



ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA
TRABUCO CANYON WATER DISTRICT
ADMINISTRATION FACILITY
32003 DOVE CANYON DRIVE, TRABUCO CANYON, CA
JUNE 4, 2025 AT 8:00 AM

COMMITTEE MEMBERS

Mark Anderson, Committee Chair
Glenn Acosta, Committee Member
John Horst, Committee Member Alternate

DISTRICT STAFF

Fernando Paludi, General Manager
Michael Perea, District Secretary
Lorrie Lausten, District Engineer
Gary Kessler, Water System Superintendent
Oscar Ulloa, Wastewater Superintendent
Jason Stroud, Maintenance Superintendent

AGENDA NOTE:

Trabuco Canyon Water District (District) will make this Engineering/Operational Committee Meeting available by telephone audio as follows:

Telephone Audio: 1 (669) 900-6833

Access Code: 973-7562-7682

Persons desiring to monitor the Committee meeting agenda items may download the agenda and documents on the internet at www.tcwd.ca.gov. You may submit public comments by email to the Committee at mperea@tcwd.ca.gov. In order to be part of the record, emailed comments on meeting agenda items must be received by the District at the referenced e-mail address not later than 7:00 a.m. (PDT) on the day of the meeting.

CALL MEETING TO ORDER

VISITOR PARTICIPATION

Members of the public wishing to address the Committee regarding a particular item on the agenda are requested to submit public comments at the time of the meeting or by email to the Committee at mperea@tcwd.ca.gov. The Committee Chair will call on the visitor following the Committee's discussion about the matter. Committees do not constitute a quorum of the Board of Directors and Committee Members cannot make decisions on matters. The Committee makes recommendations only to the Board of Directors. Members of the public will be given the opportunity to speak to the Committee prior to making a recommendation on the matter. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.

ORAL COMMUNICATION

Members of the public who wish to make comment on matters not appearing on the agenda are requested to submit oral communication at the time of the meeting by email to the Committee at mperea@tcwd.ca.gov. Under the requirements of State Law, Directors cannot take action on items not identified on the agenda and will not make decisions on such matters. The Board President may direct District Staff to follow up on issues as may be deemed appropriate. For persons desiring to make verbal comments and utilizing a translator to present their comments into English reasonable time accommodations, consistent with State law, shall be provided. Please limit comments to three minutes.

COMMITTEE MEMBER COMMENTS

REPORT FROM THE GENERAL MANAGER

ENGINEERING MATTERS

**PRESENTER(S): FERNANDO PALUDI, GENERAL MANAGER
MICHAEL PEREA, ASSISTANT GENERAL MANAGER
LORRIE LAUSTEN, DISTRICT ENGINEER**

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

RECOMMENDED ACTION:

Approve the following Engineering/Operational Committee Meeting Recap(s) and recommend that the Board receive and file same (Consent Calendar).

1. *May 7, 2025 Committee Meeting*

ITEM 2: ROBINSON RANCH WASTEWATER TREATMENT PLANT BLOWER MODIFICIATION PROJECT-CONSTRUCTION CONTRACT AWARD

RECOMMENDED ACTION:

Recommend the Board of Directors authorize the General Manager to award the Robinson Ranch Wastewater Treatment Plant Blower Modification Project to SS Mechanical Construction Corp. in the amount of \$919,022, with a 10% contingency of \$91,900 for a not to exceed amount of \$1,010,922 (Action Calendar).

ITEM 3: DIMENSION WATER TREATMENT PLANT TRANSMISSION MAIN REHABILITATION PROJECT

RECOMMENDED ACTION:

Receive information at the time of the meeting and take action(s) as deemed appropriate.

ITEM 4: PRELIMINARY 10-YEAR CAPITAL IMPROVEMENT PROGRAM

RECOMMENDED ACTION:

Receive information at the time of the meeting and take action(s) as deemed appropriate.

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Heritage Sewer Lift Station Rehabilitation Update
2. 2025 Consumer Confidence Report
3. Saddle Crest Development Update
4. Saddleback Meadows Development Update
5. Other Projects

RECOMMENDED ACTION:

Committee to receive project status updates at the time of the Committee Meeting.



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING AGENDA | JUNE 4, 2025**

OPERATIONAL MATTERS

**PRESENTER(S): GARY KESSLER, WATER SYSTEM SUPERINTENDENT
OSCAR ULLOA, WASTEWATER OPERATIONS SUPERINTENDENT
JASON STROUD, MAINTENANCE DEPARTMENT SUPERINTENDENT**

ITEM 6: WATER SYSTEM UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

ITEM 7: WASTEWATER SYSTEM UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

REGULATORY AND OTHER MATTERS

ITEM 9: OTHER MATTERS/REPORTS

RECOMMENDED ACTION:

Hear Other Matters/Reports that may have arisen after the posting of the agenda.

ADJOURNMENT

AVAILABILITY OF AGENDA MATERIALS

Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the Trabuco Canyon Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection at the Trabuco Canyon Water District Administrative Facility, 32003 Dove Canyon Drive, Trabuco Canyon, California (District Administrative Facility) or will be posted online on the District's website located at www.tcwd.ca.gov. If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available online at www.tcwd.ca.gov at the same time as they are distributed to the Board Members, except that, if such writings are distributed immediately prior to or during the meeting, they will be posted online on the District's website located at www.tcwd.ca.gov.

COMPLIANCE WITH THE REQUIREMENTS OF CALIFORNIA GOVERNMENT CODE SECTION 54954.2

In compliance with California law and the Americans with Disabilities Act, if you need special disability-related modifications or accommodations, including auxiliary aids or services in order to participate in the meeting, or if you need the agenda provided in an alternative format, please contact the District Secretary at (949) 858-0277, at least 48 hours in advance of the scheduled Board meeting. Notification at least 48 hours prior to the meeting will assist the District in making reasonable arrangements to accommodate your request. The Board Meeting Room is wheelchair accessible.



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

ENGINEERING MATTERS

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

RECOMMENDED ACTION:

Approve the following Engineering/Operational Committee Meeting Recap(s) and recommend that the Board receive and file same (Consent Calendar):

1. *May 7, 2025 Committee Meeting*

CONTACTS (staff responsible): PALUDI/PEREA



**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | MAY 7, 2025**

DIRECTORS PRESENT

Mark Anderson, Committee Chair
Glenn Acosta, Committee Member

STAFF PRESENT

Fernando Paludi, General Manager
Michael Perea, Assistant General Manager
Lorrie Lausten, District Engineer
Gary Kessler, Water Superintendent
Oscar Ulloa, Wastewater Superintendent
Jason Stroud, Maintenance Superintendent
Roseann Lejsek, Executive Assistant
Karen Warner, Principal Accountant
Phil Serpas, CMMS/SCADA Administrator

STAFF ABSENT

None

DISTRICT CONSULTANTS

None

PUBLIC PRESENT

None

CALL MEETING TO ORDER

Director Anderson called the May 7, 2025 Engineering/Operational Committee Meeting to order at 8:00 a.m.

VISITOR PARTICIPATION

No comments were received.

ORAL COMMUNICATION

No comments were received.

COMMITTEE MEMBER COMMENTS

None

REPORT FROM THE GENERAL MANAGER

None

ITEM 1: ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP

Mr. Paludi presented the Engineering/Operational Committee Meeting Recap for Committee review in accordance with the agenda.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | MAY 7, 2025**

RECOMMENDATION: The Committee recommended forwarding this matter to the Board of Directors (Consent Calendar).

ITEM 2: ADOPTION OF 2024 ORANGE COUNTY WATER AND WASTEWATER MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Mr. Paludi presented this matter for Committee consideration. Mr. Perea provided a brief overview of the Hazard Mitigation Plan, and he reported that District staff collaborated with the Municipal Water District of Orange County (MWDOC), and Herdon Group – HSG to provide comments and edits to the Draft Administrative Report and Annex Jurisdictional Profile (Annex) specific to TCWD. Mr. Perea also reported that staff worked with the Water Emergency Response Organization of Orange County (WERO) to submit the Multi-Jurisdictional Hazard Mitigation Plan, which has been submitted to CalOES for final approval.

RECOMMENDATION: Committee recommended the Board of Directors adopt Resolution No. 2025-1345 approving the 2024 Orange County Water and Wastewater Multi-Jurisdictional Hazard Mitigation Plan (Action Calendar).

ITEM 3: APPROVAL AND ADOPTION OF UPDATED MEMORANDUM OF UNDERSTANDING (MOU) WITH ORANGE COUNTY SHERIFF'S DEPARTMENT FOR USE OF COUNTYWIDE MASS NOTIFICATION SYSTEM (ALERT OC)

Mr. Paludi presented this matter for Committee consideration. Mr. Perea provided a brief background of the County's Mass Notification System (Alert OC), and he reported that in 2013 the Sheriff's Department made this system available to other public agencies throughout the County, including Trabuco Canyon Water District. Mr. Perea noted that there is no cost to use the system. Mr. Perea stated for the District to continue to participate and use the system, the Board of Directors would need to approve the updated MOU with the County.

RECOMMENDATION: Committee recommended the Board of Directors approve the Memorandum of Understanding Between the County of Orange and Participants for Use of Countywide Mass Notification System and authorize the General Manager to execute the Public Mass Notification System Individual User Agreement (Action Calendar).

ITEM 4: WASTEWATER TREATMENT PLANT HEADWORKS REPLACEMENT PROJECT

Mr. Paludi presented this matter for Committee consideration, and he reported that this Capital Improvement Program (CIP) project is critical for the Wastewater Treatment Plant. Ms. Lausten reported that the project was originally budgeted to rehabilitate the existing system, however, staff has identified a more efficient and reliable alternative. Ms. Lausten provided a summary of vendor pricing for rehabilitation, equipment and turnkey project costs. Ms. Lausten stated that staff recommends purchasing the Duperon system, with installation to be completed in-house to save costs. Mr. Ulloa added that the current system has had several components replaced throughout the years, and that parts are becoming obsolete.

RECOMMENDATION: Committee to recommend that the Board of Directors authorize the General Manager to purchase the Duperon FlexRake bar screen climber and compactor from JBI Water and Wastewater in the amount of \$334,000.

ITEM 5: DIMENSION WATER TREATMENT PLANT TRANSMISSION MAIN REHABILITATION

Mr. Paludi presented this matter for Committee consideration. Ms. Lausten reported that the technical memorandum was completed by Hazen and Sawyer. Ms. Lausten provided a summary of the project phasing within the memo, and she explained the various options for pipeline replacement. Discussion occurred regarding the project timeline, and the Committee requested that staff put together a schedule and timeline for the full Board's review. Ms. Lausten added that a section of the pipeline has been sent for pipe bursting testing, and she

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | MAY 7, 2025**

stated that staff should receive the video results within the week. Mr. Paludi added that a full update will be brought to the Board at the May Regular Board Meeting.

RECOMMENDATION: None – Informational item only.

ITEM 6: PRELIMINARY 10-YEAR CAPITAL IMPROVEMENT PROGRAM

Mr. Paludi presented this matter for Committee consideration, and he noted that the Committee was provided a handout showing the 10-year CIP dashboard that Ms. Warner and Mr. Berg put together based on the financial model. Mr. Paludi stated that the 10-year CIP is based on the 2022 Asset Condition Assessment as well as other important projects as identified by staff. Mr. Paludi went through the District-wide projects as well as potable, recycled water and wastewater projects. Discussion occurred regarding various projects, and Mr. Perea noted that staff is going through the Condition Assessment to identify projects that staff has completed in-house. Mr. Perea commended staff for their hard work to control costs. Ms. Lausten also identified current projects where staff is working to cut costs. The Committee requested that staff bring two rate increase options to the budget workshop for the Board’s consideration.

RECOMMENDATION: None – Informational item only.

ITEM 7: UPDATE ON STATE WATER BOARD CROSS CONNECTION CONTROL PLAN HANDBOOK (CCCPH) REQUIREMENTS AND CROSS-CONNECTION CONTROL MANAGEMENT PLAN (CCCMP) ADOPTION

Mr. Paludi introduced this matter for Committee consideration, and he reported that this policy update was managed by Mr. Perea with the assistance of John Robinson Consulting and participation of Orange County water agencies. Mr. Perea provided an overview of the adopted State Water Board regulations and the District’s proposed Cross-Connection Control Management Plan (CCCMP). Mr. Perea highlighted the benefits of the District’s Automatic Metering Infrastructure (AMI) meters as this system provided twenty-four-hour monitoring of reverse flows which may indicate a potential cross-connection which provides an increased security for the District’s distribution system, results in more accurate hazard assessment reporting, and a cost savings to residential customers by limiting the mandatory installation of backflow prevention assemblies on services with presumed hazards. Mr. Perea reviewed the public hearing schedule with the Committee, and he reported that staff is working with general counsel to meet these requirements.

RECOMMENDATION: None – Informational item only.

ITEM 8: HARRIS GRADE TANK REPLACEMENT COST ESTIMATE UPDATE

Mr. Paludi introduced this matter for Committee consideration, and he reported that District staff have worked with Tetra Tech (Consultant) to update the reservoir siting study for this project. Ms. Lausten provided an overview of the Harris Grade Reservoir Siting Study completed by Tetra Tech in 2020, and she reported that Tetra Tech has updated the engineer’s estimate for the construction of 1.7 MG steel tank reservoir. Discussion occurred concerning the updated estimate. Director Anderson asked if this project was included in the District’s capital improvement plan (CIP); Mr. Paludi indicated that the project was not included in the CIP.

RECOMMENDATION: None – Informational item only.

ITEM 9: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Report on Completion of WWTP Handrail Replacement Project by District Personnel

Mr. Ulloa provided a brief presentation on this project, and he reported that although the original project was budgeted at \$100,000 and the procured vendor quote for this work was \$270,722. Mr. Ulloa reported that District ordered the materials and completed the work during the normal workday in between duties, and the

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | MAY 7, 2025**

work was completed for approximately \$20,000. The Committee commended staff for their cost control efforts and work on this project.

2. Saddle Crest Development Update

Mr. Paludi provided a brief update on this matter, and he reported that the settlement agreement has been provided to the developer.

3. District CMMS Asset Summary Update

Mr. Serpas provided a brief status update on the planned asset summary report, and he shared that he is working with Cartegraph (vendor) to re-categorize all assets to facilitate this type of report.

4. WWTP SCADA Project Update

Ms. Lausten reported this project is close to completion, pending some wiring configuration work in the Operations room that will be performed by Hydrotech Electric (Contractor).

5. Other Projects

None

RECOMMENDATION: None – Informational item only.

ITEM 10: WATER SYSTEM UPDATES

Mr. Kessler reviewed the projects and repairs for the prior month, and he reported that Water Operations staff had completed the following tasks:

1. Excavated and removed 2 four-foot sections of 16" Main Transmission Line at DWTP for Pipe Splitting Testing
2. Rebuild customer meter services on Hamilton Trail
3. Rebuild customer meter services on Live Oak Canyon
4. Rebuild customer's boost pump discharge line
5. Serviced 85 valves in the Robinson Ranch service area
6. Installed Anodes on Filter #4 and began putting filter #4 back together at DWTP

Mr. Kessler presented the Water System Summary for Committee review.

Director Anderson related that residents in the Hamilton Oaks community have expressed their appreciation of District staff for their work on recent repairs and meter downsizing requests.

RECOMMENDATION: None – Informational item only.

ITEM 11: WASTEWATER SYSTEM UPDATES

Mr. Ulloa reviewed the projects and repairs for the prior month, and he reported that Wastewater Operations staff had completed the following tasks:

1. Assisted with UPS replacement at Dove Recycle Pump Station.
2. Installed a new turbidity meter at the WWTP.
3. Cleaned and graded spoils yard at the WWTP.
4. Prepped and conducted a plant tour for Scouting of America group.
5. Performed weed abatement at WWTP per Orange County Fire Authority (OCFA) and Division of Safety of Dams (DSOD).

Mr. Ulloa presented the Recycled Water System Summary for Committee review.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING RECAP | MAY 7, 2025**

Director Anderson inquired about the WWTP solids handling process; Mr. Ulloa provided a brief overview of the solids retention time (SRT) at the WWTP which results in fewer sludge hauling trips.

RECOMMENDATION: None – Informational item only.

ITEM 12: MAINTENANCE DEPARTMENT UPDATES

Mr. Stroud reviewed the projects and repairs for the prior month, and he reported that Maintenance staff completed the following tasks:

Projects and Repairs

Maintenance staff performed and/or completed the following tasks and projects:

Water Operations

1. Schedule Duthie Power to remove mobile emergency generator from Field Office/Booster One site
2. New Dimension cleaned out attic space at Field Office/Booster One for Hydrotech Electric to inspect wiring issues and repair

Wastewater Operations

1. Receive two new WILO pumps for Via Alegre LS

District Fleet Upgrades & Other Projects

1. Clean, prep, inspect truck #17 for use
2. Clean, prep, inspect truck #10 for use
3. Service and inspect boat for use
4. Schedule Duthie Power to perform fuel tank replacement on TCWD Cummins Mobile generator
5. JPIA pressure vessel inspection
6. Weed abatement program
7. Prep two items for auction, one 2014 F250 service body and one pickup truck bed (removed for service body install); staff will proceed with the District's Surplus Property Disposal Policy on this matter.

RECOMMENDATION: None – Informational item only.

ITEM 13: OTHER MATTERS/REPORTS

Mr. Perea reported that the Municipal Water District of Orange County (MWDOC) will be presenting a certificate of recognition to the District for hosting a tour of the Robinson Ranch WWTP for the Boy Scouts of America.

Director Anderson suggested that District staff evaluate the potential for a solar farm on Porter Property; Mr. Paludi indicated that District staff has recently issued the Porter Property Public Land Disposition RFQ and will reconvene the District Properties Committee to oversee this process.

RECOMMENDATION: None

ADJOURNMENT

Director Anderson adjourned the May 7, 2025 Engineering/Operational Committee Meeting at 9:50 a.m.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

ENGINEERING MATTERS

ITEM 2: ROBINSON RANCH WASTEWATER TREATMENT PLANT BLOWER MODIFICATION PROJECT CONSTRUCTION CONTRACT AWARD

The District’s Robinson Ranch Wastewater Treatment Plant (RRWWTP) operates a blower-aeration system consisting of four (4) blower-motor configurations. The existing Sutorbilt positive displacement blowers lack the needed capacity to effectively overcome pressure changes as a result of varying elevation within the sequencing batch reactors (SBR). Staff will be transitioning to multistage centrifugal air blowers, matching the existing Hoffman configuration, which will provide increased efficiency and redundancy. The four blowers are to be relocated outside of the existing Blower Building at the RRWWTP due to issues with heat from the blowers damaging the Motor Control Center (MCC), along with easier maintenance of the blowers. The remaining building space will be dedicated to an electrical room with the upgraded MCC currently in the design phase. The construction drawings are included as Exhibit 1.

Due to the long procurement time of equipment, Staff pre-purchased the two Hoffman blowers. In May 2025, the District solicited bids from eight (8) pre-qualified contractors, and received the following four (4) bids (Exhibit 2):

WWTP Blower Modification Project Bids	
Company	Bid Amount
SS Mechanical	\$919,022
Olsson Construction	\$1,188,000
Ferreira Construction	\$1,203,415
Pacific Hydrotech	\$1,336,100

Staff have reviewed the bids, checked the references and are recommending the award of Bid Items 1-15 to SS Mechanical. In addition, staff are currently soliciting proposals for Construction Management and Inspection Services which will be brought to the committee at the July 2025 meeting.

FUNDING SOURCE:

Capital Improvement Program

FISCAL IMPACT (PROJECT BUDGET):

\$1,995,000 for the WWTP Blower Modification Rehabilitation (FY26 and FY27) which includes the Blower Modification award and the future MCC Replacement.

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption

RECOMMENDED ACTION:

Recommend the Board of Directors authorize the General Manager to award the Robinson Ranch Wastewater Treatment Plant Blower Modification Project to SS Mechanical Construction Corp. in the amount of \$919,022, with a 10% contingency of \$91,900 for a not to exceed amount of \$1,010,922 (Action Calendar).

EXHIBIT(S):

1. Bid Summary
2. [Construction Plans](#)

CONTACTS (staff responsible): PALUDI/LAUSTEN/ULLOA

**ROBINSON RANCH WASTEWATER TREATMENT PLANT
BLOWER EQUIPMENT STATION AND BLOWER RELOCATION**

Bid Opening Date: May 28, 2025 @ 1:00 p.m.

Item	Description	Quantity	Unit	Engineer's Unit Price	Engineer's Total Cost	#1		#2		#3		#4	
						Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
1	Mobilization / Demobilization	1	LS	\$61,250.00	\$61,250.00	\$40,000.00	\$40,000.00	\$10,000.00	\$10,000.00	\$60,000.00	\$60,000.00	\$60,000.00	\$60,000.00
2	Survey Staking and Verification of Utility Locations, Field Dimensions, and Existing Electrical Work	1	LS	\$50,000.00	\$50,000.00	\$9,220.00	\$9,220.00	\$50,000.00	\$50,000.00	\$15,400.00	\$15,400.00	\$20,600.00	\$20,600.00
3	Clearing, Grubbing and Site Demolition	1	LS	\$20,000.00	\$20,000.00	\$19,940.00	\$19,940.00	\$80,000.00	\$80,000.00	\$46,500.00	\$46,500.00	\$20,600.00	\$20,600.00
4	Miscellaneous Structural, Electrical, and Mechanical Demolition	1	LS	\$16,100.00	\$16,100.00	\$42,615.00	\$42,615.00	\$90,000.00	\$90,000.00	\$90,000.00	\$90,000.00	\$21,500.00	\$21,500.00
5	Remove and Deliver Two Existing Sutorbilt Blower and Motor Assemblies	1	LS	\$30,000.00	\$30,000.00	\$16,920.00	\$16,920.00	\$10,000.00	\$10,000.00	\$17,700.00	\$17,700.00	\$43,800.00	\$43,800.00
6	Remove and Relocate Two Existing Hoffman Blower and Motor Assemblies	1	LS	\$250,000.00	\$250,000.00	\$42,985.00	\$42,985.00	\$15,000.00	\$15,000.00	\$35,375.00	\$35,375.00	\$64,300.00	\$64,300.00
7	Install Two Owner Furnished Lonestar Blower and Motor Assemblies	1	LS	\$200,000.00	\$200,000.00	\$16,220.00	\$16,220.00	\$15,000.00	\$15,000.00	\$26,530.00	\$26,530.00	\$40,000.00	\$40,000.00
8	Blower Suction and Discharge Piping and Manifolds	1	LS	\$143,500.00	\$143,500.00	\$217,150.00	\$217,150.00	\$210,000.00	\$210,000.00	\$228,000.00	\$228,000.00	\$407,000.00	\$407,000.00
9	Miscellaneous Electrical Work	1	LS	\$75,000.00	\$75,000.00	\$165,289.00	\$165,289.00	\$210,000.00	\$210,000.00	\$152,430.00	\$152,430.00	\$188,800.00	\$188,800.00
10	Miscellaneous Instrumentation Work	1	LS	\$37,500.00	\$37,500.00	\$11,335.00	\$11,335.00	\$15,000.00	\$15,000.00	\$55,000.00	\$55,000.00	\$12,300.00	\$12,300.00
11	Miscellaneous Structural Improvements	1	LS	\$62,000.00	\$62,000.00	\$99,220.00	\$99,220.00	\$240,000.00	\$240,000.00	\$155,205.00	\$155,205.00	\$116,300.00	\$116,300.00
12	Metal Canopy and Accessories	1	LS	\$80,000.00	\$80,000.00	\$177,890.00	\$177,890.00	\$175,000.00	\$175,000.00	\$220,675.00	\$220,675.00	\$206,000.00	\$206,000.00
13	Asphalt Concrete Pavement	600	SF	\$14.75	\$8,850.00	\$31.78	\$19,068.00	\$20.00	\$12,000.00	\$81.00	\$48,600.00	\$39.00	\$23,400.00
14	Record Documents, O&M Manuals, Warranties and Training	1	LS	\$25,800.00	\$25,800.00	\$11,170.00	\$11,170.00	\$1,000.00	\$1,000.00	\$10,000.00	\$10,000.00	\$1,500.00	\$1,500.00
15	Allowance for Field Orders	1	Allowance	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00
16	*Optional - Sound Panels and Accessories	1	LS	\$60,000.00	\$60,000.00	\$0.00	\$0.00	\$25,000.00	\$25,000.00	\$12,000.00	\$12,000.00	\$80,000.00	\$80,000.00
TOTAL (1 THROUGH 16) :					\$1,150,000.00	\$919,022.00		\$1,188,000.00		\$1,203,415.00		\$1,336,100.00	

Incorrect Bid Calculation Submittal

*Option not selected

\$1,336,800.00

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

ENGINEERING MATTERS

ITEM 3: DIMENSION WATER TREATMENT PLANT TRANSMISSION MAIN REHABILITATION PROJECT

Trabuco Canyon Water District (District) operates the Dimension Water Treatment Plant (DWTP) in the City of Lake Forest. DWTP is one of the only local drinking water treatment facilities of its kind in Orange County and the District’s only independent source of water with the capacity to serve all District customers. DWTP can process up to six cubic feet per second (cfs) of untreated water from Metropolitan Water District (MWD). Treated water leaving DWTP is pumped to the District’s service area via a 4-mile, 16” transmission pipeline (Transmission Main). The Transmission Main was originally constructed in 1964 although some portions have been replaced as part of road improvement projects, residential development, and overall system upgrades. The Transmission Main operates under high pressure and several major breaks in the pipeline occurred between August-November 2024. Consequently, the Transmission Main has been taken out of service and the District must depend on neighboring districts for water supply at a substantially higher cost and with no guarantee of reliability.

Staff have worked with their consulting engineers, Hazen and Sawyer (Hazen), to develop a repair plan focused on the most appropriate and effective construction methods to rehabilitate the Transmission Main. The analysis and comparison of available pipeline rehabilitation options with recommendations and estimated costs is summarized in Hazen’s final Technical Memorandum (TM), included as Exhibit 1. Exhibit 2 shows the first phase which will repair/replace the most vulnerable 12,500 linear feet (LF) to restore water service as soon as possible. The total estimated cost for Phase 1 is \$5,900,000 and currently out to bid. A schedule of completed and planned tasks is included below:

Transmission Main Pipeline Rehabilitation Project Schedule				
Item No.	Task/Item Description	Agency/Consultant/ Contractor	Completion Date	Planned Date
1	Source of Supply Ad Hoc Committee Meeting Kick - Off	Staff	1/28/2025	
2	Rehabilitation Investigation and Engineering Design	Hazen	1/29/2025	
3	Geotechnical Investigation	GMU	4/8/2025	
4	ROW, Easements and Property Owner Investigation	KDM	4/14/2025	
5	Soil Boring Permits	City of Mission Viejo & County of Orange	5/9/2025	
6	Plans and Bid Documents Completed. Bids Solicitated for Pipeline Repair/Replacement	Hazen	5/15/2025	
7	Soil Borings Completed	GMU	5/16/2025	
8	Pipeline Pre-Bid Construction Meeting	Staff	5/21/2025	
9	Geotechnical Report Completed	GMU	5/23/2025	
10	E/O Committee Meeting - Committee review			6/4/2025
11	Pipeline Bids Due			6/10/2025
12	Ad Hoc Committee Meeting - Committee review			TBD
13	Regular Board Meeting - Award Project			6/18/2025
14	Material Procurement (60 days)			8/19/2025
15	Phase 1A - Video, Clean Pipe, Install Liner, Pipeline Connections (30 Days)			9/19/2025
16	Phase 1B - Install Pipeline/Pipe Bursting (60 Days)			10/19/2025

The second phase will repair/replace an additional 4,500 LF of pipeline and will be completed within 24 months following Phase I, during periods when water demands are low. Staff is developing an estimated cost of Phase 2 of the Transmission Main rehabilitation, subject to analysis of alternatives and construction methods.

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

In addition to the Pipeline Rehabilitation, Staff has been working with their consulting Engineers, Arcon Structural, to prepare structural calculation and plans for the seismic retrofit to the DWTP Filter 4 Tank. The schedule for this work is as follows:

Dimension Water Treatment Plant Filter 4 Rehabilitation Project Schedule				
Item No.	Task/Item Description	Agency/Consultant/ Contractor	Completion Date	Planned Date
1	Structural Repair on DWTP Filter 4	Arcon	3/25/2025	
2	Structural Plans and Calcs Completed for Filter 4 Repair	Arcon	5/12/2025	
3	Bids Solicitated for Structural Repairs	Staff	5/28/2025	
4	DWTP Filter 4 Bids Due			6/11/2025

More information may be presented at the time of the meeting.

FUNDING SOURCE:

Capital Improvement Program

FISCAL IMPACT:

The Engineer’s Cost Estimate for Phase I of the Transmission Main Rehab is \$5,900,000 for construction only. The estimated cost to date of engineering support, including constructability analysis, design, geotechnical, and survey is \$200,000.

The Fiscal Year 2026 CIP Budget total for Phase 1 of this project is \$7,000,000

ENVIRONMENTAL COMPLIANCE:

Notice of Exemption

RECOMMENDED ACTION:

Receive information at the time of the meeting and take action(s) as deemed appropriate.

EXHIBIT(S):

1. [Final Technical Memorandum prepared by Hazen and Sawyer, April 23, 2025 \(excluding Appendices\)](#)
2. [Construction Key Map](#)
3. [Structural Retrofit Plans](#)

CONTACTS (staff responsible): LAUSTEN/ULLOA

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

ENGINEERING MATTERS

ITEM 4: PRELIMINARY 10-YEAR CAPITAL IMPROVEMENT PROGRAM

Maintaining a 10-year Capital Improvement Program (CIP) is integral to Trabuco Canyon Water District's (District) long-term financial planning efforts, including budgeting, debt management, and rate projections. Staff has developed the proposed 10-year list of CIP projects by revising the 5-year CIP that the District has been implementing as part of the 2022 Rate Study, adding remaining high-priority projects from the 2022 Asset Condition Assessment study, as well as adding other proposed new projects that address critical needs but were not identified in the Asset study.

Projects and programs in the preliminary 10-year CIP are categorized as either exclusively associated with a particular service or system (i.e. Potable Water, Wastewater, Recycled Water), or a combination of two systems (i.e. Wastewater and Recycled Water), or District-Wide. The preliminary 10-year total CIP budget, from Fiscal Year (FY) 2024-25 through FY 2033-34 is approximately \$70 million. However, the list of proposed projects is subject to Board of Directors review and approval during the current FY 2025-26 budget process and on an annual basis.

More information will be provided at the time of the Committee meeting.

FUNDING SOURCE:

Capital Improvement Program projects are typically funded through a combination of debt proceeds and cash reserves.

FISCAL IMPACT:

There is no authorized fiscal impact associated with the preliminary 10-year CIP, which is intended for planning and discussion purposes.

ENVIRONMENTAL COMPLIANCE:

Not applicable. Individual capital projects will be required to comply with environmental permitting requirements as necessary.

RECOMMENDED ACTION:

Receive information at the time of the meeting and take action(s) as deemed appropriate.

EXHIBIT(S):

None

CONTACTS (staff responsible): PALUDI/LAUSTEN

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

ENGINEERING MATTERS

ITEM 5: OTHER ENGINEERING AND OPERATIONS PROJECT UPDATES

1. Heritage Sewer Lift Station Rehabilitation Update
2. 2025 Consumer Confidence Report
3. Saddle Crest Development Update
4. Saddleback Meadows Development Update
5. District CMMS Asset Summary Update
6. Other Projects

RECOMMENDED ACTION:

Committee to receive project status updates at the time of the Committee Meeting.

EXHIBIT(S):

1. 2025 CCR Report

CONTACTS (staff responsible): PALUDI/PEREA/LAUSTEN

ANNUAL WATER QUALITY REPORT

Reporting Year 2024

Presented By



This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Este informe contiene información importante sobre su agua potable. Traducirlo, o hablar con alguien que lo entienda.

Your 2025 Water Quality Report

Since 1990, California public water utilities have been providing an annual Water Quality Report to their customers. This year's report covers drinking water quality testing and reporting for 2024. Trabuco Canyon Water District (TCWD) vigilantly safeguards its water supply, and as in years past, the water delivered to your home meets the quality standards required by federal and state regulatory agencies. The U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) are the agencies responsible for establishing and enforcing drinking water quality standards. TCWD and other regional water suppliers frequently go beyond what is required by testing for unregulated chemicals that may have known health risks but do not have drinking water standards. Unregulated chemical monitoring helps U.S. EPA and DDW determine where certain chemicals occur and whether new standards need to be established for those chemicals to protect public health.

Through drinking water quality testing programs carried out by TCWD, your drinking water is constantly monitored from source to tap for constituents that are both regulated and unregulated. The state allows water agencies to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, is more than a year old.

Quality Water is Our Priority

Turn the tap and the water flows, as if by magic. Or so it seems. The reality is considerably different. Delivering high-quality drinking water to our customers is a scientific and engineering feat that requires considerable effort and talent to ensure the water is always there, always safe to drink. Because tap water is highly regulated by state and federal laws, water treatment and distribution operators must be licensed and are required to complete on-the-job training and technical education before becoming certified by the state.

Our licensed water professionals have an understanding of a wide range of subjects, including mathematics, biology, chemistry, physics, and engineering. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water;
- Monitoring and inspecting machinery, meters, gauges, and operating conditions;
- Conducting tests and inspections on water and evaluating the results;
- Documenting and reporting test results and system operations to regulatory agencies; and
- Serving our community through customer support, education, and outreach.

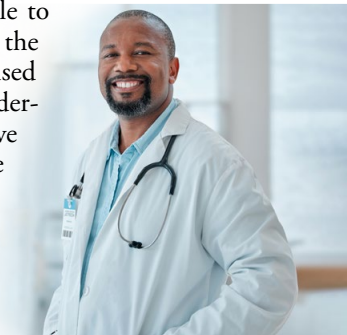
So the next time you turn on your faucet, think of the skilled professionals who stand behind every drop.

Sources of Supply

TCWD has a variety of water supply sources, including imported wholesale and treated surface water and local groundwater. TCWD's Dimension Water Treatment Plant treats primarily imported water from the Colorado River. TCWD also receives imported, treated water from the Metropolitan Water District of Southern California (MWDSC) or the Baker Water Treatment Plant, which uses water from MWDSC and the Santiago Reservoir (Irvine Lake). MWDSC's imported water sources are the Colorado River and the State Water Project, which draws water from the Sacramento-San Joaquin River Delta.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. U.S. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).



We Invite You to Learn More About Your Water's Quality

For information about this report, or your water quality in general, please contact Fernando Paludi, General Manager, at (949) 858-0277. The TCWD Board of Directors meets the third Wednesday of each month at 6:00 p.m. at the administration building, 32003 Dove Canyon Drive. The public is encouraged to attend. TCWD encourages its customers to visit tcwd.ca.gov. For more information about the health effects of the contaminants listed in the tables, call the U.S. EPA hotline at (800) 426-4791.



/TrabucoCanyonWaterDistrict



/TrabucoCanyonWaterDistrict



@TCWDWater

Source Water Assessment

Imported (MWDSC) Water Assessment

Every five years, water purveyors are required by DDW to examine possible sources of drinking water contamination in their State Water Project and Colorado River source waters. The most recent surveys for MWDSC's source waters are the Colorado River Watershed Sanitary Survey—2020 Update and the State Water Project Watershed Sanitary Survey—2021 Update. Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/stormwater runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater.



U.S. EPA also requires water purveyors to complete a source water assessment (SWA) that uses information collected in the watershed sanitary surveys. MWDSC completed its SWA in December 2002. The most recent SWA for Santiago Reservoir was completed in 2001. The SWA is used to evaluate the vulnerability of water sources to contamination and helps determine whether more protective measures are needed. A copy of the most recent summary of the Watershed Sanitary Surveys or the SWA can be found at tcwd.ca.gov or by calling the district at (949) 858-0277.

Baker Water Treatment Plant

The Baker Water Treatment Plant receives untreated surface water from MWDSC and Santiago Reservoir. The surface water assessment of Santiago Reservoir is provided by Serrano Water District, which also uses this source. The most recent sanitary survey for Santiago Reservoir was updated in 2019. Water supplies from Santiago Reservoir are most vulnerable to septic systems and wildfires. The SWA for Santiago Reservoir was completed in April 2001. The assessment was conducted for the Serrano Water District by Boyle Engineering Corporation with assistance from the Serrano Water District staff. A copy of the complete assessment may be viewed at the Irvine Ranch Water District (IRWD) Water Quality Department, 3512 Michelson Drive, Irvine. You may request a summary of the assessment by writing to District Secretary, Irvine Ranch Water District, 15600 Sand Canyon Avenue, Irvine, CA 92618.

Groundwater Assessment

An assessment of the drinking water sources for TCWD was completed in 2011. The water sources are considered most vulnerable to contaminants associated with historic gas stations, septic systems, agricultural/irrigation wells, above- and belowground storage tanks, and mining activities. There have been no contaminants detected in TCWD's water associated with these activities. The only detections of contaminants are associated with naturally occurring salts and radiochemicals and low-level organics. A copy of the complete assessment may be viewed at TCWD. You may request a summary of the assessment by contacting the district secretary at (949) 858-0277.

About Lead in Tap Water

Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and home plumbing. TCWD is responsible for providing high-quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter certified by an American National Standards Institute-accredited certifier to reduce lead is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure it is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling does not remove lead from water.

Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, or doing laundry or a load of dishes. If you have a lead or galvanized service line requiring replacement, you may need to flush your pipes for a longer period. If you are concerned about lead and wish to have your water tested, contact TCWD at (949) 858-0277. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at epa.gov/safewater/lead.

Lead Service Line Inventory

To address lead in drinking water, public water systems were required to develop and maintain an inventory of service line materials by October 16, 2024. Developing an inventory and identifying the location of lead service lines (LSL) is the first step for beginning LSL replacement and protecting public health. The lead service line inventory may be found at tcwd.ca.gov/district-services/domestic-water/revised-lead-and-copper-rule-lcrr. Please contact us if you would like more information about the inventory or any lead sampling that has been done.

Cross-Connection Control Management Plan

In cooperation with the State Water Resources Control Board Division of Drinking Water, TCWD's major goal is to ensure the distribution of a safe and potable water supply to all domestic water users. In order for TCWD to achieve this goal, a Cross-Connection Control Management Plan (CCCMP) is being developed with an effective date of July 1, 2025. TCWD's CCCMP was developed pursuant to the requirements set forth in the Cross-Connection Control Policy Handbook (CCCPC) which replaced State of California Administrative Code Title 17, Sections §7583 through §7605 and applies to all State of California Public Water Systems, as defined in California's Health and Safety Code (CHSC, section 116275(h)).

2024 Trabuco Canyon Water District Drinking Water Quality

For more information about the health effects of the listed contaminants in the following tables, call the U.S. EPA hotline at (800) 426-4791.

2024 TRABUCO CANYON WATER DISTRICT DISTRIBUTION SYSTEM WATER QUALITY

	MCL (MRDL/ MRDLG)	AVERAGE AMOUNT	RANGE OF DETECTIONS	MCL VIOLATION	TYPICAL SOURCE OF CONTAMINANT
Disinfection Byproducts					
Total Trihalomethanes (ppb)	80	45	12 - 64	No	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	14	ND - 20	No	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	0.85	0.3 - 2.3	No	Disinfectant Added for Treatment
Aesthetic Quality					
Color (color units)	15*	1	ND - 1	No	Erosion of Natural Deposits
Odor (threshold odor number)	3*	1	ND - 1	No	Erosion of Natural Deposits
Turbidity (ntu)	5*	0.2	ND - 0.5	No	Erosion of Natural Deposits

Four locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids – per State Water Resources Control Board Guidelines, average amount shall be reported as the highest of the locational running annual average values for the year; sixteen locations are tested monthly for color, odor and turbidity.

MRDL = Maximum Residual Disinfectant Level; **MRDLG** = Maximum Residual Disinfectant Level Goal;

*Constituent is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

LEAD AND COPPER ACTION LEVELS AT RESIDENTIAL TAPS

	ACTION LEVEL (AL)	PUBLIC HEALTH GOAL	90TH PERCENTILE VALUE	SITES EXCEEDING AL / NUMBER OF SITES	AL VIOLATION?	TYPICAL SOURCE IN DRINKING WATER
Lead (ppb)	15	0.2	ND	0/35	No	Corrosion of Household Plumbing
Copper (ppm)	1.3	0.3	0.18	0/35	No	Corrosion of Household Plumbing

Every three years, at least 30 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2024. Lead was not detected in any sample. Copper was detected in 21 samples; none exceeded the regulatory action level. A regulatory action level is the concentration of a constituent, if exceeded triggers treatment or other requirements that a water system must follow.

UNREGULATED CHEMICALS REQUIRING MONITORING IN THE DISTRIBUTION SYSTEM

CHEMICAL	NOTIFICATION LEVEL	PHG	AVERAGE AMOUNT	RANGE OF DETECTIONS	MOST RECENT SAMPLING DATE
Haloacetic Acids (HAA5) (ppb)	n/a	n/a	10.5	4.27 - 17.6	2020
Haloacetic Acids (HAA6Br) (ppb)	n/a	n/a	9.34	3.65 - 16.8	2020
Haloacetic Acids (HAA9) (ppb)	n/a	n/a	18.5	7.25 - 31	2020



2024 TRABUCO CANYON WATER DISTRICT TRABUCO CREEK WELLS FACILITY

CONSTITUENT	MCL	PHG (MCLG)	AVERAGE AMOUNT	RANGE OF DETECTIONS	MCL VIOLATION?	MOST RECENT SAMPLING DATE	TYPICAL SOURCE OF CONTAMINATION
Inorganic Constituents							
Nitrate (ppm as N)	10	10	1.3	1.3	No	2024	Fertilizers, Septic Tanks
Nitrate+Nitrite (ppm as N)	10	10	1.3	1.3	No	2024	Fertilizers, Septic Tanks
Secondary Standards*							
Chloride (ppm)	500*	n/a	16	16	No	2024	Erosion of Natural Deposits
Specific Conductance (µmho/cm)	1,600*	n/a	620	620	No	2024	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	150	150	No	2024	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	430	430	No	2024	Erosion of Natural Deposits
Unregulated Constituents							
Bicarbonate (ppm)	Not Regulated	n/a	230	230	n/a	2024	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	83	83	n/a	2024	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	19	19	n/a	2024	Erosion of Natural Deposits
pH (pH units)	Not Regulated	n/a	7.2	7.2	n/a	2024	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	26	26	n/a	2024	Erosion of Natural Deposits
Total Alkalinity (ppm as CaCO ₃)	Not Regulated	n/a	180	180	n/a	2024	Erosion of Natural Deposits
Total Hardness (ppm as CaCO ₃)	Not Regulated	n/a	287	287	n/a	2024	Erosion of Natural Deposits
Total Hardness (grains per gallon)	Not Regulated	n/a	17	17	n/a	2024	Erosion of Natural Deposits
Total Hardness (grains/gal)	Not Regulated	n/a	17	17	n/a	2024	Erosion of Natural Deposits

ppb = parts-per-billion; ppm = parts-per-million; ntu = nephelometric turbidity units; ND = not detected; n/a = not applicable; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal; µmho/cm = micromho per centimeter; *Constituent is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

	TREATMENT TECHNIQUE	TURBIDITY MEASUREMENTS	TT VIOLATION?	MOST RECENT SAMPLING DATE	TYPICAL SOURCE IN DRINKING WATER
Turbidity - combined filter effluent					
1) Highest single turbidity measurement	5 NTU	0.32	No	2024	Soil Runoff
2) Percentage of samples less than 0.2 NTU	95%	100%	No	2024	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Trabuco Canyon Water District's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique." A treatment technique is a required process intended to reduce the level of constituents in drinking water that are difficult and sometimes impossible to measure directly. NTU = nephelometric turbidity units

UNREGULATED CHEMICALS REQUIRING MONITORING

CHEMICAL	NOTIFICATION LEVEL	PHG	AVERAGE AMOUNT	RANGE OF DETECTIONS	MOST RECENT SAMPLING DATE
Bromide (ppm)	n/a	n/a	0.033	0.032 - 0.033	2020

Drinking Water Definitions

What are water quality standards?

Drinking water standards established by U.S. EPA and DDW set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The tables in this report show the following types of water quality standards:

- **Maximum contaminant level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.
- **Maximum residual disinfectant level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
- **Primary drinking water standard:** MCLs for contaminants that affect health, along with their monitoring and reporting requirements and water treatment requirements.
- **Regulatory action level (AL):** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

What is a water quality goal?

In addition to mandatory water quality standards, U.S. EPA and DDW have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The tables in this report include three types of water quality goals:

- **Maximum contaminant level goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by U.S. EPA.
- **Maximum residual disinfectant level goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Public health goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

How are contaminants measured?

Water is sampled and tested throughout the year. Contaminants are measured in:

- Parts per million (ppm) or milligrams per liter (mg/L)
- Parts per billion (ppb) or micrograms per liter (µg/L)
- Parts per trillion (ppt) or nanograms per liter (ng/L)

2024 TRABUCO CANYON WATER DISTRICT DIMENSION WATER TREATMENT PLANT

CONSTITUENT	MCL	PHG (MCLG)	AVERAGE AMOUNT	RANGE OF DETECTIONS	MCL VIOLATION?	MOST RECENT SAMPLING DATE	TYPICAL SOURCE IN DRINKING WATER
Radiologicals							
Alpha Radiation (pCi/L)	15	(0)	3.1	3.1	No	2017	Erosion of Natural Deposits
Uranium (pCi/L)	20	0.43	3.5	3.5	No	2017	Erosion of Natural Deposits
Inorganic Constituents							
Aluminum (ppm)	1	0.6	0.11	0.11	No	2024	Treatment Process Residue, Natural Deposits
Barium (ppm)	1	2	0.13	0.13	No	2024	Erosion of Natural Deposits
Fluoride (ppm) naturally-occurring	2	1	0.31	0.31	No	2024	Erosion of Natural Deposits
Secondary Standards*							
Aluminum (ppb)	200*	600	110	110	No	2024	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	120	120	No	2024	Leaching from Natural Deposits
Specific Conductance (µmho/cm)	1,600*	n/a	1,100	1,100	No	2024	Ions in Water
Sulfate (ppm)	500*	n/a	260	260	No	2024	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	680	680	No	2024	Runoff or Leaching from Natural Deposits
Unregulated Constituents							
Calcium (ppm)	Not Regulated	n/a	72.1	72.1	n/a	2024	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	27.4	27.4	n/a	2024	Runoff or Leaching from Natural Deposits
pH (pH units)	Not Regulated	n/a	7.74	7.74	n/a	2024	Hydrogen Ion Concentrations
Sodium (ppm)	Not Regulated	n/a	110	110	n/a	2024	Runoff or Leaching from Natural Deposits
Total Alkalinity (ppm as CaCO ₃)	Not Regulated	n/a	160	160	n/a	2024	Runoff or Leaching from Natural Deposits
Total Hardness (ppm as CaCO ₃)	Not Regulated	n/a	293	293	n/a	2024	Runoff or Leaching from Natural Deposits
Total Hardness (grains/gal)	Not Regulated	n/a	17	17	n/a	2024	Runoff or Leaching from Natural Deposits

ppb = parts-per-billion; ppm = parts-per-million; pCi/L = picoCuries per liter; ntu = nephelometric turbidity units; ND = not detected; n/a = not applicable; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal;

*Constituent is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

	TREATMENT TECHNIQUE	TURBIDITY MEASUREMENTS	TT VIOLATION?	MOST RECENT SAMPLING DATE	TYPICAL SOURCE IN DRINKING WATER
Turbidity - combined filter effluent					
1) Highest single turbidity measurement (NTU)	1	0.21	No	2024	Soil Runoff
2) Percentage of samples less than 0.2 NTU	95%	100%	No	2024	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Trabuco Canyon Water District's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique." A treatment technique is a required process intended to reduce the level of constituents in drinking water that are difficult and sometimes impossible to measure directly. NTU = nephelometric turbidity units

UNREGULATED CHEMICALS REQUIRING MONITORING

CHEMICAL	NOTIFICATION LEVEL	PHG	AVERAGE AMOUNT	RANGE OF DETECTIONS	MOST RECENT SAMPLING DATE
Bromide (ppm)	n/a	n/a	0.034	0.03 - 0.038	2020
Lithium (ppb)	n/a	n/a	52	44 - 60	2023
Manganese (ppb)**	SMCL = 50	n/a	ND	ND - 0.58	2020
Total Organic Carbon (Unfiltered)(ppm)	n/a	n/a	2.8	2.6 - 3	2020

SMCL = Secondary MCL.

** Manganese is regulated with a secondary standard of 50 ppb but was not detected, based on the detection limit for purposes of reporting of 20 ppb. Manganese was included as part of the unregulated chemicals requiring monitoring.

2024 METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA TREATED SURFACE WATER

CHEMICAL	MCL	PHG (MCLG)	AVERAGE AMOUNT	RANGE OF DETECTIONS	MCL VIOLATION?	TYPICAL SOURCE OF CHEMICAL
Radiologicals - Tested in 2023 and 2024						
Gross Alpha Particle Activity (pCi/L)	15	(0)	ND	ND - 5	No	Erosion of Natural Deposits
Gross Beta Particle Activity (pCi/L)	50	(0)	4	ND - 5	No	Decay of Natural and Man-made Deposits
Uranium (pCi/L)	20	0.43	1	ND - 3	No	Erosion of Natural Deposits
Inorganic Chemicals - Tested in 2024						
Aluminum (ppm)	1	0.6	ND	ND - 0.11	No	Treatment Process Residue, Natural Deposits
Barium (ppm)	1	2	0.124	0.124	No	Refinery Discharge, Erosion of Natural Deposits
Bromate (ppb)	10	0.1	ND	ND - 1.6	No	Byproduct of Drinking Water Ozonation
Fluoride (ppm)	2	1	0.7	0.6 - 0.8	No	Water Additive for Dental Health
Secondary Standards* - Tested in 2024						
Aluminum (ppb)	200*	600	ND	ND - 110	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	104	93 - 116	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	n/a	2	1 - 2	No	Naturally-occurring Organic Materials
Odor (threshold odor number)	3*	n/a	1	1	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	979	888 - 1,070	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	224	196 - 253	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	621	556 - 686	No	Runoff or Leaching from Natural Deposits
Unregulated Chemicals - Tested in 2024						
Alkalinity, total as CaCO ₃ (ppm)	Not Regulated	n/a	114	105 - 123	n/a	Runoff or Leaching from Natural Deposits
Boron (ppm)	NL=1	n/a	0.14	0.14	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	n/a	68	58 - 78	n/a	Runoff or Leaching from Natural Deposits
Hardness, total as CaCO₃ (ppm)	Not Regulated	n/a	270	235 - 305	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gal)	Not Regulated	n/a	16	14 - 18	n/a	Runoff or Leaching from Natural Deposits
Lithium (ppb)	Not Regulated	n/a	40	32 - 47	n/a	Various Natural and Man-made Sources
Magnesium (ppm)	Not Regulated	n/a	26	22 - 29	n/a	Runoff or Leaching from Natural Deposits
pH (pH units)	Not Regulated	n/a	8.2	8.2	n/a	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	n/a	4.9	4.4 - 5.4	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	103	90 - 116	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	TT	n/a	2.4	2 - 2.5	n/a	Various Natural and Man-made Sources

ppb = parts per billion; ppm = parts per million; pCi/L = picoCuries per liter; µmho/cm = micromhos per centimeter; ND = not detected; MCL = Maximum Contaminant Level; (MCLG) = federal MCL Goal; PHG = California Public Health Goal; NL = Notification Level; n/a = not applicable; TT = treatment technique; * Chemical is regulated by a secondary standard.

METROPOLITAN WATER DISTRICT DIEMER FILTRATION PLANT	TREATMENT TECHNIQUE	TURBIDITY MEASUREMENTS	TT VIOLATION?	TYPICAL SOURCE OF CHEMICAL
Turbidity - combined filter effluent				
1) Highest single turbidity measurement (NTU)	0.3	0.06	No	Soil Runoff
2) Percentage of samples less than or equal to 0.3 NTU	95%	100%	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT). A treatment technique is a required process intended to reduce the level of chemicals in drinking water that are difficult and sometimes impossible to measure directly.

NTU = nephelometric turbidity units

2024 BAKER WATER TREATMENT PLANT

CHEMICAL	MCL	PHG (MCLG)	AVERAGE AMOUNT	RANGE OF DETECTIONS	MCL VIOLATION?	TYPICAL SOURCE OF CHEMICAL
Radiologicals - Tested in 2024						
Gross Alpha Particle Activity (pCi/L)	15	MCLG = 0	3.8	3.8	No	Erosion of Natural Deposits
Gross Beta Particle Activity (pCi/L)	50	MCLG = 0	4.6	4.6	No	Decay of Natural and Man-made Deposits
Uranium (pCi/L)	20	0.43	2.2	2.2	No	Erosion of Natural Deposits
Inorganic Chemicals - Tested in 2024						
Arsenic (ppb)	10	0.004	2	2 - 2.27	No	Erosion of Natural Deposits
Barium (ppm)	1	2	0.129	0.113 - 0.141	No	Refinery Discharge, Erosion of Natural Deposits
Chlorine Dioxide (ppb)	MRDL = 800	MRDLG = 800	98.5	ND - 680	No	Drinking Water Disinfectant Added for Treatment
Chlorite (ppm)	1.0	0.05	ND	ND - 0.09	No	Byproduct of Drinking Water Chlorination
Fluoride (ppm)	2.0	1	0.35	0.31 - 0.38	No	Erosion of Natural Deposits; Water Additive for Dental Health
Secondary Standards* - Tested in 2024						
Chloride (ppm)	500*	n/a	112	98.4 - 119	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	n/a	ND	ND - 8	No	Naturally-occurring Organic Materials
Manganese (ppb)	50*	n/a	1.44	ND - 47	No	Leaching from Natural Deposits
Odor (threshold odor number)	3*	n/a	2	ND - 4	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	1,065	1,008 - 1,126	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	237	228 - 243	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	642	588 - 712	No	Runoff or Leaching from Natural Deposits
Turbidity (ntu)	5*	n/a	ND	ND - 0.3	No	Soil Runoff
Unregulated Chemicals - Tested in 2024						
Alkalinity, total as CaCO₃ (ppm)	Not Regulated	n/a	124	115 - 144	n/a	Runoff or Leaching from Natural Deposits
Boron (ppm)	NL = 1	n/a	0.138	0.127 - 0.153	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	n/a	72.7	67.2 - 79.5	n/a	Runoff or Leaching from Natural Deposits
Hardness, total as CaCO₃ (ppm)	Not Regulated	n/a	295	281 - 313	n/a	Runoff or Leaching from Natural Deposits
Hardness, total as CaCO₃ (grains/gallon)	Not Regulated	n/a	17	16 - 18	n/a	Runoff or Leaching from Natural Deposits
Lithium (ppb)	Not Regulated	n/a	65.7	64.2 - 67.2	n/a	Various Natural and Man-made Sources
Magnesium (ppm)	Not Regulated	n/a	27.9	26.2 - 29.8	n/a	Runoff or Leaching from Natural Deposits
pH (pH unit)	Not Regulated	n/a	7.9	7.4 - 8.6	n/a	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	n/a	5.9	4.83 - 21.2	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	105	90.3 - 114	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	TT	n/a	1.9	1.9	n/a	Various Natural and Man-made Sources

ppb = parts per billion; **ppm** = parts per million; **pCi/L** = picoCuries per liter; **µmho/cm** = micromhos per centimeter; **NTU** = nephelometric turbidity units; **MCL** = Maximum Contaminant Level; **PHG** = California Public Health Goal; **MCLG** = federal MCL Goal; **MRDL** = Maximum Residual Disinfectant Level; **MRDLG** = Maximum Residual Disinfectant Level Goal; **NL** = Notification Level; n/a = not applicable; **TT** = treatment technique;

* Chemical is regulated by a secondary standard.

IRVINE RANCH WATER DISTRICT BAKER WATER TREATMENT PLANT	TREATMENT TECHNIQUE	TURBIDITY MEASUREMENTS	TT VIOLATION?	TYPICAL SOURCE IN DRINKING WATER
Turbidity - combined filter effluent				
1) Highest single turbidity measurement (NTU)	0.1	0.043	No	Soil Runoff
2) Percentage of samples less than or equal to 0.3 NTU	95%	100%	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. Low turbidity in the treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT). A treatment technique is a required process intended to reduce the level of chemicals in drinking water that are difficult and sometimes impossible to measure directly. NTU = nephelometric turbidity units

Drinking Water Fluoridation

Fluoride has been added to U.S. drinking water supplies since 1945 to help prevent tooth decay. As of today, the majority of public water suppliers in the country, including the MWDSC, fluoridate their water. MWDSC began adding fluoride in December 2007, complying with all provisions of California's fluoridation system requirements. Fluoride levels in drinking water are regulated in California and limited to a maximum of 2 parts per million (ppm). Some local ground-water supplies naturally contain fluoride, but they are not supplemented with additional fluoride.

Additional Information

For more details on water fluoridation, please visit:

- **U.S. Centers for Disease Control and Prevention (CDC):** cdc.gov/fluoridation or (800) 232-4636
- **State Water Resources Control Board, Division of Drinking Water:** waterboards.ca.gov/drinking_water/certlic/drinkingwater/Fluoridation.html
- **American Dental Association:** ada.org
- **American Water Works Association:** awwa.org

For specific inquiries about MWDSC's fluoridation program, please contact MWDSC directly at (800) 225-5693.

Cryptosporidium

Cryptosporidium is a microscopic organism that originates from animal and human waste and may be present in surface water. When ingested, it can cause diarrhea, fever, and other gastrointestinal symptoms. In 2024, the MWDSC tested for Cryptosporidium and did not detect its presence in any water after it had been treated. If Cryptosporidium is ever detected in drinking water, it is effectively removed through a combination of sedimentation, filtration, and disinfection.

The U.S. EPA and the Centers for Disease Control and Prevention (CDC) provide guidelines on how to reduce the risk of infection from Cryptosporidium and other microbial contaminants. For more information, contact the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791 or visit epa.gov/safewater."

Drinking Water Contaminants

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity.

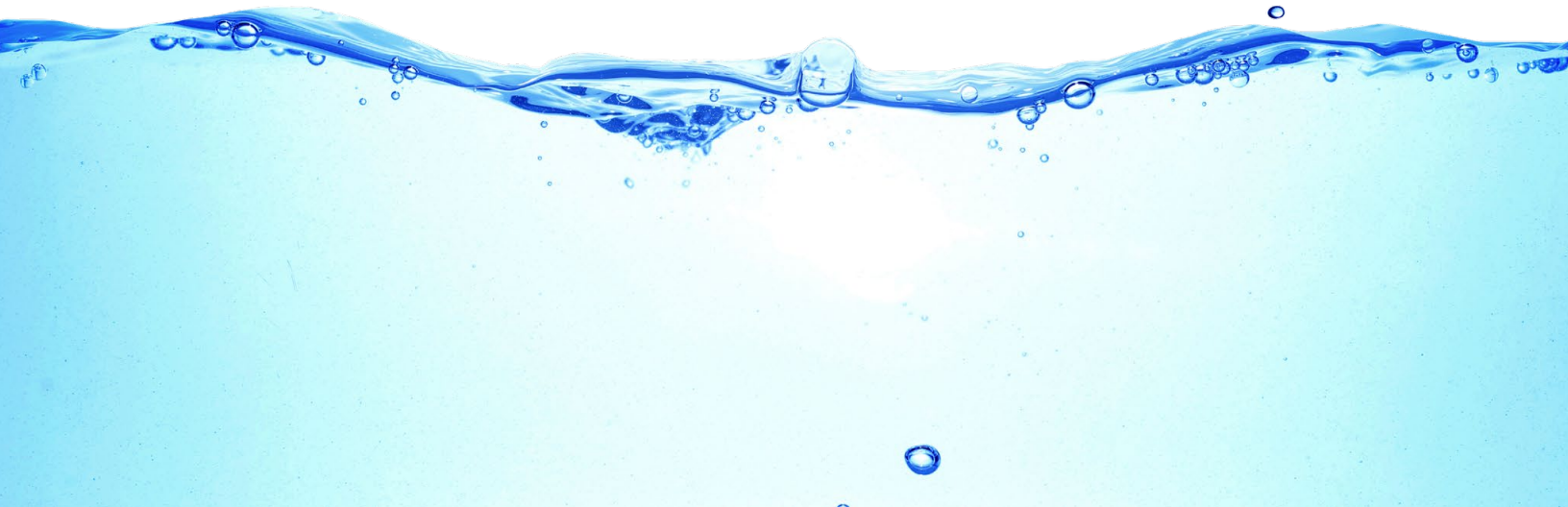


Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants that can be naturally occurring or the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the U.S. EPA and SWRCB prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).



Disinfectants and Disinfection By-Products in Drinking Water

Disinfection of drinking water was one of the greatest public health advancements of the 20th century, significantly reducing the spread of waterborne diseases caused by bacteria and viruses. Today chlorine and chloramines are commonly used disinfectants to ensure safe drinking water.

How Disinfection Works

- Chlorine is added at the water source (groundwater wells or treatment plants) to kill harmful microorganisms.
- Residual chlorine remains in the distribution system to prevent bacterial growth in the pipes that carry water to homes and businesses.
- Chloramines, a combination of chlorine and ammonia, are also used as a disinfectant and help reduce certain by-products.

Disinfection By-Products and Regulations

While effective, chlorine and chloramines can react with naturally occurring materials in water, forming disinfection by-products (DBPs), which may pose health risks. The most common DBPs are trihalomethanes (THMs) and haloacetic acids (HAAs).

To protect public health, the U.S. EPA regulates DBPs under the Safe Drinking Water Act:

- In 1979 the U.S. EPA set the maximum allowable total THM level at 100 parts per billion (ppb).
- In 2002 the Stage 1 Disinfectants/Disinfection Byproducts Rule lowered the limit to 80 ppb and added HAAs to the list of regulated chemicals.
- In 2006 the Stage 2 Disinfectants/Disinfection Byproducts Rule introduced further monitoring and control measures.
- Full compliance began in 2012.

Your drinking water meets or exceeds all state and federal standards, with rigorous monitoring in place. We regularly test for DBPs and adjust treatment methods to maintain a safe balance between disinfection and by-product control.

Important Considerations

- **Fish and aquatic pets:** Chloramines can be toxic to fish and should be removed from water used in aquariums.
- **Kidney dialysis patients:** Chloramines must be filtered from water used in dialysis treatment—consult your health-care provider.

For more information on water quality and regulations, visit:

- **U.S. EPA water regulations:** epa.gov/sdwa
- **SWRCB:** waterboards.ca.gov

Your drinking water is treated, tested, and monitored to ensure it remains safe and reliable for you and your community.



Trabuco Canyon Water District

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Trabuco Canyon, CA 92679
(949) 858-0277 • tcwd.ca.gov
generalinformation@tcwd.ca.gov

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

OPERATIONAL MATTERS

ITEM 6: WATER SYSTEM UPDATES

The following is a brief report of the water system through **May 2025**.

Projects and Repairs

Water Operations staff performed and/or completed the following tasks and projects:

1. Repaired a potable water service line leak on Saratoga in the Dove Canyon community.
2. Worked with Ferreira Construction to abandon two valves in the Cooks Corner intersection on Santiago Canyon Road.
3. Conducted two fire flow tests in the Saddle Crest community and Dove Canyon Plaza.
4. Repaired two air vacs on Live Oak Canyon Road and Hamilton Trail.
5. Serviced 59 valves in the Trabuco Oaks community.

Monthly Water System Operations Summary

The Monthly Water System Operations Summary is attached for the Committee's review. Any anomalies will be presented at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

1. Monthly Water System Operations Summary

CONTACTS (staff responsible): PEREA/KESSLER

TRABUCO CANYON WATER DISTRICT
MONTHLY WATER SYSTEM OPERATIONS SUMMARY - 2025

System Demands**													
AF/Day	3.9	3.3	3.4	3.7									3.6
Daily Average, CFS	2.0	1.6	1.7	1.9									1.8
Other Water Deliveries/Purchases													
Ridgeline (DWTP Delivery)	0.0	0.0	0.0	0.0									0.0
El Toro (Interconnection Purchase)	0.0	0.0	0.0	0.0									0.0
Baker WTP (CSC Delivery)	98.6	89.7	90.2	103.7									382.2
Portola Hills (Wholesale Purchase)	10.0	7.5	8.2	7.8									33.5
Skyridge (Wholesale Purchase)	1.8	1.6	1.6	1.4									6.4

* Usage estimated

** Excludes Operational use, losses, and supplement to Recycled Water Reservoir (RW)

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

OPERATIONAL MATTERS

ITEM 7: WASTEWATER SYSTEM UPDATES

The following is a brief report of the wastewater system through **May 2025**.

Projects and Repairs

Wastewater Operations staff performed and/or completed the following tasks and projects:

1. Replaced 2" pipe train that feeds recycled water to Santa Margarita Water District (SMWD).
2. Assisted in the cutover to the new SCADA system for Barneburg/Golf Club/Bell Canyon/Heritage/Santiago Lift Stations
3. Assisted in the cutover to the refurbished SCADA system at the Robinson Ranch Wastewater Treatment Plant (WWTP).
4. Calibrated all flow meters at the WWTP
5. Working through Cartegraph to organize and locate assets as they apply to Wastewater Operations.

Sewer System Management Plan (SSMP) Report

The purpose of the program is to communicate on a regular basis with the public on the development, implementation, and performance of TCWD's SSMP. Status updates on the work and type of work performed on the sewer system will be provided, including sewer line and manhole cleaning, system repairs, lift station cleaning, and updates from satellite facilities:

Sewer System Management Plan (SSMP) Monthly Update	
Total Sewer Line, Feet*	212,045
Total Sewer Line Cleaned (Ft) – Month	2,240
Total Sewer Line Cleaned (Ft) – Cleaning Cycle	27,340
Cleaning Cycle Period (Mos.) [Start date: 1/1/25]	4
Total Sewer Line Cleaned, %	12%
The Oaks at Trabuco – Pumping Frequency for the Month	13
O'Neill Park Sewer System Status	Ok
O'Neill Park Sewer System Repairs	None
SSMP Quarterly Report – <i>Next Quarterly Report</i>	2Q 2025
SSMP Program Audit – <i>Next Audit Report**</i>	June 2025

**This amount includes the OC Parks-owned O'Neill Park sewer system the District is contracted to clean.*

***Periodic internal audits shall be conducted, at a minimum every two years, with reports kept on file. The audit shall focus on evaluating the effectiveness of the SSMP and TCWD's compliance with the mandatory elements of TCWD's SSMP:*

Monthly Recycled Water System Operations Summary

The Monthly Recycled Water System Operations Summary is attached for the Committee's review. Any anomalies will be presented at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

1. Monthly Recycled Water System Operations Summary
2. 2025 SSMP Program Audit

CONTACTS (staff responsible): PEREA/ULLOA

TRABUCO CANYON WATER DISTRICT | RECYCLED WATER SYSTEM SUMMARY - 2025

RECYCLED WATER SUPPLY															
	MAX	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
WWTP Reclaimed Water Production, AF	78.3	37.1	35.6	41.5	39.4									153.5	520.1
Reclaimed Reservoir Level, FT	1274.5	1,265.5	1,270.0	1,271.5	1,271.5									-	-
Reclaimed Reservoir Free Board, FT	25.5	9.0	4.5	3.0	3.0									-	-
Reclaimed Reservoir Storage, AF	145.5	94.6	118.8	127.7	127.7									-	-
Supplemental Domestic Water Added, AF	N/A	0.0	0.0	0.0	0.0									0.0	5.2

RECYCLED WATER SYSTEM DEMAND															
NON DOMESTIC WATER USER	ALLOC. AF	8% JAN	17% FEB	25% MAR	33% APR	42% MAY	50% JUN	58% JUL	67% AUG	75% SEP	83% OCT	92% NOV	100% DEC	TOTAL	ALLOC. %
Dahlia Court	8.2	0.04	0.02	0.0	0.0									0.06	0.7%
Dove Canyon Golf Course	106.7	12.49	5.1	4.8	25.1									47.48	44.5%
Dove Canyon Master Association	279.3	10.92	3.6	3.6	11.2									29.29	10.5%
Robinson Ranch	80.2	1.41	0.4	0.8	2.8									5.39	6.7%
Trabuco Highlands	159.7	3.26	27.4	0.2	5.3									36.08	22.6%
City of RSM	0.1	0.00	0.02	0.00	0.02									0.03	26.2%
Construction Water	N/A	0.00	0.0	0.0	0.0									0.00	N/A
Sakaida Nursery	1.1	0.00	0.0	0.0	0.0									0.00	0.0%
SMWD	N/A	0.00	0.0	0.0	0.0									0.00	N/A
TY Nursery	17.9	0.00	0.00	0.0	0.01									0.01	0.1%
TOTAL, AF	653.2	28.1	36.5	9.4	44.3									118.34	18.1%
PERCENTAGE OF NDW ALLOCATION/YEAR		4.3%	9.9%	11.3%	18.1%										
TOTAL ANNUAL AVG. NDW AVAILABLE**	774.36														

URBAN RUNOFF CAPTURE AND REUSE															
DISTRICT FACILITY		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	FIVE YEAR AVG
Shadow Rock Detention Basin Production		0.00	10.19	8.18	0.00									18.37	1.6
Dove Tick Creek Production*	<i>Dry Season</i>	5.5	5.3	5.8	0.0									16.6	45.0
	TCWD Portion	5.5	5.3	5.8	0.0									16.6	-
	SMWD Portion	0.0	0.0	0.0	0.0									0.0	-
Dove Lake Water Pumped		0.0	0.0	0.0	0.0									0.0	190.1
Dove Lake Free Board, Ft		10.3	3.2	0.0	0.0									-	-
Dove Lake Storage, AF		131.2	309.0	331.0	331.0									-	-
Total Rainfall, In.		0.9	2.4	5.2	0.2									8.7	16.2

* SMWD share of Dove/Tick Pump Station Dry Season Water is 50% of production.

** Based on 5-Year Average Reclaimed Water Reservoir Base Supply & Recycled Water Production



SEWER SYSTEM MONITORING PLAN (SSMP) PROGRAM ANNUAL AUDIT REPORT for 2025

Prepared by:

Oscar Ulloa, Wastewater Superintendent

&

Michael Perea, Assistant General Manager

TABLE OF CONTENTS

SYSTEM OVERVIEW	1
Element 1: Goal	1
Element 2: Organization	1
Element 3: Legal Authority	2
Element 4: Operation and Maintenance	2
<i>4.a. Collection System Maps</i>	2
<i>4.b. Resources and Budget</i>	2
<i>4.c. Prioritized Preventative Maintenance</i>	3
<i>4.d. Scheduled Inspections and Condition Assessment</i>	3
<i>4.e. Contingency Equipment and Replacement Inventories</i>	4
<i>4.f. Training</i>	4
Element 5: Design and Performance Provisions	5
Element 6: Overflow Emergency Response Plan	5
Element 7: Fats, Oils, and Grease (FOG) Control Plan	5
Element 8: System Evaluation and Capacity Assurance Plan (SECAP)	6
Element 9: Monitoring, Measurement, and Program Modifications	6
Element 10: SSMP Program Audits	7
Element 11: Communication Program	7
TABLE 2 - FOG CONTROL STATISTICS	9
TABLE 3 - SSOS CAUSED BY HYDRAULIC LIMITATIONS	9

TRABUCO CANYON WATER DISTRICT

Sewer System Management Plan Annual Audit Report

Date of Audit: April 2025

Name(s) of Auditor(s):

Michael Perea, Assistant General Manager
Oscar Ulloa, Wastewater Superintendent

SYSTEM OVERVIEW

Miles of gravity sewer mains:	36.8
Miles of force main:	9
Total miles of all sewer lines:	45.8
Number of pump stations:	9
Population served:	12,921 (2020 Urban Water Management Plan)

Report Organization

The following sections are organized as the SSMP elements appear in Statewide Order 2006-003-DWQ, in this SSMP, and in the SSMP Comprehensive Audit Form. The responses provided on the Comprehensive Audit Form will help to complete this audit report. Reference materials are also listed with each element.

Element 1: Goal

1. Are the goals stated in the SSMP still appropriate and accurate? (circle one) Y N
2. If the answer to Question 1 is NO, please identify which goals require revision or replacement, the reason for such action, the content of the revised or new goal, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

Element 2: Organization

Reference Material

- Trabuco Canyon Water District Organization Chart
- Telephone/E-mail Contact List

1. Is the SSMP current with agency organization and staffing contact information? (circle one) Y N
2. If the answer to Question 1 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

Element 3: Legal Authority

Reference Material

- TCWD Rules and Regulations
- State of California Water Codes

1. Does the SSMP contain current information about the District’s legal authority?

(circle one)

Y N

2. Does the District have sufficient legal authority to control sewer use and maintenance?

(circle one)

Y N

3. If the answer to Questions 1, 2, is NO, please describe the content and schedule for necessary changes. Comments for a YES response may also be provided here.

Element 4: Operation and Maintenance

4.a. Collection System Maps

Reference Material

Summary of information included in the Districts mapping and GIS systems for the collection system.

1. Does the SSMP contain current information about the District’s sanitary sewer maps?

(circle one)

Y N

2. Are the District’s sewer collection system maps complete, current, and sufficiently detailed?

(circle one)

Y N

3. If the answer to Questions 1 and/or 2 is NO, please identify what information or maps require revision or replacement, the reason for such action, the content of the revised or new information and/or maps, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

Collection System maps are always being updated with system redlines completed in the field. The District is currently upgrading its Computerized Maintenance Management System (CMMS) software solution and will complete the project in FY 2022-23.

4.b. Resources and Budget

Reference Material

- Current Capital Improvement Plan (CIP)
- Current TCWD Operating Budget

1. Does the SSMP contain current information about the District’s resources and budget?

(circle one)

Y N

2. Are the District’s resources and budget sufficient to support effective sewer system management? (circle one) Y N
3. Does the District’s planning efforts support long-term goals? (circle one) Y N
4. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

4.c. Prioritized Preventative Maintenance

Reference Material

- Cleaning Schedules
- List or Map of Hotspots
- Work Orders
- Service Call Data
- Customer Feedback

1. Does the SSMP contain current information about the preventative maintenance activities for the District collection system? (circle one) Y N
2. Considering the information in Tables 1, are the Districts preventative maintenance activities sufficient and effective in reducing and preventing SSOs and blockages? (circle one) Y N
3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

Known problem/trouble areas are cleaned on a quarterly basis to prevent SSO’s.

4.d. Scheduled Inspections and Condition Assessment

Reference Material

- Inspection Reports
- Pipe and Manhole Condition Data

1. Does the SSMP contain current information about the inspections and condition assessment for District systems? (circle one) Y N
2. Are the District’s scheduled inspections and condition assessment system effective in locating, identifying, and addressing deficiencies? (circle one) Y N
3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

All pipeline and manhole inspections are completed during sewer line cleaning.
Damaged pipes and manholes are promptly repaired. Video inspections are performed as needed.

4.e. Contingency Equipment and Replacement Inventories

Reference Material

- Funds Spent on Equipment and Materials
- Equipment and Parts Inventory

1. Does the SSMP contain current information about the District’s equipment and replacement inventories? (circle one) Y N
2. Are contingency equipment and replacement parts sufficient to respond to emergencies and properly conduct regular maintenance? (circle one) Y N
3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, what equipment or parts need to be obtained, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

District Maintenance Superintendent and/or designee maintains and updates equipment/asset inventory and parts for the District’s Sanitary Sewer System.
Basic Inspection of Terminals (BIT) are performed quarterly on commercial/ heavy equipment vehicles. Critical parts with long lead times are on shelf for repairs.

4.f. Training

Reference Material

- Employee Training Records

1. Does the SSMP contain current information about the training expectations and programs for the staff that operates the District systems? (circle one) Y N
2. Do supervisors believe that their staff is sufficiently trained? (circle one) Y N
3. Are staff satisfied with the training opportunities and support offered to them? (circle one) Y N
4. If the answer to Questions 1, 2, and/or 3 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

Safety Training is completed on a weekly basis (tailgate meetings) and training records are kept by respective department Superintendent or designee.
Educational Training is provided through Seminars, Conferences, and other approved online training sources throughout the year.

Element 5: Design and Performance Provisions

Reference Material

- Design and Construction Standards
- Ordinances

1. Does the SSMP contain up-to-date information about the District’s design and construction standards? (circle one) Y N
2. Are the design and construction standards, as well as inspection and testing standards for new and rehabilitated facilities, sufficiently comprehensive and up-to-date? (circle one) Y N
3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

SSMP references all design criteria and Standard Drawings as well as inspection and testing criteria documents which are on file with the District and maintained by the District Engineer.

Element 6: Overflow Emergency Response Plan

Reference Material

- Data Submitted to CIWQS – *See Table 1 – Annual SSO Statistics*
- Customer Service Call Data

1. Does the SSMP contain up-to-date information about the overflow emergency response plan used for the District systems? (circle one) Y N
2. Considering the information in Table 1, is the overflow emergency response plan (OERP) effective in handling SSOs? (circle one) Y N
3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates. Comments for a YES response may also be provided here.

SSMP references the SSOP document which contains TCWD Emergency Response Plan.

Element 7: Fats, Oils, and Grease (FOG) Control Plan

Reference Material

- Cleaning Schedules
- Food Service Establishment Inspection Reports or Summaries
- Data Submitted to CIWQS *See Table 2 – FOG Control Statistics*
- Service Call Data

1. Does the SSMP contain current information about the FOG plan? (circle one)

Y N

2. Considering the information in Table 2, is the current FOG program effective in documenting and controlling FOG sources? (circle one) Y N
3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates.

Comments for a YES response may also be provided here.

TCWD monitors and inspects sixteen (16) businesses in its service area. These inspections are completed quarterly, and customers are notified of inspections or any potential violations.

Element 8: System Evaluation and Capacity Assurance Plan (SECAP)

Reference Material

- TCWD Master Plan
- Sub-Area Master Plans
- SSO Data – *See Table 3 – SSOs Caused by Hydraulic Limitations*

1. Does the SSMP contain current information about the capacity assessment for the District systems? (circle one) Y N
2. Has a capacity assessment identifying and addressing any hydraulic deficiencies been completed for the District systems? (circle one) Y N
3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates.

Comments for a YES response may also be provided here.

The District has completed a Master Plan that contains all up to date information.

Element 9: Monitoring, Measurement, and Program Modifications

1. Does the SSMP contain up-to-date information about the District’s data collection and organization procedures? (circle one) Y N
2. Are the data collection and organization procedures sufficient to evaluate the effectiveness of its SSMP for the District’s systems? (circle one) Y N
3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates.

Comments for a YES response may also be provided here.

District staff maintains sewer cleaning records through a GIS-based software program. The goal is to clean the entire sanitary sewer system on an annual basis.

Element 10: SSMP Program Audits

1. Has this SSMP Audit been completed and kept on file for the San Diego Regional Water Quality Control Board to review if needed? (circle one) **Y**N

SSMP Audit will be kept on file at the Administration office and the Robinson Ranch Wastewater Treatment Plant (WWTP).
SSMP is scheduled to be updated and re-certified by the Board of Directors every five years.

Element 11: Communication Program

Reference Material

- Project Specific Mailings
- Website
- Meeting with Neighboring Agencies
- Monthly Operational and Engineering Committee meetings

1. Does the SSMP contain up-to-date information about the District’s public outreach activities? (circle one) **Y**N

2. Has the District’s effectively communicated with the public, other agencies, about the SSMP and addressed any feedback? (circle one) **Y**N

3. If the answer to Questions 1 and/or 2 is NO, please identify what information requires revision or replacement, the reason for such action, the content of the revised or new information, and the schedule for implementation or updates.

Comments for a YES response may also be provided here.

District staff (Engineering, Operations, & Maintenance) meet weekly to review ongoing District projects and improvements.
Operational/Engineering Committee Meetings are held once a month with Board Members, at this time the SSMP is discussed and put on record for public participation and information purposes.

TRABUCO CANYON WATER DISTRICT | SSMP Program Annual Audit Report – 2024

INDICATOR	2021	2022	2023	2024
Number of SSOs (total)	2	0	0	2
• Wet season SSOs	0	0	0	0
• Dry season SSOs	2	0	0	2
Number of SSOs (by volume range)				
• < 10 gallons				
• 10 – 99 gallons	1	0	0	0
• 100 – 999 gallons	1	0	0	1
• 1,000 – 9,999 gallons	0	0	0	1
• H 10,000 gallons	0	0	0	0
Total SSO Volume (Gallons)	400	0	0	3000
• Volume reaching waters of the State	0	0	0	0
• Volume not contained, but also not reaching the waters of the state	400	0	0	3000
○ Volume recovered	150	0	0	3000
○ Net volume (total minus recovered)	250	0	0	3000
• Number of SSOs per 10 miles of sewer per year	0	0	0	.54
• Volume of SSOs per 10 miles of sewer per year	0	0	0	815
• Total volume conveyed to the WWTP (million gallons)	185	0	0	6.0
• Total Volume SSO/Total Volume conveyed, gallons	0	0	0	0.001
• Number of SSOs (by cause)				
○ Blockages	2	0	0	0
○ Roots	0	0	0	0
○ Grease	0	0	0	0
○ Debris	0	0	0	0
○ Debris from Laterals	0	0	0	0
○ Animal Carcass	0	0	0	0
○ Construction Debris	0	0	0	0
○ Multiple Causes	0	0	0	0
• Infrastructure Failure	0	0	0	1
• Inflow & Infiltration (I&I)	0	0	0	0
• Power Failure	0	0	0	0
• Flow Capacity Deficiency	0	0	0	0
• Natural Disaster	0	0	0	1
• Bypass	0	0	0	0
• Cause Unknown	0	0	0	0
• Average Emergency Response Time (minutes)	15-30	15-30	15-30	15-30
○ Business Hours	15	15	15	15
○ Non-business Hours	30	30	30	30
• Number of locations with multiple SSOs	0	0	0	1

(1) Wet season is defined as November through April, with the dry season being May through October. This seasonal categorization does not reflect actual conditions at the time of an SSO even

TABLE 2 - FOG CONTROL STATISTICS

	2021	2022	2023	2024
Number of SSOs caused by FOG	0	0	0	0
Planned cleaning (linear foot)	194,369	194,369	194,369	194,369
Unplanned cleaning (linear foot)	0	0	0	0
Number of FOG inspections completed	64	64	64	64

TABLE 3 - SSOS CAUSED BY HYDRAULIC LIMITATIONS

	2021	2022	2023	2024
Number of SSOs caused by capacity limitations	0	0	0	0

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

OPERATIONAL MATTERS

ITEM 8: MAINTENANCE DEPARTMENT UPDATES

The following is a brief report of work completed by Maintenance staff through **May 2025**.

Projects and Repairs

Maintenance staff performed and/or completed the following tasks and projects:

Water Operations

1. Assisted Water Operations in meeting with Orange County Public Works (OCPW)
2. Worked with Hydrotech Electric at Field Office/Booster Pump Station (BPS) One to replaced damaged wiring in attic.
3. Attended job walk at Dimension Water Treatment Plant (DWTP) and Bike Trail for Transmission Main Pipeline Rehabilitation Project.
4. Performed Preventative Maintenance at DWTP, Falcon BPS, Topanga BPS, Robinson BPS, and Field Office – Oil change and grease motors/pumps.

Wastewater Operations

1. Assisted Operations and Beavans Systems on new SCADA system at WWTP.
2. Performed weed abatement at WWTP and Porter Ranch

District Fleet Upgrades & Other Projects

1. Fleet Preventative Maintenance on Vehicle No. 30
2. Inspect CAT Skid Steer and worked with vendor to install non-pneumatic wheels and tires.
3. Maintenance team attended pump class training
4. Ordered and received sand, base, and rock from GreenStone Materials
5. UPDATE: District mobile generator repairs are almost completed; new fuel tank installation.

RECOMMENDED ACTION:

Committee to receive system status updates. No action required.

EXHIBITS

None

CONTACTS (staff responsible): PEREA/STROUD

**TRABUCO CANYON WATER DISTRICT
ENGINEERING/OPERATIONAL COMMITTEE MEETING | JUNE 4, 2025**

REGULATORY AND OTHER MATTERS

ITEM 9: OTHER MATTERS/REPORTS

Other Matters/Reports from the General Manager and/or District staff may be provided at the time of the Engineering/Operational Committee Meeting.

RECOMMENDED ACTION:

Hear Other Matters/Reports that may have arisen after the posting of the agenda.

EXHIBITS

None

CONTACTS (staff responsible): PALUDI/PEREA