

State Water Resources Control Board

TO: Joseph Yun, Executive Officer
California Water Commission
901 P Street, Room 314
Sacramento CA

FROM:  Eileen Sobeck
Executive Director

DATE: May 21, 2018

SUBJECT: WATER STORAGE INVESTMENT PROGRAM (WSIP) - RECOMMENDATIONS
FOR RELATIVE ENVIRONMENTAL VALUES OF WATER QUALITY BENEFITS

With this letter and attached project assessments, the State Water Resources Control Board (State Water Board or Board) submits to the California Water Commission (Commission) the recommended overall water quality relative environmental value (REV) project scores for the eligible Water Storage Investment Program (WSIP) Proposition 1 applications with claimed water quality benefits.

The State Water Board recognizes the value of additional surface water and groundwater storage in California. The WSIP represents an important opportunity to invest in California's water future, ensure a more reliable and resilient water supply, and restore important species and habitat. The Board continues to acknowledge the complexity of the task before the Commission. These scores reflect the significant work completed by the Commission, technical review teams, and applicants to date. They are an important step towards ensuring the WSIP-funded water storage projects achieve their stated water quality and public benefits.

Per the language of Proposition 1 and the Commission's WSIP regulations, the State Water Board is tasked with determining a project's relative environmental value for water quality improvements as they relate to the State Water Board's nine water quality priorities.¹ (The water quality priorities focus on water quality improvements associated with surface water, groundwater, and conjunctive use projects.) Applicants aligned their claimed water quality benefits with one or more of the priorities. The State Water Board fully evaluated and scored the claimed monetized and non-monetized water quality benefits.

State Water Board staff used the water quality REV criteria² to assess the extent to which each claimed priority would be achieved, as supported by the application. Projects were evaluated based only on claimed priorities to (1) ensure an equitable comparison across

¹ Listed in California Code of Regulations, title 23, section 6007, subsection (c), Table 3.

² Listed in California Code of Regulations, title 23, section 6007, subsection (c), Table 4.

project types (i.e., surface water, groundwater, or conjunctive use), and (2) not penalize projects addressing a limited number of priorities.

The enclosed project assessments summarize the include the State Water Board's technical review score packages for the WSIP applications. The State Water Board calculated an overall water quality REV project score for each project based on the claimed water quality priorities and REV criteria.

Enclosures: Water Quality REV Assessments

cc: [via email only]

Amy Young, Program Manager
California Water Commission
Amy.Young@water.ca.gov

Gordon Burns, Undersecretary
California Environmental Protection Agency
Gordon.Burns@calepa.ca.gov

Felicia Marcus, Chair
State Water Resources Control Board
Felicia.Marcus@waterboards.ca.gov

Michael Lauffer, Chief Counsel
State Water Resources Control Board
Michael.Lauffer@waterboards.ca.gov

Eric Oppenheimer, Chief Deputy Director
State Water Resources Control Board
Eric.Oppenheimer@waterboards.ca.gov

George Kostyrko, Director
Office of Public Affairs
George.Kostyrko@waterboards.ca.gov

Lily Weaver, Staff Counsel
State Water Resources Control Board
Lily.Weaver@waterboards.ca.gov

James Nachbaur, Director
Office of Research, Planning, and
Performance
State Water Resources Control Board
James.Nachbaur@waterboards.ca.gov

Katheryn Landau, Senior Environmental
Scientist
Office of Research, Planning, and
Performance
State Water Resources Control Board
Katheryn.Landau@waterboards.ca.gov

Water Quality Relative Environmental Value Assessment Sacramento County Regional Sanitation District – South Sacramento County Agriculture and Habitat Land Recycled Water, Groundwater Storage, and Conjunctive Use Program

Project Description

The proposed South Sacramento County Agriculture and Habitat Lands Recycled Water, Groundwater Storage, and Conjunctive Use Program (proposed Program) has the potential to provide a reliable regional water resource by supplying up to 50 thousand acre-feet per year (TAF/y) of recycled water from the upgraded Sacramento Regional Wastewater Treatment Plant. Recycled water from the proposed Program would be used to irrigate up to 16 thousand acres of agricultural and habitat lands in Sacramento County in lieu of groundwater. This would reduce groundwater withdrawals and thereby allow groundwater levels in the proposed Program area to recover. Development of a groundwater bank and increased groundwater storage would allow for conjunctive management of groundwater and surface water. The primary goals of the proposed Program are to provide recycled water to agriculture, contribute to a more resilient water supply for the county and surrounding region, and provide significant multiple ecosystem benefits.

Sacramento County Regional Sanitation District (Regional San) claimed that the proposed Program would address the following one State Water Resources Control Board (State Water Board) water quality priority:

- Priority 5: Improve salinity conditions in surface water bodies that are not meeting water quality standards for sodium, total dissolved solids, chloride, or specific conductance/electrical conductivity.

Scoring Process

The State Water Board staff calculated a Relative Environmental Value (REV) for the water quality improvements of each project, as required by California Code of Regulations, title 23, section 6007, subsection (c). This calculated score is referred to as the Overall Water Quality REV Project Score in this document. Water quality priorities are listed in Table 3 of the regulation; water quality REV criteria are listed in Table 4 of the regulation. Staff independently evaluated the information provided in the application for each claimed priority and assigned REV criteria points using the following scoring guidance:

- 4 points: claimed improvement would be fully provided by the project, and is fully supported by the application.
- 1 to 3 points: claimed improvement would be partially provided by the project, and is partially or fully supported by the application.
- 0 points: claimed water quality improvement associated with a priority would not be provided by the project, and is not supported by the application.
- n/a: REV is not applicable to the claimed priority for this project.

A priority score was calculated for each claimed priority; it is the total REV criteria points for that priority. One additional point was assigned for each claimed priority (REV 1 Points). Together,

the priority scores and REV 1 Points sum to the project's Total Priority Score. The Total Priority Score was divided by the Total Maximum Points Possible to calculate the Overall Water Quality REV Project Score.

Summary of Recommendations to the California Water Commission

The State Water Board assigned the proposed Program an overall water quality REV project score of 88.9%. This score is based on the level of improvement provided by the salinity reduction (Priority 5) and the quality of the application. The proposed Program meets the objectives, goals, and requirements of WSIP. The application was well documented, thorough, and included adequate supporting information for most REV criteria questions to allow technical review. The overall water quality REV priority score was reduced from 100% because the size of the improvement (REV 2 - magnitude) is small and because additional documentation for some of the REV criteria questions were needed to support the claimed benefits.

Table 1 summarizes the water quality REV criteria points assigned to each claimed priority, priority scores, and the overall water quality REV project score. Technical review notes for water quality REV criteria points are summarized in Table 2.

Discussion of claimed priorities:

Priority 5: Improve salinity conditions

Based on the technical review of the information provided in the application, staff assigned Priority 5 has a priority score of 31 points of out a maximum possible 36 points. As described in the application, the proposed Project will improve salinity conditions in the Sacramento River and Delta waterways. A portion of the discharge from the wastewater treatment plant will be diverted from the river and used for agricultural irrigation. This diverted water will result in reduced total dissolved solids (TDS) loading to the Sacramento River and Delta waterways. The reduction in mass loading of salts to the river will incrementally lower the electrical conductivity in the lower Sacramento River and downstream waterways of the Sacramento-San Joaquin Delta. The applicant's modeling analysis shows the proposed Project would result in slight reductions in ambient salinity levels in the Sacramento River and the Delta.

Table 1. Scoring matrix for claimed water quality priorities.

Priorities	Water Quality Relative Environmental Value (REV) Criteria											Priority Score	Maximum Points Possible
	REV 2	REV 3	REV 4	REV 5	REV 6	REV 7	REV 8	REV 9	REV 10	REV 11	REV 12		
P1													
P2													
P3													
P4													
P5	2	4	3	4	4	4	4	4	n/a	2	n/a	31	36
P6													
P7													
P8													
P9													
REV 1 Points											1		
Total											32	36	
Overall Water Quality REV Project Score											88.9%		

Notes:

Water Quality REV Criteria: REV 1: Number of different water quality priorities for which corresponding public benefits are provided by the project; REV 2: Magnitude of water quality improvements; REV 3: Spatial scale of water quality improvements; REV 4: Temporal scale of water quality improvements; REV 5: Inclusion of an adaptive management and monitoring program that includes measurable objectives, performance measures, thresholds, and triggers for managing water quality benefits; REV 6: Immediacy of water quality improvement actions; REV 7: Immediacy of the realization of water quality benefits; REV 8: Duration of water quality improvements; REV 9: Consistency with water quality control plans, water quality control policies, and the Sustainable Groundwater Management Act (2014); REV 10: Connectivity of water quality improvements to areas that support beneficial uses of water or are being managed for water quality; REV 11: Resilience of water quality improvements to the effects of climate change and extended droughts; REV 12: Extent to which undesirable groundwater results that are caused by extractions are corrected. (Cal. Code Regs., tit. 23, § 6007, subd. (c), Table 4.)

Overall Water Quality REV Project Score = Total Priority Score / Total Maximum Points Possible.

Technical reviewers assigned REV Criteria points to each claimed priority using the following scoring guidance:

- 4 = claimed improvement would be fully provided by the project and is fully supported by the application;
- 1-3 = claimed improvement would be partially provided by the project, and is partially or fully supported by the application;
- 0 = claimed improvement would not be provided by the project and is not supported by the application;
- n/a = REV is not applicable to the claimed priority for this project.

Table 2. Technical review application scoring notes for claimed water quality benefits.

REV Criteria ¹	Score	Notes
Priority Claimed: Priority 5 (Improve conditions in surface water bodies that are not meeting water quality standards for salinity conditions.)		
REV 2: Magnitude	2	Stated the program will provide measurable and achievable electrical conductivity (EC) water quality improvements to 303(d)-listed water bodies. Based on the information provided, the expected EC improvements would not provide a significant water quality improvement. Additionally, the magnitude of the improvement associated with the proposed Project would be minimal.
REV 3: Spatial	4	Detailed information on the spatial extent of salinity improvement was provided. It is projected that measurable salinity improvements will occur in multiple Delta water bodies.
REV 4: Temporal	3	Information on the temporal extent of salinity improvements was provided. Measurable salinity improvements were projected to occur throughout the year, but the timing of these improvements was not specified. Additional information is needed to assess the timing for specific salinity improvements.
REV 5: Adaptive Management	4	The adaptive management information provided in the application incorporates a flexible decision-making process. Future monitoring of the progress is planned for and supported.
REV 6: Improvement Action	4	Detailed information was provided, including when actions would commence, and the number of months anticipated between grant encumbrance and first recycled water delivery to the program area (in 2023). The EchoWater Project is currently underway. Based on the information provided, 2023 is a reasonable date.
REV 7: Realization of Benefit	4	Detailed information was provided, including the number of months to full realization of water quality benefits. Full implementation of the proposed Program is expected in October 2030. Based on the information provided, this is a reasonable date. The stated reduction in salt loading to the Sacramento River would be immediate.
REV 8: Duration	4	The duration for the proposed Program was claimed to be indefinite. If the reverse osmosis facility operates as planned, with a recycled water delivery of at least 50 TAF/y, there is no reason to suspect that the duration would not be indefinite. This indefinite timeline assumes regular operation and maintenance will be performed according to the information provided in the application and that the identified measures will be taken, as necessary, for other potential unexpected project issues.

REV Criteria ¹	Score	Notes
REV 9: Consistency	4	Consistency is well-documented in the application. Based on the information provided, the proposed Program is consistent with permit requirements, the State Water Board's Recycled Water Policy, Integrated Regional Water Management Plans (IRWMPs), Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), and the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan). The proposed Program is supportive of TMDL-driven efforts to reduce salinity (TMDLs not set yet); ongoing efforts to address water quality impairments in the four (4) Delta waterways on the State's 303(d) list of impaired water bodies; and addresses the protection of beneficial uses specified in the Basin Plan (water contact and non-water contact recreation, designated fish and wildlife, and groundwater recharge). The applicant is in the process of seeking approval of a water right change petition from the State Water Board, Division of Water Rights.
REV 10: Connectivity	n/a	n/a
REV 11: Resilience	2	Salinity changes due to climate change were considered in the salinity models. The application, however, lacked some of the requested information, including how climate risk factors were included in the proposed Program's siting and design. An explanation as for why some identified risk factors were not applicable was not provided.
REV 12: Undesirable Groundwater Results	n/a	n/a
Other Comments		Overall, the application was well documented, thorough, and provided adequate supporting information. The technical review team could understand the objective, purpose, and potential water quality improvements provided by the proposed Program.

Notes:

¹ See Table 1, Footnote 1 for water quality REV criteria definitions.

Technical reviewers assigned REV Criteria points to each claimed priority using the following scoring guidance:

- 4 = claimed improvement would be fully provided by the project and is fully supported by the application;
- 1-3 = claimed improvement would be partially provided by the project, and is partially or fully supported by the application;
- 0 = claimed improvement would not be provided by the project and is not supported by the application;
- n/a = REV is not applicable to the claimed priority for this project.