BOARD OF DIRECTORS
EAST BAY MUNICIPAL UTILITY DISTRICT

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

Notice of Location Change

PLANNING COMMITTEE MEETING
Tuesday, September 14, 2021
9:15 a.m.
*****Virtual*****

In accordance with the Governor's Executive Order N-08-21 which suspends portions of the Brown Act, **this meeting will be conducted by webinar and teleconference only.** A physical location will not be provided for this meeting.

Dated: September 9, 2021

Rischa S. Cole

Rischa S. Cole
Secretary of the District

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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 14, 2021
9:15 a.m.
Virtual

Location

In accordance with the Governor's Executive Order N-08-21 which suspends portions of the Brown Act, **this meeting will be conducted by webinar and teleconference only.** A physical location will not be provided for this meeting.

Committee Members: Marguerite Young {Chair}, Lesa R. McIntosh and Frank Mellon

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

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.	Orinda Water Treatment Plant's Disinfection Improvements and Chemical Systems Safety Improvements Projects Update	(Yoloye)
2.	Water Quality Program Semi-Annual Update	(Briggs)
3.	Main Wastewater Treatment Plant Seismic Retrofit Program Update	(White)
4.	Regulatory Compliance Semi-Annual Report – January 2021 through June 2021	(Briggs)
5.	Camanche – Riverview Fire Protection	(Tognolini)

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
Tuesday, September 14, 2021
9:15 a.m.

EBMUD public Board meetings will be conducted via Zoom.
Board committee meetings are recorded, and live-streamed on the District's website.

Please visit this page beforehand to familiarize yourself with Zoom.
https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-Meeting

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

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.

If you wish to provide public comment please:

- 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
- The Secretary will call each speaker in the order received
- 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
- 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 keep track of time and inform each speaker when his/her allotted time has concluded

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 9, 2021

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Olujimi O. Yoloye, Director of Engineering and Construction OY

SUBJECT: Orinda Water Treatment Plant's Disinfection Improvements and Chemical Systems Safety Improvements Projects Update

SUMMARY

This memorandum provides an update on the Orinda Water Treatment Plant's (WTP) Disinfection Improvements and Chemical Systems Safety Improvements Projects (Projects), including information on the final design, coordination with the City of Orinda (City), and upcoming contracts for Board consideration. These Projects will be presented at the September 14, 2021 Planning Committee meeting.

BACKGROUND

Staff presented to the Planning Committee during five meetings in 2017 and early 2018, on the District's efforts to improve disinfection reliability and reduce disinfection byproducts (DBPs), particularly trihalomethanes (THMs), and recommended a new ultraviolet/chlorine contact basin (UV/CCB) disinfection facility at Orinda WTP. Under Board Motion Nos. 019-18 and 020-18 consultant design agreements were authorized to initiate the Orinda WTP Disinfection Improvements Project. At the October 16, 2018 District Projects Tour, staff briefed the Board on ongoing pilot-scale testing of UV disinfection equipment and initial design concepts.

Staff provided updates to the Planning Committee regarding the Disinfection Improvements Project in July 2019 and March 2020 on the results of the UV pilot-scale testing and vendor pre-selection, plans to prequalify interested bidders and sub-bidders, and the schedule for completion of California Environmental Quality Act analysis and continued meetings with the public leading up to consideration of the Supplemental Environmental Impact Report (SEIR) in December 2020. On December 8, 2020, the Board approved the SEIR for the Orinda WTP Disinfection Improvements Project and directed staff to continue to work with the City to address their remaining comments and concerns, particularly those related to traffic circulation, traffic safety, and implementation of traffic mitigation measures.

The Chemical Systems Safety Improvements Project, which includes a full replacement of the plant's chemical storage and feed systems, as well as temporary chemical feed systems to maintain plant operations during construction, has been combined with the Disinfection Improvements Project into a single set of contract documents. Combining these two projects will reduce risk to the District by minimizing impacts to plant operations and simplifying construction management responsibilities. Design was completed in May 2021, and the Projects are scheduled to be advertised for bids this month.

DISCUSSION

The following sections describe the results of ongoing coordination and outreach efforts with the City and community of Orinda; strategies for a partnership between the District and the contractor during construction; rental space for District and contractor construction support staff; temporary facilities for staff who will be temporarily displaced by the construction; and engineering services and construction management contracts needed to support the Projects.

Coordination with the City and Results of Traffic Control Plan and Mitigation Measures: In response to the City's comments on the District's Final SEIR, District staff worked with City staff to address their concerns related to biological resources and transportation/traffic circulation, which were detailed in a letter from the City dated December 7, 2020. District staff retained the services of a traffic consultant and completed a detailed analysis of the Project's potential impacts on traffic circulation and safety during various phases of the work.

As a result of this analysis, minimum traffic safety and mitigation measures were included in the contract documents and were agreed upon between District and City staff. Highlights of traffic mitigation measures that will be implemented include additional flaggers at key intersections, increased signage, detailed instructions for trucking staff, regular meetings with City staff and the Orinda Police Department, and restrictions on heavy truck haul routes to only allow site access from the south entrance of the plant via State Route 24.

Community Engagement: Because of the size, complexity, and duration of the projects, District staff has actively engaged the community since the certification of the SEIR in December 2020. These efforts include completion of a dedicated Disinfection Improvements Project website and development of an informational pamphlet, and use of mailers, emails, social media posts, and phone calls responding to questions from the community.

Completion of Prequalification of General Contractor and Subcontractors: The Projects involve complex construction methods requiring specialized expertise in trenchless pipe installation, excavation shoring and medium voltage electrical systems. Because of the risk of a protracted outage at the Orinda WTP, which could have significant customer impacts, it was important to reduce the risk by ensuring only properly qualified contractors perform the work. In June 2021, staff completed a rigorous process to prequalify interested general contractors and sub-contractors, which resulted in a list of prequalified interested bidders that includes seven

general contractors, six excavation and shoring sub-contractors, and nine electrical sub-contractors.

District-Contractor partnering approach: The District intends to partner with the selected construction contractors and develop shared goals, deepen mutual understanding and collaboration, and proactively identify issues to develop creative solutions to construction challenges as a team.

Rental Office Space for Construction staff: The Orinda WTP site does not have adequate space for both construction staging and temporary office trailers. Additional offsite space is needed to allow for more efficient use of the limited onsite staging area. The District successfully negotiated the terms of a lease for additional office space in a building located at 25 Orinda Way. The proposed building is near the Orinda WTP site and provides ideal office space for the construction management team and contractor staff.

Temporary Maintenance Facilities for District staff: To prepare the Orinda WTP site for the Projects, District maintenance staff must be relocated off-site to allow for the demolition of existing ground maintenance and mechanical maintenance buildings. Staff will be temporarily relocated to temporary facilities to be constructed at the staging area adjacent to the Orinda Sports Fields off Camino Pablo to the north of Orinda WTP. The site improvements related to these temporary facilities include site preparation and paving a District-furnished mobile office building, steel storage containers and a portable shower trailer. Community use of the sports fields and parking area will not be interrupted except during paving of the site, which will be coordinated with City staff.

Engineering Services and Construction Management Support Agreements: Due to the size and complexity of the Projects, two engineering services during construction (ESDC) agreements will be needed. These services include biological and geological monitoring, support during major concrete placement, and electrical tie-ins, review and approval of submittals, and responses to requests for information. An additional agreement for construction management (CM) and inspection services is needed to supplement Disteict staff.

NEXT STEPS

The scheduled milestones for the awards of the various contracts and agreements for the Projects are as follows:

- Mobile Office Building for Temporary Maintenance Facilities September 14, 2021
- Rental agreement for office space at 25 Orinda Way September 14, 2021
- Contract for Spec. 2178 (Temporary Maintenance Facilities) October 2021
- Contract for Spec. 2139 (Projects) December 2021
- Agreements for ESDC in support of Projects December 2021

- Agreement for CM and inspection services December 2021

Construction of the Projects is expected to start in spring 2022.

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: September 9, 2021

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager

FROM: David A. Briggs, Director of Water Operations and Maintenance

SUBJECT: Water Quality Program Semi-Annual Update

SUMMARY

The attached report provides an update on the District's water quality initiatives to ensure the delivery of high-quality water to customers. Water quality data for the first six months of calendar year 2021 is summarized in the report. A presentation on the Water Quality Program will be made at the September 14, 2021 Planning Committee meeting.

DISCUSSION

From January 1, 2021 through June 30, 2021, the District met all federal and state drinking water standards and 97 percent of the District's internal goals (120 of 124 goals were met). As in previous updates, levels of three groups of disinfection byproducts were higher than District goals but continue to be stable. The District continues to minimize potential lead exposure to customers and monitor contaminants of emerging concern.

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Attachment

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ATTACHMENT

WATER QUALITY SEMI-ANNUAL REPORT

This report provides the status of District efforts to ensure the delivery of high-quality water to its customers for the first six months of calendar year 2021.

District Water Quality Goals

The District's internal water quality goals are substantially more stringent than federal and state water quality standards. The goals are adjusted when appropriate, depending on the latest technical information and regulatory changes. During the first half of 2021, the District exceeded three internal water quality goals related to disinfection byproducts (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 current goals of 40 parts per billion (ppb) for TTHMs and 30 ppb for HAA5 are half that of regulatory standards. The District's goal was exceeded in one out of 32 individual TTHM samples and three out of 32 HAA5 samples. Achieving lower levels of these DBPs with current treatment technologies employed at the water treatment plants could compromise appropriate disinfection of the water. Future capital projects at the water treatment plants will enable better control of DBPs; however, the levels are unlikely to be consistently below the District's internal goals.

N-nitroso-dimethylamine (NDMA) is one of several nitrosamines that can form when chloramine is used. NDMA forms slowly and is generally detected in parts of the distribution system with very long residence times. In the first half of 2021, the District's water quality goal was exceeded in four of 10 NDMA samples. The District's goal of 3 parts per trillion (ppt) is set at the Public Health Goal (PHG) because there is currently no regulatory standard for NDMA.

Maintaining a high disinfectant residual in the distribution system controls the growth of microorganisms and maintains the safety of drinking water. The District analyzes hundreds of chlorine residual samples each month throughout the service area, both from water mains and distribution reservoirs. The District's goal is to maintain at least 0.5 mg/L chlorine residual in 95 percent of samples each month. In the first half of 2021, this goal was met every month.

Lead

The District continues to minimize customer exposure to lead in drinking water. Based on data from the customer sampling voucher program, school sampling, federal and state monitoring requirements, and periodic focused studies, the corrosion control program effectively minimizes the release of lead from any remaining leaded components.

The customer sampling program continues to be successful. Since 2017, over 2,000 customers have taken advantage of the offer for a free lead test. Results continue to be good, with 90 percent of samples less than one part per billion (ppb). The District has streamlined the administrative and record-keeping aspects of the program and will transition from a pilot effort to a permanent part of operations in Fiscal Year 2023.

The District completed a detailed inventory of all service lines in 2019 and developed a plan to remove any remaining lead components. Development of the inventory was a four-year effort including manual searches of over 215,000 tap records and hundreds of field inspections. The effort confirmed that 94 percent of service lines are copper. A few dozen lead service lines were found during the review and immediately replaced with copper.

Approximately 2,100 galvanized steel service lines remain, most of which were installed before 1950. These are conservatively assumed to include short connectors made of lead (known as goosenecks) based on construction methods used at the time. While there may be lead components on the galvanized steel services, thousands of customer tap samples confirm lead concentrations are not elevated and do not represent a public health risk. The District developed a plan, which was approved by the State Water Resources Control Board (SWRCB), to remove an average of 125 galvanized steel service lines each year, along with any associated lead goosenecks, during pipeline replacement, repair of breaks and leaks, or if needed, through a dedicated replacement activity. Replacement for all galvanized lines will take up to 20 years. The District is presently replacing these laterals (or confirming the material is not galvanized) at rates that exceed the annual target.

Backflow Protection

Without backflow protection, untreated groundwater from private wells and other non-potable sources can affect the distribution system. In 2017, staff began proactively investigating the potential for other improperly configured groundwater wells. County records were examined and indicated an additional 4,408 sites with potential wells. Notices were sent to customers with potential wells asking for more information; 3,501 of these customers did not respond. To date, 751 site inspections have been completed. Staff has verified the presence of 397 wells. At these sites, 212 wells already had appropriate backflow protection devices. For the remaining 185 wells, the District either installed or facilitated the installation of backflow prevention devices. Through field visits, an additional 32 wells, not previously identified by county records, have been found. District staff will continue to target at least 300 of these sites for investigation each year until all known wells are investigated.

Regulatory Updates

The SWRCB and the U.S. Environmental Protection Agency (USEPA) continue to develop regulations for perfluoroalkyl substances and polyfluoroalkyl substances (collectively known as PFAS). In California, Notification Levels, Response Levels, and draft PHGs for two PFAS, Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS), have been issued. California is working on Notification Levels for seven additional PFAS. The SWRCB continues its phased monitoring program, requiring water suppliers to monitor PFAS in accordance with their risk for contamination. In each of the first three rounds of monitoring orders, the District has not been required to monitor due to the relatively protected nature of the District’s watersheds.

At the federal level, regulation development is slower. Although the USEPA issued its final Regulatory Determination in January 2021, stating its intent to develop enforceable limits for

two PFAS compounds (PFOS and PFOA), no timeline has yet been specified. USEPA will continue collecting data in the proposed fifth Unregulated Contaminant Monitoring Rule (UCMR 5) that was published in March 2021. UCMR 5, as proposed, would require sample collection for 29 PFAS compounds between 2023 and 2025 using updated analytical methods.

The District conducted a proactive monitoring program for PFAS in 2020-2021. Quarterly samples from the influent and effluent of each in-service water treatment were collected and analyzed for 18 different PFAS compounds. Most results were "non-detects," however, there were some low-level detections of some compounds. All results were below the Notification Levels. No further PFAS sampling is planned until the UCMR 5 in 2023.

The SWRCB continues to develop regulations for microplastics in drinking water as required by Senate Bill 1422. A definition of microplastics was finalized in June 2020 that includes particles less than 5 millimeters and as small as 1 micrometer (between 5,000 and 1 micrometers). Analytical method development is ongoing. Drinking water utilities will eventually be required to conduct four consecutive years of microplastics monitoring.

The SWRCB is moving faster, and in some ways, differently, than USEPA in regulating lead which complicates compliance. The SWRCB requires utilities to report on service lines with lead connectors (e.g., goosenecks) as part of a utility's lead service line inventory. Meanwhile, the draft federal rule specifically excludes these service lines. Also, the SWRCB requires that the service lateral inventory include only the public side of the service line (from the water main to the meter) and not the private side (from the meter to the house). In contrast, USEPA's draft rule includes a requirement for water systems to inventory both public and private service lines.

Another example of differing lead regulations relates to school sampling protocols. The SWRCB requires water systems to collect samples from schools using a 1-liter sample volume. In USEPA's draft regulation, a 250 mL sample volume is specified. Therefore, the school sampling already completed under the SWRCB's requirement cannot be used to meet the upcoming federal requirement. The District is actively participating in several working groups with both state and federal staff developing their respective regulations in an attempt to provide relevant technical input and modify the District's programs to ensure compliance and public health while minimizing unnecessary costs.

The USEPA continues to develop revised microbial and disinfection byproduct regulations. These efforts include a series of workshops and listening sessions during which information is gathered from interested stakeholders. The District is participating and contributing information in these sessions.

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Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	Goal	Status*
USEPA/State Water Quality Regulations										
Primary (Health Standards)										
Inorganic Chemicals										
Aluminum	ug/L	1000	600	50	200			½SMCL	100	Met
Antimony	ug/L	6	1	6				PHG	1	Met
Arsenic	ug/L	10	0.004	2				PHG	0.004	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				PHG	1	Met
Cadmium	ug/L	5	0.04	1				PHG	0.04	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				PHG	1	Met
Hexavalent chromium	ug/L		0.02					PHG	0.02	Met
Mercury	ug/L	2	1.2	1				½MCL	1	Met
Nickel	ug/L	100	12	10				PHG	12	Met
Nitrate + Nitrite Total (as N)	mg/L	10	10					½MCL	5	Met
Nitrate as N [x4.5 for NO3]	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	2				PHG	1	Met
Selenium	ug/L	50	30	5				½MCL	25	Met
Thallium	ug/L	2	0.1	1				PHG	0.1	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				PHG	0.1	Met
1,1,2-Trichloroethane (1,1,2-TCA)	ug/L	5	0.3	0.5				PHG	0.3	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				PHG	0.5	Met
1,3-Dichloropropene (Total)	ug/L	0.5	0.2	0.5				PHG	0.2	Met
1,4-Dichlorobenzene (p-DCB)	ug/L	5	6	0.5				½MCL	2.5	Met
Benzene	ug/L	1	0.15	0.5				PHG	0.15	Met
Carbon Tetrachloride	ug/L	0.5	0.1	0.5				PHG	0.1	Met

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	Goal	Status*
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
Methyl-tert-butyl ether (MTBE)	ug/L	13	13	3	5			½SMCL	2.5	Met
Monochlorobenzene (Chlorobenzene)	ug/L	70	70	0.5				½MCL	35	Met
Styrene	ug/L	100	0.5	0.5				PHG	0.5	Met
Tetrachloroethylene	ug/L	5	0.06	0.5				PHG	0.06	Met
Toluene	ug/L	150	150	0.5				½MCL	75	Met
Trichloroethylene (TCE)	ug/L	5	1.7	0.5				PHG	1.7	Met
Trichlorofluoromethane (Freon 11)	ug/L	150	1300	5				½MCL	75	Met
Vinyl Chloride (VC)	ug/L	0.5	0.05	0.5				PHG	0.05	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	0.0017	0.01				PHG	0.0017	Met
2,3,7,8-TCDD (Dioxin)	pg/L	30	0.05	5				PHG	0.05	Met
2,4,5-TP (Silvex)	ug/L	50	3	1				PHG	3	Met
2,4-D	ug/L	70	20	10				PHG	20	Met
Alachlor (Alanex)	ug/L	2	4	1				½MCL	1	Met
Atrazine (Aatrex)	ug/L	1	0.15	0.5				PHG	0.15	Met
Bentazon (Basagran)	ug/L	18	200	2				½MCL	9	Met
Benzo(a)pyrene	ug/L	0.2	0.007	0.1				PHG	0.007	Met
Bis(2-ethylhexyl)phthalate (DEHP)	ug/L	4	12	3				½MCL	2	Met
Carbofuran	ug/L	18	0.7	5				PHG	0.7	Met
Chlordane	ug/L	0.1	0.03	0.1				PHG	0.03	Met
Dalapon	ug/L	200	790	10				½MCL	100	Met
Di(2-ethylhexyl)adipate	ug/L	400	200	5				½MCL	200	Met
Dinoseb (DNBP)	ug/L	7	14	2				½MCL	3.5	Met
Diquat	ug/L	20	6	4				PHG	6	Met
Endothall	ug/L	100	94	45				½MCL	50	Met
Endrin	ug/L	2	0.3	0.1				PHG	0.3	Met
Ethylene dibromide (EDB)	ug/L	0.05	0.01	0.02				PHG	0.01	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				PHG	0.03	Met
Hexachlorocyclopentadiene	ug/L	50	2	1				PHG	2	Met
Lindane (Gamma BHC)	ug/L	0.2	0.032	0.2				PHG	0.032	Met

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	Goal	Status*
Methoxychlor	ug/L	30	0.09	10				PHG	0.09	Met
Molinate	ug/L	20	1	2				PHG	1	Met
Oxamyl (Vydate)	ug/L	50	26	20				½MCL	25	Met
PCB's	ug/L	0.5	0.09	0.5				PHG	0.09	Met
Pentachlorophenol (PCP)	ug/L	1	0.3	0.2				PHG	0.3	Met
Picloram	ug/L	500	166	1				PHG	166	Met
Simazine	ug/L	4	4	1				½MCL	2	Met
Thiobencarb	ug/L	70	42	1	1			½SMCL	0.5	Met
Toxaphene	ug/L	3	0.03	1				PHG	0.03	Met
1,2,3-Trichloropropane	ug/L	0.005	0.0007	0.005				PHG	0.0007	Met
Disinfection By-Products (DBPs)										
Bromate	ug/L	10	0.1	1				½MCL	5	Met
Chlorite	ug/L	1000	50	20				PHG	50	Met
Haloacetic Acids (HAA5)	ug/L	60						½MCL	30	Not Met
Total Trihalomethanes (TTHM)	ug/L	80						½MCL	40	Not Met
Radionuclides										
Alpha	pCi/L	15		3				½MCL	7.5	Met
Beta	pCi/L			4			50	Other [1]	25	Met
Radium 226 + 228	pCi/L	5						½MCL	2.5	Met
Strontium-90	pCi/L	8	0.35	2				PHG	0.35	Met
Tritium	pCi/L	20000	400	1000				PHG	400	Met
Uranium	pCi/L	20	0.43	1				PHG	0.43	Met
Microbiological										
%Total Coliforms Positive/Mo.	Organisms/100 ml	5%						Other [2]	0.5%	Met
TCR Tap Total Chlorine Residual	mg-Cl_2/L							Meets Partnership for Safe Water	≥ 0.5 mg-Cl_2/L in ≥95% of routine samples per month	Met
Reservoir Total Chlorine Resdiual	mg-Cl_2/L							Exceeds Partnership for Safe Water [3]	≥ 0.5 mg-Cl_2/L in ≥95% of reservoirs per month	Met
Treatment Techniques										
Individual Filter Effluent (IFE) Turbidity	NTU							Exceeds Partnership for Safe Water [4]	<0.10 NTU more than 99.5% of time per filter	Met
Combined Filter Effluent (CFE) Turbidity	NTU							Exceeds Partnership for Safe Water [4]	< 0.10 NTU more than 99.9% of the time.	Met
Distribution System Fluoride	mg/L							Other [5]	0.6-1.2	Met
CT Ratio							1	Other [6]	>1.0	Met
Lead 90th percentile	ug/L		0.2	5			15	½ AL[7]	7.5	Met
Copper 90th percentile	ug/L		300	50			1300	½ AL[8]	650	Met

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	Goal	Status*
Langelier Saturation Index (LSI)								Corrosion Control	-0.5 to 0.5 in 95% WTP effluent samples (annually)	Met
Acrylamide							0.05% monomer by wt. dose not to exceed 1 mg/L	Other [9]	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	ug/L		300	50	1000			PHG	300	Met
Foaming agents (MBAS)	ug/L				500			½SMCL	250	Met
Iron	ug/L				300		100	Other [10]	100	Met
Manganese	ug/L				50	500	15	Other [10]	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	Com-plaints/ month						30	Other [11]	30	Met
Emerging Contaminants										
Inorganic Chemicals										
Boron	ug/L			100		1000		½NL	500	Met
Chlorate	ug/L					800		½NL	400	Met
Organic Chemicals										
1,2,4-Trimethylbenzene	ug/L					330		½NL	165	Met
1,3,5-Trimethylbenzene	ug/L					330		½NL	165	Met
Cylindrospermopsin	ug/L						0.7	HA [12]	0.7	Met
Microcyctins	ug/L						0.3	HA [12]	0.3	Met
N-Nitrosodi-methylamine [NDMA]	ng/L		3			10		PHG	3	Not Met
N-Nitrosodiethylamine [NDEA]	ng/L					10		½NL	5	Met
Naphthalene	ug/L					17		½NL	8.5	Met

[1] ½ screening level
[2] 1/10th 5% MCL
[3] ≥ 0.5 mg-Cl2/L in ≥95% of routine monthly samples
[4] <0.10 NTU 95% of the time
[5] Optimal Fluoride Dose (0.7 mg/L) per 2015 US Public Health Service recommendation
[6] CT ratio of 1 is the minimum for compliance; goal is be greater than or equal to 1 at all times.
[7] ½ Action Level
[8] ½ Action Level; compliance based on in-home samples.
[9] USEPA Treatment Technique
[10] Based on operational experience
[11] Based on historical data
[12] USEPA Health Advisory Level

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: September 9, 2021

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Eileen M. White, Director of Wastewater EMW

SUBJECT: Main Wastewater Treatment Plant Seismic Retrofit Program Update

SUMMARY

Many structures at the Main Wastewater Treatment Plant (MWWTP) were constructed before modern seismic codes. Recent seismic evaluations and risk assessments have identified vulnerabilities and prioritized mitigation efforts. The District will begin to implement seismic retrofit projects for employee safety and to improve the performance of and reduce risks to structures and treatment operations. Staff will provide an update at the September 14, 2021 Planning Committee meeting.

DISCUSSION

The MWWTP includes over 80 buildings and process structures such as tanks, basins, channels, and underground facilities. The oldest facilities were built in the 1950s, with major expansions constructed in the 1960s and 1970s. Seismic evaluations and retrofits of wastewater facilities were completed in the late 1990s after the 1989 Loma Prieta earthquake. Since then, seismic codes and guidelines have significantly changed. As a result, the District completed additional seismic vulnerability assessments in 2018. These included a review of past evaluations, development of facility inventories, establishment of risk assessment criteria, and identification of high-risk facilities. The review resulted in recommendations for seismic mitigation projects. Building on these recommendations, the District completed the MWWTP Geotechnical Investigation for Seismic Hazard Mitigation Project in 2020 and the MWWTP Seismic Structural Evaluation and Conceptual Design Project in 2021.

Changed Codes and Guidelines

The current seismic codes and guidelines are now largely performance-based, providing better tools for setting and understanding seismic performance objectives. The performance-based standards for the MWWTP use two representative seismic events on the Hayward Fault, a 6.4 and a 7.3 magnitude event, to demonstrate how much damage a structure will experience during these events. The District defines acceptable levels of performance for each structure under those

two earthquake events and then performs structural evaluations to determine whether seismic vulnerabilities exist that need mitigations.

Geotechnical and Structural Evaluations

After completing the seismic evaluations in 2018, geotechnical information was needed to identify required retrofit improvements. In 2020, the District completed a geotechnical engineering assessment to determine the impacts from liquefaction to inform seismic improvement projects. This was followed by structural evaluations, in which a team of staff and consultants performed investigations, evaluations, and risk assessments to identify the structures that potentially pose the greatest risk to life safety and risk of impacting operations in the event of a major earthquake. In the 2018 evaluations, a risk score was calculated for each of the 80 facilities. Facilities with high risk scores are more likely to have vulnerabilities during seismic events, while low risk scores are more likely to have no vulnerabilities. Further engineering analysis determined if those facilities had seismic structural vulnerabilities, and the facilities with the highest risk scores were further evaluated to identify whether specific structural vulnerabilities existed. Seismic retrofit projects for the highest priority facilities were included in the District's Fiscal Year (FY) 2022-2031 Capital Improvement Program (CIP).

Nonstructural Element Performance

Nonstructural elements, including architectural, mechanical, electrical, plumbing, furniture, fixtures, and equipment, can also increase life safety risk and have a significant impact on functional recovery after an earthquake, but were not included in the previous seismic evaluations. Evaluations of nonstructural elements have begun, and mitigation of these hazards will be included in the scope of work of all upcoming facility-specific seismic retrofit projects.

MWWTP Administrative Facilities Seismic Retrofit Project

The MWWTP Administrative Facilities Seismic Retrofit Project will be the first project resulting from the recent seismic evaluation efforts. Factors that increase the risk for these facilities include high occupancy, critical service, age of the facility, and housing of emergency equipment. This project will include the design and construction of seismic retrofits to improve life safety and reduce operational impacts. Facilities to be retrofitted under this project include:

- MWWTP Administration and Lab Building
- Field Services Building
- Building 1084
- Site-wide Electrical Equipment Anchorage
- Other Miscellaneous Seismic Structural Improvements

NEXT STEPS

The Board will be asked to consider a consultant agreement for the MWWTP Administrative Facilities Seismic Retrofit Project at its meeting on September 28, 2021. Other identified high-risk facilities have been included in projects in the District's FY22-FY31 CIP.

CCC:EMW:sak

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: September 9, 2021

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: David A. Briggs, Director of Operations and Maintenance DB

SUBJECT: Regulatory Compliance Semi-Annual Report – January 2021 through June 2021

SUMMARY

This memorandum summarizes the key regulatory issues and compliance activities since the last Regulatory Compliance Semi-Annual Report on March 9, 2021. A presentation outlining the status of these issues and activities will be provided at the September 14, 2021 Planning Committee meeting.

DISCUSSION

A summary of the major regulatory issues during the reporting period follows. Specific details and activities are contained in the attached report.

Environmental Compliance

On June 14, 2021, the Alameda County Department of Environmental Health granted closure of the Anderson Building leaking underground storage tank located at the Adeline Maintenance Complex Administration parking lot.

On February 2, 2021, the West County Wastewater District issued a Compliance Schedule in response to a series of pH exceedances at the Richmond Advanced Recycled Expansion facility at the Chevron Refinery. The work outlined in the Compliance Schedule is required to be completed by October 31, 2021.

Three reportable digester gas releases occurred at the Main Wastewater Treatment Plant during this period. The first resulted in a Notice of Violation (NOV), the second will not result in an NOV, and the third resulted in a Notice to Comply. Corrective actions for each incident are completed or underway.

There were no National Pollutant Dishcharge Elimination System permit violations during this period at the wastewater treatment facility.

Workplace Health and Safety

The District's Strategic Plan includes a Key Performance Indicator (KPI) for Lost Time Injury Rate (LTIR) to be less than or equal to 3.0. The LTIR as of June 30, 2021 is 2.05.

Emergency Preparedness and Response

The Emergency Operations Team was activated in March 2020 during the start of the pandemic and has been in continuous activation since to guide the District's response.

CCC:DAB:sd

Attachment

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ATTACHMENT

REGULATORY COMPLIANCE SEMI-ANNUAL REPORT
January 2021 through June 2021

This report provides the status of the District's efforts to meet the objectives of and comply with environmental, health, and safety regulations in accordance with District Policies 7.05 – Sustainability and Resilience and 7.09 – Workplace Health and Safety.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND WATER DISCHARGE REQUIREMENTS PERMIT ISSUES

Upcountry Wastewater and Water Treatment Plants: Three of the four upcountry wastewater treatment plants are now regulated under the State Water Resources Control Board General Order. These include Pardee Recreation Area, Pardee Center, and Camanche North Shore. Camanche South Shore continues to operate under an individual permit, and the District will soon be required to apply for coverage under the General Order for this treatment plant.

Pardee Recreation Area Water Treatment Plant is located at the top of steep terrain about 720 feet upstream from Pardee Reservoir. The facility's backwash water discharge is currently regulated under an expired NPDES Permit. In 2017, the Central Valley Regional Water Quality Control Board (CVRWQCB) rejected the District's NPDES permit application, stating that the discharge is being applied to land because there is not a direct discharge pipe to the Reservoir and in dry weather, the discharge is mostly absorbed into the hillside. After consulting with the District, the CVRWQCB is now reconsidering the issuance of an NPDES permit. Staff is awaiting the CVRWQCB's final determination.

AIR PERMIT COMPLIANCE

Main Wastewater Treatment Plant Digester Gas Releases: Three releases of digester gas occurred during this reporting period.

1) On April 24, 2021, the newly installed membrane cover on Digester 3 failed, causing the release of approximately 283,000 cubic feet of digester gas and extensive damage to the dual membrane covers and the top of the digester wall. The digester has been out of service since that time. A breakdown relief request was filed with Bay Area Air Quality Management District (BAAQMD) on April 24. The cause of the incident appears to be related to the design and installation of the cover anchorage points in the concrete wall of the digester. BAAQMD has granted breakdown relief for this release and no violation will be issued. A deficiency notice relating to the design and installation of the dual membrane covers on Digesters 3 and 4 was issued to the contractor. The contractor responded with a plan for the re-design of the dual membrane covers on Digesters 3 and 4.

2) On May 18, 2021, a release of approximately 91,000 cubic feet of digester gas occurred from Digester 6 when a sample port lid opened as the digester was pressurized with digester gas after being out of service. Even though staff observed the sample port lid was closed prior to returning the digester to service, the lid opened when pressurized. This is likely because the wingnut to secure the latch on the lid was

either not closed tightly or was hung up on a rusty bolt preventing it from securing the lid. Several changes have been made to Standard Operating Procedures to clean and grease the latch assemblies prior to returning a digester to service. Over the next few years, the intention is to replace these sample port lids with plates that are secured in place with bolts to prevent unintentional lid opening. BAAQMD issued a Notice of Violation (NOV) for this release. No penalty or settlement offer has been issued at this time.

3) On June 15, 2021, a small digester gas leak from a cracked plexiglass cover on a viewport on Digester 8 was discovered and reported to BAAQMD. Approximately 4,300 cubic feet of digester gas was released over the next three days while appropriate repair parts were ordered to stop the leak. The District has been in communication with BAAQMD about the cause of this incident, which is the plexiglass over the viewport cracked due to age. A custom rubber gasket was secured in place over the cracked plexiglass to stop the leak on Digester 8. In the future, metal plates will replace the plexiglass on the viewports; however, this replacement must be done when digesters are out of service or after extensive planning to perform the work when the digester is in service. BAAQMD issued a Notice to Comply for this release. A Notice to Comply is a lesser citation than an NOV and no penalty or settlement offer will result from this action.

OTHER ENVIRONMENTAL ISSUES

Anderson Building Leaking Storage Tank: The Alameda County Department of Environmental Health opened a Leaking Underground Storage Tank cleanup site case for the Anderson Building in 1988 after a 500-gallon underground fuel tank was removed from the site. Subsequent soil sampling indicated that a release of hydrocarbons occurred prior to the tank removal. The District cooperated with all information requests from the County including soil and groundwater sampling in 2018, and a Sensitive Receptor Survey following the sampling. The sampling results showed minor amounts of hydrocarbons still existed in the soil and groundwater at the site. The County reviewed the site under the SWRCB's Low-Threat Underground Storage Tank Closure Policy and granted closure of the site on June 14, 2021. No further action is required for this issue.

Richmond Advance Recycled Expansion (RARE) pH Violations: A series of pH exceedances and violations occurred at RARE in the sanitary sewer discharge to the West County Wastewater District (WCWD) in 2020. To address this series of violations, WCWD issued a Compliance Schedule to the District on February 2, 2021, outlining work the District agreed to complete to address the pH issues. The District is installing a mixing system within the existing waste equalization tank and additional pH monitoring probes in new locations to provide better neutralization control for the various waste streams entering the tank. The system is scheduled to be operational in fall 2021 and work progresses as outlined in the Compliance Schedule. WCWD will not issue NOVs to the District if there are any pH exceedances during the compliance schedule period.

Integrated Pest Management Program (IPM): The District established an IPM program in the 1990s to develop a consistent approach toward pest management throughout the District. The IPM program provides written guidance for determining the most appropriate pest control methods for a particular application, including, but not limited to, the use of chemicals. In 2019 and 2020, the District hosted multiple meetings to solicit input from stakeholders on proposed changes to the guidelines which had not been updated since 2010. The final draft of the IPM guidelines was presented to the Sustainability/Energy Committee on April 27, 2021 and posted on the District's webpage for external stakeholder access.

WORKPLACE HEALTH AND SAFETY

Lost Time Injury Rate: The Workforce Planning and Development goal in the District's Strategic Plan includes a Key Performance Indicator (KPI) for Lost Time Injury Rate (LTIR) of less than or equal to 3.0. The District's rolling 12-month LTIR as of June 30, 2021 is 2.05. The LTIR measures the number of work-related injuries or illnesses resulting in days away from work per 100 employees. During this reporting period, the OSHA 300 Log of Injuries and Illnesses reported '0' lost time cases presumed to be coronavirus related. Overall, the District's safety measures have significantly limited work-related contraction of the virus.

The number of lost time hours due to injury or illness has fallen by approximately 50 percent over the last ten years from 35,282 hours in 2010 to 18,090 hours in 2020. This is a reduction of 17,192 hours, the equivalent of approximately 10 full-time employees. The District continues to focus on preventing injuries by utilizing leading indicators such as prevention through design strategies, supervisor presence in the field, the number of local safety committee meetings held, safety training hours completed, injury investigation reports completed and presenting lost time injury investigation results at management and staff meetings.

COVID-19 Pandemic: Cal OSHA issued a COVID-19 Prevention - Emergency Temporary Standard on November 11, 2020. The Occupational Safety Health and Standards Board approved a revision to the Standard on June 17, 2021. The Regulatory Compliance Office has worked to ensure the District remains in compliance with the regulation. An Outbreak occurred at the Central Area Service Center in January requiring the District to offer testing to everybody in that location. Cal OSHA defines an Outbreak of three cases at the same location in 14 days. During this reporting period 30 employees contracted COVID-19 with a total of 87 as of June 30, 2021.

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EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: September 9, 2021

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Michael T. Tognolini, Director of Water and Natural Resources MTT

SUBJECT: Camanche – Riverview Fire Protection

SUMMARY

The District operates Camanche Reservoir under a Federal Energy Regulatory Commission (FERC) license, with four developed recreation areas on the Mokelumne watershed including the Camanche South Shore Recreation Area. The District also operates three mobile home parks located inside the Camanche Recreation Areas that are not within the FERC license boundary. This memo summarizes fire fuel reduction work and fire prevention in the Camanche South Shore Recreation Area, with a focus on the Riverview Campground and the adjacent mobile home park. This item will be presented at the September 14, 2021 Planning Committee meeting.

DISCUSSION

Fire fuel reduction and mitigation occur annually on District watershed land and recreation areas. The majority of this work focuses on annual grass growth and occurs in late spring and early summer when growth has peaked and grasses begin to dry out. The most common methods used to remove annual grasses in the Riverview campground and around the mobile home park are mowing, weedeaters, and goat grazing. These methods typically reduce grasses to 1” to 3” in height, significantly decreasing the potential for fires to spread. In addition to removing annual grass fuels, the District maintains a network of fire roads throughout the watershed. There are three fire roads situated between Riverview campground and the mobile home park that allow access to fire suppression equipment and serve as fuel breaks, limiting the spread of fire.

Fire mitigation for larger fuels takes place on the watershed on a 5 to 10 year cycle. Crews focus on the removal or pruning of brush and trees typically using chainsaws, pole saws, pruners, and chippers. In 2015, the District contracted a California Conservation Corps crew to fell dead trees and prune live trees to remove ladder fuels over a 10-acre area between the Riverview campground and the mobile home park.

The District takes considerable measures to ensure the public can enjoy recreational activities like campfires and barbecues without posing a significant fire risk. Concession maintenance staff completely clear all campfire rings and barbecues in the recreation areas to the bare ground over

a five-foot radius and remove hot ashes after use. Hot ash and coal receptacles are located throughout the recreation area for public use. During elevated fire danger conditions such as Red Flag Warning events, the District prohibits the use of barbecues and fire pits.

The District's Watershed Rules and Regulations also limit fires to designated sites in the recreation areas, prohibit fires with flames greater than four feet, and prohibit the burning of plastics and other non-approved materials. District Rangers and contracted law enforcement officers patrol the recreation areas regularly to ensure visitors comply with these rules and regulations and remain fire safe.

Mobile homes are subject to the defensible space requirements described in California's Public Resources Code 4291, and mobile home park residents are primarily responsible for mitigating fire fuels within their leased lot. The homes are regularly inspected for defensible space compliance by the concessionaire's mobile home park manager. The District maintains trees in the mobile home parks and prunes or removes trees on residents' lots as needed.

NEXT STEPS

The District will continue to perform regular fire fuel mitigation in developed recreation areas and on its managed watersheds. The fire fuel mitigation program, fire prevention efforts, and recreation trends will be evaluated continually and management adapted as needed. The District will operate developed recreation areas and mobile home parks with an emphasis on public safety and the protection of property and natural resources.

CCC:MTT:dec