VERMONT

Vermont Department of Environmental Conservation *Agency of Natural Resources*
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MEMORANDUM

TO:	For the Record
FROM:	Stephen Bushman, P.E., Dam Safety Engineer
DATE:	July 15, 2009
SUBJECT:	Inspection of Curtis Pond Dam, Calais, VT

On May 29, 2009, Stephen Bushman, P.E., and Shawn Thompson made a periodic inspection of the Curtis Pond Dam located in Calais, Vermont, State Identification Number 40.09. John Brabant, Calais Selectboard member was also present during the inspection. A number of photos where taken. The last inspection of the dam was conducted on May 20, 2008. This report updates those observations and records additional information.

OVERALL CONDITION

The overall condition of the dam was poor, which has been noted in previous reports.

DOWNSTREAM HAZARD CLASSIFICATION

The dam is a Class 2, "Significant Hazard" Dam.

JURISDICTION

Since the dam impounds more than 500,000 cubic feet, any alteration, reconstruction or breaching would require prior approval from the Department under provisions of 10 VSA Chapter 43.

RECOMMENDATIONS FOR OWNER

1. The project to determine the appropriate rehabilitation of the dam should be finalized.

2. The dam should be observed periodically for any change in the seepage pattern, volume or clarity. Also any sinkhole development or dam movement should be noted. Report any changes to the State Dam Safety Office at (802) 241-3450.

3. Keep the spillway clear of debris.

4. The small woody vegetation along the upstream waters edge and the small brush piles on the dam should be removed.

3. The erosion at the water's edge along the left side should be backfilled with suitable material.

4. Remove tree on left side of downstream slope.

5. Discourage the use of the crest as a sandbox for children, especially if crest material is being disturbed or removed.

INSPECTION

The inspection of the dam was conducted on May 29, 2009 between 1330 and 1430 hours. The weather was cloudy with temperatures in the 50's. Rain was the previous weather conditions. The water level was 0.35 feet above the log to the right of the spillway.

1. Embankment Section

   a) Upstream Slope: The upstream slope had minor woody vegetation at the water's edge. There was minor erosion along the waters edge, including the animal path noted in previous reports. There was erosion in three spots underneath the water to the left of the spillway; the cause was not determined.

   b) Downstream Face: The downstream face consists of a dry masonry wall. The wall leans off vertical to the downstream side, as has been recorded in previous reports. Seepage through the stone face appears similar to previous inspections in both pattern and quantity, roughly five feet on either side of the spillway. Rocks have been filled in where originals have fallen out. There is a large tree growing on the left abutment.

   c) Crest: There was significant erosion and repairs on each side of the spillway, which is believed to be evidence of high flows or overtopping. There were a few sinkholes along the top of the crest that were filled in with sod and soil. There was a brush pile to the left of the spillway. The grass cover across the crest was well mowed. There was an area near the left abutment being used as a sandbox. It appeared as if some disturbance to the crest was occurring as a result.

2. Spillway: The principal spillway consists of an uncontrolled channel on the crest. The approach and weir sections were clear of vegetation and debris. The discharge channel was rock lined and was free of vegetation. There was a surfboard under the bridge in the spillway.

3. Sluice Gate: The condition of the sluice gate is not known. Water flow around the exit of the sluice gate was evident.

HYDROLOGY AND HYDRAULICS

The drainage area at this site is about 917 acres. The pond area at the normal pool is about 76 acres with storage of about 724 acre-feet. At the dam crest, the pool stores 1,000 acre-feet.