

## EXECUTIVE SUMMARY

This report documents observations and evaluation of Waitsfield Town Pond Dam located in Waitsfield, Vermont, based on a visual dam safety inspection conducted by Weston & Sampson of Waterbury, Vermont on April 16, 2008. This is a result of the Section 1272 Order (Order) presented to the Town of Waitsfield on April 11, 2008. In the Order the Town was directed to conduct a Dam Safety inspection of the Town Pond Dam. This report is a result of that inspection.

Waitsfield Town Pond Dam, a non-registered dam, was found to be in **POOR** condition.

The primary deficiencies identified include:

- A separation of the first joint in the outlet pipe has facilitated internal erosion of the earthen embankment leading to the development of a sinkhole. This sinkhole is evident from visual observation of the dam crest.
- The corrugated metal riser has become corroded and has several perforations allow leakage below the water line.
- The crest of the dam has a significant vertical depression on the crest along center of the embankment.
- The condition of the low level outlet is unknown and assumed to be inoperable, thus providing no feasible method to drain the pond.
- The anti-vortex, trash rack device is no longer usable due to corrosion.
- There is evidence of geotextile fabric within the earthen structure.

Several alternatives for remedial measures were investigated as part of this assessment, including No Action, Dam Removal, Dam Rehabilitation, and Dam Replacement. The objectives of the Town of Waitsfield were considered while evaluating the alternatives. Those that best fit these objectives are presented in detail herein. The result of the assessment was the development of the Preferred Recommendation.

Weston & Sampson understands that the Town Pond is a community resource. The pond provides fire protection for the Waitsfield community. It also provides aesthetic and recreation opportunities. In addition, this pond provides stormwater treatment for runoff from Winter Park Common. It is our understanding that the objective of the Town of Waitsfield is to address the deficiencies of the dam with a least cost, long-term solution.

Given the deficiencies identified in this report, action must be taken to address these deficiencies. To address those deficiencies with a least cost long-term solution Weston & Sampson recommends the implementation of the Dam Rehabilitation alternative. It is our opinion that unless a comparable fire protection resource is presented and an alternative stormwater treatment practice is developed, the Town Pond should remain in place. Therefore, the implementation of the Dam Rehabilitation alternative is recommended.

The following is a brief summary of the Dam Rehabilitation alternative:

- Remove and replace the corrugated metal riser and outlet pipe, in kind, with precast concrete pipe.
- Excavate the embankment in the vicinity of the outlet pipe and remove the geotextile fabric, and reconstruct the embankment according to modern dam safety practices.
- Install an operable low-level outlet on the new riser.

- Dredge the accumulated silt within the pond to provide for additional volume storage.

This alternative has a probable range in construction costs between \$30,000 and \$50,000. The subsequent engineering and permitting fees will range between \$8,000 and \$10,000.