UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
777 Sonoma Avenue, Room 325
Santa Rosa, California 95404-4731

February 14, 2022

Todd Sexauer
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Re: NOAA's National Marine Fisheries Service's Comments on the Draft Environmental Impact Report (DEIR) for Santa Clara Valley Water District's (Valley Water) Pacheco Reservoir Expansion Project in Santa Clara County, California

Dear Todd Sexauer:

NOAA's National Marine Fisheries Service (NMFS) is the federal agency responsible for managing, conserving, and protecting living marine resources in inland, coastal, and offshore waters of the United States. We derive our mandates from several Federal statutes, including the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). The purpose of the ESA is to conserve threatened and endangered species and their ecosystems. Our response pertains to the proposed project's effects on the threatened South-Central California Coast (S-CCC) steelhead (*Oncorhynchus mykiss*) Distinct Population Segment (DPS) and its designated habitat in the Pajaro River Watershed. This response is provided under the authority of the ESA, and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402). NMFS is also providing comments under the California Environmental Quality Act.

The DEIR evaluates six project alternatives, which include the No Project Alternative, Proposed Project Alternative, and four additional dam replacement alternatives. In general, the project includes construction of a new dam upstream of the existing dam, decommissioning and removal of the existing dam, operation and management of the new dam and reservoir, construction or relocation of utility and associated infrastructure, stream habitat restoration, and the implementation of other mitigation measures.

The following are NMFS' comments. Our comments focus heavily on the Proposed Project Alternative, however, nearly all of these comments are also relevant to other project alternatives.

Page ES-2

- Please define or provide examples of "emergency response public benefits."

Page ES-2 and ES-3

- The document states that the Primary Objectives have equal priority. The two primary objectives are defined on page ES-3 (and elsewhere in the document), which are (1)

water supply reliability/security/operational flexibility, and (2) increase suitable habitat in Pacheco Creek for federally threatened S-CCC steelhead via improved flow and water temperature conditions. During drought periods, it is not clear how these two objectives will be managed as equal priorities. It should be clear that emergency declarations would not result in a reduction or elimination of commitments for providing and maintaining steelhead habitat suitability. See the following comments for specific examples.

Page ES-10

- The text states: "A 35,000-acre-foot habitat storage reserve would be maintained to provide suitable flows and water temperatures for SCCC steelhead in the North Fork and mainstem Pacheco Creek during multi-year droughts. Once the expanded reservoir drops below 35,000 acre-feet, the reserve would be managed independent of water supply to provide releases according to the Variable Flow Schedule, unless an emergency declaration is made for health and safety purposes." The EIR should clearly define what the types of emergencies are and the triggers for each emergency type. As described, this 35,000 acre-foot storage reserve is for maintaining suitable habitat conditions for steelhead in multiple/consecutive drought years. However, it is also during multiple drought year periods that emergencies would be expected, thus potentially compromising the reserve benefit for steelhead. Please clarify.

Page 2-14

- The text at the top of the page describes the vulnerabilities of the CVP and SWP infrastructure in the Sacramento-San Joaquin Delta to earthquakes and levee breaches as reasons to increase supply alternatives and delivery reliability. However, it should be noted that the Diablo Range, where the proposed dam project is located, is a seismically active area. In fact, both Anderson and Coyote dams located to the immediate north of the proposed site, are located on, or close to, major fault lines.
- The text states that Llagas Creek and Pacheco Creek steelhead runs are "sporadic" due to the "intermittent nature of the streams". While partially true, the intermittent nature of these streams, particularly Llagas Creek, is greatly exacerbated by the presence of Chesbro Dam (interrupting winter runoff events for storage) and groundwater pumping in the Llagas Groundwater Basin. In an unimpaired flow regime and groundwater basin, runoff from winter and spring storms would have more frequently facilitated passage of steelhead into and out of the subwatershed relative to the current impacted condition.
- The text later states: "the SCCC steelhead population is severely impacted by insufficient flow, unusable water temperatures, and climate change." Again, it should be noted that the "insufficient flow and unusable water temperatures" are greatly influenced by the presence of dams and their operations as well as groundwater pumping in the basin. Furthermore, dams without fish passage facilities (e.g., Uvas and Chesbro), have precluded passage to perennial headwater reaches where the effects of climate change are less severe.

Page 2-15 (and ES-15)

- The text states there are approximately 10 miles of Pacheco Creek that are considered suitable for spawning and rearing (egg incubation and fry rearing) that extends downstream from the confluence of the South Fork and North Fork Pacheco Creek. The Proposed Project would add approximately 1.8 miles of additional suitable habitat if appropriately

restored, a nearly 15 percent increase in habitat. It is not clear why Alternatives with fewer miles of stream habitat available (e.g., Alternative B, 183%) have considerably higher percent increase in cohort scores relative to the Proposed project (157%). Please explain.

Page 2-26 and 2-27

- Regarding the proposed restoration of the 1.8 miles of North Fork Pacheco Creek, this section does not detail plans for the restoration of riparian or floodplain vegetation. When would planting of vegetation in these areas occur?

Page 2-30 and 2-31

- Figure 2-11 shows most Borrow Areas focused downstream of the proposed new dam with Disposal Areas proposed within the new reservoir inundation area. This seems counterintuitive – disposing of material largely within the reservoir storage area and borrowing from the un-impounded area downstream of the dam. Please explain the rationale for this.

Page 2-35 and 2-36

- As noted above, the text on Page 2-35 states that use of the habitat storage reserve may occur through an emergency declaration by the Board of Directors during emergencies (of which extended drought is listed as an emergency type). However, at the top of Page 2-36, it states that, "A 35,000-acre-foot habitat storage reserve would also be maintained to provide suitable flows and water temperatures for steelhead in the North Fork and mainstem of Pacheco Creek during multi-year droughts." How can the habitat reserve be available to maintain suitable flows and water temperatures during multi-year droughts (i.e., extended drought) and also be used to meet M&I needs? Please explain.

Page 2-37

- To maintain suitable spawning and rearing habitat below the new Pacheco Dam, gravel replenishment would be necessary. As part of the adaptive management or maintenance plans, NMFS encourages Valley Water to develop plans for regular gravel augmentation within North Fork Pacheco Creek below the dam to maintain higher quality spawning habitat in this reach. NMFS recommends habitat maintenance activities be implemented in the restored reach of North Fork Pacheco Creek. These could include, but are not limited to, vegetation establishment and future maintenance (e.g., floodplain sycamore alluvial wetland), riffle-pool sequences to avoid or address critical riffles or hydraulic steps that may form following settlement of the restored channel, installation of spawning gravels, and large wood placement). Please identify habitat maintenance activities that will be implemented as part of the project.

Page 2-39 and 3.6-19

- BMP BI-2 states "minimize potential impacts to salmonids by avoiding routine use of vehicles and equipment in salmonid streams between January 1 and June 15." To fully avoid or minimize potential impacts to salmonids, the use of vehicles and equipment in live streams (i.e., water present) should be avoided at all times, not just January 1 to June 15. If access to flowing channel is necessary, then Valley Water should develop temporary

dewatering plans that bypass flows around the work area and include species relocation plans. Please revise.

Page 2-48 and 3.6-21

- The text states that Valley Water will coordinate with CDFW to provide the necessary details for the salvage and relocation operations (fish and aquatic species). Please revise to include NMFS as well. Also, there is no need to have separate capture and relocation plans for separate agencies (native, unlisted species vs. ESA-listed species) since the species are typically mixed.
- Regarding federal permits for fish capture and relocation – this would be covered via the section 7 consultation and the issuance of an Incidental Take Statement for the dam's construction. A section 10(a)(1)(A) research permit would not be applicable or appropriate. Please revise.
- The anadromous fish exclusion barrier section suggests a barrier would be constructed downstream of San Felipe Lake (i.e., "would prevent anadromous fish access to San Felipe Lake and Pacheco Creek upstream during construction"). This would not be acceptable to NMFS as it would block access for steelhead to other Pajaro River tributaries unaffected by the Project (e.g., Pacheco Creek, South Fork Pacheco Creek, Cedar Creek, and the tributaries to Tequisquita Slough). This should be discussed further with NMFS and other agencies. Please revise.

Page 2-62

- S-CCC steelhead were listed as threatened under the federal ESA on August 18, 1997.[1] Please revise.

Page 2-64 (see also Page 3.20-10)

- Regarding water quality and the San Luis Low-Point issue, it is unclear from the text whether similar algae-related water quality issues would arise in the expanded Pacheco Reservoir. San Luis Reservoir and the expanded Pacheco Reservoir are in close proximity to each other, share a similar climate, have similar surrounding land uses (grazing and ranching lands) and vegetative communities (oak woodland, grasslands, and oak-savanna) and, therefore, it would seem reasonable to assume that algal blooms of similar nature could occur in the expanded reservoir. Please elaborate on the possibility of episodic harmful algal blooms in the new reservoir and measures considered to avoid or minimize these possibilities.

Page 2-85

- Please explain why the habitat storage reserve volumes differ between the Proposed Project and the other alternatives (35,000 acre-feet vs. 55,000 acre-feet). Specifically, what is the basis for the 20,000 acre-foot difference, and why would Alternative B, with a 96,000 acre-foot reservoir storage capacity, have a larger (55,000 acre-foot) habitat storage reserve than the proposed 140,000 acre-foot reservoir?

[1] https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/south-central-california-coast-steelhead

Page 3.5-114

- Valley Water should work with agencies and other local stakeholders on physical habitat restoration in Pacheco Creek to enhance floodplain inundation and sycamore alluvial woodland recruitment on floodplains and creek bank terraces. This could include construction of strategically placed secondary channels and or meander restoration.

  One additional tool that should be considered is the use of beaver dam analogs (BDAs),[2] where appropriate. These structures could be targeted for areas in Pacheco Creek (or North Fork Pacheco Creek) where increased floodplain inundation would pose little or no risk to properties (e.g., the Valley Habitat Agency property, or restored North Fork Pacheco Creek segment) or infrastructure (e.g., State Route 152 or the San Felipe Pipeline). The BDAs could be constructed from willows or other riparian species selectively harvested from the riparian zone on site. While selective harvest of riparian trees for BDAs would require coordination with resource agencies, such actions could be considered as part of the maintenance plan for the project and evaluated during the permitting process. Harvest, in this case, would mimic natural harvest by beavers and/or the loss of trees caused by flood events or channel dry-back. BDAs have been shown to enhance habitat for a host of riparian wildlife and plant species in riparian and floodplain zones by spreading water and creating physical and streamflow velocity heterogeneity.

Page 3.6-40

- The text at the bottom of the page states that a functional barrier would be installed downstream of the scour pool below the existing Pacheco Dam. This differs from the description of the anadromous fish barrier proposed on page 2-48, which would be located downstream of San Felipe Lake. As noted above, this San Felipe Lake option would not be acceptable with respect to steelhead passage to other streams unaffected by the proposed project. Please correct or clarify.

Page 3.6-41

- The text near the bottom of the page describes the potential introduction of "water quality constituents, algae, or contaminates from San Luis Reservoir…. would be less than significant impact because impacts on anadromous fish species and their habitat would not be substantial." Here it is not clear what the difference is between "constituents" and "contaminates". Please elaborate.

Page 3.6-42

- The text briefly describes the use of reduced flow releases to facilitate dry-back conditions in portions of Pacheco Creek. While NMFS is open to this concept in specific situations (critically dry years), this section of the EIR should also indicate that the Technical Advisory Committee agreed in concept to using the volume of water not released during these dry-back events for brief, high flow pulse events because it would aid in sycamore woodland recruitment and encourage channel forming processes.
- These adaptive reservoir release strategies (dry-back and higher pulse flows) for habitat enhancement should be accompanied with before and after monitoring to evaluate

[2] https://www.fs.fed.us/pnw/pubs/pnw_rp612.pdf

effectiveness at achieving desired outcomes. For example, data, including pre-project baseline, on sycamore alluvial woodland and mixed riparian extent along the creek and floodplain areas should be maintained. The results of these analyses would be used by Valley Water and the resource agencies to evaluate whether these adaptive actions should continue or be modified. For example, if channel dry-back results in the loss of steelhead but does not accomplish a reduction of willow/mixed riparian, then this activity should be re-evaluated or discontinued.

Page 3.6-43

- Regarding invasive species, please consider the impacts of invasive species that are not fish or amphibians (e.g., bullfrogs) that are the result of water transfers from San Luis Reservoir.

Page 3.6-44

- The subheading *Construction* notes the general types of impacts on anadromous fishes from constructing the new dam (changes in water quality, sound and vibration effects caused by blasting, channel restoration activities, and changes in stream flow and water temperature). However, it does not list or describe the impacts of several years of construction (6+ years) on steelhead population resiliency due to the lack of stored water for releases during the dry season that would be necessary to sustain spawning and rearing habitat in the below dam reaches of Pacheco and North Fork Pacheco creeks. Valley Water should coordinate with NMFS and CDFW on contingency plans for re-establishing/enhancing a steelhead population after construction is complete.

Page 3.6-168

- Regarding cumulative effects and mitigation with the California High-Speed Rail (HSR) Project, we strongly encourage Valley Water to collaborate with the HSR team on mitigation opportunities to maximize benefits, particularly with respect to land conservation/preservation options where larger and more contiguous easements or preservation blocks would be superior to smaller, more fragmented parcels. Furthermore, we strongly encourage Valley Water to focus their mitigation efforts in the Pajaro River watershed to greatest extent practicable.

Page 3.12-9

- The bottom paragraph suggests the surface water diversions on Corralitos and Browns creeks are part of Pajaro Valley Water Management Agency's water supply portfolio. These diversions are owned and operated by the City of Watsonville. Please correct.

Page 3.12-128

- Table 3.12-20 indicates the new reservoir would result in a change in reservoir spill (acre-feet) of -58%, -86%, -100%, -84%, and -100% for wet, above normal, below normal, dry, and critical water year types, respectively, with a long-term average of -67%. However, there is no accompanying text that articulates the environmental impacts of these reductions in both spill frequency and magnitude, particularly with respect to riparian and floodplain habitats and the species they support. NMFS considers these reductions in spill events as significant impacts. Please elaborate.

General Comment

- NMFS strongly encourages Valley Water to develop and implement a steelhead monitoring program for the Pacheco Creek watershed. This program should be developed in coordination with NMFS and CDFW.

We appreciate the opportunity to comment on the DEIR for the Pacheco Reservoir Expansion Project. We also appreciate the ongoing coordination with the resource agencies and we remain available to assist Valley Water with their continued evaluation of the Project and its potential impacts on S-CCC steelhead and their recovery in the Pajaro River Watershed. Please direct questions regarding this letter to Joel Casagrande of the NMFS North-Central Coast Office in Santa Rosa, California at (707) 575-6016, or joel.casagrande@noaa.gov.

Sincerely,

A. Ingham

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cc: e-file ARN 151416WCR2022SR00037

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