



Sixtieth Annual Report

to the

INTERNATIONAL JOINT COMMISSION
CANADA AND UNITED STATES

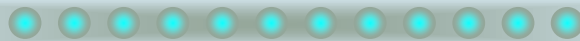
I J C . O R G

from the

International Columbia River
Board of Control

for

Calendar Year 2001



SIXTIETH ANNUAL REPORT

to the

INTERNATIONAL JOINT COMMISSION

from the

INTERNATIONAL COLUMBIA RIVER BOARD OF CONTROL

for Calendar Year 2001

COVERING

**The effect of the regulation of water levels at
Grand Coulee Dam on the levels of the Columbia River
at the international boundary**

Summary of the Sixtieth Annual Report
to the International Joint Commission from the International
Columbia River Board of Control
for Calendar Year 2001

The flow of the Columbia River at Grand Coulee Dam for the 2001 calendar year totaled 61,900 cubic hectometers (50,180,000 acre-feet), about 36.4 percent below the average observed in the 88-year period of record.

The instantaneous maximum discharge of the Columbia River at the international boundary was 3,480 cubic meters per second (123,000 cubic feet per second) on May 25, about 54 percent below the mean annual flood for the 64-year period of record, and ranking sixty-third out of sixty-three peaks for the same period. The floods of 1979 and 1995 were equal.

Instantaneous extremes of stage on Franklin D. Roosevelt Lake varied between elevations 392.442 meters (1,287.54 feet) on December 17 and 370.923 meters (1,216.94 feet) on April 19. The stage was 391.406 meters (1,284.14 feet) at midnight on December 31, 2001. Backwater at the international boundary varied during the year between 0.000 meter (0.00 feet) and 0.140 meter (0.46 feet). Backwater on December 31, 2001, was 0.046 meter (0.15 feet). Flashboards at Grand Coulee Dam were in place for all of 2001 and should remain in place in the future under normal conditions.

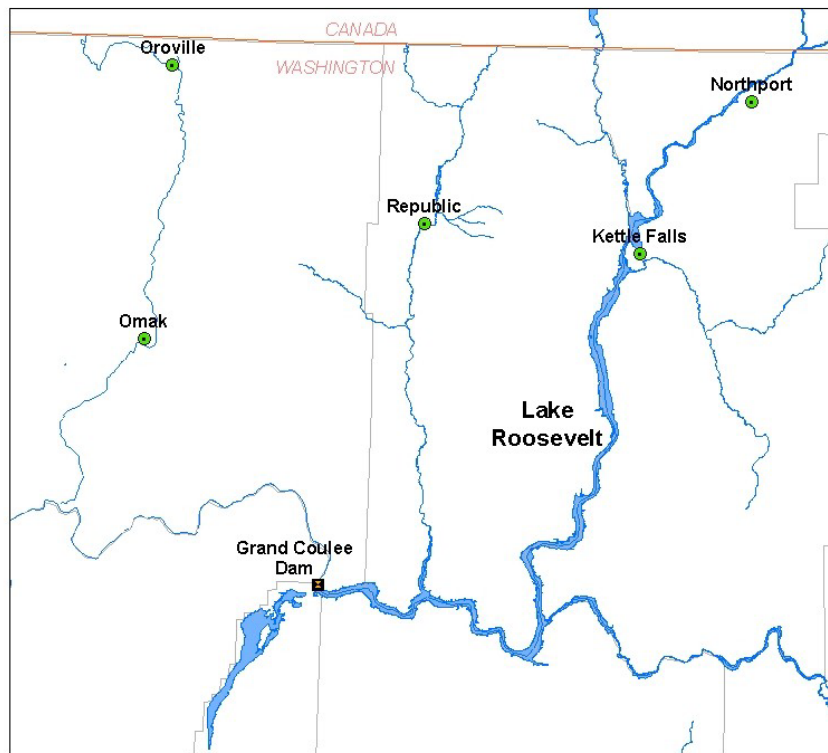
SIXTIETH ANNUAL REPORT (For the Calendar Year 2001)

To: The International Joint Commission

From: The International Columbia River Board of Control

(1) The Order of the International Joint Commission dated December 15, 1941, in the matter of the Application of the United States for Approval of the construction and operation of the Grand Coulee Dam and reservoir

(Franklin D. Roosevelt Lake), provided for the creation of an engineering board to be known as the International Columbia River Board of Control, to which the undersigned have been duly appointed. The order provides that the Board shall conduct studies under the supervision of the Commission as to the effect of the operation of Grand Coulee Dam and Franklin D. Roosevelt Lake upon water levels at



and above the international boundary, and shall submit a report to the Commission annually.

(2) During the calendar year 2001, the United States Geological Survey continued the collection of information concerning the stages and discharges of Franklin D. Roosevelt Lake, and in cooperation with the Water Survey of Canada, the stages and discharges of the Columbia River at the international boundary, upstream from the lake.

(3) The annual flow of the Columbia River at Grand Coulee Dam for calendar year 2001 totaled 61,900 cubic hectometers (50,180,000 acre-feet), about 36.4 percent below the average observed for the 88-year period of record. The instantaneous maximum discharge of the Columbia River at the international boundary during the snowmelt season was 3,480 cubic meters per second (123,000 cubic feet per second) on May 25, about 54 percent below the mean annual flood for the 64-year period of record, ranking sixty-third out of sixty-three peaks for the same period. The floods of 1979 and 1995 were equal. The ten lowest peaks in the 64-year period of record have occurred in the last 29 years, indicating, in part, the effects of storage behind Mica Dam (1973) and Libby Dam (1974). The discharge at the international boundary is shown on the accompanying hydrograph. Extremes of stage recorded at midnight on the lake varied between elevations 392.442 meters (1,287.54 feet) on December 17 and 370.923 meters (1,216.94 feet) on April 19. Elevations are above mean sea level, Bureau of Reclamation datum, and adjustments of 1937. The stage at midnight on December 31, 2001, was 391.406 meters (1,284.14 feet).

Grand Doulee Dam



Libby Dam



Micca Dam

(4) The analyses of data collected indicate that backwater at the international boundary varied during the year between 0.000 meter (0.00 feet) and 0.140 meter (0.46 feet). Backwater on December 31, 2001, was 0.046 meter (0.15 feet). Backwater that occurred at the international boundary during the period January 1, 1997, to December 31, 2001, as computed at 10-day intervals each month, is plotted on the accompanying graph. Backwater since the time of filling of Franklin D. Roosevelt Lake in June 1942 to December 31, 1996, is plotted on the charts submitted with previous annual reports.

(5) The Board has been informed by the United States Bureau of Reclamation that flashboards at Grand Coulee Dam were in place for all of 2001.

Respectfully submitted,

Kirk E. Johnstone, Manager
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APPENDIX I

