

FY17 Annual Readiness Report and Program Update

September 12, 2017 Planning Committee

Agenda



- Strategic plan KPIs
- FY17 Annual Readiness Report
- FY18 Key Initiatives

Emergency Preparedness KPIs



- Update Emergency Operations Plan every two years
 - Drafted and under final review
- Conduct Emergency Operations Team exercise annually
 - Conducted fall 2016
- Draft 2-3 event specific communications plans
 - 2 plans drafted and under internal review

Business Continuity KPIs



- Update all BCPs every 2 years
 - 22 out of 22 current (100%)
- Exercises conducted annually
 - 22 out of 22 exercises completed (100%)

Credit Union did not update their plan or conduct an exercise.

FY17 Program Plans



- Updated the District-wide Alternative Work Location Plan
- Updated 11 Site Security Emergency Action Plans and developed 3 new plans
- Drafted the Board of Directors Succession Plan and Alternative Work Location Plans to be incorporated in GM BCP
- Updated the Pandemic Response Plan, AB Power Loss Response Plan, Fuel Emergency Mitigation Plan, Emergency Notification Plan
- Updated the Critical Vendors List and continued Vendor BC Questionnaire survey

FY17 Training – Student Hours



Training Program	FY15	FY16	FY17
Business Continuity	703	585	278
Emergency Preparedness/ Response	1,225	1,248	1,492
Ranger Training – Annual Refresher and Live Fire	200	288	250
Total	2,128	2,121	2,020

Exercises Conducted



Type	FY15	FY16	FY17
Drills/Tests	12	15	16
Workshops	6	2	7
TTX	14	18	11
FX	9	7	7
Full Scale Functional	1	1	1
Total	35	43	42

Exercise Highlights



- Emergency Operations Team (EOT) functional exercise
 - Large main break and sinkhole in Berkeley
- Alternative work location exercise for Board Meeting in Orinda
- District-wide communication system drills
 - September 2016 – 84% response
 - April 2-17 – 99% response

District Events for FY17



- 2017 Briones Aqueduct Slide Repair - District Declared Emergency
- 2017 Winter Storms - County, State and Federally Declared Disaster

Outreach and Coordination



- Emergency coordination and facility tour
 - San Pablo WTP, Summit Reservoir, and pipeline replacement
 - City of Richmond, El Cerrito, Kensington, and CCC representatives
- Emergency water distribution
 - Multiple meetings with City of Berkeley
- Earthquake preparedness
 - HayWired Earthquake Report Volume 1 released
 - Hosted workshop in April

Mitigation and Prevention



- Implemented security design standards for 9 new and upgraded facilities projects based on Physical Security Vulnerability Assessment
- Upgraded the network for upcountry facilities
- Implemented a new voicemail system linked to Outlook
- Improvements to the data backup infrastructure,
- Staged eight emergency laptop computers at the Walnut Creek Water Treatment Plant.
- Migrating the contact center phone system to a more resilient cloud based service

FY18 Key Initiatives



- Complete BOD Succession Plan
- Complete MOU with Berkeley for emergency water distribution
- Expand emergency water distribution discussion with other cities
- Conduct facility tour for East of the Hills first responders and City Managers

Questions?



Semi-Annual Water Quality Update

Planning Committee

September 12, 2017

Overview



- January 1 – June 30, 2017
- KPIs
 - Comply with 100% of regulations
 - Comply with 100% of District's water quality goals
- Water Quality Initiatives
 - Disinfection byproduct control
 - Distribution system water quality
 - Lead control efforts
- Possible regulatory changes

- Met 100% of state and federal drinking water regulatory requirements
- Met 97% of District's water quality goals
 - District has 122 separate water quality goals
 - Goals are set at levels substantially stricter than regulatory requirements

Trihalomethanes (THMs) and Haloacetic Acids (HAA5)



- Goals are half of the MCL
 - THMs goal is 40 ppb
 - HAA5 goal is 30 ppb
- Samples collected quarterly from 16 locations each quarter (32 total)
- THMs: 23 of 32 individual samples exceeded the goal
- HAA5: 19 of 32 individual samples exceeded the goal

THMs and HAA5



- Both are disinfection byproducts
- Both form when chlorine reacts with organic material in the water
- Higher levels of organic material in the water due to long drought followed by heavy rainfall
- Warmer temperature and longer retention times necessitate higher chlorine doses

N-Nitrosodimethylamine (NDMA)



- Not regulated
- California Notification Level (NL) is 10 ng/L
- District's water quality goal is 3 ng/L
- 6 of 10 samples exceeded goal, average was 3.6 ng/L
- None exceeded state's NL
- Chloramination byproduct

Filter Turbidity



- Regulatory standard is 95% of readings less than 0.3 NTU (0.2 NTU for inline plants)
- District goal is 99.9% of readings less than 0.1 NTU, never higher than 0.2 NTU
- Each plant had a few occasions scattered over the 6-month period during which turbidity exceeded the goal, generally attributed to challenging raw water quality and faulty equipment

Water Quality Initiatives



DBP Reduction Efforts - Immediate



- Intensive monitoring efforts
- Chemical dose adjustments at treatment plants
- Evaluation of chemical injection and mixing equipment
- Laboratory/bench-scale tests
- Flushing in distribution system
- Aeration in reservoirs
- Expert Panel review

DBP Reduction Efforts – Long-term



- Planning and design of major treatment plant improvement projects
- pH adjustment facilities
- Ultraviolet light for disinfection at Orinda WTP
- Clarification processes for DBP-precursor removal
- Oxygenation system at San Pablo Reservoir

Distribution System Water Quality



- High water age continues to be problematic
 - Temporarily remove reservoirs from service
 - Operate reservoirs at lower levels
 - Long-term: downsize reservoirs
- Periodic chlorination of individual reservoirs is necessary

Lead Control Efforts



- Lead and Copper Rule
- Inventory of service lines
- Customer voucher program
- Sampling in schools

Regulatory Changes



- New MCL for 1,2,3-TCP
- Deleted MCL for hexavalent Cr
- State is reviewing perchlorate MCL
- Revisions to Lead and Copper Rule
 - More outreach to customers, health-based standard, increased transparency, point-of-use filters, and other changes

Questions?



Semi-Annual Regulatory Compliance Update

Planning Committee

September 12, 2017

Reporting Period: March 1, 2017 through August 31, 2017

- Enforcement actions
- Enhance Compliance Action
- Workplace health and safety
- Upcoming activities

Enforcement Review



- Strategic Plan KPI = Zero NPDES and Waste Discharge Requirement (WDR) permit Notices of Violation (NOVs) received
- FY17
 - 4 NOVs for NPDES or WDRs
- This reporting period
 - 4 NOVs for NPDES or WDRs
 - 2 NOVs for air permits

Notices of Violation



- Claremont Tunnel Discharge
 - Discharge managed by contractor
 - Permit limit = 0.0 mg/L total chlorine
 - Actual discharge = 3.17 mg/L total chlorine
 - \$3,000 mandatory minimum penalty

Notices of Violation (continued)



- Three main breaks 2015/2016
 - \$382,095 to State Water Pollution Cleanup and Abatement Account
 - \$49,000 to Fish and Wildlife Pollution Account
 - \$80,000 to National Fish and Wildlife Foundation
 - \$382,095 suspended pending completion of Enhanced Compliance Action

Enhanced Compliance Action



- Goal: Protect creeks by detecting leaks before they become main breaks
- 485 pipes 12 inch and crossing or near a creek
- Install and monitor for 3 years

Notices of Violation (Air)



- Main WWTP Air Permit
 - 219,700 cubic feet of unabated digester gas released through relief valve
 - Control system cable failure
 - Future settlement with BAAQMD is expected

Notices of Violation (Air)



- Main WWTP Air Permit
 - Accepted \$17,700 settlement
 - Exceeded hydrogen sulfide limit 4 times in digester gas
 - New limit changed from 340 ppm instantaneous to 200 ppm annual average

Cal OSHA Citation

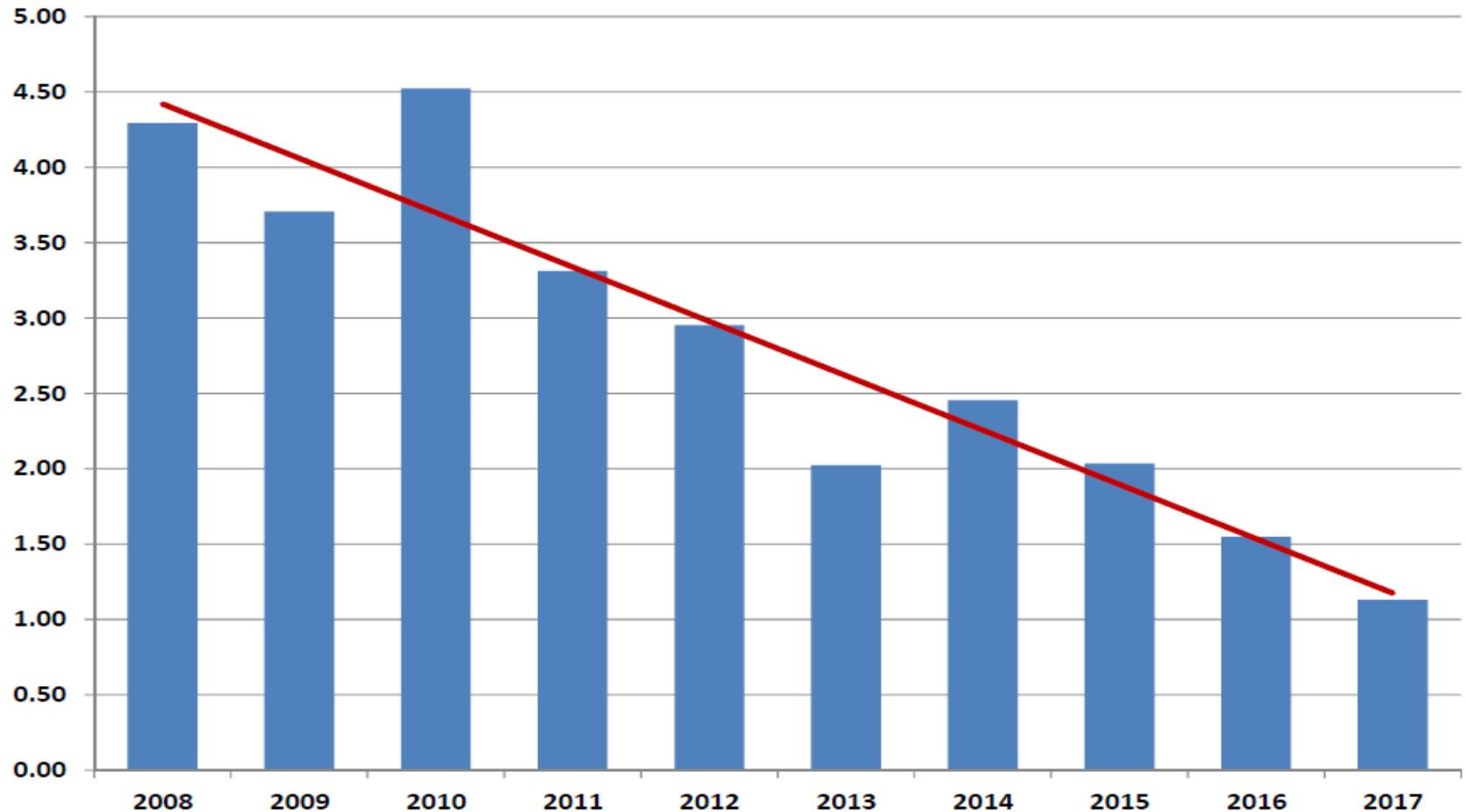


- 2 citations related to partial finger amputation
 - General Violation related to lack of training - \$935 fine.
 - Accident Related Serious Violation for lack of a machine guard - \$22,500 fine.
- Appeal of the serious violation in progress

Lost Time Injury Rate



District Lost Time Injury Rate



Upcoming Activities



- Wastewater wet weather facility corrective action plan
- Poison Lake site remediation
- Bixler fuel storage tank site closure
- Participatory team ergonomics guide

Wet Weather Program Management Update

Planning Committee

September 12, 2017

- Overview of Wet Weather Operation of the Wastewater System
- Challenges from the 2016-2017 Wet Weather Season
- Improved Approach to Ensuring Wet Weather Readiness
- Conclusion

Wastewater Interceptor System



- EBMUD:
 - 29 miles of gravity interceptors
 - 8 miles of force mains
 - 15 pump stations
 - Main Wastewater Treatment Plant (MWWTP)
 - 3 Wet Weather Facilities (WWFs)
 - 5 overflow structures



- Satellites: ~1,600 miles of regional collection system
- Property Owners: ~1,600 miles of private sewer laterals

Wastewater Flow Range



- **Wastewater flow from Satellites (MGD = million gallons per day)**
 - Average annual flow = 50 MGD
 - Peak wet weather = 415 MGD (at MWWTP)
 - **Peak wet weather = 700 MGD (system-wide)**
 - Primary treatment = 320 MGD (max)
 - Secondary treatment = 168 MGD (max)

Wet Weather Facilities

San Antonio Creek
(S. Interceptor)
No storage;
utilized

Point Isabel
(N. Interceptor)

Provides ~ 1 mill
gallons of storage

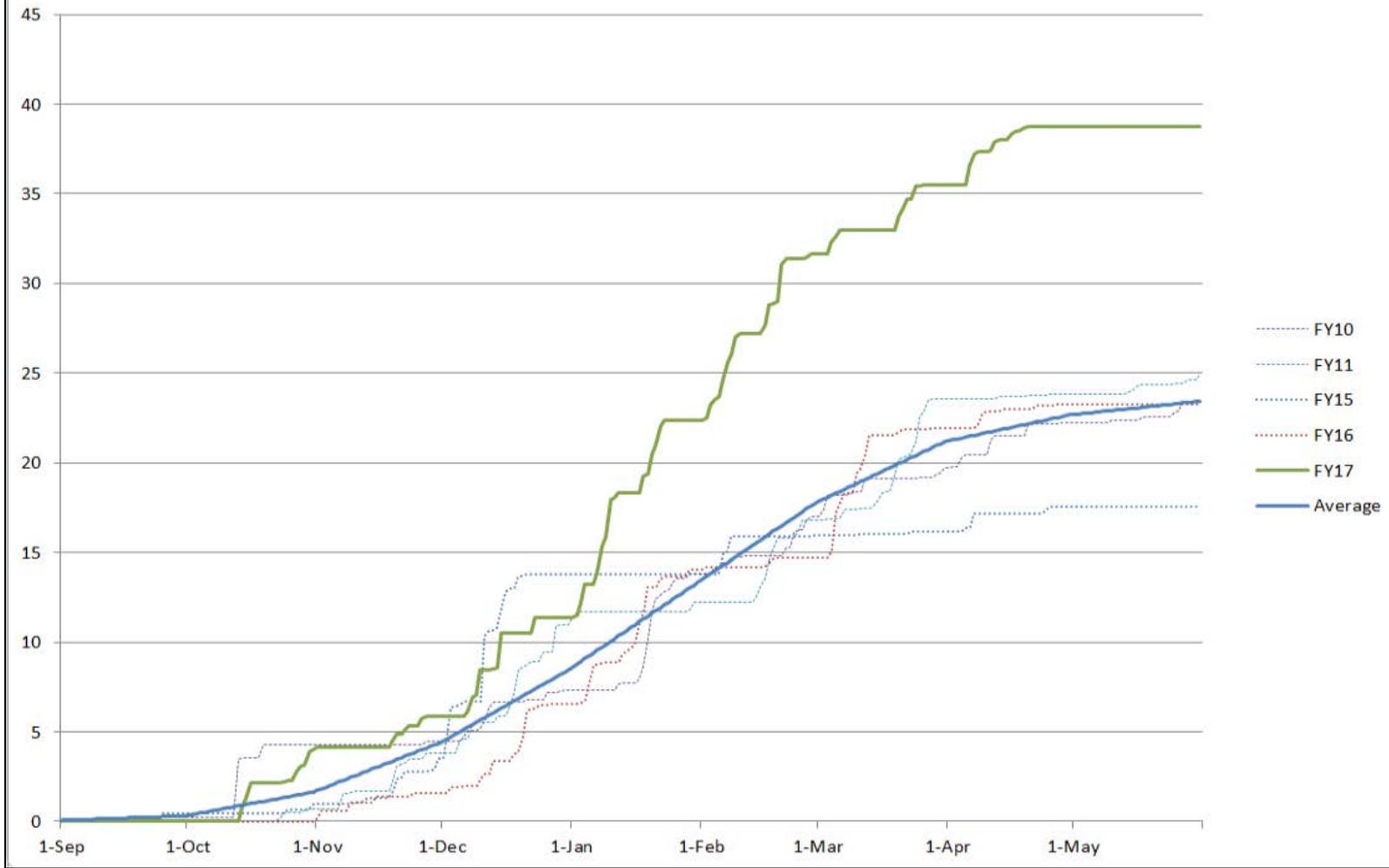
Oakport
(S. Interceptor)
Provides ~ 3 million
gallons of storage



2016-2017 Wet Season was Particularly Challenging



Precipitation by Fiscal Year



Opportunities for Continuous Improvement



- Seven incidents occurred last season that are attributable to either operator error, equipment malfunction, or system capacity issues
- EBMUD is implementing institutional measures to improve our wet weather operations to ensure improved performance in the future

Key Elements of Improved Wet Weather Program Management



- Enhancing training program
- Documenting and institutionalizing best practices
- Identifying and addressing single points of failure
- Implementing organizational improvements and enhancing coordination
- Investigating options for proactive flow management

Training and Exercises

- Improved the breadth and depth of our training
- Increased the hours per training session
- Added new teaching modules
- Included new troubleshooting and response plans to cover power outages, control system outages, and loss of plant air
- Added an evaluation of the operators' retention of knowledge and demonstration of skills and abilities



Documentation of Operational Practices



- Reviewed and updated all WWF SOPs and checklists
- Developed an internal wiki webpage for posting all training materials
- Holding supervisory staff accountable for annually reviewing and updating training materials, checklists, and SOPs

The image displays three screenshots of the EBMUD internal wiki website. The top-left screenshot shows the 'Remote Operations' page, which includes a navigation menu on the left, a search bar, and a main content area with a map of San Francisco Bay. The top-right screenshot shows the 'Point Isabel Standard Operating Procedures' page, listing various ISA procedures such as 'ISA 02 Entry to Facility' and 'ISA 78 Draining and cleaning after the storm'. The bottom screenshot shows the 'Remote Operations Training' page, detailing training materials for 2017, including 'Point Isabel Training' and 'Standard Operating Procedures'.

Organizational Improvements



- Instituted mandatory training for all operators and supervisory staff to improve understanding of interdependencies
- Developed a Supervisory Staffing Plan
- Implementing an Incident Command System (ICS) to facilitate better coordination during wet weather events



Improve Level Monitoring Stations & Overflow Structures



- Instituted a practice to field-test the operation and calibration of equipment at level monitoring stations and overflow structures before wet weather events
- Evaluating possible reliability improvements for power supply, communication links and data storage



16/SEP/09 13:24:46 3720-LEVEL MONITORING STATIONS

STATION NUMBER	STATION LEVEL	STATION LOCATION	INVERT ELEVATION	INTERNAL DIAMETER	LEVEL AT 90% FULL	LEVEL AT 95% FULL
NORTH INTERCEPTOR						
LNS 1	N1 LEVEL 1.15 FT	BUCHANAN ST.	98.97 FT	42.00 IN	3.15 FT	3.33 FT
LNS 8	N2 LEVEL 1.15 FT	2ND & VIRGINIA	95.50 FT	48.00 IN	3.60 FT	3.80 FT
LNS 2	N3 LEVEL 1.15 FT	AQUATIC PARK, BERKELEY	92.16 FT	66.00 IN	4.95 FT	5.20 FT
SOUTH INTERCEPTOR						
LNS 3	S1 LEVEL 1.20 FT	EMBARCADERO DR.	91.94 FT	84.00 IN	6.30 FT	6.65 FT
LNS 3A	S0 LEVEL 1.20 FT	EMBARCADERO DR.	91.94 FT	84.00 IN	6.30 FT	6.65 FT
LNS 4	S2 LEVEL 1.25 FT	DENNISON & KENNEDY	96.49 FT	78.00 IN	5.85 FT	6.18 FT
LNS 5	S3 LEVEL 1.10 FT	EAST 7TH & OVERPASS	102.78 FT	84.00 IN	6.30 FT	6.65 FT
LNS 11	S4 LEVEL 1.20 FT	DIV STRUCTURE @ OAKPORT	89.50 FT	84.00 IN	6.30 FT	6.65 FT
ALAMEDA INTERCEPTOR						
LNS 6	A1 LEVEL 1.15 FT	WARDNER SQUARE DRIVE	92.20 FT	60.00 IN	4.50 FT	4.75 FT
LNS 7	A2 LEVEL 0.14 FT	CLEMENT & BROADWAY	103.99 FT	42.00 IN	3.15 FT	3.33 FT

PLANT INF 137 MGD
SECONDARY INF 152 MGD

Identifying and Addressing Single Points of Failure

- Performing detailed evaluations of key equipment and systems at IPS and WWFs to identify:
 - single points of failure
 - consequence of failure
 - mitigation measures



Proactive Flow Management



- Strike a balance between ensuring that we have no SSOs while trying to direct as much flow as possible to the MWWTP
 - Activate the WWFs earlier
- Use models and statistical analyses to guide operational decisions

Conclusion



- EBMUD takes pride in being an effective steward of San Francisco Bay
- We have made it our highest priority to improve our performance to protect public health and San Francisco Bay
- We are using this as an opportunity to make physical, organizational, and cultural changes to ensure compliance going forward



Thank you

Main Wastewater Treatment Plant Seismic Evaluation Update

Planning Committee
September 12, 2017



Agenda

- Background
- Past Seismic Evaluations
- MWWTP Seismic Evaluation Update Project
 - Phase 1 – Past Review
 - Phase 2 – Evaluation Update
- Next Steps



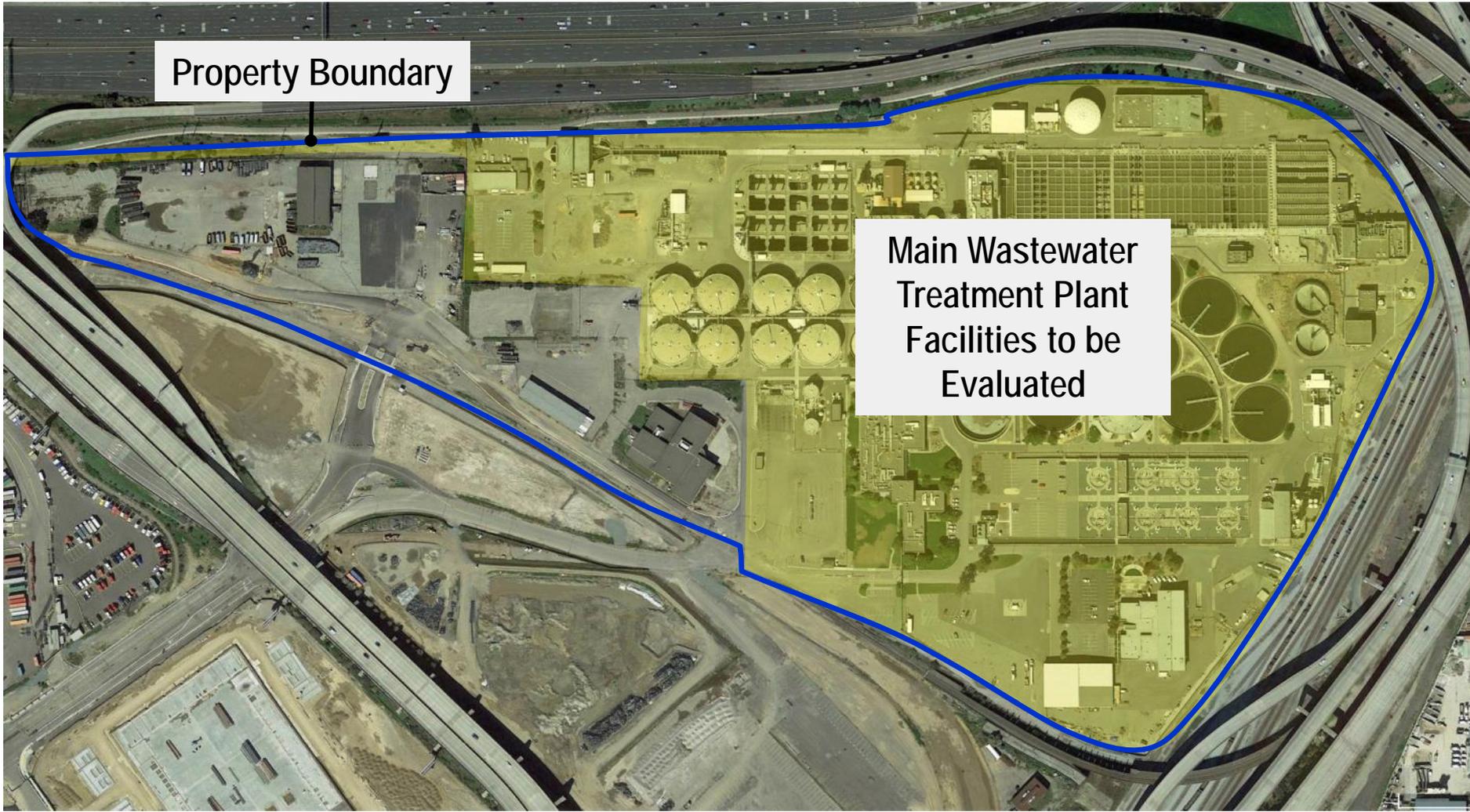
Scope

MWWTP Facilities



Property Boundary

Main Wastewater
Treatment Plant
Facilities to be
Evaluated



Scope

MWWTP Effluent Outfall Pipeline



- 108-inch Outfall Pipe
- Dechlorination Facility
 - Control Building
 - Chemical Storage Tanks
- Transition Structure



Background

MWWTP Facilities

- Over 80 structures
 - Buildings
 - Tanks
 - Channels
 - Underground facilities
- Age of Facilities
 - Oldest from 1950s
 - Added treatment 1960s and 1970s
 - Last major expansion 1990s
 - More recent additions



Past Seismic Evaluations

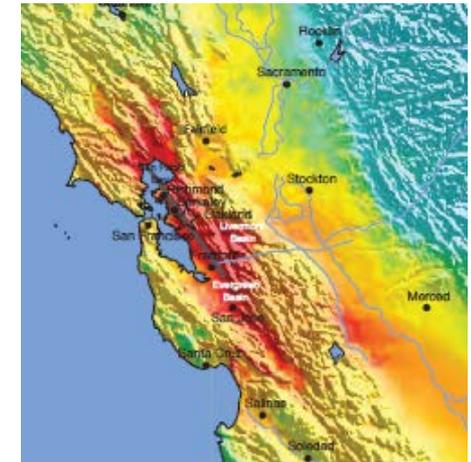
- Following the 1989 Loma Prieta Earthquake
 - Three phases of evaluations
 - From 1989 to 1996
 - EQE Engineering Support
- Other Seismic Evaluations
 - 2005 Review of changes in seismic criteria
 - 2008 Seismic evaluation of storage facilities
 - 2014 Seismic evaluation of digesters



Past Seismic Evaluations Criteria



- Maximum Earthquake: Hayward 7.5
- Probable Earthquake: Hayward 6.5
- Levels of Service
 - Life Safety
 - Hydraulic Flow Through the System
 - Disinfection
 - Full Service: Primary and Secondary Treatment
- Evaluation Guidelines [\(now obsolete\)](#)
 - 1987 Applied Technology Council: ATC-14
 - 1988 Uniform Building Code



Past Seismic Evaluations Findings and Outcomes



- Removal of three structures
- Retrofit of seven structures
 - Chlorine Unloading Platform
 - Dewatering Building
 - Operation Center
 - Surface Aeration Control Buildings (two)
 - Old Maintenance Building
 - Sed. Tank Blower Building
- System-wide equipment anchoring
- Procurement of emergency response equipment



MWWTP Seismic Evaluation Update

Evaluation Approach



Review Past Findings

- Phase 1 (complete)
- Update criteria
- Review geotechnical findings
- Collect facility records

Conduct Visual Inspections

Seismic Evaluations

- 2013 ASCE 41 – Seismic Evaluation of Existing Buildings
- 2006 ACI 350 – Seismic Design of Liquid-Containing Concrete Structures

Seismic Risk Assessment

<u>Rating</u>	<u>Consequence</u>	<u>Likelihood</u>
0	Minor to None	Very Unlikely
1	Moderate – Low	Unlikely
2	Moderate – High	Likely
3	Serious	Highly Likely

Alternative Analysis Review

Prioritize Capital Improvements



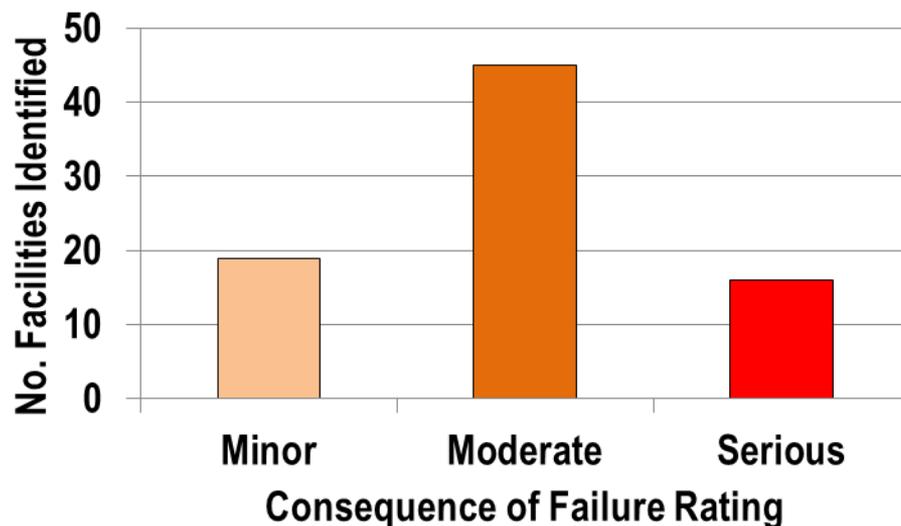
MWWTP Seismic Evaluation Update

Phase 1 Evaluation (complete)



- Review of Past Seismic Evaluations
- Inventory of Facilities
- Inventory of Documents
- Conceptual Level Risk Assessment

Results of Consequence of Failure Review

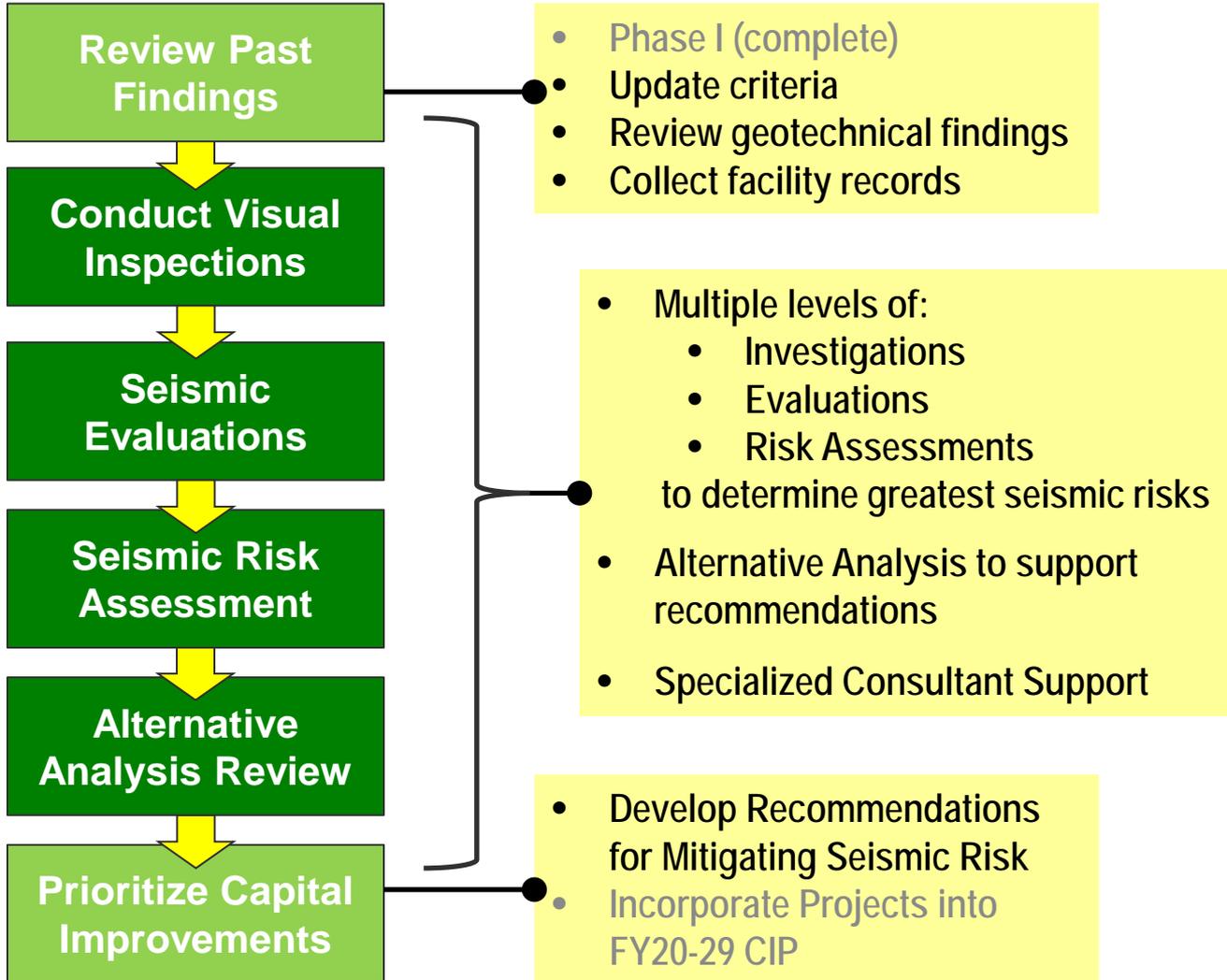


Facilities within the “**Serious**” Consequence Group

Type of Facility	No.
Electrical and Gas Facilities	6
Liquid Process	4
Primary Process	3
Support Facilities	2
Solids Process	1

MWWTP Seismic Evaluation Update

Phase 2 Evaluation



MWWTP Seismic Evaluation Update

Next Steps



- Execute consultant agreement for specialized seismic support (for Board consideration on September 12, 2017)
- Complete Seismic Evaluation Update (July 2018)
- Incorporate prioritized recommendations into FY20-29 CIP



IT Security Update

**Board of Directors
Planning Committee
Sept. 12, 2017**

IT Security @ EBMUD



- Formed in 2006 as a separate division using staff from other ISD groups.
- Staffed with 5 people.
- Primary function is to protect the District's information systems and data.
- A majority of staff time spent on operational work related to managing the IT Security infrastructure
- Other responsibilities include:
 - data security consulting for projects with vendors/consultants
 - developing cyber security and data security policy and procedures
 - maintaining the ISD business continuity plan

IT Security Definitions



- **Vulnerability** – A weakness or flaw in software or a system
- **Exploit** – A way to leverage a weakness in software or a system
- **Malware – Malicious Software**
- **Threat** – A hacker exploiting a vulnerability
- **Phishing** – Fake emails used to trick users into giving up sensitive information

IT Security Definitions



- **Incident** - *A security event that potentially compromises the confidentiality, integrity, or availability of an information asset.*
- **Breach** - *An incident that results in the confirmed disclosure—not just potential exposure—of data to an unauthorized party.*

Evolving Security Threats



- In 2006 and before the threats came from the skilled hacker mainly seeking notoriety or bragging rights.
- Today malware is a black market commodity
 - Minimal skills needed to attack
 - Extensive cloud based attack services readily available

Evolving Security Threats



- This results in an exponential increase in cyber threats.
- Primary motivation is money.
- Email is a primary vector with spear phishing being an emerging tactic

Cyber Attack For Hire



 vDOS ☰

How do I purchase a vDos plan?

Purchasing a booter plan is easy and only takes a few minutes, we accept the following payment methods, based on your billing country/region and the currency in which you want to pay to make it an easy, secure and a quick shopping experience for you.

 Bitcoin, we believe in the huge potential of this new digital currency.

A pink piggy bank icon with a gold coin slot on top, set against a teal circular background.

Pricing Lists

Select the best package based on your usage needs and size of business.

Bronze	Silver	Gold	VIP
\$19.99 /monthly	\$29.99 /monthly	\$39.99 /monthly	\$199.99 /monthly

* - From krebsonsecurity.com

Ransomware



- Makes your data inaccessible and holds it for ransom
- 600% increase in 2016
- \$1 Billion earned in 2016 by hackers
- \$5 Billion estimated damage in 2017

WannaCry Ransomware



- WannaCry – May 12, 2017
 - Over 200,000 computers across 150 countries impacted
 - \$4 - 8 Billion estimated losses
 - Leveraged EternalBlue Exploit (NSA)
 - Main defense – keeping patches current

Domestic Cyber Attacks



Equifax breach

Hackers Breached San Francisco's Transit System and Demanded a Ransom

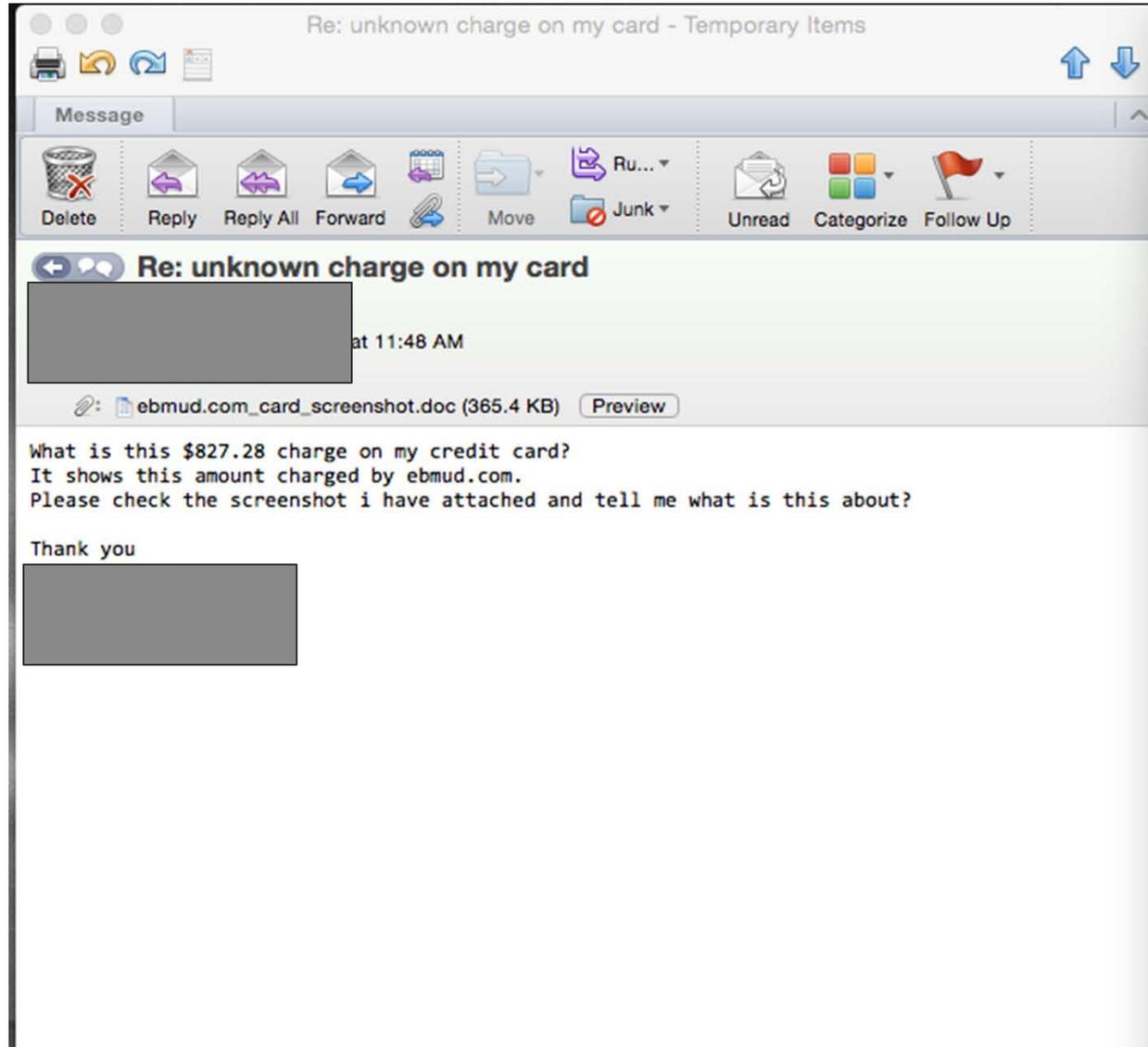
Researchers Discover U.S. Government Site Hosting Malicious Ransomware

Wendy's credit card hack hit 1,000 restaurants

EBMUD Malware Incident

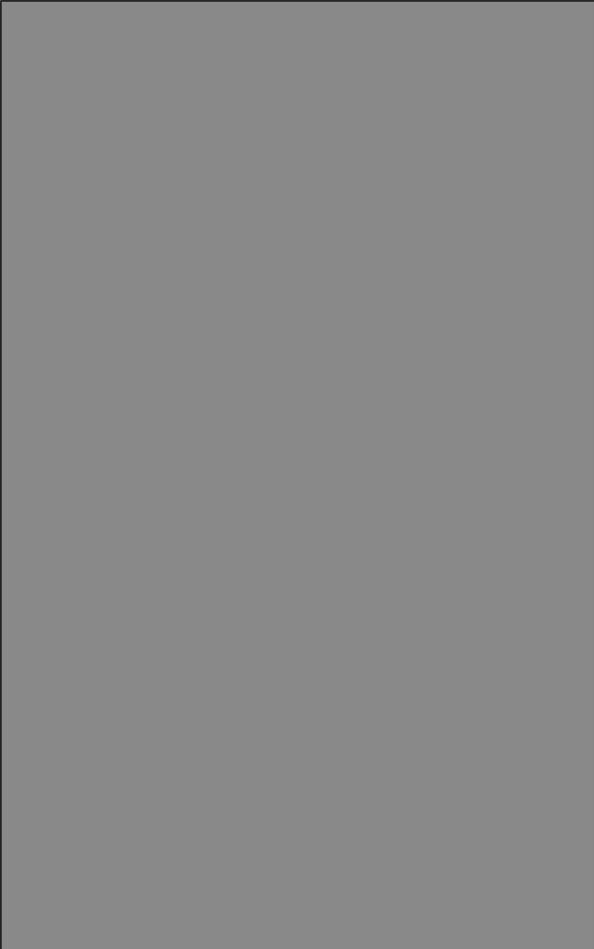


- 700 Emails sent to District
- 12 Emails made it passed email filters
- 5 emails opened
- 1 email attachment opened



Email Exploit Attempt



-  [\[REDACTED\]@ebmud.com](mailto: [REDACTED]@ebmud.com)
- [\[REDACTED\]@ebmud.com](mailto: [REDACTED]@ebmud.com)
- [\[REDACTED\]@ebmud.com](mailto: [REDACTED]@ebmud.com)
- [\[REDACTED\]@ebrnud.com](mailto: [REDACTED]@ebrnud.com)
- [\[REDACTED\]@ebmud.com](mailto: [REDACTED]@ebmud.com)
- [\[REDACTED\]@ebmud.com](mailto: [REDACTED]@ebmud.com)
- [\[REDACTED\]@ebmud.com](mailto: [REDACTED]@ebmud.com)

Email Exploit Attempt



From: [REDACTED]@ebrnud.com]
Sent: Thursday, August 03, 2017 9:05 AM
To: [REDACTED]
Subject: [SUSPICIOUS MESSAGE] Professional Fee

This Message contains suspicious characteristics and has originated outside your organization.

Hi [REDACTED]

We have a time sensitive payment request to a vendor today, will you have a moment to handle this today?

Regards,

[REDACTED]

What is EBMUD's strategy



- Defense in Depth
 - External cloud based security services
 - Perimeter security
 - Internal Network Monitoring
 - Configuration Management
 - Employee Awareness
 - Incident Response / Recoverability

Next Steps



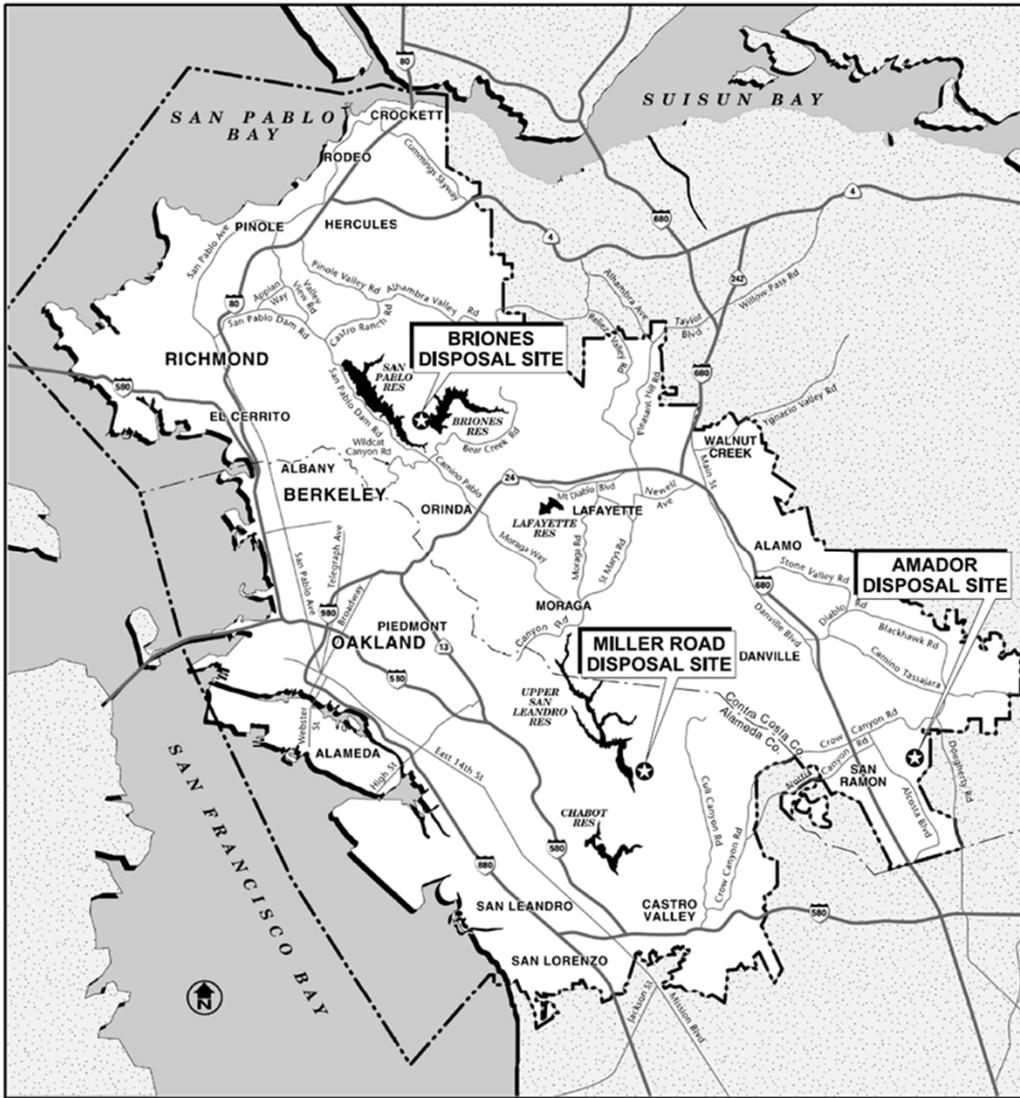
- IT Security Review planned for early 2018
 - Independent review existing priorities
 - Any new vulnerabilities

Trench Soils Removal and Sustainable Local Reuse

Planning Committee

September 12, 2017

Trench Soils Storage Sites



- Temporary storage of soil and rock generated by pipeline work
- In last 5 years, District generated 46,000 cubic yards (CY) per year
- Sites approaching full capacity

Project Purpose



- Create capacity for ongoing storage of newly generated trench soils
- Maintain environmental compliance
- Protect drinking water quality



Scope



- Characterize trench soils
- Identify facility(ies) for reuse
- Sort, load and haul
 - 200,000 CY from Briones
 - 75,000 CY from Miller Rd
 - 25,000 CY from Amador
- Implement best management practices for storm water and dust control
- \$15M contract
- 2 year contract plus 2 single year options

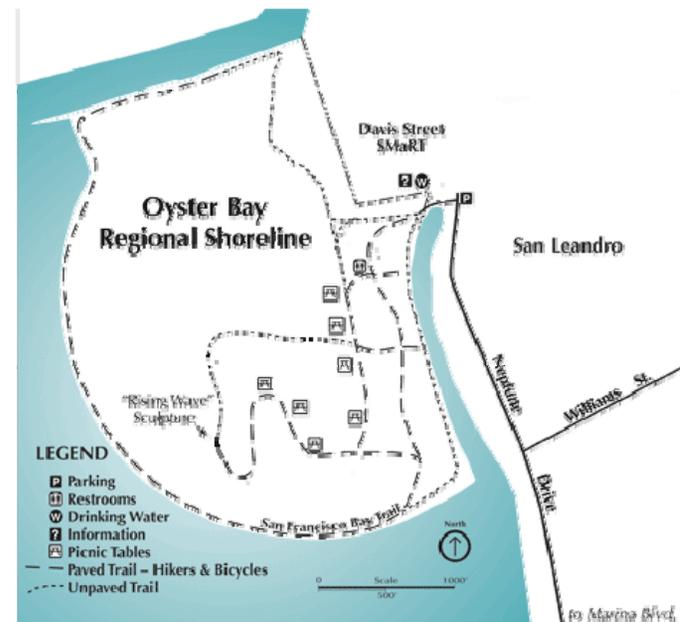
Impacts



- Temporary increase in trucks on the road
- Notice of Exemption submitted to Alameda and Contra Costa Counties
- Coordination required for ongoing District operations

Benefits

- Capacity for ongoing District operations
- Reuse of soil at a public space - EBRPD Oyster Bay Regional Shoreline



Schedule and Next Steps



- Complete contract negotiations
- Board review on September 26
- Off-haul
 - Briones: April to October 2018
 - Amador: April to June 2019
 - Miller Road: June to September 2019
- Master Plan Update

Customer Assistance Policy

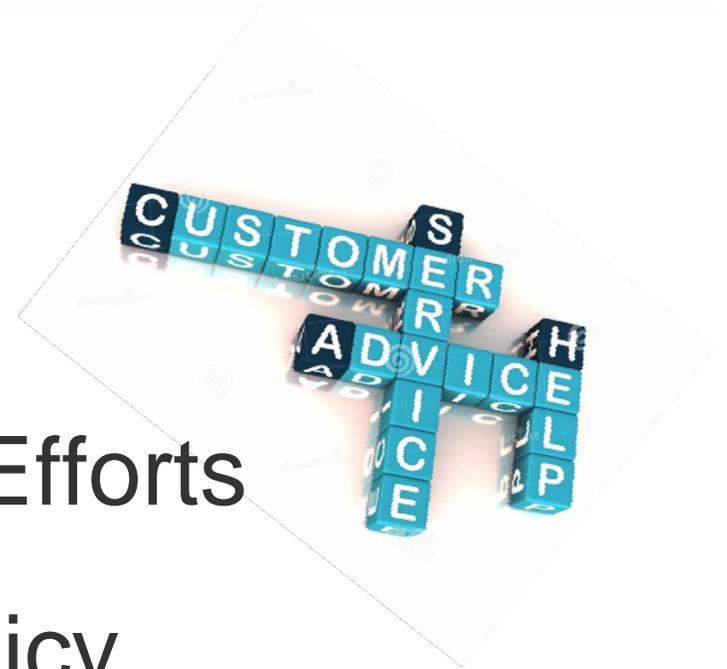
Planning Committee

September 12, 2017

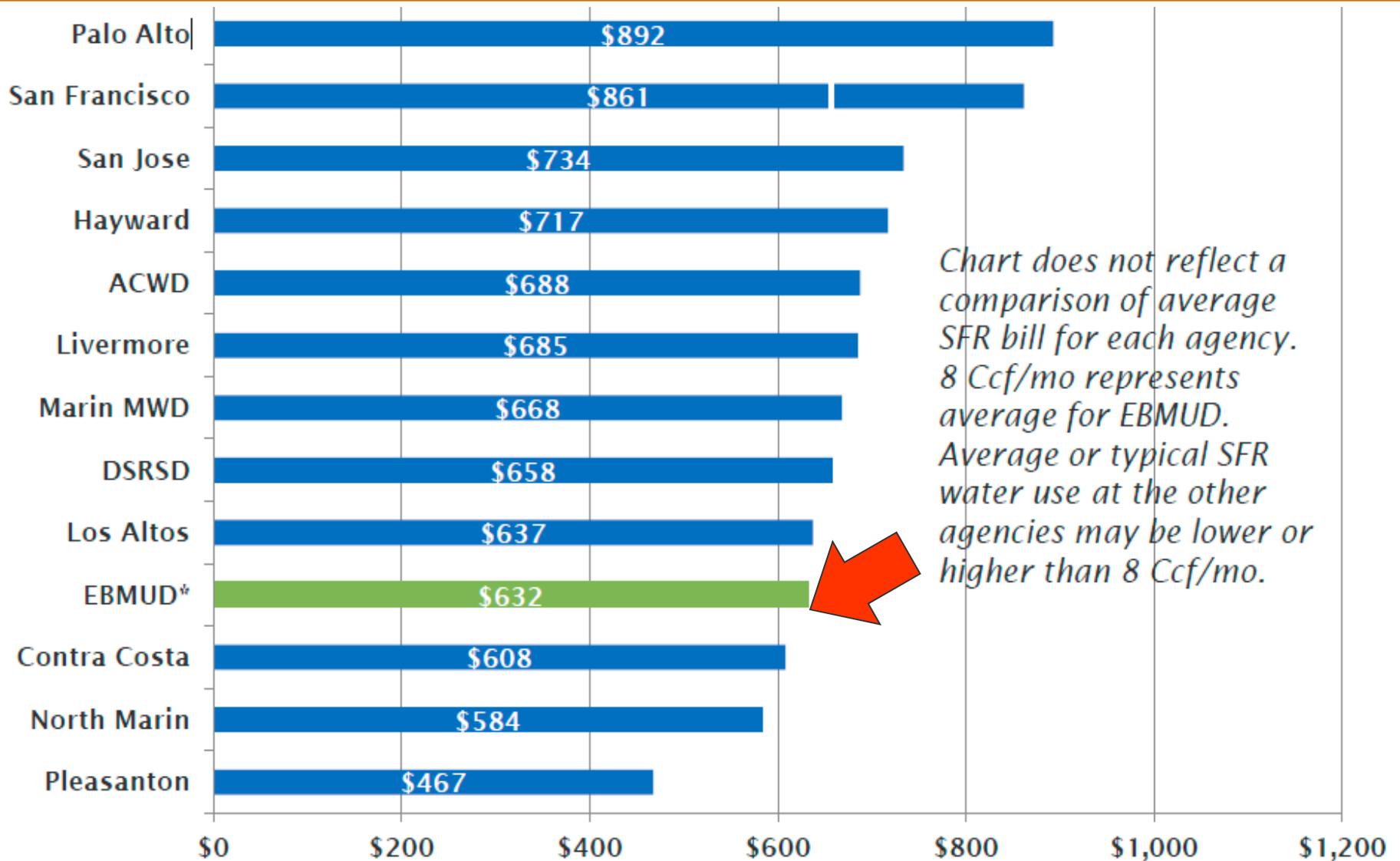
Agenda



- Background
- Customer Concerns
- Low-Income Assistance Efforts
- Customer Assistance Policy Highlights
- Next Steps



District Rates (8 Ccf per month)



EBMUD Customer Assistance Program (CAP)



- ✓ 1987 Established Customer Assistance Program
- ✓ Modified to include wastewater charges and homeless shelters
- ✓ 50% discount water service and flow charges; 35% discount on wastewater
- ✓ Over \$41 million in assistance to local community
- ✓ CAP assistance to avoid service shut-off
- ✓ Regulatory limitations



CAP Outreach Touch Points



CAP



Start Service

Bill Messages

Phone/Field Contact

Delinquent Notices

Pipeline Newsletter

Website

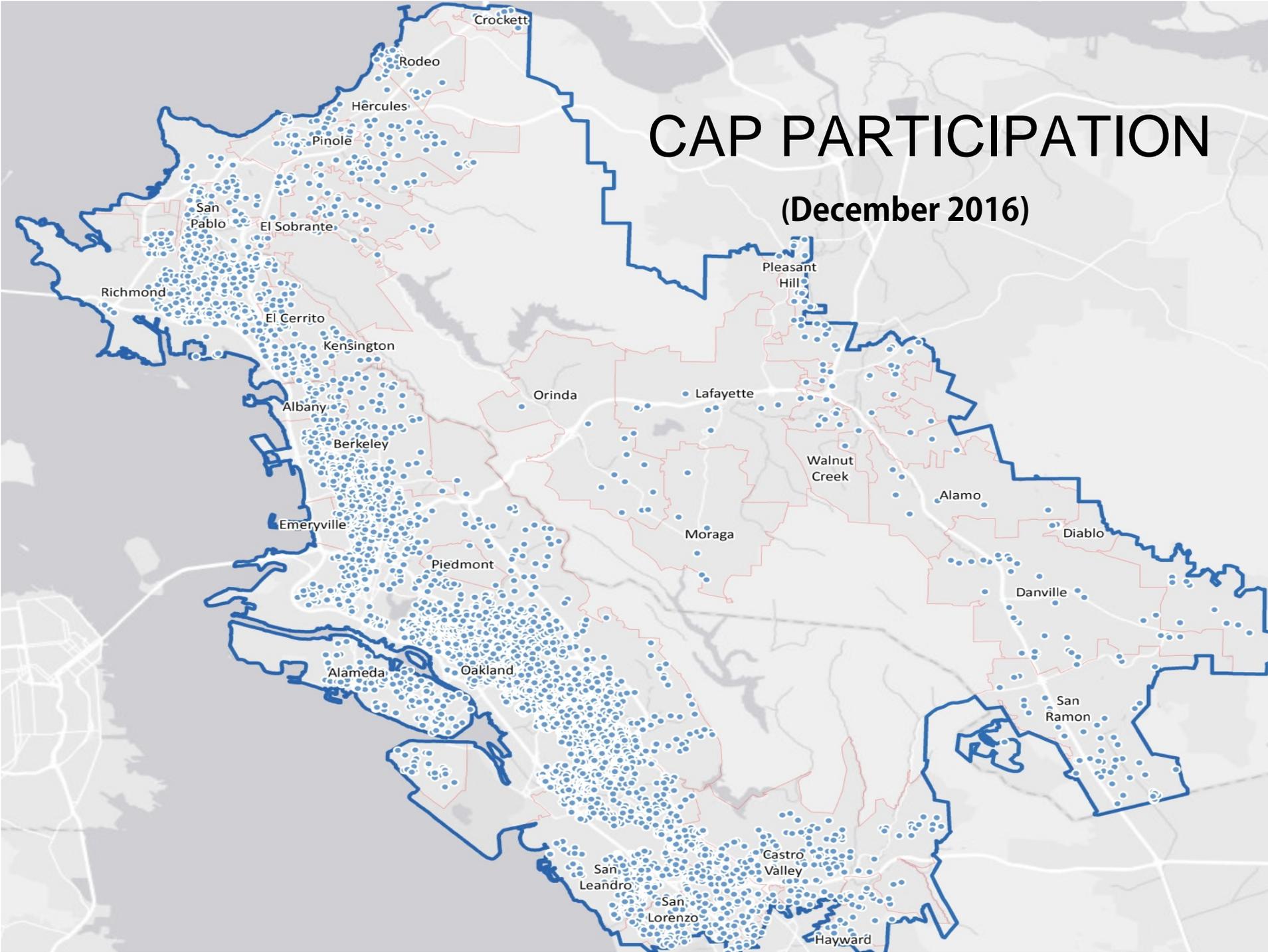
Social Media

Social Service Agencies

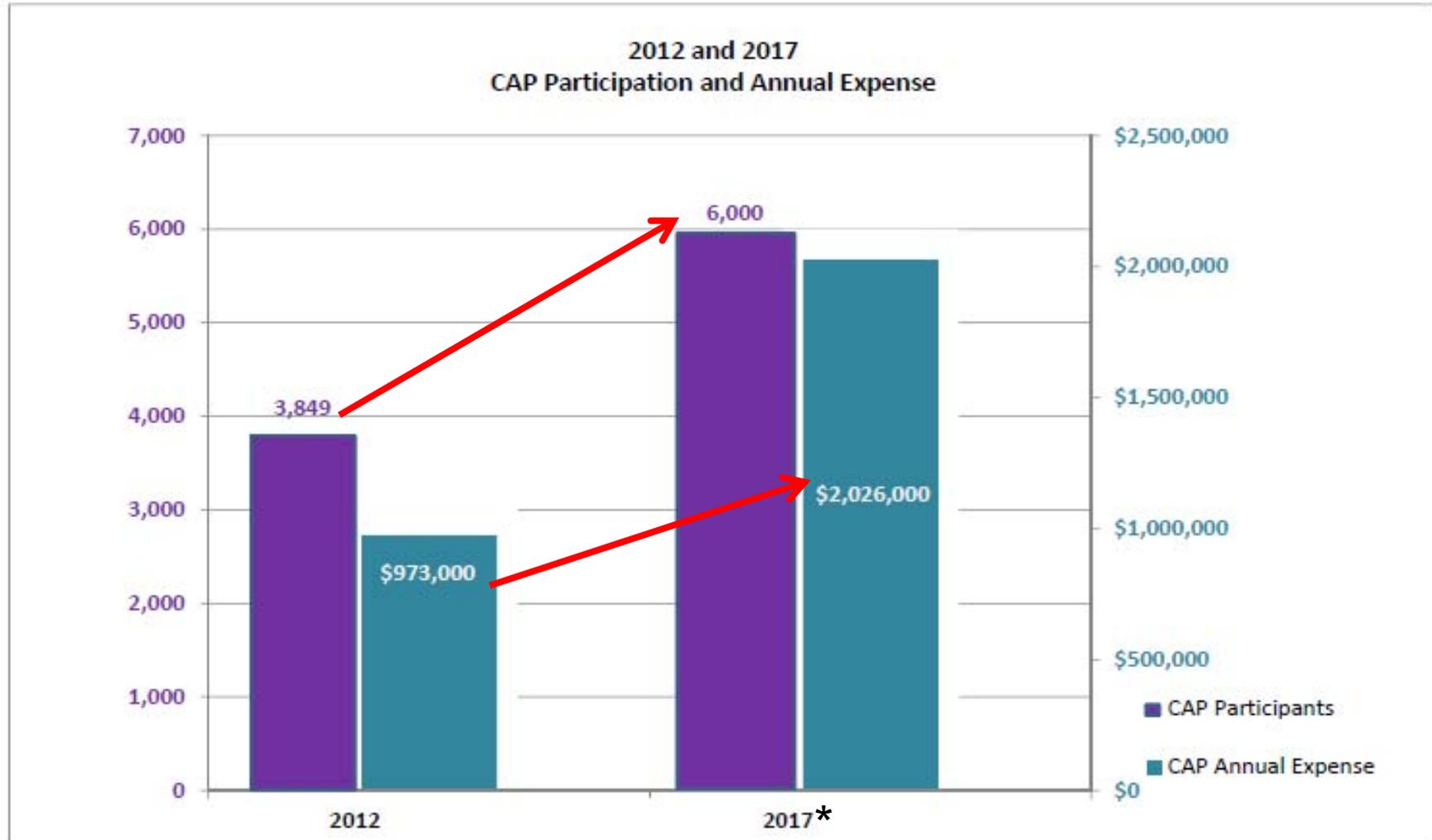
Bus Shelters/Billboards

CAP PARTICIPATION

(December 2016)



CAP Growth (last 5 years)



* Enrollment as of July 28, 2017, expense projected for FY18

Efforts Accomplished

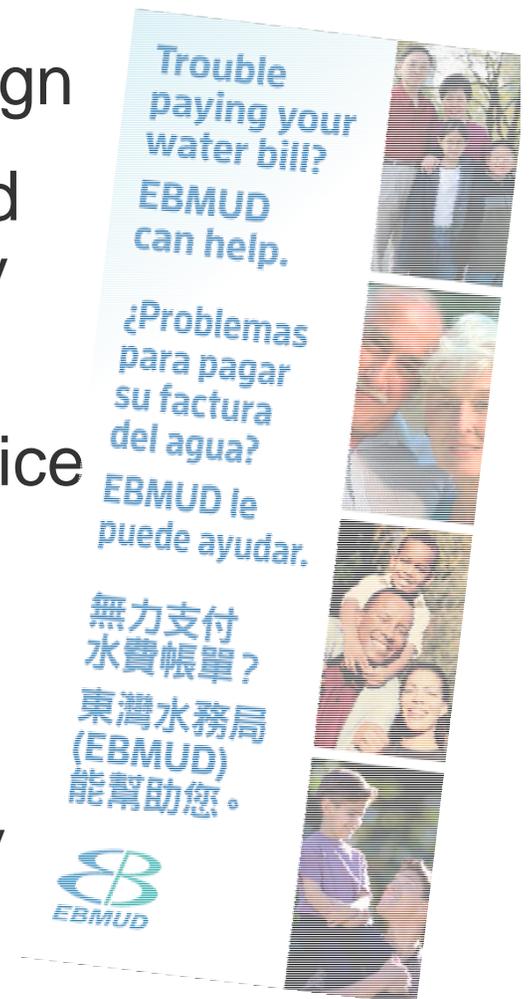


- ✓ Requested local agencies to reduce the pass-through charges collected on EBMUD bills for low-income customers
- ✓ Engaged social service agencies in Alameda and Contra Costa Counties to provide CAP information to EBMUD customers
- ✓ Changed guarantee deposit calculations to better reflect customer anticipated usage
- ✓ Adjusted practices to improve support for low-income customers and avoid shutoffs
- ✓ Extended payment plans from up to 6 months to up to 12 months

Efforts Accomplished (Cont.)



- ✓ Enhanced CAP distribution, multi-lingual application access, and outreach campaign
- ✓ Conducted water conservation audits and outfitted households with water-efficiency devices for CAP households
- ✓ Re-established guardian notification service to help seniors and disabled customers
- ✓ Provided comprehensive training to employees
- ✓ Amending EBMUD's Water Theft Penalty Ordinance



EBMUD Customer Assistance Policy Highlights



- Promote and increase CAP participation and enhance application process
- Review and consider options to enhance assistance to low income customers to maintain water service
- Provide water service to any customer who complies with a District approved payment plan and keeps account current
- Commit multi-lingual resources to assist low income customers

EBMUD Customer Assistance Policy Highlights (Cont.)



- Provide a range of services to assist qualifying low income customers consistent with the District's mission, within its authority under the Municipal Utility District Act, and in accordance with applicable federal and state laws and regulations.
- Actively engage in local and state efforts to explore and, where feasible, develop other means to support affordability of water and wastewater services

Next Steps



Sept. 26 - Customer Assistance Policy -
Finance/Administration Committee

Oct. 10 - Customer Assistance Policy -
Board consideration and adoption

Nov. 27 - Long Term Financial
Sustainability Workshop

Nov-Dec. - State LIRA White Paper

Feb. 2018 - State LIRA Program