



Santa Clara Valley Water District

File No.: 17-0815

Agenda Date: 12/12/2017

Item No.: *5.2.

BOARD AGENDA MEMORANDUM

SUBJECT:

Expedited Purified Water Program - Program Status Updates and Implementation Next Steps.

RECOMMENDATION:

- A. Receive and discuss Expedited Purified Water Program updates;
- B. Consider staff's recommendation to proceed with Indirect Potable Reuse to Los Gatos Ponds; and
- C. Provide input on next steps for the Expedited Purified Water Program's implementation process, including proceeding with procurement and initiating environmental assessment and permitting.

SUMMARY:

The purpose of this item is to provide an update to the Board on key activities that staff has undertaken over the past several months regarding the Expedited Purified Water Program (Program); to present staff's research and analysis on the possible Program components; to consider staff's recommendation that the District pursue Indirect Potable Reuse to Los Gatos Ponds; and to provide direction to staff regarding accelerating Program implementation.

Background

At the October 10, 2017 Board meeting, the Board received a presentation from the San Diego County Water Authority (SDCWA) on the alternative delivery methods SDCWA has used, and on its 2-year experience to date with the operation and maintenance of the Carlsbad Desalination Facility by a private entity. The Board also received information from staff regarding the status of the Memorandum of Understanding (MOU) negotiations with the City of San Jose for expansion of the Silicon Valley Advanced Water Purification Center for potable reuse. The Board deliberated and approved a motion to proceed with a Public-Private Partnership (P3) delivery approach for the Purified Water Program.

Draft Purified Water Program Plan

At the November 15, 2017 Recycled Water Committee meeting, staff presented the Draft Purified Water Program Plan (Draft Program Plan), which is a culmination of the preliminary engineering

analysis for potential Program components; related consultant services for groundwater studies and water supply operations modeling; and staff's draft 2017 Water Supply Master Plan (WSMP) projections for future water demands and water supply reliability.

Attachment 1 presents the draft Executive Summary of the Program Plan. A PowerPoint presentation summarizing the development and analysis of Program components and staff's recommended Program option is in Attachment 2.

The key driver for developing a staff-recommended Program option is achieving a 24,000 acre-feet per year (AFY) goal of potable reuse production by 2025, as included in staff's draft 2017 WSMP. Although various potential Program components were developed and analyzed, three alternatives that would meet this target were brought forward:

Alternative 1 - Expanded Silicon Valley Advanced Water Purification Center (SVAWPC) and conveyance to Los Gatos Recharge Ponds for indirect potable reuse (IPR).

Alternative 2 - Expanded SVAWPC and conveyance to injection wells and Los Gatos Recharge Ponds for IPR.

Alternative 3 - Expanded SVAWPC and conveyance to the Penitencia Water Treatment Plant for raw water augmentation of imported water, and subsequent conventional water treatment prior to delivery to the potable water distribution system. The industry currently uses the term Direct Potable Reuse (DPR) for this process.

Table 1 presents the summary of production capacity, an expected 80 percent average utilization yield, and unit costs per acre-foot for these three alternatives. The costs presented do not include costs for Reverse Osmosis (RO) concentrate management beyond discharge to the existing Regional Wastewater Facility outfall; any charges for treated wastewater; or costs for land use adjacent to the existing SVAWPC.

**Table 1. Program Alternatives and Unit Costs for a
Production Capacity of 24,000 Acre-Feet per Year of Purified Water**

Parameter	Alt. 1 IPR: Los Gatos Ponds	Alt. 2 IPR: Injection Wells and Los Gatos Ponds	Alt. 3 DPR to Penitencia WTP
Production Capacity (AFY)	24,000	24,000	24,000
80% Utilization Yield (AFY)	19,200	19,200	19,200
80% Utilization Unit Costs (\$/AF)	\$2,000	\$2,200	\$2,000

Staff is currently refining the water supply modeling to reflect recent Board decisions to implement the Water Supply Master Plan No Regrets package and conditionally approve California WaterFix. Refinements are expected to result in some reduction of the anticipated utilization rate for purified water. A reduction in utilization rate would result in a higher cost per acre foot. Results are expected to be presented to the Board as part of a Water Supply Master Plan update in February 2018.

Staff recommends the District proceed with Alternative 1 - IPR to Los Gatos Ponds. As described in Attachments 1 and 2, this alternative would produce purified water under existing regulations and would allow for greater flexibility of expanding IPR and potential DPR use in the future. Proceeding with development and construction of Alternative 1 requires partnership with the City of San Jose.

Program Implementation - Next Steps

Staff's analysis of the schedule for Program implementation has identified the following key elements:

1. Decision on the Program alternative (as presented above);
2. Executed MOU with City of San Jose regarding amount of treated wastewater, RO concentrate management and land;
3. Completion of California Environmental Quality Act (CEQA) documentation and permitting;
4. Selection of P3 entity and execution of Water Services Agreement.

Staff is working on an MOU with the City of San Jose with provisions regarding treated wastewater availability, land, and RO concentrate management. This MOU would begin the partnership and acknowledge next steps to advance the Expedited Purified Water Program. A future agreement with definitive terms would be developed after executing the MOU and addressing the key MOU provisions.

Concurrent with development of an MOU with the City of San Jose, staff is pursuing potable reuse alternatives with the Cities of Mt View, Palo Alto and Sunnyvale.

The CEQA assessment and documentation is typically initiated once a project or program has been defined. If the Board approves staff's recommendation on the Program alternative, the CEQA process can proceed. The key risk of proceeding now is that a definitive agreement with the City of San Jose is necessary to complete permitting. Staff recommends that CEQA work be initiated at risk (i.e., under the assumption that a mutually acceptable agreement can be negotiated with the City of San Jose). The benefits of proceeding are that it addresses a critical path item for funding eligibility and construction. The risk is that the process may have to be amended should any of the major Program elements change (e.g., RO concentrate management), resulting in increased staff time and professional services.

At the November 15, 2017 Recycled Water Committee (Committee) meeting, staff presented the Committee with the following elements of P3 implementation:

1. An overview of the likely P3 structure between the District and a private entity.

-
2. Necessary Program elements (partnership with the City of San Jose; completion of environmental documentation and permitting) for proceeding with a project.
 3. A preliminary timeline for selecting a P3 entity and negotiating and executing a P3 agreement to construct and operate an IPR facility.

The Committee requested that this matter be presented to the full Board for discussion and direction to staff. Staff's presentation on Program next steps and preliminary timeline is included in Attachment 2. This presentation includes two potential approaches for completing the P3 procurement. One approach is to re-issue a Request for Qualifications (RFQ) to potentially expand the shortlist to a minimum of three qualified P3 entities. Another approach is to proceed directly to a Request for Proposals (RFP) process with the existing shortlist. Per the Committee's recommendation, staff is soliciting input and direction on the Expedited Purified Water Program next steps.

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 a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

ATTACHMENTS:

Attachment 1: Draft Executive Summary: Purified Water Program Plan

Attachment 2: PowerPoint

UNCLASSIFIED MANAGER:

Katherine Oven, 408-630-3126