REPORT ON FLOODS OF
December 1975 and January 1976

PUGET SOUND, WASHINGTON COASTAL, and EASTERN SLOPE CASCADE RIVER BASINS, WASHINGTON

June 1977

P004315

90,000 c.f.s. at Concrete on 2 December at about 7 p.m. - 3 hours later than the forecast. Inflow to the dam peaked at 32,000 c.f.s. on 4 December at about 5 a.m. Skagit River receded below 90,000 c.f.s. at Concrete on 4 December at about 7:30 p.m. At 8:15 p.m. on 4 December, the Corps of Engineers notified Seattle City Light that discharges should be increased from Ross Dam because Skagit River discharg had receded below the control flow at Concrete. Project outflow was increased to 10,000 c.f.s. the evening of 4 December and increased again to 21,000 c.f.s. on the morning of 5 December while the inflow receded. At about 11 a.m. on 5 December, inflow finally dropped below outflow, and a maximum reservoir elevation of 1601.04 was reached (city of Seattle Ross Dam datum). The peak ended a reservoir rise averaging 3 feet per day. Storage of 104,000 acre-feet was used to control flood runoff, representing 87 percent of the allocated flood control storage of 120,000 acre-feet. Project outflow was maintained between 21,000 c.f.s. and 26,000 c.f.s. for the next 4 days to regain the reservoir space allocated to flood control. The rate of fall in reservoir level averaged 2.4 feet per day during this period. On the morning of 9 December, the reservoir reached flood control elevation 1592 feet and project outflow was reduced to pass inflow which had receded to a more usual flow magnitude. Without flood control regulation by Ross Dam the flood peak on the Skagit River near Concrete would have been about 39.5 feet (143,000 c.f.s.) 2.6 feet higher than the observed peak. Streamflows and reservoir stage at Ross Dam are shown on plate 10 for 1 through 10 December.

b. Baker River. Inflow to Upper Baker Dam began increasing at about noon on 1 December when Baker Lake was at elevation 704.83, 19.17 feet below full pool, and Lake Shannon was at elevation 437.07, 1.53 feet below full pool. At 2 a.m. on 2 December, Lake Shannon reached full pool and outflow was adjusted to nearly pass inflow until 4 December. Outflow from Baker Lake was maintained at 5,100 c.f.s. for flood control as confirmed by telephone communication between the Corps of Engineers and PSP&L on the afternoon of 2 December. Inflow to Baker Lake continued to increase and peaked about midnight on 3 December at about 25,000 c.f.s. Outflow from Baker Lake was increased to 10,100 c.f.s. at 10 p.m. on 3 December with the rising inflow. Outflow from Lake Shannon also continued to increase late on 3 December with rising inflow resulting in a peak discharge on Baker River at Concrete of 24,800 c.f.s. at 5:45 a.m. on 4 December. Inflow to Baker Lake quickly receded on 4 December dropping to below outflow at 10 a.m. when a maximum pool elevation 717.2 was reached. Storage used at Baker Lake during the 3-day period amounted to about 53,900 acre-feet. This is 37,900 acre-feet stored by PLS&L in the interest of flood control beyond that required for channel storage replacement. Without regulation by the Baker Project, the peak at Concrete would have been about 37.5 feet (127,500 c.f.s.), .6 foot higher than the observed peak.

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