

SIXTY-FIFTH ANNUAL REPORT  
to the  
INTERNATIONAL JOINT COMMISSION  
from the  
INTERNATIONAL COLUMBIA RIVER BOARD OF CONTROL  
for Calendar Year 2006



Columbia River at Northport, Washington (Environment Canada photo)

# INTERNATIONAL JOINT COMMISSION

## UNITED STATES AND CANADA



### International Columbia River Board of Control

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Vancouver, BC V6C 3S5

March 23, 2007

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-fifth Annual Report of the International Columbia River Board of Control for calendar year 2006.

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-fifth Annual Report  
to the International Joint Commission by the  
International Columbia River Board of Control  
for Calendar Year 2006

The flow of the Columbia River at Grand Coulee Dam for the 2006 calendar year totaled 93,890 cubic hectometers (76,120,000 acre-feet), about 3.0 percent below the mean annual volume for the 93-year period of record.

The instantaneous maximum discharge of the Columbia River at the international boundary was 6,600 cubic meters per second (233,000 cubic feet per second) on May 25, about 11 percent below the mean annual instantaneous maximum discharge for the 69-year period of record, and ranking thirty-ninth out of 69 discharge peaks.

Extremes of instantaneous stage on Franklin D. Roosevelt Lake varied between elevations 393.149 meters (1,289.86 feet) on July 5 and 375.096 meters (1,230.63 feet) on May 6. The stage was 391.958 meters (1,285.95 feet) at midnight on December 31, 2006. Backwater at the international boundary varied during the year, between 0.000 meter (0.00 feet) and 0.24 meter (0.78 feet). Backwater on December 31, 2006, was 0.02 meter (0.06 feet). Flashboards at Grand Coulee Dam were in place for all of 2006 and should remain in place in the future under normal operating conditions.

# SIXTY-FIFTH ANNUAL REPORT

For Calendar Year 2006

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 5, 2006, the Board attended the Commission's 2006 Spring Semi-Annual Meeting in Seattle, Washington. The Board presented an overview of Grand Coulee Dam and Lake Roosevelt, and summarized the Canadian Columbia River Inter-Tribal Fisheries Commission issues related to the 1941 Order of Approval for Grand Coulee Dam.

During calendar year 2006, 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 2006 totaled 93,890 cubic hectometers (76,120,000 acre-feet), about 3.0 percent below the mean annual volume for the 93-year period of record. The instantaneous maximum discharge of the Columbia River at the international boundary was 6,600 cubic meters per second (233,000 cubic feet per second) on May 25, about 11 percent below the mean annual instantaneous maximum discharge for the 69-year period of record, and ranking thirty-ninth out of 69 discharge peaks. Thirty-one of the lowest annual instantaneous maximum discharge peaks in the 69-year period of record have occurred in the last 34 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 393.149

meters (1,289.86 feet) on July 5 and 375.096 meters (1,230.63 feet) on May 6. Elevations are above mean sea level, Bureau of Reclamation datum, and adjustments of 1937. The stage at midnight on December 31, 2006, was 391.958 meters (1,285.95 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 0.24 meter (0.78 feet). Backwater on December 31, 2006, was 0.02 meter (0.06 feet). Backwater that occurred at the international boundary during the period January 1, 2002, to December 31, 2006, 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, 2001, 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 2006.

