

Sixty-First Annual Report  
to the  
International Joint Commission



from the  
International Columbia River Board of  
Control

for

# Calendar Year 2002

SIXTY-FIRST ANNUAL REPORT

to the

INTERNATIONAL JOINT COMMISSION

from the

INTERNATIONAL COLUMBIA RIVER BOARD OF CONTROL

for the Calendar Year 2002

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 Sixty-first Annual Report  
to the International Joint Commission by the International  
Columbia River Board of Control  
for the Calendar Year 2002

The flow of the Columbia River at Grand Coulee Dam for the 2002 calendar year totaled 93,960 cubic hectometers (76,170,000 acre-feet), about 3.4 percent below the average observed in the 89-year period of record.

The instantaneous maximum discharge of the Columbia River at the international boundary was 6,680 cubic meters per second (236,000 cubic feet per second) on June 30, about 12 percent below the mean annual flood for the 65-year period of record, and ranking thirty-seventh out of sixty-four 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 393.024 meters (1,289.45 feet) on July 8 and 377.931 meters (1,239.93 feet) on May 18. The stage was 391.997 meters (1,286.08 feet) at midnight on December 31, 2002. Backwater at the international boundary varied during the year between 0.000 meter (0.00 feet) and 0.131 meter (0.43 feet). Backwater on December 31, 2002, was 0.027 meter (0.09 feet). Flashboards at Grand Coulee Dam were in place for all of 2002 and should remain in place in the future under normal conditions.

## SIXTY-FIRST ANNUAL REPORT (For the Calendar Year 2002)

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 2002, 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 2002 totaled 93,960 cubic hectometers (76,170,000 acre-feet), about 3.4 percent below the average observed for the 89-year period of record. The instantaneous maximum discharge of the Columbia River at the international boundary during the snowmelt season was 6,680 cubic meters per second (236,000 cubic feet per second) on June 30, about 12 percent below the mean annual flood for the 65-year period of record, ranking thirty-seventh out of sixty-four peaks for the same period. The floods of 1979 and 1995 were equal. The ten lowest peaks in the 65-year period of record have occurred in the last 30 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 393.024 meters (1,289.45 feet) on July 8 and 377.931 meters (1,239.93 feet) on May 18. Elevations are above mean sea level, Bureau of Reclamation datum, and adjustments of 1937. The stage at midnight on December 31, 2002, was

391.997 meters (1,286.08 feet).

(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 0.131 meter (0.43 feet). Backwater on December 31, 2002, was 0.027 meter (0.09 feet). Backwater that occurred at the international boundary during the period January 1, 1998, to December 31, 2002, 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, 1997, 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 2002.

Respectfully submitted,

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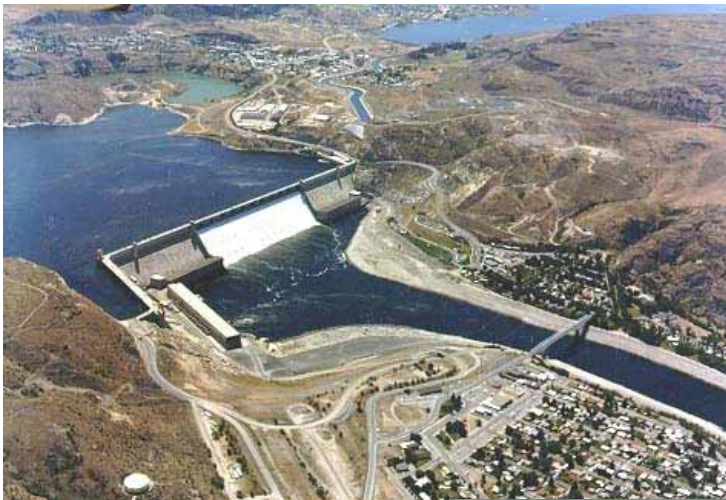
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Above: Aerial View of Grand Coulee Dam. Below: Grand Coulee Dam and the Third Powerplant, Right Powerplant, and Left Powerplant



