

Full Authority
28 November 2024
Agenda Item: 15

Limerick Township Request

Background

Over the weekend of the 10th and 11th of August 2024, at least one beaver dam on an unnamed subwatershed system failed, resulting in water released downstream, emptying into Steenburg Lake.

CVCA staff were contacted by Limerick Township CAO Victoria Tisdale on the 13th of August regarding the situation. V. Tisdale indicated she wished to have a conversation about the incident “to bring this to your attention, and let you know that we will need to do some work on this road now, and have our engineers come and inspect the bridge to ensure that there was no significant damage to it. This will be an expense that was not budgeted for in the annual budget.” She also stated she “would like to have a discussion with both of you, Greg and Councillor Pack if possible to discuss how we are going to address this issue and how we can prevent this from happening in the future.”

On the 14th of August, the President of the Steenburg Lake Cottage Association contacted the CVCA to ensure we were aware of the incident and posed a number of questions. The response from the CVCA would be included in their upcoming newsletter. A response was forwarded on the 16th and is included in the agenda package.

A meeting occurred on site on the 29th of August, with representatives from Limerick Twp., including CAO V. Tisdale, Councilor and CVCA Board Member Shawn Pack, and Roads Superintendent Greg Maxwell (attended virtually) CVCA representatives Regulations Officer Beth Lowe, myself. At the meeting, the discussion included:

- The engineers report assessing damage to the bridge.
- The condition of the banks next to the bridge at the four corners and the scouring of the material.
- Discussed the options for repairing the scouring and suggested larger material to aid with possible future dam failures (450mm rock to 600mm diameter).
- The Township could supply some of material and labour.
- S. Pack suggested CVCA contribute to repairs by paying for the larger rock materials not available in the Township (contribution only partial, not the total cost).
- S. Pack recognized would be difficult or place added pressure on our budget since the CVCA did not budget for these types of scenarios.

- I stated there is a real possibility one or more beaver dams further north of the dam on our property may have failed, which could have led to additional pressure (or over topping) and triggered a failure at our site.
- Meeting concluded with no resolution other than S. Pack stating he would bring the issue forward to the November Board meeting for discussion.

Limerick Township Request Letter

Received the attached letter from Limerick Township via Chair Martin on the 7th of November. The following is provided for the CVCA Board Members consideration.

Item of Concern – Bank Condition

CVCA staff agree bridge scour occurred at the site and would be caused during high flows and the beaver dam failure was undoubtedly a high flow/energy event, as pictures and personal accounts have confirmed.

However, no proof has been brought forward by the Township indicating the banks were in the same condition as at the time of the installation or even in state of good condition.

It is quite likely there was erosion and/or damage to the “soft infrastructure” prior to the beaver dam event in August due to many highwater events over many years. The state of the soft infrastructure could easily have been degraded over time and the beaver dam failure simply was the final action that caused the banks to erode to the current state.

Item of Concern – Material Sizing

There is a possibility that the original installation of the bridge did not include the appropriate sizing of material to absorb the energy sufficiently from high flows or a beaver dam failure. This conclusion can be made since the engineer’s current repair recommendations are to consider using larger rock material in the event there is another beaver dam failure. Apparently, the rock sizing originally suggested is for “typical” installations. Since this bridge is at the exit point of a subwatershed consisting of 16 square kilometers (see attached map), perhaps it should not have been considered “typical”.

Item of Concern – Additional Beaver Dams

There is topographical evidence in this 16 square kilometers subwatershed of numerous wetlands and stretches of the creek where a number of beaver dams do or could exist. Therefore, it is quite conceivable that during a summer storm event which resulted on the 9th and 10th of August that one or more beaver dams failed further upstream of the beaver dam on the CVCA property creating a domino effect. One or more beaver dam failures would result in additional water suddenly placing more pressure/stress on the furthest dam downstream, which in this case is the dam on the McGeachie property. Therefore, to shift all of the blame onto the CVCA without confirming there was only one failure is unwarranted.

If it was determined there was another beaver dam which failed upstream, then, based on the Township desire to treat all property owners in the same manner, the CVCA would expect the request and resulting financial burden be shared between all of the landowners.

Item of Concern – Recognition in Asset Management Plan

The CVCA recognizes there are circumstances when unforeseen events occur in any organization. However, for one organization to request support for repairs to their asset raises the issue of precedence and in this case changes to our Inventory of Programs and Services category 3. Both of these issues will result in additional costs for the organization. For example:

- Paying for these expenses identified by the Township sets a precedent. If another similar event occurs and the CVCA is solely responsible, in all likelihood the Township will be further emboldened to seek financial support with an even better case since the CVCA has already paid once. The amount could be similar or it could be even substantially higher, especially if the bridge needed repairs or replacement.
- Since a beaver dam failure could occur in any given year, if payment is made this year to cover expenses, then the CVCA would need to collect additional levy for maintenance, repairs and replacement value. In essence, the bridge responsibility would fall under the CVCA's umbrella and need to be considered a "de facto" asset and placed in the asset management plan.

It would be reasonable to suggest this would be a significant additional cost to cover.

In addition to the foregoing, not only would this reserve need to be established for future payments, but any other property the CVCA owns where a beaver dam failure is a possibility, the levy may have to be increased to cover those potential expenses.

Item of Concern – Previous Dam Failure

The beaver dam failed approximately 15 years ago, no accusations or evidence was presented to the CVCA which led to a request for any funding for any damages at that time.

Item of Concern – Watershed Example

County Road 620 suffered a road washout a few years ago. The County did not seek any compensation from the CVCA.

Item of Concern – Monitoring and Maintenance

The Township states in their letter of 30th of October “Regular monitoring and maintenance of the beaver dam could have prevented the flooding that occurred on August 10, 2024.”

The statement clearly indicates the flooding could have been prevented. Beaver dams do not fall under the purview of the CVCA’s mandate. Even if the CVCA considered monitoring the dam, it would require a significant allocation of resources to do so and it would only be effective the actual time spent on site.

For example, a round trip for staff to complete an inspection would be approximately 3.5 hrs. at best from the CVCA office (travel time to the entrance of the trails, time on the trail and time inspecting the beaver dam X2). Then one must consider the monitoring of the dam is only as good as the time spent on site, since once staff have left the site, the dam could easily degrade or fail at anytime when no staff are present. In other words, a .5 hr inspection in a working day doesn’t extend a minute beyond the time on site.

Therefore, a constant monitoring system would be required, perhaps weekly, daily or twice a day or? What about weekends? Should have a biologist to determine when maintenance could/should be done and the impacts on the surrounding ecosystem.

The maintenance suggestion also begs the question, what would staff do on site to maintain a beaver dam? Any attempt to either reinforce or dismantle the dam could have significant health and safety implications for staff, especially if the dam failed during the attempt to maintain it.

If we were to implement a monitoring program for the McGeachie property, then we would be faced with monitoring all of our properties. The CVCA would have to expand our staff complement (and the addition of a vehicle and the appropriate equipment) to cover all properties and 365 days a year. The only source of revenue would be a considerable increase of levy.

Item of Concern – Category 2 or 3 Implications for the Delivery of CVCA Programs and Services

Since this is not a Category 1 classified program, it would fall under either Category 2 or 3. Either one would require agreements with our member municipalities. This leaves the door open for not all municipalities to sign an agreement, which would increase the financial burden on the remaining municipalities willing for the CVCA to undertake the additional workload

Item of Concern – Private Individual vs. CVCA Considerations

Treating CVCA the same as if a private individual had been responsible is a valid point. All property owners should be treated fairly and in the same manner. However, there is doubt that an individual landowner would be expected to pay for these expenses. It would be a significant burden for the individual, especially if expenses continue to escalate. One must also believe if this precedent is set, then the next time an issue occurs and the expenses are even greater, would the same treatment occur. The messaging to the public seems tenuous.

Item of Concern – Legal Precedents

There are no legal precedents in Ontario – see attached letter from CVCA solicitor.

Staff Recommendation

That the CVCA respectfully decline the Limerick Township request to pay for expenses related to the flooding incident as identified in the Township letter of October 30th, 2024.

Board Decision

TP

Item of Concern – Material Sizing Map

