MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
PROJECT DESCRIPTION FOR SELECTIVE VEGETATION MANAGEMENT
IN THE CARMEL RIVER CHANNEL, SUMMER AND FALL 2016

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.

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

1. Highway One Bridge Area (encroaching vegetation area approximately 500 ft^2): at River Mile (RM) 1 upstream and downstream of Highway One Bridge willows encroaching into the active channel will be trimmed back.

2. Via Mallorca Bridge Area (encroaching vegetation area approximately 200 ft^2): at RM 3.2 upstream and downstream of Via Mallorca Bridge willows encroaching into the active channel will be trimmed back.

3. Rancho San Carlos Bridge Area (encroaching vegetation area approximately 100 ft^2): at RM 3.9 upstream and downstream of Rancho San Carlos Bridge willows encroaching into the active channel will be trimmed back.

4. Valley Greens Bridge Area (encroaching vegetation area approximately 100 ft^2): at RM 4.8 upstream and downstream of Valley Greens Bridge willows encroaching into the active channel will be trimmed back.

5. Schulte Bridge Area (downed trees, debris piles, and encroaching vegetation area approximately 100 ft^2): at RM 6.7 upstream and downstream of Schulte Bridge 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. In addition, downed trees in the area will have their crown branches removed with the trunks being notched in several places and left in place for large wood habitat.

6. Robinson Canyon Bridge Area (encroaching vegetation area approximately 100 ft^2): at RM 8.5 upstream and downstream of Robinson Canyon Bridge willows encroaching into the active channel will be trimmed back.

7. **Randazzo's Bridge Area (encroaching vegetation area approximately 100 ft^2):** 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.

8. Garland Park Area (debris pile and encroaching vegetation area approximately 100 ft^2): at RM 11.0 encroaching vegetation constricting the channel will be trimmed back and a debris pile will be broken up.

9. West Garzas Road Area (encroaching vegetation area approximately 200 ft^2): at RM 12.1 willows encroaching into the active channel will be trimmed back.

10. Boronda Bridge Area (downed tree and encroaching vegetation area approximately 200 ft^2): at RM 12.6 upstream and downstnream of Boronda Road Bridge encroaching willows will be trimmed back. These trees will have some of their lower branches trimmed to allow debris to pass. In addition, a downed black cottonwood will have its crown branches removed with the trunk being notched in serval places.

11. Chalk Rock Area (downed tree and encroaching vegetation area approximately 100 ft^2): at RM 13.5 willows encroaching into the active channel will be trimmed back and some debris piles will be broken apart. In addition, a large downed western sycamore will have it trunk notched in serval places and left in place.

12. Esquiline Bridge Area (downed tree and encroaching vegetation area approximately 200 ft^2): 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. In addition, a downed black cottonwood will have its crown branches removed with the trunk being notched in several places and left in place.

13. Ward Bridge Area (downed trees): upstream and downstream of Ward's private bridge at RM 15.0; several large trees have fallen in a section with a split 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 2,000 square feet of stream cover encompassing approximately 0.05 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 2016. 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 larger canopy trees on the banks still provide shade.

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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