

# Municipality of North Cowichan Quamichan Lake Water Quality Task Force MINUTES

June 13, 2017, 4:00 p.m.  
Municipal Hall - Council Chambers

Members Present            Mayor Jon Lefebure, Chair  
                                    Ken Ashley  
                                    James Cosh  
                                    Tim Kulchyski  
                                    Tom Rutherford  
                                    Jen Woike

Members Absent            Dave Groves

Staff Present                Alyssa Meiner, Deputy Director of Corporate Services  
                                    David Conway, Director of Engineering and Operations

## 1.     **CALL TO ORDER**

There being a quorum present, the Chair called the meeting to order at 4:05 p.m.

## 2.     **APPROVAL OF AGENDA**

It was moved and seconded:

That the Committee approve the agenda as amended to add Public Input after item 3.

**CARRIED**

## 3.     **ADOPTION OF MINUTES**

It was moved and seconded:

That the Committee adopt the minutes of the meetings held March 16, 2017 and May 25, 2017.

## 4.     **PUBLIC INPUT**

The Committee heard from two members of the public regarding the proposed Bazett trail over the municipal road right-of-way. One property owner expressed concerns that the trail construction would harm the lake and invite more people to the area, while another property owner was in favour of the trail as a community asset and could increase public awareness of lake health issues.

## 5.     **DELEGATIONS AND PRESENTATIONS**

### 5.1    **Ground Water**

The Committee heard from Paul Slade regarding ground water and the Cowichan River Aquifer. The Committee heard that a well could be drilled to pull water out of the aquifer and the cool, clean water added to the lake with minimal impact on existing

infrastructure. The Committee discussed the implications of adding the water year-round versus only during the summer months, including benefit to fish and impact for agricultural lands. The Director of Engineering and Operations added that water licensing for other than domestic use would first need to be confirmed with the Ministry of Forests Lands and Natural Resource Operations before proceeding with this option.

## **5.2 Cowichan River Aquifer**

See item 5.1.

## **5.3 Natural Processes for the Reduction of Runoff**

The Committee heard from Dave Polster regarding natural processes to reduce erosion. The Committee heard that erosion can be controlled by making the ground rough and loose, scattering woody debris, and de-compacting compacted surfaces to prevent surface water run-off.

The Committee discussed how thinking has changed and the paradigm change away from removing water quickly from property through ditches and stormwater systems, and instead towards more natural riparian environments which slow water flow, and channel water through plants into the land and reduce water run-off.

The Committee heard from Member Ken Ashley that North Vancouver is embracing a green infrastructure approach with infiltration galleries, protocols for construction to minimize water run-off, and potential incentives to not export water for builders and property owners.

# **6. BUSINESS**

## **6.1 Task Force Report**

Committee member Jim Cosh introduced and summarized the Task Force report and recommendations to remove phosphorus from the lake, reduce phosphorus going into the lake, and monitor phosphorus levels in the lake. Approaches identified include: skimming the algae blooms on the lake surface, adding digester bacteria into the lake, adding barley straw, adding zeolite to fields, adding cold water to the lake, and improving the lake outlet.

The Committee discussed how to reduce water run-off, including slowing down water, maintaining catchment ponds, reducing site disturbance to times when the lake is draining, public education to reduce fertilizer use, reducing hard surfaces such as paved roads where water runs off into storm drains, inspecting septic tanks, expanding sewer systems, adding zeolite to fields, adding plantings at the end of fields, regulatory changes to reduce water run-off and requiring developers to clean up storm water pollution. The Committee heard each make a contribution and all worth considering.

Member Ken Ashley told the Committee that the community is not alone in this problem. After 150 years of settling, Europe, North America, the Great Lakes, etc. are all dealing

with this problem and a shallow lake with non-point source loading, such as Quamichan Lake, is the most difficult to solve. The Committee heard that a watershed management solution is required.

The Committee discussed the need for collaboration and education as key aspects of the solution, and that more than cosmetic solutions are needed. The Committee heard there is a need to identify sources of phosphorus, identify treatments, monitor, and educate.

## **6.2 Permanent Information Signs**

It was moved and seconded:

That the Committee recommend that Council direct staff to

1. install permanent signage at the Quamichan Lake public access points,
2. continue to monitor cyanobacteria levels, and
3. add additional warning signs when risk levels of cyanobacteria are present.

(Opposed: Woike)

**CARRIED**

## **6.3 Mouth of Quamichan Creek**

It was moved and seconded:

That the Committee recommend that Council direct staff to monitor the outlet of Quamichan Lake through an on-site visual inspection each spring.

**CARRIED**

## **6.4 Monitoring Programs**

The Committee discussed the need for monitoring of creeks fed by agricultural lands, developed lands, and monitoring of lake to determine phosphorus levels. The importance of a well-designed monitoring program that takes into account frequency and timing was discussed. The Committee felt high level of expertise would be provided with Ken Ashley and Deb Epps providing design recommendations.

It was moved and seconded:

That the Committee recommend that Council authorize a monitoring program that takes into account design recommendations from experts.

**CARRIED**

## **6.5 Next Steps**

The Committee discussed which options from the Task Force report to pursue and heard from member Ashley to be wary of anecdotal evidence and that if the solution option is not in peer reviewed literature, it is either brand new or does not work.

The Director of Engineering and Operations agreed to prepare a report on the feasibility, cost, and licence implications of adding cold water to the lake. The Director also identified that the drainage bylaw is due for an update.

The Mayor agreed to discuss at the June 19, 2017 Priority Setting Meeting, the creation of a sub-committee to consider how to develop a program for water run-off reduction measures.

Member Jim Cosh agreed to revise the Task Force Report to include decisions made at this meeting, circulate the report to members for review. The Committee heard that another meeting would be held to approve the report, and agreed to present the final report to members of Council at a Committee of the Whole meeting.

It was moved and seconded:

That the Committee recommend that Council establish a program to manage and reduce nutrient loading into Quamichan Lake.

**CARRIED**

**7. NEW BUSINESS**

None.

**8. ADJOURNMENT**

The meeting ended at 6:44 p.m.

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Signed by Chair or Member Presiding

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Certified by Recording Secretary