

- Davidson Lake is a relatively shallow, spring fed lake
- The Lake is deepest at the eastern end with a maximum depth of 8 m
- At the western end, the lake depth is approximately 1 m
- For decades (dating back to the earliest lake developments in the 1950's), the lake level has been controlled by a series of beaver dams in the outlet wetlands.



## Summer 2017 – Low water levels



- In the spring of 2017, the beaver dams controlling the lake level were destroyed by vandals, and the beavers were shot and killed
- This resulted in a sudden, catastrophic drop in lake elevation which, by July 2017, had reached a dangerously low level
- This event, coupled with hot dry weather, caused an alarming increase in water temperature, algae blooms, fish kills and foul odour in the western portion of the lake



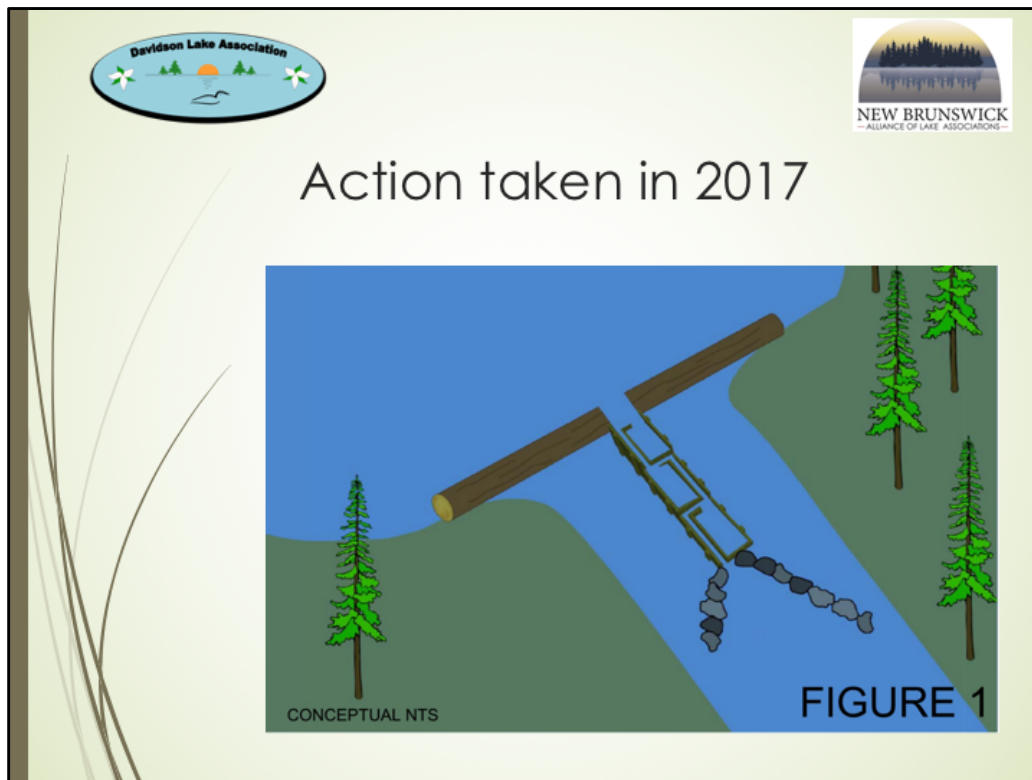
## What's the risk?



<https://www.919thebend.ca/2019/06/27/nb-medical-officer-warns-about-potential-risks-of-blue-green-algae/>



- Warm lake temperatures raise the risk of toxic blue green algae blooms and irrecoverable damage to lake quality and surrounding ecosystem



- Much concern was raised at the 2017 AGM relating to the low water level
- As a result, a temporary leveling system was installed within days of the meeting.
- Fortunately, the leveler prevented further loss of water from the lake, and toxic algae blooms did not develop
- Following the 2018 freshet, the lake level returned to historic norms and the water quality since has been excellent.





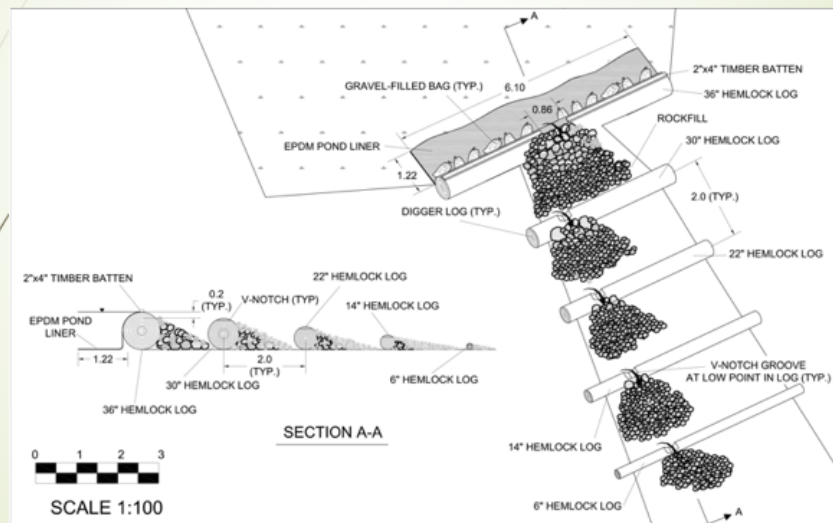
- NBENV requires that the temporary leveler be removed by the end of July 2019
- The Davidson Lake Association is very concerned that removing the leveler will cause a catastrophic drop in lake level similar to that which occurred in 2017, along with the associated temperature rise, fish kills, bad odours and potential development of toxic and uncontrollable algae blooms.



- The Davidson Lake Association has been working with the Department of Fisheries and Oceans (DFO) and NBENV to come up with a solution that will preserve lake quality and protect the Davidson Lake ecosystem
- The proposal involves installation of a new lake leveler at the location of the destroyed beaver dam to effectively repair the dam. This would be installed prior to removal of the temporary leveler and therefor preserve the Lake level and prevent catastrophic drainage of the Lake.



## New Design



- The structure will include a fish passage (digger log) system to allow safe fish passage as per DFO requirements.
- The structure will be constructed by hand with volunteer labour using logs, rockfill and an EPDM (rubber) pond liner
- A removable timber batten and sluiceway will be implemented to allow more control on high water levels (during high flow periods) in addition to controlling low lake level in the dry summer months.





Please help the Davidson Lake Association by supporting this initiative and signing the petition. If you can't sign in person, please send an email to the Davidson Lake Association care of [davidsonlakenb@gmail.com](mailto:davidsonlakenb@gmail.com)