February 26, 2016

NOTICE OF MEETING – REQUEST FOR RSVPS

Members of the Joint Recycled Water Committee
   SCVWD Director Tony Estremera, Committee Member
   SCVWD Director Barbara Keegan, Committee Member
   SCVWD Director Gary Kremen, Committee Member

And Supporting Staff Members
   Norma Camacho, Acting Chief Executive Officer
   Stan Yamamoto, District Counsel
   Anthony Fulcher, Sr. Assistant District Counsel
   Jim Fiedler, Chief Operating Officer, Water Utility
   Katherine Oven, Deputy Operating Officer, Water Utility Capital
   Garth Hall, Deputy Operating Officer, Water Supply Division
   Angela Cheung, Deputy Operating Officer, Water Utility & Maintenance
   Teresa Alvarado, Deputy Administrative Officer, District Communications
   Marta Lugo, Public Information Representative III, District Communications
   Hossein Ashktorab, Water Use Efficiency Unit Manager, Recycled & Purified Water
   Luis Jaimes, Senior Project Manager, Recycled & Purified Water
   Miguel Silva, Assistant Engineer II (Civil), Recycled & Purified Water
   Toni Vye, Staff Analyst, Recycled & Purified Water
   Natalie Dominguez, Board Administrative Assistant II, Clerk of the Board

A meeting of the Joint Recycled Water Committee will take place at 9:30 a.m., on Tuesday, March 1, 2016, at the Santa Clara Valley Water District Headquarters Boardroom, 5700 Almaden Expressway, San Jose, California.

Enclosed for your convenience is a copy of the agenda and corresponding materials. Please bring these materials to the meeting with you.

Please RSVP at your earliest convenience by email to ndominguez@valleywater.org, or by calling 408-630-2659.

Regards,

Natalie F. Dominguez

Natalie F. Dominguez
Board Administrative Assistant
Santa Clara Valley Water District
Office of Clerk of the Board

Enclosures
AGENDA
Joint Recycled Water Committee

Santa Clara Valley Water District Headquarters Boardroom
5700 Almaden Expressway
San José, California

Tuesday, March 1, 2016
9:30 a.m.

Time Certain:
9:30 a.m.  1. Call to Order/Roll Call

2. Time Open for Public Comment on Any Item Not on the Agenda
   Comments should be limited to two minutes. If the Committee wishes to discuss a subject raised by the speaker, it can request placement on a future agenda.

3. Election of Chair and Vice Chair

4. Action Items:

   4.1 Review of February 9, 2016 Memorandum to the Board of Directors from Chair Keegan and Director Hsueh, entitled “Recommendation on Implementation of Expedited Purified Water Program.”

      Recommendations:
      Review the subject memorandum and discuss the approaches that the Committee would prefer to follow when identifying and discussing issues/assumptions/criteria and associated uncertainties and risks related to the Expedited Purified Water Program (Program).

   4.2 Expedited Purified Water Program Update (K. Oven)
       A. Program Elements
       B. Schedule
       C. Technical Studies
       D. Partnership Agreements
       E. Dual Track Process for Delivery Method
       F. Environmental/Permitting
       G. Board Policy Decisions

      Recommendations:
      Receive information and discuss next steps.

   4.3 Recycled and Purified Water Efforts in Northwest County (G. Hall)
       A. Reverse Osmosis Feasibility Study
          I. Consultant Selection
          II. District Cost Sharing Agreement
B. Plan for developing Northwest Santa Clara County Recycled Water Strategic Planning
C. Next Steps

**Recommendations:**
Review and discuss Advanced Water Purification Feasibility Study and Northwest Santa Clara County Strategic Plan.

4.4 South County Recycled Water Expansion (G. Hall)
A. Next steps following February 23, 2016 Board discussion

**Recommendations:**
Receive and discuss the next steps following the February 23, 2016, Board discussion on the 2015 South County Recycled Water Master Plan Update (Master Plan) and provide direction to staff.

4.5 Potable Reuse Demonstration Test Plan Update (G. Hall)

**Recommendations:**
Receive and discuss the Potable Reuse Demonstration Test Plan Update and provide direction to staff.

4.6 Silicon Valley Advanced Water Purification Center Operations and Maintenance Update (A. Cheung)

**Recommendations:**
Receive and discuss information on Silicon Valley Advanced Water Purification Center operations and maintenance update.

4.7 Potential Topic(s) for Next Meeting (G. Hall)

**Recommendations:**
Receive and discuss potential topic(s) for next meeting.

4.8 Next Meeting Dates

**Recommendations:**
Discuss and select next meeting dates.

5. **Clerk Review and Clarification of Committee Requests and Recommendations**

This is an opportunity for the Clerk to review and obtain clarification on any formally moved, seconded, and approved requests and recommendations made by the Committee during discussion of Item 4.

6. **Adjourn:** Adjourn to next meeting.
COMMITTEE AGENDA MEMO

SUBJECT: Review of February 9, 2016 Memorandum to the Board of Directors from Chair Keegan and Director Hsueh, titled “Recommendation on Implementation of Expedited Purified Water Program.”

RECOMMENDED ACTION:

Review the subject memorandum and discuss the approaches that the Committee would prefer to follow when identifying and discussing issues/assumptions/criteria and associated uncertainties and risks related to the Expedited Purified Water Program (Program).

SUMMARY:

The February 9, 2016 Memorandum from Chair Keegan and Director Hsueh recommended that the Joint Recycled Water Committee schedule an in-depth discussion session(s) related to implementation of the Program, identifying issues/assumptions/criteria and associated uncertainties and risks. Such discussion(s) would aid in determining which topics are most appropriate for consideration by the entire Board.

Background

The Program, with a current estimated total cost of $945M, represents a significant investment for the District with implications for supply reliability and water rates. The Board recently authorized proceeding with a preliminary engineering study that will produce a planning level document recommending the best way to incorporate purified water into the County’s water supply. Various assumptions and uncertainties have been identified by staff in Board updates regarding the Program since inception in early 2015; however, further evaluation of risks and uncertainties, and discussion by the Committee, is anticipated as an important ongoing process as the Program unfolds.

Next Steps

Staff will prepare and present materials consistent with Committee direction to assist in discussions at future meetings of the Committee and the Board.

ATTACHMENT:

Attachment 1: February 9, 2016 Memorandum from Chair Keegan and Director Hsueh
This memorandum presents our recommendation regarding Board involvement in the implementation of Expedited Purified Water Program (Program).

RECOMMENDATION:
That the Board Joint Recycled Water Committee (Committee) schedule an in-depth discussion related to the implementation of the Program, identifying issues/assumptions/criteria and associated uncertainties and risks, so as to determine appropriate subjects for the whole Board discussion and decision.

RATIONALE:
The District is currently conducting several technical studies for the implementation of the Program, and is currently ready to embark on an engineering study, which will incorporate analyses from these technical studies. The intent of the study is to produce a planning-level document recommending alternative(s) on the best way to incorporate purified/recycled water into County’s water supply. This planning document not only serves as the basis for implementation strategy and project delivery methodology, but also serves as the basis for CEQA evaluation.

At this juncture, more in-depth involvement by the Committee and the entire Board is critically important. Board involvement at this time is critical as the engineering study will be comprehensive and may not be limited to just refining the existing Program. Additionally, since the study will include a wide range of issues/assumptions/criteria and associated uncertainties and risks, some of the issues would benefit from the Board’s timely involvement. This is particularly important as staff will need to have an early understanding of the Board’s perspective to ensure that the Program is delivered expeditiously and without unnecessary delay.

Therefore, we recommend that the Board Joint Recycled Water Committee schedule an in-depth discussion session(s) related to the implementation of the Program, identifying issues/assumptions/criteria and associated uncertainties and risks, so as to determine appropriate subjects for the whole Board discussion and decision.

We thank the Committee in advance, if the recommendation is accepted by the Board, for its time and efforts.
SUBJECT: Expedited Purified Water Program Update

RECOMMENDED ACTION:
Receive information and discuss next steps.

SUMMARY:
This committee agenda memorandum presents a status update on the potable reuse options under consideration for the Expedited Purified Water Program.

Background
The Expedited Purified Water Program was initiated in response to the extended drought experienced in California. It seeks to accelerate implementation of potable reuse to provide greater water supply reliability to the County and to avert groundwater depletion that could result in ground surface subsidence. The Board charge was to develop up to 45,000 AFY. To do so will involve three major components:

1. Production of purified water from wastewater sources
2. Conveyance of that purified water to its distribution points
3. Distribution points:
   a. groundwater recharge via percolation ponds or injection wells with subsequent extraction by well users
   b. surface water augmentation and subsequent treatment at one of the District’s conventional water treatment plants

A number of studies were initiated in mid-2015 to assess the detailed feasibility issues associated with each of these major components. The primary issues of focus for the analyses include:

• RO concentrate chronic toxicity to determine the potential production capacity for the Silicon Valley Advanced Purification Center (SVAWPC) Expansion without adversely impacting regulatory compliance with the Regional Water Facility’s NPDES permit.
• Groundwater basin operational modeling to assess the storage capacity for purified water.
• Injection wells in terms of viable locations with respect to recharge, land availability and costs.
• Sunnyvale ongoing project assessment in terms of the various options under consideration and their financial viability.
In addition, with the preliminary engineering contract authorized by the Board on February 9, 2016, a strong focus will be refining costs for all the facilities.

Next Steps

Further updates will be provided to the Committee at its scheduled meetings.

ATTACHMENT(S):

Attachment 2: PowerPoint Presentation
SUBJECT: Recycled and Purified Water Efforts in Northwest County

RECOMMENDED ACTION:

Review and Discuss Advanced Water Purification Feasibility Study and Northwest Santa Clara County Strategic Plan.

SUMMARY:

The City of Palo Alto (Palo Alto), the City of Mountain View, and the Santa Clara Valley Water District (District) are working in partnership on following two contracts:

- Advanced Water Purification Feasibility Study
- Northwest County Recycled Water Strategic Planning Effort

The Advanced Water Purification Feasibility Study at the Palo Alto Regional Water Quality Control Plant (RWQCP) will determine how to improve recycled water quality from the RWQCP. Palo Alto, in partnership with the District, will manage the project with cost sharing from the District and City of Mountain View. As outlined in the Scope of Work, Palo Alto and the District will review and collaborate on all deliverables under this contract. The consultant selection has been completed and the staff is currently reviewing the cost sharing agreement for this effort. Palo Alto would like to execute a contract by mid-April 2016.

The proposed second contract will focus on creating a Northwest Santa Clara County Recycled Water Strategic Plan (Strategic Plan) associated with the Palo Alto RWQCP and recycled water customers in East Palo Alto, Stanford, Los Altos, Los Altos Hills, Menlo Park and Mountain View. Palo Alto, in partnership with the District and Mountain View, will share costs and hire a consultant to complete the Strategic Plan. The Strategic Plan will include Phase III of the recycled water system expansion, financial planning, preliminary design, funding, and a study of groundwater in northwest Santa Clara County. The purpose of the groundwater study is to evaluate the feasibility for indirect potable reuse.

Palo Alto and the District staff are currently finalizing the Scope of Work for this effort and Palo Alto will then advertise a Request for Proposals (RFP) and subsequently, execute the contract in late July 2016.
COMMITTEE AGENDA MEMO

SUBJECT: South County Recycled Water Expansion

RECOMMENDED ACTION:

Receive and discuss the next steps following the February 23, 2016 Board discussion on the 2015 South County Recycled Water Master Plan Update (Master Plan) and provide direction to staff.

SUMMARY:

The District, in partnership with the South County Regional Wastewater Authority and in collaboration with the cities of Gilroy and Morgan Hill, prepared a draft update of the Master Plan in 2015. This master planning update evaluates opportunities to provide reliability, redundancy, and expansion of the recycled water system within Gilroy and further, evaluates alternatives to provide service to Morgan Hill. The draft Master Plan, as presented to the Board on February 23, 2016, recommends an estimated $98 million capital improvement program for expansion of the treatment and distribution of non-potable recycled water to the southern portion of Santa Clara County, California.

ATTACHMENT(S):

Attachment 2: PowerPoint Presentation
COMMITTEE AGENDA MEMO

SUBJECT: Potable Reuse Demonstration Test Plan Update

RECOMMENDED ACTION:

Receive and discuss the Potable Reuse Demonstration Test Plan Update and provide direction to staff.

SUMMARY:

The District began the implementation of the Potable Reuse Demonstration Test Plan at the Silicon Advanced Water Purification Center (SVAWPC) in September 2014. Sampling has concluded and all results have been received. The research team has completed the detailed analysis of the full-scale SVAWPC; including microfiltration, reverse osmosis, and ultraviolet disinfection. The results demonstrated good performance across each process train, with a result of high purity water comparable to potable water. A draft of the Potable Reuse Demonstration Test Plan Final Report was sent to the Independent Advisory Panel (IAP) for review on November 30, 2015. A presentation containing the results from the Potable Reuse Demonstration Test Plan was given to the IAP on December 11, 2015. The IAP meeting was well-attended and resulted in positive feedback from the IAP. The IAP provided a written review of the Potable Reuse Demonstration Test Plan Final Report to staff on February 2, 2016. The District staff is currently working to address the IAP’s comments and expect to finalize the Potable Reuse Demonstration Test Plan Final Report by June 2016.

ATTACHMENT(S):

Attachment 2: PowerPoint Presentation
COMMITTEE AGENDA MEMO

SUBJECT: Silicon Valley Advanced Water Purification Center Operations and Maintenance Update

RECOMMENDED ACTION:

Receive and discuss information on Silicon Valley Advanced Water Purification Center operations and maintenance update.

SUMMARY:

The Silicon Valley Advanced Water Purification Center (SVAWPC) has been in operation since March 2014. In accordance with the Integration Agreement with the City of San Jose, the budget for the operations and maintenance of the facility is to be presented to the joint City-District Policy Advisory Committee each year for approval. The proposed FY2017 budget for SVAWPC is included in the attached presentation. In addition to the budget, staff will present a few highlights of the facility’s operations and maintenance activities in 2015, and the facility’s production rate for the first full fiscal year of operation, namely FY2015.

ATTACHMENT:

Attachment 2: PowerPoint presentation
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COMMITTEE AGENDA MEMO

SUBJECT: Potential Topic(s) for Next Meeting

RECOMMENDED ACTION:

Receive and discuss potential topic(s) for next meeting.

SUMMARY:

Potential topics for next meeting include the following:
   A. Discuss and decide on topics for the next meeting
   B. Receive information on various industry meetings related to water reuse

ATTACHMENT(S):

Attachment 2: PowerPoint Presentation
Attachment 3: Recycled and Purified Water 2016-2017 Conference Opportunities
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<table>
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<tr>
<th>No.</th>
<th>Conference Name</th>
<th>Sponsor</th>
<th>Brief Summary</th>
<th>Event Date</th>
<th>Location</th>
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<tr>
<td>1</td>
<td>2016 WateReuse California Annual Conference</td>
<td>WateReuse California</td>
<td>Focuses on the design, management, operation, and use of water recycling facilities and projects in California.</td>
<td>March 13-15, 2016</td>
<td>Hyatt Vineyard Creek Hotel &amp; Spa, 170 Railroad Street, Santa Rosa, CA 95401</td>
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<td>2</td>
<td>ACWA 2016 Spring Conference &amp; Exhibition</td>
<td>Association of California Water Agencies (ACWA)</td>
<td>Latest developments in membrane technology that can enhance water reliability and quality. Each year the conference reveals new directions in water and wastewater treatment technologies, desalting and membrane bioreactor applications.</td>
<td>May 3-6, 2016</td>
<td>Monterey Marriott &amp; Portola Hotel Monterey, CA</td>
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<td>3</td>
<td>2016 WateReuse Pacific Northwest Conference</td>
<td>WateReuse Research Foundation</td>
<td>Focuses on the design, management, operation, and use of water recycling facilities and projects in the Pacific Northwest.</td>
<td>May 18-19, 2016</td>
<td>Red Lion Hotel at the Park, 303 W. North River Drive, Spokane, WA 99201</td>
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<td>4</td>
<td>20th Annual WateReuse Research Conference</td>
<td>WateReuse Research Foundation</td>
<td>The latest research focused on helping communities develop resilient water supplies. Focuses on providing water professionals and industry with tools to address water scarcity and sustainability challenges.</td>
<td>May 22-24, 2016</td>
<td>Westin Denver Downtown, 1672 Lawrence Street, Denver, CO 80202</td>
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<td>5</td>
<td>ACE 16: Annual Conference &amp; Exposition</td>
<td>American Water Works Association (AWWA)</td>
<td>Covering topics such as developing robust asset management programs, implementing potable reuse solutions, addressing water loss in distribution systems, responding to harmful algal blooms in surface water, and more.</td>
<td>June 19-22, 2016</td>
<td>McCormick Place Convention Center, 2301 S Lake Shore Dr, Chicago, IL</td>
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<td>6</td>
<td>6th Annual Water Reuse in Texas Conference</td>
<td>WateReuse Research Foundation</td>
<td>TBD</td>
<td>July 14-15, 2016</td>
<td>Embassy Suites Conference Center and Spa, 1001 E McCarty Ln, San Marcos, TX 78666</td>
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<td>No.</td>
<td>Conference Name</td>
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<td>7</td>
<td>2016 Arizona Water Reuse Symposium</td>
<td>WateReuse Research Foundation</td>
<td>TBD</td>
<td>July 24-26, 2016</td>
<td>Little America Hotel 2515 E Butler Ave Flagstaff, AZ 86004</td>
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<td>8</td>
<td>31st Annual WateReuse Symposium</td>
<td>WateReuse Research Foundation</td>
<td>The annual event brings together water managers and industry leaders to network and learn what’s</td>
<td>Sept. 11-14, 2016</td>
<td>Tampa Marriott Waterside Hotel &amp; Marina Tampa, Florida</td>
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<td>working and what’s next in water reuse policy, operations, technology and public perception.</td>
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<td>9</td>
<td>2016 WateReuse Potable Reuse Summit</td>
<td>WateReuse Research Foundation</td>
<td>TBD</td>
<td>Oct. 17-18, 2016</td>
<td>The Skirvin Hilton Hotel Oklahoma City, OK</td>
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<td>The annual event brings together water managers and industry leaders to network and learn what’s</td>
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<td>working and what’s next in water reuse policy, operations, technology and public perception.</td>
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<td>10</td>
<td>2017 Membrane Technology Conference &amp; Exposition</td>
<td>American Water Works Association (AWWA)</td>
<td>Each year the conference reveals new directions in water and wastewater treatment technologies,</td>
<td>Feb. 13-17, 2017</td>
<td>Long Beach, California</td>
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<td>desalting and membrane bioreactor applications.</td>
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<td>11</td>
<td>2017 WateReuse California Annual Conference</td>
<td>WateReuse Research Foundation</td>
<td>TBD</td>
<td>March 19-21, 2017</td>
<td>Westin San Diego 400 W Broadway San Diego, CA 92101</td>
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<tr>
<td>12</td>
<td>11th Annual IWA International Conference on Water</td>
<td>WateReuse Research Foundation</td>
<td>TBD</td>
<td>July 23-27, 2017</td>
<td>Long Beach Convention Center Long Beach, CA</td>
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<td>Reclamation and Reuse</td>
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<tr>
<td>13</td>
<td>32nd Annual WateReuse Symposium</td>
<td>WateReuse Research Foundation</td>
<td>TBD</td>
<td>Sept. 10-13, 2017</td>
<td>Renaissance Phoenix Downtown Hotel Heard Building 50 E Adams Street</td>
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<td>Phoenix, AZ 85004</td>
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</table>
COMMITTEE AGENDA MEMO

SUBJECT: Next Meeting Dates

RECOMMENDED ACTION:
Discuss and select next meeting dates.

SUMMARY:
None.

ATTACHMENT(S):
JOINT RECYCLED WATER COMMITTEE
Barbara Keegan, Board Member, Santa Clara Valley Water District
Gary Kremen, Board Member, Santa Clara Valley Water District
Tony Estremera, Board Member, Santa Clara Valley Water District

Joint Recycled Water Committee
March 1, 2016
Agenda Outline

4.1 Review of February 9, 2016 Memorandum from Chair Keegan and Director Hsueh

4.2 Expedited Purified Water Program Update (K. Oven)

4.3 Recycled and Purified Water Efforts in Northwest County (G. Hall)

4.4 South County Recycled Water Expansion (G. Hall)

4.5 Potable Reuse Demonstration Test Plan Update (G. Hall)

4.6 Silicon Valley Advanced Water Purification Center Operations and Maintenance Update (A. Cheung)

4.7 Potential Topic(s) for Next Meeting (G. Hall)

4.8 Next Meeting Dates

Recycled Water Committee Meeting – March 1, 2016
4.1 Review of February 9, 2016 Memorandum from Chair Keegan and Director Hsueh
4.2 Expedited Purified Water Program Update
Presentation Outline

A. Program Elements
B. Schedule
C. Technical Studies
D. Partnership Agreements
E. Dual Track Process for Delivery Method
F. Environmental/Permitting
G. Board Policy Decisions
Potential Program Elements

- SVAWPC Expansion
  - Los Gatos Ponds
  - Injection Wells
- Ford Road
- Sunnyvale
  - Ponds
  - Injection Wells
  - Ponds

Recycled Water Committee Meeting – March 1, 2016
Expedited Purified Water Program
Potential Components

- Sunnyvale WPCP
- SJ/SC Regional Wastewater Facility
- SVAWPC Expansion
- Mid-Basin Injection Wells IPR - 5,600 AFY
- DPR to Central Pipeline - 5,000 AFY
- Sunnyvale IPR
- Apple Campus 2
- Westside Injection Wells IPR
- Los Gatos Recharge Ponds IPR - 20,200 AFY
- Ford Recharge Pond IPR - 4,200 AFY

Legend:
- IPR/DPR Purified Water Pipeline
- Future Wolfe Road Pipeline
- Existing Recycled Water Pipeline
- District Raw Water Pipeline
- Expanded SVAWPC
- Water Pollution Control Plant
- Water Treatment Plant
- Pump Station
Water Supply System Modeling

System Operation Projections for Various Potable Reuse Scenarios
- Red Line = 10,000 AFY of capacity
- Green Line = 31,000 AFY of capacity
- Blue Line = 40,000 AFY of capacity

Potable Reuse Utilization
- Red Line = 10,000 AFY of capacity
- Green Line = 31,000 AFY of capacity
- Blue Line = 40,000 AFY of capacity

Recycled Water Committee Meeting – March 1, 2016
Program Capacity – Recharge Issues

Recharge

• Los Gatos Ponds (20,000 AFY)
• Injection Wells (5,000 to 20,000 AFY)
• Ford Ponds (~4,000 AFY)

Issues

• Local and imported water prioritized, limiting reuse in certain periods
• Potential for full reuse limited by available basin storage
Groundwater Modeling
Recycled Water Committee Meeting – March 1, 2016

Figure A

Legend
- 1 Onsite Alignment
- 2 Zonker Road Alignment
- 3 Master Plan Alignment
- 4 Major Streets Alignment
- 5 Major & Minor Streets Alignment

Total July RWF Plant Flow = 92.7 MGD; SBWR TPS Flow = 30.6 MGD

Mean Copper Concentrations

Copper Limit w/ 3:1 Dilution Credit = 20 ug/L

Current Copper Limit = 11 ug/L (AMEL)
Preliminary Engineering

- Alternatives beyond Master Plan?
- Refine pipe alignments, well sites, facilities
- Refine Program costs with independent review
- Constructability reviews
- Develop proposed Program
Direct Potable Reuse
Surface Water Augmentation
Surface Water Augmentation (IPR-DPR Hybrid)

How would it work?

- Purified water pumped into raw water line.
- Treated at surface water plants or added to recharge basins.
- Operations continue as normal.

Program Benefits

- Potentially less infrastructure required:
  - Pipelines shorter
  - No injection wells
  - Capitalizes on existing treatment plant ozonation
  - Simpler operations
Total of $1.5M expended out of $4.4M authorized
## Program Schedule – Updated

### 2015
- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

### 2016
- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

### 2017
- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

### 2018
- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

### 2019
- Jan
- Feb
- Mar
- Apr
- May
- Jun
- Jul
- Aug
- Sep
- Oct
- Nov
- Dec

### Board Policy Decisions
- **San Jose**
- **Sunnyvale**

### Partnership Agreements
- Supply System Modeling
- Groundwater Studies
- Preliminary Program Assessment
- Preliminary Engineering

### CEQA/Permits
- Secure Contract

### Public Outreach
- Extended Schedule

### Grant Funding
- Milestones

### Project Delivery
- Procurement
- Design Development
- Construction

(Continues until end of Dec 2020)
### Considerations

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
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<tbody>
<tr>
<td>Cost allocation</td>
<td>Cost share MBR*</td>
<td>Purchase MBR water from City</td>
<td>Receive secondary effluent</td>
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<td>Land acquisition for purification facility</td>
<td>On WPCP site</td>
<td>On WPCP site</td>
<td>Acquire plot near WPCP</td>
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<td>Water quantity</td>
<td>Up to 13 MGD</td>
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<td>Up to 13 MGD</td>
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<td>Water quality</td>
<td>MBR effluent</td>
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<td>Secondary effluent</td>
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<td>Project risks</td>
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<td>• Environmental/permitting</td>
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<td>• RO Concentrate Management</td>
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* * Membrane Bioreactor

Recycled Water Committee Meeting – March 1, 2016
## Timeline for Recycled and Purified Water in Sunnyvale

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<th>Item</th>
<th>2016</th>
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<tbody>
<tr>
<td></td>
<td>01</td>
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<tr>
<td>Sunnyvale go/no-go decision</td>
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<td>Joint Recycled Water Committee with Sunnyvale and District</td>
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<tr>
<td>Independent cost analysis</td>
<td></td>
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<tr>
<td>Staff evaluates options and prepares recommendation</td>
<td></td>
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<tr>
<td>Staff submits recommendation to Board</td>
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<td>Integration agreement with City</td>
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## Integration Agreements

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<tr>
<th>Issues</th>
<th>San José/Santa Clara</th>
<th>Sunnyvale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>Proposed</td>
</tr>
<tr>
<td><strong>Land</strong></td>
<td>5 Acres</td>
<td>20+ acres</td>
</tr>
<tr>
<td><strong>Treated wastewater</strong></td>
<td>~12 MGD</td>
<td>~50 MGD</td>
</tr>
<tr>
<td><strong>Wastewater quality</strong></td>
<td>Secondary treated</td>
<td>Secondary treated</td>
</tr>
<tr>
<td><strong>RO Concentrate</strong></td>
<td>~1.5 MGD</td>
<td>~8 MGD</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Cost sharing</td>
<td>Cost sharing</td>
</tr>
</tbody>
</table>
District/City of San José
IRS Private Letter Ruling

- Critical issue for City of San José
- Collaboration on private activity analysis:
  - Council approved additional funding for City of San José staffing resources.
  - District to fund $50k City of San José outside legal costs.
  - District/City of San José drafting joint Private Letter Ruling request to the IRS.
- Collaboration on the evaluation of P3 RFQ/RFP
Updated Procurement Schedule

- **RFQs Issued**: Jan 2016
- **Shortlists**: May 2016
- **RFPs Issued**: Aug 2016
- **Decision Point**: Feb 2017
- **Guaranteed Max Price**: Aug 2018

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Recycled Water Committee Meeting – March 1, 2016

Attachment 2
Page 23 of 38
Choosing Delivery Method

Policy decision (May 2016?)

• Level of interest
• Issues raised

Analytical evaluation (Feb 2017)

• Value for money analysis
• Other criteria under development
• Solicit input from respondents prior to issuing RFP
Environmental/Permitting

CEQA

- In contract negotiations
- Project descriptions on critical path
- Completion critical to grant funding and to initiating construction

Permitting

- San Jose owns NPDES permit
- Developing information for critical Regional Water Quality Control Board meetings
4.3 Recycled and Purified Water Efforts in Northwest County
Recycled and Purified Water Efforts in Northwest County

- RO Feasibility Study
  - Purpose: To improve recycled water quality including reducing salinity
  - Cost Share Agreement ~$325,000
  - 80% SCVWD and 20% Palo Alto
  - Timeline: June 2016-December 2017

- Northwest Santa Clara County Strategic Plan
  - Purpose: To develop comprehensive master planning for expansion of recycled water (including purified water) in Northwest County
  - Cost Share Agreement ~$1.5M
  - Timeline: FY 2017-FY 2018
4.4 South County Recycled Water Expansion
Next Steps:
- SCRWA Board briefing and City Council of Morgan Hill briefing meeting (March 2, 2016)
- Public Open House (March 2016)
- Final Master Plan to Board for acceptance (June 2016)
- Initiate CEQA (June 2016)
- Potentially amend partnership agreement, prepare funding agreements, and prepare cost share agreements as needed (June/July 2016)
4.5 Potable Reuse Demonstration Test Plan Update
Goals:
1) Demonstrate treatment performance in compliance with current and expected CA potable reuse regulations
2) Understand range of changes to O&M possibly needed at purification center
3) Gain approval of the District’s plans with regulators and the public

Results:
1) Exceptional pathogen and pollutant removal
2) Meets water quality standards
3) New surrogates have been proven to accurately predict the removal of pathogens and contaminants
4) Identified “Critical Control Points” and parameters to ensure highest water quality
4.6 Silicon Valley Advanced Water Purification Center O&M
## Silicon Valley Advanced Water Purification Center O&M

<table>
<thead>
<tr>
<th>Description</th>
<th>FY15 Actual(^1)</th>
<th>FY16 Adopted</th>
<th>FY17 Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>$596,637</td>
<td>$647,000</td>
<td>$610,000</td>
</tr>
<tr>
<td>Chemicals</td>
<td>$582,320</td>
<td>$900,000</td>
<td>$900,000</td>
</tr>
<tr>
<td>Labor</td>
<td>$1,436,500</td>
<td>$2,072,280</td>
<td>$2,353,498</td>
</tr>
<tr>
<td>Other Operation &amp; Maintenance (O&amp;M) Services &amp; Supplies</td>
<td>$832,738</td>
<td>$931,135</td>
<td>$865,700</td>
</tr>
<tr>
<td>Budgeted sinking fund for RO and MF membrane replacement</td>
<td>$939,000(^2)</td>
<td>$967,000(^2)</td>
<td>0</td>
</tr>
<tr>
<td><strong>O&amp;M Cost</strong></td>
<td><strong>$4,387,195</strong></td>
<td><strong>$5,517,415</strong></td>
<td><strong>$4,729,198</strong></td>
</tr>
</tbody>
</table>

- FY 14 was the start-up year, with testing beginning in January 2014 and facility serving SBWR in March 2014
- \(^1\)FY 15 is the first full year of operation, and these are the financial audited numbers
- \(^2\)Sinking fund in reserves - not expended as yet- estimated sufficient to replace MF and RO membranes, when needed
• SVAWPC product water met all permit requirements.

• SVAWPC’s reverse osmosis concentrate/brine met all City requirements.

• SVAWPC produced all recycled water demand for South Bay Water Recycling for 15 hour period in 2015 – allowing SBWR to go down for planned maintenance.

• SVAWPC waste stream monitoring results for the first 2 years were all good. Monitoring frequency is reduced as agreed upon by District and City staff.
## Silicon Valley Advanced Water Purification Center O&M

<table>
<thead>
<tr>
<th>Month</th>
<th>Million Gallons</th>
<th>% Utilization&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>July ’14</td>
<td>243</td>
<td>100%</td>
</tr>
<tr>
<td>August ’14</td>
<td>198</td>
<td>81%</td>
</tr>
<tr>
<td>September ’14</td>
<td>166</td>
<td>68%</td>
</tr>
<tr>
<td>October ’14</td>
<td>143</td>
<td>59%</td>
</tr>
<tr>
<td>November ’14</td>
<td>100</td>
<td>41%</td>
</tr>
<tr>
<td>December ’14</td>
<td>75</td>
<td>31%</td>
</tr>
<tr>
<td>January ’15</td>
<td>74</td>
<td>30%</td>
</tr>
<tr>
<td>February ’15</td>
<td>72</td>
<td>30%</td>
</tr>
<tr>
<td>March ’15</td>
<td>109</td>
<td>45%</td>
</tr>
<tr>
<td>April ’15</td>
<td>141</td>
<td>58%</td>
</tr>
<tr>
<td>May ’15</td>
<td>142</td>
<td>58%</td>
</tr>
<tr>
<td>June ‘15</td>
<td>192</td>
<td>79%</td>
</tr>
</tbody>
</table>

<sup>1</sup> Overall FY 15 utilization rate is 57% and O&M unit cost is $715/AF
4.7 Potential Topic(s) for Next Meeting
4.8 Next Meeting Dates