California WATER COMMISSION

**Water Storage Investment Program: Pacheco Reservoir Expansion Project Continuing Eligibility and Feasibility Determination (Action Item)**

**Introduction**

The California Water Commission (Commission) is administering the Water Storage Investment Program (WSIP) to fund the public benefits associated with water storage projects using funds from the Proposition 1 Water Quality, Supply, and Infrastructure Improvement Act of 2014. Currently, seven projects have a WSIP maximum conditional eligibility determination (MCED), which is the amount of Proposition 1 funding potentially available to a given project and are actively working to secure a formal WSIP award amount. The Pacheco Reservoir Expansion Project (PREP or Project), promoted by its applicant, the Santa Clara Valley Water District (Valley Water), is one of those seven projects. For this project to remain in the WSIP, it must meet the continuing eligibility requirements described below.

Water Code section 79757 and California Code of Regulations, Title 23, Division 7, section 6013(f)(2) requires a WSIP applicant to complete the following before January 1, 2022, as a condition of continued WSIP eligibility:

- Draft environmental documentation is available for public review.
- The Director of the Department of Water Resources receives commitments for at least 75 percent of the non-public benefit cost shares of the project.
- All feasibility studies are complete.

Additionally, as a condition of continued eligibility, the Commission must, by January 1, 2022:

- Make a finding that the project is feasible and will advance the long-term objectives of restoring ecological health and improving water management for beneficial uses of the Delta.

The Commission determined final application scores and made nine determinations for each of the projects in the WSIP at its June 2018 meeting. One of the determinations made was that each project *appeared* feasible. This initial limited feasibility determination allowed the Commission to return to the full feasibility determination after each applicant completed its feasibility studies to meet the Water Code section 79757 requirements. Since the June 2018 Commission meeting, applicants continued to work toward completing the interim statutory requirements of Water Code section 79757. The PREP has reached the stage where the Commission can deliberate on project feasibility.

This staff report presents the status of the January 1, 2022, requirements and staff's review and recommendation about the feasibility documents for consideration in the Commission's feasibility deliberations.

**Background**

Through the WSIP, the Commission will invest nearly $2.6 billion in the public benefits of water storage projects, consistent with the requirements of Proposition 1 (the Water Quality, Supply, and Infrastructure Improvement Act of 2014), Chapter 8. In July 2018, the Commission made MCEDs, decisions that set the amount of Proposition 1 funding potentially available to a given project. Since then, one applicant has withdrawn from the program. In early 2021, the Commission decided to adjust two project MCEDs to their initially requested amounts. Additionally, the Commission made a 2.5 percent inflation adjustment to all seven project MCEDs. The seven remaining applicants are working to complete the Proposition 1 requirements, which include obtaining permits and final environmental documents, contracts for the administration of public benefits, and contracts for non-public benefit cost shares before returning to the Commission for a final award hearing.

This agenda item implements Goal Four of the Commission's Strategic Plan, which calls on the Commission to carry out its statutory responsibilities for the Proposition 1 Water Storage Investment Program.

**Meeting Overview**

At the December meeting, Commission staff will present its recommendations regarding the PREP's feasibility documentation and a summary of documents received that are responsive to the January 1, 2022, statutory requirements. The Commission will then decide whether to make a feasibility determination. The Commission will have the opportunity to ask questions of applicants and hear public comment before deliberating on its feasibility determination.

This is an action item.

**Summary of Issues**

*Status of January 1, 2022 Requirements.* The documents that constitute compliance with Water Code section 79757 are listed below.

| Requirement | Status |
|---|---|
| Draft environmental document available for public review. | Valley Water, 2021. Pacheco Reservoir Expansion Project. Draft Environmental Impact Report (EIR). |
| 75% of non-public benefit cost share submitted to the Director of DWR. | Letter of Commitment to fund project from Valley Water.<br>The letter was transmitted by the California Water Commission to the Director 11/19/2021. |

| Requirement | Status |
|---|---|
| Completed feasibility documents. | 2017 WSIP Application. PREP<br>2017-2018. WSIP staff technical review, PBR review, appeal, appeal response, and scoring recommendations<br>AECOM et al, 2021. Supplemental Feasibility Documentation, Water Storage Investment Program, Pacheco Reservoir Expansion. Prepared for Valley Water, November. (available upon request) |

*Feasibility Document Review.* California Code of Regulations, Title 23, Division 7 incorporates by reference the Technical Reference for the WSIP. The Technical Reference specifies criteria to establish technical feasibility and constructability as well as environmental, economic, and financial feasibility as follows:

- Technical Feasibility – the applicant must demonstrate that the project is technically feasible consistent with the operations plan, including a description of data and analytical methods, the hydrologic period, development conditions, hydrologic time step, and water balance analysis showing, for the with- and without-project condition, all flows and water supplies relevant to the benefits analysis.
- Constructability – the applicant must demonstrate that the project can be constructed with existing technology and availability of construction materials, work force, and equipment.
- Environmental feasibility – the applicant must demonstrate the project is environmentally feasible. The applicant must describe how significant environmental issues will be mitigated or indicate if the California Environmental Quality Act (CEQA) lead agency has or will file a Statement of Overriding Considerations (SOOC).
- Economic feasibility – the applicant must demonstrate the expected benefits of the project equal or exceed the expected costs, considering all benefits and costs related to or caused by the project.
- Financial feasibility – the applicant must demonstrate sufficient funds will be available from public (including the funds requested in the application) and nonpublic sources to cover the construction and operation and maintenance of the project over the planning horizon. It must also show that beneficiaries of non-public benefits are allocated costs that are consistent with and do not exceed the benefits they receive.

**Technical Feasibility and Constructability Review**

Commission staff has reviewed the project operations, description and design of dam and associated appurtenant structures, conveyance facilities, utilities, cost estimates, and construction methods for the PREP and concluded that the Supplemental Feasibility

Documentation and appendices have demonstrated that the Project can be technically and physically constructed and operated.

The PREP is a surface storage project located in southeast Santa Clara County that would expand the existing Pacheco Reservoir from 6 thousand acre-feet (TAF) to 140 TAF. The project would construct new conveyance infrastructure to segments of the CVP San Felipe Division in Merced and Santa Clara counties, and deliver water supply to up to eight south-of-Delta wildlife refuges in Merced County. The primary water sources to fill the expanded reservoir would be natural inflows from the North and East Forks of Pacheco Creek and Valley Water and San Benito City Water Agency's contract CVP supplies transferred from San Luis Reservoir via the Pacheco Conduit. The PREP would be operated to provide emergency storage/emergency water supply, improve water supply reliability, increase steelhead habitat suitability in Pacheco Creek below the reservoir, increase Level 4 refuge water supplies, and reduce impaired water quality deliveries from San Luis Reservoir.

The dam type for the proposed project is described in the Supplemental Feasibility Documentation (SFD) (AECOM et al, 2021) as a new hardfill dam with integrated spillway and inlet/outlet works that would be constructed about 1.5 miles upstream from the existing North Fork Dam. Within the SFD appendix, the applicant includes information regarding coordination with DWR's Division of Safety of Dams (DSOD) on their hardfill dam concept. Valley Water received a letter from DSOD expressing concerns with the viability/acceptability of the hardfill dam concept. In response to concerns raised by DSOD related to the viability/acceptability of the hardfill dam type, the applicant included a sensitivity analysis in the SFD appendix to demonstrate project feasibility if the dam type at the upstream dam site for the reservoir expansion is modified to the more conventional earthfill dam. The earthfill dam was evaluated as Alternative A in the Alternatives Development and Project Description Appendix. The earthfill dam would be constructed with a low permeability earthfill core, with permeable material in the dam's upstream shell and earth or rock material in the downstream shell. Construction methods for the hardfill or earthfill dam, appurtenant structures, and conveyance facilities demonstrated that all the facilities for the Pacheco Reservoir Expansion Project can be constructed with existing technology and available construction materials, work force, and equipment.

**Environmental Feasibility Review**
Commission staff reviewed the SFD (AECOM et al, 2021), and Draft EIR (Valley Water, 2021) to determine whether the applicant demonstrated environmental feasibility and described how significant impacts would be mitigated or whether the CEQA lead indicated they would file a SOOC. These materials demonstrate the project is environmentally feasible.

The SFD referenced the Draft EIR and included discussion of possible effects of the Refined Project (referenced as the Proposed Project within the Draft EIR) and proposed mitigation

measures. In addition, the SFD Appendix included a sensitivity analysis of the feasibility that incorporates other dam types (e.g., earthfill dam in lieu of hard fill dam at the upstream site). The Draft EIR identified the preferred alternative to be an upstream, hardfill dam and Alternative A to be an upstream, earthfill dam. Valley Water determined it was appropriate to consider all action alternatives in similar level of detail within the Draft EIR, in part to reduce the potential for recirculation of the Draft EIR if one or more of these variations was determined to be unworkable at some point in the CEQA process.

The Draft EIR indicated that the Proposed Project would result in significant and unavoidable environmental impacts related to:

1. Agriculture and forestry by conflicting with existing zoning for agricultural use, or a Williamson Act contract;
2. Air quality by conflicting with or obstructing implementation of applicable air quality plan (construction period only), and resulting in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (construction period only);
3. Cultural resources by causing a substantial adverse change in the significance of a historical and archaeological resources, and disturbing human remains, including those interred outside of formal cemeteries,
4. Tribal cultural resources by causing a substantial adverse change in the significance of a tribal cultural resource;
5. Geology, soils, mineral resources, and paleontological resources by conducting activities that could directly or indirectly result in soil erosion and/or loss of topsoil;
6. Land use and planning by causing a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;
7. Noise by causing a substantial temporary or permanent increase in ambient noise levels (construction period only);
8. Water quality by causing violation of water quality standards or waste discharge requirements or otherwise substantially degrading water quality in Pacheco Creek or its tributaries (construction period only), altering existing draining patterns of the site which may cause indirect erosion or siltation on or off-site or providing substantial additional sources of polluted runoff (construction period only), and conflicting with, or obstructing the implementation of a water quality control plan (construction period only).

The facilities for the Sensitivity Analysis Alternative are the same as those described for Alternative A within the Draft EIR. The Draft EIR described Alternative A as having significant and unavoidable impacts similar to those of the Proposed Project related to Cultural Resources, Tribal Cultural Resources, Land Use and Planning, and Water Quality, and significant and

unavoidable impacts greater than the Proposed Project related to Agricultural and Forestry Resources, Air Quality, Geology, Soils, Mineral Resources and Paleontological Resources, and Noise. Valley Water anticipates preparing and considering for adoption a Statement of Overriding Consideration which will address why the project benefits outweigh the project impacts.

In addition, the Draft EIR identified potentially significant but mitigable impacts for both the Proposed Project and Alternative A that include adverse impacts to aesthetics, biological resources (botanical/wildlife); biological resources (fisheries); geology and soils, mineral resources and paleontological resources; greenhouse gas emissions; recreation; water quality; and wildfire. Valley Water anticipates preparing and considering for adoption a Mitigation Monitoring and Reporting Program.

**Economic Feasibility Review**

Economic feasibility is concerned with the economic benefits associated with physical benefits in comparison to all costs. Staff has reviewed the economic costs and benefits analysis in the original application and the Feasibility Study, including any changes since the MCED determination. Staff has reviewed all cost estimates. Non-monetized and qualitative benefits and costs have been considered. These cost estimates and benefits demonstrate the project is economically feasible.

Staff considered how the project may have changed from the 2017 application. The Technical Reference states: An applicant must identify and explain differences in assumptions, procedures, and results between its feasibility study and its application, and how those differences could affect project feasibility.

The Project has changed since 2017. Of particular relevance to the feasibility analysis, the 2017 dam was an earthfill dam located 1.0 mile upstream from confluence of the North and South Forks of Pacheco Creek. The 2021 Feasibility Documentation considers a hardfill dam located 1.5 miles further upstream. This provides 1.5 miles of additional stream habitat compared to the original dam location. The 2021 project is about twice as expensive as proposed in 2017. The SFD (AECOM et al, 2021) includes “Chapter 6. Feasibility of Other Dam-Type Alternatives” which provides feasibility information for an earthfill dam alternative. The cost of the earthfill dam alternative is expected to be $2.304 billion, exceeding the $2.161 billion cost of the proposed project. Table 6-5 indicates that the benefits for both alternatives are the same.

<u>Project Costs.</u>

In the 2017 application, total Project costs (in 2015 dollars) were $1.093 billion over the planning horizon. Estimated total Project costs in the SFD are $2.161 billion, an increase of $1.068 billion. Most of this cost increase involves dam construction. Also, the length of a pipeline from the dam to the existing Pacheco Conduit is increased by about a mile. Inflation is

a factor; staff is generally assuming a 13.6 percent increase in price levels from WSIP levels (2015 dollars) to the end of 2021.

Benefits.

The 2021 Project provides physical benefits similar to the project as proposed in 2017. However, economic benefits claimed in the Feasibility Documentation are 2.3 times larger than the 2018 benefits approved by staff for MCED purposes in May 2018. Table 1 compares monetized benefits and costs by category in 2021 to the 2017 application as adjusted by staff in May 2018.

**Table 1. Project Benefits and Costs, Applicant's 2021 Compared to 2017 Application after Staff Adjustments in 2018 (in million $ present value)**

| | Applicant, 2021 | Staff Adjusted, 2018 |
|---|---|---|
| Public Benefits | | |
| Ecosystem Improvement - Pacheco Creek | $1,491.50 | $716.00 |
| Ecosystem Improvement - San Joaquin Refuges | $6.40 | $4.96 |
| Total Ecosystem Benefits | $1,497.90 | $720.96 |
| Emergency Response | $792.20 | $137.87 |
| Total Public Benefits | $2,290.10 | $858.83 |
| Non-Public Benefits | | |
| M&I Water Supply | $142.50 | $156.44 |
| M&I Water Quality | $125.40 | $85.28 |
| Total Non-Public Benefits | $267.90 | $241.71 |
| Total Benefits | **$2,558.00** | **$1,100.54** |
| Total Costs | **$2,161.10** | **$1,093.82** |
| B/C Ratio | 1.18 | 1.01 |

Differences between the SFD estimates and the 2018 staff estimates are discussed in the following subsections.

*Ecosystem Improvement- Pacheco Creek*

The 2021 Ecosystem Improvement benefit is more than double that proposed by applicant and approved by staff in 2017. Almost all of the benefit and the increase is attributable to the

Ecosystem Improvement - Pacheco Creek category. In 2017, that benefit was proposed by applicant and ultimately accepted by staff.

The benefit was and still is based on the single-purpose alternative cost method. This alternative cost is the cost of a dam which is the same as the proposed Project except that it is sized and operated to provide the same physical ecosystem benefit as the Project. Since it does not have to provide the other benefits, it costs less ($1.491 billion) than the proposed Project ($2.161 billion). As proposed, this benefit accounts for 65 percent of project benefits.

In 2021, staff expressed concerns that this method may overstate the ecosystem benefits to Pacheco Creek for several reasons, and the applicant has responded to those concerns in an appendix to its SFD. Each staff concern, and its opinion after considering applicant's response to comments, is provided below.

**Concern #1. The single-purpose alternative cost may not be the least cost method of achieving the same physical benefits as the project.**
Staff concludes that the single-purpose alternative is likely to be representative of the least cost alternative for providing the same physical benefits as the project. There may be a combination of actions that could provide the same benefits for less cost, but those actions would all include a smaller version of the proposed project at similar cost as estimated by the applicant. Also, it is unlikely that a lower-cost alternative in the other rivers (Arroyo Seco, Salinas, San Antonio or Nacimiento) that are habitat for this Interior Coast Range Biogeographic Population Group could be developed.

**Concern #2. The project may not be able to provide a self-sustaining population of Interior Coast Range Biogeographic Population Group steelhead trout.**
This concern relates primarily to the use of cohort scores as a measure of physical benefit. The cohort scores provide relative indicators for the ability of Pacheco Creek to support all life stages of the species. However, adults and juveniles must migrate through about 30 miles of the Pajaro River to or from Monterey Bay, and some must survive in the ocean. Neither of these factors is thought to be insurmountable or very expensive relative to the share of Project cost allocated to ecosystem improvement.

Still, returns in terms of spawners or escapement may not reach habitat potential and establishment of a self-sustaining population could take time and additional cost. A project lifetime cost of $3.7 million is included for monitoring and management. Additional management costs could include population enhancement, fishing enforcement, or modifications to water use practices or structure of the Pajaro River.

**Concern #3. Some of the cost allocated to ecosystem improvement should be considered as mitigation for the Project.**

Staff consulted with California Department of Fish and Wildlife staff regarding this concern. CDFW staff at this point cannot discern how much of the Variable Flow Schedule water will be providing public benefit and how much will be mitigating impacts from the project. That is, some of the ecosystem flows should not be counted as a benefit, but rather, as project mitigation that provides no new benefit. The alternative cost of achieving the full flow amount overstates the ecosystem benefit because part of that alternative cost should be assigned to mitigation. Below, to be conservative, staff assumes that 10 percent of the alternative cost should be assigned to mitigation, not ecosystem benefit.

The single purpose alternative has been sized to provide the ecosystem benefit without providing other quantified benefits, but the single-purpose alternative would also provide unquantified benefits including flood damage reduction, downstream groundwater recharge, and avoided costs of repairing and operating the existing North Fork dam. If quantified, these benefits could be subtracted from the alternative cost to obtain a more accurate ecosystem cost share.

**Concern #4. The cost of the single-purpose alternative may exceed the willingness-to-pay of California residents for the physical improvements achieved.**
The alternative cost method is appropriate for benefits estimation only when the physical benefits provided by the project and its alternative are worth the cost. In this case, the value that Californians would place on the restoration of South-Central California Coast (SCCC) steelhead trout is not known.

The economic benefits provided by preservation of rare or endangered species have been extensively studied. The Technical Reference (Appendix E page E-14 to E-23) reviews relevant studies. Staff is aware of no studies that apply to SCCC steelhead trout. When no market exists and therefore no direct observation of price or value can be made, economic benefits must be judged by indirect methods. Revealed preference methods rely on actual behavior of people such as voting or pricing of real estate to judge benefit. Stated preference methods rely on surveys or similar tools to determine the value people place on preserving rare species.

The applicant provides anecdotal evidence of support for ecosystem restoration and environmental stewardship programs in Section 4 of the appendix to the SFD. However, this information does not support a quantified estimate of the local or state-wide willingness to pay for the proposed Pacheco Creek SCCC steelhead trout improvement.

Therefore, staff cannot judge whether the planned physical ecosystem benefit of the project is or is not worth the alternative cost. There is simply no evidence regarding willingness to pay for SCCC steelhead that supports either result.

The applicant has not proposed a share of benefit for, or a share of cost to be paid by the remainder (non-California portion) of the nation. Stated preference studies, plus the fact that

people donate to help preserve wildlife around the globe, support the notion that non-Californians have a positive willingness to pay to help endangered species. The Endangered Species Act (ESA) also provides revealed preference evidence for these national values, and many ESA costs are borne directly or indirectly by the nation. If SCCC steelhead can be preserved, then the nation may experience an avoided cost benefit. The evidence suggests that a share of the project ecosystem benefit should be assigned to non-Californians. Stated differently, the single-purpose alternative cost is more likely to be a good measure of benefit if national willingness-to-pay for the project's physical benefits is included.

*Ecosystem Improvement- San Joaquin Refuges*

The applicant provides a 2021 benefit of $6.40 million, similar to the $4.96 million as approved by staff in 2018. The 2021 benefit is reasonable and a small fraction of other project benefits.

*Emergency Response Delta Levee Failure*

Emergency response benefits in the 2021 Feasibility Documentation are $792.2 million.

Due to uncertainty in several parameters, emergency response benefits are among the hardest to estimate. The widely used frequency of 4.2 percent represents an event that has not happened in modern history but is becoming more probable with sea level rise. The costs of such an event will depend substantially on the time of year and amount of water stored south of Delta when the event occurs. A severe shortage can impose costs on urban water users that are several times the retail price being paid. The average benefit of water in the Feasibility Documentation provided for emergency shortage is an average of $5,383 per AF in 2030. This average is reasonable for the location and the type of shortage event assumed.

The project would provide a variety of other types of emergency benefits that are not quantified, including water used to replace water lost to accidental or intentional chemical contamination, water for firefighting, and depending on how regional conveyance facilities are affected, improved water supply reliability following an earthquake or other outages. Staff believes that the calculated benefit is large enough to encompass all of these additional emergency benefits.

One of the costs of the emergency response water supply is that other water supply benefits must be foregone. Potentially, the storage space vacated for emergency supplies might be refilled soon after the emergency event so that there is little effect on future supplies. However, it is prudent to assume that the use of stored water for emergency supplies results in a loss of non-emergency water supply as the storage space is being refilled.

The applicant states (page 2-12 of the Comment Appendix in the SFD) that "water supply benefits were not adjusted to reflect potential supplies unitized for emergency response" because "the Refined Project may, depending on the type and duration of an emergency, be

able to provide emergency response supplies while concurrently providing M&I water supplies." Staff finds that this statement is speculative; water balance requires that all dispositions of water supply be accounted for. An adjustment is recommended in the water supply section below.

*Water Supply*

Water supply benefits in the Feasibility Documentation are based on an average of 3,595 AF of additional M&I supply per year based on an average of 9,000 AF of additional water conveyed by the Pacheco Conduit to Santa Clara Valley (Table 5-5). Total water supply benefits are $142.5 million in present value terms.

As described under Emergency Response above, staff has reduced these benefits to account for water needed to replace the water used for emergency response supply. The Appendix page 4-5 states "On average, the expected available emergency storage supply is estimated to be 99,904 acre-feet under 2030 future conditions." The amount of water not available for water supply would be far less due to reduced evaporation and the potential to replace the water released for an emergency later. As an estimate of the adjustment to water supply resulting from water supplied for emergency use, staff made the following assumptions. An emergency supply release of 50,000 AF per event would have to come out of M&I supply. This would occur in 4.2 percent of years, so the average annual reduction in M&I water conveyed is 2,100 AF or 23.33 percent of the 9,000 AF conveyed. Reducing the claimed M&I water supply benefit of $142.5 million by 23.33 percent results in a revised benefit of $109.25 million.

*Water Quality*

The SFD claims a municipal water quality benefit of $125.4 million based on avoided costs of water treatment plant upgrades at the Santa Teresa Water Treatment Plant. The project would "avoid the consequences of the San Luis low-point issue by taking delivery of Valley Water supplies earlier in the season and storing these supplies in the expanded Pacheco Reservoir, using additional local supplies developed through expansion of the Pacheco Reservoir, and using the Project as a source blending water when needed" (Feasibility Documentation page 4-13). It is not entirely clear from the documentation that, without-project, that the Santa Teresa Water Treatment Plant upgrades would be economical as compared to the taste and odor problems experienced, especially with the new upgrades to their Rinconada Water Treatment Plant (Comments Appendix page 2-13). No adjustment is recommended.

*Non-Monetized Benefits*

Staff finds and the applicant concurs that the project has several uncounted economic benefits. These include a variety of emergency response benefits, avoided costs of safety of dam improvements at the existing North Fork dam, avoided future operations costs at that facility,

flood damage reduction, and downstream improvements to groundwater conditions near Pacheco Creek.

Potential unquantified emergency response benefits have been mentioned. Staff considers these benefits to support the quantified emergency response benefit rather than being additional benefits. The other additional unquantified benefits are discussed by the applicant in the Comment Appendix Chapter 3. Staff finds that these uncounted benefits could contribute significantly to the economic feasibility of the project.

The proposed project would utilize Pacheco Creek inflows and CVP contract water delivered through San Luis reservoir. The project could provide some additional operational flexibility to use San Luis Reservoir to facilitate delivery and storage of other supplies including SWP and transfers.

Benefit-Cost Results.

Table 2. provides benefit-cost calculations as provided by the applicant and as adjusted by staff. The main adjustments are 1) the single-purpose alternative cost estimate has been reduced by 10 percent to account for flow mitigation requirements and 2) M&I water supply benefits have been reduced to account for water supply provided for emergency response purposes. Table 2. presumes that the benefits of establishing the Central-South Coast steelhead population are worth the single-purpose alternative cost. This is more likely to be true if the analysis includes national benefits of preservation of the species.

As shown in Table 2, the benefit-cost (B/C) ratio is about 1.10 after the staff adjustments, so the project meets conditions for economic feasibility.

**Table 2. Net Present Value of Benefits by Benefit Category and Costs, Supplemental Feasibility Documentation (SFD) versus Staff Recommended (in million $ present value)**

| | Applicant SFD | Staff Recommended | Notes |
|---|---|---|---|
| Ecosystem - Pacheco Creek, Single purpose alternative cost | $1,491.50 | $1,491.50 | |
| **Public Benefits** | | | |
| Ecosystem - Pacheco Creek, total | $1,491.50 | $1,342.4 | $1491.5 reduced 10% for share of water for mitigation |
| Ecosystem - San Joaquin River Watershed | $6.40 | $6.40 | |
| Total Ecosystem Benefits | $1,497.90 | $1,348.75 | Some of this benefit is national in scope |

| | | | |
|---|---|---|---|
| Emergency Response | $792.20 | $792.20 | Water supply reduced for ER use below |
| Uncounted Flood Damage Reduction | | unknown | |
| **Total Public Benefits** | $2,290.10 | $2,140.95 | |
| **Non-Public Benefits** | | | |
| M&I Water Supply | $142.50 | $109.25 | Reduced for water for ER |
| M&I Water Quality | $125.40 | $125.40 | |
| Uncounted groundwater recharge and avoided costs | | unknown | ` |
| **Total Non-Public Benefits** | $267.90 | $234.65 | |
| **Total Quantified Benefits** | **$2,558.00** | **$2,375.60** | Difference is staff adjustment for ecosystem and water supply |
| **Costs** | | | |
| Capital Cost | $1,874.70 | $1,874.70 | |
| **Total Cost (Capital, IDC, Replacement, Monitoring, O&M)** | **$2,161.10** | **$2,161.10** | |
| B/C Ratio | 1.18 | 1.10 | |
| Net benefit | $396.90 | $214.50 | |

**Financial Feasibility Review**

Financial feasibility means that financial resources will be available to construct and operate the Project as planned. Staff has reviewed all planned cost contributions from all sources to determine if financing appears adequate to build and operate the Project over its planning horizon.

The applicant's commitment to pay its cost share is also accepted as evidence of financial feasibility for related non-public benefits. The applicant has a strong rate base and history of meeting financial obligations which supports financial feasibility.

The regulations (Technical Reference section 3.5) require that beneficiaries of non-public benefits are allocated costs that do not exceed the benefits they receive. Staff has reviewed costs allocated to beneficiaries and compared them to their benefits. Costs allocated to and borne by the applicant include the non-capital costs and any capital costs that exceed the MCED provided from WSIP. The applicant would also be responsible for any cost overruns or unforeseen costs required for implementation.

The non-public benefit capital cost allocation is $196.3 million (Table 5-11 in the Supplemental Feasibility Documentation) and page 5-16 states "the remaining 63 percent of capital costs for public benefits ($1,181.7 million) have been allocated to Valley Water and SBCWD" for a total capital cost allocation of $1.378 billion. In addition, none of the OMR, replacement, monitoring costs, or IDC ($286.4 million in present value in Table 5-7) are paid by WSIP, so a total of $1.664 billion must be allocated to local, non-public beneficiaries. Total non-public benefits are shown in SFD Table 5-6 as $267.9 million. Even attributing the full emergency supply benefit to Valley Water and SBCWD ($792.2 million in Table 5-6), the total local benefits would be $267.9 + $792.2 or $1.06 billion. In response to this comment from staff, the applicant confirmed its commitment to environmental stewardship and its obligation and willingness to pay for ecosystem benefits: "Valley Water is a beneficiary of both public and non-public benefits, and, therefore, it is appropriate to allocate public benefit costs to Valley Water."

According to the U.S. 2020 census there were 640,000 households in Santa Clara County in 2019. The difference between local benefits, including emergency response, and allocated cost is $603.9 million ($1,662 minus $1,060) or $943.59 per household. Staff cannot determine whether or not Santa Clara County households are willing to pay this much for the benefits they will receive. If part of the $603.9 million can be paid by others, for example using federal funds to pay for national ecosystem benefits, then the likelihood that local benefits will exceed the local cost share increases.

Staff noted in comments to the applicant that additional, non-monetized benefits such as groundwater recharge potentially could also be included as water supply benefit. The applicant agreed that some benefits have not been monetized but are part of its consideration to pay for the project.

Based on the applicant's strong financial base, its ability to pay, and its Board decisions to date, staff accepts applicant's commitment to pay for a substantial share of costs allocated to ecosystem benefits. Commission and staff should continue to monitor and coordinate with the applicant as final funding and implementation approach.

**Commission Decision**

The Commission can decide to make a determination that the PREP is feasible. If the Commission determines that the PREP is feasible, the project will continue to be eligible for WSIP funds and work toward completing the statutory requirements that could lead to a final award hearing.

Alternatively, the Commission may opt to not make a determination. If the Commission decides not to make a determination by December 31, 2021, the project would no longer be eligible for funding through the WSIP. For projects where no determination is made and the project has an early funding agreement, staff will close the agreement.

Projects must still complete all environmental documentation, have contracts for 100% of the non-public benefit cost share, have obtained all required permits, and secure contracts for administration of public benefits (Water Code section 79755(a)) before the Commission can conduct a final funding hearing.

**Staff Recommendation**

Based on information received from Valley Water which includes the PREP Supplemental Feasibility Documentation, a letter of commitment from Valley Water to fund the project, and draft environmental documentation, staff finds that Valley Water has provided documents that meet the requirements of Water Code section 79757 including completed feasibility documents; the PREP meets conditions for technical, environmental, economic and financial feasibility and constructability defined in the Technical Reference. Staff recommends that the Commission make a determination that the project is feasible.

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