



FEMA

East Bay Seismic Program Utility District Seismic Program

East Bay, CA - The East Bay Municipal Utility District (EBMUD) provides water service to 1.2 million people along the east side of San Francisco Bay. Three major active faults create a high seismic risk to EBMUD's water-supply facilities. Following the Loma Prieta Earthquake in 1989, EBMUD performed an in-depth evaluation of the seismic vulnerability of its water-treatment plants, reservoirs, buildings, pipelines, tunnels, pumping plants and communication facilities. The results showed that in the event of a magnitude 7 earthquake on the Hayward Fault, it would take approximately six months to restore partial service, and the costs to repair damage to facilities were estimated at \$245 million dollars.

The EBMUD Board of Directors decided to take action in 1994 by approving a 10-year, \$189 million capital improvement program to minimize damage to the water system, improve firefighting capabilities, and protect customers from long, disruptive water outages following a catastrophic seismic event. The Seismic Improvement Program (SIP) reduces long-term risks to EBMUD facilities, people, property owners and the local economy. The four goals of the SIP are: (1) Life Safety -- to minimize the loss of life due to failure of any EBMUD structure; (2) Water Quality and Public Health -- to ensure that all water introduced into the treatment system is fully treated; (3) Fire Service -- to enable water availability in all areas, especially high fire danger zones; and (4) Customer Service -- restore minimum water service to 70 percent of customers within 10 days.

To date, the District has completed seismic upgrades for 21 reservoirs. EBMUD has installed shut-off valves and emergency hose connections at nine locations where water mains that cross earthquake faults are particularly vulnerable. These upgrades will either prevent pipe rupture or provide a bypass system to reroute water around broken pipes to protect life safety and property and to preserve the water supply for post-earthquake uses, including fighting fires. Upgrades to five of six water treatment plants are complete to ensure they will be available and functioning after a seismic event.

The District also educates the public about seismic risks in the Bay area, and maintains public support for the SIP with an extensive community outreach program. EBMUD has reached out to the community to solicit input prior to program implementation. It routinely conducts outreach during project implementation for the SIP, which has resulted in the strong support of the public and local elected officials. Additionally, the SIP Team has partnered with other agencies and state and local offices of emergency services to develop a single message on how to store emergency water supplies.



Multiple Counties,
California



Quick Facts

Sector:

Public

Cost:

\$189,000,000.00 (Estimated)

Primary Activity/Project:

Retrofitting, Non-structural

Primary Funding:

Local Sources