

expected in the Ferguson burn area.

The decision tiers outlined in the chart are based on a post-fire assessment of the burned lands adjoining SR 140. Caltrans representatives worked with the federal Burned Area Emergency Response (BAER) team following the Ferguson Fire to survey the degree and amount of soil burned in the area, which in turn helped determine where stormwater could flow across the denuded landscape and overwhelm the highway.

Altogether, about 12 miles of the roadway was declared vulnerable to post-fire flooding in the event of heavy rainstorms. Up to 10 locations, primarily culverts and bridges, were identified on the BAER map as potential overflow points along the highway.

Armed with that information, Caltrans and its partners began mapping out the plan for protecting SR 140 and travelers during the winter season. Information about the new program also was shared with residents at town hall meetings and other public gatherings.

The collaborative effort included the U.S. Forest Service, Mariposa County Sheriff's Office, California Highway Patrol, Yosemite National Park, and the Weathernet private forecasting firm that worked with NWS on the localized forecasts.

Caltrans also readied for the upcoming season by moving extra cleanup equipment to its Midpines maintenance station on 140, near the affected area, as well as signs and barricades, and placing a weather reporting station nearby to monitor conditions.

Fog Alerts Give Drivers A Clear Warning of Conditions Ahead



Thick fog is an unwelcome fact of life for drivers, particularly those in the Central Valley. Caltrans works with the National Weather Service in Hanford to warn of expected murky conditions ahead of time through a fog severity index that forecasts where fog is expected to form, and how bad it'll get.

Caltrans also works with the National Weather Service office in Hanford to alert travelers in Central California when fog descends. The fog severity index served as a model for the weather decision tiers chart created for the Ferguson Fire burn area along State Route 140.

The fog index is issued daily by NWS during the winter months and early spring, when thick fog can reduce visibility to almost zero, particularly in the Central Valley.

Similar to the burn area chart, the index ranks levels of fog severity by color, ranging from a Level 1 green signifying no transportation risk to Level 5 purple, issued when conditions are most severe — zero to 200 feet visibility — and the greatest danger for chain reaction accidents exists.

The index also features a series of maps overlaid with the risk-level colors that correspond to the current conditions in the region, and hourly projections of where fog is predicted to occur for the next 15 hours. The fog zone shown encompasses

a wide area, from San Joaquin to Kern counties, and from the Coast Range to the west side of the Sierra Nevada.

At times when dense fog is forecast, Caltrans' District 6 office in Fresno uses the index to deliver warnings to drivers via its changeable message system along the regional highway network, sometimes several hours before fog develops. This can allow travelers driving in the late afternoon to prepare for dense fog the next morning.

Unfortunately, predicting fog is not an exact science. The conditions that create it can quickly change, and the vaporous clouds can be highly localized.

But NWS' fog severity index, which wrapped up its second year of operation, is felt to be another valuable tool that can help Caltrans inform and protect travelers on State highways, and is an example of multi-agency partnerships that can save lives.