

June 15, 2022

MEETING NOTICE
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER COMMITTEE

Members of the Recycled Water Committee:

District 6 Director, Tony Estremera, Committee Chair
District 3 Director, Richard Santos, Committee Vice Chair
District 2 Director, Barbara Keegan

Staff Support of the Recycled Water Committee:

Rick Callender, Chief Executive Officer
Melanie Richardson, Assistant Chief Executive Officer
Darin Taylor, Chief Financial Officer
Aaron Baker, Chief Operating Officer, Water Utility
Rachael Gibson, Chief of External Affairs
Tina Yoke, Chief Operating officer
Carlos Orellana, District Counsel
Anthony Fulcher, Sr. Assistant District Counsel
Leslie Orta, Sr. Assistant District Counsel
Vincent Gin, Deputy Operating Officer, Water Supply Division
Donald Rocha, Deputy Administrative Officer, Office of Government Relations
Bhavani Yerrapotu, Deputy Operating Officer, Watersheds Design and Construction Division
Emmanuel Aryee, Acting, Deputy Operating Officer
Kirsten Struve, Assistant Officer
Sam Bogale, Assistant Officer
Lisa Bankosh, Assistant Officer
Charlene Sun, Treasury and Debt Manager
Hossein Ashktorab, Unit Manager, Recycled & Purified Water
Carmen Narayanan, Financial Planning & Revenue Manager
Metra Richert, Unit Manager, Water Supply Planning and Conservation Manager
Lei Hong, Utility Ops & Maintenance Manager
Sherilyn Tran, Civic Engagement Manager
Medi Sinaki, Sr. Engineer-Water Quality
Girlye Jacobson, Sr. Engineer-Treatment Plant Design
Henry Barrientos, Associate Civil Engineer
David Tucker, Associate Civil Engineer
Zachary Helsley, Associate Civil Engineer
Elise Latedjou-Durand, Senior Environmental Planner
Ricardo Barajas, Program Administrator

A regular meeting of the Santa Clara Valley Water District's Recycled Water Committee has been scheduled to occur at 12:00 p.m. on Wednesday, June 22, 2022 in the Headquarters Building Boardroom located at the Santa Clara Valley Water District, 5700 Almaden Expressway, San Jose, California.

Members of the public may join the meeting via Zoom Teleconference at:

<https://valleywater.zoom.us/j/99518153521>

The meeting agenda and corresponding materials are located on our website:

<https://www.valleywater.org/how-we-operate/committees>



Santa Clara Valley Water District Recycled Water Committee Meeting

Join Zoom Meeting:
<https://valleywater.zoom.us/j/99518153521>

Headquarters Building Boardroom
5700 Almaden Expressway
San Jose, CA 95118

REGULAR MEETING AGENDA

**Wednesday, June 22, 2022
12:00 PM**

District Mission: Provide Silicon Valley safe, clean water for a healthy life, environment and economy.

RECYCLED WATER COMMITTEE

Tony Estremera - District 6, Chair
Richard Santos - District 3, Vice Chair
Barbara Keegan - District 2

During the COVID-19 restrictions, 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 to the public through the legislative body agenda web page at the same time that the public records are distributed or made available to the legislative body. Santa Clara Valley Water District will make reasonable efforts to accommodate persons with disabilities wishing to participate in the legislative body's meeting. Please advise the Clerk of the Board Office of any special needs by calling (408) 265-2600.

KIRSTEN STRUVE
Committee Liaison

EVA SANS
Assistant Deputy Clerk II
Office/Clerk of the Board
(408) 265-2306
esans@valleywater.org

Note: The finalized Board Agenda, exception items and supplemental items will be posted prior to the meeting in accordance with the Brown Act.

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**Santa Clara Valley Water District
Recycled Water Committee
REGULAR MEETING
AGENDA**

Wednesday, June 22, 2022

12:00 PM

Join Zoom Meeting:
<https://valleywater.zoom.us/j/99518153521>

Headquarters Building Boardroom
5700 Almaden Expressway
San Jose, CA 95118

*****IMPORTANT NOTICES AND PARTICIPATION INSTRUCTIONS*****

Santa Clara Valley Water District (Valley Water) Board of Directors/Board Committee meetings are held as a “hybrid” meetings, conducted in-person as well as by telecommunication, and is compliant with the provisions of the Ralph M. Brown Act.

To maximize public safety while still maintaining transparency and public access, members of the public have an option to participate by teleconference/video conference or attend in-person. To observe and participate in the meeting by teleconference/video conference, please see the meeting link located at the top of the agenda. If attending in-person, you are required to wear a mask.

In accordance with the requirements of Gov. Code Section 54954.3(a), members of the public wishing to address the Board/Committee at a video conferenced meeting, during public comment or on any item listed on the agenda, should use the “Raise Hand” tool located in the Zoom meeting link listed on the agenda, at the time the item is called. Speakers will be acknowledged by the Board Chair in the order requests are received and granted speaking access to address the Board.

Valley Water, in complying with the Americans with Disabilities Act (ADA), requests individuals who require special accommodations to access and/or participate in Valley Water Board of Directors/Board Committee meetings to please contact the Clerk of the Board’s office at (408) 630-2711, at least 3 business days before the scheduled meeting to ensure that Valley Water may assist you.

This agenda has been prepared as required by the applicable laws of the State of California, including but not limited to, Government Code Sections 54950 et. seq. and has not been prepared with a view to informing an investment decision in any of Valley Water’s bonds, notes or other obligations. Any projections, plans or other forward-looking statements included in the information in this agenda are subject to a variety of uncertainties that could cause any actual plans or results to differ materially from any such statement. The information herein is not intended to be used by investors or potential investors in considering the purchase or sale of Valley Water’s bonds, notes or other obligations and investors and potential investors should rely only on information filed by

Valley Water on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access System for municipal securities disclosures and Valley Water's Investor Relations website, maintained on the World Wide Web at <https://emma.msrb.org/> and <https://www.valleywater.org/how-we-operate/financebudget/investor-relations>, respectively.

Under the Brown Act, members of the public are not required to provide identifying information in order to attend public meetings. Through the link below, the Zoom webinar program requests entry of a name and email address, and Valley Water is unable to modify this requirement. Members of the public not wishing to provide such identifying information are encouraged to enter "Anonymous" or some other reference under name and to enter a fictional email address (e.g., attendee@valleywater.org) in lieu of their actual address. Inputting such values will not impact your ability to access the meeting through Zoom.

Join Zoom Meeting:
<https://valleywater.zoom.us/j/99518153521>
Meeting ID: 995 1815 3521
Join by Phone:
1 (669) 900-9128, 99518153521#

1. CALL TO ORDER:

1.1. Roll Call.

2. TIME OPEN FOR PUBLIC COMMENT ON ANY ITEM NOT ON THE AGENDA.

Notice to the Public: Members of the public who wish to address the Committee on any item not listed on the agenda should access the "Raise Hand" tool located in Zoom meeting link listed on the agenda. Speakers will be acknowledged by the Committee Chair in order requests are received and granted speaking access to address the Committee. Speakers comments should be limited to three minutes or as set by the Chair. The law does not permit Committee action on, or extended discussion of, any item not on the agenda except under special circumstances. If Committee action is requested, the matter may be placed on a future agenda. All comments that require a response will be referred to staff for a reply in writing. The Committee may take action on any item of business appearing on the posted agenda.

3. APPROVAL OF MINUTES:

3.1. Approval of Minutes.

[22-0762](#)

Recommendation: Approve the minutes of the May 25, 2022 meeting.

Manager: Candice Kwok-Smith, 408-630-3193

Attachments: [Attachment 1: 052522 RWC Minutes](#)

Est. Staff Time: 5 Minutes

4. REGULAR AGENDA:

- 4.1. Update on Purified Water Program including Partnership with Cities of San Jose and Palo Alto. [22-0763](#)
- Recommendation: Receive updates and provide feedback on the following topics:
- A. Schedule for Purified Water Project
 - B. Collaboration with partner agencies regarding the Purified Water Project
 - C. Public Private Partnership (P3) Procurement of the Purified Water Project
 - D. Outreach regarding the Purified Water Project.
- Manager: Kirsten Struve, 408-630-3138
- Attachments: [Attachment 1: Timeline](#)
- Est. Staff Time: 15 Minutes
- 4.2. South Santa Clara County Water Reuse Collaboration. [22-0764](#)
- Recommendation: Receive an update on the Joint Water Resources Committee's Technical Work Group discussions regarding collaboration on water reuse efforts and provide feedback.
- Manager: Kirsten Struve, 408-630-3138
- Est. Staff Time: 10 Minutes
- 4.3. Provide Update to the Recycled Water Committee on Valley Water Reverse Osmosis (RO) Concentrate Management Efforts. [22-0768](#)
- Recommendation: Receive information and update on RO Concentrate Management efforts.
- Manager: Kirsten Struve, 408-630-3138
- Attachments: [Attachment 1: PowerPoint](#)
- Est. Staff Time: 10 Minutes
- 4.4. Discuss the 2022 Recycled Water Committee Work Plan, Upcoming Discussion Items, and Next Meeting Date. [22-0767](#)
- Recommendation: Receive information on the 2022 Recycled Water Committee Work Plan and provide feedback on upcoming discussion items and next meeting date.
- Manager: Candice Kwok-Smith, 408-630-3193
- Attachments: [Attachment 1: 2022 Revised Work Plan](#)
- Est. Staff Time: 5 Minutes

5. CLERK REVIEW AND CLARIFICATION OF COMMITTEE REQUESTS.

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 the meeting.

6. ADJOURN:

6.1. Adjourn to Regular Meeting at 12:00 p.m., on July 27, 2022.



Santa Clara Valley Water District

File No.: 22-0762

Agenda Date: 6/22/2022

Item No.: 3.1.

COMMITTEE AGENDA MEMORANDUM Recycled Water Committee

SUBJECT:

Approval of Minutes.

RECOMMENDATION:

Approve the minutes of the May 25, 2022 meeting.

SUMMARY:

In accordance with the Ralph M. Brown Act, a summary of Committee discussions, and details of all actions taken by the Committee, during all open and public Committee meetings, is transcribed and submitted to the Committee for review and approval.

Upon Committee approval, minutes transcripts are finalized and entered into the Valley Water's historical records archives and serve as historical records of the Committee's meetings.

ATTACHMENTS:

Attachment 1: 052522 RWC Minutes

UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193

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RECYCLED WATER COMMITTEE MEETING

MINUTES

WEDNESDAY, MAY 25, 2022
12:00 PM

(Paragraph numbers coincide with agenda item numbers)

1. CALL TO ORDER:

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

1.1 Roll Call.

Committee members participating by teleconference were District 3 Director R. Santos, District 2 Director B. Keegan, and District 6 Director T. Estremera, Chairperson presiding, constituting a quorum of the Committee.

Staff in attendance was E. Sans, Assistant Deputy Clerk II.

Staff participating were R. Callender, Chief Executive Officer, C. Orellana, District Counsel, A. Baker, H. Barrientos, S. Greene, V. Gin, Z. Helsley, G. Jacobson, E. Latedjou-Durand, M. Lugo, S. Peters, M. Richert, M. Richardson, D. Rocha, M. Sinaki, K. Struve, C. Sun, and S. Tran.

Also in attendance were Valley Water consultant contractors P. Daniel, Liquisti, LLC, and D. Chen, HDR, Inc.

Guest in attendance was Dr. Arthur Keller, and Sanjay Reddy (Carollo Engineers)

2. TIME OPEN FOR PUBLIC COMMENTS 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:

3.1 Approval of Minutes.

Recommendation: Approve the minutes of the March 23, 2022 meeting.

The Committee considered the minutes of the March 23, 2022 meeting.

Move to Approve: R. Santos

Second:	B. Keegan
Yeas:	R. Santos, B. Keegan, T. Estremera
Nays:	None
Abstains:	None
Recuses:	None
Absent:	None
Summary:	3 Yeas; 0 Nays; 0 Abstains; 0 Absent.

4. ACTION ITEMS:

4.1 Update on Purified Water Program Including Partnerships with Cities of San Jose and Palo Alto.

Recommendation: Receive updates and provide feedback on the following topics:

- Collaboration with partners regarding the Purified Water Project;
- Public Private Partnerships (P3) Procurement of the Purified Water Project;
- California Environmental Quality Act (CEQA) efforts related to the Purified Water Project; and
- Outreach regarding the Purified Water Project.

Ms. Kirsten Struve, Assistant Officer, reviewed the information on this item, per the attached Committee agenda memo.

Dr. Arthur Keller, of unknown residency and affiliation, inquired if the public is allowed to look on the virtual data room, and whether members of the public could attend the meeting with Cities of Palo Alto and Mountain View. Ms. Struve responded that the virtual data room is only for short list respondents; and that the meetings with the cities are for staff only at this time.

The Committee noted the information, without taking formal action.

4.2 Update on Direct Potable Reuse Efforts.

Recommendation: Receive information on Direct Potable Reuse (DPR) regulatory developments and Valley Water engagement.

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 taking formal action.

4.3 Update on Valley Water Desalination Efforts in Santa Clara County.

Recommendation: Receive information on desalination efforts as a water supply in the Santa Clara County.

Ms. Samantha Greene, Senior Water Resources Specialist, reviewed the information on this item, per the attached Committee Agenda Memo, and per the information contained in Attachment 1.

The Committee noted the information, without taking formal action.

4.4 Discuss the Evaluation of Alternative Purification Technologies.

Recommendation: Discuss alternative purification technologies and make recommendations as necessary.

Mr. Medi Sinaki, Senior Engineer-Water Quality, reviewed the information on this item per the attached Committee agenda memo.

The Committee expressed support for continued community engagement especially from Dr. White who provided professional perspective, and is at the forefront of these technologies.

The Committee noted the information, without taking formal action.

4.5 Discuss the 2022 Recycled Water Committee Work Plan, Upcoming Discussion Items, and Next Meeting Date.

Recommendation: Receive information on the 2022 Recycled Water Committee Work Plan and provide feedback on upcoming discussion items and next meeting date.

The Committee requested the following, without taking formal action.

- Staff to present a plan for targeted outreach efforts to the corporate employers, chambers of commerce and developers to engage them on the benefits of recycled/purified water.

5. ADJOURN:

5.1 Adjourn to Regular Meeting at 12:00 p.m. on Wednesday, June 22, 2022.

Chairperson Estremera adjourned the meeting at 1:00 p.m., to the next regular meeting on June 22, 2022.

Eva Sans
Assistant Deputy Clerk II

Approved:

Date:

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Santa Clara Valley Water District

File No.: 22-0763

Agenda Date: 6/22/2022

Item No.: 4.1.

COMMITTEE AGENDA MEMORANDUM

Recycled Water Committee

SUBJECT:

Update on Purified Water Program including Partnership with Cities of San Jose and Palo Alto.

RECOMMENDATION:

Receive updates and provide feedback on the following topics:

- A. Schedule for Purified Water Project
- B. Collaboration with partner agencies regarding the Purified Water Project
- C. Public Private Partnership (P3) Procurement of the Purified Water Project
- D. Outreach regarding the Purified Water Project.

SUMMARY:

A. Schedule

As discussed at the May 2022 Recycled Water Committee (RWC), the Purified Water Project (PWP) procurement schedule is contingent on executing needed agreements with our partner agencies for land and operations/RO concentrate prior to release of the Request for Proposal (RFP). While the procurement schedule has shifted slightly, the delivery of the water is still projected to be in 2028. Work on the EIR, draft RFP and funding opportunities continue to advance.

B. Collaboration with Partner Agencies Regarding the Purified Water Program

Valley Water continues to engage partner agencies on the Purified Water Project conveyance pipeline alignment and completion of technical studies. Valley Water is scheduled to present the PWP to the City of Campbell Council on June 21 and will report on the outcomes from this meeting at the next Recycled Water Committee meeting in July. Valley Water continues to communicate with the Cities of Palo Alto and Mountain View to further develop the necessary agreements for a future purification facility in the City of Palo Alto.

C. Public Private Partnership (P3) Procurement of the Purified Water Project

Project technical requirements were further developed by staff and consultants. After separate meetings in May with members of the Project Team, the short-listed P3 Respondents submitted written questions and requested additional information that will be beneficial once

the RFP is released.

D. Outreach Regarding the Purified Water

Outreach staff continue providing public and private group virtual tours of the Silicon Valley Advanced Water Purification Center. Staff is conducting onsite tour training for newer employees in preparation for resuming in-person tours at the purification center. Tours will start up later this summer with key stakeholders. The team will also pre-record a virtual tour video to have virtual tour options available in the future.

Staff is preparing to conduct the countywide annual perception poll on purified water this summer. The team is finalizing an outreach services agreement to work with a consultant who will assist with potable reuse outreach strategies.

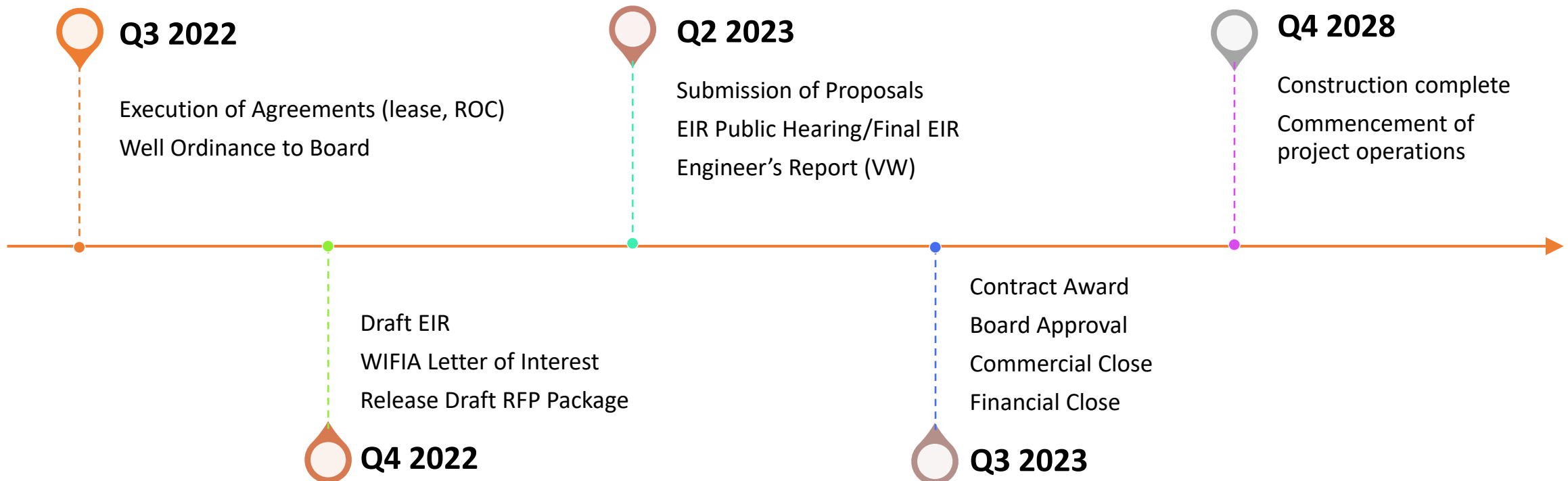
ATTACHMENTS:

Attachment 1: Timeline

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138

draft Purified water project Schedule



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Santa Clara Valley Water District

File No.: 22-0764

Agenda Date: 6/22/2022

Item No.: 4.2.

COMMITTEE AGENDA MEMORANDUM

Recycled Water Committee

SUBJECT:

South Santa Clara County Water Reuse Collaboration.

RECOMMENDATION:

Receive an update on the Joint Water Resources Committee's Technical Work Group discussions regarding collaboration on water reuse efforts and provide feedback.

SUMMARY:

The Santa Clara Valley Water District (Valley Water) and the cities of Gilroy and Morgan Hill have a long history of collaboration and partnership to ensure the utilization and expansion of non-potable water recycling in South County. Valley Water established the Joint Water Resources Committee with elected officials representing Gilroy and Morgan Hill to pursue collaborative relationships and agreements to support recycled and purified water expansion. In August 2021, the Joint Water Resources Committee recommended the establishment of a Technical Working Group (TWG) to further evaluate:

- One Comprehensive Water Reuse Agreement,
- Consistent water reuse terms and conditions countywide,
- Provisions to advance water reuse and purified water production, distribution, and wholesaling, and
- Cost sharing accords to integrate water conservation, water reuse, and water supply.

The Joint Water Resources Committee's recommendation was subsequently approved at a joint meeting of the Valley Water Board and the City Councils of Morgan Hill and Gilroy.

The inaugural meeting of the TWG occurred on September 21, 2021, and included staff participation from the City of Gilroy, City of Morgan Hill, and Valley Water. The TWG has met monthly since September 2021, and has included representatives from the City of Gilroy, the City of Morgan Hill, and Valley Water. Initial discussions with TWG members focused on developing revisions to the existing partnering agreements, water reuse and purification opportunities for South County, the benefits and challenges of a single comprehensive agreement, and review of current collaborative agreements for South County water reuse.

For this update, staff will discuss interagency deliberations regarding updating the South County

recycled water master plan, future capital infrastructure planning, volume of wastewater availability, storage considerations and impacts on water delivery in South County, opportunities to expand water reuse to Morgan Hill, and options to update our legal agreements to promote water reuse in South County. Staff will also present topics for presentation at the upcoming Joint Water Resources Committee meeting to be held on July 6, 2022. Agenda items for this meeting include a discussion of South County collaborative discussions and an update of drought conditions and impacts.

ATTACHMENTS:

None.

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138



Santa Clara Valley Water District

File No.: 22-0768

Agenda Date: 6/22/2022

Item No.: 4.3.

COMMITTEE AGENDA MEMORANDUM

Recycled Water Committee

SUBJECT:

Provide Update to the Recycled Water Committee on Valley Water Reverse Osmosis (RO) Concentrate Management Efforts.

RECOMMENDATION:

Receive information and update on RO Concentrate Management efforts.

SUMMARY:

Reverse Osmosis concentrate (ROC) is the by-product of purifying treated wastewater. Ensuring proper disposal of the ROC in a cost-effective manner is critical to a successful potable water reuse project. Valley Water staff, in collaboration with other agencies and academia, have been studying and piloting several treatment alternatives for ROC since 2017. These have included industrial and commercially available treatment systems and processes as well as Nature-Based Solutions (NBS). The latter is a unique and important category with the potential of addressing the issue of metals and other emerging contaminants (e.g., PFAS) present in ROC. These natural treatment processes are environmentally beneficial and also embraced by the regulatory agencies. The Bay Area Clean Water Agencies (BACWA), State Water Resources Control Board, State Coastal Conservancy, and the South Bay Restoration Project have recently expressed support for NBS.

The results of the pilot studies and evaluations conducted by Valley Water - some as joint projects with the academic institutions and other agencies - are indicative of the effectiveness of NBS as a potential alternative for ROC management. NBS have the potential to reduce nutrients, constituents of emerging concern (CEC), and metals. This form of treatment may consequently assist with meeting the regulatory requirements associated with ROC disposal and protection of the health of the San Francisco Bay.

Oro Loma Sanitary District Horizontal Levee (OLSD-HL) Project

The OLSD-HL project started on April 9, 2015. It includes a wetland basin and a new type of levee known as a "horizontal levee." This wide, gently sloping wedge of gravel, mud and grass mimics a historic wetland ecosystem that existed before settlement in the Bay Area. Treated effluent from the Oro Loma facility flows into the basin, is piped to the top of the horizontal levee, and flows through the soil to sustain native plants. This vegetation provides wildlife habitat and removes nutrients and other contaminants that may still be present in the treated effluent. In addition, a full-scale horizontal levee could act as a natural buffer to absorb storm surges and provide natural protection from flooding.

Dr. David Sedlak and his team of researchers at the University of California, Berkeley, have been leading the monitoring efforts to quantify the effectiveness of the OLSD-HL. The experiment has provided a much-needed field test of how treated wastewater and these levee systems can help address critical flood protection, water quality, and wildlife habitat issues.

Phase I of the ROC Studies at OLSD-HL

In August 2019, Valley Water joined UC Berkeley (UCB) and Oro Loma Sanitary District (OLSD) to evaluate the effectiveness of the horizontal levee as a treatment strategy for the higher mass loads of contaminants in ROC. Truckloads of 10,000 gallons per week of ROC have been transported to OLSD, stored onsite, and introduced into a dedicated cell for ROC to examine the effect of treatment. Data collected for the past two years indicate significant reduction of nutrients, trace organic contaminants, and metals (e.g., copper).

Phase II of the ROC Studies at OLSD-HL

Valley Water is planning to continue to build upon what has been learned from Phase I of the project by sustaining its collaboration with UCB and OLSD into Phase II of the study. The new phase is supported by the encouraging results and information compiled in Phase I related to the removal of nutrients, contaminants of emerging concern, and metals. Phase II will focus on the removal rates of contaminants, additional compounds such as PFAS, and would include modifications to the treatment cells in the OLSD-HL:

- OLSD will host the experiment, provide project management for the design and reconstruction, and provide operational support (power, routing flows, landscape management, and general operational support as directed by UCB).
- The study seeks to quantify the treatment capacity of a horizontal levee to treat reverse osmosis concentrate. As part of the study, the experimental system will be reconstructed to maximize treatment capacity and effectiveness.
- The experiment will focus on analytes of emerging concern, including trace pharmaceuticals, trace metals, and PFAS compounds.
- Sampling events will be scheduled under the counsel and direction of Dr. David Sedlak.
- It is anticipated that Valley Water's involvement in Phase II would be for 36 months.

The support offered by OLSD and UCB for Phase II of the project primarily stems from their interest in maximizing the use of the existing site - which has cost OLSD over \$2M - and advancing the science of NBS. This is a great opportunity for Valley Water to utilize a fully constructed NBS at our disposal at a very low cost and complete the ROC treatment studies. The results will close a large gap in our ROC management evaluation efforts. At the same time, these efforts would address the study and evaluation requirements that have been requested by the Regional Water Board as part of their permitting processes to allow ROC discharge to the South Bay from the future purification facility to be built in Palo Alto or San Jose. The portion of the cost of Phase II for Valley Water will be

managed through a Cost Sharing Agreement for a not-to-exceed fee of \$475,000. This cost will be spread over three (3) years for the duration of Phase II (2022 - 2025). The funding will be met from Valley Water's Recycled and Purified Water Program's budget FY22 (project no. 91101004).

ATTACHMENTS:

Attachment 1: PowerPoint

UNCLASSIFIED MANAGER:

Kirsten Struve, 408-630-3138

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Valley Water

Clean Water • Healthy Environment • Flood Protection

Reverse Osmosis Concentrate Management Plan Update



Berkeley
UNIVERSITY OF CALIFORNIA



Recycled Water Committee
June 22, 2022
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Attachment 1
Page 1 of 9

Nature-Based Solutions

- Pretreatment of ROC for discharge
- Potential to remove metals and other contaminants
- Potential as an alternative for treatment of ROC
- May assist with meeting the regulatory requirements and protection of the health of the San Francisco Bay and the surrounding environment
- Is supported by the regulatory agencies due to its green nature
- Create habitats



Valley Water Nature Based Solution



Engineered Treatment Cells / Open Water Pilot Study



Floating Wetland Treatment

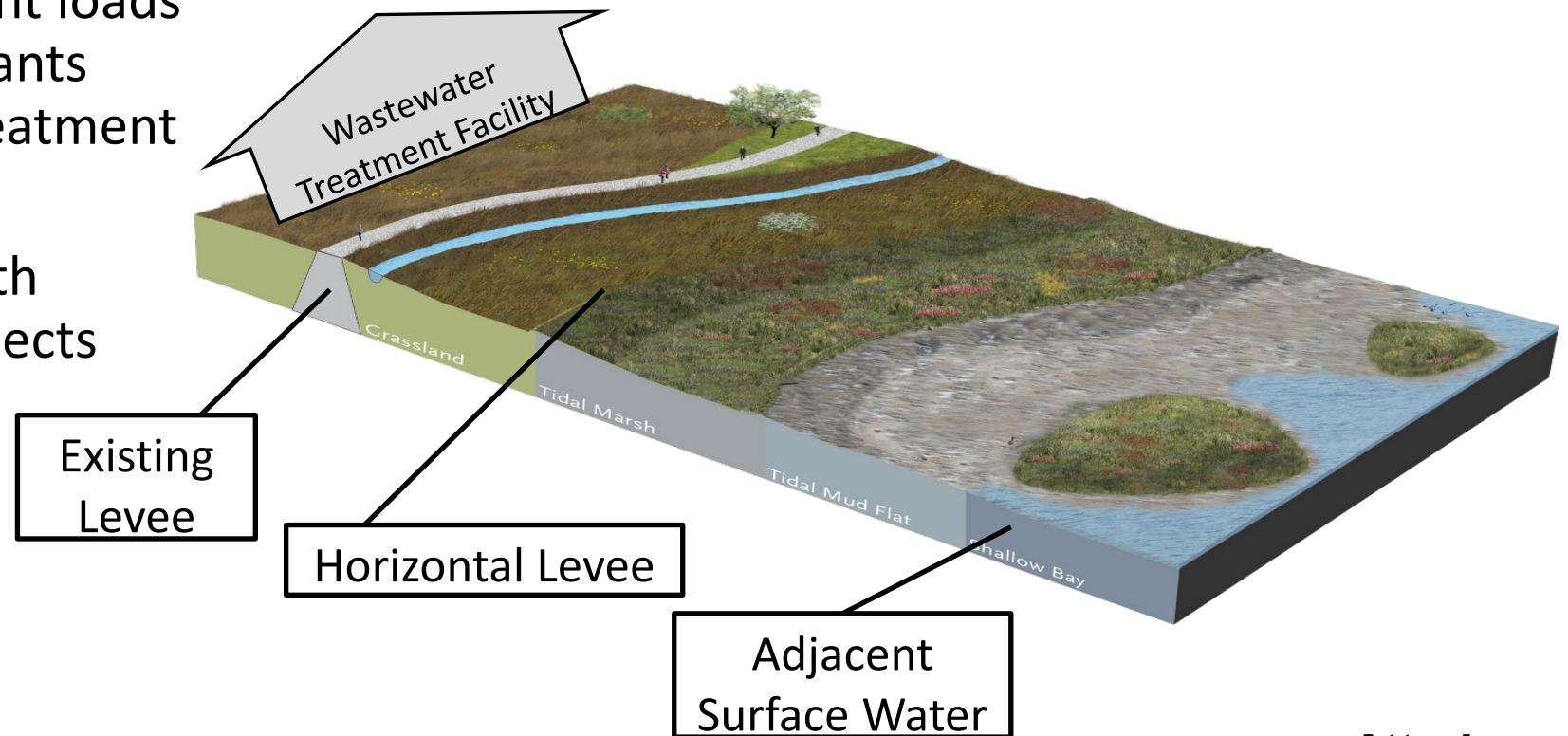


OLSD Horizontal Levee Pilot



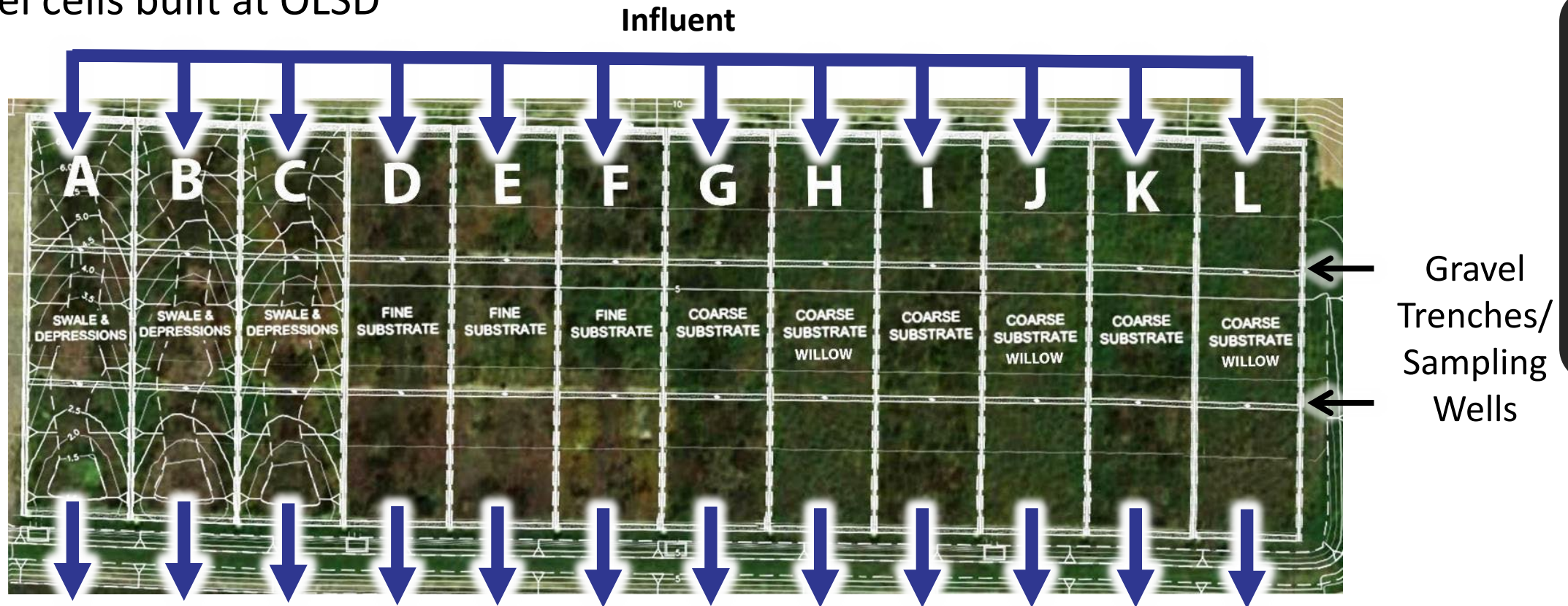
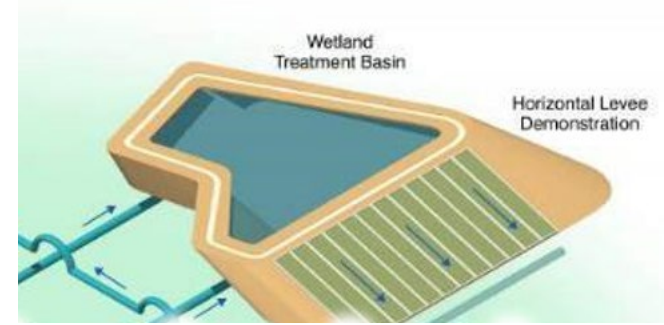
Horizontal Levees

- Sloped subsurface treatment wetland
- Built between a coastal levee and tidal marshes
- Potential of reducing nutrient loads and trace organic contaminants from coastal wastewater treatment facilities
- Could be well integrated with shoreline rehabilitation projects



Horizontal Levee Project

- Located at Oro Loma Sanitary District, San Lorenzo, CA
- 1.5 acres or about 7000 m²
- 12 parallel cells built at OLSD



Phase 1 of the ROC Studies at OLSD-HL

- Initiated in Aug./Sep. 2019
- ROC transport from SVAWPC to OLSD 10,000 gallons per week
- Coarse substrate cell has been receiving ROC for ~24 months
- Monitor water quality in ROC and identical wastewater cell every 6 weeks for the past two years
- Result showed significant reduction of nutrients, trace organic contaminants, and metals (e.g., copper)



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Next Steps

Phase 2 of the ROC Studies at OLSD-HL

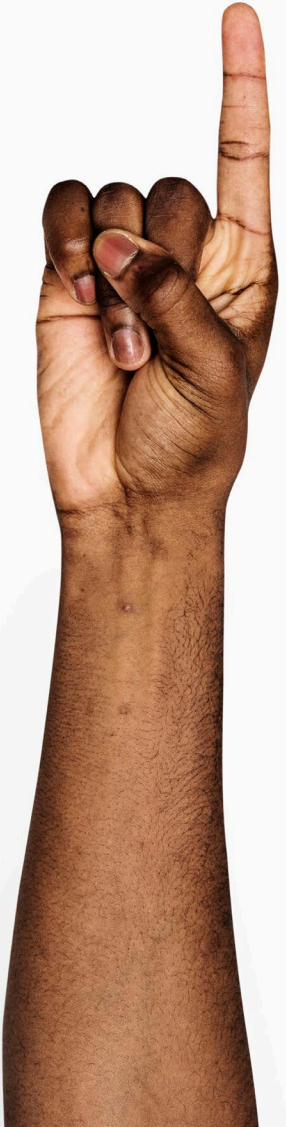
- Initiate in Aug./Sep. 2022 (36 months)
- The study seeks to quantify the treatment capacity of a horizontal levee to treat ROC
- OLSD will host, manage and reconstruct 3 of 12 experimental cells for ROC
- ROC transport from SVAWPC to OLSD 10,000 gallons per week
- Continue monitoring water quality in ROC cells (trace pharmaceuticals, trace metals, and PFAS compounds)



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QUESTIONS



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Santa Clara Valley Water District

File No.: 22-0767

Agenda Date: 6/22/2022

Item No.: 4.4.

COMMITTEE AGENDA MEMORANDUM Recycled Water Committee

SUBJECT:

Discuss the 2022 Recycled Water Committee Work Plan, Upcoming Discussion Items, and Next Meeting Date.

RECOMMENDATION:

Receive information on the 2022 Recycled Water Committee Work Plan and provide feedback on upcoming discussion items and next meeting date.

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.

At the February 1, 2022 meeting, the Committee approved the 2022 work plan that has agenda items necessary for the continuation of the recycled water projects. Staff solicits Committee feedback on any additional timeline information for holding discussions on the assigned Work Plan items, and confirmation of the next meeting date on July 27, 2022.

An updated 2022 work plan (Attachment 1) proposes changes for the remaining meetings in the year.

ATTACHMENTS:

Attachment 1: 2022 Revised Work Plan

UNCLASSIFIED MANAGER:

Candice Kwok-Smith, 408-630-3193

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REVISED RWC 2022 WORKPLAN

Task	Agenda Item	January	February	March	April	May	June	July	August	September	October	November	December
Focus 1: Advance the Purified Water Program by releasing an RFP for at least one locally-sponsored project													
1.1	Update on Purified Water Program including Partnership with Cities of San Jose and Palo Alto.	X		X		X	X	X	X	X	X	X	X
1.2	Independent Advisory Panel.												
1.3	Update on Public Private Partnership [P3] Procurement.	X		X		X	X	X	X	X	X	X	X
Focus 2: Implement the CoRe Plan													
2.1	Implement the Countywide Water Reuse Master Plan (CoRe Plan)							X					
2.2	Joint Mtg Prep/Debrief: TPAC			X									
2.3	Joint Mtg Prep/Debrief: Cities of Palo Alto/Mtn View.												
2.4	Joint Mtg Prep/Debrief: City of Sunnyvale.												
2.5	Update on SFPUC/BAWSCA Collaboration Efforts.												
Focus 3: Continue to monitor Direct Potable Reuse (DPR) guidance and implement actions as needed.													
3.1	Actively Engage in Direct Potable Reuse						X			X			
Focus 4: Finalize negotiations on term sheet for South County recycled water and agreement on governance													
4.1	South Santa Clara County Water Reuse Collaboration.			X			X			X			
Focus 5: Continue to monitor feasibility of desalination													
5.1	Continue to monitor feasibility of desalination.					X							
Others													
0.1	Regional discussion on options : Feasibility analysis of Recycled Water Exchange with Contra Costa Water District and Central Contra Costa Sanitary District and feasibility of desalination.							X					
0.2	Update on Bottling Purified and water tasting station at the SVAWPC.	X						X					
0.3	Urban Runoff Study with Stanford University.	X					X	X		X			
0.4	Outreach Efforts.	X		X		X	X	X	X	X	X	X	X
0.5	Alternative Purification Technologies in Response to 04/12/22 Board Meeting Public Comment					X							

*Blue strikes - items added on updated work plan

*Red strikes - items deleted from current work plan

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Reverse Osmosis Concentrate Management Plan Update



**Recycled Water Committee
June 22, 2022**

Nature-Based Solutions

- Pretreatment of ROC for discharge
- Potential to remove metals and other contaminants
- Potential as an alternative for treatment of ROC
- May assist with meeting the regulatory requirements and protection of the health of the San Francisco Bay and the surrounding environment
- Is supported by the regulatory agencies due to its green nature
- Create habitats



Valley Water Nature Based Solution



Engineered Treatment Cells / Open Water Pilot Study



Floating Wetland Treatment

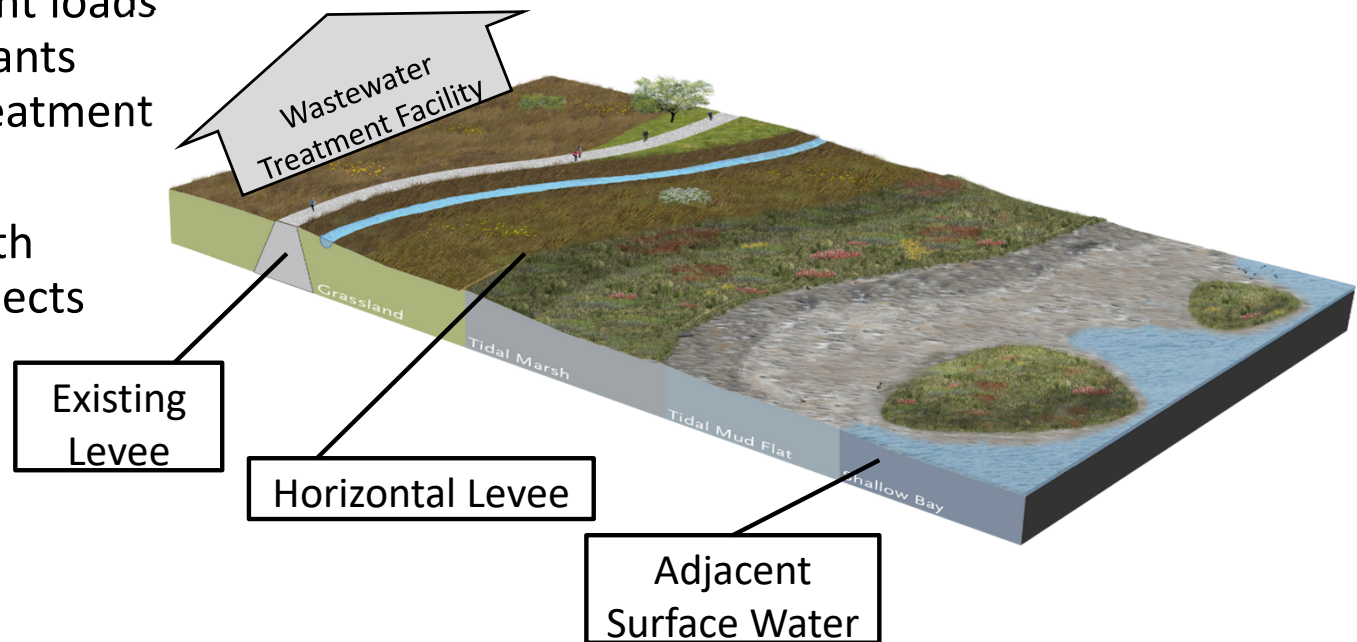


OLSD Horizontal Levee Pilot



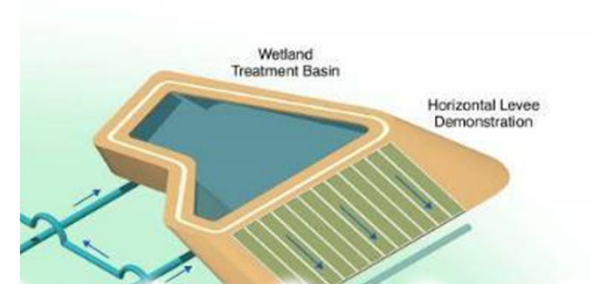
Horizontal Levees

- Sloped subsurface treatment wetland
- Built between a coastal levee and tidal marshes
- Potential of reducing nutrient loads and trace organic contaminants from coastal wastewater treatment facilities
- Could be well integrated with shoreline rehabilitation projects



Horizontal Levee Project

- Built at Oro Loma Sanitary District, San Lorenzo, CA in November 2015
- 12 parallel cells on 1.5 acres (7000 m²)
- Nitrate and trace organics removed near entrance to system



5

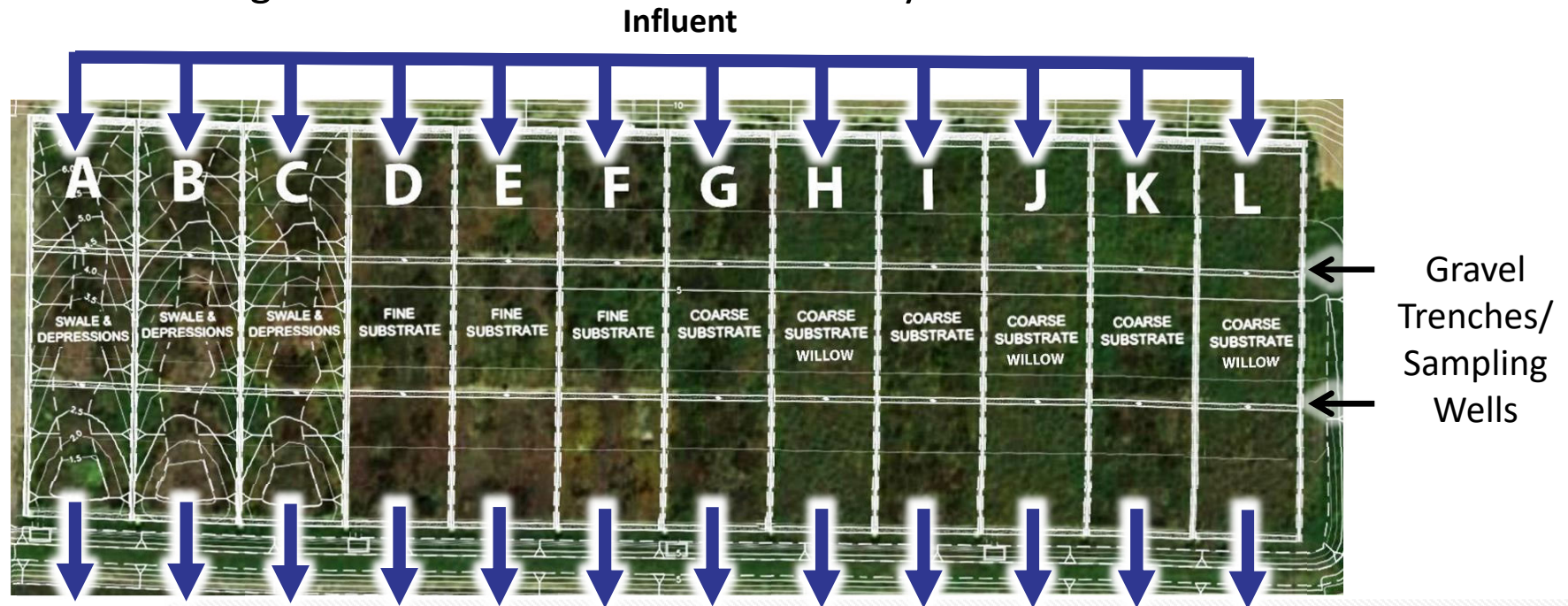


Image source: UC Berkeley

Phase I of the ROC Studies at OLSD-HL

- Initiated in Aug./Sep. 2019
- ROC transport from SVAWPC to OLSD 10,000 gallons per week
- One coarse substrate cell receives ROC; comparison cell receives OLSD effluent
- Monitor water quality in both cells every 6 weeks for the past two years
- Result showed substantial removal of nutrients, trace organic contaminants and copper



Next Steps

Phase II of the ROC Studies at OLSD-HL

- Initiate in Aug./Sep. 2022 (36 months)
- The study seeks to quantify/enhance the treatment capacity of a horizontal levee to treat ROC
- OLSD will host, manage and reconstruct 3 of 12 experimental cells to enhance the performance of horizontal levee with special consideration of ROC
- ROC transport from SVAWPC to OLSD 10,000 gallons per week
- Continue monitoring water quality in ROC cells (trace organics, Cu, Ni and PFAS compounds)



QUESTIONS





Valley Water

Clean Water • Healthy Environment • Flood Protection

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