

(1) Topographic Characteristics: The Columbia River and its tributaries drain an area of 259,000 square miles, mostly between the Rocky Mountains and Cascade Range. The basin extends 270 miles north into Canada and 550 miles south into the United States. The maximum width is about 730 miles. A map showing these and other features of the basin is attached inside the back cover of this presentation.

The Canadian portion of the basin, comprising 39,500 square miles, is in the southeastern part of British Columbia; the United States portion, 219,500 square miles, includes most of Idaho, Oregon and Washington, all of Montana west of the Continental Divide, and small areas of Nevada, Utah and Wyoming. While only about 15 per cent of the river basin is located in Canada approximately 30 per cent of the total river flow originates in that area.

The Columbia River rises in Columbia Lake in the Rocky Mountain Trench and flows a distance of 480 miles in British Columbia before crossing the international boundary into the northeast corner of the State of Washington. In the United States the river flows southerly through the central part of Washington to its junction with the Snake River, then turns and flows westerly and northwesterly to the Pacific Ocean, a total distance of 1,225 miles from its source in Columbia Lake. The total fall of the river from its source to the ocean is 2,655 feet.

The Kootenay River rises to the southeast of Golden, British Columbia, and flows southerly, passing within a mile of Columbia Lake at Canal Flats, British Columbia. About 45 miles south of the international boundary the river turns in a wide semicircle, re-enters Canada, and flows northerly into Kootenay Lake. From the outlet of the lake, the river flows westerly to join the Columbia about 29 miles north of the boundary. The total length of the Kootenay River is 464 miles.

The Clark Fork has its source near Butte, Montana, and flows northwesterly 490 miles to its junction with the Columbia just upstream from the international boundary. It is joined by the Flathead River, its principal tributary, at mile 245, and enters Pend Oreille Lake at mile 139. From Pend Oreille Lake to the Columbia, the stream is named the Pend Oreille River and it crosses the international boundary into Canada only 16 miles before its confluence with the Columbia.

(2) Flow Characteristics: The largest known flood of general occurrence in the Columbia River basin was that of June 1894. The flood resulted from rapid melting of an above-normal snow pack that had accumulated during the preceding winter. Maximum discharge of the Columbia River was estimated at 680,000 cubic feet per second at the international boundary and 1,240,000 cubic feet per second at The Dalles, Oregon. The peak stage at The Dalles was 34 feet above extreme low water and 26.6 feet above the stage at mean annual flow.

The nature of the river basin results in wide fluctuations in streamflow. Extremes of 680,000 cubic feet per second and 12,900 cubic feet per second have been estimated for one point on the international