

# Winter Storms Exact Historic Roads Toll

Caltrans/Local Damage Estimate: \$1.4 Billion and Still Climbing From 2017's Deluge



Roadways along the coast and in the Sierra Nevada, such as this one at Bridal Veil Falls on State Route 50, were pummeled by winter storms through April. This road washout happened in February, and repairs won't likely be done until September because of difficult conditions at the site.

The winter storms that brought an end to California's drought also caused an estimated \$1.4 billion in damage to state and local roadways since January, according to Caltrans figures, ranking the 2017 winter as the most expensive in department history.

For Caltrans, weather-related costs soared to an estimated \$1 billion by the end of May — roughly four times what was budgeted for emergency repairs for the fiscal year. Local entities reported \$400 million in storm-related damage to roadway systems under their control.

The relentless procession of storms in 2017 took their toll on almost all elements of the state highway system. Storm damage included roadway flooding, mud slides, rock slides, avalanches, road washouts, slipouts (undermined roadways), gaping potholes and other pavement damage, and a high-profile bridge failure that cut off travel through one of Cali-

fornia's most scenic and storied state parks.

Many of those weather-related incidents, such as the Pfeiffer Canyon Bridge closure in Big Sur, or numerous rock and mud slides that blocked Highway 50 through the Sierra Nevada, were classified as emergencies that required immediate action. There were 288 "director's order" projects this winter that authorized the hiring of contractors to quickly begin work, sometimes in a matter of hours, depending on the scope of the emergency.

Altogether, Caltrans' 12 regional districts reported 424 weather-damaged sites that each required at least \$5,000 in repairs.

Caltrans is spending \$757.7 million on emergency projects — beyond the \$246.3 million budgeted for permanent restoration projects through the State Highway Operation and Protection Program (SHOPP). Other non storm-related SHOPP projects may be deferred as a result.

Caltrans is seeking reimbursement from the federal government for the massive repair bill left by the 2017 storms, but it's uncertain how much the state will receive. The Federal Highway Administration allocates about \$100 million annually toward storm damage for the entire United States, and any additional appropriation requires congressional approval.

The 2017 winter season also put the department's staff to the test. Many in the Maintenance division worked around the clock to keep the roads clear and open, particularly in the mountain and foothill areas inundated with record amounts of rain and snow. Staffing costs for those emergency duties was \$3 million, Caltrans statistics show.

Northern and Central California roadways absorbed the heaviest damage this winter. Six of the seven counties requiring \$50 million or more in road-related repairs are in the north part of the state, with Los Angeles County incurring the most serious damage in the south. Marin County was the hardest hit of all 58 California counties, with \$104 million in estimated damage, followed by Mendocino (\$94.6 million), Monterey (\$83.7 million), Santa Clara (\$79.1 million), San Mateo (\$68 million), Humboldt (\$62 million), and Los Angeles (\$60.4 million).

Caltrans' districts along the coast typically sustain the costliest road damage during heavy winters, con-



Caltrans photo by Scott Lorenzo

Highway 99, in southern Sacramento County, was inundated earlier this year. Caltrans District 3, which takes in Sacramento and a swath of the Sierra, absorbed \$129.6 million in weather-related damage.

tending with floods that inundate low-lying sections near sea level and cleaning up after slides in the mountainous areas inland.

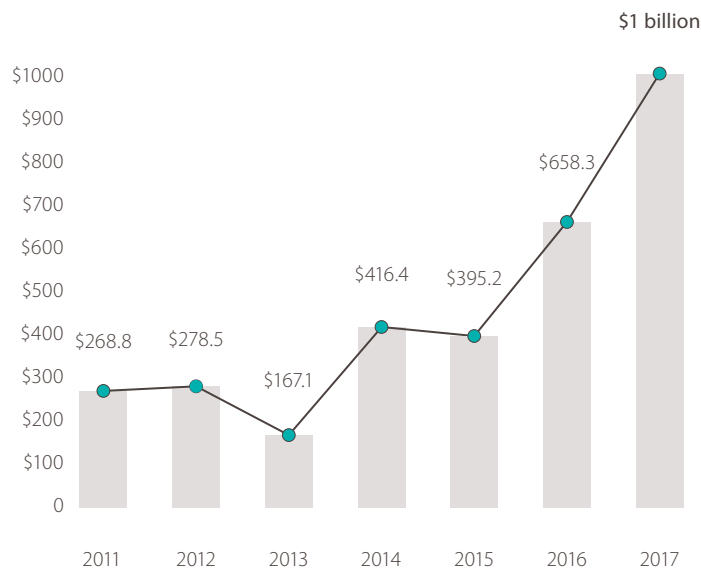
The deluge of 2017 proved no exception. Caltrans District 4, made up of Bay Area counties, posted the highest winter costs for 2017 at \$376.3 million, followed by District 1 (North Coast, \$183.2 million), District 3 (Sacramento-Sierra, \$129.6 million), District 5 (Central Coast, \$120.9 million), and District 7 (Los Angeles, \$87.3 million).

In the Sierra, Caltrans District 3 crews fought a virtually nonstop battle all winter to keep open Interstate 80 and Highway 50. The critically important commercial and tourist routes were besieged by a series of rock and mud slides at lower elevations and record-breaking snowfall over the passes.

In a related development, Caltrans also is monitoring the impact of melt-off from the massive snowpack upon exposed mountain roads, particularly around the Lake Tahoe area. **MM**

### California Storm Damage Costs

(in millions \$)



Source: Tony Tavares, Chief, Division of Maintenance; Gerald Kracher, Major Damage Engineer, Division of Maintenance