

Melissa Stone

From: Stan Williams <swilliams@poseidonwater.com>
Sent: Tuesday, January 31, 2017 9:19 AM
To: Board of Directors
Subject: Poseidon Water's Letter and Comments on Agenda Item 2.1 Update on the 2017 Water Supply Master Plan and Potential Storage Items on the Board Meeting for January 31, 2017
Attachments: SCVWD.Poseidon.Water.Board.Letter.2017.1.31.docx; COMMENTS ON THE SANTA CLARA VALLEY WATER DISTRICT DRAFT 2017 WATER SUPPLY PLAN PLANNING OBJECTIVES.docx

Please distribute copies of both attached documents. Since the meeting is tomorrow, let me know if you will not be able to distribute copies and I will print copies to bring to the meeting instead.

Thanks

January 31, 2017

Santa Clara Valley Water District Board of Directors
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

RE: Agenda Item 2.1 Update on the 2017 Water Supply Master Plan and Potential Storage Options

Dear Chair Varella and Directors Keegan, Santos, Hsueh, Estremera, Kremen, and LeZotte.

Poseidon Water LLC ("Poseidon"), as the P3 coordinator of one of the short listed teams for the Public - Private Partnership-Purified Water Program, provides these comments on Item 2.1 on the Agenda for the Santa Clara Valley Water District's ("District") Special Board Meeting on January 31, 2017.

Poseidon's Comments

1. We complement the District on the high caliber material developed and provided for this update. The presentation and attached strengths and weaknesses analysis, summary of projects, and planning objectives provide excellent background and explanation of the big decisions facing the District Board. It appears that the staff and Board have been working together to improve the information that will be necessary for the decisions ahead.

The District is approaching one of those key milestones when big decisions need to be made by the Board. This is an excellent opportunity for the Board to take a leading role in providing a visionary, forward looking approach to addressing the trade-offs that need to be made in providing the County's future water supply. This is the time to use the diversity of experience and background that each Board member provides to create innovative combinations of solutions at different scales that demonstrate the District's expertise and leadership in water resource management not only in Silicon Valley, but also in the state of California.

2. Poseidon was pleased to see 24,000 acre-feet per year (AFY) of potable reuse capacity by 2025 as part of the baseline scenario assumptions and 15,000 AFY of additional potable reuse capacity in several of the portfolios. We agree that potable reuse should be one of the major components in the portfolio of projects for the District's future water supply.

In the spring of 2015, when the expedited program was recommended to the Board it was for 45,000 AFY by 2020. It appears that the capacity and schedule has changed since then. Now that there has been some relief from the drought, and with more options on the table, the Board may want to consider undertaking a direct potable recycled water option

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rather than just the ground water recharge indirect potable approach. As we understand it, direct potable reuse may be able to deliver 15,000 AFY from a 32 million gallons per day (MGD) advanced purification plant on a long-term average with 35,000 AFY in drought years. With this option the District **would** be innovating a new approach for the state rather than replicating indirect potable reuse that is already occurring throughout California.

3. The trending scenario is an interesting approach and may provide a better way to evaluate risks.
4. Prior to this meeting, the level of service goal as a CEO interpretation of Board policy seemed to lack sufficient supporting analysis. There is recognition in the presentation material that the level of service goal determines costs, but there may still be a need for more Board evaluation of this issue. It would seem that the Board might want a clear public record of how this goal was determined.
5. The yields and costs information (including life cycle costs) in the presentation, as requested by the Board, is the most comprehensive comparison we have seen.
6. Use of an expert panel was an excellent addition to the District's process.
7. The selection of a portfolio should reflect consideration of a number of factors including:
 - What the Board wants the District image to be in Santa Clara County and Silicon Valley;
 - How the decision will affect external relations with retailers, the cities, regulators, resource management agencies, environmental groups and the business community;
 - How to balance competing demands and manage multiple new projects while providing existing services and testing new options;
 - How the public will view the District's response;
 - Whether the portfolio is diverse enough; and
 - Will the District be putting itself in an innovating role?

Poseidon will have a representative at the January 31st Board meeting where we hope to be able to interact with the Board, the staff, other interested parties and the public.

Sincerely,

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ATTACHMENT 1

POSEIDON'S COMMENTS ON ATTACHMENT 3, DRAFT 2017 WATER SUPPLY MASTER PLAN PLANNING OBJECTIVES

BACKGROUND

Water supply planning has a long history with the Santa Clara Valley Water District. There was a time at this District when staff periodically prepared Water Supply Master Plans which were then adopted by the board. This was done in 1975, 1983, and attempted in 1990 when a draft Water Supply Overview Study was presented to the board, but it was not adopted. It was essentially tabled, in part because it outlined supply alternatives based on least cost analysis, but also because it did not engage board members in the development of the alternatives.

To address these problems the board agreed to a different planning approach called integrated water resources planning which was intended to function as an adaptive blueprint offering options to meet future external events, such as drought, and would comprehensively address board and community concerns beyond least-cost analysis. In 1996 the board approved initiating a stakeholder process for this planning effort.

Stakeholders helped staff identify several alternative water resource strategies and rate them against planning objectives, ultimately selecting a final preferred strategy. That strategy identified three action programs corresponding to a range of future water shortage levels, with components phased in over time, based on demand.

District Board members had attended the work sessions with staff and the stakeholders and in December 1997, the district Board unanimously accepted the preferred strategy which included more groundwater recharge, more water recycling, more conservation and the establishment of water banking and water transfer arrangements.

In 2003 the planning strategy was reviewed as the District developed a planning framework and supporting modeling tools that enabled the District to fairly compare investment options in an environment of continual change and emerging opportunities. The framework and tools were designed to provide a consistent and thorough process to help the District identify and select specific water resource investments. The 2003 framework and tools were developed with input from the District's management team, technical staff, and community stakeholders. There was a great emphasis during this planning effort in clarifying and ranking objectives and identifying the difference between stakeholder and staff priorities.

The next update in the water supply planning process was the 2012 Water Supply and Infrastructure Master Plan which identified the District strategy to continue investments to meet the county's future water supply needs through at least 2035. This "ensure sustainability" water supply strategy was intended to be an implementation plan that scheduled projects based on finances, risk and water supply and infrastructure needs. To provide a reliable supply of water to meet needs through 2035 the District's Ensure Sustainability water supply strategy relied on the following three elements: 1. secure baseline supplies and infrastructure, 2. optimize the use of existing supplies and infrastructure, and 3. increase recycling and water conservation to meet future increases in demands. This strategy ensures

sustainability because it would meet future increases in demands with conservation and recycling, builds on the existing baseline system, and manages risks to water supply reliability from climate changes and reduced imported water supplies. The plan consisted of five phases from 2012 to 2031 with the construction of the indirect potable project, groundwater recharge ponds and a reservoir pipeline in the third and fourth phases from 2022 to 2031.

The plan anticipated at least 20,000 acre-feet per year of purified water would be available by 2035, but then in the spring of 2015 staff came back to the board with a recommendation to expedite the indirect potable reuse project to provide up to 45,000 acre-feet per year by 2020. This recommendation to accelerate the plan was caused by the drought going into its 4th year which was causing significant declines in Santa Clara County's ground water levels which could lead to irreversible land subsidence.

The District staff came to the board in September of 2017 to provide an update on the implementation status of the 2012 Water Supply and Infrastructure Master Plan and to obtain board input on the planning approach and on draft planning objectives.

COMMENTS ON PLANNING OBJECTIVES

In order to evaluate the 2017 staff planning objectives the board should understand what changes have occurred over time and how the recommended objectives respond to board policies as shown in the table below:

2003 Planning Objectives	2017 Planning Objectives		Comments
	Objective	Board Policy	
In order of staff priority. (Stakeholder priority)			
1. Ensure Supply Reliability (stakeholder 2) ■ Provide for County Water Demands ■ Meet Contract Obligations ■ Maximize District Influence	1 – Provide a Reliable Water Supply for the County	This objective relates to Board Ends Policy 2.1 “Current and future water supply for municipalities, industries, agriculture and the environment is reliable.	Supply reliability remains staff's highest priority. In 2003 stakeholders ranked water quality higher, but staff felt it was number 1.
	-Meeting Service Area Demand	No--CEO Interpretation S 2.4 requires the District 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	This CEO interpretation should be reviewed by the Board since it so directly affects who is to benefit from the organization, in what way, and at what cost. There should be a public record of how the level of service was determined.

<p>3. Ensure Supply Diversity (stakeholder 3)</p>	<p><i>-Maintaining Groundwater Storage-</i></p> <p><i>-Securing Existing Water Supplies-</i></p> <p><i>-Reducing Reliance on the Delta</i></p>	<p>water demand in drought years.”</p> <p>Board Ends Policy 2.1.1 calls for the District to “aggressively protect groundwater from the threat of contamination and maintain and develop groundwater to optimize reliability and to minimize land subsidence and salt water intrusion.”</p> <p>Board Ends Policies 2.1.2, 2.1.3, and 2.1.4 call for the District to “protect, maintain, and develop” local surface water, imported water, and recycled water, respectively.</p> <p>No. Section 85021 of the 2009 Delta Reform Act states that “The policy of the State of California is to reduce reliance on the Delta in meeting California’s future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency. Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of</p>	<p>This is an important objective as the District’s dependence on water imported through the delta has not change much over time. In contrast, the portion of the San Diego County Water Authority supply that come from imported water changed from 95% in 1991 to 41% in 2016 and is projected to be 21% by 2020.</p> <p>This is an area where a more specific District policy should be formulated. The 2003 objectives included a supply diversity objective that was more broadly based in policy.</p>
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		local and regional water supply efforts.”)	
	<i>-Maximizing Water Conservation and Water Use Efficiency-</i>	Board Ends Policy 2.1.5, is to “Maximize water use efficiency, water conservation and demand management opportunities.”	
2. Ensure Water Quality (stakeholder-1) ■ <i>Maximize Treatability</i> ■ <i>Meet or Exceed Water Quality Regulations</i> ■ <i>Protect Groundwater Quality</i>	2 - Ensure Drinking Water Quality <i>-Protecting Groundwater Quality</i> <i>-Meeting Drinking Water Quality Regulations</i>	This objective is based on Board Ends Policies 2.1.1 “Aggressively protect groundwater basins from the threat of contamination and maintain and develop groundwater to optimize reliability and to minimize land subsidence and saltwater intrusion” and 2.3 “Reliable high quality drinking water is delivered.”	
6. Minimize Cost Impacts (stakeholder 6) ■ <i>Minimize District Costs</i> ■ <i>Minimize Community Costs</i>	3- Minimize Cost	This objective relates to Executive Limitation 4.2 that the Board Appointed Officers shall “Spend in ways that are cost-efficient.”	This objective has been given a lower priority by stakeholders and staff in prior planning efforts and it is not clear why it has been given higher priority in these draft objectives.
7. Maximize Adaptability (stakeholder 7) ■ <i>Maximize Capital Investment</i> ■ <i>Maximize Scalability</i>	4- Maximize Flexibility in the Water Supply System <i>-Maximizing District Influence over Supplies and Operations</i> <i>-Minimizing Implementation Complexities and Barriers-</i> <i>-Allowing for Phased</i>	No.	This flexibility objective appears to be focused on implementation concerns of staff. In earlier plans there had been an adaptability objective that was somewhat similar and that objective was the least priority for stakeholders and staff. This objective does not seem to be at the same policy level as the other objectives which may be why it is not related to Board policies. Also it is not

	<p>Implementation of New Projects and Programs-</p> <p>-Adapting to Climate Change-</p>	<p>CEO Interpretation S.2.7 of Ends Policy E-2 "there is a reliable, clean water supply for current and future generations" calls for the District to "incorporate climate change mitigation and adaptation into District planning efforts.</p>	<p>clear why flexibility should have a higher priority than protecting the natural environment and ensuring community benefits which are easier to relate to Board policies.</p> <p>It is surprising that the Board has not adopted any policies addressing climate change. The District board was one of the first public agencies to adopt a Climate Change Resolution back in January 2008, but apparently the direction given was not translated into any Board policies.</p>
<p>5. Protect the Natural Environment (stakeholder 4)</p> <ul style="list-style-type: none"> ■ Maximize Benefit to Habitat and the Environment ■ Ensure Environmental Water Quality ■ Maximize Efficiency of Existing Resources 	<p>5- Protect the Natural Environment</p> <p>-Protecting and Restoring Creek, Bay, and Other Aquatic Ecosystems-</p> <p>-Reducing Greenhouse Gas Emissions</p>	<p>This objective relates to Board Ends Policies 4.1 "Protect and restore creek, bay, and other aquatic ecosystems"</p> <p>4.3 "Strive for zero net greenhouse gas emission or carbon neutrality.")</p>	<p>Protecting the natural environment has been given a higher by stakeholders in past planning efforts.</p>
<p>4. Ensure Community Benefits (stakeholder 5)</p> <ul style="list-style-type: none"> ■ Increase Recreational Benefits ■ Improve Flood Protection 	<p>6- Ensure Community Benefits</p> <p>-Fulfilling Reasonable Customer Expectations for Good Service</p>	<p>This objective relates to Board Executive Limitation EL-2 "The BAOs shall promote conditions, procedures, and decisions that fulfill reasonable customer expectations for</p>	

		good service, are safe, dignified, and nonintrusive.”	
	<p><i>-Improving Quality of Life in the County through Appropriate Public Access to Trails, Open Space, and District Facilities</i></p> <p><i>-Providing Natural Flood Protection and/or Reducing Potential for Flood Damages</i></p>	<p>4.2.1 “Support healthy communities by providing additional trails, parks, and open space along creeks and in the watersheds.”</p> <p>This objective also relates to Board Ends Policies 3.2 “Reduced potential for flood damages,”</p>	

