

February 1890 Flood Event

Unusually heavy precipitation was followed by heavy snowmelt in the Willamette Valley. This flood's inundation area has been used by FEMA as the base floodplain for parts of the Willamette.

June 1894 Flood Event

Heavy precipitation throughout the Columbia River basin during the 1893-94 winter led to heavy snowpack. This was followed by a dry, warm spring resulting in a massive snowmelt. There was still heavy rainfall in the lower basin, contributing to the flooding. Water levels remained at major flood levels (31.3+ NAVD88) for 38 days.

May 1948 Flood Event

Heavy precipitation in the Columbia River basin throughout the winter led to heavy snowpack. Early spring had little precipitation and few warm days. May brought heavy rainfall and warm temperatures, which created heavy snowmelt in late May causing flooding throughout the entire basin. Water levels remained at major flood levels (31.3+ NAVD88) for 26 days. Fifteen lives were lost.

June 1956 Flood Event

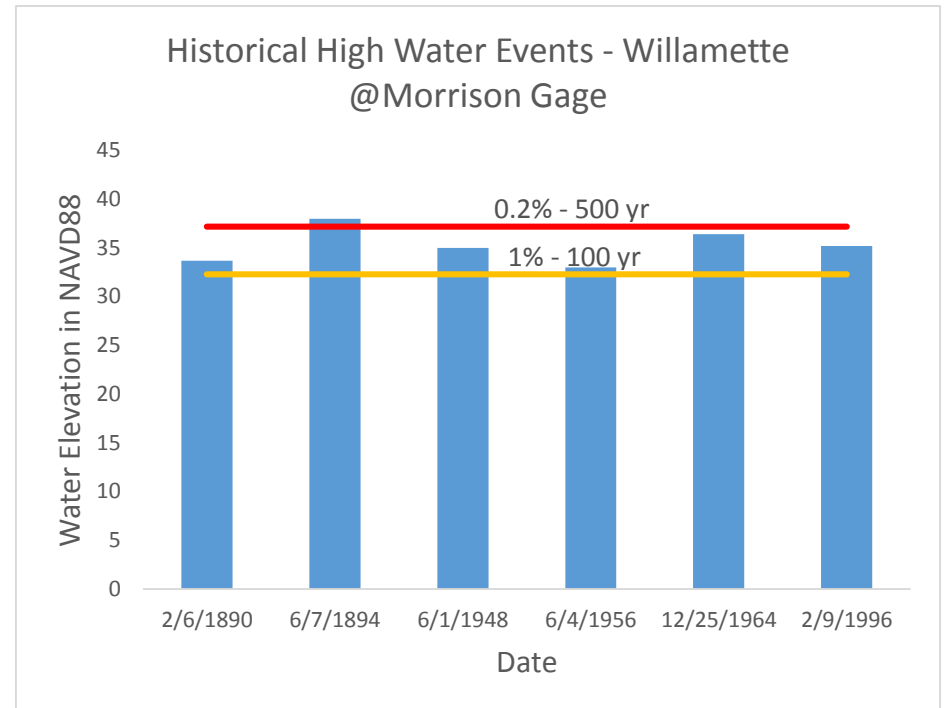
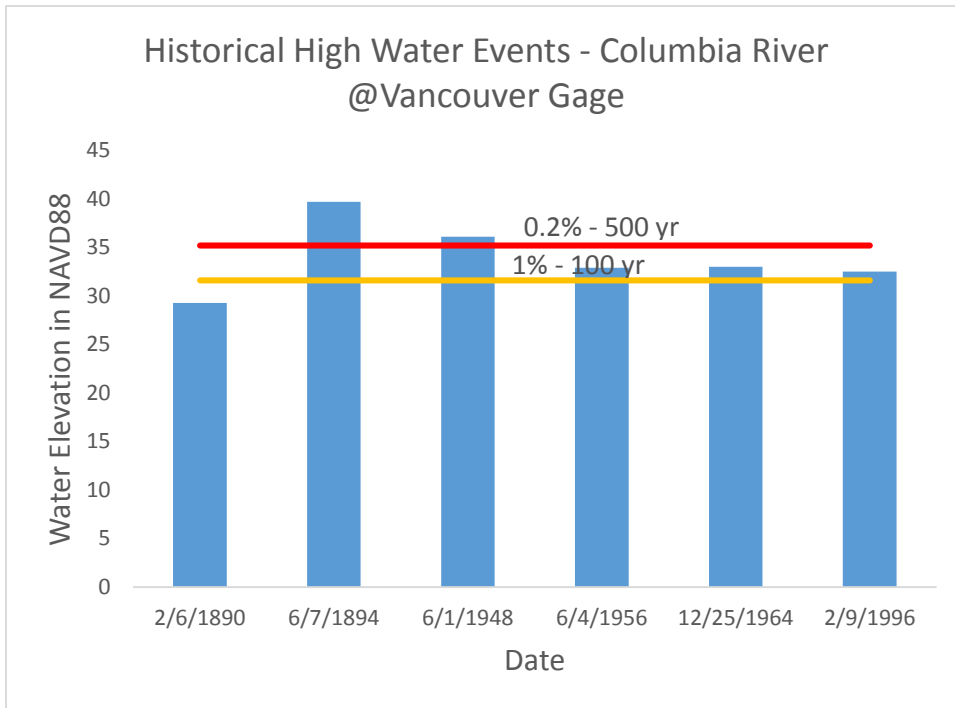
Persistent heavy precipitation in the Columbia River basin started in October of 1955 through February of 1956. Heavy rainfall in the northern Columbia basin continued through March. Snowpack in higher elevations started by the end of October, and by springtime snowpack was much higher than usual. Warm temperatures in late spring augmented the snowmelt. Water levels remained at major flood levels (31.3+ NAVD88) for 12 days.

December 1964 Flood Event

Unusual cold weather in early December was followed by heavy snowfall. Subsequently there was warm, persistent, heavy rains later in the month. This classic "rain on snow" flood affected all of Oregon, with nearly every river in the state flooding and over 30 major bridges impassable. December rainfall that year was more than 3.5" above average in the Portland area. Water levels remained at major flood levels (31.3+ NAVD88) for 2 days.

February 1996 Flood Event

The season had heavy precipitation and warmer temperatures earlier in the season throughout the Pacific Northwest. Floodwaters were fed by heavy rains and melting snow. The Portland Airport area received about 7 inches of rain in a four day period. The Willamette River reached 31 NAVD88 in height and crested the downtown Portland seawall (33.3 NAVD88). Several rivers, many in the northern Willamette Valley, set new flood stages.



COLUMBIA RIVER @VANCOUVER GAGE		
Date	Water Elevation NAVD88	Current FEMA Annual-Chance Water Surface Elevation
2/6/1890*	29.3	Above 10%
6/7/1894*	39.7	Above 0.2%
6/1/1948	36.1	Above 0.2%
6/4/1956	32.9	Above 1%
12/25/1964	33	Above 1%
2/9/1996	32.5	Above 1%

WILLAMETTE RIVER @MORRISON GAGE		
Date	Water Elevation NAVD88	Current FEMA Annual-Chance Water Surface Elevation
2/6/1890*	33.7	Above 1%
6/7/1894*	38.0	Above 0.2%
6/1/1948	35.0	Above 1%
6/4/1956	33.0	Above 1%
12/25/1964	36.4	Above 1%
2/9/1996	35.2	Above 1%

*No dams on Columbia River at this time

**Vancouver gage data not available until 1902, source used: USACE CL-03-112

After 1973 no additional flood control projects on the Columbia River have been constructed. The Vancouver Gage is located downstream of Peninsula Drainage District #1 near the Port of Vancouver. Upstream elevations will be higher. The Willamette Gage is at the Morrison Bridge. Gage data obtained from the National Weather Service. Current FEMA elevations obtained from the 2010 City of Portland Flood Insurance Study from FEMA.