



January 12, 2018

Refer to NMFS No.: WCR-2017-7369

John Roadifer, P.E.  
Project Engineer  
AECOM  
300 Lakeside Drive, Suite 400  
Oakland, California 94612

Re: NMFS' Comments on the Los Padres Dam and Reservoir Alternatives and Sediment Management Study Draft Alternatives Descriptions Technical Memorandum

Dear Mr. Roadifer:

This letter is in response to AECOM's December 1, 2017 request for comments on the Los Padres Dam and Reservoir Alternatives and Sediment Management Study Draft Alternatives Descriptions Technical Memorandum (TM) to be submitted by January 12, 2018. This letter provides a background on the January 10, 2018, Memorandum of Agreement (MOA) between California American Water Company (CAW), the California Coastal Conservancy (Conservancy) and NOAA's National Marine Fisheries Service (NMFS), which dictates many of the deadlines and deliverables for the Los Padres Dam Feasibility Study. We also provide a brief statement of our position regarding the future of Los Padres Dam and Reservoir. The accompanying enclosure provides specific preliminary comments on the draft TM.

Per the 2018 MOA, CAW has agreed to complete a study on the feasibility of removing Los Padres Dam (LPD Feasibility Study) by June 30, 2019. Per the MOA, CAW, the Conservancy, and NMFS (the "Parties") agreed the LPD Feasibility Study must include an analysis of the loss of stored reservoir water used for summer stream flows, and the benefits of improved steelhead passage if LPD is removed. The LPD Feasibility Study must also evaluate options for permanent unimpeded upstream and downstream passage and management of sediment if LPD is left in place. To assist in preparing the LPD Feasibility Study, CAW is relying on ongoing studies for which CAW has provided \$1.0 million in funding to MPWMD for certain studies concerning the fate of LPD (MPWMD Studies). These studies include: the LPD Fish Passage Feasibility Study, the Los Padres Dam and Reservoir Alternatives and Sediment Management Study, the Carmel River Basin Hydrological Model, the Instream Flow Incremental Method Study of the Carmel River. CAW is also relying on a CAW funded PIT-tagging program (\$1.0 million) and downstream fish passage and in-reservoir survival study at Los Padres Reservoir (\$0.5 million) to inform the LPD Feasibility Study.



As outlined in the MOA, CAW and NMFS anticipate the MPWMD studies will be completed by June 30, 2018, at which time CAW and NMFS would meet to discuss the status of the MPWMD Studies and to determine if additional studies by CAW are necessary to complete of the LPD Feasibility Study. If CAW and NMFS agree additional studies are necessary, then they will discuss extending the deadline for completion of the LPD Feasibility Study. Per the MOA, CAW will make its final determination whether to remove the dam within six months following completion of the LPD Feasibility Study, unless the Parties agree that additional studies are necessary and agree to a later deadline. If found feasible, and the Parties agree to removal, CAW further agrees to remove LPD within five years after an alternative water supply is identified and implemented as described in the Final Environmental Impact Report/Environmental Impact Statement for the Monterey Peninsula Water Supply Project (MPWSP). The five-year timeline is subject to reasonable extensions based on permitting or other authorization requirements, or other conditions beyond CAW's control.

In general, NMFS believes removing LPD would alleviate the need for any additional mitigation/take coverage for impacts to steelhead from CAW's operations at LPD. However, the water stored in Los Padres Reservoir is managed to maintain stream flows in the Carmel River, primarily for maintenance of juvenile steelhead rearing habitat downstream of the dam. Therefore, prior to making any final recommendations on preferred alternatives, NMFS will need to review the outcomes of the Carmel Basin Hydrological Model to ensure suitable stream flows and habitat conditions will persist without the reservoir, or that optimal water releases will be provided for steelhead if the reservoir remains in place. In addition, NMFS will utilize the results of the Carmel Basin Hydrologic Model to assess whether there are sufficient water supply alternatives that obviate the need for Los Padres Reservoir. For example, CAW has identified the MPWSP as a feasible long-term water supply to replace unauthorized diversions from the Carmel Valley Aquifer, to reduce reliance upon new points of diversions, and to protect against overdraft of the Seaside Groundwater Basin by 2021 at the earliest. Finally, NMFS will assess the results of the first full year of downstream fish passage performance with the existing facilities as well as any early results from the PIT-tagging study to inform the impact the dam/reservoir has on juvenile steelhead survival and passage and to better evaluate the proposed downstream passage alternatives.

We look forward to continuing our collaborative process with AECOM and the Parties towards the identification and selection of a sustainable alternative for the future of Los Padres Dam that ultimately leads to improved habitat conditions for steelhead in the Carmel River while maintaining adequate water supplies for the Monterey Peninsula. Please direct questions regarding this letter or the enclosed comments to Joel Casagrande of the NMFS North-Central Coast Office in Santa Rosa at (707) 575-6016, or [Joel.Casagrande@noaa.gov](mailto:Joel.Casagrande@noaa.gov).

Sincerely,



Alecia Van Atta  
Assistant Regional Administrator  
California Coastal Office

for

Enclosure

cc: Dennis Michniuk, California Department of Fish and Wildlife  
Trish Chapman, California Coastal Conservancy  
Richard C. Svindland, California American Water  
Copy to File ARN 151422WCR2017SR00186  
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**NMFS' Preliminary Comments on the Los Padres Dam and Reservoir Alternatives and Sediment Management Study Draft Alternatives Descriptions Technical Memorandum**

Current information clearly illustrates the adverse impacts of dams and reservoirs on steelhead and their critical habitat. We seriously question the possibility of increasing the height of Los Padres Dam or the storage capacity of Los Padres Reservoir without incurring irreversible detrimental impacts on the Carmel River population of South-Central California Coast Steelhead (*Oncorhynchus mykiss*), and, in turn, the greater S-CCC steelhead Distinct Population Segment (DPS). The Los Padres Dam and Reservoir Alternatives and Sediment Management Study Draft Alternatives Descriptions Technical Memorandum (TM) describes multiple alternatives for increasing the height of the dam or the storage capacity of the reservoir. Specifically, Alternative 4a includes raising the existing dam; Alternative 4b proposes installation of operational gates (*e.g.*, Obermeyer gates) on the existing spillway; Alternative 4c proposes building a new and larger dam downstream of the existing structure; and Alternative 4d proposes building a new dam downstream while keeping the existing reservoir as sediment trap. With the exception of Alternative 4b, implementation of these alternatives would permanently flood (at least seasonally) critical habitat for steelhead, add complexity and uncertainty to fish passage success and survival in the reservoir, and perpetuate reduced rates of coarse sediment transport and degraded water quality downstream of the reservoir. In previous correspondences among NMFS, CAW, MPWMD, and/or the State Public Utilities Commission (*e.g.*, NMFS 2011), NMFS has clearly stated that we do not support any alternatives that involve constructing a new dam or permanently raising the existing dam height to increase water storage capacity, and instead recommended completing a dam removal feasibility study. We therefore request Alternatives 4a, 4c, and 4d be removed from further consideration. Furthermore, we recommend the alternatives analysis be expanded to include off-channel water supply sources such as increased desalination-sourced water, winter ASR, and regional recycled water opportunities as viable water supply substitutes to reservoir storage.

In consideration of the current status of S-CCC steelhead, the MOA, other relevant agreements, and recent operational and landscape changes (*e.g.*, development of alternative water sources, the State Water Resources Control Board's 2016 Cease and Desist Order, and removal of San Clemente Dam), NMFS offers the following specific comments on the TM. Please note that these comments are preliminary in that key information has not been provided to date (described below) which limits our ability to comprehensively evaluate some of the statements in the TM.

1. A diagram is needed of the reservoir profile (bottom and surface) and sediment that shows the upper and lower profiles and the three main texture packets (zones) that are referred to in the different sediment related alternatives.
2. Suggest presenting flushing scenarios as stand-alone information rather than as embedded in alternatives. Also, the alternatives are not fully understandable without first presenting the thorough sediment flushing study results that NMFS understands is in preparation.

## **EXHIBIT 2-B**

### Page 2-1: Conceptual Alternative Descriptions

- Although acknowledged, the costs of different alternatives do not factor in the costs for new fish passage improvements, which would vary depending on alternative and fish passage type, and are likely substantial. Without a likely range of potential fish passage costs, effectively evaluating alternatives for LPD would not be possible. For example, dam removal may have a "High Cost" but no additional fish passage costs. Whereas raising the dam may have a "Low or Moderate" cost but would also require a "Moderate to High" cost for construction, operation, and maintenance of improved fish passage designs, thus making the two alternatives more comparable in the long-term.

### Page 2-8: *"The estimated 380,000 CY of ...."*

- Based on the bathymetry, could there be fish passage issues when transitioning between Zone 3 and Zone 2 if only the Zone 2 sediments are sluiced away (slope or drop-off from zone 3 to former zone 2 areas)?

### Page 2-13: top paragraph (above map)

- Without the use of the stated public roads, it is not clear how this alternative would proceed. Would it require construction of new, temporary roads? Please explain.
- Last sentence of the same paragraph states - *"there are no practicable feasible locations for this sub alternative."* Does this mean this alternative should no longer be considered?

### Page 2-14: Sustainability

- Regarding sedimentation rates, there is no substantial reason to believe that future rates will be less than past rates. It seems a wider range of potential sediment yield should be considered. It is possible with climate change, fire frequency, *etc.*, that the same rate of sedimentation observed over the past 69 years could be achieved in a shorter period (*e.g.*, 40-50 years).

### Page 2-14: Effects on Steelhead Passage over Los Padres Dam and through the Reservoir

- *"...where passage would continue in its current form."* This may not be the case as we have yet to determine the suitability (success) of existing downstream passage.

### Page 2-15: Section 2.4.1 Expand with Dam Raise (Alternative 4a)

- 586 AF seems like a minor amount relative to what could be achieved through other, off-channel alternatives such as larger desalinization volumes, increased Aquifer Storage Recover (ASR), *etc.* Please put differences in water storage into context with the supply/demand of the system, and to dry-season stream flow volumes.

### Page 3-2: bottom paragraph

- Do we know if Sites D and E experienced inundation during the past winter with multiple >10 year events?

### Page 3-4: top paragraph

- Document states *"access to sites D and E would be difficult to develop without construction of an access road in the river channel."* This would be a substantial impact



## **EXHIBIT 2-B**

to perennial habitat that would be repeated overtime, and therefore should be weighed heavily when considering this as a feasible solution.

Page 3-4: Section 3.3 Sluicing Tunnel (Option 3)

- Table 4-1 indicates this may be an option combined with dam removal alternatives, however there is no mention of that in the text here. Make more explicit in the text.

Page 3-8: Harmful Effects on Steelhead

- With Option 4, would there be bypass flows to maintain optimal stream flow for fish to the reservoir (where the existing trap location is) and for rearing fish in the reach between the reservoir and the outlet of the sluicing tunnel?

Page 3-8: Effects on Downstream Channel Geometry and Flood Elevations

- Under Option 3, the report states “....*the increased fine sediment is expected to have little effect on the channel thalweg elevation downstream, because fine sediment tends to stay suspended throughout the river to the ocean.*” While this is true for fines such as silts and clays, what about the sand fraction (or is this considered coarse)?
- Recommend putting predictions for channel geometry and flood elevation changes into context with the knowledge now available following the removal of San Clemente Dam and delivery of coarse sediment downstream.
- Recommend including particle abrasion (size reduction with distance traveled) effects with opinions and evaluations of sediment delivery impacts downstream.

## **References Cited**

NMFS (National Marine Fisheries Service). 2011. Letter to Monterey Peninsula Water Management District, dated December 1, 2011, regarding reservoir expansion at Los Padres Dam. 2 pages.