

CARMEL LAGOON

WINTER 2015-16 SANDBAR MANAGEMENT PLAN

PROJECT DESCRIPTION

Conduct mechanical breaching of the sandbar at the mouth of the Carmel River lagoon during emergency situations to alleviate flooding. Before management of the sandbar occurs, the County shall implement all measures of flood protection (e.g., sand bags) to reduce the flood potential to the surrounding homes and infrastructure to the greatest extent feasible.

The decision to mobilize and conduct emergency sandbar management (i.e., mechanical breaching) would be based upon one or more of the following conditions: A) Lagoon Water Elevation. Mobilization would occur when the lagoon water level reaches a surface elevation of 12.77 feet (NGVD88) as measured at the staff gauge located in the north arm of the lagoon. Actual channel excavation on the sandbar would begin when the lagoon water level reaches a surface elevation of 13.27 feet (NGVD88); B) River Flows. When the rate of increase in water level in the lagoon, as estimated on the staff gauge, indicates less than six hours until the water level in the lagoon reaches a surface elevation of 12.77 feet (NGVD88), or when Carmel River flows reach or exceed approximately 200 cubic feet per second (cfs), as provided by Water Resources Agency or MPWMD to RMA-Public Works via the stream gauges at Las Padres Dam and at Esquiline Road Bridge; C) Ocean Influence (High Tides and/or Storm Surge). When monitoring indicates wave over-topping would begin to rapidly increase the water level of the lagoon as well as increase the sandbar elevation.

Breaching would utilize a bulldozer or excavator to dig a channel through the sandbar to the south, and would result in excavation and sidcasting of approximately 222 cubic yards of beach sand. The channel would be excavated to an agreed elevation and alignment. Breaching of the plug would be completed by a crew using hand tools to avoid use of heavy equipment in water. The total area of site disturbance, from the staging area to the southern end of the channel, equals approximately 0.41 acres or 18,000 square feet. The total length of the site disturbance area equals approximately 600 linear feet.

Based on monitoring of conditions, the channel plug would be backfilled to ensure the lagoon water surface level does not drop below 8.77 feet (NVGD88).

Supplemental information regarding management actions and monitoring:

Subsequent to any sandbar management action and after high inflows from the river have receded, the lagoon sandbar shall either be allowed to naturally close or remain with an open outlet channel flowing over the beach in a meandering channel that would be designed to mute tidal influence and rapid draining of the lagoon. When inflow exceeds initial opening outflows, the lagoon continues to rise long after the actual breaching. The lagoon shall be maintained at a minimum 8.77 foot (NVGD88) water surface elevation. If excessive scour is observed in the constructed outlet channel, the lagoon shall immediately be closed by the placement of sand that is free of contaminants.

County RMA-Public Works staff will monitor the river mouth and lagoon water levels both during and after the management action (i.e., breaching), and as often as necessary as conditions warrant. A qualified biological monitor (i.e., minimum of three years experience with anadromous salmonids) will be present during the initial breaching or closure of the channel. While the outlet channel remains open, the biologist shall monitor the channel twice daily (a.m. County of Monterey

and p.m.) to document any fish entrainment, stranding, or other occurrences that pose a risk to steelhead. If stranded steelhead are observed, the County shall contact NMFS and CDFW to coordinate any necessary fish rescues. Regular updates (bi-weekly) via email or phone call shall be provided to address any action that may be necessary if 'take' of steelhead occurs. A report produced by the biological monitor documenting construction activities and any observation of fish mortalities and/or harm or harassment will be submitted to the Corps and NMFS within two weeks post-construction. The report shall also outline all implemented measures of flood protection to protect surrounding homes and infrastructure, and estimated volume of sand moved.

Prior to work occurring during the nesting season of the snowy plover (e.g., summer closure), a qualified biological monitor will identify any areas that pose risk to the snowy plover. A report produced by the monitor documenting any observation of snowy plover will be submitted to the Corps and USFWS pre-construction. In the event that a snowy plover nest is found, the USFWS shall be contacted before work commences that may impact the species.

County RMA-Public Works staff requires approximately 24 to 48 hours, depending on weather conditions and the size of the sandbar, to mobilize and clear a channel through the sandbar with 1-2 bulldozers or excavator. Equipment is driven on the beach for sand management only. Loading and fueling takes place on paved areas to ensure containment of hazardous materials.

County RMA-Public Works staff will usually work during daylight hours when large waves can be seen. In addition, work would occur outside of active rain storms to the greatest extent feasible while maintaining the primary goals of preventing flooding impacts and/or maintaining minimum water levels in the lagoon. Heavy equipment shall not be operated in open waters of the lagoon.