

November 9, 2017

**NOTICE OF MEETING – REQUEST FOR RSVPS**

Members of the Recycled Water Committee:

Tony Estremera, *Chairperson*  
Barbara Keegan, *Vice Chairperson*  
Gary Kremen, *Committee Member*

And Supporting Staff Members:

Norma J. Camacho, Chief Executive Officer  
Rick Callender, Chief of External Affairs  
Nina Hawk, Chief Operating Officer, Water Utility  
Darin Taylor, Chief Financial Officer  
Stan Yamamoto, District Counsel  
Emmanuel Aryee, Unit Manager, Pipelines Project Delivery  
Hossein Ashktorab, Unit Manager, Recycled & Purified Water  
Debra Butler, Senior Project Manager  
Angela Cheung, Deputy Operating Officer, Water Utility & Maint.  
Phillippe Daniel, Contractor  
Anthony Fulcher, Sr. Assistant District Counsel  
Christopher Hakes, Assistant Officer, Water Utility Capital  
Garth Hall, Deputy Operating Officer, Water Supply  
Luis Jaimes, Senior Project Manager  
Katrina Jessop, Associate Civil Engineer  
Elise Latedjou-Durand, Environmental Planner II  
Marta Lugo, Public Information Representative III  
Lin Moore, Committee Clerk  
Katherine Oven, Deputy Operating Officer, Water Utility Capital  
Charlene Sun, Treasury and Debt Manager  
Toni Vye, Staff Analyst  
Darryl Williams, Civic Engagement Manager

The next meeting of the Santa Clara Valley Water District Recycled Water Committee, is scheduled to be held at **2:00 p.m. on Wednesday November 15, 2017**, in the District **Headquarters Building Boardroom**, 5700 Almaden Expressway, San Jose, California.

Enclosed for your convenience, please find a copy of the agenda and corresponding materials.

Additional materials for this meeting may be distributed and made available to the public at or prior to the meeting, in compliance with the Brown Act.

Please RSVP at your earliest convenience to confirm your attendance by calling 408-630-2306, or via email to [lmoore@valleywater.org](mailto:lmoore@valleywater.org).

Sincerely,

*Lin Moore*

Board Administrative Assistant II  
Office of Clerk of the Board

**THIS PAGE INTENTIONALLY LEFT BLANK**

**RECYCLED WATER COMMITTEE**

Tony Estremera, Chairperson  
Barbara Keegan, Vice Chairperson  
Gary Kremen, Committee Member



**AMENDED/APPENDED AGENDA  
RECYCLED WATER COMMITTEE**

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

Wednesday, November 15, 2017  
2:00 PM

**Time Certain:**

2:00 p.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. **Approval of Minutes:** August 9, 2017.  
  
Recommendation: Approve the minutes.
4. **Action Items:**
  - \*4.1 Update on Countywide Water Reuse (Recycled and Purified Water) Efforts. (G. Hall)
    - A. Countywide Water Reuse (Recycled and Purified Water) Master Plan
    - B. Reverse Osmosis Concentrate Management
    - C. District/City of Sunnyvale/City of Palo Alto/City of Mountain View Collaboration Efforts and Memoranda of Understanding
    - D. District/San Francisco Public Utilities Commission/Bay Area Water Supply and Conservation Agency Collaboration Efforts and Feasibility Study
    - E. South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water  
Recommendation: Receive information and discuss next steps.
  - \*4.2 Update on Expedited Purified Water Program, including Staff Responses to August 9, 2017 Committee Requests. (K. Oven)
    - A. Draft Purified Water Program Plan
    - B. P3 Implementation-Next Steps  
Recommendation: Receive information and discuss next steps.
5. **Review 2017 Committee Workplan and Accomplishments Report, and Discussion on 2018 Committee Work Plan and Meeting Schedule.**  
  
Recommendation:
  - A. \*Review 2017 Work Plan and Accomplishments;
  - B. \*Authorize the Committee Chair to present the 2017 Accomplishments to the Board;
  - C. Identify items to carry forward to 2018 Work Plan; and
  - D. Approve a 2018 Recycled Water Committee Regular Meeting Schedule.

**(OVER)**

**6. 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.*

**7. Adjourn:**

REASONABLE EFFORTS TO ACCOMMODATE PERSONS WITH DISABILITIES WISHING TO ATTEND COMMITTEE MEETINGS WILL BE MADE. PLEASE ADVISE THE CLERK OF THE BOARD'S OFFICE OF ANY SPECIAL NEEDS BY CALLING (408) 630-2277.

Meetings of this committee will be conducted in compliance with all Brown Act requirements. All public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at the same time that the public records are distributed or made available to the legislative body, at the following locations:

Santa Clara Valley Water District  
Clerk of the Board Unit  
5700 Almaden Expressway  
San José, CA 95118

Recycled Water Committee Purpose: The Committee's purpose is to develop a long-term proposal for how the District can work together with other local agencies on recycled water opportunities within the district boundaries, to establish a collaborative process to facilitate policy discussion and sharing of technical information on recycled water issues. It is the role of the Recycled Water Committee to meet with the other entities (Sunnyvale, Palo Alto, CSJ SC/TPAC) in individual meetings as required and/or necessary. The Recycled Water Committee can also meet with new entities if the need arises.



RECYCLED WATER COMMITTEE

---

# MINUTES

---

Wednesday, August 9, 2017  
12:00 P.M.

(Paragraph numbers coincide with agenda item numbers)

**1. Call to Order/Roll Call.**

A meeting of the Santa Clara Valley Water District (District) Recycled Water Committee (Committee) was called to order in the District Headquarters Building Boardroom, 5700 Almaden Expressway, San Jose, California, at 12:00 p.m.

Committee members in attendance were District 2 Director B. Keegan, District 7 Director G. Kremen, and District 6 Director T. Estremera, Chairperson presiding, constituting a quorum of the Committee.

Staff members in attendance were H. Ashktorab, D. Butler, P. Daniel, J. De La Piedra, A. Fulcher, R. Gibson, C. Hakes, G. Hall, L. Jaimes, E. Latedjou-Durand, L. Moore, K. Oven, M. Silva, and C. Sun.

**2. Time Open for Public Comment on Any Item Not on the Agenda.**

Chairperson Estremera declared time open for public comment on any item not on the agenda. There was no one present who wished to speak.

**3. Approval of Minutes:** May 30, 2017.

Recommendation: Approve the minutes.

It was moved by Director Keegan, seconded by Director Kremen, and unanimously carried to approve the minutes as presented.

**4. Action Items:**

4.1 Expedited Purified Water Program Update.

- A. Staff Response to the Recycled Water Committee's Concern Re: Progress of City of San José/District's Memorandum of Understanding Negotiations

B. Program Update: Status of Studies, Analysis of Financing Options, Private Activity, and Purified Water Planning

Recommendation: Receive information and discuss next steps.

Ms. Katherine Oven, Deputy Operating Officer, reviewed the information on Item 4.1-A, and Ms. Charlene Sun, Treasury and Debt Officer, reviewed the information on Item 4.1-B, per the attached Committee Agenda Memo and attachment materials.

During the presentation, the Committee made the following requests:

1. Staff to bring back to the next Committee meeting, a revised copy of the table contained in Attachment 2, that includes detailed cost per project and cost per acre foot breakdowns, in 2017 dollar values;
2. Staff is to include in their next Expedited Purified Water Program Update to the Committee, alternate program delivery methods including Public Private Partnership (P3) alternatives with union labor;
3. Staff is to schedule a meeting of the Joint Recycled Water Policy Advisory Committee prior to November 2017, to discuss next steps on the District and City of San Jose Memorandum of Understanding; and
4. Staff is to investigate the feasibility of completing, or partially completing and publicly posting in ample time prior to the next Committee meeting, a preliminary draft Engineer's Report for the Expedited Purified Water Program that evaluates both direct and indirect potable water reuse.

Mr. Stan Williams, Poseidon Water, requested information on the Committee's May 30, 2017 request to schedule a meeting with the San Diego County Water Authority; encouraged continued discussion on procurement; discussed advantages of P3 over Design Build alternatives; and confirmed continued interest in the project.

Chairperson Estremera requested that staff follow up with scheduling a meeting between the San Diego County Water Authority and the District Board of Directors in October or November 2017.

4.2 Update on Countywide Water Reuse (Recycled and Purified Water) Master Plan.

Recommendation: Receive information and discuss next steps.

Mr. Luis Jaimes, Senior Project Manager, reviewed the information on this item, per the attached Committee Agenda Memo.

The Committee noted the information without formal action

Mr. Hossein Ashktorab, Recycled and Purified Water Unit Manager, reviewed the information on Items 4.3 and 4.4, per the attached Committee Agenda Memos.

- 4.3 Update on Reverse Osmosis Concentrate Management.
  - A. Report on Reverse Osmosis Concentrate Workshop
  - B. Project Milestones and Timeline.

Recommendation: Receive information and discuss next steps.

The Committee noted the information without formal action.

- 4.4 Direct Potable Reuse Analysis Efforts Update.
  - A. Pass and Fail Analysis
  - B. Permitting
  - C. Cost Comparison Between Indirect Potable Reuse and Direct Potable/Indirect Potable Reuse Options

Recommendation: Receive information and discuss next steps.

The Committee noted the information without formal action.

Mr. Jaime reviewed the information on Items 4.5, 4.6, and 4.7, per the attached Committee Agenda Memos.

- 4.5 Update on District/City of Sunnyvale Collaboration Efforts.
  - A. Update on City of Sunnyvale Memorandum of Understanding
  - B. Update on Wolfe Road Recycled Water Facilities Project Opening Celebration.

Recommendation: Receive information and discuss next steps.

The Committee noted the information without formal action.

- 4.6 Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts.
  - A. District/City of Palo Alto Memorandum of Understanding
  - B. District/City of Mountain View Memorandum of Understanding
  - C. City of Palo Alto Advanced Water Purification System Feasibility Study
  - D. Northwest County Recycled Water Strategic Plan

Recommendation: Receive information and discuss next steps

The Committee noted the information without formal action.

4.7 Update on District/San Francisco Public Utilities Commission/Bay Area Water Supply and Conservation Agency Collaboration Efforts and Feasibility Study.

Recommendation: Receive information and discuss next steps.

The Committee noted the information without formal action.

4.8 Update on South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water in Two New Developments.

Recommendation: Receive information and discuss next steps.

Mr. Ashktorab reviewed the information on this item, per the attached Committee Agenda Memo.

The Committee noted the information without formal action.

**5. Review Committee Workplan and Meeting Schedule.**

Chairperson Estremera confirmed that the next Committee meeting would be held at 12:00 p.m., on November 8, 2017.

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

The Committee requests and recommendations were not read into the record.

**7. Adjourn:**

Chairperson Estremera adjourned the meeting at 1:30 p.m., to the next regularly scheduled meeting at 12:00 p.m., on November 8, 2017, at Santa Clara Valley Water District Headquarters Boardroom, 5700 Almaden Expressway, San Jose, California.

Respectfully submitted,

Lin Moore  
Recycled Water Committee Clerk

Approved:





Committee: RWC  
Meeting Date: 11/15/17  
Item No.: 4.1  
Unclassified Manager: Garth Hall  
Email: [GHall@valleywater.org](mailto:GHall@valleywater.org)

## COMMITTEE AGENDA MEMO

**SUBJECT:** Update of Countywide Water Reuse (Recycled and Purified Water) Efforts:  
A. Countywide Water Reuse (Recycled and Purified Water) Master Plan  
B. Reverse Osmosis Concentrate Management  
C. District/City of Sunnyvale/City of Palo Alto/City of Mountain View Collaboration Efforts and Memoranda of Understanding  
D. District/San Francisco Public Utilities Commission/Bay area Water Supply and Conservation Agency Collaboration Efforts and Feasibility Study  
E. South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water

### RECOMMENDED ACTION:

Receive information and discuss next steps.

### SUMMARY:

The Committee receives updates on countywide water reuse (recycled and purified water) efforts as standing items on all regular Recycled Water Committee meeting agendas. The following information provides an update on the referenced items since the last Committee meeting, held on August 9, 2017:

#### A. Countywide Water Reuse (Recycled and Purified Water) Master Plan

The objective of this project is to prepare a comprehensive countywide master plan to facilitate the integration and expansion of recycled water as well as the development of purified water systems in Santa Clara County (County) in partnership and collaboration with recycled water producers, wholesalers, retailers, users, and other interested parties. Specific objectives include identification of how much water will be available for potential potable reuse (PR) and non-potable reuse (NPR) expansion, system integration options, recommendations for PR projects and building upon NPR projects, and proposals for governance model alternatives including roles and responsibilities, mainly:

- Identify Sources of Treated Wastewater for Reuse and Determine NPR and PR Split
- Identify District, Regional, and Local Benefits
- Evaluate Governance Roles and Responsibilities and Provide Recommendations
- Evaluate Potential Regional Inter-Connectivity
- Evaluate Potential for New Infrastructure

This Countywide Water Reuse Master Plan (Master Plan) will be a comprehensive document for evaluating and recommending the most reliable and efficient projects for PR and IPR on a countywide basis. The Master Plan will incorporate findings from the District's Expedited Purified Water Program, RO Concentrate Management Plan and partnership developments with San Francisco Public Utilities Commission (SFPUC), Bay Area Water Supply and Conservation Agency (BAWSCA), and the cities of Palo Alto, Mountain View, Sunnyvale, and San José.

This work will be completed by both staff and consultant. Consistent with RFP Preliminary Scope of Work, staff has already begun developing content for introductory chapters, governance framework, and baseline summary. Staff expect to select a consultant and issue a Notice-To-Proceed by March 2018.

Staff has begun a Request for Proposal (RFP) process for the selection of a consultant to support development of the Master Plan. A Pre-proposal Meeting was held on September 7, 2017 with interested parties. Proposals are due October 20, 2017. Staff plans to evaluate proposals and carryout consultant oral interviews in November 2017. The projected completion date for the draft Master Plan is December 2018 with a final Master Plan completed by June 2019.

#### B. Reverse Osmosis Concentrate Management

On June 14, 2017, District staff hosted the first stakeholder Reverse Osmosis (RO) Concentrate Management Project workshop (Workshop No. 1) called "Project Objectives, Challenges, and Drivers". Information on this workshop was presented at the August 9, 2017 Recycled Water committee meeting. On October 17, 2017, the District hosted the second stakeholder RO Concentrate Management Project workshop (Workshop No. 2) titled "Initial Screening and Multi-Criteria Analysis (MCA) Shortlisting of RO Concentrate Management Options." Once again over 30 project stakeholders returned for collaborative, facilitated discussions that included a review of key outcomes from Workshop No. 1, RO Concentrate Management options under consideration, initial screening to eliminate options before applying MCA, the MCA approach and evaluation criteria, and then concluding with a dialog of MCA results and conclusions. The Workshop provided a forum for our stakeholder partners to review 120 possible RO concentrate management options, assess 588 unique evaluations using MCA, and support shortlisting to 17 recommended options for further examination. The project team will now undertake a more in-depth evaluation of the shortlisted RO concentrate management options in order to further refine the shortlist to a single preferred RO concentrate management plan or strategy for each of the advanced water treatment facilities under consideration.

A total of four workshops are planned for this project. Future workshops will present the results of collaborative studies with the University of California (Berkeley) and Stanford University on the economic and technical feasibility of RO concentrate treatment by engineered wetlands, as well as a detailed alternatives review and preferred management option per site.

A key project milestone consisting of the installation of the pilot engineered-treatment system was completed in May 2017. Upcoming project deliverables include: a conceptual alternatives report in December 2017; a pilot engineered-treatment system final technical memorandum and feasible alternatives report in August 2018; and a final RO concentrate management plan report, in December 2018.

#### C. District/City of Sunnyvale/City of Palo Alto/City of Mountain View Collaboration Efforts and Memoranda of Understanding

##### *District/City of Sunnyvale Memorandum of Understanding for Water Reuse Feasibility Studies*

On March 28, 2017, the District Board of Directors authorized a memorandum of understanding (MOU) for collaborating with the City of Sunnyvale (Sunnyvale) on assessing the feasibility of water reuse alternatives. The Sunnyvale City Council subsequently approved the MOU on May 23, 2017. Coordination meetings between Sunnyvale and District staff were held on August 21, 2017 and September 28, 2017 to discuss the feasibility assessments work plan. Coordination efforts and development of a long term comprehensive agreement are expected to continue, to align with the Master Plan.

##### *District/City of Palo Alto MOU and District/City of Mountain View Agreement Assessing the Feasibility of Developing Water Reuse Alternatives*

On June 27, 2017, the District Board of Directors authorized the CEO to execute the proposed MOU between the District and City of Palo Alto (Palo Alto). Palo Alto City Council approved the MOU on August 28, 2017. District staff will work with Palo Alto staff to draft a long-term agreement.

On September 26, 2017, the District Board of Directors authorized the Chief Executive Officer (CEO) to execute the proposed Agreement between the District and City of Mountain View (Mountain View) to explore opportunities to expand recycled and purified water within the County. The Mountain View City Council unanimously approved the Agreement at its October 3, 2017 meeting. District staff will work with Mountain View staff to draft a long term agreement.

#### *District/Palo Alto/Mountain View Advanced Water Purification System Feasibility Study*

The Advanced Water Purification System Feasibility Study (Feasibility Study) determined how to improve recycled water quality from the Regional Water Quality Control Plant (RWQCP) in Palo Alto. Following the completion of the Feasibility Study in April 2017, District and Palo Alto staff authorized the consultant to complete two optional tasks: 1) A Preliminary Design Report for a 1 to 2 million gallons per day (MGD) Advanced Water Purification System (AWPS); and 2) A White Paper on utilizing a parcel of land adjacent to the RWQCP for the construction of a 6 to 10 MGD AWPS. On September 27, 2017, the consultant submitted the draft Preliminary Design Report and staff is currently reviewing this submittal. The consultant is currently addressing comments provided by both District and Palo Alto staff and is on schedule to finalize the White Paper in late October 2017.

#### *Palo Alto Northwest County Recycled Water Strategic Plan*

The Northwest County Recycled Water Strategic Plan (Strategic Plan) includes recycled water preliminary planning studies for the expansion of recycled water to Stanford Research Park, and customers in Los Altos, Los Altos Hills, Mountain View, East Palo Alto, and Menlo Park. The Strategic Plan also includes a groundwater assessment in Northwest County to better understand groundwater conditions and the potential for potable reuse in the area. A public workshop has been scheduled for October 23, 2017 to present the results of the draft Groundwater Assessment Report. The objective of this workshop is to provide information and solicit input from stakeholders including Northwest County partner cities, San Mateo County, Stanford University and citizen groups such as Save Palo Alto's Groundwater.

#### D. District/San Francisco Public Utilities Commission/Bay Area Water Supply and Conservation Agency Collaboration Efforts and Feasibility Study

The District is investigating the feasibility of developing purified water to augment water supply in the County with potable reuse. Additional capacity may be developed to produce purified water for customers common to the District, SFPUC, and BAWSCA. The SFPUC, BAWSCA, and District sequentially approved an MOU. The MOU sets forth the respective roles and responsibilities of the parties regarding feasibility studies to identify and evaluate options for SFPUC and BAWSCA to participate in the District's Purified Water Program.

District staff held a kickoff meeting on June 6, 2017, with representatives from BAWSCA and SFPUC to organize the framework of the feasibility study. The first phase of the study effort will develop viable alternatives based on each agency's constraints and objectives.

District, BAWSCA, and SFPUC agreed to have three joint workshops. The first workshop to identify alternatives for participation was held with SFPUC and BAWSCA on July 17, 2017. The second workshop was held on October 19, 2017, and focused on constraints and benefits. The third workshop will develop viable alternatives for preliminary analysis. The first phase of analysis is expected to conclude in January 2018. Findings from this phase will include a short-list of possible projects and will inform a decision on whether to conduct hydraulic modeling on the selected projects.

#### E. South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water

On September 18, 2017, the City of Gilroy (City) Council approved the proposed agreements between the City and District for the City to receive approximately \$3 million in reimbursements for the installation of approximately 8,500 linear feet of recycled water pipelines within defined phases of the Meritage Homes Hecker Pass Development and the Glen Loma Ranch Development. District approval and execution of these agreements is pending receipt of the signed documents from the City.

The South County Regional Wastewater Authority (SCRWA), as the recycled water producer in South County, is developing a project to upgrade their Area 93 Recycled Water Pump Station. This recycled water project is in alignment with the short-term capital improvement recommendations in the 2015 South County Recycled Water Mater Plan. On October 4, 2017, the SCRWA Board approved an action to move forward on this project with the development of final construction documents and issuance of a bid for construction. This project is estimated to cost \$2.5 million. SCRWA will be covering the cost to pay for this project in alignment with the 1999 Producer-Wholesaler and Wholesaler-Retailer agreements for the supply of recycled water between SCRWA, District, and cities of Gilroy and Morgan Hill, as amended in 2006.

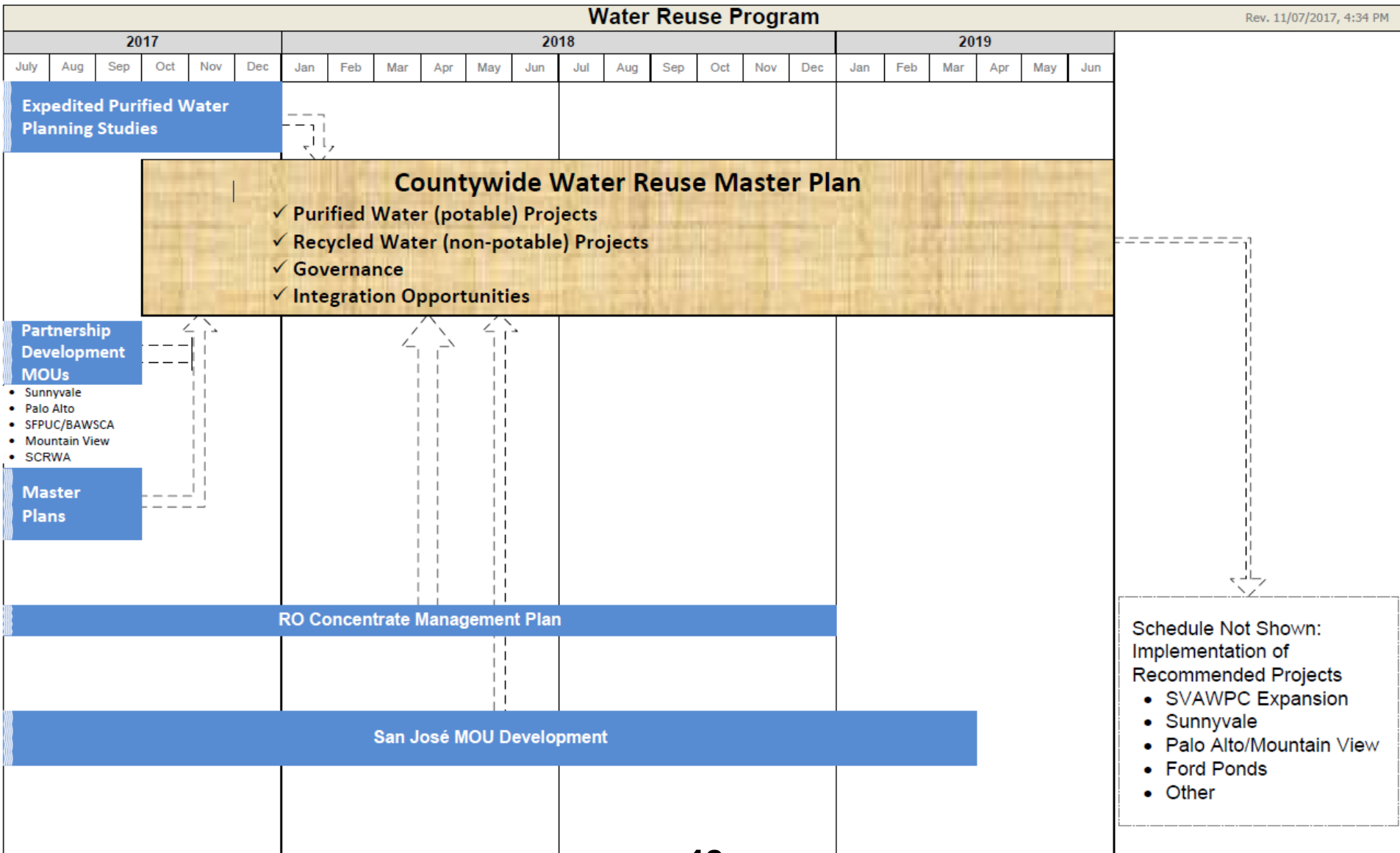
**ATTACHMENT(S):**

Attachment 1: PowerPoint Presentation

## 4.1 Update on Countywide Water Reuse (Recycled and Purified Water) Efforts



# 4.1.A. Countywide Water Reuse (Recycled and Purified Water) Master Plan



# 4.1.B. Reverse Osmosis Concentrate Management

## Project Submittals:

- Engineered Treatment Cells Sampling and Analysis Plan – July 2017
- Draft Summary of Available and Emerging Technologies – May 2017
- Draft Project Definition Report – October 2017

## Next Steps:

- Draft Conceptual Alternatives Report - December 2017
- Pilot Engineered-Treatment System Technical Memorandum and Feasibility Alternatives Report – August 2018
- RO Concentrate Management Plan Report – December 2018

Open-Water Engineered Treatment Cells



Pilot Ozone Unit



# 4.1.B. Reverse Osmosis Concentrate Management

## Workshop No. 2

- Goal: apply multi-criteria analysis to short-list feasible alternatives
- Key Outcomes
- Workshop No. 3 – Feasible Alternatives (July 2018)





# 4.1.C. District/City of Sunnyvale/City of Palo Alto/City of Mountain View Collaboration Efforts and MOU

## Agreements and MOU's

Item	Schedule/Milestones
<b>District/City of Sunnyvale MOU</b>	<ul style="list-style-type: none"><li>• Approval/Execution: May 23, 2017</li><li>• Coordination Meetings: September 28, 2017</li></ul>
<b>District/City of Palo Alto MOU</b>	<ul style="list-style-type: none"><li>• Approval/Execution: August 28, 2017</li></ul>
<b>District/City of Mountain View Agreement</b>	<ul style="list-style-type: none"><li>• Approval/Execution: October 3, 2017</li></ul>

MOU = Memorandum of Understanding

# 4.1.C. District/City of Sunnyvale/City of Palo Alto/City of Mountain View Collaboration Efforts and MOU

SCHEDULE															
2016				2017				2018				2019			
Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
<b>NORTHWEST COUNTY RECYCLED WATER STRATEGIC PLAN</b>															
<div style="border: 1px dashed black; padding: 5px;"> <p style="text-align: center;"><b>Part 1: District/Palo Alto/Mountain View</b></p> <p>ADVANCED WATER PURIFICATION SYSTEM FEASIBILITY STUDY</p> <p style="margin-left: 150px;">WHITE PAPER-MEASURE E SITE</p> <p style="margin-left: 150px;">PRELIMINARY DESIGN, SITE 1</p> </div>															
<div style="border: 1px dashed black; padding: 5px;"> <p style="text-align: center;"><b>Part 2: District Palo Alto</b></p> <p>PA RW PHASE III BUSINESS PLAN, PRE-DESIGN &amp; SECURING-FUNDING</p> <p>GROUNDWATER LOWER &amp; UPPER AQUIFER ANALYSIS RECHARGE/STORAGE REUSE</p> <p>RWQCP PARTNER AGENCIES INTEREST IN RECYCLED WATER</p> <p>ADDITIONAL FUNDING IDENTIFICATION AND ASSISTANCE</p> </div>															
<div style="border: 1px dashed black; padding: 5px;"> <p style="text-align: center;"><b>Part 3: Palo Alto/Mountain View</b></p> <p>WHITE PAPERS</p> <p>PALO ALTO POTABLE WATER SUPPLY RESOURCES PLANNING (IWRP)</p> <p>MOUNTAIN VIEW RECYCLED WATER DISTRIBUTION EXPANSION &amp; SUNNYVALE TIE-IN</p> </div>															
<p><b>Part 3: Palo Alto/Mountain View - White Papers</b></p> <ul style="list-style-type: none"> <li>• WHITE PAPER INITIAL DESCRIPTION OF ALL WATER SOURCES - COMPLETED 2016</li> <li>• WHITE PAPER SATELLITE &amp; ON-SITE TREATMENT &amp; REUSE; STORMWATER USE - COMPLETED 2016</li> </ul>															

# 4.1.C. District/City of Sunnyvale/City of Palo Alto/City of Mountain View Collaboration Efforts and MOU

## *Part 1: District/Palo Alto/Mountain View*

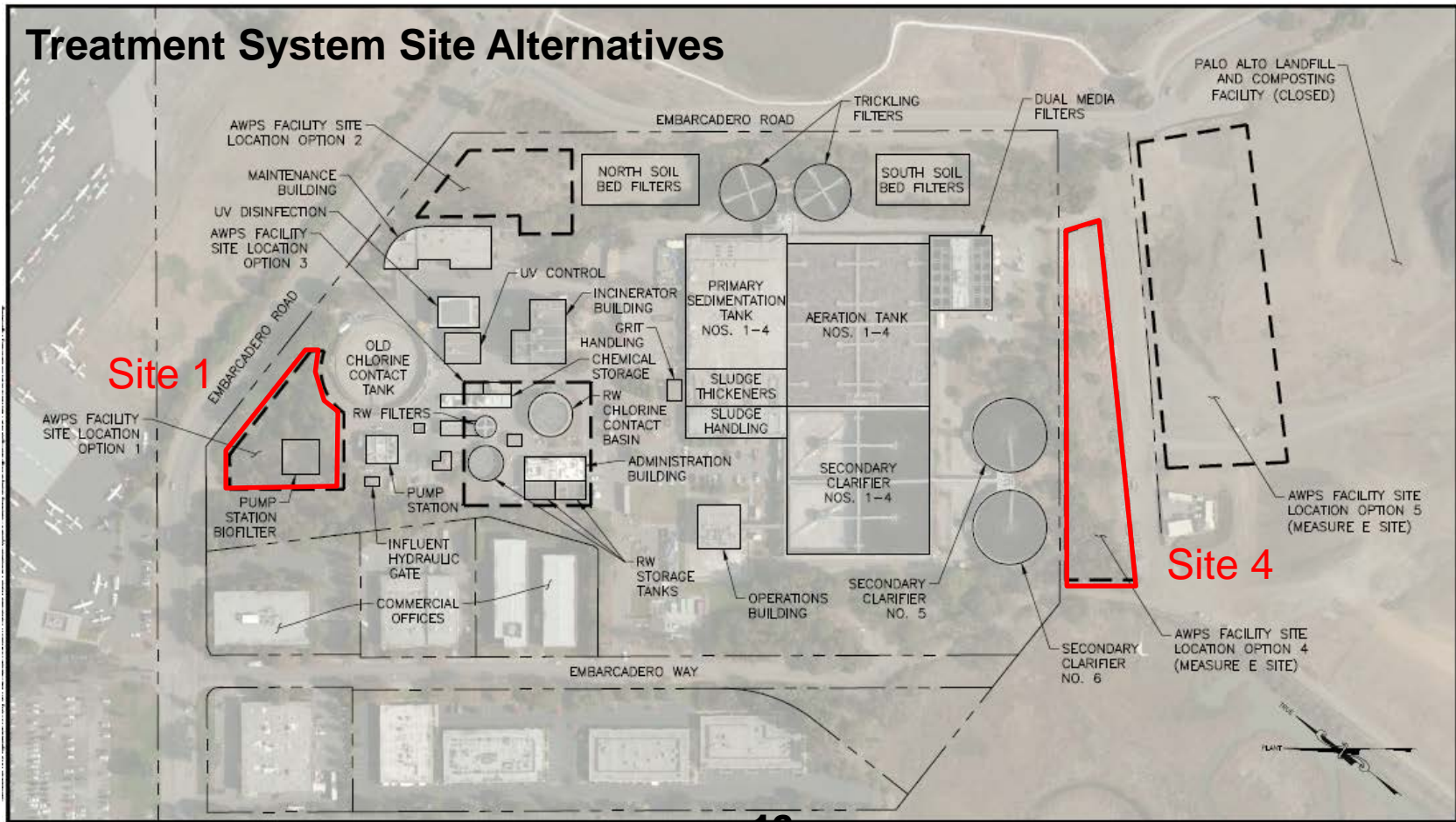
### ***Advanced Water Purification System (AWPS) Feasibility Study and Preliminary Design***

#### **Submittals:**

- Final Report Submitted on April 2017
- White Paper on Site 4 (Measure E Site) for a 6-10 MGD AWPS
- Draft Preliminary Design for Site 1-2 MGD AWPS – (Staff reviewing)

# 4.1.C. District/City of Sunnyvale/City of Palo Alto/City of Mountain View Collaboration Efforts and MOU

## Part 1: District/Palo Alto/Mountain View Advanced Water Purification System Feasibility Study



# 4.1.C. District/City of Sunnyvale/City of Palo Alto/City of Mountain View Collaboration Efforts and MOU

## ***Part 2: District/Palo Alto***

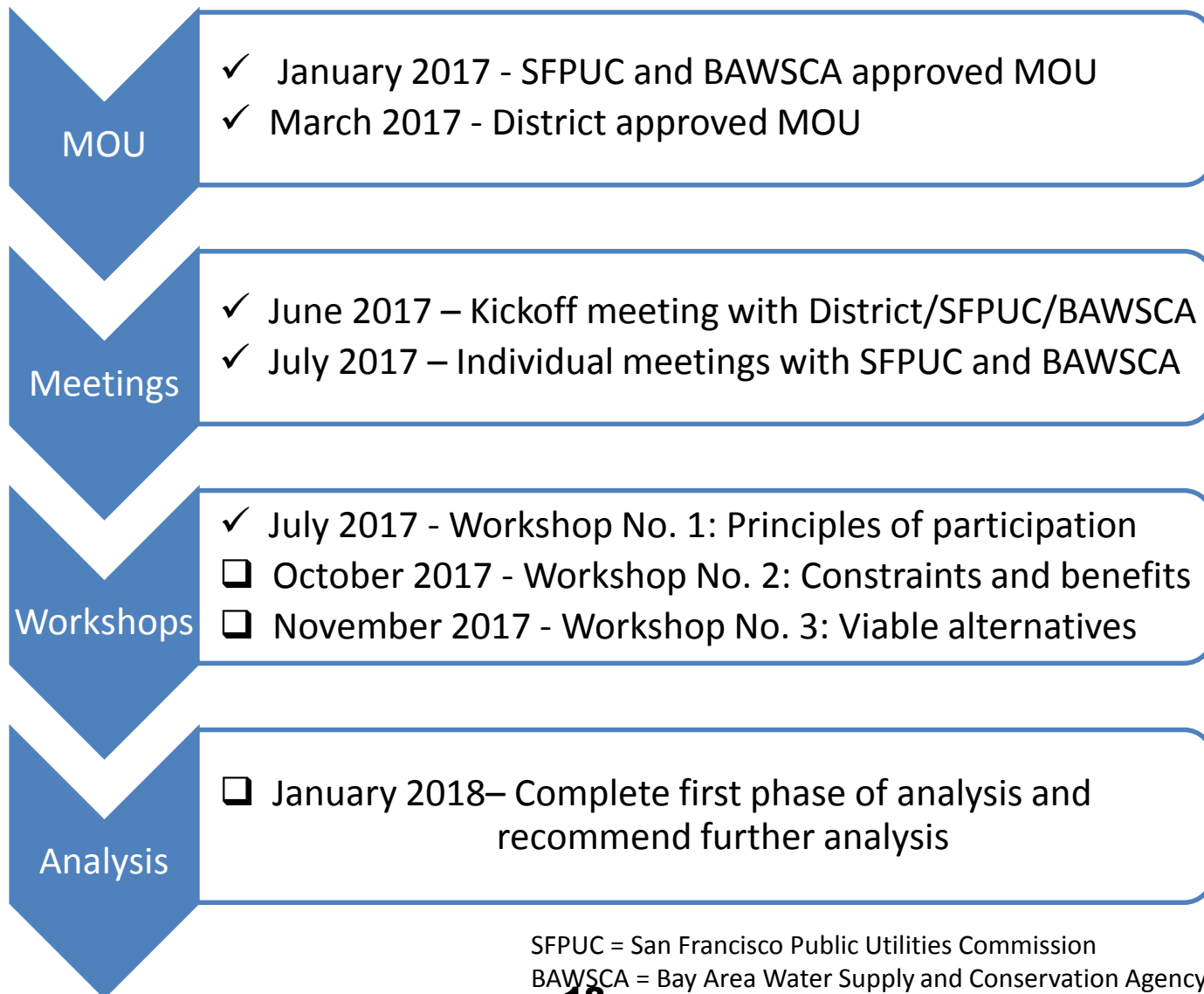
### ***Northwest County Recycled Water Strategic Plan***

#### ***Submittals:***

- Draft Business Plan for Phase III Expansion
- Draft Preliminary Design for Phase III Expansion
- Draft Groundwater Assessment Report\*

*\*Groundwater Assessment Report Workshop held in Palo Alto on October 23, 2017.*

# 4.1.D. District/SFPUC/BAWSCA Collaboration Efforts and Feasibility Study



SFPUC = San Francisco Public Utilities Commission  
BAWSCA = Bay Area Water Supply and Conservation Agency  
MOU = Memorandum of Understanding

## 4.1.E. South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water

### ➤ Meritage Homes Hecker Pass Development – Phases 3 and 4 (\$1.5 Million)

- Approved by Gilroy City Council – September 18, 2017

*Increase approximately 4,520 linear feet of proposed 12-inch diameter recycled water pipeline to a 24-inch.*

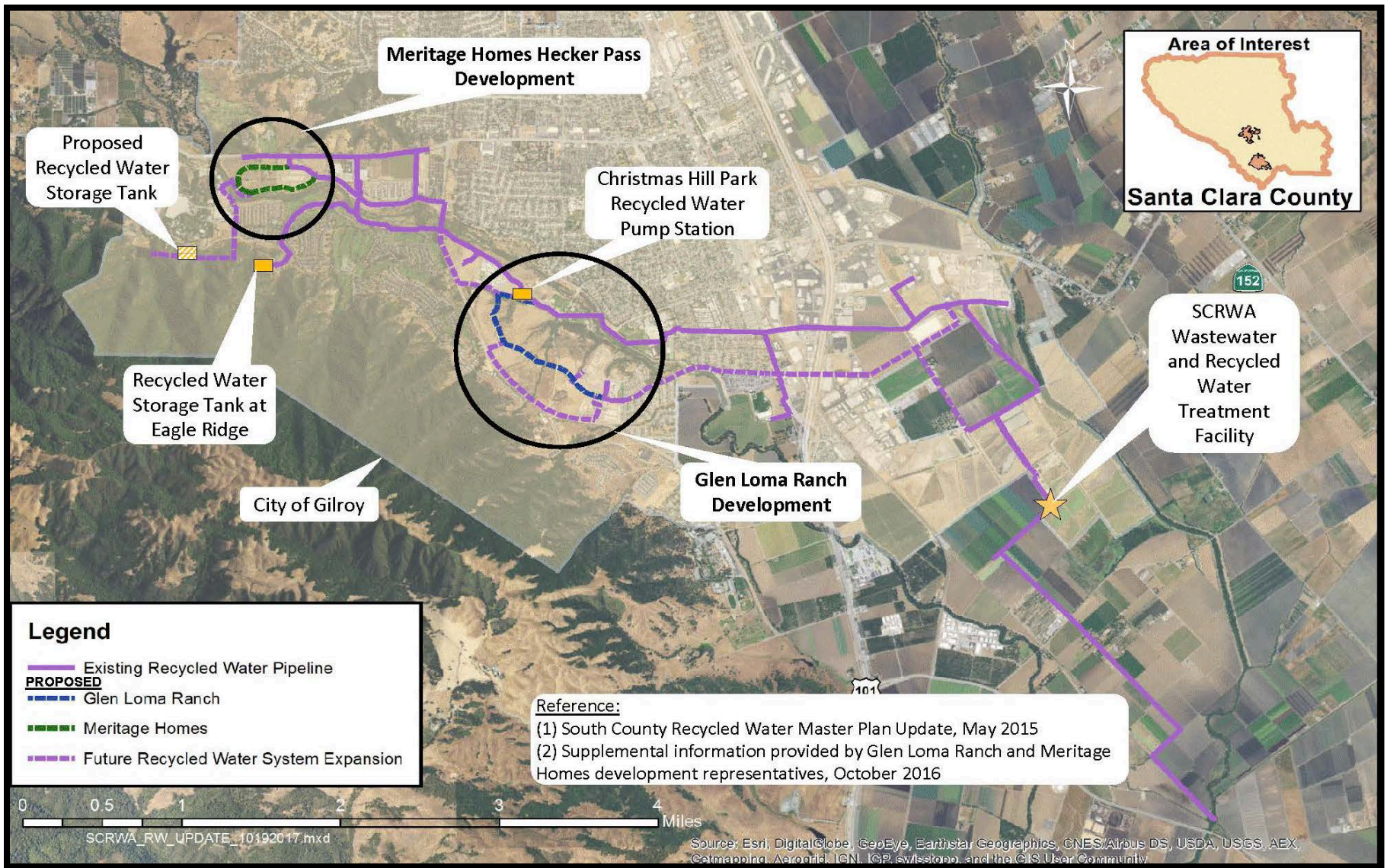
### ➤ Glen Loma Ranch Development – Home Ranch and Wild Chestnut Neighborhoods (\$1.5 Million)

- Approved by Gilroy City Council – September 18, 2017

*Increase approximately 2,825 linear feet of proposed 16-inch diameter recycled water pipeline to a 30-inch*

*Install additional 1,175 linear feet of 24-inch and 30-inch diameter recycled water pipeline*

# 4.1.E. South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water





## 4.1.E. South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water

### Area 93 Recycled Water Pump Station Upgrade by South County Regional Wastewater Authority (\$2.5 Million)



# 4.1 E. 2015 Master Plan CIP Recommendation

Segments	Capital Improvement Projects (2015 Master Plan update)	Cost Estimate
Immediate -Term	<ul style="list-style-type: none"> <li>• <b>Distribution:</b> 26,600 foot pipeline extension</li> <li>• <b>Wastewater Treatment Plant (WWTP):</b> UV Treatment, pump station upgrade</li> </ul>	\$ 14.3 Million  <u>WWTP</u> \$ 4.5 Million
Short- Term	<ul style="list-style-type: none"> <li>• <b>Distribution:</b> 21,860 foot pipeline extension</li> <li>• <b>WWTP:</b> Chlorine contact basin upgrade, <b>pump station upgrades</b>, meter conversion (Gilroy/District), 6 mgd reservoir expansion (District)</li> </ul>	\$ 10.0 Million  \$2.5 Million  <u>WWTP</u> \$ 8.4 Million
Long- Term	<ul style="list-style-type: none"> <li>• <b>Distribution:</b> 7,010 foot pipeline extension, 1.5 mgd storage tank, and booster pump station</li> <li>• <b>WWTP:</b> 2.5 mgd secondary treatment expansion (SCRWA) and recycled water fill station (commercial / residential) (City of Gilroy/District)</li> </ul>	\$ 10.0 Million  <u>WWTP</u> \$ 50.9 Million
<b>Total Cost Estimate</b>		<b>\$ 98.1 Million</b>

mgd = million gallons per day



Committee: RWC  
Meeting Date: 11/15/17  
Item No.: 4.2  
Unclassified Manager: K. Oven  
Email: [KOven@valleywater.org](mailto:KOven@valleywater.org)

## COMMITTEE AGENDA MEMO

**SUBJECT:** Update on Expedited Purified Water Program, including Staff Responses to August 9, 2017 Committee Requests:  
A. Draft Purified Water Program Plan  
B. P3 Implementation – Next Steps

### RECOMMENDED ACTION:

Receive information and discuss next steps.

### SUMMARY:

The Committee receives updates on the Expedited Purified Water Program as a standing item on all regular Recycled Water Committee (Committee) meeting agendas. During the August 9, 2017 update, the Committee requested that staff include the following information at the Committee's next meeting:

1. Program Delivery Method Alternatives
2. City of San José Memorandum of Understanding (MOU)
3. San Diego County Water Authority's presentation to full Board

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

At the August 9, 2017 Committee meeting, staff also informed the Committee that the preliminary engineering work on the Program components would be completed before the end of this calendar year. The Committee requested that the draft Executive Summary for the Program Plan be presented and discussed at the next Committee meeting.

#### A. Draft Purified Water Program Plan

At the August 9, 2017 Committee meeting, staff had presented a status report for the single-source and competitively-selected consultant agreements that had been initiated in mid-2015 for developing the Purified Water Program. The Draft Purified Water Program Plan (Draft Program Plan) is a culmination of the preliminary engineering analysis for potential Program components; related consultant services for groundwater studies and water supply operations modeling; and staff's draft 2017 Water Supply Master Plan (WSMP) projections for future water demands and water supply reliability.

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

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

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

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

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

Table 1 presents the summary of production capacity, an expected 80 percent year-over-year utilization yield, and unit costs per acre-foot for these three alternatives.

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

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

Staff recommends the District moves forward with Alternative 1 - IPR to Los Gatos Ponds. As described in greater detail in Attachments 1 and 2, this alternative would produce purified water under existing regulations and would allow for greater flexibility of expanding both IPR and DPR use in the future. Implementation of this alternative is contingent on the satisfactory completion of an MOU with the City of San Jose regarding treated wastewater availability, land, RO concentrate management, and associated terms.

**B. P3 Implementation – Next Steps**

At their October 10, 2017 Board meeting, the Board decided to move forward with a Public-Private Partnership (P3) delivery method for the Purified Water Program.

As detailed in Attachment 2, staff will present the Committee the following elements of P3 implementation:

1. An overview of the likely P3 structure between the District and a private entity.
2. A preliminary timeline for negotiating and executing a P3 agreement and attaining an operating facility. This will be contingent on execution of an MOU with the City of San Jose.
3. Staff’s recommendation for the RFQ alternatives.

**ATTACHMENT(S):**

Attachment 1: Draft Executive Summary for Purified Water Program Plan  
Attachment 2: PowerPoint Presentation

**THIS PAGE INTENTIONALLY LEFT BLANK**

## Executive Summary

### ES-1 Introduction

As the Santa Clara Valley Water District (District) entered the fourth year of a five-year drought in 2015, with ongoing concern over ground level subsidence due to dropping groundwater basin levels and its potential impacts, the District Board of Directors charged staff with evaluating the feasibility of developing up to 45,000 acre-feet per year (AFY) of potable reuse via advanced purification of treated wastewater. Subsequently, an initial goal of this Expedited Purified Water Program (Program) of 24,000 AFY was identified to complement other elements in the District's water resource portfolio to meet projected demands through 2040.

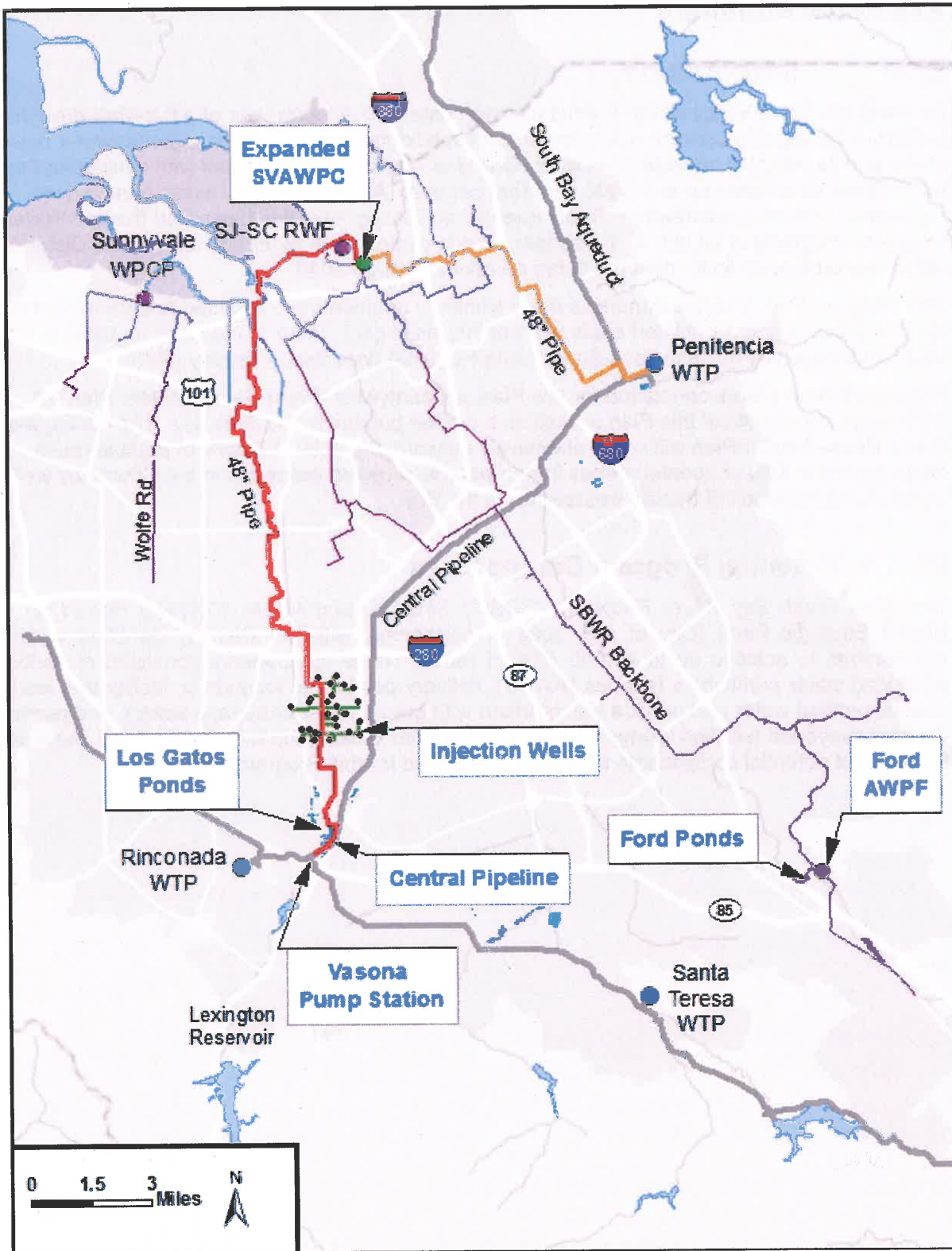
This Program Plan (Plan) summarizes the preliminary engineering conducted to determine the specific projects and associated costs to meet this initial goal. This Plan focuses on projects that could be sourced by the San Jose-Santa Clara Regional Wastewater Facility (RWF).

Separate from the work conducted for this Plan, a Countywide Water Reuse Master Plan will incorporate the results of this Plan as well as the other potable reuse initiatives. The Countywide Water Reuse Master Plan will comprehensively examine the potential scale of potable reuse development in light of updated trends in non-potable recycled water use in the County as well as desired discharges of treated wastewater to the Bay.

#### ES-1.1 Potential Program Components

The 2014 *South Bay Water Recycling (SBWR) Strategic and Master Planning Report* (2014 SBWR Strategic Plan) (City of San Jose in partnership with the District) identified various components to achieve up to 45,000 AFY of reuse. Those components consisted of various advanced water purification facilities (AWPF), delivery points (the location or facility that would receive purified water and provide the interface with groundwater or surface water), and purified water conveyance facilities (pump stations and pipelines) linking the two. Figure ES-1 illustrates the array of potential components that were considered for this Program.

Figure ES-1: Potential Program Components





The delivery point receiving the purified water dictates the type of potable reuse and, accordingly, the regulatory framework by which a project would be approved. Table ES-1 below summarizes the type of potable reuse and status of associated regulations for each of the potential delivery point being considered in this Program.

**Table ES-1: Types of Potable Reuse Under Consideration**

Potential Delivery Point	Type of Potable Reuse	Status of Regulations
Los Gatos Ponds	Indirect Potable Reuse (IPR)– Groundwater Recharge via Surface Spreading	Promulgated in 2014
Injection Wells	Indirect Potable Reuse (DPR)– Groundwater Recharge via Subsurface Injection	Promulgated in 2014
South Bay Aqueduct or Central Pipeline	Direct Potable Reuse – Raw Surface Water Augmentation	No regulations yet in place; Department of Drinking Water (DDW) Report to Legislature in 2016 noted that establishing direct potable reuse regulations is feasible. <sup>1</sup>
Ford Pond	Indirect Potable Reuse – Groundwater Recharge via Surface Spreading	Promulgated in 2014

<sup>1</sup>AB574, signed into law on 10/2/2017, sets a 2023 deadline for development of regulations for "raw water augmentation."

It should be noted that potable reuse strategies lacking established regulations are not prohibited. DDW has the authority to permit potable reuse projects on a case by case basis, similar to DDW permitting of several IPR projects in southern California prior to formal adoption of groundwater recharge regulations.

### ES-1.2 Program Planning Activities

The planning phase of the Program was comprised of several initiatives; the key initiatives included:

- Water Supply Modeling Study
- Groundwater Study
- Preliminary Engineering Services

Water Supply Modeling Study – A Water Supply Modeling Study was prepared as part of the Program to identify and assess the yields of various purified water alternatives as they added to the District’s water supply mix. With the aid of Maine Technology, District staff updated the District’s Water Evaluation and Planning (WEAP) model and used the updated model to simulate how various potable reuse scenarios would fit into the District’s portfolio of water supplies, providing guidance in the refinement of alternatives in terms of both facility capacities and operating strategies. Based on this modeling, 2040 projected demands, and the District’s 2012 Water Supply and Infrastructure Master Plan, an initial target of 24,000 AFY was established for this Program.

Groundwater Modeling - Since introduction of purified water into a groundwater basin via either percolation ponds or injection wells is the most common means of potable reuse, refinement of the District’s MODFLOW groundwater flow model for the northern Santa Clara Subbasin was

critical to the assessment of that category of options. District staff, with support from Todd Groundwater, incorporated results of the WEAP model into the groundwater model as multiple potable reuse scenarios were crafted and evaluated. Results were evaluated in terms of groundwater levels and subsurface travel time to assess both operational and regulatory viability.

Preliminary Engineering Services – Preliminary engineering services, including technical assessments and facilities planning of alternative advanced water purification systems, purified water conveyance systems, and delivery points were performed by RMC/Woodard & Curran. The progression of technical assessment and facilities planning provided the level of detail necessary to evaluate the operational needs; capital and operations and maintenance costs; and benefits of potential purified water components and alternatives.

### ES-1.3 Key Assumptions and Decisions

During preliminary planning, certain key assumptions and decisions were made to support the ongoing development of this Plan.

Program yield could be sustainably sourced by the RWF. Starting with the 2014 SBWR Strategic Plan and during this planning effort, it was recognized that reducing the RWF effluent discharge to Artesian Slough could have water quality implications on the Slough and South San Francisco Bay. It is assumed, pending further study, that the maximum amount of RWF effluent diverted to support this initial 24,000 AFY phase would not negatively impact the salt marsh and Bay environment. District staff are currently engaging with the City of San Jose regarding source water availability.

Reverse osmosis and advanced oxidation to be used for all IPR options. Alternative, non-RO water purification strategies were considered during the technical assessment phase (based on limited information available) for groundwater recharge via surface spreading options. It is recognized that such options offer a supplemental treatment component (commonly referred to as soil-aquifer treatment or SAT). Regulatory restrictions may limit a project's "yield" for certain water purification strategies, and the District's policy (E 2.1.1.) is to "aggressively protect groundwater from the threat of contamination." Thus, reverse osmosis and advanced oxidation treatment was assumed for all IPR projects. Reverse osmosis and advanced oxidation are explicitly specified in state regulations and incorporated by most potable reuse projects throughout California (including Orange County Water District's Groundwater Replenishment System). As discussed later in this Plan, advanced water purification and monitoring enhancements are included in the DPR facility component.

Existing RWF Outfall and NPDES permit could accommodate reverse osmosis (RO) concentrate. A technical assessment was conducted to evaluate the potential for discharging RO concentrate from expanded advanced water purification facilities to the RWF outfall. Preliminary results suggested that RO concentrate from the initial 24,000 AFY phase would not implicate either the operation of the outfall or the RWF's NPDES permit for priority pollutants. Accordingly, it was assumed for this Plan, pending further study of chronic toxicity, that all RO concentrate would be discharged to the RWF Outfall. This issue is being more fully vetted in the District's RO Concentrate Management Plan, which is anticipated to be complete in 2018.

## ES-2 Alternatives Development

A three-step process was used to identify and develop alternatives to achieve the goals of the Program. First, potential program components (AWPF, conveyance alignments, and delivery point improvements) were refined through a series of technical assessments and bundled into

potential project components. Table ES-2 presents potential program components evaluated during Program planning.

**Table ES-2: Source and Delivery Points Summary<sup>1</sup>**

Facility	Production Capacity	Delivery Points	Delivery Point Capacity <sup>2</sup>
Expanded Silicon Valley Advanced Water Purification Center (SVAWPC)	24,000 AFY	Los Gatos Ponds	19,200 AFY
		Injection Wells	12,000 AFY
		South Bay Aqueduct near Penitencia WTP	19,200 AFY
Ford Advanced Water Purification Facility (AWPF)	4,200 AFY	Ford Pond	3,400 AFY

<sup>1</sup>Expanded SVAWPC would receive treated wastewater from the RWF; Ford AWPF would receive non-potable source water via the SBWR system.

<sup>2</sup>Delivery point capacity based on average annual utilization of 80 percent.

Second, facility plans were prepared for each potential project component, providing Class 4 cost estimates and operational parameters that would carry into the evaluation process. In addition to cost estimates, potential project components were evaluated based on implementability and operational flexibility. Implementability considerations included ease of Regional Water Quality Control Board approval, DDW approval, and institutional arrangements. Operational flexibility considerations included compatibility with existing operations and maintenance, expandability, and delivery point “turn down” capability.

Third, through this screening process, and with the ongoing aid of the District’s WEAP model, project components were refined, and in some cases combined, to create a set of alternatives that could achieve the Program’s 24,000 AFY initial target. Potential alternatives combining the Ford Pond delivery point and a reduced Los Gatos Ponds yield were evaluated. WEAP modeling indicated that any potential yield increase did not justify the additional cost of these merged facilities, eliminating Ford Pond delivery point from further consideration for the initial phase. Table ES-3 presents the resulting 24,000 AFY alternatives.

**Table ES-3: 24,000 AFY<sup>1</sup> Alternatives**

Description	Alternative 1 IPR <sup>2</sup> to Los Gatos Ponds	Alternative 2 IPR to Los Gatos Ponds and Injection Wells <sup>3</sup>	Alternative 3 DPR <sup>2</sup> RWA <sup>2</sup> to South Bay Aqueduct <sup>4</sup>
SVAWPC Expansion Capacity acre feet per year (AFY)	24,000	24,000	24,000
Conveyance Pipeline Length	18 miles	18 miles	9 miles
Number of Injection Wells	-	6	-
Operational Storage	-	-	6 MG

<sup>1</sup>Maximum project production based on dry year scenario.

<sup>2</sup>IPR – Indirect Potable Reuse; DPR – Direct Potable Reuse; RWA – Raw Water Augmentation

<sup>3</sup> In addition to the conveyance pipeline, Alternative 2 includes lateral pipelines from the conveyance pipeline to each injection well.

<sup>4</sup> In addition to the conveyance pipeline, Alternative 3 includes pipelines in proximity to the Penitencia Water Treatment Plant to convey the purified water to the new tank and to the water treatment plant.

### **Alternative 1 – IPR to Los Gatos Ponds**

Alternative 1, shown in Figure ES-2, would deliver purified water produced by a 24,000 AFY expanded SVAWPC, conveyed through an approximately 18-mile, 48-inch pipeline to a system of feeder pipelines to Los Gatos Ponds. Delivery of purified water would be managed (scaled back in wet winter months) to allow Los Gatos ponds to continue to receive diversions from Los Gatos Creek and releases from Lexington Reservoir as a means of maintaining and using existing water rights.

### **Alternative 2 – IPR to Injection Wells and Los Gatos Ponds**

Alternative 2, shown in Figure ES-3, would construct six injection wells to enhance the District's groundwater recharge capacity and increase flexibility to receive purified water flows. The injection wells would be located along the Los Gatos pipeline corridor to minimize infrastructure needs. This alternative would have the same water purification and conveyance infrastructure as Alternative 1 – IPR to Los Gatos Ponds, with added distribution piping to the wells.

### **Alternative 3 – Direct Potable Reuse to South Bay Aqueduct**

Alternative 3, shown in Figure ES-4, would introduce purified water directly into the District's raw water supply system. Unlike IPR projects that deliver purified water to a natural environment (groundwater basin or large surface water body), DPR delivers purified water directly to the raw surface water infrastructure. Alternative 3 would construct an enhanced (supplemental water purification and monitoring), expanded SVAWPC. Purified water would be conveyed via a 9-mile pipeline to the Penitencia Water Treatment Plant (PWTP) site, where purified water would be blended with South Bay Aqueduct (SBA) water in the existing SBA terminal tank prior to delivery to the Penitencia Water Treatment Plant (PWTP) and the Central Pipeline, which serves Los Gatos Ponds and the Rinconada Water Treatment Plant (RWTP). In addition to enhanced advanced purification and monitoring, two 3-million gallon (MG) storage tanks, one at the expanded SVAWPC and the other at the PWTP, would be constructed as part of this alternative to support regulatory requirements and operational flexibility.

Figure ES-2: IPR to Los Gatos Ponds

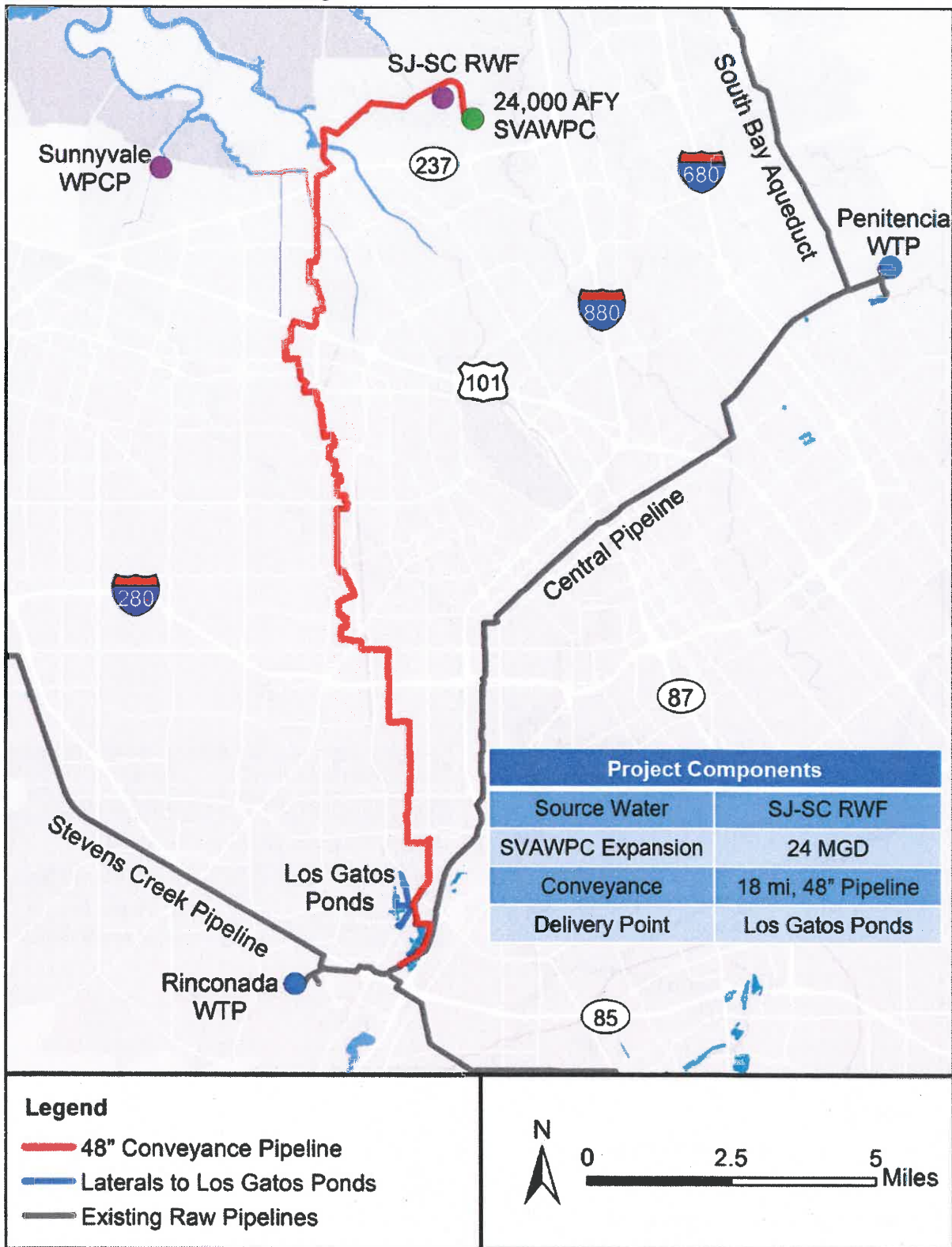


Figure ES-3: IPR to Injection Wells and Los Gatos Ponds

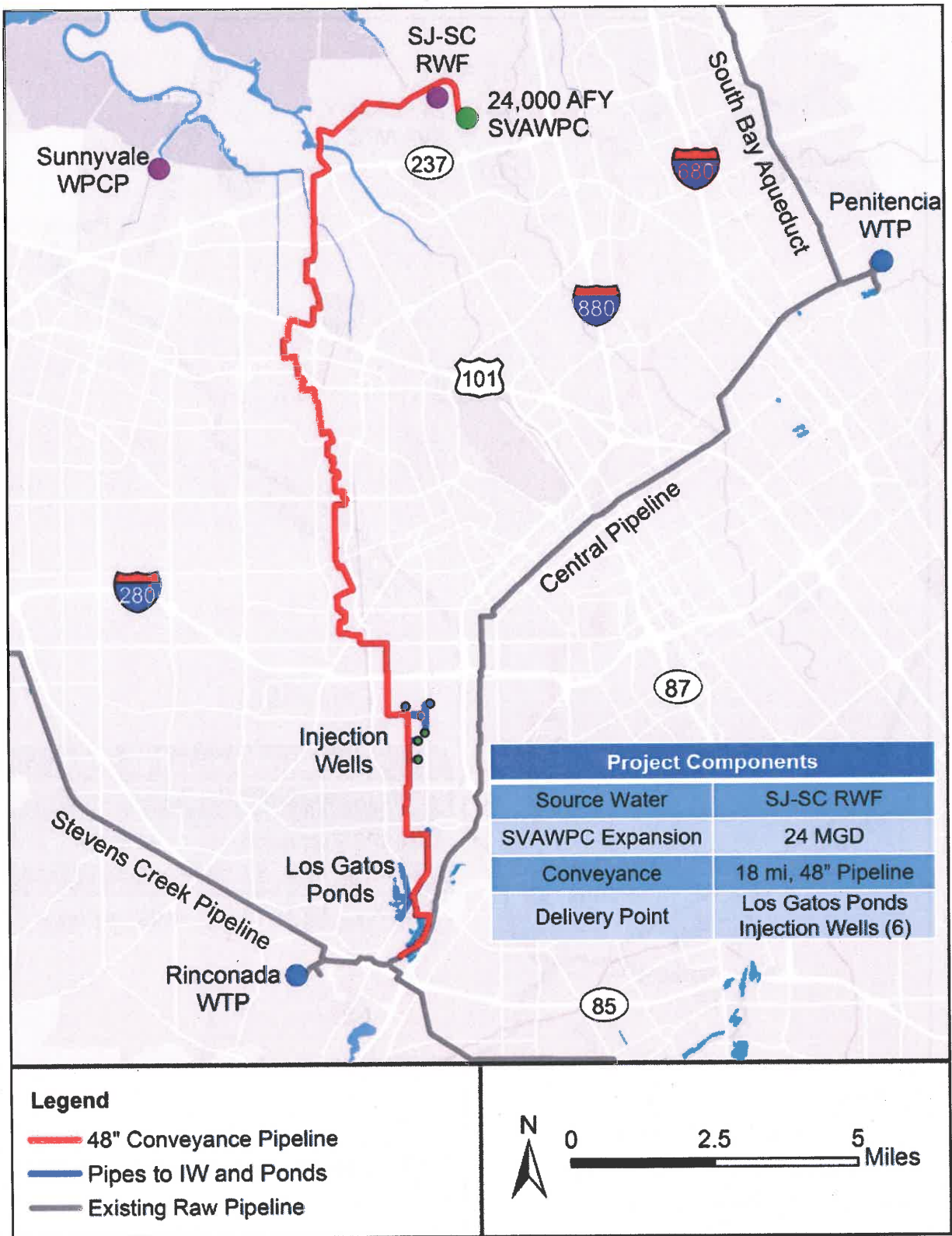
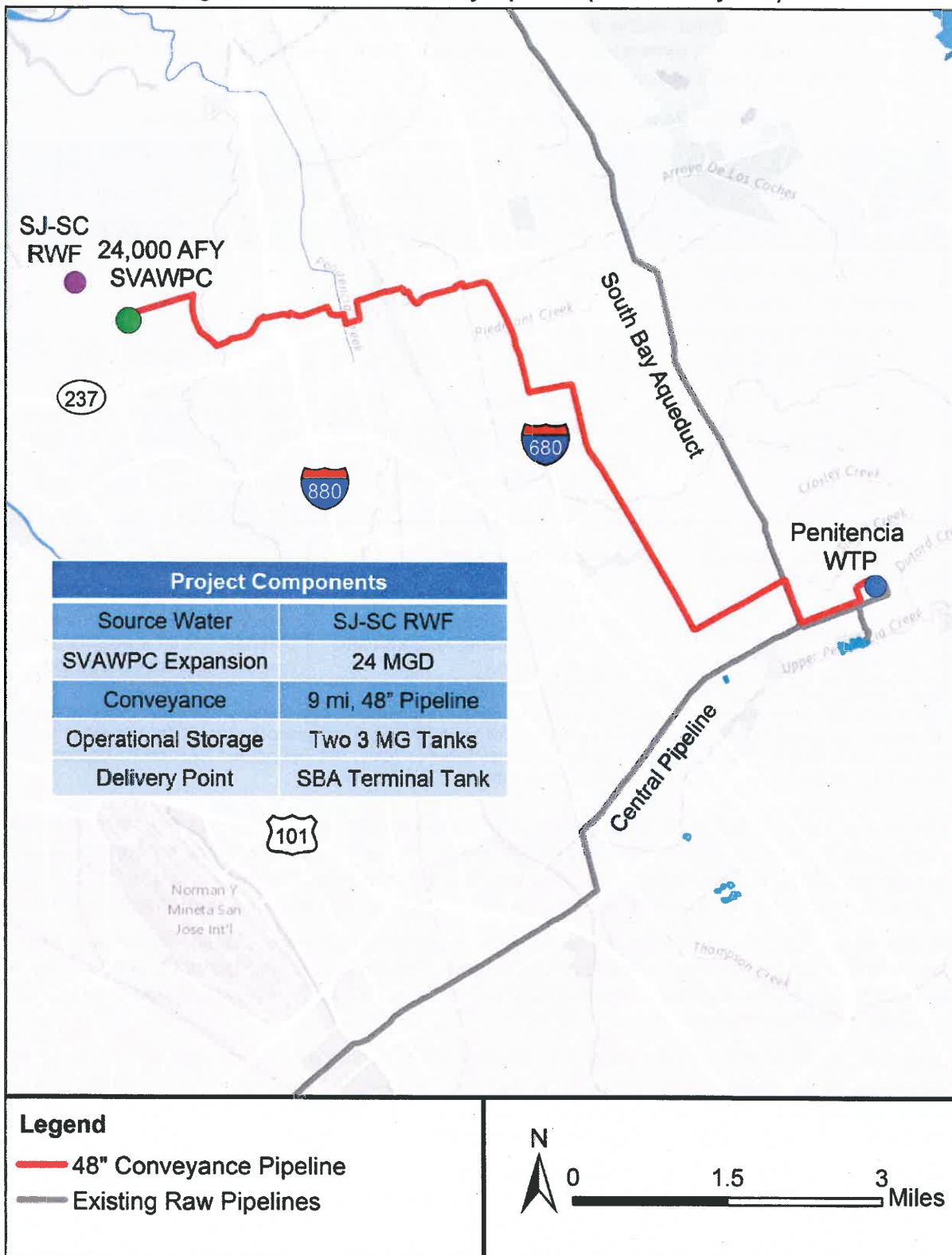


Figure ES-4: DPR to South Bay Aqueduct (Raw Water System)



## ES-3 Alternatives Comparison

A comparison of the three viable alternatives was conducted based on four key parameters; project life-cycle unit cost, expandability, regulatory certainty, and implementation timeline. Table ES-5 presents the results of this comparison.

**Table ES-5: 24,000 AFY Alternative Comparison (August 2017 Value)**

Category	Alternative 1 – IPR to Los Gatos Ponds	Alternative 2 – IPR to Injection Wells and Los Gatos Ponds	Alternative 3 – DPR to South Bay Aqueduct
Total Capital Cost (\$M)	\$648	\$692	\$596
Annual O&M Cost <sup>1</sup> (\$M/yr)	\$12	\$12	\$14
Annual R&R Cost <sup>2</sup> (\$M/yr)	\$13	\$15	\$12
Unit Cost <sup>3</sup> (\$/AF)	\$2,000	\$2,200	\$2,000
Expandability	High expandability with options including injection wells and DPR to either Central Pipeline or Vasona Pump Station (feed to RWTP)		Limited expandability due to need for blending with surface water and capacity of Central Pipeline, plus once mixed with raw water it cannot be used for injection wells
Regulatory Certainty	Regulations in place.		Regulations not in place; additional research required.
Implementation Timeline	Timeline well established due to established regulations and no need for additional research and demonstration.		Timeline uncertain due to lack of established regulations and potential need for additional research and demonstration.

<sup>1</sup>Based on the assumption that facilities operate at 80% capacity.

<sup>2</sup> Refurbishment and replacement (R&R) costs reflect a constant, annualized cost based on 100-year life cycle analysis

<sup>3</sup>Unit cost represents 100-yr lifecycle present value divided by project yield present value. Lifecycle present value includes initial Capital costs, annual operations and maintenance costs, and anticipated R&R costs. Unit costs are based on an assumed average annual yield of 80% of the 24,000 AFY capacity.

Alternative 3 – DPR to South Bay Aqueduct has a lower total capital cost but higher total annual costs than Alternative 1 – IPR to Los Gatos Ponds. This combination results in nearly equal unit costs between these two alternatives. Alternative 2 – IPR to Injection Wells and Los Gatos Ponds has higher capital costs than either of the other alternatives and an associated higher unit cost.

Alternatives 1 and 2 would support expandability, as both include a pipeline that could readily serve new or additional injection wells, or be extended to intertie with the District's Central Pipeline or the Vasona Pump Station. An intertie with the Vasona Pump Station would add a future DPR component to the Program.

Both IPR Alternatives (Alternatives 1 and 2) provide equivalent regulatory certainty, as the regulation for this type of potable reuse is in place. Regulations for Alternative 3 - DPR have not been established, and there is a potential that additional, unforeseen requirements could impact the cost analysis developed to date for this alternative.

Finally, the implementation timeline for Alternative 3 is less certain, due to lack of regulation and potential need for supplemental research and demonstration.



## ES-4 Recommendations

Based on the multi-stage analysis conducted during Program planning, **Alternative 1 – Los Gatos Ponds IPR** has been identified as the recommended alternative to supplement the District’s water supply with up to 24,000 AFY of purified water. Table ES-6 summarizes the reasons for this recommendation.

**Table ES-6: Recommended Alternative for Purified Water Program  
Initial Target of 24,000 AFY**

Parameter	Alternative 1 – IPR to Los Gatos Ponds Features
Unit Cost (\$/AF)	Among the lowest unit cost of alternatives evaluated.
Expandability	High expandability potential, with future delivery points at injection wells (IPR); and to either Central Pipeline or Vasona Pump Station (feed to RWTP) (DPR).
Regulatory Certainty	Regulations in place and several similar projects in operation.
Implementation Timeline	Timeline well established due to established regulations and no need for additional research and demonstration.

In addition to this recommendation for a 24,000 AFY project, the Program planning effort has identified a variety of potential options and delivery points to expand the Program in the future. Table ES-7 summarizes future expansion options for the Program.

**Table ES-7: Future Expansion Options**

Source	Conveyance	Potential Delivery Points
Expanded SVAWPC	Pipeline to Los Gatos Ponds (built as part of 24,000 AFY project)	Injection Wells (IPR)
		Connection to Central Pipeline (DPR)
		Vasona Pump Station (to Rinconada WTP) (DPR)
Ford AWP (sourced by SBWR)	Ford Pond Pipeline	Ford Pond(s) (IPR)

The future expansion options should be considered as part of the District’s Countywide Water Reuse Master Plan that is currently underway. This plan will include Sunnyvale and Palo Alto / Mountain View recycled and purified water options that function independently or interconnect with the expanded SVAWPC.

**THIS PAGE INTENTIONALLY LEFT BLANK**

# 4.2A Expedited Purified Water Program Draft Program Plan



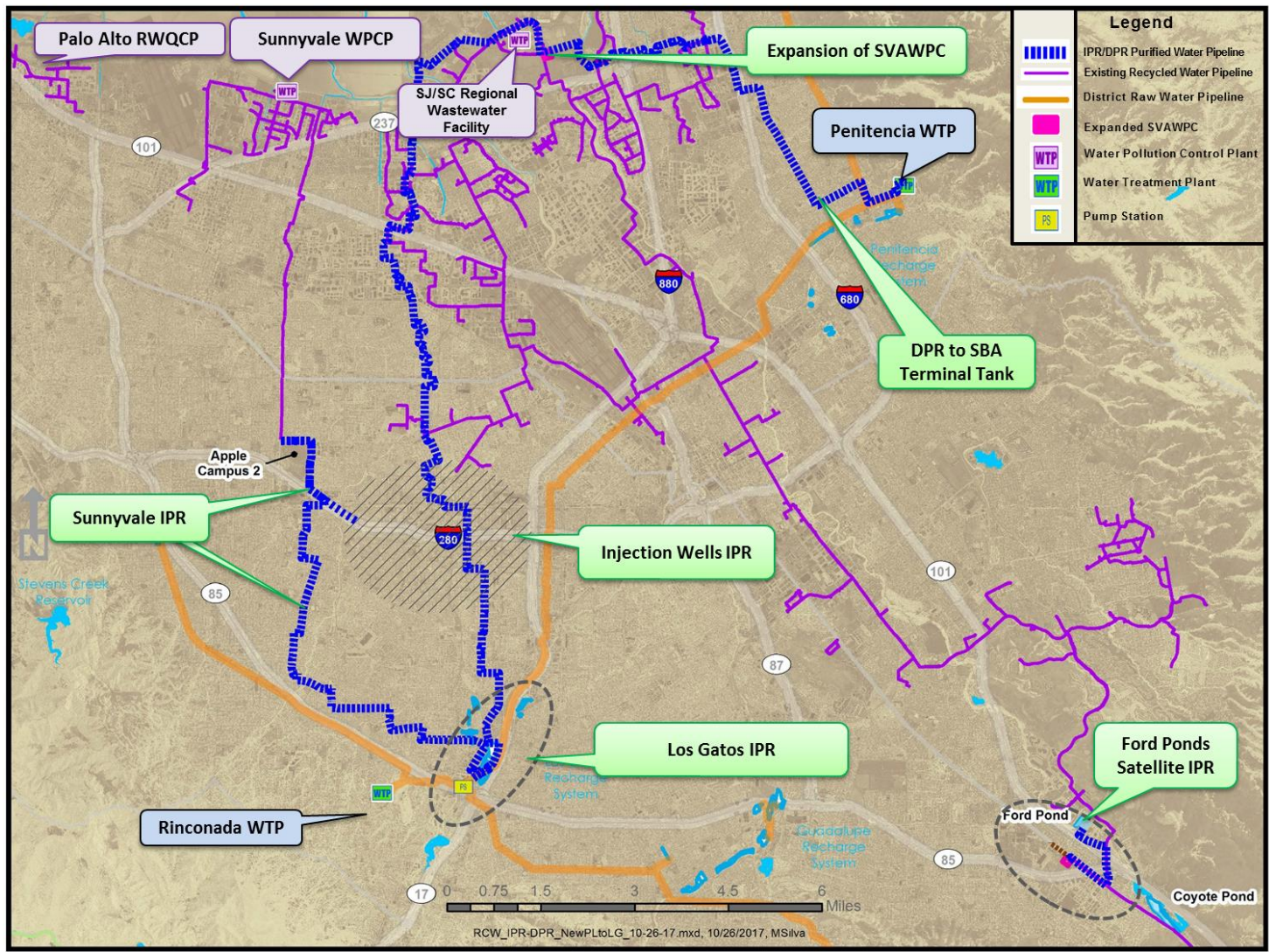
## 4.2A Presentation Outline

1. Development of Program Plan
2. Potential Program Components
3. Component Cost Comparison
4. Program Alternatives
5. Recommended Plan
6. Future Opportunities

## 4.2A Development of Program Plan

- Mar.-April 2015: Board directs staff to expedite expansion of up to 45,000 AFY of purified water for potable reuse
- Feb. 9, 2016: Board approves Preliminary Engineering Services agreement with RMC (now Woodard & Curran) to prepare Program Plan
- Draft 2017 Water Supply Master Plan: 24,000 AFY of potable reuse by 2025
- Nov. 2017: Draft Program Plan
- Jan. 2018: Final Program Plan Report

# 4.2A Potential Program Components



# 4.2A Comparison of Program Component Costs

	IPR Los Gatos Ponds	IPR Injection Wells	DPR South Bay Aqueduct	IPR Ford Ponds
Production Capacity (AFY)	24,000	15,000	24,000	4,200
80% Utilization Yield (AFY)	19,200	12,000	19,200	3,400
<b>80% Utilization Unit Cost (\$ per AF)</b>	<b>\$2,000</b>	<b>\$3,000</b>	<b>\$2,000</b>	<b>\$2,700</b>

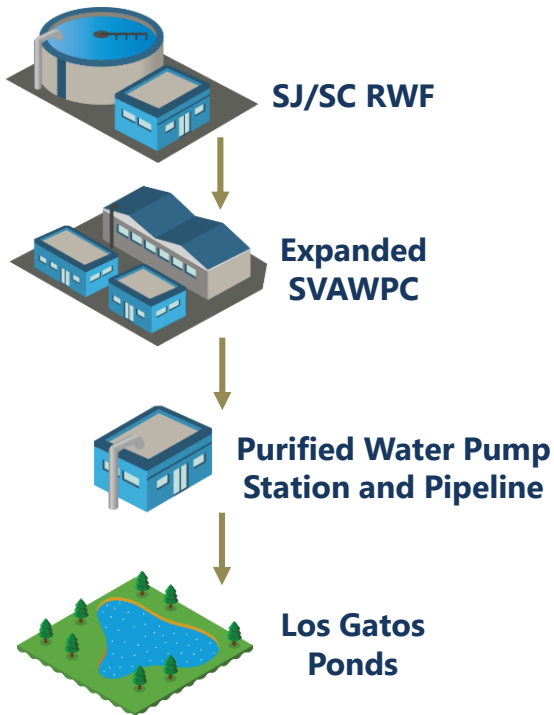
# 4.2A Cost Comparison: IPR to Los Gatos vs. DPR to Penitencia WTP

Component	IPR Cost	DPR Cost	Notes
<b>Capital Cost</b>			
Advanced Water Purification Facilities	\$346M	\$377M	Additional treatment and monitoring requirements for DPR
Conveyance Facilities	\$282M	\$152M	IPR pipeline (18 miles) is longer than DPR pipeline (9 miles)
Receptor Facilities	\$11M	\$53M	DPR receptor requires a new tank and potable system modifications at PWTP
Other Capital Costs	\$9M	\$14M	Pump station costs are similar, but DPR requires property purchase
<b>Total</b>	<b>\$648M</b>	<b>\$596M</b>	
<b>O &amp; M Cost</b>			
	\$12M/yr	\$14M/yr	DPR has higher treatment operations costs

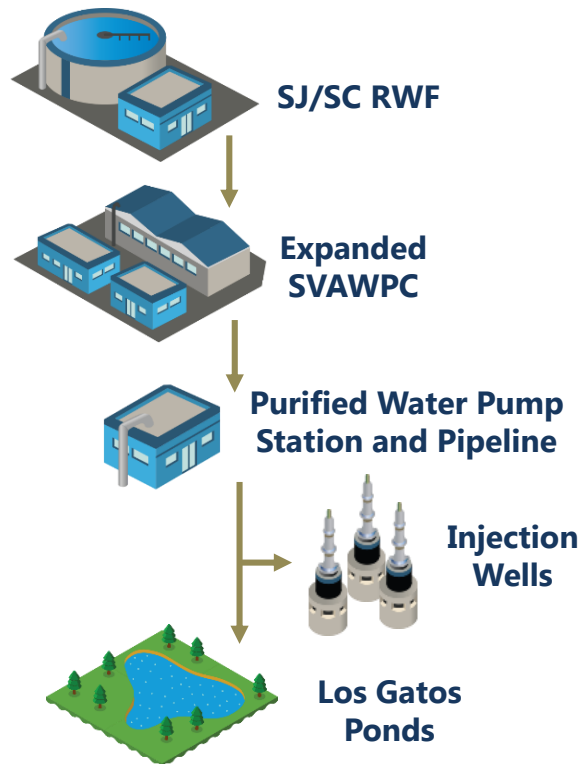


# 4.2A Three Alternatives to Produce/Utilize Up to 24,000 AFY

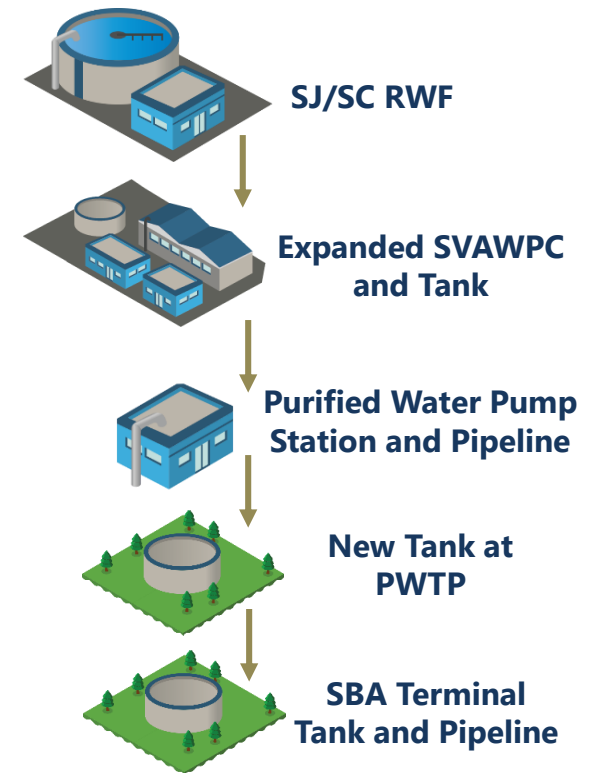
## Alt. 1 – Los Gatos Ponds IPR



## Alt. 2 – Los Gatos Ponds/Injection Wells IPR



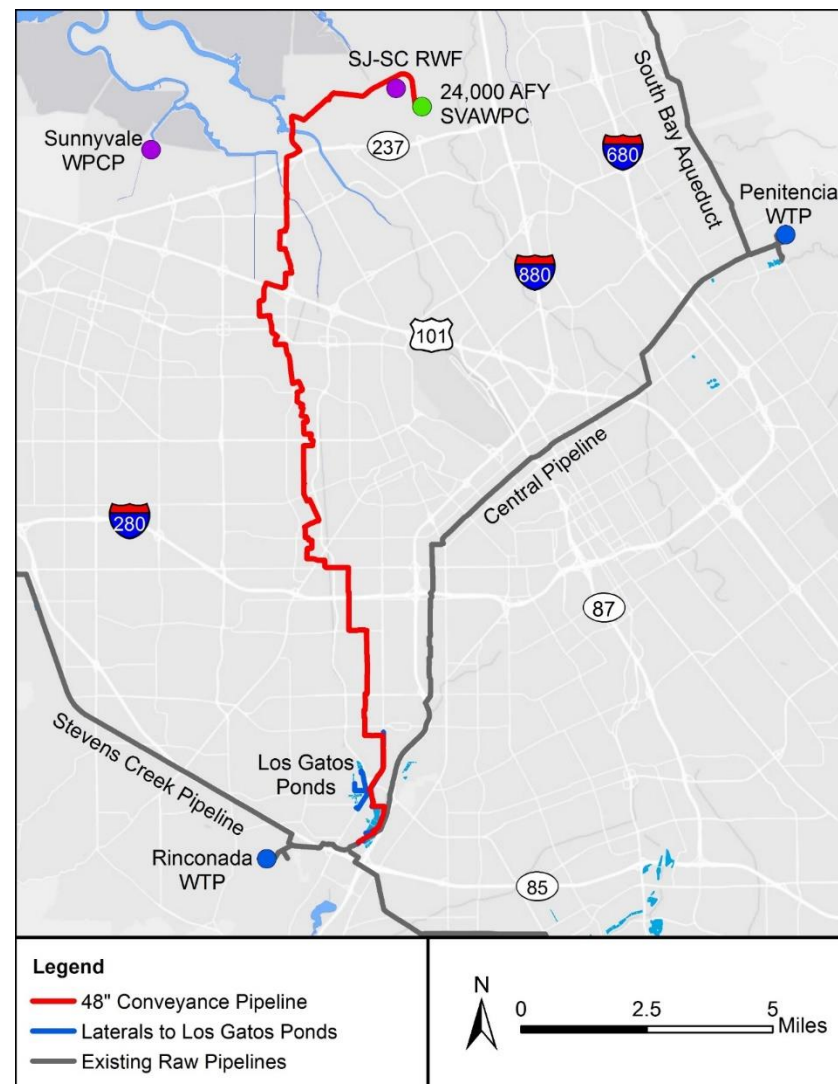
## Alt. 3 – Direct Potable Reuse to Penitencia WTP



# 4.2A Alt 1: Indirect Potable Reuse (IPR) to Los Gatos Ponds

## Project Components:

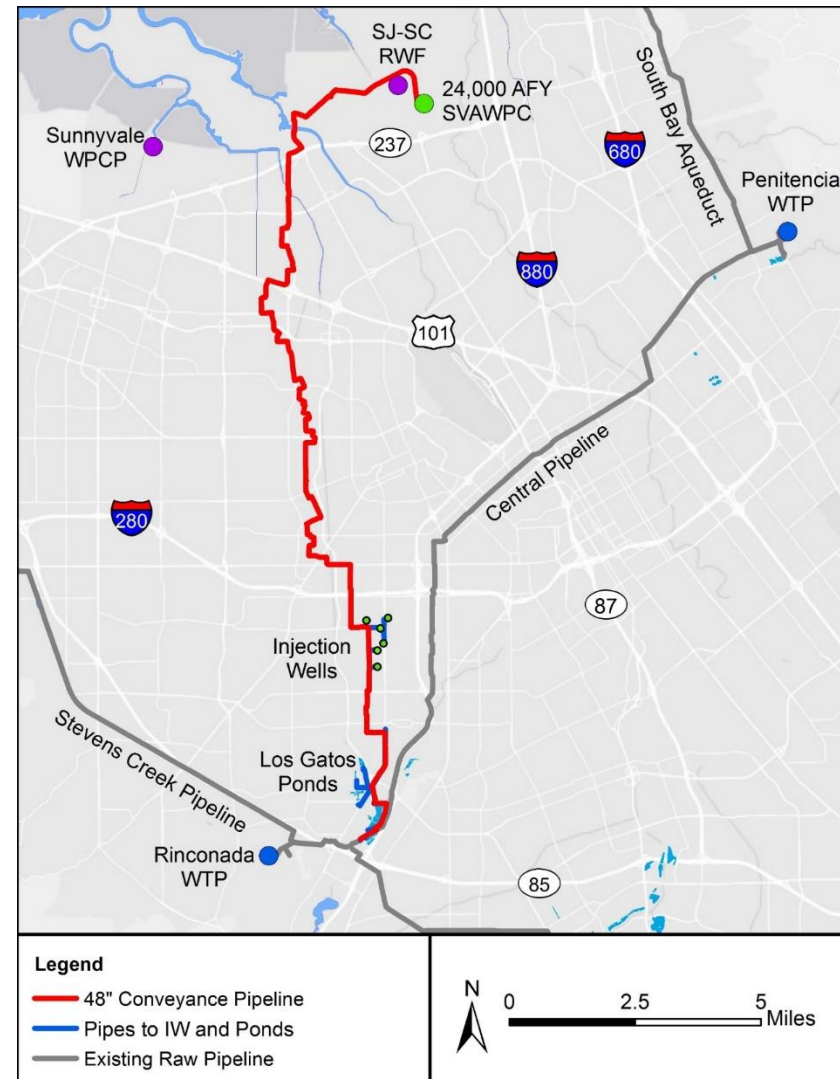
- 24,000 AFY expansion of SVAWPC
- ~18 miles of 48" pipeline
- Modifications at Los Gatos Ponds



# 4.2A Alt 2: IPR to Los Gatos Ponds and Injection Wells

## Project Components:

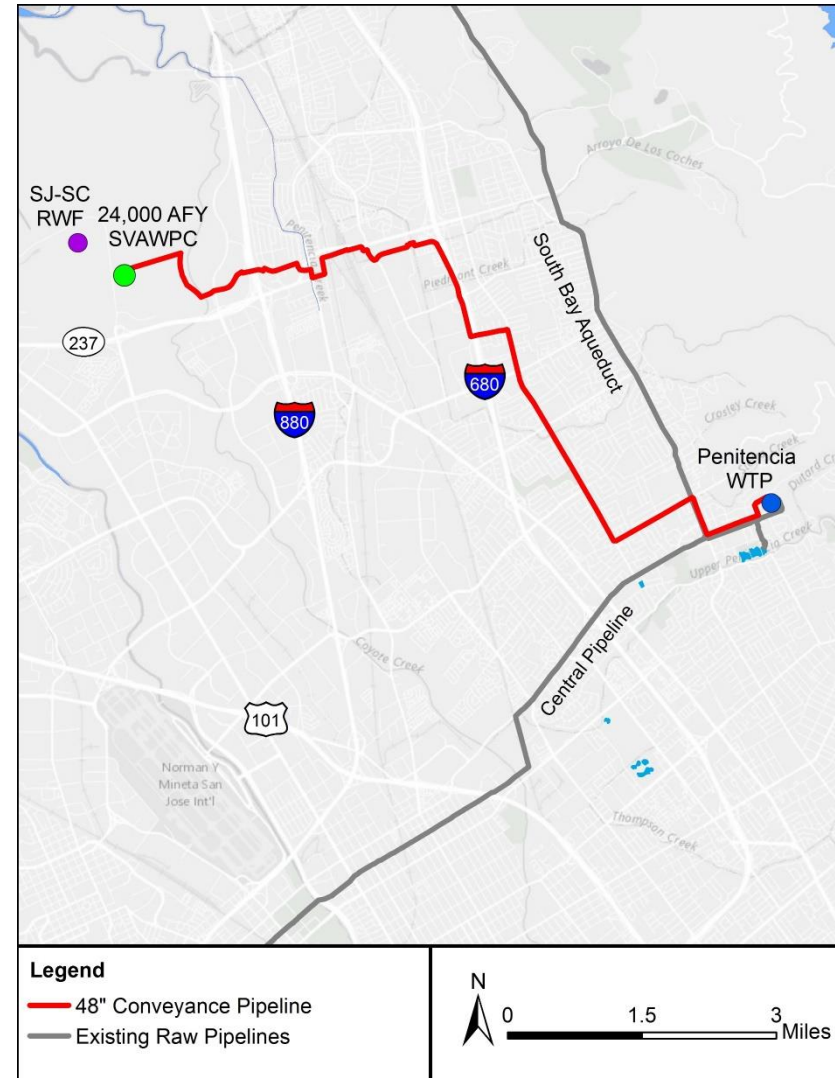
- 24,000 AFY expansion of SVAWPC
- ~18 miles of 48" pipeline
- 6 Injection Wells
- Modifications at Los Gatos Ponds



# 4.2A Alt 3: DPR to South Bay Aqueduct

## Project Components:

- 24,000 AFY expansion of SVAWPC
- Enhanced treatment and monitoring program
- Additional 3MG storage tank at expanded SVAWPC
- ~ 9 miles of 48" pipeline
- Modifications at Penitencia WTP:
  - ~ 1 mile of on-site piping
  - New 3MG tank
  - Connection to existing SBA Terminal Tank and Central Pipeline



# 4.2A Alternatives Comparison Summary

Parameter	Alt 1 - IPR Los Gatos Ponds	Alt 2 – IPR LG Ponds and Injection wells	Alt 3 - DPR South Bay Aqueduct
Production Capacity (AFY)	24,000	24,000 <sup>a</sup>	24,000
80% Utilization Yield (AFY)	19,200	19,200	19,200
<b>80% Utilization Unit Cost (\$ per AF)</b>	<b>\$2,000</b>	<b>\$2,200</b>	<b>\$2,000</b>

Notes:

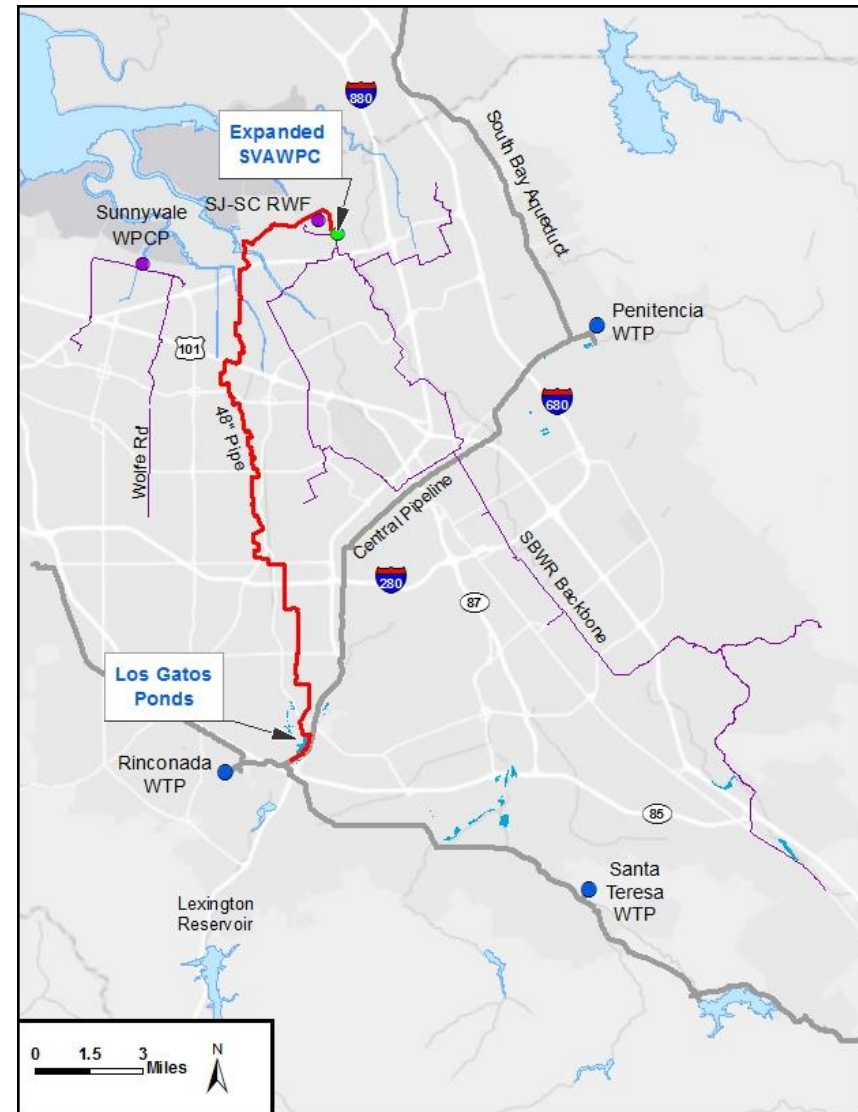
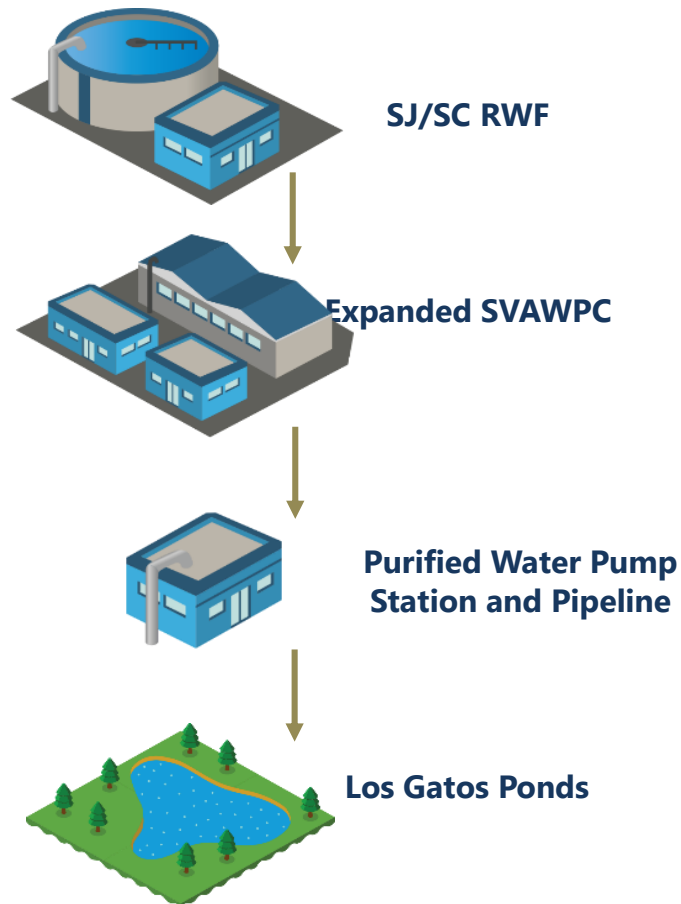
a. 6,000 AFY Injection Wells and 18,000 AFY to Los Gatos Ponds

# 4.2A Staff Recommends Alternative 1: IPR to Los Gatos Ponds

<b>Parameter</b>	<b>Alternative 1 – IPR to Los Gatos Ponds Features</b>
<b>Unit Cost (\$/AF)</b>	Among the lowest unit cost of evaluated alternatives.
<b>Expandability</b>	High expandability potential with future delivery points to injection wells; a connection with Sunnyvale/Palo Alto/Mt. View; and DPR to either Central Pipeline or Vasona Pump Station (feed to Rinconada WTP).
<b>Regulatory Certainty</b>	Regulations in place and several similar projects in operation.
<b>Implementation Timeline</b>	Timeline well established due to established regulations; no need for additional research and/or demonstration.

# 4.2A Recommended Alternative: IPR to Los Gatos Ponds

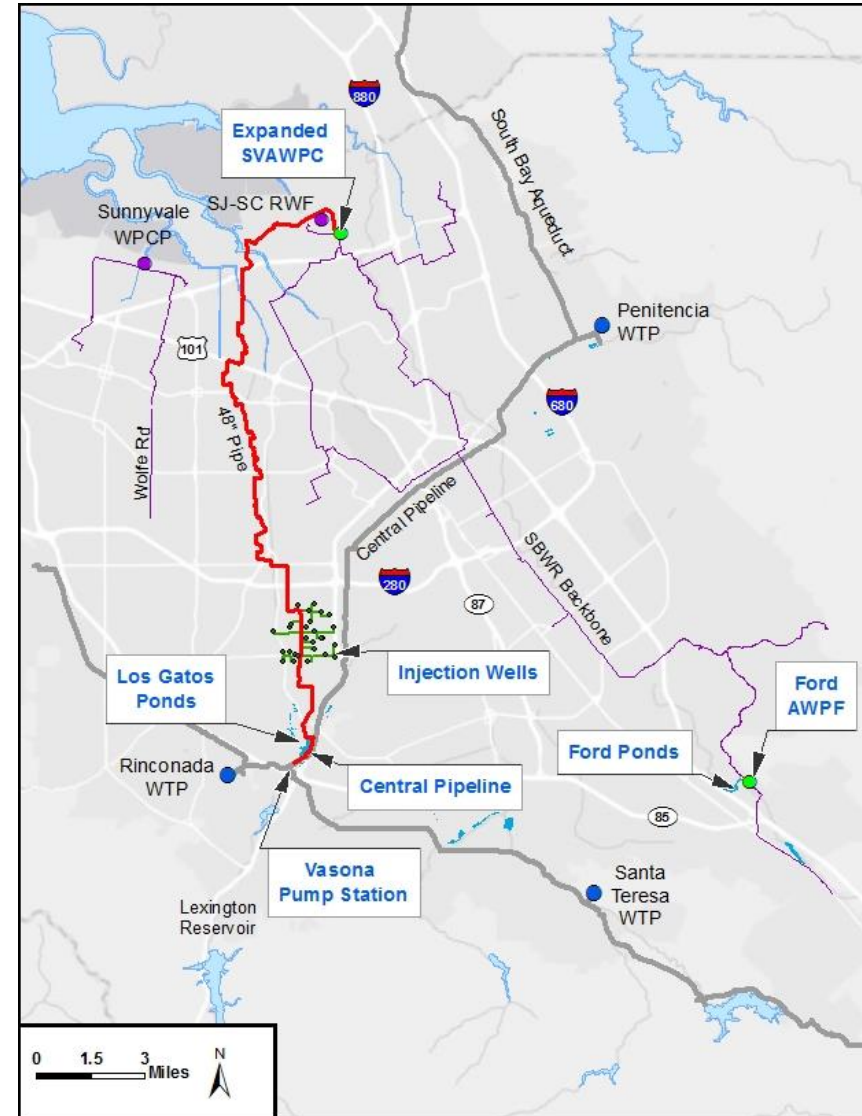
## Alt. 1 – Los Gatos Ponds IPR



# 4.2A Future Opportunities

## IPR to Los Gatos Ponds (Recommended Alternative)

- Further Expansion of SVAWPC to serve:
  - IPR for Injection Wells
  - DPR Connection to Central Pipeline or Vasona Pump Station (feed to Rinconada WTP)
- Ford Advanced Water Purification Facility (AWPF): IPR to Ford Ponds
- Countywide Water Reuse Master Plan: System integration opportunities for cities of San Jose, Sunnyvale, and Palo Alto/Mountain View.



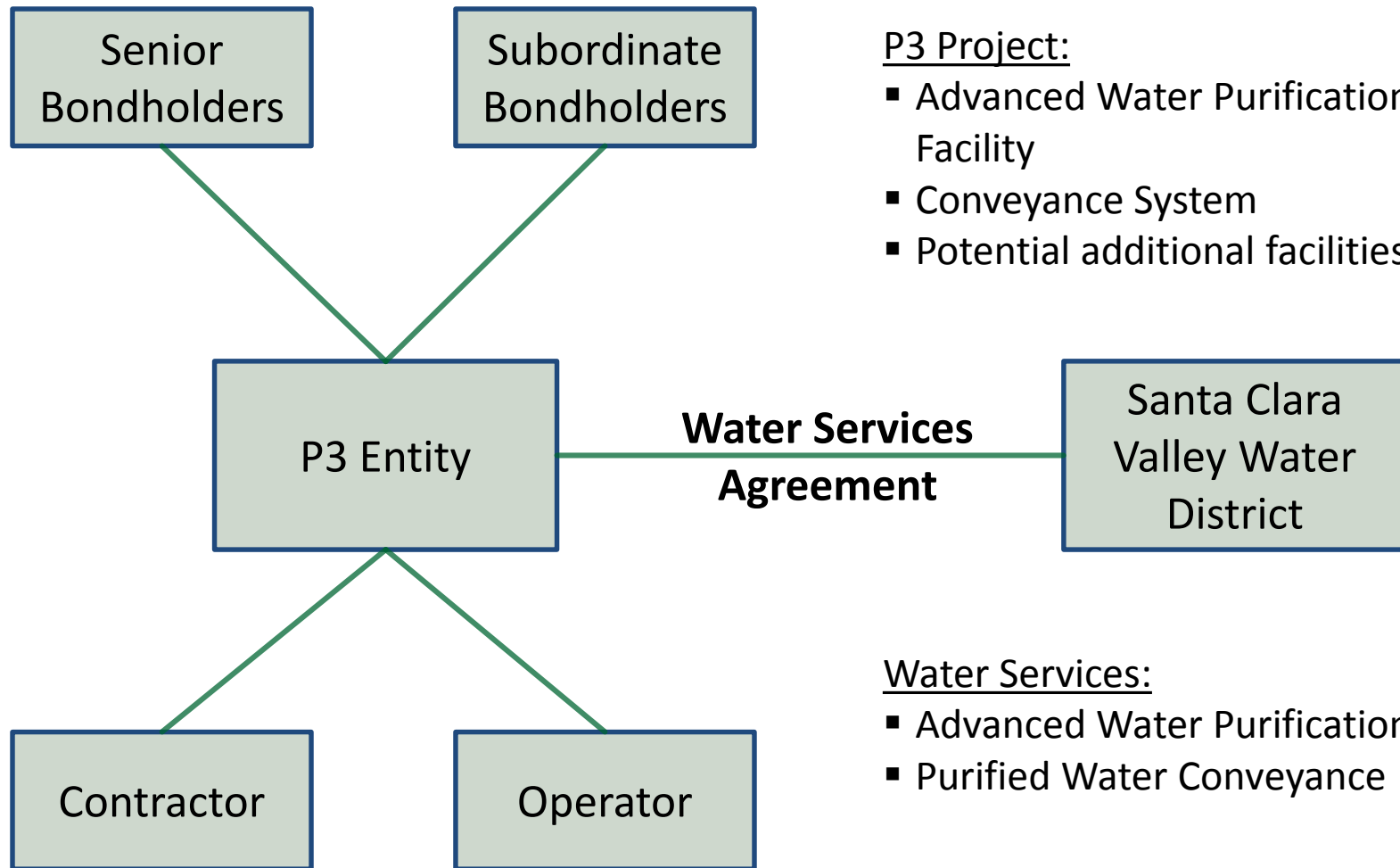




## 4.2B P3 Implementation - Next Steps



# 4.2B P3 Overview



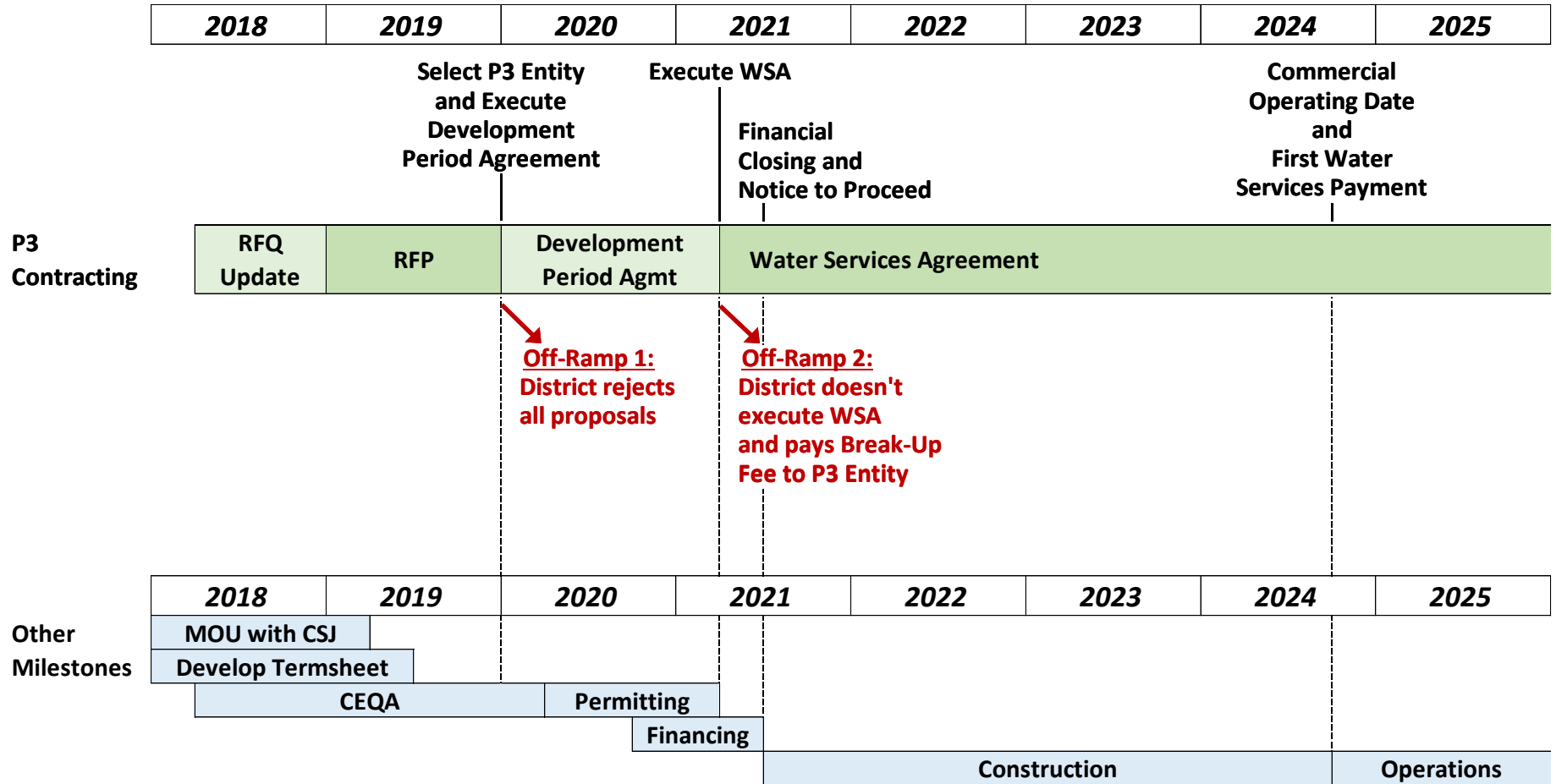
## P3 Project:

- Advanced Water Purification Facility
- Conveyance System
- Potential additional facilities

## Water Services:

- Advanced Water Purification
- Purified Water Conveyance

# 4.2B Conceptual Timeline for P3



# 4.2B RFQ Update

	2018	2019	2020	2021	2022	2023	2024	2025
P3 Contracting	RFQ Update	RFP	Development Period Agmt	Water Services Agreement				

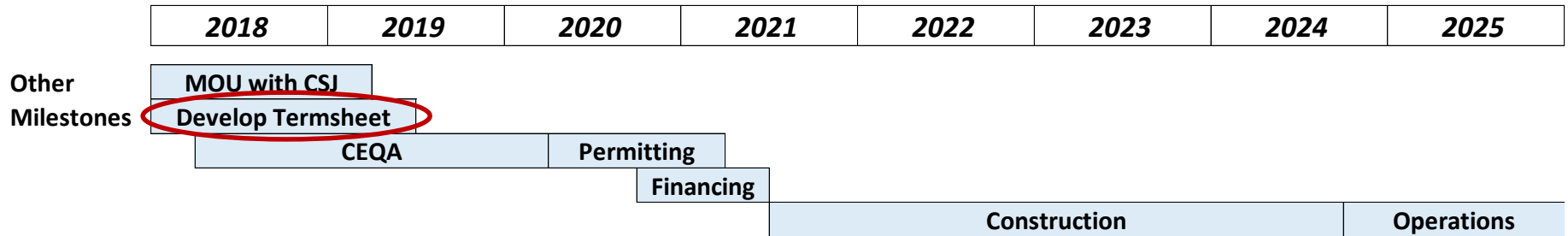
Two teams shortlisted for P3 Track:

1. Poseidon Water;
2. TableRock/Goldman/CH2MHill

## RFQ Alternatives:

- A. Keep current shortlist and proceed with new RFQ solicitation to expand shortlist for RFP process (Staff recommendation).
- B. Disregard current shortlist and proceed with new RFQ solicitation.
- C. Keep current shortlist and proceed with RFP.

# 4.2B P3 Termsheet



## Specification of Performance Requirements by the District

- Feedwater quality, volume, flow rate
- Purified water quality, volume, flow rate
- Point of delivery for purified water
- RO concentrate discharge requirements / point of discharge
- Project labor agreement (PLA) requirements

## Specification of Water Unit Pricing Structure

- Debt Service Charge component
- Fixed O&M Component (i.e. when plant is in standby mode)
- Variable O&M Component (i.e. when plant is producing purified water)

## Risk Transfer Components

# 4.2B Development Period Agreement

	2018	2019	2020	2021	2022	2023	2024	2025
P3 Contracting	RFQ Update	RFP	Development Period Agmt	Water Services Agreement				

- Covers undertakings of the parties during CEQA documentation and permitting
- Grants the successful P3 entity exclusive rights to negotiate the Water Services Agreement (WSA).
- Provides a break-up fee and offramp if a WSA is not approved.
- Satisfies CEQA requirement that the District not approve the Project prior to completion of CEQA.
- Draft of Development Period Agreement to be included in RFP.

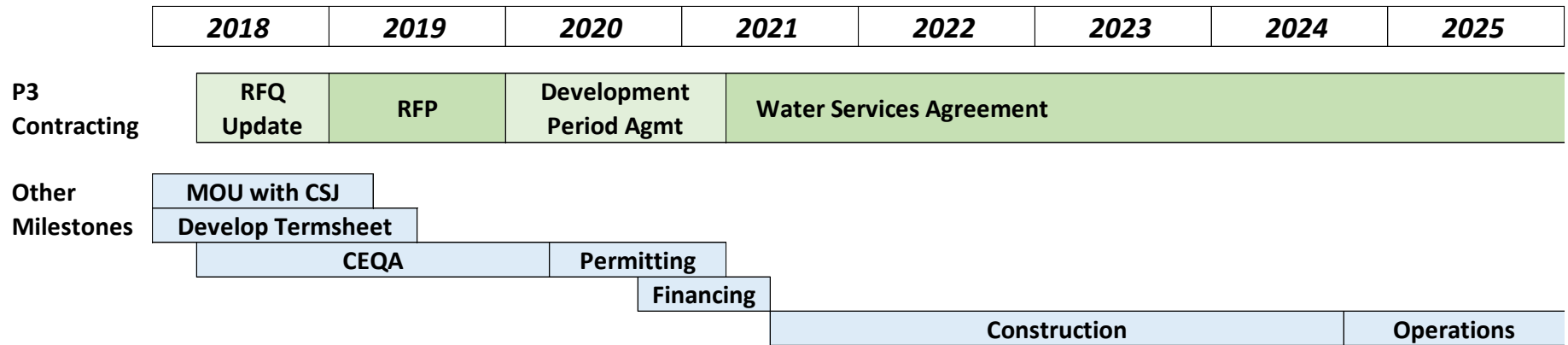
# 4.2B Water Services Agreement (WSA)

	2018	2019	2020	2021	2022	2023	2024	2025
P3 Contracting	RFQ Update	RFP	Development Period Agmt	Water Services Agreement				

- Covers undertakings of the parties during financing, construction and operations
- Meets Performance Standards specified by the District
- Conforms to revised IRS safe-harbor requirements for a “Qualified Management Contract”, thereby avoiding private use
- Provides a fixed price for purifying and conveying water for the District
- Final pricing is contingent on bond issuance following approval of the WSA by the District, and to future re-openers for shared risk items, such as uninsurable force majeure events and changes in law



# 4.2B Next Steps



- Develop termsheet: Jan. 2018 – June 2019
  - Assume 24,000 AFY purified water production at Zanker Rd.
  - Assume conveyance to Los Gatos Recharge Ponds
- Initiate CEQA work using termsheet assumptions: March 2018
  - District bears costs and risk
- Continue pursuing MOU with City of San Jose
- Initiate RFQ Update: March/April 2018



Committee: RWC  
Meeting Date: 11/15/17  
Item No.: 5  
Unclassified Manager: L. Moore  
Email: [lmoores@valleywater.org](mailto:lmoores@valleywater.org)

## COMMITTEE AGENDA MEMO

**SUBJECT:** Review 2017 Committee Workplan and Accomplishments Report, and Discussion on 2018 Committee Work Plan and Meeting Schedule.

### RECOMMENDED ACTION:

- A. Review 2017 Work Plan and Accomplishments;
- B. Authorize the Committee Chair to present 2017 Accomplishments to the Board;
- C. Identify items to carry forward to 2018 Work Plan; and
- D. Approve a 2018 Recycled Water Committee Regular Meeting Schedule.

### SUMMARY:

Under direction of the Clerk, Work Plans are used by all Board Committees to increase Committee efficiency, provide increased public notice of intended Committee discussions, and enable improved follow-up by staff. Work Plans are dynamic documents managed by Committee Chairs, and are subject to change as factors occur. Committee Work Plans also serve as Annual Committee Accomplishment Reports.

The 2017 Recycled Water Committee Annual Work Plan and Accomplishments Report is contained in Attachment 1. Staff requests the Committee review the 2017 Work Plan/Accomplishments Report and authorize the Chair to submit the Accomplishments to the full Board of Directors, upon conclusion of the Committee's final 2017 meeting.

The 2018 Recycled Water Committee Work Plan is contained in Attachment 2. Information on this document was populated by staff, as follows:

#### Proposed Meeting Dates:

In 2017, the Recycled Water Committee developed a pattern of meeting quarterly, with most (3 of 4) meetings occurring on the second Wednesdays of the month. For this reason, staff proposes a similar 2018 regular schedule, with regular meetings occurring at 12:00 p.m. on February 14, May 9, August 8, and November 14, 2018.

#### Schedule for Presentation of Materials:

Discussion topics have been populated on the proposed 2018 Work Plan from the following sources:

- Items referred to the Committee by the Board;
- Items requested by the Committee to be brought back by staff;
- Items scheduled for presentation to the full Board of Directors; and
- Items identified by staff.

**ATTACHMENT(S):**

Attachment 1: 2017 Work Plan/Accomplishments Report

Attachment 2: 2018 Work Plan

## PURPOSE AND GUIDANCE

The Recycled Water Ad Hoc Committee was enacted by the Board of Directors on January 12, 2016. The Committee’s purpose is to develop a long-term proposal for how the District can work together with other local agencies on recycled water opportunities within the district boundaries, to establish a collaborative process to facilitate policy discussion and sharing of technical information on recycled water issues. It is the role of the Recycled Water Committee to meet with the other entities (Sunnyvale, Palo Alto, CSJ SC/TPAC) in individual meetings as required and/or necessary. The Recycled Water Committee can also meet with new entities if the need arises.

The Board of Directors identified the following Issues, Challenges, Strategies and Opportunities related to Recycled Water during their October 4, 2016 Priorities and Strategic Directions Work/Study Session. As such, the Recycled Water Ad Hoc Committee, while doing its work, should seek out opportunities to address the Board’s identified issues and challenges, and support the Board’s identified strategies and opportunities, as follows:

Issues/Challenges	Strategies/Opportunities
<ul style="list-style-type: none"> <li>• Public perception</li> <li>• Governmental Relations/Water Rights</li> <li>• Funding/Delivery Method</li> </ul>	<ul style="list-style-type: none"> <li>• Expedite Purified Water Program partnering with San Jose/Santa Clara, plus look at potential opportunity with South Bay Recycled Facilities</li> <li>• Develop Partnerships with Sunnyvale, Palo Alto, Mountain View for new recycled/purified water</li> <li>• Expand South County Recycled Water partnering with SCRWA</li> </ul>

This annual work plan establishes a framework for committee discussion and action during the annual meeting schedule. The committee work plan is a dynamic document, subject to change as external and internal issues impacting the District occur and are recommended for committee discussion. Subsequently, an annual committee accomplishments report is developed based on the work plan and presented to the District Board of Directors.

## PARKING LOT

*The Parking Lot contains unscheduled items referred to the Committee by the Board of Directors, or requested to by the Committee to be brought back by staff.*

Date Requested	Requesting Body	Assigned Staff	Discussion Subject	Intended Outcome(s)
05/30/17	RWC	K. Oven	Staff to bring back information on impacts associated with sudden staff resource expansion, including number of staff needed and input from HR.	
05/30/17	RWC	C. Sun	Staff is to continue providing updates until IRS letter is complete.	

## 2017 WORK PLAN

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
11/15/17	Approval of Minutes	L. Moore	Approve Minutes	
	Expedited Purified Water Program Update, including the following responses to August 9, 2017 Committee requests: <ul style="list-style-type: none"> <li>• Cost breakdowns, per project and per acre foot, in 2017 dollar values;</li> <li>• Alternate delivery methods, including P3 with union labor;</li> <li>• Status of City SJ MOU;</li> <li>• Preliminary draft Engineer's Report evaluating DPR and IDPR; and</li> <li>• Committee request to schedule SDCWA to meet with District Board.</li> </ul>	K. Oven/J. De La Piedra	Receive information and discuss next steps	
	Update on Countywide Water Reuse (Recycled and Purified Water) Master Plan.	J. De La Piedra	Receive information and discuss next steps.	
	Update on Reverse Osmosis Concentrate Management.	J. De La Piedra	Receive information and discuss next steps.	
	Direct Potable Reuse Analysis Efforts Update.	J. De La Piedra	Receive information and discuss next steps.	
	Update on District/City of Sunnyvale Collaboration Efforts.	J. De La Piedra	Receive information and discuss next steps.	
	Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts.	J. De La Piedra	Receive information and discuss next steps.	
	Update on District/San Francisco Public Utilities Commission/Bay Area Water Supply and Conservation Agency	J. De La Piedra	Receive information and discuss next steps.	

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
11/15/17 (cont'd)	Collaboration Efforts and Feasibility Study.			
	Update on South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water.	J. De La Piedra/K. Oven	Receive information and discuss next steps.	
	Review Committee Work Plan and discuss 2018 meeting schedule.	Committee	<ul style="list-style-type: none"> <li>• Review 2017 Work Plan and Accomplishments;</li> <li>• Identify items to carry forward to 2018 Work Plan;</li> <li>• Establish 2018 Regular Meeting Dates.</li> </ul>	

## 2017 ACCOMPLISHMENTS REPORT

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
<b>02/16/17</b>	Election of Chair and Vice Chair	L. Moore	Elect Committee Officers	Elected Chair: T. Estremera Elected Vice Chair: B. Keegan
	Approval of Minutes	L. Moore	Approve Minutes	Approved as presented
	Update on Expedited Purified Water Program/Memorandum of Understanding with City of San Jose	K. Oven	Receive information and discuss next steps.	The Committee requested staff bring back information on the technical studies, P3s, and alternatives for discussion and development of a Committee recommendation to the Board for their consideration.
	Direct Potable Reuse Update.	G. Hall	Receive information and discuss next steps.	The Committee requested that staff begin the process of preparing an IRS opinion letter, in protection of tax-exempt status, and to bring back updates to the Committee until it is finalized. (5/30/17 agenda <i>Update on Private Activity Analysis</i> )
	Update on Recycled and Purified Water Expansion Efforts.	G. Hall	Receive information and discuss next steps for i) Sunnyvale, ii) Palo Alto/Mtn View, iii) SFPUC	Noted
	Grant Funding Opportunities.	G. Hall	Receive information and discuss next steps.	Noted
	Independent Advisory Panel for Potable Reuse	G. Hall	Receive information and discuss next steps.	The Committee requested that staff create more opportunities for directors to connect with the public via presentations to committees and other elected bodies; and to promote more SCVAWPC tours.
	Public Outreach	R. Callender	Receive information and discuss next steps.	Noted
	Review Committee Work Plan and Agenda Topics for next meeting		Review work plan and and identify agenda topics for next meeting.	Noted

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
05/30/17	Approval of Minutes – Feb 16, 2017	L. Moore	Approve Minutes	Approved
	Expedited Purified Water Program Update.	K. Oven	Receive info on staff follow-ups from 3/27/17 Work Study on Expedited Purified Water Program, and 2/16/17 Committee request for info on studies, P3s, and alternatives, and provide direction to staff.	Noted and gave feedback: <ul style="list-style-type: none"> <li>Staff to bring back information on large loans from the State Revolving Funds</li> <li>Committee wants to consider extent of the impacts of a sudden staff resource expansion; the number of staff needed, would like to get HR input on the various impacts.</li> <li>MOU with San Jose – re-prioritize.</li> <li>Staff is to schedule meeting of San Diego County Water Authority with District Board</li> </ul>
	Direct Potable Reuse Analysis Efforts Update.	G. Hall	Receive information and discuss next steps.	Noted.
	Update on Private Activity Analysis	D. Taylor	Receive information and discuss next steps, and receive information in response to 2/16/17 request for information on IRS Opinion Letter in Protection of Tax-Exempt Status	Noted and continued to next meeting.
	Legislative Update on Assembly Bill 574 (Quirk) Potable Reuse and Senate Bill 740 (Wiener) Onsite Treated Water.	R. Callender	Receive updates on recycled water legislation and discuss next steps.	Noted
	Update on Countywide Recycled and Purified Water Master Plan	G. Hall	Receive information and discuss next steps.	Noted.
	Update on Cities Palo Alto/Mtn View, SFPUC/BAWSCA Collaboration Efforts.	G. Hall	Recommend that the Board authorize the CEO to execute MOUs between District and City of Palo Alto; and receive information and discuss next steps.	Approved.
	Update on Sunnyvale MOU	G. Hall	Receive information and discuss next steps.	Noted



<b>5/30/17 (cont'd)</b>	Update on South County Efforts	G. Hall / K. Oven	Receive information and discuss next steps.	Noted
	Update on Outreach Opportunities for District Board to Engage with Public and Elected Body Committees on Recycled/Purified Water Expansion	R. Callender	Receive information and discuss next steps.	Noted
	Review Committee Work Plan	Committee	Confirm Agenda Topics for Next Meeting(s)	Requested that staff clearly indicate topics of public interest in the agenda subject. <i>Expanded format used beginning 8/9/17 meeting.</i>
	Next Meeting Date	Committee	Confirm/Adjust Next Meeting Date(s)	August 9, 2017

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
08/09/17	May 30, 2017 Minutes	L. Moore	Approve the Minutes	Approved
	<p>Expedited Purified Water Program Update, including:</p> <ul style="list-style-type: none"> <li>• Staff Response to Committee Concern Re: Progress of City SJ/District MOU Negotiations; and</li> <li>• Update on Expedited Purified Water Program - Status of Studies, Analysis of Financing Options, Private Activity, and Purified Water Planning</li> </ul>	K. Oven/J. De La Piedra	Receive information and discuss next steps.	<p>Committee requested that staff:</p> <ul style="list-style-type: none"> <li>• Bring back detailed cost breakdowns, per project and per acre foot, in 2017 dollar values;</li> <li>• Include in next Program Update, alternate delivery methods, including P3 with union labor;</li> <li>• Schedule meeting of Joint RWPAC prior to Nov 2017, to discuss next steps on MOU;</li> <li>• Investigate feasibility of completing/partially completing and publicly posting preliminary draft Engineer's Report that evaluates DPR and IDPR, prior to next meeting; and</li> <li>• Follow up on Committee request to schedule SDCWA to meet with District Board.</li> </ul>
	Update on Countywide Water Reuse (Recycled and Purified Water) Master Plan.	J. De La Piedra	Receive information and discuss next steps.	Noted.
	<p>Update on Reverse Osmosis Concentrate Management, including:</p> <ul style="list-style-type: none"> <li>• Report on Reverse Osmosis Concentrate Workshop, and</li> <li>• Project Milestones and Timeline.</li> </ul>	J. De La Piedra	Receive information and discuss next steps.	Noted
	<p>Direct Potable Reuse Analysis Efforts Update, including:</p> <ul style="list-style-type: none"> <li>• Pass and Fail Analysis;</li> <li>• Permitting; and</li> <li>• Cost Comparison Between Indirect Potable Reuse and Direct Potable/Indirect Potable Reuse Options.</li> </ul>	J. De La Piedra	Receive information and discuss next steps.	Noted.

	Update on District/City of Sunnyvale Collaboration Efforts, including: <ul style="list-style-type: none"> <li>• City Sunnyvale MOU; and</li> <li>• Wolfe Rd Recycled Water Facilities Project Opening Celebration.</li> </ul>	J. De La Piedra	Receive information and discuss next steps.	Noted.
	Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts, including: <ul style="list-style-type: none"> <li>• District/City PA MOU;</li> <li>• District/City Mtn View MOU;</li> <li>• City PA MOU; and</li> <li>• NW County Recycled Water Strategic Plan.</li> </ul>	J. De La Piedra	Receive information and discuss next steps.	Noted.
	Update on District/San Francisco Public Utilities Commission/Bay Area Water Supply and Conservation Agency Collaboration Efforts and Feasibility Study.	J. De La Piedra	Receive information and discuss next steps.	Noted.
	Update on So. County Efforts and District/City Gilroy Agmts for Expansion of Recycled Water in Two New Developments.	K. Oven/J. De La Piedra	Receive information and discuss next steps.	Noted.
	Review Committee Work Plan	Committee	Confirm Agenda Topics for Next Meeting(s).	Next Mtg Scheduled 12:00 p.m. 11/8/17

## PURPOSE AND GUIDANCE

The Recycled Water Ad Hoc Committee was enacted by the Board of Directors on January 12, 2016. The Committee’s purpose is to develop a long-term proposal for how the District can work together with other local agencies on recycled water opportunities within the district boundaries, to establish a collaborative process to facilitate policy discussion and sharing of technical information on recycled water issues. It is the role of the Recycled Water Committee to meet with the other entities (Sunnyvale, Palo Alto, CSJ SC/TPAC) in individual meetings as required and/or necessary. The Recycled Water Committee can also meet with new entities if the need arises.

The Board of Directors identified the following Issues, Challenges, Strategies and Opportunities related to Recycled Water during their October 4, 2016 Priorities and Strategic Directions Work/Study Session. As such, the Recycled Water Ad Hoc Committee, while doing its work, should seek out opportunities to address the Board’s identified issues and challenges, and support the Board’s identified strategies and opportunities, as follows:

Issues/Challenges	Strategies/Opportunities
<ul style="list-style-type: none"> <li>• Public perception</li> <li>• Governmental Relations/Water Rights</li> <li>• Funding/Delivery Method</li> </ul>	<ul style="list-style-type: none"> <li>• Expedite Purified Water Program partnering with San Jose/Santa Clara, plus look at potential opportunity with South Bay Recycled Facilities</li> <li>• Develop Partnerships with Sunnyvale, Palo Alto, Mountain View for new recycled/purified water</li> <li>• Expand South County Recycled Water partnering with SCRWA</li> </ul>

This annual work plan establishes a framework for committee discussion and action during the annual meeting schedule. The committee work plan is a dynamic document, subject to change as external and internal issues impacting the District occur and are recommended for committee discussion. Subsequently, an annual committee accomplishments report is developed based on the work plan and presented to the District Board of Directors.

# PARKING LOT

*The Parking Lot contains unscheduled items referred to the Committee by the Board of Directors, or requested to by the Committee to be brought back by staff.*

Date Requested	Requesting Body	Assigned Staff	Discussion Subject	Intended Outcome(s)
05/30/17	RWC	K. Oven	Staff to bring back information on impacts associated with sudden staff resource expansion, including number of staff needed and input from HR.	Receive information and discuss next steps.
05/30/17	RWC	C. Sun	Staff is to continue providing updates until IRS letter is complete.	

## 2018 WORK PLAN

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
02/14/18 12:00 pm	Election of 2018 Chair, Vice Chair	Committee	Consider the nomination and approve the election of 2018 Committee Chair and Vice Chair	
	Approval of Minutes	Committee	Approve Minutes	
	Expedited Purified Water Program Update	K. Oven/G. Hall	Receive information and discuss next steps on: A. Program Status B. 10/19/17 Special Joint RWPAC Meeting Feedback, Follow Up, and Outcomes; and C. 04/19/18 Regular Joint RWPAC Meeting Preparation, Planning, and Direction to Staff.	
	Update on Countywide Water Reuse (Recycled and Purified Water) Master Plan.	G. Hall	Receive information and discuss next steps on: A. Status of RFP Process and Planned Spring 2018 Board approval of Consultant Agreement.	
	Update on Reverse Osmosis Concentrate Management.	G. Hall	Receive information and discuss next steps on: A. December 2017 Planned Completion of Conceptual Alternatives Report; B. Status of August 2018 Planned Completion of Pilot Engineered-Treatment System Final Technical Memorandum and Feasibility Alternatives Report; and C. Status of December 2018 Planned Completion of Final Reverse Osmosis Concentrate Management Plan Report.	
	Direct Potable Reuse Analysis Efforts Update.	G. Hall	Receive information and discuss next steps on: A. Staff Evaluation and Analysis of different SWP and Purified Water	

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
02/14/18 12:00 pm (Cont'd)			blend scenarios for PWTP and RWTP; B. Status and/or Feedback on National Water Research Institute White Paper "Implementation of Direct Potable Reuse: An Analysis for California Water Utilities."	
	Update on District/City of Sunnyvale Collaboration Efforts.	G. Hall	Receive information and discuss next steps on: A. Status of MOU Negotiations; B. Status of Wolfe Road Recycled Water Project Opening Celebration	
	Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts.	G. Hall	Receive information and discuss next steps on: A. January/February 2018 Joint RWAC w/City Palo Alto Meeting Feedback, Follow Up, and Outcomes; B. Consultant Completion of AWPS Design; and C. Status of Northwest County Recycled Water Strategic Plan.	
	Update on District/SFPUC/BAWSCA Collaboration Efforts and Feasibility Study.	G. Hall	Receive information and discuss next steps on: A. Completion of first phase of analysis; and B. Discussion on future decision on proceeding with additional work.	
	Update on South County Recycled Water Projects and District/City of Gilroy Agreements.	G. Hall/K. Oven	Receive information and discuss next steps on: A. TBD	
	Review Committee Work Plan and discuss 2018 meeting schedule.	Committee	Review and make necessary adjustments to Committee Work Plan, and confirm next meeting discussion subjects, and confirm next meeting time and date.	

## 2017 ACCOMPLISHMENTS REPORT

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
05/09/18 12:00 pm	Approval of Minutes	Committee	Approve Minutes	
	Expedited Purified Water Program Update	K. Oven/G. Hall	Receive information and discuss next steps on: A. Program Status B. 04/19/18 Regular Joint RWPAC Meeting Feedback, Follow Up, and Outcomes; and C. Discussion of October 2018 Special Joint RWPAC Meeting and Opportunity for Direction to Staff.	
	Update on Countywide Water Reuse (Recycled and Purified Water) Master Plan.	G. Hall	Receive information and discuss next steps on: A. December 2018 Planned Completion of Draft Countywide Water Reuse Master Plan.	
	Update on Reverse Osmosis Concentrate Management.	G. Hall	Receive information and discuss next steps on: A. Status of August 2018 Planned Completion of Pilot Engineered-Treatment System Final Technical Memorandum and Feasibility Alternatives Report; and B. Status of December 2018 Planned Completion of Final Reverse Osmosis Concentrate Management Plan Report.	
	Direct Potable Reuse Analysis Efforts Update.	G. Hall	Receive information and discuss next steps on: A. <b>TBD</b>	
	Update on District/City of Sunnyvale Collaboration Efforts.	G. Hall	Receive information and discuss next steps on: A. <b>TBD</b>	



MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
05/09/18 12:00 pm (Cont'd)	Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts.	G. Hall	Receive information and discuss next steps on: A. Status of Northwest County Recycled Water Strategic Plan.	
	Update on District/SFPUC/BAWSCA Collaboration Efforts and Feasibility Study.	G. Hall	Receive information and discuss next steps on: A. TBD	
	Update on South County Recycled Water Projects and District/City of Gilroy Agreements.	G. Hall/K. Oven	Receive information and discuss next steps on: A. TBD	
	Review Committee Work Plan and discuss 2018 meeting schedule.	Committee	Review and make necessary adjustments to Committee Work Plan, and confirm next meeting discussion subjects, and confirm next meeting time and date.	

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
08/09/18 12:00 pm	Approval of Minutes	Committee	Approve Minutes	
	Expedited Purified Water Program Update	K. Oven/G. Hall	Receive information and discuss next steps: A. Discussion of October 2018 Special Joint RWPAC Meeting and Opportunity for Direction to Staff.	
	Update on Countywide Water Reuse (Recycled and Purified Water) Master Plan.	G. Hall	Receive information and discuss next steps on: A. Status of December 2018 Planned Completion of Draft Countywide Water Reuse Master Plan	
	Update on Reverse Osmosis Concentrate Management.	G. Hall	Receive information and discuss next steps on: A. Status of August 2018 Planned Completion of Pilot Engineered-Treatment System Final Technical Memorandum and Feasibility Alternatives Report; and B. Status of December 2018 Planned Completion of Final Reverse Osmosis Concentrate Management Plan Report.	
	Direct Potable Reuse Analysis Efforts Update.	G. Hall	Receive information and discuss next steps on: A. TBD	
	Update on District/City of Sunnyvale Collaboration Efforts.	G. Hall	Receive information and discuss next steps on: A. TBD	
	Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts.	G. Hall	Receive information and discuss next steps on: A. Status of Northwest County Recycled Water Strategic Plan.	
	Update on District/SFPUC/BAWSCA Collaboration Efforts and Feasibility Study.	G. Hall	Receive information and discuss next steps on: A. TBD	

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
08/09/18 12:00 pm (Cont'd)	Update on South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water.	G. Hall/K. Oven	Receive information and discuss next steps.	
	Review Committee Work Plan and discuss 2018 meeting schedule.	Committee	Review and make necessary adjustments to Committee Work Plan, and confirm next meeting discussion subjects, and confirm next meeting time and date.	

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
11/15/18 12:00 pm	Approval of Minutes	Committee	Approve Minutes	
	Expedited Purified Water Program Update	K. Oven/G. Hall	Receive information and discuss next steps: A. *Tentative* Discussion of October 2018 Special Joint RWPAC Meeting Feedback, Follow Up, and Outcomes.	
	Update on Countywide Water Reuse (Recycled and Purified Water) Master Plan.	G. Hall	Receive information and discuss next steps on: A. Status of December 2018 Planned Completion of Draft Countywide Water Reuse Master Plan; and B. Status of June 2019 Planned Completion of Countywide Water Reuse Master Plan.	
	Update on Reverse Osmosis Concentrate Management.	G. Hall	Receive information and discuss next steps on: A. Status of December 2018 Planned Completion of Final Reverse Osmosis Concentrate Management Plan Report.	

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
11/15/18 12:00 pm (Cont'd)	Direct Potable Reuse Analysis Efforts Update.	G. Hall	Receive information and discuss next steps on: A. TBD	
	Update on District/City of Sunnyvale Collaboration Efforts.	G. Hall	Receive information and discuss next steps on: A. TBD	
	Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts.	G. Hall	Receive information and discuss next steps on: A. Status of Northwest County Recycled Water Strategic Plan.	
	Update on District/SFPUC/BAWSCA Collaboration Efforts and Feasibility Study.	G. Hall	Receive information and discuss next steps on: A. TBD	
	Update on South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water.	G. Hall/K. Oven	Receive information and discuss next steps on: A. Status of South County Recycled Water Pipeline Short-Term Phase 1B/2A Project i. Plans, Specifications, and Authorization to Advertise for Bids; and ii. Consultant Agmt w/Mott MacDonald for Construction Mgmt Services	
	Review Committee Work Plan and discuss 2018 meeting schedule.	Committee	Review and make necessary adjustments to Committee Work Plan, and confirm next meeting discussion subjects, and confirm next meeting time and date.	