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September 8, 2022

SENT VIA EMAIL
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WIFIA Program
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**RE: Santa Clara Valley Water District's WIFIA Application for the New
Pacheco Dam**

Dear Ms. Jernberg:

This letter concerns the Water Infrastructure Finance and Innovation Act (“WIFIA”) application prepared by the Santa Clara Valley Water District (“Valley Water”) for the Pacheco Reservoir Expansion Project (“Pacheco Dam” or “project”). The Stop the Pacheco Dam Project Coalition (“coalition”) is working to protect the environment, as well as working ranchlands, from the wasteful and high-risk Pacheco Dam project. The coalition is concerned that the Pacheco Dam project would be environmentally damaging and would not provide tangible water supply benefits. For the reasons described in this letter and the supporting exhibits, the coalition asks that the EPA deny Valley Water’s application for WIFIA funding.

I. BACKGROUND

On October 9, 2020, and July 14, 2021, Valley Water submitted two separate Letters of Intent (“LOI”) to the EPA’s WIFIA loan program. Both LOIs sought funding to construct a new dam upstream of the existing Pacheco Reservoir. In total, Valley Water now seeks \$1.235 billion from the WIFIA program to be committed toward a total estimated project cost of \$2.9 billion.

A. The Pacheco Dam Would Be a New Reservoir, Not an Expansion

While Valley Water has characterized the Pacheco Dam project as an expansion of an existing reservoir, it is not an expansion but a new dam. In fact, the new reservoir would be almost 25 times as large as the existing Pacheco Reservoir, would flood about 1,500 acres of private rangeland containing cultural artifacts dating back over 3,000 years as well as rare wildlife, plant and natural communities habitat, and bifurcate essential wildlife corridors. The newly proposed dam would be built 1.8 miles upstream of the existing dam, with only about 20 acres of overlap in surface area. (Exhibit 1, Map of Pacheco Dam Project.) In addition to the privately owned lands, the area proposed to be flooded also contains land protected by conservation easements, as well as a portion of Henry Coe State Park. Notably, the existing Pacheco Reservoir is not even currently permitted by the California Department of Water Resources Division of Dam Safety (“DSOD”) to store water due to damage to the spillway and risks posed to downstream communities. (Exhibit 2, DSOD Letters, December 20, 2021 and April 6, 2018 [“Due to the poor condition of the spillway at North Fork Dam, the District must continue to comply with the reservoir restriction imposed in our April 6, 2018 letter, which requires the upstream and downstream outlet controls to remain in the fully open position to maximize releases and maintain the lowest possible water surface elevation.”].)

B. Costs of the Project Continue to Rise and Funding Partners are Uncertain

The October 9, 2020 LOI requested a loan amount of \$659,710,520. (Exhibit 3, Valley Water’s 2020 LOI Application, p. 3.) At that time, Valley Water estimated the total eligible project cost to be \$1,346,348,000. (*Ibid.*) On April 6, 2021, EPA notified Valley Water that it had been selected to apply for up to \$692,969,046. (Exhibit 4, EPA Notice re: 2020 LOI.) The July 14, 2021 LOI requested an additional \$575,394,883, totaling \$1,235,105,403. During the period between the 2020 LOI and 2021 LOI, the estimated project cost nearly doubled from \$1,346,348,000 to \$2,520,623,273. (Exhibit 5, Valley Water’s 2021 LOI Application, p. 3.) The increase in cost was due to changes in the dam and spillway design. (*Id.* at 7.) On October 26, 2021, EPA notified Valley Water that it had been selected to apply for an additional \$575,394,883. (Exhibit 6, EPA Notice re: 2021 LOI.)

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On April 29, 2022, Valley Water submitted its WIFIA application. The application puts the total cost of the Pacheco Dam project at \$2,957,771,954. The application also requests the EPA increase the loan amount to \$1,449,308,257, which is \$200 million more than what was requested in the 2020 and 2021 LOIs.

Further, Valley Water has been unable to obtain additional funding partners. In the 2021 LOI, Valley Water stated that it has “actively sought partnerships with local agencies such as San Benito County Water District (“SBCWD”) and the Pacheco Pass Water District (“PPWD”), and state and federal agencies such as the California Water Commission and the US Department of the Interior.” (Exhibit 5, Valley Water’s 2021 LOI Application, p. 22.) Currently, the project has obtained roughly \$500 million in potential funding from the California Water Commission’s (“CWC”) Proposition 1 Water Storage Investment Program (“WSIP”). However, this amount assumes Valley Water is able to meet all the WSIP technical requirements, including an individual contract with the California Department of Fish and Wildlife (“CDFW”); Valley Water has not yet met these requirements thus making WSIP funding speculative at this time.

A \$1.235 billion WIFIA loan would increase potential funding to roughly \$2 billion, including the WSIP funds through CWC. Therefore, Valley Water would still need to fund an additional billion dollars. In its recently released Fiscal Year 2023-2027 Capital Improvement Program, the only “partnership reimbursement” for Pacheco Reservoir is the CWC. (Exhibit 7, Valley Water’s FY 23-27 Capital Improvement Program, p. VII-1.) Thus, it appears that Valley Water would need to fund the remaining billion dollars with conventional infrastructure bonds at market rates.

Additionally, Valley Water’s WIFA application includes a request for an additional \$500 million, which amount was not included in its initial LOIs for unrelated projects. Although the original two LOIs requested funding solely for the Pacheco Dam project, the WIFIA application added Anderson Dam Seismic Retrofit, Coyote Creek Stream Augmentation and Fish Protection/Chillers and Coyote Percolation Dam Replacement. The application adds these projects and also breaks down costs into separate phases. It appears that Valley Water assumes it may put these other funding requests into its application before it submits LOIs for these separate projects. This appears to conflict with the processes provided by the WIFIA program and indicates that Valley Water may not itself believe in the feasibility of the Pacheco Dam project.

II. VALLEY WATER IS ATTEMPTING TO IMPROPERLY CIRCUMVENT NEPA AND HAS FAILED TO OBTAIN A NEPA LEAD AGENCY

A. A Categorical Exclusion Is Not Available for the Planning Portion of Potential WIFIA Funds

In an email discussion between EPA and Valley Water, EPA staff suggested that a NEPA Categorical Exclusion be used for Loan #1 because it would not include construction. The email states, “On that last point re NEPA, we’ll just be doing a Categorical Exclusion for the first loan since there’s no actual construction but since NEPA is going to take a long time for the second loan having an application that reflects more of the construction piece will help support us beginning work on it.” (Exhibit 8, Email Thread re: Water Reliability Project, May 2022.) A Categorical Exclusion from NEPA may not be relied upon for Loan #1. As explained below, segmenting the NEPA review process violates the statute. Further, Loan #1 would fund several separate projects, none of which merit a Categorical Exclusion.

Council on Environmental Quality (“CEQ”) regulations address piecemealing. These regulations prevent a piecemeal approach that would divide a “project into multiple actions, each of which individually has an insignificant environmental impact, but which collectively have a substantial impact.” (*Thomas v. Peterson* (9th Cir. 1985) 753 F.2d 754, 758.) The CEQ defines “connected actions” as actions that:

- i. Automatically trigger other actions which may require environmental impact statements.
- ii. Cannot or will not proceed unless other actions are taken previously or simultaneously.
- iii. Are interdependent parts of a larger action and depend on the larger action for their justification.

(40 C.F.R. § 1508.25(a)(1) (1984).)¹

The Pacheco Dam project falls squarely under both subsections ii and iii of title 42 of the Code of Federal Regulations, part 1508.25(a)(1). The construction aspect of the project would not proceed without the planning and design portion of the project. Second, the sole purpose of the planning and design stages of the project is to construct the dam and operate the reservoir. Therefore, the scope of the action includes planning,

¹ See also *Hammond v. Norton* (D.C. Cir. 2005) 370 F.Supp.2d 226, 247.

design, construction, and operation, none of which should be evaluated under a separate NEPA process.

Additionally, public policy mandates against splitting funds for separate phases. Valley Water is asking the EPA to loan money for a high-risk, high-cost, and high environmental impact project that was called into question by local, state, and federal agencies during the review of the project under the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq. [“CEQA”]). Although not explained in the WIFIA Application, it appears that the Pacheco Dam’s costs increased so much from the initial estimates that Valley Water now needs hundreds of millions more just to complete the planning and design. This comes after Valley Water has already spent more than \$80 million on its planning process only to come up with a design that was deemed *infeasible* by the California DSOD, produced an EIR that has been roundly criticized by local, state, and federal agencies, and to date has no NEPA lead agency for the project.

B. Valley Water Has Not Begun the NEPA Process Because There Is No Federal Lead Agency

Under Section 2.7 of the WIFIA Handbook, all projects selected to apply must comply with NEPA. (Exhibit 9, WIFIA Program Handbook, p. 19.) Further, “During the project review stage, each proposed project must be assessed for its impact on the environment under the guidelines set forth by NEPA.² EPA will not obligate funds for a loan prior to completing its NEPA review.” (*Id.* at 20.) In order to circumvent EPA’s rules, Valley Water has stated it would rely on a NEPA Categorical Exclusion in order to obtain the first round of funding. However, as explained in Section II.A, Valley Water’s attempt to use a Categorical Exclusion for the planning and design of a project would violate NEPA.

The LOIs fail to provide any discussion regarding Valley Water’s plan to complete NEPA review of the project. While the NEPA process may be completed after the application is submitted, the major shortcomings in the Pacheco Reservoir Expansion Project’s Draft Environmental Impact Report (“DEIR”) call into question whether the NEPA process could be adequately completed. In fact, Valley Water does not even appear to have a plan for how it would complete the NEPA process.

² 42 U.S.C. § 4321.

EPA's DEIR comment letter raised concerns regarding NEPA compliance. EPA encouraged Valley Water to enter a joint federal and state environmental review process to "avoid redundancy, improve efficiency and interagency cooperation, and be easier for the public and applicants." (Exhibit 10, EPA Comment Letter on Pacheco Reservoir DEIR, p. 1.) In its application, Valley Water states that "Going forward, Valley Water intends to develop a joint EIR/EIS for the Pacheco Reservoir Expansion Project with a federal lead agency." (Exhibit 11, Valley Water WIFIA Application, April 29, 2022, p. 25.)

Valley Water has claimed that the NEPA process is in its early stages but has yet to identify a federal lead agency. During a public meeting in January 2022, commenters inquired about the status of the project's NEPA compliance. During that discussion, a Valley Water representative attempted to explain the status, stating: "We are in a working relationship with the Bureau of Reclamation. We reached out to them to be the lead federal agency for the NEPA process and federal permitting. They are currently reviewing the draft EIR and we are expecting comments from them for the draft EIR that will answer a lot of the questions that they need for them to make their determination."³

However, it does not appear that the Bureau of Reclamation even commented on the DEIR. Further, there is no indication that the Bureau of Reclamation has agreed to be the lead agency for NEPA review. In fact, internal EPA communications suggest that *Valley Water has requested the EPA be the lead agency.* (Exhibit 12, Email re: Environmental Review, March 9, 2022.) We request that EPA not take on the NEPA lead agency role for this project because the project does not meet the criteria for WIFIA funding.

III. VALLEY WATER'S INVITATION TO SUBMIT AN APPLICATION WAS BASED ON INACCURATE LETTERS OF INTENT

In addition to the many problems described above, Valley Water's WIFIA application should also be denied because it does not meet EPA's WIFIA loan requirements.

³ A recording of the January 13, 2022, meeting can be found at https://www.youtube.com/watch?v=jwK_t9eZfuc, visited March 08, 2022 (see 58:20 – 59:02 [answering a question regarding Pacheco Reservoir's NEPA process]).

A. Engineering Due Diligence Was Not Properly Conducted

1. *LOI Question B.1 Asks Valley Water to Provide Preliminary Design/Engineering Report or Planning Document for Each Aspect of the Project*

Valley Water asserts that multiple feasibility evaluations have been completed for the Pacheco Dam; this is incorrect as to the current version of the project. One evaluation was completed by the Bureau of Reclamation for the San Luis Reservoir Low Point Improvement Project (“SLLPIP”). The second was completed by the CWC for the WSIP funding described earlier. “These feasibility evaluations included physical benefit (e.g., acre-feet/year) quantifications, monetary benefit quantifications (e.g., \$/year), preliminary designs, and cost estimates.” (Exhibit 5, Valley Water’s 2021 LOI Application, p. 6.) However, since the completion of those feasibility evaluations, Valley Water has been informed that the project engineering design proposal evaluated in the WSIP application is infeasible. (See (Exhibit 13, DSOD Hardfill Denial Letter, November 1, 2021.)

On November 1, 2021, the DSOD responded to Valley Water’s design concept submittal regarding the hardfill dam. (Exhibit 13, DSOD Hardfill Denial Letter, November 1, 2021.) The letter states, “DSOD cannot agree with Valley Water and its consultants that hardfill dams have proven adequate performance based on the lack of documented negative performance.” (*Id.* at p. 1.) DSOD goes on to state that it identified major issues, including issues relating to the degradation of hardfill over time, which led it to reject the hardfill dam concept. (*Ibid.*) The letter also states, “The upper dam site preferred by Valley Water remains a feasible site to construct a dam, such as an earthfill dam, but this site does have noted geologic issues that will need to be addressed for any dam type.” (*Id.* at 2.) The DSOD denial further delays the project and ultimately questions the feasibility of a dam project at this site.

2. *Construction Schedule Assessment Incorrect*

a. *LOI Question B.2 Asks Valley Water to Provide Overall Project Schedule That Contains Key Milestones and Costs*

The schedule Valley Water provided to the EPA is not feasible. In the 2021 LOI, Valley Water estimated that the project would be constructed between July 2024 and September 2029. (Exhibit 5, Valley Water’s 2021 LOI Application, p. 8.) However, the DEIR states that construction would not be completed until the spring of 2032. (Exhibit

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14, Pacheco Reservoir DEIR, p. ES-8.) Based on the project's track record, the 2032 completion date is likely also completely wrong.

As discussed in more detail below, the California State Water Resources Control Board ("SWRCB") provided comments on the DEIR indicating the water rights permitting process involving SWRCB could take several years. (Exhibit 15, SWRCB DEIR Comment Letter on Pacheco Reservoir DEIR, February 15, 2022, p. 6.) Further, Valley Water still needs approval from DSOD regarding design feasibility. If DSOD eventually approves a dam configuration for the site, Valley Water may need to recirculate the environmental documents for the project to match the design approved by DSOD.

Additionally, the LOIs state that all design and planning would be completed before December 15, 2023. Therefore, Valley Water is apparently claiming that it can initiate and complete all environmental review processes in the next 18 months. However, the CEQ June 12, 2020 report illustrates the low probability of these events occurring in the timeline provided. The report found that the average EIS timeline from Notice of Intent to Record of Decision was 4.5 years. (Exhibit 16, CEQ EIS Timeline Guidance, p. 1.) As of the date of this letter, Valley Water has not published a Notice of Intent for the Pacheco Reservoir. Therefore, due to the EIS alone, the project's timeline is likely to be lengthened by several years.

Additionally, the cost of the project continues to rise. Valley Water initially estimated the cost to be \$969 million; however, due to inflation, the estimated cost rose to \$1.3 billion in 2019. (Exhibit 5, Valley Water's 2021 LOI Application, p. 7.) After conducting additional design work in 2020, Valley Water determined the cost would be closer to \$2.5 billion. (*Ibid.*) This increase was "prompted largely by changes to the dam and spillway design." (*Ibid.*) Valley Water also asserted that it could reduce project costs by pursuing a hardfill dam. As noted above, DSOD has determined that a hardfill dam is infeasible at the site. (*Id.* at 8.)

In its application materials, Valley Water now asserts the project would cost nearly \$3 billion. (Exhibit 17, Valley Water's WIFIA Application Attachment C.1.) The requested amount of \$1.235 billion in WIFIA funding alone is almost as much as the entire project was estimated to cost in 2019. The project's costs have continued to skyrocket and there is no indication that Valley Water would be able to contain future cost increases.

b. Inadequate Time Allotted for Environmental Permits and Crosscutter Compliance

In its LOI, Valley Water asserted that it would have CEQA processes completed by December 2022. (Exhibit 5, Valley Water’s 2021 LOI Application, p. 6.) This date is unlikely due to factors including the breadth and depth of environmental concerns brought forward by the public and government agencies during the public comment period as well as DSOD’s rejection of the project presented as the “proposed project” in the DEIR.

SWRCB’s DEIR comment letter also illustrates the shortcomings of Valley Water’s proposed timeline. SWRCB notes that Valley Water would be required to obtain a water rights permit and a 401 water quality certification. (Exhibit 15, SWRCB DEIR Comment Letter on Pacheco Reservoir DEIR, February 15, 2022, pp. 3-4.) The comment goes on to state that the water rights application for the project may require a water rights hearing. “A hearing may take several years to complete.” (*Id.* at p. 6.)

Additionally, Valley Water has not yet initiated consultation under the Endangered Species Act (“ESA”) with National Oceanic and Atmospheric Administration Fisheries (“NOAA” aka “NMFS”) or U.S. Fish and Wildlife Service (“USFWS”). The LOIs fail to consider the extensive amount of time it would take to obtain required permits and approvals from various state and federal agencies for a new dam built in an environmentally sensitive area that would affect multiple listed species and their habitat. Valley Water’s timeline assertions also fail to include the extensive time needed to complete both the state and federal environmental review processes. The best-case scenario is that the project’s timeline is unrealistic; the worst-case scenario calls into question the likelihood of the project making it through permitting at all.

B. The Project Would Not Address Several Factors Presented in the LOIs and Would Create Significant Adverse Impacts

As explained herein, the Pacheco Dam project would do more to harm the environment and fails to provide water reliability benefits. In addition, Valley Water’s DEIR to the Pacheco Reservoir Expansion Project brought to light numerous shortcomings of the project. Unsurprisingly, EPA staff has also questioned the appropriateness of the project for the WIFIA program. For instance, EPA’s former Region 8 NEPA Branch Chief, Philip Strobel, expressed concern regarding the Pacheco Dam project’s significant adverse impacts being a good fit for WIFIA funding. (Exhibit 18, Email Thread from Philip Strobel, January 2022.) Mr. Strobel stated, “I have

concerns with WIFIA being used for projects with significant adverse impacts when there are so many communities with infrastructure needs that could be met while providing overwhelming health and environmental benefits, and without significant adverse effects.” (*Ibid.*)

Mr. Strobel also noted that EPA commented on the Pacheco Dam DEIR. Although the EPA no longer uses the Rating System Criteria for EISs, Mr. Strobel’s email states, “R9 sent a comment letter that to me looks pretty close to a ‘3’ letter.” (*Ibid.*) During the time period that EPA used the 1, 2, 3 rating system for EISs, 3 indicated that an EIS is inadequate. A “3” rating “indicates EPA’s belief that the draft EIS does not meet the purposes of NEPA and/or the Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS.”⁴ Although the EPA’s comment was to a DEIR rather than a DEIS, EPA’s letter describes several of the DEIR’s deficiencies. Several other federal and state agencies also made comments that the DEIR was inadequate, and Valley Water has yet to address basic environmental issues.

As Mr. Strobel noted, there are numerous other projects in communities that need infrastructure that would provide “overwhelming health and environmental benefits, and without significant adverse effects.” (Exhibit 18, Email Thread from Philip Strobel, January 2022.) The Pacheco Dam is not one of those projects. Pacheco Dam would significantly damage the environment while providing questionable water supply benefits to Valley Water customers. As identified by EPA staff, this is not a project that American taxpayer dollars should help fund with low-interest loans.

1. *The Project Would Not Address Water Quality Concerns*

LOI question 18 asks whether the project is designed to maintain compliance, and Valley Water answered “yes.” (Exhibit 5, Valley Water’s 2021 LOI Application, p. 35.) Valley Water stated that “algae, mercury, and other contaminants may create water quality compliance challenges for SCVWD. To protect human health, new water quality regulations may be introduced. Once the Project is completed SCVWD will be able to switch to Pacheco Reservoir supplies if algae-bloom or other acute water quality conditions occur, including in San Luis Reservoir.” (*Ibid.*)

⁴ <https://www.epa.gov/nepa/environmental-impact-statement-rating-system-criteria#:~:text=EPA%20rates%20the%20draft%20EIS,for%20improving%20the%20draft%20EIS.>

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Valley Water is referring to a low point problem that occurs at San Luis Reservoir, which causes algal blooms. The low point occurs when the reservoir drops below 369 feet above mean sea level; at that time, an algal bloom occurs and negatively impacts the water quality. (Exhibit 19, SLLPIP EIR, pp. ES-1-2.) This occurs because “high temperatures and declining water levels in San Luis Reservoir create conditions that foster algae growth.” (*Id.* at ES-1.) Although the proposed Pacheco Reservoir is less than 10 miles from San Luis Reservoir and contains similar weather and topography, the LOIs and the DEIR fail to discuss the possibility of algal blooms also occurring at the proposed Pacheco Dam. Instead, Valley Water claims that “The expansion of Pacheco Reservoir will allow both SCVWD and SBCWD to avoid the water quality impacts of algal growth in San Luis Reservoir.” (Exhibit 5, Valley Water’s 2021 LOI Application, p. 35.)

NMFS, in its DEIR comment, voiced concern about the lack of analysis regarding potential algal blooms:

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...and, therefore, it would seem reasonable to assume that algal blooms of similar nature could occur in the expanded reservoir.

(Exhibit 20, NMFS DEIR Comment Letter on Pacheco Reservoir DEIR, February 14, 2022, p. 4.)

The EPA also commented on this issue:

Although it is not thoroughly discussed, the EPA is concerned that cyanobacteria from the San Luis reservoir that is released into the Pacheco reservoir via the new conduit may further inoculate both the events, Valley Water would generally reduce the amount of CVP water delivered from San Luis Reservoir and increase withdrawals from the expanded reservoir into the Pacheco Conduit. It is not clear, however, whether the blending of

natural inflow with supplemental CVP water from San Luis Reservoir will improve water quality or serve to further degrade it.

(Exhibit 10, EPA Comment Letter on Pacheco Reservoir DEIR, p. 4.)

The omission of algal bloom analysis in the DEIR was also raised by two California state agencies. CDFW recommended that:

[T]he EIR include a more detailed discussion of potential sources of HABs and include an analysis of their potential occurrences in the Proposed Project area. Additionally, CDFW recommends that the EIR acknowledge there is a relationship between HABs and aquatic vegetation and that it is a knowledge gap of concern that may need to be addressed through future adaptive management.

(Exhibit 21, CDFW DEIR Comment Letter on Pacheco Reservoir DEIR, February 11, 2022, p. 19.) Additionally, the SWRCB requested that Valley Water provide additional information about the current cyanobacteria blooms at the reservoir, the time periods, and durations at which they occur, and provide an analysis for potential cyanobacteria blooms at the new reservoir. (Exhibit 15, DEIR Comment Letter on Pacheco Reservoir DEIR, February 15, 2022, pp. 18-19.)

Both LOIs ignore this possibility. Instead, Valley Water suggests that building the Pacheco Dam would alleviate the water quality problem by pumping water from San Luis Reservoir to the new Pacheco Reservoir. This assertion is not supported by facts and fails to address the likelihood that algal blooms would also occur in the new reservoir.

2. Valley Water's Assertion That the Project Would Address Water Quantity Concerns Is Misleading

Currently, the majority of Valley Water's other reservoirs are nearly empty. Valley Water's September 2022 Water Tracker newsletter shows all Valley Water reservoirs are at 19% capacity.⁵ Even omitting data from Anderson Reservoir, which is being repaired, all reservoirs are only at 36%. Thus, Valley Water is currently using less than half its storage capacity. Therefore, if levels at other reservoirs are this low and there is a low

⁵ <https://s3.us-west-1.amazonaws.com/valleywater.org.us-west-1/s3fs-public/2022-09/Water%20Tracker%20September%202022.pdf>, last visited September 7, 2022.

point problem at the San Luis Reservoir, this begs the question of whether a new Pacheco Reservoir would sit half empty, similar to Valley Water's other reservoirs.

Additionally, the size of a given reservoir does not guarantee water availability. At full pool, the reservoir would inundate roughly 1,367 acres and contain 140,000 acre-feet of water. But the reservoir could only be filled when water is available from Valley Water's San Luis Reservoir storage, or when there are flows in Pacheco Creek. Notably, inflow from Pacheco Creek can be as low as 50 acre-feet in the driest years. According to the DEIR, the project (storage *potential* of 140,000 acre-feet) would only increase the *baseline water supply by an average of 3,600 acre-feet*. (Exhibit 14, Pacheco Reservoir DEIR, p. 2-60.) The long-term average evaporation would be over 5,500 acre-feet per year. (*Id.* at p. 3.12-128.) Therefore, on average, the reservoir would lose more to evaporation than it would provide to water users. There are numerous other water projects that better address water quantity and quality issues on the West Coast.

3. *Other Environmental Concerns Make WIFIA Funding Improper*

a. *The Project Would Damage a State Park and other Publicly Funded Conservation Lands*

The project would inundate a portion of Henry Coe State Park, contrary to California law. California Public Resources Code section 5019.53 states that each state park shall be restored, protected, and maintained in a manner that is consistent with the primary purpose of the park. Flooding the land is a failure to maintain the park in its natural state. The statute also addresses improvements in state parks. "Improvements undertaken within state parks shall be for the purpose of making the areas available for public enjoyment and education in a manner consistent with the preservation of natural, scenic, cultural, and ecological values for present and future generations." (Pub. Resources Code, § 5019.53.) These types of improvements are allowed "so long as those improvements involve no major modification of lands, forests, or waters." (*Ibid.*) Valley Water intends to modify lands, forests, and water, and do so without regard for the natural value of the park.

b. *Construction Impacts on Steelhead are Unaddressed*

According to Valley Water, one of the main goals of the project is to provide steelhead habitat, however, the benefits to steelhead are grossly exaggerated while impacts to steelhead are minimized. As explained above, Valley Water has yet to initiate consultation with NMFS regarding the endangered steelhead the project would impact.

NMFS and EPA both voiced concerns regarding the lack of analysis of construction impacts on anadromous fish. NMFS stated the DEIR “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.” (Exhibit 20, NMFS DEIR Comment Letter on Pacheco Reservoir DEIR, February 14, 2022, p. 6.) EPA echoed this same point stating, “Although the proposed project would increase the capacity to store water in wet years for groundwater recharge, its 6 – 8-year construction timeframe would have significant direct impacts on the ability of the system to recharge groundwater, provide suitable [SCCC] steelhead habitat, or improve water quality.” (Exhibit 10, EPA Comment Letter on Pacheco Reservoir DEIR, p. 3.)

Not only do these comments speak to the inadequate analysis contained in the DEIR, but also to the inaccurate assertions that the project would benefit steelhead. Valley Water must address these concerns in the final EIR and during consultation with NMFS, however, at this time Valley Water has failed to indicate that it has a solution to the problem.

c. The Dam Project Would Not Reduce GHG Emissions

Valley Water asserts the project “would minimize operational energy requirements, and thereby minimize GHG emissions, associated with development of water supplies to meet future water supply needs.” (Exhibit 5, Valley Water’s 2021 LOI Application, p. 26.) Valley Water goes on to identify possible energy use reductions the project may provide. However, neither the LOIs nor the DEIR analyzes the increase in GHG emissions that would occur from the reservoir itself.

Several recent studies have shown that large reservoirs emit much larger amounts of GHGs than scientists previously believed.⁶ Valley Water failed to properly discuss this issue in the DEIR and omits it from its WIFIA documents. Without calculating GHG emissions from reservoir off-gassing the determination that the project would reduce GHG emissions is unfounded. (Exhibit 5, Valley Water’s 2021 LOI Application, p. 26.)

⁶ <https://academic.oup.com/bioscience/article/66/11/949/2754271> (cited in DEIR); <https://www.sciencedaily.com/releases/2021/06/210601100642.htm#:~:text=Overall%2C%20the%20researchers%20found%20the,1.07%20gigatons%20of%20carbon%20dioxide>

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IV. CONCLUSION

There are numerous projects across California and the United States that would provide the water infrastructure benefits that the WIFIA program was designed to support, but the Pacheco Dam is not one of those projects. The environmental impacts would be devastating, the cost continues to rise, and there is a high likelihood that this controversial new dam would never reach the construction phase. Further, Valley Water's LOIs provide demonstrably false information, and several integral facts have changed since the submission of the LOIs. EPA should consider this current up-to-date information when evaluating Valley Water's application.

We urge the EPA not to loan Valley Water the funds requested in its WIFIA application and to instead provide the \$1.2 billion in requested WIFIA funds to broadly supported projects that more responsibly address the water needs of this country.

Very truly yours,

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By: 

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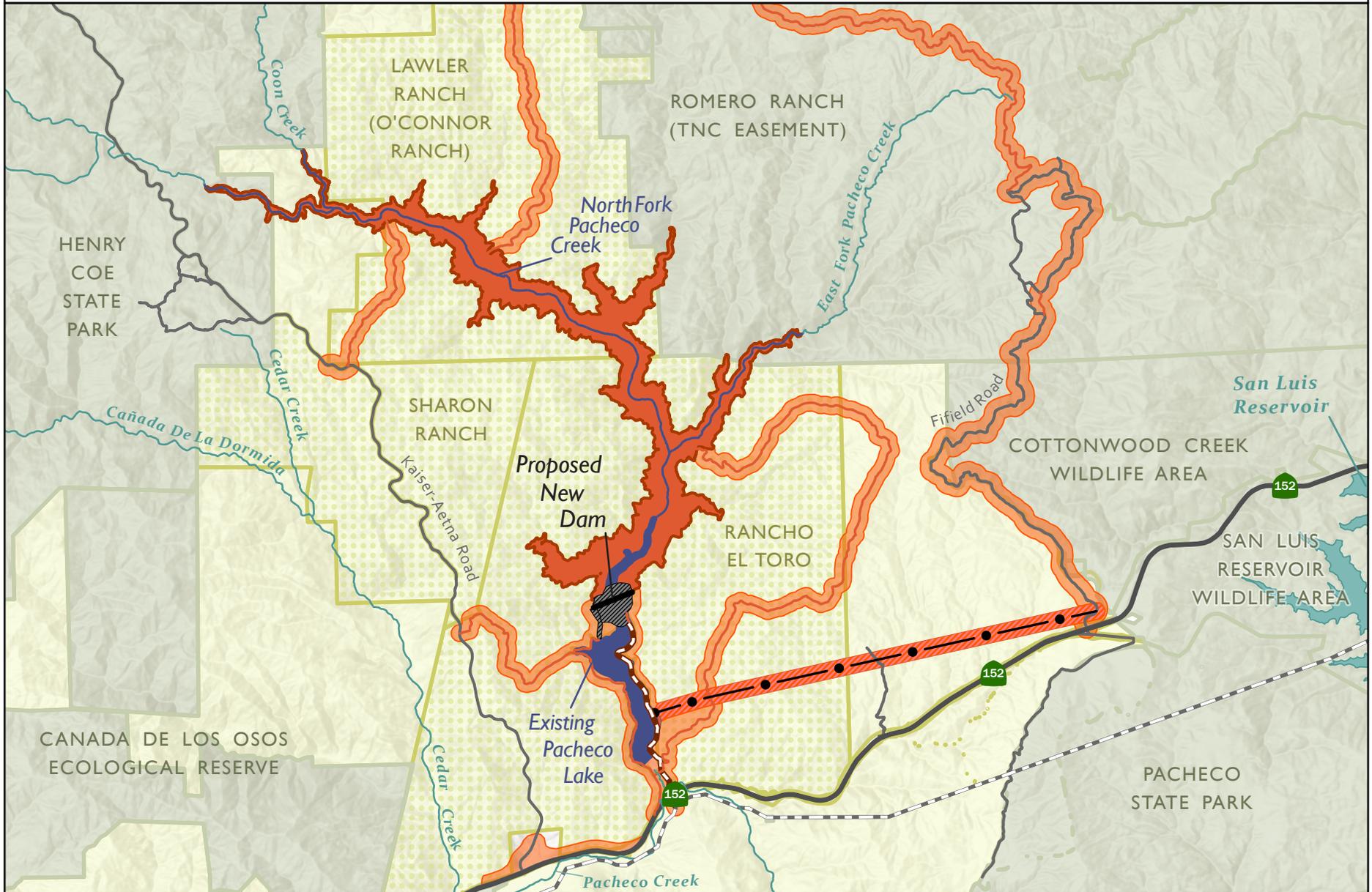
Jorianne Jernberg
Director, WIFIA Management Division
U.S. Environmental Protection Agency
September 8, 2022
Page 16 of 16

Attachments:

<u>Exhibit 1</u>	Map of Pacheco Dam Project
<u>Exhibit 2</u>	DSOD Letters, December 20, 2021 and April 6, 2018
<u>Exhibit 3</u>	Valley Water's 2020 LOI Application (Excerpt)
<u>Exhibit 4</u>	EPA Notice re: 2020 LOI
<u>Exhibit 5</u>	Valley Water's 2021 LOI Application
<u>Exhibit 6</u>	EPA Notice re: 2021 LOI
<u>Exhibit 7</u>	Valley Water's FY 23-27 Capital Improvement Program (Excerpt)
<u>Exhibit 8</u>	Email Thread re: Water Reliability Project, May 2022
<u>Exhibit 9</u>	WIFIA Program Handbook (Excerpt)
<u>Exhibit 10</u>	EPA DEIR Comment Letter on Pacheco Reservoir DEIR
<u>Exhibit 11</u>	Valley Water WIFIA Application, April 29, 2022 (Excerpt)
<u>Exhibit 12</u>	Email re: Environmental Review, March 9, 2022
<u>Exhibit 13</u>	DSOD Hardfill Denial Letter, November 1, 2021
<u>Exhibit 14</u>	Pacheco Reservoir DEIR (Excerpts)
<u>Exhibit 15</u>	SWRCB DEIR Comment Letter on Pacheco Reservoir DEIR, February 15, 2022
<u>Exhibit 16</u>	CEQ EIS Timeline Guidance
<u>Exhibit 17</u>	Valley Water's WIFIA Application Attachment C.1
<u>Exhibit 18</u>	Email Thread from Philip Strobel, January 2022
<u>Exhibit 19</u>	SLLPIP EIR (Excerpts)
<u>Exhibit 20</u>	NMFS DEIR Comment Letter on Pacheco Reservoir DEIR, February 14, 2022
<u>Exhibit 21</u>	CDFW DEIR Comment Letter on Pacheco Reservoir DEIR, February 11, 2022

EXHIBIT 1

PROPOSED PACHECO DAM IMPACT AREA



STOP
THE
PACHECO DAM
PROJECT
Protect Pacheco and the Environment

StopPachecoDam.org

- Waterway
- Impacted waterway
- Pacheco conduit
- Existing road
- New pipeline
- New road construction
- New power line
- Protected lands
- Williamson Act ranchlands
- New inundation area
- Power line construction area
- Road construction area

0 0.5 1 1.5 Miles

Projection: NAD83 UTM Zone10N
Parcel Data: Santa Clara County (2021)
State Lands: gis.data.ca.gov (2019)
Terrain: Esri, NASA, NGA, USGS, FEMA
Locations approximate
Prepared Feb 2022 by Valley Spatial

EXHIBIT 2

DEPARTMENT OF WATER RESOURCES

P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



December 20, 2021

Mr. Steve Lindsay, President
Pacheco Pass Water District
Post Office Box 1382
Hollister, California 95023

North Fork Dam, No. 77
Santa Clara County

Dear Mr. Lindsay:

This is to inform the Pacheco Pass Water District (District) that the Division of Safety of Dams (DSOD) has completed an independent assessment of the spillway at North Fork Dam consisting of a file review and visual inspection. DSOD conducted this review given the risk posed by the unmitigated failure of a section of the left spillway wall and the urgent need to evaluate the remainder of the structure for additional deficiencies. The left wall section failed in January 2017 and has not been mitigated despite DSOD's April 5, 2017 and April 6, 2018 letters ordering its repair.

Based on DSOD's review and inspection, the spillway is vulnerable to failure during future storms or landslide events due to its lack of maintenance, design deficiencies, and history of failures. Therefore, we conclude that the spillway must be replaced with one meeting modern design standards. This new spillway must be completed by December 31, 2032, which will allow for the District to budget and secure the necessary funding for the design and construction.

DSOD is aware that the District is working to secure external funding to construct a partial-height wall, which we approved in a May 7, 2020 letter as an interim repair to the failed left wall section. We also understand the District expects to receive the external funding and are on track to complete the interim repairs by July 2023. Please keep DSOD apprised on construction schedules. The completion of the interim repairs does not change the District's obligation to construct a new spillway by December 31, 2032.

No earthwork activities shall proceed along and upslope of the left spillway walls without DSOD review and approval. Such work poses a risk of reactivating historic landslides in the left hillslope that could block the spillway [REDACTED]

Due to the poor condition of the spillway at North Fork Dam, the District must continue to comply with the reservoir restriction imposed in our April 6, 2018 letter, which requires the upstream and downstream outlet controls to remain in the fully open position to maximize releases and maintain the lowest possible water surface elevation. In addition, the District must perform daily inspections if the spillway is in use due to a storm event, and any change in conditions must be reported to DSOD immediately.

Mr. Lindsay
December 20, 2021
Page 2

In the interest of dam safety, DSOD is committed to working closely with the District toward addressing the spillway deficiency at North Fork Dam. If you have any questions or need additional information, you may contact Area Engineer Austin Roundtree at (916) 565-7822 or Regional Engineer Melissa Collord at (916) 565-7820.

Sincerely,

Shawn Jones for

Sharon K. Tapia, P.E.
Division Manager
Division of Safety of Dams

cc: Mr. Casey Meredith, Chief
Dam Safety Planning Division
California Governor's Office of Emergency Services
3650 Schriever Avenue
Mather, California 95655

Mr. Jeff Cattaneo, District Manager
San Benito County Water District
Post Office Box 889
Hollister, California 95024

Mr. Christopher Hakes, Deputy Operating Officer
Dam Safety and Capital Delivery
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3686



SCVWD Pacheco Reservoir Expansion Project Supplemental WIFIA LOI

Title: California Division of Dam Safety
Letters 2017 and 2018

File Name: C17a_4.2018_Div_Dam_Safety_Ltr

Description: 2017 and 2018 Letters from
California Department of Water Resources,
Division of Safety of Dams regarding existing
North Fork Dam dam safety issues

July 2021

APR - 5 2017

Mr. Frank O'Connell, President
Pacheco Pass Water District
Post Office Box 1382
Hollister, California 95023

North Fork Dam, No. 77
Santa Clara County

Dear Mr. O'Connell:

This letter is in response to the incident involving the failure of the temporary repairs to the left spillway wall. The failed section involves four wall panels, having an approximate length of 80 feet and starting approximately 170 feet downstream of the beginning of the left spillway wall. Upon being informed of the incident on January 20, 2017 by Mr. Jeff Cattaneo with the San Benito County Water District, Area Engineer William Vogler, Design Engineer Melissa Collord, and Senior Engineering Geologist Robert Burns inspected the dam on the same day.

The Division's inspection team determined that since the failed left wall section was located away and off the dam, it does not pose an immediate dam safety issue. However, repairs must be completed in a timely manner to prevent deterioration and failure of additional wall panels that could block the spillway or render it inoperable.

Mr. Vogler restricted the reservoir to Elevation 469.00, which is 2.0 feet below the spillway crest. This directive was made in accordance with Division 3, Part 1, Chapter 4, Section 6111 of the California Water Code (CWC). Mr. Vogler also requested that the outlet be fully opened whenever the reservoir level is at or above the restricted level, and the dam be inspected daily if the spillway is in-use, and at least three times a day if the reservoir level is at or above Elevation 473.00 or two-feet above the spillway crest. Mr. Vogler requested that any change in conditions be reported immediately to the Division.

The instability of the left spillway wall panels is a long-standing dam safety issue that dates back to the 1940s, and multiple repairs and failures have occurred. A repair application was filed on June 24, 1999, and approved on October 4, 2001, for a long-term repair; however, this work was never completed due to reported funding issues. The Pacheco Pass Water District's (District) progress towards addressing the dam's spillway deficiency with a long-term permanent repair has been unacceptable.

Therefore, in accordance with Section 6081 of the CWC, THE DISTRICT IS HEREBY ORDERED to complete temporary short-term repairs to the spillway by October 1, 2017. In addition, THE DISTRICT IS HEREBY ORDERED to complete a permanent long-term repair by October 1, 2020.

SURNAME
DWR 155 (Rev 7/11)

<i>Manning and for M. Collord 4/4/17</i>	<i>W. Vogler 4/4/17</i>	<i>W. Vogler 4/4/17</i>	<i>Robert A. Burns 4/5/17</i>
<i>N. Wagner 4/4/17</i>	<i>W. Vogler 4/4/17</i>	<i>W. Vogler 4/4/17</i>	<i>Christina 4/5/17</i>

Mr. Frank O'Connell
APR - 5 2017
Page 2

Submit a repair plan for a short-term repair for our review and approval by June 1, 2017, so construction work can be completed by October 1, 2017. No work may be done without our prior approval.

For the long-term repair, a new repair application will be required. A condition assessment of the entire spillway, including any necessary investigation and exploration, must be incorporated into the design phase for the work. All necessary improvements must be included in the repair work. A new repair application, updated plans and specifications, and a filing fee must be submitted by January 2, 2019, to ensure all construction work is completed by October 1, 2020. The application work must be done under the direction of a civil engineer registered in the State of California.

Until permanent repairs are completed to the left spillway wall, the reservoir level shall remain at or below the restricted level of Elevation 469.00. Whenever the reservoir exceeds the restricted level, the low-level outlet must be fully opened to maximize releases. In addition, if the spillway is in-use, it must be inspected daily, and any change in conditions must be reported to us immediately.

If satisfactory progress is not made toward addressing the North Fork Dam's spillway deficiency, further restrictions will be imposed, or the Certificate of Approval to store water may be revoked in accordance with Division 3, Part 1, Chapter 4, Section 6357.1 of the CWC.

If you have any questions or require additional information, please contact Mr. Vogler at (916) 227-4625 or Regional Engineer Andrew Mangney at (916) 227-4631.

Sincerely,

**Original Signed by
Sharon K. Tapia for**

Sharon K. Tapia, Chief
Division of Safety of Dams

Enclosure
Certified Mail

cc: (See attached list.)

WfVogler:TGlorioso
North Fork Dam.doc
Spell Check 4/4/17

cc: Mr. Scott Morgan, Staff Counsel
Office of the Chief Counsel
Department of Water Resources
1416 Ninth Street, Room 1118
Sacramento, California 95814

Mr. Jeff Cattaneo, District Manager
San Benito County Water District
Post Office Box 889
Hollister, California 95024-0899

Mr. James Fiedler, Chief Operating Officer
Water Utility Enterprise
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3686

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



APR 06 2018

SECOND NOTICE REGARDING NECESSARY REPAIRS

Mr. Frank O'Connell, President
Pacheco Pass Water District
Post Office Box 1382
Hollister, California 95023

North Fork Dam, No. 77
Santa Clara County

Dear Mr. O'Connell:

This is a follow-up to our letter dated April 5, 2017, regarding the necessary repairs to the failed left spillway wall panels at North Fork Dam. On November 6, 2017, Area Engineer Austin Roundtree inspected the dam, and noted that no progress has been made toward the required spillway repairs. Additionally, none of the required maintenance work noted in past inspection reports and letters has been completed, which is unacceptable. For your reference, Mr. Roundtree's latest inspection report is attached, which documents his observations, conclusions, and recommendations regarding the safety of the dam.

A fully functional spillway is essential to the safety of the dam. The spillway at North Fork Dam is used nearly every year, and failure to repair the left wall in a timely manner has created an unsafe condition at the dam. In its current condition, additional wall panels adjacent to the failed section could progressively fail and block the channel, render the spillway inoperable, and cause the dam to overtop. Therefore, we are further restricting the reservoir below the current restricted level of two feet below the spillway crest.

In accordance with Division 3, Part 1, Chapter 4, Section 6081 of the California Water Code, **THE DISTRICT IS HEREBY ORDERED** to maintain the upstream and downstream outlet controls in the fully open position in order to maximize releases and maintain the lowest possible water surface elevation. The District must perform daily inspections when the spillway is in use, and any change in conditions needs to be reported immediately. This restriction shall remain in effect until permanent repairs to the left spillway wall are completed.

In addition, **THE DISTRICT IS HEREBY ORDERED** to complete short-term interim repairs to the left spillway wall by October 1, 2018, and long-term permanent repairs by October 1, 2020. A work plan for the interim repairs was not submitted as requested in our April 5, 2017 letter, which is unacceptable. Please submit this plan no later than July 1, 2018. No repair work may be done without our prior approval.

A new repair application will be required for the long-term spillway repair, and a comprehensive condition assessment of the entire spillway must be completed. The District will need to submit for our review and approval a detailed work plan identifying all tasks needed to carry out the comprehensive condition assessment of the spillway, including any necessary investigation and exploration programs. The results of the assessment must be documented in a detailed report and all deficiencies identified as part of the assessment must be addressed and included in the repair work. The repair application, updated plans and specifications, and appropriate filing fee must be submitted by January 2, 2019, to ensure all construction work is completed by October 1, 2020. The application work must be designed and constructed under the direction of a civil engineer registered in the State of California.

Mr. Frank O'Connell

Page 2

If the District fails to comply with the orders stated in this letter and continues to make unsatisfactory progress toward addressing the spillway deficiency at North Fork Dam, the Certificate of Approval to store water will be revoked in accordance with Section 6357.1 of the CA Water Code.

During Mr. Roundtree's inspection, he noted no progress has been made toward addressing the maintenance items requested in previous inspection reports and in our January 15, 2014, and March 15, 2016 letters, and that additional work is now required. Therefore, THE DISTRICT IS HEREBY FURTHER ORDERED to complete the following items by October 1, 2018:

1. Remove all woody vegetation from the downstream face and from within five feet of the downstream groins and toe of the dam.
2. Remove all woody vegetation from the joints of the concrete-lined upstream face, and from the joints of the spillway walls and invert.
3. Seal/repair all cracks, joints, and damaged concrete in the spillway, and grind down any raised downstream panel edges.

If you have any questions or require additional information, contact Mr. Roundtree at (916) 227-4625 or Regional Engineer Melissa Collord at (916) 227-4631.

Sincerely,



Sharon K. Tapia, Chief
Division of Safety of Dams

Enclosure
Certified Mail

cc: (See attached list.)

cc: Ms. Robin Brewer, Assistant Chief Counsel
Office of the Chief Counsel
Department of Water Resources
1416 Ninth Street, Room 1118
Sacramento, California 95814

Ms. Lori Newquist, Coordinator
California Office of Emergency Services
Hazard Mitigation
3650 Schriever Avenue
Mather, California 95655

Mr. Jeff Cattaneo, District Manager
San Benito County Water District
Post Office Box 889
Hollister, California 95024

Ms. Katherine Oven, Deputy Operating Officer
Water Utility Capital Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118-3686

EXHIBIT 3



LETTER OF INTEREST

Provide the following information in this form or as narrative answers. Narrative answers can reference source documents (include the name of the document and relevant pages or sections). Provide any referenced documents as attachments.

Section A: Key Loan Information

1. Legal name of prospective borrower:

Santa Clara Valley Water District (SCVWD) acting through the Santa Clara Valley Water District Public Facilities Financing Corporation (a nonprofit public-benefit corporation formed to provide assistance to the SCVWD in financing the acquisition, construction, and improvement of public works for the SCVWD)

2. Other names under which the prospective borrower does business:

Santa Clara Valley Water District (SCVWD)

3. Project name (*assign a short name to the project for purposes of identification*):

Pacheco Reservoir Expansion Project (Project)

4. Provide a brief description of the project(s) seeking financing. Limit the description to the elements included in the estimated total projects costs in Question A-7. (Word Limit: 300).

The Pacheco Reservoir Expansion Project will mitigate against drought, provide emergency water supplies, and reduce aquifer depletion and flooding. The Project includes expansion of Pacheco Reservoir through construction and operation of a new dam, pump station, conveyance facilities, and related infrastructure (e.g., access roads). The new dam would be constructed on Pacheco Creek, upstream from the existing North Fork Dam, and would inundate most of the existing Pacheco Reservoir. The proposed total storage for the expanded reservoir is 140 thousand acre-feet (TAF). Water will be collected behind the new dam during the winter months from runoff from the local watershed area and Central Valley Project (CVP) supplies from Pacheco Conduit will be diverted when needed. SCVWD will construct, own, and operate the reservoir and associated regional facilities.

The Project would include: an expanded reservoir with a total active storage capacity of 140 TAF; a new earth-fill dam and open channel spillway structure; new pipelines and tunnels connecting the new reservoir to the Pacheco Conduit; a new pump station; removal of the existing dam and associated channel restoration; access improvements; and associated utility improvements and relocations.



The Project sits north of Highway 152 and is located approximately 60 miles southeast of San Jose, California.

In recent years, SCVWD and its partners have invested significant resources in evaluating alternatives and assessing the feasibility of Pacheco Reservoir expansion. These efforts have resulted in a viable plan to secure necessary environmental permits and progress efficiently through final design, construction mobilization, and construction.

5. Describe the project's or projects' purpose(s) (including quantitative or qualitative details on public benefits the project will achieve). If the loan contains more than one project, the projects must serve a common purpose. Describe the common purpose that the projects share (i.e. addressing sanitary sewer overflows or improving drinking water quality). (Word limit: 300).

The Project seeks to fulfill significant water-resource needs and opportunities in five resource areas. Project objectives are:

- Increase water supply reliability to help meet municipal and industrial (M&I) water demands in Santa Clara County during drought periods and emergencies, or to address shortages due to regulatory and environmental restrictions.
- Develop water supplies for environmental water needs at wildlife refuges, to support habitat management in the Sacramento-San Joaquin Delta watershed.
- Increase suitable habitat in Pacheco Creek for federally threatened South-Central California Coast (SCCC) steelhead.
- Reduce flood risks along Pacheco Creek and downstream areas, including in disadvantaged communities.
- Improve water quality and minimize supply interruptions, when water is needed for San Felipe Division contractors, and increase operational flexibility for south-of-Delta contractors that are dependent on San Luis Reservoir.

In total, the Project will expand the reservoir's capacity to supply enough water to 1.4 million residents each year.

Recognized as the most effective and economical means to achieve critical benefits, the Project has attracted many supporters, including the California Water Commission (CWC) and the U.S. Department of Interior, Bureau of Reclamation (Reclamation) (Attachments *A5a_CWC_DeterminationsPacheco*, *A5b_WSIP_Letters_of_Support*, *A5c_SLLPIP_ES*, and *A5d_2021_WIIN_Act_Funding_Recs*). Agency partners, San Benito County Water District (SBCWD) and the Pacheco Pass Water District (PPWD), signed a memorandum of understanding to advance the Project and deliver important environmental and water supply benefits to the region (Attachment *A5e_SCVWD_SBCWD_PPWD_MOU*).

Quantitative and qualitative benefits of the project have been defined in both SCVWD's CWC Water Storage Investment Program (WSIP) application and Reclamation's San Luis Low Point



Improvement Project (SLLPIP) Feasibility Report. Additional information regarding these studies is presented in Attachments *A5f_WSIP_Benefits_App5* and *A5g_SLLPIP_FR_AppE*.

Attachments:

- *A5a_CWC_DeterminationsPacheco*
- *A5b_WSIP_Letters_of_Support*
- *A5c_SLLPIP_ES*
- *A5d_2021_WIIN_Act_Funding_Recs*
- *A5e_SCVWD_SBCWD_PPWD_MOU*
- *A5f_WSIP_Benefits_App5*
- *A5g_SLLPIP_FR_AppE*

6. Requested amount of the WIFIA loan (in dollars). This amount may be no more than 49% of the estimated eligible project costs provided in question A-7:

\$659,710,520

SCVWD is open to negotiating the final amount of the WIFIA loan. SCVWD is also willing to consider executing a Master Credit Agreement with EPA to fund the project through multiple WIFIA loan issuances.

7. Estimated total eligible project costs (in dollars):

\$ 1,346,348,000 (Note: It is anticipated that final eligible project costs may vary from this amount and SCVWD will discuss material updates with the EPA in the future, to realign funding needs.)

8. Identify the month and year the prospective borrower will submit an application. (Assume invitations to apply will be issued approximately 90 days from letter interest submission deadline).

September 2021

9. Identify the month and year the prospective borrower wants to close its WIFIA loan.

December 2022

SCVWD would like to close earlier than this date if possible. If an environmental determination is made prior to December 2022, SCVWD would be willing to close earlier. Also, if a first WIFIA loan issuance only covers Project planning and design costs (not construction), CEQA completion is not required by SCVWD prior to loan execution.

California Environmental Quality Act (CEQA) completion is planned for December 2022. To date, several environmental reviews of the Project have been completed, including the EPA review of the Draft SLLPIP Environmental Impact Statement/Environmental Impact Report (EIS/EIR).

EXHIBIT 4



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

April 6, 2021

Mr. Melih Ozbilgin
Senior Water Resources Specialist
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Subject: Santa Clara Valley Water District Selection Notification

Dear Mr. Ozbilgin,

Thank you for submitting your Water Infrastructure Finance and Innovation Act (WIFIA) letter of interest for the FY 2020 Selection Round. We are very pleased to inform you that the Pacheco Reservoir Expansion Project has been moved off the waitlist and selected to submit an application for credit assistance for up to \$692,696,046 or not to exceed 49 percent of total eligible project costs.

We will soon be reaching out to you to schedule a pre-application meeting to discuss the WIFIA underwriting process in greater detail. Brian Jefferis will be the primary point of contact for this transaction and is available by e-mail at jefferis.brian@epa.gov or by phone at 202-566-2172 to answer any immediate questions you may have.

You can find the [new application form](#) the program has developed for 2020 and the [WIFIA Borrower Guide to Federal Requirements](#) on our website.

Once we receive your complete application, the WIFIA team will commence underwriting the transaction. Receipt of credit assistance remains subject to negotiation of an agreement on terms and conditions satisfactory to the Agency as well as the project's compliance with Federal requirements, including the National Environmental Protection Act (NEPA), American Iron and Steel requirements, Flood Plain Management Standards, and the Davis-Bacon Wage Act. More information about the underwriting and project approval process is attached to this letter.

We expect to receive your application by no later than January 8, 2022. If timing for your application and project construction has changed, please notify your underwriter as soon as possible.

We look forward to working with you on this project.

Sincerely,

A handwritten signature in cursive script, appearing to read "Joranne Jernberg".

Joranne Jernberg
Acting Director, WIFIA Program

EXHIBIT 5

WIFIA Letter of Interest Instructions

A prospective borrower seeking Water Infrastructure Finance and Innovation Act (WIFIA) credit assistance must complete and submit this letter of interest form and provide requested attachments to the U.S. Environmental Protection Agency (EPA) by the deadline announced in the [Notice of Funding Availability](#) (NOFA). In its submittal, the prospective borrower:

- 1) Describes itself and its proposed project(s);
- 2) Provides key financial and engineering information and documents; and
- 3) Explains how the project meets the [WIFIA selection criteria](#).

The prospective borrower should answer all questions in this form. Narrative answers can reference source documents by including the name of the document and relevant pages or sections and providing any referenced documents as attachments. The prospective borrower must sign Sections E and F in the appropriate spaces and submit a scanned version of the signature pages to EPA.

A prospective borrower may assert a Confidential Business Information (CBI) claim covering part or all of the information submitted to EPA as part of its letter of interest, in a manner consistent with 40 C.F.R. 2.203, 41 Fed. Reg. 36902 (Sept. 1, 1976), by placing on (or attaching to) the information a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as trade secret, proprietary, or company confidential. The prospective borrower should also state whether it desires confidential treatment until a certain date or until the occurrence of a certain event. Information covered by a business confidentiality claim will be disclosed by EPA only to the extent and only by means of the procedures set forth under 40 C.F.R. Part 2, Subpart B. Information that is not accompanied by a business confidentiality claim when it is received by EPA may be made available to the public by EPA without further notice to the prospective borrower. More information about CBI is available in the [WIFIA program handbook](#) and frequently asked questions (FAQ) available at <http://www.epa.gov/wifia>.

The total length of the letter of interest form should not exceed 50 pages, excluding any attachments. Responses should be on single-spaced, standard-sized 8 ½" x 11" pages. Page margins should not be less than 1-inch. Font size should not be smaller than 11-point Calibri. There is no limit to the number or length of attachments provided. Attachments should be the most recent versions of the documents available at the time of submission and may be draft or preliminary. Attachments must be referenced in the letter of interest form to be considered.

The final letter of interest submission must include:

- 1) A completed version of this letter of interest form (in Microsoft Word)
- 2) Scanned signature pages (Sections E and F) (in PDF)
- 3) All attachments requested and referenced in the letter of interest form

When finished, the letter of interest form and attachments may be submitted either by:

- 1) Emailing the documents as attachments to wifia@epa.gov; or



- 2) Uploading the documents to EPA's SharePoint site. To be granted access to the SharePoint site, the prospective borrower can request access to SharePoint by emailing wifia@epa.gov. Requests to upload documents must be made in advance of the deadline as outlined in the NOFA.

After EPA's intake process is complete, it will provide a confirmation email to the contacts listed in Section D.

Additional instructions and resources for completing and submitting this letter of interest are available in the [NOFA](#), [WIFIA program handbook](#), and WIFIA website (www.epa.gov/wifia). Questions may be submitted to the WIFIA program office at wifia@epa.gov.

Burden

The public reporting and recordkeeping burden for this collection of information is estimated to average 60 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, included through the use of automated collection techniques to the Director, Regulatory Support Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

Warning

Falsification or misrepresentation of information or failure to file or report information required to be reported may be the basis for denial of financial assistance by EPA. Knowing and willful falsification of information required to be submitted and false statements to a Federal Agency may also subject you to criminal prosecution. See, for example, 18 U.S.C. §1001.

Additional information about the WIFIA program and the letter of interest form is available at <https://epa.gov/wifia> and by contacting wifia@epa.gov.



LETTER OF INTEREST

Provide the following information in this form or as narrative answers. Narrative answers can reference source documents (include the name of the document and relevant pages or sections). Provide any referenced documents as attachments.

Section A: Key Loan Information

1. Legal name of prospective borrower:

Santa Clara Valley Water District (SCVWD) acting through the Santa Clara Valley Water District Public Facilities Financing Corporation (a nonprofit public-benefit corporation formed to provide assistance to the SCVWD in financing the acquisition, construction, and improvement of public works for the SCVWD)

2. Other names under which the prospective borrower does business:

Santa Clara Valley Water District (SCVWD) (Valley Water)

3. Project name (*assign a short name to the project for purposes of identification*):

Pacheco Reservoir Expansion Project (Project). This WIFIA Letter of Interest (LOI) is supplemental to the Pacheco Reservoir Expansion Project LOI approved by the EPA in 2021. Project cost estimates have increased necessitating a supplemental request for WIFIA credit assistance. Additional Project cost information is provided in the response to question B.1 and Attachment *B1c_SLLPIP_FR_Design_Rprt_C*.

Attachments:

- ***B1c_SLPIP_FR_Design_Rprt_C***

4. Provide a brief description of the project(s) seeking financing. Limit the description to the elements included in the estimated total projects costs in Question A-7. (Word Limit: 300).

The Pacheco Reservoir sits north of Highway 152 and is located approximately 60 miles southeast of San Jose, California. The Pacheco Reservoir Expansion Project will mitigate against drought, provide emergency water supplies, and reduce aquifer depletion and flooding. The Project includes expansion of Pacheco Reservoir through construction and operation of a replacement dam, pump station, conveyance facilities, and related infrastructure (e.g., access roads). The new dam would be constructed on Pacheco Creek, upstream from the existing North Fork Dam, and would inundate most of the existing Pacheco Reservoir. The proposed total storage for the expanded reservoir is 140 thousand acre-feet (TAF). Water will be collected behind the new dam during the winter months from



runoff from the local watershed area and Central Valley Project (CVP) supplies from Pacheco Conduit will be diverted when needed. SCVWD will construct, own, and operate the reservoir and associated regional facilities.

The Project would include: an expanded reservoir with a total active storage capacity of 140 TAF; a new earthfill or hardfill dam and open channel spillway structure; new pipelines and tunnels connecting the new reservoir to the Pacheco Conduit; a new pump station; removal of the existing dam and associated channel restoration; access improvements; and associated utility improvements and relocations.

In recent years, SCVWD and its partners have invested significant resources in evaluating alternatives and assessing the feasibility of Pacheco Reservoir expansion. These efforts have resulted in a viable plan to secure necessary environmental permits and progress efficiently through final design, construction mobilization, and construction.

5. Describe the project's or projects' purpose(s) (including quantitative or qualitative details on public benefits the project will achieve). If the loan contains more than one project, the projects must serve a common purpose. Describe the common purpose that the projects share (i.e. addressing sanitary sewer overflows or improving drinking water quality). (Word limit: 300).

The Project seeks to fulfill significant water-resource needs and opportunities in five resource areas. Project objectives are:

- Increase water supply reliability to help meet municipal and industrial (M&I) water demands in Santa Clara County during drought periods and emergencies, or to address shortages due to regulatory and environmental restrictions.
- Develop water supplies for environmental water needs at wildlife refuges, to support habitat management in the Sacramento-San Joaquin Delta watershed.
- Increase suitable habitat in Pacheco Creek for federally threatened South-Central California Coast (SCCC) steelhead.
- Replace a high risk, existing dam. Reduce flood risks along Pacheco Creek and downstream areas, including in disadvantaged communities.
- Improve water quality and minimize supply interruptions, when water is needed for San Felipe Division contractors, and increase operational flexibility for south-of-Delta contractors that are dependent on San Luis Reservoir.

In total, the Project will expand the reservoir's capacity to supply enough water to 1.4 million residents each year.

Recognized as the most effective and economical means to achieve critical benefits, the Project has attracted many supporters, including the California Water Commission (CWC) and the U.S. Department of Interior, Bureau of Reclamation (Reclamation) (Attachments



A5a_CWC_DeterminationsPacheco, A5b_WSIP_Letters_of_Support, A5c_SLLPIP_ES, and A5d_2021_WIIN_Act_Funding_Recs). Agency partners, San Benito County Water District (SBCWD) and the Pacheco Pass Water District (PPWD), signed a memorandum of understanding to advance the Project and deliver important environmental and water supply benefits to the region (Attachment *A5e_SCVWD_SBCWD_PPWD_MOU*).

Quantitative and qualitative benefits of the project have been defined in both SCVWD’s CWC Water Storage Investment Program (WSIP) application and Reclamation’s San Luis Low Point Improvement Project (SLLPIP) Feasibility Report. Additional information regarding these studies is presented in Attachments *A5f_WSIP_Benefits_App5* and *A5g_SLLPIP_FR_AppE*.

Attachments:

- *A5a_CWC_DeterminationsPacheco*
- *A5b_WSIP_Letters_of_Support*
- *A5c_SLLPIP_ES*
- *A5d_2021_WIIN_Act_Funding_Recs*
- *A5e_SCVWD_SBCWD_PPWD_MOU*
- *A5f_WSIP_Benefits_App5*
- *A5g_SLLPIP_FR_AppE*

6. Requested amount of the WIFIA loan (in dollars). This amount may be no more than 49% of the estimated eligible project costs provided in question A-7:

Valley Water is requesting \$575,394,883 as part of the EPA’s 2021 notice of funding availability (NOFA) for WIFIA loans. As part of the 2020 NOFA, Valley Water was approved by the EPA to apply for a \$659,710,520 WIFIA loan, which combined with this 2021 loan request, if selected, would result in a total loan of \$1,235,105,403.

7. Estimated total eligible project costs (in dollars):

\$2,520,623,273

8. Identify the date the prospective borrower will submit an application. (Assume invitations to apply will be issued approximately 90 days from letter interest submission deadline).

4/15/2022

9. Identify the date the prospective borrower wants to close its WIFIA loan.

12/30/2022



California Environmental Quality Act (CEQA) completion is planned for December 2022. To date, several environmental reviews of the Project have been completed, including the EPA review of the Draft SLLPIP Environmental Impact Statement/Environmental Impact Report (EIS/EIR).

10. Identify the type of entity that the prospective borrower is (pick one):

- A. Corporation
- B. Partnership
- C. Joint Venture
- D. Trust
- E. Federal, State, or Local Governmental Entity, Agency, or Instrumentality
- F. Tribal Government or Consortium of Tribal Governments
- G. State Infrastructure Finance Authority

11. If option E, F, or G was selected in question A-10, does the prospective borrower have legal authority to carry out the proposed project activities described in this Letter of Interest?

- Yes No Not Applicable

If yes, cite the legal authority.

Santa Clara Valley District Act, Chapter 1405 of Statutes 1951 of the State of California, as amended (District Act)

12. If "C. Joint Venture" was selected in question A-10, describe the organizational structure of the project(s) and attach an organizational chart illustrating this structure. Explain the relationship between the prospective borrower, the project, and other relevant parties. Include individual members or titles of the project team(s) and their past experiences with projects of similar size and scope. If multiple parties are involved in the project's construction, maintenance, and operation, describe the project's risk allocation framework.

Not applicable

13. County(ies) Served by project(s)

**Santa Clara, San Benito, Santa Cruz, Monterey Counties, California – direct beneficiaries
San Francisco, Alameda Counties, California – indirect beneficiaries**

14. Population Served by project(s)



2 million (Santa Clara County 1.928 million, San Benito County 70,000)

15. Total population served by system

1.928 million (Santa Clara County)

16. Borrower department and division name:

Dam Safety and Capital Delivery Division, Pacheco Project Delivery Unit

17. Business street address:

5750 Almaden Expressway, San Jose, CA 95118

18. Mailing street address (if different from above):

For courier shipments: Santa Clara Valley Water District, Winfield Warehouse, 5905 Winfield Blvd., San Jose, CA 95123-2428. Mailing address: 5750 Almaden Expressway, San Jose, CA 95118.

19. Employer/taxpayer identification number (EIN/TIN):

94-1695531

20. Dun and Bradstreet Data Universal Number System (DUNS) number:

SCVWD Public Facilities Financing Corporation: 069128999. SCVWD: 018689591

21. National Pollutant Discharge Elimination System (NPDES) and/ or Public Water System (PWS) number (if applicable):

PWS CA4310027

22. If the prospective borrower is not a public entity, is the project(s) publicly sponsored? Please explain.

Not applicable



Section B: Engineering & Credit

1. Provide a technical report such as a preliminary design/engineering report or planning document for each aspect of the project(s). Provide the filename(s) in the textbox.

If no technical reports are available, provide a detailed description of all major project components. Indicate whether the project involves the construction of new facilities or the renovation or replacement of existing ones. Describe each of the project components in terms of dimensions, quantities, capacities, and square footage, etc.

Feasibility evaluations for the expansion of Pacheco Reservoir have been developed and comprehensively reviewed through two ongoing federal and state processes:

- **Reclamation's Federal Feasibility Report for the San Luis Low Point Improvement Project (SLLPIP)**
- **California Water Commission's Water Storage Investment Program (WSIP)**

These feasibility evaluations included physical benefit (e.g., acre-feet/year) quantifications, monetary benefit quantifications (e.g., \$/year), preliminary designs, and cost estimates. The evaluations demonstrate the need for dam replacement. Documentation from these two ongoing efforts are provided as attachments (see Attachments section below) to support this Letter of Interest. In addition, further background on these two ongoing efforts is provided below under the Background section.

The Project has progressed significantly and according to schedule since SCVWD's submission of the Pacheco Reservoir Expansion Project 2020 WIFIA LOI. A draft Environmental Impact Report (EIR) will be completed by December 2021 and California Environmental Quality Act (CEQA) completion is planned for December 2022. To date, several environmental reviews of the Project have been completed, including the EPA review of the Draft SLLPIP Environmental Impact Statement/Environmental Impact Report (EIS/EIR). 30% design completion is planned for November 2021. Technical and environmental progress is well-aligned with execution of a WIFIA Credit Agreement and the application of WIFIA credit assistance.

Attachments:

One of the design documents, the SLLPIP Feasibility Report Design Report, is a very large file and has therefore been split into multiple attachments.

- *B1a_2017_WSIP_AppProjDesc*
- *B1b_2020_SLLPIP_FR_ProjDesc*
- *B1c_SLLPIP_FR_Design_Rprt_A*
- *B1c_SLLPIP_FR_Design_Rprt_B1*
- *B1c_SLLPIP_FR_Design_Rprt_B2*



- *B1c_SLLPIP_FR_Design_Rprt_B3*
- *B1c_SLLPIP_FR_Design_Rprt_B4*
- *B1c_SLLPIP_FR_Design_Rprt_C*

Background

The feasibility of expanding Pacheco Reservoir has been studied by SCVWD for over 25 years. SCVWD began studying the reservoir's rehabilitation and expansion in the 1990s. These initial studies evaluated 13 potential reservoir sites—including the expansion of Pacheco Reservoir—for their potential to store contracted federal Central Valley Project (CVP) and State Water Project (SWP) supplies and local water supplies to improve water supply reliability for the region. SLLPIP studies, co-led by Reclamation and SCVWD, further evaluated the feasibility of expanding Pacheco Reservoir, in order to improve water supply reliability to SCVWD related to the frequency and duration of the low-point issue in San Luis Reservoir. Previous publicly available SLLPIP studies and reports that have investigated the upgrade and expansion of Pacheco Reservoir include the *San Luis Low Point Improvement Project Initial Alternatives Information Report* (Reclamation 2008), *San Luis Low Point Improvement Project Plan Formulation Report* (Reclamation 2011), *San Luis Low Point Improvement Project Draft Feasibility Report* (Reclamation 2019), and *San Luis Low Point Improvement Project Draft Environmental Impact Statement/Environmental Impact Report* (EIS/EIR) (Reclamation and SCVWD 2019). In February 2020, as part of its approval process for the Final Feasibility Report, Reclamation conducted an in-depth review of designs - a key aspect of Reclamation's Design, Estimating, and Construction Review (DEC Review) process. Reclamation and SCVWD anticipate releasing final versions of the SLLPIP Feasibility Report and EIS/EIR in late 2020, consistent with the funding requirements for the Water Infrastructure for the Nation Act (WIIN Act).

Approved by California voters in 2014, Proposition 1 dedicated \$2.7 billion for investments in water storage projects. The California Water Commission (CWC) is administering the WSIP to fund the public benefits associated with these projects. In August 2017, SCVWD submitted a WSIP application to the CWC for the Project (SCVWD 2017). Through a rigorous selection process, the CWC chose eight projects based on the public benefits their projects will provide, with the Pacheco Reservoir Expansion Project being the highest-ranked project of these in-depth evaluations (*Attachment A5a_CWC_DeterminationsPacheco*). In July 2018, the CWC approved a maximum conditional funding amount of \$484.5 million for the Project. SCVWD is working closely with the CWC to meet the remaining requirements for the WSIP funding.

In the WSIP application, SCVWD included an initial cost estimate of \$969 million (2015 dollars) for the Pacheco Reservoir Expansion Project. Due to projected inflation, the estimated project cost rose to about \$1.3 billion in 2019. This cost estimate was included in SCVWD's 2020 LOI. In 2020, SCVWD performed a more detailed design study which included an updated cost estimate. This design study indicated that construction costs for the proposed project had increased to approximately \$2.5 billion (escalated to time of construction), prompted largely by changes to the dam and spillway design.



SCVWD is exploring ways to reduce the estimated project costs. For example, an assessment of the feasibility of a hardfill dam has been developed. A hardfill dam could have cost, dam footprint, and seismic advantages while achieving the same Project safety, resiliency, and water supply benefits. Additional information on this innovative approach is described in the LOI response to C.6.

References:

- Reclamation (U.S. Department of the Interior, Bureau of Reclamation). 2008. *San Luis Reservoir Low Point Improvement Project Initial Alternatives Information Report*. Sacramento, CA. February. Available at: <https://www.usbr.gov/mp/slpp/docs/slpp-iair-feb2008.pdf>
- _____. 2011. *San Luis Reservoir Low Point Improvement Plan Formulation Report*. Sacramento, CA. January. Available at: <https://www.usbr.gov/mp/slpp/docs/san-luis-low-point-improvement-project-pfr-january2011.pdf>
- _____. 2019. *San Luis Reservoir Low Point Improvement Project Draft Feasibility Report*. Sacramento, CA. April. Available at: <https://www.usbr.gov/mp/slpp/docs/slpp-draft-feasibility-report.pdf> and <https://www.usbr.gov/mp/slpp/docs/slpp-draft-feasibility-report-appendices.pdf>
- Reclamation (U.S. Department of the Interior, Bureau of Reclamation) and Santa Clara Valley Water District (SCVWD). 2019. *San Luis Reservoir Low Point Improvement Project Environmental Impact Statement/Environmental Impact Report*. Sacramento, CA. July. Available at: https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=339
- Santa Clara Valley Water District (SCVWD). 2017. *Water Storage Investment Program Application for Pacheco Reservoir Expansion Project*. August. Available at: <https://cadwr.box.com/s/0u8gp7vni5z7cnh5i55bpqgd4kkq06f0>

2. Present the overall project schedule start and end dates for key milestones and costs in the provided tables. For WIFIA loans with one project, fill out Row 1. For WIFIA loans with multiple projects, fill out and create as many rows as needed.

Project Name	Planning*	Design*	Construction
Pacheco Reservoir Expansion Project	3/1/2017 - 12/15/2023	12/1/2019 – 9/30/2023	7/15/2024 – 9/1/2029
Major Project Elements			
Decommissioning Existing Dam	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	10/1/2024 - 1/15/2025
Temporary Works	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	7/15/2024 - 11/15/2024



Zoned Embankment Dam	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	10/1/2024 - 9/15/2028
Inlet/Outlet Works	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	1/15/2025 - 9/15/2026
Spillway	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	5/15/2026 - 9/15/2027
Pump Station	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	2/1/2026 - 9/15/2027
Conveyance	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	1/15/2025 - 7/15/2026
Substation and Power Transmission Line	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	6/15/2026 - 8/15/2027
Roads and Bridges	3/1/2017 - 12/15/2023	12/1/2019 - 9/30/2023	9/1/2027 - 9/1/2029

***As shown in B.6. Sources and Uses, the Planning and Design phases of the Project require considerable capital. In addition to the Construction phase, SCVWD is interested in applying WIFIA funding to these Project Development phases of the Project.**

3. Choose the proposed lien priority for the WIFIA loan.

- Senior Lien
- Subordinate Lien: All project debt has the same priority as the WIFIA loan.
- Subordinate Lien: Not all project debt has the same priority as the WIFIA loan.
A springing lien will be used in a bankruptcy related event.

4. Describe the proposed security for the WIFIA loan (e.g., water utility revenue or general obligation) and provide an existing credit rating that is less than a year old or is actively maintained. The rating should be on the same security and lien as the proposed WIFIA loan. If a credit rating is not available, describe how the senior obligations of the project will achieve an investment-grade rating.

The source of repayment for the net Project costs (net of grant funding) will be a combination of SCVWD water utility rates and charges and other legally available funds, as well as partner agency contributions, as applicable.

The WIFIA loan will be on the same security and lien as the existing parity lien Water Utility revenue bonds which currently have strong AA+ and Aa1 ratings from Fitch and Moody's, respectively. The most recent rating reports from September 2020 are provided as attachments.



Attachment:

- *B4a_Rating_Fitch_09-17-2020*
- *B4b_Rating_Moodys_2020*

5. If an existing credit rating is not available, provide a financial pro forma and three years of audited financial statements. Indicate the filenames in the textbox below.

The financial pro forma should include key long-term (at least 10 years, but no greater than the proposed life of the WIFIA loan) revenues, expenses, and debt repayment assumptions for the revenue pledged to repay the WIFIA loan.

The financial pro forma should be provided in an editable Microsoft Excel format, not in PDF or "values" format and include, at a minimum, the following:

- a. Sources of revenue
- b. Operations and maintenance expenses
- c. Dedicated source(s) of repayment
- d. Capital expenditures
- e. Debt service payments
- f. Projected debt service coverage ratios for total existing debt and the WIFIA debt
- g. The project's or system's debt balances broken down by funding sources
- h. Equity distributions, if applicable

If available, include sensitivity projections for pessimistic, base and optimistic cases. A sample financial pro forma is available at <https://www.epa.gov/wifia/wifia-application-materials-and-resources>. Provide the financial pro forma filename in the textbox.

Not applicable



6. Provide a sources and uses of funds table for the construction period(s), including the proposed WIFIA loan. For prospective borrowers other than Public Entities, add rows as needed to identify the amount and source(s) of project equity, letters of credit, and other sources of debt as applicable. Note any ineligible project costs. More information about eligible costs is available in the [WIFIA program handbook](#). Indicate the certainty of other sources of funding.

Sources Category	Estimated Dollar Value	Funding Certainty
1a. WIFIA Loan (2021 LOI) (new request) (combined WIFIA contribution cannot exceed 49% of eligible costs)	\$575,394,883	N/A
1b. WIFIA Loan (2020 Approved LOI) (combined WIFIA contribution cannot exceed 49% of eligible costs)	\$659,710,520	N/A
2. Revenue Bonds	\$726,484,120	Certain
3. SRF Loan	0	Certain
4. Borrower Cash	\$10,000,000	Certain
5. Previously Incurred Eligible Costs*	\$52,370,000	Certain
6. Other (please specify) WSIP Prop 1 Funding	\$496,663,750	Certain
TOTAL SOURCES	\$2,520,623,273	
Uses Category	Estimated Cost	
1. Construction	\$1,857,764,407	
2. Design	\$69,042,659	
3. Planning	\$102,595,571	
4. Land Acquisition	\$21,515,331	
5. Other Capital Costs	\$421,953	
6. Contingency	\$468,283,352	
7. Total Capital Costs	\$2,519,623,273	
8. Financing Costs	\$1,000,000	
8. Ineligible Costs (if applicable)	Click or tap here to enter text.	
9. Other (please specify) Click or tap here to enter text.	Click or tap here to enter text.	
10. Other (please specify) Click or tap here to enter text.	Click or tap here to enter text.	
TOTAL USES	\$2,520,623,273	

*Previously Incurred Eligible Costs are project related costs incurred prior to the WIFIA loan's execution. Please see the WIFIA Program Handbook for additional information on Eligible Costs.

For funding sources that are uncertain (excluding the WIFIA Loan), explain alternative funding that could be used if the funding source is not available.

WIFIA Loan: the estimated amount of \$1.2 billion reflects the sum of the amount Valley Water had previously submitted as part of the EPA's 2020 notice of funding availability (NOFA), which was stated at \$659,710,520, plus the additional \$575,394,883 in new WIFIA



loan funding request as part of the 2021 NOFA, to bring the total WIFIA funding amount to 49% of the current project cost estimate of \$2.5 billion.

Long Term Bonds: Valley Water's high credit ratings of Aa1 and AA+ from Moody's and Fitch respectively (one notch below "AAA") on its water utility revenue bonds affords ready market access at attractive yields in the marketplace which will pay for the portion of the project costs not funded by other sources as identified above. A portion of the bonds will be used to refinance short-term debt (i.e., commercial paper) issued for the project to provide interim financing.

Borrower Cash: The Pacheco Project is scheduled to be allocated \$10 million from Valley Water's Safe, Clean Water special parcel tax, pursuant to voter approval on November 3, 2020.

WSIP Proposition 1 Funding: On January 20, 2021 the California Water Commission adjusted the Maximum Conditional Eligibility Determinations (MCED) amount to \$496,663,750, which represents a 2.5% inflation adjustment to the 2018 MCED amount of \$484,550,000.

In addition to the above funding sources, Valley Water is actively pursuing additional funding opportunities, including but not limited to the following:

Bureau of Reclamation: Valley Water has collaborated with Reclamation on a Feasibility Report for the SLLPIP. Funding is uncertain. In the event Reclamation funding is available and accepted by the SCVWD Board, the financing plan will still have less than 80% federal funding and any changes in the financing plan will be reviewed with EPA. SCVWD may adjust the WIFIA loan amount accordingly.

Public Agency Partnerships: Pursuant to Valley Water Board of Directors' direction provided on May 11, 2021, staff is seeking to obtain up to 35% participation from interested public agencies to share the cost and storage benefits associated with the Project. This is an uncertain funding source - currently Valley Water has entered into a Memorandum of Understanding with the San Benito County Water District for a 2.5% participation level, with an option to increase up to 10% participation to be exercised prior to construction start date, which is currently estimated to begin in 2024. (Attachment: A5e_SCVWD_SBCWD_PPWD_MOU)

Should the Project cost increase, or if EPA is unable to fund the full 49% WIFIA loan requested, SCVWD plans to issue a combination of short- and long-term debt to finance the cost of the project. SCVWD's strong credit worthiness is demonstrated by Fitch and Moody's current credit ratings of AA+ and Aa1, respectively.

The source of repayment for the net Project costs (net of grant funding) will be a combination of SCVWD water utility rates and charges and other legally available funds as identified in the table above.



Attachments:

- *A5e_SCVWD_SBCWD_PPWD_MOU*
- *B4a_Rating_Fitch_09-17-2020*
- *B4b_Rating_Moodys_2020*



Section C: Selection Criteria

For each question answered yes, provide a response to explain how the project seeking the WIFIA loan achieves the stated result. When applicable, reference attachments. Responses to these questions will allow the WIFIA program to evaluate the project in relation to the selection criteria outlined in the NOFA. If the Letter of Interest contains multiple projects, include information about any of the projects that would fit the selection criteria. See [Attachment A: Selection Criteria & Scoring](#) for more information.

1. Will the project create construction jobs?

Yes No

If yes, approximately how many?

Over 12,000 construction jobs created is a preliminary estimate during the eight-year construction period (Attachment C1_SLLPIP_FR_Chapter5, Table 5-14, p. 5-12), along with more than 5,800 indirect or induced jobs as a result of the Project according to the federal feasibility study evaluation for the San Luis Low Point Improvement Project (SLLPIP) for which a National Economic Development (NED) benefit analysis was conducted to evaluate the change in the nation's output of goods and services that would result from implementing various project alternatives, including the Pacheco Reservoir Expansion Project (Attachment C1_SLLPIP_FR_Chapter5). The IMPLAN (Impact analysis for Planning) modeling package was used to assess the regional economic impacts from the Project expenditures.

Attachment:

- C1_SLLPIP_FR_Chapter5

2. Will the project create post-construction jobs?

Yes No

If yes, provide approximately how many and explain how this number was calculated.

As referenced in the response to C.1., a NED benefit analysis was completed as part of the federal feasibility study evaluation for the SLLPIP Feasibility Report. The NED evaluated the change in the net value of the nation's output of goods and services that would result from implementing various project alternatives, including the Pacheco Reservoir Expansion Project. A summary of employment benefits is available in Chapter 5 of the SLLPIP Feasibility Report, and further detail regarding the NED analysis is available in Appendix E of



the SLLPIP Feasibility Report (Attachments C1_SLLPIP_FR_Chapter5 and A5g_SLLPIP_FR_AppE).

A formal projection of post-construction job creation is not yet available. Operation and maintenance of the assets in question will require the attention of local employees. However, the Project will have a useful life of greater than 50 years and be reliable, productive, and efficient, therefore, the Project may not result in a near term increase in post-construction SCVWD jobs.

Benefits of the Project are expected to result in new, post-construction employment opportunities regionally through water service reliability and ecological enhancements, resulting in increased productivity and efficiency. As referenced in the response to C.1. and further explained in the response to C.3., the Project is projected to result in 3,089 jobs through induced effect. Induced effects are defined as changes in expenditures of household income (Attachment C1_SLLPIP_FR_Chapter5).

Attachments:

- C1_SLLPIP_FR_Chapter5
- A5g_SLLPIP_FR_AppE

3. Will the project support economic growth?

Yes No

If yes, explain how.

In total, the implementation of the Pacheco Reservoir Expansion Project is anticipated to result in an annual economic benefit of \$76,800,000 in the nation's output of goods and services (Attachment A5c_SLLPIP_ES, Table ES-2).

Beyond the employment and income generated by construction and operation of the infrastructure being funded by the implementation of the Pacheco Reservoir Expansion, the project will provide additional water supply reliability to the region, enhancing the potential for economic growth and development in Santa Clara County and the surrounding areas. Notably, SCVWD serves Silicon Valley, a national and international hub for high-tech innovation and development, accounting for one-third of all venture capital investments in the United States.

The NED benefit analysis conducted as part of the SLLPIP Feasibility Report evaluated the change in the nation's output of goods and services that would result from implementing the Project (Attachment A5g_SLLPIP_FR_AppE). The beneficial effects of the project were evaluated in monetary terms and measured in terms of change in national income. The



benefits evaluated included emergency water supply, ecosystem benefits, M&I water supply, and agricultural water supply.

The San Francisco Bay Area faces numerous emergency water supply issues ranging from droughts, floods, infrastructure failures during earthquakes, or water quality issues in the Delta from a levee failure. Each of these supply disruptions will have varying impacts on SCVWD customers in terms of severity and duration. Expanding the Pacheco Reservoir will provide, on average, 103 TAF of increased emergency supplies for M&I customers through expanded surface storage and enhanced groundwater storage. An emergency response monetization analysis was conducted to reflect the physical limitations of SCVWD's system. The total economic benefit from the project was estimated at \$649,000,000. Annualizing this value with consideration of the probability of an emergency occurring in any given year, yielded an economic-benefit value of \$27,300,000 (Attachment *A5g_SLLPIP_FR_AppE*).

Ecosystem benefits were estimated for both the ecological benefits from steelhead ecosystem enhancements and those for San Joaquin Valley wildlife refuges. Steelhead benefits were estimated using a "least-cost" approach, by comparing and testing the sensitivity of ecological benefits of the proposed Project compared to investments in other West Coast watersheds, to achieve similar benefits. The total annualized benefits from steelhead ecosystem enhancements are estimated to be \$48,000,000 (Attachment *A5g_SLLPIP_FR_AppE*, Chapter 6). The economic benefit to wildlife refuges is based off a reduced cost to the federal government's Refuge Water Supply Program for purchase of incremental water supply. The Project would transfer 2,000 AF of SCVWD's CVP water supply, during below normal water years, to the Incremental Level 4 Refuge Water Supply Pool—which is managed by Reclamation and U.S. Fish and Wildlife Service. On average, the Project would provide 341 AF of water to the San Joaquin Valley wildlife refuges, resulting in an annual benefit of \$140,000 (Attachment *A5g_SLLPIP_FR_AppE*, Chapter 7).

This project is anticipated to provide an average annual increase of 2.8 – 6.3 TAF of water per year for M&I customers at a lower cost than SCVWD's current alternative water supplies, resulting in a projected benefit of \$1.6 million - \$6.1 million annually. Some of these M&I benefits are offset by a decrease in water availability to agricultural water users, resulting in a liability of \$0.5 million annually for agricultural water users (Attachment *A5g_SLLPIP_FR_AppE*, Chapters 3 and 4, *A5f_WSIP_Benefits_App5*, Chapter 5).

Economically Stressed Communities Served

The Project will serve the residents of Santa Clara County, the heart of Silicon Valley, where there is extreme income inequality, with some of the wealthiest households in the country living next to households living below the poverty line. 2015 - 2019, the median household income (MHI) in Santa Clara County was \$124,055 (in 2019 dollars) with over 6% of the population below the federal poverty line (Attachment: *C3a_Santa_Clara_County_CA_US_Census_Quickfacts*).



While the total percentage of the community living below the federal poverty line is not large, the cost of living in Santa Clara County is much greater than most other counties. The California State Department of Housing and Community Development defines a household of four, earning \$94,450, as low income, and \$66,500 as very low income (*Attachment C3b_CASStateIncomeLimits*). By these definitions, approximately 39% of households in the Santa Clara County would be designated as low income (making under \$100,000), and at least 22% of the households are very low income (making under \$50,000). There is one census tract (5116.08) where more than 59% of households live at or below the poverty line (MHI of \$36,500), and 48 census tracts in the region have at least 10% of households at or below the poverty line.

Additionally, the Project may reduce peak 100-year event flood flows from Pacheco Reservoir by 61%. The Project will reduce peak flows along Pacheco Creek, in the Soap Lake area (a disadvantaged community), and for the U.S. Army Corps of Engineers' Pajaro River Project for the communities of Pajaro and Watsonville. The California DAC (Disadvantaged Communities) Mapping Tool highlights disadvantaged localities, census tracts, and census block groups in Santa Clara County and the region that would be impacted by the Project. (*Attachment C3c_DAC_Tool_Maps*).

The US Bureau of Labor Statistics reports that as of 2018, there were 12,382 households receiving cash public-assistance income in the region, and 29,566 households receiving supplemental nutrition assistance benefits (*Attachment C3d_ACSDP03_5Y_2018*).

Santa Clara County has multiple Opportunity Zones (*Attachment C3e_SantaClara_OZs*). Opportunity Zones are a tool for economic development and revitalization in economically stressed communities. Nominated census tracts had to meet one of the criteria under the definition of "low-income community" in the Internal Revenue Code Section 45D(e): (1) a poverty rate of at least 20%; (2) a median family income below 80% of the greater of the statewide or metropolitan area median family income if the community is located in a metropolitan area; or (3) a median family income below 80% of the median statewide family income if the community is located outside a metropolitan area.

Attachments:

- *A5g_SLLPIP_FR_AppE*
- *A5f_WSIP_Benefits_App5*
- *A5c_SLLPIP_ES*
- *C3a_Santa Clara County CA US Census Quickfacts*
- *C3b_CASStateIncomeLimits*
- *C3c_DAC_Tool_Maps*
- *C3d_ACSDP03_5Y_2018*
- *C3e_SantaClara_OZs*



4. Will the project protect drinking water, including source water protection?

Yes No

If yes, explain how.

An expanded Pacheco Reservoir would be integrated into SCVWD's existing water system, including coordinated operations of SCVWD's surface-water reservoirs and underlying groundwater aquifers. The Project will also maintain or restore groundwater and surface-water interconnection and maintain water temperatures and flows in Pacheco Creek, especially during consecutive dry years. The Project protects source water from water temperatures becoming too high and flows become too low.

As referenced above in C.3., the Bay Area faces numerous emergency water supply issues ranging from droughts, floods, or infrastructure failures during earthquakes, fires, or other major storm events. A primary driver of the Project was the need for additional water supply during these emergencies. Analyses estimate that expanding Pacheco Reservoir will provide 103,000 acre-feet, on average, of increased emergency water supplies for M&I customers through expanded surface-water storage and enhanced groundwater storage (Attachments *C4a_WSIP_Executive_Summary*, *C4b_WSIP_Benefits_Emerg_Rspns*).

Groundwater is an important water supply source for Santa Clara County and its preservation was the goal that spurred the formation of SCVWD. SCVWD's management of groundwater includes replenishment with local and imported surface water, reductions in groundwater demand through the use of treated surface-water deliveries, water conservation, and water recycling, and ongoing monitoring of groundwater levels and quality across the subbasins. The California Department of Water Resources (DWR) has prioritized the Santa Clara Subbasin as medium-priority based on groundwater quality concerns in the subbasin. The Project is projected to have a positive groundwater impact. In subbasins underlying SCVWD service areas, additional surface-water supplies developed through the Project can provide in-lieu groundwater recharge and raise groundwater levels. For example, in the Santa Clara Subbasin, the Project would increase groundwater storage levels by four percent during critical years (2070 future conditions) (Attachment: *C4c_WSIP_Groundwater*).

SCVWD manages two groundwater subbasins: the Santa Clara Plain and Coyote Valley in the Santa Clara Subbasin of the Santa Clara Valley Groundwater Basin and the Llagas Subbasin of the Gilroy-Hollister Groundwater Basin. The Project has the potential to provide positive contributions in four California groundwater basins that are subject to the Sustainable Groundwater Management Act of 2014. The California DWR Bulletin 118 basins that could directly benefit from the Project include: Santa Clara Valley, Gilroy-Hollister Valley, Corralitos, and San Joaquin Valley.



The Project provides direct benefits to seven high- or medium-priority California Statewide Groundwater Elevation Monitoring subbasins including:

- Santa Clara Subbasin (medium-priority) of the Santa Clara Valley Basin
- Llagas Area (high-priority), Bolsa Area (medium-priority), Hollister Area (medium-priority), and the San Juan Bautista Area (medium-priority) of the Gilroy-Hollister Valley Basin
- Pajaro Valley (high-priority) of the Corralitos Basin.
- Delta-Mendota Subbasin (high-priority) of the San Joaquin Valley Basin

Groundwater benefits from the Project are summarized in the response SCVWD submitted to CWC as part of the WSIP application (*Attachment C4c_WSIP_Groundwater*).

Attachments:

- *C4a_WSIP_Executive_Summary*
- *C4b_WSIP_Benefits_Emerg_Rspns*
- *C4c_WSIP_Groundwater*

5. Will the project support international commerce?

Yes No

If yes, explain how.

In 2018, the United States Department of Commerce, International Trade Administration identified Santa Clara County as the 16th largest exporter among US metro areas, exporting approximately \$22 billion in goods (*Attachment C5_DOC_ITA_SantaClaraExports*). The exports are predominantly computer and electronic products, followed by machinery, electrical equipment and components, and chemicals. These industries are notoriously water intensive. The additional emergency water supply created by the Project will provide resiliency for these industries in the event of a drought or other water emergency, allowing them to stay in business and continue to support international commerce.

The Project supports the international commerce of Santa Clara County where our largest employers are mega, multi-national firms including: Apple, Google, Facebook, Cisco Systems, Stanford, Tesla, Applied Materials, Intel, Oracle, Gilead Science, Juniper Networks, and many others.

Attachment:

- *C5_DOC_ITA_SantaClaraExports*



-
6. Will the project implement new or innovative technology(ies), such as using renewable or alternate sources of energy, water recycling, or desalination?

Yes No

If yes, explain how.

The Project is employing new and innovative technologies as part of both project development and implementation for developing long-term operations of the expanded reservoir.

To develop long-term operations of the Project and its integration with other statewide and regional water infrastructure, a suite of numerical modeling tools has been developed to support the technical, environmental, and economic viability assessments of the Project during the planning phase. These tools are anticipated to be refined to support adaptive management of fisheries, water supply, and other ecological resources following Project construction. The development and application of this advanced suite of water-resources modeling tools reflects an innovative approach to optimizing available water supplies and accessing system-wide benefits to agricultural and M&I water supplies (including emergency M&I supplies), wildlife refuges' water supplies, reservoir and stream water temperatures, surface-groundwater interaction, steelhead habitat suitability, and power generation and use. Attachment C6_PREPWR&FNMFlow_Chart illustrates this modeling framework, highlighting major inputs, outputs, and the flow of information.

CalSim-2 simulates statewide Central Valley Project (CVP) and State Water Project (SWP) operations to determine the annual CVP and SWP water allocations (e.g., anticipated deliveries). The CVP allocations are delivered out of San Luis Reservoir to SCVWD. The storage levels in San Luis Reservoir are modeled and used to estimate the power required and generated for pumping plants located on the reservoir. The storage levels are also used as a proxy for low-point issues, which occur when the reservoir drops below 300 TAF of storage in warm summer months. During low-point events, depending on the severity of algae, SCVWD blends San Luis Reservoir water with other SCVWD sources or altogether stops taking water from the reservoir.

CE-QUAL-W2, a model developed by the U.S. Army Corps of Engineers, simulates water temperature within the expanded Pacheco Reservoir, accounting for the effects of local weather conditions, natural inflow, CVP inflow from San Luis Reservoir, and reservoir outflows. Using a range of baseline CE-QUAL-W2 simulations, a simplified lookup table logic was developed and embedded in the Water Evaluation And Planning (WEAP) system to represent habitat release temperatures.

WEAP simulates water supply operations of SCVWD—including all 10 existing reservoirs, an expanded Pacheco Reservoir, all groundwater subbasins, and all imported water supplies



(CVP, SWP, and San Francisco Public Utilities Commission)—to determine how and under what conditions the Project can meet primary and secondary objectives. For the expanded Pacheco Reservoir, WEAP uses embedded decision logic to set habitat releases and lookup tables to determine habitat release temperatures. Additional logic was developed to model the operations of SBCWD.

SCVWD’s Pacheco Creek Steelhead Habitat Suitability Model (PCSHSM)—utilizing habitat release volumes and temperatures produced in WEAP as an input time series—simulates streamflow and stream temperature in Pacheco Creek. Based on habitat suitability curves developed through detailed hydraulic modeling and field investigations, PCSHSM estimates habitat suitability for steelhead in Pacheco Creek every month for 10 miles below the expanded reservoir, based on flows and temperatures. An annual cohort score is produced and used as a proxy for steelhead production potential over a 14-month lifecycle.

Attachment:

- *C6_PREPWR&FNMFlow_Chart*

7. Will the project use new or innovative approaches to plan, design, manage, and/or implement the project?

Yes No

If yes, explain how.

SCVWD has embraced an innovative and singular approach to planning and designing the Project. Going forward, SCVWD will continue to seek opportunities to adopt innovative tools and techniques to achieve Project objectives.

Alternative Dam Technology

SCVWD is considering implementing innovative hardfill dam technology for the Project. Hardfill dams include cemented materials and a preliminary feasibility assessment suggests the use of a hardfill dam for the Pacheco Reservoir Expansion Project could result in economic, environmental, and seismic resiliency benefits (Attachment: *C7_PREP_HF_Dam_Feasibility_TM*). Hardfill dams are a newer technology and to-date, no hardfill dams have been permitted by the California Division of Safety of Dams (DSOD). The SCVWD hardfill dam feasibility technical memorandum presents an assessment of the feasibility of a hardfill dam at the Pacheco Reservoir with due consideration to the dam safety guidelines established by the DSOD, U.S. Army Corps of Engineers (USACE) and U.S. Bureau of Reclamation (Reclamation). The feasibility assessment considers whether a hardfill dam for the reservoir presents an acceptably low level of risk to people, property, and the environment.



Based on initial DSOD comments, the feasibility assessment focused on literature review of static and seismic performance of hardfill and roller compacted concrete (RCC) dams; geologic evaluation of the dam and appurtenant structure sites; seismic hazard assessment including regional and local faulting; comprehensive site investigation and laboratory testing; material characterization including development of material properties and consideration of uncertainties associated with selected material properties; borrow site investigation and laboratory testing; assessment of development and handling of hardfill aggregates; static and seismic stability evaluations of the dam and foundation; and the overall conclusions and recommendations on the feasibility assessment. The assessment demonstrates both SCVWD's commitment to incorporating innovative technologies in the Project design and SCVWD's ability to work collaboratively with regulatory and enforcement agencies, methodically evaluating the application of those technologies.

Project Partnering

Advancing the Pacheco Reservoir Expansion Project has been a collaborative effort to identify and advance a water management solution on a regional scale to concurrently achieve social, environmental, and economic objectives. SCVWD took an innovative approach to project development from the start, recognizing the need 1) to engage multiple community, regional, and national stakeholders, and 2) to integrate multiple views during the planning process, as well as in the implementation of the plan.

SCVWD actively sought partnerships with local agencies such as the SBCWD and the Pacheco Pass Water District (PPWD), and state and federal agencies such as the California Water Commission and the US Department of the Interior. Multiple agreements document these collaborations (*Attachments A5a_CWC_DeterminationsPacheco* and *A5e_SCVWD_SBCWD_PPWD_MOU*). In partnership with regional agencies, SCVWD led the successful effort to obtain funding support from an innovative, new state program, WSIP. In collaboration with Reclamation, SCVWD tested the viability, practicality, and economic feasibility of different project alternatives and cooperated to identify optimal Project configurations to maximize benefits. To date, as referenced above (*Attachment C6_PREPWR&FNMFlow_Chart*), SCVWD and its partners have embraced innovative modeling techniques and tools to test the credibility of previous findings and adjust the Project plan to optimize benefits.

Innovative financing partners and programs is another tool SCVWD has identified for the Project. Many of the ecological, habitat, water supply, and resiliency benefits of the Project are long-term in nature. Accordingly, SCVWD has looked beyond traditional financing mechanisms and identified long-term and flexible financing tools to fund the project—like WIFIA. With WIFIA financing, SCVWD can mitigate the immediate financial stresses of a project that will provide multigenerational benefits to the region.



Over the past few years, SCVWD has garnered immense support for the project and established its commitment to an innovative, collaborative, and data-driven approach to design, manage, and implement the Project.

Attachments:

- *C7_PREP_HF_Dam_Feasibility_TM*
- *A5a_CWC_DeterminationsPacheco*
- *A5e_SCVWD_SBCWD_PPWD_MOU*
- *C6_PREPWR&FNMFlow_Chart*

8. Does the project protect the system, project specific asset, or community from extreme weather events such temperature, storms, floods, or sea level rise expected based on current conditions?

Yes No

If yes, explain how.

The Project protects the SCVWD system and communities directly and indirectly served by the system from extreme weather events including floods and acute and prolonged droughts. Currently, Santa Clara County and much of California are experiencing extreme drought conditions. On June 9, 2021 SCVWD declared a water shortage emergency. Extreme event benefits are described and quantified in Attachment *C8_WSIP_Benefits_FloodControl*. Construction of the Project would provide SCVWD with its first dedicated emergency water supply, and it would avoid undesirable results caused by long-term reliance on groundwater during emergencies. In an emergency, the Project could deliver—either directly or by exchange—water to any retail water agency served by SCVWD.

Floods have historically occurred on Pacheco Creek downstream from the existing North Fork Dam, near the community of Dunneville and the City of Hollister. Pacheco Creek is a flashy-prone watershed with a track record of overwhelming private levee facilities, flooding State Route 152, and inundating thousands of acres of productive farmland. The Project would provide increased reservoir capacity to capture flood waters, reducing peak flood flows downstream from the existing Pacheco Dam. The Project will also provide flood control benefits by reducing flows in Pacheco Creek downstream from the reservoir during flood events; however, the Project will not be operated specifically for flood control purposes.

The Project will also provide incidental flood control benefits by further reducing downstream flows during flood events, when additional storage is available in Pacheco Reservoir. SCVWD used the WEAP model to analyze the Project based on the WEAP simulation period (1922-2015) for current conditions (2017), 2030 future conditions, and 2070 future conditions. This analysis developed a monthly reservoir storage volume for



every month in the simulation period. An exceedance analysis was performed on the estimated storage volumes, to determine the available reservoir storage by month. Modeling indicated that the Project will provide flood control benefits by reducing flows in Pacheco Creek, downstream from the reservoir during flood events (Attachment *C8_WSIP_Benefits_FloodControl*).

Emergency response benefits are increased water supplies available to SCVWD that can be delivered in the event of an emergency. Identified emergencies may include major levee failures in the Delta, a major earthquake, or wildland fires that would disrupt the ability of SCVWD to import water into their service area. Further details are explained in Attachment *C4b_WSIP_Benefits_Emerg_Rspns*. Additional water supplies made available through the Project, and the operational integration of the Project with existing SCVWD water system facilities, would help reduce or mitigate the impacts of emergencies.

Attachments:

- *C8_WSIP_Benefits_FloodControl*
- *C4b_WSIP_Benefits_Emerg_Rspns*

9. Does the project protect the system, project specific asset, or community from extreme weather events such temperature, storms, floods, or sea level rise predicted to occur in the future?

Yes No

If yes, explain how.

The Project is designed to account for the future, such as changes in the climate that can lead to extreme weather events and to protect the system, including the ecosystem and communities. Santa Clara County satisfies approximately 45% of its water supply demand through imported water from the Delta. Dependence on the Delta affects the region's water supply reliability during periods of extended drought, or through supply shortages triggered by regulatory and environmental restrictions.

Analyses, using CalSim 2 and WEAP models performed for the Project, demonstrated improved M&I water-supply reliability benefits under 2030 and 2070 future conditions. The Project would improve M&I water supplies through an increased ability to fully utilize CVP allocations, and through development of local water supplies from the Pacheco Creek watershed. By creating access to this additional CVP and local water supplies, the Project would, on average, provide an increase of between 2,800 AF and 6,313 AF of M&I water supply under 2030 future conditions for all water year types. Under 2070 future conditions, the Project would provide an average of 3,284 AF for all water year types (Attachment *A5f_WSIP_Benefits_App5*, Chapters 4 and 5, *C9_WSIP_Benefits_Uncert_Analysis*, section 2.1.4).



The models were used to simulate 2070 future conditions for the 2070 Wetter/Moderate-Warming Uncertainty Scenarios and 2070 Drier/Extreme-Warming Uncertainty Scenarios. Under the 2070 Wetter/Moderate-Warming Uncertainty Scenarios, additional storage under with-Project conditions is greater in the 2070 Wetter/Moderate-Warming Uncertainty Scenario for most water year types, when compared to the 2070 future conditions scenario. The percentage increase in steelhead cohort scores is larger for all water year types as well. In dry years, storage under the 2070 Wetter/Moderate-Warming Uncertainty Scenario is slightly lower. Further details are described in Attachment *C9_WSIP_Benefits_Uncert_Analysis*, sections 2.1 and 2.2.

Under the 2070 Drier/Extreme-Warming Uncertainty Scenario, the Project can provide more M&I emergency response supply under the 2070 Drier/Extreme-Warming Uncertainty Scenario, when compared to 2070 future conditions, for all water year types. Compared to 2070 future conditions, the percentage increase in steelhead cohort scores is larger (for most water year types) under the 2070 Drier/Extreme-Warming Uncertainty Scenario. The exception is critical years, when the percentage increase in steelhead cohort scores is slightly lower.

The Project protects the community from extreme weather events by accounting for the change in climate and population that may be impacted by these weather events. The Expanded Water Supply Portfolio Scenario includes additional supplies that may be needed to keep up with population growth through 2070. Compared to 2070 future conditions, the Project is able to provide more storage for emergency response in most water year types when SCVWD supplies are increased. Emergency response storage is slightly decreased, in comparison to 2070 future conditions, under wet water years. However, the 2070 Expanded Water Supply Portfolio Scenario is able to provide additional water storage for emergency response in all water year types, under with-Project conditions.

Project performance during a drought was analyzed for a five-year drought in 2070 future conditions consisting of only dry and critical years. The analysis used Project operations during the 1987-91 drought period. This period consists of two dry and three critical water-year types. Modeling results show that the Project can maintain and improve ecosystem and emergency response public benefits during drought periods. The Project could provide significant benefits to SCCC steelhead during prolonged droughts, especially compared to without-Project conditions. The Project could also provide substantial increases in emergency storage over without-Project conditions during prolonged drought.

Additionally, as referenced in the response to C.8., the Project is expected to enhance flood resiliency in the face of future, variability in climate conditions.

Attachment:

- *A5f_WSIP_Benefits_App5*



- *C9_WSIP_Benes_Uncert_Analysis*

10. Does the project reduce greenhouse gas emissions?

Yes No

If yes, explain how.

California's water system is energy intensive, accounting for nearly 10 percent of the state's greenhouse gas (GHG) emissions (PPIC 2016). SCVWD will need to continue to invest in and develop additional water supplies as the population of Santa Clara county continues to grow. Based on California Department of Finance estimates, Santa Clara County's population is expected to increase from the current 1.9 million (2021) to approximately 3 million by 2070. To address future water needs, SCVWD proactively identifies strategies to address increasing water demands through the development of water supply master plans. In their recent Water Supply Master Plan 2040 (SCVWD 2019), SCVWD outlined multiple strategies, including securing existing supplies (i.e., use of Pacheco Reservoir expansion to optimize use of CVP supplies), expanding water reuse, and development of other sources (including desalination).

Development of water supplies through the expansion of Pacheco Reservoir would minimize operational energy requirements, and thereby minimize GHG emissions, associated with development of water supplies to meet future water supply needs. Energy requirements to convey imported water supplies from the Delta to SCVWD are estimated to be 1,165 kWh/acre-foot (DWR 2015) with an additional 250 kWh/acre-foot required for conventional water treatment (Schunke et al. 2020). To pump water supplies from Pacheco Conduit into Pacheco Reservoir, an additional 65 kWh/acre-foot is also required. Accordingly, the total energy requirement for water supplies developed through expansion of Pacheco Reservoir is approximately 1,480 kWh/acre-foot. Energy requirements for water supplies developed through expansion of Pacheco Reservoir are substantially less than those for other sources, thereby minimizing future greenhouse gas emissions. For example, based on SCVWD's South Bay Advance Recycled Water Treatment Facility Engineers Report, energy requirements for water supplies developed through potential water recycling program expansion would require approximately 1,750 kWh/acre-foot. Water supplies developed through desalination would require an estimated 4,300 kWh/acre-foot up to 5,550 kWh/acre-foot (Schunke et al. 2020). In comparison to water supplies developed through expansion of Pacheco Reservoir, GHG emissions associated with operational energy requirements would be approximately 290% to 375% higher for water supplies developed via desalination.

California Department of Water Resources. 2017. Management of the California State Water Project: Bulletin 132-16. June. <https://water.ca.gov/-/media/DWR-Website/Web->



[Pages/Programs/State-Water-Project/Management/Cost-And-Revenue/Files/Bulletin-132-Management-of-the-California-State-Water-Project-2016.pdf](#)

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Schunke A, Hernandez Herrera. G, Padhye. L, and Berry. T. 2020. Energy Recovery in Seawater Reverse Osmosis Desalination: Current Status and New Possibilities, *Frontiers in Sustainable Cities*. <https://www.frontiersin.org/articles/10.3389/frsc.2020.00009/full>

Valley Water. 2009. South Bay Advance Recycled Water Treatment Facility Engineers Report. November.
https://www.valleywater.org/sites/default/files/Water%20Supply%20Master%20Plan%20040_11.01.2019_v2.pdf

Valley Water. 2019. Water Supply Master Plan 2040. November.
https://www.valleywater.org/sites/default/files/Water%20Supply%20Master%20Plan%20040_11.01.2019_v2.pdf

11. Does the project serve a population in a region impacted by significant energy exploration, development, or production areas?

Yes No

If yes, explain how.

The Project does serve a population in a region impacted by energy exploration, development, and production areas. Santa Clara County and the surrounding San Francisco Bay Area is a region with significant and diverse energy exploration, development, and production. Santa Clara County is home to a thriving oil and gas production industry, multiple electric utilities that produce power locally, and a growing number of companies in the wind and solar power industry.

As of 2013, the oil and gas industry provided over 5,000 jobs in the region, and contributed almost \$780 million in labor and other economic benefits to Santa Clara County (Attachment *C11a_LAEDC_OG_Ind_&_Workforce*, exhibit 5-1), of which over 400 jobs and approximately \$25 million in labor income are associated with oil and gas production (Attachment *C11a_LAEDC_OG_Ind_&_Workforce*, exhibit 5-2).

Silicon Valley Power (SVP), is the major energy provider for the City of Santa Clara. SVP produces about 20% of the power consumed by its customers, much of which is produced locally within the City of Santa Clara. Within the city, SVP owns natural gas-fueled facilities including the Donald Von Raesfeld natural gas power plant (147.8 MW), Gianera Generating Station (49.5 MW), and Cogeneration Plant #1 (7 MW). Additional power is also generated



by the Jenny Strand Solar Research and Development Park (100 kW), the Tasman Parking Structure Solar PV (400 kW), and by the capture and burning of methane gas from a closed City of Santa Clara landfill (750 kW). Outside of the city, SVP owns the Stony Creek Hydroelectric System and Grizzly Hydroelectric Project, and receives additional power from wind and solar power facilities located in the greater San Francisco Bay Area (Attachments *C11b_SiliconVly_PwrElec_ResMap*).

Attachments:

- *C11a_LAEDC_OG_Ind_&_Workforce*
- *C11b_SiliconVly_PwrElec_ResMap*

12. Does the project address water quality concerns?

Yes No

If yes, explain how.

The Project will directly address water quality concerns. When constructed, the Project will yield improved water quality conditions in the event of a system failure in the Delta, and during low-point events in San Luis Reservoir. The Project would also support actions of local groundwater sustainability agencies that are formed in response to the California Sustainable Groundwater Management Act of 2014, by improving downstream groundwater quality.

When constructed, the Project would provide a significant water quality improvement in drinking water conditions as a blending source for less-desirable quality water and as an emergency water supply. This supply would be used during severe drought situations, in the event of system outages, and failure of one or more Delta levees. All of these situations have the potential to cause excess salinity, from the San Francisco Bay, to reach the export facilities at the C.W. Bill Jones and Harvey O. Banks Pumping Plants.

In addition, SCVWD would be able to switch to Pacheco Reservoir supplies if algae-bloom conditions occur in San Luis Reservoir. During low-water-level periods, the water quality within the algal blooms is particularly not suitable for agricultural or M&I water users. Water stored in the San Luis Reservoir could be pumped and stored in the expanded Pacheco Reservoir earlier in the season, and then released to SCVWD during low-point conditions. This solution would avoid the water quality impacts of algal growth in San Luis Reservoir.

The Project also addresses water temperature through protection of the SCCC steelhead population in the Pajaro River watershed. The Project is focused on establishing suitable flow and temperature conditions in all hydrologic conditions for SCCC steelhead in Pacheco Creek, downstream of the new dam.



Finally, the Project may be able improve groundwater quality in the Pajaro Valley Subbasin, which is managed by the Pajaro Valley Water Management Agency. In the summer months, the Pajaro River runs dry, or experiences degraded water quality. Increased fresh flow releases from the Project into the Chittenden Gap can dilute nutrient-rich surface water in the Pajaro River and assist in improving groundwater quality downstream.

Additional details regarding Project-related, net improvements in water quality are presented in Attachment *C12_WSIP_WaterQualityImprovements*.

Attachment:

- *C12_WSIP_WaterQualityImprovements*

13. Does the project address water quantity concerns?

Yes No

If yes, explain how.

As referenced in earlier responses, the Bay Area faces numerous emergency water supply issues ranging from droughts, floods, infrastructure failures during earthquakes, or water quality issues in the Delta from a levee failure. Each of these supply disruptions will have varying impacts on SCVWD customers in terms of severity and duration. A primary driver of the Project was the need for additional water supply during these emergencies. Analyses estimate that expanding the Pacheco Reservoir will provide 103,000 AF, on average, of increased emergency water supplies for M&I customers through expanded surface storage and enhanced groundwater storage.

The population of the State of California is anticipated to grow, increasing demand for water and making it increasingly difficult to provide adequate water supplies to maintain a healthy industrial and agricultural economy, while also protecting the environment. Shifts in agricultural cropping patterns from field crops to high-valued permanent crops may contribute to future increases in the value of water, and it may result in a “hardening” of water demand in the agricultural sector. As this trend continues, it is likely that agriculture will have less flexibility during dry years to transfer water supplies to M&I users. A similar hardening condition may develop in the municipal sector, as conservation actions are increasingly relied upon to balance demands in all year types, rather than being reserved for dry years and drought conditions. Compounding these trends is the uncertainty associated with climate change, which may shift the timing and/or availability of water throughout the state. All of these factors, in combination, increase the need to identify additional and alternative sources of water.



The Project is anticipated to provide an average annual increase of 2.8-6.3 TAF of water per year for SCVWD M&I customers. Improved SCVWD M&I water supply reliability will be realized through an increased ability to fully utilize CVP allocations, and through development of local water supplies from the Pacheco Creek Watershed (Attachment *A5g_SLLPIP_FR_AppE*, Chapters 3 and 4, *A5f_WSIP_Benefits_App5*, Chapters 4 and 5).

Attachments:

- *C4a_WSIP_Executive_Summary*
- *C4b_WSIP_Benefits_Emerg_Rsps*
- *A5f_WSIP_Benefits_App5*
- *A5g_SLLPIP_FR_AppE*

14. Is the project identified in an existing regional, state, or multistate agreement?

- Yes No

If yes, attach the relevant document and write in the textbox the filename and relevant section(s) or page(s).

SCVWD is the prospective WIFIA borrower and will be the owner and operator of the expanded Pacheco Reservoir. However, there are many key partners that have committed to the Project.

SCVWD, Pacheco Pass Water District, and the San Benito County Water District signed an MOU in June 2018 to collaborate on the Project, and they are currently drafting an allocation of benefits agreement and a provisional operating agreement. The MOU is attached for reference (Attachment *A5e_SCVWD_SBCWD_PPWD_MOU*).

After review of the WSIP application and analyses, the CWC issued a Maximum Conditional Eligibility Determination of \$496,663,750 for the Project (Attachment *A5a_CWC_DeterminationsPacheco*).

SCVWD has entered into an agreement to work collaboratively with Reclamation. The SLLPIP Draft Feasibility Report is a joint study by Reclamation in cooperation with SCVWD. Reclamation and SCVWD implemented a multiyear plan formulation and screening process to identify, evaluate, and develop alternatives.

The Project has the potential to provide positive contributions in four California groundwater basins that are subject to the Sustainable Groundwater Management Act of 2014. The California DWR Bulletin 118 basins that could directly benefit from the Project include: Santa Clara Valley, Gilroy-Hollister Valley, Corralitos, and San Joaquin Valley. These basins contain medium- or high-priority subbasins, as defined by DWR’s California Statewide Groundwater Elevation Monitoring (CASGEM) program. SCVWD intends to enter into



voluntary coordination agreements with each groundwater sustainability agency (GSA) that could be affected by the Project.

Attachments:

- *A5a_CWC_DeterminationsPacheco*
- *A5e_SCVWD_SBCWD_PPWD_MOU*

15. Is the project identified as a municipal, state, or regional priority?

Yes No

If yes, attach the relevant document and write in the textbox the filename and relevant section(s) or page(s).

The Project has been identified as a federal, state, and regional priority.

As indicated by federal appropriations for Reclamation’s SLLPIP, expansion of Pacheco Reservoir remains a top federal priority for water resources infrastructure investment. Congress and multiple administrations have placed strong emphasis in addressing Delta issues, including annual appropriations from 2004 to 2019 for specific projects identified in the CALFED Bay-Delta Authorization Act, including the SLLPIP. In late 2016, the Water Infrastructure Improvements for the Nation Act (WIIN ACT) was signed into law. The SLLPIP is a federal priority for water resources infrastructure investment. In June 2020, expansion of Pacheco Reservoir (via SLLPIP) was one of only 10 projects recommended by Reclamation for WIIN Act funding in FY 2021 (*Attachment A5d_2021_WIIN_Act_Funding_Recs*)

In 2014, California Proposition 1 dedicated \$2.7 billion for investments in water storage projects. The CWC is administering the WSIP to fund the public benefits associated with these projects. In July 2018, the CWC approved funding for eight projects, including the Pacheco Reservoir Expansion Project. Through a rigorous selection process, the CWC chose projects based on their public benefits (*Attachment A5a_CWC_DeterminationsPacheco*).

In the Project’s 2017 WSIP application, more than 60 elected officials, organizations (representing labor unions, agricultural entities, governmental agencies, businesses, and others), resource conservation districts, public water agencies, and environmental leaders provided letters to the CWC in support of the Project, demonstrating the widespread and broad-based support for this application. A representative list of these organizations was provided in the WSIP application Executive Summary and the letters are included for reference in *Attachment A5b_WSIP_Letters_of_Support*.

The California Water Plan [Update 2018](#) provides actions, scenarios, and an investment strategy to overcome the state’s water resource challenges. In the Plan, reduced flood risk, more reliable water supplies, reduced groundwater depletion, and greater habitat and



species resiliency were identified as top priorities for the state. The priorities completely align with Project benefits.

In multiple sections, the 2021 SCVWD Protection and Augmentation of Water Supplies (PAWS) Annual Report recognizes the Pacheco Reservoir Expansion Project as an excellent opportunity for SCVWD to increase the reliability of future water supplies through additional storage capacity (Attachment *C15_2021_SCVWD_PAWS, summary of benefits, page 36*). As part of the SCVWD program to sustain water supply availability, the report acknowledges Project benefits, including reducing the frequency and severity of water shortages, increased emergency water supplies, improved water quality, providing flood protection for disadvantaged communities, ecosystems benefits through our region and the Delta, and protecting and growing the native steelhead population.

Attachments:

- *A5d_2021_WIIN_Act_Funding_Recs*
- *A5a_CWC_DeterminationsPacheco*
- *A5b_WSIP_Letters_of_Support*
- *C15_2021_SCVWD_PAWS*

16. Does the project protect water resources with exceptional recreational value or ecological importance?

Yes No

If yes, identify the water resources, why it has exceptional recreational value or ecological importance, and describe how the project protects it.

A primary driver of the Pacheco Reservoir Expansion Project has been to protect a region of significant ecological importance. The Project will improve a federally listed threatened specie’s habitat and enhance the habitat of multiple wildlife refuges. Specifically, the Project will provide increased water supplies to wildlife refuges and will release water to Pacheco Creek for ecosystem augmentation for South-Central California Coast steelhead (federally listed threatened species under the Endangered Species Act). Wildlife refuges will receive about 2,000 AF of water per year in below normal years. The Project will provide for improved flow conditions in Pacheco Creek, by maintaining 10 to 30 cubic feet per second (cfs) in creek flow year-round, providing fishery enhancements for steelhead.

An ecosystem improvement benefit of the Project would be the increased deliveries of incremental water supplies to the Refuge Water Supply Program. SCVWD intends for this supply to go to the Grassland Resource Conservation District (GRCD), which provides water to the largest contiguous block of wetlands remaining in California’s Central Valley. The increased supply would provide habitat and food for migratory birds of the Pacific Flyway, resident bird species, and many wildlife species. (Attachment *A5g_SLLPIP_FR_AppE*, Chapter



7.2).

The Pajaro River Watershed is the northern extent of the SCCC steelhead, and scientists estimate there's a 90% chance the species will go extinct within the next 50 years without a serious intervention (*Attachment C4a_WSIP_Executive_Summary*, Public Benefits section). Enlarging Pacheco Reservoir would contribute to improved SCCC steelhead habitat by improving seasonal water flows and lowering water temperatures in the Pacheco Creek downstream from Pacheco Dam. The 2013 National Marine Fisheries Service, SCCC Steelhead Recovery Plan indicates that pattern and volume of water released to Pacheco Creek is essential to improving essential habitat functions for the juvenile and adult life stages. The improved flow conditions in Pacheco Creek provided by the Project is projected to contribute to the recovery of the core steelhead populations under all hydrologic conditions (*Attachments A5g_SLLPIP_FR_AppE*, Chapter 6.2 and *C4a_WSIP_Executive_Summary*, Public Benefits section, pages 12-20).

Attachments:

- *A5g_SLLPIP_FR_AppE*
- *C4a_WSIP_Executive_Summary*

17. Is the project designed to address an existing compliance issue?

Yes No

If yes, identify the compliance issues(s). Explain how and to what extent the project addresses it.

The Project will address two significant compliance issues in the region, including: 1) spillway deficiencies of the existing North Fork Dam identified by the California Department of Water Resources, Division of Safety of Dams (DSOD), and 2) Clean Water Act Section 303(d) water quality impairments in Pacheco Creek, identified by the Central Coast Regional Water Quality Control Board (CCRWQCB).

The existing North Fork Dam, which impounds the existing Pacheco Reservoir, has been identified as having significant dam safety issues by DSOD. The Project will replace this unsafe dam. Since the 1940s, North Fork Dam has undergone multiple repairs to its spillway. The facility is currently under restricted-operation criteria due to existing spillway deficiencies. The criteria require the outlet to be left fully open until the spillway is repaired satisfactorily, and the spillway is required to be inspected daily when it is spilling. DSOD has stated that if satisfactory progress is not made to address spillway deficiencies, additional remedies would be invoked, inclusive of revocation of the PPWD's Certificate of Approval to store water. If such certification is revoked, the lake would be drained and the Dam's outlet structures would be left open, a step that would further reduce existing fisheries habitat.



The Project includes decommissioning of the existing North Fork Dam, including its spillway, and construction of a new dam upstream and appurtenant structures to current DSOD requirements.

Water quality is regulated under the federal CWA and the California Porter-Cologne Water Quality Control Act. Under these statutes, beneficial uses have been established and divided into 20 standards by the CCRWQCB. Beneficial uses designated for Pacheco Creek include municipal and domestic supply, agricultural supply, groundwater recharge, water contact and noncontact water recreation, wildlife habitat, cold and warm freshwater habitat, fish migration, fish spawning, preservation of biological habitats, preservation of rare and endangered species, freshwater replenishment, and commercial and sport fishing. However, as identified in the *2019 Water Quality Control Plan for the Central Coastal Basin* by the CCRWQCB, beneficial uses in Pacheco Creek are identified as impaired under CWA Section 303(d) due to high concentrations of fecal coliforms; low dissolved oxygen and turbidity sourced from agriculture, natural, and grazing-related sources; as well as from storm drainage discharges, animal discharges, and sewer spills and leaks (Attachment *C17b_2019_CCRWQCB_Basin_Plan*). Expansion of Pacheco Reservoir will address fecal coliform and dissolved oxygen water-quality compliance issues as follows:

- **Water Temperature and Dissolved Oxygen:** Water temperatures in the warmer/drier months (May through September) will be consistently and substantially lowered throughout the upper 11 miles of Pacheco Creek. Lower temperatures are generally favorable for ecosystem water quality, which will benefit SCCC steelhead in Pacheco Creek and also address dissolved oxygen compliance issues. The solubility of oxygen decreases as water temperature increases. The Project will decrease water temperatures in the warmer/drier months in all year types, improving dissolved oxygen concentrations.
- **Fecal Coliform:** Increasing flow in Pacheco Creek during drier/warmer months will dilute the concentration—and thus reduce the impacts of—fecal coliform in the creek. In addition, a land-side buffer along the shoreline of the expanded Pacheco Reservoir will allow for improved watershed management practices, including excluding cattle grazing in these areas. Cattle grazing is identified as the primary source of coliform within the Pacheco Creek watershed.

Under 2030 future conditions, with-Project water temperatures are lower than those without-Project:

- Critical years: from June through July, up to 39%
- Dry years: from June through July, up to 20%
- Below normal years: from June through July, up to 22%
- Above normal years: from June through July, up to 13%
- Wet years: from June through July, up to 11%

Attachments:



- *C17a_4.2018_Div_Dam_Safety_Ltr*
- *C17b_2019_CCRWQCB_Basin_Plan*

18. Is the project designed to maintain compliance?

- Yes No

If yes, identify the potential compliance issue(s). Describe how the project maintains compliance.

In California, contaminants of emerging concern are increasingly being detected in surface water. When constructed, the Project will reduce exposure to emerging contaminants by providing a significant water quality improvement in drinking water conditions as a blending source for less-desirable quality water and as an emergency water supply.

In the future, algae, mercury, and other contaminants may create water quality compliance challenges for SCVWD. To protect human health, new water quality regulations may be introduced. Once the Project is completed, SCVWD will be able to switch to Pacheco Reservoir supplies if algae-bloom or other acute water quality conditions occur, including in San Luis Reservoir. During low water level periods, the water quality within the algal blooms is particularly not suitable for agricultural or M&I water users. Water stored in the San Luis Reservoir could be pumped and stored in the expanded Pacheco Reservoir earlier in the season, and then released to SCVWD during low-point conditions. The expansion of Pacheco Reservoir will allow both SCVWD and SBCWD to avoid the water quality impacts of algal growth in San Luis Reservoir.

Securing funding through the WIFIA program, and completing the Pacheco Reservoir Expansion Project, allows SCVWD to be able to invest in multiple strategies to support compliance and reduce and remove contaminants from local creeks, streams, and the San Francisco Bay. Coordinated cleanup of encampments near waterways, trash and graffiti removal, and rapid emergency response to hazardous materials spills will enable SCVWD to stay in compliance with existing water quality regulations and proactively invest in maintaining compliance, if and when compliance requirements are introduced (Attachment *C18_SCVWD_SafeCleanWtr_Program*).

Attachment:

- *C18_SCVWD_SafeCleanWtr_Program*

19. Does the project reduce exposure to lead or emerging contaminants within a drinking water or wastewater system?

- Yes No



If yes, explain how.

When constructed, the Project will reduce exposure to emerging contaminants by providing a significant water quality improvement in drinking water conditions as a blending source for less-desirable quality water and as an emergency water supply. Algae can contribute to the presence of emerging contaminants. SCVWD would be able to switch to Pacheco Reservoir supplies if algae-bloom conditions occur in San Luis Reservoir. During low water level periods, the water quality within the algal blooms is particularly not suitable for agricultural or M&I water users. Water stored in the San Luis Reservoir could be pumped and stored in the expanded Pacheco Reservoir earlier in the season, and then released to SCVWD during low-point conditions. The expansion of Pacheco Reservoir will allow both SCVWD and SBCWD to avoid the water quality impacts of algal growth in San Luis Reservoir.

The Project is expected to increase suitable habitat in Pacheco Creek for the federally threatened SCCC steelhead. Healthy ecosystem support, including regulating water temperature and flow for the SCCC steelhead, could reduce exposure to emerging contaminants. Warmer water temperatures could lead to exposure of emerging contaminants, but the Project is focused on establishing suitable flow and temperature conditions in all hydrologic conditions for SCCC steelhead in Pacheco Creek, downstream of the new dam.

Attachment:

- *C12_WSIP_WaterQualityImprovements*

20. Does this project or projects include costs for implementing cybersecurity measures?

Yes No

If yes, please describe these measures and associated costs.

SCVWD has adopted information security practices and maintains an active information security posture, which is annually reviewed by independent third-party consultants engaged by SCVWD. SCVWD has appointed a Deputy Operating Officer for Information Technology and a Unit Manager for Infrastructure Services, who together are responsible for updates to information security practices and are charged with identifying and monitoring threats which are typically addressed by SCVWD’s Infrastructure Services team and educating staff concerning vulnerabilities. SCVWD security practices support network, computer and mobile device security (both digital and physical), email security, anti-virus and anti-malware requirements, operating system and application patching, encryption requirements, personnel, third party management, asset management, business continuity and disaster recovery, PCI compliance and secure computing asset disposal. SCVWD



currently engages external consultants to audit and assess internal controls of the information security program annually.

The Pacheco Reservoir will be operated remotely. Accordingly, SCVWD is required to integrate advanced cybersecurity measures into the design and ongoing operations of the infrastructure. Due to the significant security considerations related to the Project, additional details on the cybersecurity approach can be provided upon request.

SCVWD has incorporated costs associated with implementing cybersecurity measures in the design and construction as well as operating and maintenance costs of the Project.

21. WIFIA funding would

- Delay the project development schedule
- Have no impact on the project development schedule
- Accelerate the project development schedule
- Allow you to implement other high priority projects sooner than anticipated
- Be the only funding option that would allow the project to be implemented

22. Will WIFIA financing reduce the contribution of Federal assistance to the project?

- Yes
- No



Section D: Contact Information

1. Primary point of contact

Name: **Melih Ozbilgin**
Title: **Senior Water Resources Specialist**
Organization: **Santa Clara Valley Water District**
Street Address: **5750 Almaden Expressway**
City/State/Zip: **San Jose, CA 95118**
Phone: **(408) 630-2725**
E-mail: MOzbilgin@valleywater.org

2. Secondary point of contact

Name: **Ryan McCarter**
Title: **Engineering Unit Manager, Pacheco Project Delivery Unit**
Organization: **Santa Clara Valley Water District**
Street Address: **5750 Almaden Expressway**
City/State/Zip: **San Jose, CA 95118**
Phone: **(408) 630-2983**
E-mail: RMcCarter@valleywater.org



Section E: Certifications

Please sign in the appropriate space and submit a scanned version of the signature page to EPA with the electronic Letter of Interest submission.

1. *National Environmental Policy Act:* The prospective borrower acknowledges that any project receiving credit assistance under this program must comply with all provisions of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and that EPA will not approve a loan for a project until a final agency determination, such as a Categorical Exclusion (CATEX), Finding of No Significant Impact (FONSI), or a Record of Decision (ROD), has been issued.
2. *American Iron and Steel:* The prospective borrower acknowledges that any project receiving credit assistance under this program for the construction, alteration, maintenance, or repair of a project may only use iron and steel products produced in the United States and must comply with all applicable guidance.
3. *Prevailing Wages:* The prospective borrower acknowledges that all laborers and mechanics employed by contractors or subcontractors on projects receiving credit assistance under this program shall be paid wages at rates not less than those prevailing for the same type of work on similar construction in the immediate locality, as determined by the Secretary of Labor, in accordance with sections 3141-3144, 3146, and 3147 of Title 40 (Davis-Bacon wage rules).
4. *Lobbying:* Section 1352 of Title 31, United States Code provides that none of the funds appropriated by any Act of Congress may be expended by a recipient of a contract, grant, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, or an employee of a Member of Congress in connection with the award or making of a Federal contract, grant, loan, or cooperative agreement or the modification thereof. The EPA interprets this provision to include the use of appropriated funds to influence or attempt to influence the selection for assistance under the WIFIA program.

WIFIA prospective borrowers must file a declaration: (a) with the submission of an application for WIFIA credit assistance; (b) upon receipt of WIFIA credit assistance (unless the information contained in the declaration accompanying the WIFIA application has not materially changed); and (c) at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any declaration previously filed in connection with the WIFIA credit assistance.

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of



Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

5. *Debarment:* The undersigned further certifies that it is not currently: 1) debarred or suspended ineligible from participating in any Federal program; 2) formally proposed for debarment, with a final determination still pending; or 3) indicted, convicted, or had a civil judgment rendered against it for any of the offenses listed in the Regulations Governing Debarment and Suspension (Governmentwide Nonprocurement Debarment and Suspension Regulations: 2 C.F.R. Part 180 and Part 1532).
6. *Default/Delinquency:* The undersigned further certifies that neither it nor any of its subsidiaries or affiliates are currently in default or delinquent on any debt or loans provided or guaranteed by the Federal Government.
7. *Other Federal Requirements:* The prospective borrower acknowledges that it must comply with all other federal statutes and regulations, as applicable. A non-exhaustive list of federal cross-cutting statutes and regulations can be found at <https://www.epa.gov/wifia/wifia-federal-compliance-requirements>.
8. *Signature:* By submitting this letter of interest, the undersigned certifies that the facts stated and the certifications and representations made in this letter of interest are true, to the best of the prospective borrower's knowledge and belief after due inquiry, and that the prospective borrower has not omitted any material facts. The undersigned is an authorized representative of the prospective borrower.

Signature:

Date Signed: Click or tap to enter a date.

Name: Click or tap here to enter text.

Title: Click or tap here to enter text.

Organization: Click or tap here to enter text.

Street Address: Click or tap here to enter text.

City/State/Zip: Click or tap here to enter text.

Phone: Click or tap here to enter text.



US Environmental Protection Agency
WIFIA Program
Letter of Interest

OMB Control No. 2040-0292
EPA Form No. 6100-030
Approval expires 4/24/2023

E-mail: [Click or tap here to enter text.](#)



Section F: Notification of State Infrastructure Financing Authority

Please sign in the appropriate space and submit a scanned version of the signature page to EPA with the electronic Letter of Interest submission.

By submitting this letter of interest, the undersigned acknowledges that EPA will (1) notify the appropriate State infrastructure financing authority in the State in which the project is located that the prospective borrower submitted this letter of interest; and (2) provide the submitted letter of interest and all source documents to that State infrastructure financing authority.

Prospective borrowers that **do not want their letter of interest and source documents shared with the State infrastructure financing authority** in the state in which the project is located may opt out by initialing here _____.

If a prospective borrower opts out of sharing a letter of interest, EPA will still notify the State infrastructure financing authority within 30 days of receiving a letter of interest.

Signature:

Name: Click or tap here to enter text.

Date Signed: Click or tap to enter a date.



KEY DEFINITIONS

- (a) *Administrator* means the Administrator of EPA.
- (b) *Credit assistance* means a secured loan or loan guarantee under WIFIA.
- (c) *Eligible project costs* mean amounts, substantially all of which are paid by, or for the account of, an obligor in connection with a project, including the cost of:
- (1) Development-phase activities, including planning, feasibility analysis (including any related analysis necessary to carry out an eligible project), revenue forecasting, environmental review, permitting, preliminary engineering and design work, and other preconstruction activities;
 - (2) Construction, reconstruction, rehabilitation, and replacement activities;
 - (3) The acquisition of real property or an interest in real property (including water rights, land relating to the project, and improvements to land), environmental mitigation (including acquisitions pursuant to section 33 U.S.C. §3905(7)), construction contingencies, and acquisition of equipment; and
 - (4) Capitalized interest necessary to meet market requirements, reasonably required reserve funds, capital issuance expenses, and other carrying costs during construction.
- (d) *Iron and steel products* means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.
- (e) *Project* means:
- (1) Any project for flood damage reduction, hurricane and storm damage reduction, environmental restoration, coastal or inland harbor navigation improvement, or inland and intracoastal waterways navigation improvement that the Secretary determines is technically sound, economically justified, and environmentally acceptable, including—
 - (A) a project to reduce flood damage;
 - (B) a project to restore aquatic ecosystems;
 - (C) a project to improve the inland and intracoastal waterways navigation system of the United States; and
 - (D) a project to improve navigation of a coastal or inland harbor of the United States, including channel deepening and construction of associated general navigation features.
 - (2) 1 or more activities that are eligible for assistance [under section 1383\(c\) of this title](#), notwithstanding the public ownership requirement under paragraph (1) of that subsection.
 - (3) 1 or more activities described in section [300j-12\(a\)\(2\) of title 42](#).



-
- (4) A project for enhanced energy efficiency in the operation of a public water system or a publicly owned treatment works.
 - (5) A project for repair, rehabilitation, or replacement of a treatment works, community water system, or aging water distribution or waste collection facility (including a facility that serves a population or community of an Indian reservation).
 - (6) A brackish or sea water desalination project, including chloride control, a managed aquifer recharge project, a water recycling project, or a project to provide alternative water supplies to reduce aquifer depletion.
 - (7) A project to prevent, reduce, or mitigate the effects of drought, including projects that enhance the resilience of drought-stricken watersheds.
 - (8) Acquisition of real property or an interest in real property—
 - (A) if the acquisition is integral to a project described in paragraphs (1) through (6); or
 - (B) pursuant to an existing plan that, in the judgment of the Administrator or the Secretary, as applicable, would mitigate the environmental impacts of water resources infrastructure projects otherwise eligible for assistance under this section.
 - (9) A combination of projects, each of which is eligible under paragraph (2) or (3), for which a State infrastructure financing authority submits to the Administrator a single application.
 - (10) A combination of projects secured by a common security pledge, each of which is eligible under paragraph (1), (2), (3), (4), (5), (6), (7), or (8), for which an eligible entity, or a combination of eligible entities, submits a single application.
- (f) *Public entity* means:
- (1) a Federal, State, or local Governmental entity, agency, or instrumentality; or
 - (2) a Tribal Government or consortium of Tribal Governments.
- (g) *Publicly sponsored* means the obligor can demonstrate, to the satisfaction of the Administrator that it has consulted with the affected State, local or Tribal Government in which the project is located, or is otherwise affected by the project, and that such government supports the proposed project. Support can be shown by a certified letter signed by the approving municipal department or similar agency, mayor or other similar designated authority, local ordinance, or any other means by which local government approval can be evidenced.
- (h) *State infrastructure financing authority* means the State entity established or designated by the Governor of a State to receive a capitalization grant provided by, or otherwise carry out the requirements of, title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et. seq.) or section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12).
- (i) *Treatment works* has the meaning given the term in section 212 of the Federal Water Pollution Control Act (33 U.S.C. 1292).
- (j) *WIFIA* means the Water Infrastructure Finance and Innovation Act of 2014, Pub. L. 113-121, 128 Stat, 1332, codified at 33 U.S.C. §§ 3901-3914.



US Environmental Protection Agency
WIFIA Program
Letter of Interest

OMB Control No. 2040-0292
EPA Form No. 6100-030
Approval expires 4/24/2023



Attachment A: Selection Criteria & Scoring

Project Readiness Criteria	Points
Readiness to proceed	40
Preliminary engineering feasibility analysis	40
New or innovative approaches	20
Borrower Creditworthiness Criteria	Points
Enables project to proceed earlier	10
Financing plan	10
Reduction of Federal assistance	10
Required budget authority	10
Preliminary creditworthiness assessment	60
Project Impact Criteria	Points
National or regional significance	5
Protection against extreme weather events	20
Serves energy exploration or production areas	5
Serves regions with water resource challenges	5
Addresses identified priorities	5
Repair, rehabilitation, or replacement	20
Economically stressed communities	20
Reduces exposure to lead & emergent contaminants	20
Total Points	300

EXHIBIT 6



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

October 26, 2021

Mr. Melih Ozbilgin
Senior Water Resources Specialist
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Subject: Santa Clara Valley Water District Selection Notification

Dear Mr. Ozbilgin,

Thank you for submitting your Water Infrastructure Finance and Innovation Act (WIFIA) letter of interest for the FY 2021 Selection Round. We have reviewed these materials and are very pleased to inform you that the Pacheco Reservoir Expansion Project has been selected to submit an application for a loan for up to \$575,394,883 or not to exceed 49 percent of total eligible project costs.

We will soon be reaching out to you to schedule an initial pre-application meeting to discuss the WIFIA underwriting process in greater detail. Brian Jefferis will be the primary point of contact for this transaction and is available by e-mail at jefferis.brian@epa.gov or by phone at 202-566-2172 to answer any immediate questions you may have.

In addition, the WIFIA program will be hosting a webinar for all selected prospective borrowers to provide an overview of the WIFIA application process and walk through the [application form](#) on December 7th at 2:00 pm EST. We encourage your participation and will send you a meeting invitation with more details soon. Please forward it to all members of your team, including contractors, who will have a role in the WIFIA application process.

Once we receive your complete application, the WIFIA team will commence underwriting your transaction. Receipt of a WIFIA loan remains subject to negotiation of an agreement on terms and conditions satisfactory to the Agency as well as the project's compliance with Federal requirements, including the National Environmental Protection Act (NEPA), American Iron and Steel requirements, Flood Plain Management Standards, and the Davis-Bacon Wage Act. Selected prospective borrowers may request to increase their loan amount during the application process. Loan increase requests will be reviewed on a case-by-case basis and are subject to the availability of funding.

Based on your submitted letter of interest, we expect to receive your application by April 15, 2022. If timing for your application and/or project construction has changed, please notify your underwriter as soon as possible.

EPA is planning its announcement of the FY 2021 selections and will coordinate with your organization on this press release. Until then, the announcement of the selection of your project for a WIFIA loan is embargoed. Please do not share this information externally. If you have questions regarding communicating your selection or would like to coordinate your announcement with EPA, please contact Karen Fligger at fligger.karen@epa.gov or 202-564-2992.

We look forward to working with you on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Jorianne Jernberg". The signature is written in a cursive style with a large initial "J".

Jorianne Jernberg
Director, WIFIA Program

EXHIBIT 7

Appendix A - Valley Water Partnership Summary

Partnership Reimbursements are funds that are reimbursed by Valley Water’s partners after Valley Water advances the needed funds. The following table identifies capital projects that are funded cooperatively with Valley Water’s partners through reimbursements.

Partnership Reimbursement (\$K)

FY 2022-37 Planned Capital Reimbursement Schedule

Project Number	Project Name	Agency	Claims	Actuals							Total
			On-hand (09/14/21)	Thru FY21	FY22	FY23	FY24	FY25	FY26	Future	
91214010	Small Capital Improvements, San Felipe - Rch 1	Total	0	2,902	471	496	104	41	217	14,261	18,492
		San Benito Water Dist		2,902	471	496	104	41	217	14,261	18,492
91954002	Pacheco Reservoir Expansion Project	Total	0	11,485	4,691	4,249	3,775	26,282	35,870	410,312	496,664
		California Water Commission		11,485	4,691	4,249	3,775	26,282	35,870	410,312	496,664
92144001	Pacheco/Santa Clara Conduit ROW Acquisition	Total	0	19	0	0	0	0	0	0	19
		San Benito Water Dist		19							19
92374005	SCADA Remote Architecture & Comm. Upg	Total	0	0	0	0	0	0	0	0	0
		San Benito Water Dist		0							0
91094007s	South County Recycled Water Pipeline	Total	0	2,106	490	2,560	2,650	0	0	0	7,806
		SCRWA		811							811
		USBR - ARRA		1,295							1,295
		USBR - Title 16		0	490	2,560	2,650	0	0	0	5,700
26154001s	Guadalupe River--Upper, I-280 - Blossom Hill Rd.	Total	1,682	33,455	0	0	0	0	0	0	33,455
		State Subventions	931	28,864							28,864
		City of San Jose	751	4,591							4,591
26174041s	Berryessa Ck, Calaveras Byd to I-680	Total	0	10,288	826	826	0	0	0	0	11,940
		State Subventions		288	826	826					1,940
		DWR - Prop 1E		10,000							10,000
40174004	Berryessa Ck, Lwr Penitencia Ck - Calaveras Blvd.	Total	0	12,464	0	0	0	0	0	0	12,464
		DWR - Prop 1E		12,464							12,464
40264011	Cunningham Flood Detention Certification	Total	0	3,718	0	0	0	0	0	0	3,718
		DWR - Prop 1E		1,000							1,000
		NRCS		2,718	0						2,718
40334005	Lwr Penitencia Ck Imp, Berryessa to Coyote Cks.	Total	0	5,000	0	0	0	0	0	0	5,000
		DWR - Prop 1E	0	5,000							5,000
40264008s	Lwr Silver Ck, I-680 to Cunningham, Rchs 4-6	Total	0	53,055	0	0	0	0	0	0	53,055
		State Subventions		8,009							8,009
		DWR - Prop 1E		24,000							24,000
		NRCS-ARRA		20,676							20,676
		City of San Jose		370							370
50284010	Llagas Ck--Lwr, Capacity Restoration	Total	0	120	0	0	0	0	0	0	120
		State Subventions		120	0						120
26174051s	Llagas Creek--Up, Buena Vista to Wright	Total	5,662	29,781	6,734	579	0	0	0	0	37,094
		State Subventions	5,662	25,691	6,734	579	0	0	0	0	33,004
		City of Morgan Hill		4,090							4,090
26244001	Permanente Creek, SF Bay to Foothill Expway	Total	0	1,023	0	0	0	0	0	0	1,023
		Cities of Mountain View and Los Altos		1,023							1,023
10284007s	San Francisquito Creek, SF Bay - Searsville Dam	Total	0	5,558	0	0	0	0	0	0	5,558
		JPA Member Agencies		4,520							4,520
		JPA (Joint Powers Authority)	0	1,038							1,038
26444001	San Francisco Bay Shoreline	Total	0	11,372	0	0	0	0	0	0	11,372
		SFBRA Measure AA (Grant)		11,372							11,372
00044026	San Francisco Bay Shoreline	Total	0	16,703	19,400	27,985	30,300	12,174	4,834	0	111,396
		SFBRA Measure AA (Grant)		15,872	11,400	11,400	11,400	11,400			61,472
		SFBRA Measure AA (Ballot Reimbursement)		831							831
		State Subventions		0	8,000	16,585	18,900	774	4,834	0	49,093
26444002	San Francisco Bay Shoreline	Total	0	420	0	0	0	0	0	0	420
		State Bond - DWR		420							420
62084001	Watersheds Asset Rehabilitation Program	Total	0	442	0	0	0	0	0	0	442
		City of Palo Alto		442							442
SUBTOTAL - Reimbursements from Current Projects			7,344	199,911	32,612	36,695	36,829	38,497	40,921	424,573	810,038

EXHIBIT 8

From: [Jefferis, Brian](#)
To: [Charlene Sun](#)
Cc: [Steve Peters](#); [Broughton, Amy](#)
Subject: RE: Water Reliability project
Date: Friday, May 13, 2022 8:07:54 AM

Yes, got it. Thanks!

From: Charlene Sun <CSun@valleywater.org>
Sent: Friday, May 13, 2022 10:39 AM
To: Jefferis, Brian <jefferis.brian@epa.gov>
Cc: Steve Peters <speters@valleywater.org>; Broughton, Amy <amy.broughton@stantec.com>
Subject: RE: Water Reliability project

Good morning

Yes, please reach out to Amy directly for NEPA questions. Amy can coordinate with Valley Water folks to respond to specific project questions.

I also want to make sure you saw the second email I sent yesterday regarding the bond docs and a correction to the reference to the resolution:

The bond documents relating to the most recent bonds/COPs which are the 2020AB Bonds and 2020CD COPs are available from the following link:

Bond Docs

Password: [REDACTED]

Also, as a point of clarification, I mis-read the question regarding Resolution 94-59, which relates to the 1994 Bonds, which are no longer outstanding and are not in effect, hence not provided in the documentation package.

The response I provided below relates to Resolution 94-58, which will also be terminated on 6/1/2022 and not provided.

Please let me know if you have any other questions.

=====

Thanks
Charlene Sun
Tel: (408)630-2528
Cell: (408)912-0066

From: Jefferis, Brian <jefferis.brian@epa.gov>
Sent: Friday, May 13, 2022 6:38 AM
To: Charlene Sun <CSun@valleywater.org>; Steve Peters <SPeters@valleywater.org>
Subject: RE: Water Reliability project

Hi Charlene, You are so fast! Thanks very much. By the way, I received news today that we're moving to a rolling LOI process starting with this upcoming round. So we should be able to get back to you shortly after you submit the LOI for Anderson.

Hana and I are still working through the MCA for Safe Clean. I'm shooting for late next week to get it distributed to your team. Apologies it's taking a while. Also, Alaina on our environmental team might reach out to Amy if that's ok on a couple of NEPA questions for Safe Clean.

Talk soon,
Brian

From: Charlene Sun <CSun@valleywater.org>
Sent: Thursday, May 12, 2022 6:46 PM
To: Jefferis, Brian <jefferis.brian@epa.gov>; Steve Peters <speters@valleywater.org>
Subject: RE: Water Reliability project

Hi Brian,

Please see my responses in red below.

=====

Thanks
Charlene Sun
Tel: (408)630-2528
Cell: (408)912-0066

From: Jefferis, Brian <jefferis.brian@epa.gov>
Sent: Thursday, May 12, 2022 9:25 AM
To: Charlene Sun <CSun@valleywater.org>; Steve Peters <SPeters@valleywater.org>
Subject: Water Reliability project

Hi Charlene & Steve, I was just talking to the team about the recent Water Reliability application. We have a few big picture questions:

- I thought we were doing everything for Pacheco under one or two loans followed by Andersen but the application looks like we're doing all non-construction costs under one loan followed by all construction costs under a second loan. Is that accurate? Understood we're doing this under an MCA.

CS: Yes, the plan is to do all non-construction costs for both Pacheco and Anderson in Loan 1 and all construction costs for both projects in Loan 2. The reason for this bifurcation is to align with the environmental review process, which may take some time to go through, but we would like to secure the WIFIA loan and the interest rate as early as possible given rates are on an upward trend. We will be submitting the Anderson LOI in June when the 2022 NOFA is released, and our hope is that Anderson will be selected for funding and we can align Loan #1 closing to take place shortly after EPA's project selection announcement for the 2022 NOFA.

- If that's the case and given the size of the construction costs, we'll need to see estimates of construction in the Section E spreadsheet. We don't need specific contract info which I'm guessing you don't have yet but a breakout nonetheless so we can do our technical review, assess contingency, have a reasonable basis for the full amount we're offering in the master agreement, begin NEPA for everything etc. On that last point re NEPA, we'll just be doing a CATEX for the first loan since there's no actual construction but since NEPA is going to take a long time for the second loan having an application that reflects more of the construction piece will help support us beginning work on it.

CS: We'll work on a revised Section E spreadsheet and let you know when it's ready to be uploaded.

- I see mention of Coyote Creek in this application. Is there overlap with the Safe Clean Project? I'm mainly just concerned with duplication of costs between the two master agreements.

CS: There is no overlap, the Coyote Percolation Dam and Chillers are part of the Anderson Dam project pursuant to the FERC requirements. These projects are all funded from the Water Utility rates and charges and not part of the SCW program. The SCW program is funded by the parcel tax, and the Coyote Creek project in the SCW program is primarily for flood control, it is budgeted and managed separated from the Percolation Dam and Chillers associated with Anderson Dam. Each project has a unique project number, unique budget, project scope, and separate funding sources.

- Hana is requesting the following so that Shearman can get started.
 1. Resolution 94-59

CS: Resolution 94-58 is only applicable to one series of bonds, 2006B, which will be fully defeased on 6/1/2022 and thereby terminated. It is not applicable to any other water utility debt currently outstanding or in the future as it'll be terminated on 6/1/2022, hence we did not provide it in the documentation package.

2. Installment purchase agreements and supplemental resolutions for most recent outstanding revenue bonds

CS: I'll check with Bond Counsel to provide a copy (some redaction may be necessary)

EXHIBIT 9



HANDBOOK

April 2021

imposed by lenders; and the cost of obtaining credit rating letters for the WIFIA loan and other WIFIA Project debt

- Major Maintenance or Capital Expenditure Reserve Funds: The WIFIA program will consider the eligibility of spare major essential items that are included in the construction contract on a case-by-case basis. For project financings, eligible costs generally include the initial cash funding of Major Maintenance or Cap Ex Reserve Funds.
- The following are not eligible project costs: debt principal payments; capitalized interest on WIFIA credit assistance; Construction Contingency Reserve Fund for cost overruns during construction; retainage from payments to designers or constructors; and Operating and Maintenance Reserve Funds are not eligible project costs.

Additionally, indirect costs allocable to the development, oversight, or management of a project are generally eligible.

Prospective borrowers may request that costs incurred prior to receipt of credit assistance, including the value of any integral in-kind contributions, be included as a part of eligible project costs. The WIFIA program will approve such requests on a case-by-case basis.

Previously incurred costs must be directly related to the development or execution of the project including preliminary design, right-of-way acquisition, and NEPA compliance related costs. WIFIA will only reimburse costs incurred prior to financial close to the borrower of the proposed WIFIA loan. WIFIA will not refinance completed projects. Projects are required to be pre-construction or under construction at the time of loan closing. The WIFIA program retains the right to ask for appropriate documentation to evidence such costs for both sizing the WIFIA loan and reimbursement.

2.7 FEDERAL COMPLIANCE REQUIREMENTS

Projects receiving WIFIA credit assistance must comply with all relevant federal laws and regulations. The following subsections describe four requirements that are of particular importance to the WIFIA program. Appendix E lists additional compliance requirements but is not intended as a comprehensive inventory. Appendix H provides prospective borrowers an overview of how EPA will assess the appropriate level of National Environmental Policy Act (NEPA) review for an individual project. This is provided for informational purposes.

AMERICAN IRON AND STEEL (AIS) REQUIREMENT

The statute requires borrowers receiving WIFIA credit assistance to use iron and steel products produced in the United States.¹⁹ Borrowers may not use WIFIA credit assistance for the construction, alteration, maintenance, or repair of a project eligible for assistance unless all the iron and steel products used in the project are produced in the United States. Therefore, **even iron and steel products not purchased or financed by WIFIA, must comply with this requirement.** By statute, “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and

¹⁹ [33 U.S.C. § 3914](#)

restraints, valves, structural steel, reinforced precast concrete, and construction materials.²⁰ Equipment employed in construction but which does not become part of the project is not an “iron and steel product” for the purposes of this requirement.

Guidance developed for compliance with AIS requirements for EPA’s SRF programs applies to projects receiving WIFIA credit assistance. Such guidance can be found on the [EPA Clean Water State Revolving Fund’s website](#).

EPA may grant waivers for a case or category of cases upon request from the borrower. EPA will grant a waiver if it finds that (i) applying these requirements would be inconsistent with the public interest; (ii) iron and steel products are not produced in the US in sufficient and reasonably available quantities and of a satisfactory quality; or (iii) inclusion of iron and steel products produced in the US will increase the cost of the overall project by more than 25 percent. Prospective borrowers should contact the WIFIA program with any questions regarding AIS requirements and waivers.

The following national waivers issued by EPA apply to projects receiving WIFIA credit assistance in the same manner as they apply to projects receiving assistance under the Clean Water and Drinking Water SRF programs:

- Short-Term National Product Waiver for Stainless Steel Nuts and Bolts Used in Pipe Couplings, Restraints, Joints, Flanges, and Saddles
- One-Year Extension of the Short-Term National Product Waiver for Stainless Steel Nuts and Bolts Used in Pipe Couplings, Restraints, Joints, Flanges, and Saddles
- National Product Waiver for Pig Iron and Direct Reduced Iron
- De Minimis Waiver

Each of these national waivers can be found on the [EPA Clean Water State Revolving Fund’s website](#).

DAVIS-BACON WAGE REQUIREMENT

The statute requires WIFIA borrowers pay all laborers and mechanics employed by contractors or subcontractors wages at rates not less than those prevailing for the same type of work on similar construction in the immediate locality, as determined by the Secretary of Labor.²¹ This is commonly referred to as the Davis-Bacon wage requirement. This requirement applies to all laborers and mechanics working on a project, not only those paid from WIFIA credit assistance. Further guidance can be found on the [Department of Labor’s website](#).

NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

Projects selected to apply for WIFIA and SWIFIA loans are required to comply with the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. § 4321 *et seq.*, which mandates that Federal agencies consider the effects of their actions, including programs, regulations, policies, and grant-funded specific projects, on the quality of the human environment. The Council of Environmental Quality has established NEPA implementing regulations at 40 C.F.R. part 1500 for meeting these requirements, and

²⁰ [33 U.S.C. § 3914\(b\)](#)

²¹ [33 U.S.C. § 3909\(e\)](#)

each Federal agency has developed its own implementing procedures specific to its mission. NEPA requirements do not apply at the letter of interest stage, and therefore compliance with NEPA is not a prerequisite for submitting a letter of interest.

During the project review stage, each proposed project must be assessed for its impact on the environment under the guidelines set forth by the NEPA.²² EPA will not obligate funds for a loan prior to completing its NEPA review.

The applicant must provide information to the WIFIA program about the project and its potential environmental effects. The program and the applicant will discuss the scope of information to be provided to the program in its application. This information may include the project description and potential environmental impacts of the proposed project, its purpose and need, project details and design, and costs. EPA is responsible for the NEPA review. In carrying out its responsibilities, EPA will take the following actions:

- Review the information submitted by the applicant.
- Determine the adequacy of the information submitted for making a decision on the appropriate level of environmental review under NEPA.
- Prepare the appropriate environmental review document or review and adopt environmental review documents prepared by the applicant, other federal agency, or a third-party contractor and ensure its accuracy.
- If necessary, issue an EA or draft/final EIS and take public comment.
- If necessary, complete the NEPA process through preparation of the appropriate decision-making document such as a final finding of no significant impact (FONSI) or ROD.

Categorical Exclusion (CATEX): The applicant can review EPA's list of actions that may be categorically excluded at [40 C.F.R. § 6.204](#) to determine if the project fits within an established CATEX. An applicant who concludes that the project may qualify for a CATEX may request a CATEX determination from EPA; or EPA may determine that a proposed project may be eligible for a CATEX during initial discussions with the applicant about the proposed project. If EPA determines the project does not qualify for a CATEX, the applicant will provide EPA with more detailed information on the proposed project in the form of an Environmental Information Document (EID).

WIFIA Programmatic Environmental Assessment: WIFIA and SWIFIA projects may also be eligible for coverage under the [WIFIA Programmatic Environmental Assessment \(PEA\)](#). The PEA analyzes the potential environmental impacts related to the issuance of credit assistance under WIFIA. The PEA is an innovative approach to environmental review covering a group of projects that are similar in scope, scale, and magnitude, and that have similar types of impacts, rather than a singular project. Projects covered under the PEA do not require an additional public notification or public comment period. The PEA provides a streamlined NEPA compliance path for water and wastewater infrastructure projects and will make compliance with NEPA straightforward using an environmental questionnaire. WIFIA credit assistance projects qualify for coverage under this PEA when:

²² [42 U.S.C. § 4321](#)

- The impacts from their projects are within the scope of those considered in Section 4 of the PEA,
- Proper supporting documentation is provided, and
- A memorandum to the record is developed by EPA using the [PEA Questionnaire for WIFIA Credit Assistance Projects in Appendix A or Questionnaire for WIFIA Credit Assistance SRF Programs in Appendix B](#).

Environmental Information Document: If EPA determines that the project does not qualify for a CATEX or the PEA, EPA will likely ask the applicant to submit an EID to EPA to provide information about the project and its potential environmental effects, if a previously completed EID was not already provided to EPA. The EID provides basic project information including a detailed description of the proposed project and evaluates the environmental impacts and alternatives to the proposed project. The scope and level of detail of the EID should be commensurate with the magnitude and significance of the proposed project.

The applicant should consult with EPA to obtain information on the processes to follow when preparing an EID and the information that should be included. If the applicant holds one or more public meetings as part of preparing the EID, a description of the process and any additional documentation should be included in the EID. Please be aware that EPA may request additional information from applicant if insufficient information has been provided for EPA to conduct the NEPA review.

Environmental Assessment (EA): If EPA determines that the proposed project does not qualify for a CATEX or the PEA, EPA may evaluate the proposed project in an EA. The prospective borrower's role in the EA process is to provide sufficient information in the EID submitted to EPA. In some cases, the prospective borrower may submit a draft EA and supporting documents in lieu of an EID. EPA may contact the prospective borrower during the EA preparation process to request additional information on the project or its potential impacts. If the EA results in a FONSI, the prospective borrower may also be asked to assist EPA in conducting any public review process. The prospective borrower should consult with EPA for the exact processes to follow.

Environmental Impact Statement (EIS): If EPA determines that the applicants proposed project does not qualify for a CATEX, the PEA or EA, or an EA has concluded that significant impacts will occur, EPA may evaluate the proposed project in an EIS. EPA may enter into a third-party agreement with the applicant to hire a consulting firm to prepare the EIS. As the project's proponent, the applicant may be asked to assist EPA (e.g., by providing project information, assisting with public meetings or hearings, and helping to respond to comments that require project changes). After the EIS is complete, EPA will make a decision on the action it will take and formalize it in a ROD.

EPA has compiled additional information included in Appendix H to provide an overview of how EPA will evaluate the appropriate level of NEPA review.

NATIONAL HISTORIC PRESERVATION ACT (NHPA)

The National Historic Preservation Act (NHPA) embodies a long-standing national policy to preserve historic sites, buildings, structures, districts and objects of national, state, tribal, local, and regional significance and, among other things, to protect such historic properties from adverse impacts caused by activities undertaken or funded by federal agencies. NHPA expanded the scope of the 1935 Historic

Sites Act (Pub. L. No. 74-292) by establishing the National Register of Historic Places, a listing of historical and cultural resources maintained by the U.S. Department of the Interior (DOI).

The fundamental responsibilities of federal agencies are expressed in Section 106 of the Act, which reads:

The head of any Federal agency having direct or indirect jurisdiction over a proposed or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation established under title II of this Act (16 U.S.C. § 470i et. seq.) a reasonable opportunity to comment with regard to such undertaking (16 U.S.C. § 470(f)).²³

The NHPA is administered by the DOI and the Advisory Council on Historic Preservation (the Council). The Council implements Section 106 of the NHPA and has promulgated regulations for consultation regarding how to determine the effects of federal agency undertakings on historic properties (36 C.F.R. Part 800). Although under certain circumstances the Council may become directly involved in such consultations, the procedures generally call for consultation between the federal agency and relevant state or tribal historic preservation officers (SHPOs and THPOs) and other interested parties, including applicants for federal assistance (who may be authorized to initiate consultation with the SHPO/THPO and others – 36 C.F.R. § 800.2(c)(4)). The consultation process generally involves a series of determinations regarding the area of potential effect of the undertaking, whether there are historic properties (defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places – 36 C.F.R. § 800.16(l)) within such area, and, if so, whether such properties may be affected and how to address any adverse effects.

EPA, in consultation with the Advisory Council or SHPO/THPO, as well as other interested parties, must first determine whether a project might affect historic properties that are included or eligible for inclusion on the National Register. This step is done by identifying whether there are historic properties in the project area. EPA reviews background information, consults with the SHPO/THPO and others, seeks information from knowledgeable parties, and conducts additional studies as necessary. Unlisted properties are evaluated against the National Park Service's published National Register criteria, in consultation with the SHPO/THPO and any Indian Tribe or Native Hawaiian organization that may attach religious or cultural importance to them.

If EPA finds that historic properties are present, the next step is to assess possible adverse effects. Again, consultation must occur with the SHPO/THPO and other interested parties. If they agree that there will be no adverse effect, the agency proceeds with the undertaking and any agreed upon conditions. If the

²³ Under relevant Section 106 implementing regulations, undertaking means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including: those carried out by or on behalf of the agency; those carried out with federal financial assistance; and those requiring a federal permit, license, or approval (36 C.F.R. § 800.16(y)).

parties cannot agree or they find that there is an adverse effect, the agency begins consultation to identify ways to avoid, minimize, or mitigate adverse effects. This process also requires consultation with the SHPO/THPO and others, including Indian Tribes and Native Hawaiian organizations, local governments, and members of the public. If, because of disagreement among the appropriate parties, the agency cannot issue a determination that no historic or cultural properties are in the project area, that resources do exist in the project area but will not be adversely affected, or that adequate mitigating measures will be taken to avoid or reduce adverse effects to resources in the project area, the agency will then enter into consultations with all parties to resolve the dispute.

EXHIBIT 10



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

February 15, 2022

Todd Sexauer, Senior Environmental Planner
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Ernest A. Conant
Regional Director, Mid-Pacific Region
Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825

Subject: Pacheco Reservoir Expansion Project Environmental Impact Report, Santa Clara County, California (State Clearinghouse #2027082020)

Dear Todd Sexauer and Ernest Conant:

The EPA has reviewed the above-stated project that was prepared to comply with the California Environmental Quality Act. We note that the EPA previously provided comments related to the subject EIR as a part of the Bureau of Reclamation and the Santa Clara Valley Water District's San Luis Low Point Improvement Project Draft Environmental Impact Statement/Report on September 20, 2019. The July 2019 Draft EIS evaluated multiple alternatives, including the viability of the Pacheco Reservoir expansion alternative, using the California Simulation Model II (CalSim-II) that includes current and future water supply reliability projections to better address water supply reliability and associated water quality and treatment issues during the low water summer months in San Luis Reservoir. Although no preferred alternative was identified, the EPA's 2019 comments on the Pacheco alternative recommended that more operational details be provided to understand how algal blooms would affect the new reservoir, how water quality objectives could be met, how benefits to steelhead would be realized, and how a new reservoir would impact waters of the U.S. and wetlands.

The EPA understands that funding opportunities¹ led to the release of Draft EIR before issuance of a Supplemental or Final EIS. The EPA's recommendations, listed below and described in more detail in the attachment, focus primarily on measures to avoid, minimize, or mitigate environmental impacts from project activities and are intended to inform the next environmental document and future analysis that will be required to comply with NEPA. Please consider the following as the environmental review process continues:

- Synchronize NEPA and CEQA for the remainder of the environmental review process if feasible.
- Use an updated operations model to capture longer periods of drought and assess direct and cumulative impacts to other water users or resources.

¹ In July 2018, the California Water Commission approved the maximum conditional funding amount for the expansion of Pacheco Reservoir, which considered the Project's ability to provide ecosystem improvements and emergency response public benefits (EIR p. ES-22).

- Address continuing water quality impairments and include all measures to monitor and avoid harmful algal blooms and sediments that can degrade Pacheco Creek.
- Conduct a concurrent analysis of alternatives under CEQA, NEPA and the Clean Water Act Section 404 to ensure that the Least Environmentally Damaging Practicable Alternative (LEDPA) is identified. Further, properly apply the 2008 Mitigation Rule (40 CFR 230.91-98) to avoid, minimize and then compensate for significant adverse effects.
- Consider evaluating the ability of existing storage to accommodate any IR4 Refuge supply and continue consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife to better understand the suitability of water quality for refuge purposes.
- Include all available mitigation and best practices to reduce the cumulatively considerable air quality pollutants.
- Quantify greenhouse gas (GHG) emissions from the creation of the larger reservoir and discuss how local GHG emissions would be offset by reductions in GHG emissions from other project activities, e.g., reduced energy use.

The EPA appreciates the opportunity to provide comments to help facilitate continuity between the state and federal processes. We look forward to reviewing the next environmental document prepared for the project. If you have any questions, please contact me at (415) 947-4167 or Robin Truitt, the lead reviewer for this Draft EIR, at (415) 972-3742 or Truitt.Robin@epa.gov.

Sincerely,

JEAN PRIJATEL

Digitally signed by JEAN
PRIJATEL
Date: 2022.02.15 15:16:48
-08'00'

Jean Prijatel
Manager, Environmental Review Branch

Enclosed: Detailed Comments

Cc: Nicole Johnson, Bureau of Reclamation
Sharon McHale, Bureau of Reclamation
Katrina Galacatos, U.S. Army Corps of Engineers
Alison Kirk, Bay Area Air Quality Management District
Joel Casagrande, National Marine Fisheries Service
Jane Ling, State Water Resources Control Board

Synchronizing NEPA and CEQA

A joint federal and state environmental review process integrating the requirements of the National Environmental Policy Act and the California Environmental Quality Act can avoid redundancy, improve efficiency and interagency cooperation, and be easier for the public and applicants. The EPA recommends consulting the 2014 Handbook: NEPA and CEQA: Integrating Federal and State Environmental Reviews (2014),² developed by the State of California Office of Planning and Research in coordination with the Council on Environmental Quality. While NEPA and CEQA largely follow the same process for determining the need for an Environmental Impact Statement or Environmental Impact Report, it is recommended that state and federal agencies synchronize the processes so that the public is not presented with multiple commenting periods, and decisionmakers have the maximum suite of potential alternatives and project design options to consider without revisiting recommended decisions from largely completed NEPA or CEQA processes. We understand that financial considerations required the expedited release of the Draft EIR, separate from the NEPA analysis; however, the EPA recommends aligning NEPA and CEQA analyses and release of documents from this point forward to most efficiently and effectively inform the public and decisionmakers as the project advances.

Alternatives

The EPA appreciates that the Draft EIR presents a detailed description of alternatives and provides succinct tables that compare the environmental impacts of the proposed project with each alternative, e.g., Table ES-4 and Table 3.12-5. However, each alternative is only compared to the Proposed Project and there is no clear basis for choosing among the four alternatives as they relate to each other. For example, Alternative B would have the smallest reservoir capacity at the upstream dam site (96K acre feet covering 1,072 acres with 30.2 miles of shoreline (p. ES-23)) but its impacts are compared only to the Proposed Action also located at the upstream site (Table 3-6). We recommend including an analysis comparing impacts from each alternative to the others to provide the public and decision makers a clear distinction among them.

Alternative C, located at the downstream site, was selected as the Environmentally Superior Alternative, however, the Draft EIR does not provide a clear description or rationale for stating that Alternative C is considered environmentally superior. We note that Alternative C has a longer construction duration of 7.3 years, higher GHG emission levels and conflicts with statewide GHG reduction targets for 2020, 2030, and 2050 (Table 3.10-3), greater energy requirements during construction considering off-road fuel consumption, on-road fuel consumption, helicopter fueling needs, and batch plant energy usage (p. 3.8-2), greater impacts on sensitive natural communities and riparian habitat (p. 3.5-222), and the need for a longer transmission line. Although Alternative C would require fewer acres of vegetation be cleared and removed from areas already inundated, existing reservoir sediments could affect water quality (pp. ES 39-41, 2-16; see also Table ES-6). The Draft EIR acknowledges that both the Proposed Project and Alternative C have significant and unavoidable impacts to air and water quality during construction even with project design and implementation features, Best Management Practices (BMPs) and certain project-specific avoidance and minimization measures (PAMM) (p. ES-12, Table ES-3). We recommend that the Final EIR discuss how the designation of environmentally superior was determined and consider whether it would be the least environmentally damaging practicable alternative for a future Clean Water Act Section 404 permit (see below Wetlands and Clean Water Act Section 404 section).

² NEPA and CEQA: Integrating Federal and State Environmental Reviews
https://opr.ca.gov/docs/NEPA_CEQA_Handbook_Feb2014.pdf

Wetlands and Clean Water Act Section 404

As noted in Section 3.5, the proposed project would likely require a permit from the U.S. Army Corps of Engineers (Corps) for the discharge of fill material into waters of the U.S. (WOTUS) under Section 404 of the Clean Water Act. The EPA notes that estimates of impacts to WOTUS presented in Table 3.5-9 are based on the Navigable Waters Protection Rule, which is no longer being implemented by EPA and the Corps. Based on the information presented in Table 3.5-9, construction of the Proposed Project would result in permanent impacts to 128.8 acres of waters, including 14 acres of wetlands. Permitting under Section 404 of the Clean Water Act requires analyses and findings, including the determination of a least environmentally damaging practicable alternative (LEDPA). The EPA recommends concurrent analysis of alternatives under CEQA, NEPA and CWA Section 404 to ensure that the LEDPA is included in CEQA and NEPA alternatives and can be selected in the decision document. Under the 2008 Mitigation Rule (40 CFR 230.91-98), avoidance, minimization, and compensation for impacts are required for compliance with CWA Section 404 in that order, and compensatory mitigation should be sited properly using a watershed approach to ensure that impacts are appropriately offset.

The EPA recommends that the EIR/EIS disclose steps taken to achieve compliance with Section 404 of the Clean Water Act and implementing regulations (40 C.F.R. Part 230) and present information on potential impacts to WOTUS consistent with current regulations (40 C.F.R. 230.3(s)). To support a LEDPA determination, consider modifying the Proposed Action or any of its alternatives to reduce impacts to WOTUS. The EPA recommends a reproducible assessment of the condition of aquatic resources in the reservoir footprint, using an approved conditional assessment such as the California Rapid Assessment Method (CRAM).³ Additionally, the EPA recommends identifying potential opportunities for compensatory mitigation in the Pajaro River watershed to inform a Mitigation Plan (40 CFR 230.94(c)) following the LEDPA determination.

Water Supply Reliability and Operations Modeling

Currently, Pacheco Reservoir does not receive water from the Central Valley Project (CVP) or State Water Project (SWP) (p. 2-5), but the proposed action would supplement watershed runoff with contract CVP and SWP supplies transferred from San Luis Reservoir via a new Pacheco Conduit. Valley Water has a contract with Reclamation for up to 152,500 acre-feet per year of CVP water, inclusive of an agricultural water supply contract of 33,100 acre-feet. Valley Water has a contract with the California Department of Water Resources (DWR) for up to 100,000 acre-feet per year of SWP water. The Draft EIR notes that the actual amount of water allocated under these contracts each year is typically less than these contractual amounts depending on hydrology and regulatory restrictions. (p. ES 2-7). The EIR estimates that impacts to current users of the CVP and SWP water supply would be less than significant because water supplies would only be reduced by 1% and would therefore require no mitigation (pp. 3.12-31, 3.12-87).

Impacts to CVP and SWP users were modeled in California Simulation Model II (CalSim-II) and considered significant only if they resulted in decreases of more than 5% from existing or future conditions. While the EPA understands that moving water between projects and watersheds is complex, the EPA recommends the EIR/EIS use the latest simulated models to explain more clearly how the use of supplemental water from the CVP and SWP will affect current users. The EPA is concerned that the modeling approach presented in the Draft EIR does not represent the best available information on

³ California Wetland Monitoring Workgroup (CWMW). 2019. Using the California Rapid Assessment Method (CRAM) for Project Assessment as an Element of Regulatory, Grant, and other Management Programs. Technical Bulletin – Version 2.0, 85 pp. https://www.cramwetlands.org/sites/default/files/2019CRAM_TechnicalBulletin.pdf

project operations. CalSim-II only evaluates historical hydrology through 2003 which does not include the more severe drought that occurred in water years 2012 – 2016. CalSim-II was replaced by CalSim 3.0 in 2017, which includes historical data through 2015, improved supply and demand estimations, finer spatial resolution, and a daily rainfall-runoff model. These factors suggest that CalSim 3.0 may be a more appropriate operations model, better suited to assessing potential effects occasioned by a longer temporal scope and the degree of significance of climate change impacts to associated water operations.

The EPA also notes that the operating criteria used to model diversions to the Pacheco Reservoir (Section 3.12.3.1) are based on state and federal requirements that are currently being revisited. In the 2018 Framework for the Sacramento/Delta Update to the Bay-Delta Plan,⁴ the State Water Resources Control Board states that existing requirements are insufficient to protect the Bay-Delta ecosystem and proposes new inflow-based Delta outflow objectives of 55% of unimpaired flow within an adaptive range of 45-65%. The EPA recommends running the model again with inputs to include reasonably foreseeable diversion criteria that are more stringent to meet Delta outflow objectives and protect Delta beneficial uses.

Instream Flows and Groundwater Recharge

The Draft EIR describes that imported CVP and SWP waters from the San Luis reservoir are used to recharge local groundwater aquifers to help balance pumping and to provide reserves for use during dry years when surface water availability is limited (p. 2-7). Groundwater depletion has already led to land subsidence in some areas (p. 3.7-14) and it is unlikely that the project would thoroughly address groundwater overdraft (p. 2-13/14). As the Draft EIR states, the Variable Flow Schedule would allow the project to increase the reliability flows within Pacheco Creek during summer months, thereby increasing groundwater recharge (pp. 3.20-109/110). The EPA recommends that the variable flow schedule be included in the selected alternative.

Although the proposed project would increase the capacity to store water in wet years for groundwater recharge, its 6 – 8-year construction timeframe would have significant direct impacts on the ability of the system to recharge groundwater, provide suitable South-Central Coast steelhead habitat, or improve water quality. For example, steelhead fisheries in the Pajaro River are supported by groundwater recharge and surface flows from Pacheco Creek via San Felipe Lake and the Miller Canal (Figure 3.6-1) and would be directly impacted by changes in Pacheco Creek flow regimes (p. 3.6-1). Instream flows and groundwater recharge would be interrupted during the summer months of the construction period, generally reduced to less than 1 cubic feet per second, and in some cases the channel would be dry. Additional evaporative and percolation losses would occur under existing and future condition baselines before flows enter San Felipe Lake and the Pajaro River (p. 3.12-28). The EPA suggests that the EIR/EIS evaluate these temporal construction-related impacts more closely to determine whether the impacts are reversible or could become permanent.

Harmful Algal Blooms

Although improved water quality appears to be a secondary objective of this proposed action, the Draft EIR states that the San Luis Low Point Improvement Project was initiated to determine how to improve water quality coming from the reservoir when warm temperatures and declining water levels cause algae to bloom near diversion points (p. ES-2). The EIR notes that water quality is sufficiently deteriorated such that the harmful algal blooms (HABs) can clog drip irrigation systems and water treatment facilities, be toxic to wildlife and livestock, and result in taste and odor issues (p. ES 2-64).

⁴https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/sed/sac_delta_framework_070618%20.pdf

Although it is not thoroughly discussed, the EPA is concerned that cyanobacteria from the San Luis reservoir that is released into the Pacheco reservoir via the new conduit may further inoculate both the reservoir and releases to Pacheco Creek.⁵ The EIR states that during San Luis Reservoir low point events, Valley Water would generally reduce the amount of CVP water delivered from San Luis Reservoir and increase withdrawals from the expanded reservoir into the Pacheco Conduit (p. 2-34). It is not clear, however, whether the blending of natural inflow with supplemental CVP water from the San Luis Reservoir will improve water quality or serve to further degrade it. The EPA recommends quantifying the amount of relatively cleaner natural flows to determine whether dilution has any beneficial water quality effect.

Even if the intent under all alternatives is to transfer water from the CVP to the expanded reservoir primarily between December and May when temperatures are lower, (e.g., p. 3.6-41), there doesn't appear to be any analysis related to conditions that are conducive to the formation of HABs, or toxicity effects to fish and livestock that use Pacheco Creek as a water source downstream. The EPA recommends incorporating California Cyanobacteria and Harmful Algal Bloom Network Trigger Levels,⁶ as updated periodically to reflect an evolving understanding of HABs, into the EIR/EIS.

While recognizing these effects of HABs, the EPA recommends that any Reservoir Management Plan describe a general HAB monitoring plan and identify actions to be taken to protect public health and other beneficial uses if trigger criteria are exceeded, including releasing water from deeper in the reservoir. Throughout the bloom season, monitoring for cyanobacteria species and cyanotoxins is critical to ensure appropriate protective measures are in place to address the cyanobacteria species and cyanotoxin concentrations present.

Sedimentation

The Proposed Project and its alternatives include the excavation and removal of approximately 700,000 cubic yards of mostly fine-grained residual sediment from within the existing reservoir which could mobilize during high precipitation events and increase turbidity above Central Coast Basin Water Quality Control Plan objectives. Implementation of Mitigation Measure WQ-1a would minimize sedimentation impacts but impacts would remain cumulatively significant and unavoidable (p. 3.20-147). If practicable, the EPA supports the construction of a downstream cofferdam, as proposed under the Alternative C, to attenuate flows and settle sediments before they reach Pacheco Creek (p. 3.20-115), and the beneficial reuse/use of dredged sediments for wetland restoration projects or to combat sea level rise.⁷

Central Valley Fish and Wildlife Refuge Deliveries

The EIR notes that salts, selenium, and boron continue to be of significant concern in Central Valley refuges (p. 3.20-16); that variables unrelated to the proposed project would affect these IL4 deliveries, e.g., willing sellers (p. 2-16); and that refuge benefits related to this proposal, e.g., site-specific conditions needed (p. 3.5-54) are unknown. The EPA recommends further analysis in the EIR/EIS on

⁵ Otten, T.G., Crosswell, J.R., Mackey, S. and Dreher, T.W., 2015. Application of molecular tools for microbial source tracking and public health risk assessment of a *Microcystis* bloom traversing 300 km of the Klamath River. *Harmful Algae*, 46, pp.71-81.

⁶ California Guidance for Cyanobacteria HABs in Recreational Inland Waters, https://mywaterquality.ca.gov/habs/resources/habs_response.html

⁷ see *Sediment for Survival* at <https://www.sfei.org/documents/sediment-for-survival>

whether the reasonably foreseeable Delta Conveyance Project and B.F. Sisk Dam Raise (previously evaluated as an alternative in the San Luis Low Point Improvement Project Draft EIS in July 2019 and again in a 2020 Supplemental Draft EIS) would address refuge delivery uncertainties. Further, in consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, the EPA recommends that the EIR/EIS discuss whether project operations would improve water quality in the refuges.

Air Quality

The San Joaquin Valley Air Basin, San Francisco Bay Area Air Basin and subbasins are all in nonattainment of National Ambient Air Quality Standards for ozone and respirable particulate matter constituents (Tables 3.4-2/3/4/5), and where “serious,” various plan requirements and transportation performance standards are triggered (p. 3.4-15). The EIR acknowledges that construction-related emissions from the Proposed Project and each of its Alternatives would significantly exceed the Bay Area Air Quality Management District’s daily mass emissions thresholds, even with the proposed mitigation measures (p. 3.4-66; Tables 3.4-6; 4.3-9). The Draft EIR states that all construction vehicles and commuter vehicles would access the construction area by utilizing State Route 152 and the vehicle fleet needed for project construction would include heavy equipment, concrete trucks, water tankers, dump trucks to import or remove materials, and delivery vehicles. The EIR notes that the daily Vehicle Miles Travelled for the peak construction periods were estimated and that the project would increase the VMT by approximately 2% over existing levels (Section 3.18). The EIR also notes that the maximum annual number of total truck trips associated with importing materials onto the construction sites and removing waste materials is 11,044 trips occurring in years four through seven of construction (p. 2-33).

Given the magnitude and duration of this construction project, the EPA recommends the following minimization and mitigation measures be considered, in addition to the dust and emission control measures listed in Mitigation Measures AQ-1 and AQ 2 (p. 3.4-63).

Mobile and Stationary Source Controls:

- If practicable, lease new, cleaner equipment using the best available emissions control technologies that meets the most stringent of applicable federal or state standards:
- Consider ways to reduce the number of commuter vehicles travelling to and from the project site, per shift. This could include carpooling subsidies or providing van or bus transit.
- On-highway vehicles should meet, or exceed, EPA exhaust emissions standards for model year 2010 and newer heavy-duty on-highway compression-ignition engines (e.g., drayage trucks, long haul trucks, refuse haulers, shuttle buses, etc).
- Consider using electric vehicles, natural gas, biodiesel, or other alternative fuels during construction and operation phases to reduce the project’s criteria and greenhouse gas emissions.
- Plan construction scheduling to minimize vehicle trips.
- Prohibit engine tampering to increase horsepower, except when meeting manufacturer’s recommendations.

Administrative Controls:

- Develop a construction traffic and parking management plan that maintains traffic flow and plan construction to minimize vehicle trips.
- Avoid routing truck traffic near sensitive land areas.
- Recycle construction debris to the maximum extent feasible.
- Post visible speed limit signs at construction site entrances.

- Consider staggering construction schedules with other projects having emissions above NAAQS thresholds, e.g., High-Speed Rail through Pacheco Pass adjacent to State Road 152 (p. 3.12-87)
- Identify where implementation of mitigation measures is economically infeasible.

Fugitive Dust Source Controls:

- Stabilize heavily used unpaved construction roads with a non-toxic soil stabilizer or a soil weighting agent that will not result in loss of vegetation or increase other environmental impacts.
- Provide gravel ramps of at least 20 feet in length at tire washing/cleaning stations and ensure construction vehicles exit construction sites through treated entrance roadways unless an alternative route has been approved.
- Use sandbags or equivalent BMPs to prevent run-off to roadways in construction areas adjacent to paved roadways and ensure consistency with the project's Storm Water Pollution Prevention Plan.
- Sweep the first 500 feet of paved roads exiting construction sites, other unpaved roads en route from the construction site, or construction staging areas whenever dirt or runoff from construction activity is visible on paved roads, or at least twice daily (less during periods of precipitation).
- Cover or treat soil storage piles with appropriate dust suppressant compounds and disturbed areas that remain inactive for longer than 10 days.
- Provide covers for vehicles used to transport solid bulk material on public roadways and that have potential to cause visible emissions.
- Alternatively, sufficiently wet and load materials onto the trucks in a manner to provide at least one foot of freeboard.
- Use wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) where soils are disturbed in construction, access and maintenance routes, and materials stockpile areas. Keep related windbreaks in place until the soil is stabilized or permanently covered with vegetation.

Consider substantively connecting the Proposed Project's air quality emissions with likely health consequences, e.g., hospital admissions, mortality. The *Guidance to Address the Friant Ranch Ruling for CEQA projects in the Sacramento Metropolitan Air District* is an example of such an analysis and may be able to be adapted to other geographic areas with input from the applicable air districts to evaluate health effects quantitatively.⁸

Climate Change and Greenhouse Gas Emissions

The levels of greenhouse gas emissions generated by project activities are expected to be significant under all alternatives but could be reduced to less than significant with mitigation (Table 3.10-2). EPA appreciates that mitigation measures GHG-1 (to electrify or use renewable/bio- diesel construction equipment) and GHG-2 (purchase carbon offsets) are offered; however, it is not clear whether actual reductions in emissions or air quality improvements would be realized given that implementation of GHG-1 is subject to local availability and economic feasibility and carbon offsets may be purchased for other regions or states (p. 3.10-4). The EPA recommends that firm commitments be made to use a certain percentage of GHG-reducing construction equipment and that carbon credits be used regionally so that adverse impacts could be offset with local benefits.

⁸ www.airquality.org/LandUseTransportation/Documents/SMAQMDFriantRanchFinalOctober2020.pdf,
[Report \(airquality.org\)](http://www.airquality.org)

While the Draft EIR acknowledges the potential effects of climate change in Chapters 2 and 3 and recognizes the vulnerability to regional water supplies, the analysis uses a model centered on 2035 for hydrology and sea level rise, which, while appropriate for assessing near-term climate effects for analysis of operations of existing water infrastructure, offers less relevant insights for a proposed reservoir which is not expected to begin operating until the 2030s (p. 3.10-4). The EPA recommends revising future climate change assessments for this project to include a planning horizon that reflects the timeline of the project, such as the “mid-century” scenario (2045-2074, centered on 2060) analyzed by DWR’s Bay-Delta Office for California’s Fourth Climate Change Assessment.⁹ As noted above, CalSim 3.0 is likely better-suited to assess impacts of climate change on project operations than CalSim-II.

The EPA recommends quantifying the greenhouse gas emissions from land converted to flooded lands to supplement any analysis of greenhouse gas emissions from direct project construction impacts. We further recommend discussing the elements of this project that would offset or reduce its direct and indirect GHG emissions by expanding renewable energy or improving energy efficiency as guided by the Valley Water Climate Change Action Plan (p. 3.8-4) and California Air Resources Board’s Climate Change Scoping Plan (p. 3.10-6). The EIR notes that man-made reservoirs are a globally important source of anthropogenic greenhouse gas emissions, particularly methane. While quantifying greenhouse gas (GHG) emissions may be uncertain due to potential offsets from carbon sequestration of terrestrial vegetation (p. 3.10-8), there are tools available to estimate GHG emissions using default emission factors from the International Panel on Climate Change’s *Guidance for National Greenhouse Gas Inventories* and other publicly available data. The EPA recommends that the EIR/EIS use 2019 refinements to the IPCC *Guidance for National Greenhouse Gas Inventories*¹⁰ to calculate carbon dioxide and methane emissions from land converted to flooded lands as the basis for comparing estimated emissions from land-cover types already known to exist in the proposed action’s footprint, including wetlands and grazing lands.

⁹ Wang, J., H. Yin, J. Anderson, E. Reyes, T. Smith, and F. Chung. 2018. *Mean and Extreme Climate Change Impacts on the State Water Project*. A report for California’s Fourth Climate Change Assessment CCCA4-EXT-2018-004. January 2021 from https://www.energy.ca.gov/sites/default/files/2019-12/Water_CCCA4-EXT-2018-004_ada.pdf

¹⁰ <https://www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/>

EXHIBIT 11



For the WIFIA Application Instructions

The U.S. Environmental Protection Agency (EPA) will invite selected applicants to submit an application for Water Infrastructure Finance and Innovation Act (WIFIA) loans. Unsolicited applications will not be considered. Following selection, each selected applicant will be assigned a transaction team led by an underwriter. The transaction team can answer the applicant's questions regarding the application form, its attachments, and the project review, negotiation, and closing processes.

The applicant should answer all questions in this form. It may indicate if a requirement is not applicable to its project. Narrative answers can reference source documents by including the name of the document and relevant pages or sections and providing any referenced documents as attachments. The applicant must sign the Certification in the appropriate space and submit a scanned version of the signature pages to EPA. If the applicant anticipates a delay in one or more source documents, it should discuss the situation with its transaction team and indicate the anticipated date of submitting that document in the application. Additionally, the applicant is required to notify and submit to EPA any updated application materials that become available during the review period. EPA may request additional items from applicants on a case-by-case basis.

The applicant may assert a Confidential Business Information (CBI) claim covering part or all of the information submitted to EPA as part of its letter of interest, in a manner consistent with 40 C.F.R. 2.203, 41 Fed. Reg. 36902 (Sept. 1, 1976), by placing on (or attaching to) the information a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as trade secret, proprietary, or company confidential. The applicant should also state whether it desires confidential treatment until a certain date or until the occurrence of a certain event. Information covered by a business confidentiality claim will be disclosed by EPA only to the extent and only by means of the procedures set forth under 40 C.F.R. Part 2, Subpart B. Information that is not accompanied by a business confidentiality claim when it is received by EPA may be made available to the public by EPA without further notice to the applicant. More information about CBI is available in the WIFIA program handbook and frequently asked questions (FAQ) available at <http://www.epa.gov/wifia>.

The applicant must submit a non-refundable application fee. The application fee is \$25,000 for an application for a project serving small communities (population of not more than 25,000 people). For all other project applications, the application fee is \$100,000. For further information regarding the application fee, as well as the credit processing fee which will be charged at loan closing, and any other applicable fees, please see the [WIFIA fee rule](#).

WIFIA Application Submission

The final application submission must include:

1. Completed application form;
2. All attachments requested and referenced in this form; and
3. The application fee.



Section D: Federal Requirements Compliance

1. Has the project completed or is in the process of completing an environmental review in accordance with the National Environmental Policy Act (NEPA)?

Yes No

Responses in this section have been provided for both the Pacheco Reservoir Expansion Project and the Anderson Dam Seismic Retrofit Project.

The Pacheco Reservoir Expansion Project will require compliance with NEPA pursuant to an action by EPA as a potential funding agency. To date, Valley Water has prepared a draft environmental impact report (DEIR) that was prepared to support compliance with both CEQA and NEPA. Going forward, Valley Water intends to develop a joint EIR/EIS for the Pacheco Reservoir Expansion Project with a federal lead agency.

The Anderson Dam Seismic Retrofit Project has not completed NEPA documentation to-date. Valley Water's approach is to prepare a DEIR to satisfy CEQA requirements. Valley Water anticipates having a DEIR released for public review in early 2023. FERC has indicated that they would use Valley Water environmental information to prepare an EA for the Anderson Dam Seismic Retrofit Project, including the subprojects: Coyote Percolation Dam Replacement and Coyote Creek Stream Augmentation Fish Protection / Chillers.

However, an Environmental Assessment (EA) and Supplemental EA have been completed by FERC for the FERC Order Compliance Project (FOCP). These NEPA documents do cover several of the interim risk reduction measures (IRRM) that are being considered in the Anderson WIFIA application including the Coyote Creek Stream Augmentation Fish Protection / Chillers and the Coyote Percolation Dam Replacement. FERC is the lead federal agency.

If yes, identify the lead federal agency for the NEPA review, and provide an agency staff contact name/email/phone number.

Holly Frank, Fishery Biologist, FERC, Division of Hydropower Administration and Compliance, 888 First St. NE, Washington D.C. 20426-0001. Phone: (202) 502-6833. Email: holly.frank@ferc.gov

If no, please complete the [Programmatic Environmental Assessment \(PEA\) Questionnaire](#) unless one of the following exceptions are true:

- The proposed project is a pipeline replacement or rehabilitation project, or an upgrade or expansion of an existing facility
- The proposed project contains a large number of components in a wide geographic location



US Environmental Protection Agency
WIFIA Program
Application

OMB Control No. 2040-0292
EPA Form No. 6100-032
Approval expires 4/24/2023

the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

- 3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

- 7. *Debarment:* The undersigned further certifies that it is not currently: 1) debarred or suspended from participating in any Federal programs; 2) formally proposed for debarment, with a final determination still pending; or 3) indicted, convicted, or had a civil judgment rendered against it for any of the offenses listed in the Regulations Governing Debarment and Suspension (Governmentwide Nonprocurement Debarment and Suspension Regulations: 2 C.F.R. Part 180 and Part 1532).
- 8. *Default/Delinquency:* The undersigned further certifies that neither it nor any of its subsidiaries or affiliates are currently in default or delinquent on any debt or loans provided or guaranteed by the Federal Government.
- 9. *Other Federal Requirements:* The applicant acknowledges that it must comply with all other federal statutes and regulations, as applicable. A non-exhaustive list of federal cross-cutting statutes and regulations can be found at: <https://www.epa.gov/wifia/wifia-resources#complianceanchor>.

- 10. *Signature:* By submitting this application, the undersigned certifies that the facts stated and the certifications and representations made in this application are true, to the best of the applicant's knowledge and belief after due inquiry, and that the applicant has not omitted any material facts. The undersigned is an authorized representative of the applicant.

Name: Rick L. Callender, Esq.
Title: Chief Executive Officer
Organization: Santa Clara Valley Water District
Street Address: 5750 Almaden Expressway
City/State/Zip: San Jose, CA 95118
Phone: (408) 630-2017
E-mail: rcallender@valleywater.org

Signature: 

Date Signed: 4/29/2022

EXHIBIT 12

From: [McCurdy, Alaina](#)
To: [Jefferis, Brian](#); [Mak, Kavita](#); [Longrie, Ashley](#); [Temple, Leslie](#)
Cc: [Escobar, Alejandro](#)
Subject: RE: Santa Clara Valley Water - Pacheco Dam - Heads up
Date: Wednesday, March 9, 2022 2:42:00 PM
Attachments: [image001.png](#)

If there is another agency involved, we'll have to coordinate with them. Please hedge any bets on the lead until after their app is in. I don't want that info to get out ahead of us. I'd much rather lean on another agency than take this on ourselves, we barely have capacity to keep what we already have moving.

Thanks,
Alaina

Alaina McCurdy
WIFIA Program
McCurdy.alaina@epa.gov
(O) 202-564-6996
(C) [REDACTED]

From: Jefferis, Brian <jefferis.brian@epa.gov>
Sent: Wednesday, March 9, 2022 2:39 PM
To: Mak, Kavita <mak.kavita@epa.gov>; McCurdy, Alaina <McCurdy.Alaina@epa.gov>; Longrie, Ashley <Longrie.Ashley@epa.gov>; Temple, Leslie <temple.leslie@epa.gov>
Cc: Escobar, Alejandro <escobar.alejandro@epa.gov>
Subject: RE: Santa Clara Valley Water - Pacheco Dam - Heads up

Thanks Kavita, maybe the first EIS for WIFIA? That'll be 2 years

From: Mak, Kavita <mak.kavita@epa.gov>
Sent: Wednesday, March 9, 2022 2:22 PM
To: McCurdy, Alaina <McCurdy.Alaina@epa.gov>; Longrie, Ashley <Longrie.Ashley@epa.gov>; Temple, Leslie <temple.leslie@epa.gov>
Cc: Escobar, Alejandro <escobar.alejandro@epa.gov>; Jefferis, Brian <jefferis.brian@epa.gov>
Subject: Santa Clara Valley Water - Pacheco Dam - Heads up

This is a heads up for the environmental team:

An engineer with Santa Clara Valley Water called me today about the Pacheco Dam project. They plan to submit their loan application in April. He wanted to double check that we would be the lead federal agency for NEPA since they are currently working with Bureau of Reclamation with another project that is related to this one, but separate. I told him we would likely be the lead federal agency. He mentioned that this project would have significant, unavoidable impacts and that they

are already working with FWS on a Section 7 consultation.

I wanted to give you all a heads up because this application will be coming in soon and the environmental review looks like it will be really heavy lift. On the plus side the borrower is aware that the review could take long time and they are willing to work with us to complete any documentation or surveys necessary to finish the review.

Let me know if you have any questions.

Thanks,
Kavita

Kavita Mak, P.E. (she/her)

Environmental Engineer
WIFIA Management Division
Office of Wastewater Management
U.S. Environmental Protection Agency
(O) 202-566-2999
(M) [REDACTED]
mak.kavita@epa.gov



EXHIBIT 13

DEPARTMENT OF WATER RESOURCES

P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



November 1, 2021

Mr. Christopher Hakes, Deputy Operating Officer
Dam Safety and Capital Delivery
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Pacheco Dam, Proposed
Santa Clara County

Dear Mr. Hakes:

This is the Division of Safety of Dams' (DSOD) response to the Santa Clara Valley Water District's (Valley Water) design concept submittals for the proposed Pacheco Dam. Valley Water's submittals, dated March 1, 2021, March 16, 2021, and August 25, 2021, sought DSOD's review and approval of the feasibility of constructing a "hardfill" dam at the preferred upper dam site. For the reasons set forth below, DSOD is unable to approve Valley Water's concept.

DSOD has completed its review of the submitted documents (list enclosed). These submittals define a hardfill dam as a symmetrical gravity dam constructed of cemented materials utilizing construction methods similar to Roller Compacted Concrete (RCC). Hardfill materials generally do not meet industry requirements for RCC mixtures, such as using lower quality aggregates with greater fines content (0.075 mm and smaller particles). According to the submittals, Pacheco Dam would be of similar design.

As proposed, Pacheco Dam would be the largest hardfill dam in the United States, standing at a height of 326-feet with 140,000 acre-feet of storage. A key aspect of DSOD's review has been the design, construction, and performance history of hardfill dams in the United States and elsewhere. However, given the short history (less than 20 years) and limited documentation for this type and size of dam, sufficient information is not readily available. With this limitation, DSOD cannot agree with Valley Water and its consultants that hardfill dams have proven adequate performance based on the lack of documented negative performance.

As discussed in a meeting with you and your staff on October 27, 2021, DSOD has identified major issues that lead us to reject the hardfill dam concept. A complete list of major comments is enclosed. The most critical issue, which was identified during your consultant's (AECOM) Probable Failure Mode (PFM) workshop, is the potential degradation of hardfill over time in the presence of water. This negative factor is identified numerous times in the screening of PFMs, but it was considered remote. However, a lack of research and limited performance history leave large uncertainties as to whether this factor is remote. This compounds the risk since the potential for water to interface with the hardfill cannot be fully mitigated, especially at the interface between the dam and foundation.

Mr. Hakes
November 1, 2021
Page 2

Although risk reduction measures could be incorporated into the design, the adequacy and longevity of any risk reduction measure would be unknown. The ability to monitor the dam's performance would be limited in areas such as at the contact between the dam and its foundation. As such, if deficiencies do manifest after significant progression, intervening actions may not be adequate to prevent a catastrophic failure of the dam.

Additionally, the lack of well-documented case histories, cohesive design standards, and independent research regarding hardfill dams and their long-term performance poses unacceptable risks for public safety. Finally, the suitability of the hardfill as a robust dam design cannot be accepted by DSOD based on these factors and assumptions that may prove incorrect in time as the performance of this dam type is better understood.

The upper dam site preferred by Valley Water remains a feasible site to construct a dam, such as an earthfill dam, but this site does have noted geologic issues that will need to be addressed for any dam type. The concern of site-specific fault rupture and the associated unknowns will remain until the foundation is excavated or fully explored via a trench. Additionally, the adverse bedding in the right abutment and potential for differential settlement between the adjacent geologic units will need to be further evaluated. Any dam constructed at this site will need to be designed to accommodate all uncertainties reliably to mitigate the risks associated with the extremely high downstream consequence associated with a dam of the proposed size.

If you have any further questions or comments, please contact Design Engineer Ashley Moran at (916) 565-7850 or Project Engineer Christopher Dorsey at (916) 565-7846.

Sincerely,



Sharon K. Tapia, P.E.
Division Manager
Division of Safety of Dams

Enclosures

California Natural Resources Agency
DEPARTMENT OF WATER RESOURCES
DIVISION OF SAFETY OF DAMS
November 1, 2021

Enclosure 1

The list of documents submitted by Valley Water that DSOD reviewed for determining the acceptability of a hardfill dam at the proposed Pacheco Dam site follows:

1. Hardfill Dam Workplan Pacheco Reservoir Expansion Project, by AECOM, Inc., Stantec, and GEI Consultants, dated March 11, 2021.
2. Evaluation of Hardfill Dam Technical Memorandum Pacheco Reservoir Expansion Project, by AECOM, Inc., Stantec, and GEI Consultants, dated March 15, 2021.
3. Project Alternatives Assessment Technical Memorandum Pacheco Reservoir Expansion, by AECOM, Inc., Stantec, and GEI Consultants, dated March 2021.
4. DRAFT Assessment of Regional and Local Faulting, Pacheco Reservoir Expansion Project, Santa Clara County, California, by Lettis Consultants International, Inc., dated September 10, 2020.
5. Assessment of Local and Site-Specific Faulting, Pacheco Reservoir Expansion Project, Santa Clara County, California, by Lettis Consultants International, Inc. dated February 12, 2021.
6. Reservoir Rim Landslide Inventory Mapping near the Proposed Pacheco Reservoir Expansion Project, Santa Clara County, California, by Lettis Consultants International, Inc. dated March 2, 2021.
7. Pacheco Reservoir Expansion Project (PREP): Workshop materials from PFM workshop, by AECOM, Inc., Stantec, and GEI Consultants, dated August 25, 2021.

California Natural Resources Agency
DEPARTMENT OF WATER RESOURCES
DIVISION OF SAFETY OF DAMS
November 1, 2021

Enclosure 2

The following is DSOD's list of major comments with respect to the proposed hardfill dam at the Pacheco Dam site (upper or lower):

1. Long-term performance data for hardfill dams of the proposed size are not available to adequately support the proposition of a hardfill dam of such extreme consequence. The dynamic properties of hardfill are not well studied or known, and there are no records showing that the select hardfill dams of a similar or larger size have been subjected to dynamic loading close to their design loads. The documentation by AECOM regarding seismic history are based on estimates rather than direct measurements. The conclusion that hardfill dams have adequate performance because there has been no documentation of negative performance is potentially unconservative given the limited history (less than 20 years) for dams of this type and size under extreme loads.
2. In AECOM's review of potential failure modes (PFMs), a negative factor for many of the PFMs is the possibility that hardfill can degrade over time in the presence of water. We find this to be the most critical issue because water may be able to access the hardfill in multiple locations, and some locations may not be detectable. To date, thorough and complete research on this issue has not been performed, and it would take significant time to completely understand. However, this issue cannot be disregarded and is the crux of further issues below.
3. A grout curtain will not fully prevent seepage below or around the dam, and seepage is likely to permeate the dam at the foundation contacts and potentially cause hardfill degradation. The degradation of hardfill in existing dams is currently unknown and the appropriate research would need to be conducted to mitigate any potential risks.
4. The aggregates will be variable on site, which would increase the potential for hardfill to degrade over time if areas of concentrated seepage occur. While multiple mix designs will be developed, not every property of the hardfill will be understood, and the global variability may cause internal flaws or fractures that cannot be predicted or analyzed before construction. Additionally, adequate mixing will be a challenge with many aggregates exceeding 10-percent fines content. While a liner as proposed would protect the dam, we note that liners do degrade with time and environmental conditions (reservoir cycling, weather, etc.).

Enclosure 2

5. The potential for larger units of shales to abut sandstone units creates a potential for differential settlement below the dam. While structurally, the dam may be able to adequately bridge this condition, water would be more likely to access the interface reducing friction resistance, increasing uplift on the dam, and providing a pathway for seepage into and possible degradation of the hardfill or erosion of the foundation that may be undetectable.
6. Considering the adverse bedding and zones of open fractures in the proposed right abutment and the relatively narrow footprint of the hardfill dam, there is a risk of instability and seepage that could result in failure at that abutment. A dam with a larger footprint, like an earthfill dam, would better mitigate the risk of abutment failure by increasing seepage path lengths and improving the ability to capture and monitor for seepage.
7. The site-specific fault rupture evaluation does not adequately demonstrate absence of active faults in the dam foundation. Any planar, laterally continuous bedrock faults or shear zones exposed in the foundation during construction will be considered conditionally active and a possible rupture hazard if their attributes are reasonably consistent with the current tectonic regime. If a shear is encountered, conclusive proof of inactivity will be difficult to achieve given the apparent absence of Quaternary deposits greater than 35,000 years old.

EXHIBIT 14

DRAFT

ENVIRONMENTAL IMPACT REPORT

Pacheco Reservoir Expansion Project

State Clearinghouse # 2017082020

November 2021



The Proposed Project would include a pipeline and pump station to allow for the bi-directional conveyance of water between the expanded reservoir and Pacheco Conduit. The conveyance pipeline would be 10,800 feet long and 114-inch-internal-diameter with a capacity of 490 cfs.

To tie-in the new pipeline into the existing Pacheco Conduit, approximately 910 feet of the existing Pacheco Conduit would be removed and replaced. To provide power to the dam and water conveyance facilities, a new 70 kilovolt (kV)/4.16 kV electrical substation and 4.1 miles of new, single overhead 70 kV transmission line would be constructed.

A combination of new permanent and temporary roads and improvements to existing access routes would be required to allow primary and auxiliary access to the new dam and facilities, nearby properties of existing landowners, and construction areas. Permanent access roads would include a 1.6-mile frontage road, 6.1 miles of dam and auxiliary access roads, and 29.9 miles of property-owner access roads. In addition, 7.2 miles of temporary construction roads would be required during construction. Primary vehicular access to the dam site, and appurtenant facilities during construction and operation, would be provided by a new permanent, paved tight-diamond interchange and overpass located at the State Route 152 (SR 152) and Kaiser-Aetna Road intersection.

ES.5.1.2 Construction

Construction of the Proposed Project would be initiated in late 2025, with an estimated duration of 6.7 years. The permanent tight-diamond interchange and overpass at SR 152 and Kaiser-Aetna Road, and permanent and temporary access roads, would be completed early in the construction period to facilitate access for construction crews and hauling equipment to the dam site. In year two of construction, the existing Pacheco Reservoir would be drained, and the existing North Fork Dam and ancillary facilities would be decommissioned. Following decommissioning of the existing dam, flows would follow a natural hydrograph until the new dam is completed. Construction of the hardfill dam with integrated spillway and inlet/outlet works, conveyance facilities, utilities, and other improvements would occur concurrently until completion in early spring 2032.

The Proposed Project would include 15 construction staging areas totaling 83.7 acres, 3 on-site material borrow areas totaling 52.5 acres, and 4 disposal areas totaling 75.6 acres, as shown in Figure ES-4. To allow for material mixing on-site during construction, the Proposed Project would include the development of a concrete batch plant, located in one of the identified staging areas, and a hardfill batch plant, located in one of the identified borrow areas. A mix of equipment would be on-site during construction to support earthmoving, grading, tunneling, concrete mixing, paving, vegetation clearing, aerial transportation (e.g., helicopters for power transmission lines), and similar activities. During the peak of construction, the construction labor force would consist of multiple crews plus construction management personnel (up to 410 workers per day).

- Construction will be coordinated with the California Highway Patrol, Cal Fire and other state and local agencies that provide public and/or emergency services for Santa Clara, Merced, and Stanislaus counties. These agencies shall be notified in advance of the timing, location, and duration of construction activities and the location roadway closures.
- Any changeable message signs or other illuminated signage placed within roadway corridors to warn drivers of upcoming construction activity and any lane closure will be placed away from areas adjacent to residences and positioned so as to reduce any light trespass outside of the roadway corridor. Brightness or intensity of the message will be adjusted to the ambient light conditions. The use of background color in nighttime conditions will be limited to avoid washout effect of the text, loss of resolution, or experience of excessive brightness by drivers in otherwise dark conditions.
- To the extent applicable, the above strategies shall conform to the California Manual on Uniform Traffic Control Devices for Streets and Highway: Part 6 Temporary Traffic Control (Caltrans 2014).

PAMM TR-2 Ridesharing Program

During the construction period, Valley Water will require its construction contractors to develop and implement a Ridesharing Program to reduce the number of single occupancy vehicle trips by the construction workers trips traveling to and from the Project site. The Ridesharing Program will result in at least 90 percent of all construction worker vehicle trips being shared by at least two construction workers. Of the shared trips, at least 22.5 percent will be by vanpools or a similar type of vehicle with at least 5 construction workers per vehicle.

PAMM TR-3 Road Repair

Public right-of-way shall be repaired or restored to pre-construction conditions upon completion of construction. Valley Water shall inspect and document the condition of Kaiser-Aetna Road prior to and after completion of the Project. At a minimum, roads damaged by the Project shall be repaired to a structural condition equal to that which existed prior to the Project construction activities at no expense to the owner(s).

2.3.5 Ability to Address Project Objectives/Benefits

Table 2-5 illustrates the ability of the Proposed Project to meet Project objectives by quantifying net benefits. The Proposed Project would address, to varying degrees, both of the primary Project objectives and both of the secondary Project objectives. The Proposed Project would provide public benefits as defined in Water Code Section 79753(a), including ecosystem improvements and emergency response benefits. The Proposed Project would also provide non-public benefits including water supply and M&I water quality benefits.

Table 2-5. Ability of the Proposed Project to Address Project Objectives and Summary of the Net Benefits

Benefit	Objective Addressed	Indicators	Existing Conditions (2017) ¹⁰	Future Conditions (2030) ¹⁰
Emergency Response	Primary Objective: Increase water supply reliability and system operational flexibility to help meet M&I and agricultural water demands in Santa Clara and San Benito Counties during drought periods and emergencies, or to address shortages due to regulatory and environmental restrictions	Net increase in regional surface storage (Pacheco Reservoir and Valley Water's surface reservoirs) and groundwater storage (North County Santa Clara Subbasin) ^{1, 2, 9}	117,480 AF	107,160 AF
Water Supply		Net increase in baseline supplies available to Valley Water and SBCWD; average all years and critical years only ^{3, 7, 8}	5,130 AF/ 8,830 AF	3,600 AF/ 8,350 AF
Ecosystem Improvement – Pacheco Creek	Primary Objective: Increase suitable habitat in Pacheco Creek for federally threatened SCCC steelhead through improved water temperature and flow conditions	Percent increase in Steelhead Cohort Score ^{4, 9}	157%	146%
		Provides adult attraction pulse flows for SCCC steelhead	Yes	
		Length of new stream channel habitat ⁵	1.8 miles	
Ecosystem Improvement – San Joaquin River Watershed	Secondary Objective: Develop water supplies for environmental water needs at IL4 wildlife refuges to support habitat management in the Delta watershed	Net increase in Incremental Level 4 water deliveries to San Joaquin River watershed refuges in below normal years ^{6, 7, 9}	2,000 AF	2,000 AF
M&I Water Quality	Secondary Objective: Improve water quality and minimize supply interruptions, when water is needed, for Santa Clara and San Benito Counties, to increase operational flexibility for south-of-Delta contractors dependent on San Luis Reservoir	Number of months of avoided impaired water quality deliveries from San Luis Reservoir over 82-year simulation period ^{8, 9}	96 months out of 102 months (94% reduction)	63 months out of 65 months (97% reduction)

Notes:

- ¹ Values were derived from CalSim II and Valley Water's WEAP model. See Section 3.12.3.4 for additional information on reservoir and groundwater storage volumes.
- ² Under existing conditions, water stored in Pacheco Reservoir would not be available for emergency response due to lack of connection to the SCVWD or SBCWD water systems. Under the Proposed Project, an expanded Pacheco Reservoir would be connected to Valley Water and SBCWD water systems via the Pacheco Conduit.
- ³ Values were derived from Valley Water's WEAP model. See Section 3.12.3.4 for additional information on Valley Water and SBCWD water supplies.
- ⁴ Values were derived from Pacheco Creek Steelhead Habitat Suitability Model. The Steelhead Cohort Score provides an index of the ability of Pacheco Creek to support South-Central California Coast steelhead through all life stages. See Section 3.6.3.4 for additional information on effects to SCCC steelhead.
- ⁵ Reflects length of historic North Fork Pacheco Creek stream channel that is currently inundated by the existing Pacheco Reservoir and would be restored between the spillway of the new dam and the existing North Fork Dam that would be decommissioned.
- ⁶ Values were derived from CalSim II and reflect refuge deliveries in the San Joaquin River watershed. The values reflect the total quantity of water that Valley Water—and SBCWD for the Proposed Project and Alternative C—would transfer from their current CVP contract allocation—directly or through exchanges—to the Refuge Water Supply Program. See Section 3.5.3.3 for additional information on benefits of refuge deliveries.
- ⁷ Water year types based on the Sacramento Valley water year hydrologic classification.
- ⁸ Values were derived from CalSim II and Valley Water's WEAP model.
- ⁹ For additional information on numerical modeling conducted to quantify physical benefits, see the Water Resources and Fisheries Numerical Modeling Appendix.

Table 3.12-20. Simulated Mean Annual Pacheco Reservoir Operations for the Proposed Project Under Existing Conditions (2017)

Variable	Alternative	Variable	Wet	Above Normal	Below Normal	Dry	Critical	Long-term Average
Natural Inflow	Baseline ^{1,2}	Volume (AF)	24,852	17,035	7,913	5,497	1,517	13,104
	Proposed Project ¹	Volume (AF)	23,858	16,354	7,596	5,277	1,456	12,579
	Percent Change		-4%	-4%	-4%	-4%	-4%	-4%
Supplemental CVP Inflows	Baseline ^{1,2}	Volume (AF)	0	0	0	0	0	0
	Proposed Project ¹	Volume (AF)	10,074	14,605	16,696	9,790	10,945	11,953
	Percent Change		N/A	N/A	N/A	N/A	N/A	N/A
Water Supply Withdrawals	Baseline ^{1,2}	Volume (AF)	0	0	0	0	0	0
	Proposed Project ¹	Volume (AF)	2,675	8,163	6,697	11,507	15,234	7,993
	Percent Change		N/A	N/A	N/A	N/A	N/A	N/A
Habitat Releases	Baseline ^{1,2}	Volume (AF)	5,496	5,123	4,919	4,140	2,659	4,630
	Proposed Project ¹	Volume (AF)	8,013	8,092	8,257	8,298	7,831	8,102
	Percent Change		46%	58%	68%	100%	195%	75%
Spill	Baseline ^{1,2}	Volume (AF)	17,930	10,336	2,984	1,692	12	8,049
	Proposed Project ¹	Volume (AF)	7,521	1,479	0	263	0	2,654
	Percent Change		-58%	-86%	-100%	-84%	-100%	-67%
Evaporation	Baseline ^{1,2}	Volume (AF)	551	500	455	361	212	435
	Proposed Project ¹	Volume (AF)	6,879	5,527	4,981	4,934	4,162	5,524
	Percent Change		1149%	1005%	996%	1268%	1861%	1170%
Storage	Baseline ^{1,2}	Volume (AF)	4,261	3,672	3,330	2,436	1,155	3,158
	Proposed Project ¹	Volume (AF)	129,961	117,911	111,658	118,285	91,645	116,858
	Percent Change		2950%	3111%	3253%	4756%	7832%	3600%

Note:

¹ Values based on CalSim-II, WEAP, and PCSHSM simulations. Simulation period: 1922-2003. Water Year Type based on Sacramento Valley Water Year Index. Additional information on reservoir operations modeling is provided in the Water Resources and Fisheries Numerical Modeling Appendix.

² Baseline values reflect operation of the existing Pacheco Reservoir and North Fork Dam consistent with recommendations in the 2014 Report on Comprehensive Strategy and Instructions for Operation of Pacheco Reservoir (Micko 2014).

Key:

AF = acre-feet

CVP = Central Valley Project

N/A= not applicable

EXHIBIT 15

State Water Resources Control Board

February 15, 2022

Santa Clara Valley Water District
c/o Todd Sexauer
5750 Almaden Expressway
San Jose, CA 95118
PachecoExpansion@valleywater.org

Dear Mr. Sexauer:

COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT (STATE CLEARINGHOUSE #2017082020) FOR THE PACHECO RESERVOIR EXPANSION PROJECT IN SANTA CLARA COUNTY

Thank you for the opportunity to comment on the draft Environmental Impact Report (EIR) for the Pacheco Reservoir Expansion Project (Project).

The mission of the State Water Resources Control Board (State Water Board) and the nine Regional Water Quality Control Boards throughout the state (Regional Boards) (collectively Water Boards) is to preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations.

The State Water Board administers water rights in California and the State and Regional Boards have primary authority over the protection of the State's water quality. The Pacheco Reservoir Expansion Project will require both water right and water quality approvals from the State Water Board and Central Coast Regional Water Quality Control Board (Central Coast Water Board). Accordingly, the Water Boards are responsible agencies for the Project pursuant to the California Environmental Quality Act (CEQA).

As responsible agencies under CEQA, the Water Boards must review and consider the environmental effects of the Project identified in the draft EIR that are within their purview and reach their own conclusions on whether and how to approve the project. (Cal. Code Regs., tit. 14, § 15096, subd. (a).) Responsible agencies should also comment on draft environmental impact reports and negative declarations for projects that will require the responsible agencies' approval. (*Id.*, § 15096, subd. (d).)

E. JOAQUIN ESQUIVEL, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

Accordingly, the Water Boards submit these joint comments. General comments regarding the Project are included below whereas specific comments are included in a comment table as an attachment to this letter. In addition, for each comment in the attached table, the commenting Section within the State Water Board is identified to facilitate follow up discussion between staff if warranted. Should you have questions or topics for discussion regarding these comments, please contact the appropriate staff identified below.

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General Comments

Consideration of CEQA by the State Water Board

The State Water Board, as a responsible agency under CEQA, will review and consider environmental impact determinations and associated analysis as presented in a draft and final EIR prepared by the Santa Clara Valley Water District (Valley Water) for the Project. Consideration of environmental impacts is required before taking any final action, such as issuing a water right permit, a water right change petition, or a water quality certification pursuant to section 401 of the Clean Water Act. Accordingly, these comments are intended to assist in development of a robust CEQA document capable of supporting actions by the State Water Board for the Project. In exercising its independent authority, however, the State Water Board may reach determinations that differ from those presented in CEQA.

North Fork Pacheco Creek

State Water Board comments on the North Fork Pacheco Creek within the Pacheco Creek watershed focus on anticipated State Water Board actions, which include action on an application for water quality certification, a petition to change water right license 2879, and water right applications seeking to divert additional water from North Fork Pacheco Creek. The Project involves the removal of an existing dam that creates Pacheco Reservoir and construction of a new dam and expanded reservoir approximately 1.8 miles upstream of the existing dam on North Fork Pacheco Creek. Pacheco Pass Water District diverts and stores water in the existing Pacheco Reservoir under water right license 2879. The petition to change license 2879 will seek authorization to move the point of diversion upstream to the new dam location. The new reservoir will also divert more water from North Fork Pacheco Creek, requiring acquisition of new water right permit(s).

Water Right Permit

The draft EIR indicates that Valley Water intends to file a water right application to appropriate water by permit with the State Water Board. Valley Water intends to use the additional water from North Fork Pacheco Creek for fish and wildlife preservation and enhancement, and municipal, and industrial uses. Fish and wildlife preservation and enhancement use are considered a non-consumptive use (where water returns to the stream) and municipal and industrial uses are consumptive uses. Based on the proposed use of water for fish and wildlife enhancement and preservation by the Project as described in the draft EIR, the Project may need to file two separate water right applications since it appears that the non-consumptive use and consumptive uses are not incidental to each other. (See Cal. Code Regs., tit. 23, § 686.) Consideration of any water right application is a discretionary action that requires determinations that (1) unappropriated water is available, (2) potential impacts to fish and wildlife will not be unreasonable and public trust resources will be protected to the extent feasible and in the public interest, and (3) the appropriation of water is in the public interest.

Petition to Change Water Right Licenses and Permits

The draft EIR indicates that Valley Water intends to file a change petition, on behalf of Pacheco Pass Water District, to change water right license 2879 which diverts water from North Fork Pacheco Creek into the existing Pacheco Reservoir. However, the draft EIR does not discuss the need for a petition to change the U.S. Bureau of Reclamation's (Reclamation) water rights for the Central Valley Project (CVP) to allow for redirection of water previously diverted under Reclamation's rights into the proposed new reservoir; the Board's analysis indicates that such a petition will be a requirement for the project. The EIR should also fully address potential impacts, including identification of mitigation measures, from effectively expanding the south of Delta capacity to store water diverted from the Delta, particularly given that most of the water proposed to be stored in the new reservoir would be water diverted from the Delta. (See Wat. Code, §§ 1702, 1703, 1703.6, subd. (d) [setting forth requirements for water right change petitions].) When a project is seeking to petition to modify existing water

rights and the project is also seeking a water right application as part of the same project on the same water source, the State Water Board may process both actions together. Petitions follow the same general processing steps and timeline as water right applications, as described below. Additionally, consideration of any petition on an existing water right is a discretionary action that requires determinations that the change to the existing water right (1) will not cause injury to existing water right holders or initiate a new water right, (2) will not cause unreasonable impacts to fish and wildlife and public trust resources will be protected to the extent feasible and in the public interest, and (3) will be in the public interest.

Water Quality Certification

Section 401 of the Clean Water Act (33 U.S.C. § 1341) requires any applicant for a federal license or permit for an activity that may result in any discharge to waters of the United States to obtain certification from the State that the project will comply with the applicable water quality requirements, including water quality standards promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Clean Water Act section 401 directs that certifications shall prescribe effluent limitations and other conditions necessary to ensure compliance with the Clean Water Act and with any other appropriate requirements of state law, which includes the Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.). Conditions of certification shall become a condition of any federal license or permit subject to certification. The Project requires one or more federal permits and will result in a discharge to waters of the United States, and therefore must obtain a water quality certification from the State Water Board. Since the Project involves a water right activity, the application for a Water Quality Certification should be submitted to the State Water Board, which will coordinate with the Central Valley Water Board on its processing.

The State Water Board's certification must ensure compliance with applicable water quality standards as listed in regional and state water quality control plans. Water quality control plans designate the beneficial uses of water that are to be protected (such as municipal and industrial, agricultural, and fish and wildlife beneficial uses), water quality objectives for the reasonable protection of the beneficial uses and the prevention of nuisance, and a program of implementation to achieve the water quality objectives. (Wat. Code, §§ 13241, 13050, subds. (h), (j).) The beneficial uses, together with the water quality objectives contained in the water quality control plans, and applicable state and federal anti-degradation requirements, constitute California's water quality standards for purposes of the Clean Water Act. In issuing water quality certification for a project, the State Water Board must ensure consistency with the designated beneficial uses of waters affected by the project, the water quality objectives developed to protect those uses, and anti-degradation requirements. (*PUD No. 1 of Jefferson County v. Washington Dept. of Ecology* (1994) 511 U.S. 700, 714-719.)

Although the draft EIR analyzes the Project's potential impacts to environmental resources in comparison to baseline (existing) environmental conditions, the water quality certification process will evaluate the Project's consistency with water quality

standards. The evaluation of the Project's consistency with water quality standards may require actions in addition to proposed CEQA mitigation measures. The draft EIR needs additional analysis of potential water quality impacts associated with Project construction in addition to mitigation measure refinement to ensure established restoration metrics are met.

Water Right and Water Quality Certification Processing, Timing, and Hearing

The timelines for processing water right applications and petitions can vary greatly in length depending on the size and complexity of the project and the number and nature of protests received. The State Water Board will begin processing the application(s) and petition(s) once they are deemed complete. When water right applications are submitted to the State Water Board, staff must evaluate whether the application is complete within 30 days of receiving it, unless the timeline is suspended by Gov. Code, § 55922.1. due to a critically dry year or drought emergency. However, if deficiencies are found that make the applications incomplete, the State Water Board will send a deficiency letter which will provide a minimum of 60 days to address deficiencies.

The Board's first step, once the application is deemed complete, is to prepare a public notice of the project. Public noticing includes publication to provide existing water right holders and other stakeholders that may be affected by the proposed project information about the project and the opportunity to file protests against approval of the applications and petitions. The noticing period for the application(s) and petitions(s) is 60 days. Individuals and other entities may file protests against the water right application(s) or petitions(s) if they think that the proposed action will cause injury to an existing water right holder, adversely affect public trust resources, have an adverse environmental impact, or not be in the public interest.

If a valid protest is received during the noticing period, the water right applicant will be prompted to conduct protest resolution. (Wat. Code, § 1333.) Protest resolution typically lasts a minimum of 180 days. Depending on the number and content of the protests, protest resolution may be a lengthy process. Protest resolution may also result in the water right applicant and/or the protestants providing additional information to support their findings and/or claims. (Wat. Code, § 1334.) Protest resolution may result in the applicant conducting additional analysis to investigate matters raised by protestants. A robust draft and final EIR and supporting documentation should assist a water right applicant in resolving protests. In addition to the notice and protest process, other processing steps run concurrently, such as evaluation of water availability and potential impacts to public trust resources, as discussed below.

As part of processing the water right application, this project may involve a petition for release of priority from a state-filed application (Application 18334SF) located on the downstream flow path. A public hearing is required if a petition for release of priority from a state-filed application is filed. (Wat. Code, § 10504.1.) A hearing is also required if there are outstanding protests on a water right application or change petition that raise disputed issues of material fact. (Wat. Code, §§ 1350, 1351, 1704.)

Whenever practicable, a hearing on a petition for release of priority from a state-filed application will be combined with any required hearing on a related application or change petition. (Cal. Code Regs., tit. 23, § 739.) If the water right application for the Project requires a water right hearing, the hearings process generally runs after the other processing steps discussed, as information generated during processing the application is relied upon during the hearing. As mentioned above regarding protests, a robust EIR that addresses all State Water Board comments is expected to greatly assist with this process.

A hearing may take several years to complete. The California Water Commission has provided resources for State Water Board staffing to assist with processing of Proposition 1 Water Storage Investment Program (WSIP) projects, including this project. This dedicated staffing allows for expedited processing. Valley Water should be aware, however, that even when a project is considered expedited, hearing on an expedited project will be prioritized as appropriate taking into consideration other high priority efforts, such as other WSIP projects and other high priority matters that require a hearing. It is also possible that processing will be affected by drought conditions or other urgent matters. Per the California Water Commission's webpage for the Project, Valley Water is targeting the issuance of water right approvals for the Project by the end of 2024. The State Water Board wants to ensure that Valley Water is made aware that processing a water right application and petitions for the Project will take a considerable amount of time due to the complexity of the Project. Valley Water can help speed up the hearing timeline, and the entire water rights process, by completing a robust water availability analysis and resolving protests prior to the hearing.

The Project's water quality certification process is associated with a United States Army Corp of Engineers (USACE) Clean Water Act Section 404 permit. As such, the water quality certification process will be limited to approximately 90 days unless the USACE grants an extension. To ensure the requirements of the water right and water quality certification are consistent, State Water Board staff recommends Valley Water work with State Water Board staff to determine the appropriate timing for the filing of the water quality certification application for the Project.

Water Availability and Public Interest

The State Water Board will consider the hydrologic analyses and water availability findings included in the EIR for the Project while processing any water right applications filed for the proposed project. In determining the amount of water available for appropriation, the State Water Board must make its own independent findings on water availability and take into consideration the public interest and the relative benefit to be derived from all beneficial uses of the water concerned, including municipal, industrial, preservation and enhancement of fish and wildlife resources, and the water quality needed to protect beneficial uses.

The draft EIR indicates Valley Water may have embarked on efforts to assess water availability, however the water right application process typically involves a more

comprehensive examination, including cumulative impacts at a watershed scale. As a general approach, water availability considerations compare available supply, under a range of hydrologic conditions, minus water that needs to remain instream and water that is already spoken for by senior diverters (including senior priority applications).

Environmental analyses for projects involving new surface water diversions typically entail evaluation of the impacts of the proposed diversion, including the impacts on biological resources. For the State Water Board to evaluate the impacts of the proposed diversion of water, the Project needs to identify some key elements, starting with the quantity and rate of water proposed for diversion, and the beginning and end of the annual season when water would be diverted from North Fork Pacheco Creek. The draft EIR states the maximum amount of water North Fork Pacheco Creek can produce in any given year, and includes reduced downstream percentages compared to baseline flows in the creek, however the draft EIR does not indicate or analyze the quantity of water from the creek that will be sought under a water right application and how much will remain instream. The draft EIR does not appear to evaluate a minimum flow required to maintain instream resources during times of diversion, evaluate if there is a need for passing through peak flows to maintain the natural hydrograph, including for channel maintenance, or evaluate whether the season of diversion should be limited to reduce impacts to downstream fisheries and other instream resources. Without this information, the State Water Board will not be able to fully evaluate the impacts of the proposed diversion of water.

Water Right Application and Petition on License 2879 Public Trust Considerations

In addition to the State Water Board's obligations under CEQA and the Water Code, the State Water Board has an independent obligation to consider the effect of an application for a water right permit on public trust resources, and avoid or minimize harm to those resources to the extent feasible and in the public interest. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 446-447.) The common law public trust doctrine protects public uses of navigable water bodies, including fishing, recreation, and the preservation of fish and wildlife habitat. Under the public trust doctrine, the State Water Board has a duty of continuing supervision over the appropriation of water. The Board is not confined by past allocation decisions, and the CEQA baseline should not be construed as the appropriate baseline for consideration of the need to protect public trust resources. In addition, it is the policy of this state that all state agencies, boards, and commissions seek to conserve endangered species and threatened species and use their authority in furtherance of the purposes of the California Endangered Species Act. State agencies should not approve projects which would jeopardize the continued existence or habitat of any endangered species or threatened species if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy. (Fish & G. Code, §§ 2053 & 2055.)

The State Water Board will also need a better understanding of proposed reservoir operations in order to process a water right application and petition. The draft EIR should clarify how the reservoir will operate with multiple sources of water and multiple

water rights. More detailed information, which could be provided in a reservoir operations plan, could be provided concerning the operations of the reservoir, including a range of quantities of water that would be stored in the expanded reservoir from diversions under water right License 2879, the CVP, and the proposed water right application(s) for additional diversion from North Fork Pacheco Creek.

Sacramento San Joaquin River Delta Watershed

The State Water Board acknowledges the significant benefit of a new water supply project such as Pacheco Reservoir to enhance California's water resiliency, where such projects can be designed and operated in a manner that does not exacerbate existing pressures on either the Delta ecosystem or the Pajaro River watershed.

The proposed project would involve the redirection of water diverted by the CVP from the Sacramento/San Joaquin Delta (Delta) watershed and stored in San Luis Reservoir, effectively expanding storage capacity and increasing the ability to divert water from the Delta. Many of the current Delta operating requirements are in the process of being updated to strengthen environmental protections, including the water quality and flow objectives included in the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) and the federal biological opinions issued under the federal Endangered Species Act for the long-term operation of the State Water Project (SWP) and CVP. Nonetheless, both the existing conditions baseline and the future conditions baseline identified in the draft EIR, which is less protective of Delta fish and wildlife than the existing conditions baseline, are used to conclude that Project and cumulative impacts to Delta fishes are less than significant, and the draft EIR does not evaluate any proposed operational constraints associated with diversions from the Delta.

In prior comments on the related San Luis Low Point Improvement Project's (SLLPIP) environmental documentation, State Water Board staff noted that Delta outflows under existing conditions are highly impaired, and are associated with prolonged and precipitous declines of native Delta species (see the State Water Board's 2017 scientific basis report in support of potential update and implementation of the Bay-Delta Plan:

www.waterboards.ca.gov/water_issues/programs/peer_review/docs/scientific_basis_phase_ii/201710_bdphaseII_sciencereport.pdf

The State Water Board's 2018 Framework for possible updates to the Bay-Delta Plan:

https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/sed/sac_delta_framework_070618%20.pdf).

However, as in the SLLPIP draft EIR/EIS, the draft EIR continues to rely on existing regulatory requirements to avoid significant impacts to Delta fishes, without consideration of potential future Bay-Delta Plan requirements. Potential changes

include new and modified Sacramento River inflow, Delta outflow, and cold water habitat objectives, as well as other requirements to ensure the reasonable protection of fish and wildlife beneficial uses. Although the State Water Board supports new storage projects that can take advantage of high flow events, operational constraints that address the potential impacts of increased diversions on fishery resources and water quality in the Delta should be evaluated.

While it is possible that a voluntary agreement for possible updates to the Bay-Delta Plan will be finalized and submitted to the State Water Board and ultimately incorporated into the Bay-Delta Plan, such a voluntary agreement would not necessarily address operating criteria for new or expanded diversion projects or other diverters that are not part of any voluntary agreement. As discussed further in detailed comments below, the draft EIR should include Project-specific operational constraints to ensure that future operations of the Project are consistent with modeled operations that form the basis for impact conclusions in the draft EIR.

Other State Water Board Considerations

Tribal Resources

For projects that may involve tribal resources, the Water Boards are committed to having meaningful involvement and consultation with California Native American Tribes on actions that may have an impact to tribal lands, tribal interest, and/or tribal cultural resources consistent with the mission of the Water Boards:

www.waterboards.ca.gov/about_us/public_participation/tribal_affairs/docs/california_water_board_tribal_consultation_policy.pdf

Equity Resolution

The State Water Board adopted Resolution No. 2021-0050, Condemning Racism, Xenophobia, Bigotry, and Racial Injustice and Strengthening Commitment to Racial Equality, Diversity, Inclusion, Access, and Anti-Racism

(https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2021/rs2021_0050.pdf).

Any action by the State Water Board related to the Project will take this resolution into consideration ensuring there is no conflict with the resolution.

Closing

We appreciate the opportunity to participate in the environmental review process. If you have any questions regarding these comments, please contact the appropriate staff identified above.

Sincerely,



Erik Ekdahl, Deputy Director
State Water Board, Division of Water Rights

Attachment: Comment Table for Pacheco Reservoir Expansion Project's Draft EIR

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COMMENT TABLE FOR PACHECO RESERVOIR EXPANSION PROJECT'S DRAFT EIR

Chapter 2: Project Description and Alternatives to the Proposed Project

Comment No.	Page No.	Comment
1	2-15	The draft EIR states that “Field studies indicate that, under current conditions (low flows and high water temperature), only the 10 miles of Pacheco Creek downstream from the existing confluence of North Fork and South Fork Pacheco Creeks may provide suitable habitat for steelhead egg incubation and fry rearing in some years”. The draft EIR should include discussion of how conditions will change in North Fork Pacheco Creek above the confluence given the proposed restoration and proposed flow schedule. Specifically, the EIR should discuss whether conditions will be appropriate for SCCC and when, including the likelihood that SCCC will move upward into the North Fork Pacheco Creek to the restored portion of North Fork Pacheco Creek once the Project is operating.
2	2-26	The draft EIR states “Material excavated from the dam would be sorted on-site; material deemed suitable for earth fill would be used for construction of the cofferdam.” Please specify the criteria for “suitable” material.
3	2-34	Under “Natural Inflows and Integrated Water Management,” the draft EIR indicates the expanded reservoir will be filled with natural inflows from North Fork Pacheco Creek and supplemented by inflows from San Luis Reservoir. The draft EIR provides the expected maximum and minimum inflows from North and East Fork Pacheco Creeks, but does not specify how much of those inflows the proposed project would divert. The draft EIR should be revised to include the proposed amount of water that will be diverted from North Fork Pacheco Creek by the Project and the amount of water that will be diverted from the Delta and stored in the reservoir.
4	2-36	The draft EIR states that “In years when adult migration most likely does not occur due to lack of hydrologic connectivity in the Pajaro River system, and other steelhead life stages within Pacheco Creek are not likely to be present to benefit from summer/fall baseflows (e.g., June –October), reservoir releases for summer/fall baseflows may be reduced to retain water supplies to create later environmental pulse flows.” Please explain what constitutes a lack of hydrologic connectivity and provide information on the parameters that will be monitored or measured to determine a lack of hydrologic connectivity and the associated operational changes.

5	2-36	The draft EIR should identify the criteria or methodology that will be used to identify that “other steelhead life stages within Pacheco Creek are not likely to be present to benefit from summer/fall baseflows.” Any additional monitoring or assessment criteria should be evaluated and discussed in the draft EIR.
6	2-61, 2-62	<p>Section 2.3.5.1 states that “On average, the expected available emergency storage supply would be 117,480 acre-feet under existing conditions and 107,160 acre-feet under future conditions. However, the volume of water supplied for emergency purposes may exceed these volumes because high salinity water from the Delta could be blended with low salinity water from the Proposed Project, depending on water supply conditions.” Please specify which water sources will contribute to the “emergency storage supply” and how much water will come from each source under different conditions.</p> <p>Section 2.3.5.2 states that “The Proposed Project would, on average (all water year types), provide an increase of 5,130 acre-feet of municipal and industrial water supply to Valley Water and SBCWD, under existing conditions. Under future conditions, the Proposed Project would provide an average (all water year types) of 3,600 acre-feet to Valley Water and SBCWD. During critical water years, the Proposed Project would provide an increase of 8,830 acre-feet of municipal and industrial water supply to Valley Water and SBCWD under existing conditions. Under future conditions, the Proposed Project would provide an increase of 8,350 acre-feet of municipal and industrial water in critical years to Valley Water and SBCWD.” The draft EIR should be revised to specify how much water from each source will contribute to the additional municipal and industrial water supply.</p>
7	2-62	Section 2.3.5.3 states that “The Proposed Project would improve habitat for SCCC steelhead by providing seasonal water flows and improving temperatures in the Pacheco Creek downstream from the expanded reservoir.” The draft EIR should be revised to describe the total maximum amount of water that will be diverted, stored, and used in the expanded reservoir under the range of possible hydrologic conditions for fish and wildlife preservation and enhancement uses downstream of the expanded reservoir.
8	2-85	The draft EIR states that “A 55,000-acre-foot habitat storage reserve would be maintained to provide suitable flows and water temperatures for steelhead in the North Fork and mainstem of Pacheco Creek during multi-year droughts.” The draft EIR should be revised to provide analysis as to why under Alternative A, the habitat storage reserve is 55,000 acre-feet whereas under the Proposed Project there is only 35,000 acre-feet proposed for the habitat storage reserve.
9	-	For each alternative, the draft EIR provides estimates of the additional water that would be made available for fish and wildlife, municipal, and industrial uses within the expanded reservoir. However, the

		draft EIR does not indicate of that additional water for these uses, how much would come from which water source (North Fork Pacheco Creek or the CVP). The draft EIR should be revised for Alternative A, B, C and D to indicate how much water will come from each source to provide the proposed additional water for fish and wildlife, municipal, and industrial uses.
10	-	Project alternatives analyzed in the draft EIR are related to dam type and location. It is unclear if the alternative included analysis of routes and locations for access roads, the electric transmission line, the conveyance pipeline, and other ancillary facilities. The draft EIR should be revised to clearly discuss these aspects for Alternative A, B, C, and D.

Chapter 3: Environmental Setting, Impacts, and Mitigation

Comment No.	Page No.	Comment
11	-	The cumulative impacts section does not include a discussion of the State Water Board’s efforts to update and implement the Bay-Delta Plan and should. The State Water Board approved updated San Joaquin River flow and southern Delta salinity objectives in 2018 and is in the process of implementing those objectives. The State Water Board is also in the process of updating the Delta outflow and other flow and water project operational objectives in the Bay-Delta Plan as discussed above.

Section 3.5: Biological Resources – Botanical/Wildlife

Comment No.	Page No.	Comment
12	-	This section should also include in its analysis the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. (www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html). The Dredge or Fill Procedures provide California’s definition of wetland, wetland delineation procedures, and procedures for submitting applications for activities that could result in discharges of dredged or fill material to waters of the state. The Dredge or Fill Procedures ensure that State Water Board regulatory

		activities will result in no net loss of wetland quantity, quality, or permanence, compliant with the California Wetlands Conservation Policy, Executive Order W-59-93.
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Section 3.6: Biological Resources – Fisheries Resources

Comment No.	Page No.	Comment
13	-	The draft EIR should consider the impact of the diversion of water from North Fork Pacheco Creek to the Pajaro River watershed as a whole. Specifically, the draft EIR should identify the diversion amount or range of possible diversion amounts and evaluate the potential direct and cumulative impacts of the proposed diversion and all other diversions in the watershed on the Pajaro River Lagoon and the fishery resources that utilize the lagoon.
14	3.6-3	The draft EIR states “East Fork Pacheco Creek is listed as having a historical steelhead population (DFG 1990 as cited in Becker and Reining 2008); however, steelhead are currently blocked from entering East Fork Pacheco Creek by North Fork Dam.” The draft EIR should discuss why the proposed dam will not include a fish passage structure to allow connectivity to the steelhead’s historical range within North Fork Pacheco Creek.
15	3.6-21	The <i>Biological Resources, Fisheries</i> section should include an evaluation of the impacts of minimization measure PAMM Fish-2. This minimization measure includes the construction of “a functional barrier that would prevent anadromous fish access to San Felipe Lake and Pacheco Creek upstream during construction,” estimated to last for approximately 6.7 years. However, this exclusion barrier may have impacts of its own on SCCC steelhead that could effectively extirpate them from Pacheco Creek. It is unclear from the draft EIR what efforts will be made to facilitate recolonization of Pacheco Creek by SCCC steelhead after construction is completed or an estimated timeline for natural recolonization. An assessment for the impacts of PAMM Fish-2 should be included in the draft EIR and a recovery plan should be included as mitigation.
16	3.6-45	The <i>Biological Resources, Fisheries</i> section should include an analysis of the impacts of dampened winter peak flows on geomorphic processes that support the ecosystem. The winter pulse flows were designed to attract adult steelhead into Pacheco Creek. However, winter peak flows also drive geomorphic processes including scour and bed mobilization which rejuvenate riparian forests and clean gravel for salmon, benthic macroinvertebrates, and benthic diatoms. Peak flows are expected to be reduced by 41 to 55 percent in wet years under the proposed project. On page 3.6-45, the draft EIR

		state, “In high flow events, these tributary flows, combined with the release flows may be sufficient to trigger geomorphic processes that could affect habitat for anadromous fish species.” An analysis of the impacts of dampened winter flows on these geomorphic processes and other benefits such as flood plain access for yearling steelhead was not included in the draft EIR. The tradeoffs of reducing flows at one time to increase flows at another should be fully evaluated and described.
17	3.6-48	The water year type averaged X2 position cross-referenced from Section 3.20.3.4 is too coarse of a summary to support a less than significant impact determination for Delta fishes. Minimally, a seasonally averaged X2 position for the months of January through June should be considered. Ideally, more detailed information such as changes to frequency distributions of monthly X2 positions should be considered.
18	3.6-92	The SLLPIP draft EIR/EIS identified a significant impact associated with the risk of introduction of invasive aquatic species (including fishes) into Pacheco Creek. Mitigation Measure BIO-2 would have required a screen or treatment system capable of preventing the transfer of invasive fish, larvae, and eggs into Pacheco Reservoir. The draft EIR determined this impact to be less than significant, seemingly based on the observation that some invasive fish species are already present in the Pacheco Creek and the Pajaro River watershed. The Project description does not appear to contain a mitigation measure corresponding to the SLLPIP BIO-2. Mitigation Measure PAMM BI-13 <i>Aquatic Invasive Species Management</i> , appears to address introduction of invasive species due to construction and maintenance activities, but does not clearly address introduction of invasive species via import of water from San Luis Reservoir and should.
19	3.6-170	The cumulative analysis assumes that compliance with existing regulations will be sufficient to avoid cumulative impacts to Delta fishes. This conclusion is inconsistent with the large body of scientific information summarized in the State Water Board’s 2017 scientific basis report in support of the update of the Bay-Delta Plan, which concludes that existing flow conditions in the Delta watershed are insufficient to support native anadromous and resident fishes present in the Delta watershed. The draft EIR should consider operational constraints for the project to avoid additional impacts to the Delta.

Section 3.12: Hydrology and Water Management

Comment No.	Page No.	Comment
20	-	<p>The draft EIR is unclear as to how much additional water the Project will be diverting from North Fork Pacheco Creek. The draft EIR indicates that the additional water diverted from North Fork Pacheco Creek will be used for fish and wildlife preservation and enhancement, municipal, and industrial uses but does not state the proposed amount for each use. The draft EIR appears to indicate that much of the additional water diverted from North Fork Pacheco Creek will be primarily used for fish and wildlife preservation and enhancement downstream of the reservoir within Pacheco Creek. The draft EIR does not indicate how often the water will be used for municipal and industrial uses. The draft EIR should be revised to specify how much water will be diverted and allocated for each use as a range and on an average annual basis.</p>
21	-	<p>The draft EIR should include a reservoir operations plan that includes, but is not limited to, how the reservoir will be initially filled after construction, how water entering and leaving the reservoir from both North Fork Pacheco Creek and the CVP will be accounted for, and how water released for fish and wildlife use downstream of the reservoir (including how identifying how much will be released for subsequent beneficial use) will be monitored and tracked, including what triggers would be monitored that cause changes in the proposed variable flow schedule.</p>
22	-	<p>The level of explanation of modeling assumptions and local hydrology in the draft EIR, including the <i>Water Resources and Fisheries Numerical Modeling Appendix</i> (“Appendix”, in the context of this comment) is improved relative to the prior San Luis Low Point Improvement Project draft EIR/EIS. However, additional detail and more comprehensive presentation of results are necessary for a complete analysis. Specifically, the following items should be addressed:</p> <ul style="list-style-type: none"> <li>• The basis for the assumed changes to the demand pattern for delivery of CVP San Luis supplies (Appendix Table 2-3, p. 2-17) should be described more completely, and the Project should include features that ensure that actual operations remain within the analyzed range. The validity of impact determinations, particularly for Delta resources, depends upon an accurate representation of the effect of the timing and quantity of imports to the expanded Pacheco Reservoir from San Luis Reservoir. It is not clear from the information in the draft EIR whether the assumed operations are appropriate for all water year types and alternatives.

		<ul style="list-style-type: none"> • The results presented in Section 3.12 are generally presented as monthly averages by water year type. Some representation of the range of variation within these averaged periods should be included. For example, one would expect that storage in a reservoir with a storage volume of approximately five times the sum of annual average inflow and imports may fluctuate substantially, particularly during extended droughts. The draft EIR does not appear to show any explicit representation of operations during such a period, though such periods occur during the modeled hydrological record. • The results of operations modeling of the Project should be described more completely to help the reader understand the effect of the Project in the context of overall Valley Water operations. Chapter 6 of the Appendix contains a detailed description of WEAP model assumptions, but does not contain illustrative results to enable the reader to understand the modeled operations. Time series presentations of representative operational conditions throughout the domain of the WEAP model would provide useful context.
23	3.12-14	<p>A change petition to add Pacheco Reservoir as a Point of Rediversion may be required, and the expanded reservoir may need to be added as a place of storage for CVP's water rights if water from the CVP is stored in Pacheco Reservoir. In addition, if water is delivered to Pacheco Reservoir for storage when San Luis Reservoir is filling it could potentially add more storage space for the CVP rights. If so, the project has the potential to increase diversions from the Delta, and the potential impacts to the Delta fisheries and water quality conditions should be evaluated.</p>
24	3.12-25, 29,30	<p>The draft EIR states that impacts of the proposed project to water users in the Pajaro River Watershed would be less than significant because water supplies available to surface water users would not be substantially decreased. The draft EIR also mentions that the operation of the proposed project could cause changes to Pacheco Creek, but concludes that the changes would not impact surface water users in the Pajaro River Watershed due to the minor known amount of surface water diversion and the relatively minor change in total contribution of Pacheco River to Pajaro River. The draft EIR indicates that under the operation of the proposed project, surface flows downstream of Pacheco Reservoir during winter months could be over 50 percent less compared to flows under the baseline condition. This seems to be a significant reduction in flows downstream of the Reservoir and to conflict with the conclusion of less than significant impact due to no substantial decrease in surface water supplies. The draft EIR also noted that there is a state filing (Application 18334SF) downstream on the Pajaro River with a large diversion amount. Although the state filing has not been assigned for actual diversion, it will be required to be considered in the water availability analysis for the applications for water right permits.</p>

		Relatedly, the draft EIR indicates that “the depletion of interconnected surface water criterion is excluded from analysis of Hydrology and Water Management impacts.” Interaction of surface water and groundwater could play an important role in how downstream groundwater users are impacted by the surface flow reductions.
25	3.12-32,33; 3.12-103, 3.12-137	The draft EIR indicates the chronic lowering of groundwater levels below sustainability criterion established in the draft Groundwater Sustainability Plan (GSP) for the North San Benito Subbasin would be the most appropriate to assess the significance of potential impacts to groundwater supplies during construction. Please further explain the reasoning for using chronic lowering of groundwater levels given that construction of the project is not an ongoing activity. Although construction of the proposed project may not have a long-term impact to groundwater supplies, modeled results in the draft EIR shows that the proposed project could cause over 10% reductions in groundwater storage in Reaches 1, 2 and 3 for during both the modeled wet period and drought period. Further explanation is needed on why this impact is not significant and whether downstream groundwater users available supply could be impacted.

Section 3.20: Water Quality

Comment No.	Page No.	Comment
26	-	The regulatory discussion in Chapter 3.20.2 should be revised to refer more specifically to State and Federal antidegradation policies to ensure that the antidegradation polices have been taken into consideration when assessing impacts to water quality. The Basin Plan which covers the antidegradation policies is available here: https://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/
27	3.20-10	The draft EIR states “Anecdotal observations suggest when Pacheco Reservoir storage is low in the fall, cyanobacteria (i.e., blue-green algae) may form a harmful algal bloom, depleting dissolved oxygen in the reservoir and diminishing water quality. Releases from the reservoir during these times are toxic to fish and livestock that use Pacheco Creek as a water source downstream (Smith 2007).”

		Please provide additional information on the current cyanobacteria blooms in Pacheco Reservoir as part of existing conditions, specifically what time period and duration cyanobacteria blooms occur along with species identification. Additionally, in the impact analysis, please provide analysis on the potential for the new reservoir to impact future cyanobacteria blooms.
28	3.20-23	<p>The draft EIR states “PAMM BI-14: Comply with Restriction on Herbicide Use in Aquatic Areas -- This PAMM will require that only herbicides and surfactants registered for aquatic use will be applied within the banks of channels within 20 feet of any water present.”</p> <p>For PAMM BI-14, please define “registered for aquatic use”. Additionally, please note that the <i>Statewide National Pollutant Discharge Elimination System Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications (Aquatic Weed Control General Permit)</i>¹ (State Water Board 2013) applies to projects that require aquatic weed management activities. The Aquatic Weed Control General Permit sets forth detailed management practices to protect water quality from pesticide and herbicide use associated with aquatic weed control.</p>
29	3.20-26	<p>The draft EIR states “Table 3.20-15 provides a summary of water quality impacts and associated mitigation measures with implementation of the Proposed Project, No Project Alternative, and alternatives to the Proposed Project. Table 3.20-15 also provides a summary comparison of impacts of the Proposed Project to the other alternatives (i.e., No Project Alternative and Alternatives A through D), indicating whether the impacts of the other alternatives are similar to or more or less severe than those of the Proposed Project. It should be noted that these comparisons present the most severe impact determination, and this impact may be based on impacts from either the construction of project facilities or from long-term operations and maintenance.”</p> <p>State Water Board staff requests that impact analysis for Section 3.20 Water Quality provide separate impact determinations for construction and operational related impacts as these actions are separated in time and can create different types of impacts.</p>
30	3.20-29	The draft EIR states “The applicable CC Basin Plan temperature water quality objective for cold and warm freshwater habitat beneficial uses states that surface water temperatures shall not be increased

¹Water Quality Order No. 2013 0002 DWQ and NPDES No. CAG990005, as amended by Order No. 2014-0078-DWQ, Order No. 2015-0029-DWQ, Order No. 2016-0073-EXEC, and any amendments thereto. Available at: https://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/weed_control.html. Accessed May 21, 2021.

by more than 5°F above natural receiving water temperature. However, the definition of “natural receiving water” temperature has not been established and there is debate as to what time period and watershed conditions the “natural receiving water” should reflect. The CCRWQB developed an evaluation guideline for the CC Basin Plan water temperature general objective of inland surface waters for the 303(d) analysis (SWRCB 2018a), classifying waters with temperatures greater than a threshold of 70°F (21°C) as impaired for beneficial uses of cold freshwater habitat, specifically for steelhead. To determine the significance of temperature impacts during construction and operations, water temperatures in Pacheco Creek were evaluated against both the “natural receiving water” numeric objective and the 303(d) evaluation guideline of maintaining temperatures below 70°F (21°C). Impacts were considered significant if flows during construction or releases from the expanded reservoir during long-term operations resulted in mean monthly increases in natural receiving water of 5°F or greater, or if mean monthly water temperatures exceeded 70°F (21°C) for a duration (i.e., number of months) or distance (number of creek miles) greater than baseline conditions, which are not currently impaired for water temperature. Since no measurements are available to characterize natural receiving water temperatures of North Fork Pacheco Creek, reference mean monthly natural receiving water temperatures available for Upper Coyote Creek listed in Table 3.20-5 were used to define natural inflow reference conditions for analysis of water temperature.”

State Water Board staff have several comments on the above referenced text:

- The use of mean monthly water temperature as a threshold for significance criteria when assessing compliance with CC Basin Plan and general objectives of inland surface waters for 303(d) listing is not appropriate. A mean monthly water temperature analysis averages water temperatures over a monthly time period which smooths out water temperature data and neglects to acknowledge hourly, daily, or weekly temperatures which may exceed CC Basin Plan and Thermal Plan temperature criteria. State Water Board staff request a 7-day maximum weekly average criteria be applied to the draft EIR’s analysis.
- Use of Upper Coyote Creek for creation of an existing condition (baseline) for Pacheco Creek in comparison to potential impacts associated with the Proposed Project is not appropriate. Creek specific conditions such as topography, water diversions, and geomorphology can influence a creek’s water temperatures. Additionally, the Upper Coyote Creek data used for a baseline

		<p>comparison to Pacheco Creek was collected between 1965 to 1976 (draft EIR p. 3.20-6) which is not reflective of 2017 (year of Notice of Preparation issuance). State Water Board staff request that water temperature data from Pacheco Creek be collected to accurately create a baseline condition which can then be compared to modeled water temperatures (7-day weekly average) for assessing potential water quality impacts. Absent additional data collection on Pacheco Creek, more recent data than from 1976 for nearby creeks should be considered.</p>
31	3.20-29	<p>The draft EIR states “The discussion of construction of the Proposed Project under this impact focuses on five water quality constituents described similarly in both the CC and CV Basin Plans: temperature, sediment and turbidity, pH, oil and grease, and toxicity. The discussion of other water quality constituents described in Section 3.20.1.1 is excluded from the analysis of construction impacts as they are unrelated to the activities described under the Proposed Project. There are no proposed facilities or construction activities in any area subject to the Bay-Delta Plan.”</p> <p>Impact WQ-1 analyzes if the Proposed Project and its alternatives could cause a violation of water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality in Pacheco Creek or its tributaries. Narrowing the impact analysis associated with construction related impacts to temperature, sediment and turbidity, pH, oil and grease, and toxicity is not sufficient to accurately analyze the potential impacts of Proposed Project construction to water quality standards. The Central Coast and Central Valley Basin Plan narrative water quality objectives referenced in draft EIR section 3.20.1.1 should be included in the impact analysis because construction activities, dewatering and diversion, and long-term reservoir operations have the potential to impact concentrations of constituents in the Pacheco Creek watershed.</p> <p>The Project involves the removal of an existing dam and reservoir, and the construction of a new dam and reservoir approximately 1.8 miles upstream of the existing dam. In addition, the Proposed Project involves removal and stabilization of sediments currently entrained in the existing Pacheco Reservoir. The amount of sediment present is estimated to be between 800,000 to 1,600,000 cubic yards (draft EIR p.3.20-8). WQ-1 discusses that some reservoir sediment may be released from the reservoir footprint and into Pacheco Creek. Sediments may contain nutrients (bio-stimulatory substances), metals, and pesticides/harmful constituents. To assess the potential impacts to water quality standards associated with sediment transport, a sediment transport model should be developed that would bookend the amount of sediment that may be released in various water years during Project activities, and estimate</p>

		<p>the extent to which sediments may be transported through Pacheco Creek and into the Pajaro River. Sediment released into Pacheco Creek during Project activities should be appropriately mitigated to reduce Project impacts. Please note, if significant sediment deposits occur in Pacheco Creek and/or the Pajaro River it can decrease the water depth and thereby affect water temperature and aquatic habitat.</p> <p>Additionally, nutrient and chemical constituents of the sediments should be discussed in WQ-1 as it can affect water quality through exposure within and releases from the former reservoir footprint.</p>
32	3.20-33	<p>The draft EIR states “Consistent with PAMM WQ-2, all borrow, staging and disposal area would be sited to minimize or avoid water bodies or drainage features.”</p> <p>State Water Board staff should be consulted with on the location of borrow, staging, and disposal sites prior to finalization.</p>
33	3.20-33	<p>The draft EIR states “Under the Proposed Project, about 1.8 miles of the historic channel of North Fork Pacheco Creek that was initially inundated by the existing Pacheco Reservoir in 1939 would be restored to provide salmonid spawning and rearing habitat. Approximately 1,000,000 cubic yards of residual sediments deposited in the existing reservoir inundation area would be excavated and either transported to on-site designated disposal areas or stabilized in areas outside the 100-year floodplain of North Fork Pacheco Creek or its tributaries within the Project study area.”</p> <p>Please provide an estimate of how much sediment is expected to remain within the current reservoir footprint and be stabilized following dam removal.</p>
34	3.20-34	<p>The draft EIR states “Monitoring in key reaches downstream in Pacheco Creek would be used to assess and address potential downstream sediment impacts.”</p> <p>In addition to turbidity, State Water Board staff recommend water quality monitoring include suspended sediment, dissolved oxygen, temperature, arsenic, cobalt, and nickel measurements to assess and address potential downstream impacts due to sediment releases associated with the Proposed Project.</p>
35	3.20-37 and 3.20-38	<p>The draft EIR states “Operation of the Proposed Project would cause the water surface elevation of the expanded reservoir to increase and decrease over time. As discussed under Impact Geo-6 in Section 3.9.3.3, the effects of increased wave action and fluctuating water levels may lead to shoreline erosion around the perimeter of the expanded reservoir, loading of fine sediment into the expanded reservoir, increases in turbidity, and possible degradations in surface water quality in the expanded reservoir, and</p>

		<p>under peak flow events in North Fork Pacheco Creek and Pacheco Creek downstream. Over time, similar to the “bathtub ring” phenomena observed around the shoreline of the existing Pacheco Reservoir and other reservoirs, the shoreline would erode to a point where bedrock would become exposed, which would limit ongoing erosion and decrease discharge of sediment into the reservoir. Within the portion not subject to clearing (Zone 3), organic material cover and residual root strength of trees and brush would be expected to slow down the erosional processes to some degree, but over time the decay of these residual erosion inhibitors would result in exposure of underlying soil and rock to shoreline erosion. This impact would be significant because water quality standards could be violated, or water quality could otherwise be substantially degraded.</p> <p>Mitigation Measure WQ-1b would help to mitigate shoreline erosion impacts by reducing the overall sediment load to the North Fork Pacheco Creek watershed. This would be accomplished by conducting a watershed improvement inventory within subwatersheds that offer opportunities for in-channel or upland sediment reduction, channel stabilization. This inventory would form the basis for developing a watershed-based sediment management plan that would implement restoration activities (e.g., drainage improvement, channel and bank stabilization, revegetation, and animal management strategies) intended to prevent or reduce erosional processes that have negative impacts on water quality, receiving waters and beneficial uses. This plan would include specific performance standards (including moving turbidity levels towards compliance with CC Basin Plan objectives) and monitoring objectives intended to demonstrate effectiveness. With implementation of Mitigation Measure WQ-1b, this impact would be less than significant with mitigation.”</p> <p>Please include in the impact analysis an estimate/quantification of the shoreline erosion’s contribution to water quality impacts during high flow events. Additionally, please provided estimated duration, magnitude and frequency of shoreline erosion events that will adversely impact water quality standards in Pacheco Creek. The current analysis doesn’t define the potential extent and timeframe for potential water quality impacts.</p> <p>Mitigation Measure WQ-1b includes the development of a plan that would reduce sediment loads to North Fork Pacheco Creek to offset the Project’s impacts to water quality associated with shoreline erosion. Mitigation Measure WQ-1b lacks a performance standard to quantify sediment load reductions that will be achieved from its implementation. Without a performance standard, State Water Board staff</p>
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		can not accurately assess whether Mitigation Measures WQ-1b will be effective and reduce impacts to a less than significant level. State Water Board staff recommend Mitigation Measures WQ-1b be updated to include a performance standard for sediment load reductions that is at a minimum comparable to the potential impacts associated with the Proposed Project's operations related to shoreline erosion.
36	3.20-42 and Table 3.20-23, all references thereto	See comment number 17 above.

EXHIBIT 16



EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C. 20503

June 12, 2020

ENVIRONMENTAL IMPACT STATEMENT TIMELINES (2010-2018)

This document presents information on the time that Federal agencies took to complete environmental impact statements (EISs) pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4347, and related records of decision (RODs) between 2010 and 2018. This report serves as an update to the December 2018 CEQ report on the timelines of EISs that were issued from 2010 – 2017.ⁱ The information provided below includes figures reflecting the length of time from issuance of a notice of intent (NOI) to prepare an EIS through publication of a draft and final EIS and publication of a ROD, as well as a summary of well-known factors that may affect the timelines presented.

OVERVIEW

To determine the time required for Federal agencies to complete EISs prepared pursuant to NEPA, the Council on Environmental Quality (CEQ) reviewed data from the following publicly available sources: (1) the Environmental Protection Agency’s EIS Database;ⁱⁱ (2) the Federal Register;ⁱⁱⁱ and (3) agency and project websites. The information provided in this document is based on 1,276 EISs for which a notice of availability of a final EIS was published between January 1, 2010, and December 31, 2018, and a ROD was issued by June 18, 2019.^{iv} This represents 115 additional EISs with RODs compared to the 2018 Report. The data presented does not include final EISs published during the 2010-2018 period for which a ROD was still in preparation, on hold, or not planned as of June 18, 2019. To access the underlying data for this report, click [here](#).

Based on its review, CEQ found that across all Federal agencies, the average (*i.e.*, mean) EIS completion time (from NOI to ROD) was 4.5 years, unchanged from the 2018 report, and the median was 3.5 years, a decrease of .1 years compared to the 2018 report.^v One quarter of the EISs took less than 2.2 years (*i.e.*, the 25th percentile), and one quarter took more than 6.0 years (*i.e.*, the 75th percentile); both figures are unchanged from the 2018 report.^{vi} The period from publication of an NOI to the notice of availability of the draft EIS took on average 58.4 percent of the total time. Preparing the final EIS, including addressing comments received on the draft EIS, took on average 32.2 percent of the total time. The period from the final EIS to publication of the ROD took on average 9.4 percent of the total time.

CEQ’s findings are provided in Figures 1 through 6 below. The findings regarding the length of time for completion of the EIS and issuance of the ROD do not include the additional time that may have been required for pre-NOI activities, or the additional time required for completing a supplemental EIS where one was required. CEQ did not examine all factors specific to individual projects.^{vii} In general, the time may depend on the following factors:

- **Variation in scope and complexity:** Even within an agency, EISs may vary widely in technical complexity and other factors that influence the length and timing of the

document. These other factors may include changes in the proposed action, funding, and community concerns. Similarly, EIS processes for large infrastructure projects vary considerably from those associated with rulemakings or land management planning processes that are largely within the control of the lead agency. This document presents Federal Government-wide and agency-specific data but does not subdivide EISs by sector or type. The distribution of EIS completion times in Figure 1 indicates that there may be factors that cause some reviews to take much longer than is typical. This report does not attempt to identify those factors or to measure their effect on review times.

- **Pre-NOI activity:** Use of the NOI publication date as the starting point of the EIS timeline may not accurately represent the beginning of the environmental review process. The CEQ NEPA regulations state that an agency shall publish an NOI “[a]s soon as practicable” after its decision to prepare an EIS.^{viii} The extent of preparatory work done before issuing an NOI varies significantly among agencies and even among EISs within agencies. Some agencies publish an NOI only after considerable internal scoping, initial consultations with key participants in the NEPA process, gathering of needed environmental data, and pre-application procedures. Some NEPA reviews also take place under procedures that require an applicant to supply considerable environmental information or to obtain other agency approvals before formally starting the EIS process and issuing an NOI.^{ix} Substantial pre-NOI activity may decrease the NOI to ROD timeline reflected in this document. However, this document does not provide the length of time associated with pre-NOI activity nor does it consider the effect of that time and preparatory work on the rest of the review.
- **Delays or Suspensions in EIS Activity:** For some EISs, the timeline does not represent continuous activity. Delays may be attributable to the agency, the applicant, Congress, the needs of cooperating agencies, States, Tribes, and local interests, or public controversy. Delays may occur during the preparation of the EIS or in the issuance of a ROD, and while agencies may announce a suspension and restart, they do not consistently announce that work on an EIS has been suspended. Consequently, CEQ did not adjust timeframes to account for delays or suspensions. This document does not identify the causes of delay for any EISs included in the data or adjust the timelines where the delay is attributable to circumstances beyond the control of the agency (e.g., changes in priority, resources, or project funding).
- **Cooperating and Co-Lead Agencies:** The data presented here identify each EIS and its timeline with a single lead agency. While the EIS may also involve other cooperating or co-lead agencies participating in the EIS process, for purposes of this data collection effort, only one agency is listed. This does not affect the government-wide characterization of EIS timelines, but could increase or decrease the average and median times reported for individual agencies to complete the EIS process since the time to complete a particular EIS is only attributed to the lead agency.
- **FEISs with No ROD:** The NEPA process is intended to inform agency decision-making. However, in some cases, an agency prepares an EIS but does not issue a decision, or had not yet issued a decision at the time data for the report was collected. This occurred for

118 EISs within the data reviewed in this report. Based on the data collected, these 118 EISs took an average of 4.5 years from NOI to FEIS. EISs that have not resulted in a ROD, including legislative EISs prepared pursuant to 40 C.F.R. 1506.8, are not further discussed.

- **Revised EISs:** Agencies occasionally prepare what they describe as revised versions of a draft EIS or a final EIS. This occurred 70 times at the draft EIS stage and 6 times at the final EIS stage. For purposes of the data presented here, the initial EIS dates were used.
- **Supplemental EISs:** The timelines presented here do not include the time required to develop supplemental EISs. From 2010 to 2018, supplemental final EISs were issued for 173 actions. Supplemental EISs sometimes lacked NOIs, making timeline calculation difficult, and these supplements were prepared for a broad range of purposes across departments and agencies.
- **Adoptions:** Agencies may adopt another agency's EIS pursuant to 40 C.F.R. 1506.3. This was done 67 times from 2010 to 2018. The timelines presented here do not include adoptions.

Figure 1

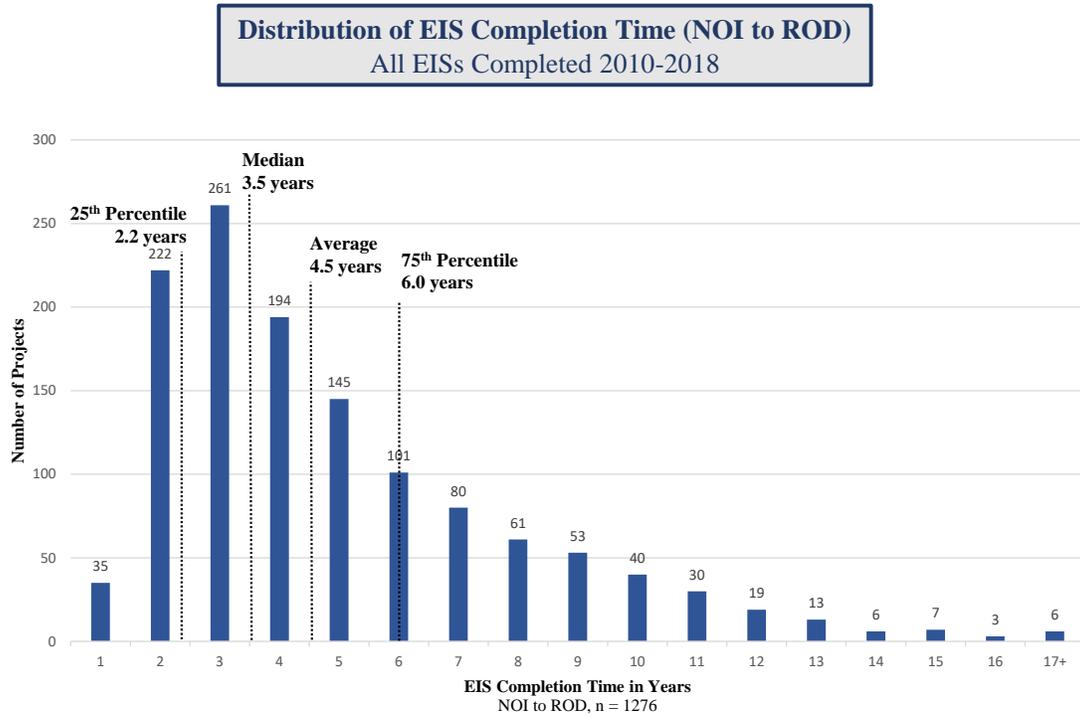


Figure 2

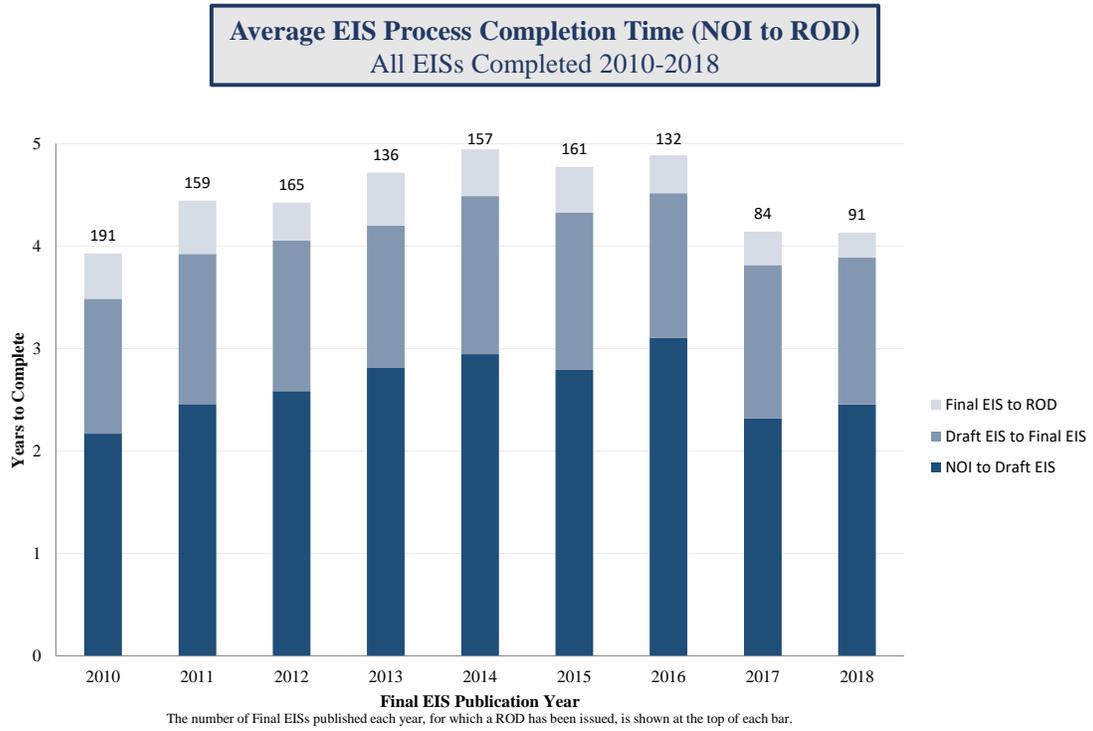


Figure 3

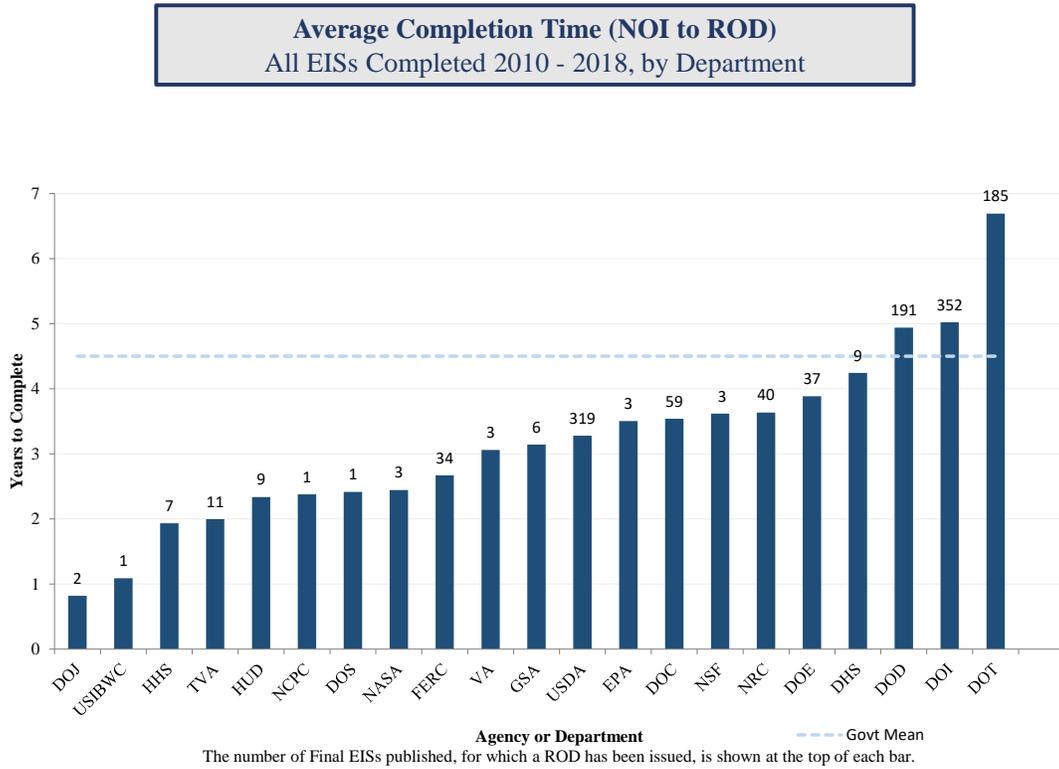


Figure 4



Figure 5: Agency Average Completion Times 2010 – 2018 (in years)^x

Agency	EISs Completed	Average NOI to Draft	Average Draft to Final	Average Final to ROD	Average NOI to ROD
Department of Agriculture (USDA)	1	2.80	0.38	0.09	3.27
Agricultural Research Service (ARS)	1	0.57	5.98	0.95	7.5
Animal and Plant Health Inspection Service (APHIS)	9	1.41	1	0.18	2.59
Farm Service Agency (FSA)	2	0.96	0.68	0.17	1.81
Natural Resources Conservation Service (NRCS)	3	0.96	0.68	0.17	1.81
Rural Utilities Service (RUS)	4	1.77	0.82	0.60	3.18
United States Forest Service (USFS)	299	1.80	1.28	0.24	3.31

Department of Commerce (DOC)					
First Responder Network Authority (FirstNet)	5	1.66	1.13	0.15	2.94
National Oceanic and Atmospheric Administration (NOAA)	54	2.11	1.22	0.26	3.59

Department of Defense (DOD)					
National Geospatial-Intelligence Agency (NGA)	1	0.91	0.48	0.17	1.56
National Security Agency (NSA)	2	1.27	0.46	0.17	1.90
United States Air Force (USAF)	22	1.26	1.49	0.29	3.04
United States Army (USA)	18	1.33	1.16	0.43	2.92
United States Army Corps of Engineers (USACE)	111	4.08	1.31	0.65	6.04
United States Marine Corps (USMC)	10	2.46	1.09	0.25	3.80
United States Navy (USN)	27	2.28	1.46	0.33	4.07

Department of Energy (DOE)	16	1.98	1.80	0.37	4.16
Bonneville Power Administration (BPA)	8	1.54	1.22	0.66	3.41
Western Area Power Administration (WAPA)	11	1.95	1.23	0.35	3.53

Agency	EISs Completed	Average NOI to Draft	Average Draft to Final	Average Final to ROD	Average NOI to ROD
National Nuclear Security Administration (NNSA)	2	2.97	1.46	1.12	5.54

Department of Health and Human Services (HHS)					
Centers for Disease Control and Prevention (CDC)	2	0.84	0.53	0.19	1.55
Food and Drug Administration (FDA)	1	1.41	0.86	0.00	2.27
National Institutes of Health (NIH)	4	1.16	0.71	0.16	2.04

Department of Homeland Security (DHS)					
Customs and Border Protection (CBP)	1	0.94	0.86	0.71	2.51
Federal Emergency Management Agency (FEMA)	3	2.95	0.86	0.30	4.11
United States Coast Guard (USCG)	5	3.23	1.15	0.29	4.67

Department of Housing and Urban Development (HUD)					
	9	1.38	0.58	0.38	2.34

Department of the Interior (DOI)					
Bureau of Indian Affairs (BIA)	15	1.95	2.16	1.26	5.36
Bureau of Land Management (BLM)	143	2.42	1.45	0.50	4.36
Bureau of Ocean Energy Management (BOEM)	16	0.98	0.67	0.36	2.01
Bureau of Reclamation (BR)	35	3.20	1.20	0.92	5.32
National Park Service (NPS)	88	4.58	1.67	0.39	6.64
Office of Surface Mining Reclamation and Enforcement (OSMRE)	4	4	1.05	0.24	5.29
United States Fish and Wildlife Service (USFWS)	49	3.10	1.22	0.43	4.75

Agency	EISs Completed	Average NOI to Draft	Average Draft to Final	Average Final to ROD	Average NOI to ROD
Department of Justice (DOJ)					
Federal Bureau of Prisons (BOP)	2	0.44	0.25	0.13	0.82

Department of State (DOS)	1	1.52	0.29	0.61	2.42
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Department of Transportation (DOT)					
Federal Aviation Administration (FAA)	9	5.09	1.69	0.34	7.12
Federal Highway Administration (FHWA)	124	4.16	2.79	0.42	7.37
Federal Railroad Administration (FRA)	14	3.16	1.57	0.43	5.16
Federal Transit Administration (FTA)	31	3.12	1.90	0.27	5.29
National Highway Traffic Safety Administration (NHTSA)	4	0.59	0.72	0.08	1.39
Surface Transportation Board (STB) ^{xi}	3	2.48	3.41	0.47	6.36

Department of Veterans Affairs (VA)	3	1.30	1.46	0.30	3.06
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Environmental Protection Agency (EPA)	3	1.83	1.12	0.55	3.50
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Federal Energy Regulatory Commission (FERC)	34	1.45	0.68	0.54	2.67
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General Services Administration (GSA)	6	1.65	1.31	0.18	3.14
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U.S. International Boundary & Water Commission (USIBWC)	1	0.75	0.25	0.09	1.09
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Agency	EISs Completed	Average NOI to Draft	Average Draft to Final	Average Final to ROD	Average NOI to ROD
National Aeronautics and Space Administration (NASA)	3	1.61	0.69	0.14	2.45

National Capital Planning Commission	1	1.82	0.42	0.13	2.38
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National Science Foundation (NSF)	3	2.36	0.75	0.50	3.62
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Nuclear Regulatory Commission (NRC)	40	1.68	0.91	1.04	3.64
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Tennessee Valley Authority (TVA)	11	1.17	0.52	0.30	2.00
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Figure 6: Agency Median Completion Times 2010 – 2018 (in years)

Agency	EISs Completed	Median NOI to Draft	Median Draft to Final	Median Final to ROD	Median NOI to ROD
Department of Agriculture (USDA)	1	2.80	0.38	0.09	3.27
Agricultural Research Service	1	0.57	5.98	0.95	7.50
Animal and Plant Health Inspection Service (APHIS)	9	1.57	0.5	0.11	2.25
Farm Service Agency (FSA)	2	0.96	0.68	0.17	1.81
Natural Resources Conservation Service (NRCS)	3	0.78	0.29	0.1	1.81
Rural Utilities Service (RUS)	4	1.72	0.62	0.40	3.26
United States Forest Service (USFS)	299	1.41	0.92	0.11	2.88

Department of Commerce (DOC)					
First Responder Network Authority (FirstNet)	5	1.75	1.05	0.13	2.93
National Oceanic and Atmospheric Administration (NOAA)	54	1.65	0.63	0.17	2.79

Department of Defense (DOD)					
National Geospatial-Intelligence Agency (NGA)	1	0.91	0.48	0.17	1.56
National Security Agency (NSA)	2	1.27	0.46	0.17	1.90
United States Air Force (USAF)	22	0.85	0.80	0.19	2.43
United States Army (USA)	18	1.05	0.90	0.27	2.32
United States Army Corps of Engineers (USACE)	111	3.16	0.98	0.48	5.30
United States Marine Corps (USMC)	10	1.63	0.71	0.14	2.98
United States Navy (USN)	27	1.84	1.27	0.19	3.47

Department of Energy (DOE)	16	1.65	0.84	0.22	2.69
Bonneville Power Administration (BPA)	8	1.43	0.70	0.19	2.70
Western Area Power Administration (WAPA)	11	1.65	0.82	0.28	3.03
National Nuclear Security Administration (NNSA)	2	2.97	1.46	1.12	5.54

Department of Health and Human Services (HHS)					
Centers for Disease Control and Prevention (CDC)	2	0.84	0.53	0.19	1.55

Agency	EISs Completed	Median NOI to Draft	Median Draft to Final	Median Final to ROD	Median NOI to ROD
Food and Drug Administration (FDA)	1	1.41	0.86	0.00	2.27
National Institutes of Health (NIH)	4	0.96	0.78	0.16	2.04

Department of Homeland Security (DHS)					
Customs and Border Protection (CBP)	1	0.94	0.86	0.71	2.51
Federal Emergency Management Agency (FEMA)	3	2.90	0.58	0.23	4.72
United States Coast Guard (USCG)	5	2.99	0.84	0.33	4.11

Department of Housing and Urban Development (HUD)					
	9	1.48	0.48	0.15	2.50

Department of the Interior (DOI)					
Bureau of Indian Affairs (BIA)	15	2.07	1.34	1.47	5.82
Bureau of Land Management (BLM)	143	1.98	1.05	0.29	3.79
Bureau of Ocean Energy Management (BOEM)	16	0.69	0.56	0.36	1.65
Bureau of Reclamation (BR)	35	2.91	1.04	0.52	4.62
National Park Service (NPS)	88	4.06	1.35	0.22	6.15
Office of Surface Mining Reclamation and Enforcement (OSMRE)	4	4.60	1.00	0.16	5.82
United States Fish and Wildlife Service (USFWS)	49	2.65	0.97	0.23	4.51

Department of Justice (DOJ)					
Federal Bureau of Prisons (BOP)	2	0.44	0.25	0.13	0.82

Department of State (DOS)					
	1	1.52	0.29	0.61	2.42

Department of Transportation (DOT)					
Federal Aviation Administration (FAA)	9	5.16	1.13	0.22	6.58
Federal Highway Administration (FHWA)	124	3.52	1.90	0.23	6.69
Federal Railroad Administration (FRA)	14	2.58	1.06	0.22	4.83
Federal Transit Administration (FTA)	31	2.21	1.55	0.23	4.18
National Highway Traffic Safety Administration (NHTSA)	4	0.52	0.64	0.10	1.23

Agency	EISs Completed	Median NOI to Draft	Median Draft to Final	Median Final to ROD	Median NOI to ROD
Surface Transportation Board (STB)	3	2.12	1.32	0.49	3.76
Department of Veterans Affairs (VA)	3	1.42	1.01	0.28	2.66
Environmental Protection Agency (EPA)	3	1.88	0.71	0.40	2.78
Federal Energy Regulatory Commission (FERC)	34	1.27	0.50	0.34	2.29
General Services Administration (GSA)	6	1.16	1.08	0.16	3.08
U.S. International Boundary & Water Commission (USIBWC)	1	0.75	0.25	0.09	1.09
National Aeronautics and Space Administration (NASA)	3	1.83	0.67	0.12	2.81
National Capital Planning Commission (NCPC)	1	1.82	0.42	0.13	2.38
Nuclear Regulatory Commission (NRC)	40	1.39	0.81	0.32	2.61
Tennessee Valley Authority (TVA)	11	1.28	0.48	0.15	1.86

ⁱ The 2018 Report can be found here: https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Timelines_Report_2018-12-14.pdf. In updating this report, CEQ has reclassified a small number of projects (between FEIS with RODs, FEIS with no RODs, Supplements, and Adoptions).

ⁱⁱ Federal agencies are required to file EISs with the U.S. Environmental Protection Agency (EPA). 40 CFR 1506.9. The EPA database is available at <https://cdxnodengn.epa.gov/cdx-enepa-II/public/action/eis/search> and includes records of all EISs received by EPA since 1987. The EPA database includes the dates of EPA's publication of a notice of availability of a draft or final EIS, which officially starts a public review period (pursuant to CEQ regulations, a minimum of 45 days for draft and 30 days for final EISs). 40 CFR 1506.10. Under certain authorities, States, Tribes, and units of local government have been granted the authority to conduct NEPA reviews on behalf of Federal agencies (e.g. The Department of Transportation's Surface Transportation Project Delivery Program under 23 U.S.C. § 327 and the Department of Housing and Urban Development's Community Development Block Grant Program under 42 U.S.C. §5304(g)). EISs conducted by non-Federal agencies are included in this report if the Federal agency on whose behalf the EIS was being conducted filed the EIS with the Environmental Protection Agency (EPA).

ⁱⁱⁱ Every Federal agency is required to publish an NOI in the Federal Register (FR) to initiate preparation of an EIS. 40 CFR 1501.7. An agency may also announce modification or withdrawal of an NOI through a FR notice, and may publish a ROD (or its notice of availability) in the FR.

^{iv} CEQ has compiled these data in a spreadsheet which is available here: https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Timelines_2020-6-12.xlsx. CEQ anticipates updating this compilation periodically.

^v The median is the middle value; half of the measurements are above this value and half are below. The average is the sum of the values divided by the number of values. The 25th percentile means 25 percent of the measurements are below this value and 75 percent are above. The 75th percentile means 75 percent of the measurements are below this value and 25 percent are above.

^{vi} The average is affected by "outliers," including two EISs that took, respectively, 21 and 25 years.

^{vii} Individual agencies may have more detailed data on their own EIS schedules.

^{viii} 40 C.F.R. 1501.7.

^{ix} "...agency activities under NEPA are hard to separate from other required environmental analyses under federal laws such as the Endangered Species Act and the Clean Water Act; executive orders; agency guidance; and state and local laws." U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-14-369, NATIONAL ENVIRONMENTAL POLICY ACT: LITTLE INFORMATION EXISTS ON NEPA ANALYSES (2014), at 10, <https://www.gao.gov/assets/670/662543.pdf>.

^x EISs attributed to Departments in Figures 5 and 6 are conducted at the Departmental level or are otherwise not attributed to a particular bureau, office, or agency within the Department. Figure 3 provides aggregated data for all agencies within a particular Department.

^{xi} The Surface Transportation Board Reauthorization Act of 2015 (P.L. 114-110) established the STB as a wholly independent federal agency. Prior to the Act, the STB was administratively aligned with the U.S. Department of Transportation, although it had been decisionally independent since its establishment in 1996. The projects listed here were completed when the Surface Transportation Board was still administratively aligned with Department of Transportation.

EXHIBIT 17



Pacheco Reservoir



SCVWD Water Reliability Program WIFIA Loan Application

Title: Sources and Uses of Funds
Table for the Water Reliability Program

File Name: C.1_Water Reliability Program
Sources and Uses

Description: Tables showing the sources and
uses of funds for the Water Reliability Program

April 2022

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

COMBINED - PACHECO AND ANDERSON PROJECTS

TOTAL PROJECT (ALL LOANS)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 1,974,941,097
2. Revenue Bonds	375,231,033
3. SRF Loan	-
4. Borrower Cash	1,016,285,008
5. Previously Incurred Eligible Costs*	159,893,514
6. Other (please specify) <i>WSIP Prop 1 Funding</i>	504,141,383
TOTAL SOURCES	\$ 4,030,492,035
Uses Category	Estimated Cost
1. Construction	\$ 2,596,249,106
2. Design	146,103,081
3. Planning	90,013,700
4. Land Acquisition	47,559,633
5. Other Capital Costs ²	503,569,239
6. Contingency	645,997,276
7. Total Capital Costs	\$ 4,029,492,035
8. Financing Costs ³	1,000,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) <i>Click or tap here to enter text.</i>	-
11. Other (please specify) <i>Click or tap here to enter text.</i>	-
TOTAL USES	\$ 4,030,492,035

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

COMBINED - PACHECO AND ANDERSON PROJECTS

LOAN #1 (NON-CONSTRUCTION ONLY)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 386,044,370
2. Revenue Bonds	73,346,911
3. SRF Loan	-
4. Borrower Cash	86,930,238
5. Previously Incurred Eligible Costs*	159,893,514
6. Other (please specify) <i>WSIP Prop 1 Funding</i>	81,630,620
TOTAL SOURCES	\$ 787,845,653
Uses Category	Estimated Cost
1. Construction	\$ -
2. Design	146,103,081
3. Planning	90,013,700
4. Land Acquisition	47,559,633
5. Other Capital Costs ²	503,569,239
6. Contingency	-
7. Total Capital Costs	\$ 787,245,653
8. Financing Costs ³	600,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) <i>Click or tap here to enter text.</i>	-
11. Other (please specify) <i>Click or tap here to enter text.</i>	-
TOTAL USES	\$ 787,845,653

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

COMBINED - PACHECO AND ANDERSON PROJECTS

LOAN #2 (CONSTRUCTION ONLY)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 1,588,896,727
2. Revenue Bonds	301,884,123
3. SRF Loan	-
4. Borrower Cash	929,354,769
5. Previously Incurred Eligible Costs*	-
6. Other (please specify) <i>WSIP Prop 1 Funding</i>	422,510,763
TOTAL SOURCES	\$ 3,242,646,382
Uses Category	Estimated Cost
1. Construction	\$ 2,596,249,106
2. Design	-
3. Planning	-
4. Land Acquisition	-
5. Other Capital Costs ²	-
6. Contingency	645,997,276
7. Total Capital Costs	\$ 3,242,246,382
8. Financing Costs ³	400,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) <i>Click or tap here to enter text.</i>	-
11. Other (please specify) <i>Click or tap here to enter text.</i>	-
TOTAL USES	\$ 3,242,646,382

*Previously Incurred Eligible Costs are project related costs incurred prior to the WIFIA loan’s execution. Please see the WIFIA Program Handbook for additional information on Eligible Costs.

¹ Not inclusive of Capitalized Interest which is being proposed as part of the loan structure.

² Includes project management, construction management, and engineering services during construction costs.

³ Includes only estimated fees (i.e., application and credit processing) payable to EPA/WIFIA and costs for legal and profesional services provided to Valley Water regarding this LOI and loan application/closing. Does not include debt service or other financing costs related to any short- or long-term debt of Valley Water.

⁴ Valley Water intends for the project to comply with WIFIA requirements.

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

PACHECO RESERVOIR EXPANSION PROJECT

TOTAL PROJECT (ALL LOANS)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 1,449,308,257
2. Revenue Bonds	275,362,863
3. SRF Loan	-
4. Borrower Cash	673,075,200
5. Previously Incurred Eligible Costs*	55,884,250
6. Other (please specify) <i>WSIP Prop 1 Funding</i>	504,141,383
TOTAL SOURCES	\$ 2,957,771,954
Uses Category	Estimated Cost
1. Construction	\$ 1,982,797,800
2. Design	84,203,885
3. Planning	47,178,086
4. Land Acquisition	22,635,513
5. Other Capital Costs ²	324,837,220
6. Contingency	495,699,450
7. Total Capital Costs	\$ 2,957,351,954
8. Financing Costs ³	420,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) <i>Click or tap here to enter text.</i>	-
11. Other (please specify) <i>Click or tap here to enter text.</i>	-
TOTAL USES	\$ 2,957,771,954

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

PACHECO RESERVOIR EXPANSION PROJECT

LOAN #1 (NON-CONSTRUCTION ONLY)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 234,762,285
2. Revenue Bonds	44,603,910
3. SRF Loan	-
4. Borrower Cash	62,225,639
5. Previously Incurred Eligible Costs*	55,884,250
6. Other (please specify) <i>WSIP Prop 1 Funding</i>	81,630,620
TOTAL SOURCES	\$ 479,106,704
Uses Category	Estimated Cost
1. Construction	\$ -
2. Design	84,203,885
3. Planning	47,178,086
4. Land Acquisition	22,635,513
5. Other Capital Costs ²	324,837,220
6. Contingency	-
7. Total Capital Costs	\$ 478,854,704
8. Financing Costs ³	252,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) <i>Click or tap here to enter text.</i>	-
11. Other (please specify) <i>Click or tap here to enter text.</i>	-
TOTAL USES	\$ 479,106,704

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

PACHECO RESERVOIR EXPANSION PROJECT

LOAN #2 (CONSTRUCTION ONLY)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 1,214,545,972
2. Revenue Bonds	230,758,953
3. SRF Loan	-
4. Borrower Cash	610,849,561
5. Previously Incurred Eligible Costs*	-
6. Other (please specify) <i>WSIP Prop 1 Funding</i>	422,510,763
TOTAL SOURCES	\$ 2,478,665,249
Uses Category	Estimated Cost
1. Construction	\$ 1,982,797,800
2. Design	-
3. Planning	-
4. Land Acquisition	
5. Other Capital Costs ²	-
6. Contingency	495,699,450
7. Total Capital Costs	\$ 2,478,497,249
8. Financing Costs ³	168,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) <i>Click or tap here to enter text.</i>	-
11. Other (please specify) <i>Click or tap here to enter text.</i>	-
TOTAL USES	\$ 2,478,665,249

*Previously Incurred Eligible Costs are project related costs incurred prior to the WIFIA

¹ Not inclusive of Capitalized Interest which is being proposed as part of the loan structure.

² Includes project management, construction management, and engineering services during construction costs.

³ Includes only estimated fees (i.e., application and credit processing) payable to EPA/WIFIA and costs for legal and professional services provided to Valley Water regarding this LOI and loan application/closing. Does not include debt service or other financing costs related to any short- or long-term debt of Valley Water.

⁴ Valley Water intends for the project to comply with WIFIA requirements.

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

ANDERSON DAM SEISMIC RETROFIT, COYOTE CREEK FISH PROTECTION, AND COYOTE PERCOLATION DAM PROJECT

TOTAL PROJECT (ALL LOANS)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 525,632,840
2. Revenue Bonds	99,868,170
3. SRF Loan	-
4. Borrower Cash	343,209,808
5. Previously Incurred Eligible Costs*	104,009,264
6. Other (please specify)	-
TOTAL SOURCES	\$ 1,072,720,082
Uses Category	Estimated Cost
1. Construction	\$ 613,451,306
2. Design	61,899,197
3. Planning	42,835,613
4. Land Acquisition	24,924,120
5. Other Capital Costs ²	178,732,019
6. Contingency	150,297,827
7. Total Capital Costs	\$ 1,072,140,082
8. Financing Costs ³	580,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) Click or tap here to enter text.	-
11. Other (please specify) Click or tap here to enter text.	-
TOTAL USES	\$ 1,072,720,082

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

ANDERSON DAM SEISMIC RETROFIT, COYOTE CREEK FISH PROTECTION, AND COYOTE PERCOLATION DAM PROJECT

LOAN #1 (NON-CONSTRUCTION ONLY)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 151,282,085
2. Revenue Bonds	28,743,001
3. SRF Loan	-
4. Borrower Cash	24,704,599
5. Previously Incurred Eligible Costs*	104,009,264
6. Other (please specify)	-
TOTAL SOURCES	\$ 308,738,949
Uses Category	Estimated Cost
1. Construction	\$ -
2. Design	61,899,197
3. Planning	42,835,613
4. Land Acquisition	24,924,120
5. Other Capital Costs ²	178,732,019
6. Contingency	-
7. Total Capital Costs	\$ 308,390,949
8. Financing Costs ³	348,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) Click or tap here to enter text.	-
11. Other (please specify) Click or tap here to enter text.	-
TOTAL USES	\$ 308,738,949

EPA WIFIA APPLICATION 2022

Sources & Uses of Funds Table (Section C.1. of Application)

ANDERSON DAM SEISMIC RETROFIT, COYOTE CREEK FISH PROTECTION, AND COYOTE PERCOLATION DAM PROJECT

LOAN #2 (CONSTRUCTION ONLY)

Sources Category	Estimated Dollar Value
1. WIFIA Loan (cannot exceed 49% of eligible costs) ¹	\$ 374,350,755
2. Revenue Bonds	71,125,170
3. SRF Loan	-
4. Borrower Cash	318,505,208
5. Previously Incurred Eligible Costs*	-
6. Other (please specify)	-
TOTAL SOURCES	\$ 763,981,133
Uses Category	Estimated Cost
1. Construction	\$ 613,451,306
2. Design	-
3. Planning	-
4. Land Acquisition	-
5. Other Capital Costs ²	-
6. Contingency	150,297,827
7. Total Capital Costs	\$ 763,749,133
8. Financing Costs ³	232,000
9. Ineligible Costs (if applicable) ⁴	-
10. Other (please specify) Click or tap here to enter text.	-
11. Other (please specify) Click or tap here to enter text.	-
TOTAL USES	\$ 763,981,133

*Previously Incurred Eligible Costs are project related costs incurred prior to the WIFIA loan’s execution. Please see the WIFIA Program Handbook for additional information on Eligible Costs.

¹ Not inclusive of Capitalized Interest which is being proposed as part of the loan structure.

² Includes project management, construction management, and engineering services during construction costs.

³ Includes only estimated fees (i.e., application and credit processing) payable to EPA/WIFIA and costs for legal and professional services provided to Valley Water regarding this LOI and loan application/closing. Does not include debt service or other financing costs related to any short- or long-term debt of Valley Water.

⁴ Valley Water intends for the project to comply with WIFIA requirements.

EXHIBIT 18

From: [McCurdy, Alaina](#)
To: [Schaedle, Candi](#)
Subject: RE: WIFIA
Date: Monday, January 10, 2022 9:09:00 AM
Attachments: [RE WIFIA question.msg](#)

Hi Candi,

Can we catch up briefly this week? It seems like the larger NEPA community needs to hear from WIFIA about how our selection process and application process works and at what time the NEPA review occurs.

I sent the attached message to Connell the other day after she inquired about the Santa Clara project. This might be helpful for your discussions as well.

Thanks,
Alaina

Alaina McCurdy
WIFIA Program
McCurdy.alaina@epa.gov
(O) 202-564-6996
(C) 202-809-5795

From: Schaedle, Candi <Schaedle.Candi@epa.gov>
Sent: Friday, January 7, 2022 5:53 PM
To: McCurdy, Alaina <McCurdy.Alaina@epa.gov>
Subject: FW: WIFIA

Hi Alaina,

Happy New Year! I hope you had a wonderful holiday! I just wanted to give you a heads up on the email below – just saw this email and not sure what the issue or concern is yet but wanted to make you aware for your situational awareness – I will keep you updated if I hear anything else on this

From: Barger, Cindy <Barger.Cindy@epa.gov>
Sent: Friday, January 07, 2022 1:40 PM
To: Schaedle, Candi <Schaedle.Candi@epa.gov>; Yesmant, Christopher <Yesmant.Christopher@epa.gov>
Subject: FW: WIFIA

FYI

Cindy S. Barger
Director, NEPA Compliance Division
Office of Federal Activities

U.S. Environmental Protection Agency
Washington, DC
Tel: 202-564-3169
Cell: 202-897-5686

From: Strobel, Philip <Strobel.Philip@epa.gov>
Sent: Friday, January 7, 2022 12:38 PM
To: Barger, Cindy <Barger.Cindy@epa.gov>
Cc: Chu, Rebecca <Chu.Rebecca@epa.gov>; Dunning, Connell <Dunning.Connell@epa.gov>; Prijatel, Jean <PRIJATEL.JEAN@EPA.GOV>
Subject: RE: WIFIA

Update: I heard from R10 that the Willamette project does not trigger significant concerns for them and has clear benefits.

Phil

Philip S. Strobel
Chief, NEPA Branch
US EPA - Region 8 (ORA-N)
1595 Wynkoop St., Denver, CO 80202
303-312-6704

"The river knows everything; one can learn everything from it." — (Herman Hesse, Siddhartha)

From: Barger, Cindy <Barger.Cindy@epa.gov>
Sent: Friday, January 7, 2022 9:11 AM
To: Strobel, Philip <Strobel.Philip@epa.gov>
Cc: Chu, Rebecca <Chu.Rebecca@epa.gov>; Dunning, Connell <Dunning.Connell@epa.gov>; Prijatel, Jean <PRIJATEL.JEAN@EPA.GOV>
Subject: RE: WIFIA

Hi Phil – Let me check in with Candi/Chris on background for these projects.

To loop in the others – we are going to reach out to OW on the NISP one (after some discussions w/ you on background).

Thanks!
Cindy

Cindy S. Barger
Director, NEPA Compliance Division
Office of Federal Activities
U.S. Environmental Protection Agency
Washington, DC

Tel: 202-564-3169

Cell: 202-897-5686

From: Strobel, Philip <Strobel.Philip@epa.gov>

Sent: Wednesday, January 5, 2022 7:18 PM

To: Barger, Cindy <Barger.Cindy@epa.gov>

Cc: Chu, Rebecca <Chu.Rebecca@epa.gov>; Dunning, Connell <Dunning.Connell@epa.gov>; Prijatel, Jean <PRIJATEL.JEAN@EPA.GOV>

Subject: WIFIA

Hi Cindy:

Hope you are back and feeling better soon. Also hoping it is just a low grade "snow flu".

Because the NISP project made the WIFIA waitlist, I did some digging in the WIFIA archives and could only find two previous times that WIFIA funded a new reservoir (and really maybe only one):

Pacheco Reservoir Expansion Project (Selected in 2020) for the Santa Clara Water District will build a new dam and boost Pacheco Reservoir's operational capacity from 5,500 acre-feet to up to 140,000 acre-feet. That's a large project.

https://www.epa.gov/sites/default/files/2021-04/documents/santa_clara.pdf

BOR had done a Draft EIS when the project was called the *San Luis Low Point Improvement Project*, then turned it over to California who has published a CEQA DEIR. R9 sent a comment letter that to me looks pretty close to a "3" letter. The Corps would still have a NEPA responsibility for this project.

The second project looks to mainly be a water supply pipeline project (selected in 2019). It is called the **Willamette Water Supply System**. It will include intake facilities on the Willamette River, over 30 miles of 66" pipe, a water treatment plant, and two storage reservoirs to serve 400,000 residents and businesses. On the project website, it appears the "reservoirs" may actually just be storage tanks. Still, this is a water supply project taking water directly from a river, an action that often has potential for significant impacts.

https://www.epa.gov/sites/default/files/2020-10/documents/coh_tvwd_wifiaprojectfactsheet_loancloser.pdf

As far as I can tell, neither project completed NEPA prior to WIFIA selection. I'm curious to know how OFA handled (or is planning to handle the NEPA) for these projects. As we discussed, I have concerns with WIFIA being used for projects with significant adverse impacts when there are so many communities with infrastructure needs that could be met while providing overwhelming health and environmental benefits, and without significant adverse effects.

Thanks -Phil

Philip S. Strobel

Chief, NEPA Branch

US EPA - Region 8 (ORA-N)

1595 Wynkoop St., Denver, CO 80202
303-312-6704

“The river knows everything; one can learn everything from it.” — (Herman Hesse, *Siddhartha*)

EXHIBIT 19

Executive Summary

ES.1 Purpose of this Environmental Impact Statement/Environmental Impact Report

The United States Department of the Interior, Bureau of Reclamation (Reclamation) and the Santa Clara Valley Water District (SCVWD) are proposing the San Luis Low Point Improvement Project (SLLPIP) to address water supply reliability and schedule certainty issues for SCVWD associated with low water levels in San Luis Reservoir. The SLLPIP alternatives would help to maintain a high quality, reliable, and cost-effective water supply for SCVWD, and would ensure that they receive their annual Central Valley Project (CVP) contract allocations at the time and at the level of quality needed to meet their existing water supply commitments.

Reclamation, the National Environmental Policy Act (NEPA) Lead Agency, and SCVWD, the California Environmental Quality Act (CEQA) Lead Agency have prepared this joint Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) to comply with NEPA and CEQA. This Draft EIS/EIR analyzes the direct, indirect, and cumulative effects of implementing the SLLPIP. Along with the environmental documentation process, Reclamation and SCVWD have completed a feasibility study to identify and analyze alternatives. The Feasibility Report documenting the study findings has been released for review concurrently with this Draft EIS/EIR.

ES.2 Project Background

Reclamation owns and jointly operates San Luis Reservoir with the California Department of Water Resources to provide seasonal storage for the CVP and the State Water Project (SWP). San Luis Reservoir is capable of receiving water from both the Delta-Mendota Canal (DMC) and the California Aqueduct. This enables the CVP and SWP to pump water into the reservoir during the wet season (October through March) and release water into the conveyance facilities during the dry season (April through September) when demands are higher. Deliveries from San Luis Reservoir to the San Felipe Division of the CVP, which includes SCVWD, flow west through Pacheco Pumping Plant and Conduit.

During the summer, high temperatures and declining water levels in San Luis Reservoir create conditions that foster algae growth. The thickness of the algae blooms vary, but typically average about 35 feet in depth. The water quality within the algal blooms is not suitable for municipal and industrial (M&I) water users relying on existing water treatment facilities in Santa Clara County.

Figure ES-1 shows the intake and outlet facilities associated with the reservoir. As water levels decline to the point that the algae is in the vicinity of the Upper Intake, that intake is no longer used. The low point problem occurs when the water levels decline to the point that the algae blooms are near the Lower Intake.

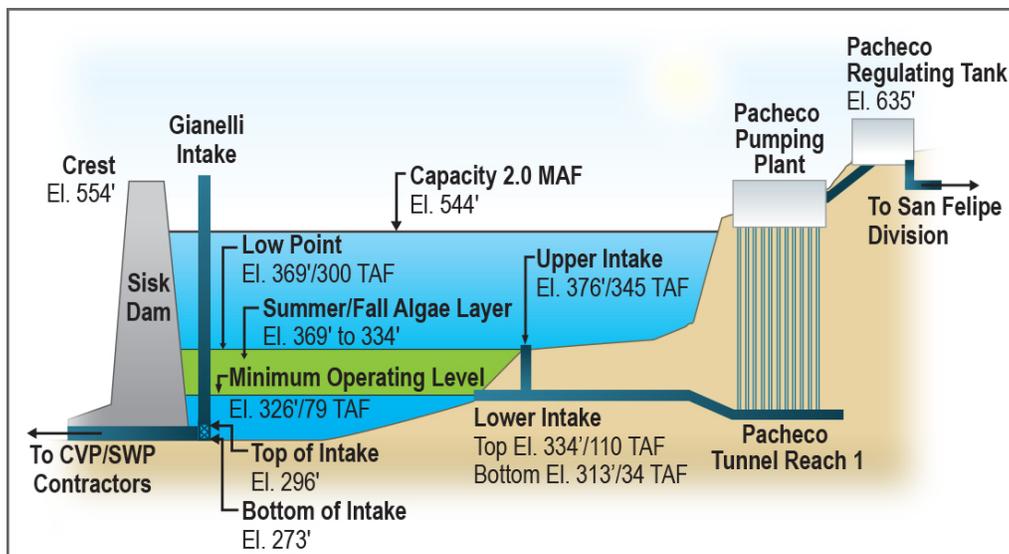


Figure ES-1. Reservoir Intake and Outlet Facilities

If water levels fall below an elevation of 369 feet above mean sea level (MSL) (300 thousand acre-feet [TAF]), SCVWD cannot withdraw water from San Luis Reservoir for M&I purposes because of water quality issues. San Luis Reservoir is the only delivery route for SCVWD's CVP supplies; therefore, SCVWD cannot access CVP supplies for M&I purposes during low-point events.

ES.3 Purpose and Need/Project Objectives

The Lead Agencies are proposing the SLLPIP for the purpose of optimizing the water supply benefit of San Luis Reservoir while reducing additional risks to water users by:

ES.3.1 Primary Objectives

- Avoiding supply interruptions when water is needed by increasing the certainty of meeting the requested delivery schedule throughout the year to South-of-Delta contractors, including SCVWD, dependent on San Luis Reservoir.
- Increasing the reliability and quantity of yearly allocations to South-of-Delta contractors, including SCVWD, dependent on San Luis Reservoir.

ES.3.2 Secondary Objective

- Provide opportunities for ecosystem restoration.

EXHIBIT 20



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
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118
PachecoExpansion@valleywater.org
tsexauer@valleywater.org

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 contaminants 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,



Amanda (Mandy) Ingham
Central Coast Branch Chief
North Central Coastal Office

cc: e-file ARN 151416WCR2022SR00037

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EXHIBIT 21



State of California – Natural Resources Agency
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February 11, 2022

Todd Sexauer

Santa Clara Valley Water District
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San Jose, CA 95118

TSexauer@valleywater.org

Subject: Pacheco Reservoir Expansion Project, Draft Environmental Impact Report, SCH No. 2017082020, Santa Clara, San Benito, Stanislaus, and Merced Counties

Dear Todd Sexauer:

The California Department of Fish and Wildlife (CDFW) received a Draft Environmental Impact Report (DEIR) from the Santa Clara Valley Water District (Valley Water) for the Pacheco Reservoir Expansion Project (Project) pursuant to the California Environmental Quality Act (CEQA).

CDFW is submitting comments on the DEIR to inform Valley Water, as the Lead Agency, of our concerns regarding potentially significant impacts to sensitive resources associated with the proposed Project. CDFW is providing these comments and recommendations regarding those activities involved in the Project that are within CDFW's area of expertise and relevant to its statutory responsibilities (Fish and Game Code, § 1802), and/or which are required to be approved by CDFW (CEQA Guidelines, §§ 15086, 15096 and 15204).

CDFW ROLE

CDFW is a Trustee Agency with responsibility under CEQA (Pub. Resources Code § 21000 et seq.) pursuant to CEQA Guidelines section 15386 for commenting on projects that could impact fish, plant, and wildlife resources. CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as permits issued under the California Endangered Species Act (CESA), the Native Plant Protection Act, the Lake and Streambed Alteration (LSA) Program, and other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

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Water Rights

The use of unallocated stream flows is subject to appropriation and approval by the State Water Resources Control Board (SWRCB) pursuant to Water Code section 1200 et seq. CDFW, as Trustee Agency, is consulted by the SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Certain fish and wildlife are reliant upon aquatic ecosystems, which in turn are reliant upon adequate flows of water. CDFW therefore has a material interest in assuring that adequate water flows are present within streams for the protection, maintenance, and proper stewardship of those resources. CDFW provides, as available, biological expertise to review and comment on environmental documents and impacts arising from Project activities.

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the Project. Issuance of a CESA Permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened, rare, or endangered species. (Pub. Resources Code, §§ 21001, subd. (c), 21083; CEQA Guidelines, §§ 15380, 15064, and 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code section 2080.

Lake and Streambed Alteration

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et. seq., for Project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project and

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may issue an LSA Agreement. CDFW may not execute the final LSA Agreement (or ITP) until it has complied with CEQA as a Responsible Agency.

PROJECT DESCRIPTION SUMMARY

Proponent: Santa Clara Valley Water District

Description: The Project aims to expand the Pacheco Reservoir by constructing and operating a new dam. The DEIR evaluates the Proposed Project, four alternative dam configurations that vary in type, location, and flow schedules, as well as a No Project alternative (summarized in Table ES-1).

The Proposed Project is located upstream of the existing North Fork Dam which impounds 5,500 acre-feet (AF) of water when functional. The Proposed Project would include construction of a hardfill dam and impound 140,000 AF of water. The Proposed Project also includes new water conveyance facilities (pipelines, tunnel, and pump station) that would connect the new expanded reservoir to the Pacheco Conduit as well as the decommissioning of the existing North Fork Dam and restoration of segments of the North Fork Pacheco Creek channel; utility modifications including a new electrical substation and power transmission lines; and new permanent access roads and road improvements on State Route (SR)-152 and Kaiser-Aetna Road. The Proposed Project would include a variable flow schedule release (see page 5 of this letter).

Alternative A would be an earthfill dam located upstream of the existing dam site, hold 140,000 AF of reservoir capacity, include temporary overcrossing improvements to SR 152 and follow a fixed flow schedule. Alternative B would also be an earthfill dam located upstream of the existing dam, hold 96,000 AF of water and follow a fixed flow schedule. Alternatives C and D are both located downstream of the existing dam site; each holds 140,000 AF of reservoir capacity. Alternative C is a hardfill dam type and has a variable flow schedule while Alternative D is earthfill and has a fixed flow schedule.

The DEIR identifies the following objectives that the Project intends to satisfy:

- Primary Objectives
 - Increase water supply reliability and system operational flexibility to help meet municipal and irrigation (M&I) and agricultural water demands in Santa Clara and San Benito Counties during drought periods and emergencies, or to address shortages due to regulatory and environmental restrictions.

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- Increase suitable habitat in Pacheco Creek for federally threatened South Central California Coast (SCCC) steelhead (*Oncorhynchus mykiss*) through improved water temperature and flow conditions.
- Secondary Objectives
 - Improve water quality and minimize supply interruptions, when water is needed, for Santa Clara and San Benito Counties, to increase operational flexibility for south-of – Sacramento-San Joaquin Delta (Delta) contractors dependent on San Luis Reservoir.
 - Develop water supplies for environmental water needs at Incremental Level 4 (IL4) wildlife refuges to support habitat management in the Delta Watershed.

Location: The existing Pacheco Reservoir is located on North Fork Pacheco Creek in southwestern Santa Clara County. North Fork Pacheco Creek is a 19-mile stream with headwaters northwest of Pacheco Reservoir in Henry W. Coe State Park. Mainstem Pacheco Creek begins 0.4 miles downstream from the North Fork Dam at the confluence of the North Fork Pacheco Creek and South Fork Pacheco Creek. Pacheco Creek is within the Pajaro River Watershed and is a tributary to the Pajaro River.

The Project area includes the entirety of the existing Pacheco Reservoir and adjacent areas affected by facilities, construction, or inundation related to the expanded reservoir (up to approximately seven miles upstream of the existing reservoir). This area includes portions of southwestern Santa Clara County, northwestern Merced County, and southwestern Stanislaus County. The Project area also includes areas downstream from the existing North Fork Dam, including portions of North Fork Pacheco Creek, Pacheco Creek, and San Felipe Lake within southern Santa Clara County and northern San Benito County.

Because of the potential influence of the proposed Project and future operations on resources over a large geographic area, the broader Project study area includes all portions of the areas listed below:

- Areas downstream from San Felipe Lake, including Miller Canal, and the Pajaro River
- Valley Water and San Benito County Water District facilities and service areas
- Wildlife refuges within the San Joaquin River Watershed that receive Central Valley Project Improvement (CVPIA) incremental level 4 water supplies

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- Central Valley Project (CVP) and State Water Project (SWP) facilities, areas downstream from these facilities, and water service areas, including the Delta and San Luis Reservoir

COMMENTS AND RECOMMENDATIONS

CDFW offers the below comments and recommendations to assist Valley Water in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish, plants, and wildlife (biological) resources.

General Comments

CDFW understands the importance of finding solutions that address water supply shortages to continue providing water for M&I uses as well as for agriculture. CDFW also recognizes that the Proposed Project and Alternatives have the potential to incorporate multi-benefits such as for biological resources (e.g., flows for steelhead, water for various habitats, etc.).

The DEIR currently lacks sufficient information for CDFW to fully assess the magnitude of the Proposed Project's environmental impacts and which mitigation measures may be necessary. For the reasons and concerns outlined throughout this letter, CDFW recommends Valley Water correct the issues identified in the DEIR and incorporate CDFW's recommendations in the EIR.

Variable Flow Schedule

Under the Proposed Project, flow releases would be based under a Variable Flow Schedule, which would include release of baseflows in all months; adult steelhead attraction pulse flows in January, February, and March; and outmigration pulse flows in April and May. The monthly base flows and pulse flow targets would vary by water year type. Water would be conserved during summer and drier years.

Issue: The DEIR (Chapter 2 section 2.3.3.1 Operations, Releases to North Fork Pacheco Creek) states "*Monthly baseflows and pulse flow targets vary by water year type, as defined by the Pacheco Reservoir Inflow Index using unimpaired inflow to the expanded reservoir. These monthly baseflows and pulse flow targets were developed in a series of workshops as part of a collaborative process between Valley Water and stakeholder agencies, including but not limited to NMFS, U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and the CWC [California Water Commission]*" (p. 2-35).

CDFW participated in these multi-agency workshops and provided input on the needs of species that will be affected by the construction and operation of the proposed Project.

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Of the approximately 18 workshops conducted from 2019 to 2021, only two were specific to the Proposed Project configuration as described in the DEIR.

CDFW is concerned that changes in the Pacheco Creek flow regime have the potential to impact ecosystem functions and the plant and wildlife species and aquatic and terrestrial natural communities such as riparian and wetland vegetation that depend on these flows. Valley Water solicited input on flow regimes in Pacheco Creek using a set amount of water that would minimize impacts to some species while providing benefits to others. The Variable Flow Schedule resulting from these multi-agency workshops represents a flow schedule that attempts to minimize impacts to species, and provide a benefit to steelhead, and was largely conceptualized based on an understanding that the Proposed Project would be located at the downstream dam site (i.e., Alternatives C and D). The additional 1.8 miles of stream channel below the proposed dam site included as part of the Proposed Project were not factored into the analysis that was conducted and discussed during the workshops described. Additionally, CDFW recognizes that not all water being provided under the Variable Flow Schedule is solely for an ecosystem benefit under the Water Storage Investment Program (WSIP).

Recommendation: CDFW recommends the proposed Variable Flow Schedule, as described in Table 2-3 (p. 2-36), be evaluated specific to the upstream dam site (i.e., the Proposed Project location and Alternatives A and B) to ensure it still meets the needs of both mitigating for all Project impacts and providing a benefit to SCCC steelhead, and consider any influences of restoration to the 1.8 miles of North Fork Pacheco Creek on the proposed Pulse Flow target magnitude and duration.

Issue: Table ES-4 (page ES-15) contains a row comparing “Percent increase in Steelhead Score”. The cohort scores range from 21-36 percent less in the Variable Flow Schedule Project Alternatives (Proposed Project and Alternative C-the Environmentally Superior Alternative) versus the Fixed Flow Project Alternatives (Alternatives A, B and D). The Variable Flow Schedule was created to benefit steelhead, but this analysis shows a reduction in benefits to steelhead.

Recommendation: CDFW recommends the EIR further explain why or how the cohort score is 21-36 percent less in the Variable Flow Schedule Project Alternatives versus the Fixed Flow Project Alternatives. It is understood the flow schedule has been changed to benefit a variety of species, including steelhead and Sycamore Alluvial Woodland (SAW), but CDFW recommends that the EIR provide a detailed explanation of scoring methods and results to explain conflicting objectives.

WSIP Benefit - SCCC Steelhead Habitat Improvement

Issue: As affirmed by Valley Water in the DEIR Executive Summary (ES.2 Background), the basis for the Proposed Project’s public ecosystem benefit under the WSIP is

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improved habitat for SCCC steelhead. It is CDFW's expectation that a re-established steelhead population will be present and utilizing Pacheco Creek's improved habitat for achievement of this public ecosystem benefit.

The DEIR anticipates that the Proposed Project will impact steelhead and other aquatic and terrestrial species during Project construction and operations (e.g., negative effects caused by induced creek dryback, Table 2-3 p.2-36). Section 6004(a)(3) of the California Code of Regulations for the WSIP require projects to demonstrate a net improvement, which is the enhancement of a resource condition less any negative impacts of the project that are not fully mitigated. The DEIR states, "*If a water supply interruption were determined to be an imminent risk to essential public health and safety, the Board of Directors of either agency [Valley Water and/or SBCWD] could make an emergency declaration and Valley Water and/or SBCWD could continue to withdraw water from the expanded reservoir, including the habitat storage reserve, to meet demand*" (p. 2-35). Therefore, based on the DEIR, CDFW cannot discern the amount of water that is expected to go toward providing a public ecosystem benefit to steelhead from the amount that will go toward minimizing impacts of the Proposed Project or toward the Proposed Project's emergency supply public benefit.

Recommendation: CDFW recommends that the EIR clearly describe how Valley Water plans to prioritize and allocate water supplies to meet the Proposed Project's needs and requirements. For example, the EIR should clearly differentiate between the Project's net improvements to steelhead and improvements from offsetting impacts of the Project by fulfilling compensatory mitigation requirements.

Fisheries Impacts

Issue: With the exception of the construction impacts in Pacheco Creek to Monterey hitch (*Lavinia exilicauda harengus*) and Monterey roach (*Lavinia symmetricus subditus*), which are both designated as state Species of Special Concern (Impact Fish-4), the DEIR determines that impacts to other special-status fish and native freshwater mussels during construction and operation of the Proposed Project to be less-than-significant (LTS) or No Impact (NI, Fish-9) in the primary study area (Table 3.6-2, pp. 3.6-24 - 3.6-27). However, the DEIR does not provide sufficient data or evidence to substantiate these findings. Some examples of where insufficient analyses have been provided to support a finding of LTS are outlined below:

The DEIR states "*The expanded reservoir under the Proposed Project would result in a larger area of inundation compared to the existing and future baselines, thereby reducing the amount of riverine habitat upstream from the new dam available to Monterey roach by approximately 7.7 miles, leaving 8.4 miles of intermittent creek habitat upstream from the expanded reservoir*" (p. 3.6-29). The 48% reduction of

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riverine habitat in North Fork Pacheco Creek is considered LTS “*Because much of North Fork Pacheco Creek is frequently dry*” (p. 3.6-29).

However, CDFW is concerned that the DEIR lacks an evaluation of the existing fish population size(s) and location(s) of stream use by native fish to be able to assess the potential impact of decreased habitat availability. Further, the DEIR states (p.3.6-30) that the expanded reservoir would be repopulated by fish in the Upper North Fork Creek, including Monterey roach, thereby suggesting the importance of the North Fork Creek’s habitat to maintaining and reestablishing viable populations of special-status native resident fish species.

The DEIR states “*The introduction of CVP water from San Luis Reservoir into Pacheco Reservoir has the potential to introduce non-native fish and invertebrate species into upper North Fork Pacheco Creek, which already supports a community of non-native species fish*” (p. 3.6-29). However, the DEIR finds the impact to be LTS because North Fork Pacheco Creek frequently goes dry which would “*result in keeping the numbers of non-native fish species inhabiting the upper North Fork Pacheco Creek above the expanded reservoir low*” (p. 3.6-29). Without substantiating this conclusion, CDFW considers it contradictory that the drying of North Fork Pacheco Creek would have LTS impacts on native species but negative impacts on non-native species. Furthermore, the DEIR states “*While the North Fork Pacheco Creek is intermittent, some habitat for these native and non-native fish may persist during these conditions that could sustain populations and could result in recolonization of the expanded reservoir*” (p. 3.6-31). But the DEIR states the potential impact to be LTS because the few Monterey roach currently populating the existing reservoir are already exposed to non-native predatory fish species (p. 3.6-31). CDFW considers this an insufficient and qualitative rather than quantitative assessment of potential impacts to special-status native resident fish species.

P. 3.6-30 states “*Under the Proposed Project, special-status native resident fish (Monterey roach which may be present) would be precluded from entering the expanded reservoir and dam construction area by the installation of a cofferdam upstream from the new dam and a functional barrier downstream from the existing dam.*” The DEIR fails to evaluate the potential impacts caused by exclusion of the native species, which could be for the duration of construction, which is stated to be between 5.8 to 7.3 years. Furthermore, it is stated that impacts from the draining of the existing Pacheco Reservoir and removal of the dam would result in the loss of habitat for reservoir species for a minimum of six years but that this impact is LTS because “*most, if not all, of these fish are non-native species*” (p. 3.6-30). However, the DEIR does not present data or evidence suggesting native fish species are absent from the reservoir. It is also unclear how native fish would repopulate the new reservoir if they currently were absent from both the existing reservoir and excluded for the duration of construction.

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The DEIR acknowledges that “*Winter peak flows during construction would mobilize residual sediment in the restored channel to some degree, increasing turbidity, suspended sediment, and bedload material in lower North Fork Pacheco Creek and downstream in Pacheco Creek*” (p.3.6-32). However, the DEIR then states, “*Monterey hitch and Monterey roach are currently exposed to increases in turbidity and sedimentation during peak flows*” (p.3.6-32) and therefore concludes while there might be some impacts to these species during a peak flow event, they have adapted to increases in turbidity and sedimentation and as such, are not expected to be affected. CDFW disagrees with the LTS determination. The compounding impacts of increasing turbidity and sedimentation by construction of the Proposed Project have not been evaluated. As discussed in Annear *et al.* (2004), studies assessing the impact of sediment on aquatic biota have demonstrated an inverse relationship between accumulation of sediment in spawning and rearing habitats and survival and abundance of fish.

Recommendation: CDFW recommends the EIR expand its evaluation of potential impacts of the Proposed Project on all special-status native fish, such as SCCC steelhead, Monterey hitch, Monterey roach, Pacific lamprey (*Entosphenus tridentatus*), and native freshwater mussel species that could be present within the Project study area, and provide sufficient analysis and scientific justification for any LTS determination.

CDFW also recommends the EIR evaluate the potential frequency and magnitude of impacts caused by sediment loading to all native aquatic species and their habitats (e.g., spawning gravels).

CDFW also recommends that the EIR analysis be based on surveys (e.g., electrofishing) conducted to quantitatively characterize the existing Monterey roach and Monterey hitch population sizes relative to the non-native fish population. Additionally, habitat mapping of North Fork Pacheco Creek should include identification of habitat types such as holding pools that might persist during intermittent conditions as well as invertebrate sampling/identification to evaluate existing conditions. Together, these surveys can provide information and create baseline conditions against which future conditions can be compared, and monitored, to ensure increased delivery of CVP water into the expanded reservoir is not (or is) introducing new non-natives or increasing known non-native populations, so that adaptive management can occur as necessary.

Issue: The DEIR finds the Proposed Project to have LTS effects either directly or through habitat modifications for special-status, anadromous fish species in lower North Fork Pacheco Creek, Pacheco Creek, South Fork Pacheco Creek, San Felipe Lake, Miller Canal, and Pajaro River (Impact Fish-7, Fish-8, Fish-9, and Fish-10, respectively). However, CDFW believes that the Proposed Project and Alternatives have the potential to significantly impact SCCC steelhead survival and recruitment in these creeks.

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The DEIR PAMM Fish-2 Anadromous Fish Exclusion Barrier and Relocation Plan (p. 2-48, 49) states, “*The primary objective of this plan will be to determine the physical location for placement of functional barriers that would prevent anadromous fish access to San Felipe Lake and Pacheco Creek upstream during construction... These barriers will be placed in Miller Canal and Tequisquita Slough downstream of San Felipe Lake due to their confined channel characteristics.*” Although this action is proposed as a Project-specific avoidance and minimization measure, CDFW believes this action can and will have an impact on SCCC steelhead in Pacheco Creek. Excluding anadromous fish from the entire Pacheco Creek watershed during construction (lasting between 5.8 to 7.3 years), would extirpate the species from Pacheco Creek. Furthermore, Appendix Alternatives Development and Project Description states (p. 2-9) “*Currently, Uvas Creek has the only self-sustaining steelhead population in the Pajaro River watershed*” and “*In the Pajaro River watershed, there are only two consistent populations – Corralitos Creek near the estuary, and Uvas Creek. Llagas Creek and Pacheco Creek only have sporadic steelhead activity due to the intermittent nature of the streams.*” This raises the question of how a Pacheco Creek SCCC steelhead population would be re-established after Project construction and what would be the source or origin of SCCC steelhead for Pacheco Creek.

Recommendation: CDFW recommends that the EIR include a detailed evaluation of impacts to SCCC steelhead during the construction phase of the Proposed Project, including an assessment of the potential impacts of installing the fish exclusion barrier and relocating steelhead (PAMM Fish-2). The EIR should also include a description of SCCC steelhead population enhancement actions to be implemented after Project construction is complete to ensure a successful return and re-establishment of SCCC steelhead in Pacheco Creek.

Issue: Section 3.6.3.4 of the DEIR (impact Fish-7 p.3.6-42) states, “*To control the spread of willows from encroaching on sycamore alluvial woodland habitat, flow releases that result in drybacks in Pacheco Creek may be implemented in critically dry years when inflows into the expanded reservoir would be low, and the habitat conditions less suitable for steelhead... Because these fish already experience nearly annual drybacks, this impact would be less than significant because impacts on anadromous fish species and their habitat would not be substantial.*” CDFW disagrees with the DEIR’s conclusion that because the current sporadic SCCC steelhead population in Pacheco Creek (Appendix Alternatives Development and Project Description p. 2-9) experiences nearly annual drybacks, the future impact would be LTS to the steelhead population once habitat improvements have occurred and a SCCC steelhead population has re-established. Induced drybacks, as proposed in the Variable Flow Schedule, could result in significant impacts to any rearing juvenile SCCC steelhead present in Pacheco Creek by stranding individuals or concentrating them in isolated pools that become unfavorable habitat conditions.

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Furthermore, proposed Project operations during emergencies could have potential impacts to SCCC steelhead. The DEIR states, *“If a water supply interruption were determined to be an imminent risk to essential public health and safety, the Board of Directors of either agency [Valley Water and/or SBCWD] could make an emergency declaration and Valley Water and/or SBCWD could continue to withdraw water from the expanded reservoir, including the habitat storage reserve, to meet demand”* (p. 2-35). Drawdown of the habitat storage reserve and reducing and/or eliminating releases into Pacheco Creek to maintain stream conditions can impact SCCC steelhead and other aquatic and terrestrial species that depends on releases.

Recommendation: CDFW recommends the EIR include a robust analysis of all potential impacts to steelhead from implementing drybacks and drawdown of the habitat storage reserve, and include an effective monitoring and mitigation plan to offset all direct and indirect impacts.

SCCC Steelhead Monitoring

Issue: The DEIR describes releases to North Fork Pacheco Creek in Chapter 2 (p.2-39) as followed: *“In years when adult migration most likely does not occur due to lack of hydrologic connectivity in the Pajaro River system, and other steelhead life stages within Pacheco Creek are not likely to be present to benefit from summer/fall baseflows (e.g., June – October), reservoir releases for summer/fall baseflows may be reduced to retain water supplies to create later environmental pulse flows.”* In addition, Section 3.6.3.4 (p. 3.6-37) states, *“In order to control the spread of willows from encroaching on sycamore alluvial habitat, drybacks may be implemented in critical years when inflows into the expanded reservoir would be low, habitat conditions less suitable for steelhead, and a low number of adults have migrated into the system.”* These statements imply that reservoir releases may be modified depending on SCCC steelhead presence in Pacheco Creek. However, the DEIR does not include any description of a routine monitoring plan to assess juvenile and adult SCCC steelhead presence in Pacheco Creek.

Chapter 3, Section 3.6 of the DEIR references limited information on SCCC steelhead presence in Pacheco Creek and is based on observations from the 1970s and early 1980s. The DEIR acknowledges there is no fish monitoring program in the Pajaro River watershed. The analysis of the Proposed Project impacts to SCCC steelhead would benefit from more recent monitoring data.

Recommendation: CDFW recommends that the EIR include a robust steelhead monitoring plan. CDFW also recommends that baseline monitoring data for SCCC steelhead in Pacheco Creek, including North and South Forks, be collected to better assess potential impacts to the species from Project construction and operations. The monitoring plan should include pre-construction and post-construction objectives that would determine population of native fish in the system. CDFW also recommends

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annual aquatic monitoring for other special status fish species previously mentioned in this letter as well as regular water quality monitoring [e.g., temperature, stage, and dissolved oxygen (DO)] at appropriate locations within the Project area.

Steelhead Habitat Restoration

Issue: The DEIR Chapter 2 (p. 2-15) states *“Field studies indicate that, under current conditions (low flows and high water temperature), only the 10 miles of Pacheco Creek downstream from the existing confluence of North Fork and South Fork Pacheco Creeks may provide suitable habitat for steelhead egg incubation and fry rearing in some years (Smith pers. comm 2017).”* However, the DEIR does not provide substantiating data or references to support this assertion. Additionally, the habitat suitability domain for calculating cohort score (Table 7-10 p. 7-13) is described as the *“Length of the creek from dam outlet to 8 creek miles below the confluence of North Fork and South Fork Pacheco Creek”*. This is inconsistent with the description of suitable habitat occurring for 10 miles downstream of the North and South Fork Pacheco creeks confluence.

Furthermore, Water Resources and Fisheries Numerical Modeling Appendix, Section 7.2 Modeling Assumptions (p. 7-14) states *“the start of creek mile 0 was moved upstream to coincide with the new dam location for each alternative. The stream/aquifer submodel and habitat suitability assumptions for creek mile 0 remained the same as the No Project Alternative.”* However, no supporting data or evidence is provided to corroborate the conclusion that the stream/aquifer and/or habitat suitability created through restoration of the currently inundated North Fork Pacheco Creek will perform the same as habitats currently downstream.

While the schedule for restoration is described as occurring in two phases (p. 3.6-31, 32), it is unclear when the restored reach would function as suitable habitat for SCCC steelhead and other native aquatic species. The timing of the start and completion of the second phase should also be clarified. The DEIR states that *“phase one would begin in the summer of construction year two...phase two would begin in the summer before the final year”* (p. 2-26), therefore, the gap between phases could be approximately 3-5 years.

Recommendation: CDFW recommends that the EIR more fully describe and reference the cited field studies, methodologies, and any other supporting evidence (i.e., specific habitat locations and characteristics) used to support the conclusion from p. 2-15 as quoted above. CDFW recommends that model assumptions be clearly described and supported, potentially differing by location (i.e., the lower vs. higher dam location). Additionally, a more detailed restoration plan for the North Fork Pacheco Creek should be provided, which includes a proposed timeline supported by modeling for when specific restoration actions might be completed and when the reach is likely to function

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as suitable aquatic habitat (e.g., sinuosity re-established, gravel augmented, contain sufficient vegetative cover, sediment loading issues addressed).

Issue: The DEIR mentions that the *“Pajaro River Watershed is considered severely degraded”* (p.2-14). The Proposed Project and Alternatives are far upstream in the watershed, but downstream fish passage needs are not addressed. It is not clear if fish will be able to access the restored flow and habitat area once the Proposed Project has been completed. Improvements that may be needed downstream to allow fish to access improved habitat restoration areas is not discussed.

Recommendation: CDFW recommends the EIR include a thorough assessment of the greater Pacheco Creek migratory corridor in order to understand fish passage conditions downstream of the new dam after completion of the Proposed Project and subsequent stream restoration. The DEIR fish passage assessment should encompass the area from downstream of the new dam to the ocean to ensure Pacheco Creek provides sufficient fish passage and supports suitable habitat for fish that may eventually occupy the newly restored channel.

Temperature Analysis

Issue: The DEIR provides supporting documentation for water temperature of baseline conditions, the Proposed Project, and Alternatives A-D. However, the model results leave uncertainty about the Project’s water temperature impacts to aquatic resources because of potential compounded model error resulting from limited historical measured data. For example, the Water Resources and Fisheries Numerical Modeling Appendix states, *“Extensive historical measured data was not available to develop comprehensive input parameters for all models. Where necessary, input data was developed or selected from different sources by applying a precautionary principle of assuming a conservative value that would result in the ‘worst’ or most impactful outcome (e.g., assuming warmer air temperatures so as not to overestimate cold-water release benefits)”* (p.1-4). Additional uncertainty stems from the use of modeled mean monthly water temperatures. Chapter 3, Section 3.12 and the Water Resources and Fisheries Numerical Modeling Appendix describes models (e.g., CE-QUAL-W2 and PCSHSM) that estimate reservoir release temperatures and water temperatures in Pacheco Creek on a mean monthly basis. Monthly average water temperatures could vary greatly at a smaller time scale. Daily and weekly changes to water quality can often have lethal or sub-lethal effects on aquatic resources, which a monthly time step cannot capture.

Recommendation: Due to the limited historical data on water temperatures in Pacheco Creek which can lead to modeling error as well as the variability of water quality conditions in this stream system, CDFW recommends that modeling to assess water quality impacts on aquatic resources be based on a daily time series analysis rather than a monthly analysis. Additionally, the worst-case conditions must be analyzed on a

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daily time-step rather than a monthly time-step in order to more accurately evaluate potential lethal or sub-lethal effects on aquatic resources such as SCCC steelhead.

Overarching Uncertainty

Issue: CDFW recognizes the limitations of the analytical tools and data available to Valley Water to conduct a comprehensive evaluation of potential impacts of the Proposed Project on aquatic species. However, there are several instances in the DEIR where statements and conclusions on Project impacts to water quality and consequently fisheries are not sufficiently substantiated. Select example include:

- p. 3.6-41, “*Supplemental CVP inflows would result in a long-term average blend of 55 percent natural inflow from the North Fork Pacheco Creek watershed and 45 percent CVP supplies by volume in the expanded reservoir (see Section 3.20.3.4)...A long-term average would have a blending ratio of less than 50 percent CVP water; however, some years – mostly in extended droughts- this may exceed 50 percent...Accordingly, the impact of straying would be less than significant because impacts on anadromous fish species and their habitat would not be substantial.*” CDFW would like to note that an analysis of blending ratios of natural inflow and imported water is not provided in Section 3.20.
- p. 3.6-42, “*To control the spread of willows from encroaching on sycamore alluvial woodland habitat, flow releases that result in drybacks in Pacheco Creek may be implemented in critically dry years when inflows into the expanded reservoir would be low, and the habitat conditions less suitable for steelhead... Lower North Fork Pacheco Creek would maintain at least 8 cfs to support any rearing steelhead, if present, and to support the riparian vegetation. Ramping rates would be set at 1 cfs every four hours to reduce the risk of stranding fish. Because these fish already experience nearly annual drybacks, this impact would be less than significant because impacts on anadromous fish species and their habitat would not be substantial.*” While under baseline conditions anadromous fish likely experience nearly annual drybacks, this would not be the case with the Proposed Project operations. An induced dryback could potentially have significant impacts on steelhead that might be present in Pacheco Creek.

Recommendation: CDFW recommends the EIR provide supporting documentation and/or analysis to substantiate statements regarding Project impacts to aquatic and terrestrial biological resources. CDFW recommends an analysis be conducted and provided to substantiate conclusions of LTS. The model results and not just an interpretation of them should be included in the EIR. CDFW recommends the EIR include graphs, tables, etc. to explain and show the comparative analysis. These graphics should show baseline conditions and future conditions for the Proposed Project and Alternatives. Graphs showing the following information (similar to those

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recently presented by Valley Water on September 22, 2021, at the Pacheco Expansion Project Operations Workshop #8) would be helpful: 1- Graphs of flow data (y) plotted against creek miles (Points of Interest) (x); 2-Temperature data by month (y) plotted against creek miles (Points of Interest) (x); and 3-Depth/Habitat Suitability (y) plotted against creek miles (Points of Interest) (x).

Additionally, CDFW recommends the EIR substantiate the statement from the second example above with an analysis of anticipated frequency of drybacks in critically dry years.

CalSim-II Baseline Assumptions

Issue: In Table 2-1, pgs. 2-3 through 2-11, Chapter 2 of the Water Resources and Fisheries Numerical Modeling Appendix: The CalSim-II Baseline Assumptions notation 5 (p. 2-11) states that Refuge Level 4 (and IL4) water is not included as part of the analysis. Firm Level 2 water deliveries were assumed for the purpose of existing baseline analysis. IL4 supplies can count for as much as two-thirds of refuge supplies and not including IL4 in the CalSim analysis may affect the modeling assumptions of the DEIR.

Recommendation: The United States Bureau of Reclamation has contracts for IL4 water supplies that are based on water allocations, and CDFW recommends including IL4 supply with the modeling analysis to more accurately represent water demands, and water supply availability.

Cumulative Impacts

Issue: The DEIR states that Valley Water customers “*receive more than 45 percent of their supply from Delta exports under CVP and SWP contracts*” (p.2-13). Therefore, a secondary goal of the Proposed Project is to increase Valley Water and SBCWD’s local storage capacity so that they can “*take advantage of a portion of higher wet year allocations*” (p. 2-13). As such, the Delta is included in the DEIR as the extended Project study area because of the potential operational changes the Proposed Project could cause in the San Luis Division of the Central Valley and State Water Projects (p.3.6-1). The DEIR uses CalSim II to evaluate Delta conditions and concludes “*there would be negligible changes to Delta conditions under the Proposed Project, including X2, Old and Middle River flows, and exports for both CVP and SWP*” (p. 3.6-48). However, the DEIR fails to account for or evaluate potential cumulative impacts to the Delta caused by changes in CVP and SWP operations resulting from the Proposed Project along with changes related to foreseeable future projects, such as the Delta Conveyance Project which has planned exports ranging from 3,000 cfs to 7,500 cfs, or the Los Vaqueros Reservoir Expansion Project which also plans to alter the quantity and timing of Delta exports.

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Recommendation: CDFW recommends that the EIR evaluate cumulative impacts to Delta species caused by changes in CVP and SWP export quantity and timing in order to disclose all reasonably foreseeable potential impacts.

Issue: In section 2.10, Alternatives Considered but Eliminated from Further Analysis, the following alternative was mentioned “*Repair Existing Dams (Anderson, Almaden, Calero, and Guadalupe)*. This alternative was rejected because the future conditions baseline includes completion of the below projects. As described in the Water Resources and Numerical Modeling Appendix (see Table 6-2 in Section 6.5), the below projects are included in the future conditions (2030) baseline water operations modeling.

- *Anderson Dam Seismic Retrofit Project*
- *Almaden Dam Improvements Project*
- *Calero Dam Seismic Retrofit Project*
- *Guadalupe Dam Seismic Retrofit Project*”

Although repair of these other dams is not an alternative for this Project, CDFW is concerned with the inaccuracy of Repair of Existing Dams timeline. In section 2.10 and in the following quote “...and the additional water-related facilities assumed to be in place by 2030” (p. 3.6-19), the DEIR states that these projects are part of the future condition of 2030. CDFW does not consider this timeline to be realistic since many of these projects are still in the development phase or CEQA review process. For context, the Anderson Dam Seismic Retrofit Project is the most advanced of all seismic retrofit projects listed to be implemented (construction was initiated in 2021) and its expected construction completion is late 2030.

Recommendation: CDFW recommends selecting a more appropriate completion year for the dam retrofit projects mentioned above and re-evaluating the future conditions baseline based on a more realistic timeframe for initiation and completion of the proposed Valley Water seismic retrofit projects.

Sediment, Turbidity, and Pollutants

Issue: The DEIR states “*samples showed depths of residual sediments of between 7 and 20 feet within the estimated floodplain of the historic North Fork Pacheco Creek channel, with a composition of either silt or poorly graded gravel with sand*” (p.3.20-9). Additionally, “*the excavation of the dam site to a depth of 30 to 40 feet would require excavation of 926,000 cubic yards*” p. 3.20-31, and “*the exposure of 493 acres in the first few years of construction would expose soil and rock to erosional processes over the course of several construction seasons*” (p. 3.2-31).

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However, when discussing impacts to water quality related to sediment and turbidity, the DEIR states there are no tools available to quantify potential changes in turbidity and that no data exist to quantify the baseline turbidity of existing Pacheco Reservoir or North Fork Pacheco Creek, so impacts were analyzed qualitatively (p. 3.20-34). The DEIR finds impacts related to decommissioning the existing dam to be significant, and significant and unavoidable (Impact WQ-1, WQ-5, WQ-6, WQ-7), related to the Proposed Project's potential to cause a violation of water quality standards, as a result of turbidity and sediment releases, and concludes, "*No further mitigation is feasible that could cost effectively achieve the objectives of creation of functional habitat and removal or stabilization of all sediment in a manner that ensures water quality objectives are met under high flow conditions during construction*" (p.3.20-34).

However, it is unclear what, if any, additional mitigation was assessed and determined cost prohibitive. Additionally, the DEIR acknowledges activities related to construction and decommissioning the existing dam will adversely impact water quality, and consequently aquatic species and their habitat, including SCCC steelhead, but has not attempted to quantitatively assess the magnitude of impacts.

CDFW also has concerns about the mobilization of sediment from the existing reservoir footprint once the dam is moved upstream. Sudden increases in sediment load resulting from storm runoff can cause negative impacts to fish health and survival such as decreased water quality, potential decreases in suitable spawning gravel, and potential suffocation of eggs and/or alevin. Details as to how sediment from the existing reservoir bed will be stabilized during construction of the new dam and during the restoration of the channel downstream of the new dam are described generally in the DEIR (e.g., PAMM BI-4 and WQ-5 would be implemented where applicable to provide native revegetation, and PAMM BI-7 would stabilize surfaces with sufficient geotextile or plastic p. 3.20-33). However, the DEIR does not discuss the timeframe for the downstream channel restoration making it difficult for CDFW to determine the type and extent of impacts resulting from construction of the Proposed Project.

Recommendation: CDFW recommends that the EIR include a quantitative analysis of turbidity and sediment impacts and include a robust sediment removal, management, and mitigation plan for activities relating to removal of the existing dam, channel restoration, and subsequent construction of the new dam as well as present a timeline for implementation of identified activities. A quantitative assessment could potentially be done thorough developing tools and/or collecting data to generate accurate baseline conditions related to water quality. Once baseline conditions are determined and the magnitude of the impacts analyzed and described in the DEIR, CDFW can more effectively compare the impacts with the mitigation proposed and assess the type and extent of any remaining impacts. Even if the EIR determines that impacts are significant and unavoidable, CDFW recommends that additional mitigation measures would be

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warranted to, at a minimum, decrease the magnitude and duration of impacts to Pacheco Creek and aquatic species.

Issue: Section 3.11 of the DEIR states that as a result of the proposed channel restoration, *“Under the Proposed Project, approximately 1,000,000 cubic yards of residual sediments deposited in the existing reservoir inundation area would be excavated and either transported to disposal sites or stabilized in upland areas away from the restored channel in order to restore the historic channel planform and profile”* (p.3.11-29,30). As such, three of the eight samples collected for analysis of hazardous materials were taken as composite samples from the channel restoration area within the existing reservoir, *“Of the three samples analyzed, one sample exceeded the Construction Worker Safety ESL for Cobalt, and all three samples exceeded the Construction Worker Safety ESL for Nickel (SFBRWQCB 2019)”* (p.3.11-30). The section also acknowledges that in addition to the excavation activities described, the Proposed Project would expose 493 acres in the first few years of construction which would be susceptible to erosional processes thereby transporting the potentially hazardous material (p. 3.11-29).

However, the DEIR finds any impacts to be LTS because of the Project-specific avoidance and minimization measure HM-4 which will require dust control and notification measures along with an Excavated Materials Management Plan if naturally occurring asbestos or heavy metals are identified subject to grading or excavation activities. Both arsenic and cobalt were reported in samples to exceed their respective screening levels and nickel was reported in seven of the eight samples exceeding the construction worker ESL of 86 mg/kg (p.3.11-4). With these results reported, it is unclear how a determination of LTS was made and why a management plan is not being developed for arsenic, cobalt, and nickel, and presented in the DEIR.

Recommendation: CDFW recommends the EIR include a measure to include an Excavated Materials Management Plan for arsenic, cobalt, and nickel to prevent contamination of waters downstream both during and after decommissioning of the existing dam. Various pollutants such as heavy metals can affect amphibians and lead to *“population declines both directly by reducing individual survival and indirectly by decreasing mass or by increasing the frequency of abnormalities”* (Egea-Serrano *et al.* 2012). The EIR should therefore include measures in the management plan in order to avoid or minimize negative impacts to aquatic species in North Fork Pacheco and Pacheco Creeks.

Harmful Algal Blooms

Issue: The DEIR states that the *“expansion of Pacheco Reservoir under the proposed project would avoid the consequences of the San Luis Reservoir low-point issue by taking delivery of CVP supplies earlier in the season, storing these supplies in the*

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expanded Pacheco Reservoir, using additional CVP and local supplies developed through expansion of the Pacheco Reservoir, and using water stored in the expanded reservoir as a source of blending water when needed” (p. 2-64). The DEIR also states, “Anecdotal observations suggest when Pacheco Reservoir storage is low in the fall, cyanobacteria (i.e., blue-green algae) may form a harmful algal bloom, depleting dissolved oxygen in the reservoir and diminishing water quality” (p. 3.20-10).

However, this appears to be the extent of the discussion on Harmful Algal Blooms (HABs). HABs include a wide range of phytoplankton species such as diatoms and dinoflagellates, in addition to cyanobacteria. Additionally, “*Water would be transported from San Luis Reservoir into the new expanded reservoir; therefore, aquatic resources in San Luis Reservoir, and from the Delta, as San Luis Reservoir receives water from the Delta, have the potential to be transported into the expanded reservoir” (p. 3.6-1). Cyanotoxins may be present in water, sediment, and biological organisms even if a bloom isn’t observed. Microcystis is the dominant cyanobacteria in California, but Aphanizomenon and Dolichospermum are becoming more abundant (Lehman et al. 2021). Further, certain cyanobacteria HABs can be epiphytic, meaning they are present on aquatic plants. These cyanobacteria may create toxins that can bioaccumulate killing predators such as bald eagles (*Haliaeetus leucocephalus*) (Breinlinger et al. 2021).*

Recommendation: CDFW recommends that the EIR include a more detailed discussion of potential sources of HABs and include an analysis of their potential occurrence in the Proposed Project area. Additionally, CDFW recommends that the EIR acknowledge there is a relationship between HABs and aquatic vegetation and that it is a knowledge gap of concern that may need to be addressed through future adaptive management.

Adaptive Management Plan

Issue: Chapter 2 Section 2.3.3.1 Operations, Adaptive Management Plan, outlines Valley Water’s expectation to “*develop and implement adaptive management plans in cooperation with appropriate regulatory agencies to be consistent with WSIP and regulatory requirements” (p. 2-36). Specific contract requirements are identified in the California Code of Regulations, Title 23, § 6014 for the administration of public benefits under the WSIP. Specifically, section § 6014(a)(2)(A)(1)) outlines required components of adaptive management including monitoring metrics, locations, frequency, and timing, metric evaluation methodology and associated threshold or trigger levels, decision making processes, as well as funding sources and financial commitments to implementing the adaptive management plan. As such, the adaptive management plan developed consistent with the WSIP regulations will be specific to providing suitable habitat conditions for SCCC steelhead in Pacheco Creek, with metrics associated with SCCC steelhead presence.*

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Recommendation: CDFW recommends that separate adaptive management plans be developed in consultation with CDFW: one that addresses WSIP requirements (CCR, Title 23, Section § 6014(a)(2)(A)(1)), and another for other species and/or habitat (i.e., sycamore alluvial woodland) and pursuant to other regulatory requirements.

Water Handling During Construction

Issue: The DEIR Chapter 2, Section 2.3.2.2 Construction Sequencing and Methods for Facilities, Water Handling During Construction at New Dam Site (p. 2-28) states, “*water entering the dam construction area would be handled by use of a coffer dam and run-of-river system (e.g., similar to natural hydrograph), passing creek flows through the pre-existing creek channel prior to cofferdam construction, and diverting water through the dam site via a diversion system following cofferdam construction.*” The description of water handling during construction for the Proposed Project and Alternatives A-D does not present sufficient information to determine impacts to aquatic and terrestrial resources during construction. It is unclear when and where water will be diverted, conveyed, and released in the Project area.

Recommendation: CDFW recommends the EIR include a more detailed description of the various phases of water handling (i.e., pre- and post- cofferdam construction) and the water diversion system design and location, and include figure(s) of the proposed cofferdam and water diversion system that is described for the Proposed Project and Alternatives A-D. The EIR should include a thorough analysis of potential impacts to biological resources resulting from the water diversion system.

Groundwater

Issue: The DEIR relies on the draft Groundwater Sustainability Plan prepared by the Groundwater Sustainability Agency (GSA) for the North San Benito Subbasin to establish a threshold for significant impacts to groundwater supplies and levels (Impact Hydro-3 and Impact Hydro-4). The GSA establishes the minimum threshold as groundwater 97 feet below ground surface (bgs), measured at Key Well 11-5-13D1. CDFW believes the DEIR has adopted this minimum threshold improperly. The GSP uses the minimum threshold of 97 feet bgs to indicate a problematic chronic lowering of groundwater levels (p. 3.12-25). Alternatively, the GSP utilizes a minimum threshold of 44 feet bgs as the minimum threshold for “*unreasonable adverse impacts on beneficial uses of surface water, including impacts to aquatic and riparian habitat*” (p. 3.12-25).

Additionally, it appears that groundwater levels near Pacheco Creek are frequently near the surface and well within the reach of groundwater dependent ecosystems. For example, Figure 3.12-14, p.3.12-103 indicates that groundwater is frequently within 30 feet of the ground surface for multiple years at a time. Furthermore, the DEIR states that Pacheco Creek operates as a gaining stream (i.e., it receives water inputs from high

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groundwater levels) during even dry years (p. 3.12-6). Therefore, the minimum threshold of 97 feet bgs is an inadequate threshold for determining potential impacts to groundwater dependent ecosystems located downstream of the Proposed Project, as this area regularly has demonstrated groundwater levels near the surface.

Furthermore, the DEIR does not identify ecosystems downstream of the Proposed Project that may be impacted by lower groundwater levels. However, the California Department of Water Resources' Natural Communities Dataset (NC Dataset) identifies both groundwater-dependent vegetation and wetlands downstream of the Proposed Project along Pacheco Creek within the Gilroy-Hollister Valley, North San Benito subbasin. While the NC Dataset only identified groundwater dependent ecosystems within groundwater basins identified within the California Department of Water Resources' Bulletin 118, it is likely that groundwater dependent ecosystems also exist further upstream along Pacheco Creek (in Groundwater Reach 1 as depicted in Figure 3.12-5), closer to the Proposed Project.

Moreover, the DEIR states that "*the Proposed Project would temporarily modify surface flows in Pacheco Creek for the period of time between removal of North Fork Dam and initial operation of the new dam. This would result in seasonal changes in groundwater recharge in Pacheco Creek and seasonal reductions in groundwater supplies for up to seven years in the four Groundwater Reaches underlying Pacheco Creek*" (p. 3.12-31).

Recommendation: CDFW recommends the EIR properly identify ecosystems that may be impacted by groundwater level declines as well as adopt a much higher groundwater level as the threshold for the determination of potential Project impacts.

Permanent Access Roads and Artificial Lighting

Issue: In section 2.3.1.5 Permanent and Temporary Access Roads and Improvements, the Proposed Project and Alternatives A-D would include both permanent and temporary roads. However, the DEIR does not provide sufficient information on baseline conditions and future road infrastructure (whether the permanent roads are existing or proposed to be constructed). The purpose or need for any future construction of permanent roads as well as resulting impacts of road construction to biological resources are also not clearly described. CDFW considers any additional barriers or impediments to species movement as both a significant impact and a cumulatively significant impact.

Additionally, the DEIR states that "*permanent lighting*" (p. 2-22) will be installed as part of the Proposed Project; however, the DEIR does not adequately address impacts to species due to artificial lighting. Night lighting can disrupt the circadian rhythms of many species. Many wildlife species use photoperiod cues for communication (e.g., bird song; Miller 2006), determining when to begin foraging (Stone *et al.* 2009), behavior thermoregulation (Beiswenger 1977), and migration (Longcore and Rich 2004). Artificial

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lighting has also been found to impact juvenile salmonid overwintering success by delaying the emergence of salmonids from benthic refuge and reducing their ability to feed during the winter (Contor and Griffith 1995). One study showed that artificial light adversely impacts reproduction in badgers and causes a reduction in the population size and affects foraging (Natural England 2002).

Recommendation: CDFW recommends that the EIR provide a more detailed description on both existing and future proposed permanent roads within the Proposed Project area. In addition to implementing mitigation measure PAMM BI-10 – Minimize Impacts on Wildlife Dispersal and Migratory Corridors, CDFW recommends the following measures be incorporated in the EIR to address both the individual and cumulatively significant impacts to wildlife connectivity in order to reduce those impacts to LTS:

- Existing wildlife studies and data should be reviewed and referenced and, as necessary, new studies conducted to identify the areas where wildlife crossings are most prevalent and to identify areas where wildlife crossing installations would result in the largest benefit to rare, threatened, and endangered species and serve to reduce vehicle strikes.
- Existing structures should be updated, and new structures installed to facilitate wildlife movement and increase overall connectivity in the Project area from existing conditions. Site selection criteria and design criteria for wildlife connectivity structures should be conducted in coordination with natural resources agencies and follow the protocols outlined in; The California Department of Transportation (Caltrans), Wildlife Crossings Design Manual, Meese et.al., University of California Davis, March, 20093 and the Wildlife Crossing Structure Handbook – Design and Evaluation in North America, Publication No. FHWACFL/TD-11-003, March, 20114.

CDFW recommends the EIR address all direct and indirect impacts to biological resources from the installation of artificial lighting. In addition to measure PAMM AES-1, Project Lighting, the EIR should describe the type, quantity, location and specification outputs (in kelvin-scale and/or nanometers) of all proposed new and replacement artificial lighting installations for all proposed dam alternatives. A comparison analysis amongst potential alternatives as it pertains to light pollution should be included in the EIR. To accomplish this, the EIR should provide an analysis of the current lighting regime known to be present onsite as well as an analysis of the proposed changes and the lighting regime that will occur as a result of new or replacement lighting installations through the development and comparison of Isolux diagrams. Isolux diagrams should illustrate the area and intensity over which artificial lighting will create additional light impacts over the natural landscape or aquatic habitat along the Project area. CDFW recommends incorporating the following avoidance and minimization measures as conditions of approval in the EIR to reduce potentially significant impacts:

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Mitigation Measure 1: Light Impact Assessment and Avoidance

Valley Water shall submit to natural resource agencies, 30 days prior to the initiation of construction, Isolux diagrams that include current light levels present during Pre-Project conditions and the predicted Project light levels that will be created upon completion of the Project. Within 60 days of Project completion Valley Water shall conduct a ground survey that compares predicted light levels with actual light levels through comparison of Isolux diagrams. If an increase from the projected levels to the actual levels is discovered, additional avoidance, minimization, or mitigation measures may be required in coordination with the natural resource agencies.

Mitigation Measure 2: Light Output Limits

All LED's or bulbs installed as a result of the Project shall be rated to emit or produce light at or under 2700 kelvin that results in the output of a warm white color spectrum.

Mitigation Measure 3: Vehicle Light Barriers

Solid concrete barriers at a minimum height of 3.5 feet should be installed in areas where they have the potential to reduce illumination from overhead lights and from vehicle lights into areas outside of the roadway. Barriers should only be utilized as a light pollution minimization measure if they do not create a significant barrier to wildlife movement. Additional barrier types should be employed when feasible, such as privacy slats into the spacing of cyclone fencing to create light barriers into areas outside the roadway.

Mitigation Measure 4: Reflective Signs and Road Stripping

Retro-reflectivity of signs and road stripping should be implemented throughout the Project to increase visibility of roads to drivers and reduce the need for electrical lighting. Reflective highway markers have also been proven effective to reduce raptor collisions on highways in California Central Valley if installed along highway verges and medians.

Mitigation Measure 5: Light Pole Modifications and Shielding

All light poles or sources of illumination that shall be new or replacement installation should be installed with the appropriate shielding to avoid excessive light pollution into natural landscapes or aquatic habitat within the Project area and in coordination with wildlife agencies. In addition, the light pole arm length and mast heights should be modified to site specific conditions to reduce excessive light spillage into natural landscapes or aquatic habitat. In areas with sensitive natural landscapes or aquatic habitat Valley Water should also analyze and determine in the updated EIR if placing the light poles at non-standard intervals has the potential to further reduce the potential

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for excessive light pollution caused by decreasing the number of light output sources in sensitive areas.

Wildlife Connectivity/Corridors

Issue: The Proposed Project would inundate existing upland habitat as well as construct permanent roads and improve drainage by installing culverts. The Proposed Project may create barriers to the movement of wildlife such as mountain lion (*Puma concolor*), which is a candidate species for listing under CESA; tule elk (*Cervus canadensis nannodes*; see also page 35 of this letter); and mesocarnivores which could prevent access to important hunting or foraging grounds, shelter, and breeding areas. Such impediments and habitat fragmentation could result in isolation of subpopulations and reduced genetic material exchange, putting populations at risk of local extirpation. Roads are also known causes of wildlife mortality in the Pacheco Pass State Route 152 area based on ongoing wildlife permeability studies conducted by Pathways for Wildlife (from 2020 to present). Under measure PAMM BI-10 Minimize Impacts on Wildlife Dispersal and Migratory Corridors, p. 2-45, the DEIR states that culverts of at least 36 inches in diameter or greater at key wildlife crossing locations would be installed; however, this measure would not fully ensure wildlife passage for all species and not sufficiently mitigate for impacts to wildlife corridors to LTS levels.

Recommendation: CDFW recommends that the EIR include a detailed description of existing wildlife habitat linkages and movement corridors within the Proposed Project study area, and a thorough analysis of the Project's potential direct and indirect impacts to mountain lion, tule elk, and mesocarnivore subpopulations, including impaired wildlife connectivity and mortality due to vehicle collisions on roads resulting from implementation of the Project. Work by James Thorne and others from the University of California, Davis, in 2002 and 2006, tracking data from mountain lion and tule elk research and work associated with the Santa Clara Habitat Conservation Plan/Natural Community Conservation Plan (SCVHP or Habitat Plan) has specifically identified 17 corridors in Santa Clara County of significant importance.

The EIR should include effective and feasible avoidance, minimization, and mitigation measures to reduce impacts to wildlife connectivity to LTS. For impacts that cannot be completely avoided, compensatory mitigation could include planning, design, and implementation of appropriate wildlife crossings in select areas of the Pacheco Creek watershed and surrounding lands. An extensive evaluation should be conducted before final wildlife passage locations are selected to determine the appropriate and most effective locations, number, and types of wildlife passage structures. Dedicated wildlife crossing structures should ensure permeability, be evaluated on a species-specific basis, and be required to meet specific minimum dimensions for increased probability of wildlife utilizing these structures for crossing opportunities. Specific care should be taken to ensure that any wildlife crossing structure design incorporates generous

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openness and clear line of sight from entry to exit to maximize detection of the crossing by species at the time of encounter and to ensure use. Wildlife crossings should be developed in consultation with CDFW and other appropriate natural resource agencies and experts.

Water Conveyance Facilities

Issue: Chapter 2, section 2.3.1.2 Water Conveyance Between Expanded Reservoir and Existing Pacheco Conduit and Chapter 3.6, p. 3.6-39 of the DEIR describe the construction of a conveyance pipeline that will include trenchless tunneling underneath South Fork Pacheco Creek. The proposed tunnel would require excavation “*for the approximately 350-foot-long trenchless crossing.*” Although there are some measures provided to prevent fractures (e.g., monitoring ground movement) additional measures are needed.

Recommendation: CDFW recommends that a frack-out contingency plan be developed for the conveyance pipeline and included as a minimization measure. The plan should be designed, pre-planned, and include directing the drilling in such a way as to minimize the risk of spills of all types. The frac-out contingency plan should address the possibility of frac-outs (the release of drilling lubricants through fractures in streambed, waterway, or bank) and should include but not be limited to the name(s) and phone numbers of biological monitor(s) and crew supervisor(s); documentation of the experience of the drilling contractor and the training of their inspector(s); site specific resources of concern, including factors such as possible presence of sensitive species; monitoring protocols including frac-out monitoring; and containment and equipment list, necessary hose lengths, number of sandbags or similar and specifications on diverting flow around frac-out, etc. The EIR should also address all potential impacts to biological resources due to this project component.

Potential for Species to Occur and Project Study Area

Issue: The DEIR repeatedly states that a species has a low potential to occur within the Project area since there are no California Natural Diversity Database (CNDDDB) occurrences within 5 miles of the Project area. For example, Lemmon’s Jewelflower (*Caulanthus lemmonii*), which has a California Rare Plant Rank of 1B.2 (rare, threatened, or endangered), has the potential to occur in grassland habitats within the access and utility area. Nevertheless, the DEIR states that “*however, there are no CNDDDB record within 5 miles of the project study area of this species, so it is considered to have low potential to occur*” (p. 3.5-26). The potential for a species to occur should not be solely based on whether an occurrence has been documented on CDFW’s CNDDDB. CNDDDB is a very useful tool that provides location and natural history information on special-status plants, animals, and natural communities, but is a positive

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occurrence database which does not confirm absence and does not replace a site-specific habitat assessment and protocol-level surveys.

The DEIR includes inconsistencies between Chapter 3.5 and the Biological Resources – Botanical/Wildlife Appendix in regards to the Project study area boundaries. Chapter 3.5 discusses some impacts from the installation of transmission lines and construction of permanent access roads, but the Botanical/Wildlife Appendix states “*the study area encompasses approximately 6,835 acres and includes the currently proposed impact areas associated with construction of the proposed dam and inundation area (i.e., study area does not include the future landowner access routes or auxiliary roads or transmission lines)*” (p.2-1). It is therefore unclear how Chapter 3.5 addresses biological resource impacts from Project activities such as the utility transmission lines and access roads.

Recommendation: CDFW recommends that the EIR re-assess the potential for species to occur based on rigorous and thorough habitat assessments and suitability for each plant and wildlife species with potential to occur within the Project area, and not solely rely on CNDDDB occurrences. CDFW recommends that protocol-level surveys be conducted in habitats found to be suitable for special-status species.

CDFW also recommends that the EIR address the inconsistencies between Chapter 3.5 and the Biological Resources – Botanical/Wildlife Appendix. The Project study area should be clear and consistent throughout the document and supplemental information. Additionally, impacts due to the construction of permanent access roads or installation of transmission lines should be fully analyzed in the EIR (see also other sections in this letter addressing these topics).

Bald Eagle (*Haliaeetus leucocephalus*), Golden Eagle (*Aquila chrysaetos*), and California Condor (*Gymnogyps californianus*)

Issue: Bald eagle is State listed under CESA as endangered and a State Fully Protected Species. Golden eagle is a State Fully Protected Species and both species are protected under the Bald and Golden Eagle Act. California Condor is both Federally listed and State listed as endangered, as well as a State Fully Protected Species. These species are known to occur within and in the vicinity of the Proposed Project footprint. The Project will permanently remove potential nest trees and foraging habitat used extensively by these species and involve noise and groundwork from construction. Mitigation Measure BI-13a: Avian Transmission Line Design Avoidance Measures, and Mitigation for Loss of Habitat (Proposed Project, Alternatives A- D) (p. 3.5-322) states that Valley Water will follow Avian Power Line Interaction Committee (APLIC) *Suggested Practices for Avian Protection on Power Lines*. However, the measure does not include mitigation for loss of habitat as the mitigation measure title states.

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Recommendation: CDFW recommends that the EIR include detailed mitigation measures based on guidance and recommendations from the APLIC to avoid or minimize avian collisions and electrocution from installation of transmission lines. The EIR should also include an assessment of all temporary and permanent loss of all nesting, roosting and foraging habitat for bald eagle, golden eagle and other avian species, and sufficient compensatory mitigation to completely offset the impacts to avian habitat.

California Tiger Salamander (*Ambystoma californiense*), California Red-Legged Frog (*Rana Draytonii*), Foothill Yellow-Legged Frog (*Rana boylei*)

Issue: California tiger salamander (CTS) is both Federally and State listed as threatened. California red-legged frog (CRLF) is federally listed as threatened and is a State Species of Special Concern. Foothill yellow-legged frog (FYLF) is State listed as endangered and a candidate to be federally listed. The DEIR describes multiple Project activities that could cause “take” of CTS and FYLF as well as impact CRLF and their habitat.

Recommendation: If the Proposed Project will impact any CESA-listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit. More information on the CESA permitting process can be found on the CDFW website at <https://www.wildlife.ca.gov/Conservation/CESA>. CDFW recommends that Valley Water apply for an ITP for CTS and FYLF as a condition of Project approval.

If any CRLF are found during pre-construction surveys or at any time during construction, discussion with CDFW is recommended to determine if any additional minimization measures are warranted. CDFW recommends that initial ground-disturbing activities be timed to avoid the period when CRLF are most likely to be moving through upland areas (November 1 and March 31). When ground-disturbing activities must take place between November 1 and March 31, CDFW recommends a qualified biologist monitor construction activity daily for CRLF.

Western Burrowing Owl (*Athene cunicularia*)

Issue: Western burrowing owl (BUOW) is designated as a California Bird Species of Special Concern. The DEIR states that there is potential for nesting and foraging habitat within the Project study area for BUOW and other owl species. The DEIR also states that “*construction activities (e.g., grading) would occur during the avian breeding season (i.e., February 1 through September, depending on species) and could disturb special-status avian species*” (p. 3.5-97) including BUOW. Furthermore, “*construction-related disturbances... could result in the incidental loss of fertile eggs or nestlings and/or nest abandonment*” (p. 3.5-98).

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Recommendation: In addition to measure BI-3b which includes conducting focused surveys prior to construction following CDFW's Staff Report on Burrowing Owl Mitigation survey methodology (<https://wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds>), CDFW recommends that surveys encompass the entire Project area and a sufficient buffer zone to detect owls nearby that may be impacted. Time lapses between surveys or Project activities should trigger subsequent surveys, as determined by a qualified biologist, including but not limited to a final survey within 24 hours prior to ground disturbance before construction equipment mobilizes to the Project area. The qualified biologist should have a minimum of two years of experience implementing the CDFW 2012 survey methodology resulting in detections.

CDFW recommends that detected burrowing owls be avoided pursuant to the buffer zone prescribed in the CDFW 2012 staff report. Please be advised that CDFW does not consider eviction of burrowing owls (i.e., passive removal and of an owl from its burrow or other shelter) as a "take" avoidance, minimization, or mitigation measure; therefore, off-site habitat compensation is appropriate if impacts to BUOW habitat cannot be completely avoided. Off-site habitat compensation that supports both suitable nesting and foraging habitat would be warranted for any nest burrows used within the last three years that would be removed. Habitat compensation acreages amount depends on site-specific conditions. For mitigation to be effective and enforceable, we recommend that mitigation lands for BUOW be protected in perpetuity through placement of a conservation easement and preparation and implementation of a long-term management plan and endowment to manage the land for BUOW.

San Joaquin Kit Fox (*Vulpes macrotis mutica*)

Issue: San Joaquin kit fox (SJKF) is State listed as threatened. The Proposed Project and Alternatives A-D have the potential to impact foraging, denning, and dispersal habitat for this species. In addition to grassland and shrubland habitats, SJKF den in a variety of areas such as rights-of-way, agricultural and fallow/ruderal habitat, dry stream channels, and canal levees, and populations can fluctuate over time. SJKF are also capable of occupying urban environments (Cypher et al. 2013). SJKF may be attracted to Project construction zones due to the type and level of ground disturbing activities and the loose, friable soils resulting from intensive ground disturbance. In addition to natural habitats, SJKF will forage in fallow and agricultural fields and utilize streams and canals as dispersal corridors. As a result, there is potential for SJKF to occupy all suitable habitat within the Project area and surrounding area.

Without appropriate avoidance and minimization measures for SJKF, potential significant impacts associated with construction include habitat and connectivity loss, den collapse, inadvertent entrapment, reduced reproductive success, reduction in health and vigor of young, and direct mortality of individuals.

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Recommendation: To evaluate potential impacts to SJKF associated with subsequent land conversion, ground disturbance and construction, CDFW recommends conducting the following evaluation of Project areas and implementing the following mitigation measures:

- For all Project-specific components including construction and land conversion, CDFW recommends that a qualified biologist conduct a habitat assessment in advance of Project implementation, to determine if the Project area or its immediate vicinity contains suitable denning habitat for SJKF.
- CDFW recommends assessing presence/absence of SJKF dens by having qualified biologists conduct surveys of Project areas and a 500-foot buffer of Project areas to detect SJKF and their sign. CDFW also recommends following the USFWS “*Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance*” (2011).

If SJKF dens or other SJKF use is identified on-site and take avoidance cannot be ensured, CDFW recommends that Valley Water obtain an ITP in advance of Project implementation.

Western Pond Turtle (*Actinemys marmorata*)

Issue: Western pond turtle (WPT) is a State Species of Special Concern. Mitigation Measure BI-8c (p. 3.5-94) includes the development of a translocation plan to move individuals out of harm’s way.

Recommendation: CDFW recommends adding the measure below in the EIR to ensure relocation, if needed, is appropriately implemented:

- Surveys for WPT should include the identification of western pond turtles and their nests. If relocation is necessary, a relocation plan shall be prepared and approved by CDFW prior to implementation. The plan shall include disinfection and handling protocols, animal care during relocation, suitable areas for relocations, and reporting requirements.

Tricolored Blackbird (*Agelaius tricolor*)

Issue: Tricolored blackbird (TRBL) is State listed as threatened. The DEIR acknowledges that TRBL occur within the Project study area. The DEIR states that the Santa Clara Valley Habitat Agency (SCVHA) “*identified an active tricolored blackbird breeding colony at Circaulo pond in 2021, adjacent to Pacheco Creek*” (p. 3.5-36) which is located several miles downstream of the existing Pacheco dam.

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Recommendation: Although the DEIR provides some avoidance, minimization, and mitigation measures such as PAMM BI-1 (pre-construction surveys and protective buffers), CDFW recommends EIR include the following measures, and that these measures be made conditions of approval for the Project.

It is advised that Project activities be timed to avoid the typical bird breeding season (February 1 through September 15). However, if Project activities must take place during that time, CDFW recommends that a qualified biologist conduct surveys for nesting TRBL throughout the nesting season with a final survey no more than 7 days prior to the start of ground or vegetation-disturbing activities to evaluate the presence/absence of TRBL nesting colonies in proximity to Project activities and to evaluate potential Project related impacts.

If an active TRBL nesting colony is found during pre-construction nesting season surveys, CDFW recommends implementation of a minimum 300-foot no-disturbance buffer in accordance with CDFW's *Staff Guidance Regarding Avoidance of Impacts to Tricolored Blackbird Breeding Colonies on Agricultural Fields in 2015* (CDFW 2015). However, a larger buffer up to 0.25 mile may be warranted for construction-type projects such as the Proposed Project that are not of an agricultural nature. CDFW advises that the buffer remain in place until the breeding season has ended or until a qualified biologist has determined that nesting has ceased, the birds have fledged and are no longer reliant upon the colony or parental care for survival. Further, TRBL colonies can expand overtime and for this reason the colony may need to be reassessed on a reoccurring basis to determine the extent of the breeding colony within seven (7) days of Project initiation.

In the event that a TRBL nesting colony is detected during surveys, consultation with CDFW is advised to discuss how to implement the Project and avoid take, or if avoidance is not feasible, acquisition of an ITP, pursuant to Fish and Game Code section 2081 subdivision (b), would be warranted prior to any ground or vegetation disturbing activities. If TRBL activity (nesting and/or foraging) is identified on or near the Project area, Valley Water should mitigate for the permanent loss of nesting and/or foraging habitat. Mitigation lands should be protected in perpetuity under a conservation easement and be managed in perpetuity through an endowment with an appointed land manager.

Swainson's Hawk (*Buteo swainsoni*)

Issue: Swainson's hawk (SWHA) is State listed as threatened and has the potential to nest and forage within the Project area. The DEIR states (page 3.5-38) that approximately 4,000 acres of woodland and scrub habitats within the Project study area provide suitable nesting for SWHA and other raptors. The DEIR presents a general pre-construction survey measure (PAMM BI-1) for raptors; however, protocol-level surveys

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specific to SWHA are warranted in order to ensure that presence or absence is confirmed. Compensatory mitigation for loss of both SWHA suitable nesting and foraging habitat is needed to reduce impacts to LTS levels.

Recommendation: CDFW recommends that prior to the initiation of construction activities, the Project proponent should have a qualified biologist conduct surveys for SWHA in accordance with the Swainson's Hawk Technical Advisory Committee's (TAC) *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (2000), available on CDFW's webpage at <https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds>. Survey methods should be closely followed by starting early in the nesting season to maximize the likelihood of detecting an active nest (nests, adults, and chicks are more difficult to detect later in the growing season because trees become less transparent as vegetation increases). Surveys should be conducted within a minimum 0.5-mile radius of the Project area or a larger area, if necessary, to identify potentially impacted active nests. Surveys should occur annually for the duration of the Project. The qualified biologist should have a minimum of two years of experience implementing the TAC survey methodology. If an active nest is identified, a 0.5-mile protective buffer should be maintained around the nest until the young fledge. The protective buffer should be clearly marked and be an area where no Project-related activities or personnel are allowed while in place. If the 0.5-mile buffer must be reduced, the Project proponent should be required to obtain a CESA ITP as a condition of Project approval.

If SWHA activity (foraging, not just nests) is identified on or near the Project site, Valley Water should mitigate for the permanent loss of foraging habitat. CDFW recommends compensation for the loss of SWHA foraging habitat to reduce impacts to SWHA foraging habitat to LTS based on CDFW's Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (CDFG, 1994), which recommends that mitigation for habitat loss occur within a minimum distance of 10 miles from known nest sites and the amount of habitat compensation is dependent on nest proximity. In addition to fee title acquisition or conservation easement recorded on property with suitable grassland habitat features, mitigation may occur by the purchase of conservation or suitable agricultural easements. Suitable agricultural easements would include areas limited to production of crops such as alfalfa, dry land and irrigated pasture, and cereal grain crops. Vineyards, orchards, cotton fields, and other dense vegetation do not provide adequate foraging habitat.

Mitigation lands should be protected in perpetuity under a conservation easement and be managed in perpetuity through an endowment with an appointed land manager.

Monarch Butterfly (*Danaus plexippus plexippus*)

Issue: Monarch butterfly is a California Terrestrial and Vernal Pool Invertebrate of Conservation Priority and candidate species under the federal Endangered Species Act

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(ESA). The DEIR states “*potential suitable breeding and migration habitat for the monarch butterfly occurs adjacent to and upstream from North Fork Dam*” (p. 3.5-32). Additionally, “*within the upstream and downstream areas, 11 populations of approximately 7,300 host plants (i.e., milkweed [Asclepias spp.]) encompassing 24 acres throughout the project study area were identified that could provide potential breeding habitat for this species*” (p.3.5-32). The Project may result in injury or mortality to monarch butterfly and loss of breeding and migration habitat. Therefore, Project impacts to monarch butterfly would be potentially significant.

Recommendation: In addition to Mitigation Measures BI-5b, BI-7, BI-8b and specifically BI-5c, which would include planting of seed or plants in suitable habitat in the vicinity of where seeds are collected or other areas of the Project study area, CDFW recommends that plantings be maintained and monitored within a protected site. Additionally, the use of pesticides should be avoided when monarchs are potentially present.

Western Bumble Bee (*Bombus occidentalis*) and Crotch Bumble Bee (*Bombus crotchii*)

Issue: The DEIR states that “*approximately 1,297 acres of grassland habitat in the project study area provides potential foraging and nesting habitat*” (p.3.5-32), but that there is low potential for these species to occur partially because there are minimal ground squirrel (*Otospermophilus beecheyi*) burrows that were observed but smaller burrows (i.e., gopher [*Thomomys bottae*]) were observed. The Project may impact foraging and nesting habitat due to construction of permanent facilities and associated infrastructure such as the new dam, access roads, the expanded reservoir, installation of transmission lines, construction within the interchange area, and other Project activities.

CDFW disagrees that there is low potential for these species to occur within the Project area. Crotch bumble bee has been documented to occur within the vicinity of the Project area (CDFW 2021) and historic observations occur in both Santa Clara and Merced Counties. Similarly, CNDDDB records of western bumble bee have been reported in Santa Clara County in the vicinity of the Project area. The Project area supports grasslands and upland scrub that contain requisite habitat elements for both bumble bee species, including small mammal burrows. The Project may impact foraging and nesting habitat for western bumble bee and Crotch bumble bee due to construction of permanent facilities and associated infrastructure such as the new dam, access roads, the expanded reservoir, installation of transmission lines, construction within the interchange area, and other Project activities.

Recommendation: CDFW recommends the EIR include a complete and accurate assessment of suitable overwintering, nesting and foraging habitat for western bumble bee and Crotch bumble bee, and an analysis of the Proposed Project’s impacts to their

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habitats. Bumblebees are critically important because they pollinate a wide range of plants over the lifecycles of their colonies, which typically live longer than most native solitary bee species. Crotch bumble bee primarily nest in late February through late October underground in abandoned small mammal burrows but may also nest under perennial bunch grasses or thatched annual grasses, underbrush piles, in old bird nests and in dead trees or hollow logs. Overwintering sites include soft, disturbed soil or under leaf litter or other debris. Western bumble bee nests, forages and overwinters in meadows and grasslands with floral resources and may be found in some natural areas within the urban landscape. As an avoidance measure, CDFW recommends that all small mammal burrows, thatched/bunchgrass, and other habitat described above be avoided by a minimum of 50 feet, and compensatory mitigation be provided if avoidance of bumble bee habitat is not possible.

Sycamore Alluvial Woodland

Issue: Central California sycamore alluvial woodland (SAW) is a rare habitat type designated as a California Native Plant Society S3 ranked with limited distribution in California. SAW is also designated as G1 and S1.1 (critically imperiled) under the CNDDDB ranking system. SAW is also currently experiencing diebacks and has also shown minimal seedling recruitment. The DEIR (BI-2c; p. 3.5-67) states that the Project's direct construction-related impacts to Central California sycamore alluvial woodland (SAW) would be compensated through the preservation, enhancement and/or restoration of SAW at a minimum 2:1 or as agreed to by CDFW. The DEIR (p. 3.5-70) also states that 71 acres (Table 3.5-7) of SAW from creek mile 0 to creek mile 7 would be expected to shift to other riparian vegetation community types at a faster rate and to a greater degree than baseline conditions or the No Project Alternative, and that these indirect impacts to SAW would be mitigated at a 1:1 ratio (BI-2c).

Furthermore, the DEIR states (p. 3.5-114) that the Proposed Project could potentially limit the areas available for the SCVHA, which is the entity that administers the SCVHP, to preserve/restore SAW given the impacts identified in Impact Bio-2 and the limited amounts of SAW present in the SCVHP boundaries. Potential indirect impacts of the flows associated with the Proposed Project along Pacheco Creek could occur on portions of the Pacheco Creek Reserve which is managed by the SCVHA. The DEIR acknowledges that impacts of the Project to SAW pose a potential conflict with the SCVHP given the amounts of SAW that the SCVHP is required to preserve, and the rarity of this sensitive vegetation community in the SCVHP permit area.

Changes in the new Pacheco Reservoir's hydrologic flow regime could negatively affect extant SAW along Pacheco Creek as well as prevent future restoration of this unique habitat type by the SCVHA, especially within the Pacheco Creek Reserve as well as adjacent lands. Proposed changes in the hydrologic regime would likely result in willow (*Salix* spp.) encroachment and competition with SAW which require periodic drybacks.

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Therefore, CDFW is concerned that the Project's proposed operational flow regime may reduce Pacheco Creek's ability to support SAW and hinder the Habitat Plan's restoration goals (SCVHA must achieve up to 20 acres of SAW restoration/creation credits).

Recommendation: CDFW is one of the two Wildlife Agencies (with USFWS) who work collaboratively with the SCVHA in implementing the Habitat Plan. Due to the rarity of SAW in the area, the length of time needed for restore this habitat type and the significant direct and indirect impacts of the Proposed Project on SAW, CDFW believes that a 2:1 mitigation ratio for direct impacts and 1:1 ratio for indirect impacts to SAW is inadequate to reduce impacts to LTS. CDFW recommends that the EIR prescribe a minimum 4:1 mitigation ratio for all impacts to SAW within the Proposed Project study area. Although the Proposed Project is not covered under the SCVHP, a 4:1 mitigation ratio is most appropriate for reasons stated above and is commensurate with requirements for projects covered under the Habitat Plan. Lands proposed as mitigation for the Project's impacts to SAW should be discussed pro-actively with the SCVHA to avoid conflicts with pending or future acquisition of reserves under the SCVHP.

The EIR should also prescribe a hydrologic flow regime that balances the needs of all species affected by the Project. Operational changes for the new Pacheco Reservoir should consider the unique ecological requirements of the natural plant communities along Pacheco Creek and prevent adverse impacts to extant SAW populations and allow for successful future restoration efforts.

Mountain Lion (*Pumas concolor*) and American Badger (*Taxidea taxus*)

Issue: The Fish and Game Commission recently accepted the mountain lion Central Coast North Evolutionarily Significant Unit (ESU) as a State candidate for listing as threatened under CESA. As a candidate species, mountain lion within this ESU now has all the protections afforded to a listed species under CESA. The DEIR states that "*all terrestrial habitat adjacent to and upstream from the existing north fork dam is suitable habitat for Mountain Lion*" (p. 3.5-39). Other parts of the Project area are also considered suitable habitat for this species. In addition to mountain lions, American badgers also have the potential to occur within the Project area. American badger is State Species of Special Concern. The DEIR states that "*suitable habitat for this species is primarily associated with the upstream and access and utility areas*" (p. 3.5-39). There is also potential for suitable habitat for the badger in other parts of the Project area. The DEIR also states that "*although there would be a long-term and short-term loss of habitat for these species, it would not significantly reduce denning and foraging habitat that occurs within the surrounding area adjacent to the project site; ample habitat would remain within the project study area and the surrounding vicinity*" (p. 3.5-107). This conclusion is unsubstantiated considering that the Project has an expected duration of 5.8 to 7.3 years.

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Recommendation: CDFW recommends avoiding impacts to areas that provide habitat for mountain lion and other sensitive species. If impacts cannot be avoided, CDFW recommends that the EIR include robust feasible avoidance, minimization, and mitigation measures to reduce impacts to mountain lion to LTS. If take of mountain lion cannot be completely avoided, CDFW recommends that Valley Water apply for an ITP in advance of Project implementation.

CDFW also recommends the following additional mitigation measures for American Badger: a qualified biologist should survey for this species including adjacent habitat prior to construction, avoid impacts to occupied burrows and include a sufficient buffer approved by CDFW; and development of a relocation plan and submitted to CDFW for a review and approval.

Tule Elk (*Cervus canadensis nannodes*)

Issue: Elk are California's largest land mammal and an important wildlife resource whose population growth in recent decades has been of great interest to the public. Population growth since 1970 has been significant and California now supports approximately 5,700 tule elk (CDFW 2018). The DEIR briefly mentions tule elk in a historical and cultural context and refers to it as a subsistence resource within section 3.7.2.1 Regional Setting p. 3.7-5 and p. 3.7-9. Although the DEIR focuses on special-status species, the Project has the potential to impact this species. Without appropriate mitigation measures for tule elk, potentially significant impacts include loss of habitat and corridors, entanglement with fences and other structures, and mortality resulting from vehicle collisions.

Recommendation: To evaluate potential impacts to tule elk, CDFW recommends conducting the following evaluation of the Project area, incorporating the following mitigation measures into the EIR prepared for this Project, and that these measures be made conditions of approval for the Project.

Mitigation Measure 1: Tule Elk Habitat

The EIR should include surveys of tule elk and their habitat. The loss of habitat should be conserved and Valley Water should coordinate with CDFW to determine suitable mitigation.

Mitigation Measure 2: Fencing

Physical barriers such as fencing, mesh wire, panels, electric fence, and visual barriers have the potential to impact tule elk. CDFW recommends not utilizing physical barriers that may impede tule elk access to water and foraging areas.

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Roosting Bats

Issue: The Project would impact riparian, oak woodland habitats, and other habitats that could contain roosting habitat for bats, including special-status species like the pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), and western red bat (*Lasiurus blossevilli*), which are all California Species of Special Concern. The DEIR states that measure PAMM BI-9c, Exclusion for Special-Status Bat Species, would *involve "installation of screens at potential roosts to prevent bat use (after verifying that no bats would be trapped by screening)"* (p. 2-45) but does not provide any measure specific to the removal of potential maternity or roosting habitat.

Recommendation: CDFW recommends the EIR include the following measures:

- At least six months prior to the start of construction and tree removal activities, a qualified biologist shall assess all trees to determine if they contain suitable bat roosting habitat (e.g., cavities, crevices, deep bark fissures). If any trees contain such habitat, bat presence shall be presumed. Trees containing bat roosting habitat shall be removed using the method described below during the following seasonal periods of bat activity:
 - o Prior to maternity season – from approximately March 1 (or when night temperatures are above 45°F and when rains have ceased) through April 15 (when females begin to give birth to young); and prior to winter torpor – from September 1 (when young bats are self-sufficiently volant) until October 15 (before night temperatures fall below 45 degrees Fahrenheit and rains begin).
 - o On Day 1, in the afternoon and under the supervision of a qualified biologist, chainsaws only shall be used to remove tree limbs that do not contain suitable bat roosting habitat (e.g., cavities, crevices, deep bark fissures). The next day, the rest of the tree shall be removed.
 - o If bat habitat trees cannot be removed during the above seasonal periods of bat activity, a qualified biologist shall survey the trees to determine if the tree contains a maternity colony or winter torpor bats. If the qualified biologist cannot make this determination with certainty, the presence of maternity colonies or winter torpor bats shall be assumed, and removal of the tree shall be delayed until the seasonal periods of bat activity specified above. If the biologist determines bats are present but maternity colony or winter torpor bats are absent, then the tree may be removed outside of the above periods of seasonal bat activity using the above two step tree removal process. If the qualified biologist determines that bats are absent,

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then the tree may be removed without bat seasonality or method restrictions.

CDFW also recommends that wildlife exclusion or fencing plans be provided to CDFW for review and approval.

Mitigation for Habitat and Species Impacts

Issue: Throughout the DEIR in Chapter 3.5, mitigation measures are presented to avoid, minimize, or compensate for impacts to biological resources. For the loss of habitat (including plant communities and species habitats) the DEIR suggests a mitigation ratio at a 2:1 with the flexibility that natural resource agencies could require additional mitigation. It is not clear in the DEIR how Valley Water quantified mitigation impacts and recommended a 2:1 ratio for each impact. The DEIR also does not specify whether mitigation for loss of habitat or impacts to fish and wildlife species as well as plant species could overlap.

Recommendation: CDFW recommends that the EIR more clearly describe the approximate amounts and types of mitigation for each habitat type and species expected to be impacted and develop appropriate and effective mitigation proposals for each habitat and/or species. In general, ground-based temporary impacts to habitat are those whereby habitat is fully restored within one year of the impact; semi-permanent impacts are those whereby habitat is restored within two years of the impact; and permanent impacts are those of more than two years in duration.

The EIR should clearly describe how mitigation for each species or habitat is expected to be fulfilled such as through land acquisition or purchase of mitigation/conservation bank credits, or other viable approaches, and whether overlap may occur between species (e.g., CTS, SJKT and BUOW). As previously mentioned in this letter, mitigation lands should be protected in perpetuity under a conservation easement and managed in perpetuity through an endowment with an appointed land manager. The easement should be held by a governmental entity, special district, non-profit organization, for-profit entity, person, or another entity to hold title to and manage the property provided that the district, organization, entity, or person meets the requirements of Government Code sections 65965-65968, as amended.

CDFW often recommends a minimum 3:1 mitigation ratio for permanent impacts to species habitat, a 2:1 mitigation ratio for semi-permanent impacts and a 1:1 mitigation ratio for temporary impacts in addition to full restoration. However, higher or lower mitigation ratios may be required depending on the type and extent of biological resource impacts from any given project. CDFW recommends that Valley Water work with the natural resource agencies to determine suitable mitigation and locations for impacts to biological resources.

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Editorial Comments and/or Suggestions

Water Rights

Issue: Section 3.12.2.2 of the DEIR states the expansion of Pacheco Reservoir would require a water rights change petition with respect to the existing Pacheco Pass Water District (PPWD) water right and the application of new water right permits from the SWRCB storage and diversion at the expanded Pacheco Reservoir. In addition, the SWRCB may require Reclamation to submit a change petition for CVP water rights due to the proposed use of the expanded Pacheco Reservoir as a conduit for conveying CVP water to Valley Water.

Project-related diversions to storage may impact riparian, wetland, fisheries and terrestrial (upland) wildlife species and their habitats. As stated previously, CDFW, as Trustee Agency, is consulted by the SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Given the potential for impacts to sensitive species and their habitats, it is advised that consultation with CDFW occur well in advance of any SWRCB water right application process.

Recommendation: CDFW recommends the EIR provide additional detail on how the proposed water right applications and change petitions will differ from existing water rights. CDFW also recommends the EIR provide all existing water rights within the sphere of influence of the Project, including those associated with the CVP and State SWP water supply, pre-1914 appropriative rights, riparian rights, prescriptive rights, and appropriative rights approved under licenses and SWRCB WR Orders.

Water Quality

Issue: In ES.5.1.5, Table ES-4, the M&I Water Quality section of the table includes the number of months that water quality will not be impaired (based on modeling results); however, the DEIR lacks information on the months when water quality would be impaired and types of impacts that would subsequently occur.

Recommendation: CDFW recommends the EIR include more detailed information on the modeling results, and describe the conditions when the objectives such as water quality cannot be met and the impacts to biological resources that would be associated with those conditions.

Monitoring Program

Issue: The monitoring program for the Proposed Project is inconsistent with that described for Alternatives A-D.

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Recommendation: CDFW recommends consistency or clarification for the differences in the monitoring program for the Proposed Project and Alternatives A-D. The monitoring program for the Proposed Project should include a new stream gage at the confluence of the North and South Fork Pacheco Creeks, similar to that described in Section 2.6.3.1, p. 2-86, “*A new stream gage installed downstream from the confluence of North Fork and South Fork Pacheco Creek would measure stream flow and water depth in Pacheco Creek.*”

Construction Schedule and Sequencing

Issue: In section 2.3.2.1 as well as other sections, the DEIR includes some information regarding the schedule of the Proposed Project. However, the schedule(s) lack details of the various phases and timing of Project components.

Recommendation: In order to better assess potential impacts to species, CDFW recommends the EIR include a more comprehensive schedule (e.g., table or outline format) of the sequential phases and timing of Project components (e.g., old dam removal, restoration, new dam, filling, operations, etc.).

Operation and Maintenance

Issue: The DEIR states that “*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***” (p. ES-10). It is unclear what triggers or criteria would need to be met in order for an emergency to be declared.

Recommendation: CDFW recommends the EIR include a clear description of the types of scenarios that might result in an “emergency declaration” and the process by which that decision is reached.

Issue: The DEIR states, “*If necessary, at the beginning of the wet season storage capacity would be made available by releasing water to Pacheco Conduit until the expanded reservoir was 5,500 below full capacity.*” Another option for creating storage capacity would be to release water into Pacheco Creek for habitat releases.

Recommendation: CDFW recommends that Valley Water consider releasing water into Pacheco Creek for habitat purposes, as appropriate for ensuring storage capacity to meet the proposed variable flow schedule for habitat releases (e.g., augment adult attraction pulse flows).

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Issues to be Resolved

Issue: CEQA Guidelines Section 15123 states that the lead agency must disclose issues to be resolved, and that “*an EIR shall contain a brief summary of the proposed action and its consequences.*” The DEIR states the following under section ES.11 (p. ES-41) Issues to be Resolved, “*Selection of lands and activities for compensatory mitigation related to botanical/natural community and terrestrial resource mitigation measures.*”

Recommendation: CDFW is concerned with the overall lack of description in the DEIR of proposed compensatory mitigation to completely offset future impacts of the Proposed Project on aquatic, terrestrial and plant species and their habitats, and sensitive plant communities. Although specific mitigation acreages required to compensate for impacts may not be fully known during the CEQA review process, the EIR should still identify and describe proposed mitigation types and locations in order to ensure that impacts are mitigated to below a level of significance and not defer the formulation of mitigation measures to a later time or to other permitting agencies.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs., tit. 14, § 753.5; Fish and Game Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the DEIR to assist Valley Water in identifying and mitigating Project impacts on biological resources.

CDFW recommends Valley Water correct the issues identified in this letter. To ensure significant impacts are adequately mitigated to LTS levels, the feasible mitigation measures described in this letter should be incorporated as enforceable conditions into the final CEQA document for the Project.

Questions regarding this letter or further coordination should be directed to the following CDFW representatives:

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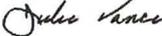
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