



Santa Clara Valley Water District

File No.: 21-0234

Agenda Date: 3/19/2021

Item No.: 5.

BOARD AGENDA MEMORANDUM

SUBJECT:

Update on Santa Clara Valley Water District Efforts to Develop Purified Water Project in Santa Clara County.

RECOMMENDATION:

Receive information regarding the status of Purified Water Projects and provide comment and direction:

- a. That the Valley Water Board of Directors direct its staff to collaborate to complete negotiations for the needed agreements by June 2021, with direction to prioritize an integrated facility located in San José that provides purified water for groundwater recharge; and
- b. That the San Jose City Council accept the report regarding the status of the Santa Clara Valley Water District's (Valley Water) Purified Water Project in Santa Clara County.

SUMMARY:

Water Supply Master Plan and County-Wide Reuse Master Plan

The Santa Clara Valley Water District's (Valley Water) long-term water supply strategic planning has identified expansion of recycled and purified water at an affordable price as an essential important component of the county's water supply. Specifically, Valley Water has a goal to meet ten percent of the water supply demands with recycled and purified water. Record-breaking droughts and climate change projections have reinforced the need to identify and develop new sources of water for Santa Clara County that are locally-controlled and drought-resilient. During severe or extended drought conditions, groundwater levels can become significantly lowered, raising concerns regarding reduced local water supply reliability as well as land subsidence (sinking) and associated effects on infrastructure.

Over the past three years, Valley Water has been developing a Countywide Water Reuse Master Plan (aka CoRe Plan), an integral component of Valley Water's Water Supply Master Plan in collaboration with partners and stakeholders, including the City of San José (City). The CoRe plan will be finalized in 2021 and identifies and evaluates future reuse opportunities including purified water projects for potable reuse. Indirect potable reuse through groundwater replenishment was identified as the most feasible first phase for increased water reuse and improved water supply reliability.

History of Collaboration with San José on Purified Water to Support Non-Potable Recycled Water

Valley Water and the City as administrator and the City of Santa Clara as the co-owner of the San José-Santa Clara Regional Wastewater Facility (RWF) have been working collaboratively to expand use of recycled water produced at the RWF. To enhance and expand the use of recycled water for customers in San Jose, Santa Clara and Milpitas, Valley Water in collaboration with the City constructed the Silicon Valley Advanced Water Purification Center (SVAWPC). SVAWPC uses (1) microfiltration, (2) reverse osmosis, and (3) ultraviolet disinfection. Similar technology also provides safe, clean, and reliable water to astronauts on the International Space Station and water suppliers around the world. This facility improves water quality of recycled water served through the South Bay Water Recycling (SBWR) program by reducing the salt levels, making it more useable for customers. Capital contributions to construction of the facility included \$11 million from San José and \$65 million from Valley Water. Valley Water provides operations and maintenance services for the facility with cost share from the RWF. Valley Water's operation and maintenance has provided \$12 million towards improved recycled water quality since the facility began operations. Opened in July 2014, the SVAWPC has demonstrated the safety, cleanliness, and reliability of advanced water purification as a new, locally controlled, and drought-resilient water supply.

Purified Water Project Implementation (Potable Reuse)

In June 2020, the Valley Water Board directed staff to implement a potable reuse project as soon as feasible using a public-private partnership approach (P3). In October 2020, the Board re-affirmed this direction and directed staff to launch a P3 procurement plan as soon as the necessary elements for a proposed project, including (a) agreement for long-term supply of treated wastewater, (b) agreement enabling management of reverse osmosis concentrate, and (c) agreement for siting of the purification facilities, are sufficiently secured for the proposed project.

The Purified Water Project elements include a new advanced water purification facility, water conveyance pipeline, and associated facilities for replenishing groundwater with about 11,000 acre-feet per year of purified water at the groundwater recharge ponds in Campbell along Los Gatos Creek. The advanced water purification facility will be located either in Palo Alto or in San José immediately adjacent to and integrated with the existing SVAWPC at Zanker Road.

As the Valley Water Board has directed that the Purified Water Project be implemented rapidly and the environmental process has already started, the decision as to whether to proceed with a project based in Palo Alto or in San José is dependent on the progress of finalizing agreements by Summer of 2021.

The P3 approach will use a design, build, finance, operate, maintain (DBFOM) delivery method where a private entity delivers the project. Valley Water will retain ownership of the project and partner with the private entity as a public-private partnership. DBFOM benefits include accelerated project delivery, project construction and life-cycle cost efficiencies, and reducing impacts on rate payers. Valley Water's Board of Directors will make a decision on the location of the purification facility in the summer of 2021 based on feasibility analysis and partner discussions. This will be followed by the release of a Request for Proposal in the fall of 2021 and selection of a DBFOM contractor in 2022. Construction of the Purified Water Project including the advanced water

purification facility and conveyance to the Los Gatos Recharge system is anticipated to be complete by 2028.

Valley Water is working with our partner agencies on performing technical studies to support the project as well as California Environmental Quality Act (CEQA) compliance. A scoping meeting is planned for March 29, 2021.

In addition to the scoping meeting, Valley Water is launching a comprehensive outreach plan in support of the Purified Water Project, including ongoing tours. Tours at the purification center help Valley Water educate the public about the benefits and advantages of potable reuse, such as using advanced purified water in drinking water supplies through groundwater recharge and enhancing non-drinkable, recycled water.

Palo Alto and Mountain View Agreement and Negotiations:

In 2019, Valley Water's Board of Directors approved an agreement with the cities of Palo Alto and Mountain View that includes a local advanced treatment facility for recycled water, a water supply option, and wastewater for a potential regional advanced water purification center. With the agreement, Valley Water will fund \$16 million of the \$20 million needed to build a local advanced treatment facility for recycled water at the Regional Water Quality Control Plant (RWQCP) in Palo Alto. This new plant will produce up to 1.125 million gallons per day (MGD) of advanced treated water to be blended with existing recycled water for a total enhanced recycled water supply of 2.25 MGD of advanced treated water to recycled water customers. Valley Water staff is currently negotiating a land lease option and reverse osmosis concentrate management with City of Palo Alto staff for the regional facility.

San José-Santa Clara Regional Wastewater Facility Negotiations:

On September 1, 2020, the San José City Council directed the City Manager to prioritize the pursuit of expanded recycled water use with Valley Water to increase local, drought-resilient supply and reduce reliance on imported water. Specifically, through collaborative efforts, Valley Water and the City were to establish a negotiation team and negotiate to meet future water needs by developing and expanding programs and partnerships for water reuse, including both recycled water and potable reuse. As a result, Valley Water and City of San José and Santa Clara staff are currently discussing terms for options for wastewater, land, and reverse osmosis concentrate management for the potential San José location of the Purified Water Project facility. The RWF Master Plan set aside 60 acres for expansion of recycled water adjacent to the existing facility. The Purified Water Project is consistent with the City's General Plan goal to beneficially reuse 100% of the City's wastewater supply, including indirect use of recycled water as part of the potable water supply. In addition, the project is consistent with the South Bay Water Recycling (SBWR) strategic and master plan and Climate Smart San José goals to further strategic expansion of recycled water to increase supply and reduce reliance on imported water.

At the January 15, 2021 Recycled Water Committee, San Jose staff committed to meeting Valley Water's timeline to address integration of the new and existing facility due to the community benefits and cost savings that would be realized. Staff from Valley Water, City of San Jose and City of Santa

Clara have had productive discussions on the following issues:

- Amendment of the existing agreement to facilitate an integrated facility that implements potable reuse and continues to support purified water to improve the quality of the recycled water delivered through the SBWR system (purple pipes). Integration of the facilities will lower costs due to efficiencies and will reduce the environmental footprint of the facility.
- An agreement to allow for transferring treated wastewater to the new integrated facility.
- An agreement to lease land for the additional acreage required for the expanded facility at a reasonable cost recognizing the benefits of this collaborative project to the RWF and the region.
- Working collaboratively on cost-effective solutions to managing discharges from the purification facility (RO concentrate) including allowing continued blending with the treatment plant's effluent.
- Ensuring that neither Valley Water nor the RWF is exposed to unreasonable risks, including regulatory compliance for the treatment plant and financial risk related to securing water, discharges from the purification facility, and land for Valley Water.
- Determining continued cost-sharing of purified water provided for non-potable reuse to South Bay Water Recycling.

Resolution of these issues is needed to ensure a viable project that is cost effective for our mutual rate payers to ensure a sustainable water supply for our communities.

FINANCIAL IMPACT:

The cost of the Purified Water Project is estimated at approximately \$600 million, which will be financed by the private entity. Payments will be based on delivery of purified water after project completion.

CEQA:

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

An EIR is being prepared in support of the Purified Water Project with a scoping meeting scheduled for March 29, 2021.

ATTACHMENTS:

Attachment 1: PowerPoint

Attachment 2: City of San Jose Memo

File No.: 21-0234

Agenda Date: 3/19/2021
Item No.: 5.

UNCLASSIFIED MANAGER:

Kirsten Struve, Valley Water Assistant Officer, 408-630-3138

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Valley Water

Clean Water • Healthy Environment • Flood Protection

Joint Council-Board meeting
March 19, 2021



Update on Valley Water Efforts to Develop Purified Water Project in Santa Clara County.

Presented by: Kirsten Struve, Assistant Officer



Droughts



Economic
impacts



Land
subsidence risk

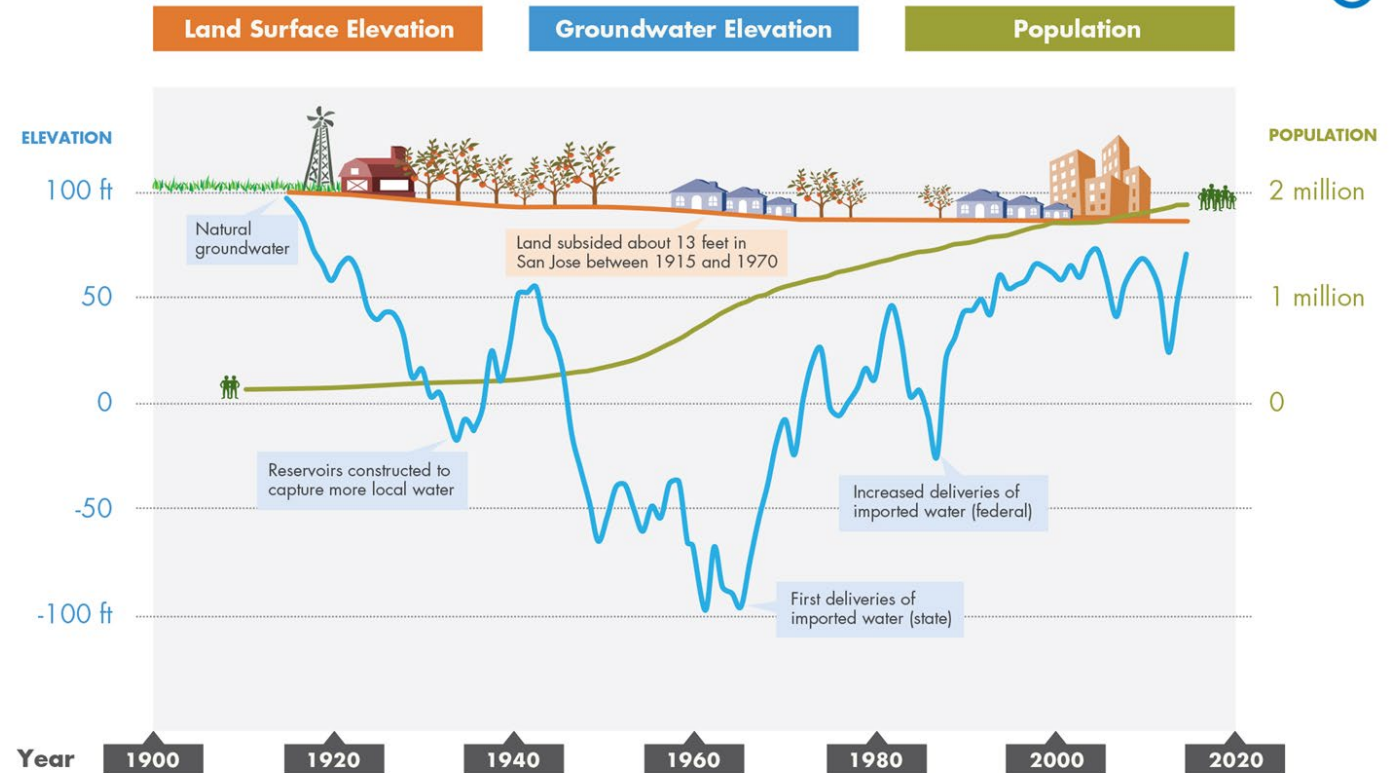


Climate Change Risks Continue to Drive Urgency for Addressing Water Supply Reliability

3

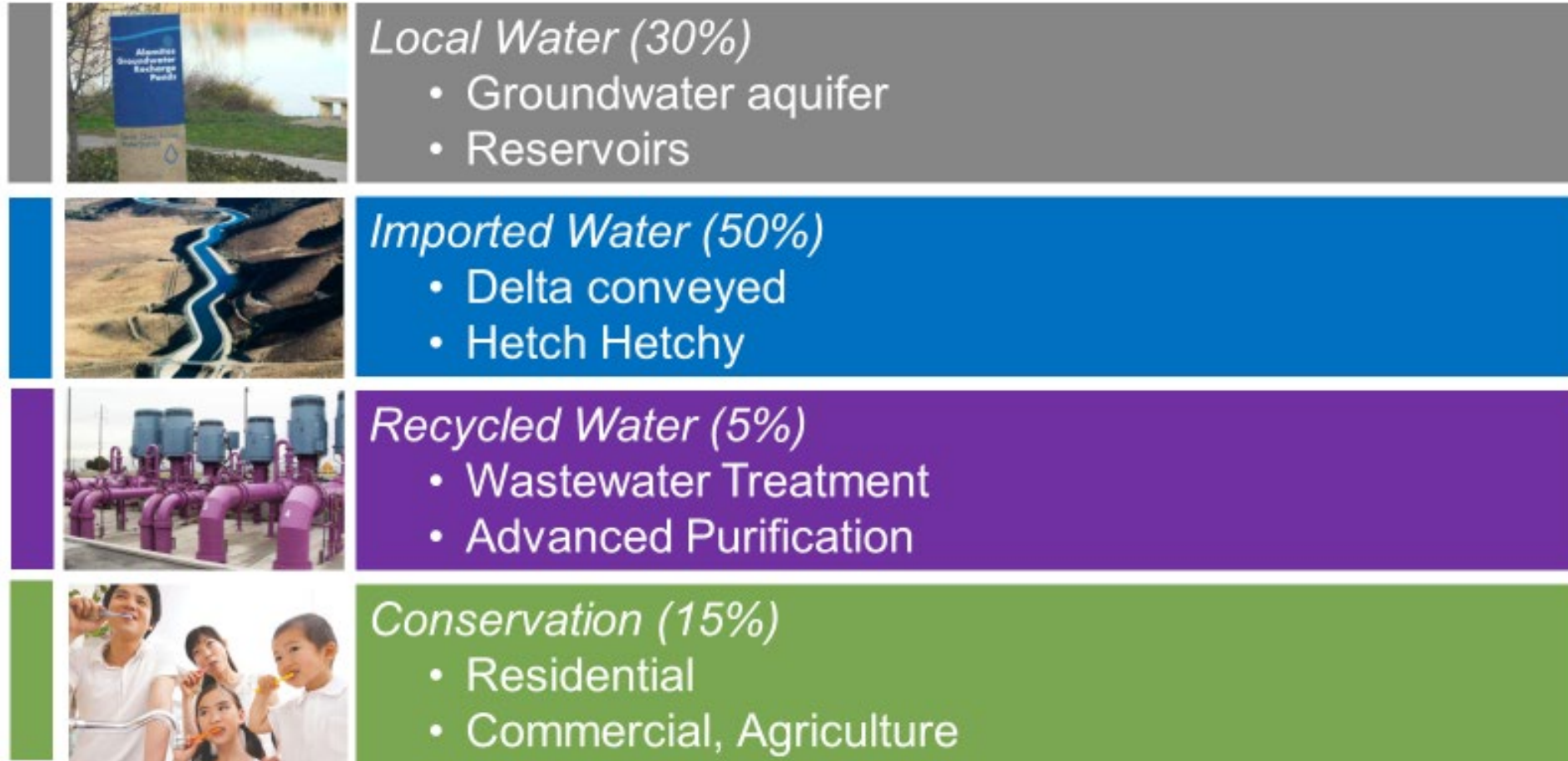
SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE *a graphic representation not intended as a technical exhibit*

Santa Clara Valley
Water District



valleywater.org

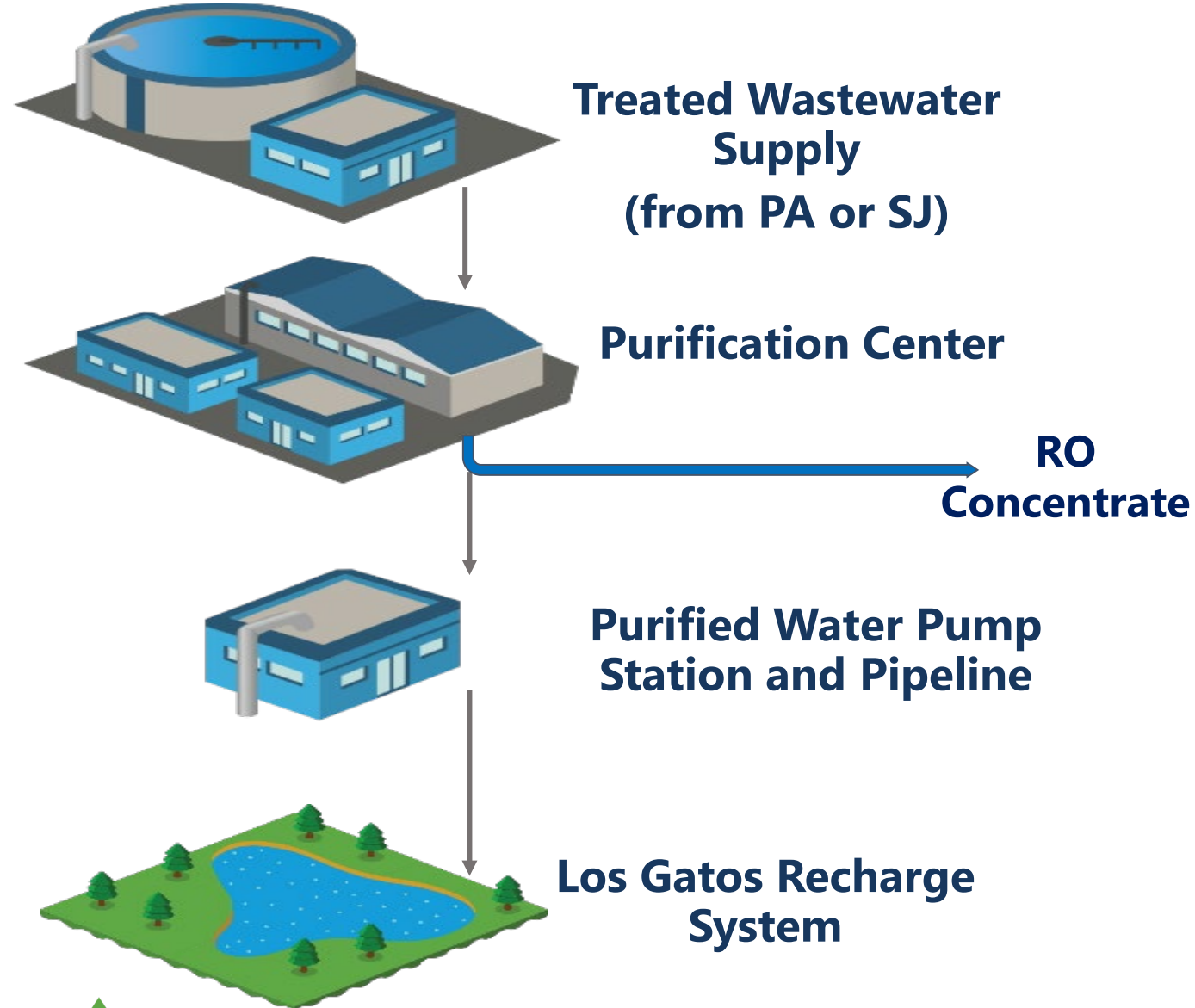
Recycled and Purified Water is an important component of the water supply portfolio



History of Collaboration



Purified Water Project



Elements

1. Pipeline from Palo Alto RWQCP to Palo Alto AWWP
 2. Pipeline from Palo Alto AWWP to LGRS
 3. Pipeline from San Jose AWWP to Joint Purified Water Pipeline (36-inch)
 4. Pipeline from Palo Alto RWQCP to Palo Alto AWWP (36-inch)
 5. Pipeline from Palo Alto AWWP to Joint Purified Water Pipeline (36-inch)
 6. Pipeline from Joint Purified Water Pipeline to LGRS (36-inch)

Purpose of this Project

- Recycled and purified water is a drought-resilient and locally controlled water supply
- Improve supply reliability consistent with Water Supply Master Plan 2040
- Meet our goal of about 10% of Santa Clara County's water demand from water reuse
- In June 2020, the Board directed staff to implement a potable reuse project as soon as feasible.





Shared Opportunity

- Leverages Current Partnership
- Reconfigure Existing Facilities
 - Less environmental impacts
 - Reduced costs and ratepayer impacts
 - Lowers operating costs of SBWR
- Requires agreement on:
 - Amendments to existing agreements
 - Treated wastewater
 - Land
 - Reverse osmosis concentrate management

Project Delivery Method

- Using Design-Build-Finance-Operate-Maintain Delivery Method.
A private entity delivers the project, Valley Water retains ownership and partners with the private entity as part of a P3.
- Water rate impacts will be lessened if Valley Water is successful in helping the private entity partner obtain low-cost federal financing.



valleywater.org

**(P3) Public Private
Partnership**

Timeline

- Summer 2021: Board decision on project site
- 2022: Valley Water plans to award the project.
- 2024: Private partner completes design and permitting (with defined community benefits).
- 2028: Construction will be completed and water flowing to the Los Gatos Recharge system.



Environmental/Public Review

An Environmental Impact Report (EIR) is being created and will be released at a later date.

EIR Scoping Meeting on March 29, 2021

Any impacts and mitigations will be identified in the EIR.



QUESTIONS





Valley Water

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Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: March 15, 2021

Approved

Date

3/16/21

**SUBJECT: SANTA CLARA VALLEY WATER DISTRICT'S EFFORT TO DEVELOP
PURIFIED WATER PROJECTS IN SANTA CLARA COUNTY**

RECOMMENDATION

Accept the report regarding the status of the Santa Clara Valley Water District's (Valley Water) Purified Water Project in Santa Clara County.

OUTCOME

Provide general information and background on the status of Valley Water's Purified Water projects.

BACKGROUND

Over the past two decades, the City of San José (City) and Valley Water continually collaborated in supporting the use of recycled water, thereby augmenting local water supply in San José. Beginning in the mid-1990's and to satisfy regulatory requirements in its NPDES discharge permit and maintain health of the South Bay, the Regional Wastewater Facility (RWF) created South Bay Water Recycling (SBWR), a regional recycled water distribution system serving the Cities of San José, Santa Clara, and Milpitas.

In 2002, the City and Valley Water agreed to partner on additional recycled water infrastructure projects, including the expansion of recycled water in South San José. In 2010, the City and Valley Water entered into the Recycled Water Facilities and Programs Integration Agreement to construct and fund the Silicon Valley Advanced Purification Center (SVAWPC), an advanced wastewater effluent treatment facility producing up to 8 million gallons per day (MGD) of purified water. The SVAWPC is part of the RWF treatment process, and the purified water is blended with RWF effluent, creating a high-quality recycled water, to be distributed by SBWR. Currently, SBWR delivers approximately 13,000 acre feet per year (AFY) of water, reaching peak summer delivers of about 35 MGD.

Valley Water intends to pursue the expansion of the potable water supply for Santa Clara County through the treatment of wastewater, as evaluated during the 2014 SBWR Strategic and Master Planning process. In anticipation of Valley Water's interest, the 2013 RWF Plant Master Plan proactively reserved 23 acres of land adjacent to the SVAWPC for the purpose of a new purified water facility or additional recycled water facilities. To support this effort, in August 2017, Valley Water agreed to fund City staff and resources to evaluate the feasibility of another purified water project.

In December 2019, Valley Water and the cities of Palo Alto and Mountain View partnered on the development of a potential purified water project. If Valley Water exercises its option under that Palo Alto/Mountain View agreement, it will treat the wastewater effluent from a wastewater treatment facility located in Palo Alto (Regional Water Quality Control Plant) for potable reuse to augment the County's water supply. While the agreement includes an option for Valley Water to purchase a minimum 9 MGD of treated wastewater for up to 76 years, it also includes several beneficial terms, such as a \$16 million payment to the wastewater treatment facility and payments of \$1.0 million per year upon exercising the option. Not included in this agreement are terms regarding responsibility for managing Reverse Osmosis Concentrate (a by-product of a purified water facility) and land availability.

In January 2020, Valley Water approached San José and Santa Clara staff to express an interest in negotiating an agreement modeled after their Palo Alto/Mountain View agreement. Two subsequent meetings were held in February and March 2020, with all parties recognizing the significant time commitment and resources required to negotiate a similar agreement, and with acknowledgement that a Palo Alto/Mountain View style agreement could be possible, with further discussion.

On June 16, 2020, Valley Water's Board received an update on concepts to further develop purified water in Santa Clara County. Valley Water's Board directed staff to explore, within 90 days, a similar agreement with San José and Santa Clara, and the expansion of the SVAWPC to increase production of purified water for potable reuse. Similarly, on September 1, 2020, Council directed the City Manager to prioritize the pursuit of expanded recycled water use with Valley Water to increase a local, drought-resilient water supply and reduce reliance on imported water. On October 13, 2020, the Santa Clara City Council also authorized staff to negotiate a Palo Alto/Mountain View style agreement with San José and Valley Water, supporting the expansion of recycled water and potable reuse.

ANALYSIS

Per Council direction (see hyperlink below) on September 1, 2020 staff proceeded to negotiate a Palo Alto/Mountain View-style agreement with Valley Water, and prioritize solutions consistent with the following principles:

- To not incur additional liabilities or other adverse financial impacts on the Regional Wastewater Facility and sanitary sewer collection system;
- To not increase the discharge of nutrients and other pollutants to the Bay;
- Minimize or reduce greenhouse gas emissions;
- Support a vibrant and adaptive ecosystem in the Lower South San Francisco Bay;
- Minimize the drinking water rate impact on our residents;
- Ensure long-term viable water supplies for San José.

<https://sanjose.legistar.com/LegislationDetail.aspx?ID=4624806&GUID=A6AC381F-CF43-4246-B51B-D69F4EF79832&Options=&Search=>),

City staff has met regularly with the Valley Water negotiation team to maintain pace with Valley Water's expedited schedule and desire to complete negotiations by June 2021. In this expeditious intent and to remain consistent with Council direction, staff initially committed to solely focus on negotiating an agreement based on the Palo Alto/Mountain View-style agreement to reserve 9 MGD of wastewater effluent, along with similar financial terms. Although discussions occurred regarding feasibility of additional topics beyond that of a Palo Alto/Mountain View style agreement, on January 13, 2021, Valley Water requested to expand the scope to renegotiate or enter into new agreements to address the following three issues:

1. Long term ground lease of RWF lands adjacent to the SVAWPC
2. Responsibility for treatment of the reverse osmosis concentrate waste that would be generated by the expansion of the SVAWPC
3. Revisions to the 2010 Integration Agreement

While the negotiation has progressed in identifying draft terms for the expanded scope, the three new issues have added complexities that require further in-depth analysis and significant time. Additional analysis includes, but is not limited to, an evaluation of the treatment and management of reverse osmosis to fully vet cost and potential impacts to ensure no consequential impacts to either RWF Operations or the RWF Capital Improvement Program, an evaluation of construction impacts to recycled water supply and availability, and further legal analysis of potential private activity restrictions. Any potential arrangements would require close coordination with the Santa Clara City Council, and consideration by the Treatment Plant Advisory Committee (TPAC).

Once impacts have been fully evaluated and considered by TPAC, and the San José and Santa Clara City Councils, the expanded project would require three new or revised agreements, including a real estate transaction agreement, a revised operations agreement, and an amendment or replacement to the 2010 Integration Agreement. It is estimated that it will require an additional two years to fully complete.

Due to the expanded agreement scope, including full risk evaluation, it is not feasible to expect that negotiations and corresponding agreements will be completed by Valley Water's deadline of

June 2021. To meet that aggressive timeline, or to not unnecessarily delay Valley Water's progress, two options are available:

Option #1 – Focus solely on a Palo Alto/Mountain View style agreement

In order to maintain pace with Valley Water's expedited schedule and desire to complete negotiations by June 2021, staff will solely focus upon negotiation of an agreement consistent with that offered to Palo Alto/Mountain View to reserve 9 MGD of wastewater effluent for Valley Water's future use.

Option #2 – Defer negotiations and recommend Valley Water proceed with a Palo Alto/Mountain View project.

Due to the considerable staff time and resources required to fully evaluate potential consequences, and renegotiate or enter into new agreements, defer negotiations and encourage Valley Water to pursue their Palo Alto/Mountain View project. This option will allow Valley Water to maintain a June 2021 deadline for selecting a project.

In the meantime, RWF will continue to focus on the Capital Improvement Program, biosolids transition, and support the Shoreline Levy project. The City and Valley Water have a long history of collaboration and partnership on the expansion and use of recycled water; staff looks forward to continuing this collaboration.

CONCLUSION

The additional three topics effectively expand the scope and complexity of negotiations; and will require significantly more resources than currently available. This added scope is beyond what was contemplated in a Palo Alto/Mountain View style agreement and what City staff committed to negotiate. Although City staff remains committed to support a purified water project, it is not feasible to responsibly complete negotiations any sooner than June 2023.

EVALUATION AND FOLLOW-UP

No follow up is anticipated at this time.

CLIMATE SMART SAN JOSE

The recommendation in this memo aligns with one or more Climate Smart San José energy, water, or mobility goals.

HONORABLE MAYOR AND CITY COUNCIL

March 15, 2021

Subject: Santa Clara Valley Water District's Effort to Develop Purified Water Projects in Santa Clara County

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PUBLIC OUTREACH

This memorandum will be posted on the City's website for the March 19, 2021 Joint City Council / Santa Clara Valley Water District Board Special Meeting.

COORDINATION

This project has been coordinated with the City Attorney's Office and Budget Office.

COMMISSION RECOMMENDATION/INPUT

No commission recommendation or input is associated with this action.

CEQA

Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Informational Memos that involve no approvals of any City action.

/s/

KERRIE ROMANOW

Director, Environmental Services

For questions, please contact Jeff Provenzano, Deputy Director, at (408) 277-3671.

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