

SUMMARY

This years weather was influenced by the peak and waning effects of the strongest and most long lasting El Nino to occur this century. This effect was to displace typical seasonal weather regimes to that the high and low pressure systems located over the northern Pacific so that the weather systems were generally less intense than typical and that the jet stream divided to send part of storm's energy into California and the other part into British Columbia, leaving the Oregon, Washington, Idaho, and western Montana area outside the typical storm pattern. Many of the southern trajectory storms curved northward after entering California and tracked over eastern Idaho, producing some above normal rainfall totals in the headwaters of the Snake River while coastal basin rainfalls were normal or below. Annual temperatures in the basins averaged slightly above normal with ten of the twelve months experiencing warmer than normal temperatures. All this kept the snowpack below normal also. The streamflows patterns matched those of the rainfall and snow with below normal flows on the coast and high flows from the Snake Basin.

Numerous small floods occurred across the northwest, but none were noteworthy, except for the flooding of Prineville, Oregon, at the end of May. This unusual rain event occurred after the snowmelt runoff had ended and a storm circled through California and into central Oregon producing extreme rainfall in the high desert plains. No lives were lost although significant damage was done to this quiet town. In general, however, flood damages were low this year.

Reservoirs were regulated according to their preset schedules and there were no significant deviations from their planned operations. Reservoir regulating plans are sufficiently flexible so that any abnormal rainfall that did occur were quickly adjusted for. Even Prineville and Ochoco reservoirs, which were full when the late-May storm hit, were able to surcharge storage and lessen the impact of the unprecedented rainfall. Large federal storage projects again were used to augment lower Columbia and Snake river flows for juvenile fish migration to the sea.

Fish numbers were a mixed bag this year. The juvenile outmigration of salmonids was greater than normal and the total number of fish transported was the third highest since this activity began in 1978. Returning adults were not as optimistic. Most runs were less than their 10-year averages except for the coho and the Snake River fall chinook which were above their 10-year averages.

Work continues on construction of fish passage facilities at the major dams. At Bonneville Dam a two-mile long fish passage pipe is being installed to discharge the juveniles, that are collected at the dam, back into the river at a location that decreases their exposure to predators. At The Dalles Dam the already efficient fish passage procedure is being studied to increase fish survival rates. At John Day Dam a new fish monitoring and bypass system has been put into operation with flumes specially designed to minimize stress of the downstream migrants.