



October 6, 2017

Santa Clara Valley Water District Board of Directors
Santa Clara Valley Water District
5700 Almaden Expressway
San Jose, CA 95118

RE: Agenda Item 2.10 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.

Dear Chair Verela and Directors Santos, LeZotte, Hsueh, Kremen, Estremera and Keegan:

Poseidon Water LLC ("Poseidon"), as the coordinator of one of the short-listed entities for the Public-Private Partnership ("P3") for the Purified Water Program, provides these requests, suggestions, and comments on Item 2.10 of the October 10, 2017 agenda for the Santa Clara Valley Water District Board ("Board") meeting.

POSEIDON'S REQUESTS

Poseidon respectfully requests that the Board determine that:

- A. Of the Phase 1 EPWP Projects (The SVAWPC Expansion Project and the Purified Water Pipeline Project identified in the Request for Qualifications for a Public—Private Partnership between Respondent and the Santa Clara Valley Water District with Regards to the Expedited Purified Water Program, January 2015 ("RFQ")), the SVAWPC Expansion Project is a P3 Project¹.
- B. the District commence negotiations (like the processes followed by the City of Rialto and the San Diego County Water Authority)² with the current short-listed

¹ In the RFQ the definition of P3 Project is "That portion of the EPWP that the District elects to pursue using a P3 delivery method. P3 Team.... The P3 Project could include the Group A EPWP Projects, a combination of Group A and Group B EPWP Projects, or the entire EPWP. The District intends to establish the scope of the P3 Project as part of its decision on delivery method and simultaneously with its selection of the P3 Respondent."

² The Board has heard presentations from two entities that did use a P3 approach. Both the City of Rialto and the San Diego County Water Authority did not use a value-for-money analysis in their decision-making process. The process they followed was to determine project components and then to negotiate with a P3 entity to determine assignment of risks and performance guarantees.

P3 entities to develop proposed term-sheets and proposed P3 Contracts, including preliminary indicative pricing.

- C. District staff, with guidance by the Board's Recycled Water Committee, work with the short-listed P3 entities during the P3 negotiations by providing the draft term-sheet, as well as the program-specific studies and analyses that have been completed and are underway for the EPWP during 2018.
- D. Selection of the P3 entity to execute the Project would be recommended by the RWC to the Board based on evaluation of criteria that could include the proposed P3 Contract (including the indicative pricing), the quality of the negotiating process, experience in executing these kind of Projects, successful interaction with public agencies, proposed risk allocation among the parties, flexibility, and innovation on Project execution.

In addition to above requests, Poseidon would also respectfully suggest that the Board consider additional actions including:

The existing Silicon Valley Advanced Water Purification Center as a P3 Project to make a P3 more viable³.

The reclassification of the Ford Ponds IPR project from a Long-Term Purified Water Program element to a EPWP project that could also be determined to be a P3 Project⁴.

POSEIDON'S COMMENTS

Poseidon's view of Board's objectives

³ Comments and questions raised by the RWC for the Board September 20, 2016 Work Study Session on the EPWP and the dual track procurement included the following:

- Need to consider privatizing the existing SVAWPC and the expanded SVAWPC operations to make a P3 more viable.
- Concerns expressed regarding cumulative impacts of financing this EPWP and other water supply efforts (CalWater Fix; Sites or Los Vaqueros Reservoirs)
- Need to characterize risk transfer, particularly for capital cost overruns.
- Consider PDB for Los Gatos Pipeline and P3 for expanded SVAWPC.

⁴ Staff is involved in the ongoing collaboration with the City of San Jose which is reviewing treated wastewater availability at the San Jose/Santa Clara Regional Wastewater Facility. Since the Ford Ponds IPR project would treat 5 mgd of South Bay Water Recycling purchased by the District as part of the Silver Creek Pipeline upsizing, it may be able to proceed while the collaboration is still underway. The project includes a satellite plant and preliminary engineering has refined this project design, the preferred treatment train for the plant facility and cost estimates.

Poseidon Water LLC

5780 Fleet Street, Suite 140 Carlsbad, California 92008 Phone: (760) 655-3900 Fax: (760) 655-3901
www.poseidonwater.com

Through participation throughout the Board's review of the procurement/delivery approach for the EPWP, Poseidon has not only reviewed and commented on the EPWP, but has also followed the Board's work on the broad mandate to protect the existing water supply system, as well as identify the new supplies and infrastructure that will be needed to meet Santa Clara County's future water needs. It appears to us that the Board's objectives include providing a diverse water supply portfolio to meet future water needs while managing costs. In pursuing a more diverse water supply portfolio there has appeared to be an emphasis on multiple projects including micro and distributed water supply solutions while maintaining the capacity to address aging infrastructure.

SCVWD 2018-22 Capital Improvement Program ("CIP")

The Santa Clara Valley Water District's Fiscal Years 2018-2022 Five-Year Capital Improvement Program was recently adopted by the Board to address the future challenges of:

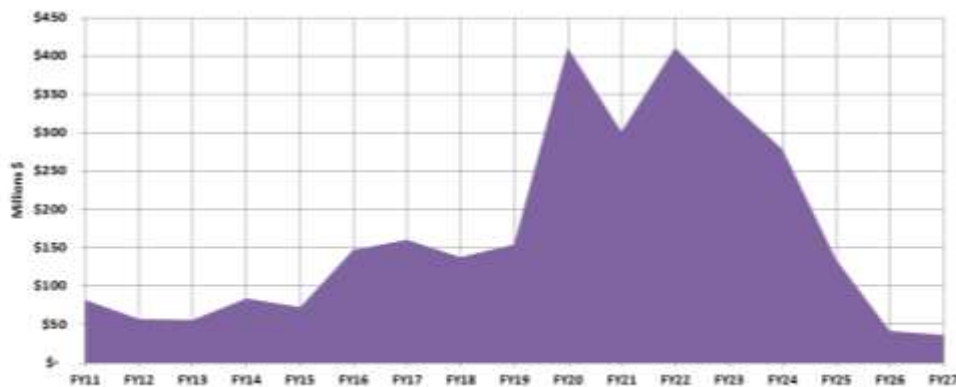
- Replacing/repairing aging infrastructure
- Dam seismic retrofits
- FAHCE Implementation
- Safe Clean Water Capital Projects
- Expansion of recycled water systems and water purification facilities

The CIP includes \$1.7 billion planned expenditures over the next five (5) years towards a \$4.5 billion total investment when completed with \$691 million from outside sources (State/Federal/Other)

Funding the CIP required annual groundwater production charge increases of 9.6% in North County and 6.4% for South County in FY 2017-18. Even at that funding level there were several projects that were not funded including Dam Seismic Retrofit at 2 Dams (Chesbro & Uvas), SCADA Small Capital Improvements, South County Recycled Water Reservoir Expansion, Alamitos Diversion Dam Improvements, Coyote Diversion Dam Improvements, and Land Rights - South County Recycled Water.

In addition to the needs addressed by the CIP, concerns have been expressed regarding cumulative impacts of financing this EPWP and other water supply efforts (CalWater Fix; Sites or Los Vaqueros Reservoirs). Projections of the increasing demand for capital projects are shown in the chart below with large increases for future years.

Issue: Rising Demand for Capital Investments



5

SCVWD Master Water Supply Planning

Over the past year the District has been updating the SCVWD Water Supply Master Plan. The analysis for the plan update shows declining reliability and the Staff and Board have reviewed over forty projects for filling the gaps in water supply. Several of these potential projects have been analyzed in detail: California WaterFix, Dry Year Options/Transfers, Groundwater Banking, Groundwater Recharge, Lexington Pipeline, Los Vaqueros, Pacheco Reservoir, Potable Reuse - Ford Pond, Potable Reuse – Injection Wells, Potable Reuse - Los Gatos Ponds, Sites Reservoir, and Water Contract Purchase.

These potential projects total more than \$3 billion and the challenge for the Board is to evaluate and develop a water supply strategy for achieving long-term water supply reliability.

A P3 approach for components of the EPWP can help the District address water supply needs

Poseidon believes that a P3 approach can help diversify the District's funding sources, provide more project funding capacity over time, and provide additional flexibility to help mitigate stress on District finances.

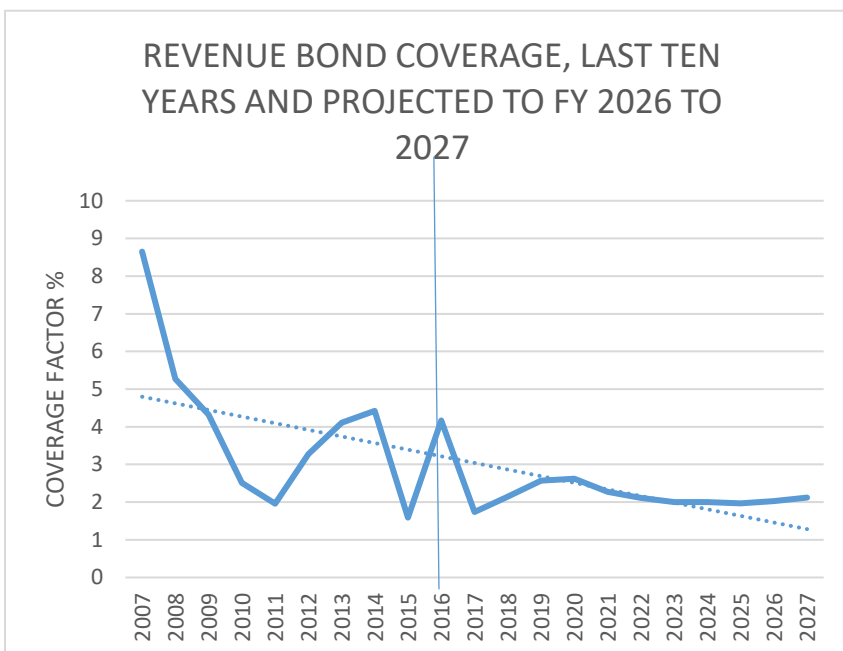
⁵SCVWD staff presentation at P3C Conference in Dallas, 2017, Panel on Creating and Adapting P3s in the Water Sector-Katherine Oven.

PROJECT FINANCING AND DISTRICT'S BOND RATINGS

Performing the EPWP or part of the EPWP as a properly structured P3, will most likely have a positive impact on the District Debt Capacity and Debt Rating. The successful delivery of the Carlsbad Seawater Desalination Plant by Poseidon served to supplement and drought-proof SDCWA's water supply without significant impact to water rates or their debt burden, a factor that led to an upgrade of their credit rating to AAA resulting in lower interest rates that saved over \$63M (net present value basis) on a new \$340M bond issuance (June 2016).

P3 has less impact on debt coverage

A P3 approach requires a lower revenue bond coverage which should be important to the District. Debt service on outstanding debt is paid from water revenues. Bond covenants stipulate that the District must maintain a 1.25 debt coverage ratio on all parity bonds. The long-term financial analysis targets a debt coverage ratio of 2.0, which helps establish the parameters for capital planning that ensure bond covenants will be met.



The Chart to the left, derived from the 2016 Comprehensive Annual Report ("CAFR") for the District and the District's 2018-2022 Capital Improvement Program, shows the actual (left side of vertical line) and projected (right side of vertical line) revenue bond coverage over a twenty-year period with a trendline (downward) shown by a dotted line.

The Staff projections, which do not assume a P3 approach are very close to ratio of 2.0

COST COMPARISONS BETWEEN DB AND P3

Poseidon Water LLC

5780 Fleet Street, Suite 140 Carlsbad, California 92008 Phone: (760) 655-3900 Fax: (760) 655-3901
www.poseidonwater.com

Current schedule delay increases the benefits of a P3 approach compared to Progressive Design Build (PDB)

Staff's previous analysis of the costs and benefits of the P3 approach versus PDB found that a longer commercial operation schedule delay increased the financial benefits of a P3 approach. In the scenarios that were presented to the Board on September 20, 2016, a one year schedule delay was projected to create \$24 million and a two year delay a \$49 million Net Present Value benefits for a P3 approach compared to a PDB approach.

The Staff's Board Agenda Memorandum responds to previous questions asked at the last Board Work Study session and provides an update to the program status. Key parts of that status report are the ongoing studies and negotiations that have caused at least a year or two schedule delays. Poseidon believes that the information provided to the Board supports moving forward with a P3 approach for certain components of the program (at least the SVAWPC Expansion Project) as well as potentially other elements, and that the selection of the P3 entity can be accomplished during 2018.

In Staff's review of alternative delivery approaches, one of the principal advantages for PDB approach was speed. Staff has informed the Board that PDB was considered a less complex procurement which could result in a quicker start to construction. The current delay in schedule takes away that advantage and provides time for the more comprehensive negotiation of a P3 agreement in parallel with the additional work and negotiations that will be taking place in 2018.

P3 approach projected to decrease water rates increases

During this review, Staff have presented projected from \$75 to \$125 per acre foot reduction in water rate increases needed to implement the program through a P3 approach. In an April 2017 presentation to the Board, staff projected that from fiscal year ("FY") 2020 to FY 2017 the water rates needed for a P3 approach would have been \$79 million less than for a PDB.

P3 increases access to some grant funds.

Staff has also noted that a P3 entity would not be hindered by some of the regulations for the WIFIA⁶ grant program that may limit the District. The *Analysis of Financing Strategies* prepared

⁶ Water Infrastructure Finance and Innovation Act (WIFIA). Staff has presented that the District would have to negotiate with the EPA to allow the District a certain time period to refund senior debt. If the EPA does not have the flexibility to allow for a refunding period, then WIFIA would not be an option. This would not be the case for a P3 entity.

for the program found that the 30-year Net Present Value Cost of a P3 approach coupled with WIFIA was less costly the traditional tax-exempt bond option and provided risk transfer benefits.

P3 approach does have potential cost savings.

The Staff report notes that: *P3 can accelerate delivery and reduce costs w/life-cycle management innovations.* This is consistent with the findings of the National Council for Public-Private Partnerships: *“Thorough analysis often reveals that cost savings are possible when PPPs are used, with many estimates providing a 7-10 percent savings over the life of the project.”* The Council’s 2012 publication “Testing Tradition: Assessing the Added Value of Public-Private Partnerships” reached this conclusion:

Conclusion In general, PPPs can offer long-term savings on capital expenditures, in addition to the other advantages described above. Private financing of capital expenditures can lead to significant capital savings on the design, build, and operation phases, with additional savings possible through technology investment on operating expenditures. When considering those cost savings and adding in the savings that result from risk transfer, the tax exemptions previously thought by some to be an advantage of traditional procurement are rendered ineffectual. For this reason, decision makers must consider the final, bottom line dollar amount required for the full life of the asset in question, not just the construction and financing costs. Thus, comprehensive analysis must consider not only construction bids but also ongoing O&M and all risks, whether retained, transferred, or shared. Because of the potential cost savings associated with PPPs and the large amounts of private equity currently available to fund them, this method appears to be an option that should be considered for procurement of public projects. Again, PPPs can be advantageous in many cases; however, these arrangements are not “free money” or miraculous solutions to public budget problems. Decision makers must consider the long-term consequences of investment upon taxpayers, economies, and the environment;⁷

DISTRICT WORKLOAD AND STAFF REQUIREMENTS FOR A DB VS. A P3

RFQ Phase: Evaluating alternative procurement approaches is a Staff intensive process. During the 2016 RFQ process the Staff went through a very intense review based on stringent criteria to determine the shortlisted parties for the different procurement tracks. The Staff reviewed volumes of qualifications for the Pipeline Progressive DB Track, the SCVWPC Expansion DB Track and the P3 Track. We understand that it was an extremely time-consuming exercise. It is Poseidon’s view that there will be limited value in revisiting the RFQ process again based on the stringent parameters for qualification included in the original RFQ, the number and high quality of the teams that responded to the RFQ and the time spent by the shortlisted parties in

⁷ Testing Tradition: Assessing the Added Value of Public-Private Partnerships, National Council for Public-Private Partnerships, 2012, page 14.

providing input, under the District's communication rules, during a lengthy procurement process.

RFP Phase: By procuring the Project following a more traditional P3 negotiation approach, the District will not need to spend the time and resources, including Staff time, to go through a lengthy 30% design package review.

Design/ Construction Phases: Based on our experience delivering the Carlsbad desal project under a performance based project delivery approach for the desal plant, SDCWA only had to have one or two dedicated staff members involved in the design/construction process of the plant. SDCWA staff reviewed all design packages with the assistance of an outside design firm and had the right to review all construction activities of the plant and had full access to the design and construction personnel. For the 10-mile pipeline portion of the project, SDCWA reviewed design packages mostly with internal staff resources but had a much heavier presence including field inspectors which was more of a traditional Design-Build approach than the full performance-based approach for the Plant.

Commissioning/performance testing of the Plant Phase: SDCWA staff increased their on-site presence for this phase.

Overall, it appeared that the pipeline Design-Build process for the Carlsbad project consumed a significantly greater amount of the SDCWA staff resources compared to the Plant component.

POSEIDON'S COMMENTS ON NEXT STEPS

The District used a Request for Qualifications (SOQ) process in which SOQs were evaluated and shortlists for each group of SOQs were published in June 2016. There are currently two short-listed P3 entities and therefore we are suggesting the following process:

- A. The short-listed P3 entities will update their financial and project information that was provided to the District in 2016.
- B. Based on a review of the updated information, staff will recommend to the RWC initiating negotiations with one or both short-listed P3 entities.
- C. Under a performance based approach, the District and the short-listed P3 entities will negotiate in their proposed P3 Contract all the requirements of the District regarding water quality source and product, points of delivery, major technology components, major specifications regarding key materials to be used, quality standards, specifications and other parameters meeting the Districts requirements. This approach allows the P3 entities to come up with

their own design and propose innovative proven approaches to achieve the best technical and financial solution for the Project on a life-cycle cost basis⁸.

- D. The portion of life cycle cost associated with hard cost including construction cost and O&M cost needed to be evaluated should be based on indicative pricing for the proposed P3 contract.
- E. District should focus on: risks to be transferred or maintained by the District including risk of cost overruns, entitlements and permits, delays, and Project performance; impacts on the District's borrowing capacity; speed of execution, and the quality and track record of the team to take the project from inception to operations.
- F. The P3 short-listed entities and the District would also negotiate in the proposed P3 Contract the approval and revision rights during all phases of the Project in a way that the risks are retained by the P3 Entity but satisfying all Districts' requirements.

This proposed P3 contract negotiation would take place in 2018.

CLOSING

During the Board's review of alternative procurement/delivery approaches, Staff has identified several advantages of using a P3 approach including:

- Life-cycle O&M (including rehabilitation) addressed by private partner.
- Transfer of cost and schedule risks to private partner.
- Lenders' reps provide added oversight.
- Third party financing.
- Hand-back conditions secured.

Poseidon agrees and suggests that in addition a P3 approach provides water price certainty, maintains the District's borrowing capacity, provides for efficiency/innovation incentives for the P3 entity to lower cost and transfers the operations cost overruns risk to the P3 entity.

⁸ Initially for the Carlsbad project, the SDCWA Board adopted a term sheet with Poseidon and then set up a Project Advisory Group which provided direction and oversight to SDCWA Staff throughout the negotiations and the development of the proposed Water Purchase Agreement ("WPA"). SDCWA Staff then provided the proposed WPA to the SDCWA Board for approval.

In closing, Poseidon respectfully requests that the Board determine that:

- A. Of the Phase 1 EPWP Projects (The SVAWPC Expansion Project and the Purified Water Pipeline Project identified in the Request for Qualifications for a Public—Private Partnership between Respondent and the Santa Clara Valley Water District with Regards to the Expedited Purified Water Program, January 2015 (“RFQ”)), the SVAWPC Expansion Project is a P3 Project.
- B. the District commence negotiations (like the processes followed by the City of Rialto and the San Diego County Water Authority) with the current short-listed P3 entities to develop proposed term-sheets and proposed P3 Contracts, including indicative pricing.
- C. District staff, with guidance by the Board’s Recycled Water Committee, work with the short-listed P3 entities during the P3 negotiations by providing the draft term-sheet, as well as the program-specific studies and analyses that have been completed and are underway for the EPWP during 2018.
- D. Selection of the P3 entity to execute the Project would be recommended by the RWC to the Board based on evaluation of criteria that could include the proposed P3 Contract, the quality of the negotiating process, experience in executing these kind of Projects, successful interaction with public agencies, proposed risk allocation among the parties, flexibility, and innovation on Project execution.

In addition to above requests, Poseidon would also respectfully suggest that the Board consider additional actions including:

The existing Silicon Valley Advanced Water Purification Center as a P3 Project to make a P3 more viable.

The reclassification of the Ford Ponds IPR project from a Long-Term Purified Water Program element to a EPWP project that could also be determined to be a P3 Project.

Poseidon will have a representative at the October 10th Board meeting where we hope to be able to interact with the Board, the Staff, other interested parties, and the public.

Sincerely,



Stan Williams

Vice President of Project Development

ATTACHMENTS

Poseidon Water LLC

5780 Fleet Street, Suite 140 Carlsbad, California 92008 Phone: (760) 655-3900 Fax: (760) 655-3901
www.poseidonwater.com

Attachment 1

THE PROCUREMENT EVALUATION PROCESS

Since 2015 the Santa Clara Valley Water District (“District”) has undertaken an extensive and thorough review to evaluate alternative delivery/procurement methods for the Expedited Purified Water Project (EPWP). (See attachment 1 THE PROCUREMENT EVALUATION PROCESS for a summary of the process).

From the beginning, the Board has understood the need for active involvement in this evaluation. The Board provided specific direction to the RWC to identify the issues, assumptions, criteria and associated uncertainties and risks involved with the EPWP to determine which topics were most appropriate for consideration by the entire Board. A February 9, 2016 Memorandum from Chair Keegan and Director Hsueh had recommended this approach and had noted that: “At this juncture, more in-depth involvement by the Committee and the entire Board is critically important....”

The entire Board held Work Study Sessions on the EPWP and the dual track procurement on September 20, 2016 and March 27, 2017. The Board has heard presentations from four public agencies (Orange County Water District and the cities of Rialto, San Jose, and Stockton) on their experiences with traditional and alternative project delivery methods. A representative from the San Diego County Water Authority, which received the 2107 Clair A. Hill Water Agency Award for its Carlsbad Desalination Project, is also making a presentation during this Board meeting about that agency’s experience.

During this time, the RWC has held nine meetings and staff, along with several consultants and experts has completed a substantial amount of additional program-specific information. Overall, the District had eleven consultant agreements for over \$14 million to support the development of the EPWP and by the end of May 2017, \$7.6 million had been spent. This work effort has provided important information that has not been previously available and which have help to determine several key aspects of the EPWP. (See attachment 2- PROGRAM-SPECIFIC WORK COMPLETED IN 2016 AND 2017).

While these program-specific studies have produced considerable information, over the course of the past year and a half, additional considerations have been identified. For example, an alternative under evaluation, with a potential to reduce Program infrastructure costs, is to blend purified water with the District’s raw water sources (e.g., the South Bay Aqueduct) prior to conventional surface water treatment at the District’s treatment plants. State regulations for DPR are still under development. Most of these work efforts are estimated to be complete by December 2018 with the Countywide Recycled Water Plan to be completed in June 2019. (The projected completion date for the draft Master Plan is by December 2018 with a final Master Plan by June 2019).

THE REVIEW PROCESS

Back in 2015, when the Santa Clara Valley Water District Board (Board) started evaluating alternative delivery/procurement methods for the Expedited Purified Water Project (EPWP), Clean Energy Capital (CEC) prepared a report titled the “Preliminary Evaluation of Program Delivery Methods.” That report identified that a Public Private Partnership (P3) might save significant time, but that lack of program-specific data at that time made decision making on the appropriate delivery method or methods for the EPWP difficult.

CEC identified three alternative strategies that the Board could utilize to determine an appropriate delivery method: 1) the District could accept the absence of Program-specific data and make a decision despite significant uncertainty; 2) the District could defer decision-making to allow Program-specific data to be developed including a benchmarking study; or 3) the District could solicit P3 proposals.

The first alternative –making an immediate decision would require a decision to be made to use a public delivery method and to rule out further consideration of the P3 alternative because the threshold issues and key risk factors associated with P3 delivery methods had not been addressed and resolved at that point in time. The key advantage to this alternative was the immediacy of decision-making, but that would have been offset by the timeline needed to pursue development activities required for the EPWP. The major disadvantage of making an immediate decision regarding P3 was that the Program-specific data regarding the relative merits of alternative delivery methods had not yet been produced.

The Board ended up selecting a modified combination of these strategies of developing Program-specific data, looking at other examples of agencies that had used alternative procurement approaches, soliciting P3 and Progressive Design Build (PDB) responses to requests-for-qualifications (RFQ), and short-listing certain responding entities. The District initially decided to make the decision on the procurement (RFP) approach during the RFP process.

The Board also provided direction to the Recycled Water Committee (RWC) to identify the issues, assumptions, criteria and associated uncertainties and risks involved with the EPWP to determine which topics were most appropriate for consideration by the entire Board. A February 9, 2016 Memorandum from Chair Keegan and Director Hsueh had recommended this approach and had noted that: “At this juncture, more in-depth involvement by the Committee and the entire Board is critically important....”

At the July 28, 2015 meeting, the Board directed staff to proceed with a Request for Qualifications (RFQ) process for Program delivery and to pursue a dual track procurement for both a Progressive Design-Build (PDB) and a Public-Private Partnership (P3) delivery method. Then at the January 12, 2016 meeting, the Board received a Final Report on the Preliminary Evaluation of Program Delivery Methods for the Program and affirmed proceeding with dual track solicitation for Statements of Qualification for both a Progressive Design-Build project delivery and a Public-Private Partnership project delivery. 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 PDB of the Silicon Valley Advanced Water Purification Center (SVAWPC) expansion, and four (4) SOQs for a PDB of a pipeline to convey purified water to the Los Gatos Recharge Ponds (Los Gatos Pipeline). The SOQs were evaluated and shortlists for each group of SOQs were published in June 2016.

The RWC, responding to the Board’s charge, met on March 1, May 12, July 6, July 19, and September 7, during 2016. At the July 6, 2016 Committee meeting, the Committee directed staff to proceed with facilitating a Board decision on a project delivery method for the EPWP prior to issuing an RFP. Also in July, the Committee members traveled to Carlsbad, California to meet with staff and the Board Chair of the San Diego County Water Authority (SDCWA) to learn of SDCWA’s experience in contracting with a P3 entity to design, construct, finance, operate and maintain the 50,000 acre-feet/year Carlsbad Desalination Facility. A tour of the facility was also provided.

The September 7, 2016 Board Ad Hoc Recycled Water Committee meeting included a workshop on the differences between the PDB and P3 approaches and staff’s assessments of the PDB and P3 project delivery methods. Staff had recommended that the RWC recommend to the full Board to choose the

PDB project delivery method for the EPWP. The RWC did not approve that recommendation and had an extensive discussion of important issues. Some key comments and questions raised by the Committee during the workshop included the following:

- Need to consider privatizing the existing SVAWPC and the expanded SVAWPC operations to make a P3 more viable.
- Concerns expressed regarding cumulative impacts of financing this EPWP and other water supply efforts (CalWater Fix; Sites or Los Vaqueros Reservoirs)
- Need to characterize risk transfer, particularly for capital cost overruns.
- Consider PDB for Los Gatos Pipeline and P3 for expanded SVAWPC.

The entire Board held a September 20, 2016 Work Study Session on the EPWP and the dual track procurement. As part of that work study session the Board received a summary of the RWC meeting regarding the project delivery methods for the Expedited Purified Water Program (as outlined above) and considered, but did not approve, staff's recommendation to pursue the PDB project delivery method for the EPWP.

The RWC continued working in 2017. At the February 16th meeting staff reported that Program-specific studies, evaluations, and activities related to source treated wastewater quantity, RO concentrate management options, and regulatory compliance risks could extend for 1 to 2 more years before resolution of the key issues. It was also reported that the MOU with the City of San Jose would take one to two years to complete and that this schedule extension would likely increase Program implementation costs.

The Committee made no comments on the proposed actions for the next meeting, but added the following: a. Staff to bring back information on the technical studies, P3s, and alternatives to have a discussion that would yield a recommendation to bring to the Board for their consideration. b. Staff to begin the process of preparing an IRS opinion letter and to bring back updates to the Committee until it is finalized. c. Staff to create more opportunities for directors to connect with the public and deliver more presentations to committees of other elected bodies; and to promote more tours of the Silicon Valley Advanced Water Purification Center. The Committee asked staff to reschedule the next meeting, and the Chair will call the meeting, according to the Brown Act, when that date is known.

The SCVWD Board held another work study session on the EPWP and the dual track procurement process at a special meeting on March 27th. The Board heard presentations from four public agencies (Orange County Water District and the cities of Rialto, San Jose, and Stockton) on their experiences with traditional and alternative project delivery methods. A representative from the San Diego County Water Authority was invited, but was not able to attend this Work Study Session. The Board considered staff's analysis regarding the choice of PDB or P3 delivery method. The Board also directed staff to prepare further information on the District's financing capabilities; on meaningful cost comparisons between PDB and P3; and on the level of staff resources that would be required for a PDB versus a P3 effort. The Board requested that staff schedule an additional work study session on the EPWP and invite other agencies with P3 project experience, to attend. The Board requested that staff also include cost and benefit analysis information in that presentation, including projected impacts on staffing levels, and on water rates.

RWC meeting on May 30, 2017. The purpose of this Program update was to provide the Committee with staff's progress in addressing the following issues, and to receive direction on any further information the Committee believes should be presented to the full Board:

1. Financial: Does the District have sufficient capacity to publicly fund all the major capital programs under consideration? Would the District's bond rating be at risk?
2. P3 Delivery Approach: Concern expressed over "progressive" element in proposed P3.
3. Cost: How do we meaningfully compare the two delivery method alternatives?
4. Workload: What staffing levels are required under PDB vs. P3?

The Committee made the following requests:

- Staff is to bring back information on large loans from the State Revolving Fund;
- Staff is to gather information on extent of the impacts of staff resource expansion and receive HR input;
- Staff is to agendize a meeting with the San Diego County Water Authority on a late August 2017 Board Meeting, and
- Staff is to agendize on the next Board Work Study Session, a discussion on priorities, evaluating risk, accomplishments, etc., of the Expedited Purified Water Program.
- Staff is to look at other options for potable reuse and come up with strategies moving forward with the City of San Jose Memorandum of Understanding.

At the next RWC meeting on August 9, 2017 Staff responded to the Recycled Water Committee's Concern Re:

Progress of City of San José/District's Memorandum of Understanding Negotiations. Funding of City Staff: A Master Funding Agreement to pay for City staff support services for the Program is currently in routing for signatures by CSJ and District staff. The proposed funding for this Agreement is \$200,000. This Agreement will allow CSJ staff to attend District meetings; review Program development deliverables; identify, discuss, and resolve issues; review and evaluate private activity limitations for direct potable reuse; and strategize for and attend meetings with regulatory agencies regarding permitting conditions.

Availability of Treated Wastewater for Potable Reuse: The Countywide Water Reuse Master Plan (Agenda Item 4.2) will further investigate current trends in raw wastewater flows to the RWF; forecast future flows; evaluate the environmental impacts of reduced flows to South San Francisco Bay; and develop an optimal allocation of treated wastewater use for both potable and non-potable reuse. The Master Funding Agreement will allow CSJ staff to participate in the development of the Countywide Water Reuse Master Plan, which is anticipated to resolve the above-listed issues by December 2018.

RO Concentrate Management: An RO Concentrate Management Study has been underway since late October 2016, and will be completed by December 2018. The executed Master Funding Agreement will allow CSJ staff to review recent studies and participate in the development of RO concentrate management solutions.

Staff also presented a Program Update on the status of Studies, Analysis of Financing Options, Private Activity, and Purified Water Planning. A total of \$4.7M in fees was negotiated for four single-source agreements and three amendments. To date, \$3.1M (66%) has been expended. A total of \$9.6M in fees was negotiated for four consultant agreements procured through a competitive selection process. To date, \$4.8M (47%) has been expended. A key remaining deliverable from these technical and support studies is the preparation of a proposed Program Plan, anticipated to be completed in late fall 2017. Another effort for Program planning was the installation of monitoring wells to support dissolution testing, provide baseline water level and water quality data, and potentially serve as compliance wells for indirect potable reuse. Five monitoring wells were installed at John D. Morgan Park in early 2017 through a public works contract. The construction cost of this effort was \$0.6 million.

The following are key determinations and deliverables from the technical support studies to date:

1. Purified water production of 24,000 acre-feet per year (AFY) would have an annual utilization rate of 75% for the range of historical hydrologic conditions;
2. Travel times for purified water recharged at the Los Gatos Recharge Ponds or at the injection well sites would meet regulatory requirements;
3. There is a low potential for purified water to dissolve naturally-occurring metals (arsenic and hexavalent chromium) in soil;
4. Toxicity and dilution studies indicate that increased RO concentrate volumes from an expanded purification facility on Zanker Road, if discharged via the Regional Wastewater Facility outfall, would not impact NPDES compliance issues; and
5. Purified water would require some water quality conditioning prior to being released for indirect or direct potable reuse.

Staff reported that as part of the Private Activity Analysis update the District's analysis of Program alternatives has determined, and CSJ staff and their bond counsel agree, that there is no private activity impact on the tax-exempt bond status of the CSJ RWF financing if purified water will be used for groundwater recharge (indirect potable reuse, IPR).

There would be a private activity impact if purified water will be used for raw water augmentation at the District's conventional water treatment plants (direct potable reuse, DPR). District staff is currently working with bond and tax counsel to prepare a draft Private Letter Ruling request to the IRS to seek guidance on resolving the private activity issues related to DPR. As part of the recently executed Master Funding Agreement with CSJ, District staff will collaborate with and fund CSJ attorneys and their bond and tax counsel to develop and finalize the Private Letter before final submission to the IRS. The timeline for each step of this analysis is included in staff's PowerPoint presentation.

The remaining key issues to be resolved focus on the availability of treated wastewater for potable water reuse and the options for managing the RO concentrate that would be generated by an expanded purification facility at Zanker Road. As noted earlier, the District is addressing these through the RO Concentrate Management Study and the Countywide Water Reuse Master Plan. As part of these efforts, other sources of treated wastewater are actively being considered in collaboration with the cities of

Sunnyvale, Palo Alto, and Mountain View. Resolution of the key issues is anticipated by the end of calendar year 2018.

Staff reported that the funding agreement with the City of San Jose had finally been signed by the City and was on the SCVWD CEO's desk for signature. The committee members suggested that it was time for them to meet directly with City Councilmembers to determine the level of interest in providing waste water for the project.

Staff reported on progress on several issues with a timeline of finishing the studies by the end of 2018. The committee members expressed concern about the delay and asked for updated cost information for the project. Staff responded that a Program Plan would be completed in draft form in October. This plan and updated cost information would be prepared for the next RWC meeting on November 8th.

When asked by the committee members, the staff said they would attempt to put a SDCWA presentation on a regular Board meeting in September if it was possible. The RWC affirmed that the committee wants staff to go forward with this presentation.

Staff did present some analysis of a financial comparison of DB versus P3 and concluded that private financing worked best with a combination of WIFIA financing. The RWC noted that the analysis did not include any risk transfer and how that is related to price.

Attachment 2

PROGRAM-SPECIFIC WORK COMPLETED IN 2016 AND 2017

During the period of 2016 and 2017 staff has completed several program-specific studies and analyses. Overall, the District had eleven consultant agreements for over \$14 million to support the development of the EPWP and by the end of May 2017, \$7.6 million had been spent. This work effort has provided important information that has not been previously available and which have help determine several key aspects of the EPWP. Below is a list of some of the major work accomplished:

-The District's Preliminary Program Assessment:

Developed injection well sizing, typical layouts, O&M criteria, and potential well site locations.

Developed pipeline alignment alternatives for purified water conveyance to Los Gatos Recharge Ponds and an alternative assessment methodology.

-Groundwater Studies

Analyzed hydrogeology and regulatory limits on groundwater recharge, a well injection travel time, travel time requirements.

Determined there is a low potential for purified water to dissolve naturally occurring metals in soil.

Determined that purified water will require conditioning to protect pipelines and prevent metal's mobilization.

-Water Systems Operations modeling

Modeled multiple scenarios to identify current/future groundwater basin demands for indirect potable reuse.

Determined that purified water use contingent on hydrological conditions and available groundwater storage capacity.

Optimization analyses indicates 75% utilization of purified water over range of historical hydrologic conditions.

-Preliminary Engineering

Performed hydraulic analyses and detailed development for the Los Gatos Recharge Pond modifications, including interconnection piping, valving, and appurtenances; selected alternative improvements and prepared cost estimate.

Evaluated alternative, including cost estimates for a Lexington Pipeline to convey water from Lexington Reservoir to Vasona Pump Station.

Researched existing utilities to further analyze/refine 3 alternative pipeline alignments to convey purified water from Zanker Road to Los Gatos Recharge Ponds; performed hydraulic analyses and developed cost estimates.

Performed a conceptual level assessment of infrastructure needs and costs for DPR/IPR alternative.

-Procurement Advisory Services

Supported analyses of P3 vs. PDB.

Drafted preliminary P3 term sheet.

-Project Management Services

Framed major program decisions, supply need, potential purified water production capacity, purified water utilization and affordability.

Identified principal program risks for cost and schedule with mitigation measures.

Developed independent cost validation model.

Benefit cost analysis shows the largest benefits are associated with 24,000 AFY.

-Other Services

The District's analysis of Program alternatives has determined, and City of San Jose (CSJ) staff and their bond counsel agree, that there is no private activity impact on the tax-exempt bond status of the CSJ financing if purified water will be used for groundwater recharge (indirect potable reuse, IPR).

Analysis of Financial issues including Purified Water Program: Impact on Credit Rating, Financing Options for PDB and P3, and North County Rate Impact Scenarios.

Comparison of Delivery Method Schedules.