

Earthquake Preparedness

Planning Committee

April 9, 2019

Agenda



- Preparedness programs
- Mutual assistance
- Community outreach
- Next steps

Preparedness Programs



- Directed by Policy 7.03
 - Emergency Operations Plan (EOP)
 - Business Continuity Plans (BCPs)

Key Performance Indicators



KPI	Target	Status
Update EOP	Every 2 years	On Target
Conduct EOT Exercise	Annual	Goal Met
Update BCP	Every 2 years	On Target
Conduct BCP Exercises	Annual	On Target

SEMS & Mutual Assistance

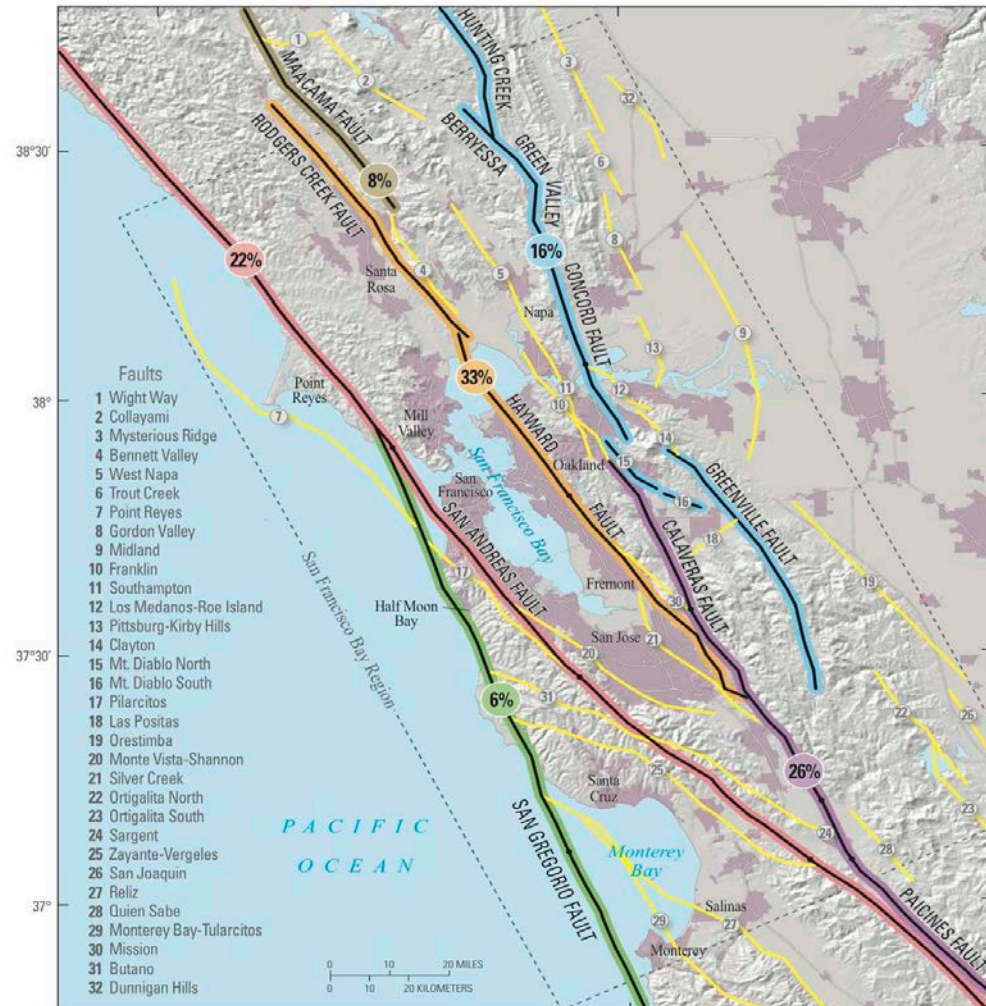


- Standardized Emergency Management System (SEMS)
- Multi-Agency Water Mutual Assistance Agreement (MAWMAA)
 - Los Angeles Department of Water and Power
 - Las Vegas Valley Water District
- California Water/Wastewater Agency Response Network (CalWARN)
 - California water and wastewater utilities

HayWired Report



- Volume I: Earthquake Hazard
- Volume II: Engineering Implications
- Damage to District Infrastructure
- Wide spread outages water and WW services
- Volume III: Social and Economic Impact; due out 2019



- Working with cities and counties to:
 - Ensure their Local Hazard Mitigation Plans are accurate regarding EBMUD systems
 - Explain post-earthquake water system outages and recovery expectations
 - Develop Water Points of Distribution (POD) Plans
 - Conduct emergency preparedness tours

Next Steps



- Continue coordinating with stakeholders
 - Water Points of Distribution
 - Coordination of Local Hazard Mitigation Plans
- Exercise mutual assistance
 - April 29/30, 2019 meeting at EBMUD
- October - Emergency Operations Team exercise
- Work with Cal OES on Mutual Assistance Plans and Reimbursement

Questions



Water Quality Program Annual Update - 2018

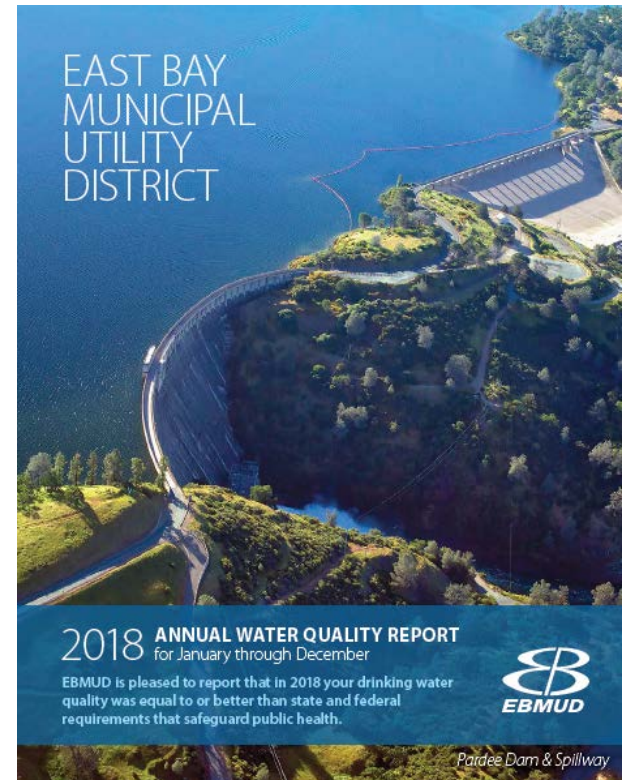
Planning Committee

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Agenda



- Calendar Year 2018 data, same as Annual Water Quality Report for customers
- Regulatory Standards
- Internal Water Quality Goals
- Other Water Quality Issues
 - Lead
 - Taste and Odor
 - Distribution System WQ
 - Emerging Issues



Regulatory Standards



- Met all State and Federal Standards in 2018

Water Quality Goals



- 97% of internal water quality goals were met
 - Disinfection byproducts
 - Filter effluent turbidity



Water Quality Goals - Disinfection Byproducts



- Current goal is $\frac{1}{2}$ of regulatory level
- Trihalomethanes (THMs)
 - Goal not met in 40 of 64 locations
- Haloacetic Acids (HAA5)
 - Goal not met in 21 of 64 locations
- Capital projects at water treatment plants underway to reduce levels

Water Quality Goals - Disinfection Byproducts

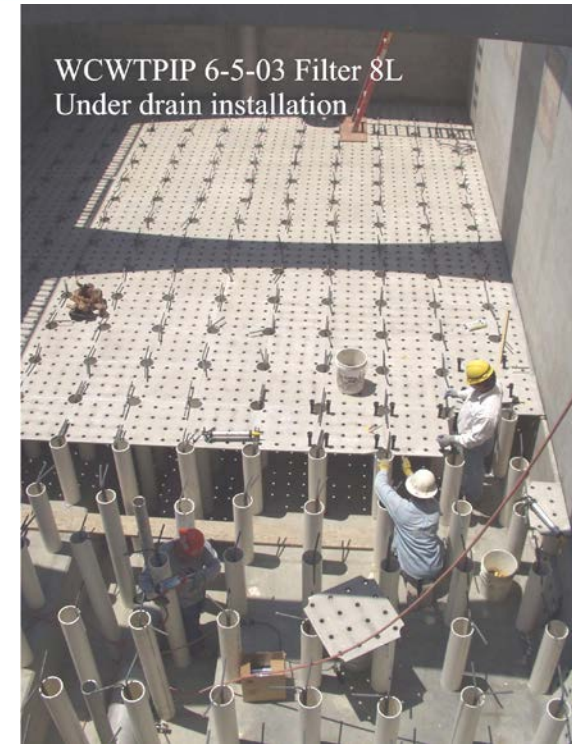


- n-nitrosodimethylamine (NDMA)
- Not currently regulated
- Can be a byproduct of the chloramination process
- EBMUD goal = Public Health Goal (30% of Notification Level)
- Goal not met in 9 of 20 samples
- Newer data has shifted the regulatory focus; NDMA is not likely to be regulated soon

Water Quality Goals - Filter Effluent Turbidity



- Measure the effectiveness of the filtration process
- Five water treatment plants, multiple filters at each plant
- Measurements are made every minute from every filter every day
- 17 individual readings out of 16 million did not meet turbidity target
- 99.99989% of samples met goal (regulatory requirement is 95%)



Water Quality Goals - Balance

- All regulations must be met simultaneously
- Some are in conflict with each other (Disinfection vs. Disinfection byproducts)
- Acute (immediate) risk from pathogens vs. chronic (long-term) risk from chemical exposure
- Better disinfection can result in higher disinfection byproducts



Water Quality Goals

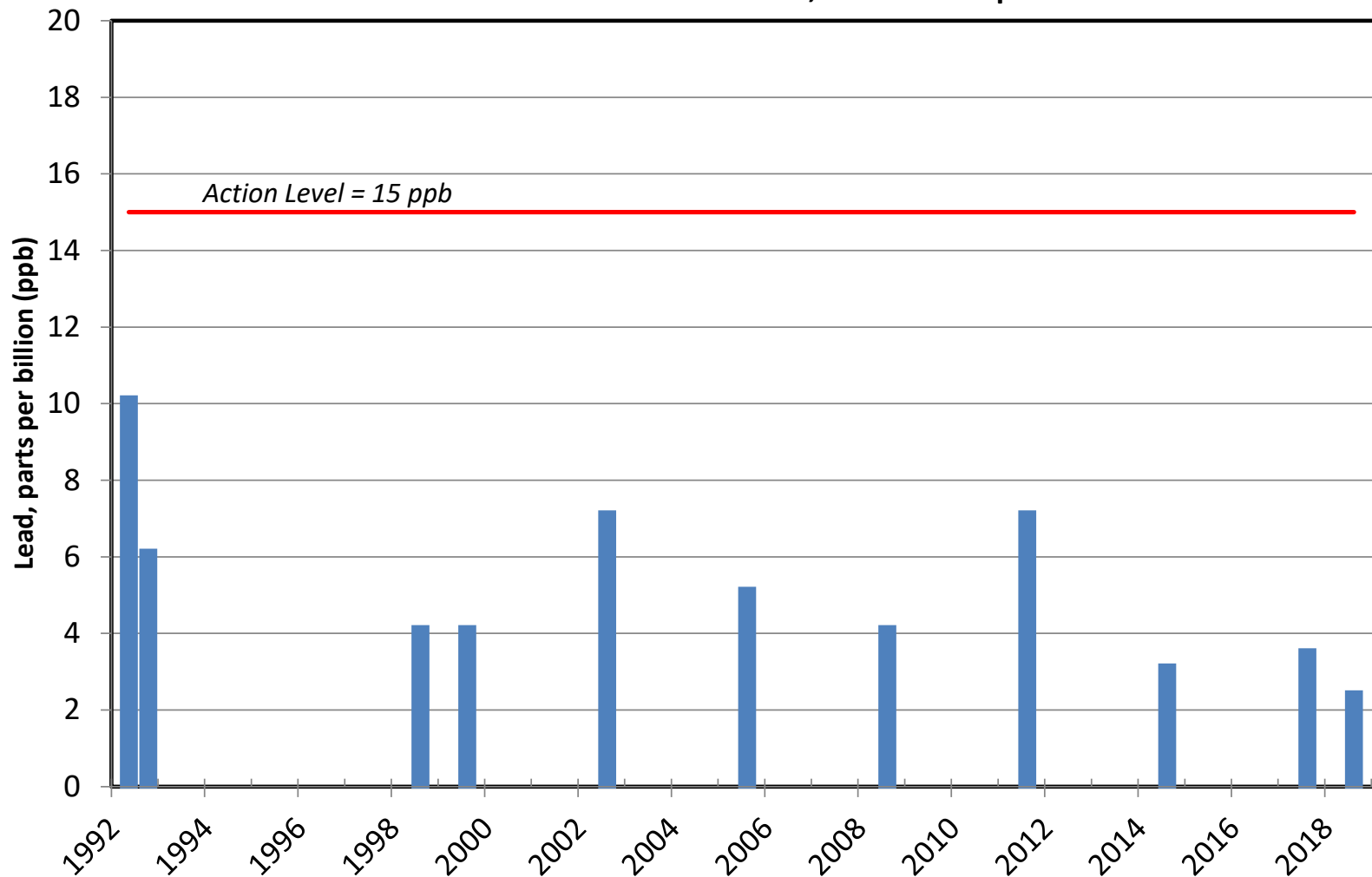


- Undergoing revision
- Including new goals specifically focused on distribution system quality and disinfection process at treatment plants
- Revising goals to better reflect more recent data and balance risks

Lead – Regulatory Monitoring



EBMUD Lead and Copper Rule Monitoring Results
90th Percentile Concentrations, Customer Taps



- Customer sample voucher program
 - 90th percentile < 1 ppb
- Sampling in schools
 - Mandatory sampling is complete
 - 90th percentile < 1.5 ppb
- Service line inventory
 - Meeting regulatory deadlines
 - Lead is replaced with copper if found

Taste and Odor Issues

- Algae can form T&O-causing compounds
- Ozone is effective for treatment
- During spring 2018, ozone system at Sobrante WTP was out of service for upgrades
- Temporary powdered activated carbon system, additional monitoring, and operational adjustments were made
- No T&O issues, ozone back on line mid-June



Cyanobacteria, USEPA

Distribution System Water Quality



- Quality can degrade as water travels through many miles of pipes
- Water age is high in some parts of system
- Nitrification occurs in some areas
- Partnership goal: more than 0.5 mg/L chlorine residual in 95% of samples
 - Partnership goal met every month of 2018

Per- and Poly-fluoroalkyl Substances (PFAS)

- Human-made chemicals, used extensively in many products (carpets, clothing, paper products, fire-fighting foam, cookware)
- Resistant to heat, water, and oil
- Some PFAS are presumed to be immunotoxic (affect function of immune system), liver toxins, and possibly carcinogenic
- No enforceable federal standards yet
- Several states taking action (health advisories, notifications)



National Institutes of Health, 2019

Per- and Poly-fluoroalkyl Substances (PFAS)



- EBMUD did not detect PFOA and PFOS during UCMR3 (2013-2015)
- Analytical methods have improved
- California State Board's Action Plan
 - Notification levels issued for PFOA and PFOS
 - Targeted Orders to monitor for specific water systems (wells within 2 miles of airports, 1 mile of landfills)
 - Investigative Orders directly to selected airports and landfills requiring workplans, monitoring, and investigation

Questions



Regulatory Compliance Semi-Annual Report

Planning Committee

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Agenda



- Environmental Compliance
- Integrated Pest Management
- Workplace Health and Safety
- Key Upcoming Activities

Environmental Compliance



- Water and wastewater
 - San Antonio Creek Wet Weather Facility pH exceedance in February 2019
 - Enhanced Compliance Action for leak detection loggers



Environmental Compliance



- Air
 - Two settlements related to gasoline dispensing facilities
 - Torn vapor recovery hose at the MWWTP
 - Incorrect fuel hose at Stockton
 - Digester gas venting incident at MWWTP. Breakdown relief requested.



Potable Water Discharge



- Chlorinated discharge into San Ramon Creek
- Newer pipe with leak detection
- Met with San Francisco Regional Water Quality Control Board (SF RWQCB)
- Report describing the District's water loss efforts due in May

Orinda WTP Compliance



- 230,000 gallon chlorinated water discharge in September 2017
- Presented findings to Regional Water Quality Control Board in January and May 2018
- Settlement discussions ongoing

Integrated Pest Management (IPM)



- Conducted four public meetings in January
- IPM presentation at the February 26 Sustainability/Energy Committee
- Annual training conducted in March for District staff

A flyer titled 'Integrated Pest Management' with a background image of a green field with yellow flowers under a blue sky. The flyer contains information about public meetings and pest management techniques.

Integrated Pest Management

Public Meetings
Opportunity to learn how EBMUD manages pests

The East Bay Municipal Utility District makes decisions about managing pests such as invasive plants, insects and rodents using a carefully planned set of tools which may include a combination of techniques including selective planting, mulching, mowing, grazing, pruning, natural predation, controlled burns and spraying. EBMUD is holding a series of public meetings to share details on its Integrated Pest Management Program.

PUBLIC MEETING INFORMATION

STOCKTON
DATE: January 10, 2018
LOCATION: San Joaquin Farm Bureau
ADDRESS: 3290 North Ad Art Road
Stockton, CA 95215

WALNUT CREEK
DATE: January 16, 2018
LOCATION: Lindsay Wildlife Museum
ADDRESS: 1931 1st Avenue
Walnut Creek, CA 94597

OAKLAND
DATE: January 23, 2018
LOCATION: EBMUD Admin. Building
ADDRESS: 375 11th Street, 2nd Floor
Oakland, CA 94607

VALLEY SPRINGS
DATE: January 30, 2018
LOCATION: McLean Hall, Pardee Center
ADDRESS: 3535 Sandretto Road
Valley Springs, CA 95252

All meetings will begin at 6:00 pm.

QUESTIONS?
ipm@ebmud.com
ebmud.com/sustainability

EBMUD

MULCHING • CONTROLLED BURNS • MOWING • GRAZING
PRUNING • NATURAL PREDATION • SELECTIVE PLANTING • SPRAYING

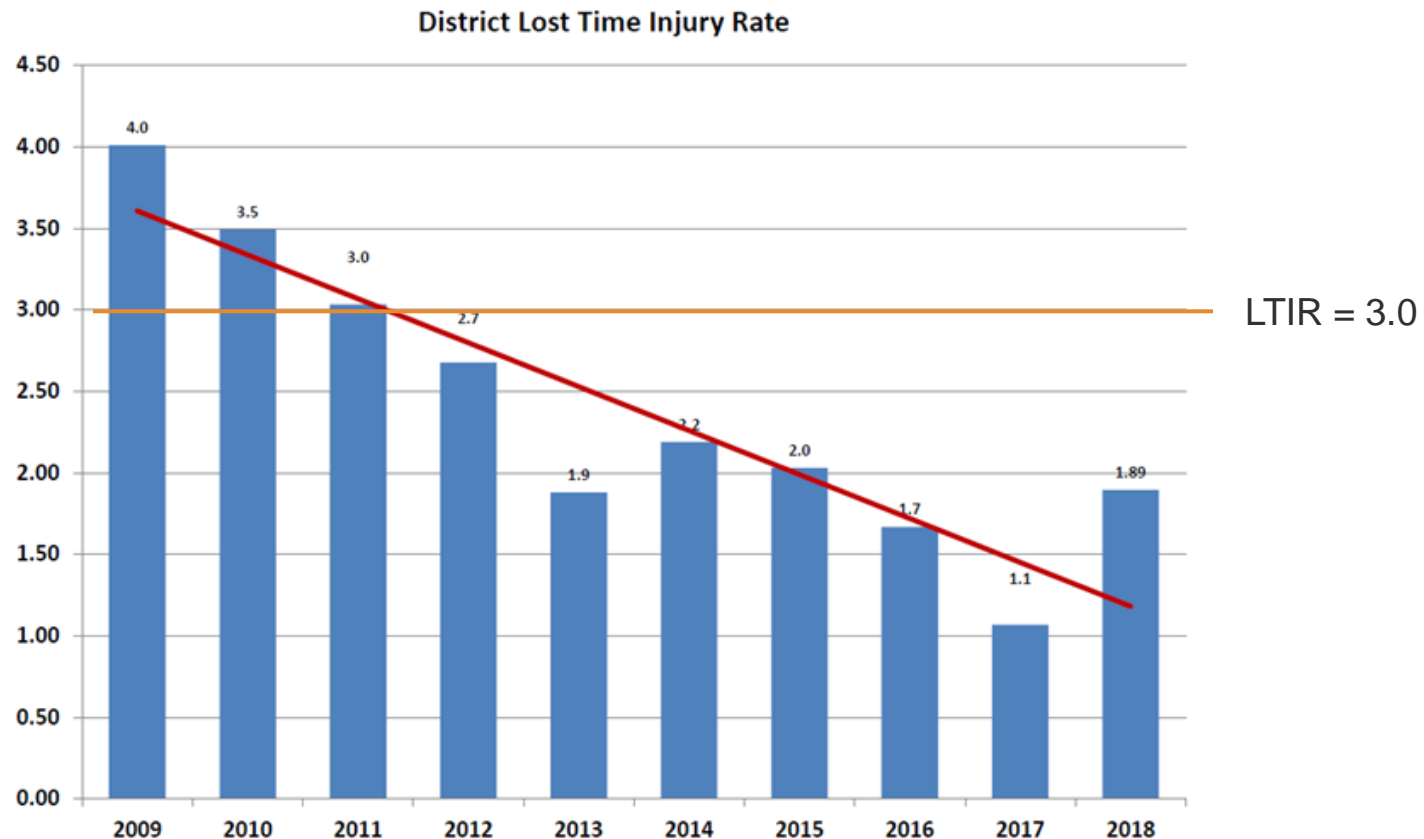
Workplace Health and Safety



Workforce Planning and Development

Goal: Lost Time Injury Rate (LTIR) ≤ 3.0

Actual: LTIR 1.89



- Complaint notice from Cal OSHA in February related to Injury Illness Prevention Plan in Meter Reading and Maintenance

Key Upcoming Activities



- Orinda WTP settlement agreement
- Continue leak detection ECA
 - Quarterly reports thru September 2020
- SF RWQCB report on potable discharge prevention and mitigation

Questions



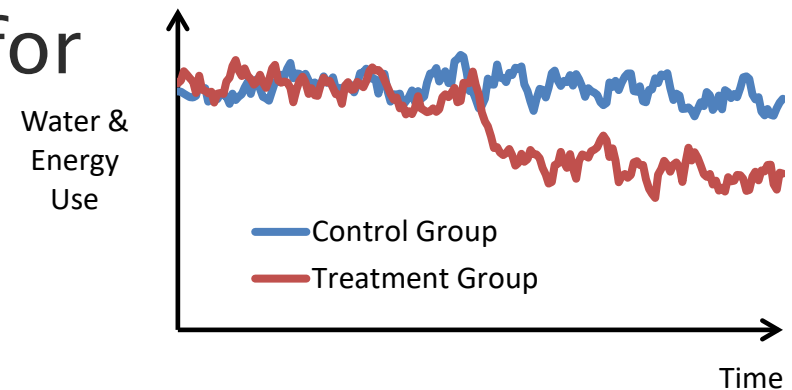
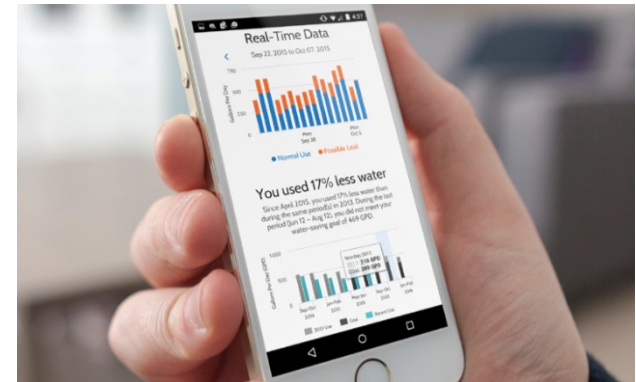
Advanced Metering Infrastructure Water-Energy Nexus Study Update

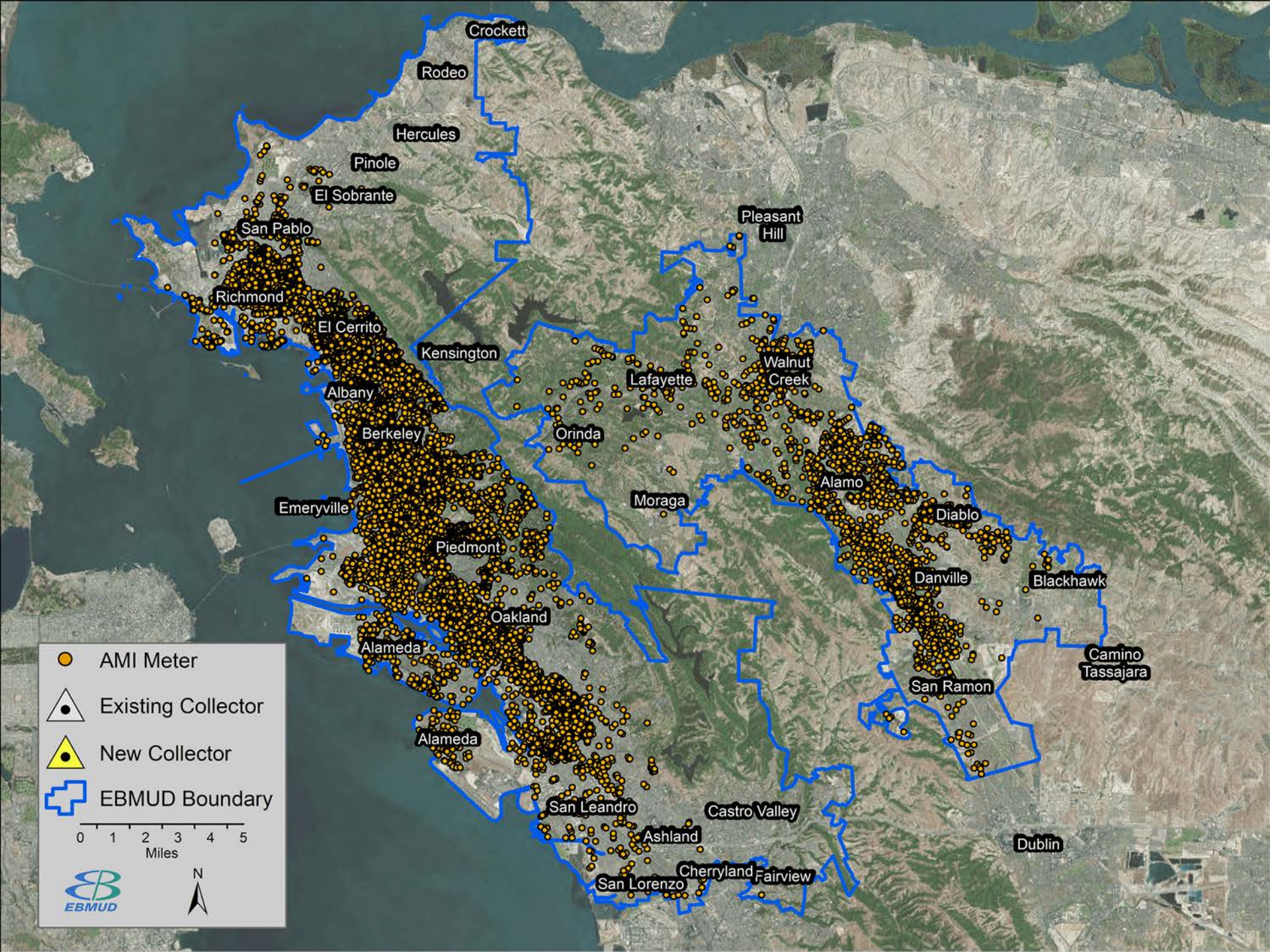
Planning Committee

April 9, 2019

Purpose

- Provide AMI data to quantify water and energy savings
- Evaluate AMI for 13,000 accounts
- \$1.25M in grant funding for two studies
 1. EBMUD-U.S. Bureau of Reclamation
 2. EBMUD-PG&E-UC Davis





Crockett

Rodeo

Hercules

Pinole

El Sobrante

San Pablo

Richmond

El Cerrito

Kensington

Albany

Berkeley

Emeryville

Piedmont

Oakland

Alameda

Alameda

San Leandro

Ashland

Castro Valley

San Lorenzo

Cherryland

Fairview

Dublin

Pleasant Hill

Lafayette

Walnut Creek

Alamo


Diablo

Danville


Blackhawk

Camino Tassajara


San Ramon




AMI Meter



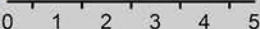
Existing Collector




New Collector




EBMUD Boundary



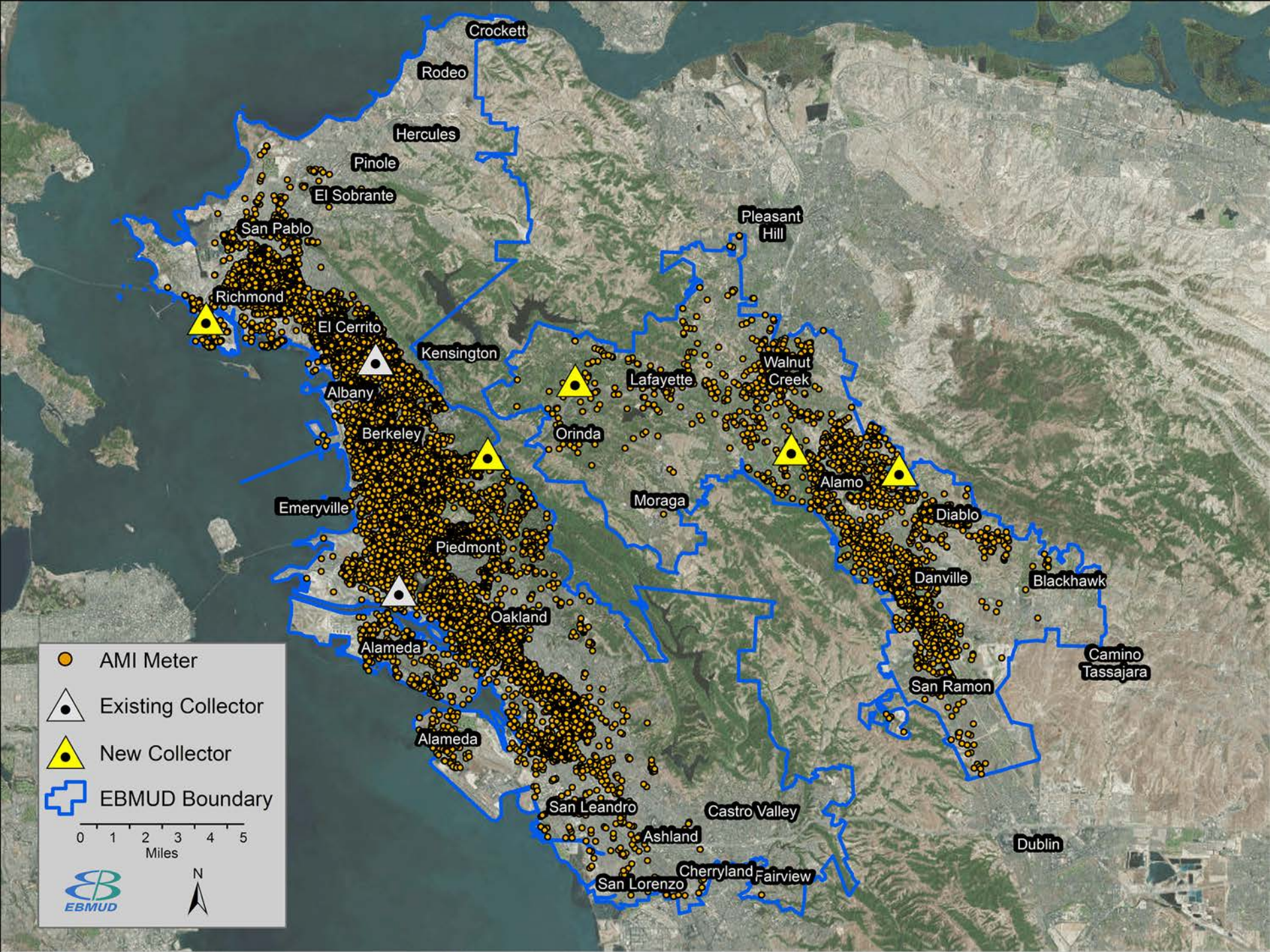
0 1 2 3 4 5
Miles





EBMUD





N



 AMI Meter

 Existing Collector

 New Collector

 EBMUD Boundary

0

1


2

3


4

5

Miles



N



Crockett
Rodeo
Hercules
Pinole
El Sobrante
San Pablo
Richmond
El Cerrito
Kensington
Albany
Berkeley
Emeryville
Piedmont
Oakland
Alameda
Alameda
San Leandro
Ashland
San Lorenzo
Cherryland
Fairview
Castro Valley
Moraga
Lafayette
Orinda
Walnut Creek
Pleasant Hill
Alamo
Diablo
Danville
Blackhawk
Camino Tassajara
San Ramon
Dublin

AMI Transmitter Installation



- AMI transmitters installed by District
- Hourly meter reads
- AMI transmitters communicate with AMI collectors



AMI Collector Construction



- Incorporated community input from community meetings in 2018
- Constructed five collectors beginning in January 2019



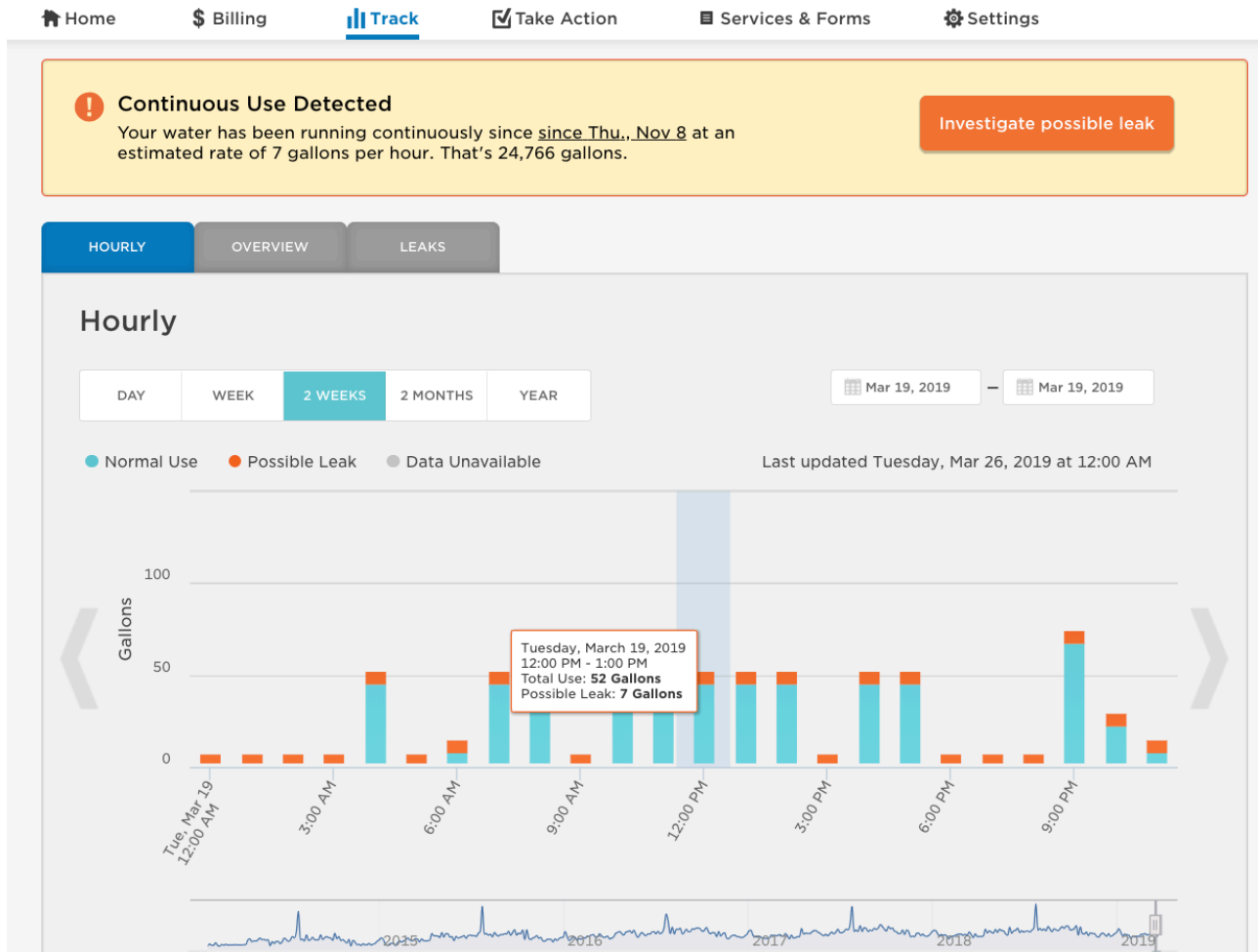
AMI Collector Construction



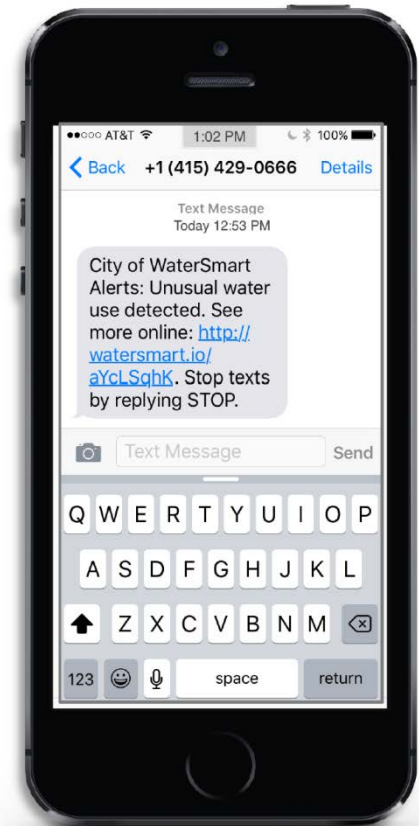
- Construction completed January 30, 2019
- Each collector reads 600 to 6,000 meters
- Testing is underway



Customer AMI Portal

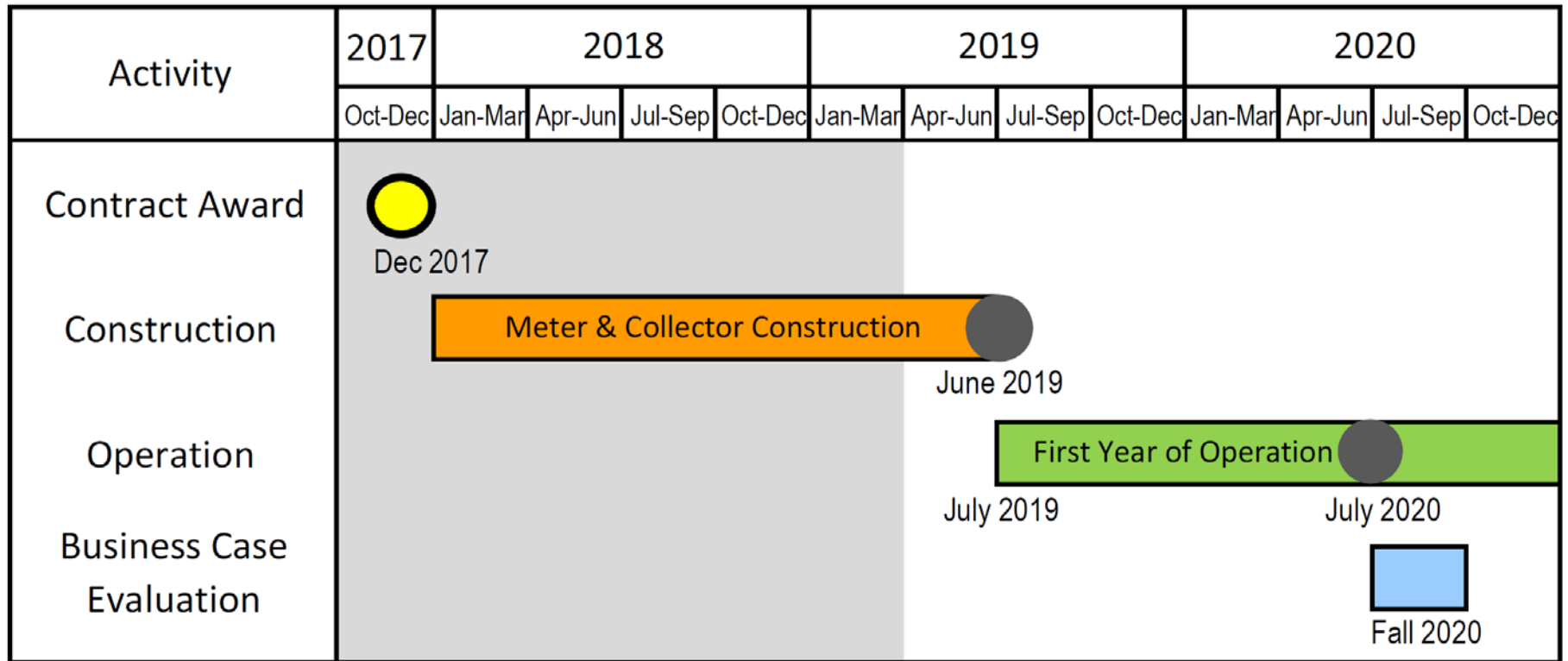


Leak Alert on Website



Leak Alert Text Message

Next Steps



Questions



South Interceptor 3rd Street Rehabilitation Phase 2 Update

Planning Committee

April 9, 2019

Agenda

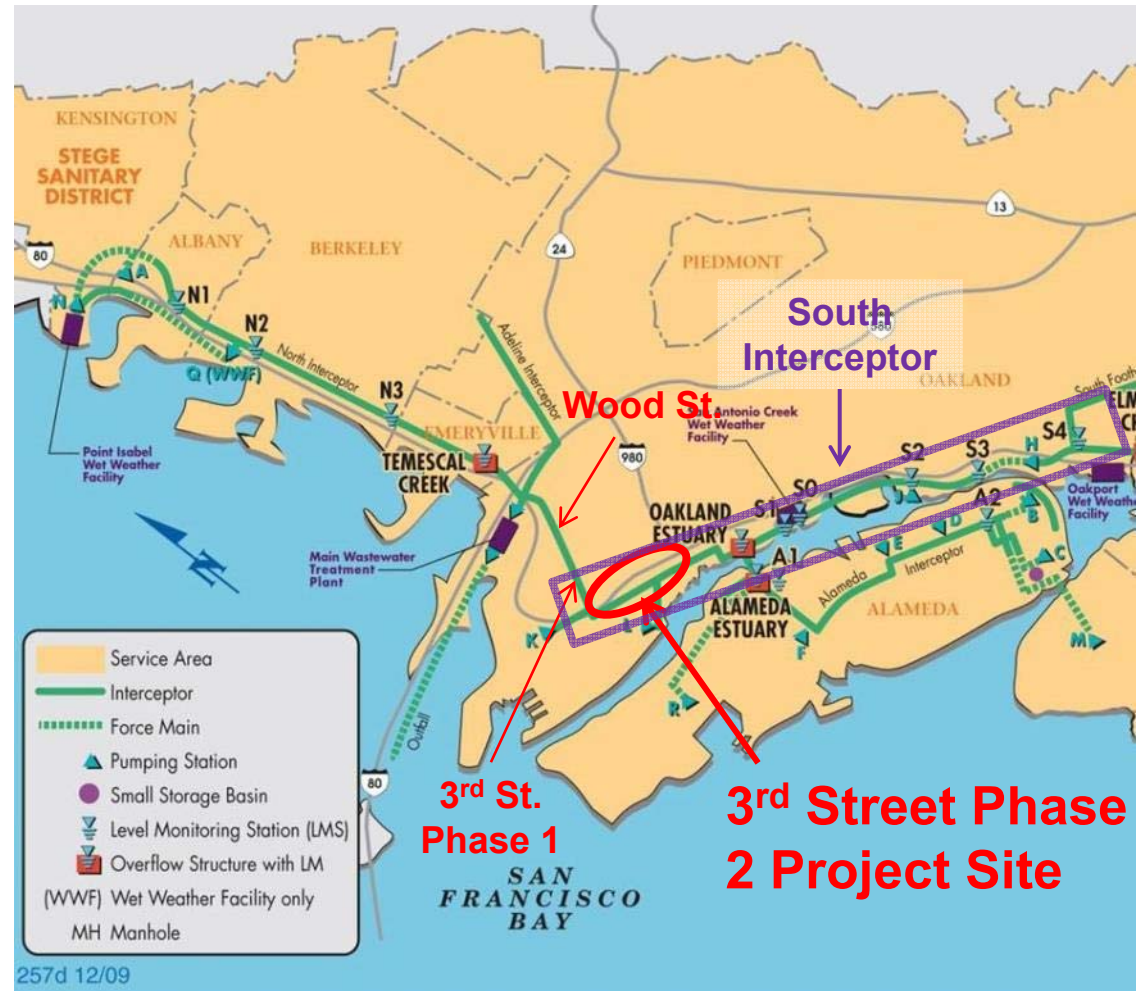


- Background
- Project Scope
- Current Construction Progress
- Schedule
- Impacts and Mitigation
- Community Outreach Update
- Next Steps

Background



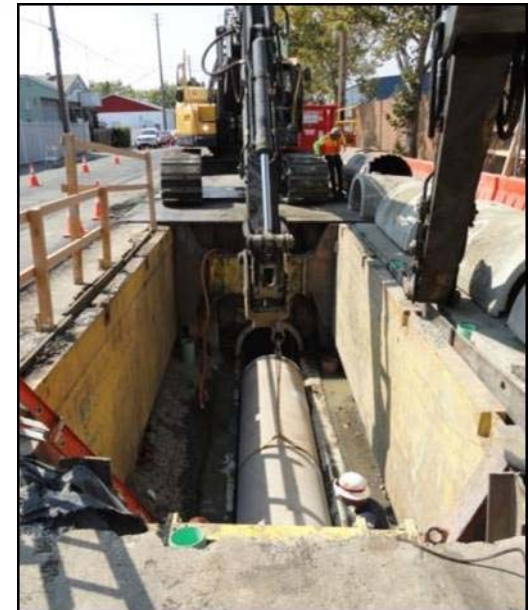
- South Interceptor is the District's largest sewer pipe
 - Constructed in 1952, with no redundancy
 - 30 in. to 105 in. diameter
 - Conveys 60% of flow to the Main Wastewater Treatment Plant
- Severe corrosion throughout South Interceptor



Project Scope



- Slipline approximately 4,700 linear feet of existing 105" diameter sewer along 3rd Street
 - \$12.5M construction contract was awarded to Mladen Buntich Construction Company in September 2018
 - Three temporary jacking pits for inserting new pipe
 - Original design included five temporary jacking pits
 - Jacking pits are industrial areas and not in residential areas
 - Full and partial road closures around jacking pits
 - Rehabilitate five manhole structures with PVC liner



Alameda Interceptor Rehabilitation, 2015

3rd Street Phase 2 alignment = 4,700 feet



Current Construction Status



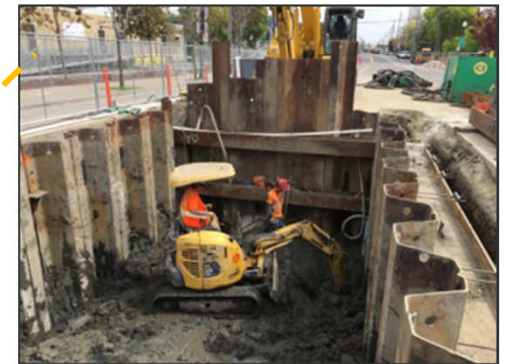
Pit #3: Preparing for removal of top of interceptor



Pit #2: Installing shoring



Pit #1: Excavating to top of interceptor



Project Schedule



September 11, 2018 – Planning Committee Presentation and Project Award

November 12, 2018 – Contractor Notice to Proceed

2019

February 19, 2019 – Start Traffic Control

April 15, 2019 – Remove Top Portion of Existing Interceptor at Pits #1 and #3

June 20, 2019 – Begin Sliplining New Pipe

→ August 20, 2019 – Finish Sliplining New Pipe

→ September 30, 2019 – Complete Grouting of Annular Space

October 28, 2019 – Reconstruct Top Portion of Interceptor and
Complete Work within Interceptor

November 13, 2019 – Remove Traffic Control

2020

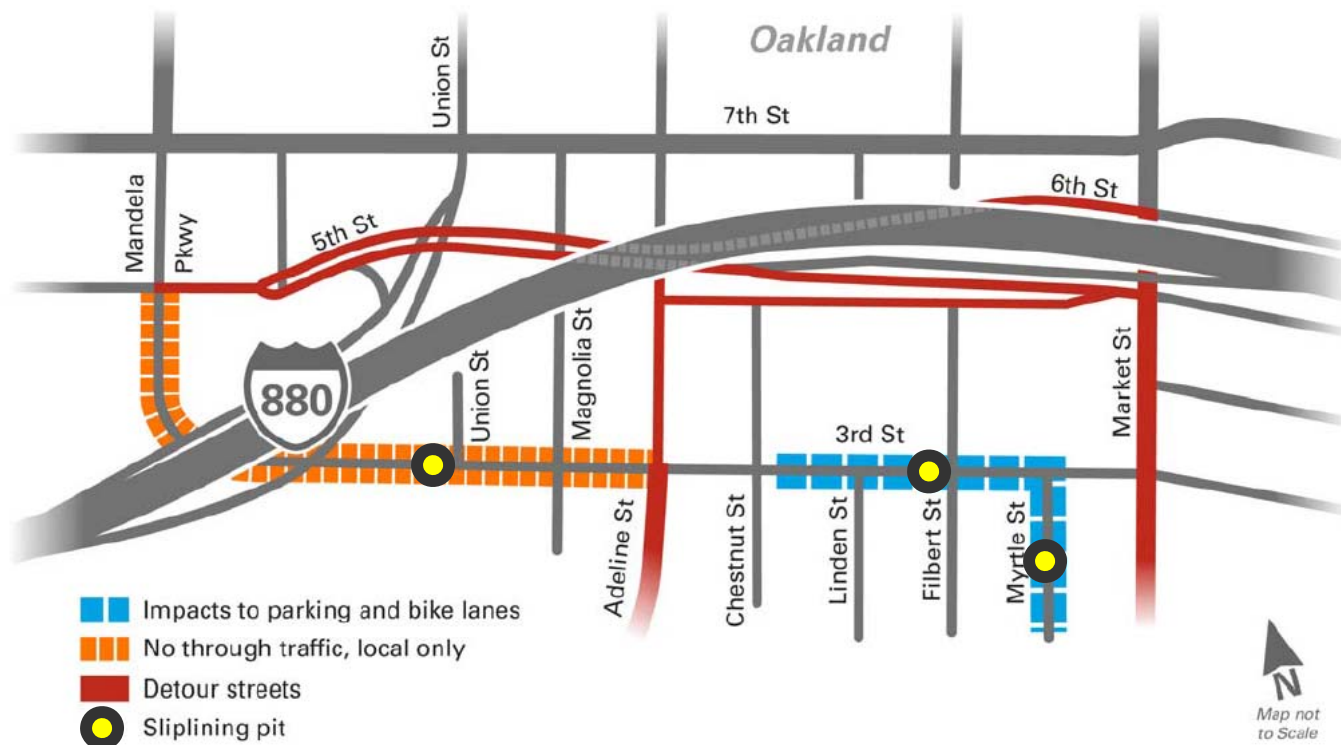
January 28, 2020 – Finish Manhole Rehabilitation and Complete Project

December 2020 – Construction Completion Deadline

Impacts and Mitigation Traffic Control



- 3rd at Union Street closed to vehicles, but open to bicyclist and pedestrians
- Lane shifts and no parking near 3rd at Filbert Street and Myrtle at 3rd Street
- Traffic being rerouted onto 5th and 6th Streets through Mandela Parkway, Adeline Street, and Market Street



Impacts and Mitigation Traffic Control



- Early and frequent discussions with parties affected by traffic control
- Coordination between contractor and local businesses
- Traffic control
 - Traffic message boards
 - Maintaining bike lanes where possible
 - Setting up NO PARKING signs well in advance of closures
- Staff has received positive feedback from stakeholders on outreach efforts



Impacts and Mitigation Noise



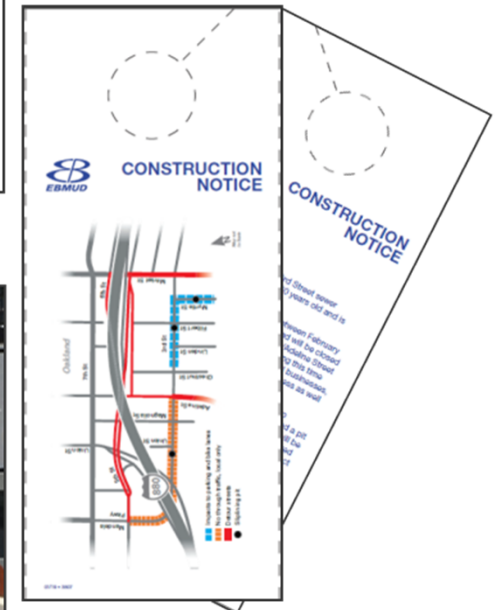
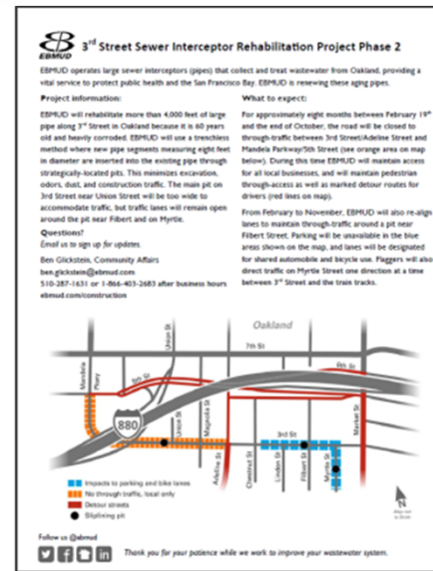
- Using low noise generating equipment wherever possible
- Minimizing idling of equipment
- Taking noise measurements at nearest neighboring receptors
- Notifying neighbors when noise-intensive activities will occur



Community Outreach Update



- In-person meetings and phone calls
 - January 2018 through February 2019
- Notification mailers sent during week of February 5, 2019
- Door hangers distributed on February 15, 2019
- Project signs at work sites



Community Outreach Update



- Major stakeholders
 - City of Oakland Transportation Department
 - West Oakland Environmental Indicators Project
 - Councilmember McElhaney's staff
 - Port of Oakland
 - Bike East Bay
 - West Oakland Business Alert
 - Jack London Improvements District
 - Oakland Marathon and Triathlon
- Local Businesses
 - Sincere Home Décor
 - Portillo Trucking
 - Amtrak/Caltrans Maintenance Facility
 - Duwo Properties
 - First Group Bus Yard
 - Pacific Agri-Products

External Coordination for SD392, Third Street Sewer Interceptor Rehab (Future Coordination is in Purple)

Last updated: March 25, 2019 by Kingsley

City of Oakland

- (Future) Fall 2019: Kingsley, Gary Lin, and Rebecca will meet with Jimmy Mach (City of Oakland Wastewater Engineering Division Manager) to discuss progress of sewer lateral connections.
- March 21, 2019: Kingsley Kuang and Buntich paid for and obtained 900 LF of NO PARKING signs (total of 36 signs). Total was \$35,214.48 and is good for 90 days.
- March 11, 2019: John Kyser, Rebecca, Kingsley, and Buntich met with Tesfaye Beyenne and Kevin Kashi regarding reduction in utility fees on the obstruction permit. Kevin's position is that there is nothing that can be done at his level, and that further correspondence should be between the District's and City's directors and attorneys.
- March 5, 2019: Rebecca had phone call with Kevin Kashi.
- February 21, 2019: Kingsley met with Jimmy Mach (Division Manager of Oakland Public Works) to discuss proposed sewer and storm drain bypass plans at siliplining pits.
- February 19, 2019: Rebecca had email exchange with Kevin Kashi regarding the obstruction permit fee table
- February 19, 2019: Rebecca left messages for Kevin Kashi and Fred Loeser regarding the fee calculation. Sent email summing the fees.
- February 19, 2019: Kingsley, Rebecca, John Law, and Mladen Buntich Construction met with City of Oakland transportation engineers to discuss edits to traffic control plans. Excavation permit, TCPs were signed off on. Tesfaye Beyenne noted that the excavation permit, which shows a filed date of 8/29/2018, needed to be renewed already, a fee of \$195. (Note that it expired before it was issued.) The obstruction permit application was submitted over the counter. The calculated fees amounted to \$69,694.
- February 19, 2019: Patricia McGowan returned Rebecca's call and said she would connect with Tabin that morning to confirm that she is satisfied with our plan and efforts.
- February 15, 2019: Rebecca forwarded various emails to Tabin Chung and Leo Hernandez to demonstrate Patricia McGowan's request and compliance as well as

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Next Steps



- Continue to engage in community outreach efforts
 - Attend regularly scheduled stakeholder meetings
 - West Oakland Commerce Association
 - West Oakland Business Alert
 - West Oakland Neighbors/NCPC
 - Other community meetings upon request
 - Provide updates to neighbors and community groups as schedule or activities change in the field
- Construction period ends in December 2020

Questions



Natural Resources Department Public Recreation Management

Planning Committee
April 9, 2019

Outline



- Discuss Mokelumne and East Bay Recreation Programs
- Review Results vs. Key Performance Indicators
- Discuss Major Activities and Initiatives in 2018

Mokelumne Watershed Recreation



- Four developed Recreation Areas plus over 35 miles of trail
- More than 600,000 visitors in a typical year
- Implementing recommendations from Mokelumne Watershed Recreation Management Plan (2010)
- KPIs established for cost recovery, safety and visitor satisfaction

Mokelumne Recreation Visitation



Management Area	2014	2015	2016	2017	2018
Camanche North Shore	170,525	147,726	192,660	242,036	236,674
Camanche South Shore	168,291	164,264	211,040	254,378	259,714
Pardee Recreation	66,769	48,140	57,224	89,926	56,630
Mokelumne River Day Use	60,753	53,520	64,252	55,233	48,313
Camanche Hills Hunting Preserve	13,262	12,768	12,498	12,610	13,368
Mokelumne Trails	8,462	8,259	9,417	9,519	11,199
Total Visitation	488,062	434,677	547,091	663,702	625,898

Mokelumne Recreation Revenues



Management Area	2014	2015	2016	2017	2018
Camanche North Shore	\$1,846,493	\$1,525,651	\$2,097,412	\$2,611,701	\$2,849,628
Camanche South Shore	\$1,920,050	\$1,728,206	\$2,380,703	\$2,873,529	\$3,137,441
Pardee Recreation	\$584,765	\$336,981	\$546,621	\$709,772	\$713,366
Camanche Hills Hunting Preserve	\$1,216,982	\$1,199,135	\$1,198,695	\$1,275,692	\$1,390,976
Total Revenues	\$5,568,290	\$4,789,973	\$6,223,431	\$7,470,694	\$8,091,411

Mokelumne Recreation Financial KPIs



Recreation Management Area And % Cost Recovery (CR) Target	FY14 CR	FY15 CR	FY16 CR	FY17 CR	FY18 CR
Camanche North Shore: 45%	66%	67%	54%	64%	71%
Camanche South Shore: 45%	64%	63%	63%	54%	68%
Camanche Hills Hunting Preserve: 95%	93%	87%	94%	100%	97%
Pardee Recreation: 40%	40%	45%	34%	46%	38%

Mokelumne Recreation Public Safety



RMP Goal	2014 Result	2015 Result	2016 Result	2017 Result	2018 Result
Boating Safety <.01%	.005% 1 Accident 20,461 Vessels	.000% 0 Accidents 18,223 Vessels	.011% 3 Accidents 28,130 Vessels	.011% 4 Accidents 36,918 Vessels	.009% 3 Accidents 34,537 Vessels
Visitor Incidents <.2%	.06% 294 Incidents 487,361 Visitors	.06% 273 Incidents 434,360 Visitors	.04% 207 Incidents 547,055 Visitors	.04% 243 Incidents 663,702 Visitors	.04% 249 Incidents 625,898 Visitors

Mokelumne Recreation Customer Surveys



- Visitor surveys include request for feedback on Courtesy, Cleanliness, Value, Safety and Security
- Target rating is minimum 80% “Good” or “Excellent”
- 2014 results: 93%
- 2015 results: 95%
- 2016 results: 95%
- 2017 results: 95%
- 2018 results: 94%

HOW ARE WE DOING?

Please rate the following regarding your most recent experience on EBMUD's Mokelumne Recreation Trail System. Please email additional comments to recreate@ebmud.com.

Date of visit: 12/29/18

	EXCELLENT	GOOD	ONLY FAIR	POOR	NO EXPERIENCE
Courtesy and helpfulness of staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanliness of location and facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value for services provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety/Security of recreation area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of information/signage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How can we improve? The best day of my 71 years of life! Beautiful

Optional - City/State of Residence:

Age: ☐ Under 35 ☐ 36 - 50 ☐ 51 - 60 ☐ Over 60 Gender: ☐ F ☐ M

HOW ARE WE DOING?

Please rate the following regarding your most recent experience at Camanche South Shore. Please email additional comments to recreate@ebmud.com.

Date of visit: 8/15/18

	EXCELLENT	GOOD	ONLY FAIR	POOR	NO EXPERIENCE
Courtesy and helpfulness of staff	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanliness of location and facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Value for services provided	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety/Security of recreation area	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of information/signage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How can we improve? Cockroaches very bad! Will not be coming back until problem fixed!

Campsite # or location of visit: 232

Optional - City/State of Residence:

Age: ☐ Under 35 ☐ 36 - 50 ☐ 51 - 60 ☐ Over 60 Gender: ☐ F ☐ M

HOW ARE WE DOING?

Please rate the following regarding your most recent experience at Camanche South Shore. Please email additional comments to recreate@ebmud.com.

Date of visit: 6/12/18

	EXCELLENT	GOOD	ONLY FAIR	POOR	NO EXPERIENCE
Courtesy and helpfulness of staff	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanliness of location and facilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value for services provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety/Security of recreation area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of information/signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall satisfaction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How can we improve? Great Weekend!

I like the Boat Clean Process. I wish that

Campsite # or location of visit: 232

Optional - City/State of Residence: Escondido CA 209-632-2683

Age: ☐ Under 35 ☐ 36 - 50 ☒ 51 - 60 ☐ Over 60 Gender: ☐ F ☐ M

Mokelumne Recreation Projects and Initiatives



- Pardee Shoreline Trail reconstruction completed
- Pardee Reservoir floating debris removal nears completion
- Pardee marina parking lot repaired and resealed

Mokelumne Recreation Projects and Initiatives (cont.)



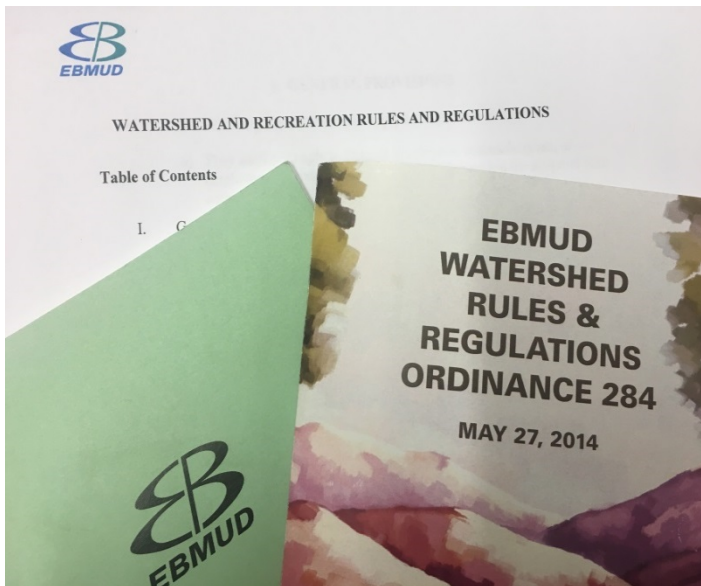
- Public events such as Children's Fishing Day and River Clean-up Day create positive visitor experiences
- Eco-tourism draws visitors from across the region
- Ranger-led education programs connect students and scouts with watersheds



Mokelumne Recreation Projects and Initiatives (cont.)



- First dog-friendly watershed trail opened at Camanche South Shore
- New Watershed rules established to protect visitors
- Infrastructure repairs and upgrades returned fuel and electric service to visitors



East Bay Watershed Recreation



- Two developed recreation areas and over 90 miles of trails
- Over 1.2 million visitors in a typical year.
- Venue for 3 collegiate crew rowing teams and host of 4 amateur rowing events drawing over 3,000 spectators
- KPIs established for cost recovery, safety and visitor satisfaction

East Bay Recreation Public Safety



		RESULTS				
<u>KPI</u>	<u>GOAL</u>	<u>CY 2014</u>	<u>CY 2015</u>	<u>CY 2016</u>	<u>CY 2017</u>	<u>CY 2018</u>
Visitor Incidents *	.2%	.02%	.03%	.03%	.04%	.025%
		281 Incidents	403 Incidents	371 Incidents	447 Incidents	335 Incidents
		1,166,555 visitors	1,263,651 visitors	1,292,700 visitors	1,227,300 visitors	1,344,849 visitors

*Number of documented visitor incidents per visitor day

East Bay Recreation Customer Surveys



- 2014 results: 100% of responses “Good” or “Excellent”
- 2015 results: 94% of responses “Good” or “Excellent”
- 2016 results: 92% of responses “Good” or “Excellent”
- 2017 results: 89% of responses “Good” or “Excellent”
- 2018 results: 85% of responses “Good” or “Excellent”



East Bay Watershed Recreation Visitation



Location	CY 2015	CY 2016	CY 2017	CY 2018
Lafayette Recreation Area	1,106,994	1,080,662	1,003,287	1,071,623 (+7%)
San Pablo Recreation Area	153,395	140,638	137,513	147,154 (+7%)
Trail System	68,300	71,140	86,500	126,072 (+36%)
Total	1,328,689	1,292,440	1,227,300	1,344,849 (+9%)

East Bay Watershed Recreation Revenue



Location	CY 2015	CY 2016	CY 2017	CY 2018
Lafayette Recreation Area	\$1,302,658	\$1,321,629	\$1,284,738	\$1,268,857
San Pablo Recreation Area	\$827,252	\$884,155	\$844,308	\$898,236
Watershed Trails	\$53,880	\$58,180	\$62,960	\$70,040
Total	\$2,183,790	\$2,263,964	\$2,192,006	\$2,237,133

East Bay Recreation Financial KPIs



Recreation Management Area	FY 2014 Actual	FY 2015 Actual	FY 2016 Actual	FY 2017 Actual	FY 2018 Actual
% Cost Recovery Target					
Lafayette Recreation Management Area: 65%	84%	82%	79%	79%	59%
San Pablo Recreation Management Area: 40%	54%	50%	57%	55%	55%

East Bay Recreation Projects and Initiatives



Trail resurfacing (3 miles) at Lafayette Reservoir



Upgraded signage

East Bay Recreation Projects and Initiatives



Refurbished play structure at
Lafayette Reservoir



East Bay Recreation Projects and Initiatives



Upgraded rental boat fleet

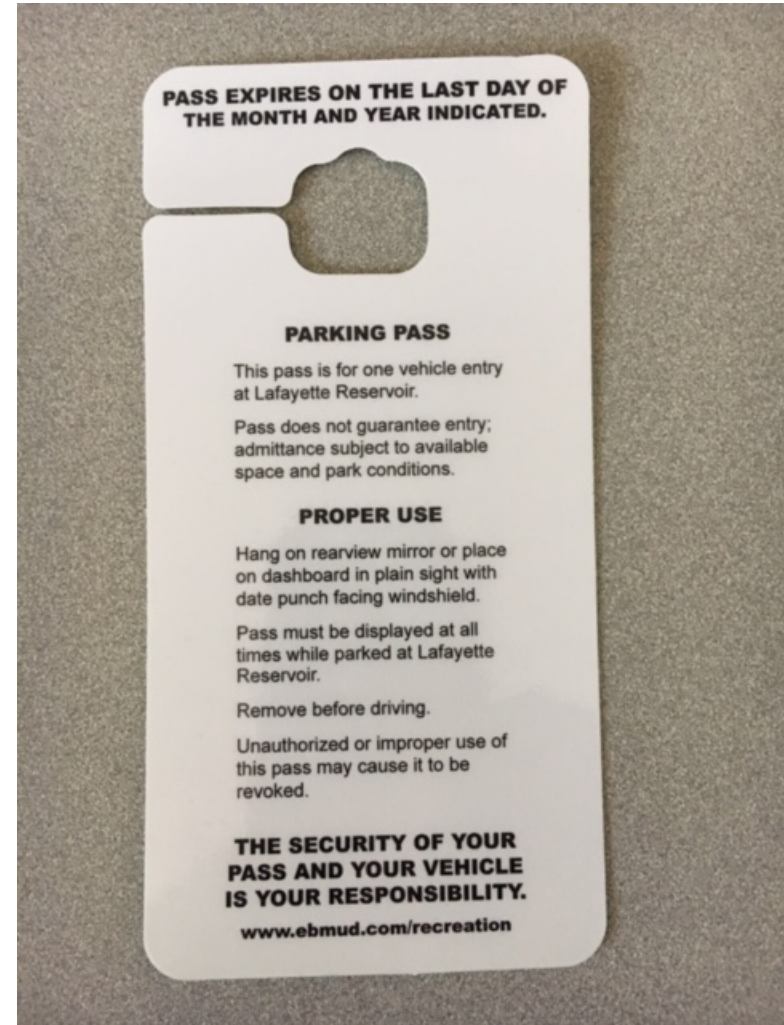


East Bay Recreation Projects and Initiatives



Informational signage and water bottle filling station.

East Bay Recreation Projects and Initiatives



New parking control system.

East Bay Recreation Projects and Initiatives



**Upgraded San Pablo
launch picnic area**

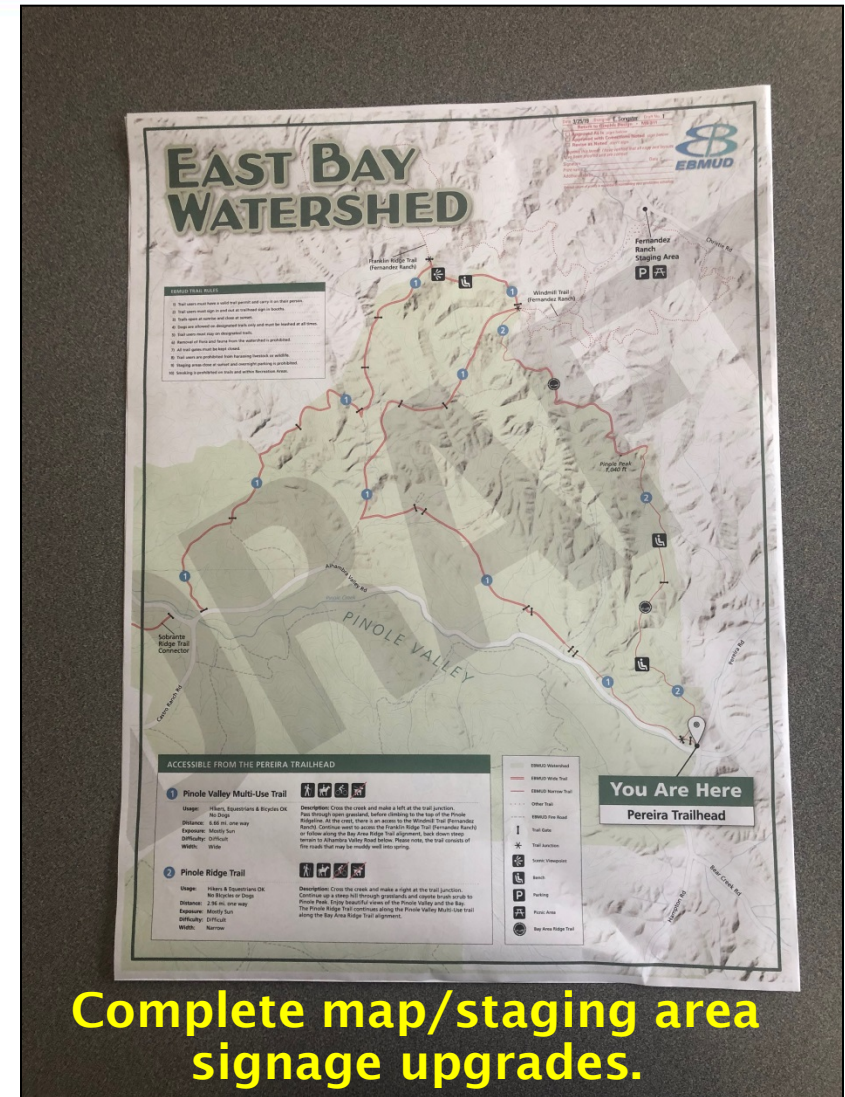


New, improved trail/creek crossing

Next Steps



- Complete the final 1990 Camanche Plan projects at Camanche South Shore
- Complete three key infrastructure projects at Camanche North Shore
- Improve revenue/expense ratio at Pardee to meet KPI



Complete map/staging area signage upgrades.