



Frequently Asked Questions about Carmel River Flooding (prepared in November 2016)

1. Which agency is responsible for flood control?

Monterey County has several entities involved in responding to potential flood situations. When rainfall and flow increase substantially during winter storms, the Office of Emergency Services coordinates responses with the Resource Management Agency, the Monterey County Water Resources Agency, the Public Works Department, local fire districts and other responders.

2. What responsibilities does the Monterey Peninsula Water Management District (MPWMD) have to respond to floods?

MPWMD is responsible for monitoring streamside resources along much of the river between Los Padres Dam and the lagoon. MPWMD also carries out vegetation management, erosion protection and stream restoration projects. Although Monterey County is responsible for flood response and flood control projects, where possible, MPWMD cooperates on projects to provide technical assistance. MPWMD will respond to emergency situations involving fallen trees and/or debris in the active channel of the river.

3. What is the capacity of the river for passing high flows?

Between Camp Steffani near Carmel Valley Village and the lagoon, the capacity in the main channel varies from as little as the 10-year flow level to near the 100-year flow level. In many areas, the river flows out of the main channel and into floodplain areas at flows between the 10- and 20-year return flood (i.e., a 20-year flood is expected on average about once every 20 years). The most recent significant flood was in 1998, when flow was measured at 14,600 cubic feet per second (about a 20-year flood magnitude). Many properties along the lower five miles of the river experienced significant erosion and some flooding.

4. How do I find out if the river is approaching flood stage?

There are several useful real-time web sites for tracking weather and river flow; however, **users should be cautioned** that information is provisional. Gaging sites are placed in locations that are naturally dynamic and readings can be erratic during storm events. Users should not rely solely on web site data and should use multiple sources of information to verify what is reported on the web.

Carmel River flows:

NOAA River Guidance at Rosie's Bridge (updated daily)

<http://www.cnrfc.noaa.gov/graphicalRVF.php?id=RDRC1>

USGS gage at Rosie's Bridge (real-time)

<http://waterdata.usgs.gov/ca/nwis/uv/?11143200>

USGS gage at Via Mallorca Bridge (real-time)

<http://waterdata.usgs.gov/ca/nwis/uv/?11143250>

MPWMD gages (four that are updated daily)

<http://www.mpwmd.net/environmental-stewardship/carmel-river-basin/carmel-river-flows/>

Weather sites

Monterey Bay buoy forecast

<http://www.stormsurf.com/cgi-bin/4cast.cgi?ID=enp.46042>

NOAA weather forecast

<http://www.wrh.noaa.gov/mtr/>

NOAA rainfall forecasts

<http://www.wrh.noaa.gov/mtr/rain.php>

NOAA 24-hour observed precipitation for Monterey County

http://www.cnrfc.noaa.gov/county_precipMaps.php?group=monterey&hour=24

Other

NOAA river and lagoon stages for Monterey County

http://cdec.water.ca.gov/stage_maps/ccoast_river_0hr.png

Carmel River lagoon

<http://www.mpwmd.net/environmental-stewardship/carmel-river-lagoon/lagoon-water-levels/>

El Niño/Southern Oscillation (ENSO) Diagnostic Discussion

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/

The river is very “flashy”; in other words it rises quickly in response to rainfall. Indicators that the river may rise up over the floodplain include the absolute

height of the river, the rate at which the river is rising, and the time since rainfall ceased.

On March 10, 1995 the area around Rosie's Bridge began flooding shortly after midnight while heavy rain was still occurring in the upper watershed. In the hours leading up to the noon peak, the river was rising at about one foot per hour and the peak of the flood passed the Rosie's Bridge area just before noon about four hours after heavy rain had tapered off to showers. It took another six hours from Rosie's Bridge for the peak to reach Highway 1. In many flooded areas, structures were inundated for several hours before flow dropped below flood stage. The Highway 1 bridge collapsed overnight after a large cottonwood rammed into the bridge and knocked it off its foundation. Several other bridges fell or were damaged during the flood. By daylight on March 11, the river had fallen significantly and was running in the main channel once again. But, many businesses and residential properties in Carmel Valley, including many in Cachagua Valley, had suffered damage.

For more descriptions of historical flooding, see http://www.mcwra.co.monterey.ca.us/floodplain_management/historical_flooding.php

5. How can I find out if my home is susceptible to flooding?

MCWRA maintains a database of properties that are located in the 100-year floodplain. You may obtain more information by contacting MCWRA at (831) 755-4860 and requesting a determination. The FEMA flood map center for Carmel Valley can also be accessed at: <http://msc.fema.gov/portal/search?AddressQuery=carmel%20valley%20ca%2093924#searchresultsanchor>

6. My home is located in a flood zone. How can I reduce or prevent flooding of my structure.

Under current regulations that protect all properties within the 100-year floodplain, property owners have a few options. Temporary measures, such as sandbagging around openings, can be very effective at reducing flood damage. More permanent protective measures, such as berms, levees, flood walls, and elevation of structures must be reviewed and authorized by Monterey County.

Additional information about floodproofing is at: http://www.mcwra.co.monterey.ca.us/floodplain_management/fpm_overview.php

7. What agencies and resources are available to assist people during a flood?

The [Monterey County Office of Emergency Services](#) coordinates disaster response. The Carmel Valley fire departments place people in the field to warn

the public to evacuate in case of flooding. If resources allow, the Monterey County Public Works Department will provide crews to help with sandbagging and other flood prevention measures.

If there is an imminent threat of flooding and/or damage to a structure, private contractors may be available to provide assistance. Property owners should be aware that permits and/or authorizations from local, State, and Federal agencies may be necessary prior to taking action.

8. The river is eroding the streambank along my property. What can I do to stop the erosion?

Saturated streambanks can collapse suddenly during high flows, so when inspecting an eroding streambank, use a great deal of caution. Erosion is a naturally occurring condition that indicates the river is adjusting to changes in the environment; however, if the erosion is threatening structures or erosion is occurring along otherwise healthy streamside areas, swift and definitive action may be needed to stabilize the situation.

As staff resources allow, MPWMD will assist property owners with technical recommendations and with obtaining necessary authorizations if emergency work is required. Contact Larry Hampson, District Engineer (larry@mpwmd.net) at (831) 238-2543 or at (831) 658-5620.