



21 July 2010
File No. 32846-000

Gayle Hall, Town Supervisor
Town of Fort Ann
80 George Street
Fort Ann, New York 12827

Subject: Hadlock Pond Dam Lake Lowering
Control of Eurasian Watermilfoil

Dear Supervisor Hall:

At your request we have reviewed the background materials received and the prospect of increased lake lowering during winter months in an attempt to control Eurasian Watermilfoil. Typically the lake is drawn down about 5 ft below normal pool and we understand there may be a desire to draw it down further. We understand that one of the control measures for watermilfoil is to lower the lake level sufficiently to freeze the plants during the winter.

We have considered the potential effects of lowering the lake and exposing Hadlock Pond Dam during the winter months. We concluded that the water level could be lowered for the winter as long as some measures are taken and limits set. Our recommendations are as follows:

1. Inspect the dam just after draining the lake, just before refilling it, and during/after the filling.
2. If necessary, re-compact any soils on the upstream face loosened by frost action prior to refilling the lake.
3. Avoid freezing of the lower gate valve and freezing of embankment soil below the concrete or Roller Compacted Concrete (RCC) fuseplugs. The lower gate valve can be protected if the lake level is held a little above the top of the gate, which allows a drawdown of about 15 ft. However, the base of the RCC fuseplug along the upstream of the dam is only about 10.7 ft below the normal pool and the lake level drawdown should be limited to about 8.5 ft to protect this area from freezing. Likewise a drawdown of about 13.5 ft would be acceptable to protect the concrete fuseplug subgrade from freezing. Therefore if a drawdown during winter greater than 8.5 ft is planned special measures would be needed to protect the fuseplug subgrades from freezing. These measures could include the use of insulating blankets and/or fill placed over the specific areas to be protected.
4. When refilling the lake, do so in a controlled fashion, avoiding excessive filling rates. The Initial Filling Plan prepared for the first filling after the re-construction provides good guidelines, although the rate of filling after the milfoil control could likely be greater than indicated in that plan.

Town of Fort Ann

21 July 2010

Page 2

We have contacted the NYSDEC Dam Safety section directly and they have no particular concerns over the proposed lake lowering. They suggest that a version of the initial (after reconstruction) refilling plan be incorporated into the dam's existing Inspection and Maintenance Plan so that the procedures are in place for this and potentially future lowerings of this nature. We agree with that suggestion. The Dam Safety section would also like a courtesy e-mail or telephone call when the refilling begins just to keep them informed.

Impacts unrelated to the protection of the dam structure, but that should be considered, are the potential for increased damage to private docks and the risk of not being able to fill the lake in time for the beginning of the recreational season.

Please contact us with any further questions on this matter.

Sincerely yours,

HALEY & ALDRICH OF NEW YORK

Edward M. Zamiskie, Jr. P.E.
Partner

Document2