MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
PROJECT DESCRIPTION FOR SELECTIVE VEGETATION MANAGEMENT
IN THE CARMEL RIVER CHANNEL, SUMMER AND FALL 2015

SELECTIVE VEGETATION MANAGEMENT

A series of average hydrologic years on the Carmel River since 1998 has encouraged significant vegetation growth in the active channel in several areas. Winter storm flows capable of scouring vegetation out of the channel bottom have not occurred since a peak flow in February 1998 of 14,500 cubic feet per second (cfs), which was estimated to be a 20-year return flood magnitude. The highest peak flow since 1998 was in March 2011 at 5,000 cfs (about a five-year return flow). This flow did not scour vegetation that has been encroaching into the channel bottom since the very wet 1998 el Niño winter. As a result, the risk of streambank erosion along riverfront properties has increased at several locations (see enclosed maps) should winter flows rise above the five-year return magnitude. Erosion can occur as high flows are directed away from the center of the channel by vegetation, downed trees, and debris dams into streambanks.

Six areas impacted by vegetation encroachment, downed trees or debris piles in the channel bottom are proposed for selected vegetation management:

1. Via Mallorca Bridge Area (encroaching vegetation): at approximately RM 3.2 several patches of willows are encroaching into the Carmel River. These willows will have their branches trimmed back to allow debris to pass.

2. Koontz Area (debris piles): approximately one mile downstream of Schulte Bridge at RM 6.0 debris piles have been forced up against vegetation. These debris piles will be broken up with hand tools and removed from live vegetation. Some trees may be trimmed to allow debris to pass through the constriction.

3. **Randazzo's Bridge Area (encroaching vegetation):** beginning at a private bridge known as Randazzo's Bridge at RM 10.1 tree branches will be trimmed that are encroaching into the active channel.

4. Boronda Bridge Area (encroaching vegetation and downed trees): at approximately RM 12.2 two areas have patches of encroaching vegetation along the Carmel River. These trees will have their branches trimmed to allow debris to pass. Some larger trees in the active channel may be removed. In addition, several large trees have fallen into the main channel downstream of Boronda Bridge. The trunks of these trees will be notched to allow debris to pass with branches being removed.

5. Esquiline Bridge Area (encroaching vegetation): upstream and downstream of Esquiline Bridge at RM 14.5 trees growing on mid-channel gravel bars will be trimmed with some of the large ones being potentially removed. Some branches will be placed in the flowing stream to provide cover. The remaining branches and slash will be chipped.

6. Ward Bridge Area (downed trees): upstream and downstream of Ward's private bridge at RM 15.0; several large trees have fallen in the main channel. These trunks will be cut in several places allow debris to pass. The large sections of tree trunks will be left in the flowing stream to provide large wood habitat.

In general, a width of up to 30 feet of open channel is desired. A total of approximately 500 square feet of stream cover encompassing approximately 0.011 acres in the channel bottom may be affected by the vegetation removal. In addition, a total of approximately four debris piles will be affected by the management actions.

Woody species in the center of the channel, including sycamore, alder, cottonwood, and willow, will be cut by hand, using chainsaws, loppers, and other hand tools. As described in Monterey Peninsula Water Management District's (MPWMD) "Guidelines for Vegetation Management and Removal of Deleterious Materials for the Carmel River Riparian Corridor" (2012), a minimum of work will be carried out in order to maintain an open passage for flow and debris. The debris piles will be broken apart with hand tools and spread around the area. A portion of the cut branches and tree trunks will be placed along stream edges to provide shade and cover for aquatic species. Encroaching vegetation will be trimmed and chipped. Vegetation on the banks will be left in place to maintain bank stability.

MPWMD proposes to conduct vegetation management between approximately mid-August and mid-October 2015. Because vegetation will be cut using hand tools, no stream diversions or erosion control plans are necessary. Both steelhead and California red-legged frogs (CRLF) may be present in the reaches targeted for vegetation cutting.

Avoidance and minimization measures proposed to protect steelhead include the following:

1. Where possible, trees will be cut to fall away from stream areas that may contain steelhead. Where trees cannot be cut to fall away from stream areas, the direction of fall will be to areas that steelhead are less likely to occupy, such as shallow or open water areas.

2. Work will be conducted in the fall when long stretches of the Carmel River are dry. Where water is present water temperatures may be less affected by the removal of shade along the stream edge because daylight hours are fewer.

Avoidance and minimization measures to protect CRLF include the following:

1. A qualified biologist will survey project areas using United States Fish and Wildlife Service survey guidelines prior to conducting work in the channel.

2. A qualified biologist will conduct a training session for any workers who have not already participated in such a session.

3. A qualified biologist will inspect project areas daily for the presence of CRLF prior to conducting work in the channel.

4. If CRLF are found at a project site and it is determined that vegetation removal may impact frogs, MPWMD will delay vegetation removal until the frogs move or relocate frogs to another area of the river if delay is not feasible.

Temporary impacts from vegetation management may include the loss of cover and shade. MPWMD conducts ongoing revegetation activities along the Carmel River that mitigate for such

temporary impacts. In addition, MPWMD routinely removes non-native plant species in the riparian corridor which allows for the expansion of native plants and removes competition associated with non-natives. Additional information about these activities is available by contacting Thomas Christensen, MPWMD Riparian Projects Coordinator, at (831) 238-2547.

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