

The Great New Year's Flood of 1997

The New Year's flood of 1997 was probably the largest in the 90-year Northern California record which begins in 1906. It was notable in the intensity, volume of flood water, and the extent from the Oregon border down to the southern end of the Sierra. Many new flood records were set. This was a classic event produced by clouds lifted up over the foothills topography; warm moist winds from the southwest (a 'pineapple express') blowing over the Sierra Nevada dumped amazing amounts of rain at the middle and high elevations (up to 11,000 feet) especially over a 3 day period centered on New Year's Day. Amounts of rain at lower elevations were not unusual. For example, downtown Sacramento in the middle of the Central Valley had 3.7 inches during the week from December 26 through January 2. But Blue Canyon, at the one-mile elevation between Sacramento and Reno, had over 30 inches. Many Valley folks could not understand that there was a problem because they were not seeing a lot of rain. Meanwhile, the entire northern Sierra was observing 20 inches, some 40 percent of average annual precipitation.



Downstream arch and missing shingles

The big storm was preceded by a very cold snowstorm which produced heavy snows to low elevations a few days before Christmas. The lower elevation snow melted during the New Year's storm (for example, at the mile high Blue Canyon station where over 30 inches of rain melted the 5 inches of water content in the snowpack). Snowmelt, mostly from lower elevations added to the runoff, but the bulk of runoff was simply too much rain (1).

The South Yuba River rose to about 26 feet above normal and just below the deck of the 1862 covered bridge at South Yuba River State Park. Debris carried by the water flowed under the upstream side of the bridge deck and tore out some of the shingles and siding as it passed under the downstream face. Fortunately during the 1971 bridge repair the deck had been raised about five feet. Later in 1997 the State repaired the flood damage and replaced the roof structure and the shingles.



Upstream damage