



*This document compares MPWMD comments with the NMFS 2013 Final Recovery Plan*

December 17, 2012

National Marine Fisheries Service  
501 West Ocean Blvd., Suite 4200  
Long Beach, CA 90802.

ATTN: Penny Ruvelas

**SUBJECT:** Comments on SCCC Steelhead Public Review Draft Recovery Plan

Dear Ms. Ruvelas:

This letter is to convey comments and recommendations by the Monterey Peninsula Water Management District (MPWMD) concerning the “Public Review Draft South-Central California Coast Steelhead Recovery Plan” (Recovery Plan) released in October 2012. MPWMD appreciates the opportunity to review this plan. MPWMD’s interest in commenting on this plan is focused on the Biogeographic Population Group (BPG) of steelhead in the Carmel River Basin. However, we are also cognizant that the recovery plan applies to the entire South Central California Coast (SCCC) Distinct Population Segment (DPS).

The Recovery Plan seeks to achieve a broad range of actions that could influence or change policies and land use plans across all levels of government involved in land use and water resource decisions in the Carmel River Basin. The Recovery Plan correctly identifies many of the causes of the decline in Carmel River steelhead. However, several actions proposed in the plan to fully recover the steelhead population will be both costly and controversial and are likely to face stiff opposition if they are to be funded by property owners within the basin and ratepayers of the Monterey Peninsula.

MPWMD specifically rejects the inclusion of removal of the Los Padres Dam as an action item in the proposed plan because there has been insufficient analysis of short-term and long-term impacts and/or benefits to steelhead, water rights, property, infrastructure, and streamside resources from recovery actions, and alternatives should be evaluated in a more comprehensive benefit/cost analysis.

*NMFS describes two options: dam removal or improvements for fish passage at all life stages and provision for spawning gravel and large woody debris within the lower main stem. However, p. 10-15 also goes on to say*

*“The Los Padres Dam is an important part of a regional water supply system, and its removal or modification will require additional studies, and must take into account its existing and future functions.”*

The comments below are intended to clarify and expand on the basin description and to point out areas within the Recovery Plan that appear to require revision or additional work.

### **Critical Recovery Actions in the Carmel River Basin**

The three critical recovery actions identified in the plan are: 1) management of surface and groundwater to provide flow for adults and juveniles; 2) restoration of estuarine (Carmel River lagoon) and freshwater rearing habitats; and 3) removal of main stem dams. The plan explains that these should be high priority activities.

MPWMD agrees that management and monitoring of surface and groundwater and restoration of estuarine and freshwater habitats should be high priority actions. MPWMD also agrees that San Clemente Dam and Old Carmel River Dam serve no useful purposes and should be removed to improve passage and re-connect the upper and lower portions of the basin. However, removal of Los Padres Dam should not be a high priority action without addressing several key issues including dewatering of the lower Carmel River in the dry season, existing water rights, municipal water supply, and long-term effects to downstream properties from the resumption of a natural sediment load to the lower river. Other points about removal of Los Padres Dam include:

- No analysis has been completed about the direct effects of dam removal to steelhead and their habitat (both positive and negative). Los Padres Reservoir retains an almost insignificant amount of the total annual basin runoff (less than 2%), but provides up to 90% of instream flow by the end of the dry season. Effects on water temperature, bioenergetics, the spread of invasive species, food supply, and availability of habitat should be modeled and described.
- Using instream flow incremental methodology (IFIM), an analysis of the trade-offs in habitat area due to dam removal, which would improve passage to the area above Los Padre Dam, but result in reductions in dry season flows to the lower river, is especially important. Data relied on in the past for such analysis in the basin is 20 to 30 years old and should be updated.
- In valuing habitat above Los Padres Dam and comparing it with habitat downstream, some consideration should be given to the potential for a landslide event creating a fish passage barrier and cutting off a portion of the upper watershed in the future. This occurred previously on Cal-Am property above the dam and the slide was remediated. This would not be possible for slides occurring in the Ventana Wilderness area.
- MPWMD estimates that a cessation of releases from storage at Los Padres Dam could result in a reduction in streamflows at the current San Clemente Dam site during about

half of all water years that would make the Sleepy Hollow Steelhead Rearing Facility inoperable. NMFS has suggested that this facility could be operated as a future SCCC DPS steelhead recovery facility/conservation hatchery once MPWMD no longer needs to operate it.

- Los Padres Reservoir retains approximately 60% of its original capacity and serves as a point of storage associated with a portion of Cal-Am's diversion rights. Currently, 100% of its usable storage capacity is allocated and managed to sustain river flows during the summer and fall dry season. Water from storage is recaptured in the lower river for municipal supply. Without these releases in the dry season, MPWMD estimates that there would be at least some period with little or no flow downstream of Robles del Rio at RM 15 in about half of all Water Years (Cal-Am has proposed to reduce their Carmel River diversions to less than 400 acre-feet in the dry season). Currently, even with significant Cal-Am diversions in the lower river, reservoir releases maintain a perennial stream down to RM 9.6 in 75% of Water Years. The stream is intermittent along only one mile of this reach in the remaining 25% of years.
- After the rainy season ends, in most years all the tributaries except Pine Creek and San Clemente Creek, which are sparsely inhabited, go dry and the main stem "loses" flow in the downstream direction. Releases from Los Padres Reservoir partially compensate for overpumping of the alluvial aquifer by Cal-Am and for riparian diversions throughout the watershed. SWRCB has not exercised jurisdiction over surface flows in the sub-watersheds and groundwater in the sub-basins has not been adjudicated. The Recovery Plan proposes no analysis of the effects of main stem riparian diversions or tributary diversions during the dry season. Cumulatively, these diversions have the potential to dewater portions of the lower river in the dry season, even in the absence of Cal-Am diversions during the same period.
- Removal of Los Padres Dam would allow a full resumption of the natural sediment load to the lower river. Although this would likely halt, and possibly reverse long-term degradation (channel incision), there are 19 bridges across the Carmel River and approximately 1,600 parcels in the 100-year floodplain downstream of San Clemente Dam. Resumption of the natural sediment load in the river would likely have consequences in portions of the alluvial section, including increased flood elevations in some reaches and channel braiding. These effects should be modeled and described.
- The plan provides no analysis of the effects that removal of Los Padres Dam would have on existing water supply functions or on existing pre-1914, appropriative, and riparian water rights.
- No funding source for dam removal is identified. Over the next 20 to 30 years (depending on the type of project financing), local ratepayers will be required to fund about \$450 million – or more than \$11,000 per water connection – to remove San Clemente Dam and build replacement water supply projects to reduce diversions from the Carmel River and in the Seaside Groundwater Basin. Additional expenditures by ratepayers to deal with the removal of Los Padres Dam in the foreseeable future could meet significant public opposition.

- The recovery plan offers only one option for the dam – removal – with no analysis of alternatives, such as a maintenance dredging program, downstream habitat improvements, and improved fish passage facilities throughout the watershed.
- Removal of the dam under existing conditions (i.e., with its current storage capacity) would significantly alter the ecology and geomorphology of most of the main stem of the Carmel River. These potential changes – some positive and some negative – are not described or analyzed.

MPWMD recognizes that fish passage issues and silt retention at Los Padres Reservoir are key issues that must be resolved in order for steelhead in the Carmel River to recover. MPWMD believes that, considering the cost and potential controversy that would arise from a project to completely remove Los Padres Dam, other less expensive actions to improve steelhead passage and habitat should be considered while analysis of dam removal and a management plan for the dam and reservoir is developed. These include: 1) improve fish passage at Los Padres Dam; 2) restore the flow of spawning gravels past Los Padres Dam; 3) maintain existing storage capacity at Los Padres Reservoir; 4) carry out restoration projects to increase channel complexity in the active channel downstream; 5) remove passage barriers in tributary systems; and 6) enhance habitat in tributary systems. These actions would clearly benefit steelhead, can be completed incrementally as funds become available, and would likely be much less controversial than dam removal.

For these reasons, the removal of Los Padres Dam should excised from the Plan, or at a minimum be described as a secondary priority at this time, instead of as a critical recovery action. A long-term plan should seek to manage the Carmel River in order to recover steelhead while providing some water supply to the community. In addition, actions and projects that reduce the need to mechanically manage the Carmel River State Beach in the winter should be singled out as a near-term priority.

### **Threat Sources (Chapters 4 and 10)**

Table 4-1 and Table 10-4 list several threat sources in the Carmel River Basin. Table 4-1 shows threat sources as affecting 100% of the watershed. It is not clear whether these designations actually apply to the main stem only or to the entire watershed. There are areas within the watershed with none of the listed threats, such as the 44-square-mile basin upstream of Los Padres Reservoir. Listing “levees and channelization” as a 100% threat appears to apply to the main stem only. There are 146 miles of stream designated as critical habitat, with many areas having no levees or channelization. It would be helpful to separate “levees” and “channelization” as there are very few miles of stream that have levees. “Recreational Facilities” in the watershed should be defined. In some parts of the text, this appears to refer to the Carmel River State Beach, whereas in other areas, it seems to refer to National Forest area.

*Comments on Threat Sources listed on Table 4-1 not addressed.*

## Section 8.1 DPS-WIDE RECOVERY ACTIONS

p. 8-2:

“DPS-wide recovery actions addressing widespread threat sources include the following:

- Collaboration between riparian landowners and the State Water Resources Control Board to minimize withdrawals from riparian wells...

It is unclear how SWRCB would foster such collaboration. It is MPWMD understands that the SWRCB has no jurisdiction over riparian diversions, but can provide technical expertise to other State and Federal agencies that may be involved in regulating riparian diversions.

*No change to Final Plan from above comment.*

- “▪ Close remaining areas currently open to angling below impassible barriers in all anadromous waters;”

*Recommended action changed to “Complete a Fishery Management and Evaluation Plan for anadromous waters of the SCCCPS DPS; assess impacts of angling on native O. mykiss above barriers which are currently impassable to upstream-migrating steelhead.”.*

A lower threshold than the recovery number of an average of 4,150 returning adults each year should be established to open up the Carmel River for sport fishing. One local group of fishermen, the Carmel River Steelhead Association, has raised awareness and funds for restoration of Carmel River steelhead for almost 40 years. It is important to retain the engagement of such groups.

- “▪ Extend the California Water Code Section 1294.4 dealing with instream flows...”

CWC 1294.4 does not exist. CWC 1259.4 deals with instream flows. If the requirements in CWC 1259.4 are to be expanded, which streams would this action apply to?

*Improper code citation changed. NMFS recommendation is to expand instream flow requirements to the entire Recovery Planning Area (for the Carmel River Basin, this would include most streams). Off-stream storage is proposed as an alternative to direct diversions in the dry season.*

## Chapter 10 Carmel River Basin Biogeographic Population Group

p.10-3, Figure 10-1: This figure is corrupted, with portions of the figure blanked out.

*Figure replaced.*

p. 10-7, right-hand column

“Spawning habitat in the mainstem below San Clemente Dam has been degraded by water releases from the dam, contributing to increasing bank erosion and armoring.”

*Statement no longer appears in the plan.*

This statement needs clarification of the armoring effect of San Clemente Dam. The flow of water in the main stem is uncontrolled during times when bedload is moving and flow “releases” in the basin are normally associated with releases from storage at Los Padres Reservoir during the dry season. San Clemente Dam and Reservoir have virtually no effect on water flow in the river, but the dam and reservoir do trap almost 100% of the bedload and a portion of the suspended load. We suggest the following text:

“Spawning habitat in the mainstem downstream of San Clemente Dam has been degraded since 1921 by the retention of spawning gravel and the streambed has become armored for several miles downstream with large cobbles and boulders. Sediment retention in the reservoir has also contributed to degradation (lowering of the streambed) in the active channel of the alluvial section, which has increased the frequency and severity of erosion.”

*The description of habitat downstream of Los Padres Dam is more general in the Final Recovery Plan.*

p. 10-9, Figure 10-4 Major Fish Passage Barriers, Carmel River Basin BPG

The map shown in Figure 10-4 does not match the 2004 MPWMD reconnaissance survey of rearing habitat and the limits of spawning habitat and presence of natural barriers in the watershed (see Figures A and B attached this letter). MPWMD can provide a GIS layer of upstream limits (contact Eric Sandoval [eric@mpwmd.net](mailto:eric@mpwmd.net)). We note that in Figure 10-4 in the Recovery Plan, Los Padres Dam is labeled a complete barrier, even though it has had a Trap and Truck operation for decades. This is in contrast to the labeling of San Clemente Dam as a partial barrier with its out of date fish ladder. The water falls in Black Rock Creek are an impassible natural barrier below the dam at White Rock Club. Therefore White Rock Club’s dam is not a barrier to steelhead migration. The same applies to the dam on Garzas Creek in the Santa Lucia Preserve.

*Figure 10-4 appears to reflect MPWMD comments.*

p. 10-6, paragraph 2 states the following:

“San Clemente and Los Padres dams (while equipped with fish passage facilities) impede access to spawning and rearing habitat in at least 50 percent of the Carmel River watershed.”

Studies by MPWMD in 1986 and 1989 showed that approximately 50% of the main stem spawning habitat was above Los Padres Dam. Those studies also estimated that 45% of total spawning habitat in the watershed was above Los Padres Dam. Another 44% was in the reach between the Narrows at RM 9.6 and Los Padres Dam and 11% of spawning habitat was in tributary sub-watersheds. Due to poor habitat conditions in the lower 9.6 miles of the main stem in the 1980s, no estimates were made in these studies of spawning habitat in this reach, which has steadily improved due to intense streamside restoration and water management efforts. More recent data from redd surveys in the lower 9.6 miles indicate a spawning density of one-half to two-thirds that of the reach from the Narrows to San Clemente Dam.

The 1980s studies also estimated that 42% of the potential rearing habitat in the watershed was upstream of Los Padres Dam. Similar to the estimate for spawning habitat, the lower seven miles of the main stem were assumed to provide no rearing habitat. Previous NMFS SCCC steelhead status review documents repeat the theme that there is little or no rearing value to the lower 9.6 miles of main stem river, and reduced value for the next nine miles.

Annual summer fish rescues, and fall population monitoring data for juvenile steelhead indicate significant abundance of juvenile steelhead in the lowest five to nine miles of the main-stem Carmel River, often at densities and individual sizes greater than at upstream sites. As reported in MPWMD’s Annual Mitigation and Monitoring Reports, fall juvenile abundance data suggests that as much as 37% of the juvenile steelhead reared in the mainstem Carmel River below San Clemente Dam may be produced in the areas below RM 8 in recent water years. Large numbers of juvenile steelhead have been produced in very short stretches of river below RM8 in 2000, 2003, 2005, 2006 and 2010, when winter and spring runoff combined with better water management practices in the dry season allowed more of the river to remain wet year round. MPWMD data should be statistically compared to the five existing years of historic CDFG data from three sites above LPD, which was collected by the local Region or the statewide Wild Trout Program periodically over the last 18+ years. Comparisons of densities and size distributions of *O. mykiss* above and below LPD will indicate whether long held beliefs about relative habitat quality, and thus rearing capacity, are in fact true.

*Statistics characterizing the amount of spawning habitat have been removed in the Final Plan.*

p. 10-13 to 10-17, Table 10-4 Recovery Actions in the Carmel River Basin

*Car-SCCCS-4.1 Develop and implement water management plan for dam operations*

- The plan should recognize or acknowledge existing MPWMD plans, procedures, and processes, such as the Quarterly Water Budget and Low Flow Memorandum of Agreement, which is coordinated with the dam operator (Cal-Am), the California

Department of Fish and Game, and the NMFS Santa Rosa field office. If these actions are not appropriate or incomplete, the Draft Recovery Plan should be more specific about future actions.

*Action changed to reflect comments.*

*Car-SCCCS-4.2 Develop and implement water management plan for diversion operations*

- The same comments as for *Car SCCC 4.1* apply.
- It should be noted that the SWRCB ordered a 70% reduction in Carmel River diversions in 1995 and followed that order up in 2009 with a Cease-and-Desist order to reduce diversions that must be met by 2017. In addition, in 1998, the SWRCB declared the Carmel River to be a fully appropriated stream between May 1 and December 31. For all new water rights permits issued by SWRCB, the Carmel River instream flow requirements for steelhead that were promulgated by NMFS are incorporated as conditions to a permit. If these actions are not appropriate or incomplete, the Draft Recovery Plan should be more specific.

*Action changed to reflect comments.*

*Car-SCCCS-5.1 Develop and implement flood control maintenance program*

- Along the main stem there are about 1,600 parcels in the 100-year floodplain of the Carmel River. Except in the lower four miles of the main stem, there are no flood control facilities. In most reaches, the Carmel River flows into overbank areas at a flow level associated with the 10 to 15-year return event. Because the Carmel River is highly susceptible to both flood and bank erosion during high-flow events in the lower 15.5 miles of the river, MPWMD believes a flood control maintenance program would probably require widening of the existing river corridor by at least 200 feet in most reaches, purchases of flood and erosion-prone properties, and significant improvements at the margins of flood-prone areas. While these actions could technically address the flood problems of the Carmel River, the economic feasibility of such a program would be very challenging.

*No response.*

- The Monterey County Water Resources Agency (MCWRA) has the primary responsibility for flood control and drainage activities in Monterey County, but that agency is not listed on Table 10-4 as a Potential Collaborator.

*MCWRA now listed.*

- This action should clarify whether it is intended to be watershed-wide, apply to the main stem, or to areas outside of the main stem.



*No response.*

*Car-SCCCS-6.1 Conduct groundwater extraction analysis and assessment and  
Car-SCCCS-6.2 Develop and implement a groundwater monitoring and management program*

- The plan should describe that MPWMD already conducts such regular efforts for most of the alluvial aquifer. The Draft Recovery Plan should describe what additional efforts or program modifications may be appropriate.

*NMFS' response includes updating existing plans.*

*Car-SCCCS-7.1 Develop and implement a plan to restore natural channel features*

- In the main stem, this action would have similar challenges to *Car-SCCCS-5.1 Develop and implement flood control maintenance program.*

*NMFS' response includes updating existing plans.*

*Car-SCCCS-7.2 Develop and implement plan to vegetate levees and eliminate or minimize herbicide near levees*

- Along the main stem, virtually all the stream banks and inboard side of levee areas are densely vegetated. There is no known use of herbicides to control native vegetation, although MPWMD uses a small amount of herbicide on invasive species where physical removal is not effective.

*NMFS' response includes updating existing plans.*

*Car-SCCCS-7.3 Develop and implement stream bank and riparian corridor restoration plan*

- It is unclear how this action is different from *Car-SCCCS-7.1 Develop and implement a plan to restore natural channel features.* Also, the level or type of restoration should be defined. In most of the Carmel River alluvial reach, streamside vegetation has either naturally recruited or been introduced through intensive restoration efforts since 1984. Is this action intended to be watershed-wide?

*No response.*

*Car-SCCCS-9.1 Develop and implement a watershed-wide plan to assess the impacts of non-native species and develop control measures; Car-SCCCS-9.2 Develop and implement a non-native species monitoring program; Car-SCCCS-9.3 Develop and implement a public educational program on non-native species impacts.*

- Non-native species impacts and proposed actions do not appear to warrant a “1B” level, and should be reprioritized to a 3A or 3B level. While non-native species eradication,

minimization, or management is a general resource management goal in many watersheds, there is no evidence that non-native species are significantly affecting Carmel River steelhead abundance in any measurable way. Potential exceptions to address are the presence of Brown Trout in the watershed above Los Padres Dam and striped bass in the Carmel River lagoon.

- This objective should be moved to the lowest level Recovery Action, so that addressing it does not compete with the remediation of far higher priorities and the primary causal factors affecting steelhead abundance in the watershed.

*Level changed to 2B from 1B*

*Priority 1: Actions that must be taken to prevent extinction or to prevent the species from declining irreversibly.*

*Priority 2: Actions that must be taken to prevent a significant decline in species population/habitat quality or in some other significant negative impact short of extinction.*

*Car-SCCCS-12.1 Develop and implement an estuary restoration and management plan*

- The threat source listed for this action is “Upslope/Upstream Activities.” In addition to upstream diversions and water resource development, a threat to steelhead in the Carmel River lagoon is activity at the lagoon to reduce the potential for flooding. This action should include Urban Development as a threat source.

*No response in the table; however, Section 10.5 text describes development at the lagoon.*

### **General Comments and Recommendations**

- An alternatives analysis to proposed recovery actions should be completed

*No direct response; however, Section 10.5 describes the need for additional analysis.*

- Analysis of short-term and long-term impacts and/or benefits to steelhead, water rights, property, infrastructure, and streamside resources from recovery actions should be completed

*There is some recognition that there should be more data gathered on sources of threats or stresses to steelhead with “site-specific investigations in order to refine the recovery actions or to target additional recovery actions.”*

- A more comprehensive cost estimate should be completed

*No response.*

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- A benefit/cost analysis of proposed recovery actions should be completed

*No response.*

If you have questions about this letter, please call me at (831) 658-5620.

Sincerely,

A handwritten signature in blue ink that reads "Larry Hampson". The signature is written in a cursive style.

Larry Hampson, District Engineer

Cc: see attached distribution list

Attachments: Figure A – Steelhead Rearing Habitat in the Carmel River Basin  
Figure B – Steelhead Spawning Habitat in the Carmel River Basin

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