



**BOARD OF DIRECTORS  
EAST BAY MUNICIPAL UTILITY DISTRICT**

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375 - 11th Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

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***Notice of Time and Location Change***

**PLANNING COMMITTEE MEETING**

**Tuesday, April 14, 2020**

**8:45 a.m.**

***\*\*Teleconference\*\****

Notice is hereby given that the Tuesday, April 14, 2020 Planning Committee Meeting of the Board of Directors has been rescheduled from 9:15 a.m. to 8:45 a.m.

Due to COVID-19 and in accordance with Alameda County Health Order 20-04 (issued March 31, 2020), and with the Governor's Executive Order N-29-20 which suspends portions of the Brown Act, this meeting will be conducted **via teleconference only**. In compliance with said orders, a physical location will not be provided for this meeting. These measures will only apply during the period in which state or local public health officials have imposed or recommended social distancing.

Dated: April 9, 2020

A handwritten signature in blue ink that reads 'Rischa S. Cole'.

Rischa S. Cole  
Secretary of the District

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**BOARD OF DIRECTORS  
EAST BAY MUNICIPAL UTILITY DISTRICT**

375 – 11<sup>th</sup> Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

**AGENDA  
Planning Committee  
Tuesday, April 14, 2020  
8:45 a.m.**

**Location**

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*Committee Members Doug Linney {Chair}, Lesa R. McIntosh and  
Frank Mellon will participate via teleconference*

**Public Participation**

**To participate via telephone: Dial 855-369-0450;  
Enter participant pin 49-281-364 # when prompted**

**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. *If you participate via telephone and wish to speak on agenda OR non-agenda items you will be asked to:*

- State your name, affiliation if applicable, and topic
- The Secretary will compile a list of those who wish to make public comment and will call each speaker in the order received
- The Secretary will keep track of time and inform each speaker when his/her allotted time has concluded
- Each speaker will be allotted 3 minutes to speak; the Committee Chair has the discretion to amend this time based on the number of speakers

**DETERMINATION AND DISCUSSION:**

1. 2019 Mokelumne Fall-run Chinook Salmon and Steelhead Returns (Tognolini)
2. Water Quality Program Annual Update – 2019 (Briggs)
3. Regulatory Compliance Semi-Annual Report –September 2019 through March 2020 (Chan)

**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](http://www.ebmud.com).*

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: April 9, 2020

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

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

SUBJECT: 2019 Mokelumne Fall-run Chinook Salmon and Steelhead Returns

### INTRODUCTION

The 2019 fall-run Chinook salmon return to the Mokelumne River was an estimated 12,870 fish, including 4,376 fish that spawned in the river and 8,503 collected at the hatchery for egg production. The return was over 2,000 fish above the post-Joint Settlement Agreement average of 10,054, and is about 236 percent of the long-term average (1940 – 2019) of 5,452. In eight of the last nine years, the salmon return has exceeded 12,000 fish. One indicator the District uses to assess the health of the Mokelumne fishery is the running nine-year average return, which represents three complete three-year salmon life cycles. With the addition of the 2019 returns, the nine-year average annual return is 14,155 fish—259 percent of the long-term average. Additionally, the steelhead trout return to the hatchery continues to flourish and exceeded 500 adult fish. This memo provides a review of the 2019 return and the key factors affecting salmon and steelhead returns to the Mokelumne River. This item was held over from the March 10, 2020 Planning Committee meeting and is now scheduled for presentation on April 14, 2020.

### DISCUSSION

In 2019, the Mokelumne River Chinook salmon return continued to demonstrate the success of a suite of management actions implemented over the last decade. These actions include: moving the release location of the hatchery fish to Jersey Point, which is further upstream than previous Bay releases, to balance increased survival and reduced straying; conducting fall pulse flows to attract adults; using net pens as a fish release strategy to increase survival of hatchery produced juveniles; and habitat enhancements to increase survival of naturally produced juveniles. While other Central Valley salmon populations show lingering effects of the most recent drought, the Mokelumne River population continued to thrive. Figure 1 (Attachment) shows salmon returns to the Mokelumne River since recordkeeping began in 1940. The Sacramento Basin (Upper Sacramento, Yuba, Feather, and American Rivers) continues to show a slightly improving trend post-drought with over approximately 192,000 fall-run salmon, up from the 2018 return of approximately 147,000. Sacramento Basin numbers remain below the long-term averages and return target.

While the returns to the Mokelumne remain strong, they may have been better if Delta Cross Channel gates had been closed more often, which reduces straying to other Central Valley streams. The gates were only closed for one two-day period near the end of October, and preliminary data indicate that a significant portion of the American River salmon return was comprised of Mokelumne River salmon.

The successful strategy of releasing pulse flows to increase salmon returns to the river continued. EBMUD conducted five pulses beginning in late September and coordinated with Woodbridge Irrigation District on three additional pulses in November—all with positive results. The pulses continued through November and increased daily passage of salmon past Woodbridge Dam. Staff worked with operators on the Stanislaus River to coordinate timing of pulses to maximize effectiveness for each of the systems, which included an earlier pulse from the Mokelumne system. Warmer than normal summer temperatures resulted in challenges to cold water pool management, which were alleviated through coordinated reservoir operations and additional cold water releases from Pardee to support Camanche.

The Mokelumne salmon population continues to make up a significant portion of the commercial and recreational catch off the coast of California. Numbers released by California Department of Fish and Wildlife show that Mokelumne hatchery origin salmon made up approximately 18 percent of the commercial and 19 percent of the recreational catch respectively. While these numbers reflect declines from last year's record contribution of 43 percent of commercial and 33 percent of recreational catch, the decreases can be attributed to higher contribution rates from other systems. The total number of Mokelumne salmon caught remained about the same. The change in percentage is indicative of other systems finally recovering from some of the depressed numbers during the drought. Considering the size of the watershed, average annual runoff, and modest (< 3 percent) Delta outflow contribution, the Mokelumne's contribution to the salmon industry and dependent businesses remains significant.

Steelhead trout returns for the Mokelumne River (primarily measured at the hatchery) have never been substantial since recordkeeping began in 1963. The District and various resource agency partners who comprise the Mokelumne River Hatchery Coordination Team have, over the course of the last 10-15 years, implemented numerous measures to improve returns such as changing release locations, eliminating egg imports, and improving rearing techniques. In 2019, over 500 adult steelhead—about twice the total from 2018—entered the hatchery, yielding an egg take of approximately 700,000. The production goal for the hatchery is 250,000 yearling steelhead smolts and this level of return has allowed the hatchery to meet this goal in recent years.

## **NEXT STEPS**

Weather and Delta conditions continue to challenge juvenile salmon migrating from the Mokelumne River, and overcoming these effects will be at the forefront of fisheries management activities going forward. Staff, working with resource agencies, will continue to implement measures to improve the survival of juvenile salmon as they migrate through the central Delta. These strategies include evaluating the results of barging juvenile salmon and spring pulse flows.

District biologists will continue to engage with resource agency staff, advocacy groups and others in key forums, such as the Central Valley Project Improvement Act Science Integration Team, Hatchery Scientific Review Group Statewide Policy Team, and Central Valley Hatchery Coordination Team, to help build on the successes of the last eight years. The District is actively involved in the Bay Delta Water Quality Control Plan Phase 2 process and will continue to work to ensure any outcome protects the Mokelumne fishery and supports sustainable operation of the hatchery and recovery of salmonids in the Central Valley.

ARC:MTT:MW

Attachment

I:\SEC\2020 Board Related Items\Committees 2020\041420 Planning Cttee\WNR -- 2019 Moke Fall Run Chinook Salmon Rtrns



**Figure 1 – Annual Chinook Salmon Escapement Totals to the Lower Mokelumne River Since 1940 with Drought Periods Delineated by Shaded Bars.**

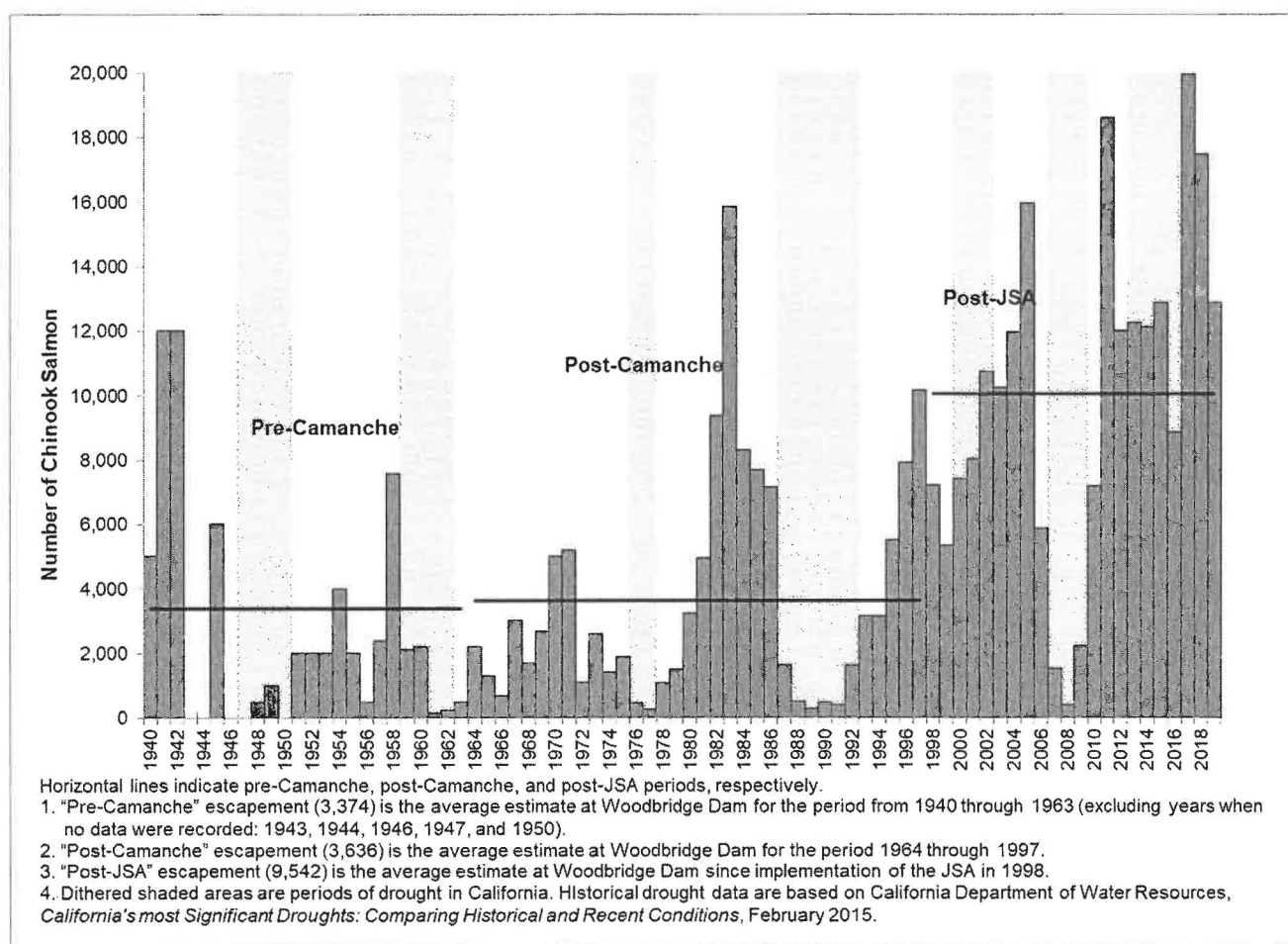


Figure 1 – Annual Chinook salmon escapement totals to the lower Mokelumne River since 1940 with drought periods delineated by shaded bars.



## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: April 9, 2020

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: David A. Briggs, Manager of Water Operations *YB*

SUBJECT: Water Quality Program Annual Update – 2019

### INTRODUCTION

This memo provides an update on the District's water quality initiatives to ensure delivery of high-quality water to customers. Water quality data for calendar year 2019 is included in this report, the same data publicly available to customers through the Consumer Confidence Report. A presentation on the Water Quality Program will be made at the April 14, 2020 Planning Committee meeting.

### SUMMARY

From January 1, 2019 through December 31, 2019, the District met all federal and state drinking water standards and 96 percent of the District's internal goals (119 of 124 goals were met). As in previous updates, levels of three groups of disinfection byproducts (DBPs) were higher than District goals but continue to be stable. The District continues to minimize potential lead exposure to customers under a variety of efforts. Although not required, the District sampled raw water from Pardee Reservoir in February 2020 for perfluoroalkyl and polyfluoroalkyl substances (PFAS). Resulting concentrations were below levels of concern.

### DISCUSSION

#### District Water Quality Goals

The District's internal water quality goals are substantially more stringent than federal or state water quality standards. This ensures regulatory compliance and maximizes the quality of the District's treated water. The goals are adjusted when appropriate, depending on the latest technical information and regulatory changes. In 2019, the District exceeded three internal water quality goals related to DBPs. Total trihalomethanes (TTHMs) and five haloacetic acids (HAA5) are regulated DBPs that form when chlorine reacts with natural organic matter in water. In 2019, the District's goal was exceeded in 47 out of 64 individual TTHM samples and 32 out of 64 HAA5 samples. The District's goals of 40 parts per billion (ppb) for TTHMs and 30 ppb for HAA5 are half of regulatory standards. Concentrations of these DBPs were stable throughout

2019, but unlikely to decline until the District completes additional capital improvements at its water treatment facilities.

N-nitroso-dimethylamine (NDMA) is a nitrosamine that forms when chloramine reacts with organic precursor materials in water. In 2019, the District's water quality goal was exceeded in two of 15 NDMA samples. The District's goal is set at the Public Health Goal (PHG) because there is no regulatory standard for NDMA. The regulatory future of NDMA is uncertain. The U.S. Environmental Protection Agency (USEPA) does not plan to regulate nitrosamines in drinking water based on the latest research and unclear impact on human health. However, the state of California does plan to regulate this compound.

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 storage reservoirs. The District's goal is to maintain at least 0.5 mg/L of chlorine residual in 95 percent of samples. In 2019, the chlorine residual goal was met for samples from water mains but not from distribution reservoirs. Reservoirs with long residence time can be particularly challenging<sup>1</sup>. In 4 of 12 months, the percentage was less than 95 percent, ranging from 89 percent to 93 percent in reservoirs. A range of operational actions were taken to restore chlorine residuals whenever low values were measured. Several future capital projects will help lower water age and improve distribution system water quality.

The District's goal for total coliform bacteria in the distribution system was not met. The goal is no more than 0.5 percent positive samples for coliform bacteria each month (the regulatory standard is 5 percent). In one month, 0.6 percent of the samples were positive. Repeat samples were collected whenever a positive coliform sample was found and all were negative.

### Novel Coronavirus

The World Health Organization, Centers for Disease Control and Prevention, and California State Water Board have each issued public guidance for continued use of drinking water from permitted water systems. The guidance reiterates that common water treatment practices are effective against the novel coronavirus. Due to its similarity to other well-studied pathogens, standard filtration and disinfection are recommended with no additional treatment needed. Further, the virus has not been detected in drinking water supplies. This is especially important given the critical need for clean water for sanitation purposes.

### Lead

The District continues its efforts to minimize customer exposure to lead in drinking water. Based on data from the customer sampling voucher program, school sampling, and periodic studies, the

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<sup>1</sup> Reservoirs were operated at higher than normal levels in Fall 2019 while the District managed numerous power losses associated with public safety power shutoff events initiated by PG&E. Higher reservoir levels increase residence time.

District's corrosion control program is effective in systemically minimizing the release of lead from any remaining leaded components.

- More than 1,300 customers requested vouchers for residential lead testing. Lead concentration from these customer samples has been very low (less than 1 ppb for 90 percent of the samples).
- Mandated lead sampling in school drinking water was completed in 2019. Overall results from the multi-year program were less than 5 ppb in 95 percent of the samples and less than 1 ppb in 77 percent of the samples. District staff followed up on high results and worked with each school to mitigate any problems with repeat sampling as needed.
- District staff provided input to the state agencies implementing AB 2370, which requires lead sampling in water supplies at day care facilities. Water agencies have no formal obligations under AB 2370; however, District staff provided assistance to the state in the development of the program.
- Previously unidentified lead plumbing components (e.g., "goosenecks") are occasionally discovered during the course of regular work. These are immediately replaced with copper. District staff works with customers during construction to reduce any potential exposure to lead.
- EPA published draft revisions to the Lead and Copper Rule in 2019 which will substantially alter the regulatory requirements. The District provided detailed comments to the USEPA along with other water utilities and associations. A central concern is ensuring existing state regulations will satisfy the pending federal regulations.

### Regulatory Updates

The State Water Board and USEPA have initiated regulation of PFAS. In California, Notification Levels and Response Levels for two PFAS, Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS), have been issued. Notification Levels in California for PFOA and PFOS are 5.1 parts per trillion (ppt) and 6.5 ppt, respectively; Response Levels are 10 ppt and 40 ppt. California is working on Notification Levels for seven additional PFAS. USEPA issued a Regulatory Determination stating its intent to develop enforceable limits for PFOS and PFOA; its timeline is unknown.

California continues a phased monitoring program requiring water suppliers to monitor PFAS in accordance with their risk (e.g., groundwater wells located near airport runways). The District has not been required to monitor under this program due to the relatively protected nature of its watersheds. However, the District began a proactive monitoring program for PFAS in 2020 and collected quarterly samples from the influent and effluent of each in-service water treatment plant<sup>2</sup>. The District analyzed for 18 different PFAS compounds. Results from the first quarter's sampling effort were below the laboratory's Reporting Limits for each compound.

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<sup>2</sup> Plant influent samples effectively test raw water. In the first quarter, source water originated from Pardee Reservoir.

As part of the USEPA's Regulatory Determination in 2019, the USEPA elected not to regulate 1,1-dichloroethane. In contrast, this compound is regulated in drinking water in California. This brings to 15 the number of compounds regulated by the state but not at the federal level.

The State Water Board continues to develop regulations for microplastics in drinking water as required by SB 1422. A formal definition of microplastics was proposed in March 2020, and studies continue to develop analytical methods. Monitoring requirements for drinking water utilities will be developed after methods are standardized.

### Legionella Bacteria

In the United States, the rate of reported cases of Legionnaires' disease has grown by nearly nine times since 2000. This increase may be due to increased testing, more *Legionella* in the environment, or a combination of factors. The bacteria causing Legionnaires' disease is not typically present in disinfected water but can become elevated in certain situations. In the absence of a disinfectant, and particularly in warm water, concentrations of *Legionella* can become very high. Therefore, outbreaks typically occur in cooling towers, hot tubs, decorative fountains, and other recirculating systems. After *Legionella* grows and multiplies in a building's water system, people can acquire Legionnaires' disease by inhaling small droplets of water in the air. The disease is not transmitted person-to-person. Outbreaks are preventable through regular maintenance and testing of the building's water system. The District implemented a building water management plan for the main Administration Building and has surveyed other District facilities to determine the need for additional plans.

ARC:DAB:sd

Attachment



## EBMUD Semi-Annual Water Quality Report - January 1 through December 31, 2019

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	District Goal	Status*
<b>USEPA/State Water Quality Regulations</b>										
<b>Primary (Health Standards)</b>										
<b>Inorganic Chemicals</b>										
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	4				PHG	1	Met
Selenium	ug/L	50	30	5				½MCL	25	Met
Thallium	ug/L	2	0.1	1				PHG	0.1	Met
<b>Organic Chemicals</b>										
<b>Volatile Organic Compounds (VOCs)</b>										
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

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 Semi-Annual Water Quality Report - January 1 through June 30, 2019

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	District Goal	Status*
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
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	5	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-Dichloroethylene (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
<b>Synthetic Organic Compounds (SOCs)</b>										
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

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 Semi-Annual Water Quality Report - January 1 through June 30, 2019

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	District Goal	Status*
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
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
<b>Disinfection By-Products (DBPs)</b>										
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	50%

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

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## EBMUD Semi-Annual Water Quality Report - January 1 through June 30, 2019

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	District Goal	Status*
Total Trihalomethanes (TTHM)	ug/L	80						½MCL	40	78%
<b>Radionuclides</b>										
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
<b>Microbiological</b>										
%Total Coliforms Positive/Mo.	Organisms/100 ml	5%						Other [2]	0.5%	8%
TCR Tap Total Chlorine Residual	mg-Cl <sub>2</sub> /L							Meets Partnership for Safe Water	≥ 0.5 mg-Cl <sub>2</sub> /L in ≥95% of routine samples per month	Met
Reservoir Total Chlorine Residual	mg-Cl <sub>2</sub> /L							Exceeds Partnership for Safe Water [3]	≥ 0.5 mg-Cl <sub>2</sub> /L in ≥95% of reservoirs per month	33%
<b>Treatment Techniques</b>										
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 90 <sup>th</sup> percentile	ug/L		0.2	5			15	½ AL[7]	7.5	Met
Copper 90 <sup>th</sup> percentile	ug/L		300	50			1300	½ AL[8]	650	Met
Langelier Saturation Index (LSI)								Corrosion Control	-0.5 to 0.5 in 95% WTP effluent samples (annually)	Met

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 Semi-Annual Water Quality Report - January 1 through June 30, 2019

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	District Goal	Status*
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
<b>Secondary (Aesthetic) Standards</b>										
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
<b>Customer Expectations</b>										
District-caused complaints	Complaints/month						30	Other [11]	30	Met
<b>Emerging Contaminants</b>										
<b>Inorganic Chemicals</b>										
Boron	ug/L			100		1000		½NL	500	Met
Chlorate	ug/L					800		½NL	400	Met
<b>Organic Chemicals</b>										
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 [13]	0.7	Met
Microcystins	ug/L						0.3	HA [13]	0.3	Met
N-Nitrosodi-methylamine [NDMA]	ng/L		3			10		PHG	3	13%

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 Semi-Annual Water Quality Report - January 1 through June 30, 2019

Parameter	Units	MCL	PHG	DLR	SMCL	NL	other	Basis	Goal	Status*
N-Nitrosodiethylamine [NDEA]	ng/L					10		½NL	5	Met
Naphthalene	ug/L					17		½NL	8.5	Met

## Footnotes:

[1] ½ screening level

[2] 1/10th 5% MCL

[3]  $\geq 0.5$  mg-Cl<sub>2</sub>/L in  $\geq 95\%$  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

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.

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: April 9, 2020

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager *ARC*

FROM: Clifford C. Chan, Director of Operations and Maintenance *CCC*

SUBJECT: Regulatory Compliance Semi-Annual Report – September 2019 through March 2020

### INTRODUCTION

This memorandum summarizes the key regulatory issues and compliance activities since the last Regulatory Compliance Semi-Annual Report on September 5, 2019. A presentation updating the status of these issues and activities will be provided at the April 14, 2020 Planning Committee meeting.

### DISCUSSION

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

#### Environmental Compliance

In January and February 2020, the Richmond Advanced Recycled Expansion Facility received Notices of Violation (NOVs) for a series of six short-term pH exceedances between December 24, 2019 and January 18, 2020 in the discharge of wastewater to West County Wastewater District (WCWD). The District has optimized the operation of the system and is working with WCWD on regulatory and/or enforcement options to prevent future NOVs. The pH exceedances were minor and caused no harm to the WCWD collection system or plant.

On March 4, 2020, the Bay Area Air Quality Management District (BAAQMD) issued an NOV requiring the District to replace several fuel hoses at the Adeline Maintenance Center Fueling Facility with low permeability hoses. The hoses were replaced and the NOV was signed off by the BAAQMD during a follow-up inspection.

### 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 February 2020 is 1.44, significantly lower than the KPI of 3.0.

### Emergency Preparedness and Response

The America's Water Infrastructure Act requires community water systems serving more than 3,300 people to develop or update risk assessments and Emergency Response Plans (ERPs). Community water systems must certify to the U.S. Environmental Protection Agency (USEPA) completion of the risk assessment and ERP updates. The deadline to review and revise the risk assessment was March 31, 2020 and the deadline to incorporate findings into the ERP is September 30, 2020. The District submitted its risk assessment to the USEPA on March 27, 2020. The documents will require re-certification every five years.

ARC:CCC:sd

Attachment

**REGULATORY COMPLIANCE SEMI-ANNUAL REPORT**  
**September 2019 through March 2020**

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.

**NPDES AND WATER DISCHARGE REQUIREMENTS PERMIT ISSUES**

Main Wastewater Treatment Plant (MWWTP): On February 21, 2020, the District received the Administrative Draft of the updated NPDES permit for the MWWTP. Staff is meeting with the San Francisco Regional Water Quality Control Board (SFRWQCB) on permit negotiations. The proposed permit contains lower effluent limits for ammonia which could impact the ability of the MWWTP to comply during the summer months when ammonia levels tend to be higher. The District is planning to complete an updated dilution study that is expected to result in higher dilution than the current model. The updated dilution values, when applied to the effluent limit calculations, should result in higher ammonia effluent limits than currently proposed in the next permit.

Upcountry Wastewater Treatment Plants: On November 21, 2019, the Report of Waste Discharge for Camanche North Shore was submitted to the Central Valley Regional Water Quality Control Board (CVRWQCB). Staff is working with the CVRWQCB to negotiate the terms under the State Water Resources Control Board General Order. Camanche South Shore continues to operate under an individual permit, and the District will likely be required to apply for coverage under the General Order in the near future.

Enhanced Compliance Action (ECA) Quarterly Reports:

Leak Detection ECA – The District agreed to complete an ECA as part of the final settlement agreement related to three water main breaks in late 2015 and early 2016. The ECA involves installation of 970 leak detection loggers at locations where pipes cross or are adjacent to creeks. To date, 123 leaks have been addressed that may not have been detected. The ECA requires the District to submit quarterly reports on implementation progress. The most recent quarterly report was submitted on March 25, 2020.

Chlorine Analyzer ECA – On May 24, 2019, the SFRWQCB issued a Settlement Agreement and Stipulation Order to the District for an exceedance of the limit for residual chlorine in the filter backwash discharge at the Orinda Water Treatment Plant. The non-compliant discharge occurred on September 6, 2017. The SFRWQCB agreed to suspend a portion of the administrative liability pending completion of an ECA. The ECA stipulates the purchase of chlorine analyzers to be deployed at distribution reservoirs, allowing improved response to low chlorine residual in the distribution system. The ECA deliverable includes quarterly status report updates on the purchase, installation and performance of the chlorine analyzers. The most recent quarterly report was submitted on March 30, 2020.

## AIR PERMIT COMPLIANCE

AMC Fuel Facility Violation: On February 25, 2020, the Bay Area Air Quality Management District (BAAQMD) conducted an unannounced inspection at the Adeline Maintenance Center Fuel Facility and noted several unleaded gasoline dispensing hoses were out of compliance. The BAAQMD issued a NOV requiring the District to replace the hoses with low permeability hoses within 7 days. The hoses were replaced and the NOV was signed off by the BAAQMD during a follow-up inspection on March 4, 2020. The District was required to send a letter to the BAAQMD describing the actions taken to comply with the NOV. The District may still be issued a financial penalty for the NOV by the BAAQMD.

## OTHER ENVIRONMENTAL ISSUES

Richmond Advance Recycled Expansion (RARE) Facility pH Violations: RARE received NOVs in January and February 2020 for a series of six minor pH permit exceedances between December 24, 2019 and January 18, 2020 in the wastewater discharged to West County Wastewater District (WCWD). The violations were caused by an unusual combination of low pH wastes mixing into the waste equalization tank prior to discharge to the WCWD. The violations were between 1 to 17 minutes in duration and caused no harm to the WCWD collection system or plant. Past corrective actions include the installation of a pH neutralization system, and negotiating an exception for short-term excursions in the wastewater discharge permit allowing for discharges of pH between 5 to 6. In spite of these actions, certain combinations of wastewater entering the waste equalization tank for discharge to WCWD can cause pH exceedances. The District is operating the system properly and is working with WCWD on regulatory and/or enforcement options for relief from violations should a short pH excursion causing no harm to the WCWD occur. No fines or penalties are expected from this issue.

Integrated Pest Management (IPM) Program: In February 2020, staff who implement IPM as part of their regular duties participated in an annual full-day training to review alternative methods, safety practices and review performance data from 2019. In 2020, the IPM program will focus on continued data collection of IPM methods used in the field, implementation of the newly developed process to evaluate new chemical products, and updating the IPM program guidelines to reflect all the new processes put in place in the last year.

Anderson Building former Underground Storage Tank (UST) investigation: In 2018, sampling was performed around the area of an old UST that was removed in 1987 from the Anderson Building located at the AMC. The Alameda County Department of Environmental Health (ACDEH) requested the District collect soil and groundwater samples at the site in order to evaluate current conditions. The District completed additional sampling, and based on the results, ACDEH requested the District perform a final drinking water well survey for the site. The survey was completed and submitted to the ACDEH on January 6, 2020. Staff is awaiting the regulatory review and closure of the site.



## WORKPLACE HEALTH AND SAFETY

Lost Time Injury Rate: The Strategic Plan Workforce Planning and Development goal 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 February 2020 is 1.44, significantly below the KPI of 3.0. The LTIR measures the number of work-related injuries or illnesses resulting in days away from work per 100 employees.

The number of lost time hours due to injury or illness has fallen by approximately 51 percent over the last nine years -- from 35,282 hours in 2010 to 17,332 in 2019. This is a reduction of 17,950 hours, the equivalent of approximately 10 full-time employees. The District continues to focus on preventing injuries by utilizing leading indicators such as supervisor presence in the field, 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.

Cal-OSHA Inspection at the Wastewater Treatment Plant on February 24, 2020: On February 12, 2020, a contract truck driver injured his hand at the Wastewater Treatment Plant. The injured driver was transported by ambulance to Alta Bates Summit Hospital in Oakland. On February 24, 2020, a Cal-OSHA Inspector arrived unannounced at the Wastewater Treatment Plant to investigate the incident. No citations were issued to the District.

## EMERGENCY PREPAREDNESS AND RESPONSE

America's Water Infrastructure Act (AWIA): The AWIA requires community water systems serving more than 3,300 people to develop or update risk assessments and Emergency Response Plans (ERPs). The law specifies the components of the risk assessments and ERPs must address and establishes deadlines by which water systems must certify to the U.S. Environmental Protection Agency (USEPA) completion of the risk assessment and ERP updates. The deadline to review and revise the risk assessment was March 31, 2020 and the deadline to incorporate findings into the ERP is September 30, 2020. The District submitted its risk assessment to the USEPA on March 27, 2020. The documents will require re-certification every five years.