

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

PROJECT DESCRIPTION FOR SELECTIVE VEGETATION MANAGEMENT IN THE CARMEL RIVER CHANNEL SUMMER AND FALL 2012

A series of average hydrologic years on the Carmel River since 1998 has encouraged significant vegetation growth in the center of the 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 out vegetation that has been encroaching in the channel bottom since the very wet 1998 El Niño winter. As a result, there is an increased risk of streambank erosion along riverfront properties in several locations (see enclosed maps) should winter flows rise above about a five-year return magnitude (approximately 5,000 cfs). Erosion can occur as high flows are directed away from the center of the channel by vegetation and debris dams into streambanks.

Four areas impacted by vegetation encroachment or debris piles in the channel bottom are proposed for selected vegetation removal:

1. Highway One Bridge Area (area approximately 490 feet²): beginning approximately 300 feet downstream of Highway One Bridge at River Mile (RM) 1 encroaching vegetation will be trimmed back.
2. Rancho Cañada Golf Course Bridge No. 1 (area approximately 225 feet²): at approximately RM 2.8 a debris pile has lodged itself on the bridge pier and riparian trees growing next to the pier. The debris pile will be cut in several sections and some trees will be cut at their base to encourage the debris pile to release itself from the bridge pier.
3. Scarlett Area (area approximately 253 feet²): a reach approximately 400 feet downstream of the Scarlett Well (approximately RM 8.9) will be opened up. Multiple trees have recruited on a gravel bar and have now trapped debris. This pile is increasing in size and is diverting flow into a vulnerable streambank on Carmel Valley Ranch property. These trees will be cut at their base to allow the debris pile to float up and over the current blockage.
4. Panetta Road Area: a red willow with two trunks (approximate diameter 1.2 and 0.8 feet) has fallen across the Carmel River at approximately RM 12.9. This tree has the potential to catch debris and divert flow into the banks or as debris stacks on the tree it may be ripped out of the bank (creating a weak spot). The branches will be removed and the tree will be notched.
5. Ward Area (area approximately 1250 feet²): beginning in a reach just upstream of the Ward's private bridge RM 15.0; three large trees are consistently catching debris and diverting flow into

the left bank. These trees will be cut at their base to allow debris to pass during high flow events.

In general, a width of up to 30 feet of open channel is desired. A total of approximately 2,218 square feet of stream cover encompassing approximately 0.051 acres in the channel bottom may be affected by the vegetation removal.

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 vegetation will be removed in order to maintain an open passage for flow and debris. Most of the vegetation targeted for cutting is less than eight years old. Some trees selected for cutting will be cut to the ground, but rootballs will be left intact. Other trees will be simply trimmed back. A portion of the cut branches and tree trunks will be placed along stream edges to provide shade and cover for aquatic species, excess vegetation will be chipped. Vegetation on the banks will be left in place to maintain bank stability. Streambank vegetation encroaching into the channel bottom may be cut back to 15 feet from the toe of the streambank (measured toward the center of the channel), if this option would result in less overall impact.

MPWMD proposes to conduct vegetation management between approximately mid August and mid October 2012. 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 water temperatures may be less affected by the removal of shade along the stream edge.

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 removal 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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