

# MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

## PROJECT DESCRIPTION FOR SELECTIVE VEGETATION MANAGEMENT IN THE CARMEL RIVER CHANNEL SUMMER AND FALL 2010

A series of relatively quiet 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 January 2010 at 4,220 cfs (about a four-year return flow). This flow did not scour out vegetation that became established in the channel bottom after 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.

Nine areas impacted by vegetation encroachment in the channel bottom are proposed for selected vegetation removal:

1. Ward Area: beginning in a reach just upstream of the Ward's private bridge River Mile (RM) 15.0; several large trees have fallen in the main channel. These trunks will be notched (partially cut) and branches will be trimmed. The large sections of tree trunks will be left in the flowing stream to provide large wood habitat.
2. Robles Del Rio Bridge Area: two reaches downstream of Robles Del Rio Bridge at RM 14.5 and extending approximately 100 feet each, have trees growing on mid-channel gravel bars. These trees will be trimmed with some of the large ones being removed. Sections of large trees will be placed in the flowing stream to provide large wood habitat. The remaining branches and slash will be chipped.
3. De Dampierre Area: two reaches upstream of the De Dampierre area (Little League ball fields in Carmel Valley Village) at RM 14.2 need trimming; multiple trees will be removed growing on mid-channel bars. The larger trunks will be placed in the flowing stream to provide large wood habitat. An additional reach, downstream of De Dampierre will have trees thinned to allow water to flow into an overflow channel. Each reach is approximately 150 feet long.
4. Boronda Road Bridge Area: one reach upstream of the Boronda Road Bridge, which is located at RM 12.7, has a large tree that has fallen across the channel. It will have some branches trimmed and its trunk notched. The majority of the trunk will remain in the active channel for large wood habitat.

5. Garland Park (Don Juan Bridge) Area: two reaches one upstream of Don Juan Bridge at RM 10.78 and one downstream will have trees trimmed and some removed growing on gravel bars and side areas. The majority of trees going to be removed are in the vicinity of a hydrologic gaging station and are starting to impact flow of water and the stage discharge relationship. There is also potential for them to trap debris in a high flow and impact the bridge.

6. Scarlett Area: two reaches in the Scarlett Area (approximately RM 9.0) will be opened up. The first, a dry overflow channel, will be opened up along the Carmel River. The second reach beginning at the Scarlett Restoration Project and extending 150 feet downstream, will have trees blocking the channel on a gravel bar removed. Trees will be placed in the flowing stream to provide large wood habitat.

7. Red Rock Area: beginning approximately RM 8.4 at the upstream end of the Red Rock Restoration Project and extending 150 feet downstream; trees blocking the channel on a gravel bar will be thinned. Some trees will be placed in the flowing stream to provide large wood habitat. The rest of the branches will be chipped.

8. Rancho Cañada Area: beginning approximately at RM 2.5 in the reach that runs through the Rancho Canada Golf Course encroaching vegetation will be trimmed back.

9. Highway One Bridge Area: beginning just downstream of Highway One Bridge at RM 1 encroaching vegetation will be trimmed back.

A width of up to 40 feet of open channel is desired. A total of approximately 2,400 lineal feet of stream encompassing approximately 0.55 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" (March 2003), 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. Trees selected for cutting will be cut to the ground, but rootballs will be left intact. Cut branches and tree trunks will be placed along stream edges to provide shade and cover for aquatic species, in some cases 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 2010. Because vegetation will be trimmed, but not removed entirely, no stream diversions or erosion control plans are necessary. Both steelhead and California red-legged frogs may be present in the reaches targeted for vegetation cutting (see enclosed habitat assessments).

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 California red-legged frogs (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. Additional information about these activities is available by contacting Thomas Christensen, MPWMD Riparian Projects Coordinator, at (831) 659-2543.

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