

MEMORANDUM

To: Chair and Board Directors, Regional District of Central Okanagan
From: Anna Warwick Sears, Executive Director, Okanagan Basin Water Board
Date: November 30, 2020
Subject: Okanagan Flooding and the review of the Okanagan Lake Regulation System

At the October 8, 2020 Governance and Services Meeting of the RDCO, the Board requested information on a possible review of Okanagan Lake level management, to reduce flood risk to Okanagan communities while still continuing to protect Okanagan fisheries and minimize the risk of water shortages. The Board wished to join the Okanagan Basin Water Board (OBWB) in writing letters to the B.C. Government, to request this review; and for the OBWB to develop a communication plan.

As a first practical step, we are evaluating the gaps in our knowledge. In November, the OBWB partnered with staff from the Ministry of Forests, Lands, Natural Resource Operations and Rural Development to undertake a gap analysis for what studies must be completed before any changes are made to the management of the Okanagan Lake Regulation System (OLRS). This gap analysis should be completed by March 31, 2021.

For next steps, we are specifically asking the Government of B.C. to undertake and/or fund the necessary studies identified by the gap analysis, and move forward with a review of the OLRs and its operating plan – with a goal to completing the review within the next five years.

Communication Plan

- This memo provides information related to the review and potential update of the Okanagan Lake Regulation System (OLRS) which includes the Okanagan Lake Dam, and control structures throughout the system; as well as the OLRs operating plan.
- The information in this memo will be shared with all Okanagan local governments, and the Okanagan Nation Alliance, inviting communities to prepare their own letters, and forward them to the OBWB to be sent as a package to the Minister of Forests, Lands, Natural Resource Operations and Rural Development.
- Local jurisdictions are strongly encouraged to include information that is specific to their community, such as the recovery costs from previous flooding, damage to public spaces, community values about the lakeshore, agriculture, fisheries etc.
- The letters should be addressed to Minister Katrine Conroy (Forests, Lands, Natural Resource Operations and Rural Development). I recommend cc'ing the Minister of Public Safety; the Minister of Environment and Climate Change Strategy; the Minister

of State for Lands and Natural Resource Operations; the Minister of Agriculture, Food and Fisheries; the Minister of Indigenous Relations and Reconciliation; the Parliamentary Secretary for Emergency Preparedness; and the Parliamentary Secretary for Fisheries and Aquaculture; as well as all Okanagan MLAs and the Okanagan Nation Alliance.

- As we continue to work on this file into the coming year, the OBWB may recommend further communications to the province from Okanagan communities.

Information Related to the Review of the Okanagan Lake Regulation System

The following information is provided here as background, to inform letters from Okanagan communities to the B.C. government.

- **We are asking the Government of B.C. to, in the next five years, comprehensively review and update the Okanagan Lake Regulation System (OLRS) and its operating plan to prevent damaging floods of increasing severity, while protecting Okanagan fisheries and minimizing the risk of water shortages.**
- The B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) manages the level of Okanagan Lake by operating the Okanagan Dam in Penticton, and other control structures that make up the OLRs.
- The OLRs operating plan was created in the mid-1970s and has only had minor modifications since that time. Under the current OLRs operating plan, the provincial dam operator has limited ability to manage water levels during spring freshet – and this is becoming more difficult as a result of climate change.
- Recent modelling shows that climate change is already significantly affecting the timing of inflows to the Okanagan Lake system, and causing high year-to-year variability. In recent years, we have had increased early-season snowmelt, exacerbated by heavy spring rains, followed by prolonged dry periods. These trends will continue to worsen into mid-century and beyond.
- The lakeshores of the mainstem Okanagan lakes and the Okanagan River channel have experienced flooding and high water events in three of the past four years, with particularly destructive and costly floods in 2017 and 2018.
- In 2020, the three Okanagan regional districts, and the OBWB published flood maps for the Okanagan mainstem lakes and river channel. The technical report for this effort found that as a result of climate change, floods will “exceed the capacity of existing infrastructure if operational rules are not adjusted...” **A primary recommendation of the report is that, to avoid high flood risk, the current operating rules should be comprehensively reviewed and amended within the next five years.**
- The Okanagan Nation must be a central partner in this review. The Okanagan Valley is their unceded traditional territory, and the Okanagan Nation is the leading force behind the restoration of Okanagan salmon populations. All species of Okanagan salmon will

be affected by changes in OLRs management, and any proposed changes to the OLRs and its operating plan must consider risks to salmon populations.

- The Okanagan is also at increased risk of drought from climate change, leading to potential shortages of water for agricultural irrigation and municipal water supplies. Any proposed changes to the OLRs and its operating plan must consider drought risks as well as flood risks.
- **The technical studies required for the review should be initiated as soon as possible, given that they will take time, and each year that goes by increases the risk that the Okanagan will experience another significant flood.**
- The full review and update of the OLRs and its operating plan should include extensive engagement and consultation with local communities, affected sectors and stakeholders; as well as the Okanagan Nation, and relevant provincial and federal ministries.
- The review and update of the OLRs is a provincial responsibility; however, there are many opportunities for partnerships and collaboration moving forward.

Further Assistance

The OBWB is happy to assist RDCO and any Okanagan communities with their communications to the Minister, and to answer any further questions. Please contact me directly at: Anna.Warwick.Sears@OBWB.ca