

SUMMARY

The Pacific Northwest experienced a variety of hydrologic events during WY-99. The water year began with weather systems skirting around the basin for the first month. November saw the first flooding of the season in the basins west of the Cascade Mountains. During 20-27 November the first really big storm hit western Oregon and Washington, producing lowland flooding and heavy snowfall in the Cascades and Rockies. Another major storm hit the region on the days after Christmas, with the storm centers extending from southern Oregon to northern Puget Sound. This storm dropped as much as 10 inches of rain in two days and setting new daily rainfall records for December 27 at four weather stations and producing peak annual flows in westside basins. Several other flood-producing storms entered the region during the first two months of the New Year with considerable increase in the snowpacks at higher elevations. February was the wettest month of the year with all the sub-basins reporting more than 100% of normal and four sub-basins reporting more than 200% of normal. As the intensity of storms waned in the spring, so did the accumulation of the snowpacks. Following an unusually cool April, snowmelt began in May as a warm southwest airmass began to infiltrate the basin so that by late May a short period of above normal temperatures helped start the main spring runoff in the Snake Basin. Flood stages were reached in the upper Snake basin as well as along the Imnaha River in eastern Oregon. Melt of higher elevation and Canadian snowpacks were triggered by a brief June warm spell, producing seasonal peak flows in the Kootenai and upper Columbia basins. The short bursts of snowmelt prevented more severe flooding that might have occurred with an extended hot spell and the well above normal snowpacks.

This was the fifth year in a row in which the average discharge of the index streamflow stations was above normal. The Columbia River at The Dalles, the combined flow of the upper Columbia and Snake Rivers, was 120% of normal for the year while the Willamette Basin had 134% of normal.

All reservoirs were successfully used to store flood runoff both from winter floods and from spring snowmelt runoff events.