Meeting Minutes

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

Tuesday, September 18, 2018
1:00 – 4:30 PM

Oroville Port of Entry/Osoyoos Border Facility – conference room SA225

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 and Natural Resource Operations and Rural Development
ECCC	Environment and Climate Change Canada

Membership

	United States	**Canada**
Co-Chairs	Cynthia Barton (host)	Bruno Tassone
Members	John Arterburn Col. Mark Geraldi Kris Kauffman Ford Waterstrat	Ted White Sue McKortoff Brian Symonds Anna Warwick Sears
Secretaries	Andrew Gendaszek	Gwyn Graham
IJC representatives	Rich Moy (Commissioner, U.S. Section), Gordon Walker (Commissioner, Canadian Section), Wayne Jenkinson (Engineering Advisor, Canadian Section), Mark Colosimo (Engineering Advisor, U.S. Section), Paul Allen (Communications, Canadian Section	
Guests	Shaun Reimer (FLNRORD, BC), Al Josephy (WADOE), Jiri Bakala (Ascent Films, Inc.), Martin Suchy (ECCC)	

1. Welcome and Introductions

The meeting was opened at 1:00 p.m. by Cindi Barton (Board Chair, U.S. Section) with welcoming remarks and introductions of the board members and IJC Commissioners Rich Moy and Gordon Walker who were in attendance.

2. Agenda

The draft agenda was accepted without changes.

3. Implementation of Order of Approval

3.1 Hydrologic conditions in 2018 and compliance with Order

Brian Symonds (Board Member, Canadian Section) presented an overview of the 2018 hydrologic conditions and compliance with the IJC Orders of Approval for Osoyoos Lake. Snowpack as measured in the Similkameen and Okanagan basins as measured at the Blackwall Peak and Mission Creek snow pillows, respectively, was above average from early

winter through spring. As a result, water managers expected higher-than-average runoff during the spring freshet and drought criteria including forecasted runoff for the Similkameen River, Okanagan Lake inflow, and Okanagan Lake maximum level were not met. As a result, Osoyoos Lake was operated within the non-drought rule curve for 2018.

Osoyoos Lake levels exceeded the rule curve during the spring freshet period from late April to late June. This exceedance was in compliance with the IJC Orders because the gates at Zosel Dam were fully opened on March 28. At this time, the stage of the Similkameen River and inflow to Osoyoos Lake controlled lake level, not Zosel Dam. Discharge of the Similkameen River reached a peak of 31,200 cfs on May 10, which was lower than forecasted, but higher than the 2017 peak discharge of 18,700 cfs. The Similkameen peak discharge caused backwater, but did not reverse flow in the Okanogan River channel. In early May when discharge on the Similkameen River and tributaries to the Okanagan River increased, releases from Okanagan Lake Dam were decreased thereby decreasing inflow to Osoyoos Lake during the peak of the spring freshet when backwater conditions prevented outflow from Osoyoos Lake and unregulated tributaries contributed inflow to Osoyoos Lake. Okanagan Lake reached flood stage, but at a much lower level than 2017. Flooding occurred around Osoyoos Lake in 2018 and peaked at 916.38 feet on May 12, which was about 3.4 feet above the spillway elevation. The May 10, 2018 peak was not the highest water level ever recorded on Osoyoos Lake, but occurred about a month earlier than previous peaks recorded in early June, which is consistent with climate change impact predictions.

3.2 Overview of dam operations in 2018

Al Josephy (Washington State Department of Ecology – Applicant to the IJC Orders) presented information about Zosel Dam 2018 operations. Operational goals for Zosel Dam include 1) complying with the IJC Orders of Approval, 2) protecting non-interruptible water rights in the Okanogan River, 3) protecting additional adjudicated water rights in the Columbia Basin (interruptible water rights), 4) working with U.S. and Canadian fisheries agencies, and 5) maintaining facilities in and around Zosel Dam. During 2018, water levels were close to the catwalk level of the dam structure and the weir was submerged by about one foot. Flood-related maintenance completed during 2018 included: clearing debris deposited in and around Zosel Dam during high water and replacing flood-damaged limit switches that allow smooth gate operation. Gates were unable to be operated for three weeks of the summer until the limit switches were replaced. Emergency repairs to Zosel Dam were also required in 1972 following record flooding. In addition, a PIT-tag array operated by Columbia River Inter-Tribal Fish Commission (CRITFC) was installed in May 2018 to count tagged fish. In August, the Okanagan Nation Alliance caught, documented, tagged, and released the first sturgeon on the Canadian part of Osoyoos Lake.

3.3 Operation of Okanagan System in 2018

Shaun Reimer (British Columbia – Forest, Lands, Natural Resources Operations and Rural Development) provided an overview of Okanagan system operations. The goal of Okanagan Lake operations was to hold Okanagan lake within a range of seasonal operational targets dependent on inflow forecasts. Inflow forecasts to Okanagan lake are made from February through July and calibration of inflow models is a constant process. 2018 inflow to Okanagan Lake was 622 kdm^3 or 6 feet and, at its peak, was 21.6 inches compared to 15 inches last year. Spring snowpack was approximately 200% above normal for the basin. High inflow resulted from high groundwater levels as evidenced at kettle lakes as well as record the melting of a record snowpack at Mission Creek and Brenda Mines snow pillows. Less time was available to

draw down Okanagan Lake to regulate peak inflows, which occurred in early May 3 to 4 weeks earlier than typical. In addition, other operational considerations including maintaining discharge less than 1,000 cfs to prevent scour of sockeye redds prior to emergence was maintained until near the end of emergence. During the period of peak inflow to Osoyoos Lake and Okanagan Lake, outflow from Okanagan Lake was lowered, but high tributary inflows to the Okanagan River contributed much higher inflow than normal. The level of Okanagan Lake peaked at 342.69 m (target peak was 342.48 m).

3.4 2018 Flooding Response – Community

Sue McKortoff (Board Member, Canadian Section) and Ford Waterstrat (Board Member, U.S. Section) discussed the response of the communities of Osoyoos and Oroville to the May flooding on Osoyoos Lake. In Osoyoos, emergency planning began on April 10 and an emergency operations center was set up following as concerns about spring flooding grew. By May 7 several hotels began flooding, a state of emergency was declared on May 9, and evacuation orders for 120 properties were issued on May 10 as sandbagging, gabion boxes, and tiger dams were used to protect low lying areas. On May 15 a public meeting was held and Brian Symonds and Shaun Reimer presented information about hydrologic conditions to the public. By May 23, evacuation orders were rescinded and the City of Osoyoos opened the town dump for disposal of sand bags. Emergency Management British Columbia was approached to support the purchase of a sand bag machine for future use. Response to Osoyoos Lake flooding was delayed on the U.S. side of the border and there was public sentiment that flooding seen in 2017 and 2018 is the new normal. Okanogan County provided sand bags to flood-impacted residents and AmeriCorps through the Washington State Department of Ecology provided sandbagging assistance. On U.S. side there was a lot of damage due to wave action; the City of Osoyoos banned power boats on the lake during high water to limit shoreline erosion. Since flooding, new weeds have been proliferating along the shoreline.

3.5 2018 Flooding Response – U.S. Army Corps of Engineers

Emergency flood response assistance by the U.S. Army Corps of Engineers (UASCE) must meet a three-part test: 1) augment the local and state responses which must have occurred first, 2) no direct assistance for private property, 3) mitigation of the current flood event. The USACE completed 14 direct assistance missions between May 1 and May 30 in the Okanogan region (9 communities) and deployed 16 team members, 5 pumps, more than 1 million sand bags, 2,800 supersacks, and 50 rolls of Visqueen. USACE efforts in the Okanogan Region cost about $2,000,000.

4. Business Items

4.3 Climate Change Guidance Framework and Vertical Pilot Project

Bruno Tassone (Board Chair, Canadian Section) The IOLBC, and other IJC boards, have already completed the organizational step of climate change guidance framework and is being approached by the IJC about completing the remaining steps of the climate change guidance framework. The remaining steps (vertical pilot) include 1) analyzing how board objectives could be impacted by climate change and the likelihood of these impacts, 2) how the board can play a role in their in the local area to help with adaptation, and 3) development of an adaptive management strategy to iteratively review the prior steps. The St. Croix Board completed the three steps of the vertical pilot and developed a STELLA model to assess how climate change scenarios could affect compliance with the IJC Orders. Completion of the vertical pilot is

expected to take about three to five years and, in the case of the St. Croix, was supported by the IJC, and IOLBC support will be available. The Board expressed interest in pursuing the vertical pilot and expressed interest in not only how the front end of the rule curve during the spring freshet may change impacted by climate change, but also low flows during the late summer and early fall may be impacted due to climate change. Specific objectives for IOLBC vertical climate change pilot will be determined in consultation with IJC engineering advisors. IJC wants to know when IOLBC prepared to start vertical project and there is strong interest on Canadian side to complete Climate Model (Anna Warwick Sears), but flood mapping should be worked out along with Similkameen flows. John Arteburn indicates model cannot solely focus on Spring/Summer, but also low flow resilience in Fall. Board must first prepare a 3-5 yr plan.

4.1 & 4.2 IOLBC Work Plan - Condensed with Special Projects Update

2018 Work Plan priorities 1 (high-water monuments), 2 (Zosel Dam staff gages), and 3 (Zosel Dam webcam) were discussed in section 5.1. Priorities 4 and 6 (River Film distribution) were updated in section 5.2 and priority 5 (Communication Plan) was not discussed. Item 7 was discussed in section 5.3. No progress was made for priority 8 (Osoyoos Lake Water Balance) in 2018. Tasks related to priority 8 will move into 2019 and Secretaries will coordinate data collection on the Canadian side from OBWB, which has extensive data sets already, and OTID and others on the U.S. side who may be able to provide information. No progress was made on work plan priority 9 (data availability/harmonized transboundary data) and will be moved to 2019.

5. Update on Special Projects

5.1 High-Water Monuments, Webcam, Staff Gages

Andy Gendaszek (Secretary, U.S. Section) updated the Board on high-water monuments, Zosel Dam staff gage installation, and Zosel Dam webcam installation. Funding was received in summer 2018 from the IJC to create and install high-water monuments documenting historic high-water levels on locations in Osoyoos and Oroville. A mock-up of the monument was presented to the board and will also be presented at the public meeting. The IOLBC approved the text and description and a company is currently fabricating the signs. Staff gages were installed by the USGS in March 2018 within the Zosel Dam forebay and tailrace to inform the USACE Zosel Dam operational model. A webcam of Zosel Dam is scheduled to be installed in fall 2018 after a security issue has been resolved.

5.2 Documentary Film Progress

Anna Warwick Sears (Board Member, Canadian Section) updated the board on screenings of the documentary film, A River Film. To date, the film was submitted to 42 international film festivals, has been screened at 8 film festivals, and has received 3 award of excellence. In addition, the film has been screened at 25 different locations since its premier at the 2017 IOLBC public meeting.

5.3 Zosel Dam Operational Model

Kevin Schaffer (Special Assistant to Col. Mark Geraldi, Board Member, U.S. Section) updated the Board on the Zosel Dam operational model, which was used to help NOAA-NWS issue flood warnings. The model, which predicts lake levels for given flows into and out of the lake serves several purposes including an operational tool for the Zosel Dam operators and to plan for climate change and future projected streamflow scenarios. Better estimates of lake storage and

volume at different elevations from a bathymetric/LiDAR survey and staff gage data following gate changes will improve the model.

6. *Approval of June 12 Conference Call Minutes*

The June 12 Conference Call Minutes were approved as written.

7. Meeting Adjourned at 4:30 PM