



**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 Change**

**PLANNING COMMITTEE**

**Tuesday, April 9, 2024**

**9:00 a.m.**

**Boardroom**

**375 11<sup>th</sup> Street**

**Oakland, CA 94607**

Notice is hereby given that the Tuesday, April 9, 2024 Planning Committee meeting of the Board of Directors has been rescheduled from 9:15 a.m. to 9:00 a.m. The meeting will be held in the Administration Building Boardroom at 375 11th Street, Oakland, California.

Dated: April 4, 2024

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 - 11th Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

**AGENDA  
Planning Committee  
Tuesday, April 9, 2024  
9:00 a.m.  
Boardroom  
375 11<sup>th</sup> Street  
Oakland, CA 94607**

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

*Committee Members: Marguerite Young {Chair}, April Chan and Doug A. Linney*

**ROLL CALL:**

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

**DETERMINATION AND DISCUSSION:**

1. Wastewater Pretreatment and Pollution Prevention Programs Update (Mutsuddy)
2. Los Vaqueros Reservoir Expansion Project Update (Tognolini)
3. Annual Watershed and Recreation Report – 2023 (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 11<sup>th</sup> Street, Oakland, California, during normal business hours, and can be viewed on our website at [www.ebmud.com](http://www.ebmud.com).*



## APPENDIX

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### Planning Committee Meeting

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

#### Online\*

<https://ebmud.zoom.us/j/94576194030?pwd=dWZlc3hNU3JNUVBQYmNKWjJSNVZQdz09>

**Webinar ID:** 945 7619 4030

Passcode: 925293

#### By Phone

Telephone: 1 669 900 6833

Webinar ID: 945 7619 4030

Passcode: 925293

International numbers available: <https://ebmud.zoom.us/u/kdmpbwwlg2>

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

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

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

#### In person

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

#### Via Zoom

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

#### Submitting written comments or materials

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

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

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## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: April 4, 2024

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Amit K. Mutsuddy, Director of Wastewater AM

SUBJECT: Wastewater Pretreatment and Pollution Prevention Programs Update

### SUMMARY

The District operates its Pretreatment and Pollution Prevention Programs to reduce pollutants at their source, protecting the processes at the Main Wastewater Treatment Plant (MWWTP), and water quality in San Francisco Bay. Federal regulations and the MWWTP discharge permit require the District to operate and maintain a Pretreatment Program and issue permits to certain industries. The MWWTP discharge permit also requires the District to implement a Pollution Prevention Program to reduce pollutants from residential, commercial, and non-regulated industrial dischargers at their source. To continue to reduce pollutants at the source, the District plans to update several of its wastewater discharge limitations which will require an amendment to the Wastewater Control Ordinance (Ordinance). An update on these programs and the Ordinance changes will be presented at the April 9, 2024, Planning Committee meeting.

### DISCUSSION

#### Pretreatment Program

The Pretreatment Program is a key reason for the District's success in maintaining perfect compliance with the MWWTP discharge permit over the past 24 years. The Pretreatment Program monitors the influent quality, inspects businesses, and issues permits to certain industries. These actions ensure that businesses discharge wastewater that can be safely and effectively treated at the MWWTP resulting in high quality effluent and biosolids. As demographics shift within the service area, staff are continually identifying new businesses that require permits.

#### *Industrial User Survey*

The Pretreatment Program requires periodically conducting an industrial user survey to identify and evaluate sources of non-residential discharges within the collection system. Staff conduct industrial user survey inspections annually to determine if a wastewater discharge permit is required to control wastewater discharges from businesses. In spring 2023, staff inspected four industrial

facilities that manufacture paints, inks or dyes and determined that none required a permit. The District maintains and updates a comprehensive list of industrial users for future inspections. The list is established and updated using data from internal and external sources, such as county hazardous waste generator lists. Staff has also developed a new fact sheet that outlines the District's Pretreatment Program and inspection process. The fact sheet will be shared with dischargers prior to conducting future inspections.

#### *Local Limits Study and Wastewater Control Ordinance Updates*

The District established limits for certain constituents (e.g., toxic metals, pH, and chlorinated hydrocarbons) for wastewater discharges to the community sewer to ensure regulatory compliance and protect MWWTP processes. The MWWTP National Pollutant Discharge Elimination System permit requires that these limits be evaluated every five years. The local limits study was completed in 2023. For better clarity and enhanced control of discharges, staff proposed changes to several local limits. Per federal requirements, a 30-day public comment period was established in late 2023 and notifications were made via local newspaper publication and letters to the Regional Water Quality Control Board and all permitted industrial users.

The local limits changes include replacing the limit on total identifiable chlorinated hydrocarbons, which is a grouping of chemicals more widely used in the 1970s, with a limit for the more commonly used and better-defined category of total toxic organics (TTO). The proposed TTO limit refers to a defined list of constituents, which includes the toxic organics of concern currently. The other proposed change would define the oil and grease limit of 100 milligrams per liter (mg/L) to pertain to only oil and grease of mineral origin and add a new limit of 300 mg/L for oil and grease from animal or vegetable sources, which are considered more biodegradable and less toxic.

No objections were raised during the comment period. For the proposed changes to go into effect, the District will need to amend its Ordinance. The Board will consider adopting the revised Ordinance later in 2024.

#### *Enforcement Response Plan*

The federal Pretreatment Program regulations require the District to develop and implement an enforcement response plan (ERP). The ERP describes how the District investigates noncompliance; implements escalating enforcement responses to industrial user violations; identifies personnel responsible for each type of response; and reflects the District's primary responsibility to enforce all applicable pretreatment standards. The ERP was last updated in December 2015. In 2023, staff reviewed and streamlined the ERP to enhance clarity.

#### Pollution Prevention Program

The Pollution Prevention Program is focused on reducing pollution from residential and commercial sources through educating the public about wastewater treatment, demonstrating positive behaviors for reducing pollution, and providing alternative disposal options to keep

certain wastes out of the community sewer. Educating customers about the wastewater treatment process engenders a greater appreciation for what can and cannot be treated at the MWWTP and demonstrates how rate dollars are used to protect public health and San Francisco Bay. This knowledge supports behavior change to reduce pollution at the source.

#### *Community Engagement and Outreach: Tours*

The MWWTP Tour Program includes both in-person tours and virtual tours on Zoom. The number of in-person tours continues to increase. In 2023, approximately 450 people toured the MWWTP and over 100 more participated in live virtual tours. The self-guided online tour “From the tap to the San Francisco Bay,” launched in 2022, continues to be a valuable resource and had nearly 2,000 visitors in 2023.

#### *Regional Collaboration*

The District participates and leads regional pollution reduction efforts through its role as a principal agency in Bay Area Clean Water Agencies (BACWA). Staff serves on the steering committee for Bay Area Pollution Prevention Group (BAPPG), which is a BACWA committee that coordinates campaigns for regional pollution prevention messaging. In 2023, BAPPG launched a video on “The 3P’s” in Spanish and English, which significantly increased traffic to the regional pollution prevention webpage. The next messaging will be about the “Value of Wastewater.” Staff are also working with BACWA on a regional study of per- and poly-fluoroalkyl substances (PFAS). The second phase of the PFAS study was completed in 2023 and demonstrated that residential users are a significant contributor of PFAS in wastewater. The District added a new webpage with information on PFAS in wastewater that includes resources to assist customers in reducing their use of products containing PFAS.

### **NEXT STEPS**

Staff will complete revisions to the Ordinance and will bring the modifications to the Board for consideration later this year. The District will continue to monitor and inspect commercial and industrial activities; issue and maintain wastewater discharge permits; and conduct residential outreach to address contaminants of emerging concern and protect the treatment processes at the MWWTP and San Francisco Bay water quality. The District will also engage with regional partners on various outreach campaigns and unified messaging regarding source control approaches to PFAS for the protection of public health and the environment.

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## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: April 4, 2024

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager *CCC*

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

SUBJECT: Los Vaqueros Reservoir Expansion Project Update

### SUMMARY

EBMUD is evaluating potential participation in the proposed expansion of Los Vaqueros Reservoir (LVR). The LVR Expansion Project (Project) would provide EBMUD up to 30 thousand acre-feet (TAF) of new supplemental water supply for droughts and emergencies, and provide environmental benefits by enhancing Mokelumne River environmental flows through gainsharing and water supply for wildlife refuges. One of the key issues for EBMUD to determine participation in the Project is to update the unit cost evaluation. The Project's preliminary unit costs, along with unit costs of other EBMUD supplemental supplies, will be discussed at the April 9, 2024 Planning Committee meeting.

### DISCUSSION

During normal years, about 90 percent of EBMUD's water demand is met by Mokelumne River water and around 10 percent from local runoff into EBMUD's terminal reservoirs. In addition, EBMUD's recycled water and conservation programs reduce potable water supply demand during both normal and dry years.

During dry years, supplemental water supplies and customer rationing may be needed to meet customer demand. Based on the 2020 Urban Water Management Plan (UWMP) need for water analysis, the sequencing of supplemental water supplies and rationing over a three-year drought is provided in Table 1 below.

Central Valley Project (CVP) contract water supplies, if available, could be used during each year of a three-year drought. Water transfers may also be needed during each of the three years if additional supplemental water is required beyond the CVP supplies. By 2050, the 2020 UWMP's need for water analysis, which is based on EBMUD's 2050 Demand Study and accounts for conservation, water recycling, rationing, and CVP supplies, indicates that in the third year of a drought, the amount of additional water that could be needed is between 75 – 84 TAF under the base condition and extreme drought scenarios. The goal for short-term and long-term water transfers is up to 50 TAF of water during a dry year. Therefore, by 2050, additional supplemental water beyond water transfers of around 25 – 34 TAF may be needed during the third year of a

drought and is the basis for evaluating storage projects such as the LVR Expansion Project and with San Joaquin County (SJC) Groundwater Banking.

The current need for water analysis from the 2020 UWMP does not indicate that additional water supplies are needed by 2050 during the first two years of a drought. However, EBMUD has experienced recent changes including reduced CVP reliability in the last drought and reduced demands. The need for water analysis will be updated for the 2025 UWMP and will incorporate the updated demand projections, climate change, and modifications on the assumptions of the CVP supply availability and regulations that may reduce the availability of Mokelumne River supplies.

**Table 1.** EBMUD Water Supply Portfolio and Sequencing of Supplemental Supplies During Dry Years

	Normal Year	Dry Year 1	Dry Year 2	Dry Year 3	Drought Availability or Response
<b>Mokelumne River</b>	•	•	•	•	Reduced flows
<b>Local Runoff</b>	•	•	•	•	Reduced runoff
<b>Conservation Programs</b>	•	•	•	•	Increased conservation
<b>Recycled Water</b>	•	•	•	•	Reduced availability in some areas
<b>Voluntary/Mandatory Rationing</b>	--	•	•	•	Increased rationing
<b>CVP Supplies</b>	--	•	•	•	Less available in severe droughts
<b>Need for Water in 2050 (2020 UWMP)</b>		0 TAF	0 TAF	75 – 84 TAF	
<b>Water Transfers</b>	--	•	•	•	Variable availability and cost
<i><b>LVR Expansion (evaluating)</b></i>	--	--	--	•	Accessible during severe drought
<i><b>SJC Groundwater Banking (piloting)</b></i>	--	--	--	•	Accessible during severe drought

### Unit Costs

In the Water Supply Management Program (WSMP) 2040, unit costs for potential supplemental water supply projects were calculated and compared assuming that each of the projects would operate for 3 dry years out of 10. The operational frequency of LVR and SJC groundwater banking, which are both storage projects, will likely be less than 3 dry years out of 10 because they are anticipated only to be needed during a third year of a drought as the drought deepens rather than every dry year such as CVP supplies and water transfers. Therefore, unit costs developed for storage projects are not directly comparable to the unit costs for supplemental water supply options that are used more frequently.

### *LVR Expansion*

In fall 2023, the LVR Joint Powers Authority (JPA) and Contra Costa Water District (CCWD) updated the capital cost estimate for the LVR Expansion Project, which is estimated at \$1.52 billion. The JPA's proposed methodology to allocate costs among the member agencies was used to estimate EBMUD's cost allocation for the Project. CCWD's usage fees for their facilities are still under negotiations with the JPA, but are used as proposed in LVR unit cost evaluation. EBMUD's operation and maintenance (O&M) costs for Freeport are also included to capture the costs of conducting an exchange with CCWD when EBMUD requests stored water from LVR.

The WSMP 2040 unit cost methodology was used to calculate the LVR unit costs with the exception that the drought use frequency is lower. Because of the uncertainty in the drought use frequency, unit costs are presented as a range assuming a lower and higher use frequency/yield that is based on hydrology over the past approximately 90 years and 20 years, respectively. The lower use frequency averages around 1 in 15 years and the higher frequency is 1 in 8 years. To address dam construction risk, the capital cost of the LVR dam construction is assumed to be double the estimate. The unit costs in Table 2 show two potential sources of water supply, Mokelumne River water and the Sacramento Municipal Utility District (SMUD) CVP Assignment.

The draft LVR unit cost estimates were calculated based on the best information available today, but are preliminary and subject to change as outstanding issues that impact costs are resolved such as cost allocations and the amount of State grant funding allocated to the Project (currently anticipated at \$477 million). For a storage capacity of 30 TAF, EBMUD's allocation of capital costs for the Project is estimated at around \$190 million after State grant funding is applied.

**Table 2.** Preliminary Unit Costs for LVR Expansion Project

Water Source	Unit Costs (2023 \$)	Unit Costs, LVR Dam Costs Double (2023 \$)
<b>Mokelumne River Water</b>	\$3,500 - \$6,000	\$5,100 – \$8,700
<b>SMUD CVP Assignment</b>	\$4,500 - \$7,000	\$6,000 – \$9,400

### *SJC Groundwater Banking*

The unit cost estimate for the SJC Groundwater Banking Project from the WSMP 2040 escalated to 2023 dollars is \$1,100 per AF, which assumes the project is operated 3 dry years out of 10. However, since SJC Groundwater Banking is anticipated to be used at the same frequency as LVR, unit costs were re-calculated assuming a use frequency of 1 in 15 years and 1 in 8 years, resulting in estimated unit costs ranging between \$2,000 and \$3,200 in 2023 dollars. The capital and O&M costs used are based on a concept developed over 15 years ago. Therefore, these unit costs have a high degree of uncertainty until the latest SJC Groundwater Banking Project concept becomes more developed over the next year.

### *Recycled Water*

Unit costs for recycled water projects have been calculated previously as dry year unit costs using the WSMP 2040 assumption that the project's yield only has value in 3 dry years out of 10 years during droughts. It should be noted that recycled water has benefit during non-drought years by providing recycled water credits that would allow EBMUD to transfer surplus Mokelumne River water for storage projects.

For future recycled water projects, which were calculated using the estimated capital and O&M costs from the 2019 Recycled Water Strategic Plan and escalated to 2023 dollars, the dry year unit cost is about \$9,300 per AF. Recycled water unit costs will be updated by September 2024 based on the updated Recycled Water Strategic Plan.

## **NEXT STEPS**

Staff will continue to update the preliminary unit costs for the LVR Expansion Project as outstanding issues are resolved that impact costs. In addition, staff will continue to address the critical issues on the Project agreements and explore sources of water supply. Committee and Board updates on the Project are scheduled over the next several months prior to EBMUD Board consideration of the agreements in August 2024, at the earliest. Other key issues affecting participation, including the structure of the Project agreements and addressing outstanding points in the agreements will be discussed at a future Committee meeting.

CCC:MTT:dec

## EAST BAY MUNICIPAL UTILITY DISTRICT

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DATE: April 4, 2024

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager *CCC*

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

SUBJECT: Annual Watershed and Recreation Report – 2023

### SUMMARY

This memorandum summarizes the District's watershed and recreation activities during calendar year 2023 and reports on key performance indicators (KPIs) established for watersheds and recreation in the East Bay and Mokelumne watersheds. A presentation will be made at the April 9, 2024 Planning Committee meeting.

### DISCUSSION

The District's watershed and recreation facilities continue to be popular with the public, receiving approximately two million visitors per year. Visitation is predominantly at the developed recreation areas, with approximately one million visitors to Lafayette Recreation Area and more than 500,000 visits to Camanche Recreation area. In the East Bay, visitation decreased 0.9 percent year over year, to a total of 1,444,916 visitors in 2023, and visitation to the Mokelumne watershed increased slightly by 8 percent to 648,432. On the East Bay watershed, fuel management, illegal roadside dumping, and rogue mountain bike trails require ongoing attention. Fuel management, recreation area maintenance, and public safety continue to take priority on the Mokelumne watershed.

Starting in July 2023, staff implemented a self-certified, low-income, free, one-year trail permit. Participation has been modest so far, and staff will continue to improve outreach about this option.

### NEXT STEPS

For the Mokelumne area, staff is planning major renovations to cabins at the Camanche Recreation Area, expanding the popular Kid's Fishing Day event at Camanche South Shore Recreation Area and increasing the use of prescribed fires on the watershed. In the East Bay, the interpretative signs upgrade project at Lafayette Reservoir will continue in 2024, and planning for multi-lingual signage at the watershed trail staging areas will begin. In both the East Bay and Mokelumne, staff will begin to explore other ways to remove barriers and increase access for underrepresented communities utilizing watershed and recreation opportunities.

CCC:MTT:dec

Attachment: 2023 Watershed and Recreation Summary Report

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## 2023 WATERSHED AND RECREATION SUMMARY REPORT

Watershed and recreation programs and projects strengthen the District's relationship with local communities, and helps ensure a safe and enjoyable experience for our recreational guests.

Significant watershed and recreation activities in 2023 included:

### Mokelumne

- Treated over 25 acres of grassland affected by invasive plants using prescribed fires
- Repaired damaged culvert near Middle Bar Takeout under the new Routine Maintenance Agreement with California Department of Fish and Wildlife
- Managed record visitation to Camanche Recreation Area

### East Bay

- Responded to continued rogue mountain bike activity in Canyon
- Held the Family Fishing Day at San Pablo Reservoir with 201 participants
- Removed over 200 tons of garbage from the watershed

This was the first full year of the new online recreation user survey, which replaced the paper survey that was suspended in 2020 due to COVID-19. Signs with a QR code linking directly to the survey were added at recreation areas and trailheads. In 2023, there were 117 responses; 78 percent rated their experience as Excellent or Good. Staff will continue to look for ways to improve the user experience and increase the number of responses to the survey. Another indication of customer satisfaction with EBMUD recreational offerings are the continued high usage of EBMUD trails and developed recreation areas both in the East Bay and in the Mokelumne watershed.

### Mokelumne Watershed and Recreation

Recreational facilities on the Mokelumne watershed continue to attract large numbers of visitors seeking opportunities to swim, camp, hike, fish, hunt, and boat. Trail use on the Mokelumne returned to pre-pandemic levels but high reservoir elevations on both Pardee and Camanche led to increased visitation during the 2023 recreation season. The Mokelumne River Day Use Area was closed to the public for most of the summer due to dangerously high flows on the Mokelumne River.

In 2021, limits on number of day use vehicles were established at the Mokelumne River Day Use Area and both shores of Camanche Reservoir. These limits resulted in lower peak day visitation but improved sanitary conditions in the recreation areas, decreased visitor incidents related to parking and overcrowding, improved public safety, and significantly improved overall visitor experience. Despite the vehicle limit, Camanche Recreation Area saw record visitation in 2023.

Pardee Recreation Area closed early in 2023 to facilitate upgrades to the water treatment plant serving the park. Work on the water treatment plant is ongoing, but the recreation area has been re-opened for day use and RV park residents with limited water supply.

Work on the Mokelumne watershed continues to focus on fire road and trail maintenance, and wildland fire fuel reduction. A culvert inlet that was damaged during heavy storms in January 2023 was repaired and armored, improving flows in the drainage and significantly reducing impacts from sediment to water quality in Pardee Reservoir. The Mokelumne Division secured agreements with the California Conservation Corps, California Youth Authority, and the California Department of Corrections and Rehabilitation for the use of hand crews on fire fuel reduction and road brushing projects in Amador and Calaveras Counties. Rangers also planned and implemented prescribed burn projects to treat barbed goat grass and medusahead, both invasive grasses, on over 25 acres of grassland.

The Mokelumne Watershed Master Plan and subsequent management plans established several key performance indicators (KPIs) for evaluating recreational services based on financial performance, public safety, and customer satisfaction levels. Tables 1 and 2 show annual visitation for the Mokelumne area recreation venues and performance results based on the established KPIs.

**Table 1 – Annual Visitation at Mokelumne Recreation Venues (Visitor Days)**

Location	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023
Camanche North Shore	233,340	213,896	210,870	202,431	216,343
Camanche South Shore	267,291	184,349	272,027	270,615	307,849
Pardee Recreation Area	64,234	74,573	65,147	65,034	85,140
Mokelumne River Day Use	38,115	48,438	62,598	39,475	15,000 est.
Camanche Hills Hunting Preserve	12,176	12,253	12,366	12,463	12,999
Watershed Trails	11,191	20,249	18,973	11,515	11,101
<b>Total</b>	<b>626,347</b>	<b>553,758</b>	<b>641,981</b>	<b>601,533</b>	<b>648,432</b>

**Table 2 – KPI Performance Results: Public Safety in the Mokelumne Watershed**

KPI	Goal	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023
Boating Accidents (# of accidents per boating day)	0.01%	0.006% 2 accidents 34,140 vessels	0.02% 6 accidents 28,442 vessels	0.016% 5 accidents 32,079 vessels	0.015% 4 accidents 27,508 vessels	0.003% 1 accident 33,015 vessels
Visitor Incidents (# of visitor incidents per visitor day)	0.2%	0.04% 248 incidents / 626,347 visitors	0.03% 176 incidents / 553,668 visitors	0.029% 184 incidents / 641,945 visitors	0.037% 223 incidents / 601,533 visitors	0.028% 181 incidents/ 648,432 visitors



### East Bay Watershed and Recreation

In 2023, opportunities to explore and enjoy nature attracted 1.26 million visitors to the East Bay reservoirs and watershed trails.

Crime at the recreation areas and on the watershed trails continues to be low. There were no major accidents or significant public safety related events in 2023. Wildfire management continues to be a priority, and EBMUD resources supported two multi-agency fuel reduction projects – Tunnel East Bay Hills Fuelbreak and Grizzly Peak Fuelbreak. In addition, rangers and contractors reduced the fuel load by over 8,000 tons.

Table 3 shows visitation for the East Bay Recreation Area venues.

**Table 3 – Recreation Visitation at East Bay Recreation Venues (Visitor Days)**

<b>Location</b>	<b>CY 2019</b>	<b>CY 2020</b>	<b>CY 2021</b>	<b>CY 2022</b>	<b>CY 2023</b>
Lafayette Recreation Area	921,188	840,829	1,056,289	1,086,006	1,068,022
San Pablo Recreation Area	133,714	98,605	120,393	152,478	125,980
East Bay Trails	124,957	206,265	241,930	241,225	253,914
<b>Total</b>	<b>1,179,859</b>	<b>1,145,699</b>	<b>1,418,612</b>	<b>1,461,709</b>	<b>1,447,916</b>

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