

SIXTY-FOURTH ANNUAL REPORT  
to the  
INTERNATIONAL JOINT COMMISSION  
from the  
INTERNATIONAL COLUMBIA RIVER BOARD OF CONTROL  
for the Calendar Year 2005



# INTERNATIONAL JOINT COMMISSION

## UNITED STATES AND CANADA



### International Columbia River Board of Control

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Tacoma, Washington 98402

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Vancouver, BC V6C 3S5

March 17, 2006

Ms. Elizabeth C. Bourget, P.E.  
Secretary, United States Section  
International Joint Commission  
1250 23rd Street NW., Suite 100  
Washington, DC 20037

Dr. Murray Clamen  
Secretary, Canadian Section  
International Joint Commission  
234 Laurier Avenue W., 22nd Floor  
Ottawa, Ontario K1P 6K6

Dear Ms. Bourget and Dr. Clamen:

We hereby submit the Sixty-fourth Annual Report of the International Columbia River Board of Control for calendar year 2005.

Respectfully submitted:

For the United States

For Canada

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Cynthia Barton, Ph.D, LG, LHG  
Chair, United States Section  
Center Director, Washington Water Science Center  
U.S. Geological Survey  
Tacoma, Washington

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Kirk Johnstone  
Chair, Canadian Section  
Chief, Pacific Prediction Centre  
Meteorological Service of Canada  
Environment Canada  
Vancouver, British Columbia

# Executive Summary of the Sixty-fourth Annual Report to the International Joint Commission by the International Columbia River Board of Control for the Calendar Year 2005

The flow of the Columbia River at Grand Coulee Dam for the 2005 calendar year totaled 86,810 cubic hectometers (70,380,000 acre-feet), about 10.3 percent below the mean annual volume for the 92-year period of record.

The instantaneous maximum discharge of the Columbia River at the international boundary was 4,960 cubic meters per second (175,000 cubic feet per second) on June 10, about 34 percent below the mean annual instantaneous maximum discharge for the 68-year period of record, and ranking fiftieth out of 68 discharge peaks.

Extremes of instantaneous stage on Franklin D. Roosevelt Lake varied between elevations 393.210 meters (1,290.06 feet) on July 5 and 381.780 meters (1,252.56 feet) on April 23. The stage was 392.506 meters (1,287.75 feet) at midnight on December 31, 2005. Backwater at the international boundary varied during the year, between 0.000 meter (0.00 feet) and 0.186 meter (0.61 feet). Backwater on December 31, 2005, was 0.131 meter (0.43 feet). Flashboards at Grand Coulee Dam were in place for all of 2005 and should remain in place in the future under normal operating conditions.

## SIXTY-FOURTH ANNUAL REPORT (For the Calendar Year 2005)

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. 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 on water levels at and above the international boundary, and shall submit a report to the Commission annually.

On April 13, 2005, the Board participated by videoconference in the spring semi-annual IJC meeting. The Board presented an overview of Grand Coulee Dam, Lake Roosevelt, and the extent of backwater at the International Border. The Board also summarized the Canadian Columbia River Inter-Tribal Fisheries Commission issues related to the 1941 Order of Approval for Grand Coulee Dam.

During calendar year 2005, 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.

The annual flow of the Columbia River at Grand Coulee Dam for calendar year 2005 totaled 86,810 cubic hectometers (70,380,000 acre-feet), about 10.3 percent below the mean annual volume for the 92-year period of record. The instantaneous maximum discharge of the Columbia River at the international boundary was 4,960 cubic meters per second (175,000 cubic feet per second) on June 10, about 34 percent below the mean annual instantaneous maximum discharge for the 68-year period of record, and ranking fiftieth out of 68 discharge peaks. Thirty of the lowest annual instantaneous maximum discharge peaks in the 68-year period of record have occurred in the last 33 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 instantaneous stage recorded on the lake varied between elevations 393.210 meters (1,290.06 feet) on July 5 and 381.780 meters (1,252.56 feet) on April 23. Elevations are above mean sea level, Bureau of Reclamation

datum, and adjustments of 1937. The stage at midnight on December 31, 2005, was 392.506 meters (1,287.75 feet).

The analyses of data collected indicate that backwater at the international boundary varied during the year between 0.000 meter (0.00 feet) and 0.186 meter (0.61 feet). Backwater on December 31, 2005, was 0.131 meter (0.43 feet). Backwater that occurred at the international boundary during the period January 1, 2001, to December 31, 2005, 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, 2000, is plotted on the charts submitted with previous annual reports.

The Board has been informed by the United States Bureau of Reclamation that flashboards at Grand Coulee Dam were in place for all of 2005.

