

**ANNUAL REPORT to the
INTERNATIONAL JOINT COMMISSION
from the
INTERNATIONAL OSOYOOS LAKE BOARD OF CONTROL
for
CALENDAR YEAR 1998**

The International Osoyoos Lake Board of Control was established on February 12, 1986, by the International Joint Commission to carry out the provisions of the Commission's Order of Approval dated December 9, 1982, and the Supplementary Order of Approval dated October 17, 1985.

1. ACTIVITIES OF THE BOARD

On April 7, 1998, the Board of Control declared drought conditions in accordance with conditions 7 and 8 of the Orders of 1982, based on the National Weather Service (NWS) April-July volume runoff forecast for the Similkameen River. On June 18, the Board rescinded the drought declaration as a result of a revised NWS Similkameen River forecast. Details of the declaration and rescission are given in paragraph 2b.

At the request of the IJC, the Board of Control developed and is maintaining a Web page for the Board of Control, which is linked to the IJC homepage. The URL of the site is:

http://www.ijc.org/conseil_board/osoyoos/en/osoyoos_home_accueil.htm

A formal meeting of the Board was held on September 16, 1998, in Oroville, Washington. A public meeting followed the meeting of the Board on the same date.

2. OPERATION AND MAINTENANCE OF ZOSEL DAM

a. Osoyoos Lake Elevations

The level of Osoyoos Lake was controlled by Zosel Dam throughout the year within criteria specified in the Order of Approval. The authorized range of normal operating elevations, 909.0 to 911.5 feet, is shown by the blue area in appendix I. The grey area in appendix I shows the authorized range of elevations, 910.5 to 913.0 feet, that may be used to manage storage from April 1 to October 31 if drought conditions are declared by the Board in accordance with conditions 7 and 8. Drought conditions were declared, and then rescinded, as described in paragraph 2b.

Condition 9 of the Orders of Approval recognizes that backwater from high flow in the

Similkameen River and (or) excessive flow in the Okanogan River can cause Osoyoos Lake levels to rise above the authorized range. Lake levels were influenced by Similkameen River backwater and (or) high Okanogan River flows from May 1 to approximately June 13. However, the lake level did not exceed the drought-authorized elevation of 913.0 during this period.

The maximum instantaneous elevation on Osoyoos Lake occurred on May 28 and 29 at 912.81 feet.

The maximum daily mean elevation occurred on May 28 at 912.80 ft.

The maximum instantaneous discharge of the Okanogan River at Oroville occurred on May 27 and was 3,080 cubic feet per second.

Recorded lake elevations for water years 1996-98 are shown in appendix I.

Data on Osoyoos Lake levels and relevant river flows are summarized in appendix II and depicted in the hydrographs in appendix III.

b. **Drought Operation**

On April 7 (by email), the Board of Control declared drought conditions in accordance with conditions 7 and 8 of the Orders of 1982, based on the NWS April-July volume runoff forecast for the Similkameen River of 960,000 acre-feet. A letter was sent to the Washington Department of Ecology informing them of the declaration and stating the Osoyoos Lake level could be maintained between the elevations of 910.5 feet and 913.0 feet between April 1, 1998, and October 31, 1998.

As a result of unusually heavy precipitation in late May, the NWS revised their Similkameen River forecast to 1,170,000 acre-feet for April through July. Consequently, the Board of Control rescinded the drought declaration on June 18, and a letter was sent to the Washington Department of Ecology informing them of the rescission and ordering the lowering of the lake level to 911.5 feet by July 10, 1998, and the maintenance of the level between 911.0 feet and 911.5 feet until October 31 in accordance with condition 7 of the Orders of 1982. This was completed as ordered.

c. **Zosel Dam**

The Oroville-Tonasket Irrigation District operated Zosel Dam under authority from the State of Washington, Department of Ecology. The levels on Osoyoos Lake were maintained for the year in accordance with the Commission's Orders of Approval.

3. **IMPROVEMENTS TO THE OKANOGAN RIVER CHANNEL**

Condition 4 of the IJC Order of Approval (December 9, 1982), and subsequently revised by the Supplementary Order of Approval (October 17, 1985), calls for the applicant (State of Washington Department of Ecology) to "...take all measures to ensure that the flow capacity of the Okanogan River, upstream and downstream from the control structure, enables the control structure to pass at least 2,500 cubic feet per second when the elevation of Osoyoos Lake is 913.0 feet USCGS and there is no appreciable backwater effect from the Similkameen River.

The Board obtained confirmation from the State of Washington regarding the capacities of the Okanogan River Channel. Hydrologic conditions in 1997 and 1998 demonstrated that water is able to be moved out of the lake, through the outlet channel, and past the dam at a rate greater than 2,500 cubic feet per second with the lake at an elevation less than 913.0 feet and no appreciable backwater effect from the Similkameen River.

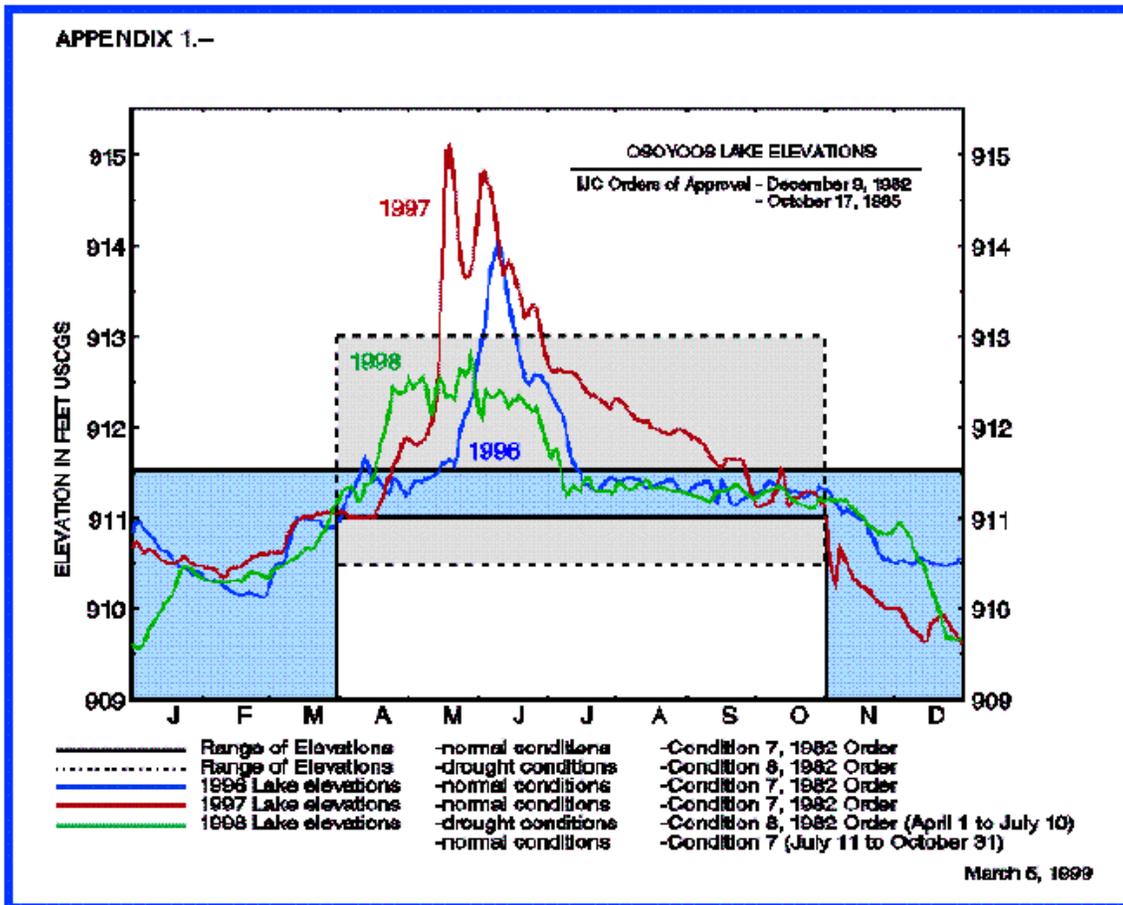
On September 16, the Board members inspected the outlet channel at the mouth of Tonasket Creek. Tonasket Creek enters a bypass reach of the outlet channel that was designed to accept the creek's sediment load deposits. The Tonasket Creek alluvial fan continued to grow in 1998 as a result of sediment deposition from late spring and early summer freshets of that year. As noted above, however, the encroachment of the deposition fan into the bypass reach has not impaired the capacity of the main outlet channel to perform according to requirements of condition 4.

4. **PUBLIC MEETING COMMENTS**

The public meeting was held in Oroville, Washington on September 16, 1998. Presentations were made on the Orders of Approval, the drought declaration and rescission, 1998 hydrologic conditions, and Zosel Dam operations. Attendance was 18, of which 2 were from the general public.

Comments from those in attendance reflected the status of one individual's dispute with the Commission over a claim for compensation and the application of Boundary Waters Treaty in the

context of condition 17 of the December 9, 1982, Order of Approval. (Secretary, Canadian Section relied on November 2, 1998.) One comment reflected future concerns about access to water, specifically the granting of any new water licenses in British Columbia, which was addressed by the B.C. Ministry of Environment, Lands and Parks. A final comment noted that the continued development around Osoyoos Lake may result in future pressure to store water at 913 feet, and expressed concern about the cut-off of irrigation water below 910.5 feet during drought conditions.



APPENDIX II.— OSOYOOS LAKE LEVELS, INFLOWS, AND OUTFLOWS

A. International gaging stations in operation throughout the year:

(1) For Stage Records

Osoyoos Lake near Oroville, Washington
Okanogan River at Oroville, Washington (auxiliary gage)

(2) For Discharge Records

Okanogan River near Oliver, British Columbia
Okanogan River near Oroville, Washington (base gage)
Similkameen River near Nighthawk, Washington

(3) Reports

Monthly summary reports of stage and discharge data were forwarded to the International Joint Commission and to the Board of Control members.

B. Compliance with the lake levels specified in the Orders of Approval is measured at the station "Osoyoos Lake near Oroville," where elevations are expressed in terms of USCGS datum.

C. Osoyoos Lake

Maximum daily mean elevation	278.221 meters (912.80 feet)	- May 28
Maximum instantaneous elevation	278.224 meters (912.81 feet)	- May 28 and 29
Minimum instantaneous elevation	277.234 meters (909.56 feet)	- January 1-5

D. Okanogan River at Oroville

Maximum instantaneous discharge	87.2 cms (3,089 cfs)	- May 27
Maximum daily mean discharge	80.4 cms (2,840 cfs)	- May 27
Annual mean discharge	24.2 cms (853 cfs)	

The annual mean discharge was 122 percent of the 56-year average of 697 cfs.

APPENDIX III.—

