

Title XVI – Water Reclamation and Reuse

WaterSMART: Water Recycling and Desalination Planning

Funding for Fiscal Year 2023

Notice of Funding Opportunity No. R23AS00076

South County Water Reuse Program Feasibility Study

Santa Clara Valley Water District

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Santa Clara Valley Water District

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List of Abbreviations

AF	acre-feet	Sewershed	The area contributing sewer flows to a wastewater treatment plant
AFY	acre-feet per year		
CEC	constituent of emerging concern	SFPUC	San Francisco Public Utilities Commission
CEQA	California Environmental Quality Act	SWA	surface water augmentation
CoRe Pan	Countywide Water Reuse Master Plan	SWP	State Water Project
County	Santa Clara County	TWA	treated water augmentation
CVP	Central Valley Project	UWMP	urban water management plan
FAC 09-01	Reclamation Manual Directives and Standards, Cost Estimating	Valley Water	Santa Clara Valley Water District
Feasibility Study	South County Water Reuse Program Feasibility Study	WSMP	Water Supply Master Plan 2040
Gilroy	City of Gilroy	WTP	water treatment plant
GWR	groundwater recharge	WTR 11-01	U.S. Bureau of Reclamation Manual Directives and Standards WTR 11-01
MGD	million gallons per day	WTR 11-02	U.S. Bureau of Reclamation Manual Directives and Standards WTR 11-02
Morgan Hill	City of Morgan Hill		
NEPA	National Environmental Policy Act	WWTP	wastewater treatment plant
NOFO	Notice of Funding Opportunity		
NPR	non-potable reuse		
NPR+	blend of tertiary treated effluent and purified water to improve recycled water quality		
O&M	operations and maintenance		
O3/BAC	ozone and biologically activated carbon		
Partner Agencies	SCRWA, Gilroy, Morgan Hill		
PR	potable reuse		
Reclamation	U.S. Bureau of Reclamation		
RO	reverse osmosis		
ROC	reverse osmosis concentrate		
RWA	raw water augmentation		
RWS	Regional Water System		
SB	Senate Bill		
SCRWA	South County Regional Wastewater Authority		

WaterSMART: Water Recycling and Desalination Planning

Technical Proposal and Evaluation Criteria

Executive Summary

Applicant

Santa Clara Valley Water District, San José, California.

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February 28, 2023

Project Summary and Location

Summarize the project in one paragraph. Specify the work proposed, including how funds will be used to accomplish specific activities, and briefly identify how the proposed activities contribute to accomplishing the goals and objectives of this NOFO.

The Santa Clara Valley Water District (Valley Water), the South County Regional Wastewater Authority (SCRWA), the City of Gilroy (Gilroy), and the City of Morgan Hill (Morgan Hill) (Partner Agencies) have been working together since 1999 to find ways to develop and broadly distribute high quality recycled water for landscape, agriculture, and industrial uses in the southern portion of Santa Clara County (County). Recycled water is a reliable source of water supply that can help alleviate dependence on local groundwater, the sole source of water supply for both Gilroy and Morgan Hill, and contribute to the long-term water security of the region. These agencies are nearing completion of an update to their 2015 South County Recycled Water Master Plan Update that identified several new reuse opportunities for the southern portion of the County, including expanded treatment, recycled water pipelines, and new satellite facilities. Valley Water and the Partner Agencies would like to use funds from this notice of funding opportunity (NOFO) to further assess these opportunities, which include both non-potable and potable end uses, through the development of a Title XVI Feasibility Study. Development of this feasibility study would help advance planning and preliminary design activities around these new potential projects which align with the goals and objectives of this NOFO. It is anticipated that the Feasibility Study would take up to 24 months to complete and would conclude by October 2025. The study area will primarily encompass portions of Gilroy and Morgan Hill – Figure 1 identifies the sewer collection area (sewershed) for both Gilroy and Morgan Hill. The proposed reuse projects will not modify and/or directly involve any Federal facility or Federal land.

Technical Project Description

The project description should describe the proposed work, including specific activities that will be accomplished. Describe the project. As part of this discussion, please address the following:

- *Applicant Category: Please indicate whether you are seeking funding for Funding Group I or Funding Group II*
- *Eligibility of Applicant: Please write a narrative summary indicating how the applicant meets the eligibility requirements, as described in Section C.1. Eligible Applicants.*
- *Goals: Discuss the goals and objectives for the proposed activities.*
- *Approach: Provide a comprehensive description of your planned approach for this project*

Valley Water is a special district that provides water resources management for the County.

Under this grant application, Valley Water is seeking funding assistance for the following items:

- Development of the project feasibility study that meets all the requirements of Reclamation Manual Directives and Standards WTR 11-01 (WTR 11-01);
- Completion of the Financial Capability Determination that meets the criteria of Reclamation Manual Directives and Standards WTR 11-02 (WTR 11-02); and
- Consultation and coordination on actions needed to complete the environmental documentation needed for National Environmental Policy Act (NEPA) compliance.

The proposed study will focus on assessing the feasibility of implementing several of the new treatment and pipeline reuse projects that were identified as part of an ongoing update to the 2015 South County Recycled Water Master Plan Update. Since the total project cost is anticipated to be less than \$500 million, Valley Water is seeking funding under Funding Group I. If deemed feasible, the reuse projects identified through this feasibility study would help expand the use of recycled water in the region which directly supports Valley Water's goal of having recycled and purified water provide for at least 10% of the total County water demands by 2025. Additionally, as the groundwater management agency for the County, Valley Water is responsible for safeguarding the County's groundwater resources. By potentially increasing the amount of reuse, these projects would help reduce groundwater demands and help promote the long-term sustainability of the local groundwater basin.

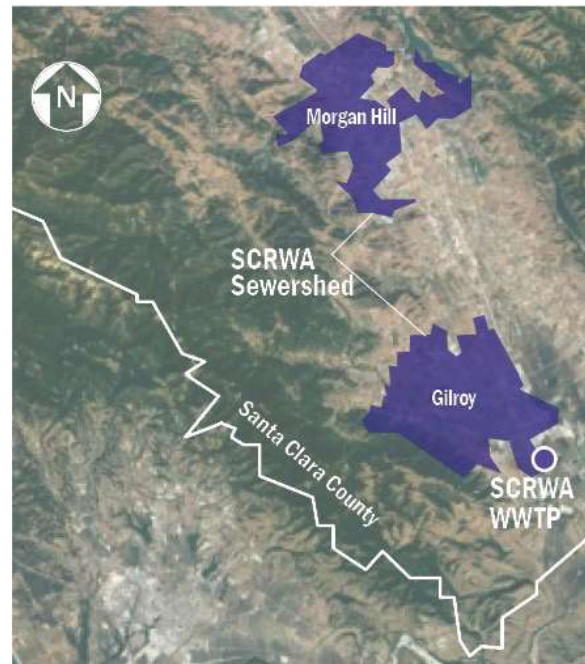


Figure 1. South County Water Reuse Expansion Feasibility Study Area

South County Water Reuse Program Feasibility Study, Financial Capability Determination, and Pre-Final Design Activities and Coordination

The following is the proposed South County Water Reuse Program Feasibility Study scope of work that provides the entire planning, engineering, environmental, economic, public information, and administrative management tasks needed to undertake the Feasibility Study investigations. Also included is the scope to complete the Financial Capability Determination that the U.S. Bureau of Reclamation (Reclamation) requires before Federal funding for construction activities can be disbursed. The products of this scope of work are the Feasibility Study and Financial Capability Determination. As noted in the following discussion, significant information will be drawn from the planning and preliminary engineering work conducted ahead of the preparation of this Feasibility Study. Note that a more formal consultation with Reclamation is needed to develop the scope and timetable to complete the environmental documentation for NEPA compliance.

Task 1 – Project Management

Task 1.1 Administration

Valley Water is responsible for overall management responsibilities. A prime consultant, retained for developing this feasibility study, will manage, compile invoicing, conduct administration and documentation of the subconsultant's activities, and report directly to Valley Water. Valley Water and the prime consultant will hold periodic progress status meetings and up to three stakeholder workshops to be scheduled at specific milestones during the Feasibility Study development process.

Task 1.2 Stakeholder Engagement and Outreach

Stakeholder engagement and outreach is critical to all phases of the proposed project. It supports planning, environmental, and project development tasks and includes:

- Support of project public outreach and communication needs,
- Stakeholder engagement and relations, and
- Public meetings and workshops support.

Task 2 – Title XVI Feasibility Study and Report

The scope of work supports Valley Water's intent to prepare a Feasibility Study that will identify the most feasible program alternatives in accordance with U.S. Bureau of Reclamation's WTR 11-01. The tasks below follow the outline of WTR 11-01 and define the product of the Feasibility Study Report. The sequence of report sections does not necessarily represent the sequence of tasks to conduct the study. The studies will build on the planning and preliminary engineering work that has been completed to date.

Task 2.1 Introductory Information

Basic information regarding the project, Valley Water, and the study area will be summarized based on planning and preliminary engineering studies completed to date and updated with available new information.

Task 2.2 Statement of Problems and Needs

This task provides a description of the study area's key water resource management problems and needs for which water reclamation, recycling, or desalination may provide a

solution. Valley Water plans to leverage information provided in other studies and current drought and climate data to inform development of the water supply picture in the study area. The statement of problems and needs will describe:

- **Problem and Need for a Water Reclamation, Recycling, or Desalination Project.** A broad view of the study area’s water resources, including challenges such as growing population, risks to surface water supplies, groundwater resources, climate change, and increasingly stringent wastewater discharge requirements.
- **Current and Projected Water Supplies.** Current and projected water supplies for the study area (including quantities).
- **Current and Projected Water Demands.** A summary of current and projected water demands through 2040; water use by general end use category (e.g., municipal, environmental, agricultural); population served and associated water quality requirements.
- **Water Quality Concerns for the Current and Projected Water Supply.** A summary of water quality issues pertaining to water supply (mainly groundwater) and wastewater.
- **Current and Projected Wastewater and Disposal Options other than the Proposed Title XVI project and Plans and Project Costs for New Wastewater Facilities.** A summary of current and projected wastewater amounts (annual and monthly) and disposal options; wastewater disposal locations; planned wastewater facility improvements and/or expansions, including projected costs.

Task 2.3 Water Reclamation, Recycling, or Desalination Opportunities

This task will summarize the opportunities for water reclamation, recycling, and desalination providing the information required for federal requirements specified in WTR 11-01, including:

- Uses and market for water reuse.
- Water market available to use recycled water.
- Considerations that may prevent water reclamation, recycling, or desalination program implementation.
- Water and wastewater agencies with jurisdiction in the potential service area or over source water for reuse.
- Potential reuse source water origin, including impaired surface and groundwaters.
- Location of source water facilities.
- Current water reuse volumes, treatment technologies, and opportunities for developing improved technologies.

Task 2.4 Analysis of Alternatives and Feasibility Study Report

The following information is required by WTR 11-01 for the analysis and selection of alternatives. These topics are required in the Feasibility Study Report.

Task 2.4.1 Non-Federal Funding Future Actions

This task provides a baseline for the “no project” alternative by identifying actions Valley Water might take if no federal funding is provided.

Task 2.4.2 Project Objectives

In coordination with Valley Water, the prime consultant will develop a draft framework for decision-making to use throughout the evaluation and selection of alternatives. The methodology will include the selection of project objectives (e.g., unit cost of product water, regulatory complexity, environmental impacts, water quality, operational complexity, public support, etc.) and assignment of weighting factors for each objective, which will be used to evaluate and score alternatives.

Task 2.4.3 Alternatives Considered

Based on the planning and preliminary engineering work completed to date, three alternatives including the No Project alternative will be formulated to meet project objectives. These alternatives will receive a reconnaissance-level analysis, and the project objectives will be applied to support Valley Water's selection of the proposed project alternative in Task 2.4.4. The following subtasks will be conducted to develop information and costs for the three alternatives:

- **Alternative Formulation.** The conceptual alternatives will be formulated to meet objectives and to develop an equitable benefit to Valley Water.
- **Layout of Alternatives.** Project layouts of the pipeline routes and locations of the treatment, wells, storage, pumping facilities, and environmental projects.
- **Cost Estimates.** Estimated costs will include capital, annual operation and maintenance, replacement, and life-cycle costs.

Task 2.4.4 Proposed Project Description

The proposed project will require more detailed definition than the alternatives in Task 2.4.3. The proposed Project will be selected by Valley Water applying the objectives discussed in Task 2.4.2. The following subtasks will be conducted on the proposed project:

- **Layout of Alternative.** Develop project layouts of the pipeline routes and locations of the treatment, storage, well, environmental projects and pumping facilities.
- **Geotechnical Review.** Address existing geologic and geotechnical conditions in a regional and project-specific context for the proposed infrastructure. Describe geologic conditions including topography, stratigraphy, faulting and seismicity.
- **Hydraulic Analysis.** Evaluate the hydraulics of the proposed distribution system to determine the hydraulic grade line under anticipated peak demand month flows.
- **Cost Estimates.** Estimate capital, annual operation and maintenance, replacement, and life-cycle costs. Develop costs as required for feasibility studies in Reclamation Manual Directives and Standards, Cost Estimating (FAC 09-01).
- **Discharge Requirements.** Identify anticipated effluent treatment and disposal water quality requirements for the proposed Project.
- **Alternative Measures or Technologies.** Identify and summarize alternative measures or technologies available to the project for water reclamation, distribution, and reuse.

Task 2.4.5 Economic Analysis

An economic analysis for the project will be conducted, including:

- A life-cycle cost analysis to compare the three alternatives to determine the most cost-effective alternative. The life-cycle costs analysis calculates annual capital costs of implementing alternatives over a 30-year and 100-year period of analysis using the current real discount rate and adds annual operations and maintenance costs.

- The economic benefits of the proposed project Alternative relative to the No Project Alternative using other water supply options, assuming costs are readily available. Water supply benefits of the proposed alternative will be calculated using the avoided costs from the non-recycled water alternative most likely to be implemented in the absence of the project.
- In addition, the prime consultant will perform a non-quantifiable benefits analysis to qualitatively describe the difficult-to-quantify benefits such as drought tolerant water supply and other social or environmental benefits. These qualitative benefits will be incorporated as part of the justification for the Project in conjunction with the comparison of project costs.

Task 2.4.6 Recommended Project Alternative

Following Tasks 2.4.3 and 2.4.5, the prime consultant will score and rank the alternatives in coordination with Valley Water and perform a sensitivity analysis to determine the effects of scores and/or weighting on resulting ranks. Based on the outcome of this exercise, the prime consultant will recommend a project alternative.

Task 2.4.7 Environmental Considerations and Potential Effects

This task will provide an overview of anticipated potential environmental effects, regulatory requirements, and compliance measures. The analysis will focus on the selected Project alternative. Final environmental analysis (not part of this task) will be completed after a finding of feasibility. The project team will address the following topics required by WTR 11-01 at a reconnaissance level:

- Potentially significant impacts,
- Potentially significant environmental effects,
- Status of required environmental compliance measures,
- Measures necessary to comply with NEPA and other laws,
- Water supply and water quality,
- Public involvement, and/or
- Potential effects on historic properties.

Task 2.4.8 Legal and Institutional Requirements

This task will describe the project's institutional framework, interactions with other agencies and legal requirements. Significant information will be derived from the planning-level engineering work completed to date. The project team will address:

- Water rights issues,
- Legal and institutional issues,
- Multi-jurisdictional or interagency agreements,
- Permitting procedures,
- Current and projected wastewater discharge requirements, and/or
- Rights to wastewater.

Task 2.4.9 Financial Capability of Sponsor

Under this task, the prime consultant will summarize Valley Water's financial capability to fund or repay their respective share of costs and identify:

- The proposed schedule for implementing the recommended project alternative.
- The willingness of the project sponsor to pay for its share of capital costs and the full operation, maintenance, and replacement costs.
- A plan for funding the recommended project alternative's construction, operation, maintenance, and replacement costs, including analyzing the project sponsor's funding for such costs.
- A description of funding sources and restrictions on such sources.

Detailed analysis will be provided in the separate Financial Capability Report (Task 3 of this grant proposal) to demonstrate that Valley Water (the non-federal project sponsor) is **financially capable of funding the non-federal share** of the project's costs before a funding agreement covering construction can be executed.

Task 2.4.10 Research Needs

Potential research needs identified during the project feasibility study will be developed and summarized.

Task 3 – Financial Capability Determination

The purpose of the Financial Capability Determination is to develop a Reclamation-approved **financial analysis**. **Prior to federal funds being disbursed for project construction activities, a financial capability determination must be approved by Reclamation to ensure non-federal partners can provide their cost share. This task reflects an update to and expansion of information provided in the feasibility report.**

- Update Valley Water's **financial statement data to enable Reclamation reviewers to compare project investment costs to existing capital assets, project operation costs to current operation costs, and annual project revenue requirements to existing revenues.**
- Update **project cost allocation to reflect the current cost estimate, which defines the federal and non-federal shares for Valley Water.**
- Collect information on the **non-federal financing plan and status from Valley Water** through emails and phone conference calls, or possibly at a meeting. The plans should include details and documentation both for funding of the non-federal share of construction (e.g., loans, grants, bonds) and for any required annual debt service and annual project operations costs (e.g., user fees and tax assessments).
- Coordinate with Reclamation and possibly meet with Reclamation staff to better understand review requirements identified in WTR 11-02; this shall be an opportunity to propose a level analysis based on what Valley Water has available and can provide.
- **Submit a draft financial capability report to Valley Water for their review. If requested, Valley Water meetings will be scheduled to discuss comments. After making revisions based on Valley Water review, the financial capability report will be submitted to Reclamation. Responses to Reclamation questions and comments will be prepared, and the financial capability report will be revised as necessary.**

Task 4 – Pre-Final Design Activities and Coordination

This task will allow Valley Water and the Partner Agencies to work with the Consultant on any site-specific investigations to gather design data, environmental and cultural resources

compliance activities, as-needed pre-final design tasks, and other project related assessments that contribute towards project implementation.

Task 5 – Grant Administration

Administration and reporting will be done in coordination with Valley Water as the primary **fiscal agent for this** feasibility study. Administration consists of assisting all involved agencies with completing the feasibility study grant agreements and preparing semi-annual reports for the duration of this feasibility study.

Technical Proposal: Evaluation Criteria

Evaluation Criterion 1 – Project Planning and Analysis (30 points)

Subcriterion No. 1a – Water Recycling Needs and Opportunities (15 Points)

1. Describe the problems and needs in the project area.

Valley Water supplies wholesale water to Santa Clara County’s approximately 2 million residents and diverse water users, and a safe, reliable supply of clean water is vital for the environmental, economic, and social well-being of the county. Currently, about half of the water used in Santa Clara County is imported from outside the county, primarily through the State Water Project (SWP) and CVP (total about 40%) and the San Francisco Public Utilities Commission’s (SFPUC) Regional Water System (RWS) to retailers in the northern part of the county (about 10%). Local supplies make up the balance of overall water use, with about 30% local surface water and groundwater, 5% recycled water, and 15% water conservation.

Valley Water’s supply portfolio is vulnerable to future severe droughts since it relies primarily on imported and local surface water and has limited drought resilient supplies. The greatest challenge to Valley Water’s water supply reliability is multiple dry years when its main sources of supply become depleted as drought conditions persist. During the 2012-2016 drought and the ongoing current drought, Valley Water has faced challenges to meet its Level of Service goal due to greatly reduced local and imported water supply and had to rely on water use reductions and emergency transfers/ purchases to mitigate drought risks. Valley Water’s water supply challenges are expected to become greater with anticipated climate change, recurring droughts, growing population and businesses, and increasing uncertainty about imported supply reliability. The past and ongoing droughts highlight the importance of and need for drought resilient supply such as water recycling and desalination to improve long-term water supply reliability. Therefore, it is imperative that Valley Water prepare for future droughts with more resilient water supply alternatives to continue providing Silicon Valley with safe, clean water for a healthy life, environment, and economy.

2. Describe the current and projected water supplies and demands in the project area; include a discussion on supply and demand imbalances.

Currently, countywide demand is approximately 310,000 AFY on average and projected to increase to 345,000 in 2045, as estimated by a 2020 Valley Water demand study. Demand increases will largely be driven by population increase and economic growth. In any given year, actual availability of each of Valley Water’s existing sources of supply depends on hydrology, groundwater recharge operations, and conditions, among other factors. Generally,

Valley Water’s existing supply is sufficient to meet County-wide demand during normal years, but during critical dry years and multiple-year droughts, Valley Water faces water shortages and must rely on short-term actions such as calls for water use reduction and emergency transfers. To meet future demand, Valley Water plans to invest in maintenance of existing supplies and infrastructure and in a diverse suite of cost-effective projects including recycled water and potable reuse, stormwater capture, conservation, and new storage identified in its Water Supply Master Plan 2040 (WSMP). Valley Water’s current projected future demand scenarios indicate that Valley Water will experience a water shortage starting 2030 without adding water supply sources. Recycled and purified water is identified as an essential component of Valley Water’s water supply portfolio to ensure water supply reliability for the County through 2040.

Climate change impacts such as warming temperatures, shrinking snowpack, increasing weather extremes, and prolonged droughts pose significant challenges for water resources management. Climate change will impact both Valley Water’s demands and sources of supply. As weather becomes drier and warmer in the future, Valley Water’s long-range planning analysis indicates that climate change may increase annual demands to approximately 360,000-375,000 acre-feet (AF) by mid-century primarily by increasing outdoor irrigation needs across all water use sectors and cooling needs in the commercial, industrial, and institutional sector. On the supply side, climate change will impact water supply by changing the volume, timing, and quality of water that is available, both locally and statewide (imported water). Therefore, climate change will make Valley Water’s problems worse by increasing its service area demand while decreasing its surface water supply. Through long-range master planning, Valley Water has been incorporating climate change impacts into demand projections and future supply analysis. In fact, climate change is one of key drivers of Valley Water’s long-term investment. Water supply modeling indicates that locally developed and renewable water supplies such as the proposed treatment and pipeline reuse projects are the most drought and climate resilient projects, and Valley Water is prioritizing investments in developing a water reuse program.

3. Describe how the planning activities will investigate potential uses and markets for reclaimed or desalinated water (e.g., environmental restoration, fish and wildlife, groundwater recharge, municipal, domestic, industrial, agricultural, power generation, and recreation).

In South County, the primary uses for reclaimed water are municipal and industrial, and recycled water use is limited to Gilroy and farmlands nearby in unincorporated Santa Clara County, though Morgan Hill is also interested in developing reuse as a drought resilient supply. Reclaimed water supports environmental and agricultural uses indirectly by freeing up other water supplies.

To identify feasible opportunities for expanding reuse, Valley Water led development of a Countywide Water Reuse Master Plan (CoRe) Plan for Santa Clara County. Through development of the CoRe Plan, Valley Water and participating partners (four wastewater treatment plants [WWTP] in the county) evaluated a wide range of reuse opportunities by building upon and integrating existing planning-level studies and reports that identify reuse projects (potable and non-potable) and demonstrate regional benefit. Additionally, Valley Water and its partners identified new projects that show promise in contributing to regional resilience and Valley Water’s potable reuse goal. Reuse projects were combined into alternatives (portfolios), primarily distinguished by wastewater source (i.e., Partner Agencies’

facilities) and reuse type, and then evaluated for feasibility. The CoRe Plan evaluated reuse alternatives that expand existing recycled water distribution systems for non-potable reuse (NPR) and explore full advanced treatment (purification) for potable reuse through groundwater recharge (GWR), surface water augmentation (SWA), raw water augmentation (RWA), and/or treated water augmentation (TWA).

The proposed feasibility study will further build on the work completed as part of the CoRe Plan, considering changes that have occurred following the plan’s finalization (e.g., regulatory framework for direct potable reuse, including RWA and TWA).

4. Describe the source water that will be considered for the project, including location, capacities, existing flows, treatment processes, and quantities of impaired water available to meet the new reclaimed, recycled, or desalinated water demands.

The source water to be considered under the proposed feasibility study is treated effluent from SCRWA, located in Gilroy (Figure 1). The SCRWA WWTP receives wastewater from two cities: Gilroy and Morgan Hill. Currently, NPR is only delivered in Gilroy and nearby unincorporated areas of Santa Clara County.

As part of the CoRe Plan development, Valley Water coordinated with SCRWA to use a flow balance approach to estimate the availability of source water (treated effluent) for purification to support additional reuse (Figure 2).

During the summer months, a portion of wastewater from Morgan Hill is needed to supply NPR in Gilroy. On average, 3 million gallons per day (MGD) of remaining effluent is available from SCRWA WWTP (Figure 3). However, if considering satellite treatment in Morgan Hill, only 2.1 MGD of Morgan Hill’s wastewater would be available on average, with minimal flow available in the summer months (when needed to supply NPR in Gilroy).

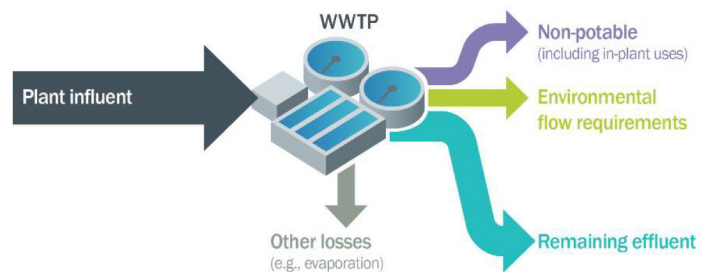


Figure 2. Flow balance approach for assessing availability of source water remaining for purification

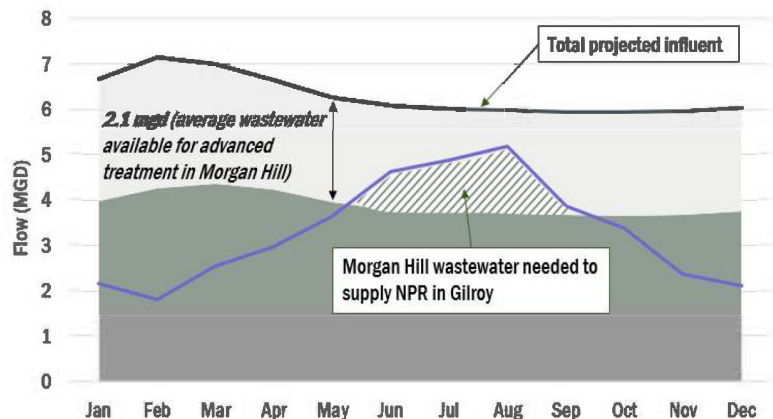


Figure 3. Projected flow conditions at SCRWA considering projected influent and Gilroy NPR demands

Subcriterion No. 1b – Evaluation of Project Alternatives (15 Points)

1. Describe the objectives that all alternatives will be designed to meet. What other water supply alternatives and project alternatives will be investigated?

Alternatives will be evaluated by comparing them to one another based on the following criteria that reflect key objectives:

- **Economics**, including a comparison of each alternative's total unit cost (e.g., cost per acre-foot [\$/AF]) reflecting capital, operations and maintenance (O&M), and replacement (over an extended time period) costs of new treatment and conveyance facilities; estimated life-cycle costs as a present value and funding capability.
- **Groundwater management and countywide supply reliability**, including a comparison of each alternative's potable reuse water supply (AFY) based on future estimated flows and design capacity; the number of delivery points included in the alternative; seasonality of PR supply and delivery point capacity; the dry year drought reliability; and the ability to protect groundwater basin quality.
- **Environmental benefits/impacts and sustainability**, including energy consumption, used as a proxy for reducing carbon footprint and GHG emissions; environmental protection, from a wastewater discharge and reverse osmosis concentrate (ROC) management perspective; and environmental protection, from a more general California Environmental Quality Act (CEQA) and NEPA perspective.
- **Ease of implementation and permitting/regulatory considerations**, including each alternative having willing partner(s) interested in collaborating, providing ownership of wastewater, offering operational simplicity, minimizing difficulty in obtaining permits for PR, minimizing difficulty in obtaining permits for environmental regulations (including ROC management and CEQA), being ready to proceed/reducing delays, gaining public acceptance/support, and supporting environmental and social justice/equity.
- **Engineering feasibility**, including using tested and proved technology, and meeting other water quality requirements without difficulty, such as source control and/or monitoring requirements.

2. Describe how the planning activities will develop project alternatives (water supply sources, reuse strategies, or treatment technologies) that have been or will be investigated.

The proposed feasibility study report will provide a framework for decision-making and integrated actions to increase the region's water supply reliability through water reuse. The approach for developing alternatives will include:

1. **Determine reuse supply availability.** Identify sources and amounts of water available for reuse; the appropriate split between non-potable (NPR) and potable reuse (PR); and regional, Valley Water, and local-level benefits from NPR and PR.
2. **Identify projects for regional integration.** Formulate several project alternatives composed of project elements in two general categories: conveyance/ distribution facilities (i.e., pipelines and pump stations) and treatment facilities. Collaborate with partners on residuals management, permitting, and land use decisions. Optimize use of existing supply and infrastructure, improve water system reliability and flexibility, and explore redefining sewersheds.
3. **Develop alternative layouts and cost estimates.** Determine treatment locations, treatment level, delivery points (where treated water is delivered for reuse), pipeline routes, wells, storage, and pumping facilities. Cost estimates will include capital, annual operation and maintenance, replacement, and life-cycle costs.
4. **Evaluate trade-offs and viability of project alternatives.** Determine acceptability, efficiency, effectiveness, and completeness of alternatives, and the climate change impacts of each alternative. Analysis includes effects on the environment and legal/institutional requirements.

5. **Solicit input and generate regional support via coordination, third-party review, and stakeholder outreach.** Improve public perception of water reuse through educational and outreach programs.

3. Provide a general description of the selected project, including project features, benefits, anticipated costs, and analyses conducted.

A South County Recycled Water Program Feasibility Study centers on using available effluent from the SCRWA WWTP or a new satellite treatment facility in Morgan Hill to feed a new advanced water purification facility (AWPF). Alternatively, Valley Water could negotiate an amendment to an existing agreement with South Bay Water Recycling (SBWR) in the North County to import recycled water to Morgan Hill for non-potable reuse (NPR). Depending on the form of potable reuse selected, recycled or purified water could be delivered to one or more of the following delivery points:

- **For NPR+:** Extend recycled water pipeline from Metcalf Energy Center to customers in Morgan Hill; includes a 6-mile pipeline extension and serving peak demands up to 5 MGD for an estimated annualized NPR demand of 2,900 AFY. SBWR delivers a blend of tertiary treated effluent and purified water to improve recycled water quality; blended product water is referred to as NPR+. Estimated capital cost is \$70M (in 2019 \$).
- **For GWR:** Recharge Llagas Subbasin using purified water from a satellite WWTP and AWPF in Morgan Hill (flow diverted from the SCRWA trunk line) in ponds proximate to Morgan Hill. Estimated capital cost is \$125M (in 2019 \$), assuming San Pedro Ponds for preliminary costs.
- **For SWA:** Augment Anderson Reservoir using purified water from a satellite WWTP and AWPF in Morgan Hill, pumping to the reservoir for blending and dilution, and subsequent treating at Santa Teresa and/or Rinconada water treatment plants (WTP). In exchange, Valley Water could recharge Llagas Subbasin with equal volume of raw water from Santa Clara Conduit. Estimated capital cost is \$145M (in 2019 \$), assuming San Pedro Ponds for preliminary costs.
- **For RWA:** Morgan Hill and/or Gilroy do not currently have access to a conventional WTP that treats surface water. Thus, this alternative has not been evaluated previously and preliminary costs are not available.
- **For TWA:** Morgan Hill and/or Gilroy could receive purified water for TWA to supplement water supply. This alternative has not been evaluated previously; thus, preliminary costs are not available.

Valley Water has performed preliminary engineering, regulatory review, and cost estimating for the alternatives related to NPR+, GWR, and SWA.

4. Include a preliminary schedule showing major tasks, milestones, and dates for the planning, design, and construction activities related to the project.

The schedule for the 24-month project is presented in Figure 4.

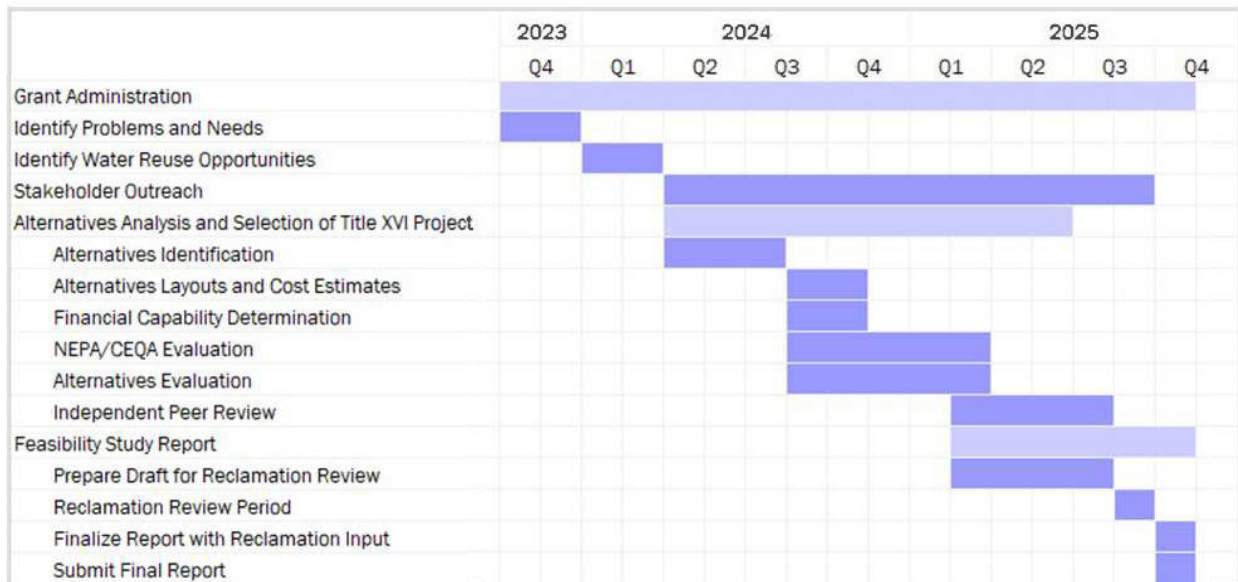


Figure 4. South County Recycled Water Program Feasibility Study Schedule

Evaluation Criterion 2 – Stretching Water Supplies (20 points)

1. Describe the potential for the project to reduce, postpone, or eliminate the development of new or expanded non-recycled water supplies.

South Santa Clara County relies heavily on groundwater. Without expanding water reuse options, reliance on groundwater would continue to increase with population growth, which will increase risks of groundwater overdraft and consequently land subsidence. The population in Morgan Hill alone is anticipated to increase 60% by 2045. Over a future 20-year period (2025 to 2045), the Morgan Hill UWMP projects groundwater demand will increase and make up 87-99% of the supply. This presents a potential for demand to exceed supply in dry years and warrant development of new or expanded non-recycled water supplies such as additional well construction and imported water. For example, Morgan Hill’s 2017 Water System Master Plan, describes a plan to install two new groundwater wells (2,600 AFY total capacity) by 2030 to serve the anticipated population growth.

Valley Water’s coordination with South County agencies to expand water reuse infrastructure would have the potential to reduce, postpone, or eliminate the development of new or expanded non-recycled water supplies by producing advance purified recycled water for indirect potable reuse and expanding non-potable reuse in South County. Morgan Hill’s UWMP demonstrates a need for recycled water is projected to grow from zero (current) to 2,900 AF (2045) which would be approximately 20% of the overall potable and non-potable demand in the area.

2. Describe the potential for the project to alleviate pressure on existing water supplies and/or facilities.

Water supplies for South County consist of local groundwater and a small amount of recycled water for Gilroy. Groundwater is pumped from two alluvial subbasins, Llagas and Coyote Valley. While both have well-managed levels, during periods of drought Valley Water will request that water suppliers reduce groundwater pumping to avoid overdraft and minimize subsidence. Pumping can exceed recharge during times of drought and in 2020,

pumping was above the 5-year average and recharge was below the 5-year average for both subbasins. Additionally, in 2021, subbasin monitoring indicated that the groundwater levels in the Llagas subbasin were 13 feet lower than the 5-year average.

Valley Water's coordination with South County agencies to expand water reuse infrastructure would help reduce the demand for groundwater from each subbasin. Reduced pumping during times of drought would help maintain the subbasins at a healthy and sustainable level.

3. Describe the potential for the project to make water available to address a specific concern. Explain the specific concern and its severity. Also explain the role of the project being investigated in addressing that concern and the extent to which the project will address it.

Valley Water's coordination with South County agencies to expand water reuse infrastructure will address water supply reliability concerns. Currently, groundwater is the primary source of water supply for the South County and highly variable annual precipitation and long periods of drought could impact the groundwater supply with increased pumping and decreased recharge rates, making it difficult to maintain the groundwater basins at sustainable levels while still meeting water demands. Also, imported water, which serves as the main source of water for replenishing the groundwater basins, is highly dependent on the hydrologic cycle and often greatly reduced during times of drought. Furthermore, climate change is likely to increase water supply demand for irrigation and cooling water due to increased temperatures.

Currently, recycled water only serves Gilroy and lands nearby in Santa Clara County, and no infrastructure exists for Morgan Hill to supply it to their potential users. Morgan Hill identified potential recycled water users through a market assessment and found that future uses would consist of landscape irrigation, agricultural irrigation, and industrial processes. Valley Water's CoRe Plan also identified opportunities to expand water reuse in the South County service area, including Morgan Hill. Expanded water reuse directed towards the projected uses identified would increase water supply reliability and water supply self-reliance within the County.

4. Describe the potential for the project to help create additional flexibility to address drought. Will water made available by the project being investigated continue to be available during periods of drought? To what extent is the water made available by the project being investigated more drought resistant than alternative water supply options? Explain.

Expanding water reuse throughout the entire South County would create additional flexibility to address drought with a sustainable source of water that is more drought resistant than alternative water supply options. Purified water from a satellite advanced water treatment plant would allow Morgan Hill to have the opportunity to utilize wastewater through groundwater recharge, surface water reuse, or non-potable reuse. Additionally, realignments in Gilroy combined with expanding recycled water infrastructure at the wastewater treatment plant could provide additional supply to Gilroy and to Morgan Hill where there currently is none.

Non-potable reuse and potable reuse with purified water are more drought resistant water supplies than others because they are not dependent on local or imported water and are less vulnerable to surface water supply constraints such as minimum flow requirements. During periods of drought, expansion of water reuse infrastructure will provide the South

County more opportunities to offset additional demands on the supply and prevent negative impacts (e.g., subsidence) to the groundwater basins primarily serving the two cities.

Evaluation Criterion 3 – Environment and Water Quality (20 points)

1. Describe the potential for the project to improve the quality of surface water or groundwater.

Disinfected tertiary treated effluent from the SCRWA facility feeds the SCRWA recycled (NPR) water system, and remaining effluent is discharged to percolation ponds that allow water to soak into the soil and slowly recharge the groundwater basin. During the months of November through April, SCRWA may discharge tertiary treated effluent to the Pajaro River on an as-needed basis to facilitate safe operation of percolation ponds, provided flow in the Pajaro River is greater than 180 MGD at the gauging station nearest the outfall and less than 6,004 MGD at the Chittenden gauging station.

The proposed project is likely to eliminate the need for wet-weather discharges to the Pajaro River from the SCRWA WWTP, which could protect surface water quality in the river with respect to salts and nutrients. Reducing the use of percolation ponds adjacent to the SCRWA facility may also improve groundwater quality.

A potable reuse project would also reduce dependence on groundwater supply and avoid over-pumping. According to Stanford research in 2018, over pumping in the San Joaquin Valley Tulare basin led to land subsidence along with releases of naturally occurring arsenic from clay layers within the aquifer. When water pumping slowed to more sustainable levels, research suggested that natural recharge from streams and rainfall helped lower arsenic concentrations again¹. A GWR project in Morgan Hill is likely to help maintain or improve groundwater quality by recharging with high-quality purified water, and an SWA project is likely to improve groundwater quality by reducing the risk of over-pumping by diversifying water supplies.

According to the Morgan Hill and Gilroy 2020 UWMPs, groundwater levels in Llagas subbasin were 13 feet lower than the 5-year average, groundwater pumping for 2020 was 6% above the subbasin 5-year average, and groundwater recharging for 2020 was 11% lower than the subbasin 5-year average (2015-2020). Although the basin is not an adjudicated groundwater basin and is not in a condition of overdraft, the Llagas subbasin is Gilroy's sole source of potable water and increasing means of recharging this subbasin is critical for subbasin sustainability, particularly as climate change leads to increased periods of drought.

2. Describe the potential for the project to improve effluent quality beyond levels necessary to meet State or Federal discharge requirements.

SCRWA's National Pollutant Discharge Elimination System (NPDES) permit specifies the average daily flow in the three driest months of each year shall not exceed 8.5 MGD. The average daily influent flow in the three wettest months shall not exceed 10.8 MGD. Effluent containing fecal coliform bacteria originating from human sources may not be discharged to the Pajaro River. By diverting additional effluent for reuse, it is unlikely SCRWA will ever exceed effluent flow limitations.

¹ Citation: Smith R, Knight R, Fendorf S. Overpumping leads to California groundwater arsenic threat. Nat Commun. 2018 Jun 5;9(1):2089. doi: 10.1038/s41467-018-04475-3. PMID: 29872050; PMCID: PMC5988660.

The role of the WWTP has shifted in the context of potable reuse. Whereas it has historically sought to make waters suitable for environmental discharge, it is now viewed as the first and critical barrier to creating a high-quality and consistent feedwater for the AWP (Olivieri et al. 2016, Tchobanoglous et al. 2015). The State Expert Panel recommended that WWTPs feeding DPR AWP provide both biological nutrient removal and tertiary filtration (Olivieri et al. 2016). Improvements to water quality may:

- provide greater degrees of pathogen reduction or inactivation.
- decrease the concentration of organic compounds and constituents of emerging concern (CECs).
- improve the performance of downstream processes.

Ozone and biologically activated carbon (O₃/BAC) pre-treatment included in the proposed treatment train can also improve the quality of the overall effluent stream. O₃/BAC breaks down, biodegrades, and removes organic compounds before the reverse osmosis (RO) separates those compounds into the concentrate stream. With O₃/BAC pre-treatment, both the RO feed and the concentrate have lower concentrations of organic contaminant material. This additional benefit of O₃/BAC pre-treatment may allow for easier RO concentrate management and discharge, particularly regarding the control of toxic organic compounds and CECs (Kenny, J. et al. 2018).

Advanced treatment of effluent as part of a potable reuse project can assist with salt and nutrient management for the percolation pond by reducing the volume of effluent and the overall mass of salt/nutrients discharged. Over a long timescale, reduced salts and nutrients in the percolation ponds could lead to groundwater quality improvements.

3. Describe the potential for the project to improve flow conditions in a natural stream channel.

Reducing groundwater pumping and recharging the aquifer is likely to improve flow conditions in the Pajaro River and other local stream channels in South County.

4. Describe the potential for the project to restore or enhance habitat for non-listed fish and wildlife species.

The SCRWA percolation ponds act as a winter refuge for wildlife, particularly many birds. The following species have been observed within the ponds: Cooper's Hawk, American Kestrel, Loggerhead Shrike, Say's Phoebe flycatcher, Western Meadowlarks, American Pipits, Red-winged Blackbirds, Savannah Sparrows, Short-billed Gulls, Canvasbacks, Ruddy Ducks, White-faced Ibis, Black-necked Stilts, Least Sandpipers, and Wilson's Snipe.

The proposed project may decrease flows to the ponds in winter by diverting effluent for reuse, but river habitat may improve with reduced SCRWA effluent discharge to the Pajaro River. Additional opportunities as part of the project to benefit habitat will be examined as part of the feasibility study.

5. Describe the potential for the project to provide water or habitat for federally listed threatened or endangered species.

According to the 2020 SCRWA WWTP Facility Expansion Project Environmental Impact Report, 23 special-status wildlife species exist in the project area, including high profile federally listed species such as the California Red-legged Frog (threatened), California Tiger Salamander (threatened), San Joaquin Kit Fox (endangered). Other Federally listed species

having predicted habitat in and around Morgan Hill include Western Red Bat, Hoary Bat, Yuma myotis, Red-winged Blackbird, Tricolored Blackbird, Burrowing owl, Northern Harrier, White-tailed kite, Peregrine falcon, and near Anderson Reservoir, Bald eagles and western pond turtles. Nesting migratory birds and raptors also use the percolation ponds as described above.

The proposed project would minimize discharges to Pajaro River and reduce percolation pond discharges, which may improve river water quality and benefit special-status fish species along with the threatened CA Red-legged frog and CA Tiger Salamander. Additional opportunities as part of the project to benefit habitat will be examined as part of the feasibility study.

Evaluation Criterion 4 – Department of Interior Priorities (15 points)

Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.

To adapt to increasing uncertainties and secure a reliable, sustainable water supply for the region's future, Valley Water's Board of Directors set a goal to meet 10% of Santa Clara County's total water demands with recycled and purified water for non-potable and potable reuse by 2025 to improve resilience to future uncertainties, including drought and climate change. The Board also established a long-term goal of producing a total of 24,000 AFY of purified water for potable reuse (drinking water) to bolster supplies. Complementing the potable reuse goal, Valley Water estimates that 28,000 AFY of 2045 demand will be met with recycled water for NPR.

Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?

Valley Water currently relies on imported water for about half of its total supply, which is especially vulnerable to the effects of climate change. To ensure long-term water supply reliability in facing of climate change, Valley Water must diversify local water supply, and expand climate resilient, local sources of water, such as reuse and groundwater recharge. NPR is a fit-for-use strategy that reduces use of potable supply for purposes that do not involve human consumption and/or contact. While NPR is an important aspect of water resources management, the focus of this feasibility study also involves evaluating opportunities for purified water to serve potable reuse, which offers the promise of a new drought-resistant local supply to improve climate change resilience. The delivery point(s) for purified water will be evaluated through this feasibility study to determine the most beneficial type of reuse for strengthening resilience in the face of climate change impacts.

Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.

Yes. The proposed project would directly benefit communities that have been identified as disadvantaged by developing a new water supply in the form of reuse and conversely helping to preserve the local groundwater basin, which is the sole source of potable water supply for South County. Area served by the SCRWA includes several agricultural and farming operations, many of them are disadvantaged and becoming underserved amid

growing uncertainty around water availability and climate change. Expansion of PR and NPR water availability in this area will improve access to water to such underserved communities.

Please describe in detail how the community is disadvantaged based on a combination of variables (see NOFO).

In 2012 Senate Bill (SB) 535 established initial requirements for minimum funding levels to disadvantaged communities as part of California's Cap and Trade Program that was authorized by the California Global Warming Solutions Act of 2006. As part of SB 535, the California Environmental Protection Agency was tasked with identifying these communities based on geographic, socioeconomic, public health, and environmental hazard criteria. As shown in Figure 5, several of these communities can be found in both Morgan Hill and Gilroy. Communities in the red shaded areas are considered disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects exposure, or environmental degradation and contain areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, and/or having low levels of educational attainment.

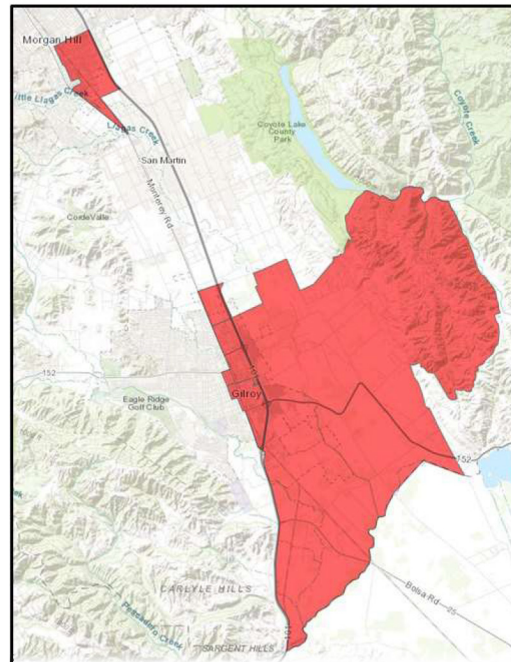


Figure 5. Senate Bill 535 Disadvantaged Communities in Study Area as of 2022

If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985.

As shown in Figure 5, the study area contains large portions of communities that are considered disadvantaged per the criteria under SB 535. The policies under SB 535 are aimed at improving public health, quality of life and economic opportunity in California's most burdened communities, and at the same time, reducing pollution that causes climate change. Many of these areas are rural, home to minorities, high concentrations of people with low income, and high rent areas. These are the same populations E.O. 13985 defines as being "undeserved communities".

Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for an Indian Tribe?

The proposed project does not directly serve and/or benefit a Tribe, although opportunities can be examined as part of the Feasibility Study.

Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?

There are no Tribal communities in the project area, although opportunities for Tribal benefits can be examined as part of the Feasibility Study.

Evaluation Criterion 5 – Watershed Perspective (15 points)

1. Will the proposed project implement a regional or state water plan or an integrated resource management plan? Explain.

Yes. The project concepts being proposed for this feasibility study were included in both Valley Water’s WSMP and the recently completed CoRe Plan. The WSMP explains Valley Water’s strategy for providing a reliable and sustainable water supply in a cost-effective manner. It informs investment decisions by describing the type and level of water supply investments Valley Water is planning to make through 2040. Included in the WSMP are a portfolio of water supply projects that include potable reuse and groundwater recharge concepts that this feasibility study would aim to help implement. Some of these potential projects were also included in the CoRe Plan. The CoRe Plan is a regional planning effort that saw Valley Water partner with cities, water retailers, and stakeholders in the County to integrate and expand recycled and purified water as a local, reliable, environmentally adaptive, drought-resilient water supply. The feasibility study would further assess some of these reuse concepts and move them closer to implementation.

These potential projects also help advance the goals and objectives of the Pajaro River Watershed Integrated Regional Water Management Plan by helping to maximize the use of recycled water and conjunctive use and helping to optimize the use of local groundwater and imported water supplies.

2. Will the proposed project help meet the water supply needs of a large geographic area, region, or watershed? Explain.

Yes. The proposed projects would directly help meet the water supply needs of Gilroy and Morgan Hill (see Figure 1), which form part of the Uvas-Llagas Watershed. The watershed is approximately 104 square miles, composed of agricultural lands and natural areas. This watershed forms part of the much larger Pajaro River Watershed that spans approximately 1,300 square miles and includes portions of Santa Cruz, San Benito, and Monterey Counties.

3. Will the proposed project promote collaborative partnerships to address water-related issues? Explain. Describe stakeholder involvement in the project planning process.

Yes. The proposed feasibility study would promote ongoing collaboration efforts between Valley Water and the Partner Agencies. These agencies have been working together since 1999 with the goal to investigate the feasibility of distributing treated wastewater for landscape, agriculture, and industrial uses and optimize the value of recycled water in their own communities. The benefits that recycled water provides the region are well documented under other criteria in this document. However, of equal importance are the benefits of learning to work together as a region – beyond service areas, political, and district boundaries – to understand that all agencies, wastewater authorities, water districts, cities, and other relevant stakeholders need to work together on water supply reliability. This partnership between Valley Water and the Partner Agencies is a successful example of regional-scale planning and implementation where the benefits of water reuse accrue on multiple levels. This approach has allowed all parties to collaborate on, identify, and

construct diverse projects that meet multiple needs for the region. It also facilitates leveraging of local, state, and federal funding sources resulting in local entities realizing projects and benefits that would be out of their reach without regional collaboration.

4. Will the proposed project include public outreach and opportunities for the public to learn about the project? Explain.

Yes. Public outreach and education are vital elements of any water reuse project. Valley Water's website (<https://www.valleywater.org/your-water/recycled-and-purified-water>) offers educational videos, photos, maps, project descriptions, access to reports and documents, and education about recycled and purified water. As it pertains to the proposed water reuse projects, Valley Water and the Partner Agencies plan on developing a thoughtful and strategic approach to public outreach and communications, for both internal and external audiences, to inform and educate management and stakeholders.

South County Water Reuse Program Feasibility Study
Santa Clara Valley Water District

South County Water Reuse Program Feasibility Study

Summary			
6. Budget Object Category	Total Cost	Federal Estimated Amount	Non-Federal Estimated Amount
a. Personnel	\$94,836		
b. Fringe Benefits	\$77,765		
c. Travel	\$0		
d. Equipment	\$0		
e. Supplies	\$0		
f. Contractual	\$400,000		
g. Construction	\$0		
h. Other Direct Costs	\$25,759		
i. Total Direct Costs	\$598,360		
j. Indirect Charges	\$0		
Total Costs	\$598,360	\$299,180	\$299,180
Cost Share Percentage		50%	50%

Required Permits or Approvals

The permits required for the construction of the proposed project will depend on the final design selected. The project will likely need to obtain the federal, state, and regional/local permits summarized in Table 1 (ESA, 2022).

Anticipated Permit or Approval	Agency
Federal	
Clean Water Act section 404 permit	U.S. Army Corps of Engineers
Endangered Species Act authorization	National Marine Fisheries Service U.S. Fish and Wildlife Service
Section 106 of the National Historic Preservation Act	California Office of Historic Preservation
State	
Section 1602 lake and streambed alteration agreement	California Department of Fish and Wildlife
Right-of-way permit	California Department of Transportation
Approval prior to change of discharge, place of use, and purpose of use of treated wastewater Clean Water and Drinking Water State Revolving Fund loan	State Water Resources Control Board
Clean Water Act section 401 water quality certification Porter-Cologne Water Quality Control Act NPDES permit and waste discharge requirements Construction General Permit and Industrial General Permit coverage	Central Coast Regional Water Quality Control Board
Title 22 section 60320.108, Groundwater Replenishment Regulations	Central Coast Regional Water Quality Control Board and State Water Resources Control Board, Division of Drinking Water
Regional and Local	
Project approval – CEQA lead agency Well permit(s)	Valley Water
Project approval – CEQA responsible agency Building Permit Sewer Use Permit Permanent easement and encroachment permit, approval of traffic control plans	City of Morgan Hill and/or City of Gilroy
Permit to construct and permit to operate emergency stationary diesel engines	Bay Area Air Quality Management District
Santa Clara Valley Habitat Conservation Plan and Natural Communities Conservation Plan compliance	Santa Clara Valley Habitat Agency
Grading permit, approval of traffic control plans	Santa Clara County

Project Budget

Funding Plan and Letters of Commitment

Describe how the non-Federal share of project costs will be obtained. Reclamation will use this information when making a determination that the applicant meets the cost share requirements identified in C.3 Cost Sharing Requirements.

The non-federal share of funding for project costs will be covered through Valley Water revenue from the sale of water to its customers. Table 2 summarizes funding sources for the proposed project requesting federal funds through this funding opportunity.

Table 2. Total Project Cost	
Funding Sources	Amount
Federal: Requested Reclamation funding	\$299,180
Non-federal	\$299,180
TOTAL	\$598,360

Project funding provided by a source other than the applicant shall be supported with letters of commitment from these additional sources. Letters of commitment shall identify the following elements:

- The amount of funding commitment.*
- The date the funds will be available to the applicant.*
- Any time constraint on the availability of funds.*
- Any other contingencies associated with the funding commitment.*

Commitment letters from third-party funding sources should be submitted with your project application. If commitment letters are not available at the time of the application submission, provide a timeline for submitting all commitment letters. Cost-share funding from sources outside the applicant's organization (e.g., loans or State grants) should be secured and available to the applicant prior to award.

Reclamation will not execute a financial assistance agreement until non-Federal funding has been secured or Reclamation determines that there is enough evidence and likelihood that non-Federal funds will be available to the applicant after executing the agreement.

Funding Commitment Letters

No time constraints apply to the non-federal share of project costs, and there are no other contingencies associated with this funding commitment.

In addition to Valley Water's commitment to fund this project, the City of Morgan Hill will provide non-federal funding in the form of in-kind staff support, as documented in the funding commitment letter below.



CITY OF MORGAN HILL
17555 PEAK AVENUE
MORGAN HILL, CA 95037
PHONE 408-779-7270
FAX 408-779-3117

WWW.MORGANHILL.CA.GOV

February 8, 2023

Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
P.O. Box 25007, MS 84-27133
Denver, Colorado 80225

Subject: Funding Commitment Letter for the South County Water Reuse Program Feasibility Study Application for Funding Assistance under WaterSMART: Water Recycling and Desalination Planning (NOFO No. R23AS00076)

Dear Application Review Committee members:

The City of Morgan Hill is submitting this letter documenting its funding commitment in support of the South County Water Reuse Program Feasibility Study grant application submitted to the Bureau of Reclamation's WaterSMART Water Recycling and Desalination Planning funding opportunity for Fiscal Year 2023.

The City has been working with Valley Water since 1999 to find ways to curve local groundwater demands through the expansion of recycled water in South County. This grant would provide an opportunity to evaluate the feasibility of further expanding water reuse for our South County communities and improve water supply reliability through a drought-resilient supply. We are committed to providing staff support equating to a value of \$25,759 for the development of the South County Water Reuse Program Feasibility Study to continue this regional partnership with Valley Water to find regional solutions that will build drought resilience.

- The amount of funding commitment – We are committed to providing staff support equating to a value of \$25,759 to continue ongoing water reuse planning efforts and evaluate the feasibility of further expanding reuse for our Silicon Valley communities and improve reliability through a drought-resilient supply.
- The date the funds will be available to the applicant – Our in-kind staff support will be available upon execution of the grant agreement between Valley Water and Reclamation, estimated to be October 2023.
- Any time constraints on the availability of funds – Our in-kind staff support will continue through the 24-month duration of developing the feasibility study.
- Any other contingencies associated with the funding commitment – No other contingencies apply.

We thank you for your consideration.

Christina Turner, City Manager

Budget Proposal

The total project cost is the sum of all allowable costs, including all required cost-sharing and voluntary committed cost-sharing and third-party contributions that are necessary to complete the proposed activities. Include the following chart (Table 3) to summarize all funding sources and denote in-kind contributions with an asterisk (*).

The total project budget is \$598,360. Table 3 summarizes the non-federal and federal funding sources. Valley Water's funding will be available October 2023, and no time constraints apply on the availability of funds through the duration of the two-year project schedule.

Table 3. Summary of Non Federal and Federal Funding Sources	
Funding Sources	Amount
Non-Federal Entities	
1. Valley Water direct contribution	\$100,820
2. Valley Water in-kind contribution*	\$172,601*
3. City of Morgan Hill, third-party in-kind contribution*	\$25,759*
Non-Federal subtotal	\$299,180
REQUESTED Reclamation Funding	\$299,180

* Asterisk denotes in-kind contribution

The budget proposal should include detailed information on the categories listed below, and it must clearly identify all items of cost, including those that will be contributed as a non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those that will be covered using the funding requested from Reclamation, and any requested pre-award costs (table 2).

The total project cost is summarized in Table 4.

Table 4. Total Project Cost	
Source	Amount
Costs to be reimbursed with the requested Federal funding	\$299,180
Costs to be paid by the applicant	\$273,421
Value of third-party contributions	\$25,759
Total project cost	\$598,360

Total project cost is \$598,360. Table 5 summarizes the budget by category, while Table 6 presents a breakdown of costs and funding source for each category.

Table 5. Budget Summary

Budget Object Category	Total Cost	Federal Estimated Amount	Non-Federal Estimated Amount
a. Personnel	\$94,836		
b. Fringe Benefits	\$77,765		
c. Travel	\$0		
d. Equipment	\$0		
e. Supplies	\$0		
f. Contractual	\$400,000		
g. Construction	\$0		
h. Other Direct Costs	\$25,759		
i. Total Direct Costs	\$598,360		
j. Indirect Charges	\$0		
Total Costs	\$598,360	\$299,180	\$299,180
Cost Share Percentage		50%	50%

Table 6. Budget Proposal for Valley Water

Budget Item Description	Qty	Unit	Unit Cost	Reclamation Funding	Recipient Funding	Total Cost
a. Personnel	1,344	hours	--	\$-	\$94,836	\$94,836
Senior Project Manager, Hossein Ashktorab	96	hours	\$101.21/hour	--	\$9,716	\$9,716
Associate Engineer, David Tucker	576	hours	\$79.05/hour	--	\$45,533	\$45,533
Assistant Engineer	576	hours	\$61.74/hour		\$35,562	\$35,562
Administrative Assistant	96	hours	\$41.92/hour	--	\$4,024	\$4,024
b. Fringe Benefits	82	%	\$46,020	\$-	\$77,765	\$77,765
Senior Project Manager, Hossein Ashktorab	82	%	\$4,858	--	\$7,967	\$7,967
Associate Engineer, David Tucker	82	%	\$23,715		\$37,337	\$37,337
Assistant Engineer	82	%	\$15,435	--	\$29,161	\$29,161
Administrative Assistant	82	%	\$2,012	--	\$3,300	\$3,300
c. Travel				\$-	\$-	\$-
d. Equipment				\$-	\$-	\$-
e. Supplies/Materials				\$-	\$-	\$-
f. Contractual				\$299,180	\$125,012	\$400,000
Lead Consultant for Feasibility Study and Financial Capability Determination				\$299,180	\$820	\$300,000
Facilitator / Stakeholder Engagement and Outreach Consultant				--	\$50,000	\$50,000
Consultant Pre-Final Design Activities and Coordination				--	\$50,000	\$50,000
g. Construction				\$-	\$-	\$-
h. Other Direct Costs				\$-	\$25,759	\$25,759
City of Morgan Hill in-kind staff support				--	\$25,759	\$25,759
i. Total Direct Costs				\$299,180	\$299,180	\$598,360
j. Indirect Costs				\$-	\$-	\$-
Total Project Costs				\$299,180	\$299,180	\$598,360
Cost Share Percentage				50%	50%	100%

A narrative summary of costs follows. If selected for award, detailed supporting documentation of costs will be provided.

- **Personnel:** The total cost for salaries and wages is \$94,836. Valley Water staff will include a Senior Project Manager, an Associate Engineer, an Assistant Engineer, and an Administrative Assistant. As the lead applicant, Valley Water will manage Task 5, Grant Administration and oversee the development of the Feasibility Study, Financial Capability Determination, and Pre-Final Design Activities (Tasks 1-4).
- **Fringe Benefits:** Fringe benefits are anticipated to cost \$77,765. The fringe benefit rate is 82% of staff salary. Fringe benefits for staff include health insurance, employer paid Medicare taxes, unemployment insurance, employer pension contributions, employer

contributions to deferred compensation retirement accounts, life insurance, and disability insurance.

- **Travel:** Valley Water will not incur any travel related expenses for this planning project.
- **Equipment:** Valley Water will not incur any equipment related expenses for planning project.
- **Supplies:** Valley Water is not supplying any supplies for this portion of the project.
- **Contractual:** Valley Water will contract with consultants for the following:
 - Lead the development of the Feasibility Study and Financial Capability determination.
 - Facilitate stakeholder meetings and public outreach efforts.
 - Assist with any pre-final design activities or other project related assessments that contribute towards project implementation.

Budgeted costs for the consultant will be fair and reasonable through assessment of qualifications, evaluation of rates, and prior experience of professional staff on projects of similar size and scope.

- **Construction:** Because this is a planning project, no construction related costs are anticipated.
- **Other Direct Costs:** As noted above, in addition to Valley Water's commitment to fund this project, the City of Morgan Hill will provide non-federal funding in the form of in-kind staff support.
- **Total Direct Costs:** The total direct cost for this funding request is \$598,360.
- **Indirect Costs:** Valley Water will not include indirect costs for this portion of the project.
- **Total Costs:** The total cost of this funding request is \$598,360.

Overlap or Duplication of Effort Statement

Valley Water is submitting a separate proposal under the Funding Opportunity No. R23AS00076 that will address the water reuse needs for San José and Santa Clara through the development of the San José-Santa Clara Purified Water Program Feasibility Study. However, the feasibility studies described in each proposal will be developed by outside contracted consultants. While it is anticipated that some of the same Valley Water staff will work on both projects, their involvement will largely consist of project oversight and grant administration which will make up only a small portion of the overall grant award.

Uniform Audit Reporting Statement

Valley Water was required to submit a Single Audit report for the 2021-2022 fiscal year and that report is available through the Federal Audit Clearinghouse website under the Employer Identification Number (EIN): 94-1695531.

Conflict of Interest Statement

Valley Water, nor any potential subrecipients, have identified any conflicts of interest, including instances of employees, potential subrecipients, or contractors being related to, married to, or having a close personal relationship with any Federal employee in the Federal funding program or who otherwise may have been involved in the review and selection of the award. If a conflict of interest arises or is identified during the life of the Federal award, Valley Water will immediately provide written notification to the Water Recycling Program.

Letters of Support

See the letters of support below from the following:

- City of Gilroy;
- City of Morgan Hill;
- City of Santa Clara; and
- City of San José.



Administration Department

7351 Rosanna Street, Gilroy, California 95020-6197
Telephone: (408) 846-0202
<http://www.cityofgilroy.org>

Jimmy Forbis
City Administrator

February 28, 2023

Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
P.O. Box 25007, MS 84-27133
Denver, Colorado 80225

Subject: Letter of Support for the South County Water Reuse Program Feasibility Study Application for Funding Assistance under WaterSMART: Water Recycling and Desalination Planning (NOFO No. R23AS00076)

Dear Application Review Committee members:

The City of Gilroy ardently supports the application that Santa Clara Valley Water District (Valley Water) is submitting on behalf of our communities in southern Santa Clara County, California, to seek financial assistance through the Bureau of Reclamation's WaterSMART Water Recycling and Desalination Planning funding opportunity for Fiscal Year 2023.

Because the South County depends solely on managed groundwater supply for drinking water, the City of Gilroy has worked with Valley Water (the county's primary water resources agency) over decades to develop recycled water to offset use of the potable water supply. The City of Gilroy participated in the development of the South Santa Clara County Recycled Water Master Plan Implementation Feasibility Report that was funded by a WaterSMART grant awarded to Valley Water and completed in 2009. Since the 2009 Feasibility Report was finalized, we have worked with Valley Water to:

1. Implement recycled water projects, including an expansion of the non-potable distribution system in the City of Gilroy;
2. Consider the potential for serving recycled water to the City of Morgan Hill; and
3. Consider opportunities (CoRe Plan) for purified water to improve the South County's water supply reliability and maintain a sustainable groundwater basin.

This grant would provide an opportunity to evaluate the feasibility of further expanding water reuse for our South County communities and improve water supply reliability through a drought-resilient supply. Current regulations enable communities to use recycled water for drinking via a reservoir or aquifer, and in 2023, the State Water Board will establish direct potable reuse regulations that will allow suppliers to distribute recycled water without first putting it into a reservoir or aquifer.

The South County Reuse Feasibility Study would begin by updating the 2009 Feasibility Report to reflect existing conditions, based on progress made since 2009. The Feasibility Study would also evaluate opportunities to develop recycled or purified water for the City of Morgan Hill through either a centralized or decentralized (satellite) treatment facility, as well as opportunities to develop purified water for the City of Gilroy. Financial support for the development of the Feasibility Study is needed.

The City of Gilroy is in full support of the development of the South County Water Reuse Program Feasibility Study and agrees with Valley Water that regional solutions will build drought resilience.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Forbis".

Jimmy Forbis, City Administrator
City of Gilroy



CITY OF MORGAN HILL
17555 PEAK AVENUE
MORGAN HILL, CA 95037
PHONE 408-779-7270
FAX 408-779-3117

WWW.MORGANHILL.CA.GOV

February 8, 2023

Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
P.O. Box 25007, MS 84-27133
Denver, Colorado 80225

Subject: Letter of Support for the South County Water Reuse Program Feasibility Study Application for Funding Assistance under WaterSMART: Water Recycling and Desalination Planning (NOFO No. R23AS00076)

Dear Application Review Committee members:

The City of Morgan Hill ardently supports the application that Santa Clara Valley Water District (Valley Water) is submitting on behalf of our communities in southern Santa Clara County, California, to seek financial assistance through the Bureau of Reclamation's WaterSMART Water Recycling and Desalination Planning funding opportunity for Fiscal Year 2023.

Because the South County depends solely on managed groundwater supply for drinking water, the City of Morgan Hill has worked with Valley Water (the county's primary water resources agency) over decades to develop recycled water to offset use of the potable water supply. The City of Morgan Hill participated in the development of the South Santa Clara County Recycled Water Master Plan Implementation Feasibility Report that was funded by a WaterSMART grant awarded to Valley Water and completed in 2009. Since the 2009 Feasibility Report was finalized, we have worked with Valley Water to:

1. Implement recycled water projects, including an expansion of the non-potable distribution system in the City of Gilroy;
2. Consider the potential for serving recycled water to the City of Morgan Hill; and
3. Consider opportunities (CoRe Plan) for purified water to improve the South County's water supply reliability and maintain a sustainable groundwater basin.

This grant would provide an opportunity to evaluate the feasibility of further expanding water reuse for our South County communities and improve water supply reliability through a drought-resilient supply. Current regulations enable communities to use recycled water for drinking via a reservoir or aquifer, and in 2023, the State Water Board will establish direct potable reuse regulations that will allow suppliers to distribute recycled water without first putting it into a reservoir or aquifer.

The South County Reuse Feasibility Study would begin by updating the 2009 Feasibility Report to reflect existing conditions, based on progress made since 2009. The Feasibility Study would also evaluate opportunities to develop recycled or purified water for the City of Morgan Hill through either a centralized or decentralized (satellite) treatment facility, as well as opportunities to develop purified water for the South County. Financial support for the development of the Feasibility Study is needed.



CITY OF MORGAN HILL
17555 PEAK AVENUE
MORGAN HILL, CA 95037
PHONE 408-779-7270
FAX 408-779-3117

WWW.MORGANHILL.CA.GOV

The City of Morgan Hill is in full support of the development of the South County Water Reuse Program Feasibility Study and agrees with Valley Water that regional solutions will build drought resilience.

Sincerely,

A handwritten signature in blue ink, appearing to read "CT", is written over a light blue circular stamp.

Christina Turner, City Manager





February 21, 2023

Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
P.O. Box 25007, MS 84-27133
Denver, Colorado 80225

Subject: Letter of Support for the South County Water Reuse Program Feasibility Study Application for Funding Assistance under WaterSmart: Water Recycling and Desalination Planning (NOFO No. R23AS00076)

Dear Application Review Committee members:

The City of Santa Clara ardently supports the application that Santa Clara Valley Water District (Valley Water) is submitting on behalf of communities in southern Santa Clara County, California, to seek financial assistance through the Bureau of Reclamation's WaterSMART Water Recycling and Desalination Planning funding opportunity for Fiscal Year 2023.

Alongside representatives from the County, the City of Santa Clara participated in the Countywide Water Reuse Master Plan (CoRe Plan) effort completed by Valley Water in 2021 and understands the need to improve water supply reliability and groundwater sustainability for communities in southern Santa Clara County. The southern portion of the county depends solely on groundwater for drinking water, and water reuse is expected to become an integral component of Valley Water's water supply portfolio in the future.

This grant would provide an opportunity to evaluate the feasibility of further expanding water reuse for South County communities and improving water supply reliability through a drought-resilient supply. Current regulations enable communities to use recycled water for drinking via a reservoir or aquifer, and in 2023, the State Water Board will establish direct potable reuse regulations that will allow suppliers to distribute recycled water without first putting it into a reservoir or aquifer.

The South County Water Reuse Program Feasibility Study would involve revision of the South Santa Clara County Recycled Water Master Plan Implementation – Determination of Feasibility Report to reflect existing conditions based on progress made since 2009. The Feasibility Study would also evaluate opportunities to develop recycled or purified water for the City of Morgan Hill through either a centralized or decentralized (satellite) treatment facility, as well as

Bureau of Reclamation Financial Assistance Operations Section
Re: Letter of Support for the South County Water Reuse Program Feasibility Study Application for
Funding Assistance (NOFO No. R23AS00076)

February 21, 2023
Page 2 of 2

opportunities to develop purified water for Gilroy. Financial support for the development of the
Feasibility Study is needed.

The City of Santa Clara is in full support of the development of the South County Water Reuse
Program Feasibility Study and agrees with Valley Water that regional solutions are needed to
build drought resilience.

Sincerely,

A handwritten signature in black ink, appearing to be the name of the City Manager, written in a cursive style.

Office of the City Manager
City of Santa Clara

February 27, 2023

Bureau of Reclamation
Financial Assistance Operations Section
Attn: NOFO Team
P.O. Box 25007, MS 84-27133
Denver, Colorado 80225

RE: Letter of Support for the South County Water Reuse Program Feasibility Study Application for Funding Assistance under WaterSMART: Water Recycling and Desalination Planning (NOFO No. R23AS00076)

Dear Application Review Committee members:

The City of San José supports the application that Santa Clara Valley Water District (Valley Water) is submitting on behalf of communities in southern Santa Clara County, California, to seek financial assistance through the Bureau of Reclamation's WaterSMART Water Recycling and Desalination Planning funding opportunity for Fiscal Year 2023.

Alongside representatives from Santa Clara, the City of San José participated in the Countywide Water Reuse Master Plan (CoRe Plan) effort completed by Valley Water in 2021 and understands the need to improve water supply reliability and groundwater sustainability for communities in southern Santa Clara County. The southern portion of the county depends solely on groundwater for drinking water, and water reuse is expected to become an integral component of Valley Water's water supply portfolio in the future.

This grant would provide an opportunity to evaluate the feasibility of further expanding water reuse for southern Santa Clara County communities and improving water supply reliability through a drought-resilient supply. Current regulations enable communities to use recycled water for drinking via a reservoir or aquifer, and in 2023, the State Water Board will establish direct potable reuse regulations that will allow suppliers to distribute recycled water without first putting it into a reservoir or aquifer.

The South County Water Reuse Program Feasibility Study would involve revision of the South Santa Clara County Recycled Water Master Plan Implementation – Determination of Feasibility Report to reflect existing conditions based on progress made since 2009. The Feasibility Study would also evaluate opportunities to develop recycled or purified water for the City of Morgan Hill through either a centralized or decentralized (satellite) treatment facility, as well as opportunities to develop purified water for the City of Gilroy. Financial support for the development of the Feasibility Study is needed.

The City of San José fully supports the development of the South County Water Reuse Program Feasibility Study and agrees with Valley Water that regional solutions are needed to build drought resilience.

Sincerely,

A handwritten signature in black ink that reads "Sarah Zárate". The signature is written in a cursive style with a prominent flourish at the end of the last name.

Sarah Zárate
Director, Office of Administration, Policy,
and Intergovernmental Relations

Official Resolution

The Valley Water official resolution is attached on the following pages.

**BOARD OF DIRECTORS
SANTA CLARA VALLEY WATER DISTRICT
RESOLUTION NO. 23-011**

AUTHORIZING SUBMISSION OF A GRANT APPLICATION TO THE UNITED STATES BUREAU OF RECLAMATION WATERSMART WATER RECYCLING AND DESALINATION PLANNING GRANT PROGRAM FOR UP TO \$1,000,000 AND, IF AWARDED, DELEGATE AUTHORITY TO THE CHIEF EXECUTIVE OFFICER OR DESIGNEE, TO NEGOTIATE AND EXECUTE A GRANT AGREEMENT AND ANY AMENDMENTS THERETO, FOR A SOUTH COUNTY WATER REUSE PROGRAM FEASIBILITY STUDY

WHEREAS, the Santa Clara Valley Water District (Valley Water) seeks external funding for a planning grant to support a South County Water Reuse Program Feasibility Study (Project) to evaluate and analyze the potential for a water recycling project; and

WHEREAS, the United States Bureau of Reclamation (USBR) Water Recycling and Desalination Planning Grant Program is currently accepting financial assistance planning grant applications for projects such as Valley Water's; and

WHEREAS, as a condition of the grant application, USBR requires submission of a Resolution adopted by Valley Water's Board of Directors authorizing staff to submit the application.

NOW, THEREFORE BE IT RESOLVED that the Board of Directors of the Santa Clara Valley Water District does hereby:

1. Authorize the Chief Executive Officer (CEO), or designee, to apply for grant funds in the amount of \$1,000,000 and, if awarded, negotiate and execute a Grant Agreement with the U.S. Bureau of Reclamation (USBR) to support the South County Water Reuse Program Feasibility Study Project, provided all grant requirements can be met; and
2. Authorize the CEO, or designee, including the Chief Financial Officer (CFO), to sign and submit invoices to USBR for grant fund reimbursements, to be made pursuant to the Grant Agreement; and
3. Authorize the CEO or designee to provide management and support services required for the performance of the work and administration, pursuant to the Grant Agreement, as deemed necessary and appropriate.

PASSED AND ADOPTED by the Board of Directors of the Santa Clara Valley Water District by the following vote on February 14, 2023:

AYES: Directors Estremera, Santos, Beall, Eisenberg, Hsueh, Keegan, Varela

NOES: Directors None.

ABSENT: Directors None.

ABSTAIN: Directors None.

SANTA CLARA VALLEY WATER DISTRICT

DocuSigned by:

 F600AB219490464
 JOHN L. VARELA
 Chair, Board of Directors

ATTEST: MICHELE L. KING, CMC

DocuSigned by:

 7E1632DBD03E40C
 Clerk, Board of Directors

Individual SF-424 Forms

Included below are the SF-424, SF-424A, SF-424B, and SF-LLL forms.