BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT

375 - 11th Street, Oakland, CA 94607 Office of the Secretary: (510) 287-0440

AGENDA
Planning Committee
Tuesday, September 9, 2025
9:00 a.m.
Boardroom
375 11th Street
Oakland, CA 94607

***** Please see appendix for public participation instructions*****

Committee Members: Directors April Chan {Chair}, Luz Gómez, and Valerie D. Lewis

ROLL CALL:

PUBLIC COMMENT: The Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.

DETERMINATION AND DISCUSSION:

1. Water Quality Program Semi Annual Update – January to June 2025 (Cortez)
2. Mokelumne Aqueduct Improvements and Failure Response (Cortez)
3. Update on Phased Approach to Design Consultant Management (Terentieff)
4. Miller Road Trench Soil Management Project Update and Final Mitigated Negative Declaration (Yezman)

ADJOURNMENT:

Disability Notice

If you require a disability-related modification or accommodation to participate in an EBMUD public meeting please call the Office of the Secretary (510) 287-0404. We will make reasonable arrangements to ensure accessibility. Some special equipment arrangements may require 48 hours advance notice.

Document Availability

Materials related to an item on this agenda that have been submitted to the EBMUD Board of Directors within 72 hours prior to this meeting are available for public inspection in EBMUD's Office of the Secretary at 375 11th Street, Oakland, California, during normal business hours, and can be viewed on our website at www.ebmud.com.

APPENDIX

Planning Committee Meeting

EBMUD Board committee meetings will be conducted in person and via Zoom.
These meetings are recorded and live-streamed.

*Online**
https://ebmud.zoom.us/j/94576194030?pwd=dWZlc3hNU3JNUVBQYmNKWjJSNVZQdz09
Webinar ID: 945 7619 4030
Passcode: 925293

By Phone
Telephone: 1 669 900 6833
Webinar ID: 945 7619 4030
Passcode: 925293
International numbers available: https://ebmud.zoom.us/u/kdmpbwwlg2

*****To familiarize yourself with Zoom, please visit https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-Meeting

Providing public comment - *The EBMUD Board of Directors is limited by State law to providing a brief response, asking questions for clarification, or referring a matter to staff when responding to items that are not listed on the agenda.*

- Each speaker is allotted 3 minutes to speak; the Committee Chair has the discretion to amend this time based on the number of speakers
- The Secretary will track time and inform each speaker when the allotted time has concluded
- Comments on **non-agenda items** will be heard at the beginning of the meeting
- Comments on **agenda items** will be heard when the item is up for consideration
- The Secretary will call each speaker in the order received

In person
- Fill out and submit a blue speaker card which is available in the meeting room

Via Zoom
- Use the raise hand feature in Zoom to indicate you wish to make a public comment https://support.zoom.us/hc/en-us/articles/205566129-Raising-your-hand-in-a-webinar
  - If you participate by phone, press *9 to raise your hand
- When prompted by the Secretary, please state your name, affiliation if applicable, and topic

Submitting written comments or materials
- Email written comments or other materials for the Board of Directors to SecOffice@ebmud.com
- Please indicate the meeting date and agenda item number or non-agenda item topic in the subject of the email. Contact information is optional.
- **Please email by 4 p.m. the day prior to the scheduled regular meeting**; written comments and other materials submitted to the Board of Directors will be filed in the record.

To *observe* the Planning Committee Meeting,
please visit: https://www.ebmud.com/about-us/board-directors/board-meetings/

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: September 4, 2025

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Roberto C. Cortez, Manager of Water Operations RCC

SUBJECT: Water Quality Program Semi Annual Update – January 2025 to June 2025

SUMMARY

The attached report provides an update on the District's efforts to ensure the delivery of high-quality water to customers. Water quality data from the first half of calendar year 2025 is summarized in the report. A presentation on the Water Quality Program will be made at the September 9, 2025 Planning Committee meeting.

DISCUSSION

From January 1, 2025 through June 30, 2025, the District met all federal and state drinking water standards and 98 percent of the District's internal goals (130 of 133 goals were met). As in previous updates, levels of disinfection byproducts were higher than District goals, and one operational target was not met. This is explained further in Attachment 1. Tabular data is presented in Attachment 2.

The District continues to monitor developing federal and state regulations related to lead, per- and polyfluoroalkyl substances, and other contaminants of concern in drinking water. Many federal drinking water regulations are pending with the U.S. Environmental Protection Agency as the federal government establishes new priorities. Earlier this month, District staff provided peer review for Oakland Unified School District's lead testing program.

CCC:DAB:sd

Attachments: 1. Water Quality Semi Annual Report for January 2025 to June 2025
2. EBMUD Water Quality Goals – January 1, 2025 through June 30, 2025

This page is intentionally left blank.

ATTACHMENT 1

WATER QUALITY SEMI-ANNUAL REPORT – January 2025 to June 2025

This report provides an update on the District's efforts to deliver high-quality water to its customers for the first six months of calendar year 2025.

From January 1, 2025 through June 30, 2025, the District met all federal and state drinking water standards and 98 percent of the District's internal goals (130 of 133 goals were met). As in previous updates, levels of two disinfection byproducts (DBPs) were higher than District goals, and a distribution system disinfectant residual goal was not met. In addition to numerical goals and standards, this report covers the District's efforts to minimize potential lead exposure to customers, monitor contaminants of emerging concern, and prepare for upcoming regulatory changes.

District Water Quality Goals

The District's internal water quality goals are substantially more stringent than federal and state water quality standards.

Chlorinated disinfectant byproducts (DBPs): During the first half of 2025, the District exceeded two internal water quality goals related to chlorinated DBPs. Total trihalomethanes (TTHMs) and five haloacetic acids (HAA5) are regulated DBPs that form when chlorine reacts with natural organic matter in raw water. The District's goals of 40 parts per billion (ppb) for TTHMs and 30 ppb for HAA5 are half of regulatory standards. Compliance with the DBP regulations is based on a running annual average of samples collected from each of sixteen individual locations in the distribution system. The District's goal for TTHMs was not exceeded in any of the 32 individual TTHM samples during this period, however, samples collected in the second half of 2024 caused the running 12-month average to exceed the goal. For HAA5, the District's goal was exceeded in 13 of 32 individual samples. Ongoing capital improvement projects at the water treatment plants (WTPs) will allow staff to better control DBP concentrations.

Distribution system chlorine residuals: The District's goal, consistent with the American Water Works Association (AWWA) Partnership for Safe Water, is to maintain at least 0.5 mg/L chlorine concentration in at least 95 percent of distribution reservoirs each month. This goal was not met in one of six months during the first half of 2025. Staff responded to each event by boosting the chlorine residual and accelerating the rate of reservoir cycling. In addition, an automated chlorine boosting station will be installed at one location with persistently long residence times and low chlorine residuals. This station is expected to be online by September 2025 and will help maintain better chlorine residuals at this location.

Other Water Quality Issues

The District has several ongoing water quality initiatives to prepare for upcoming regulatory changes or potential threats to water quality.

Perfluoroalkyl and polyfluoroalkyl substances (PFAS)

In April of 2024, EPA finalized new regulations for six PFAS: Perfluorooctanesulfonic acid (PFOS), Perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA) and its ammonium salt (so called "GenX chemicals"), perfluorohexane sulfonic acid (PFHxS), and perfluorobutane sulfonic acid (PFBS). In chemical and product manufacturing, GenX chemicals are considered a replacement for PFOA, and PFBS is considered a replacement for PFOS. EPA's regulations include Maximum Contaminant Levels (MCLs) for five of these six compounds, along with a Hazard Index (HI) calculation for four of them which attempts to account for cumulative health effects when these compounds co-occur. In May of 2025, EPA announced their intent to keep the new MCLs for PFOA and PFOS but rescind the regulations for the other four PFAS compounds as well as extend the regulatory deadlines. EPA plans to issue a new proposed rule in fall 2025 and finalize the rule in spring 2026.

Required PFAS Monitoring

In April 2023, the District began collecting samples for 29 different PFAS compounds under the federal Unregulated Contaminant Monitoring Rule 5 (UCMR5). These results are reported directly to the EPA and included in the District's annual Consumer Confidence Report. Each WTP effluent must be sampled quarterly for at least four quarters by the end of 2025. Complete results are available for four of the five WTPs. The Upper San Leandro WTP has been out of service for construction; one additional quarterly sample is needed from this WTP, which is expected later in 2025. All regulated PFAS results collected from the District's WTPs under this program to date are below the Method Reporting Levels (MRLs), the lowest level EPA considers reliable. There were two very low detections of perfluorobutanoic acid (PFBA), which has no regulations or health-based guidance, during the UCMR5 sampling effort. Nationwide, about 15 percent of all large water systems and 8% of all small water systems had at least one regulated PFAS over the health-based levels.

Based on sampling performed to date, the District believes that operational strategies involving blending higher concentration water sources with lower concentration sources will be sufficient to ensure compliance with the new regulatory standards, negating the need for new capital facilities for PFAS treatment.

Future PFAS regulations

AWWA and Association of Metropolitan Water Agencies, as well as manufacturing groups filed petitions requesting judicial review of EPA's MCLs issued in 2024. A broad group of stakeholders filed briefs in support of the new regulations. This supporting stakeholder group includes environmental groups, community groups, individuals, and seventeen states including California. In February of 2025, EPA filed a motion for a 60-day delay in the legal challenges to the PFAS MCLs "….to allow new Agency leadership to review the underlying rule." The agency has requested and received several additional delays in the deadline for their response. The final outcome of the legal battles and the regulatory requirements is unknow at this point. Staff are closely following the cases.

Lead

The District continues to minimize customer exposure to lead in drinking water through careful monitoring of corrosion control at the water treatment plants and in the distribution system, and removal of remaining lead-containing components. Based on monitoring data, customer sampling voucher program, school sampling, and other sampling data, lead levels in the District distribution system remain very low.

Lead piping

The District removed all known lead service lines years ago. Today, two remaining components of the District's service lines have potential for elevated lead and are the subject of federal regulation. In each case, District sampling indicates very low levels of lead and minimal threat to consumers.

The first components are galvanized iron service lines with short connectors made of lead (also known as pigtails or goosenecks). The District began actively replacing the remaining public-side galvanized service lines with lead connectors in 2020. There are approximately 125 such lead-pigtail services left, and replacement is expected to be complete by the end of 2026.

The second components are private galvanized service lines (on customer side of the meter) formerly connected to a District lead service line (upstream of the meter). These private plumbing components are termed Galvanized Requiring Replacement (GRR) in the federal regulations. The District identified approximately 3,900 GRRs in the service area, and, pursuant to the federal regulations, notified the affected customers by the November 2024 deadline. Annual re-notification of these customers is required, and therefore the first round of annual notification letters is currently being sent out. Sampling in the District's service area from customer taps shows that GRRs are not exposing customers to elevated levels of lead. All samples from homes with GRRs have been less than the detection limit for reporting (DLR) of 5 ppb, and 90 percent were less than the laboratory's detection limit of 0.4 ppb. These results are comparable to, and even lower than, results from other homes in the service area that do not have GRRs.

Most of the District's service lines—about 98%— never contained lead. Data from the District's lead sample voucher program, which reflects primarily non-lead services, demonstrate that 90 percent of all samples are 1 ppb or less. These low results are due to the District's proactive removal of lead service lines years ago and excellent corrosion control.

EPA's new regulations include several additional actions that are already in place at the District such as providing no-cost analysis of customer tap samples upon request, provision of filters during disturbance of lead components, and follow-up sampling.

School and childcare center sampling

Starting in 2027, the District will be required to sample at least 20 percent of schools in the service area per year for five years. After five years, the District must offer school sampling upon request. Prior school sampling (2017-2018) pursuant to state law demonstrated very low levels of lead. All elevated results were associated with on-premise plumbing (e.g., old fixtures or piping). In these cases, owners are notified to isolate or remove fixtures/plumbing. The new regulation also requires water systems to sample from childcare centers. However, California already requires operators of childcare centers to sample for lead as part of their state licensing program. Therefore, the state is likely to waive this requirement for water systems state-wide.

Earlier this month, the Oakland Unified School District (OUSD) requested peer review of their independent lead testing program and communications strategy. Staff met with OUSD on August 26, 2025 and verified OUSD's sampling protocols are consistent with EPA guidelines. Additionally, staff reviewed OUSD's public outreach documents to ensure the school community is able to understand published OUSD data and OUSD instructions to staff and students to maintain safe drinking water at their facilities.

Microplastics

The State Board continues to develop requirements for microplastics in drinking water as required in 2018 by Senate Bill 1422. A formal definition of microplastics has been developed, and two analytical methods have been selected and validated by laboratories. The State Board is working to finalize sampling procedures and handling protocols. Once these protocols are set, selected large water systems, including EBMUD, will be required to participate in an initial sampling effort to field verify these new procedures and protocols. Initial training occurred in February 2025. Phase 1 of the sampling will include raw surface water sources, and Phase 2 will include filtered water sources. Each phase is expected to take about two years. All drinking water utilities in the state will eventually be required to conduct four consecutive years of microplastics monitoring and share results in their Consumer Confidence Reports.

Fluoride

The District has added fluoride to drinking water since 1976 following a public vote. While fluoride is effective for dental health protection at low concentrations, it is harmful at high concentrations. In California, the recommended concentration in drinking water is 0.7 mg/L with a maximum allowable concentration of 2 mg/L. The District provides fluoride at the recommended level of 0.7 mg/L. Large water systems in California are required to add fluoride to the drinking water if sufficient funding is available.

A 2016 review by the National Toxicology Program (NTP), part of the National Institute of Health, concluded that higher levels of fluoride exposure - more than 1.5 mg/L - are associated with lower IQ in children. However, the study did not conclude that fluoride levels of 0.7 mg/L were harmful. A federal court ruling in September 2024 required EPA to review the health effects of fluoride and address the risks under the framework of the Toxic Substances Control Act (TSCA). The court did not dictate EPA's response, only that they take some action in

accordance with the TSCA requirements. Community water fluoridation was banned in the state of Utah in May 2025 and in Florida in July 2025. Similar laws are under consideration in other states. It is unknown if the EPA will reevaluate the fluoride MCL or consider banning its use in drinking water.

This page is intentionally left blank.

EBMUD Water Quality Goals – January 1, 2025 to June 30, 2025

Parameter	Units	MCL	PHG	DLR	SMCL	NL	Other	Basis	Goal	Status
EPA/State Water Quality Regulations										
Primary (Health Standards)										
Inorganic Chemicals										
Aluminum	ug/L	1000	600	50	200			½MCL	500	Met
Antimony	ug/L	6	1	6				½MCL	3	Met
Arsenic	ug/L	10	0.004	2				½MCL	5	Met
Asbestos	MFL	7	7	0.2				½MCL	3.5	Met
Barium	ug/L	1000	2000	100				½MCL	500	Met
Beryllium	ug/L	4	1	1				½MCL	2	Met
Cadmium	ug/L	5	0.04	1				½MCL	2.5	Met
Chromium (total)	ug/L	50		10				½MCL	25	Met
Cyanide	mg/L	0.15	0.15	0.1				½MCL	0.075	Met
Fluoride (source water)	mg/L	2	1	0.1				½MCL	1	Met
Hexavalent chromium	ug/L	10	0.02	0.1				½MCL	5	Met
Mercury	ug/L	2	1.2	1				½MCL	1	Met
Nickel	ug/L	100	12	10				½MCL	50	Met
Nitrate + Nitrite Total (as N)	mg/L	10	10					½MCL	5	Met
Nitrate as N	mg/L	10	10	0.4				½MCL	5	Met
Nitrite (as N)	mg/L	1	1	0.4				½MCL	0.5	Met
Perchlorate	ug/L	6	1	1				½MCL	3	Met
Selenium	ug/L	50	30	5				½MCL	25	Met
Thallium	ug/L	2	0.1	1				½MCL	1	Met
Organic Chemicals										
Volatile Organic Compounds (VOCs)										
1,1,1-Trichloroethane (1,1,1-TCA)	ug/L	200	1000	0.5				½MCL	100	Met
1,1,2,2-Tetrachloroethane	ug/L	1	0.1	0.5				½MCL	0.5	Met
1,1,2-Trichloroethane (1,1,2-TCA)	ug/L	5	0.3	0.5				½MCL	2.5	Met
1,1-Dichloroethane (1,1-DCA)	ug/L	5	3	0.5				½MCL	2.5	Met
1,1-Dichloroethylene (1,1-DCE)	ug/L	6	10	0.5				½MCL	3	Met
1,2,4-Trichlorobenzene	ug/L	5	5	0.5				½MCL	2.5	Met
1,2-Dichlorobenzene (o-DCB)	ug/L	600	600	0.5				½MCL	300	Met
1,2-Dichloroethane (1,2-DCA)	ug/L	0.5	0.4	0.5				½MCL	0.25	Met
1,2-Dichloropropane	ug/L	5	0.5	0.5				½MCL	2.5	Met
1,3-Dichloropropene (Total)	ug/L	0.5	0.2	0.5				½MCL	0.25	Met
1,4-Dichlorobenzene (p-DCB)	ug/L	5	6	0.5				½MCL	2.5	Met
Benzene	ug/L	1	0.15	0.5				½MCL	0.5	Met
Carbon Tetrachloride	ug/L	0.5	0.1	0.5				½MCL	0.25	Met
Dichloromethane (Methylene Chloride)	ug/L	5	4	0.5				½MCL	2.5	Met
Ethylbenzene	ug/L	300	300	0.5				½MCL	150	Met
Freon 113(1,1,2-trichloro-1,2,2-trifluoroethane)	ug/L	1200	4000	10				½MCL	600	Met

Note: District to meet all applicable regulatory requirements at all times.
Compounds highlighted in blue appear more than once in this table.
**Status is either "Met or "Not Met". If goal was not met, number shown is the percent of samples not meeting the goal.*

EBMUD Water Quality Goals – January 1, 2025 to June 30, 2025

Parameter	Units	MCL	PHG	DLR	SMCL	NL	Other	Basis	Goal	Status
Methyl-tert-butyl ether (MTBE)	ug/L	13	13	3	5			½MCL	6.5	Met
Monochlorobenzene (Chlorobenzene)	ug/L	70	70	0.5				½MCL	35	Met
Styrene	ug/L	100	0.5	0.5				½MCL	50	Met
Tetrachloroethylene (PCE)	ug/L	5	0.06	0.5				½MCL	2.5	Met
Toluene	ug/L	150	150	0.5				½MCL	75	Met
Trichloroethylene (TCE)	ug/L	5	1.7	0.5				½MCL	2.5	Met
Trichlorofluoromethane (Freon 11)	ug/L	150	1300	5				½MCL	75	Met
Vinyl Chloride (VC)	ug/L	0.5	0.05	0.5				½MCL	0.25	Met
Xylenes (Total)	ug/L	1750	1800	0.5				½MCL	875	Met
cis-1,2-Dichlorethylene (c-1,2-DCE)	ug/L	6	13	0.5				½MCL	3	Met
trans-1,2-Dichloroethylene (t-1,2-DCE)	ug/L	10	50	0.5				½MCL	5	Met
Synthetic Organic Compounds (SOCs)										
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	0.2	0.003	0.01				½MCL	0.1	Met
2,3,7,8-TCDD (Dioxin)	pg/L	30	0.05	5				½MCL	15	Met
2,4,5-TP (Silvex)	ug/L	50	3	1				½MCL	25	Met
2,4-Dichlorophenoxyacetic acid (2,4-D)	ug/L	70	20	10				½MCL	35	Met
Alachlor (Alanex)	ug/L	2	4	1				½MCL	1	Met
Atrazine (Aatrex)	ug/L	1	0.15	0.5				½MCL	0.5	Met
Bentazon (Basagran)	ug/L	18	200	2				½MCL	9	Met
Benzo(a)pyrene	ug/L	0.2	0.007	0.1				½MCL	0.1	Met
Carbofuran	ug/L	18	0.7	5				½MCL	9	Met
Chlordane	ug/L	0.1	0.03	0.1				½MCL	0.05	Met
Dalapon	ug/L	200	790	10				½MCL	100	Met
Di(2-ethylhexyl)adipate	ug/L	400	200	5				½MCL	200	Met
Di(2-ethylhexyl)phthalate (DEHP)	ug/L	4	12	3				½MCL	2	Met
Dinoseb (DNBP)	ug/L	7	14	2				½MCL	3.5	Met
Diquat	ug/L	20	6	4				½MCL	10	Met
Endothall	ug/L	100	94	45				½MCL	50	Met
Endrin	ug/L	2	0.3	0.1				½MCL	1	Met
Ethylene dibromide (EDB)	ug/L	0.05	0.01	0.02				½MCL	0.025	Met
Glyphosate	ug/L	700	900	25				½MCL	350	Met
Heptachlor	ug/L	0.01	0.008	0.01				½MCL	0.005	Met
Heptachlor epoxide	ug/L	0.01	0.006	0.01				½MCL	0.005	Met
Hexachlorobenzene	ug/L	1	0.03	0.5				½MCL	0.5	Met
Hexachlorocyclopentadiene	ug/L	50	2	1				½MCL	25	Met
Lindane (Gamma BHC)	ug/L	0.2	0.032	0.2				½MCL	0.1	Met
Methoxychlor	ug/L	30	0.09	10				½MCL	15	Met
Molinate	ug/L	20	1	2				½MCL	10	Met

Note: District to meet all applicable regulatory requirements at all times.
Compounds highlighted in blue appear more than once in this table.
**Status is either "Met or "Not Met". If goal was not met, number shown is the percent of samples not meeting the goal.*

EBMUD Water Quality Goals – January 1, 2025 to June 30, 2025

Parameter	Units	MCL	PHG	DLR	SMCL	NL	Other	Basis	Goal	Status
Oxamyl (Vydate)	ug/L	50	26	20				½MCL	25	Met
Polychlorinated biphenyls (PCBs)	ug/L	0.5	0.09	0.5				½MCL	0.25	Met
Pentachlorophenol (PCP)	ug/L	1	0.3	0.2				½MCL	0.5	Met
Picloram	ug/L	500	166	1				½MCL	250	Met
Simazine	ug/L	4	4	1				½MCL	2	Met
Thiobencarb	ug/L	70	42	1	1			½MCL	35	Met
Toxaphene	ug/L	3	0.03	1				½MCL	0.15	Met
1,2,3-Trichloropropane	ug/L	0.005	0.0007	0.005				½MCL	0.0025	Met
Perfluorooctanoic acid (PFOA)	ng/L	4.0	0.007			5.1		MCL	4.0	Met
Perfluorooctane sulfonic acid (PFOS)	ng/L	4.0	1			6.5		MCL	4.0	Met
Perfluorohexane sulfonic acid (PFHxS)	ng/L	10.0				3		MCL	10.0	Met
Perfluorononanoate (PFNA)	ng/L	10.0						MCL	10.0	Met
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoate (HFPO-DA or GenX Chemicals)	ng/L	10.0						MCL	10.0	Met
PFAS Hazard Index	unitless	1						MCL [1]	1	Met
Disinfection By-Products (DBPs)										
Bromate	ug/L	10	0.1	1				½ MCL	5	Met
Chlorite	ug/L	1000	50	20				½MCL	500	Met
Haloacetic Acids (HAA5)	ug/L	60						½ MCL	30	Not Met
Total Trihalomethanes (TTHM)	ug/L	80						½ MCL	40	Not Met
Radionuclides										
Gross alpha particle activity	pCi/L	15		3				½MCL	7.5	Met
Beta/photon emitters		4 mrem/yr		4 pCi/L			50 pCi/L	Other [2]	25	Met
Radium 226 + 228	pCi/L	5						½MCL	2.5	Met
Strontium-90	pCi/L	8	0.35	2				½MCL	4	Met
Tritium	pCi/L	20000	400	1000				½MCL	10000	Met
Uranium	pCi/L	20	0.43	1				½MCL	10	Met
Microbiological										
%Total Coliforms Positive/Mo.	Organisms/ 100 ml	5%						Other [3]	0.5%	Met
TCR Tap Total Chlorine Residual	mg-Cl_2/L							Meets Partnership for Safe Water	≥ 0.5 mg-Cl2/L in ≥95% of routine samples per month	Met
Reservoir Total Chlorine Residual	mg-Cl_2/L							Exceeds Partnership for Safe Water [4a]	≥ 0.5 mg-Cl_2/L in ≥95% of reservoirs per month [4b]	Not Met
Treatment Techniques										
Individual Filter Effluent (IFE) Turbidity	NTU							Exceeds Partnership for Safe Water [5]	<0.10 NTU in 99.5% of samples per filter (monthly)	Met
Combined Filter Effluent (CFE) Turbidity	NTU							Exceeds Partnership for Safe Water [5]	< 0.10 NTU in 99.9% of samples per WTP (monthly)	Met
Distribution System Fluoride	mg/L							Other [6]	0.6-1.2	Met

Note: District to meet all applicable regulatory requirements at all times.

Compounds highlighted in blue appear more than once in this table.

**Status is either "Met or "Not Met". If goal was not met, number shown is the percent of samples not meeting the goal.*

EBMUD Water Quality Goals – January 1, 2025 to June 30, 2025

Lead (P90 at customer tap)	ug/L		0.2	5			15	½ AL[7]	7.5	Met
Copper (P90 at customer tap)	ug/L		300	50			1300	½ AL[7]	650	Met

Parameter	Units	MCL	PHG	DLR	SMCL	NL	Other	Basis	Goal	Status
Langelier Saturation Index (LSI)	unitless							Corrosion Control	-0.5 to 0.75 in 95% WTP effluent samples (annually)	Met
Acrylamide	Dose and %						(0.05% monomer by wt. dose not to exceed 1 mg/L)	Other [8]	0.05% monomer by wt. dose not to exceed 1 mg/L	Met
Secondary (Aesthetic) Standards										
Aluminum	ug/L	1000	600	50	200			½SMCL	100	Met
Chloride	mg/L				250			½SMCL	125	Met
Color	color unit				15			½SMCL	7.5	Met
Copper (entry to distribution system)	ug/L		300	50	1000			½SMCL	500	Met
Foaming agents (MBAS)	ug/L				500			½SMCL	250	Met
Iron	ug/L				300		100	Other [9]	100	Met
Manganese	ug/L				50	500	15	Other [9]	15	Met
Methyl tertiary butyl ether (MTBE)	ug/L	13	13	3	5			½SMCL	2.5	Met
Odor threshold	TON				3			SMCL	3	Met
Silver	ug/L				100			½SMCL	50	Met
Specific Conductance	uS/cm				900			½SMCL	450	Met
Sulfate	mg/L				250			½SMCL	125	Met
Thiobencarb	ug/L	70	42	1	1			½SMCL	0.5	Met
Total Dissolved Solids	mg/L				500			½SMCL	250	Met
Turbidity (distribution)	NTU				5			½SMCL	2.5	Met
Zinc	ug/L				5000			½SMCL	2500	Met
Customer Expectations										
District-caused complaints	Complaints/ month						30	Other [10]	30	Met
Emerging Contaminants										
Inorganic Chemicals										
Boron	ug/L			100		1000		NL	1000	Met
Chlorate	ug/L					800		NL	800	Met
Organic Chemicals										
1,2,4-Trimethylbenzene	ug/L					330		NL	330	Met
1,3,5-Trimethylbenzene	ug/L					330		NL	330	Met
Cylindrospermopsin	ug/L					0.3		NL [11]	0.3	Met
Microcyctins	ug/L					0.03		NL [11]	0.03	Met
Saxitoxins	ug/L					0.6		NL [11]	0.6	Met
N-Nitrosodimethylamine [NDMA]	ng/L		3			10		NL	10	Met
N-Nitrosodiethylamine [NDEA]	ng/L					10		NL	10	Met
Naphthalene	ug/L					17		NL	17	Met

Note: District to meet all applicable regulatory requirements at all times.
Compounds highlighted in blue appear more than once in this table.
**Status is either "Met or "Not Met". If goal was not met, number shown is the percent of samples not meeting the goal.*

EBMUD Water Quality Goals – January 1, 2025 to June 30, 2025

NOTES:

[1] PFAS Hazard Index is calculated by adding the ratio of the water sample concentration to a Health-Based Water Concentrations of four PFAS compounds: PFHxS, PFNA, HFPO-DA, and PFBS
[2] Beta/photon emitters MCL is in units of millirems per year (mrem/yr) annual dose equivalent to the total body or any internal organ, and the corresponding amount of radioactivity is specific to the type of particle. A screening level of 50 pCi/L is used to determine if additional analyses are required to determine if more sensitive analyses are required. The EBMUD goal is set at ½ screening level.
[3] 1/10th of the 5% MCL
[4] (a) ≥ 0.5 mg-Cl2/L in ≥95% of routine monthly samples; (b) excludes reservoirs post treatment data
[5] <0.10 NTU 95% of the time
[6] Optimal Fluoride Dose (0.7 mg/L) per 2015 US Public Health Service recommendation
[7] ½ Action Level; compliance based on in-home samples. The "P90" value is the 90% percentile value from the Lead and Copper Rule regulatory compliance data.
[8] USEPA Treatment Technique
[9] Based on operational experience
[10] Based on historical data
[11] Recommended interim notification levels from Office of Environmental Health Hazard Assessment to the State Water Resources Control Board

Note: District to meet all applicable regulatory requirements at all times.
Compounds highlighted in blue appear more than once in this table.
**Status is either "Met or "Not Met". If goal was not met, number shown is the percent of samples not meeting the goal.*

This page is intentionally left blank.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: September 4, 2025

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Roberto C. Cortez, Manager of Water Operations RCC

SUBJECT: Mokelumne Aqueduct Improvements and Failure Response

SUMMARY

The Mokelumne Aqueducts (aqueducts) provide a critical link between the District's main upcountry water supply and the East Bay. Significant capital projects have been completed or are planned, and a number of operational plans have been established to improve the reliability of the aqueducts and the supply in the East Bay. An update will be presented at the September 9, 2025 Planning Committee meeting.

DISCUSSION

During the July 8, 2025 Planning Committee meeting, the Board requested additional information about improvements that have been made to the aqueducts and the response plan in the event of a failure of the aqueducts.

The aqueducts convey about 90 percent of the District's water supply, including drought supply from the Freeport Regional Water Project, when needed. The aqueducts transport water approximately 90 miles from Pardee Reservoir to the water treatment plants and raw water reservoirs in the East Bay. The three aqueducts vary in diameter, in-service date, and material (table below).

Mokelumne Aqueduct	Diameter (inches)	In Service Date	Construction Material
No. 1	65	1929	Riveted and welded steel pipeline with coal-tar lining and coating
No. 2	67	1949	Primarily steel with cement-mortar lining. One section is reinforced cylinder concrete.
No. 3	89	1963	Welded steel with cement mortar lining.

The aqueducts are most vulnerable in the approximately 15-mile section spanning the Sacramento-San Joaquin Delta because of geotechnical and flooding risks. For decades the

District has implemented projects to reduce the risk of failure and ensure an effective response in the event of disruptions to one or more aqueducts. Below is a summary of the projects and response plans to reduce the risk of a failure and respond to a potential failure of the aqueducts.

Improvements to the Mokelumne Aqueducts

In 2007, the District completed a study to identify short- and long-term strategies to protect the aqueducts in the Delta against earthquakes, flooding, Delta island subsidence, and sea level rise. The study considered the need to protect the aqueducts not only from direct impacts of each hazard, but indirect impacts caused by a levee failure, and was used to guide capital improvements.

Sacramento-San Joaquin Delta Levee Improvements

In the Delta, the aqueducts are protected by 55 miles of levees owned and maintained by four Reclamation Districts (RDs) responsible for maintaining Lower Roberts and Woodward Islands, Orwood-Palm Tract, and Jones Tract. To reduce flooding vulnerability and ensure rapid recovery from potential failures, the District employs a multi-pronged approach that includes levee strengthening and staging standby materials for emergency response. Each year, the District contributes approximately $250,000 in levee repairs and improvements. Since the early 1980s, the District has invested over $20 million in these efforts. In partnership with the RDs and the state, the District secured an additional $50 million for improvements completed in 2024 to further enhance Delta levee resilience.

Seismic Improvement Project (SIP)

In the 1990s, the District began the $40 million Mokelumne Aqueduct Seismic Upgrade Project to improve seismic performance of the aqueducts in the Delta. The project strengthened levees and pipe foundations at river crossings, reinforced all buried pipe joints, and upgraded pipe support structures on elevated sections of Mokelumne Aqueduct No. 3. The project also replaced low-strength bolts with high-strength bolts on elevated portions of Aqueducts No. 2 and 3, significantly improving the seismic performance and reliability of these critical facilities. The final phase of this project was completed in 2005.

Mokelumne Aqueduct Recoating (13 Phases)

Since 2001, the District has been recoating the elevated portions of the aqueducts to replace the exterior coating and protect the aqueducts from external corrosion. The first 12 phases have been completed. Phase 13 is the final phase and focuses on Mokelumne Aqueduct No. 1 and will externally recoat the aqueduct at gully crossings to prevent corrosion of these steel pipe segments. This phase is in the second year of a four-year contract.

Mokelumne Aqueduct No. 1 Anchor Upgrades

Mokelumne Aqueduct No. 1 is elevated for ten miles across the Delta and is supported by concrete anchors and a timber pile foundation that were installed in the 1920s. Many of the timber piles have experienced significant dry rot leading to settlement and risk of aqueduct

failure. Since 2010, the District has installed new concrete piles and reinforced the pipeline with stiffener plates on damaged anchors, ensuring continued reliability of Aqueduct No. 1.

Mokelumne Aqueduct Corrosion Optimization Study and Relining Projects

Mokelumne Aqueducts No. 2 and 3 are lined with cement mortar lining (CML). In 2013 and 2017, internal inspections of Mokelumne Aqueduct No. 2 revealed the CML has reached the end of its useful life. Above ground portions of Mokelumne Aqueduct No. 3 in the Delta were also inspected in 2019 indicating that the CML had also degraded and required replacement. The study recommended projects to minimize corrosion caused by the water in the aqueducts.

To further protect the aqueducts, the District plans to replace the CML along 65-miles of Mokelumne Aqueduct No. 2 and 10-miles of Mokelumne Aqueduct No. 3. The District is currently working with the Center for Smart Infrastructure at U.C. Berkeley to develop an improved cement mortar mix for the above ground portions of the aqueducts.

Mokelumne Aqueduct Cathodic Protection

The aqueducts are protected from soil corrosion by a cathodic protection system. These systems rely on expendable anode groundbeds to protect the aqueducts. As the groundbeds deteriorate over time, they must be systematically replaced to ensure continued corrosion control. Assessment and replacement of the cathodic protection systems will begin this fiscal year and continue through Fiscal Year 2034.

Mokelumne Aqueduct Resiliency Project (MARP)

In 2007, the Board accepted the findings from the Strategy for Protecting the Mokelumne Aqueducts in the Delta (SPAD) study, which recommended short- and long-term options to mitigate flood and earthquake hazards and risks to the elevated sections of the aqueducts across the Delta. The long-term recommendation was to construct a tunnel under the Delta. The proposed tunnel is 16.5 miles long from Stockton to Bixler and will be sized to convey the full capacity of the Mokelumne Aqueducts. Initial planning and environmental review have been completed but the project is currently on hold until more is known about the state's Delta Conveyance Project.

Operational Response to Mokelumne Aqueduct Failures

The District has also developed numerous mitigation and recovery strategies in the event of a failure of the aqueducts.

Use of Local Storage

The District maintains up to six months of storage in local reservoirs to provide an emergency supply (assuming 25% rationing) in the event the supply from Pardee Reservoir is interrupted. The District also stores approximately 4,000-feet of replacement pipe sections near the Bixler Service Yard to accelerate emergency repairs.

Mokelumne Aqueduct Interconnection Project

To strengthen operational flexibility and improve emergency preparedness, in 2013, the District constructed interconnections between the three aqueducts at locations on both sides of the Delta. The interconnections allow the District to bypass segments of the aqueducts that may be damaged by a levee failure, earthquake, or other catastrophes. This provides the ability to route water supplies into and out of the remaining in-service aqueducts.

Treated Water Emergency Interties

The District has installed ten intertie connections through agreements with the Contra Costa Water District (CCWD), Dublin San Ramon Services District, San Francisco Public Utilities Commission, and the City of Hayward. These interties can deliver up to 50 million gallons per day (MGD) of treated water to supplement supplies and help maintain service to our customers while aqueduct repairs are completed.

EBMUD/CCWD Raw Water Intertie

In 2007, the District and CCWD constructed a raw water intertie on Mokelumne Aqueduct No. 2 in the City of Brentwood. Through an agreement between the two agencies, the intertie can deliver up to 60 MGD of raw water from CCWD to District local reservoirs.

CCC:RCC:gb

I:\SEC\2025 Board Related Items\Committees 2025\090925 Planning Ctte\WOD - Mokelumne Aqueduct Improvements and Failure Response.docx

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: September 4, 2025

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Serge V. Terentieff, Director of Engineering and Construction Dave for SVT

SUBJECT: Update on Phased Approach to Design Consultant Management

SUMMARY

At its May 13, 2025 meeting, the Board requested an update on the phased implementation approach for design consultant usage and management. The District has implemented a phased approach to design consultant management for large and complex projects to address scope uncertainty during the early stages of design, and to increase flexibility in negotiating consultant agreements. Staff will provide an update at the September 9, 2025 Planning Committee meeting.

DISCUSSION

Background

The traditional approach for design consultant management is to hire a consultant(s) to complete the entire design of a project after preliminary design criteria have been developed. The consultant(s) provides engineering support through the completion of construction. This approach is effective for small or straightforward projects, where the project scope is well-defined and there are relatively few unknowns. However, this approach tends to be less effective for larger and/or more complex projects, where the scope is difficult to define prior to completion of key design milestones, such as 10 percent and 30 percent design.

The phased approach to design consultant management the District is currently using replaces the approach where a single consultant is responsible for the entire design of a project and instead executes separate consultant agreements to cover different design phases. The number of design phases can vary depending on project sequencing, constraints, in-house expertise, and District needs. Table 1 shows an example for a project with two separate design consultant agreements. The first agreement is only for pre-design services (up to 30%), allowing project scope to be more fully developed before a second agreement for detailed design (30% to 100%) is negotiated and authorized.

Table 1: Agreements for a Project with Two Design Phases

Phase	Deliverables
Preliminary Design	Basis of Design Report (BODR) and AACE* Class 5 cost estimate (completed by District staff).
Agreement #1: Pre-design (0% – 30%)	Technical Memoranda, pre-design up to 30% drawings, 30% construction cost estimate and schedule.
Agreement #2: Detailed Design (30% - 100%)	Bid documents (100% drawings and specifications), construction cost estimate, bid phase support. Detailed scope based on results of Agreement #1.
Agreement #3: Engineering Services During Construction	Construction support and O&M documentation. Detailed scope based on 90% cost estimate.

*Association for the Advancement of Cost Engineering

A phased approach to consultant agreements for the design of large and complex projects reduces the likelihood for scope changes and amendments after an agreement has been authorized. The approach was first recommended to the Board on November 24, 2020, outlined to the Planning Committee on January 9, 2024, and discussed on May 13, 2025 during Board consideration of an agreement for engineering services during construction for the Lafayette and Walnut Creek Water Treatment Plants (WTP) Chemical Systems Safety Improvements Project (CSSIP) under Specification 2194.

Implementation

Due to its size and complexity, the Walnut Creek WTP Pretreatment Project was selected as the first project to utilize this alternative approach to design consultant management. The first agreement for pre-design services was authorized by the Board on January 23, 2024 for an amount not to exceed $11,215,126. Under this agreement, the design consultant performed geotechnical investigation, assessed the condition of existing pipelines, and refined the design criteria included in the BODR. Work performed under this first agreement yielded value engineering opportunities and additional scope for detailed design that would not have been captured had a single design agreement been authorized under the traditional approach for design consultant management.

In addition, due to the complexity and size of the Walnut Creek WTP Pretreatment Project, construction will also likely be phased and completed under separate contracts. As part of the pre-design phase, staff is working with the consultant to identify phasing and sequencing of detailed design and construction that best meets the District's operational and financial needs. This new phased approached to design consultant management provides increased flexibility for

sequencing and defining detailed design scope of each construction phase without requiring design agreement amendments.

The 30 percent design for the Walnut Creek WTP Pretreatment Project is expected to be completed by fall 2025. An agreement for detailed design services of the first phase of the project is tentatively scheduled for Board consideration and approval by spring 2026.

NEXT STEPS

Staff will continue to evaluate project needs and identify opportunities to implement this phased approach to design consultant management.

CCC:SVT:sfp

I:\SEC\2025 Board Related Items\Board Committees 2025\090925 Planning Ctte\ECD – Design Consultant Management Update.docx

This page is intentionally left blank.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: September 4, 2025

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Crystal J. Yezman, Manager of Maintenance and Construction CJY

SUBJECT: Miller Road Trench Soil Management Project Update and Final Mitigated Negative Declaration

SUMMARY

The Miller Road stockpile site is located within District-owned watershed land southeast of Upper San Leandro Reservoir near Castro Valley in unincorporated Alameda County. Since 1975, the site has been used by the District to store and periodically remove excavated material generated by pipeline construction and maintenance activities. In 2023, Alameda County communicated to the District that continued use of the site would require a Conditional Use Permit (CUP) supported by appropriate California Environmental Quality Act (CEQA) review to assess and mitigate any potential environmental impacts. The Miller Road Trench Soil Management Project (Project) involves the continued operation of the site.

A Draft Initial Study/Mitigated Negative Declaration (IS/MND) for the Project was released for public review on March 20, 2025. Following the public review period, the Final MND was made available on August 28, 2025. This memorandum provides an update on the Project, including an overview of the public outreach process and comments received on the Draft MND. The Project will be presented at the September 9, 2025 Planning Committee meeting and to the Board the same day to consider adoption of the Final MND and approval of the Project.

DISCUSSION

Project Purpose and Description

The Miller Road trench soil stockpile site is located within District-owned watershed land southeast of Upper San Leandro Reservoir in Castro Valley in unincorporated Alameda County (see attachment). The site also includes a rock and sand stockpile site, which stores materials used to backfill trenches for pipeline construction and maintenance activities. The Project involves the continued operation of the Miller Road soil stockpile and rock and sand stockpile sites, including import, temporary storage, and periodic removal of accumulated trench soil and backfill materials.

Historically, the District imported trench soil to the site from pipeline repair and replacement projects using an average of approximately three roundtrips per day (typically Monday through Friday from 7:00 a.m. to 5:00 p.m.) using 10 cubic yard (CY) dump trucks. Once the trench soil is unloaded at the Miller Road stockpile site, the empty trucks are loaded with backfill material from the rock and sand stockpile before returning to the pipeline repair or replacement site. Additional truck trips are generated when the District's rock and sand supplier brings backfill material to the stockpile site.

The stockpile site has a storage capacity of approximately 125,000 CY and is currently over 90 percent full with approximately 116,000 CY of trench soil. Trench soil is removed from the Miller Road stockpile site when the site is near capacity. Previous trench soil off-hauls were completed in 2005, 2012, and 2019. In 2024, about 2,000 CY of soil was removed by Alameda County for a nearby road repair, avoiding hauling through Castro Valley. The frequency of off-haul events is conservatively assumed for impact analysis purposes to be more frequent than prior periods; staff expects the actual events will be less frequent as direct hauling from pipeline repair or replacement sites to other sites increases.

Draft IS/MND Analysis and Mitigation Measures

Pursuant to CEQA, staff completed a Draft IS/MND that reviewed environmental impacts. The MND analysis indicated that the Project could potentially generate environmental impacts to transportation and emergency response to wildfire due to the increased truck traffic during off-haul events. Key mitigation measures incorporated into the Project that would reduce all environmental impacts to less than significant include:

- Ensure truck drivers review and sign traffic safety requirements covering road safety, defensive driving, school zones, blind spot monitoring, and consequences for non-compliance.
- Prohibit truck parking or queuing on Redwood Road; use temporary traffic controls during wide turns at Redwood/Miller Road.
- Restrict trucks to designated haul routes.
- Install radar speed feedback signs and advance warning signs along Redwood Road to deter speeding and alert motorists to truck traffic.
- Conduct frequent truck safety inspections (brakes, tires, lights, etc.).
- Provide public information about truck traffic and safety measures via media, social media, and community meetings.
- Coordinate with Alameda County Transportation Department, schools, and emergency services before and during off-haul events; fund crossing guards as needed.
- Conduct pre- and post-event roadway surveys to document conditions and repair any project-related pavement damage.
- Ensure qualified District inspectors are present onsite and along haul routes during off-haul events to monitor safety and compliance.

In addition to the mitigation measures identified in the Draft IS/MND, the District will incorporate its standard construction specifications, procedures, and standard practices into the Project. Existing standard practices prohibit truck idling and limit truck operating hours, among other restrictions, which have proven to avoid community impacts for off-haul events at other sites. These standard practices and procedures additionally reduce or avoid environmental impacts.

Public Outreach

The Draft IS/MND was completed and circulated for a 30-day agency and public review period from March 20, 2025 through April 21, 2025, and extended to May 19, 2025 in response to community feedback.

Staff presented the Project at the March 24, 2025 Land Use meeting of the Castro Valley Municipal Advisory Council (CVMAC) and reviewed the Project scope, impacts, and mitigation as described in the Draft IS/MND. A virtual community meeting to review the Project and receive public feedback was held on April 3, 2025. Over 1,500 postcards announcing the community meeting were sent to residents near the Project site, and information was posted on NextDoor and the District's website at www.ebmud.com/MillerRoad. Feedback was accepted at the community meetings and via written correspondence. Issues and concerns raised by the community are addressed in the Final MND.

A summary of the comments is provided below.

Topic Area	**Comments**
Soil Management	Concerns about soil testing, reuse of excavated soil, and potential contamination.
Water Quality	Potential impacts to water resources, including soil/water interaction and stormwater runoff.
Traffic and Safety	Comments related to truck traffic, road damage and repair, proximity to schools, and general public safety.
Wildlife and Habitat	Potential impacts on special-status species such as the Alameda whipsnake and Crotch's bumble bee, as well as broader concerns regarding habitat connectivity.
Air Quality and Dust	Requests for dust control measures and concerns about public health impacts from construction-related emissions.
Land Use	Comments related to the need for a CUP to comply with Alameda County zoning requirements.
CEQA Process	Concerns about the public review process, timing, and overall adequacy of the environmental analysis.

The comments in their entirety, responses to the comments, and text edits to be incorporated into the MND are all included in Appendix D, "Response to Comments," of the Final MND. The responses to comments and text edits to the MND do not identify new significant impacts but merely clarify and expand upon information already presented in the MND. The District also received written comments on the Draft IS/MND from the following groups:

- Members of the public (three individuals)
- California Department of Fish and Wildlife
- CVMAC
- Alameda County Department of Transportation
- Alameda County Planning Department

NEXT STEPS

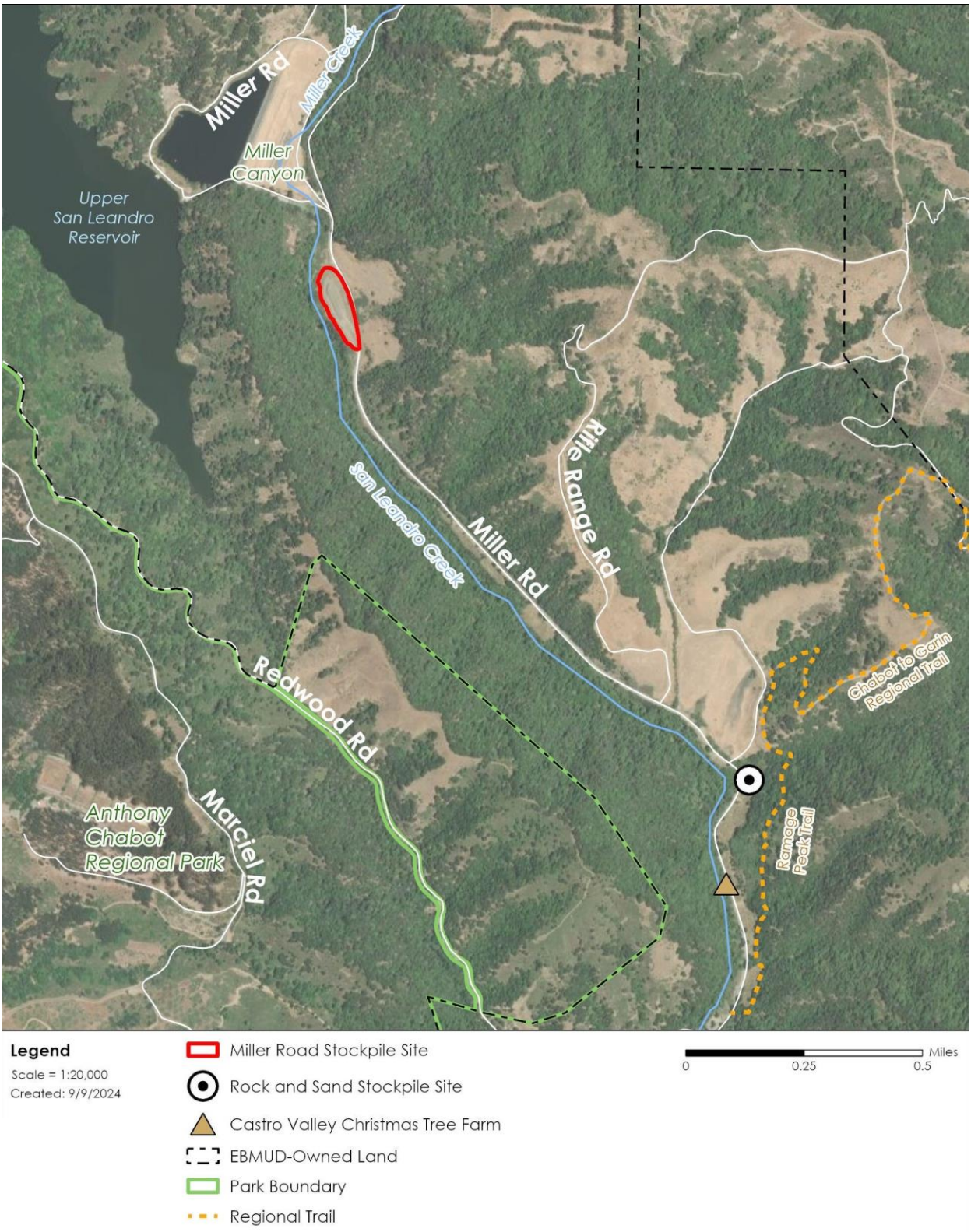
The Board will consider adoption of the Final MND and approval of the Project at its September 9, 2025 meeting. If the Board approves the Final MND, staff will apply for an Alameda County CUP. If the CUP is approved, daily activities will resume. The next off-haul event would occur in 2026, with further public outreach performed in advance.

CCC:CJY:sd

Attachment: Project Location Map

I:\SEC\2025 Board Related Items\Committees 2025\090925 Planning Ctte\MCD - Miller Road Trench Soil Mgmt Project Update and Final MND.docx

ATTACHMENT



Project Location Map

This page is intentionally left blank.