

NLA Dam Inspection and Resulting Recommendations 9/24/2014

On Wednesday, Sept. 24 the President of the NLA, the property owner, and an engineer from the Spicer Group, met at and examined the NLA dam and the beaver dam results of water backup. The following was observed, evaluated and the following recommendations made.

Inspection Team – *Doug Morgan*, property owner; *Mike Vogas*, President Negaunee Lake Association; *Shawn Middleton*, PE, CFM, Sr. Project Manager –Spicer Group

Present Situation

- For several years the beaver dam has continued to increase the water level under the NLA dam spill pipe. The DEQ is not involved with solutions to the problem until a safety issue is present. It is not currently a safety issue as described below.
- Beaver have been trapped at the beaver dam for several seasons without permission of the property owner. No contact was initiated until earlier this year when the NLA President approached him to ask his concerns. The property owner is justified in expecting consideration regarding permissions and is now, through this plan, requesting ongoing communication regarding property rights. As the beaver dam is on his property, he has the exclusive right to allow or disallow any activity regarding it.
- The members of the NLA are justifiably concerned about the integrity of their dam, as it is the foundation of their monetary and quality of life investment.
- The NLA dam was inspected, as required by law, last year by Gary Croskey. A recommendation he made, but as yet is not acted on, was to clear the downstream face of the dam to secure its integrity regarding possible downed trees, animal burrowing and general inspection visibility. This figures into this plan as noted below. Gary Croskey, in an email response to our questions, suggested that until the water level reached the top of the spill pipe there was no cause for action. This evaluation was, to the satisfaction of the NLA board, insufficient. An onsite inspection would better answer our concerns for liability and safety. In short, the board wanted a more comprehensive assessment of the situation. To this end, the President of the NLA contacted Spicer Group and the property owner to meet at the dam to determine the best plan of action moving forward. The property owner has maintained that he too is concerned for the integrity of the dam and is a part of this agreement to ensure that it is safe and well maintained.

Onsite Inspection Results

- The downstream face of the dam is overgrown and needs to be cleared of trees and brush. This recommendation in last year's dam inspection report has not yet been acted on. This clearing will allow for visual inspection of the dam to determine leakage or other concerns. This year old recommendation needs to be acted on.
- The engineer from Spicer noted that this clearing should allow visual inspection and needs to allow at least ten more feet of clearance from the toe of the dam, that point at which natural terrain becomes man made fill. This is approximately the point at the bottom of our spill pipe.
- The water level of the stream is currently about 14-16 inches under the spill pipe. The engineer from Spicer has qualified Gary Croskey's evaluation in this way. There is no safety issue until the water level reaches the toe of the dam, that level where fill meets natural terrain. The engineer was asked pointedly, "What should our plan be regarding a continual rise in the water level?" He responded, There is absolutely no safety issue at this time. The time to become involved in controlling this situation is when and if the water level reaches the toe of the dam. The

NLA/DougMorganBeaverDamPlan

immediate concern is clearing the downstream face of the dam of trees and shrubs. This will allow visual inspection and work to discourage animal burrowing. If a tree were to come down its uprooted ball might seriously compromise the integrity of the dam. Action would be advisable at the time the water reaches the toe of the dam.

- We, the property owner and the NLA, now have the benefit of a professional engineer with an onsite dam inspection.
- The following suggested plan of action is the result of these discussions and evaluations.

NLA/Morgan – Beaver Dam Action Plan

- Respect the property owner's rights by not trespassing or otherwise using his property without permission, no matter the level of the water downstream of our dam.
- Clear the downstream face of the dam to an area at least ten feet further downstream than the toe of the dam as recommended by the Spicer engineer.
- Inspect the downstream face of the dam, once it has been cleared, for leakage or other threat to its integrity.
- Maintain communication on this situation to best act on our mutual concerns for the health and maintenance of Negaunee Lake.
- Continue to monitor the water level caused by the downstream beaver dam so that if and when it reaches the bottom of the spill pipe further action can be mutually planned to remove the beaver colony or otherwise relieve the water level. The beaver population may exhaust its food supply and move on. If not and the water rises to an actionable level the necessary steps will be taken by mutual agreement.