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
Tuesday, July 9, 2024
9:00 a.m.
Boardroom
375 11th Street
Oakland, CA 94607

Notice is hereby given that the Tuesday, July 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: July 5, 2024

Rischa S. Cole

Rischa S. Cole
Secretary of the District

W:\Board of Directors - Meeting Related Docs\Notices 2024\07092024_planning_notice_time_change.docx

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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, July 9, 2024
9:00 a.m.
Boardroom
375 11th Street
Oakland, CA 94607

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

Committee Members: Directors 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. Fiscal Year 2024 Pipeline Rebuild Program Update (Terentieff)

2. Cull Creek Regulator Construction and Campus, Keller, Gramercy, and Villareal Regulators Replacement Project Update (Terentieff)

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.

APPENDIX

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
- 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.

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

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 5, 2024

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Serge V. Terentieff, Director of Engineering and Construction SVT

SUBJECT: Fiscal Year 2024 Pipeline Rebuild Program Update

SUMMARY

In Fiscal Year 2024 (FY 2024), the District replaced approximately 25.3 miles of pipe, exceeding the goal of 22.5 miles. This memo provides an update on FY 2024 accomplishments, a summary of current research and innovation initiatives, and goals and objectives for FY 2025. The Pipeline Rebuild Program annual update will be presented at the July 9, 2024 Planning Committee meeting.

DISCUSSION

Pipeline Rebuild began in FY 2015 as a multi-department program to renew the District's water distribution pipelines and ramp-up to a sustainable long-term replacement rate to reduce main breaks and water loss. In addition to exceeding the mileage goal in FY 2024, staff further improved design practices, coordinated pipeline replacement with cities and counties, advanced the development of the Center for Smart Infrastructure (CSI) at the University of California at Berkeley, and implemented construction efficiencies through pilot projects.

Highlights and accomplishments in FY 2024 are summarized below.

- Replaced approximately 25.3 miles of pipe, exceeding the FY 2024 goal of 22.5 miles.
- Prioritized projects based on a Likelihood of Failure (LOF) model incorporating pipe leak data, pipe age, and material type.
- Advanced the use of ductile iron (DI) pipe as the standard material in distribution pipeline replacement projects and implemented a pilot program utilizing restrained gasket DI pipe and fittings.
- Completed the transition to the AutoCAD Civil 3D platform for preparation of all pipeline design drawings and traffic control plans.
- Expanded the use of high-resolution aerial imagery to support the preparation of pipeline design projects.

- Completed approximately 20 miles of pipeline designs and maintained close coordination with cities and counties to maximize the replacement of the worst pipes ahead of planned paving projects.
- Piloted direct hauling of trench soils on four projects in Oakland, Walnut Creek, Lafayette, and Danville.
- Staffed and equipped a 13th crew (service crew), improving construction efficiencies and increasing productivity.
- Performed tension, bending, and bi-axial loading pipeline tests at the CSI to research and model the performance of earthquake-resistant DI pipe and other hazard resilient materials under extreme ground movement.
- Enhanced outreach to local community groups such as Cypress Mandela Training Center and Laney College to attract diverse applicants for District pipeline jobs. The District interacted with over 1,500 students and potential employees through trades-specific job fairs and mock interviews with partner organizations.

Staff continues to evaluate and refine pipeline replacement design and construction methods with performance metrics related to cost, production, and community impacts. The District invested approximately $78,000,000 in its Pipeline Rebuild Program in FY 2024, for an average cost of approximately $3,100,000 per mile of pipeline replacement. While overall project costs have trended higher in the last several years due to an increase in material and equipment rental costs, the increase in pipeline crew productivity has resulted in the District exceeding the pipeline replacement goal by 12 percent. As the District transitions to DI pipe as the standard material for distribution pipeline replacements, performance metrics will be evaluated to ensure improvement in construction efficiencies.

NEXT STEPS

The pipeline replacement goal for FY 2025 and FY 2026 is 25 miles. To accomplish this goal, the Pipeline Rebuild Program will continue to utilize a 13th service crew and the positions approved in the FY 2024 and FY 2025 budgets to reduce contract services such as hydro-vacuum excavation and dump truck services.

In FY 2025, staff will begin piloting pipeline condition assessment technologies including Dynamic Response Imaging and integrating this data into the pipeline replacement selection process to continue refining the evaluation and assessment of long-term pipe deterioration rates, ensuring the highest priority pipelines are being replaced. The District also continues to collaborate with the CSI on testing new and improved hazard resilient materials and advancing machine learning models to assess long-term pipe performance.

CCC:SVT:cdc

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: July 5, 2024

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Serge V. Terentieff, Director of Engineering and Construction SVT

SUBJECT: Cull Creek Regulator Construction and Campus, Keller, Gramercy, and Villareal Regulators Replacement Project Update

SUMMARY

The Cull Creek Regulator Construction and Campus, Keller, Gramercy, and Villareal Regulators Replacement Project (Project) will construct and replace facilities to improve distribution system operations and reliability. The Project includes construction of the temporary Cull Creek rate control station (RCS) and permanent regulator, and upgrades to the Campus, Keller, Gramercy, and Villareal regulators. Staff will provide an update on the Project at the July 9, 2024 Planning Committee meeting.

DISCUSSION

Project Purpose and Description

The District's distribution system includes over 130 pressure zones (PZs), requiring reliable pressure regulation to maintain an adequate water supply and proper fire protection. Improving the reliability and extending the service life of the RCSs and regulators is crucial to support the District's operational needs. The Project will replace Campus, Keller, Gramercy, and Villarreal regulators, all of which range from 38 - 52 years old and are nearing the end of their useful life. In addition, the Project will construct a temporary Cull Creek RCS, which is required in support of an outage for the Almond Reservoir Replacement Project. After the Almond Reservoir Replacement Project is completed, the temporary RCS will be converted to a regulator to serve the Almond PZ.

Campus Regulator, built in 1984, and Keller Regulator, built in 1986, are the sole feeds into their respective PZs, serving 19 and 21 services, respectively. Both sites are located in Oakland and consist of two pressure-regulating valves in underground concrete vaults. Gramercy Regulator, built in 1972 and located in San Leandro, supplies water from the Proctor PZ to the Almond PZ. Villareal Regulator, constructed in 1980 and located in Castro Valley, supplies water from the Norris PZ to the Villarreal PZ. Each consists of three pressure-regulating valves located within underground concrete vaults.

Inspections conducted as part of the Regulator Infrastructure Rehabilitation Program (IRP) indicate that these regulator vaults have ongoing water flooding problems, poor ventilation, and cracking and spalling in the vault walls. In addition, the valves and associated piping are significantly corroded and have poor accessibility.

The Project would address the existing issues at Campus, Keller, Gramercy, and Villareal Regulators by:

- Replacing the existing regulator vault with a shallow vault that would not require confined-space entry during maintenance.
- Replacing and upsizing the pressure-regulating valves.
- Replacing corroded piping and appurtenances.

The temporary Cull Creek RCS and permanent regulator will be located in Castro Valley and will be required to support the upcoming Almond Reservoir Replacement Project, which is a separate project to replace Almond Reservoir, which provides water storage to the Almond PZ. Following construction of the Almond Reservoir, the Cull Creek RCS will be converted to a pressure regulator which will supply water to the Almond PZ from the Southern Loop Pipeline.

NEXT STEPS

The construction contract is scheduled for Board consideration at its July 9, 2024 meeting. If the Board awards the contract, construction is expected to begin in September 2024 through March 2026.

CCC:SVT:RY