

Hodgson-Harris Reservoir Dam-Break Analysis Superior, Colorado

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ANDERSON CONSULTING ENGINEERS, INC.
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Hodgson-Harris Reservoir is located near the Town of Superior, Colorado. The structure was originally classified as a Class III structure since no loss of human life or significant property damage was expected to occur in the event of a dam failure. Proposed construction associated with the Rock Creek Ranch P.U.D. placed multi-family residences in close proximity to the outfall channel. Consequently, a more detailed investigation of the reservoir was necessary to evaluate the potential consequences of a dam failure on future residents.

In accordance with the guidelines received from the Colorado Division of Water Resources, a dam-break analysis was required to support the existing hazard classification of Hodgson-Harris Reservoir. Anderson Consulting Engineers, Inc. staff, while previously affiliated with Lidstone & Anderson, Inc., were contracted to perform the analysis which included: (a) field investigation of the existing reservoir, dam embankment and outfall channel; (b) estimation of dam breach parameters; (c) determination of peak discharge resulting from dam breach; (d) routing of flood peak through the outfall channel; (e) delineation of inundation limits; (f) estimation of potential damages resulting from the dam breach; and (g) development of a recommendation related to the hazard classification of the existing structure. For the dam-break analysis, ACE utilized the Simplified Dam-Break Flood Forecasting Model (SMPDBK) developed by the National Weather Service.

The results of the analysis indicated that the existing structure posed no threat to either human life or downstream property owners. The dam embankment at Hodgson-Harris Reservoir was recommended to remain as a Class III structure.



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