

Las Posas Valley Basin Optimization Plan

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Prepared for:

**FOX CANYON GROUNDWATER MANAGEMENT AGENCY
LAS POSAS VALLEY BASIN WATERMASTER**

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AF	Acre-Feet
AFY	Acre-Feet per Year
ASR	Aquifer Storage and Recovery
CPI	Consumer Price Index
City	City of Simi Valley
CMWD	Calleguas Municipal Water District
ELPMA	East Las Posas Management Area
ET	Evapotranspiration
FCGMA	Fox Canyon Groundwater Management Agency
Judgment	Judgment in Las Posas Valley Water Rights Coalition, et al., v. Fox Canyon Groundwater Management Agency, Santa Barbara Sup. Ct. Case No. VENC100509700
LPV	Las Posas Valley Groundwater Basin (DWR Basin No. 4-008)
MWC	Mutual Water Company
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
PAC	Policy Advisory Committee
RWQCB	Regional Water Quality Control Board
SGMA	Sustainable Groundwater Management Act
SMP	Salinity Management Pipeline owned and operated by CMWD
SVWQCP	Simi Valley Water Quality Control Plant
TAC	Technical Advisory Committee
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
VCWWD-1	Ventura County Waterworks District No. 1
VCWWD-19	Ventura County Waterworks District No. 19
WLPMA	West Las Posas Management Area
WWDs	Ventura County Waterworks Districts

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1 Introduction

This is the initial Basin Optimization Plan prepared in conformance with the Judgment adjudicating groundwater rights in the Las Posas Valley (LPV) Groundwater Basin. The purpose of this Basin Optimization Plan is to evaluate and select the *“Basin Optimization Projects that are likely to be practical, reasonable, and cost-effective to implement prior to 2040 to maintain the Operating Yield at 40,000 AFY [acre-feet per year] or as close thereto as achievable”* (Judgment § 5.3). This Basin Optimization Plan reviews the Basin Optimization Projects in order to (1) identify the projects that should be funded and scheduled for implementation in the next five years; and (2) identify the projects to be included in the initial Basin Optimization Yield Study. The Basin Optimization Yield Study will establish the Rampdown Rate (Judgment § 4.10.1.4).

Both the Basin Optimization Plan and the Basin Optimization Yield Study must be reviewed and updated, with Committee consultation, at least every five years (Judgment § 5.3.4). Additionally, the Basin Optimization Plan can be amended or additional projects included if they meet the required criteria, as determined in Watermaster’s discretion, subject to Committee Consultation (Judgment § 5.3.2.2).

1.1 LPV Judgment

On July 10, 2023, the Santa Barbara Superior Court issued a statement of decision adopting a judgment in Las Posas Valley Water Rights Coalition, et al., v. Fox Canyon Groundwater Management Agency, Santa Barbara Sup. Ct. Case No. VENC100509700 (Judgment). The Judgment adjudicates all groundwater rights in the LPV Basin and provides for the LPV Basin’s sustainable management pursuant to the Sustainable Groundwater Management Act (SGMA). The Judgment appoints Fox Canyon Groundwater Management Agency (FCGMA) as the Watermaster to implement and administer the Judgment.

As outlined in the Judgment, Watermaster, in consultation with the LPV Policy Advisory Committee (PAC) and Technical Advisory Committee (TAC), is responsible for developing a Basin Optimization Plan for the LPV Basin. The Basin Optimization Plan is designed to identify, evaluate, and prioritize projects that are “practical, reasonable, and cost-effective to implement prior to 2040 to maintain the Operating Yield¹ at 40,000 AFY or as close thereto as achievable” (Judgment § 5.3.2.2). Consistent with this objective, the Basin Optimization Plan is required to include:

- *The criteria for determining the priority and feasibility of each Basin Optimization Project. Such criteria shall include, but not be limited to, the estimated amount of yield augmentation, cost effectiveness, cost feasibility, technical/engineering feasibility, project implementation timing, benefits relative to the achievement of Sustainable Groundwater Management, and whether the collaboration, cooperation, or participation of the FCGMA, Calleguas, WWDs, United Water Conservation District, or the Water Right Holders is necessary or desirable for implementation of the Basin Optimization Project. Using the approved*

¹ The cumulative amount of Allocated Groundwater that may be sustainably Extracted from the Basin for Use in any particular Water Year under the terms of this Judgment, excluding the Use of any Groundwater pursuant to the right of Carryover. Consistent with the definition of “Total Safe Yield” in the Phase 1 Order, the components of the Operating Yield include all native and non-native sources of water within the Basin, or within either subbasin (as the context requires), presently and in the future, including native Groundwater, surface water underflow, Return Flows from the use of imported water within the Basin, recharge from treated wastewater, recharge from septic systems, storm water recharge (intentional or otherwise), recharge from natural and non-natural sources originating inside or outside the Basin, excepting augmented yield physically existing within, and recoverable from, the Basin as a result of the Calleguas ASR Project, if any.

project criteria following Committee Consultation, Watermaster shall select Basin Optimization Projects for consideration in the Basin Optimization Plan (Judgment § 5.3.2.1);

- *A description of Basin Optimization Projects that are likely to be practical, reasonable, and cost-effective to implement prior to 2040 to maintain the Operating Yield at 40,000 AFY or as close thereto as achievable. Any additional projects to be included in the Basin Optimization Plan, or any amendment thereto, must satisfy the criteria established under Section 5.3.2.1 as determined in Watermaster's discretion, subject to Committee Consultation (Judgment § 5.3.2.2);*
- *An analysis of whether any of the Basin Optimization Projects (i) are consistent with SGMA and the achievement of Sustainable Groundwater Management, and (ii) will prevent or alleviate, or cause or exacerbate, Undesirable Results or Material Injury (Judgment § 5.3.2.3);*
- *A prioritization schedule of the Basin Optimization Projects to be implemented (Judgment § 5.3.2.4);*
- *A schedule for the Basin Optimization Projects which are to be implemented to be evaluated, scoped, designed, financed, and developed. If the collaboration, cooperation, or participation of the FCGMA, Calleguas, WWDs, United Water Conservation District, or the Water Right Holders is necessary or desirable for any evaluation, scoping, design, financing, and development of any Basin Optimization Project, the schedule shall so consider the time necessary for such collaboration or cooperation (Judgment § 5.3.2.5); and*
- *A five-year budget for the costs of capital improvements, and the operation and maintenance, of the Basin Optimization Projects. The five-year budget shall include a determination of the annual costs of Basin Optimization Projects implemented or in the process of being implemented (Judgment § 5.3.2.6).*

1.2 Summary of Projects Evaluated

Projects evaluated in this Basin Optimization Plan have been identified by FCGMA and stakeholders via the Judgment, the LPV Groundwater Sustainability Plan (GSP), and the first Periodic Evaluation of the LPV GSP. Sections 2 through 5 present the project evaluations; project ranking and prioritization and projects selected for inclusion in the Basin Optimization Plan; schedule for implementation of the selected projects; and an estimated 5-year budget through fiscal year 2029-30 (ending June 30, 2030) for the selected projects. A total of nine projects were evaluated for potential inclusion in the Basin Optimization Plan (Table 1).

Table 1. Summary of Projects Evaluated

Project No.	Project Title	Description	Water Supply / Yield Augmentation	Project Proponent	Source(s)
1	Arroyo-Simi Las Posas Arundo Removal	<i>Arundo donax</i> removal, and periodic maintenance, from Arroyo Simi-Las Posas corridor	<500 AFY (up to 2,680 AFY with another project)	FCGMA	Judgment No. 1 (§ 5.4.1) GSP Project No. 2 GSP Evaluation Project No. 2
2	Purchase of Imported Water from CMWD for Basin Replenishment ^a	Purchase of 1,760 AFY of imported water from CMWD for delivery to Zone MWC and VCWWD-19, and 1,380 AFY to VCWWD-1, in lieu of groundwater extraction	3,140 AFY	FCGMA	Judgment Nos. 1&2 (§§ 5.4.2 & 5.4.9) GSP Project No. 1 GSP Evaluation Project No. 1
3	Arroyo Las Posas Storm Water Capture and Recharge	Storm water capture and recharge at existing Moorpark Water Treatment Plant percolation ponds to increase recharge to the ELPMA	<500 AFY (up to 2,000 AFY with another project)	VCWWD-1	Judgment No. 3 (§ 5.4.3) GSP Evaluation Project No. 6
4	Moorpark Desalter	Construction of a desalter well field, conveyance infrastructure, and treatment system to manage water quality and increase recharge in southern ELPMA	Approximate net loss of 2,800 AFY (up to 4,680 AFY with another project)	VCWWD-1	Judgment No. 4 (§ 5.4.4) GSP Evaluation Project No. 5
5	Arroyo Simi-Las Posas Water Acquisition	Formalize an agreement between FCGMA and the City of Simi Valley to maintain discharges from SVWQCP to Arroyo Simi-Las Posas to maintain recharge to the ELPMA	Prevent approximately 2,200 AFY loss of sustainable yield	FCGMA	Judgment No. 5 (§ 5.4.5) GSP Project No. 3 GSP Evaluation Project No. 3
6	Delivery of Recycled Water to Las Posas Valley Users via Pipeline	Construction of conveyance infrastructure, and development of agreements, to deliver SVWQCP recycled water to Las Posas Valley users via pipeline in lieu of pumping	Estimated at approximately 640 to 1,600 AFY of avoided ET loss	FCGMA	Judgment No. 6 (§ 5.4.6)
7	In Lieu Deliveries to Northern East Las Posas Management Area Feasibility Study	Study to evaluate the feasibility of providing supplemental water supplies to the northern area of the ELPMA in addition to Project 2	Unknown	FCGMA	Judgment No. 7 (§ 5.4.7) GSP Evaluation Project No. 9
8	Allocation Buyback and Reduction Program	Develop a program for the least cost acquisition of Allocation Basis, Annual Allocations, and/or Carryover	Unknown	FCGMA	Judgment No. 8 (§ 5.4.8)
9	Regional Desalter Feasibility Study	Study to evaluate the feasibility of constructing and operating a regional groundwater desalter as an alternative to Project 4 Moorpark Desalter	Unknown	FCGMA	GSP Evaluation Project No. 7

Notes: Projects are not in order of prioritization. FCGMA = Fox Canyon Groundwater Management Agency; VCWWD-1 = Ventura County Waterwork District No. 1; AFY = Acre-Feet per Year; ET = evapotranspiration; SVWQCP = Simi Valley Water Quality Control Plant.

^a Projects identified in Judgment sections 5.4.2 and 5.4.9 were combined based on TAC recommendation (TAC, August 27, 2024).

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2 Project Evaluation and Prioritization

2.1 Project Evaluation Criteria

FCGMA, in consultation with the LPV PAC and TAC, developed the following criteria to evaluate and prioritize projects that are “practical, reasonable, and cost-effective to implement prior to 2040 to maintain the Operating Yield at 40,000 AFY or as close thereto as achievable” (Judgment § 5.3). Consistent with the Judgment, these criteria include “*the estimated amount of yield augmentation, cost effectiveness, cost feasibility, technical/engineering feasibility, project implementation timing, benefits relative to the achievement of Sustainable Groundwater Management, and whether the collaboration, cooperation, or participation of the FCGMA, Calleguas, WWDs, United Water Conservation District, or the Water Right Holders is necessary or desirable for implementation of the Basin Optimization Project*” (Judgment § 5.3.2.1). These criteria are divided into four categories: water supply/yield augmentation, timing and feasibility, cost and funding, and additional project considerations. Scores are assigned to each project evaluation category such that water supply/yield augmentation, timing and feasibility, and cost and funding are equally weighted, and the additional project considerations hold less weight in evaluating the project’s benefits and feasibility for implementation. Projects are prioritized by total project score. It should be noted that these project evaluation criteria were designed to evaluate and rank the benefits of water-supply projects. As a result, feasibility studies and data-gap projects tend to rank lower than projects that are well defined and readily implementable.

Draft project evaluation criteria were submitted to the LPV PAC for consultation on April 4, 2024, and to the LPV TAC for consultation on July 10, 2024. TAC prepared an August 27, 2024, recommendation report and Watermaster prepared a September 19, 2024, response report, which was accepted by the Watermaster Board on September 25, 2024.² The project evaluation criteria used for this Basin Optimization Plan are summarized below and included in Appendix A.

2.1.1 Water Supply

This category is defined to establish the estimated project benefits to the LPV through an increase in the sustainable yield, increase in the availability of supplemental water for use in lieu of groundwater, or a reduction in groundwater demand. Project benefits are scored based on:

1. The annual volume of increased sustainable yield, available supplemental water, or reduced groundwater demand provided by the project (maximum of 25 points).
2. The documentation provided to support the estimated quantification (maximum of 25 points).

A maximum of 50 points can be assigned to each project under the Water Supply category, as detailed in Appendix A.

² FCGMA / Watermaster Board meeting agenda packages and meeting minutes are available at www.fcgma.org.

2.1.2 Timing and Feasibility

Under the Judgment and SGMA, the LPV is mandated to achieve Sustainable Groundwater Management by 2040. This category addresses the timing and uncertainty of the project and evaluates the likelihood of a project's ability to be implemented and operational prior to 2040. Timing and feasibility are scored based on seven components:

1. Project implementation timeframe (maximum of 20 points)
2. Current stage of project development (maximum of 5 points)
3. Status of approvals, permits, and environmental compliance (maximum of 5 points)
4. Project complexity (maximum of 5 points)
5. Status of, and requirements for, land acquisition or easements (maximum of 5 points)
6. Dependency on other unbuilt or unfunded projects (maximum of 5 points)
7. Project lifespan (maximum of 5 points)

A maximum of 50 points can be assigned to each project under the Timing / Feasibility category, as detailed in Appendix A.

2.1.3 Cost and Funding

This category evaluates the cost / benefit of the project and the amount of capital and operations and maintenance (O&M) of non-FCGMA funding that is committed to the project. The cost and funding category is scored based on three separate components:

1. Total project cost per acre-foot (AF) of water generated or saved (maximum of 20 points)
2. Is the project proponent providing a funding match for project construction? (maximum of 15 points)
3. Is there a funding source other than FCGMA for ongoing operation & maintenance costs? (maximum of 15 points)

A maximum of 50 points can be assigned to each project under the Cost and Funding category, as detailed in Appendix A. Note that FCGMA funding would principally need to come from Basin Assessment, but that staff continuously monitor for potential grant or other project funding.

2.1.4 Additional Project Considerations

This category evaluates whether the Basin Optimization Projects (i) are consistent with SGMA and the achievement of Sustainable Groundwater Management, and (ii) will prevent or alleviate, or cause or exacerbate, Undesirable

Results³ or Material Injury⁴. This assessment is based on the relationship between project implementation and the sustainability indicators defined in SGMA that are applicable to the LPV Basin. These include benefits relative to chronic lowering of groundwater levels, reduction of groundwater in storage, degraded water quality, land subsidence, and depletion of interconnected surface water. A total of 20 points can be assigned based on the number of sustainability indicators addressed by the project, as detailed in Appendix A.

Additionally, this category is used to identify whether the collaboration, cooperation, or participation of the FCGMA, Calleguas Municipal Water District (CMWD), WWDs, United Water Conservation District, or the Water Right Holders is necessary or desirable for implementation of the Basin Optimization Project.

2.2 Project Evaluations

The nine projects were evaluated based on the project evaluation criteria described in Section 2.1. Several projects were identified to be dependent on other unbuilt and unfunded projects. Projects with such dependencies were evaluated as standalone projects. Project interdependencies are summarized in Table 2.

2.2.1 Project 1: Arroyo Simi-Las Posas Arundo Removal

The Arroyo Simi-Las Posas Arundo Removal Project involves removal of the invasive plant species *Arundo donax* (Arundo) from approximately 324 acres of land along the Arroyo Simi-Las Posas corridor. Arundo would be replaced with native riparian plant species, which are estimated to consume approximately 6 to 25 AFY per acre less water than Arundo (VCWSD 2015). If all of the Arundo within the 324-acre area is removed, this project could result in up to an additional 2,680 AFY of recharge to the ELPMA (VCWSD 2015). However, numerical groundwater modeling conducted for the GSP Periodic Evaluation (FCGMA 2024) found that the full water-supply benefits of this project would be realized only if it is implemented in conjunction with implementation of other projects, such as the Moorpark Desalter (Project 4), that would increase recharge potential in the ELPMA. If implemented in conjunction with a project to increase available storage capacity in the ELPMA, this project is anticipated to increase groundwater recharge to the ELPMA as well as improve the health of riparian habitat along Arroyo Simi-Las Posas.

³ Undesirable Result(s) is defined in Judgment section 1.108: As defined in Water Code section 10721(x), one or more of the following effects caused by Groundwater conditions occurring throughout the Basin: (1) Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon. Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods. (2) Significant and unreasonable reduction of groundwater storage. (3) Significant and unreasonable seawater intrusion. (4) Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies. (5) Significant and unreasonable land subsidence that substantially interferes with surface land uses. (6) Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

⁴ Material Injury is defined in Judgment section 1.64: A material and unreasonable impact to the Basin, any Management Area, Water Rights Holder, Party, well or water supply caused by the Extraction, storage, or Transfer of Groundwater in the Basin. Material Injury does not include economic injury that results from other than direct physical causes, including any adverse effect on water rates, lease rates, or demand for water. If fully mitigated, Material Injury shall no longer be considered to be occurring. Topics that may be considered in an analysis for a Material Injury determination include the following: (i) groundwater levels; (ii) groundwater in storage; (iii) groundwater quality; (iv) land subsidence; (v) natural recharge; and (vi) minimum thresholds and measurable objectives as set forth in SGMA and implementing regulations.

This project was included in the GSP and requires updated analysis to assess the current location, extent, and density of Arundo in the Arroyo Simi-Las Posas corridor. Because of this, this project would be implemented in two phases.

Phase I would cover project implementation planning activities consisting of the following:

- Examination of the originally proposed project area and comparison to the current state/condition of the removal areas,
- Identification of landowners within the project area,
- Establishment of access agreements with landowners,
- Reassessment of project area and evaluation of invasive vegetation extent,
- Preparation of a removal project workplan, and
- Environmental permit and compliance coordination.

This planning step is essential for evaluating removal-restoration labor and material costs, permitting requirements/restrictions, private property access agreements, restoration needs and ongoing maintenance.

Phase II would involve field work to remove Arundo from the Arroyo Simi-Las Posas Corridor. The full scope of work and project costs for this project phase will be developed in Phase I of the project. Giant reed removal activities performed by various local interests (e.g., Ventura County Public Works Agency, various developers, Rancho Simi Recreation and Parks District, and others) are ongoing in the Arroyo Simi and can serve as a model for the removal of invasive vegetation downstream as the Arroyo Simi transitions to the Arroyo Las Posas, within the Las Posas Valley Basin.

This project is consistent with the project in the Judgment titled *Removing, and periodic removal maintenance of Arundo donax from the Las Posas Valley watershed in an environmentally safe manner* (Judgment § 5.4.1).

Table 2. Project Interdependency

Project No.	Project Title	Management Area	Additional Water Supply – Project Only	Additional Water Supply with Other Projects	Related Projects	Notes
1	Arroyo Simi-Las Posas Arundo Removal	ELPMA	Unknown <500 AFY	2,680 AFY	Project 3 and 4	Increased storage with Desalter pumping which would allow for additional recharge. Note estimated increase of flow of 1,900 AFY in ELPMA, 780 AFY in Simi Valley.
2	Purchase of Imported Water from CMWD for Basin Replenishment	WLPMA	3,140 AFY	NA	None	
3	Arroyo Las Posas Storm Water Capture and Recharge	ELPMA	Unknown <500 AFY	2,000 AFY	Project 4	Additional recharge if companion project implemented to increase available groundwater storage capacity.
4	Moorpark Desalter	ELPMA	-2,800 AFY	Up to 4,680 AFY	Projects 1, 3, and 5	Additional supply if full benefits of Projects 1 & 3 are realized. Project concept reduces purchase of imported CMWD water for every AF of produced water.
5	Arroyo Simi-Las Posas Water Acquisition	ELPMA	0 AFY	0	Project 6	Project would maintain 1,700 AFY of SVWQCP discharge to Arroyo to prevent approximately 2,200 AFY loss of sustainable yield. Project (4 or 9) to desalt flows may be needed.
6	Delivery of Recycled Water to Las Posas Valley Users via Pipeline	ELPMA, potentially also WLPMA	640 - 1,600 AFY		Projects 5 and 9	Project would reduce Project 5 recharge to Arroyo, but would reduce ET losses. May provide additional benefit for Projects 1 & 3. May require companion desalter project.
7	In Lieu Deliveries to Northern East Las Posas Management Area Feasibility Study	ELPMA	Unknown	NA	None	
8	Developing a Least Cost Acquisition Program.	All	Unknown	NA	None	
9	Regional Desalter Feasibility Study	ELPMA	Unknown	Unknown	Projects 1, 3, and 6	Evaluation of a regional groundwater desalter as an alternative to Project 4.

2.2.1.1 Water Supply

Implementation of this project could increase recharge to the ELPMA by as much as 2,680 AFY if implemented (VCWSD 2015). This is based on the estimated reduction in evapotranspiration demands associated with the project, or portion of which would occur upstream of the LPV Basin (VCWSD 2015). However, numerical groundwater modeling conducted for the GSP Periodic Evaluation (FCGMA 2024) found that recharge to the ELPMA would occur only if one or more projects were implemented to increase the available groundwater storage space in the ELPMA, otherwise the additional flow in the Arroyo Las Posas would likely flow out of the LPV Basin and into the downstream Pleasant Valley Basin. As a stand-alone project, the Arroyo Simi-Las Posas Arundo Removal Project would not provide significant additional water-supply benefit to the LPV Basin.

2.2.1.2 Timing and Feasibility

Project Phasing and Timing

This project consists of two phases to support project planning, permitting, and coordination with landowners (Phase I) and project implementation (Phase II). This project is informed by a feasibility study, initially prepared in 2015, that requires updating through additional field and desktop activities to re-evaluate the Arundo removal locations, water saving estimates, and maintenance recommendations. FCGMA estimates that implementation of both project phases could be completed within four years of project initiation.

Environmental and Permitting

This project is in the planning phase and specific permitting and CEQA requirements will be identified in Phase I of project implementation.

Project Complexity

This project relies on existing technology and similar projects have been implemented across the Ventura Watershed by various local interests (e.g., Ventura County Public Works Agency, various developers, Rancho Simi Recreation and Parks District, and others). FCGMA anticipates the need to coordinate with landowners along Arroyo Simi-Las Posas for access agreements to perform field activities, including initial Arundo mapping, Arundo removal, and Arundo removal maintenance.

To provide benefit to the ELPMA, this project requires implementation of other project(s), such as the Moorpark Desalter (Project No. 4), that would lower groundwater elevations in the Shallow Alluvial Aquifer to increase available storage in the ELPMA and limit discharge of the increased arroyo flows downstream into the Pleasant Valley Basin.

Anticipated Project Lifespan

FCGMA anticipates that the project lifespan could exceed 25 years.

2.2.1.3 Cost and Funding

FCGMA estimates that the cost to implement Phase I of this project would be approximately \$400,000. This includes costs to: (i) perform the initial field investigation / identification of Arundo removal locations, (ii) negotiate

easements with landowners, (iii) identify CEQA and permitting requirements, and (iv) develop an Arundo removal and maintenance work plan.

Capital and O&M costs for Phase II of this project were estimated by The Nature Conservancy in 2018 to support GSP development (FCGMA 2019). Adjusting The Nature Conservancy's cost estimates by the increase in Consumer Price Index (CPI) between 2018 and April 2025 leads to a capital cost estimate for Phase II of \$9,400,000 and an O&M cost of \$2,100 per acre of Arundo treated.⁵

Assuming a 25-year project lifespan and that the project will increase recharge to the ELPMA by 2,680 AFY, the total cost to implement this project is estimated at approximately \$400 per AF if the full benefit is realized by implementation of another project to increase available groundwater storage capacity. However, as a stand-alone project the estimated cost would be much higher per AF of benefit. For example, if the benefit to the LPV Basin is only 250 AFY, then the estimated cost would be approximately \$4,300 per AF.

No outside funding sources have been identified for this project and it would need to be funded through Basin Assessment. Because the project would result in habitat restoration along the Arroyo Simi-Las Posas, grant funding may be available to help fund the capital costs of this project.

2.2.1.4 Benefits Relative to Sustainable Groundwater Management

As a stand-alone project, groundwater modeling indicates that the majority of increased flow in the Arroyo Simi-Las Posas would flow through the LPV Basin and into the downstream Pleasant Valley Basin. Therefore, as a stand-alone project, the Arroyo Simi-Las Posas Arundo Removal Project would not provide significant benefits relative to sustainable groundwater management of the LPV Basin.

If the full benefits of this project are realized through implementation with a companion project to increase available groundwater storage capacity in the Shallow Alluvial Aquifer in the ELPMA, this project could provide up to 1,900 AFY of increased recharge and another 780 AFY of flow in the Arroyo Simi-Las Posas from the upstream Simi Valley Basin. The benefits would primarily be to the southern portion of the ELPMA. Groundwater flow modeling did not predict the northern portion of the ELPMA would benefit from this project as recharge from the Arroyo does not appear to influence this area. However, 2016 through 2022 extractions in the ELPMA averaged approximately 20,500 AFY, which exceeded the 17,900 AFY estimated sustainable yield of the ELPMA (not including the Epworth Gravels Aquifer; FCGMA 2024) by approximately 2,600 AFY.

2.2.1.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

Implementation of this project is anticipated to support groundwater level and storage management within the ELPMA and is consistent with Sustainable Groundwater Management in the LPV. Implementation of this project is not anticipated to cause Undesirable Results and/or result in Material Injury that cannot be mitigated.

⁵ https://www.bls.gov/data/inflation_calculator.htm

Collaboration Requirements

Implementation of this project will require coordination with landowners in the LPV to develop access agreements for Arundo mapping, removal, and O&M.

2.2.2 Project 2: Purchase of Imported Water from CMWD for Basin Replenishment

The Purchase of Imported Water from CMWD for Basin Replenishment project would supply imported water in lieu of groundwater extraction in two parts of the LPV Basin exhibiting chronic groundwater level declines. One is the area of a groundwater depression in the eastern WLPMA (FCGMA 2019). The other area is an area of a trend in long-term declining groundwater levels in the northern portion of the ELPMA. Both areas would rely on existing delivery infrastructure and would be limited to water purveyors with the ability to receive water from CMWD (FCGMA 2019). Project 7 is a feasibility study to evaluate the volume of supplemental water supplies needed to fully maintain groundwater elevations in the northern portion of the ELPMA and investigate other sources of supplemental water and infrastructure that may be needed.

Based on TAC recommendation, this project combines the two projects in the Judgment titled, *Importing of surplus water* and *Using Calleguas Facilities for Replenishment* (Judgment §§ 5.4.2 and 5.4.9).

2.2.2.1 Water Supply

During development of the GSP, FCGMA coordinated with CMWD, Zone MWC, and VCWWD-19, to estimate the volume of imported water that may be available to water purveyors within the WLPMA in CMWD's service area. In 2019, it was estimated that 1,760 AFY of CMWD water would be available for purchase and delivery to Zone MWC and VCWWD-19. CMWD represented in recent consultation that the limiting factor is the volume of imported water the two purveyors can accept to offset their pumping in the WLPMA. FCGMA used these projections for analysis of the project for this Basin Optimization Plan, however, the volume of in lieu water delivered during the 1995 through 2008 program through existing infrastructure was sufficient to mitigate the pumping depression. Additionally, Zone MWC is currently upgrading its main pipeline which will increase the quantity of water it can receive from CMWD. The volume of CMWD water needed to address the groundwater depression will be evaluated on an ongoing basis based on the groundwater monitoring program.

In the northern ELPMA, CMWD implemented an in-lieu program in late 1995 through early 2007. During this 11.5-year program, CMWD delivered an average of 1,380 AFY to VCWWD-1 in lieu of pumping. Unlike in the eastern portion of the WLPMA, the previous program did not appear to fully mitigate the long-term groundwater decline in the northern portion of the ELPMA. This Basin Optimization Plan uses the previous program average of 1,380 AFY for the Basin Optimization Yield Study modeling and includes Project 7 to conduct a feasibility study to expand the in-lieu program in this area.

2.2.2.2 Timing and Feasibility

Project Phasing and Timing

This project would implement an in-lieu program similar to the Metropolitan Water District of Southern California (MWD) incentivized program implemented by CMWD that was operational in the WLPMA between 1995 and 2008

and in the ELPMA between 1995 and 2007. Because this project will rely on existing infrastructure, it is anticipated that this project would consist of two phases: the first phase would be development of program policy by the Watermaster Board, determination of the pumping costs and amount of incentive, allocation of funds, and incentivization agreements to purchase water from CMWD; the second phase would be implementation of the project through purchase of imported water from CMWD in lieu of extraction by participating water purveyors. The program may need to be suspended during times of drought and/or if there is an imported water outage or other emergency.

Environmental and Permitting

Because this project will utilize existing infrastructure, no additional permitting or CEQA compliance is required to implement this project.

Project Complexity

This project relies on existing infrastructure and would establish a program similar to one that was operational between 1995 and 2008. Initiation and operation of this project is not technically complex and is not dependent on other unbuilt projects.

Anticipated Project Lifespan

The lifespan of the project is based on the reliability of CMWD receiving imported water from the State Water Project and MWD. Based on existing infrastructure, CMWD believes that it is likely that imported water will continue to be available for more than 50 years.

2.2.2.3 Cost and Funding

The cost to implement this project is driven by CMWD's water rates. CMWD's water rates are set each year; the current 2025 Tier 1 water rate is \$1,895 per AF⁶. The project is envisioned to incentivize VCWWD-1, VCWWD-19, and Zone MWC, by funding the difference between the cost of CMWD water and the cost of pumping and any other incentive parameters, which will be determined during the first phase of this project. For the budget projections, pumping costs are assumed to be \$500 per AF. Funding for this project would come from Basin Assessment.

2.2.2.4 Benefits Relative to Sustainable Groundwater Management

Implementation of this project would reduce groundwater production from the pumping depression located in the eastern portion of the WLPMA and in areas of the northern ELPMA with declining water levels. The purpose of the pumping reduction is to assist with water-level stabilization or recovery in these areas. Between 1995 and 2008, groundwater elevations in the eastern part of the WLPMA recovered by as much as 80 feet in response to in lieu deliveries from CMWD. These measured groundwater elevation recoveries demonstrate the efficacy of this project in managing groundwater levels in the WLPMA (FCGMA 2019). Groundwater elevations did not recover as significantly in the northern ELPMA, but the declining trend appeared to have been reduced. This project is anticipated to address groundwater levels that are currently, or have been in recent years, below the minimum threshold at four key wells in the WLPMA, and the northern ELPMA where groundwater elevations have exhibited

⁶ <https://www.calleguas.com/wp-content/uploads/2025/02/2025-Adopted-Water-Rates.pdf>

historical declines that locally exceed 250 feet and groundwater modeling forecasts that groundwater elevations will drop below minimum thresholds at current pumping rates.

2.2.2.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

Implementation of this project would be consistent with SGMA and is not anticipated to cause Undesirable Results and/or result in Material Injury that cannot be mitigated.

Collaboration Requirements

Implementation of this project will require coordination between FCGMA, CMWD, VCWWD-1, VCWWD-19, and Zone MWC.

2.2.3 Project 3: Arroyo Las Posas Storm Water Capture and Recharge

The Arroyo Las Posas Storm Water Capture and Recharge project is proposed by VCWWD-1 to divert storm flows from Arroyo Simi-Las Posas for recharge to the ELPMA. The proposed diversions would occur during high flow events via a new surface intake located near the existing stabilizer structure in the Arroyo Simi-Las Posas adjacent to the Moorpark Water Reclamation Facility operated by VCWWD-1. The storm flows would then be delivered to the existing 40-acres of percolation ponds to recharge the aquifers in the ELPMA.

This project is consistent with the project in the Judgment titled *Arroyo Las Posas storm water capture and recharge* (Judgment § 5.4.3).

2.2.3.1 Water Supply

VCWWD-1 has undertaken significant efforts to advance this project. These include geophysical surveys to characterize their existing percolation ponds and estimate infiltration rates, and hydrologic modeling to estimate the volume of storm flows that would be available for diversion. Their hydrologic modeling studies suggest that implementation of this project could provide up to 2,000 AFY of diversions to their percolation ponds (VCWWD-1, 2020). No groundwater modeling has been conducted to characterize the storage capacity of the Shallow Alluvial Aquifer, which underlies the existing percolation ponds, and typically has groundwater elevations that are similar to those in the Arroyo Las Posas streambed (FCGMA 2024). Without additional projects to lower the groundwater elevation in the Shallow Alluvial Aquifer, such as the Moorpark Desalter Project (Project 4), some, if not all of the water diverted to the recharge ponds, is likely to flow back into Arroyo Las Posas and downstream into the Pleasant Valley Basin. Therefore, if constructed as a standalone project, this project is unlikely to provide significant benefit to the LPV Basin.

2.2.3.2 Timing and Feasibility

Project Phasing and Timing

VCWWD-1 completed a feasibility study for this project in March 2025, however, it was not available for review at the time of preparation of this Basin Optimization Plan. VCWWD-1 anticipates that construction of the diversion facilities could be completed in a single phase by the end of 2027. However, it does not appear this project would provide significant benefit to the LPV Basin without implementation of a companion project to lower groundwater elevations in the area to provide additional groundwater storage capacity. Therefore, FCGMA recommends that this project not be considered for implementation unless such a companion project is implemented. Alternatively, modeling should be conducted to characterize the volume of recharged water that would remain in the ELPMA. This modeling should include assumptions that are consistent with the GSP and incorporate findings from VCWWD-1 existing studies, including, but not limited to: (i) existing infiltration pond capacity, (ii) estimated infiltration rates (Ulrich et. al, Not Dated), and (iii) the volume of stormflows available for diversion (VCWWD-1, 2020).

Environmental and Permitting

VCWWD-1 anticipates that project implementation will require CEQA and NEPA compliance, with additional permitting and coordination with the California Department of Fish and Wildlife, Regional Water Quality Control Board, Army Corps of Engineers, and VCWPD. Permitting and CEQA/NEPA compliance has not started.

VCWWD-1 does not anticipate that access agreements or land acquisition would be required to implement this project.

Project Complexity

While this project would rely on existing technology, the project is considered moderately complex and would require the construction of diversion facilities, including the construction of pipeline, pumping stations, a fish ladder, and improvements (as necessary) to VCWWD-1's existing percolation ponds. Permitting and design of the fish ladder would be better defined prior to project construction and implementation. Additionally, this project is dependent on implementation of unbuilt projects to provide the full benefits, like the Moorpark Desalter (Project No. 4), that lower groundwater elevations in the Shallow Alluvial Aquifer to provide adequate available storage.

Anticipated Project Lifespan

VCWWD-1 anticipates that this project lifespan could exceed 25 years.

2.2.3.3 Cost and Funding

VCWWD-1 estimates that the capital cost to construct this project is approximately \$4,000,000. O&M costs have not been estimated. Because total project costs are not known, and as a stand-alone project would not provide significant benefit to the basin, the water cost is assigned a value of >\$3,000 per AF for project scoring. No funding sources to construct this project have been identified by VCWWD-1 other than potential federal or state grants or loans. Therefore, funding would likely need to come from Basin Assessment and/or VCWWD-1 ratepayers.

2.2.3.4 Benefits Relative to Sustainable Groundwater Management

If the full benefits of this project are realized through implementation with a companion project to increase available groundwater storage in the Shallow Alluvial Aquifer in the ELPMA, this project would provide additional recharge to the ELPMA. However, groundwater flow modeling did not predict the northern portion of the ELPMA would benefit from this project as recharge from the Arroyo does not appear to influence this area. However, 2016 through 2022 extractions in the ELPMA averaged approximately 20,500 AFY, which exceeded the 17,900 AFY estimated sustainable yield of the ELPMA (not including the Epworth Gravels Aquifer; FCGMA 2024) by approximately 2,600 AFY.

As a stand-alone project, most if not all, of the captured storm water would likely flow through the LPV Basin and into the downstream Pleasant Valley Basin. Therefore, as a stand-alone project, the Arroyo Las Posas Storm Water Capture and Recharge Project would not be expected to provide significant benefits relative to sustainable groundwater management of the LPV Basin.

2.2.3.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

Implementation of this project is anticipated to support groundwater level and storage management within the ELPMA and is consistent with Sustainable Groundwater Management in the LPV. If the full benefits of this project are realized, storm flow in the Arroyo Las Posas to the downstream Pleasant Valley Basin may be reduced. Potential impact to the adjacent basin would need to be evaluated in the CEQA analysis.

Collaboration Requirements

Implementation of this project will require coordination between FCGMA and VCWWD-1.

2.2.4 Project 4: Moorpark Desalter

The Moorpark Desalter project consists of construction of a new groundwater desalter facility to be located east of the Moorpark Water Reclamation Facility, along Los Angeles Avenue. The project goals are to improve water quality in the southern portion of the ELPMA and provide an additional source of potable water supply to the LPV. The project aims to achieve these goals by pumping and treating high-TDS groundwater from the southern portion of the ELPMA. In doing this, the project would: (1) reduce the dependence on imported water in the LPV by providing new local potable supplies, (2) improve groundwater quality in the southern portion of the ELPMA, and (3) create additional groundwater storage within the ELPMA. Preliminary analyses of the project anticipate that the Moorpark Desalter could operate at a maximum sustained rate of 7,600 AFY.

This Project includes: (1) construction of new groundwater extraction wells to pump high-TDS groundwater from the ELPMA, and (2) construction of a desalter facility that would treat the low-quality groundwater prior to incorporation into the VCWWD-1 delivery system. This project would also require construction of an additional pipeline and discharge station to connect the desalter's brine disposal system to CMWD's Salinity Management Pipeline, which discharges brine from various desalters and water treatment plants to the Pacific Ocean. Preliminary analyses for the proposed desalter have been completed and the project is in the planning phase.

This project, along with Project 9, is consistent with the project in the Judgment titled *Constructing desalter(s) to address water quality issues in Arroyo Simi Creek* (Judgment § 5.4.4).

2.2.4.1 Water Supply

VCWWD-1 proposes to extract up to 7,600 AFY from the Shallow Alluvial Aquifer in the ELPMA. The project summary submitted by VCWWD-1 states they likely would request an additional 5,000 AFY of extraction allocation to sustain this rate of pumping to utilize in lieu of purchasing imported water from CMWD. VCWWD-1 conducted preliminary numerical groundwater flow modeling in 2016 to evaluate project feasibility at an extraction rate of 6,270 AFY. Their 2016 groundwater flow modeling study suggests that pumping 6,270 AFY for the desalter project would result in an additional 2,200 AFY of recharge to the ELPMA. If the full 2,200 AFY of additional recharge is realized, the project would have a net negative impact on water supply from the ELPMA of 2,200 AFY minus 5,000 AFY of additional pumping or -2,800 AFY.

Project 1, Arroyo-Simi Las Posas Arundo Removal, and Project 3, Arroyo Las Posas Storm Water Capture and Recharge, are dependent upon pumping by the Moorpark Desalter or another project to provide benefit to the ELPMA. Additional modeling would be required to evaluate the effects of the proposed desalter under scenarios that are consistent with those evaluated in the Periodic Evaluation of the GSP and Projects 1 and 3.

2.2.4.2 Timing and Feasibility

Project Phasing and Timing

VCWWD-1 conducted early conceptual design work in 2010 and preliminary groundwater modeling in 2016, but has not submitted documentation of any additional work conducted for the project since 2016. A full feasibility study for this project has not been completed. Because of this, project phasing and timing are not well defined.

Environmental and Permitting

VCWWD-1 anticipates that project implementation will require CEQA and NEPA compliance, but the specific permitting and regulatory requirements to construct and operate the project are not well defined. Additionally, easement or land acquisition requirements to implement this project are not well defined.

Permitting, environmental compliance, and land acquisitions would need to be identified through a feasibility study.

Project Complexity

While this project would not rely on new technology, the project is considered moderately complex and would require the construction of a desalter well field, treatment system, and conveyance infrastructure. The Moorpark Desalter project is dependent upon construction of additional pipeline to connect to the CMWD Salinity Management Pipeline (SMP). VCWWD-1 would need an agreement with CMWD to dispose of brine produced at the desalter via CMWD's SMP. Implementation of this project could provide additional benefits to projects that increase and/or maintain flows in Arroyo Simi-Las Posas by creating additional storage capacity within the Shallow Alluvial Aquifer.

Anticipated Project Lifespan

VCWWD-1 anticipates that this project lifespan could exceed 25 years.

2.2.4.3 Cost and Funding

VCWWD-1 estimates that the capital costs to construct this project are approximately \$40,000,000 but has not estimated operation and maintenance costs. Because total project costs are not known the water cost is assigned a value of >\$3,000 per AF for project scoring to reflect uncertainty in overall project costs. No outside sources of funding to construct this project have been identified, therefore, this project would need to be funded by Basin Assessment and/or VCWWD-1 ratepayers. A feasibility study including numerical groundwater modeling is needed before project implementation can be considered.

2.2.4.4 Benefits Relative to Sustainable Groundwater Management

Implementation of this project is anticipated to improve groundwater quality by pumping groundwater impacted by salts from the Shallow Alluvial Aquifer in the southern portion of the ELPMA, which has been impacted by degraded water quality resulting from surface water recharge originating from outside the LPV boundaries. While the degraded water is a concern within the Basin, because groundwater quality in the ELPMA is not directly correlated with groundwater production from the ELPMA, specific concentration minimum thresholds have not been selected for the ELPMA. Instead, until a causal relationship between groundwater quality degradation and groundwater production is established, the minimum thresholds for groundwater quality are the same as the groundwater level minimum thresholds for chronic lowering of groundwater levels (FCGMA 2019).

The project would include extraction wells pumping from the Shallow Alluvial Aquifer by as much 7,600 AFY which is projected to be 5,000 AFY more than VCWWD-1's allocation. VCWWD-1's 2016 groundwater flow modeling study suggests that pumping 6,270 AFY for the desalter project would result in an additional 2,200 AFY of recharge to the ELPMA. If the full 2,200 AFY of additional recharge is realized, the project would have a net negative impact on water supply from the ELPMA of 2,200 AFY minus 5,000 AFY of additional pumping or -2,800 AFY.

Project 1, Arroyo-Simi Las Posas Arundo Removal, and Project 3, Arroyo Las Posas Storm Water Capture and Recharge, are dependent upon pumping by the Moorpark Desalter or another project to increase available groundwater storage capacity to provide benefit to the ELPMA. The anticipated impacts to groundwater quality and groundwater elevations have not yet been quantified. Additional modeling would be required to evaluate the effects of the proposed desalter under scenarios that are consistent with those evaluated in the Periodic Evaluation of the GSP and Projects 1 and 3.

2.2.4.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

As discussed above, the project as proposed may cause a net increase in extraction from the ELPMA of -2,800 AFY without providing a corresponding increase in water supplies as VCWWD-1 proposes to use the produced water in lieu of purchasing imported water from CMWD. The impacts to sustainable groundwater management or potential to cause material injury is presently unknown. A full feasibility study including numerical groundwater modeling and impact analysis would be needed to fully evaluate the potential benefits and impacts of the project before considering proceeding with implementation.

Collaboration Requirements

Implementation of this project will require coordination between FCGMA, VCWWD-1, and CMWD.

2.2.5 Project 5: Arroyo Simi-Las Posas Water Acquisition

The Arroyo Simi–Las Posas Water Acquisition project would involve the purchase or lease of recycled water from the City of Simi Valley (City) (FCGMA 2019). In return, the City would commit to continuing to discharge the water from its shallow dewatering wells and/or the Simi Valley Water Quality Control Plant (SVWQCP) to the Arroyo Simi for downstream recharge to the LPV. The City has indicated that 3,000 AFY of recycled water from the SVWQCP would be available and 1,700 AFY would be available from the dewatering wells (FCGMA 2019). However, due to the riparian use of the water along the Arroyo Simi–Las Posas, an estimated 1,000 to 2,500 AFY of the water may be lost due to plant uptake and evaporation, leaving 2,200 to 3,700 AFY available as surface flow and recharge to the ELPMA, resulting in an estimated decrease of 1,200 AFY in sustainable yield (FCGMA 2021). It should be noted that this project seeks to maintain existing water supplies in the Basin rather than provide new or additional water supply.

This project is consistent with the project in the Judgment titled *Formalizing an agreement with the City of Simi Valley (“City”) to maintain up-stream wastewater treatment plant discharges, or treated effluent, into Arroyo Simi Creek, which shall include cooperation with and support of the City, as necessary, in its interactions with the Los Angeles Regional Water Quality Control Board (“LA Waterboard”) on this issue of treated effluent discharge into Arroyo Simi Creek* (Judgment § 5.4.5).

2.2.5.1 Water Supply

The 2025 Periodic Evaluation of the GSP evaluated the benefits of maintaining SVWQCP discharges to Arroyo Simi-Las Posas. Results from modeling conducted for the GSP suggest that loss of the recycled water discharges to Arroyo Simi-Las Posas could result in an estimated decrease in the sustainable yield of the ELPMA by approximately 2,200 AFY (FCGMA 2021). The loss could be more if one or more projects are implemented to increase recharge along the Arroyo Las Posas by increasing the available groundwater storage capacity. Reaching an agreement to purchase this water will maintain existing recharge sources that were included in the estimated sustainable yield analyzed in the Periodic Evaluation of the GSP (FCGMA 2024).

2.2.5.2 Timing and Feasibility

Project Phasing and Timing

The project would rely on existing infrastructure and will require negotiation of real property (i.e., recycled water) pricing and availability. Preliminary discussions between FCGMA and the City of Simi Valley occurred in 2021, but formal negotiations have not occurred between Watermaster and the City since the Judgment was entered. While the project could be implemented immediately following the final negotiations, the time required to develop this agreement is not well defined, but it is presumed to require 18 months for this Basin Optimization Plan.

Environmental and Permitting

Discharges of SVWQCP recycled water to Arroyo Simi-Las Posas will need to continue to comply with the City's NPDES permit and related RWQCB water quality regulatory requirements (e.g., TMDL limits).

Additional permitting is not anticipated to be required for this project.

Project Complexity

This project will rely on existing infrastructure and can be implemented once an agreement is developed and finalized between the City and FCGMA.

This project and Project 6, Delivery of Recycled Water to Las Posas Valley Users via Pipeline, both would rely on recycled water produced at the SVWQCP. Because of this, the volume of water available for discharge maintenance to Arroyo Simi Creek will depend on the volume of water delivered to Las Posas Valley users via pipeline if Project 6 is implemented.

Anticipated Project Lifespan

FCGMA anticipates that the lifespan of this project will exceed 25 years.

2.2.5.3 Cost and Funding

While the cost to purchase SVWQCP water from the City is not well defined, FCGMA anticipates that this water will cost less than the \$500 per AF evaluation criterion, and that the City will be responsible for Operation and Maintenance of the SVWQCP and its discharge infrastructure. The purchase cost would be funded through Basin Assessment.

2.2.5.4 Benefits Relative to Sustainable Groundwater Management

Surface water infiltration through the bottom of Arroyo Simi-Las Posas is a primary recharge mechanism for the ELPMA. Perennial flow in Arroyo Simi-Las Posas did not begin until the 1970s, when discharges of treated wastewater effluent, and eventually discharge from shallow dewatering wells, began upstream of the ELPMA boundary. These perennial flows resulted in rising groundwater levels throughout the southern part of the ELPMA between 1974 and 2015. The beneficial users of surface water and groundwater in the ELPMA do not have control over the upstream discharges of water to Arroyo Simi-Las Posas, and recharge to the ELPMA would be reduced if those discharges are reduced resulting in a lower sustainable yield. Therefore, purchase of this discharge would provide a measure of security for the users of groundwater and surface water in the ELPMA. Fundamentally, this project would help maintain groundwater elevations in Arroyo Simi-Las Posas and directly addresses the measurable objectives selected for the ELPMA. Additionally, this project would maintain habitat that has developed since SVWQCP discharges upstream of the ELPMA resulted in perennial flow in Arroyo-Simi Las Posas.

2.2.5.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

While implementation of this project is anticipated to support groundwater level and storage management within the ELPMA, perennial surface water flow in Arroyo Simi-Las Posas is also thought to be the primary source of high TDS concentrations observed in the groundwater in the southern ELPMA (FCGMA 2019). Continued discharges of SVWQCP recycled effluent to the arroyo are likely to increase these existing high TDS concentrations over time and another project such as a desalter may be necessary to address the TDS.

Collaboration Requirements

Implementation of this project will require coordination between FCGMA and the City of Simi Valley.

2.2.6 Project 6: Delivery of Recycled Water to Las Posas Valley Users via Pipeline

The Delivery of Recycled Water to Las Posas Valley Users via Pipeline project would consist of constructing a pump station and conveyance pipeline, in addition to formalizing an agreement with the City of Simi Valley, to deliver recycled water from the SVWQCP to Las Posas Valley users in lieu of pumping groundwater. An initial study of this project conducted in 2017 identified construction of an 8.6-mile pipeline to Berylwood Heights MWC as the least-cost alternative, with the option of construction of interconnect piping to Zone MWC (CMWD 2017). Delivery to the VCWWD-1 recycled water system was also considered, but the initial study concluded that this option required approximately 300 feet more pumping head and faced then-existing flow constraints through VCWWD-1's system. However, the project has not undergone additional development since the initial study. This project would utilize the same treated effluent as Project 5, Arroyo Simi-Las Posas Water Acquisition, but instead of continuing discharge to the Arroyo Simi-Las Posas for recharge, would deliver the water to one or both mutual water companies via pipeline.

This project is consistent with the project in the Judgment titled *Formalizing an agreement with the City for recycled water deliveries to Las Posas Valley users via pipeline, which shall include cooperation with and support of the City, as necessary, in its interactions with the LA Waterboard on this issue of recycled water* (Judgment § 5.4.6).

2.2.6.1 Water Supply

In 2017, the City of Simi Valley indicated that approximately 3,000 AFY of recycled water would be available for delivery to Berylwood Heights MWC and potentially Zone MWC. This water is currently being discharged to Arroyo Simi-Las Posas. Additional yield to the ELPMA from this project would be principally based on avoided evapotranspiration resulting from transporting this water via pipeline. Avoided ET loss in the Arroyo Simi-Las Posas for the current SVWQCP discharges are estimated to range from 21% to 53% (see Project 5) resulting in potential additional water supply for Project 6 of approximately 640 to 1,600 AFY. Additional benefit may be realized if the pipeline was constructed to deliver recycled water to VCWWD-1 which pumps in the impacted northern portion of the ELPMA, but that option was not considered cost-effective in the 2017 study (CMWD 2017). The project could additionally benefit Project 1, Arroyo Simi-Las Posas Arundo Removal, and Project 3, Arroyo Las Posas Storm Water Capture and Recharge, if diversion of the 3,000 AFY from the Arroyo Simi-Las Posas results in an increase in

groundwater storage capacity in the ELPMA. It should be noted that approximately 25% of the 3,000 AFY (750 AFY) may be lost to brine disposal if it is determined this water needs to be desalted.

2.2.6.2 Timing and Feasibility

Project Phasing and Timing

Because this project has not been further evaluated since the 2017 study, FCGMA anticipates that this project would be implemented in two phases:

Phase I would consist of a feasibility study to better define the:

- Users who would participate in this project by using recycled water in lieu of groundwater.
- Project benefits and potential impacts.
- Need for companion desalter project.
- Conveyance infrastructure requirements.
- Permitting, land agreements, and environmental compliance requirements.
- Capital and O&M costs.
- Schedule for project construction and maintenance.

FCGMA anticipates that implementation of Phase I could be completed within a 2-year timeframe following commitment of funds for the feasibility study.

Phase II would consist of negotiating easements, environmental compliance and permitting, project construction, and developing agreements between FCGMA, the City of Simi Valley, and the mutual water companies to receive SVWQCP recycled water. The schedule to implement Phase II is not presently well defined and would be determined during the Phase I feasibility study.

Environmental and Permitting

Full implementation of this project would require construction of a pump station and at least 8.6 miles of conveyance infrastructure. Permitting requirements to construct these facilities would be identified through a feasibility study, but CEQA analysis is expected to be required.

Project Complexity

While this project would rely on existing technology, it is considered moderately complex because: (i) project construction may require significant coordination and mitigation to negotiate easements and convey recycled water from the SVWQCP to Berylwood Heights MWC and potentially additionally to Zone MWC, (ii) project construction may require multiple phases, and (iii) project feasibility and operation would depend on the long-term availability, and price, of SVWQCP recycled water. The volume of water available for this project would also depend on the volume of SVWQCP recycled water that is committed to Project 5, Arroyo Simi-Las Posas Water Acquisition. Construction phasing would be identified in the Phase I feasibility study.

While the initial study conducted in 2017 concluded the recycled water may be suitable for agronomic purposes, recipients of the recycled water may be required to construct, operate, and maintain one or more desalter facilities to reduce constituent concentrations to levels suitable for irrigation and to ensure that long-term use of this water

does not result in a significant and unreasonable degradation of water quality in the LPV Basin. The need to desalt recycled water prior to use would be characterized in the Phase I feasibility study.

Anticipated Project Lifespan

FCGMA anticipates that the lifespan of this project would exceed 25 years.

2.2.6.3 Cost and Funding

FCGMA estimates that the cost to complete the Phase I feasibility study is approximately \$400,000.

The 2017 study estimated costs to construct this project. Assuming that the project would require the construction of a 100 HP pump station and 8.6-miles of 16-inch conveyance pipeline, costs to construct this project were estimated at approximately \$17.2 million. Adjusting this by the CPI leads to an estimated capital cost for Phase II of this project of \$22.1 million. Assuming:

- O&M costs are equal to 3% of the capital costs;
- The project would provide 3,000 AFY of SVWQCP recycled water to users via pipeline; and
- A 25-year project lifespan

The 2017 study estimated the cost per AF at approximately \$1,200 per AF (\$1,600 per AF with CPI adjustment) to construct and operate Phase II of this project. However, this cost omits:

- Lost recharge to the basin from taking the water out of Arroyo Simi-Las Posas and delivering it via pipeline.
- Purchase and/or lease water from the City of Simi Valley, which is anticipated to be <\$500 per AF, as described in Project 5.
- Construction, operation, and maintenance, of local desalter(s) to treat the recycled water to levels suitable for irrigation and to avoid significant and unreasonable degradation of water quality, if required.

Project costs may be more than estimated in the 2017 study and should be evaluated in a feasibility study. No funding other than from Basin Assessment has been identified for either the capital or O&M costs.

2.2.6.4 Benefits Relative to Sustainable Groundwater Management

This project would deliver recycled water from the SVWQCP directly to Berylwood Heights MWC (and potentially Zone MWC) in lieu of pumping rather than discharge into the Arroyo Simi-Las Posas for recharge in the ELPMA. The principal benefit to sustainable groundwater management would be reducing ET losses estimated at approximately 640 to 1,600 AFY if 3,000 AFY is diverted from discharge to the Arroyo and delivered directly by pipeline. Additional benefit could be realized if the recycled water was delivered to the impacted northern portion of the ELPMA which does not appear to receive recharge from the Arroyo; however, Berylwood Heights MWC's wells extract groundwater in the western portion of the ELPMA where groundwater elevations are typically above the minimum thresholds and measurable objectives. VCWWD-1 does pump from the northern portion of the ELPMA, however, the 2017 study concluded that delivering this water to VCWWD-1 would not be cost effective. This could be reevaluated in a feasibility study.

2.2.6.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

There are two potential concerns associated with this project. The first is that significant habitat has developed in the Arroyo Simi-Las Posas since discharges from the SVWQCP created perineal flows in the Arroyo starting in the 1970s. While not expected to cause an undesirable result because the habitat is supported by surface water not believed to be interconnected with groundwater, the impacts of decreasing discharges to the Arroyo by 3,000 AFY would need to be evaluated in a feasibility study and CEQA analysis.

Second, the tertiary treated effluent contains elevated concentrations of TDS, chloride, sulfate, and other constituents. Groundwater in some wells monitored in the area of the basin where Berylwood Heights MWC operates have elevated concentrations of TDS, chloride, and sulfate. The potential impact to groundwater quality due to use of recycled water delivered by pipeline from the SVWQCP would need to be evaluated in a feasibility study.

Collaboration Requirements

Implementation of this project would require coordination between FCGMA, the City of Simi Valley, RWQCB, and Las Posas Valley users able to receive and use SVWQCP recycled water in lieu of groundwater.

2.2.7 Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study

This project seeks to evaluate the feasibility of providing supplemental water supplies to the northern area of the ELPMA in lieu of groundwater extraction. The GSP identified the area of the ELPMA north of the Moorpark anticline as a region where groundwater elevations have exhibited historical declines that locally exceed 250 feet. Groundwater elevation trends in this part of the ELPMA differ from those measured in the southern portion of the ELPMA, where groundwater elevations have experienced periods of recovery in response to increasing flow in Arroyo Simi-Las Posas. Groundwater elevations north of the Moorpark anticline are less responsive to flows in Arroyo Simi-Las Posas and are primarily influenced by groundwater production and CMWD's Aquifer Storage and Recovery (ASR) operations. Supplemental water supplies to this area will reduce groundwater demand in this part of the ELPMA.

While Project 2, Purchase of Imported Water from CMWD for Basin Replenishment, would deliver surface water to VCWWD-1 in lieu of pumping in the northern ELPMA utilizing existing infrastructure, a similar program in operation between 1995 and 2007 did not fully mitigate the long-term groundwater decline. The feasibility study would utilize groundwater modeling to evaluate the volume and location of supplemental supplies needed to fully mitigate groundwater declines in the northern ELPMA, investigate sources of supplemental water, identify additional infrastructure or infrastructure upgrades needed to deliver supplemental water, and estimate capital and operation-and-maintenance costs to construct and implement the project.

This project is consistent with the project in the Judgment titled *Designing and constructing new or modified infrastructure in order to deliver In Lieu Water to water deficit areas for Use in lieu of Extracted Groundwater and to increase water conveyance within the Basin* (Judgment § 5.4.7).

2.2.7.1 Water Supply

This project is for a feasibility study. Preliminary modeling has been conducted, but a feasibility study needs to be completed to identify infrastructure needs, waters supply availability, and Las Posas Valley users in the northern ELPMA willingness to use a supplemental source of water in lieu water of groundwater. CMWD implemented an in-lieu program in late 1995 through early 2007. During this 11.5-year program, CMWD delivered an average of 1,380 AFY to VCWWD-1 in lieu of pumping. Project 2 would initiate a similar program. While beneficial, the 2005 through 2007 program was insufficient to fully mitigate groundwater declines in this area. The feasibility study would utilize groundwater modeling to evaluate the volume and location of additional supplemental water needed to fully mitigate groundwater declines.

2.2.7.2 Timing and Feasibility

Project Phasing and Timing

This project would be conducted in two phases. The first phase would be to develop the scope of work and request for proposal for the feasibility study with Committee Consultation. The second phase would be preparation of the feasibility study. It is anticipated that the project can be completed within a 2-year timeframe following commitment of funds for the project. If a feasible project is identified through this study, timetables for permitting, construction, and project implementation would be developed.

Environmental and Permitting

The feasibility study would identify additional pipelines and other facilities or upgrades that may be needed to deliver additional supplemental water supplies to expand the in-lieu program. The feasibility study would identify the environmental compliance and permits that would be required.

Project Complexity

Project complexity is presently not known. If the feasibility study finds that the project should be expanded with construction of additional pipelines and other facilities, then the implementation project may be moderately complex including the need for easements from property owners.

Anticipated Project Lifespan

Similar to Project 2, Purchase of Imported Water from CMWD for Basin Replenishment, project lifespan could exceed 50 years.

2.2.7.3 Cost and Funding

FCGMA anticipates that the feasibility study can be completed for approximately \$150,000. Capital cost, water and other operation-and-maintenance costs, would be identified in the feasibility study. A water cost of >\$3,000 per AF was used in for scoring to reflect uncertainty in the final project pricing. The feasibility study would be funded through Basin Assessment.

2.2.7.4 Benefits Relative to Sustainable Groundwater Management

This feasibility study is expected to provide a clear understanding of volume of supplemental water supplies, and corresponding piping infrastructure, required to offset groundwater demands and maintain groundwater elevations above the minimum thresholds in the northern portion of the ELPMA. Mitigating the long-term groundwater declines in this area would address projected future declines below the minimum thresholds and potentially increase the sustainable yield of the ELPMA.

2.2.7.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

In addition, this feasibility study would provide stakeholders with estimated costs associated with the supplemental water deliveries and corresponding infrastructure requirements and would also provide stakeholders with an estimate of the potential increase to the sustainable yield of the ELPMA.

Collaboration Requirements

This feasibility study may require coordination with mutual water companies and/or water purveyors whose service area extends north of the Moorpark anticline to identify entities that are able to supply, or receive and deliver, supplemental water supplies to offset groundwater extractions.

2.2.8 Project 8: Allocation Buyback and Reduction Program

This project seeks to develop a program for the least cost acquisition of Allocation Basis, Annual Allocation, and/or Carryover, as an alternative to Basin replenishment and/or Rampdown. This would include, but may not be limited to:

- Develop program scope and policies, including potential prioritization of purchases from water deficit areas of the LPV Basin.
- Engage a consultant to help develop the process for least-cost allocation acquisition and transaction mechanics.
- Implement a pilot program.
- Expand to the full program for temporary allocation (Annual Allocation and Carryover).
- Evaluate the potential to expand the program to permanent allocation (Allocation Basis) including engaging consultant(s) to study potential economic and environmental impacts of permanent assessment purchase.

This project is consistent with the project in the Judgment titled *Developing a program for the least cost acquisition of Allocation Basis or Annual Allocations, or Carryover as an alternative to Replenishment* (Judgment § 5.4.8).

2.2.8.1 Water Supply

This project would develop the policies and rules for a least-cost Allocation Buyback and Reduction Program. The Allocation Buyback and Reduction Program would be a demand-reduction program to purchase long-term (Allocation Basis) and/or short-term (Annual Allocation and/or Carryover) allocation to reduce groundwater

extractions. The program would be scalable and limited only by the amount of Basin Assessment allocated to the program and Water Right Holders' willingness to sell Annual Allocation, Allocation Basis, or Carryover.

2.2.8.2 Timing and Feasibility

Project Phasing and Timing

This project would be conducted in three phases. The first phase would be to develop the scope and policy framework for approval by the Watermaster Board in consultation with the PAC and TAC. Policy framework may include prioritization of allocation acquisition from water deficit areas, and the scope and projected budgeting for allocation purchases. The first phase would include engaging a consultant to help develop the transaction mechanics for purchasing allocation, such as a reverse auction. The second phase would be to implement a pilot program. The third phase would be to expand into full program to purchase Annual Allocation and Carryover. Additional study may be conducted during the third phase such as the potential economic and environmental impacts of expanding the program to purchase of permanent Allocation Basis. It is projected that the first phase could be completed in approximately 18 months. The second phase pilot program is projected to be conducted for one water year, expanding to the full program for purchase of temporary allocation in the second water year.

Environmental and Permitting

The first phase of project development and the second phase pilot test would not require permitting and/or environmental compliance. Identification of potential environmental compliance needed for implementation of phase 3 full program implementation would be identified during the first two phases.

Project Complexity

FCGMA anticipates that the development of this program will be moderately complex and will require development of a framework to ensure that water costs, acquisition timing, and acquisition preference / locale are appropriately defined. This will require policy development by the Watermaster Board in consultation with PAC and TAC and input from Water Right Holders. This project is not dependent on other projects.

Anticipated Project Lifespan

FCGMA anticipates that the Program developed through this project would have a lifespan that exceeds 25 years. However, this Program should be re-evaluated at a 5-year frequency to ensure that water costs and priority areas are appropriately reflected in the Program.

2.2.8.3 Cost and Funding

FCGMA estimates that development of the transaction mechanics may cost approximately \$160,000, not including Watermaster administration costs. A one-year pilot program is estimated at \$100,000 in consultant costs, not including Watermaster administration costs. Annual costs to implement the full program would be better understood following the pilot program. A range of >\$500 to <\$1,000 per AF was assumed for purposes of project scoring. Both the Program development and implementation would be funded by Basin Assessment.

2.2.8.4 Benefits Relative to Sustainable Groundwater Management

The Allocation Buyback and Reduction Program would provide additional flexibility in sustainably managing the Basin by providing a program to acquire and retire pumping allocation to reduce groundwater extraction in the Basin. By incentivizing pumping reduction in areas of the Basin with declining groundwater elevations and/or elevations below minimum thresholds and measurable objectives, especially in the eastern portion of the WLPMA and the northern portion of the ELPMA, the program would help to address potential undesirable results due to chronic lowering of groundwater levels or decreases in groundwater storage.

2.2.8.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

Implementation of the resulting program is anticipated to support groundwater level stabilization in water deficit areas of the LPV and maintain groundwater elevations above the minimum thresholds, thereby improving groundwater level and storage management. Implementation of the resulting program is not anticipated to result in undesirable results or Material Injury that cannot be mitigated.

Collaboration Requirements

Implementation of this project will require coordination between FCGMA and the PAC and TAC to develop program policies and scope.

2.2.9 Project 9: Regional Desalter Feasibility Study

The Regional Desalter Feasibility Study project would be to evaluate the feasibility of constructing and operating a regional groundwater desalter in the ELPMA as an alternative to the Project 4, Moorpark Desalter, project. In addition to removing groundwater impacted by salts in the ELPMA, a completed desalter project would provide high-quality water and extraction wells could create additional groundwater storage capacity in the Shallow Alluvial Aquifer. Unlike the Project 4 Moorpark Desalter which envisions increasing extraction in the ELPMA by 5,000 AFY, the preliminary concept for the regional desalter is that the produced water would be utilized by recipients in lieu of extraction. The scope of the Regional Desalter Feasibility Study is outlined in section 2.2.9.2.

This project, along with Project 4, is consistent with the project in the Judgment titled *Constructing desalter(s) to address water quality issues in Arroyo Simi Creek* (Judgment § 5.4.4).

2.2.9.1 Water Supply

The water supply benefits of a regional desalter would be evaluated in the feasibility study, but are presumed to be ≤2,500 to <5,000 AFY for evaluation purposes. Potential benefits include a supply of high-quality water to utilize in lieu of groundwater extraction. Additionally, the project would create increased groundwater storage capacity for storing additional Arroyo Simi-Las Posas flows through projects such as Project 1, Arroyo Simi-Las Posas Arundo Removal, Project 3, Arroyo Las Posas Storm Water Capture and Recharge, and other projects that may be identified.

2.2.9.2 Timing and Feasibility

Project Phasing and Timing

Design, permitting, and construction of a regional desalter would reasonably be estimated to require at least ten years. The Regional Desalter Feasibility Study project would be conducted in two phases. The first phase would include engagement of water purveyors to establish interest in studying a desalter project, establishing the scope of the feasibility study, developing the groundwater modeling scenarios, and engaging a consultant. The first phase is estimated to require about 12 months. The second phase would be to conduct numerical groundwater modeling and the feasibility study. The second phase is estimated to require 18 months. The project would include the following tasks:

- Engagement of water purveyors in the ELPMA including CMWD, VCWWD-1, mutual water companies, and other public entities including FCGMA that may be identified, to establish the level of interest in constructing and operating a regional desalter through a joint powers authority (JPA) or other appropriate means.
- Development of feasibility scope including modeling scenarios.
- Numerical groundwater modeling to evaluate preferred options for number options for new groundwater extraction wells to pump groundwater with elevated TDS from the Shallow Alluvial Aquifer in the ELPMA, including extraction rate, number of wells, and well locations.
- Evaluation of potential benefits and impacts to sustainable groundwater management of the Basin.
- Options for location and sizing of a desalter and associated product-water piping, pumping stations if needed, and piping and discharge station to connect to CMWD's SMP.
- Evaluation of the environmental compliance, permitting, and land acquisition and/or easement, requirements.
- Preliminary analysis of project design phases and schedule.
- Preliminary cost estimates for the project including design, construction, operation-and-maintenance, and per acre-foot cost of produced water.
- Identification of potential funding and financing mechanisms such as the State Revolving Fund.
- Project would include stakeholder engagement via the PAC and TAC at key points throughout the feasibility study.

Environmental and Permitting

Permitting, environmental compliance, and land acquisitions and/or easements needed for implementation, would be identified as part of the feasibility study.

Project Complexity

While this project would not rely on new technology, the Regional Desalter project is considered moderately complex and would require the construction of a desalter well field, treatment system, product water conveyance infrastructure, brine disposal connection to CMWD's SMP, and likely fairly complex environmental compliance and permitting requirements. Specific requirements would be evaluated as part of the feasibility study.

Anticipated Project Lifespan

Desalter projects and appurtenances generally have lifespans exceeding 25 years.

2.2.9.3 Cost and Funding

A regional desalter project would be a very expensive project. VCWWD-1 estimated the capital cost to construct the Project 4 Moorpark Desalter at \$40,000,000. Design, construction, and operation-and-maintenance, costs would be estimated as part of the feasibility study, which would also identify potential funding and financing opportunities. For purposes of project scoring, total water costs were assumed to be >\$3,000 per AF to reflect uncertainty. Absent identification of grant opportunities, costs would need to be funded through Basin Assessment.

The cost for the Regional Desalter Feasibility Study is estimated at \$300,000 which would be funded through Basin Assessment.

2.2.9.4 Benefits Relative to Sustainable Groundwater Management

While the potential sustainable groundwater management benefits and impacts would be evaluated as part of the feasibility study, implementation of a regional desalter project would improve the water supplies in the ELPMA and improve ability to sustainably manage the ELPMA in terms of groundwater elevations and groundwater in storage. It would do this in two ways: first by providing high-quality product water to users in lieu of groundwater pumping, which could be especially beneficial if delivered to the northern portion of the ELPMA; and second by creating additional groundwater storage capacity in the Shallow Alluvial Aquifer along the Arroyo Simi-Las Posas which would induce additional recharge from flows in the Arroyo and from projects such as Project 1 Arundo Removal and Project 3 Storm Water Capture and Recharge.

Additionally, implementation of this project is anticipated to improve groundwater quality by pumping groundwater impacted by salts from the Shallow Alluvial Aquifer in the southern portion of the ELPMA, which has been impacted by degraded water quality resulting from surface water recharge originating from outside the LPV Basin boundaries. While the degraded water is a concern within the LPV Basin, because groundwater quality in the ELPMA is not directly correlated with groundwater production from the ELPMA, specific concentration minimum thresholds have not been selected for the ELPMA. Instead, until a causal relationship between groundwater quality degradation and groundwater production is established, the minimum thresholds for groundwater quality are the same as the groundwater level minimum thresholds for chronic lowering of groundwater levels (FCGMA 2019).

2.2.9.5 Additional Project Considerations

Consistency with SGMA and Likelihood of Causing Material Injury or Undesirable Results

The feasibility study would evaluate the project for consistency with SGMA and potential of causing Material Injury or Undesirable results. However, it is anticipated that the conceptual regional desalter project would be consistent with sustainable groundwater management and would be expected to address potential results and not cause Material Injury.

Collaboration Requirements

Preparation of the Regional Desalter Feasibility Study would require coordination with FCGMA, CMWD, VCWWD-1, mutual water companies, stakeholders, and others who may be identified.

2.3 Project Ranking & Prioritization

The nine projects identified in Table 1 and evaluated in Section 2.2 of this Basin Optimization Plan were scored and ranked in accordance with the project identification criteria described in Section 2.1. Project ranking is summarized in Table 3. A detailed description of each project's scoring is included in Appendix B, Project Ranking Sheets. It should be noted that although a project may not have been selected for inclusion in this Basin Optimization Plan, projects can be added to the Basin Optimization Plan: *“any additional projects to be included in the Basin Optimization Plan, or any amendment thereto, must satisfy the criteria established under Section 5.3.2.1 as determined in Watermaster’s discretion, subject to Committee Consultation”* (Judgment § 5.3.2.2).

2.3.1 Projects Selected for Basin Optimization Plan

Based on the evaluation and ranking, projects were selected for inclusion in the Basin Optimization Plan “that are likely to be practical, reasonable, and cost-effective to implement prior to 2040 to maintain the Operating Yield at 40,000 AFY or as close thereto as achievable” (Judgment § 5.3.2.2). The following three projects and two feasibility studies were selected for inclusion in the Basin Optimization Plan as summarized in Table 3 and discussed below.

2.3.1.1 Project 2: Purchase of Imported Water from CMWD for Basin Replenishment

Project 2, Purchase of Imported Water from CMWD for Basin Replenishment, was the highest scoring project and is ranked at priority 1 (see Table 3). Details of the evaluation of this project are in Section 2.2.2. This project can be implemented relatively quickly and will supply in-lieu imported water to the two most water-deficient areas of the LPV Basin, the eastern portion of the WLPMA and the northern portion of the ELPMA, utilizing existing infrastructure. Implementation of this project can be quantified for inclusion in the Basin Optimization Yield Study groundwater modeling based on the historical program which supplied an average of 1,760 AFY to the WLPMA and 1,380 AFY in the ELPMA.

2.3.1.2 Project 5: Arroyo Simi-Las Posas Water Acquisition

Project 5, Arroyo Simi-Las Posas Water Acquisition, was the second highest scoring project and is ranked at priority 2 (see Table 3). Details of the evaluation of this project are in Section 2.2.5. This project will ensure continued discharges from the SVWQCP to the Arroyo Simi-Las Posas which provide groundwater recharge to the ELPMA. Previous modeling suggested that loss of the recycled water discharges could result in a decrease in the sustainable yield of the ELPMA by approximately 2,200 AFY. This project does not require new infrastructure but requires negotiation of an agreement with the City of Simi Valley. Implementation of this project can be quantified for inclusion in the Basin Optimization Yield Study groundwater modeling by maintaining discharges from the SVWQCP to the Arroyo Simi-Las Posas.

2.3.1.3 Project 8: Allocation Buyback and Reduction Program

Project 8, Allocation Buyback and Reduction Program, was the third highest scoring project and is ranked at priority 3 (see Table 3). Details of the evaluation of this project are in Section 2.2.8. This project will reduce pumping in the Basin by purchasing and retiring allocation including Allocation Basis, Annual Allocation, and/or Carryover. The Allocation Buyback and Reduction Program does not require new infrastructure and can be implemented relatively quickly following development of the program policy framework and allocation of funding. This project is scalable and limited only by the amount of Basin Assessment allocated to the program and Water Right Holders' willingness to sell allocation. Implementation of this project cannot be quantified for inclusion in the Basin Optimization Yield Study groundwater modeling until the Watermaster Board defines the program policies, funding, and quantity of allocation to be purchased.

2.3.1.4 Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study

Project 7, In Lieu Deliveries to Northern East Las Posas Feasibility Study, was the fourth highest scoring project and is ranked at priority 4 (see Table 3). Details of the evaluation of this project are in Section 2.2.7. This feasibility study will evaluate the volume and location of supplemental supplies needed to fully mitigate groundwater declines in the northern ELPMA, investigate sources of supplemental water, and identify additional infrastructure or infrastructure upgrades needed to deliver supplemental water. The feasibility study will provide estimated benefits of the project and therefore it cannot be quantified for inclusion in the Basin Optimization Yield Study groundwater modeling.

2.3.1.5 Project 9: Regional Desalter Feasibility Study

Project 9, Regional Desalter Feasibility Study, was the fifth highest scoring project and is ranked at priority 5 (see Table 3). Details of the evaluation of this project are in Section 2.2.9. This project was selected for the Basin Optimization Plan because several of the evaluated candidate projects are dependent on implementation of a desalter and associated groundwater extraction wells. It is not known whether a desalter will be cost-effective, which the feasibility study will determine. Because design, permitting, financing, and construction of a desalter would be expected to take at least ten years, a feasibility study should be conducted expeditiously to determine whether it is a viable water-supply project. A regional desalter would be an alternative to Project 4, Moorpark Desalter, which was the lowest-scoring project evaluated as presently scoped. Project 9 will not be included in the Basin Optimization Yield Study groundwater modeling as the feasibility of the project will not be known nor can the potential benefits be quantified until the feasibility study is completed.

2.3.2 Projects Not Selected for Basin Optimization Plan

Four projects were not selected for inclusion in the Basin Optimization Plan based on the evaluation and ranking. These projects were found not "likely to be practical, reasonable, and cost-effective to implement prior to 2040 to maintain the Operating Yield at 40,000 AFY or as close thereto as achievable" (Judgment § 5.3.2.2). Projects not selected for inclusion in the Basin Optimization Plan will not be included in Basin Optimization Yield Study groundwater modeling. As discussed above, non-selected projects can be considered for subsequent addition to the Basin Optimization Plan if additional studies or information provide the basis for feasibility and higher ranking.

2.3.2.1 Project 6: Delivery of Recycled Water to Las Posas Valley Users via Pipeline

Details of the evaluation of Project 6, Delivery of Recycled Water to Las Posas Valley Users via Pipeline, are in Section 2.2.6. This project was not selected for inclusion in the Basin Optimization Plan because it would be a moderately complex project that would provide limited benefits and could require one or more desalters to address potential water-quality concerns which would significantly increase the costs.

2.3.2.2 Project 1: Arroyo Simi-Las Posas Arundo Removal

Project 1, Arroyo Simi-Las Posas Arundo Removal, was not selected for inclusion in the Basin Optimization Plan because it requires a companion project such as Project 4, Moorpark Desalter, or Project 9, Regional Desalter, to provide significant benefits to the LPV Basin. Groundwater modeling suggests that the majority of additional flows provided to the Arroyo by implementation of this project would flow into the downstream Pleasant Valley Basin unless a project creates additional groundwater storage capacity in the Shallow Alluvial Aquifer. As a standalone project, this project is unlikely to provide significant benefit to the LPV Basin. Details of the evaluation of this project are in Section 2.2.1.

2.3.2.3 Project 3: Arroyo Las Posas Storm Water Capture and Recharge

Project 3, Arroyo Las Posas storm water capture and recharge, was not selected for inclusion in the Basin Optimization Plan because it requires a companion project such as Project 4, Moorpark Desalter, or Project 9, Regional Desalter, to provide benefits to the LPV Basin. Groundwater modeling suggests some, if not all of the water diverted to the recharge ponds, is likely to flow back into Arroyo Las Posas and downstream into the Pleasant Valley Basin unless a project creates additional groundwater storage capacity in the Shallow Alluvial Aquifer. As a standalone project, this project is unlikely to provide significant benefit to the LPV Basin. Details of the evaluation of this project are in Section 2.2.3.

2.3.2.4 Project 4: Moorpark Desalter

Project 4, Moorpark Desalter, was not selected for inclusion in the Basin Optimization Plan because it would be a very expensive project that would have an estimated negative impact of -2,800 AFY on groundwater supply in the ELPMA, as currently scoped. This negative impact occurs because the VCWWD-1's conceptual project description would increase pumping by 5,000 AFY and product water would be used in lieu of purchasing imported water. Details of the evaluation of this project are in Section 2.2.4.

Table 3. Summary of Project Score & Rank

Project No.	Project Title	Summary of Scoring							
		Rank	Total Score (170 Max)	Water Supply Benefit (50 Max)	Timing / Feasibility (50 Max)	Cost (50 Max)	Impacts on Sustainability Indicators (20 Max)	Selected for Basin Optimization Plan	Include in BOYS Modeling
2	Purchase of Imported Water from CWMD for Basin Replenishment	1	121	25	50	26	15	Yes	Yes
5	Arroyo Simi-Las Posas Water Acquisition	2	94	30	27	22	15	Yes	Yes
8	Allocation Buyback and Reduction Program	3	92	15	45	17	15	Yes	No
7	In Lieu Deliveries to Northern ELPMA Feasibility Study	4	64	20	26	3	15	Yes	No
9	Regional Desalter Feasibility Study	5	55	20	17	3	15	Yes	No
6	Delivery of Recycled Water to Las Posas Users via Pipeline	6	54	15	17	12	10	No	No
1	Arroyo Simi Las Posas Arundo Removal	7	52	10	34	3	5	No	No
3	Arroyo Las Posas Storm Water Capture and Recharge	8	47	10	29	3	5	No	No
4	Moorpark Desalter	9	41	20	17	3	1	No	No

Note: BOYS = Basin Optimization Yield Study.

3 Basin Optimization Project Implementation

This section describes the five-year plan for implementing the five selected Basin Optimization Projects. The five-year plan presumes that budget will have been allocated to begin implementation activities in the first quarter of fiscal year 2025-26, beginning in July 2025. Five-year schedules for each Basin Optimization Project are included in Appendix C. A Gantt chart of the schedule to implement the selected Basin Optimization Projects is included as Appendix D. The five-year plan and schedule are estimated projections and are subject to Watermaster Board approval.

FY 2025-26 (7/1/2025 – 9/30/2025)

Q1 (7/1/2025 – 9/30/2025)

- Initial project implementation planning following Watermaster Board approval of the Basin Optimization Plan

Q2 (10/1/2025 – 12/31/2025)

- Project 2: Purchase of Imported Water from CMWD for Basin Replenishment
 - Begin development of program policy
 - Work with VCWWD-1, VCWWD-19, and Zone MWC to determine pumping costs to inform amount of incentive needed and projected annual volume of in-lieu deliveries
 - Meet with CMWD to confirm availability and cost of imported water for the program
- Project 5: Arroyo Simi-Las Posas Water Acquisition
 - Initiate discussions/negotiations for purchase or lease agreement with City of Simi Valley (real-property, Board closed session)
- Project 8: Allocation Buyback and Reduction Program
 - Begin development of program scope and policy
- Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study
 - Develop feasibility study scope of work with PAC/TAC consultation
- Project 9: Regional Desalter Feasibility Study
 - Engage water purveyors in the ELPMA to establish interest in desalter

Q3 (1/1/2026 – 3/31/2026)

- Project 2: Purchase of Imported Water from CMWD for Basin Replenishment
 - Initial analysis of Watermaster Budget and Basin Assessment needed to fund program
 - PAC/TAC consultation on draft policy and incentive
- Project 5: Arroyo Simi-Las Posas Water Acquisition
 - Continued negotiations for purchase or lease agreement with City of Simi Valley (real-property, Board closed session)
- Project 8: Allocation Buyback and Reduction Program
 - Draft program scope and policy discussed at Executive Committee

- PAC/TAC consultation on draft scope and policy
- Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study
 - Request for Proposals (RFP) for consultant to conduct feasibility study
- Project 9: Regional Desalter Feasibility Study
 - Develop feasibility scope including modeling scenarios
 - PAC/TAC consultation

Q4 (4/1/2026 – 6/30/2026)

- Project 2: Purchase of Imported Water from CMWD for Basin Replenishment
 - Develop incentive agreements including reporting requirements
 - Watermaster Budget and Basin Assessment review by Fiscal Committee, Committee Consultation
 - Finalize program policy and incentive amount; adoption by Watermaster Board
- Project 5: Arroyo Simi-Las Posas Water Acquisition
 - Continued negotiations for purchase or lease of agreement with City of Simi Valley (real property, Board closed session)
- Project 8: Allocation Buyback and Reduction Program
 - RFP and engage consultant to assist with development of process for least-cost allocation acquisition and transaction mechanics
- Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study
 - Watermaster Board award of contract for feasibility study
- Project 9: Regional Desalter Feasibility Study
 - RFP for consultant to conduct feasibility study

FY 2026-27 (7/1/2026 – 6/30/2027)

- Project 2: Purchase of Imported Water from CMWD for Basin Replenishment
 - Program implementation
- Project 5: Arroyo Simi-Las Posas Water Acquisition
 - Continued negotiations for purchase or lease of agreement with City of Simi Valley (real property, Board closed session)
 - PAC/TAC consultation
 - Watermaster Budget and Basin Assessment review by Fiscal Committee, Committee Consultation, and Watermaster Board adoption
 - Finalize draft purchase or lease agreement with City of Simi Valley (real property, Board closed session)
 - Board execution of final agreement
 - Program implementation
- Project 8: Allocation Buyback and Reduction Program
 - Consultant assisting with development of process for least-cost allocation acquisition and transaction mechanics
 - Consultant report on proposed transaction mechanics
 - Executive Committee review of draft program
 - Analysis of Watermaster Budget and Basin Assessment needed to fund pilot program

- Fiscal Committee review of Watermaster Budget and Basin Assessment needed to fund pilot program
 - Watermaster Board approval of draft pilot program with PAC/TAC consultation as appropriate
- Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study
 - Feasibility study underway
- Project 9: Regional Desalter Feasibility Study
 - Watermaster Board award of contract for feasibility study
 - Feasibility study underway

FY 2027-28 (7/1/2027 – 6/30/2028)

- Project 2: Purchase of Imported Water from CMWD for Basin Replenishment
 - First-year program review report to Watermaster Board
 - Ongoing program implementation
- Project 5: Arroyo Simi-Las Posas Water Acquisition
 - Ongoing program implementation
- Project 8: Allocation Buyback and Reduction Program
 - Pilot program beginning in Water Year⁷ 2028 (10/1/2027 – 9/30/2028)
- Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study
 - Draft feasibility study
 - PAC/TAC consultation
 - Watermaster Board review
 - Final feasibility study
- Project 9: Regional Desalter Feasibility Study
 - Draft feasibility study
 - PAC/TAC consultation
 - Watermaster Board review
 - Final feasibility study

FY 2028-29 (7/1/2028 – 6/30/2029)

- Project 2: Purchase of Imported Water from CMWD for Basin Replenishment
 - Ongoing program implementation
- Project 5: Arroyo Simi-Las Posas Water Acquisition
 - Ongoing program implementation
- Project 8: Allocation Buyback and Reduction Program
 - Pilot program during Water Year 2028 (10/1/2027 – 9/30/2028)
 - Review of pilot program
 - Expand to full program for temporary allocation (Annual Allocation and Carryover) starting Water Year 2029 (10/1/2028 – 9/30/2029)

⁷ A water year begins October 1 and ends September 30 to reflect the precipitation patterns in California. Under DWR's definition of a water year, water year 2028 begins October 1, 2027, and ends September 30, 2028. Under the Judgment adopted in the LPVB adjudication (Las Posas Valley Water Rights Coalition, et al. v. Fox Canyon Groundwater Management Agency, Santa Barbara Sup. Ct. Case No. VENC100509700) water year 2028 begins on October 1, 2028, and ends on September 30, 2029. This document adopts DWR's naming convention for a water year.

- PAC/TAC consultation
- Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study
 - To be determined based on results of feasibility study
- Project 9: Regional Desalter Feasibility Study
 - To be determined based on results of feasibility study

FY 2029-30 (7/1/2029 – 6/30/2030)

- Project 2: Purchase of Imported Water from CMWD for Basin Replenishment
 - Ongoing program implementation
- Project 5: Arroyo Simi-Las Posas Water Acquisition
 - Ongoing program implementation
- Project 8: Allocation Buyback and Reduction Program
 - Ongoing program implementation for Annual Allocation and Carryover
 - Evaluate potential to expand program to permanent allocation (Allocation Basis)
 - Potential RFP to contract consultant(s) to study economic and environmental impacts of permanent allocation purchase
- Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study
 - To be determined based on results of feasibility study
- Project 9: Regional Desalter Feasibility Study
 - To be determined based on results of feasibility study

4 5-Year Project Implementation Budget

Estimated costs to implement the five selected Basin Optimization Projects are presented in Appendix E, the 5-Year Basin Optimization Projects Budget. The costs are estimated by fiscal year, broken down into quarterly estimates of project/program development, implementation, feasibility study, and Watermaster administration costs, as applicable to each project. Assumptions used for the 5-year budget are included as footnotes to the table in Appendix E. The 5-year budget assumes project development beginning in the first quarter of Fiscal Year 2025-26, which begins July 2025. Because the scope of most of the projects will not be fully defined until the first phase of project/program development, the projected 5-year budget is an order-of-magnitude projection that can be refined once the projects/programs are better defined. The 5-year budget to fund the Basin Optimization Projects is subject to Watermaster Board approval following Committee Consultation. No outside funding has been identified for the selected Basin Optimization Projects and the 5-year project implementation budget would need to be funded through Basin Assessment. Following is a summary of the estimated 5-year budget.

FY 2025-26	\$436,000
Project 2: Purchase of Imported Water from CMWD	\$60,000
Project 5: Arroyo Simi-Las Posas Water Acquisition	\$100,000
Project 8: Allocation Buyback and Reduction Program	\$130,000
Project 7: In Lieu Deliveries to Northern ELPMA Feasibility Study.....	\$86,000
Project 9: Regional Desalter Feasibility Study	\$60,000
 FY 2026-27	 \$5,707,600
Project 2: Purchase of Imported Water from CMWD	\$4,628,600
Project 5: Arroyo Simi-Las Posas Water Acquisition	\$510,000
Project 8: Allocation Buyback and Reduction Program	\$245,000
Project 7: In Lieu Deliveries to Northern ELPMA Feasibility Study.....	\$112,000
Project 9: Regional Desalter Feasibility Study	\$212,000
 FY 2027-28	 \$6,100,600
Project 2: Purchase of Imported Water from CMWD	\$5,059,600
Project 5: Arroyo Simi-Las Posas Water Acquisition	\$510,000
Project 8: Allocation Buyback and Reduction Program	\$425,000
Project 7: In Lieu Deliveries to Northern ELPMA Feasibility Study.....	\$0
Project 9: Regional Desalter Feasibility Study	\$106,000
 FY 2028-29	 \$7,130,800
Project 2: Purchase of Imported Water from CMWD	\$5,520,800
Project 5: Arroyo Simi-Las Posas Water Acquisition	\$510,000
Project 8: Allocation Buyback and Reduction Program	\$1,100,000
Project 7: In Lieu Deliveries to Northern ELPMA Feasibility Study.....	\$0
Project 9: Regional Desalter Feasibility Study	\$0

FY 2029-30	\$7,624,400
Project 2: Purchase of Imported Water from CMWD	\$6,014,400
Project 5: Arroyo Simi-Las Posas Water Acquisition	\$510,000
Project 8: Allocation Buyback and Reduction Program	\$1,100,000
Project 7: In Lieu Deliveries to Northern ELPMA Feasibility Study.....	\$0
Project 9: Regional Desalter Feasibility Study	\$0
5-Year Total Estimated Budget.....	\$26,999,400

5 References

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- Ventura County Water and Sanitation Department (VCWSD). 2015. Arroyo Las Posas and Arroyo Simi Arundo Removal Feasibility and Water Savings Study. Prepared by Wildscape Restoration. January 2015.
- Ventura County Waterworks District No. 1 (VCWWD-1). 2020. Draft Technical Memorandum: MWRP Stormwater Diversion and Groundwater Recharge Feasibility Study. Prepared by Resource Consultants, Inc.
- Ulrich, C., S. Uhlemann, M. Newcomer, and P. Fish. Not Dated. Arroyo Las Posas Stormwater Diversion Feasibility Study and Diversion Test. Prepared for Ventura County Waterworks District No. 1.

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Appendix A

Project Evaluation Checklist and Project Ranking Sheet

LAS POSAS VALLEY WATERMASTER

c/o Fox Canyon Groundwater Management Agency

800 S. Victoria Avenue | Ventura, CA 93009-1610 | Tel: (805) 654-2010 | LPV.Watermaster@ventura.org

Project Evaluation Checklist

BACKGROUND INFORMATION	
Project Name:	(Please fill in)
Purpose of Project:	(Please select one)
Project Type:	(Please select one)
Sponsoring Agency:	(Please fill in)
Management Area:	(Please select one)
Location:	(Please fill in)
Project Description:	(Please fill in)
Implementation Trigger (if applicable):	(Please fill in)
Evaluation Criteria	Response (Applicant to Complete)
Water Supply	
Annual increase in Sustainable Yield (AFY):	(Please fill in)
Annual increase in supplemental water in lieu of pumping (AFY):	(Please fill in)
Groundwater demand reduction (AFY):	(Please fill in)
List all sustainability indicators addressed by the project:	(Please fill in)
Project documentation included?	(Please select one)
Timing/Feasibility	
Project Implementation Timeframe	
Current Project status:	(Please select one)
Estimated time to Project completion (years):	(Please fill in)
Timeline / feasibility documentation included?	(Please select one)
Environmental	
CEQA/NEPA type:	(Please select one)
Status of CEQA/NEPA review and permitting:	(Please select one)
Will the Project likely be permitted?	(Please select one)
Sensitivity of location:	(Please fill in)
Permitting	
Permits required:	(Please fill in)
Status / time required:	(Please fill in)
Likelihood of Project being permitted:	(Please select one)

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Project Evaluation Checklist

Project Complexity	
Does the Project use new technology:	(Please select one)
Does the Project require land acquisition:	(Please select one)
Status of the land acquisition process:	(Please select one)
Is the Project dependent on other unbuilt or unfunded projects:	(Please select one)
Is the Project dependent on funded projects currently under construction:	(Please select one)
Description of Operation and Maintenance (if applicable):	(Please fill in)
Project Lifespan	
What is the projected lifespan of the Project:	(Please fill in)
Project Phasing	
<i>Please provide documentation of anticipated project phasing, including schedules and costs (capital and O&M) for each phase, as an attachment to this form.</i>	
Does Project require multiple phases of construction?	(Please select one)
No. of anticipated construction phases:	(Please fill in)
Description of phases:	(Please fill in)
Phasing timeline:	(Please fill in)
Total cost per phase:	(Please fill in)
Project phasing documentation attached?	(Please select one)
Cost and Funding	
Total capital cost:	(Please fill in)
Total annual Operations & Maintenance (O&M) Cost:	(Please fill in)
Is the project Proponent providing a funding match to construct the project?	(Please fill in)
Is there a funding source other than FCGMA for ongoing operation and maintenance costs?	(Please fill in)
Additional Project Considerations	
Is it necessary to collaborate and/or coordinate with FCGMA, Calleguas, WWDs, United Water Conservation District, or the Water Rights Holders for project implementation?	(Please select one)
If yes, please describe the anticipated collaboration/coordination.	(Please fill in)
Describe any material and unreasonable impacts that cannot be mitigated and/or any negative impacts to sustainability indicators caused by the project.	(Please fill in)
Project Proponent Contact Information	Response (Applicant to Complete)
Name:	(Please fill in)

LAS POSAS VALLEY WATERMASTER

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Project Evaluation Checklist

Title:	_____	(Please fill in)
Organization:	_____	(Please fill in)
Email:	_____	(Please fill in)
Phone:	_____	(Please fill in)
Date:	_____	(Please fill in)

Project Ranking Sheet

Project Name _____ Project Type _____

Sponsoring Agency _____ Mgmt. Area _____

WATER SUPPLY

1. Total Sustainable Yield / Supplemental Water / Reduced Demand

Total additional water supplied by the project for the benefit of the basin through increase to sustainable yield, supplemental water to be delivered in lieu of pumping, or reduction in groundwater demand.

_____AFY increased sustainable yield

_____AFY supplemental water in lieu of pumping

_____AFY groundwater demand reduction

Points Awarded

5	10	15	20	25
<500 AFY	≤500 AFY <2,500 AFY	≤2,500 to AFY <5,000 AFY	≤5,000 AFY <7,500 AFY	≥7,500 AFY

2. Sustainable Yield / Supplemental Water / Reduced Demand Documentation

Project documentation includes verifiable quantified estimate of increased sustainable yield, supplemental water, and/or reduced groundwater demand.

Points Awarded

5	10	15	20	25
Conceptual estimate - no supporting documentation	Conceptual estimate - limited supporting documentation	Initial feasibly study supporting estimate	Preliminary design and/or modeling supporting estimate	Detailed design and/or modeling supporting estimate

TIMING / FEASIBILITY

3. Project Implementation Timeframe

What is the project implementation timeframe?

Points Awarded

1	5	10	15	20
Cannot be implemented prior to 2040	May be operational by 2040, but uncertain	Can be operational by 2040	Can be operational in 10 years or less	Can be operational in 5 years or less

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4. Development Phase

How far along is the definition, feasibility, design, and development of the project?

Points Awarded

1	2	3	4	5
Conceptual – no feasibility or design, project not well defined	Feasibility study in progress, project well defined	Initial feasibility study completed	30% engineering design	60% or greater engineering design

5. Status of Approvals, Permits, and Environmental Review

What is the status of NEPA/CEQA review and permitting?

Points Awarded

1	2	3	4	5
Permit requirements not identified or unknown	Expected to take >5 years	Underway and approvals expected <3 years	Underway and approvals expected ≤1 year	Permitting and CEQA / environmental review complete

6. Project Complexity

How complex is the project? For example, does it require multiple phases of construction; does it use proven technology; does it require land acquisition; is dependent upon other projects; and/or does it require complex permitting?

Points Awarded

1		3		5
Very complex, relies on unproven technology		Moderately complex		Low complexity, uses readily available proven technology

7. Land Acquisition

Does the project require land acquisition or easements, and if so, what is the status?

Points Awarded

1	2	3	4	5
Required, not started and/or potential eminent domain	Process started, but less than 25% complete	>25% but <50% complete	More than 50% complete	Not required or all acquisitions and/or easements complete

8. Dependency on Other Projects

Is the project dependent upon other projects?

Points Awarded

1		3		5
Project is dependent on other unbuilt and unfunded projects		Project is dependent on funded projects under construction		Not dependent on other unbuilt projects

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9. Project Lifespan

What is the projected lifespan of the project?

Points Awarded

1	2	3	4	5
≤5 years		10 years		≥20 years

COST & FUNDING

10. Water Cost

Projected total cost of water produced, saved, or increase in sustainable yield.

\$_____ Total capital cost

\$_____ Total annual O&M cost

\$_____ Annual O&M cost per AF

\$_____ Annual cost (all costs including capital and O&M) per AF

Points Awarded

1	5	10	15	20
≥\$3,000 / AF	≤\$2,000 / AF <\$3,000 / AF	≤\$1,000 / AF <\$2,000 / AF	>\$500 / AF <\$1,000 / AF	≤\$500 / AF

11. Funding Match for Construction

Is the project proponent providing a funding match to construct the project?

Points Awarded

1	4	8	12	15
No match	<10% match	10 to 25% match	25 to 50% match	>50% match

12. O&M Funding

Is there a funding source other than FCGMA for ongoing operation & maintenance costs?

Points Awarded

1	4	8	12	15
No funding identified	25%	50% of funding committed	75%	100% of funding committed

ADDITIONAL PROJECT CONSIDERATIONS

13. Collaboration/Cooperation/Participation

Is it necessary or desirable to collaborate and/or coordinate with FCGMA, Calleguas, WWDs, United Water Conservation District, or the Water Right Holders for project implementation?

Points Awarded

N/A
Coordination requirements will not impact final project scoring.

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14. Impact on Sustainability Indicators

What impact will the project have on sustainability indicators applicable to the LPVB (i.e., chronic lowering of groundwater levels, reduction of groundwater in storage, degraded groundwater quality, land subsidence, depletions of interconnected surface water)?

Points Awarded

1	5	10	15	20
May have negative impact on sustainability indicator.	Does not address sustainability indicators.	May help mitigate one sustainability indicator.	May help mitigate two sustainability indicators.	May help mitigate three or more sustainability indicators.

Ranked by _____

Date _____

Appendix B

Project Ranking Sheets

Appendix B Project Scoring Matrix				
Project 1: Arroyo Simi Las Posas Arundo Removal				
FCGMA Evaluation Criteria Scores	Criteria		Notes	
	Water Supply	Total Sustainable Yield/ Supplemental Water/ Reduced Demand	<500 AFY	To support development of the GSP, the Nature Conservancy estimated that Arundo Donax removal from approximately 324 acres of land within the Arroyo Simi-Las Posas corridor could result in an increase in up to an additional 2,680 AFY of recharge to the ELPMA. However, modeling for the Periodic Evaluation found no increase in sustainable yield unless groundwater storage in the southern ELPMA was increased through a project such as the Moorpark Desalter.
		Points	5	
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Conceptual estimate - no supporting documentation	In 2015, VCWSD conducted a study to characterize water savings associated with removing Arundo Donax from the Arroyo Simi-Las Posas corridor. The study demonstrates that the net water savings associated with Arundo Removal is 2,680 AFY. However, the volume of this water savings that ultimately recharges the ELPMA is not characterized. Additional modeling is required.
		Points	5	
	Timing / Feasibility	Project Implementation Timeframe	Can be operational in 5 years or less	The project will be implemented in two phases: Phase (1) - development of an Arundo work plan (2 years) Phase (2) - Arundo Removal (1 to 2 years)
		Points	20	
		Development Phase	Conceptual - no feasibility or design, project not well defined	The work plan for this project has not been developed. Because of this, the scope / scale of this project is considered preliminary.
		Points	1	
		Status of Approvals, Permits, and Environmental Review	Permit requirements not identified or unknown	Specific permitting and CEQA requirements will be identified as part of the work plan development.
		Points	1	
		Project Complexity	Low complexity, uses readily available proven technology	Similar projects have been implemented within the Ventura Watershed and the project does not rely on new technology.
		Points	5	
		Land Acquisition	Required, not started and/or potential eminent domain	Access to perform field assessment tasks is required. Easements or access agreements need to be secured with property owners.
		Points	1	
		Dependency on Other Projects	Project is dependent on other unbuilt and unfunded projects	Modeling for the GSP Periodic Evaluation found that the Arundo Removal Project would provide little benefit to the ELPMA unless new project(s) are implemented to increase the available storage in the southern ELPMA such as the Moorpark Desalter.
		Points	1	
		Project Lifespan	>20 years	Project lifespan is indefinite, with annual O&M costs to ensure long-term removal.
		Points	5	
	Cost & Funding	Water Cost	≥\$3,000 / AF	\$400,000 Work Plan \$9,100,000 Total capital cost (\$7.4 M from GSP with CPI adj.) \$380,000 Annual cost assuming 25 yr life (no interest or future CPI adj) \$142 Annual capital costs per AF (@2,680 AFY) \$250 Annual O&M cost (@2,680 AFY; \$200 per AF from GSP with CPI adj.) \$392 Total annual cost per AF of additional recharge However, as stand-alone project may be over \$3,000 per AF annual cost.
		Points	1	
		Funding Match for Construction	No Match	This project would be funded through the Basin assessment. FCGMA anticipates pursuing grant funding for this, as it becomes available.
		Points	1	
		O&M Funding	No funding identified	O&M would be funded through the Basin assessment.
		Points	1	
	Additional Benefits	Collaboration / Participation Required	Yes	Collaboration with water right holders may be required to develop access agreements for initial Arundo removal and O&M.
		Points	N/A	
		Impacts on Sustainability Indicators	Does not address sustainability indicators.	If implemented with a project to increase storage in the ELPMA, the project is expected to support groundwater quality, level, and storage management within the ELPMA. However, as a stand-alone project, the Arundo Removal Project would not address sustainability indicators.
		Points	5	
		Total Points:	52	

Appendix B Project Scoring Matrix				
Project 2: Purchase of Imported Water from CWMD for Basin Replenishment				
FCGMA Evaluation Criteria Scores	Criteria		Notes	
	Water Supply	Total Sustainable Yield/ Supplemental Water/ Reduced Demand	≤2,500 to <5,000 AFY	For the GSP, it was assumed that 1,760 AFY of CMWD water would be purchased and delivered in the WLPMA to ZMWC and VCWWD-19, and 1,380 AFY to VCWWD-1 in ELPMA. FCGMA assumes that this same volume would be available for this Project.
		Points	15	
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Initial feasibility study supporting estimate	Although an initial feasibility study has not been conducted, empirical monitoring data from a similar program conducted between 1995 and 2008 demonstrated the feasibility of the project.
		Points	15	
	Timing / Feasibility	Project Implementation Timeframe	Can be operational in 5 years or less	Project would use existing delivery infrastructure. ZMWC pipeline improvements, which are underway, are required to fully utilize the water provided through this project. Implementation timeline is ultimately contingent on funding availability and negotiations between FCGMA, ZMWC, and VCWWD-19.
		Points	20	
		Development Phase	60% or greater engineering design	This project would establish a program similar to one that operated within the LPV between 1998 and 2005.
		Points	5	
		Status of Approvals, Permits, and Environmental Review	Permitting and CEQA/ environmental review complete	Permitting and CEQA is not required to implement this project.
		Points	5	
		Project Complexity	Low complexity, uses readily available proven technology	Project uses existing infrastructure and was successfully implemented between 1995 and 2008.
		Points	5	
		Land Acquisition	Not required or all acquisitions an/or easements complete	Project uses existing infrastructure. No additional land acquisition or easements are required.
		Points	5	
		Dependency on Other Projects	Not dependent on other unbuilt projects	Project is not dependent on other unbuilt projects. CMWD has indicated that there is sufficient water supplies to implement this project at a variety of scales in most years.
		Points	5	
		Project Lifespan	>20 years	CMWD indicates that this Project lifespan would exceed 50 years.
		Points	5	
	Cost & Funding	Water Cost	\$1000 to \$2000 /AF	Project proposes incentive for difference between pumping cost and cost of CMWD imported water. CMWD 2025 Tier 1 rate is \$1,895/AF; water rates are anticipated to increase in the future. Pumping costs are not presently identified.
		Points	10	
		Funding Match for Construction	No Match	No additional funding sources have been identified.
		Points	1	
		O&M Funding	100% of funding committed	No additional O&M costs are expected beyond annual water costs.
		Points	15	
	Additional Benefits	Collaboration / Participation Required	Yes	Coordination is required between FCGMA, CMWD, and participating water purveyors.
		Points	N/A	
		Impacts on Sustainability Indicators	May help mitigate two sustainability indicators	Supports groundwater elevation and storage management within the WLPMA.
		Points	15	
		Total Points:	121	

Appendix B Project Scoring Matrix					
Project 3: Arroyo Las Posas Storm Water Capture and Recharge					
FCGMA Evaluation Criteria Scores	Criteria		Notes		
		Total Sustainable Yield/ Supplemental Water/ Reduced Demand	< 500 AFY	VCWWD-1 estimates that this project will provide an additional 2,000 AFY of recharge to the ELPMA. However, similar to Project 1, this project would not be expected to recharge the underlying Shallow Alluvial Aquifer without a companion project such as the Moorpark Desalter to increase available groundwater storage. As a stand-alone project, this project would not be expected to provide significant benefit to the Basin.	
		Points	5		
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Conceptual estimate - no supporting documentation	VCWWD-1 has undertaken significant efforts to advance this project, including conducting geophysical surveys/investigations to help design their recharge basins and performing hydrologic modeling to estimate the volume of storm flows that would be available for diversion. However, no groundwater modeling has been conducted to characterize the storage capacity of the ELPMA and volume of recharged water that remains in the ELPMA	
		Points	5		
	Timing / Feasibility	Project Implementation Timeframe	Can be operational by 2040	VCWWD-1 anticipates that this project could be constructed by the end of 2027. Documentation provided by VCWWD indicates that the feasibility study will not be completed until March 30, 2025. No construction timeline was provided.	
		Points	10		
		Development Phase	FS in progress, project well defined	VCWWD-1 anticipates completing the Feasibility Study by March 30, 2025.	
		Points	2		
		Status of Approvals, Permits, and Environmental Review	Underway and approvals expected < 3 years	VCWWD-1 has not started the permitting process, but understands that coordination with CDFW, RWQCB, ACOE, and VCWPD will be required. VCWWD anticipates that permitting will take 1 year.	
		Points	3		
		Project Complexity	Moderately Complex	The project does not employ new or novel technologies, but construction of the project is moderately complex, and includes construction of diversion and percolation facilities (pipelines, pumping stations, and a fish ladder).	
		Points	3		
		Land Acquisition	Not required or all acquisitions an/or easements complete	VCWWD-1 indicates that no land acquisitions or easements are required.	
		Points	5		
		Dependency on Other Projects	Project is dependent on other unbuilt projects	Project requires a companion project such as the Moorpark Desalter to increase available groundwater storage in the southern portion of the ELPMA to provide significant benefit to the Basin.	
		Points	1		
		Project Lifespan	>20 years	VCWWD-1 anticipates a 25 year project lifespan.	
		Points	5		
		Cost & Funding	Water Cost	>\$3000 / AF	VCWWD-1 anticipates that capital costs to construct this project will be \$4M but has not provided estimates of O&M costs. Because of this, total water costs associated with the Project cannot be calculated and, therefore, have been assigned a value of ">\$3,000/AF" to reflect uncertainty in overall Project costs.
			Points	1	
	Funding Match for Construction		No Match	No additional funding sources have been identified.	
	Points		1		
	O&M Funding		No funding identified	No funding match for O&M has been identified.	
	Points		1		
	Additional Benefits	Collaboration / Participation Required	Yes	Collaboration between VCWWD-1, VCWPD, and FCGMA will be required.	
		Points	N/A		
		Impacts on Sustainability Indicators	Does not address sustainability indicators.	If implemented with a project to increase storage in the ELPMA, the project is expected to support groundwater elevation and storage management within the ELPMA. However, as a stand-alone project, the Arroyo Las Posas Storm Water Capture and Recharge Project would not address sustainability indicators.	
		Points	5		
		Total Points:	47		

Appendix B Project Scoring Matrix			
Project 4: Moorpark Desalter			
FCGMA Evaluation Criteria Scores	Criteria		Notes
	Water Supply	Total Sustainable Yield/ Supplemental Water/ Reduced Demand	<500 AFY
		Points	
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Initial feasibility study supporting estimate
		Points	
	Timing / Feasibility	Project Implementation Timeframe	May be operational by 2040, but uncertain
		Points	5
		Development Phase	Conceptual - no feasibility or design, project not well defined
		Points	1
		Status of Approvals, Permits, and Environmental Review	Permit requirements not identified or unknown
		Points	1
		Project Complexity	Moderately Complex
		Points	3
		Land Acquisition	Required, not started and/or potential eminent domain
		Points	1
		Dependency on Other Projects	Project is dependent on other unbuilt projects and unfunded projects
		Points	1
		Project Lifespan	>20 years
		Points	5
	Cost & Funding	Water Cost	>\$3000 / AF
		Points	1
		Funding Match for Construction	No Match
		Points	1
		O&M Funding	No funding identified
		Points	1
	Additional Benefits	Collaboration / Participation Required	Yes
		Points	N/A
		Impacts on Sustainability Indicators	May have negative impact on sustainability indicator
		Points	1
	Total Points:		41

Appendix B Project Scoring Matrix					
Project 5: Arroyo Simi-Las Posas Water Acquisition					
FCGMA Evaluation Criteria Scores	Criteria		Notes		
	Water Supply	Total Sustainable Yield/ Supplemental Water/ Reduced Demand	≤500 to <2,500 AFY	Failure to maintain discharges to Arroyo Simi-Las Posas could reduce the sustainable yield by 1,200 AFY, depending on the volume of SVWQCP discharges maintained in Arroyo Simi-Las Posas.	
		Points	10		
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Preliminary Design and / or modeling supporting estimate	Modeling conducted for the periodic GSP evaluations indicate that maintaining SVWQCP discharges may provide between 2,400 and 3,600 AFY of additional recharge to the ELPMA, compared to what was projected in FCGMA (2019). Additional modeling will need to be conducted when a final volume of discharges is agreed upon by both FCGMA, Water Rights Holders, and the City of Simi Valley.	
		Points	20		
	Timing / Feasibility	Project Implementation Timeframe	May be operational by 2040, but uncertain	The project does not require new infrastructure, but will require negotiation of real property (i.e. recycled water) pricing and availability. Final agreed upon terms are presently not known.	
		Points	5		
		Development Phase	Conceptual - no feasibility or design, project not well defined	Modeling for the GSP found that loss of this water would result in a reduction of 1,200 AFY of sustainable yield. Modeling conducted for the periodic GSP evaluations indicate that maintaining SVWQCP discharges may provide between 2,400 and 3,600 AFY of additional recharge to the ELPMA. Additional groundwater modeling under different project scenarios would be needed to evaluate the full impacts of loss of these flows.	
		Points	1		
		Status of Approvals, Permits, and Environmental Review	Permit requirements not identified or unknown	Discharges will need to comply with the City's NPDES permit and TMDL limits. Additional permitting is not anticipated for this project.	
		Points	1		
		Project Complexity	Low complexity, uses readily available proven technology	Project does not involve new technology or infrastructure. Project is readily implementable once agreement is developed and finalized with the City of Simi Valley.	
		Points	5		
		Land Acquisition	Not required or all acquisitions an/or easements complete	No additional land acquisition or easements are required.	
		Points	5		
		Dependency on Other Projects	Not dependent on other unbuilt projects	This project and Project 6 Recycled Water Pipeline would utilize the same source of water and benefits are mutually exclusive. There may be additional benefits if the Arundo Removal project and a Desalter are implemented.	
		Points	5		
		Project Lifespan	>20 years	Project lifespan will depend upon final negotiations.	
		Points	5		
		Cost & Funding	Water Cost	<\$500 / AF	This is an assumed cost. The actual cost is subject to the final agreement with the City of Simi Valley.
			Points	20	
	Funding Match for Construction		No Match	No construction is required.	
	Points		1		
	O&M Funding		No funding identified	SVWQCP O&M will be managed by the City of Simi Valley. Purchase of water subject to an agreement with the City would be funded through Basin Assessment.	
	Points		1		
	Additional Benefits	Collaboration / Participation Required	Yes	Coordination and collaboration required with FCGMA and the City of Simi Valley.	
		Points	N/A		
		Impacts on Sustainability Indicators	May help mitigate two sustainability indicators	Supports groundwater level and storage management in the ELPMA.	
		Points	15		
		Total Points:	94		

Appendix B Project Scoring Matrix				
Project 6: Delivery of Recycled Water to Las Posas Users via Pipeline				
FCGMA Evaluation Criteria Scores	Criteria		Notes	
	Water Supply	Total Sustainable Yield/ Supplemental Water/ Reduced Demand	500 to <2500	Project would deliver 3,000 AFY of recycled water to Berylwood Heights MWC and potentially Zone MWC via pipeline rather than continuing to discharge to the Arroyo Simi-Las Posas for recharge in the ELPMA. Project water supply based on estimated avoidance of 640 to 1,600 AFY of ET losses.
		Points	10	
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Conceptual estimate - no supporting documentation	The volume of RW available for delivery and use in lieu of groundwater is uncertain and will depend upon multiple factors, including: (i) the willingness of Berylwood Heights MWC and potentially Zone MWC to use RW water with relatively high salinity, (ii) the volume of water acquired by FCGMA for discharge to Arroyo Simi Las Posas.
		Points	5	
	Timing / Feasibility	Project Implementation Timeframe	May be operational by 2040, but uncertain	The project requires significant new infrastructure, negotiation of easements along new pipeline right-of-way, and the negotiation of real property (i.e., recycled water) pricing and availability. Final agreed upon terms and infrastructure requirements are uncertain.
		Points	5	
		Development Phase	Conceptual - no feasibility or design, project not well defined	No feasibility has been conducted to evaluate infrastructure needs, current RW demands, and current RW availability.
		Points	1	
		Status of Approvals, Permits, and Environmental Review	Permit requirements not identified or unknown	This project would require construction of new pump station and 8.6 miles of conveyance infrastructure. Permitting requirements to construct these facilities would be identified through an initial feasibility study.
		Points	1	
		Project Complexity	Moderately Complex	This project does not rely on new technology, but is technically complex because it will likely require multiple construction phases and depend on is contingent on negotiating RW availability and long-term demands
		Points	3	
		Land Acquisition	Required, not started and/or potential eminent domain	land acquisition and easement requirements will be identified through an initial feasibility study.
		Points	1	
		Dependency on Other Projects	Project is dependent on other unbuilt and unfunded projects	Delivery of RW via pipeline will decrease the volume of water discharged to the Arroyo Simi-Las Posas by an equal amount.
		Points	1	
		Project Lifespan	>20 years	Not well defined.
		Points	5	
	Cost & Funding	Water Cost	\$1000 to \$2000 /AF	Infrastructure costs are based on estimates developed by Kennedy Jenks (CMWD 2017). However, this cost omits the cost of purchase or lease of the water from the City of Simi Valley, loss of recharge to the Arroyo Simi-Las Posas, and desalter(s) that may be required to treat the water, and should be fully evaluated in a feasibility study.
		Points	10	
		Funding Match for Construction	No Match	None identified. Project is conceptual, but cost would likely need to be funded through Basin Assessment.
		Points	1	
		O&M Funding	No funding identified	None identified. Project is conceptual, but cost would likely need to be funded through Basin Assessment.
		Points	1	
	Additional Benefits	Collaboration / Participation Required	Yes	Coordination is required between FCGMA, MWCs, and City of Simi Valley
		Points	N/A	
		Impacts on Sustainability Indicators	May help mitigate one sustainability indicator	While the increase in water supply supports groundwater level and storage management in the ELPMA, the project may have water quality impacts if the RW is not desalted.
		Points	10	
		Total Points:	54	

Appendix B Project Scoring Matrix				
Project 7: In Lieu Deliveries to Northern ELPMA Feasibility Study				
FCGMA Evaluation Criteria Scores	Criteria		Notes	
	Water Supply	Total Sustainable Yield/ Supplemental Water/ Reduced Demand	≤500 AFY to <2,500 AFY	The volume of in lieu water needed to address the long-term groundwater declines in the northern ELPMA is not presently known, but will be identified in the feasibility study. Initial assumptions are it will be in the ≤500 AFY to <2,500 AFY range.
		Points	10	
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Conceptual Estimate - limited documentation	Preliminary modeling conducted and presented to the FCGMA Board.
		Points	10	
	Timing / Feasibility	Project Implementation Timeframe	Can be operational by 2040	Depending on new infrastructure that may be required identified in the feasibility study, it is anticipated that the project can be operational by 2040.
		Points	10	
		Development Phase	Conceptual - no feasibility or design, project not well defined	Project is conceptual. Current project proposal is for a feasibility study.
		Points	1	
		Status of Approvals, Permits, and Environmental Review	Permit requirements not identified or unknown	Permits required to implement this project will be identified through the FS.
		Points	1	
		Project Complexity	Moderately complex	Depending on new infrastructure that may be required identified in the feasibility study, the project may be moderately complex.
		Points	3	
		Land Acquisition	Required, not started and/or potential eminent domain	Depending on new infrastructure that may be required identified in the feasibility study, easements may be required.
		Points	1	
		Dependency on Other Projects	Not dependent on other unbuilt projects	Project is not anticipated to be dependent on other unbuilt projects.
		Points	5	
		Project Lifespan	≥20 years	Project would be expected to have a lifespan greater than 20 years.
		Points	5	
	Cost & Funding	Water Cost	>\$3000 / AF	Feasibility Study will identify potential new sources of water supply to the northern ELPMA. A cost of "\$3,000/AF" was included here to reflect uncertainty in the final project pricing.
		Points	1	
		Funding Match for Construction	No Match	No funding match has been identified.
		Points	1	
		O&M Funding	No funding identified	No O&M funding identified other than Basin Assessment.
		Points	1	
	Additional Benefits	Collaboration / Participation Required	Yes.	Collaboration with other entities is anticipated depending on the new water source(s) identified in the Feasibility Study.
		Points	N/A	
		Impacts on Sustainability Indicators	May help mitigate two sustainability indicators	Providing a new source of water in lieu of pumping in the northern ELPMA would help address the chronic decline in water levels and decrease of groundwater in storage.
		Points	15	
		Total Points:	64	

Appendix B Project Scoring Matrix				
Project 8: Allocation Buyback and Reduction Program				
FCGMA Evaluation Criteria Scores	Criteria		Notes	
	Water Supply	Total Sustainable Yield/ Supplemental Water/ Reduced Demand	≤500 AFY to <2,500 AFY	Reduced demand may vary on an annual basis. The current project is to develop the policies, cost basis and mechanism for least cost, and prioritization of purchases. The program is scalable and limited by allocated funding and willing sellers. Initial projection is the program may acquire between ≤500 AFY to <2,500 AFY.
		Points	10	
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Conceptual estimate - no supporting documentation	Study has not been initiated.
		Points	5	
	Timing / Feasibility	Project Implementation Timeframe	Can be operational in 5 years or less	Project does not require any new infrastructure and Watermaster has authority under the Judgment to levy fees that could be used to purchase allocation.
		Points	20	
		Development Phase	Conceptual - no feasibility or design, project not well defined	Project is conceptual and will be further defined through this study.
		Points	1	
		Status of Approvals, Permits, and Environmental Review	Underway and approvals expected in ≤ 1 year	Permits not required. Environmental review anticipated on a program level in less than a year.
		Points	4	
		Project Complexity	Low complexity, uses readily available proven technology	
		Points	5	
		Land Acquisition	Not required or all acquisitions an/or easements complete	
		Points	5	
		Dependency on Other Projects	Not dependent on other unbuilt projects	
		Points	5	
		Project Lifespan	≥20 years	Depending on policies enacted by the Watermaster Board, the project could have an indefinite lifespan.
		Points	5	
	Cost & Funding	Water Cost	>\$500 / AF to <\$1,000 / AF	The cost of acquiring allocation is not known and will depend upon the policies and mechanisms enacted to provide least-cost acquisition. For purposes of scoring the project, acquisition of Annual Allocation and/or Carryover is assumed to be in the >\$500 / AF to <\$1,000 / AF range. Purchase of Allocation Basis is expected to be more.
		Points	15	
		Funding Match for Construction	No Match	This program does not require construction. Development of the program is estimated at \$100,000 which would be funded through Basin Assessment.
		Points	1	
		O&M Funding	No funding identified	Funding is anticipated through Basin Assessment.
		Points	1	
	Additional Benefits	Collaboration / Participation Required	Yes.	Implementation of this project will require coordination between FCGMA and stakeholders.
		Points	N/A	
		Impacts on Sustainability Indicators	May help mitigate two sustainability indicators	Implementation of the program would help to address potential undesirable results due to chronic lowering of groundwater levels and decreases in groundwater storage.
		Points	15	
		Total Points:	92	

Appendix B Project Scoring Matrix				
Project 9: Regional Desalter Feasibility Study				
FCGMA Evaluation Criteria Scores	Criteria		Notes	
	Water Supply	Total Sustainable Yield/ Supplemental Water/ Reduced Demand	≤2,500 AFY to <5,000 AFY	Initial estimate of potential benefit of a regional desalter, to be evaluated in the feasibility study.
		Points	15	
		Sustainable Yield/ Supplemental Water/ Reduced Demand Documentation	Conceptual estimate - no supporting documentation	
		Points	5	
	Timing / Feasibility	Project Implementation Timeframe	May be operational by 2040, but uncertain	While the feasibility study is estimated to require 18 months to complete, design, permitting, and construction of a regional desalter would be expected to require at least 10 years.
		Points	5	
		Development Phase	Conceptual - no feasibility or design, project not well defined	
		Points	1	
		Status of Approvals, Permits, and Environmental Review	Permit requirements not identified or unknown	Permits and environmental review will be determined by the feasibility study.
		Points	1	
		Project Complexity	Moderately complex	While the project does not rely on new technology, the regional desalter project will require significant construction, fairly complex environmental compliance and permitting, and land acquisition and easements.
		Points	3	
		Land Acquisition	Required, not started and/or potential eminent domain	
		Points	1	
		Dependency on Other Projects	Project is dependent on other unbuilt and unfunded projects	Project dependency will be evaluated in the feasibility study, but the project will likely be dependent on other pipeline projects.
		Points	1	
		Project Lifespan	>20 years	
		Points	5	
	Cost & Funding	Water Cost	>\$3000 / AF	Total water cost including capital and O&M costs is not known, but could be >\$3,000 per AF.
		Points	1	
		Funding Match for Construction	No Match	No funding matches have been identified at this time. The feasibility study will identify potential funding and financing opportunities. Some or all of the funding likely will need to come from Basin Assessment.
		Points	1	
		O&M Funding	No funding identified	O&M costs will likely need to come from Basin Assessment.
		Points	1	
	Additional Benefits	Collaboration / Participation Required	Yes.	Preparation of the Regional Desalter Feasibility Study will require coordination with FCGMA, CMWD, VCWWD 1, mutual water companies, stakeholders, and others who may be identified.
		Points	N/A	
		Impacts on Sustainability Indicators	May help mitigate two sustainability indicators	A regional desalter would support groundwater level and storage management in the ELPMA.
		Points	15	
		Total Points:	55	

Appendix C

Individual Basin Optimization Project Schedules

Appendix C
Individual Basin Optimization Project Schedules

Project 2: Purchase of Imported Water from CMWD for Basin Replenishment

FY 2025-26 (7/1/2025 – 9/30/2025)

Q2 (10/1/2025 – 12/31/2025)

- Begin development of program policy
- Work with VCWWD-1, VCWWD-19, and Zone MWC to determine pumping costs to inform amount of incentive needed and projected annual volume of in-lieu deliveries
- Meet with CMWD to confirm availability and cost of imported water for program

Q3 (1/1/2026 – 3/31/2026)

- Initial analysis of Watermaster Budget and Basin Assessment needed to fund program
- PAC/TAC consultation on draft policy and incentive

Q4 (4/1/2026 – 6/30/2026)

- Develop incentive agreements including reporting requirements
- Watermaster Budget and Basin Assessment review by Fiscal Committee, Committee Consultation
- Finalize program policy and incentive amount; adoption by Watermaster Board

FY 2026-27 (7/1/2026 – 6/30/2027)

- Program implementation

FY 2027-28 (7/1/2027 – 6/30/2028)

- First-year program review report to Watermaster Board
- Ongoing program implementation

FY 2028-29 (7/1/2028 – 6/30/2029)

- Ongoing program implementation

FY 2029-30 (7/1/2029 – 6/30/2030)

- Ongoing program implementation

Appendix C
Individual Basin Optimization Project Schedules

Project 5: Arroyo Simi-Las Posas Water Acquisition

FY 2025-26 (7/1/2025 – 9/30/2025)

Q2 (10/1/2025 – 12/31/2025)

- o Initiate discussions/negotiations for purchase or lease agreement with City of Simi Valley (real-property, Board closed session)

Q3 (1/1/2026 – 3/31/2026)

- o Continued negotiations for purchase or lease agreement with City of Simi Valley (real-property, Board closed session)

Q4 (4/1/2026 – 6/30/2026)

- o Continued negotiations for purchase or lease of agreement with City of Simi Valley (real property, Board closed session)

FY 2026-27 (7/1/2026 – 6/30/2027)

- o Continued negotiations for purchase or lease of agreement with City of Simi Valley (real property, Board closed session)
- o PAC/TAC consultation
- o Watermaster Budget and Basin Assessment review by Fiscal Committee, Committee Consultation, and Watermaster Board adoption
- o Finalize draft purchase or lease agreement with City of Simi Valley (real property, Board closed session)
- o Board execution of final agreement
- o Program implementation

FY 2027-28 (7/1/2027 – 6/30/2028)

- o Ongoing program implementation

FY 2028-29 (7/1/2028 – 6/30/2029)

- o Ongoing program implementation

FY 2029-30 (7/1/2029 – 6/30/2030)

- o Ongoing program implementation

Appendix C

Individual Basin Optimization Project Schedules

Project 8: Allocation Buyback and Reduction Program

FY 2025-26 (7/1/2025 – 9/30/2025)

Q2 (10/1/2025 – 12/31/2025)

- o Begin development of program scope and policy

Q3 (1/1/2026 – 3/31/2026)

- o Draft program scope and policy discussed at Executive Committee
- o PAC/TAC consultation on draft scope and policy

Q4 (4/1/2026 – 6/30/2026)

- o RFP and engage consultant to assist with development of process for least-cost allocation acquisition and transaction mechanics

FY 2026-27 (7/1/2026 – 6/30/2027)

- o Consultant assisting with development of process for least-cost allocation acquisition and transaction mechanics
- o Consultant report on proposed transaction mechanics
- o Executive Committee review of draft program
- o Analysis of Watermaster Budget and Basin Assessment needed to fund pilot program
- o Fiscal Committee review of Watermaster Budget and Basin Assessment needed to fund pilot program
- o Watermaster Board approval of draft pilot program with PAC/TAC consultation as appropriate

FY 2027-28 (7/1/2027 – 6/30/2028)

- o Pilot program beginning in Water Year 2028 (10/1/2027 – 9/30/2028)

FY 2028-29 (7/1/2028 – 6/30/2029)

- o Pilot program during Water Year 2028 (10/1/2027-9/30/2028)
- o Review of pilot program
- o Expand to full program for temporary allocation (Annual Allocation and Carryover) starting Water Year 2029 (10/1/2028 – 9/30/2029)
- o PAC/TAC consultation

FY 2029-30 (7/1/2029 – 6/30/2030)

- o Ongoing program implementation for Annual Allocation and Carryover
- o Evaluate potential to expand program to permanent allocation (Allocation Basis)
- o Potential RFP to contract consultant(s) to study economic and environmental impacts of permanent allocation purchase

Appendix C
Individual Basin Optimization Project Schedules

Project 7: In Lieu Deliveries to Northern East Las Posas Feasibility Study

FY 2025-26 (7/1/2025 – 9/30/2025)

Q2 (10/1/2025 – 12/31/2025)

- o Develop feasibility study scope of work with PAC/TAC consultation

Q3 (1/1/2026 – 3/31/2026)

- o Request for Proposals (RFP) for consultant to conduct feasibility study

Q4 (4/1/2026 – 6/30/2026)

- o Watermaster Board award of contract for feasibility study

FY 2026-27 (7/1/2026 – 6/30/2027)

- o Feasibility study underway

FY 2027-28 (7/1/2027 – 6/30/2028)

- o Draft feasibility study
- o PAC/TAC consultation
- o Watermaster Board review
- o Final feasibility study

FY 2028-29 (7/1/2028 – 6/30/2029)

- o To be determined based on results of feasibility study

FY 2029-30 (7/1/2029 – 6/30/2030)

- o To be determined based on results of feasibility study

Appendix C
Individual Basin Optimization Project Schedules

Project 9: Regional Desalter Feasibility Study

FY 2025-26 (7/1/2025 – 9/30/2025)

Q2 (10/1/2025 – 12/31/2025)

- o Engage water purveyors in the ELPMA to establish interest in desalter

Q3 (1/1/2026 – 3/31/2026)

- o Develop feasibility scope including modeling scenarios
- o PAC/TAC consultation

Q4 (4/1/2026 – 6/30/2026)

- o RFP for consultant to conduct feasibility study

FY 2026-27 (7/1/2026 – 6/30/2027)

- o Watermaster Board award of contract for feasibility study
- o Feasibility study underway

FY 2027-28 (7/1/2027 – 6/30/2028)

- o Draft feasibility study
- o PAC/TAC consultation
- o Watermaster Board review
- o Final feasibility study

FY 2028-29 (7/1/2028 – 6/30/2029)

- o To be determined based on results of feasibility study

FY 2029-30 (7/1/2029 – 6/30/2030)

- o To be determined based on results of feasibility study

Appendix D

Schedule to Implement the Basin Optimization Projects

Appendix D
Schedule to Implement the Basin Optimization Projects

Project Number	Project Name	CY 2025		CY 2026				CY 2027				CY 2028				CY 2029				CY 2030	
			WY 2026			WY 2027			WY 2028			WY 2029			WY 2030						
		FY 2025-26				FY 2026-27				FY 2027-28				FY 2028-29				FY 2029-30			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Initial Project Implementation Planning																				
2	Purchase of Imported Water from CMWD																				
	Program Policy Development																				
	Water Purveyor Engagement																				
	PAC / TAC Consultation																				
	Policy & Incentive Adopted by WM Board																				
	WM Budget Review and Board Adoption																				
	Program Implementation																				
5	Arroyo Simi-Las Posas Water Acquisition																				
	Negotiate Agreement with City of Simi Valley																				
	PAC / TAC Consultation																				
	WM Budget Review and Board Adoption																				
	Program Implementation																				
8	Allocation Buyback and Reduction Program																				
	Program Development																				
	PAC / TAC Consultation																				
	Consultant Development of Transaction Mechanics																				
	WM Budget and Adoption of Pilot Program																				
	Pilot Program																				
	Program Implementation																				
7	In Lieu Deliveries to Northern ELPMA Feasibility Study																				
	PAC / TAC Consultation																				
	Develop SOW & RFP																				
	WM Board Award of Consultant Contract / Review of FS																				
	Feasibility Study																				
9	Regional Desalter Feasibility Study																				
	Initial Water Purveyor Engagement																				
	PAC / TAC Consultation																				
	Develop SOW & RFP																				
	WM Board Award of Consultant Contract / Review of FS																				
	Feasibility Study																				

Notes: Schedule subject to WM Board approval
CY = calendar year; WY = water year (DWR water year definition); FY = fiscal year
Agency Activities (Administration, Consultant / Contractor Procurement, Water Negotiations, Legal, Coordination)
Feasibility study
Construction or initial phase(s) of implementation
Operation and maintenance, or ongoing program implementation / evaluation

Appendix E

5-Year Basin Optimization Projects Budget

Appendix E
5-Year Basin Optimization Projects Budget

Proj. No.	Project Name	FY 2025-26				FY 2026-27				FY 2027-28				FY 2028-29				FY 2029-30				Estimated 5-Year Project Costs
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
	Initial Project Implementation Planning	\$25,000																				\$ 25,000
2	Purchase of Imported Water from CMWD																					
	Program Development		\$ 15,000	\$ 15,000	\$ 15,000																	\$ 45,000
	Program Implementation ^a					\$ 1,095,100	\$ 1,095,100	\$ 1,199,200	\$ 1,199,200	\$ 1,199,200	\$ 1,199,200	\$ 1,310,600	\$ 1,310,600	\$ 1,310,600	\$ 1,310,600	\$ 1,429,800	\$ 1,429,800	\$ 1,429,800	\$ 1,429,800	\$ 1,557,400	\$ 1,557,400	\$ 21,063,400
	Administration ^b				\$ 5,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 165,000
	Estimated Annual Cost				\$ 50,000				\$ 4,628,600				\$ 5,059,600				\$ 5,520,800				\$ 6,014,400	\$ 21,273,400
5	Arroyo Simi-Las Posas Water Acquisition																					
	Negotiate Agreement with City of Simi Valley		\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000																\$ 60,000
	Program Implementation ^c								\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 117,500	\$ 1,527,500
	Administration ^b						\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 75,000
	Estimated Annual Cost				\$ 45,000				\$ 147,500				\$ 490,000				\$ 490,000				\$ 490,000	\$ 1,662,500
8	Allocation Buyback and Reduction Program ^d																					
	Program Development		\$ 20,000	\$ 25,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 25,000	\$ 25,000	\$ 10,000												\$ 135,000
	Consultant Development of Transaction Mechanics				\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000													\$ 200,000
	Pilot Program										\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000								\$ 100,000
	Program Implementation														\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 1,750,000
	Administration ^b										\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 275,000
	Estimated Annual Cost				\$ 95,000				\$ 230,000				\$ 160,000				\$ 875,000				\$ 1,100,000	\$ 2,460,000
7	In Lieu Deliveries to Northern ELPMA Feasibility Study																					
	Develop SOW & RFP		\$ 15,000	\$ 15,000	\$ 5,000																	\$ 35,000
	Feasibility Study					\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000											\$ 150,000
	Administration ^b					\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 5,000	\$ 5,000											\$ 16,000
	Estimated Annual Cost				\$ 35,000				\$ 106,000				\$ 60,000				\$				\$	\$ 201,000
9	Regional Desalter Feasibility Study																					
	Purveyor Engagement, Development of SOW & Feasibility Study		\$ 10,000	\$ 15,000	\$ 15,000	\$ 10,000																\$ 50,000
	Feasibility Study						\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000										\$ 300,000
	Administration ^b						\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 5,000	\$ 5,000										\$ 22,000
	Estimated Annual Cost				\$ 40,000				\$ 169,000				\$ 163,000				\$				\$	\$ 372,000
	Estimated Total Quarterly Cost	\$ 25,000	\$ 75,000	\$ 85,000	\$ 105,000	\$ 1,208,495	\$ 1,239,600	\$ 1,360,728	\$ 1,476,200	\$ 1,424,700	\$ 1,466,700	\$ 1,550,270	\$ 1,493,100	\$ 1,493,100	\$ 1,718,100	\$ 1,839,621	\$ 1,837,300	\$ 1,837,300	\$ 1,837,300	\$ 1,967,384	\$ 1,964,900	
	Estimated Total Annual Cost				\$ 290,000				\$ 5,285,023				\$ 5,934,770				\$ 6,888,121				\$ 7,606,884	\$ 25,968,900

Notes:

Budgeting and Basin Assessments to fund projects subject to Watermaster Board approval following Committee Consultation.

SOW = Scope of Work

RFP = Request for Proposal

Project costs are estimates and subject to change as additional development is conducted.

a For budget forecasting purposes, assumes incentive amount of \$1,395 (CMWD Tier 1 cost of \$1,895 - \$500 pumping cost per AF) for 3,140 AF in lieu water annually. Actual pumping cost to be determined during project development. CMWD Tier 1 cost presumed to increase average of 7% per calendar year.

b Watermaster administration costs are placeholder estimates.

c For budget forecasting purposes, assumes a price of \$100/AF and an annual purchase of 4,700 AFY from the City of Simi Valley.

d Long-term costs are not known and will be defined through the initial study and Board policy. For forecasting purposes, assumes \$100,000 annual cost for Pilot Study and \$1,000,000 annual cost for full program implementation.

Agency Activities (Administration, Consultant / Contractor Procurement, Water Negotiations, Legal, Coordination)

Feasibility study

Construction or initial phase(s) of implementation

Operation and maintenance, or ongoing program implementation / evaluation