

03/26/19

**MEMORANDUM**

FC 14 (01-02-07)

TO: Board of Directors**FROM:** Joint Water Resources Committee (Gilroy, Morgan Hill, SCRWA, SCVWD) Meeting**SUBJECT:** Joint Water Resources Committee (Gilroy, Morgan Hill, SCRWA, SCVWD) Meeting Summary for March 6, 2019**DATE:** March 26, 2019

This memorandum summarizes agenda items from the meeting of the Joint Water Resources Committee (Gilroy, Morgan Hill, SCRWA, SCVWD) held on March 6, 2019.

ACTION ITEMS**4.1. UPDATE ON WATER SUPPLY MASTER PLAN**

Ms. Metra Richert presented the following agenda item:

Summary:**District Overview**

The Santa Clara Valley Water District (District) provides groundwater management, wholesale water supply, flood protection, and stream stewardship services to Santa Clara County (County). The District was originally formed in 1929 to manage groundwater in response to groundwater overdraft and land subsidence. Maintaining groundwater supplies and avoiding land subsidence continue to be the core function of the District's water supply program.

Originally, the County relied solely on local runoff patterns and natural recharge. However, these were insufficient to maintain groundwater levels. Between the 1930s and 1950s, the District constructed 10 dams to store winter rains for use later in the year. Initially, these efforts were sufficient. However, the post-World War II development boom increased demands, and local supplies were no longer sufficient to meet the County's needs. The District began importing water in the 1960s from the State Water Project through the South Bay Aqueduct from the north and in the 1980s from the federal Central Valley Project via San Luis Reservoir.

With continued expansion in the technology sector in the 1990s further increasing demands, the District initiated water conservation and recycled and purified water programs. The District implements nearly 20 different ongoing water conservation programs. These programs are designed to achieve sustainable, long-term water savings and are implemented regardless of water supply conditions. Recycled and purified water is a local, reliable source of supply that helps meet demands in wet, normal and dry years. In 1977 the District and the City of Gilroy began a partnership to construct and operate a South County Recycled Water system which extends from the South County Regional Waste Water Authority (SCRWA) treatment plant. The facility has been expanded over the years and uses advanced technologies to purify secondary treated wastewater to produce on average 2,000 acre-feet a year (1.8 million gallons per day) of recycled water to irrigators. The District is working with local recycled water producers, retailers, and other stakeholder to develop a Countywide Water Reuse Master Plan that will recommend reliable and efficient projects for potable and non-potable reuse.

Water Supply Master Plan

As the groundwater management agency and primary water resources agency for Santa Clara County, the District has a mission to provide Silicon Valley safe, clean water for a healthy life, environment, and economy. The Water Supply Master Plan (Master Plan) is the District'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 the District is planning to make through 2040, the anticipated schedule, the associated costs and benefits, and how Master Plan implementation will be monitored and adjusted annually.

Strategy

The Board adopted the “Ensure Sustainability” strategy in 2012 as part of the Water Supply and Infrastructure Master Plan. The “Ensure Sustainability” strategy is comprised of three elements:

- 1) Secure existing supplies and infrastructure,
- 2) Expand water conservation and reuse, and
- 3) Optimize the use of existing supplies and infrastructure.

Together these elements protect and build on past investments in water supply reliability, leverage those investments, and develop alternative supplies and demand management measures to manage risk and meet future needs, especially during extended droughts in a changing climate. As part of the Master Plan update, on January 14, 2019, the Board adopted to reaffirm the “Ensure Sustainability” strategy.

Level of Service

The water supply reliability level of service goal guides long-term water supply planning efforts and informs Board decisions regarding investments. The level of service goal, which was approved by the Board in June 2012, is an interpretation of Board Policy E-2 that “there is a reliable, clean water supply for current and future generations.” The goal was to “develop water supplies designed to meet at least 100 percent of average annual water demand identified in the District’s Urban Water Management Plan during non-drought years and at least 90 percent of average annual water demand in drought years.” As part of the Master Plan update staff recommended revising the water supply reliability level of service goal to “develop water supplies designed to meet 100 percent of demands identified in the Master Plan in non-drought years and at least 80 percent of average annual water demand in drought years.”

Staff recommended using the Master Plan demand projection because it is closer to historic trends than the Urban Water Management Plan projection and will be reviewed and updated annually as part of Master Plan monitoring. Furthermore, staff recommended updating the level of service goal for planning for drought reliability to meeting 80 percent of demands because it strikes a balance between minimizing shortages and the costs associated with the higher level of service. Furthermore, the community was able to reduce water use as much as 28 percent in 2015, indicating that shortages in the range of 20 percent are manageable. As part of the Master Plan update, on January 14, 2019 the Board adopted staff’s recommended level of service goal: “develop water supplies designed to meet at least 100 percent of average annual water demand identified in the District’s Water Supply Master Plan during non-drought years and at least 80 percent of average annual water demand in drought years.”

Supply and Demand

The Master Plan modeling analysis indicates that droughts are and will continue to be the District’s greatest water supply challenge. Modeling of 2040 conditions indicates that the water supply shortfall is approximately 150,000 acre-feet (134 million gallons per day) during drought years and 35,000 acre-feet (31 million gallons per day) during an average non-drought year.

To meet the future water supply needs and promote greater supply diversity, the District continues to explore additional water supply and demand management options. Water supply diversity helps reduce the County’s exposure to the risk of any one supply investment not performing up to expectations. In addition, developing alternative supplies reduces the District’s reliance on imported water supplies. Examples of the types of projects being considered include additional water conservation, non-potable and potable reuse, surface and groundwater storage, stormwater capture, additional recharge ponds, and dry year options (Attachment 2).

In September 2017, the Board approved planning for a variety of water conservation and stormwater capture projects, referred to as the “No Regrets” package in the Water Master Plan update. These projects would be implemented in all future water supply scenarios and are designed to reduce water demands by about 10,000 acre-feet per year (9 million gallons per day) and increase natural groundwater recharge by about 1,000 acre-feet per year (0.9 million gallons per day). The package, which increases the conservation savings goal to 110,000 acre-feet per year (98 million gallons per day) by 2040, consists of the following water conservation and stormwater capture projects:

- Advanced metering infrastructure;
- Graywater rebate program expansion;
- Leak repair incentives;
- New Development Model Ordinance; and

- Stormwater capture (agricultural land recharge also known as managed aquifer recharge (MAR), stormwater recharge in the City of San Jose and Saratoga, rain barrel rebates, and rain garden rebates).

In December 2017, the Board approved developing up to 24,000 acre-feet per year (21 million gallons per day) of potable reuse capacity. In May 2018, the Board approved participation in the California WaterFix. In June 2018, the Board approved pursuing the Pacheco Reservoir Expansion Project, which conditionally received up to \$484.5 million in State funding.

Staff analyzed the effect of these Board-approved efforts, along with additional recharge in the Llagas Groundwater Subbasin that groundwater modeling indicates is needed to meet future demands, on water supply reliability. The projects that are approved for planning are sufficient to meet the District's water supply reliability level of service goal of developing water supplies designed to meet at least 100 percent of average annual water demand identified in the District Water Supply Master Plan during non-drought years and at least 80 percent of average annual water demand in drought years.

Monitoring and Assessment

There are many unknowns and risks associated with future demands, supplies, and the status of projects and programs in the Master Plan. Therefore, a critical piece of the plan is the development of a monitoring and assessment plan (MAP). The MAP will build on regular reports on projects and annual water supply conditions and will look at how all the different deviations from schedule affect the long-term water supply reliability outlook. Staff will also evaluate how changing external factors such as changes in policy, regulations (e.g., Bay Delta Water Quality Control Plan), and scientific understanding affect the long-term water supply reliability outlook. The MAP involves an annual review of the Master Plan and periodic updates to reflect changed conditions.

The proposed Monitoring and Assessment Plan (MAP) approach for the Master Plan has four steps:

1. Develop an implementation schedule;
2. Manage unknowns and risk;
3. Report to Board annually, or as needed; and
4. Adjust the MAP as needed to serve as input to annual rate forecast, CIP and budget.

Next Steps

The next step for the Master Plan is to prepare a draft based on Board direction from the November 20, 2018 and January 8, 2019 Board meetings. Staff anticipates completing a draft Master Plan for Board and stakeholder review in spring 2019. The intent is to hold at least two workshops as part of this review – one with water retailers and one with other stakeholders. Additional presentations may be made at Board advisory committees. Staff plans to present a final Master Plan to the Board in winter 2019. The next annual report would be presented to the Board in fall 2019 and then any changes would be incorporated into the CIP, budget, and water rates setting processes.

The Committee took no action.

4.2 UPDATE ON COUNTYWIDE WATER REUSE MASTER PLAN

Mr. David Tucker presented the following agenda item:

Summary:

This item provides an update on Valley Water's Countywide Water Reuse Master Plan (Reuse Master Plan), an integral component of the Water Supply Master Plan which describes our strategy to provide a reliable and sustainable water supply.

The Reuse Master Plan aims to improve water supply reliability through water reuse for Santa Clara County (County) in collaboration with recycled water producers, wholesalers, retailers, users, and other interested parties. The Reuse Master Plan will identify: the volume of water available for potential potable reuse (PR) development and non-potable reuse (NPR) expansion; the optimal allocation between PR and NPR; options for system integration; recommendations for building upon NPR projects and potential new PR projects; and proposals for governance alternatives, including roles and responsibilities.

BACKGROUND:

Valley Water, the South County Regional Wastewater Authority (SCRWA), the City of Gilroy and the City of Morgan Hill have a long history of collaborating on the expansion of recycled water in South County, including the development of a South County Recycled Water Master Plan [JDLP1] to guide these efforts.

Valley Water Board policy sets an objective to meet at least 10% of the County's total water demands using recycled and purified water. To achieve this objective, Valley Water is developing a Reuse Master Plan that will initially provide up to 24,000 acre feet per year of potable water reuse. The Reuse Master Plan builds upon existing planning studies (including the South County Recycled Water Master Plan [JDLP2]) by integrating information and evaluating the potential for collaboration. Studies and analysis are being developed into a series of technical memoranda (TMs), which will eventually be assembled into a final Reuse Master Plan. The Reuse Master Plan team has developed the following TMs as summarized below:

Project Definition, Roles and Responsibilities Technical Memorandum

This TM establishes the project purpose, describes roles and responsibilities of Valley Water and Partner Agencies, and provides a basis for subsequent deliverables.

Regulatory Framework Technical Memorandum

This TM provides a brief history and overview of water reuse policy in California, including relevant regulations, regulatory agencies' responsibilities, recycled water in the County and recycled water regulatory structure. The Regulatory Framework TM will inform future decision making and permitting for Reuse Master Plan finalization and potential implementation.

Baseline Analysis Technical Memorandum

This TM describes the current state of water reuse in the County. Demand projections using 2015 Urban Water Management Plans as well as updates from Partner Agencies provide a basis for developing portfolios to meet future reuse demands. Valley Water analyzed these current and projected conditions at each of the four recycled water producers to calculate the volume of water available for future potable reuse. The Baseline Analysis TM will identify key countywide water reuse assumptions and existing conditions for the Reuse Master Plan to build upon.

Project Portfolio Development

This TM describes conceptual water reuse projects developed with stakeholders to achieve shared objectives of sustainable water supply. The process used to develop these potential projects included developing guiding principles with stakeholders, identifying project elements, and grouping elements into Portfolios. Based on Partner Agency feedback, Valley Water combined 18 potential project elements into five portfolios for further evaluation. These Portfolios may include a mix of potential projects, including some previously proposed projects (from recycled water master plans) and some new elements.

Direct Potable Reuse (DPR) Evaluation

Although regulatory framework for DPR is still under development by California regulators, individual case-by-case permitting is possible. In concept, DPR alternatives could utilize existing drinking water treatment and distribution systems and avoid the cost and environmental impact of constructing dedicated IPR facilities. In October 2018, the Project Partner Group expressed general support for potable reuse alternatives including DPR. Based on this discussion, additional consideration for DPR will be incorporated into the continuing Portfolio analysis.

NEXT STEPS:

Leading to completion of the Reuse Master Plan, the highest ranked portfolios will be further refined with hydraulic modeling, cost analysis, and preliminary engineering (10% design). Other factors such as energy usage and greenhouse gas emissions will be considered to further evaluate the portfolios. Since each of the Portfolios identified will require reverse osmosis concentrate management, they will be further examined in Valley Water's Reverse Osmosis Concentrate Management Planning process, which is being developed in parallel with this Reuse Master Plan.

Additional feedback from stakeholders and Partner Agencies will help refine these portfolios. Additional meetings of the Stakeholder Task Force and Project Partner Group are planned throughout 2019 for this purpose. These meetings will allow the South County Partners to continue further evaluate and provide feedback regarding future opportunities for IPR and DPR expansion within their service areas. The Reuse Master Plan is anticipated to be completed by the end of 2019.

The Committee took no action.

4.3 OPEN SPACE CREDIT

Mr. Joseph Atmore was unable to present his agenda item due to time constraints (another meeting was scheduled directly following ours) but he will return on June 5, 2019.

If you have any questions or concerns, you may contact me at, gbrambill@valleywater.org or 1.408.630.2408.

Thank you.

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