

MINUTES

International Osoyoos Lake Board of Control Annual Meeting

The Oroville Depot
1210 Ironwood Street
Oroville, Washington

Tuesday, September 12, 2006
2:30 PM

Attendance

	United States	Canada
Chairs	Dr. Cynthia Barton (absent)	Kirk Johnstone
Members	Col. Michael McCormick Kris Kauffman (absent)	Glen Davidson Brian Symonds
Secretaries	Robert Kimbrough	Daniel Millar
Guests	Commissioners: Irene Brooks, Jack Blaney Tom McAuley (Canadian Section, IJC), Dr. Mark Colosimo (US Section IJC), Larry Merkle (USACE), Marian Valentine (USACE), Ken Slattery (WA Dept of Ecology), Ray Newkirk (WA Dept of Ecology)	

Agenda

1. Welcome and introductions Kirk Johnstone
Mr. Johnstone welcomed all and led introductions.
2. Review of the agenda Kirk Johnstone
A new item was added to the agenda: Item 4.4, Reporting maintenance of Zosel Dam to the Board.
3. Business from previous meeting
- 3.1 Okanogan channel capacity verification survey in 2006 Robert Kimbrough
Mr. Newkirk acknowledged receipt of a letter dated August 8, 2006 from the Board to the Washington State Department of Ecology requesting that the four control cross sections in the outlet channel below Osoyoos Lake be resurveyed in 2006 and that results of the survey be delivered to the Board by February 1, 2007. Mr. Newkirk said that Ecology would complete the work by the requested deadlines.
- 3.2 Update on Okanogan Lake water level gauge correction factor Brian Symonds
The factor used to convert the Okanogan Lake water level gauge elevation to Canadian Geodetic Survey Datum has changed. This is due to the results of a general resurveying of the geodetic benchmarks and datums in 1984, and movement of the primary benchmark used to determine the conversion factor of the Okanogan Lake gauge. Mr.

Symonds reported that a number of benchmarks, including the primary benchmark, have recently been resurveyed and that the Water Survey of Canada (WSC) has recommended a new conversion factor be adopted. A summary of this issue is attached.

Action: The Board will write to the Commission to provide the results of this latest investigation of benchmark and datums and WSC's recommendation for a new conversion factor once the analysis is complete.

- 3.3 Update on Board members using short-term alternates, and the criteria for a quorum at a Board meeting Mark Colosimo
Tom McAuley

Mr. Colosimo reported that using short-term alternates should be approved by the Commission since the Commission appoints the Board members. In the future, Board members should email each request for short-term alternates to the Commission a few weeks prior to the date for which the alternate is being requested.

4. New Business

- 4.1 Compliance with the IJC Orders in 2005-2006 Robert Kimbrough

Mr. Kimbrough reviewed the Applicants compliance with the Osoyoos Orders during 2006. A summary of hydrologic conditions used for this discussion is attached. To date during 2006, the Applicant operated Zosel Dam consistent with the Commission's Orders of Approval.

Natural conditions caused the level of the lake to rise above 911.5 feet from May 19 to June 28, 2006. The Board received two emails from the public inquiring about the high levels and one asked if Zosel Dam was not capable of spilling water faster. During the period of high lake level, it was determined that the outlet gates in Zosel Dam were pulled completely out of the water and this information was included in the Board's response to the two public inquiries. The Board decided that in the future, it would be useful to know when the gates are out of the water when high lake levels result from natural conditions. The Board will request this information from the Applicant as the issue arises.

- 4.2 Status of Draft Plan of Study Kirk Johnstone

Mr. Johnstone reported that the Commission had recently delivered the Plan of Study to the State of Washington, the Province of British Columbia and both federal governments. In addition, the report is now accessible on the Web through the IJC Web page.

The Board would be interested in discussing with the Commission, the role of the Board when studies identified in the Plan of Study are being conducted.

- 4.3 Discussion on the idea of an Osoyoos Lake Science Forum Mark Colosimo
Tom McAuley
- Attendees decided that the spring or summer of 2007 would be a good time to hold an Osoyoos Lake Science forum and that it would be beneficial to have involvement from local governments and watershed groups. The IJC Engineering Advisors will work with Board members in developing a one-page idea paper for the forum.
- 4.4 Reporting maintenance of Zosel Dam to the Board. Kirk Johnstone
- The Board discussed Condition 15 of the 1982 Orders of Approval which states that "The Applicant shall maintain the works in a manner satisfactory to the Board of Control." To ensure that the Board is kept informed on the status of the "works" (Zosel Dam), it was decided that the Applicant shall report at future annual Board meetings on the status of the works including any maintenance that occurred during the previous year.
5. Preparation for Public Meeting
- 5.1 Review of Agenda Kirk Johnstone
- Board members found the public meeting agenda satisfactory.
6. Adjourn 4:00 PM

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**Change to the Conversion Factor used to
Convert Gauge Readings to Geodetic Elevations at
Water Survey of Canada Station 08NM083 – Okanagan Lake at Kelowna**

The 9 December 1982 Order of Approval of the International Joint Commission contains three criteria which are used to determine whether or not a drought should be determined for Osoyoos Lake operations.

Criteria 8(c) reads:

“the level of Okanagan Lake fails to or is forecasted by Canadian authorities to fail to reach during June or July elevation 1122.8 feet Canadian Geodetic Survey Datum.”

For purposes of the Order the level of Okanagan Lake is based on the level as recorded at Water Survey of Canada (WSC) Station 08NM083 – Okanagan Lake at Kelowna.

At the time the Order was issued the geodetic elevations reported for Stn 08NM083 were based on a conversion factor of 340.297 metres. In 1984, following a general resurveying of the geodetic benchmarks and datums in the region, WSC adopted a new conversion factor of 340.224 m for the station. At the time this change was not communicated to either the Province or the public. Furthermore, Environment Canada “Historical Water Levels Summary, British Columbia”, last printed in 1992, continued to use the 340.297 m conversion factor. It is important to note that the gauge reading measurements themselves were determined not to have changed, only the conversion factor used to convert these readings to geodetic elevations.

In the spring of 2004 the Province became aware of the change to the conversion factor for the first time. Recognizing that the change would have potential implications for the application of the drought criteria in the 1982 Order this discrepancy was brought to the attention of the Board at its 2004 fall meeting.

Since that time the Province and WSC have investigated the matter further and determined that the primary benchmark used to determine the conversion factor is unstable. As a result it and a number of surrounding bench marks have been resurveyed to confirm the conversion factor. This work has now been completed and WSC regional staff have recommended a new conversion factor of 340.232 m be adopted.

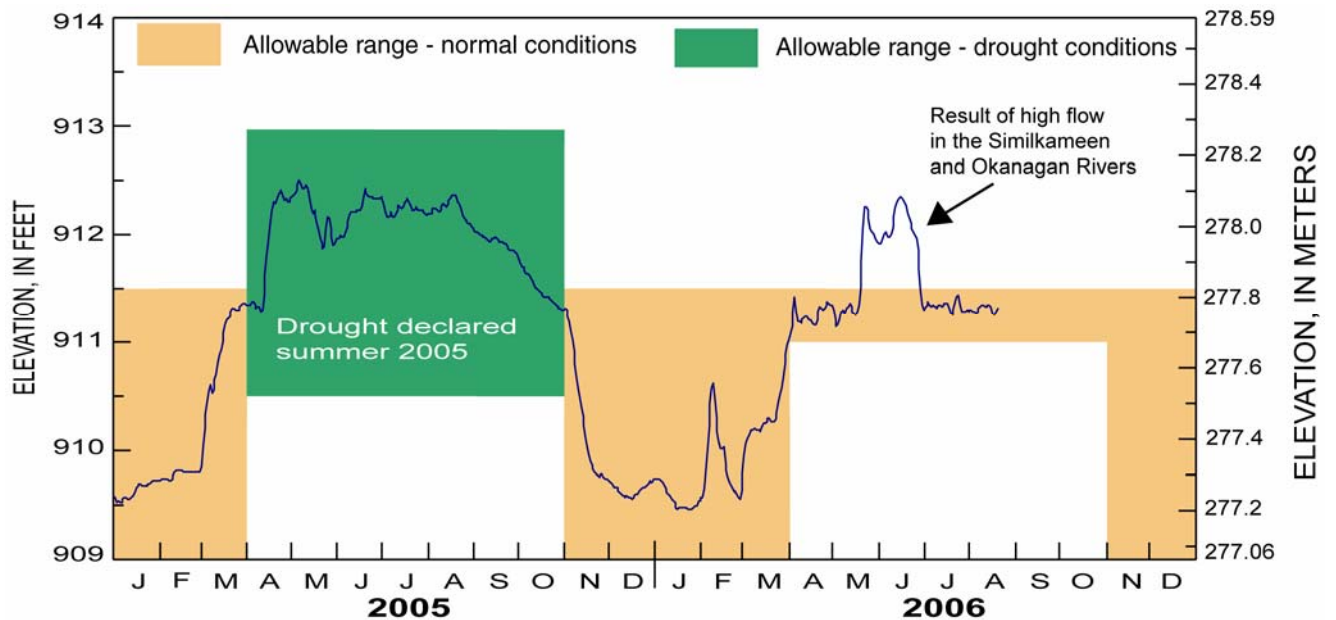
The difference between the conversion factor used when the Order was issued in 1982 and the recommended factor is 0.065 m (i.e., 340.297 m - 340.232 m) or 0.21 feet. Therefore, an Okanagan Lake level of 1122.8 feet in 1982 would be equivalent to 1122.6 feet if adopted.

Brian Symonds, P. Eng.
Member, IOLBC

Compliance with the IJC Orders in 2005-2006

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Osoyoos Lake elevation and allowable range in elevation, 2005-06.

I. HYDROLOGIC CONDITIONS - 2005

- April 8, 2005 - Drought declared based on the forecast volume of flow in the Similkameen River.
- Only 1 of 3 drought criteria met in 2005

II. HYDROLOGIC CONDITIONS – 2006

- No drought declared in 2006
- High flow in the Similkameen and Okanagan Rivers caused the level of Osoyoos Lake to rise above 911.5 feet from May 19 to June 28, 2006.

Hydrologic conditions in 2006 compared to drought criteria

Drought Criteria	Actual value (preliminary)	Drought criteria met?
Flow in the Similkameen less than 1 million ac-ft	1,065,000 ac-ft	No
Inflow to Okanagan Lake less than 195,000 ac-ft	452,800 ac-ft	No
Level of Okanagan Lake less than 1,122.8 ft	1,123.9 ft	No

Summary of Drought Conditions

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Year	Drought Criteria Condition			Drought	
	(a)	(b)	(c)	Declared?	Rescinded?
1987	1,003,453	178,900	1123.11	Yes	Yes
1988	933,296	192,700	1122.32	Yes	
1989	1,060,974	296,700	1123.54		
1990	1,566,775	536,000	1124.90		
1991	2,299,868	479,100	1123.42		
1992	735,541	123,600	1121.87	Yes	
1993	938,989	458,300	1123.56	Yes	
1994	885,375	302,600	1123.39	Yes	
1995	1,305,004	368,400	1123.17		
1996	1,661,380	654,000	1124.07		
1997	1,946,984	863,100	1124.81		
1998	1,230,960	391,000	1123.47	Yes	Yes
1999	1,706,980	560,700	1123.39		
2000	1,070,039	431,200	1123.41		
2001	566,825	192,300	1122.72	Yes	
2002	1,546,158	417,900	1123.70		
2003	781,500	137,600	1122.46	Yes	
2004	1,143,082	269,000	1122.80	Yes	Yes
2005	622,400	328,900	1123.87	Yes	
2006	1,065,000	452,800	1123.90		

Since current Zosel Dam was completed in 1987

- Between 1987 - 2006, (20 years), drought declared 10 times, and thrice rescinded
- Condition (a) (Similkameen River) has been met 7 of 20 years (35%)
- Condition (b) (Okanagan Lake inflow) has been met 5 of 20 years (25%)
- Condition (c) (Okanagan Lake elevation) has been met 4 of 20 years (20%)

For period of record for Similkameen River (78 years, 1929-2006)

- Similkameen criteria has been met 19 of 78 years (24%)