) is generally considered stable for typical conditions. Seepage shall not exit on the downstream face of the engineered fill.

Subsection DD of 19.25.12.7 NMAC defines jurisdictional storage as the volume of water in the reservoir from the lowest elevation of the downstream toe to the elevation of the spillway crest. Storage is measured to the dam crest if no uncontrolled spillway is provided. Subsection AA of 19.25.12.7 NMAC notes an uncontrolled or ungated outlet conduit used to drain the reservoir is not considered a spillway. Figure 2 shows the storage behind a dam. The gray area depicts the volume of storage for determining jurisdictional status of a dam with no spillway.

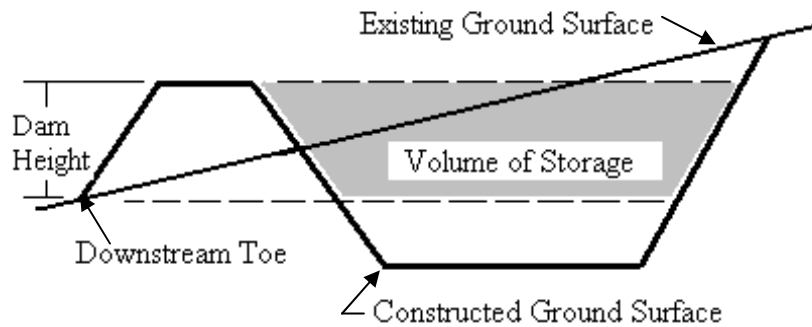


Figure 2

If a project is submitted to the OSE Dam Safety Bureau to review the jurisdictional status of a dam, the documentation listed below is required.

1. A transmittal letter that describes the project and summarizes key properties, elevations and any other critical information. The letter should also acknowledge the intent to contact the local Water Rights District Office in order to comply with the State Engineer Pond regulation contained in 19.26.2.15 NMAC.
2. Grading Plan of the pond showing existing and proposed contours in 1-foot increments. Contours shall be labeled every 5 feet. The Grading Plan shall also show the spillway location, cross-section location and extend far enough downstream to allow for an evaluation of failure potential.
3. Cross-sections at key locations including the lowest elevation along the downstream toe, the outlet works alignment and the uncontrolled spillway.
4. Stage-storage table for the entire pond volume in 1-foot increments. Storage at the elevation of the downstream toe, spillway and dam crest must be identified in the table. The table must provide incremental and cumulative storage in acre-feet.
5. Drawings and calculations supporting the submittal must be signed and stamped by the NM registered professional engineer that supervised the preparation of the documents.