



Water Storage Investment Program: Kern Fan Groundwater Storage 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 Kern Fan Groundwater Storage Project, promoted by its applicant, the Groundwater Banking Joint Powers Authority (GBJPA), formerly Irvine Ranch Water District and Rosedale-Rio Bravo Water Storage District, 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

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requirements of Water Code section 79757. The Kern Fan Groundwater Storage Project 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 share 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 Kern Fan Groundwater Storage Project'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.	<p>ESA, 2020a. Kern Fan Groundwater Storage Project Draft EIR. Prepared for Groundwater Bank Joint Powers Authority, Rosedale-Rio Bravo Water Storage District, and Irvine Ranch Water District, October</p> <p>ESA, 2020b. Final EIR. Prepared for Groundwater Bank Joint Powers Authority, Rosedale-Rio Bravo Water Storage District, and Irvine Ranch Water District, December</p> <p>ESA, 2020c. Mitigation Monitoring and Reporting Program, December</p>
75% of non-public benefit cost share submitted to the Director of DWR.	<p>Letter of Commitment from GBJPA to fund Non-Public Benefits</p> <p>The letter was transmitted to the Director and the Commission on 11/5/2021</p>
Completed feasibility documents.	<p>2017 WSIP Application. Kern Fan Groundwater Storage Project</p> <p>2017-2018. WSIP staff technical review, PBR review, appeal, appeal response, and scoring recommendations</p> <p>GBJPA et al, 2021. Kern Fan Groundwater Storage Project Feasibility Report and appendices, November (available upon request)</p>

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

Staff has reviewed the project operations, facilities description, cost estimates, and construction methods for the Kern Fan Groundwater Storage Project and concluded that the feasibility report has demonstrated that the Kern Fan Groundwater Storage Project can be technically and physically constructed and operated.

The Kern Fan Groundwater Storage Project would develop a regional water bank with a storage capacity of 100,000 acre-feet (AF) in Kern County. Project storage capacity will be split between accounts for public benefits (25,000 AF), Irvine Ranch Water District (IRWD) (37,500 AF) and Rosedale-Rio Bravo Water Storage District (Rosedale) (37,500 AF). The Project would be operated to divert and store Article 21 water primarily during wet years through recharge operations. The Project would also capture and store Section 215 (temporary water supplies and allows non-storable water to be applied to lands otherwise ineligible to receive federal water) water supplies from the San Joaquin River. The Project would use 75 percent of the stored water for water supply purposes. The remaining 25 percent of the stored water would be dedicated for ecosystem benefits. In dry and critical years, water stored in the Project would be used through a water exchange process to provide pulse flows in April or May in the Feather River below Lake Oroville. This would require agreements with one or more of the SWP partner contractors (e.g., Kern County Water Agency and Dudley Ridge Water District) to forego State Water Project Table A deliveries equivalent to the pulse flow amount in exchange for receiving an equivalent amount of Table A water from the Project. In addition, the Project would provide water supply for emergency response in the event of extended drought periods or in response to a Delta levee failure. The Project will also provide non-public benefits by providing supplemental water supplies to meet agricultural demands, municipal and industrial demands, enhanced groundwater levels, and the preservation of permanent agricultural crops.

The capture and store of Section 215 water from the San Joaquin River is a new source of supply for the Project. This source of supply was not included as part of the Project in the 2017 WSIP application. In the Feasibility Report (GBJPA et al, 2021), the applicant updated the

operations analysis to include the Section 215 water. The Section 215 water available to the project would be over and above any existing and expected demands for this water including water already dedicated for Rosedale's existing banking partners. The analyses demonstrate how the Section 215 water is captured by the project during periods when Article 21 water is not available. Article 21 and Section 215 water supplies are separately diverted to the project recharge basins so that there is no overlap and conveyance capacity constraints in the recharge of these supplies.

An engineering Preliminary Design Report (PDR) was prepared and submitted with the feasibility report. The PDR provides an analysis of project alternatives, description of the proposed facilities, how the Project facilities would be integrated with existing water banking facilities, construction methods, feasibility-level cost estimates for project features (turnout structures, conveyance facilities, recharge basins, recovery areas, and appurtenant facilities) and replacement cost estimates. The design and construction methods demonstrate that all facilities for the Kern Fan Groundwater Storage Project can be constructed with existing technology and construction materials.

Environmental Feasibility Review

Commission staff reviewed the 2017 application materials, Feasibility Report (GBJPA et al, 2021), and the Draft and Final EIR (ESA, 2020a and 2020b) 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 2021 Kern Fan Groundwater Storage Project Final Feasibility Report indicated that the project was evaluated in the 2020 EIR which included detailed discussion of possible effects of the proposed project and the proposed mitigation measures. The Report indicated that there were no unmitigated significant impacts identified in the Draft or Final EIR and, therefore, a Statement of Overriding Considerations was not required. In addition, the Report described the environmental impacts of the project as well as the selected mitigation measures necessary to avoid or reduce any significant impacts.

In 2020, GBJPA prepared the Draft and Final EIR for the Kern Fan Groundwater Storage Project. The Draft and Final EIR indicated that there would not be any significant environmental impacts as a result of the project. Potentially significant but mitigable impacts include adverse impacts to aesthetics, agriculture and forestry resources, air quality; biological resources; cultural resources; geology and soils, hazardous materials; hydrology and water quality; land use and planning; noise and vibration; transportation; and wildfire. In 2020, GBJPA adopted a Mitigation Monitoring and Reporting Program (ESA, 2020c).

Economic Feasibility Review

Economic feasibility is concerned with the economic benefits associated with project physical benefits in comparison to project costs. Economic benefits should equal or exceed project costs. The costs and benefits provided demonstrate the project is economically feasible.

Staff also 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 2021 project is different from the 2017 project primarily because additional water supplies are used to recharge, store, extract and deliver water for agricultural and M&I use. Total water supply developed by the project is about double that shown in 2017.

Benefits

Non-public benefits are water supply, groundwater, and permanent crop maintenance. Public benefits include fish species recovery and emergency response.

Water supply benefits have recently been updated by including CVP Section 215 water. Page 68 of the Feasibility Report (GBJPA et al, 2021) states: "According to the updated modeling of Article 21 and Section 215 water by MBK Engineers, the project will provide an annual expected additional supply of 8,200 AF per year on an average annual basis under 2030 future conditions, and 10,100 AF per year on an average annual basis under 2070 future conditions."

Non-Public Benefits

Water Supply (Article 21 Water)

Page 68 states "Under 2030 future conditions, the average annual agricultural water supply benefits to Rosedale and DRWD are expected to be 2,000 AF and 906 AF, respectively. The total average annual agricultural water supply provided by the Article 21 water as result of the project is estimated to be 2,900 AF." The applicant's Excel® workbook titled "Appendix_G_WSIP_Econ Benefits_updated_11-22-21" shows in the tab labeled "WSIP Benefits" 2,883 AF and 961 AF of Article 21 supply for agricultural and M&I supply, respectively, under 2030 conditions, for a total of 3,844 AF in 2030 conditions. The same spreadsheet shows Article 21 agricultural and M&I supply increasing to 3,063 and 1,021 in 2045 conditions and 3,363 and 1,121 AF in 2070, respectively.

M&I supplies for IRWD are valued using "Met [Metropolitan Water District of Southern California] tier 1 rates, inflated at Met projected escalation" (tab labeled "WSIP benefits" column AB). The Feasibility Report page 70 states: "According to the forecast of Full Service Untreated Tier 1 water, prices are projected to increase by an average of 5.6% from 2016 to

2026. Over the same period, average CPI inflation is projected to be 2.3%, resulting in an average real price increase of 3.3%. This rate of increase was applied to the MWD Tier 1 rates to 2045 and then held constant through the life of the Project.” However, the spreadsheet tab labeled “WSIP Benefits” and column labeled “Met tier 1 rates, inflated at Met projected escalation (2015 \$) (applied to urban share)” increases the MWD tier 1 rate from 2030 to 2045 between 9.42 percent and 4 percent. This rate of increase is based on the rate of increase in agricultural rates in column Y which is simply a column of numbers. For its revised analysis, staff adjusts the M&I valuation by using the stated rate of growth of 3.3 percent for the MWD rates and setting the beginning 2030 price equal to that used for the non-article 21 supplies (\$668/AF).

The Feasibility Report notes that “the Article 21 water stored in the Project for IRWD as a landowner in DRWD would be exchanged for SWP Table A water on a 1-for-1 basis to IRWD.” In the applicant’s Excel® file “Appendix_J_Cost_Allocation_Supporting_Documentation_updated_112221.xls” the tab labeled “DJA_O&M_Cost_Estimate” shows that the cost of Article 21 water is included in Project costs. However, there does not appear to be a cost for the SWP Table A water required for this exchange. Staff believes the incremental cost of providing the Table A water to IRWD rather than DRWD should be included. For its revised analysis, staff estimates that the additional variable cost of conveying SWP water from DRWD to Metropolitan is about \$150 per acre-foot. Staff includes this conveyance cost.

Staff is unable to confirm the unit values applied to agricultural water.

“Appendix_G_WSIP_Econ Benefits_updated_11-22-21” column AJ of the tab labeled “WSIP benefits”, has a time series of numbers labeled “Delta Export value, averaged across all WY types (2015 \$).” Column Y, used to value the agricultural water, which reproduces the numbers in column AJ is labeled “Delta export values weighted by project supply year types (2015 \$).” These average unit values presumably reflect the mix of water year types in agricultural supply as they change over the planning horizon. However, staff cannot replicate and confirm the calculations.

With the adjustments to the valuation of Article 21 M&I supply described above, the present value of all Article 21 supplies is \$61.4 million.

Water Supply Benefit (Section 215 Water)

The Feasibility Report states on page 69: “Under 2030 future conditions, the average annual Section 215 water supply benefits to IRWD and Rosedale are expected to be 2,050 AF and 2,350 AF, respectively.” The economic analysis spreadsheet “Appendix_G_WSIP_Econ Benefits_updated_11-22-21.xls”, in the tab labeled “WSIP Additional Benefits”, shows these agricultural and M&I supplies increasing to 2,382 and 2,382 AF in 2045 and to 2,429 and 2,704 in 2070, respectively. Agricultural supplies are valued using the same unit values as applied to

the Article 21 water (agricultural rates in column Y of “WSIP Benefits” which is a column of numbers), and M&I supplies are valued using MWD Tier 1 untreated rates increasing 3.3 percent to 2045.

Again, it appears that a cost for conveyance of the M&I water to IRWD has not been included. For its revised analysis, staff includes \$150 per acre-foot for the additional variable cost of this water delivered to IRWD. With this adjustment, the benefit of the Section 215 water is \$76.8 million.

Groundwater

Groundwater improvement benefits are based on the alternative cost of recharging groundwater. Expected net recharge (net of extractions and losses) is 288 to 292 AF per year. The estimated net present value of the increased groundwater level benefit over the life of the Project in 2015 dollars is \$3.7 million. This is a conservative estimate because groundwater levels are based on 2018 supplies and do not appear to include the additional Section 215 water.

Permanent Crop Maintenance Benefit

The applicant claims an agricultural impact benefit based on “preservation of permanent agricultural crops that would need to be replaced with low-value crops if water from the Project were not available” (Appendix G, page 4). Appendix G also states: “If the water from the project is not available in those dry years, we estimate that 1,820 acres would have to be planted in field crops (likely cotton or alfalfa) that could be fallowed in those years.”

The preservation of permanent crop land is assigned a benefit using value added estimates from a regional economic impact model called IMPLAN®. Page 5 of Appendix G describes the analysis:

“The most recent report on cotton in the southern San Joaquin Valley is from 2012 and estimates the gross returns per acre at \$2,055.9. Permanent tree crops add economic benefits in every year and establishment costs are already sunk. For almonds, the most recent report is from 2016 and estimates the gross returns at \$6,750. We use the overall output value for these two crop categories as an input into the IMPLAN model. Based on this scenario, IMPLAN estimates direct impacts of crop conversion at \$2.6 million per year in 2015 dollars on a value-added basis.”

Generally, a regional impact model such as IMPLAN does not provide estimates of benefits as defined in the Technical Reference. In fact, page 5-10 of the Technical Reference specifically directs that such models not be used for benefits analysis. Value added is not necessarily the same thing as economic benefit. The value-added components of labor income, proprietor

income, employee compensation, and other property income are related to economic benefits, but additional information regarding factors such as opportunity costs, unemployment, mobility, and regional resource constraints would need to be considered.

Instead, staff has used a crop budget approach where the net return from farming Pima cotton is compared to the net returns from farming almonds. If the water supply reliability from the project were able to preserve almond acreage, then 1,820 acres of almonds would continue producing rather than being converted to cotton. In this perspective the establishment cost of the almonds can be ignored initially (the orchard is already planted), but then must be included when almond stands must be reestablished (staff assumes this occurs 15 years in the future for purposes of its analysis). Because irrigated land rent in this region is largely dependent on the value of water and the purpose is to estimate the benefit of water supply, staff removed land rent from both crop costs. The budgets' land rent for almonds is \$1,200 per acre and \$404 for cotton.

In revising agricultural impact benefit the staff utilized two crop budgets which were also used in an earlier version of the Feasibility Report.

University of California Agriculture and Natural Resources Cooperative Extension (UCCE). 2019 Sample Costs to Establish an Orchard and Produce Almonds. San Joaquin Valley South. Double-line Drip Irrigation. Agricultural Issues Center, U.C. Davis Department of Agricultural and Resource Economics. Davis, CA.

UCCE. 2012. Sample Costs to Produce Cotton Pima Variety San Joaquin Valley. U. C. Davis Department of Agricultural and Resource Economics. Davis, CA.

From a 2012 UCCE crop budget (with cost and returns indexed to 2015 dollars), the annual net return for Pima cotton is \$662 per acre (excluding the land rent expense). From a 2019 UCCE budget, the net return for almond production with the establishment cost (excluding establishment cost and rent expense) is \$2,493 per acre (also adjusted to 2015 dollars). After an orchard re-establishment period after fifteen years using the UCCE budget estimates, the net return for almonds would then return to \$2,493 per acre. The net benefit of 1,820 acres of almonds versus Pima cotton over the 50-year project life would be \$55.58 million in present value.

Staff notes that this benefit is counted in addition to the water supply benefit. WSIP unit values are based on SWAP and water transfer prices. Both methods produce estimates of the unit value of water that are affected by water supply variability. Water transfer prices respond to the benefit of preserving permanent crops. Therefore, it is not clear that all of the permanent crop maintenance benefit is an additional benefit beyond what would already be captured in water transfer prices and the unit water values.

Public Benefits

Incidental Wetland Habitat

The project provides a wetland habitat benefit in months when recharge is occurring. The claimed benefit of \$100.41 million uses an alternative cost method which is based on a wetlands creation project. The alternative cost includes a land easement cost and water cost. This benefit has increased since the 2017 WSIP application because more water is being recharged so the alternative cost of acquiring the water has also increased.

Staff, in reviewing the applicant's spreadsheet analysis, found that the present value calculation did not include the cost of the land easement required for the alternative wetlands creation project. Cell BL3 in the tab labeled "WSIP Benefits" in the file titled "Appendix_G_WSIP_Econ Benefits_updated_11-22-21" does not count the cell BL24 which includes the easement cost. For its revised analysis, staff has included the easement cost as part of the avoided cost.

The amount of water being applied for the wetlands creation project is large relative to the 2017 application. In 2017, the annual average amount of water applied on 1,280 acres for wetlands creation was 4,400 to 4,500 AF, on average. In the 2021 Feasibility Report, the amount is 11,300 to 12,800 AF.

For its analysis of wetland benefit, the applicant uses the same acreage (1,280 acres) and the same water recharge amounts as the proposed project itself. Staff is concerned that these applied water estimates either overstate the quantity of water required to create the wetlands, or the applied water would provide a groundwater recharge benefit that would offset part of the cost of the water supplied to the wetland.

The proposed project would use recharge basins which are designed and maintained to move water into the ground. However, an alternative wetland project would not be managed that way. Wetland location and management selected to retain water could provide the same number of acre-months of inundated habitat as the proposed project with substantially less water. Therefore, the analysis overstates the alternative cost required to obtain the wetland benefit.

For its revised analysis, staff assumes that the quantity of water required to obtain the same duration and acreage of created wetland benefit as the project could be half that recharged by the project. With this assumption, and with the land easement cost included as part of the avoided cost, the incidental wetland habitat benefit is \$62.15 million.

Ecosystem Benefit-Fish Species Recovery

The applicant claims ecosystem benefits for salmon of \$22.32 million, similar to those as adjusted by staff in 2017; \$21.27 million. The 2021 revised analysis performed for the Feasibility

Report shows that the Project would provide eight ecosystem pulses of 18,000 AF in April during dry or critical years in the 2030 condition, and in 5 years in dry conditions in the 2070 condition, out of 76 years (1922 to 2003).

For its revised analysis, staff adjusted this benefit because the analysis assumed that 63 percent of pulse flows would be provided in dry years and 38 percent in critical years. Appendix D (MBK Memo) Table 1 shows the 2030 pulse flow amounts rounded off to 8 thousand acre-feet (TAF), and 1 TAF in dry and critical years, respectively. Appendix J, the cost allocation workbook sheet "WSIP_2030_MBKOperations," shows these amounts as 7.8 TAF and 1.5 TAF. In the 2070 condition, all pulse flows are provided in dry years. Staff's revised estimate is \$17.76 million. The applicant also provides an estimate based on the value of fish (\$48.2 million) which supports the conclusion that the value of the physical benefit is worth the alternative cost.

Emergency response benefits

The applicant claims emergency response extended drought benefits of \$13.21 million, and emergency response delta failure benefits of \$9.45 million. These benefits are similar to or less than those as adjusted by staff in 2017; \$10.99 million and \$17.80 million, respectively. Benefits have not been updated to account for the additional stored water enabled by Section 215 supplies. The applicant states and staff agrees that inclusion of this water might increase the emergency response benefits. The applicant conducted hydrologic analysis to show that "water is available for Delta emergency response without impacting other project supply accounts."

Unquantified benefits

The Feasibility Report claims these unquantified benefits produce additional benefits 1) potential integration with other projects 2) improved environmental conditions, specifically for green sturgeon and steelhead fish 3) optional loaning of water supplies and 4) increased groundwater level benefits. For potential integration, Sites reservoir is discussed. It may be speculative to claim a benefit based on a proposed project. For other ecosystem benefits, the ecosystem pulse flows should help these species, but the alternative cost approach to benefits valuation already covers other species rather than being additive. Under loaning of supplies, uncounted potential for additional pulse flows is mentioned, but this would come at an additional cost. The analysis may have undercounted groundwater and emergency response benefits as the CVP Section 215 supplies were not included in the underlying hydrologic analysis.

Staff notes that, for another project which had a similar pattern of south coast water supply over year types, it allowed unit water supply values in the South Coast to be influenced by

recent avoided water recycling costs. Use of this method might increase the municipal water supply benefits and improve economic feasibility of the Kern Fan project.

Project Costs

Costs in 2017 were \$206.7 million in present value terms, which were primarily capital costs (\$171 million) plus the present value of O&M costs (\$17 million). The Feasibility Report cost of \$258.6 million includes \$196.3 million of capital costs, \$18.6 million of interest during construction, \$33.1 million of O&M, and \$10.5 million of replacement costs.¹ All costs are provided in 2015 dollars.

Benefit-Cost Ratio

Table 1 below shows benefits and costs of the project as provided by the applicant in its 11/22/2021 Feasibility Report and as adjusted by staff. Staff estimates that the project has a present value of benefits of \$296.15 million against costs of \$258.6 million for a net benefit of \$37.55 million and a BCR of 1.15.

Table 1. Kern Fan Project Benefits and Costs, Applicant and Adjusted by Staff (in million \$ present value)		
	Applicant Feasibility Report	Staff Adjusted
Non-public Benefits		
Water Supply Benefits (Article 21)	\$73.01	\$60.27
Groundwater	\$3.77	\$3.77
Non-Article 21 water supply	\$82.50	\$73.96
Value of permanent crops maintenance	\$61.04	\$55.58
Public Benefits		
Environmental Benefits—Salmon	\$22.32	\$17.76
Environmental Benefits--Incidental wetland habitat	\$100.41	\$62.15
Emergency Response--Extended drought	\$13.21	\$13.21
Emergency Response--Delta failure	\$9.45	\$9.45

¹ Feasibility Report, Table 5.

Total Benefits	\$365.72	\$296.15
Total PV Costs	\$258.60	\$258.60
Net Benefits	\$107.12	\$37.55
B/C	1.41	1.15

Financial Feasibility Review

Financial feasibility means that financial resources will be available to construct and operate the project as planned. Staff have reviewed all planned cost contributions from all sources to determine if financing appears adequate to build and operate the project over its planning horizon. Staff’s review indicates:

- Funds from all sources are sufficient to cover all costs based on the applicant’s commitment to pay non-MCED costs.
- Based on the applicant’s analysis of non-Article 21 water available for recharge and its other non-public benefits, costs allocated to the non-public beneficiaries (the applicants) do not exceed the non-public benefits that they receive. Staff notes that future cost increases due to inflation may also need to be borne by the applicants, but these are currently unknown.
- The applicants are public agencies with legal authority to charge rates and assessments to their customers as necessary to cover the costs they have committed to pay for the proposed project which supports financial feasibility.

The applicant has formed a Joint Powers Authority (GBJPA) and stated its commitment to pay its cost share, which is also accepted as evidence of financial feasibility for related non-public benefits. The applicant states its commitment on page 83 of its Feasibility Report (GBJPA et al, 2021):

“The GBJPA, as project sponsor, understands the Project funding commitment and is responsible for providing the difference between the WSIP funding award and the total project cost to ensure a fully funded project. The GBJPA which includes members IRWD and Rosedale will fund the non-public benefits in the amount of \$172.9 million, as shown below in Table 11. The Boards of IRWD and Rosedale each adopted resolutions which commit each agency to fully funding the project (See Appendix A).”

The regulations (Technical Reference section 3.5) also require that beneficiaries of non-public benefits are allocated costs that do not exceed the benefits they receive. Table 12 (page 87) of the Feasibility Report compares cost shares to benefits for the GBJPA, showing that benefits exceed allocated costs. After the benefit adjustments described in the section on Economic Feasibility and shown in Table 1 above, staff estimates that benefits to the GBJPA still exceed

the costs allocated to it. In addition, the project's current MCEd of \$87.8 million (after adjustment by the Commission) remains supported by monetized public benefits and consistent with Water Code section 79755(a)(2).

Commission Decision

The Commission can decide to make a determination that the Kern Fan Groundwater Storage Project is feasible. If the Commission determines that the Kern Fan Groundwater Storage Project 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 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 the GBJPA which includes the Kern Fan Groundwater Storage Project Feasibility Report, a letter of commitment to fund the project from the GBJPA, draft and final environmental documentation, staff finds that the GBJPA has provided documents that meet the requirements of Water Code section 79757 including completed feasibility documents; the Kern Fan Groundwater Storage Project 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.

Contact

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