

Q&A Regarding Lake Levels and the Weir, Sept 2023

From: Bren & David

Date: Mon, 11 Sept 2023 at 01:14

Subject: Cowichan Lake Water Level

To: jill@cowichanwatershedboard.ca Cc: <letters@timescolonist.com>

We are cottagers on Lake Cowichan and read about the low water effects on the river , and sadly , particularly fish stock .

While the snow pack on Vancouver Island was low as of March 1st , 77% of normal , we noticed that even before the melt could happen , the lake level was falling rapidly , as if there was a hole in the bottom .

The lake was lower than usual in spring and it seemed water was being let out at an excessive rate before the melt was even done .

We have had ,and still do , an exceptional lack of rain all summer and no one could have missed this .

Several years , pumping into the river has been necessary in the fall , but in spite of the lake level being the lowest we have seen in a long time , the pumps didn't start .

So in fairness to the issue , I think the public should know where else the water goes except to run out to the ocean ?.

What other draws are on the water , and what are the economics of this to the forest company , Timber West , now Mosaic ?

It is hard not to be skeptical , but when the same people own the water , sell the water , and turn around and make paper in Chemainus with the water (while writing off the water cost) it may be the fish are just "small fry "

Where did the water go ? Who made money from it , when, and how much ?

Sincerely

David Hilton

From: Tom Rutherford <tom.cowichan@gmail.com>

Subject: Cowichan Lake Water Level

Date: September 15, 2023 at 4:33:41 PM PDT

To: "Bren & David"

Good afternoon David,

Please accept our apologies for the delay in responding to your email, the Cowichan Watershed Board is a small not for profit and we are stretched pretty thinly these days! I really appreciate you reaching out with your concerns and your obvious passion for the lake and the importance of water to our ecosystems and our community.

Your questions are really good ones – and I'll tackle them one at a time!

The lake was lower than usual in spring and it seemed water was being let out at an excessive rate before the melt was even done .

A couple of things to note off the top:

- The “license holder” who operates the weir – the Catalyst Crofton Paper Mill, is not permitted to start “storing water”- i.e. raising the gates at the weir, until April 1. This is locked into the terms of their license to protect lake front property owners from negative impacts should there be heavy rains in March and is enforced by the province.
- There is no way to “store” any water in the lake until the lake drops down below the level of the top of the weir (closing the gates before that will just force more water over the top of the weir!).

This year, as you note, the lake dropped well below the level of the top of the weir in March – but then rose to well over the weir height in April and did not drop down to a level where storage could begin until well into May. At that time the gates were raised. I have attached a graph that demonstrates this (the black line is lake level and the pinkish horizontal line the elevation of the top of the weir. IF we had a higher weir – some of the “excess” of water in April and May could have been saved and let out over the summer – rather than just having it flow over the top of the existing weir until lake levels dropped enough for the weir to be a factor. This is a project the CWB is working very hard to see realized.

We have had, and still do , an exceptional lack of rain all summer and no one could have missed this .

Once the weir is “on control” there is a schedule for how much water should be released in order to meet ecological requirements of salmon and river ecosystems: 25CMS (cubic meters/second) until May 1, 15CMS until June 15 and then 7 CMS until fall rains come. The higher flows are required in the spring to keep Steelhead redds (eggs in gravel) wetted and provide connectivity to side channel habitat where coho smolts overwinter, and provide safe downstream passage for chum, chinook and coho juveniles heading out to the ocean. This year the prescribed environmental flows were maintained until mid June but then, the tough decision was made to reduce flows to 4.5CMS in order to conserve water in an attempt to have enough to provide upstream passage for adult Chinook migrating upstream in September. So no one missed that we were heading into a dry summer with not much water behind the weir. The tough decision was made to try and keep flows up to allow juvenile salmon to get to the ocean and then reduce flows over the summer, hoping for rain.

- It is worth noting that for the first 40 years of its existence (1957-1997) the weir never failed to provide enough water for both ecological and industrial purposes. Over the last 20 years it has failed to so 14 times by my count. Although the river has been reduced to 4.5 CMS before, this year we suffered our first major fish kill as a result of low flows, high temperatures and algal decomposition. We have been balancing on the knife edge for a few years now and finally fell off the wrong side... This is not a good situation.

Several years , pumping into the river has been necessary in the fall , but in spite of the lake level being the lowest we have seen in a long time , the pumps didn't start .

The pumps are not permanent fixtures at the weir and have to be installed (at significant cost) when required to maintain a flow of 4.5CMS. The first time this was ever needed was 2019. They have been installed 3 more times since then but this is only the second time they've been used. (Twice rain came in the “nick of time”). Catalyst paper pays for installation and operation (as I understand it costs run up into 7 figures) as they are the license holder and required to provide minimum ecological and sewage dilution flows (both the town of Lake Cowichan and the Joint Utilities board downstream release treated waste water into the river).

Where did the water go? Who made money from it , when, and how much ?

The town of lake Cowichan takes it's drinking water from the lake (a very small amount compared to what flows downstream). No one else except individual property owners draw water from the lake.

The pulp mill, which does use a considerable amount of water to support their operation, has an intake well downstream in the river – at Duncan, where they withdraw around 1.7 CMS for the mill. This is significant but you don't

see the effects of it at all at the lake. They are licensed to do so by the Province of BC and, as licensee, bear the costs of weir operations and maintenance, pumping etc. – even this year when they have been shut down since July 1 and are withdrawing a very small fraction of what they usually do.

Sorry for the long-winded email but your questions are good ones and the responses somewhat nuanced! Bottom line is that if we had a higher weir and could store more water in the spring we would be able to avoid much of this hardship. Cowichan Tribes, CVRD, Paper Excellence and the Province, supported by the Cowichan Watershed Board, are working to make this a reality. In the meantime, my belief is that we will continue to see water shortages (and continue to make tough decisions on how to “spend” our water to provide most benefits to salmon and ecosystems) as changing weather patterns, resulting in hotter drier summers and reduced snowpack and lake inflows, continue to have significant effects on our watershed.

I hope this helps. Feel free to reach out to me at 250-815-5930 (or by email) if you have any other questions.

Tom Rutherford

Cowichan Watershed Board