

Meeting Minutes

Annual Public Meeting, International Osoyoos Lake Board of Control (IOLBC)

Tuesday, October 14, 2021
6:30 – 8:00 PM

Virtual Meeting: Go To Webinar

List of Acronyms

IJC	International Joint Commission
IOLBC	International Osoyoos Lake Board of Control
OBWB	Okanagan Basin Water Board
USGS	U.S. Geological Survey
USACE	US Army Corps of Engineers
WADOE	Washington State Department of Ecology
BCFLNRORD	BC Ministry of Forest, Lands, Natural Resource Operations and Rural Development
ECCC	Environment and Climate Change Canada

Membership

	United States	Canada
Co-Chairs	Cynthia Barton	Dave Hutchinson (host)
Members	John Arterburn Col. Xander Bullock Kris Kauffman Arnie Marchand	Ted White Sue McKortoff Brian Symonds Anna Warwick Sears
Secretaries	Andrew Gendaszek	Martin Suchy
IJC representatives	Lance Yohe (Commissioner, U.S. Section), Merrell-Ann Phare (Commissioner, Canadian Section), Rob Caldwell (Canadian IJC Advisor), Paul Allen (Communications, Canadian Section), Adam Greeley (AAAS Fellow, U.S. Section)	
Guests	Ken Brettmann (USACE), Emanuelle Johnston (ECCC)	

Welcome, Introductions, and Review of Agenda

The meeting was opened at 6:30 p.m. by Dave Hutchinson (Board Chair, U.S. Section) with welcoming remarks and introductions of the board members and IJC Commissioners who were in attendance. He recognized the 75th anniversary of the Board and of the Town of Osoyoos, which were both established in 1946. He then reviewed public meeting protocols and the agenda for the Public Meeting. Commissioners Phare and Yohe also welcomed attendees and offered introductory remarks.

IJC Orders of Approval

Dave Hutchinson presented an overview of the IJC, IOLBC, and the IJC Orders of Approval for Osoyoos Lake. He summarized the history and purpose of the IJC beginning with the Boundary Waters Treaty and the subsequent IJC Orders for Osoyoos Lake and the establishment of the International Osoyoos Lake Board of Control in 1946. He reviewed the history of Zosel Dam from its initial construction in 1927 to construction of the present control structure in 1988 and

the history of its regulation of Osoyoos Lake levels under the IJC Orders that were initially established in 1946 and subsequently revised in 1978, 1982, 1985, and most recently in 2013 under IJC Supplementary Orders of Approval. The 2013 Supplementary Orders of Approval redefined the rule curve of allowable lake levels for Osoyoos Lake, updated drought criteria, considered ramping rates, and directed the Board to consider adaptive management with flexibility in renewing the orders that must be revisited every 25 years. He described the activities of the IOLBC including ensuring compliance of the Applicant with the Orders, monitoring drought criteria outlined within the Orders, meeting quarterly for Board conference calls, communicating hydrologic conditions and Zosel Dam operations to the IJC and the public, and developing special projects to develop technical understanding of the Okana(o)gan/Similkameen watersheds and communicate Board activities.

Hydrologic Conditions and Lake Levels in 2021

Ted White (Board Member, Canadian Section), presented a review of hydrologic conditions of Osoyoos Lake, the Okanagan/Okanogan River, and the Similkameen River during 2021. Precipitation was near normal in the early winter, but after February drier conditions prevailed. Temperature was near normal through May but above normal from June through August with extremely high temperatures during the late June heat dome event. Snowpack in the Similkameen and Okana(o)gan basins were near normal for most of the winter but decreased below normal in response to drier conditions during the late winter and spring. Only one of the three drought criteria for the IJC Orders for Osoyoos Lake, Okanagan Lake level, was met and a drought was not declared for purposes of the Order in 2021. Although no significant peaks occurred during the spring freshet on the Similkameen River, cumulative runoff exceeded the 1,000,000 acre-feet drought criteria. Net inflow to Okanagan Lake became negative about a month earlier than usual due to warm temperatures but cumulative net inflow during June and July (195,000 acre-feet) defined by the drought criteria within the IJC Orders for Osoyoos Lake was exceeded. During 2021, Osoyoos Lake level was within the rule curve and no peak from the spring freshet was present and no backwater conditions from the Similkameen River occurred. Finally, discharge capacity of the Okanogan River (2,500 cfs) when Osoyoos Lake level is 913 feet and no backwater occurs was not able to be demonstrated in 2021.

Special Projects Updates

Martin Suchy (Board Secretary, Canadian Secretary) provided an overview of the recently completed Similkameen hydrologic modeling. In order to understand the effects of projected climate within the basin including the magnitude and timing of runoff, the Board has applied and received funding to develop the first phase of a project to develop a hydrological model of the Similkameen basin. The second phase of the project will integrate the Similkameen model with a previously developed model funded by OBWB. The Similkameen model showed a significant shift in Similkameen basin hydrology from a snowmelt dominated system with a prominent spring freshet and low winter flows to a mixed snowmelt/rainfall dominated system with a diminished freshet, higher winter flows, and lower late summer flows. The model projected that drought criteria will become increasingly met for the Similkameen River in the future and recommended updated options for seasonal forecasting and updated lake operations that leverage increases in winter flow.

Anna Warwick Sears (Board Member, Canadian Section) presented an update of recent bathymetric mapping collected within the Canadian part of the Okanagan basin commissioned by OBWB. Additional funding was provided by IJC-IWI for the U.S. part of Osoyoos Lake, the Okanogan River, and the Similkameen River.

Andy Gendaszek (Board Secretary, U.S. Secretary) presented an update of the second phase of the hydrologic modeling within the Similkameen and Okanagan River basins. The recently completed Similkameen basin model developed during the first phase of the project will be integrated with the Okanagan basin model previously developed under contract with OBWB. This integration will allow a holistic assessment of how projected climate changes within the Similkameen and Okanagan basins affect Osoyoos Lake levels and drought criteria defined within the Orders of Approval for Osoyoos Lake.

Anna Warwick Sears provided an update about the fourth Osoyoos Lake Water Science Forum, a two and half day conference highlighting current science being done in and around Osoyoos Lake. This year, the Osoyoos Indian Band and Okanagan Nation Alliance will facilitate the conference and indigenous perspectives and concepts will be built into the program. The conference is scheduled for April 2022 in downtown Osoyoos, BC.

Public Comments

Question from Public: With the heat dome that settled over the area this summer, what has been done to address any issues caused by it or is there anything that can be done to mitigate the impact of similar events?

Response: Management of water within the Okanagan system was challenging this year because of how the snowpack melted differently from previous years. Forecasting runoff is becoming increasingly challenging and improved forecasting is needed to properly manage outflow from Okanagan Lake as the hydrograph shifts in response to projected climate change.

Question from Public: Subdevelopments were approved within the 100-200 floodplain. Does this create a liability for who approved the subdivision?

Response: OBWB has been working on updated flood maps for the Okanagan, which were published in spring 2020. It is taking time to integrate these updated maps into the planning policy of local governments as the issue of changing flood risk is being addressed across the province. Interactive flood maps, reports, and recommendations have been published within the *Okanagan Flood Story* website accessible through OBWB's website.

Question from Public: Does Enloe Dam have any bearing on Similkameen River flows?

Response: Enloe Dam has very little storage and therefore does not impact Similkameen River flow.

Question from Public: Are there any projects in process that address impacts of high temperature on fisheries?

Response: The Board's mandate does not directly operate in a way that can provide thermal benefits to fish; however, tribes are working on habitat restoration projects that can benefit changes in thermal conditions by connecting cooler water within the watershed.

Meeting Adjourned at 8:00 PM