



BOARD OF WATER SUPPLY

Duane R. Miyashiro, Chair; Mahealani Cypher, Vice-Chair; Theresia C. McMurdo; Kaulana H.R. Park; David C. Hulihee; Ross S. Sasamura, Ex-Officio; Glenn M. Okimoto, Ex-Officio; Ernest Y.W. Lau, P.E., Manager and Chief Engineer; Ellen E. Kitamura, P.E., Deputy Manager and Chief Engineer

POWERS, DUTIES, AND FUNCTIONS

The Board of Water Supply (BWS) manages Oahu's municipal water resources and distribution system, providing residents with a safe, dependable, and affordable drinking water supply.

The BWS is the largest municipal water utility in the state of Hawaii. In Fiscal Year 2014, the BWS served approximately 139.2 million gallons of potable water per day and 10.8 million gallons of non-potable water per day to roughly one million customers on Oahu. The BWS carefully and proactively manages and invests in its intricate system, consisting of 94 active potable water sources, 171 reservoirs, and nearly 2,100 miles of pipeline.

The BWS is a financially self-sufficient, semi-autonomous agency of the City and County of Honolulu. Its operations and projects are financed with revenues generated by water transmission and distribution fees. It receives no tax money from the city. The BWS also pursues federal and state grants to help subsidize BWS projects.

The BWS is governed by a Board of Directors (Board), consisting of seven members. Five members are appointed by the Mayor and are confirmed by the Honolulu City Council. The remaining two serve in their capacities as the Director of the State Department of Transportation, and the Director and Chief Engineer of the city's Department of Facility Maintenance. The Board appoints the BWS Manager and Chief Engineer to administer the department.

The BWS consists of the following 11 divisions:

Capital Projects Division, Communications Division, Customer Care Division, Field Operations Division, Finance Division, Information Technology Division, Land Division, Office of the Manager and Chief Engineer, Water Quality Division, Water Resources Division, and Water System Operations Division.

MISSION

The BWS mission is to provide a safe, dependable and affordable water supply now and into the future, focusing in three strategic areas: resource, operational, and financial sustainability.

ACCOMPLISHMENTS

BWS employees work diligently to provide safe, dependable, and affordable water service to customers by concentrating their efforts to achieve the BWS's strategic goals:

Resource Sustainability (Safe)

- BWS conducted 33,775 chemical tests and 9,118 microbiological tests on samples collected from its water sources, distribution system, and treatment facilities to ensure all potable water served is safe to drink.

- In June 2014, BWS completed its annual production and delivery of the Consumer Confidence Report (CCR), also known as the Water Quality Report, to all BWS customers. The report provides information on the quality of the water delivered from the BWS system and was mailed to all customers on record. The report is also available at www.boardofwatersupply.com. Additionally, the department placed ads in Honolulu newspapers, including various ethnic language publications, to inform community members of the distribution.
- BWS staff held a record 26 outdoor water conservation classes at the Halawa Xeriscape Garden. These classes shared various techniques for reducing water use through efficient landscaping.
- The BWS held the 25th annual Halawa Xeriscape Garden Open House and Unthirsty Plant Sale. The event was attended by approximately 2,000 people who were provided information related to water conservation.
- More than 1,300 posters and 200 poems were received from 57 schools on Oahu for the 2014 Water Conservation Week Poster and Poetry Contests. The winning posters and poems will be featured in the BWS 2015 Water Conservation Calendar. The BWS formed public-private partnerships to offset calendar printing costs.

Operational Sustainability (Dependable)

- The BWS is in its second year of a three-year comprehensive Water Master Plan to provide a 30-year capital improvement program for the capacity expansion, and repair and replacement of aging water infrastructure. The Water Master Plan applies new technology and best practices in planning and engineering tools in a system-wide condition assessment of all water system assets (pumps, pipelines, reservoirs, and treatment plants) and will guide the update of the BWS financial plan to ensure sufficient funding for infrastructure needs, while keeping water rates affordable.
- BWS employees responded to 294 main breaks, or about 14 breaks per 100 miles of pipeline. According to the American Water Works Association, water utilities nationwide should strive for a limit of roughly 25-30 breaks per 100 miles of pipeline.
- In an effort to further institute best industry practices, the BWS began performing maintenance on the Automatic Meter Reading system, upgrading the software to enhance its reliability, and started a study of meter reading technology and practices. In FY 2014, the BWS placed Honouliuli 228 Reservoir #3 in service, thus improving reliability in the Ewa Beach, Kapolei, and Barber's Point areas by providing an additional six million gallons of storage capacity.

- BWS customer care staff handled approximately 156,385 customer calls; 5,557 online requests; 7,462 walk-in customers; and 568 other types of requests from customers.
- BWS investigation staff responded to 987 complaints regarding possible water line leaks; 6,505 requests by various contractors to verify the location of waterlines to prevent damage to BWS infrastructure; and 24,309 field activities to address customer billing concerns.
- Due to the high volume of calls and added requirements of Customer Care & Billing (CC&B), the call center staff was increased from 10 to 25 customer service representatives. Additionally, an operator pool was created to handle overflow calls from customers. The increase in staffing resulted in decreasing the call abandonment rate from 54.1 percent in July 2013, to 10.6 percent in June 2014.
- BWS service engineering staff addressed 6,865 walk-in customers; conducted 761 e-plan reviews; and reviewed 155 construction plans.
- With the introduction of online bill payment through BWS ePay, the volume of mail-in bill payments has decreased from more than 60 percent to approximately 48 percent.
- In addition to VISA and MasterCard, the BWS added Discover Card and JCB cards for customers to make payments.
- The BWS's nationally recognized Geographic Information System (GIS) database and applications continue to be upgraded for improved functionality and performance. This system gives users access to GIS layers and updated imagery, and integrates map service sharing with other city departments. Enhancements for mobile data gathering and data sharing have been piloted with promising results.
- In response to Federal Executive Order 13636, the BWS has increased its focus on improving critical infrastructure security and resilience. The completion of a cybersecurity program to address the executive order is expected by the end of FY 2015.

Reservoir, and Waimalu Wells I. New design contracts were awarded for facility improvements at Nuuanu 822 Reservoir, Pearl City 865 Reservoir, Waahila 180 Reservoir, Waiiau 285 Reservoir, Waiiau 550 Reservoir, and Waimalu 217 Reservoir, and for installation of security fencing at various locations.

- **Mechanical and Electrical Renovation Projects:** Construction contracts were awarded for the renovation of the mechanical and/or electrical systems at the Aiea Booster No. 3, Aina Koa Booster IV, Aina Koa Booster V, Haiku Well, Halawa Wells, Kaamilo Booster, Kamiloiki Booster, Kuliouou Well, Makaha Wells V, Newtown Wells, Nuuanu Booster II, Punaluu Wells II, Waialeale Wells, Wailupe Well I, Waiiau Wells and Booster, and Wilder Wells. Design contracts were awarded for renovation work at Beretania Pump Station, Kuliouou Wells, Manoa Well II, and Mililani Wells IV.
- The BWS continued to refine the new CC&B system that went live in January 2013. The conversion to the new system presented a number of challenges which have been addressed by continuing to improve and expand ways to decrease estimated bill incidence and increase customer service responsiveness. During FY 2014, the number of estimated bills generated monthly was reduced to less than two percent.
- The BWS completed an upgrade of its Financial Management System to bring it to a supportable version. This project ensured the continued viability of the Financial Management System, and allowed for the collection of functional enhancement requirements to be used in an enhancement project programmed for the 2016 budget.

Financial Sustainability (Affordable)

- More than \$32.8 million in construction contracts and more than \$6.5 million in professional services contracts were awarded by the Capital Projects Division as of June 30, 2014. The major programs include the following:
 - **Water Main Replacement Program:** More than \$19 million in water main construction projects were awarded to improve the water systems in Aina Haina, Alewa, Ewa Beach, Kalihi, Kaimuki, Manoa, Punchbowl, and Wilhemina Rise areas. Additionally, design contracts were awarded for water main replacements in Hawaii Kai, Manoa, Pacific Heights, Pearlridge, Wahiawa, Waikiki, and Wilhemina Rise, and also for fire hydrant installations in Aiea and Kaimuki.
 - **Water Facility Improvement Program:** During this fiscal year, new construction contracts were awarded to repair, renovate, repaint, and/or re-roof the Diamond Head Line Booster, Kaonohi 277 Reservoir, Makiki 180 Reservoir, Moanalua 405 Reservoirs No. 1 and No. 2, Niu Valley Booster, Wahiawa 1075