



Cowichan Water Use Plan

Public Advisory Group Meeting #3

Meeting Notes – March 8, 2018

Meeting Highlights

- The Public Advisory Group (PAG) was provided a progress update on the WUP planning process since PAG Meeting #2 on February 1. The Aquatic and Riparian Technical Sub-Group met once and the Lakefront Technical Sub-Group met twice since that time.
- The PAG reviewed and discussed updates to the objectives and performance measures since the last meeting. The PMs have been refined and, in some cases, winnowed to a smaller and more workable list in order to discuss and highlight the trade-offs.
- The PAG reviewed the hydrological modeling that was undertaken for the new “Round 2” water use alternatives. The new alternatives were designed to explore: increasing the storage potential in the lake in dryer years through raising the weir and an earlier control period, minimizing the frequency and magnitude of higher lake level events in the early spring by restricting the rate at which the lake was allowed to fill, optimizing the rule curve for Cowichan Lake to balance fisheries flows down the Cowichan River between early higher spring flow releases versus trying to better meet base flows down the river in the late summer and early fall period, adjusting the rule curve based on the available water in the system (hydrology optimized flows). Some insights gained through the assessment of the Round 2 (including the original bookend alternatives for context) included:
 - The new alternatives do well at meeting their intended spring flows during average inflow years (median), however the higher spring flows are not always met with some of the alternatives (in at least 1 out of every 5th year).
 - The new alternatives are generally better at meeting the desired target base flow of 7cms without having to rely much on pumping in the summer and early fall during average inflow years. The exception is ALT 10 which only pumps to 5cms and is not able to maintain the 7cms target in the early fall in most years.
 - The new alternatives are able to meet the 7cms target flows in dryer summers, except for ALT 10 and to a lesser extent ALT 12. However, the new alternatives rely on pumping in order to meet the desired base flows down the river in these dryer summers and this resulted in lake levels dropping by as much as 1m below the historical levels in the lake (i.e., 160.4m). This drop in lake levels below historical levels was associated with a lot of uncertainty in terms of the resulting environmental impacts, especially for the threatened Vancouver Lamprey.
 - The new alternatives are better at keeping lake levels lower during the highest lake level event in the spring over the 10-year dataset (in the 2050s) compared with the ‘bookend’ alternatives that were reviewed at the last PAG meeting. There were still increases however with these new alternatives with increased lake levels of between 0.1m to 0.4m (164.4m to 164.7m) during the worst winter / spring inflow event across the dataset relative to ALT 1 (the status quo alternative).
- The PAG reviewed the assessment and discussed the performance of the new alternatives by looking at the hydrology and the new performance measures (PMs) values that were calculated for each water use interest that could be affected by a change in operation or facilities. In addition, PAG members carried out two ranking exercises to gain insight towards identifying their preferred alternatives.

- The ranking exercises showed mixed support for the alternatives according to one of the methods used; however, Alternatives 10 and 12 appeared to be the most heavily preferred according to the other method that was used. There were concerns with an error in the adult chinook passage PM that may have discounted the performance of Alternative 11 (given that it has higher spring passage flows). As well, it was highlighted that given some of the higher lake levels in relation to the natural boundary level around the lake, that the new alternatives were not characterizing the actual potential impacts to lakefront property owners. The PAG discussed options for a next round of modelling with the aim to provide direction to the consulting team on elements of new alternatives that should be explored at the final PAG meeting, including changes to river ramping rates and more flexibility in river flows. Input from these discussions will be used to develop a final round of alternatives for assessment at PAG Meeting #4 in May.
- The facilitator emphasized however that while the next round of alternatives will be improved, they will likely not solve the fundamental trade-offs that are trying to be addressed, given the anticipated significant reduced summer inflows to the lake, as a result of climate change. The next round of alternatives will therefore be trying to balance the pinch points between the desired higher spring flow releases, saving enough water for later in the summer in order to meet the desired base flows to the river, trying to minimize the reliance on pumping during summer droughts to avoid lake levels dropping too much below historical levels, and trying to minimize lake levels from increasing during high winter and spring inflow periods.
- The PAG discussed the upcoming public engagement activities, as the process is nearing its end. The PAG agreed that the next public information meeting should be held in the Town of Lake Cowichan and, if possible, a second event should try to be held in Duncan if there is budget available. These public meetings would be held sometime in late May or the beginning part of June after the last PAG meeting.

Meeting Objectives

- To review and provide an update since the last meeting
- To review and discuss any updates to the performance measures
- To review and discuss the new water use alternatives and their performance
- To undertake values-based exercises to identify emerging and preferred alternatives
- To develop new and improved alternatives for our final meeting (PAG Mtg 4 to be held on May 8)
- To discuss the next steps for engaging the public on the progress of the planning
- To review the next steps of the planning process

Meeting Agenda

8:30 am	Welcome and Update
9:00 am	Objectives & Performance Measures (PMs)
9:30 am	Water Use Alternatives
10:00 am	Assessing the Alternatives – Hydrology
10:30 am	Break – <i>15mins</i>
10:45 am	Assessing the Alternatives – Performance Measures
11:30 am	Preliminary Ranking Exercises
12:30 am	Lunch
1:15 pm	Review and Discuss Ranking Results
2:30 pm	Break – <i>15mins</i>
2:45 pm	New Alternatives

3:45 pm Community Engagement
4:30 pm Adjourn

Meeting Materials

- Pre-Reading Package – Public Advisory Group Meeting 3
- Handouts
 - Updated Consequence Table
 - Alternatives Reference Sheet
 - Direct Ranking and Swing Weighting Exercise