

III. RESERVOIR REGULATION

SYSTEM OPERATION	PROJECT OPERATION	Mica	Revelstoke	Keenleyside	Libby
Bonniers Ferry	Duncan	Kootenay Lake	Birchbank	Hungry Horse	Columbia Falls
Kerr	Albeni Falls	Grand Coulee	PUDs	Yakima	Jackson-Palisades
Ririe	American Falls	Little	Wood	Owyhee	Boise
Malheur	Payette	Weiser	Powder	Brownlee	Dworshak
Spalding	Lower Snake	Mill Creek	Willow	John Day	Upper Deschutes
Chief Joseph-Bonneville	Vancouver	Willamette			

The reservoir system in the Northwest is made up of Federal, municipal, public, and privately owned dams and reservoirs. Regardless of ownership major projects are operated in accordance with the Pacific Northwest Coordinating Agreement. This agreement coordinates the seasonal operation of the system projects for the best use of their collective reservoir storage, and along with some of the other agreements that affect project operation. In this chapter, however, the regulation of the system as a unit is described followed by the regulation of the operation of individual projects, and the effects upon key gages, in downstream order and chronologically from the beginning of the operational year.

A. SYSTEM OPERATION

The 1 January 2004 water supply forecast (WSF) for the Columbia River at The Dalles for January through July was 80.5 Maf, or 75 percent of the 1971-2000 average. This January forecast was similar to the January final forecast in 2001, which was a drought year. Precipitation was somewhat above average in October and November, but sagged to slightly below average by January through August. The seasonal precipitation for the water year was slightly above average above Grand Coulee at 104 percent of average. Streamflow at The Dalles remained below average through the water year where the seasonal average. The actual January through July volume at The Dalles was 82.95 Maf, 77 percent of the 1971-2000 average. The actual April through August volume at The Dalles was 72.96 Maf, 78 percent of the 1971-2000 average. The April through August period at The Dalles is used to calculate flood control draft for Canadian Treaty Storage projects. The unregulated peak flow at The Dalles in 2004 was 407,368 cfs on 31 May 2004 and a regulated peak flow of 289,000 cfs occurred on 29 May 2004.

The Columbia River was operated to meet chum needs below Bonneville Dam from 13 November 2003 through May 2004. U.S. reservoirs were operated to target the 10 April flood control elevation per the National Marine Fisheries Service (NMFS) 2000 BiOp for juvenile fish needs, but low inflow from January through March allowed Dworshak to refill to this target. For 2004, Libby Dam released the volume of water requested by the U.S. Fish and wildlife Service to meet downstream Kootenai River white sturgeon needs. The U.S. storage projects targeted full by 30 June 2004 per the Biological Opinion, but Libby failed to refill because of the sturgeon releases in June. Projects were then drafted to the NMFS 2000 BiOp draft limits for 31 August. Libby released steady outflow through July and August per an executive agreement and drafted only 14 feet from full. Dworshak Dam reached the draft limit in September.