California WATER COMMISSION

Water Storage Investment Program: Screening Project - Del Puerto Canyon Reservoir 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.

At its December 16, 2020, meeting, the Commission directed staff to open a screening process for new potential Water Storage Investment Program (WSIP) projects. The screening process allows the creation of a pool of potential projects should the Commission decide to open a second solicitation in the future. The screening process allows the Commission to receive information sufficient to meet the January 1, 2022, statutory requirements, while leaving the procedural requirements to implement a second solicitation and substantive evaluation of any new projects to a later date. The screening process was opened in 2021 with a workshop to explain the process to perspective project teams. Staff continued to meet with perspective project teams as they worked to understand if their projects could meet screening requirements. A total of two projects have filed screening forms, one being Del Puerto Canyon Reservoir (DPCR), submitted by the Del Puerto Water District and the San Joaquin River Exchange Contractors Water Authority.

The DPCR is a new reservoir project located on Del Puerto Creek west of Interstate 5 near Patterson. The project would provide approximately 82,000 acre-feet (AF) of new off-stream storage to the Central Valley Project (CVP). Project components are the reservoir (including the main dam, two saddle dams, and other facilities), conveyance facilities to transport water to/from the Delta-Mendota Canal (DMC) (including a pipeline and pumping plant), electrical facilities, relocation of Del Puerto Canyon Road, and relocation of existing and proposed utilities that are within the project area. Work to date has included project operations modeling; the preparation of a Feasibility Study reviewed by US Bureau of Reclamation (Reclamation); a Proposition 1 consistency finding by the California Water Commission for Water Infrastructure Improvements for the Nation (WIIN) Act funding; and the preparation of an Environmental Impact Report.

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 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 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 screening process allows projects to demonstrate feasibility per Water Code section 79757 but does not require project proponents to perform analyses required of existing project applicants. As such, screening projects do not have the analyses or information required in a WSIP application. Project proponents provided the feasibility documents that may be prepared without regard to the WSIP, which the project proponents believe satisfy the WSIP feasibility requirement. The project proponents also explained how their projects have the ability to advance long term Delta objectives. This staff report presents the status of the January 1, 2022, requirements and staff's review and recommendation about the feasibility documents and other screening information for consideration in the Commission's 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 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 and made a 2.5 percent inflation adjustment to all seven project MCEDs. The Commission also held $63.9 million for a potential second solicitation and opened a screening process to see what projects might match the requirements of the WSIP.

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 Del Puerto Canyon Reservoir's (DPCR) 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 required statutory determinations. The Commission will have

the opportunity to ask questions of applicants and hear public comment before deliberating on its determinations.

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.	Del Puerto Canyon Reservoir Final Environmental Impact Report: available at https://www.delpuertocanyonreservoir.com/resources Volume 1: https://www.delpuertocanyonreservoir.com/assets/pdf/reports/Del-Puerto-Canyon-Reservoir-Final-EIR-Vol-I.pdf Volume 2 Appendices: https://www.delpuertocanyonreservoir.com/assets/pdf/reports/Del-Puerto-Canyon-Reservoir-Final-EIR-Vol-II-Appendices.pdf Volume 3 Response to Comments: https://www.delpuertocanyonreservoir.com/assets/pdf/reports/Del-Puerto-Canyon-Reservoir-Final-EIR-Vol-III-Responses-to-Comments.pdf
75% of non-public benefit cost share submitted to the Director of DWR.	Letter from Del Puerto Water District and San Joaquin River Exchange Contractors Water Authority of Cost Share Commitment The letter was transmitted to the Director of DWR on 11/19/2021.
Completed feasibility documents.	Woodard and Curran, 2020. Del Puerto Canyon Reservoir Feasibility Report and Appendices. (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. This staff review indicates where the supplied documents may not meet the Technical Reference criteria, and where, if the Commission proceeds with a second solicitation, the information is likely to be provided through a formal application.

The applicant provided a feasibility report which intends to:

1. Determine environmental, technical, economic, and financial feasibility of the proposed project;

2. Establish the degree to which a federal benefit can be achieved through project implementation; and

3. Position the project for potential receipt of up to 25 percent WIIN Act funding for a "State-led" surface water storage project. (Woodard and Curran. 2020 page 1-1)

In order to qualify the project for WIIN Act funding, the Project Sponsors must determine that the project is feasible, that a proportional share of the project benefits are federal benefits, and that the Secretary of Interior concurs, prior to January 1, 2021.

A letter from the U.S. Department of the Interior notified Congress of the intent of the Department of the Interior to find the project feasible.

The results of the analysis in the feasibility study indicate that the locally preferred alternative is technically and financially feasible and provides federal benefit to help meet the Central Valley Project Improvement Act incremental Level 4 refuge water supplies. [1]

Technical Feasibility and Constructability Review
Staff has reviewed the project operations, engineering designs, cost estimates, and construction for the DPCR

The proposed reservoir would provide storage for water allocated from Reclamation with whom the project sponsors (Del Puerto Water District [DPWD] and the San Joaquin River Exchange Contractors Water Authority [SJRECWA]) have contracts. Water would be stored in the reservoir when supply is available from the Delta-Mendota Canal and later delivered to farms within service areas of DPWD and the Exchange Contractors in San Joaquin, Stanislaus, Merced, Fresno, and Madera counties. The reservoir would be filled primarily by pumping water from the Delta-Mendota Canal. The reservoir would also receive and store flows from Del Puerto Creek during winter months.

The applicant's operations modeling analysis was conducted using a systems modeling software, GoldSim, to assess potential operations of the proposed reservoir and quantify the benefits. The GoldSim model inputs include estimated historical runoff on Del Puerto Creek and outputs from a revised No Action Alternative CalSim II model run dated 9/30/2019 developed by Reclamation for the EIS Administrative Draft Analysis for the Re-initiation of Consultation on the long-term operations of the Central Valley Project and State Water Project. The analysis focuses on inflows and outflows of the DPCR. The geographic scope of the analysis is limited to Del Puerto Creek, DPCR, Delta Mendota Canal diversions to DPCR and deliveries from DPCR.

The reservoir facilities, including main dam embankment, saddle dams, inlet and outlet works, and conveyance facilities, including pumping plants and pipelines, and infrastructure relocation

[1] U.S. Department of the Interior Office of the Secretary. Letter to: the Honorable Raul M. Grijivala. From: Timothy R. Petty PhD. Assistant Secretary for Water and Science. Stamped January 19 2021.

are described in the feasibility report and appendices. Designs, project cost estimates, and schedule are also included in the feasibility report and appendices.

The analysis provided in the feasibility study does not meet several WSIP requirements which limits reviewers' ability to substantiate net water supply increases and technical feasibility per WSIP regulations.

- Operations modeling does not meet the "water balance analysis showing, for the with- and without-project condition, all flows and water supplies relevant to the benefits analysis" of technical feasibility.
- Operations modeling does not incorporate climate scenarios equivalent WSIP requirements limiting reviewer's certainty that benefits could be produced in the future.

If the applicant prepares a full WSIP application in a future solicitation, these analyses would be required to substantiate public and non-public benefits prior to any conditional eligibility determination or funding decision by the Commission.

As described in the Technical Reference, to meet the requirements of technical feasibility, the applicant must demonstrate that the project is 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. The applicant's operations modeling analysis focuses on inflow and outflow of DPCR and does not encompass a geographic scope necessary to quantify all benefits or impacts. Thus, the operations modeling does not meet the "water balance analysis showing, for the with- and without-project condition, all flows and water supplies relevant to the benefits analysis" of technical feasibility. In addition, the regulations for the WSIP application process require all applicants to either use the Climate and Variable Infiltration Capacity (VIC) model results data for the two without-project future conditions (2030 future conditions and 2070 future conditions) or the 2030 and 2070 without-project future conditions CalSim II and DSM2 model products provided by WSIP to quantify the benefits. The required use of either the VIC model results data or CalSim II model products are dependent on the type of storage project and whether there are quantified public benefits within the Delta or resulting from Delta improvements. Without a CalSim-II or equivalent operations modeling of the with- and without project conditions encompassing an appropriate geographic scope, the sources of water supply for diversion to DPCR to provide a net increase in water supply to DPWD, SJREC, and refuges cannot be substantiated.

The project's design, cost estimates, and construction methods and schedule were previously reviewed by Reclamation's Design, Estimating, and Construction (DEC) review team. The purpose of the DEC Review process is to provide independent oversight that ensures products related to design, cost estimates, and construction are technically sound and provide a credible

basis for decision-making by Reclamation and other decision makers. The DEC review team identified three findings and recommendations that warranted further investigations:

1. Utility relocation poses a high risk to the project, which may not be fully captured within the project schedule and cost estimate.
2. There may not be sufficient quantity and/or type of material available within the specified borrow areas to construct the dam embankments.
3. The following items in the project collectively may present a major risk to the cost estimate and schedule:
    - Roadway realignment
    - Water management (dewatering and stream diversion and care during construction)
    - Design Phase Land Acquisition

The DEC Team recommended the Project team address these findings and incorporate the updated information into the cost estimates and project schedule in the feasibility report. Addressing these findings would reduce the uncertainty associated with the construction costs and schedule. Staff's review of the feasibility report indicated that these findings and recommendations have not yet been addressed and updated in the feasibility report.

In addition, the Del Puerto Canyon Reservoir Feasibility Report (page 5-11) indicates that the cost estimates for the utility and road relocation components are Class 5 estimates (Association for the Advancement of Cost Engineering or AACE) while the dam facilities are Class 4 and other conveyance facilities are Class 3 estimates. WSIP regulations (Technical Reference page 6-2) require feasibility-level cost estimates at AACE Class 4 or better. The level of accuracy of cost estimates increases in chronological order from Class 5 to Class 1. A Class 5 cost estimate contains the highest level of risk and uncertainty early in a project's life, while a Class 1 cost estimate has the lowest level of risk and uncertainty closer to project construction stages.

Economic Feasibility Review

Economic feasibility is demonstrated when a project's expected benefits equal or exceed the expected costs, considering all benefits and costs related to or caused by the project. Section 5.3 of the feasibility report presents "Local and Federal Plan Benefits" which are measured as increased annual average water supply and dollar benefits for the agricultural sponsors, Delta Mendota Canal (DMC) capacity constraint mitigation, and M&I and refuge water supply. Flood risk reduction benefits are also estimated. Project costs are estimated and compared to dollar benefits in Section 5.6.3.

Staff reviewed the Feasibility Report and its Appendices and is unable to determine that the project meets the definition of economic feasibility as described in Section 3.5 of the Technical Reference. The lack of regional operations and hydrologic modeling of the with-project condition as mentioned in the Technical Feasibility section also impacts the economic feasibility analysis.

- The source of water required to provide a net increase in water supply to DPWD, SJREC, and refuges is not clearly identified. Therefore, important costs of obtaining that supply may be left out, including potential effects on other beneficial water uses outside of the project area and is explained further below.
- Costs have not been updated to reflect recommendations of the Design, Estimating and Construction Review Report (DEC) as was explained in the Technical Feasibility section.

Project Water Supply Benefits and Costs Not Supported by With-project Operations and Hydrologic Analysis

Staff could not find Calsim modelling or equivalent that provides a consistent comparison of with-project versus without-project operations, deliveries, and water use at a geographic level sufficient to determine the ultimate source and cost of project water. The operations analysis provided (see Appendix E, page 2) states that it is limited to operations for the reservoir ("The analysis focuses on inflows and outflows of the DPCR"), not the broader regional or project operations.

The Final EIR for the project states (Appendix D, page 3.11-24):

> "Water stored in the proposed reservoir is water that would have been delivered directly to Del Puerto or the Exchange Contractors or would have otherwise been delivered to and stored in San Luis Reservoir."

Staff is unable to reconcile the claimed water supply benefits with the statement in the EIR that the water in the proposed reservoir would have been delivered to the project sponsors or other storage even without the project. If the water "would have been delivered directly to Del Puerto or the Exchange Contractors" then it should not be counted as an additional water supply benefit. If the water "would have otherwise been delivered to and stored in San Luis Reservoir" then there should be a water supply loss for San Luis reservoir water users.

The Feasibility Report states (page 5-2) that the SJREC would conserve water to provide water for DPCR: "The Exchange Contractors would use up to 40,000 acre-feet/year of conserved water to offset demand, thus making CVP water available for storage in DPCR. The conserved water would be generated consistent with the conservation program described in "Water Transfer Program for the San Joaquin River Exchange Contractors Water Authority, 2014-2038 EIS/EIR" approved by Reclamation on July 30, 2013."

If this water has not yet been conserved but would be conserved to provide water for the DPCR, then the costs associated with the conservation must be included in project costs. Staff is unable to find that they have been included.

Alternatively, if this water has already been conserved and used to support the SJREC water transfer program, then it should be part of the without-project condition rather than considered new yield of the proposed project. If all or part of such conserved water is being used in a water transfer program but would instead be stored in DPCR to support local

agricultural water use, the lost water transfer revenue must be included as a cost of the DPCR. With the exception of analysis of Del Puerto Creek (pages 13 to 25) the Feasibility Report does not provide information on project area hydrology, including water application efficiency and return flows, needed to support economic feasibility based on conservation. Without this information and a complete with-project CALSIM operations analysis, staff is unable to verify the benefits and costs claimed.

Section 2.1.1 of the Feasibility Report describes the need for and uses of water from reservoir operation (page 2-2):

"Reliable local water storage would allow the Project Sponsors to take delivery of water when it is available during wet periods and store it for use when supplies are limited."

Table 18 in Appendix E shows that the water put into storage for DPCR (the "Put" column in the table) is about the same on average as the water being released from storage (the "Yield" column) yet the full put amount is being counted as a "new" water supply benefit in the economic analysis (see Table 3 in Appendix K). Table 18 also appears to contradict the statement that the project would "take delivery of water when it is available during wet periods." The table shows that puts in dry and critical years are about the same or even larger than in wetter years. The puts in dry and critical years likely correspond to some reduced water use or "opportunity cost" in those year types.

The question of costs imposed or benefits foregone (called opportunity costs) from implementation of the proposed DPCR applies more broadly. For example, the timing of diversions into the DPCR could affect deliveries to other contractors receiving water from the DMC or San Luis Reservoir.

Without a complete with-project versus without-project CalSim operations analysis, staff is unable to verify the net water supply benefits claimed. Project-area water use efficiency, DMC and Delta Mendota pool diversions, San Luis storage, SWP and CVP exports and water use, and San Joaquin River flows may be affected in ways not revealed by the Feasibility Report.

In conclusion, because the project has yet to conduct CalSim or equivalent modeling of with-project versus without-project operations, and does not include costs at a sufficient feasibility level, there is insufficient information to show economic feasibility as required in the WSIP technical reference. The submission of a full application that meets the requirements of the WSIP regulations in a future solicitation, would allow for the identification of the benefits and costs of the project before any kind of conditional eligibility determination or funding decision by the Commission.

Financial Feasibility Review

The applicant has included an ability-to-pay analysis to address the project sponsors' (DPWD and SJRECWA) financial capacity. Project sponsors are public agencies with the capacity and authority to raise revenues, through water charges, land assessments, or other means, as needed to fund costs allocated to them.

Appendix P provides cost allocation based on benefits. The explanation of the calculations is brief but results are displayed in unformatted Excel tables attached to Appendix P. The calculations and full display of results are not summarized in the main body of the Feasibility Report, which is unusual for a federal feasibility analysis. Importantly, all of the capital costs allocated to ecosystem benefits (refuge water supply) are allocated to federal funds and none to state or local funds. WSIP funding can only be used for capital expenditures and at least half of those costs for ecosystem benefits. The submission of a full application that meets the requirements of the WSIP regulations in a future solicitation would allow for a full understanding of cost allocations including those of State and Federal funds before any kind of conditional eligibility determination or funding decision by the Commission.

Based on staff's identified concerns with the benefits and costs, as described above under Economic Feasibility, staff cannot determine that each beneficiary is allocated project costs equal to or less than its benefits received. Based on this information, staff cannot find DPCR meets the financial feasibility requirements in the Technical Reference. However, DPCR did not prepare the feasibility report to meet those requirements.

Environmental Feasibility Review

Commission staff reviewed the Feasibility Report (Woodard and Curran, 2020), and Final EIR 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 Statement of Overriding Considerations. These materials demonstrate the project is environmentally feasible.

The Feasibility Report referenced the Final EIR and included discussion of possible effects of the Del Puerto Canyon Project and proposed mitigation measures. The Final EIR indicated that the Del Puerto Canyon Reservoir Project would result in significant and unavoidable environmental impacts to:

1. Aesthetics by causing substantial damage to scenic resources within a state scenic highway and substantial degradation of existing visual character or quality, or a substantial adverse effect on a scenic vista;
2. Cultural Resources by causing a substantial adverse change in the significance of a unique archaeological resources;
3. Greenhouse Gas Emissions (GHGs) by generating GHGs, either directly or indirectly, that may have a significant impact on the environment, and conflicting with an applicable plan, policy, regulation adopted for the purpose of reducing the emissions of GHGs;
4. Traffic and Transportation by conflicting with a program plan or ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; and

5. Utilities and Service Systems by requiring or resulting in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

In addition, the Final EIR identified potentially significant but mitigable impacts including adverse impacts to aesthetics, air quality, biological resources, cultural resources, energy resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and recreation, and traffic and transportation. In 2020, SJRECWA adopted a Mitigation Monitoring and Reporting Plan and a Statement of Overriding Considerations that the benefits of increased agricultural water supply reliability; increased reliability of water supply to CVPIA-designed refuges in the Central Valley, including South of Delta refuges; mitigating existing capacity constraints of Delta-Mendota Canal; and flood reduction outweigh the significant and unavoidable environmental impacts that will result from the project.

Beneficial Uses of the Delta Review
DPWD and SJRECWA provided information related to the potential public benefits that could be provided by the DPCR as well as a description of how the project will advance the long-term objectives for beneficial uses of the Delta.

The potential public benefits include Incremental Level 4 water for wildlife refuges and increased riparian benefits resulting from groundwater recharge. The DPCR would also provide flood control benefits to residential and agricultural areas near Patterson that are currently at risk of flooding from Del Puerto Creek.

The DPCR would address the Wildlife Habitat beneficial use identified in the State Water Board's Water Quality Control Plan for the Bay-Delta. It also supports the Delta Plan Recommendation WR R12j and its related Performance Measure 3.9 Water Exports.

Based on staff's review, it appears the project would advance the long-term objectives of the Delta, consistent with the WSIP.

Commission Decision
The Commission can decide to make a determination that the DPCR is feasible will advance the long-term objectives of restoring ecological health and improving water management for beneficial uses of the Delta. If the Commission makes these two determinations, the project would be able to submit a full application for WSIP funds.

Screening projects do not have the benefit of completing the full application and therefore lack some of the analyses required through the application process. The lack of an application makes it difficult to assess the feasibility based on the Technical Reference because applicants cannot provide information required from the Technical Reference, which are necessary to

determine if the project meets the feasibility criteria. The Commission can still make the two determinations described above if the applicant can sufficiently respond to questions from the Commission regarding staff findings. If the Commission makes the two determinations and opens a future solicitation, screening projects would need to complete a full application and review process. Application requirements include specific project modeling requirements and detailed analysis of public and non-public benefits. The Commission could not make funding decisions on a screening project without an application and review process.

Alternatively, the Commission may opt to not make these determinations. If the Commission decides not to make these determinations by December 31, 2021, the project would no longer be eligible for funding through the WSIP.

Staff Recommendation

Based on information received from DPWD which includes the WSIP Screening Form, the Del Puerto Canyon Feasibility Report, a letter of commitment from DPWD and SJRECWA to fund the project, and environmental documentation, staff finds that DPCR has provided documents that meet the basic requirements of Water Code section 79757. Staff cannot determine whether the project meets the Technical Reference requirements for feasibility because DPCR has not completed a full application that includes information required from the Technical Reference. Staff recommends the Commission inquire of the applicant regarding staff's review of submitted documents before making a determination regarding DPCR's feasibility.

Staff also recommends, based on its review of the environmental documentation submitted, that the Commission find the project "will advance the long-term objectives of restoring ecological health and improving water management for beneficial uses of the Delta," consistent with Water Code section 79757(a)(2).

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