

Wastewater Odor Control



Continuous Attention Reduces Odors at Plant

Before EBMUD built its wastewater treatment plant at the foot of the Bay Bridge, untreated sewage flowed from city sewer systems into San Francisco Bay. Since 1951, we have been cleaning the waste stream and improving the health of the Bay.

Gases produced by decomposing organic matter in wastewater are the primary odor source from wastewater treatment. The most typical odor is hydrogen sulfide, which smells like rotten eggs. EBMUD operates the treatment plant to prevent odor problems and responds quickly to odor complaints.

How Does EBMUD Control Odors?

Although smells cannot be eliminated, EBMUD minimizes odors through good day-to-day management practices, quick investigation of odor reports and ongoing investment in odor control equipment and facilities.

Good Housekeeping. We continuously monitor odor emissions and manage the waste stream to minimize odors. A concentrated form of household bleach, sodium hypochlorite, is added to the waste stream as it enters the plant. Sodium hypochlorite controls odors during the initial phases of wastewater treatment. It is widely used at treatment facilities across the United States for odor control and wastewater disinfection. We also conduct plant maintenance activities to reduce the potential for off-site odors.

Air Filtration. EBMUD's plant has more than \$6 million worth of air filtration equipment that collects and treats air at locations around the plant site. In 2011, we upgraded an existing odor control system to further reduce odors along the plant's eastern fence line, nearest to local residents and businesses.

Treatment Process Improvements. As major facilities at the plant are replaced and procedures are modified to comply with changing regulations, we assess new opportunities to address odors.



EBMUD's Wastewater Treatment Plant in Oakland, California

EBMUD produces about 72,000 wet tons of biosolids annually for beneficial reuse, which reduces the amount of materials local communities send to landfills. During wastewater treatment, biosolids are separated from the wastewater and are stabilized by natural microbial activity in large tanks called anaerobic digesters. In 2013, EBMUD will complete installation of fixed covers on eight anaerobic digesters. This \$26 million investment will keep the odors produced during the process from being released into the air. We also are constructing a new sludge blending tank equipped with a state-of-the-art biofilter odor control system.

Land Use Planning. EBMUD occupies 70 acres of land at the foot of the Bay Bridge, and regularly updates facilities to meet new regulations and procedural requirements. Each change is a chance to evaluate odor control by looking at how we manage work and where we do various tasks.

For example, EBMUD converts food scraps from restaurants and supermarkets into renewable energy. Food scraps is the largest category of municipal solid waste sent to landfills, and recycling them supports local zero waste and landfill reduction goals. We reduced offsite odors from this process by moving a receiving station where trucks deliver restaurant fats, oils and grease further away from neighbors near the eastern fence line.

Next Steps

EBMUD's odor control master plan, developed based on intensive plant-wide odor sampling, identifies effective and efficient investments. Our five-year capital improvement program will invest \$17 million in odor control systems between 2014 and 2018. In 2013, we will evaluate the benefit of accelerating work to install an odor control system on the primary sedimentation tanks. These tanks are located near the new pedestrian/bike trail that will connect the East Bayshore trail to the new San Francisco-Oakland Bay Bridge span.

We will also continue to automate odor control chemical feed systems, improve daily odor monitoring strategies and test the effectiveness of various chemical dosing alternatives.

EBMUD Odor Control Hotline

To report a wastewater plant odor issue, please call the Odor Control Hotline at **510-287-1522**. The hotline is staffed 24 hours a day, 7 days a week. We will investigate the cause of the odor, take corrective actions whenever possible and follow up with you.



EBMUD has a proud history of providing high-quality drinking water for 1.4 million customers in Alameda and Contra Costa counties. The District's award-winning wastewater treatment protects San Francisco Bay and serves 640,000 customers.

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