



Santa Clara Valley Water District

File No.: 22-1269

Agenda Date: 11/22/2022

Item No.: 2.8.

BOARD AGENDA MEMORANDUM

SUBJECT:

Receive Information on Santa Clara Valley Water District's Annual Work Study Session of its Water Supply Master Plan Monitoring and Assessment Program Update.

RECOMMENDATION:

- A. Receive information on the Annual Work Study Session on the Water Supply Master Plan Monitoring and Assessment Program Update - Water Supply Master Plan Benchmarking Study;
- B. Review and provide feedback on the Annual Work Study Session on the Water Supply Master Plan Monitoring and Assessment Program Update - Water Supply Master Plan Project Evaluation Framework Concept; and
- C. Provide direction to staff.

SUMMARY:

The Water Supply Master Plan 2040 (WSMP) is Santa Clara Valley Water District's (Valley Water) guiding document for long-term water supply investments to ensure water supply reliability for Santa Clara County. Adopted by Valley Water's Board of Directors (Board) in 2019, this long-range water supply plan assesses the future county-wide demands and evaluates and recommends water supply and infrastructure projects to meet those demands to achieve its level of service (LOS) goal through 2040.

Valley Water follows a roughly 5-year cycle for its WSMP update. To help inform the direction and framework of the next WSMP update and as part of the annual Monitoring and Assessment Program (MAP), Valley Water staff, with consultant support, performed a benchmarking study to learn best practices in long range water supply planning from some of its peer water utilities. This MAP 2022 memorandum presents findings and recommendations from the study. It also discusses a framework for project evaluation within the context of WSMP, as well as a timeline and next steps for the next comprehensive WSMP update.

Benchmarking Study Overview

The benchmarking study is intended to assess good practices from peer agencies' long range water supply planning efforts to help inform Valley Water's next WSMP update. The study includes looking at peer agency planning approaches such as how they evaluate projects, as well as process-related efforts, including how they use their plans to make decisions and how stakeholders/decision makers

are engaged.

Seven peer agencies were selected for this study based on their service area population, annual budget including capital investment, and water supply challenges. Those agencies are:

- San Francisco Public Utilities Commission (SFPUC), California
- Metropolitan Water District of Southern California (MWD)
- San Diego County Water Authority (SDCWA), California
- Tarrant Regional Water District (TRWD), Texas
- Tucson Water, Arizona
- Philadelphia Water Department (PWD), Pennsylvania
- Seattle Public Utilities (SPU), Washington

For each of these agencies, their most recent, publicly available long-range water supply documents were reviewed. Based on the plan review, five of the seven peer agencies were selected for a staff interview because of their similar situations as Valley Water and their planning approaches. The interviews were focused on planning process and approaches that are not explicitly described in their plans, but also served as an opportunity to build relationship with those agencies. The findings and recommendations from plan review and interviews are summarized in a technical memorandum (Attachment 1).

Benchmarking Study Findings

While the review of peer agencies' plans identified similarities, there is no one-size-fits-all approach to water supply planning since it depends on agency size, constraints, and key drivers and goals. The findings from the peer agency plan review and interviews confirm that Valley Water's planning efforts and practices are in line with many good practices adopted by other agencies. From demand projection, project evaluation, water supply portfolio development, to communication and internal/external stakeholder engagement, Valley Water employed the same or similar approaches as most of the peer agencies.

The key findings on a number of important aspects of the seven peer agencies' plans and their planning processes are summarized below. The comparison of findings across agency practices helps illuminate good practices and potential opportunities for Valley Water to improve its long-range planning approach.

- **Common Planning Steps** - While each agency uses a somewhat unique water supply planning process, a few key planning steps are common across the agencies including defining goals, identifying project alternatives and water supply strategies, evaluating and comparing projects, and developing portfolios and implementation schedules.
- **Planning Goals and Key Drivers** - Each agency has planned for multiple goals, including increasing supply reliability, diversifying portfolio, optimizing operation, and enhancing flexibility. All of them have a common goal of providing water supply reliability over a long-term horizon.
- **Planning Horizon and Update Frequency** - Five of seven agencies, including all three California agencies, use planning horizons of 20 or 25 years. The frequency of comprehensive

updates varies by agency, and the three California agencies issue comprehensive updates every 5 years.

- **Planning Approach** - Four agencies employed a scenario planning approach to present alternative views of how the future might unfold, rather than providing one prediction or forecast of the future. The approach involves analyzing several possible future scenarios that bookend the future water supply and demand possibilities, which provides a basis for evaluating the various projects and programs and adaptive management. Key to this approach is identifying and assessing risks and uncertainties that could have a major impact on the future and hence on the success of any planning effort.
- **Demand Projection** - For the past 20 years, water use in all seven agencies has decreased despite population growth. Further, while all the agencies anticipate continued population increases, most project that water use in 20 or more years will be lower compared to their water use in 2000. Demand management through water use efficiency/conservation programs has been key to reducing water demand and an integral strategy to each agency's water supply reliability.
- **Project/Portfolio Evaluation** - While each agency has a unique approach to evaluating water supply projects (or portfolios of projects), all use multiple criteria to evaluate and ultimately select projects. The commonly used criteria include annual water supply, supply reliability, cost, and environmental requirements. Some agencies also use water quality and utilization of available capacity of their conveyance, storage, and/or treatment facilities as evaluation criteria.
- **Diverse Water Supply Portfolio** - All agencies developed diverse water supply portfolios to meet their future needs, which typically includes surface water supply, storage, groundwater, recycled water, and water conservation. As imported water has become increasingly uncertain due to environmental regulations and recurring droughts, four agencies that heavily rely on imported water supply (SFPUC, MWD, SDCWA, Tucson) focused their strategies on developing local, drought resilient supplies, along with adding additional storage, to reduce their reliance on imported supply delivery. In addition, all agencies have conservation as an integral part of their water supply portfolios, with a range of programs in place to permanently reduce water use.
- **Role in Informing Water Supply Investment Decisions** - Overall, agencies all use their master plans as a roadmap for future investment. Projects identified in the plans are generally prioritized and used as the basis of comparison for any new water projects. Project evaluations take place within the context of the WSMP, and a primary factor evaluated for all projects is their ability to meet dry year demands.
- **Internal/External Coordination and Collaboration** - All seven agencies engage key internal staff to inform long-range water supply plans, mostly through structured inter-departmental workgroups that are led by the planning team. Consistent representation and participation among workgroup members at regular meetings have proven valuable in delving into complex issues and gathering insights from managers and subject matter experts. The engagement with decision-makers (board or city council members) and external stakeholders occurred through public meetings and special workshops. Several agencies have also developed

dedicated pages on their websites to post their plans and associated files for public access.

Benchmarking Study Recommendations

While Valley Water's planning efforts and practices are largely consistent with peer agencies, insights and lessons learned from this study provide opportunities for Valley Water to consider enhancing its next comprehensive WSMP update, in the areas of planning process, planning approach, and stakeholder engagement. Specifically, Valley Water could consider to:

- **Develop a workplan to guide the comprehensive update.** The workplan would define planning objectives, establish timeline for major tasks, and specify procedures for engaging the Board and internal/external stakeholders.
- **Continue to convene an inter-departmental workgroup for the WSMP update.** The workgroup will be led by the water supply planning team with consistent participation from various Valley Water business areas.
- **Enhance Valley Water's planning approach.** To explicitly account for uncertainty affecting many factors in water supply planning and provide further flexibility in decision-making, Valley Water could consider adopting a scenario planning approach that considers alternative futures and multiple pathways to provide a basis for adaptive management.
- **Use a planning horizon of 20-30 years.** For future WSMP updates, Valley Water could use a planning horizon of around 30 years, which strikes a good balance between data availability and the uncertainty related to future conditions (i.e., forecasted demand and supply, project implementation) and is consistent with peer agency practices.
- **Develop a framework for project evaluation with additional criteria if feasible.** A framework with established goals, list of criteria, underlying assumptions, and performance matrix, could help better compare projects. Where feasible, additional criteria that were used by other agencies, such as climate resilience and conveyance utilization, can enhance the project evaluation approach and framework.
- **Continue to evaluate drought resilient local supplies and diversify storage.** Going forward, Valley Water could continue its current path of evaluating and developing locally controlled, drought resilient supplies to help reduce reliance on surface water supplies, both local and imported, as they are more vulnerable to droughts, natural disasters, and regulatory restrictions. Valley Water could also look to increase or diversify its storage to better capture more water during wet years to be used for dry years and provide flexibility to its operations.
- **Increase coordination and alignment between WSMP, Capital Improvement Program (CIP), and rate setting process.** To promote increased consistency between its CIP, rate setting process, and WSMP, Valley Water could better align those efforts to ensure Valley Water meets its short-term and long-term goals prioritized within the overall context of Valley Water's mission areas.
- **Continue to engage Board and committees to seek input.** Holding special board workshops with a dedicated focus on WSMP topics increases engagement, communication, and input during the comprehensive update process.

- **Communicate updates publicly with regular frequency.** Valley Water may consider issuing written updates as brief, standalone work products accessible to a broad public audience including elected bodies, ratepayers, and other stakeholders. Using a standard structure/format and posting updates on a designated webpage may improve stakeholder access to information and engagement in the update process.

Project Evaluation Framework

Given that the Board will need to make decisions on major projects in the next few years, a framework to evaluate projects to assist the Board in making these decisions is being developed as part of early efforts for the WSMP update. This framework includes categorizing projects, identifying linkages among projects, exploring additional evaluation criteria, and proposing pathways for decision points. The framework is intended to present a systematic and holistic approach to evaluate and ultimately select projects within the context of WSMP and financial constraints.

WSMP Update Timeline

- **2023**
 - Support rate setting process
 - Develop a workplan to establish goals and procedures
 - Refine framework
 - Project/portfolio analysis and evaluation
 - Stakeholder engagement
- **2024**
 - Plan development
 - Stakeholder outreach
 - Plan adoption

ENVIRONMENTAL JUSTICE IMPACT:

There are no Environmental Justice impacts associated with this item.

FINANCIAL IMPACT:

There is no financial impact associated with this item.

CEQA:

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

ATTACHMENTS:

Attachment 1: Technical Memorandum
Attachment 2: PowerPoint

File No.: 22-1269

Agenda Date: 11/22/2022
Item No.: 2.8.

UNCLASSIFIED MANAGER:
Kirsten Struve, 408-630-3138