



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

375 - 11th Street, Oakland, CA 94607

Office of the Secretary: (510) 287-0440

Notice of Time Change


**PLANNING COMMITTEE
MEETING**

9:00 a.m.

Tuesday, February 13, 2018

Notice is hereby given that on Tuesday, February 13, 2018 the 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 Training Resource Center of the Administration Building, 375 - 11th Street, Oakland, California.

Dated: February 8, 2018


Rischa S. Cole
Secretary of the District



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

375 – 11th Street, Oakland, CA 94607

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AGENDA

**Planning Committee
Tuesday, February 13, 2018
9:00 a.m.
Training Resource Center**

(Committee Members: Directors Mellon {Chair}, Linney and Young)

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. Orinda Water Treatment Plant Disinfection Improvements Project (X. Irias)
2. Water Distribution System Management Software (Chan)
3. Social Media Update (Kastama)

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.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 8, 2018

MEMO TO: Board of Directors

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

FROM: Xavier J. Irias, Director of Engineering and Construction *XJI*

SUBJECT: Orinda Water Treatment Plant Disinfection Improvements Project Update

SUMMARY

This memo provides an update on the Orinda Water Treatment Plant (WTP) Disinfection Improvements Project. The District has evaluated a number of treatment technologies to address water quality challenges and to improve disinfection at its inline WTPs, as presented to the Planning Committee on August 8, October 10, and December 12, 2017. Based on life-cycle cost analyses, ultraviolet (UV) disinfection with a chlorine contact basin (CCB) at the Orinda WTP was determined to be the most reliable, cost-effective, and sustainable disinfection process alternative. Two consulting agreements will be presented to the Board for consideration on February 13, 2018 for detailed design of the disinfection facilities and for independent value engineering, constructability, and process review. Staff will provide an update on the Orinda WTP Disinfection Improvements Project scope, schedule, and approach at the February 13, 2018 Planning Committee meeting.

DISCUSSION

Serving over 800,000 customers, the Orinda WTP was built in 1933 without a dedicated post-filter disinfection basin. Recent challenges in raw water quality, disinfection contact time, and disinfection byproduct (DBP) formation have underscored the need for disinfection system improvements. The Orinda WTP Disinfection Improvements Project involves the design of a 200 million gallon per day UV disinfection facility, chlorine contact basin, supporting infrastructure, and hydraulic connections to mitigate raw water quality changes and to expand the plant's disinfection reliability and treatment capacity.

The design phase of the project will require a consultant team with specialized expertise in complex deep excavation and shoring design, computational fluid dynamic (CFD) modeling, and UV equipment design. The design consultant will provide environmental and permitting services, prepare contract drawings and specifications, assist with the selection and procurement of UV equipment, and provide bid and award support services for the new UV/CCB facilities. Due to the complexity of the project, staff recommends an independent third-party value engineering

analysis and technical/constructability review of design deliverables. The selected consultants have a wide range of experience in designing large-scale UV systems for new and retrofitted WTPs.

District staff will be responsible for pilot testing, utility relocation, design and construction of new air scour equipment and control systems, design and relocation of chemical feed pumps as needed to accommodate the new UV/CCB facilities, site survey, project management, and construction management of the project. Current District staffing levels and expertise are not sufficient to support the design of the project, nor does the District have a need to maintain the expertise required for this design.

NEXT STEPS

Two consulting agreements for the Orinda WTP Disinfection Improvements project will be presented for Board consideration on February 13, 2018. Project design is scheduled to start in early 2018 to allow construction of the UV/CCB facilities to begin in 2021, following completion of the San Pablo Clearwell and Rate Control Station Project.

ARC:XJI:mjh

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 8, 2018

MEMO TO: Board of Directors

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

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

SUBJECT: Water Distribution System Management Software

INTRODUCTION

The water distribution system includes approximately 4,200 miles of pipeline and 90,000 valves ranging in size from 2 to 108 inches. Efficient response to distribution system pipeline breaks and effective maintenance requires real-time access to maps, work orders, and system data in the field. In 2014, the District investigated a number of software applications, and in 2017 piloted Sedaru, a mobile software application to support field staff with outage planning, valve testing, data collection and access to distribution system maps in the field. This item will be discussed at the February 13, 2018 Planning Committee meeting.

DISCUSSION

The District has performance indicators for responding to pipeline breaks, tracking the number and duration of customer water outages, and inspecting and testing distribution valves. To support field staff in meeting these performance indicators, the District piloted the use of tablet computers in 2012 to improve access to information for staff working in the field. The pilot was successful and tablet computers were more broadly deployed to field staff. The tablet computers were used to access maps and drawings, email, document field conditions, and to collect data.

While the ArcGIS mapping system works well for office staff, access to ArcGIS is difficult using mobile devices. In 2017, the District began a pilot with Sedaru, a mobile software application designed for field staff that uses the District's ArcGIS map data and work order information. Staff from several divisions in the Operations and Maintenance Department tested the software. During the pilot, Sedaru successfully supported field staff with pipeline break response, work order creation, field communications, and valve inspections and testing. The software application works on tablet computers, smartphones, and personal computers. It can create real-time outage plans and support field staff by identifying valves to be closed and the number and addresses of customers affected by an outage. The software can also use the District's hydraulic models to identify level-of-service impacts (e.g., low pressure) associated with an outage.

In 2014, staff evaluated three software products to provide field access to distribution system maps and replace an in-house developed valve testing software. After the review, two vendors, InfraMap and Sedaru, were selected for further testing and InfraMap was selected. Since 2014, InfraMap has not met the District's needs while Sedaru has matured and expanded its capabilities.

Given the success of the pilot work to date, the District is planning to expand the use of Sedaru software. A future, proposed contract will include the licensed use of three components of the Sedaru software for approximately 171 users including superintendents, supervisors, Dispatch Center staff, foremen, plumbers, inspectors, operators, and support staff. The first component, Field Mobile, includes access to the District's water distribution system maps and work order system. The second component, Smart Outage, allows staff to calculate and coordinate response plans for emergency pipeline breaks and planned outages. The third component, Command Center, is used to dispatch and track leak investigations and provides a dashboard to track and monitor field activities and outages. The contract also includes software configuration, implementation, and staff training.

This contract will be a direct award to ID Modeling, the developer of Sedaru, since there is no other commercially available application that delivers work order management, operational management, hydraulic modeling, comprehensive field data collection, and valve testing capabilities within the same platform, while providing real-time and predictive analytics, dispatching, tracking, trending and monitoring of system status and alarms.

FISCAL IMPACT

Cost for licensing of the software for 171 users is approximately \$270,000 per year or \$1.35 million for five years, which includes the Field Mobile, Smart Outage, and Command Center components, and provides real-time communications, advanced analytics and predictive capabilities. An additional \$330,000 will provide for software configuration, implementation, integrations, optional enhancements, and training.


NEXT STEPS


Staff is working with the vendor to ensure the software meets all District Information Technology requirements for data security and system integration. After the technical details are resolved, staff will begin contract negotiations and plans to bring the contract for Board consideration in February or March 2018. This project will improve response time for pipe breaks, improve field data collection, and reduce customer impacts associated with work on distribution pipelines.

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: February 8, 2018

MEMO TO: Board of Directors

THROUGH: Alexander R. Coate, General Manager 

FROM: Alison A. Kastama, Special Assistant to the General Manager 

SUBJECT: Social Media Update

INTRODUCTION

This memo provides an update on the District's social media use in 2017, and the plan to join Facebook in March 2018. EBMUD's social media presence increases public outreach and customer engagement, and promotes the District's good work. This information will be presented to the Planning Committee on February 13, 2018.

SUMMARY

In May 2015, the District adopted Policy 6.05 – Use of Social Media – to further the District's public outreach efforts and aid emergency response. The District has increased its social media presence to 2,065 Twitter followers, and expanded onto NextDoor, a neighborhood-based social network with 286,000 subscribers within the service area. These social media platforms have proven to be critical and beneficial in disseminating time-sensitive information. The use of social media has also provided staff with an important tool to proactively share messages about the District, address sensitive issues, gather engagement analytics, and respond to customer concerns.

Significant highlights of 2017

- On the Job Profiles:
These profiles highlight District staff and are posted weekly on ebmud.com and social media. The profiles highlight the District's workforce and critical 24/7 operations. Many profiles are included in *Splashes* to broaden understanding and appreciation of different roles employees play in furthering the District's mission.

- **Twitter engagement:**
In 2017, the District's Twitter account reported a 30 percent increase in followers compared to 2016. Engagement metrics included a 180 percent increase in 'likes' and a 92 percent increase in link clicks to ebmud.com in 2017 compared to 2016.
- **NextDoor:**
The use of NextDoor enables staff to proactively share information with service area residents regarding emerging issues, our Customer Pipeline newsletter, and community-specific notices such as construction updates.
- **Establishing a business presence:**
The District's LinkedIn account (3,800 followers) which highlights our job listings and On the Job profiles, received 1,000 'likes' of EBMUD content and 4,000 link clicks to ebmud.com.

NEXT STEPS

Staff continually look for ways to enhance public outreach using low-cost, high-impact tools. As the most popular social media platform with more than 2 billion monthly active users, staff plans to begin use of Facebook for District communications in March 2018. The 2016 EBMUD Customer Survey supports this action as more than half (52%) of District customers indicated they use social media frequently or occasionally to gather information about Bay Area current events. Sharing District news and information on Facebook will expand the District's social media audience and build on past accomplishments to engage with customers online.

EBMUD staff will post content regularly, monitor District social media feeds and respond to customers and comments during business hours. During evenings, weekends and holidays, staff will enable instant replies encouraging Facebook users to report emergencies by calling 1-866-403-2683.

Follow us @ebmud on Twitter, LinkedIn and, in March, Facebook.

ARC:AK:tm