



Santa Clara Valley Water District

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Agenda Date: 10/10/2017
Item No.: *2.10.

BOARD AGENDA MEMORANDUM

SUBJECT:

Expedited Purified Water Program - San Diego County Water Authority's Experiences with Project Delivery Methods; Additional Information on Design/Build and Public-Private Partnership for Program Delivery; Program Status Update.

RECOMMENDATION:

- A. Receive information from San Diego County Water Authority on their experiences with various project delivery methods;
- B. Receive staff's response to questions posed by the Board at its March 27, 2017 Board Work Study Session regarding various impacts of choosing Design/Build (DB) or a Public-Private Partnership (P3);
- C. Receive information on the Program Status; and
- D. Provide direction to staff on next steps for the Expedited Purified Water Program procurement process.

SUMMARY:

At its March 27, 2017 special Board Meeting, the Board received information on experiences with various project delivery methods from representatives of the Orange County Water District and the cities of Rialto, San Jose, and Stockton. No decision on project delivery method(s) for the Expedited Purified Water Program (Program) was made at that time. The Board directed staff to arrange a presentation from the San Diego County Water Authority (SDCWA) regarding its project delivery experiences.

The Board also requested staff to return with more information on 1) the District's capacity for publicly funding its capital program and the associated bond rating risks; 2) a meaningful comparison of costs between DB and P3 delivery methods; and 3) how District staffing levels would vary for a DB versus a P3 delivery method for the Program.

A presentation by SDCWA staff and staff's response to the Board's requests are provided in this Agenda Memo.

Background

Per Board direction in early 2016, staff released a dual track Request for Qualifications (RFQ) on January 15, 2016. Statements of Qualification (SOQs) were due in mid-April 2016. The District received five (5) SOQs for the P3 approach, five (5) SOQs for a progressive design-build (PDB) approach for the Silicon Valley Advanced Water Purification Center (SVAWPC) expansion, and four (4) SOQs for a PDB approach for a pipeline to convey purified water to the Los Gatos Recharge Ponds (Los Gatos Pipeline).

The SOQs were evaluated and short lists for each group of SOQs were published in June 2016.

Prior to the release of the RFQs in mid-January, 2016, staff released a questionnaire to interested proposers regarding the RFQ/RFP process. A key response from several interested parties was a recommendation that the District choose one delivery method prior to proceeding with the Request for Proposal (RFP) stage of the Program.

The Board held special Board Work Study Sessions on September 20, 2016 and on March 27, 2017, to hear presentations from staff and other public agencies on alternative project delivery methods and further deliberate the choice between a DB or P3 approach for Program delivery.

At the September 20, 2016 Work Study Session, staff presented a qualitative and quantitative comparison between the DB and P3 approaches, and made a recommendation to the Board to choose the DB approach. A decision on choice of procurement was not made at this meeting. The Board requested to hear from other public agencies on their experiences with traditional or alternative project delivery methods.

At the March 27, 2017 Work Study Session, representatives from four California agencies-Orange County Water District and the cities of San Jose, Stockton, and Rialto shared their experiences of traditional and alternative project delivery methods. A decision on choice of a delivery method was not made at this meeting. The Board requested that staff arrange a presentation from the San Diego County Water Authority to be heard at a future meeting. The Board also requested additional information from staff as described earlier in this Agenda Memo.

Attachment 1 contains a more detailed summary of staff/agency presentations at the September 20, 2016 and March 27, 2017 Board Work Study Sessions.

San Diego County Water Authority Presentation

A summary of San Diego County Water Authority's (SDCWA) project delivery experience is as follows:

1. The majority of SDCWA projects have been delivered using the traditional design-bid-build approach.
2. SDCWA employed a design-build-operate-maintain (DBOM) delivery method for its Twin Oaks Valley Water Treatment Plant (a membrane surface water treatment facility). Key drivers for

this method were schedule constraints and lack of staff with water treatment operations and maintenance skills. The facility has been operational since 2008.

3. SDCWA entered into exclusive negotiations with a P3 entity to design, construct, finance, operate and maintain (DBFOM) its 50,000 acre-feet/year Carlsbad Desalination Facility. The P3 entity had conducted extensive development of the project for many years before negotiations with SDCWA were initiated. The facility has been operational since December 2015.

The San Diego County Water Authority presentation will be made by Mr. Bob Yamada, SDCWA's Director of Water Resources. Mr. Yamada's biography is provided in Attachment 2; the presentation is in Attachment 3.

Responses to March 27, 2017 Board Requests

As described earlier, at the March 27, 2017 special Board Meeting, the Board requested staff to return with more information on 1) the District's capacity for publicly funding its capital program and the associated bond rating risks; 2) a meaningful comparison of costs between DB and P3 delivery methods; and 3) how District staffing levels would vary for a DB versus a P3 delivery method for the Program. Staff's responses and information are presented in subsequent sections and in Attachment 4.

Public Financing and District's Bond Ratings

The capacity to debt finance capital expenditures under consideration (e.g., Water Fix, Storage projects, Dam Safety Program, Purified Program) is subject to Board actions to raise water rates. The District currently has excellent bond ratings: Moody's and Fitch assigned Aa1 and AA+ ratings in March 2017. The District's credit ratings are dependent on many factors, including, but not limited to, the Board's decisions on future water rate increases, the District's ongoing financial management strength, affordability of cost increases for the District's customers, and economic and capital market conditions.

Cost Comparisons Between DB and P3

There are several considerations if attempting to project cost differences between DB and P3:

1. Both Design-Build and P3 delivery methods may be less costly than the District's traditional design-bid-build project delivery approach. In a DB approach, schedule and cost savings are realized when one entity undertakes the design and construction of a project. In a P3, the possibility of innovative approaches to design/construction/operation by a private entity may also reduce the delivery schedule and long-term operations costs.
2. There is no empirical data available that can be used to estimate the potential cost differential between DB and a P3. Potential savings are highly dependent on project- and transaction-specific considerations. These project-unique considerations include:
 - a. Risk transfer and its associated costs, which are subject to detailed negotiation;
 - b. Innovative approaches by the selected entity to deliver a project;
 - c. Lifecycle costs that must be borne by the public agency in a DB, and negotiated into the

provisions of a long-term contract in a P3.

At this time, these and other considerations are not yet sufficiently defined to support a reliable analysis and projection.

3. Traditionally, alternative delivery approaches are evaluated on a qualitative and quantitative basis.

A DB approach adds a collaborative element to a project's design and construction, which can save time and reduce construction change orders, thus providing a value to the public agency financing the project's delivery.

For a P3 approach, the quantitative comparison is undertaken using a value-for-money analysis, which is a risk-adjusted comparison of life-cycle asset costs under diverse finance and delivery structures. While P3s often produce savings in infrastructure delivery and operations due to accelerated delivery, life-cycle asset management, incentivized performance and innovation, P3s also involve higher financing, procurement and oversight costs. The question is whether the anticipated savings will outweigh (or not) the additional costs associated with a P3, which can be properly estimated only after proposals are presented.

In summary: at this time, a definitive comparison of the project cost differential between these two approaches, and which will create better value to the District and its customers, cannot be determined.

District Workload and Staffing Requirements for a DB vs. a P3

Staff has benchmarked staffing approaches for capital programs with several agencies and cities, with a particular focus on their experience in staffing for alternative project delivery methods. Included in this evaluation were the San Francisco Public Utilities Commission (SFPUC), the City of San Jose, the Sacramento Regional County Sanitation District, and the San Diego County Water Authority. Data from the Arizona Department of Transportation, the San Antonio Water System, and the cities of Fresno and Honolulu were also evaluated.

The findings include:

1. All large Capital Programs required additional staffing regardless of delivery method choice. The level of internal vs. external staff varies according to agency, labor market, and program size/complexity.
2. A P3 would require internal staffing increases and external support services that would vary in type and in timing from a DB approach.
 - a. Internal: A P3 process would be best served by the leadership of an unclassified manager who would liaise with and engage the Board members throughout the process. This position would require an understanding of the technical aspects of the Program and the legal and financial complexities involved in developing and negotiating

a P3 agreement.

A P3 would require a dedicated Project Management Unit (PMU) that would serve as the transaction implementation unit during the procurement, and then as the contract governance and oversight unit during contract execution. The PMU would be comprised of 5-7 staff, working on a full or part-time basis, and would include engineers, Operations and Maintenance (O&M) staff, and other support staff. The PMU would rely on internal senior-level support from executive staff, legal, finance, environmental planning, and operations and maintenance; and external advisers, consultants and experts.

A P3 approach would generate an intense workload at the outset for development of bridging documents, the procurement process, and contract negotiations and approval. In the long-term, a P3 would eliminate the need for hiring/retaining District O&M staff for the new facilities, though the District would have to retain competency in this area should operations be transferred back to the District.

- b. External: For the P3 procurement process, the District would have to rely on a substantial team of legal, financial and technical advisors to support the procurement and contract negotiation efforts. Once the contract is executed, the District would have to retain engineering, legal, financial, operational and maintenance expertise to assist with contract governance and oversight. Independent engineers and third-party performance monitors may also be required.

- 3. A DB approach would also require internal staffing increases and external support services, albeit with different timing and levels of certain resource needs.

Overall, the DB approach would need significantly fewer external financial and legal resources initially than the P3 approach, but would require more staff than the P3 to engage with the DB entity in the design and construction phase, and ultimately for operation and maintenance.

- a. Internal: A DB delivery method would require a dedicated Unit Manager supported by engineers, a senior environmental planner, and dedicated O&M staff. Internal senior-level support from executive staff, legal, and operations and maintenance would also be required. Additional O&M staff would have to be hired to operate and maintain the new facilities.
- b. External: As with the P3 approach, a DB delivery method would also require consultant services for program management/owner representation, engineering, and legal support. With a publicly-funded effort, the need for external legal and financial services would be minimal. The District would have to hire a construction oversight/inspection team during the construction period.

- 4. A traditional Design-Bid Build approach would require similar internal and external resources

as the DB approach

Expedited Purified Water Program (Program) Status

Based on staff and consultants' work to date, key results driving the Program, at least in its initial phase, are as follows:

1. The draft District Water Supply Master Plan has identified that about 24,000 AFY of purified water could be beneficially used by 2025 to satisfy primarily dry-year needs, and benefits will also be achieved in non-dry years.
2. The anticipated annual utilization rate of purified water for indirect potable reuse is approximately 75%.
3. Purified water recharged to the groundwater basin has a very low potential of leaching naturally-occurring metals from the soil.

Although District and City of San Jose staff began meeting in 2015 with the purpose of developing a Memorandum of Understanding (MOU) for the expansion of purified water, and have met numerous times in 2016 and 2017, the following key terms of commitment for an MOU have not yet been resolved:

- A minimum volume of treated wastewater for purification purposes;
- Use of the Regional Wastewater Facility's (RWF) outfall for discharge of Reverse Osmosis (RO) concentrate;
- Adequate land area for expansion of advanced water purification facilities adjacent to the existing Silicon Valley Advanced Water Purification Center

A February 15, 2017, letter from the City of San Jose to the Recycled Water Committee (Committee) (Attachment 5) outlined several planning-level issues requiring resolution prior to formalizing an MOU with the District for the Program. In addition to the wastewater volume and management of RO concentrate, the City stated that lack of funding was impeding city staff's ability to review deliverables from the District regarding the terms of commitment.

Acknowledging the planning-level issues raised by City staff, District staff has advised that the Committee that the District's Countywide Recycled/Purified Water Planning effort, recently launched, will help address the wastewater volume issue and that its technical studies of alternative solutions for RO concentrate are under way.

Recently, the District and City executed an agreement whereby certain City staff costs in support of the Program will be reimbursed by the District.

Staff apprised the Recycled Water Committee at its February 16, May 30, and August 9, 2017 meetings of the status of the unresolved issues. At the February 16, 2017 Committee Meeting, City of San Jose staff were present and stated that resolution of the key issues was well underway. At the May 30, 2017 Committee Meeting, District staff reported to the Committee that the issues' resolution was not progressing rapidly. At the August 9, 2017 meeting, Committee members expressed strong concern over schedule delays in obtaining agreement with the City of San Jose and asked that a Joint Recycled Water Policy Advisory Committee (JRWPAC) meeting be scheduled as soon as

possible.

The JRWPAC meeting is scheduled for October 19, 2017.

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: Summary of Prior Board Work Study Sessions
- Attachment 2: Biography, B. Yamada, Director Water Resources, SDCWA
- Attachment 3: SDCWA Presentation
- Attachment 4: SCVWD Presentation
- Attachment 5: 021517 Letter from City of San Jose
- *Supplemental Agenda Memorandum
- *Supplemental Attachment 1: PowerPoint
- *Handout 2.10-A, Poseidon

UNCLASSIFIED MANAGER:

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