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CANADIAN STORAGE WATER TO HAVE 11-FOLD USAGE

This schematic map, prepared by the Walla Walla District, U. S. Army Corps of Engineers, is to illustrate the potential hydroelectric beneficial effects of the three Canadian Treaty water storage dams, Arrow, Mica, and Duncan, upon the series of multipurpose dams on downstream on the Columbia.

Each
_ /hydroelectric generator at Bonneville, The Dalles, John Day, and McNary consumes on the average a flow of 12,000 cubic feet per second under normal load. To operate one of these approximately 70,000-kilowatt generators for one hour requires a flow of approximately 43.5 million cubic feet or 1,000 acre-feet.

One thousand acre-feet released at one of the far upstream Canadian dams during one single hour would provide sufficient water to operate a generator at each of the eleven hydroelectric plants downstream on the Columbia. Properly coordinated, this 1,000 acre-feet passing through each of the eleven dams downstream on the Columbia, could provide kilowatts for a half day, equal to the output of another Bonneville.

On the Snake River, completion of Dworshak Dam on the North Fork of the Clearwater, will have a like effect upon the four dams to be eventually completed downstream on the Lower Snake. In addition to the Snake River's Lower Granite, Little Goose, Lower Monumental, and Ice Harbor dams, the four downstream dams on the Columbia below its confluence with the Snake, McNary, John Day, The Dalles, and Bonneville, will also benefit.

This complicated upstream storage scheduling of released water is now being studied, so as to result in a greater hydraulic benefit downstream, with the availability of a greater amount of prime power being assured.