

July 28, 2017

NOTICE OF MEETING & REQUEST FOR RSVPS

Members of the Joint Recycled Water Committee:

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

And Supporting Staff Members:

Norma Camacho, Interim Chief Executive Officer
Stan Yamamoto, District Counsel
Anthony Fulcher, Sr. Assistant District Counsel
Garth Hall, Acting Chief Operating Officer, Water Utility
Rick Callender, Deputy Administrative Officer, Government Relations
Katherine Oven, Deputy Operating Officer, Water Utility Capital
Jerry De La Piedra, Acting Deputy Operating Officer, Water Supply Division
Angela Cheung, Deputy Operating Officer, Water Utility & Maint.
Hossein Ashktorab, Unit Manager, Recycled & Purified Water
Charlene Sun, Treasury and Debt Manager
Luis Jaimes, Senior Project Manager
Debra Butler, Senior Project Manager
Miguel Silva, Associate Engineer (Civil)
Henry Barrientos, Associate Engineer (Civil)
Phillippe Daniel, Contractor
Marta Lugo, Public Information Representative III
Elise Latedjou-Durand, Environmental Planner II
Toni Vye, Staff Analyst
Lin Moore, Board Admin. Assistant II

A meeting of the Santa Clara Valley Water District Recycled Water Committee will take place at **12:00 p.m., on Wednesday, August 9, 2017**, at the Santa Clara Valley Water District, **Headquarters Building, Boardroom**, 5700 Almaden Expressway, San Jose, California.

Attached for your convenience is a copy of the agenda and minutes of previous meetings. Additional materials associated with the meeting will be distributed at or before the meeting, in accordance with the Brown Act.

Please RSVP at your earliest convenience by contacting me at 408-630-2659, or by email to lmoore@valleywater.org.

Boxed lunches will be provided for Board members and presenting staff only, beginning at 11:30 a.m.

Regards,

Lin Moore

Lin Moore
Board Administrative Assistant II
Santa Clara Valley Water District

Office of Clerk of the Board

Enclosures

RECYCLED WATER COMMITTEE

Tony Estremera, Board Representative, Chairperson
Barbara Keegan Board Representative, Vice Chairperson
Gary Kremen, Board Representative



***AMENDED/APPENDED AGENDA
RECYCLED WATER COMMITTEE
Santa Clara Valley Water District Headquarters Boardroom
5700 Almaden Expressway, San José, CA**

**Wednesday, August 9, 2017
12:00 PM**

Time Certain:

12:00 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:** May 30, 2017.
Recommendation: Approve the minutes.
4. **Action Items:**
 - *4.1 Expedited Purified Water Program Update. (K. Oven/J. De La Piedra)
 - 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.
 - *4.2 Update on Countywide Water Reuse (Recycled and Purified Water) Master Plan. (J. De La Piedra)
Recommendation: Receive information and discuss next steps.
 - *4.3 Update on Reverse Osmosis Concentrate Management. (J. De La Piedra)
 - A. Report on Reverse Osmosis Concentrate Workshop
 - B. Project Milestones and Timeline**Recommendation:** Receive information and discuss next steps.
 - *4.4 Direct Potable Reuse Analysis Efforts Update. (J. De La Piedra)
 - 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.
 - *4.5 Update on District/City of Sunnyvale Collaboration Efforts. (J. De La Piedra)
 - 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.

(OVER)

***4.6** Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts.
(J. De La Piedra)

- 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.

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

(J. De La Piedra)

Recommendation: Receive information and discuss next steps.

***4.8** Update on South County Efforts and the District/City of Gilroy Agreements for Expansion of Recycled Water in Two New Developments. (J. De La Piedra/K. Oven)

Recommendation: Receive information and discuss next steps.

5. Review Committee Workplan and Meeting Schedule.

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:

Adjourn to next regularly scheduled meeting at 12:00 p.m., on November 8, 2017, in the Santa Clara Valley Water District Headquarters Boardroom, 5700 Almaden Expressway, San Jose, CA 95118.

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

Tuesday, May 30, 2017
12:00 P.M.

(Paragraph numbers coincide with agenda item numbers)

1. Call to Order/Roll Call.

A meeting of the Recycled Water Committee (Committee) was called to order in the Santa Clara Valley Water 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, and District 6 Director T. Estremera, Chairperson presiding, constituting a quorum of the Committee.

District 7 Director G. Kremen was absent.

Staff members in attendance were H. Ashktorab, R. Callender, A. Cheung, J. Fiedler, A. Fulcher, G. Hall, C. Hakes, B. Hopper, L. Jaimes, E. Latedjou-Durand, T. Mercado, L. Moore, L. Sangines, M. Silva, C. Sun, and D. Taylor.

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: February 16, 2017.

Recommendation: Approve the minutes.

It was moved by Director Keegan, seconded by Chairperson Estremera, and carried to approve the minutes of the February 16, 2017, meeting as presented. Director Kremen was absent.

4. Action Items:

4.1 Expedited Purified Water Program Update.

Recommendation: Receive information on staff's follow-up actions from the March 27, 2017 Work Study Session on

the Expedited Purified Water Program and provide direction to staff.

Mr. Darin Taylor, Chief Financial Officer, reviewed the information on this item, per the attached Board Agenda Memorandum and reviewed presentation materials Attachment 1, Pages 1-5; Ms. Charlene Sun, Treasury and Debt Manager, reviewed Pages 6-11; and Mr. Phillippe Daniel, Contractor, reviewed Pages 12-15.

The Committee made the following requests:

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

Mr. Stan Williams, Poseidon Water, requested that the current list of public/private partnership (P3) participants, who have previously responded with proposals and selected, be preserved while updating the Request for Qualification referred to in the presentation.

4.2 Direct Potable Reuse Analysis Efforts Update.

Recommendation: Receive information and discuss next steps.

Ms. Luisa Sangines, Senior Engineer, reviewed the information on this item, per the attached Committee Agenda Memo.

The Committee made the following request:

Staff is to bring back cost information (general scale of magnitude) between the two options (IPR and DPR/IPR combo).

4.3 Update on Private Activity Analysis.

Recommendation: Receive information on private activity analysis action plan and discuss next steps.

Ms. Sun reviewed the information on this item, per the attached Committee Agenda Memo.

The Committee noted the information without formal action.

4.4 Legislative Update on Assembly Bill 574 (Quirk) Potable Reuse and Senate Bill 740 (Wiener) Onsite Treated Water. (R. Callender)

Recommendation: Receive updates on recycled water legislation and discuss next steps.

Ms. Rachael Gibson, Program Administrator, reviewed the information on this item, per the attached Committee Agenda Memo.

The Committee noted the information without formal action.

4.5 Update on Countywide Recycled and Purified Water Master Plan.

Recommendation: Receive information and discuss next steps.

Mr. Hossein Ashktorab, Recycled and Purified Water Manager, reviewed the information on this item, per the attached Committee Agenda Memo.

The Committee noted the information without formal action.

4.6 Update on City of Palo Alto, City of Mountain View, and San Francisco Public Utilities Commission/Bay Area Water Supply and Conservation Agency Collaboration Efforts. (G. Hall)

- A. District/City of Palo Alto Memorandum of Understanding,
- B. City of Palo Alto Advanced Water Purification System Feasibility Study,
- C. Northwest County Recycled Water Strategic Plan, and
- D. San Francisco Public Utilities Commission/Bay Area Water Supply and Conservation Agency Memorandum of Understanding.

Recommendation: 1. That the Committee recommend that the District Board of Directors (Board) Authorize the Chief Executive Officer (CEO) to Execute the Memorandum of Understanding (MOU) Between the Santa Clara Valley Water District (District) and the City of Palo Alto (Palo Alto), Assessing the Feasibility of Developing Water Reuse Alternatives; and
2. Receive information and discuss next steps (related to Items 4.6B, 4.6C, and 4.6D).

Mr. Luis Jaimes, Senior Project Manager, reviewed the information on this item, per the attached Committee Agenda Memo, and noted a correction to Attachment 1, Slide 3 which should be revised to read, *MOU Approval/Execution by District Board and ~~Sunnyvale~~ Mountain View City Council.*

It was moved by Director Keegan, seconded by Chairperson Estremera, and carried, to bring before the Board the Committee's recommendation to authorize the CEO to execute the MOU between the District and the City of Palo Alto, as contained in this item.

Director Kremen was absent.

4.7 Update on Sunnyvale Memorandum of Understanding.

Recommendation: Receive information and discuss next steps.

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

The Committee noted the information without formal action.

4.8 Update on South County Efforts.

- A. Joint Water Resources Committee
- B. South County Recycled Water Pipeline Expansion

Recommendation: Receive information and discuss next steps.

Mr. Hossein Ashktorab, Recycled and Purified Water Manager, and Mr. Garth Hall, Deputy Operating Officer, reviewed the information on this item, per the attached Committee Agenda Memo.

The Committee noted the information without formal action.

4.9 Update on Outreach Opportunities for District Board of Directors to Engage with the Public and Elected Body Committees on Recycled and Purified Water Expansion Efforts.

Recommendation: Receive information and discuss next steps.

Mr. Tony Mercado, Public Information Representative II, 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.

Ms. Michelle Meredith, Deputy Clerk of the Board, review the information on this item, per the attached Committee Agenda Memo.

Director Keegan requested that staff clearly indicate topics of public interest in the agenda subject.

The Committee noted the information without formal action.

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

Ms. Lin Moore, Board Administrative Assistant II, reviewed the following Committee requests:

- Staff is to bring back information on large loans from the State Revolving Fund;
- Staff is to gather information on the extent of the impact of staff resource expansion and receive HR input;
- Staff is to agendaize a meeting with the San Diego County Water Authority on a late August 2017 Board Meeting, and
- Staff is to agendaize on the next Board Work Study Session, a discussion on priorities, evaluating risk, accomplishments, etc. of the Expedited Purified Water Program.

7. Adjourn:

Adjourn to next regularly scheduled meeting at 12:00 p.m., on August 9, 2017, in the Santa Clara Valley Water District Headquarters Boardroom, 5700 Almaden Expressway, San Jose, CA 95118.

Chairperson Estremera adjourned the meeting at 1:45 p.m. to the next regularly scheduled meeting at 12:00 p.m. on August 9, 2017, at Santa Clara Valley Water District Headquarters Boardroom, 5700 Almaden Expressway, San Jose, California.

Respectfully submitted,

Lin Moore
Recycled Water Committee Clerk

Approved:

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Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Agenda Item No.: 4.1
Unclassified
Manager: K. Oven
Email: Koven@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: 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

RECOMMENDED ACTION:

Receive information and discuss next steps.

SUMMARY:

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

At the May 30, 2017, Recycled Water Committee (Committee) Meeting, the Committee raised some questions about the Expedited Purified Water Program (Program) implementation timeline and possible delays due to the lack of a completed Program Memorandum of Understanding (MOU) with the City of San José (CSJ). The Committee noted that the District Board must act on several critical decisions in the near future (additional reservoir storage capacity options, the CalWater Fix, other capital investments). The Committee questioned whether the MOU with CSJ may drop in priority due to its unresolved issues; due to the possibility of water reuse MOUs being developed with other cities in the County; or due to the Board's necessary attention to other critical matters.

A February 15, 2017, letter from CSJ to the Committee (Attachment 1) outlined several planning-level issues requiring resolution prior to formalizing an MOU with the District for the Program. The key issues identified at the time were:

- Availability of treated wastewater for expanding potable reuse given drops in raw wastewater inflows to the Regional Wastewater Facility (RWF) and further potential impacts from new conservation measures;
- A concern about the District discharging reverse osmosis (RO) concentrate from an expanded purification facility via the RWF outfall without thorough consideration and evaluation of other RO concentrate management options that had been identified in the 2014 South Bay Water Recycling Master Plan; and
- Funding for city staff to review deliverables associated with the above-described issues.

Staff's progress to address these and other water-reuse issues that will impact the development and timeline of the Program are summarized as follows:

SUBJECT: 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

08/09/2017

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

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

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

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

Status of Consultant Agreements/Studies for Program Development

On March 12, 2015, the Board directed staff to proceed with exploring the potential to expedite the expansion of purified water production for the purposes of recharging the groundwater basin to reduce the danger of subsidence from a multi-year drought. On April 28, 2015, the Board approved proceeding with four single-source consultant agreements and amending two existing agreements to provide planning support to the Program at an aggregate not-to-exceed cost of \$10,000,000.

As Program development continued through 2015 and 2016, staff recommended, and the Board approved, additional consultant agreements for Program support that had been developed through competitive selection processes.

Attachment 2 presents more details regarding the consultant services, not-to-exceed fees, and work products prepared or completed to date for all Program-related consultant agreements authorized or approved by the Board in 2015 and 2016. The following are key determinations and deliverables from the technical support studies to date:

1. Purified water production of 24,000 acre-feet per year (AFY) would have an annual utilization rate of 75% for the range of historical hydrologic conditions;
2. Travel times for purified water recharged at the Los Gatos Recharge Ponds or at the injection well sites would meet regulatory requirements;
3. There is a low potential for purified water to dissolve naturally-occurring metals (arsenic and hexavalent chromium) in soil;

SUBJECT: 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

08/09/2017

- 4. Toxicity and dilution studies indicate that increased RO concentrate volumes from an expanded purification facility on Zanker Road, if discharged via the Regional Wastewater Facility outfall, would not impact NPDES compliance issues; and
- 5. Purified water would require some water quality conditioning prior to being released for indirect or direct potable reuse.

A total of \$4.7M in fees was negotiated for four single-source agreements and three amendments. To date, \$3.1M (66%) has been expended. A total of \$9.6M in fees was negotiated for four consultant agreements procured through a competitive selection process. To date, \$4.8M (47%) has been expended. A key remaining deliverable from these technical and support studies is the preparation of a proposed Program Plan, anticipated to be completed in late fall 2017.

Another effort for Program planning was the installation of monitoring wells to support dissolution testing, provide baseline water level and water quality data, and potentially serve as compliance wells for indirect potable reuse. Five monitoring wells were installed at John D. Morgan Park in early 2017 through a public works contract. The construction cost of this effort was \$0.6 million.

Analysis of Financing Options

Several options have been considered for financing the Program: tax-exempt bonds; Water Infrastructure Finance and Innovation Act (WIFIA – a new federal credit program); State Revolving Fund (SRF) and private financing (i.e., could include a mix of private activity bonds, WIFIA, SRF and private funds). A summary of the pros and cons of each approach is included in staff's PowerPoint presentation (Attachment 3).

Private Activity Analysis Update

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

There would be a private activity impact if purified water will be used for raw water augmentation at the District's conventional water treatment plants (direct potable reuse, DPR). District staff is currently working with bond and tax counsel to prepare a draft Private Letter Ruling request to the IRS to seek guidance on resolving the private activity issues related to DPR. As part of the recently executed Master Funding Agreement with CSJ, District staff will collaborate with and fund CSJ attorneys and their bond and tax counsel to develop and finalize the Private Letter before final submission to the IRS. The timeline for each step of this analysis is included in staff's PowerPoint presentation (Attachment 3).

Summary

Based on staff and consultants' work to date, several key aspects of the Program have been determined:

- 1. The District needs about 24,000 AFY of purified water by 2025 to satisfy the draft 2017 Water Supply Master Plan provision for baseline supply.
- 2. The anticipated annual utilization rate of purified water for indirect potable reuse is approximately 75%.
- 3. Purified water recharged to the groundwater basin has a very low potential of leaching naturally-occurring metals from the soil.

SUBJECT: 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
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08/09/2017

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

Resolution of the key issues is anticipated by the end of calendar year 2018. The District will then be able to proceed with the design-environmental documentation-permitting-construction phases of the Program. This schedule is sufficient for meeting the 2025 target date of 24,000 AFY of potable reuse set forth in staff's 2017 Water Supply Master Plan Update.

ATTACHMENT(S):

- Attachment 1: February 15, 2017 Letter from City of San Jose to the Joint Recycled Water Committee
- Attachment 2: Update on Program-Related Consultant Services and Outcomes
- Attachment 3: PowerPoint Presentation

February 15, 2017

Santa Clara Valley Water District
Joint Recycled Water Committee Members
5750 Almaden Expressway
San Jose, CA 95118

Re: Indirect Potable Reuse

Dear Committee Chair Estremera, Committee Vice Chair Kremen, and Committee Member Keegan:

In continuation of our collaboration on the Expedited Purified Water Program we appreciate the opportunity to review a draft of your memo to the Recycled Water Committee. The memo outlines four key issues that need to be resolved to develop a Memorandum of Understanding (MOU) between the City and the District to execute an indirect potable reuse (IPR) project. The memo discusses the results of this collaboration since December 2015, addresses possible next steps and highlights the need for additional time and funding to complete an MOU. We would like to take the opportunity to emphasize our interest in completing an additional preliminary analysis in order to establish an effective MOU.

To date, discussions on an MOU were conducted at a conceptual level and any substantive work was dependent on a private activity analysis to determine viability of the IPR project. This analysis was recently completed in January 2017. We were informed by the District that it only intended to pursue indirect potable reuse so the private activity analysis was limited to IPR. The MOU to be negotiated will only address IPR. Additional private analysis would be required if the District decides to pursue direct potable reuse.

The completion of the private activity analysis was essential to the City decision making process. City staff was also awaiting funding for staff to be able to work on the IPR project. As we have shared with the District before, per Proposition 218, staff funded by utility funding cannot work on projects that are related to water supply. We are currently reviewing the scope of services in the funding agreement that was sent to us on January 23, 2017 and will respond with our comments. Once the scope and funding are finalized, we look forward to working with you on the IPR project.

Key MOU issues related to RO concentrate management and regulatory compliance are also still awaiting additional analysis of alternatives from the District. Although the District staff state that RO concentrate management utilizing the RWF outfall is the most streamlined and inexpensive option, it does present the highest regulatory risk to the City and the wastewater facility and could be

detrimental to the health of the Bay. Thus, we would like to see an evaluation of alternate discharge options. The draft memo indicates that a study evaluating other discharge options will be completed in 2018. The discharge option selected will have substantive implications on the terms of the MOU, especially with regards to permit compliance and risk sharing.

In addition to the items outlined above, other District led initiatives may influence the terms of the MOU. The District is currently circulating a model ordinance for water efficient new developments. Two key components of this ordinance are the requirement for gray water systems and use of recycled water. If this ordinance was to be adopted by all the cities in our treatment plant service area, there would be changes to the quantity and quality of the effluent. The grey water on site recycling systems could materially impact the quality of the effluent; the flow could decrease substantially and alter the chemical composition of the influent and effluent. Mandatory connections to recycled water systems for indoor and outdoor use create challenges related to the available capacity of recycled water. In order for a large amount of new development to connect to recycled water, the quantity of recycled water would need to be significantly increased, thus potentially making less effluent available for IPR. The City cannot commit to a specific amount of effluent without taking the future impact of these water efficiency measures proposed by the District into consideration. We propose further analysis of the long-term impacts of this ordinance on the system's ability to meet all required demands.

We are very committed to working with the District on addressing these next steps and helping forge a path towards a sustainable water supply. We understand this project is very important for the region and look forward to being a vital partner in this endeavor. We also look forward to receiving additional information from the District in order to evaluate the most effective path forward. We take great pride in not only providing an essential service to the South Bay but also acting as stewards of the environment, specifically the South San Francisco Bay. Once all viable alternatives have been evaluated and the discharge option that provides the best value to our community is selected, we can continue to move forward on a project that promotes the well-being of our region, while protecting the environment.

We look forward to continued collaboration with you on this project. Thank you.

Sincerely,



Kerrie Romanow
Director, Environmental Services

CC: Norma Camacho

**Table 1. Status of Single-Source Consultant Agreements/Amendments
to Support the Expedited Purified Water Program Development**

Description of Work	Consultant	NTE* Fee	Expended through 5/31/17	Key Findings / Deliverables	Estimated Completion
Preliminary Program Assessment	RMC	\$1.3M	\$0.9M	<ul style="list-style-type: none"> • Identified recharge criteria, sizing, and siting locations for Ford recharge pond; developed site layout and cost estimate; • Developed injection well sizing; typical layouts; O&M criteria; and identified potential well site locations; • Identified necessary improvements to Los Gatos recharge system; • Developed pipeline alignment alternatives for purified water conveyance to Los Gatos Recharge Ponds based on District utilities and high pressure gas lines; developed alternative assessment methodology; • Performed toxicity and dilution studies to evaluate discharge of RO concentrate via the Regional Wastewater Facility outfall; results indicate anticipated volume of RO concentrate from expanded purification facility would not impact NPDES compliance issues. 	Completed June 2017
Groundwater Studies	Todd Groundwater	\$1.8M	\$0.9M	<ul style="list-style-type: none"> • Analyzed hydrogeology and regulatory limits on groundwater recharge or well injection travel time; travel time requirements met at Los Gatos recharge system and at injection well area. • Determined there is a low potential for purified water to dissolve naturally-occurring metals (arsenic and hexavalent chromium) in soil; • Determined that purified water will require conditioning to protect pipelines and prevent metals' mobilization. 	January 2018
Water System Operations Modeling	Maine Technology	\$0.16M	\$0.13M	<ul style="list-style-type: none"> • Modeled multiple scenarios to identify current/future groundwater basin demands for indirect potable reuse. • Determined that purified water use contingent on hydrological conditions and available groundwater storage capacity. • Optimization analyses indicate 75% utilization of purified water over range of historical hydrologic conditions. • Currently evaluating opportunities for greater annual utilization. 	October 2017
Grant Funding	Carollo	\$0.44M	\$0.14M	<ul style="list-style-type: none"> • Developed draft visioning strategy on funding opportunities for five projected potable reuse projects. • Developed multiple applications and assisted District in securing \$5.7M from the USBR WaterSmart Title XVI grant program for expansion of the South County Recycled Water System. 	Sept. 2019

**Table 1. Status of Single-Source Consultant Agreements/Amendments
to Support the Expedited Purified Water Program Development (continued)**

Description of Work	Consultant	NTE* Fee	Expended through 5/31/17	Key Findings / Deliverables	Estimated Completion
South County Master Plan Update	Amended Agreement w/ MWH Americas	\$0.15M	\$0.14M	<ul style="list-style-type: none"> • Validated/assessed market for recycled water in South County. • Evaluated additional recycled water opportunities to expand service in Gilroy and to Morgan Hill, including potable reuse. • Updated 2004 master plan recommendations and costs for build-out scenarios. 	Completed Sept. 2016
Public Outreach	Amended Agreement w/ Katz	\$0.6M	\$0.6M	<p>Assisted with community outreach through various tasks including:</p> <ul style="list-style-type: none"> • Developed presentations and training staff for Speakers Bureau; • Developed multicultural outreach plan; • Provided staff for public and private tours of the Silicon Valley Advanced Water Purification Center; • Developed stakeholder outreach plan. 	Completed June 2016
Potable Reuse Treatment Options	Amended Agreement w/ Carollo	\$0.27M	\$0.27M	The membrane bioreactor (MBR) demonstration project was intended to demonstrate how this treatment option could provide reliable pathogen removal and obtain pathogen log reduction credits (virus and protozoa) for potable reuse. The results propose a minimum log reduction credit of 2.6 for virus and 3.3 for protozoa for regulatory consideration. Final report published in June 2017.	Completed June 2017
Total for Single-Source Agreements/Amendments		\$4.7M	\$3.1M		

*Not-to Exceed

Table 2: Status of Work by Competitively-Selected Consultants to Support the Expedited Purified Water Program Development

Description of Work	Consultant	NTE* Fee	Expended through 5/31/17	Key Findings / Deliverables	Estimated Completion
Procurement Advisory Services	Public Resources Advisory Group	\$1.5M	\$0.5M	<ul style="list-style-type: none"> • Presented on Project Delivery Methods at June 2015 Board Work Study Session • Completed P3 Project Finance Program Evaluation and Legal/Financial Analysis in September 2015 • Completed P3 RFQ process in June 2016 • Drafted preliminary P3 Termsheet • Supported various meetings, workshops and analysis of P3 vs PDB 	TBD
Preliminary Engineering	RMC	\$4.36M	\$2.13M	<ul style="list-style-type: none"> • Refined Ford recharge pond size, layout, and estimated costs. • Identified preferred treatment train for the Ford Pond satellite advanced water purification facility (AWPF); prepared facility layout and estimated costs. • Evaluated surface water augmentation with purified water at Calero Reservoir; including mixing and retention time requirements, required conveyance facilities size and alignment/location, and costs. • Refined injection well hydraulic requirements, facility requirements, and potential site location layouts; evaluated property requirements and conveyance facilities; developed ranking of potential sites and cost estimates. • Performed hydraulic analyses and detailed development for the Los Gatos Recharge Pond modifications, including interconnection piping, valving, and appurtenances; selected alternative improvements and prepared cost estimate. • Evaluated alternatives, including cost estimates, for a Lexington Pipeline to convey water from Lexington Reservoir to Vasona Pump Station. • Researched existing utilities to further analyze/refine 3 alternative pipeline alignments to convey purified water from Zanker Rd. to Los Gatos Recharge Ponds; performed hydraulic analyses and developed cost estimates. • Developed facility layout for a Sunnyvale AWPF; currently developing alignments and costs alternatives to convey water from Sunnyvale's system to recharge pond areas or injection well sites. • Performed a conceptual-level assessment of infrastructure needs and costs for DPR/IPR alternative. 	December 2017

**Table 2: Status of Work by Competitively-Selected Consultants
to Support the Expedited Purified Water Program Development (continued)**

Description of Work	Consultant	NTE* Fee	Expended through 5/31/17	Key Findings / Deliverables	Estimated Completion
Project Management Services	HDR	\$2.3M	\$1.5M	<ul style="list-style-type: none"> • Framed major program decisions: supply need, potential purified water production capacity, purified water utilization and affordability. • Principal program risks for cost and schedule have been identified along with mitigation strategies. • Developed independent cost validation model. • Benefit-cost analysis has shown net benefits of various program sizes. The largest benefits are associated with 24,000 AFY baseline capacity in draft 2017 Water Supply Master Plan. • Framed environmental strategy. • Analyzed program delivery alternatives. 	March 2018
RO Concentrate Management	GHD	\$1.4M	\$0.4M	Consultant will perform a comprehensive feasibility study for reverse osmosis concentrate management options at five potential potable reuse sites in the County; first workshop was held to engage regional partners and define criteria for analysis/evaluation of options; installation of the engineered open-cell pilot wetland treatment system is complete.	November 2018
Total for Competitively-Selected Consultants		\$9.6M	\$4.5M		

*Not-to Exceed

4.1 Expedited Purified Water Program Update



4.1A. Committee Concerns re: Timing of MOU with CSJ and Program Implementation

- Master Funding Agreement will allow City staff to more fully support resolution of key issues.
- RO Concentrate Management effort to be completed by December 2018.
- Countywide Water Reuse Master Plan
 - Broader analysis of treated wastewater availability;
 - Optimal allocation between potable and non-potable reuse
 - Resolution of key issues by December 2018
- Resolution of key issues by end of 2018 sufficient to meet 2025 target of 24,000 acre-ft./yr. purified water (2017 Water Supply Master Plan Update).
- Engaging concurrently with Sunnyvale and Palo Alto/Mt. View on potable/non-potable water reuse options.

4.1B. Program Update: Status of Studies

- Seven (7) consultant agreements initiated via single-source award/amendment
 - Total \$4.7M
 - Spent \$3.1M (as of 5/31/17)
 - Most are complete.
- Four (4) consultant agreements awarded based on competitive procurement process
 - Total \$9.6M
 - Spent \$4.5M (as of 5/31/17)
- Key findings are summarized in Attachment 2.

Financing Options for PDB and P3

(Finance 70% of \$600M Project Budget)

	Progressive Design-Build Financing Options			P3 Financing Options	
	Opt A (Tax Exempt - TE)	Opt B (WIFIA + TE)	Opt C (SRF + TE)	Opt D (Private Activity Bonds + Private)	Opt E (WIFIA + PAB + Private)
30-Year Net Present Value Cost* (\$M)	360	314	285	420	352
Vs. Option A (\$M)	0	-46	-75	+61	-8
Pros	Most flexible	Lower financing cost	Lowest financing cost	Risk transfer	Risk transfer with lower financing cost
Cons	More costly	<ul style="list-style-type: none"> Higher cost to refund \$60M senior debt Insufficient loan size Higher cost to limit variable rate debt (\$5M/yr) Administrative burden 	<ul style="list-style-type: none"> Insufficient loan size Higher cost to limit variable rate debt (\$5M/yr) Administrative burden 	More costly	Risk of not securing the WIFIA loan and transfer lower cost to District

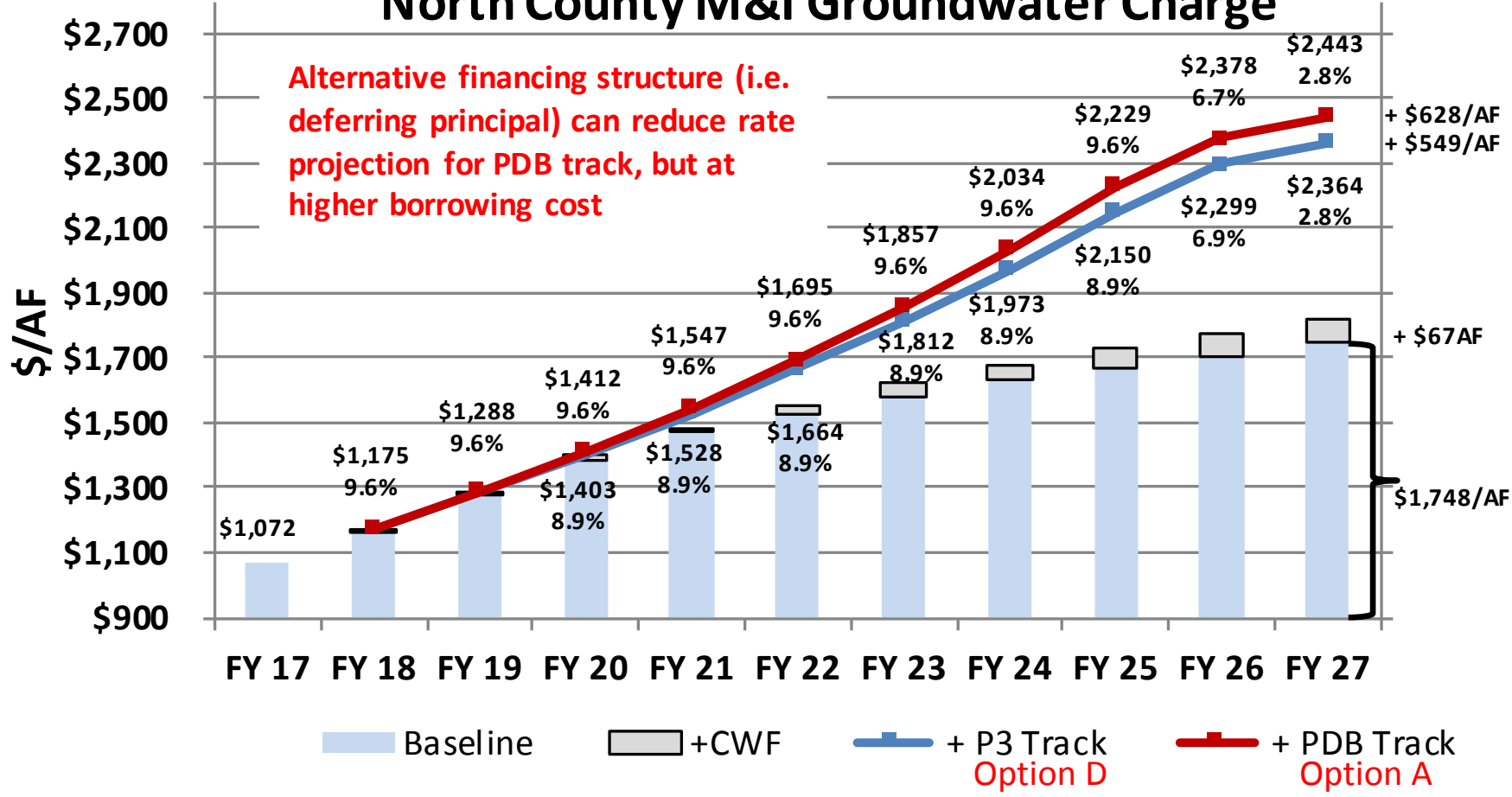
* Debt service and NPV costs based on rate scales for MMD and U.S. Treasury as of 4/5/2017.

** Minimum loan sizes for WIFIA and SRF represent the amount of loan required to generate at least \$10-15M in NPV cost savings net of all expenses.

North County Rate Impact Scenarios

North County M&I Groundwater Charge

Alternative financing structure (i.e. deferring principal) can reduce rate projection for PDB track, but at higher borrowing cost

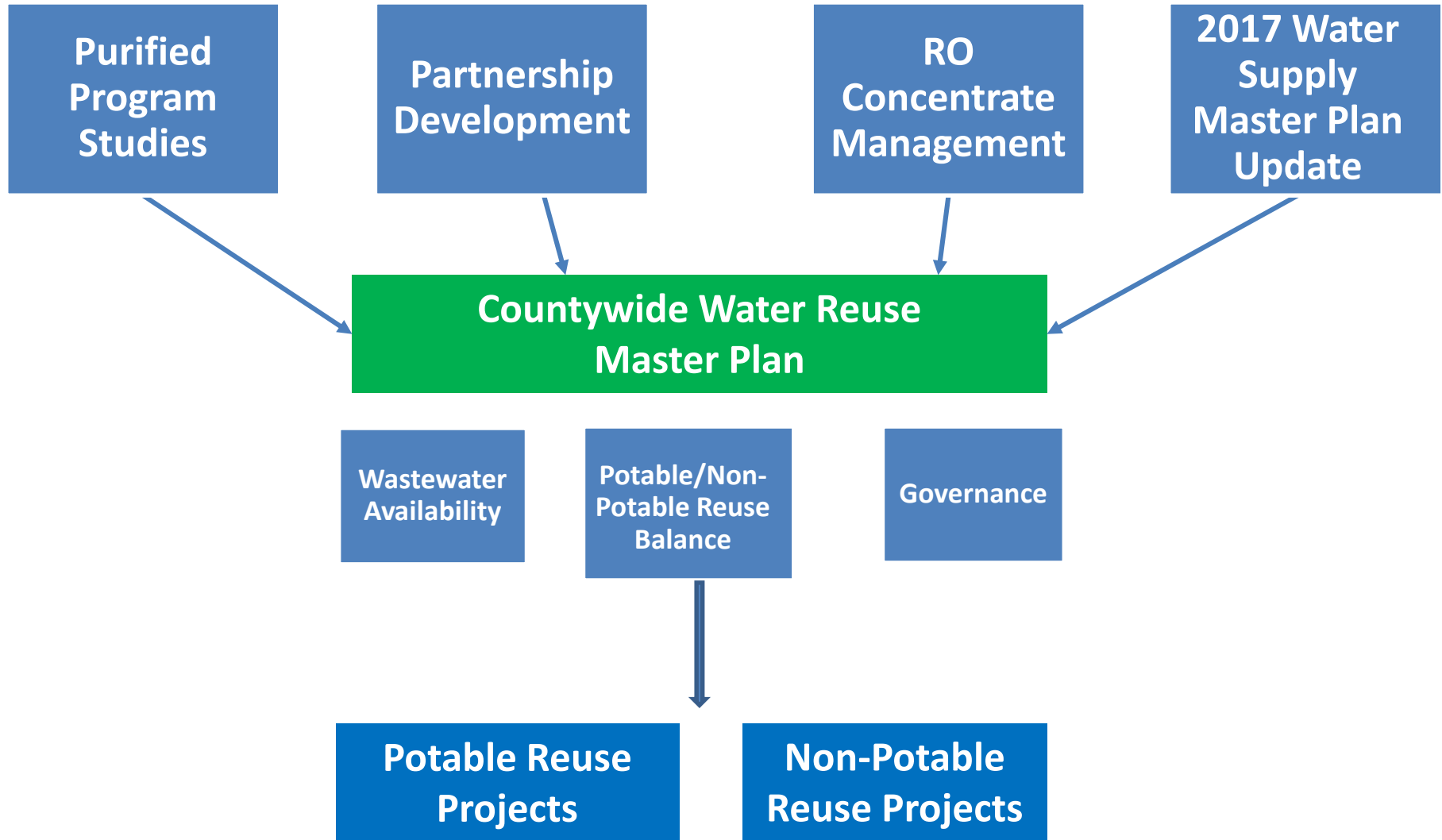


DPR Private Activity Analysis Updates

Phase	Time Estimate	Legal Cost Estimate*		Status
	(months)	Amount	Hours	
1 – Information Gathering	1	District: \$15K	District: 26	Preliminary information submitted to counsel; pending review
2 – Draft Private Letter Ruling (PLR)	1 - 2	District: \$17.5K	District: 30	Initial draft by August
3 – Collaborate with City of San Jose	2 - 3	District: \$12.5K CSJ: \$TBD	District: 20 CSJ: TBD	TBD
4 – Submit PLR to IRS and receive guidance	5 - 9	District: \$12.5K IRS: \$30K	District: 20	TBD
TOTAL	9 – 15	\$87.5K + CSJ	95+ CSJ	

***Legal costs are preliminary estimates only**

Countywide Water Reuse Master Plan Will Incorporate Findings from Multiple District Efforts



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Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Agenda Item No.: 4.2
Unclassified
Manager: J. De La Piedra
Email: GDeLaPiedra@valleywater.org

COMMITTEE AGENDA MEMO

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

RECOMMENDED ACTION:

Receive information and discuss next steps.

SUMMARY:

District staff hosted the second stakeholder workshop on January 27, 2017, that brought together leadership from local producers, wholesalers, retailers, environmental groups, and stakeholders of water reuse systems to develop a vision statement and identify key components for the Countywide Water Reuse (Recycled and Purified Water) Master Plan (Master Plan). The workshop consisted of facilitated exercises focusing on visioning, opportunities, and Master Plan framework. Participants from thirteen agencies provided feedback on ten proposed components of the Master Plan, including stakeholder engagement, governance, regional planning and integration, water treatment and contributing sewersheds, economics and funding, water quantity and quality, environmental permitting and regulations, public perception and engagement, infrastructure and land, and schedule. Attending organizations were also asked to assign a representative from their agency to participate in a Technical Working Group, which will support development of the technical efforts of the Master Plan.

Additionally, staff developed a Request for Proposal to support development of the Master Plan. The scope of services includes the integration and expansion of non-potable and potable water reuse systems in Santa Clara County, in partnership and collaboration with recycled water procedures, wholesalers, retailers, users, and other interested parties. Key outcomes of the Master Plan include:

- Amount of water available for potable and non-potable expansion
- Options for system integration
- Proposals for governance model alternatives

Staff is working through the procurement process and the selection of a consultant is expected to be completed by spring of 2018. The projected completion date for the draft Master Plan is by December 2018 with a final Master Plan by June 2019.

ATTACHMENT(S):

None.

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Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Agenda Item No.: 4.3
Unclassified
Manager: J. De La Piedra
Email: GDeLaPiedra@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: Update on Reverse Osmosis Concentrate Management
A. Report on Reverse Osmosis Concentrate Workshop
B. Project Milestones and Timeline

RECOMMENDED ACTION:

Receive information and discuss next steps.

SUMMARY:

Following the May 30, 2017 Recycled Water Committee (Committee) meeting, District staff hosted the first stakeholder Reverse Osmosis (RO) Concentrate Management workshop, titled "Project Objectives, Challenges, and Drivers," on June 14, 2017. More than 30 representatives from fourteen agencies including regulatory agencies, recycled water producers, environmental groups, and subject matter experts provided input and suggested potential criteria for evaluating and selecting RO concentrate management solutions for the county.

The workshop was divided in two parts: 1) Presentations describing project overview and project goals, regulatory framework, environmental considerations, as well as potential advanced RO concentrate management approaches, should treatment prior to discharge to the South San Francisco Bay be required; and 2) A facilitated collaborative framework discussion for the development of evaluation criteria that will be used by the project team to rank and select feasible RO concentrate management alternatives for the five potential water purification facilities within the County. The proposed criteria were organized into environmental, social, cost, engineering, and regulatory categories for inclusion in the multi-criteria analysis matrix that will be used for the ranking of conceptual and feasible alternatives, and also for final alternative selection.

The following are some of the key outcomes from the stakeholder interaction at the June 14, 2017 workshop:

- Regional Water Quality Control Board (RWQCB) and Environmental Protection Agency representatives were supportive of the project and willing to work with the District and local wastewater treatment facilities to find mutually-acceptable regulatory solutions.
- The RWQCB is willing to consider creative and unconventional permitting options
- Management of the "known unknowns" in the RO concentrate could pose a greater challenge than management of traditional pollutants.
- Important regulatory considerations include: (1) defining when a permit would be

needed (timing); and (2) an acceptable period for the permit to be in effect (duration). Achieving an acceptable balance between certainty and adaptability is important to managing risk.

- City of San José emphasized the importance of value-added benefits and possible incentives for wastewater agencies to support reduced discharges to the South San Francisco Bay.
- Palo Alto and Sunnyvale initially consider blending as a preferred strategy for RO concentrate discharge, and would be willing to discuss potential permit changes with balanced allocation of liability to each party, to accommodate the discharge of RO concentrate, including a balance of concentration-based and mass-based limitations.
- A combination of technologies or alternatives may be the preferred option to accommodate the scalability of a project at a given site (i.e., one option might be best for the first phase of implementation, and then as production is increased, additional technologies or options may be needed).
- Environmental and ecological impacts associated with RO concentrate management are very important to stakeholders.
- Wastewater and recycled water availability are critical to meeting water supply goals.
- Project scalability and modularity were deemed important considerations toward project success; adaptability to future environmental and regulatory conditions is also important.
- A regional solution could create multiple benefits and synergy with other Bay Area efforts; a centralized vs. decentralized facilities comparison was recommended.
- Costs considerations related to land acquisition, capital costs and life cycle should be addressed.

A total of four workshops are planned for this project. The next workshop is tentatively scheduled for October 17, 2017. The project was initiated in November 2016. Installation of the pilot engineered-treatment system was completed in May 2017. Key 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.

ATTACHMENT(S):

Attachment 1: PowerPoint Presentation

Attachment 2: Workshop Agenda

4.3 Update on Reverse Osmosis Concentrate Management



4.3 Workshop No. 1 Goals

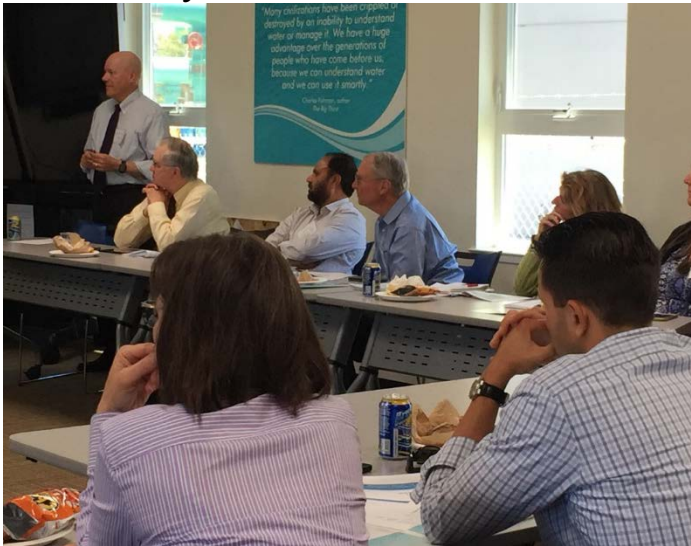
(held June 14, 2017, 12:00 pm – 4:30 pm)

- Present Project Objectives, Challenges, and Drivers;
- Engage stakeholders in a collaborative process to develop Reverse Osmosis Concentrate management solutions for future potable water reuse; and
- Invite stakeholders to provide input to support the project



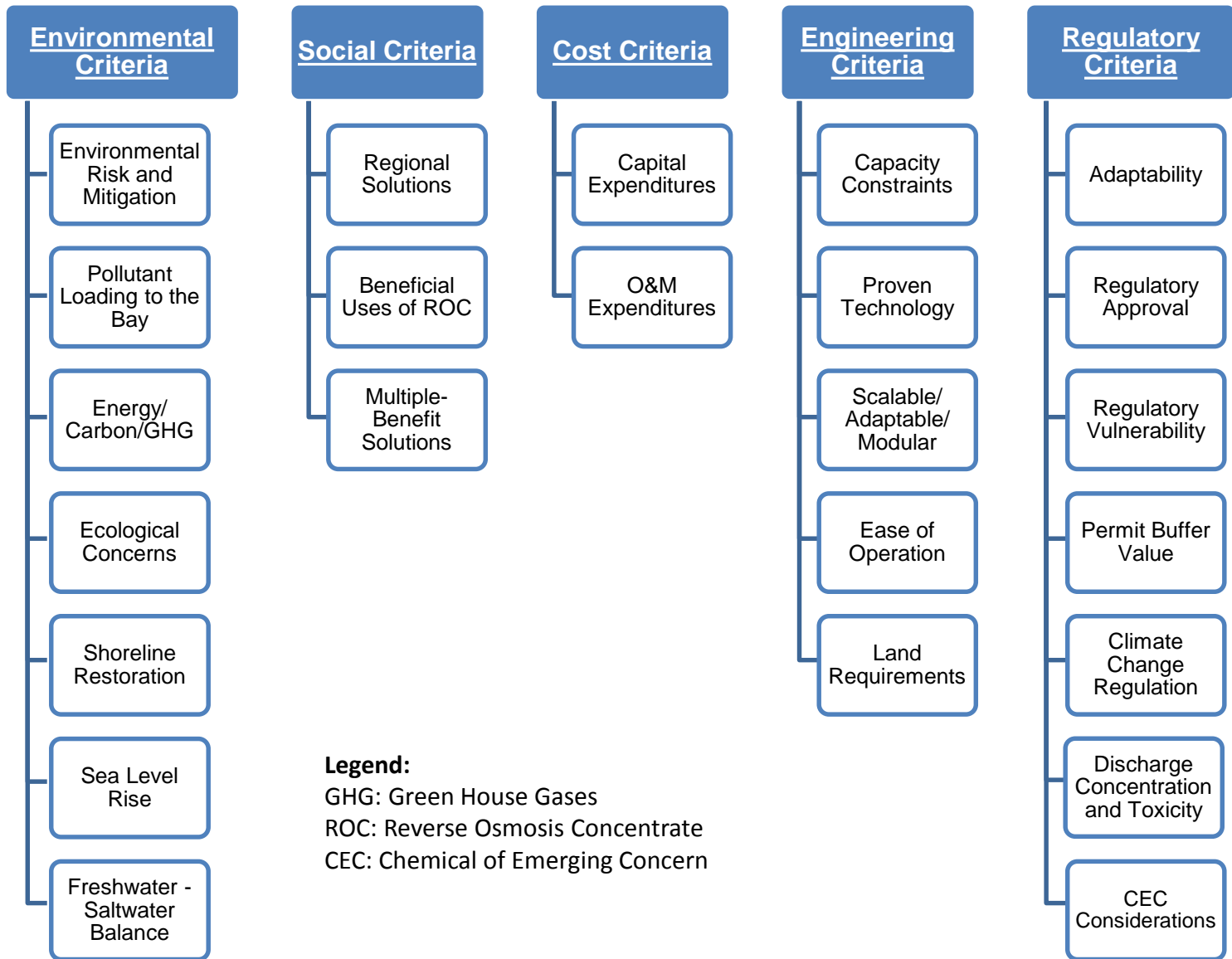
4.3 Workshop Key Outcomes

- Supportive regulatory representatives
- Potential incentives for wastewater agencies for reducing discharges to the South San Francisco Bay
- Blending is preferred strategy for some; others have concerns
- Wastewater and recycled water availability



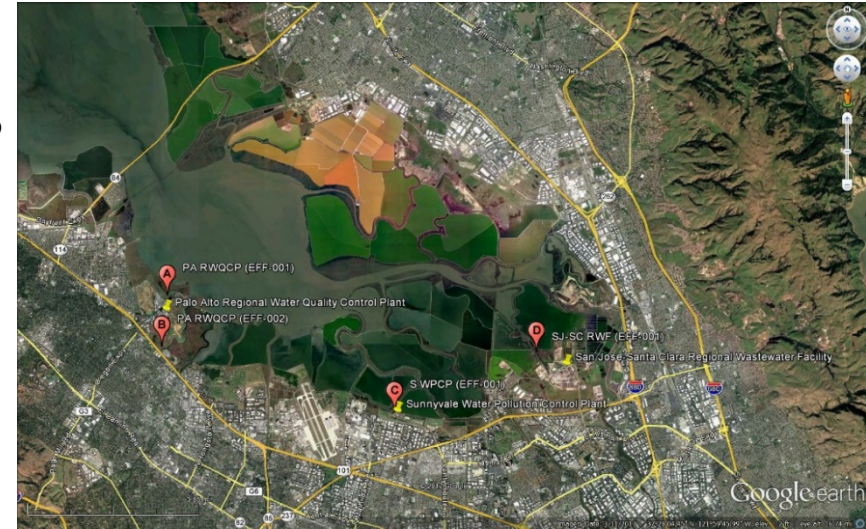
- Adaptability to future environmental and regulatory changes
- Project scalability and modularity
- Importance of environmental and ecological impacts
- Regional solution could create multiple benefits

4.3 Workshop Proposed Criteria to Identify Alternatives



4.3 Project Milestones and Timeline

- Overall project duration ~24 months
- Engineered-treatment cells pilot testing ~18 months
- Develop and recommend ROC management plans for each of the potential advanced water purification facility sites



- Develop preliminary (10%) designs for each site
- ROC Management Plan Report

4.3 Project Milestones and Timeline

Item	2016		2017												2018											
	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
PROJECT MANAGEMENT																										
PROJECT DEFINITION																										
<i>Project Definition Workshop</i>								★																		
CONCEPTUAL ALTERNATIVES																										
<i>Conceptual Alternatives Workshop</i>												★														
FEASIBLE ALTERNATIVES																										
<i>Laboratory-Scale Evaluation of AOP Treatment of ROC</i>																										
<i>Pilot-Scale Engineered Treatment System</i>																										
<i>Feasible Alternatives Workshop (Tentative)</i>																					★					
<i>Engineered Treatment Assessment & Future Vision Workshop (Tentative)</i>																						★				
STAFF-RECOMMENDED ALTERNATIVE(S)																										
ROC MANAGEMENT PLAN REPORT																										

Reverse Osmosis Concentrate Management Workshop Agenda Project Objectives, Challenges, and Drivers

Wednesday, June 14, 2017, 12:30 to 4:30 pm

Silicon Valley Advanced Water Purification Center, Visitor Center
4190 Zanker Road, San Jose, CA 95134

1. Introduction

12:30 pm

- Welcome and introductions P. Brown
 - Workshop purpose and objectives H. Ashktorab
 - Background L. Sangines
 - Project overview
 - Overview of options
-

2. Regulatory Framework and Environmental Considerations

1:00 pm

- Discharge and non-discharge environmental considerations P. Collins
-

3. Advanced Management Approaches

1:20 pm

- Focus on treatment for discharge to the Bay M. Donovan
 - AqMB approach to water quality analysis B. Goebel
 - Metals removal, nutrients removal
 - Engineered treatment wetlands
-

BREAK

1:40 pm

4. Collaborative Framework Discussion

2:00 pm

- Stakeholder interaction B. Goebel
 - Development of evaluation criteria P. Brown
-

5. Summary of Workshop and Future Actions

3:45 pm

- Summary of outcomes and action items P. Brown
 - Next steps
-

6. Adjourn

4:30 pm

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Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Agenda Item No.: 4.4
Unclassified
Manager: J. De La Piedra
Email: gdelapiedra@valleywater.org

COMMITTEE AGENDA MEMO

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

RECOMMENDED ACTION:

Receive information and discuss next steps.

SUMMARY:

A. Pass/Fail Analysis

At the May 30, 2017, Committee meeting, the Committee received information on staff's evaluation of the technical and economic feasibility of direct potable reuse (DPR) to augment raw water deliveries to the Penitencia and Rinconada Water Treatment Plants. Two technical issues pertinent to the feasibility of DPR are:

1. Treatability of raw water blended with purified water conveyed to the District's conventional water treatment plants; and
2. The Central Pipeline's capacity to convey the combined flows of the South Bay Aqueduct and purified water.

A key raw water augmentation issue is to verify if there are sufficient State Water Project (SWP) supplies to achieve a raw/purified blend ratio that is suitable for conventional water treatment at the District's plants. A search of existing literature indicates that conventional treatment is feasible with a blend of up to 50 percent purified water and raw water. Currently, the State of California has no regulations in place for DPR. However, case studies indicate that a blend of up to 50 percent of purified water with raw water was permitted by Texas regulatory agencies for raw water augmentation in Wichita Falls, Texas. Staff plans to evaluate and analyze different blend scenarios of SWP water and purified water for the Penitencia and Rinconada Water Treatment Plants.

Staff has analyzed and calculated that the Central Pipeline has adequate capacity to convey blended flows of South Bay Aqueduct and purified water to the Rinconada Water Treatment Plant. The increased flows may trigger additional pumping at Vasona Pumping Plant.

Based on a preliminary level of pass/fail analysis on technical issues, District staff has concluded that DPR implementation by the District is feasible.

B. Permitting

District staff has been working closely with its consultant to develop a permitting framework for engaging the regulatory agencies in an initial conversation about DPR implementation by the District. In addition, the District has joined a coalition of water utilities in California that are considering DPR implementation. As part of this coalition, the National Water Research Institute will coordinate and administer the development of a white paper entitled the "Implementation of Direct Potable Reuse: An Analysis for California Water Utilities." The white paper will provide a framework for the safe and consistent implementation of a range of DPR applications in California.

C. Cost Comparison between Indirect Potable Reuse (IPR) and DPR/IPR Options

District staff is working with its consultant to develop a preliminary DPR facility plan and cost estimate comparable to IPR facility plans and cost estimates that have been completed. To date, three alternative DPR pipeline alignments have been identified, and existing utility information is being obtained. The DPR facility plan and cost estimate are scheduled to be completed in October 2017.

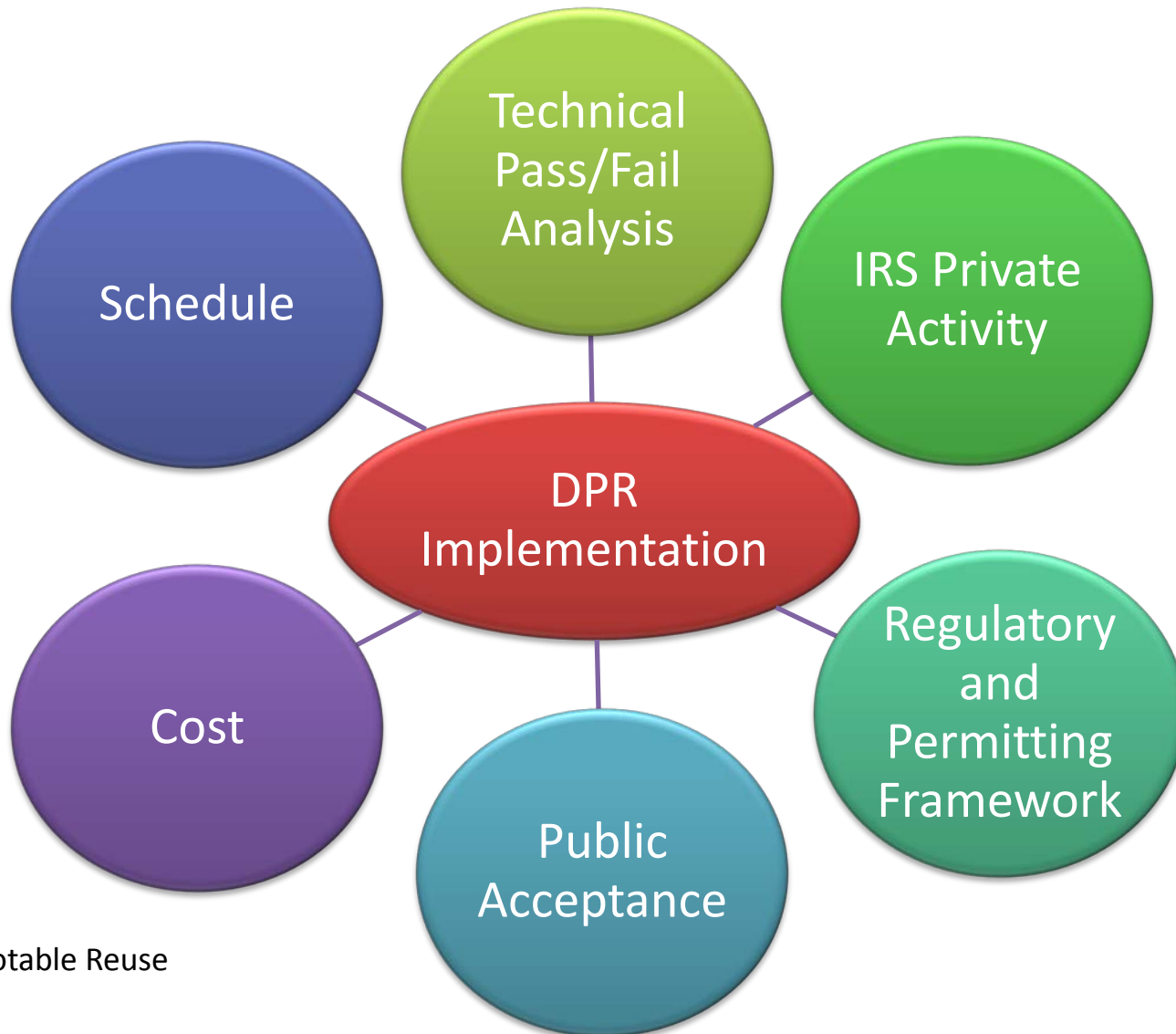
ATTACHMENT(S):

Attachment 1: PowerPoint Presentation

4.4 Direct Potable Reuse Analysis Efforts Update



4.4 DPR Feasibility Analysis Components



DPR = Direct Potable Reuse

4.4 Summary of DPR Feasibility Analysis Efforts

Nov. 2016 – Jun. 2017

Technical Pass/Fail Analysis

- ✓ Central pipeline capacity
- ✓ Treatability of blended sources
- ✓ Source water availability for blending at 50%

Permitting and Regulatory Framework

- ✓ Join DPR NWRI Coalition
- ✓ Draft permitting framework
- ✓ Select process train configuration

Cost Comparison between IPR and DPR/IPR Options

- ✓ Class IV cost evaluation in progress

- NWRI – National Water Research Institute
- DPR – Direct Potable Reuse
- IPR – Indirect Potable Reuse

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Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Agenda Item No.: 4.5
Unclassified
Manager: J. De La Piedra
Email: GDeLaPiedra@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: 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

RECOMMENDED ACTION:

Receive information and discuss next steps.

SUMMARY:

A. Update on Sunnyvale Memorandum of Understanding

On June 15, 2017, a memorandum of understanding (MOU) was enacted between the District and the City of Sunnyvale (Sunnyvale) for collaborating on assessing the feasibility of water reuse alternatives. The MOU addresses key issues related to water, land, and reverse osmosis concentrate management. Feasibility studies will identify the requirements, issues, activities, resources, costs, and financing necessary to implement non-potable and potable water reuse alternatives with Sunnyvale.

Staff has developed a work plan to complete the feasibility studies outlined in the MOU. The upcoming Countywide Water Reuse (Recycled and Purified Water) Master Plan will address water quantity, receptors, and siting of potential water reuse facilities. The Reverse Osmosis Concentrate Management Plan (Agenda Item 4.3) will investigate residuals management options. Coordination efforts and development of a long term comprehensive agreement are expected to continue through 2020, to align with the Countywide Water Reuse Master Plan.

B. Update on Wolfe Road Recycled Water Facilities Project Opening Celebration

District and Sunnyvale completed installation of 2.5 miles of recycled water pipeline underneath Wolfe Road. This work is part of the Wolfe Road Recycled Water Facilities Project, which expands recycled water infrastructure in Sunnyvale and extends service to the new Apple Campus 2 in Cupertino. The project was jointly funded by the District, Apple Inc., Sunnyvale, California Department of Water Resources, and California Water Service Company.

An opening celebration for project partners is being planned in the coming months.

ATTACHMENT(S):

Attachment 1: PowerPoint Presentation

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4.5 Update on District/ City of Sunnyvale Collaboration Efforts



4.5 Update on City of Sunnyvale Memorandum of Understanding (MOU)

Work Plan for Feasibility Studies

MOU Approval and Implementation

- District on 3/28/17
- Sunnyvale on 5/23/17
- Coordination meetings ongoing
- Comprehensive Agreement by 2020

Countywide Water Reuse Master Plan

- Source water studies
- Receptor identification
- Siting alternatives

Reverse Osmosis Concentrate Management Plan

- Residuals management for potential purification center

4.5 Update on Wolfe Road Recycled Water Facilities Project Opening Celebration



- 2.5 miles of recycled water pipeline installed beneath Wolfe Road
- Construction of Apple Campus 2 expected to be complete in 2017
- Wolfe Road Recycled Water Project opening celebration is forthcoming



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Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Agenda Item No.: 4.6
Unclassified
Manager: J. De La Piedra
Email: GDeLaPiedra@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: 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

RECOMMENDED ACTION:

Receive information and discuss next steps.

SUMMARY:

The purpose of this agenda item is to provide the Recycled Water Committee (Committee) with updates on the partnerships under development with the City of Palo Alto (Palo Alto) and the City of Mountain View (Mountain View). District staff has negotiated a Memorandum of Understanding (MOU) with Palo Alto, which will assess the feasibility and potential funding to develop potable water reuse options in northwestern Santa Clara County (Northwest County).

This agenda item also provides updated information about a proposed MOU between the District and Mountain View, the City of Palo Alto Advanced Water Purification System Feasibility Study, and ongoing work for the Northwest County Recycled Water Strategic Plan (Strategic Plan).

A. District/Palo Alto Memorandum of Understanding

On June 27, 2017, the District Board of Directors authorized the Interim Chief Executive Officer to execute the proposed MOU between the District and Palo Alto. Palo Alto in turn will present the MOU to its City Council in late August 2017, upon their return from summer recess. District staff will continue to work with Palo Alto staff to draft a long-term agreement once the MOU is fully executed.

B. District/Mountain View Memorandum of Understanding

District and Mountain View staff have agreed on a draft MOU and expect to present the final MOU at the next scheduled Committee meeting in November 2017. As with the Palo Alto MOU, commitments related to pursuing any water reuse alternatives will be formalized in a comprehensive agreement to be negotiated by the District and Mountain View in the future.

C. City of Palo Alto 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: a Preliminary Design for 1 to 2 million gallons per day (MGD) Advanced Water Purification System (AWPS); and a White Paper on utilizing a parcel of land adjacent to the RWQCP for the construction of a 6 to 10 MGD AWPS. The Preliminary Design Report is expected to be completed in late December 2017. Staff from both the District and Palo Alto are reviewing the White Paper and expect to finalize this effort in September 2017.

D. Northwest County Recycled Water Strategic Plan

The Strategic Plan includes the expansion of recycled water from Palo Alto RWQCP to recycled water customers in Stanford, Los Altos, Los Altos Hills, Mountain View, East Palo Alto, and Menlo Park. Key deliverables include: a financial plan, preliminary design, funding strategies, and a study of groundwater in Northwest County. The purpose of the groundwater study is to compile baseline information on localized aquifer conditions including sources and quantities of recharge, groundwater pumping and water quality. This information will be used to evaluate the feasibility for indirect potable reuse of advanced treated recycled water.

The Strategic Plan consultant is progressing, and has submitted several workplans for the major components including Phase III expansion to Stanford Research Park, Potable Reuse Feasibility, and External Funding strategies.

ATTACHMENT(S):

Attachment 1: PowerPoint Presentation

4.6 Update on District/City of Palo Alto/City of Mountain View Collaboration Efforts



4.6 City of Palo Alto Memorandum of Understanding

Item	Palo Alto MOU Terms of Agreement (Assumptions)
Land	<ul style="list-style-type: none"> • Investigate possible locations
Source Water and Quality	<ul style="list-style-type: none"> • Evaluate opportunities for District to obtain up to 10 MGD of treated wastewater
Effluent Commitment	<ul style="list-style-type: none"> • City of Palo Alto is not discussing or planning to discuss effluent transfers with other agencies outside its RWQCP partner agencies during the term of the MOU
RO Concentrate Management	<ul style="list-style-type: none"> • Engineered wetlands, existing ponds, or San Francisco Bay
Governance	<ul style="list-style-type: none"> • Joint Recycled Water Committee • Technical Advisory Committee
Potential Impacts	<ul style="list-style-type: none"> • Reduced flows of tertiary-treated effluent to the Bay

MOU = Memorandum of Understanding
 MGD = Million Gallons per Day
 RWQCP = Regional Water Quality Control Plant

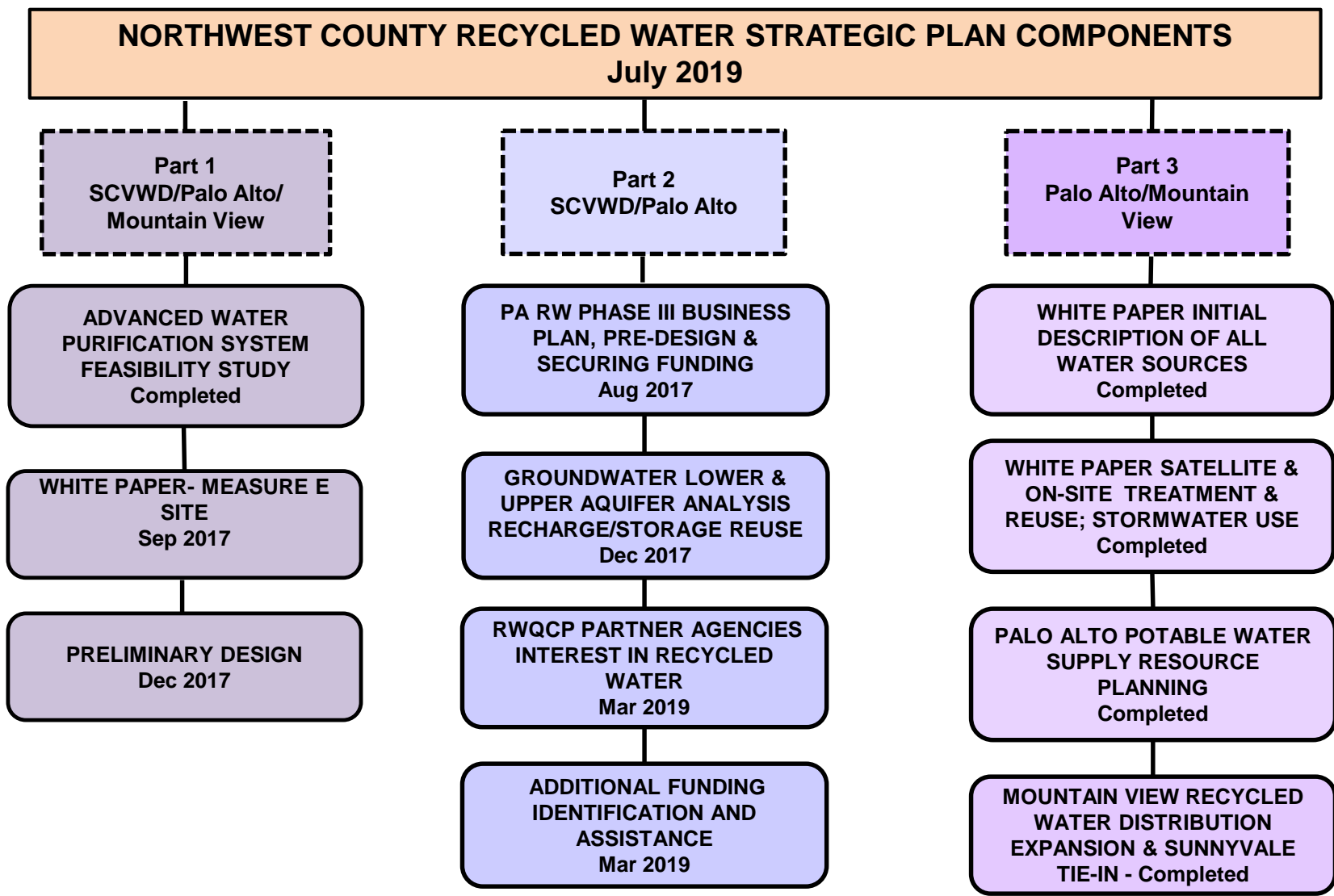
4.6 Palo Alto Collaboration Effort

Item	Schedule/Milestones
MOU Status	<ul style="list-style-type: none">• MOU executed by District Interim CEO on June 27, 2017
MOU Approval/Execution by Palo Alto City Council	<ul style="list-style-type: none">• Late August 2017

4.6 Mountain View Collaboration Effort

Item	Schedule/Milestones
MOU Status	<ul style="list-style-type: none">• Mountain View and District staff completed draft
Present Draft MOU to Recycled Water Committee	<ul style="list-style-type: none">• November 2017
MOU Approval/Execution by District Board and Mountain View City Council	<ul style="list-style-type: none">• October/November 2017

4.6 Northwest County Recycled and Purified Water Efforts



4.6 Northwest County Recycled and Purified Water Efforts

Part 1

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

- **Submittals:**

- Final Report Submitted on April 2017

- **Next steps:**

- White Paper on Site 4 (Measure E Site) AWPS Feasibility – September 2017
- Preliminary Design Site 1 AWPS - December 2017

4.6 Northwest County Recycled and Purified Water Efforts

Part 2

Northwest County Recycled Water Strategic Plan

- External Funding Strategy Workplan submitted
- Contract Completion Planned July 2019

Key Objectives

- **Phase III Expansion:**
Expand existing recycled water pipeline to South Palo Alto and Stanford Research Park
- **Northwest Groundwater Study:**
Conduct study to evaluate potable reuse feasibility (including localized aquifer conditions, sources and quantities of recharge, pumping, and water quality)
- **Potable Reuse Study:**
Evaluate feasibility for Indirect Potable Reuse (IPR) of advanced treated recycled water
- **Expand Recycled Water to Partner Agencies:**
Evaluate the expansion of recycled water to Los Altos, Los Altos Hills, Mountain View, East Palo Alto, and Menlo Park

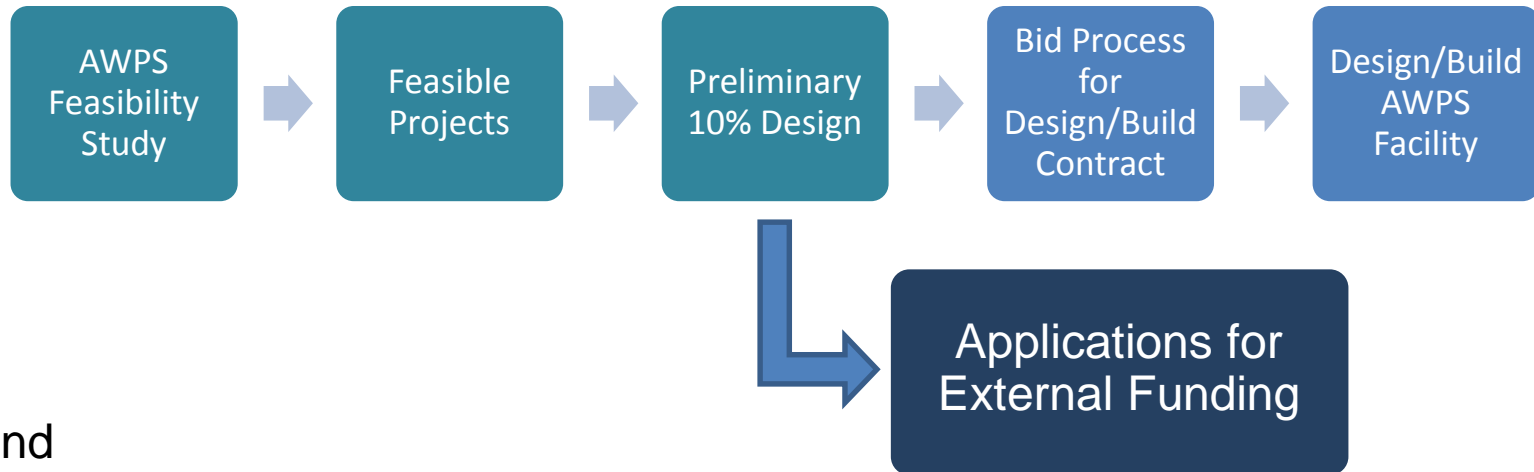
The above efforts also include consultant assistance with regulatory support and public outreach

4.6 Northwest County Recycled and Purified Water Efforts




Part 2

Northwest County Recycled Water Strategic Plan

Task 5 - External Funding Strategy



Legend

-  Advanced Water Purification System (AWPS) Feasibility Study Contract
-  No Existing Contract
-  Northwest County Recycled Water Strategic Plan Contract



Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Agenda Item No.: 4.7
Unclassified
Manager: J. De La Piedra
Email: GDeLaPiedra@valleywater.org

COMMITTEE AGENDA MEMO

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

RECOMMENDED ACTION:

Receive information and discuss next steps.

SUMMARY:

On March 28, 2017, a Memorandum of Understanding (MOU) was enacted among District, the Bay Area Water Supply and Conservation Agency (BAWSCA), and the San Francisco Public Utilities Commission (SFPUC). 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 staff plans to hold individual discussions with BAWSCA and SFPUC to prepare for a series of three joint workshops.

The first workshop to identify alternatives for participation was held with SFPUC and BAWSCA on July 17, 2017. The second workshop will identify constraints and benefits. The third workshop will develop viable alternatives for preliminary analysis. Staff estimates this first phase of analysis to conclude in December 2017. Findings from the first phase of the feasibility study will inform a future decision on proceeding with additional work.

ATTACHMENT(S):

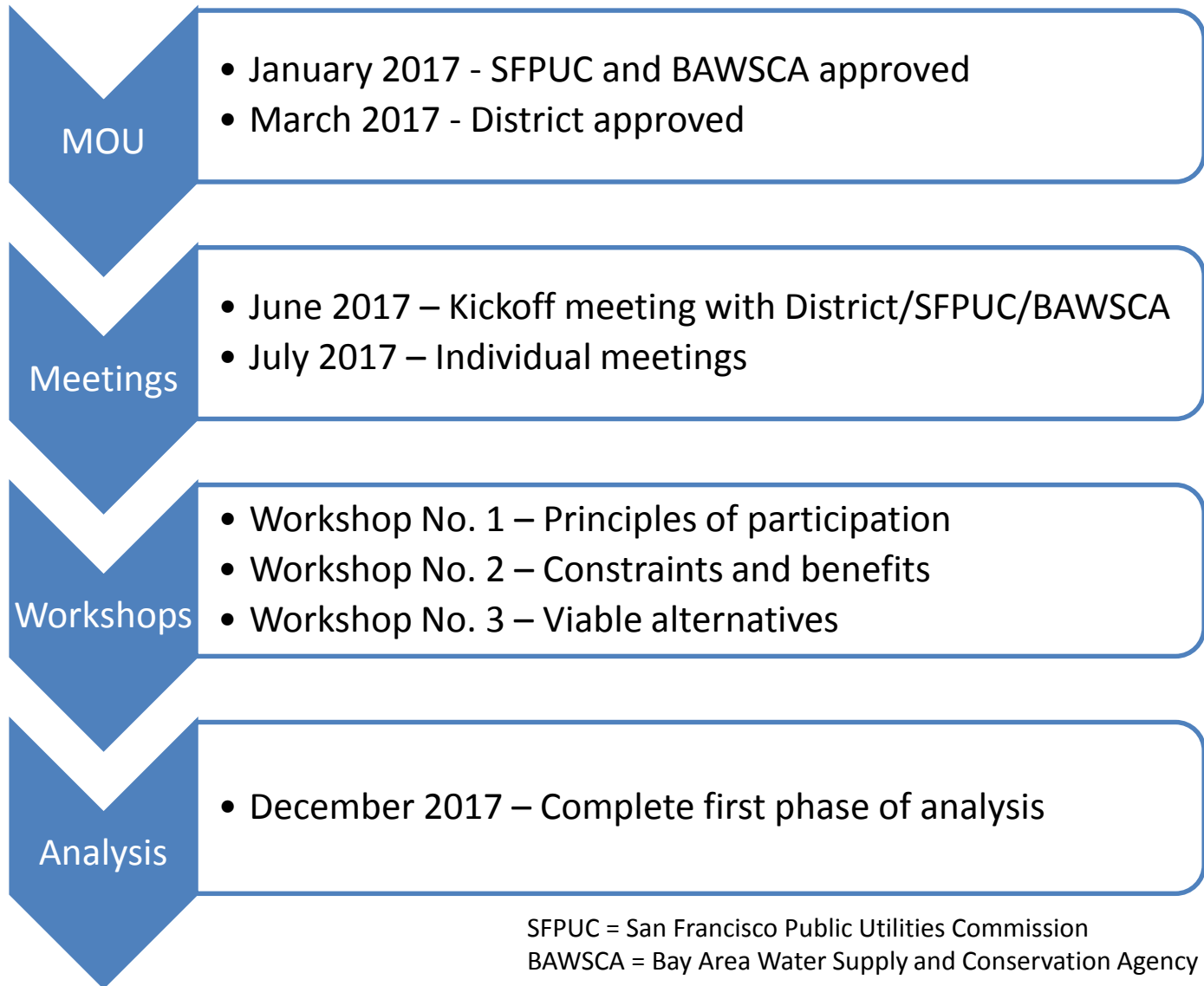
Attachment 1: PowerPoint Presentation

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



4.7 District/SFPUC/BAWSCA Feasibility Study





Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Agenda Item No.: 4.8
Unclassified J. De La Piedra
Manager: K. Oven
Email: GDeLaPiedra@valleywater.org
KOven@valleywater.org

COMMITTEE AGENDA MEMO

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

RECOMMENDED ACTION:

Receive information and discuss next steps.

SUMMARY:

In collaboration with the District, the City of Gilroy (Gilroy) has worked with representatives from Meritage Homes - Hecker Pass and Glen Loma Ranch Developments to negotiate a net cost saving of \$0.9 million for the design and construction of approximately 8,520 linear feet of pipeline extensions to the South County Recycled Water System (RW System). Construction of these projects will expand recycled water use by serving the Hecker Pass Development, Glen Loma Ranch Development, and more importantly, will increase system capacity to service existing customers as well as other potential customers. These projects are in alignment with the proposed short-term projects identified in the 2015 South County Recycled Water Master Plan Update. See Attachment 1 for additional details.

On June 8, 2017, representatives from the District, Gilroy, South County Regional Wastewater Authority (SCRWA), and CH2Hill, SCRWA Contractor, met to discuss the on-going operations and maintenance (O&M) of the RW System. This meeting provided a forum to review successful operations of the RW System, discuss current O&M activities, and discuss planning for future O&M activities.

ATTACHMENT(S):

Attachment 1: PowerPoint Presentation

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



4.8 Master Plan Implementation

Agreement 1: Meritage Homes Hecker Pass Development – West Cluster

Item	City/Developer	District
Project Description	Upsize 4,250 feet of 12-inch to 24-inch recycled water pipeline.	
Planning, Design, Permit	100 %	---
Estimated Construction	\$0.5 Million	\$1.5 Million

Agreement 2: Glen Loma Ranch – Home Ranch and Wild Chestnut Neighborhoods

Item	City/Developer	District
Project Description	Upsize 2,825 feet of 16-inch to 30-inch recycled water pipeline. Install 1,175 feet of additional 24-inch and 30-inch pipeline.	
Planning, Design, Permit	100 %	---
Estimated Construction	\$0.4 Million	\$1.5 Million

NET COST SAVINGS: \$0.9 Million

4.8 System Operations for the Future

Operation and Maintenance (O&M) meeting held on June 8, 2017

- District, City of Gilroy, SCRWA, and CH2Hill (SCRWA Contractor) staff in attendance
- Reviewed successful historical O&M of South County Recycled Water System (RW System)
- Discussed current O&M activities
- Identified planning items for consideration to improve O&M of existing and future RW System.

SCRWA = South County Regional Wastewater Authority

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Committee: Recycled Water Committee
Meeting Date: 08/09/2017
Item No.: 5
Manager: L. Moore
Email: lmoore@valleywater.org

COMMITTEE AGENDA MEMO

SUBJECT: 2017 Committee Work Plan.

RECOMMENDED ACTION:

Review and discuss the 2017 Committee Work Plan, and provide direction to staff.

SUMMARY:

The Clerk of the Board has directed staff to establish annual work plans for all Board committees. The 2017 Work Plan for the Recycled Water Committee is attached.

Included in the Work Plan is a "Parking Lot". The Parking Lot contains a list of items either referred to the Committee by the Board, or requested by the Committee to be brought back to it. The Committee is requested to review the Parking Lot and give feedback on agenda placement for Parking Lot items.

BACKGROUND:

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.

Work plans are established as a framework for committee discussions. They are dynamic documents, subject to change as factors occur. They provide advance notice to the public of timelines for Committee accomplishment of work, and as Committee work is accomplished and outcomes are subsequently logged onto the work plan, the work plan becomes an annual Committee accomplishment report.

ATTACHMENT(S):

Attachment 1: 2017 Committee Work Plan

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RECYCLED WATER COMMITTEE

Updated: 8/4/17

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

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)

RECYCLED WATER COMMITTEE

Updated: 8/4/17

2017 WORK PLAN

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
08/09/17	Approval of Minutes – May 30, 2017	L. Moore	Approve Minutes	
	Expedited Purified Water Program Update.	K. Oven	Receive information, discuss and give direction to staff on the following requests from 5/30/17 meeting: <ul style="list-style-type: none"> • Staff to bring back information on large loans from the State Revolving Funds • 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. • MOU with San Jose – re-prioritize. 	
	Update on Private Activity Analysis	D. Taylor	Continue with updates until IRS letter is completed.	
	Update on Countywide Recycled and Purified Water Master Plan	G. Hall	Receive information updates on RFP, procurement process, and Master Plan, and give direction to staff.	
	Review Committee Work Plan	Committee	Confirm Agenda Topics for Next Meeting(s)	
	Next Meeting Date	Committee	Confirm/Adjust Next Meeting Date(s)	November 8, 2017

RECYCLED WATER COMMITTEE

Updated: 8/4/17

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
11/08/17	Approval of Minutes	L. Moore	Approve Minutes	
	<i>*Insert Action Items Here.</i>			
	Review Committee Work Plan	Committee	Confirm Agenda Topics for Next Meeting(s)	
	Next Meeting Date	Committee	Confirm/Adjust Next Meeting Date(s)	

RECYCLED WATER COMMITTEE

Updated: 8/4/17

2017 ACCOMPLISHMENTS REPORT

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
02/16/17	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

RECYCLED WATER COMMITTEE

Updated: 8/4/17

MEETING DATE	WORK PLAN ITEM, BOARD POLICY, & POLICY CATEGORY	ASSIGNED STAFF	INTENDED OUTCOME(S)	ACCOMPLISHMENT DATE AND OUTCOME
05/30/17	Approval of Minutes – February 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"> Staff to bring back information on large loans from the State Revolving Funds 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. MOU with San Jose – re-prioritize..
	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
	Update on South County Efforts	G. Hall / K. Oven	Receive information and discuss next steps.	Noted

RECYCLED WATER COMMITTEE

Updated: 8/4/17

	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.
	Next Meeting Date	Committee	Confirm/Adjust Next Meeting Date(s)	August 9, 2017