

Board of Water Supply



STRATEGIC PLAN 2018 - 2022

Table of Contents

Introduction 2
 Letter from the Chair of the Board and the Chief Engineer 3
 History of the Board of Water Supply 4
 BWS Vision 5
 BWS Mission 6
 BWS Values 7
 BWS Water System 8
 BWS Sustainability Goals 9
 Resource Sustainability (Safe) 9
 Operational Sustainability (Dependable) 9
 Financial Sustainability (Affordable) 9
 BWS Strategic Objectives and Key Action Plans 9
 Sustainability Goals and Strategic Objectives 10
 Strategic Objectives and Action Plans 11
 Stakeholder Analysis 13
 BWS Water Master Plan 13
 Performance Metrics 13

Introduction

On September 26, 2016, the Board of Water Supply (BWS) senior management team chartered a project to update the Strategic Plan and document the ongoing work of the BWS in providing water to the citizens of the City and County of Honolulu.

This project was a collaboration with the BWS Board of Directors (Board) in their role of providing oversight and foresight into the direction of the BWS. Members of the Board and the senior management team participated in a series of facilitated workshops between October to December 2016, to review and reconfirm the Vision, Mission, Values, Strategic Goals, and the Strategic Objectives and develop Key Action Plans for the agency.

The intent of this Strategic Plan is to provide an internal and external perspective of the commitment of the BWS employees to deliver safe, dependable, and affordable water, now and into the future. The plan’s timeframe is five years.

This document formalizes the BWS’s Vision, Mission, Values, Strategic Goals, Strategic Objectives, and Key Action Plans.

Letter from the Chair of the Board and the Chief Engineer

We, at the Honolulu Board of Water Supply, recognize and embrace our stewardship of Oahu’s most precious resource – water. Our vision – *Ka Wai Ola* or Water for Life, captures the essence of our responsibility to the community to preserve and protect our water resources as well as our duty to provide water today and for generations to come.

The Board of Water Supply has adopted an updated five-year strategic plan to reaffirm our commitment to our mission of providing our Oahu water customers with safe, dependable, and affordable water now and into the future. The revised plan reviewed and revised our three overarching strategic goals – Resource Sustainability, Operational Sustainability and Financial Sustainability – and our key action plans to meet these goals.

Resource Sustainability addresses the need to protect, conserve, and manage Oahu’s water supplies and watersheds through adaptive and integrated strategies. Operational Sustainability focuses on the need to build an effective organization that continuously works to improve dependable service. Financial Sustainability confirms the need to implement sound fiscal strategies to provide safe, dependable, and affordable water service.

Our strategic plan expresses our core values that start with our personal responsibility as water professionals to earn and uphold the community’s trust as we perform our daily work. Through our core values, the strategic plan reinforces our all-encompassing responsibility as public servants to uphold the constitutional mandate of the Public Trust that “...all public natural resources are held in trust by the State for the benefit of the people.”

Our core values affirm our awareness of and attention to the impacts that our decisions and operations have on the community. We will actively pursue opportunities to engage the community to understand their needs and provide a quality experience in every customer interaction.

The five-year strategic plan we adopt today implements our long-term Water Master Plan, adopted October 2016 by the Board of Water Supply Board of Directors, by ensuring that our action plans mirror recommendations and actions in the Water Master Plan.

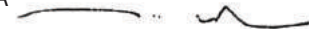
Providing Water for Life to the citizens of the City and County of Honolulu is a uniquely vital responsibility. With the adoption and publication of our strategic plan, we establish the direction for our organization going forward. We are committed to our mission, and we ask that you join us in creating a strong and lasting shared stewardship of Oahu’s water resources.

Mahalo,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer



BRYAN P. ANDAYA
Chair



History of the Board of Water Supply

The Honolulu Board of Water Supply (BWS) was created in 1929. It was an action taken by the then-State Territorial Legislature in response to public outcry for a need for a truly effective water management system that was above politics.

In the previous years, droughts and the failure of the City Water Works Department to effectively manage uncontrolled drilling, led to drastically decreasing aquifer levels and water shortages. Several important meetings were held in Honolulu during this time, with citizens, legislators, engineering experts, and water works officials all working together to solve the critical water problem.

Local citizens and experts alike recommended the establishment of a commission to manage the municipal water system. A prime consideration in the creation of this commission was to remove the operation and management of the waterworks from direct political influence and control. Both groups agreed that proper management of the water system would be most effectively accomplished through the establishment of an independent, non-political commission whose members would be responsible citizens serving overlapping terms to assure continuity.

The 1929 Legislature considered these recommendations and passed Act 96 that created and defined the powers and duties of the Honolulu BWS. With this Act, the Legislature took the control of water away from the City and turned it over to the newly-created, semi-autonomous City agency, the Honolulu BWS.

Although it remained with the City and County, it was designed to be semi-autonomous and self-supporting with the authority to charge for water usage to support its capital improvement and operating expenses and set long term plans for Oahu's water future.

Today, a seven-member Board of Directors (Board) presides over the agency and sets its policies. Five at-large members are nominated by the Mayor and approved by the City Council. Two serve as ex-officio members, the Director of the State Department of Transportation and the Chief Engineer of the City Department of Facility Maintenance.

This Board sets the policy of the BWS. It also appoints the Manager and Chief Engineer who is responsible to administer the water department and its operation.



The monies collected from water usage are used to finance the Department's operations and projects. The BWS does not receive nor request money collected from property or other county taxes or fees, or from the State, to manage and operate the water supply.

Its semi-autonomous operations allow the BWS to continue to successfully fulfill its mission to provide Oahu water users with a safe, dependable, and affordable drinking water supply now and into the future.

BWS Vision: 'Ka Wai Ola – Water for Life'

The vision of the BWS captures the critical need of water, that water is the basis for life. With this vision comes the responsibility of the BWS's stewardship of, and the duty to manage, our natural water resources for the present and future generations.

The ancient Hawaiians valued water as one of nature's greatest gifts and they lived in harmony with water. Land divisions (ahupua'a) mirrored the natural ecosystem – from the mountain top through upland forests to flatlands and the shore. Formal rules governed the use of water, and regulations were established and enforced over water use in upland areas so that a pure flow was always available to those who lived at lower elevations.

BWS Mission

The Board of Water Supply provides safe, dependable, and affordable water now and into the future

Safe addresses the multiple areas of individual and community needs.

- Our water must meet all statutory and regulatory compliance standards in providing water for consumption and other uses.
- Our water must provide for public health and safety such as for firefighting and sanitation needs.

Dependable relies upon three factors:

- The source of our water must be sufficient and available now and into the future. The BWS ensures this through management of the watershed and groundwater supply, long-range planning, and possible development of alternative sources of water.
- A water system that is designed, constructed, and operated with system redundancy that continues delivery of water even with disruptions in the system.
- The employees of BWS who are committed to providing our customers with high quality water and excellent service.

Affordable water delivery that is safe and dependable is primary. We establish programs for efficiency in water use via conservation, infrastructure installation, and water system operations and maintenance. We continually implement changes to our systems to deliver water at the most responsible cost to the customer.





BWS Values

These values guide our employees, teams, and the organization in how we work together to accomplish our mission. The values reflect and reinforce our culture in our delivery of water service to our customers.

Personal Responsibility

We are water professionals who earn and uphold the community's trust everyday through our actions and in doing our jobs right.

Team Responsibility

We depend upon and support each other and treat each other with dignity and respect.

Organizational Responsibility

We provide a healthy and safe work environment through cooperation, participation, and shared decision-making.

Societal Responsibility

We provide quality service to our customers with the highest level of courtesy and efficiency.

Environmental Responsibility

We uphold the Public Trust* as thoughtful stewards of Oahu's water resources and the environment.

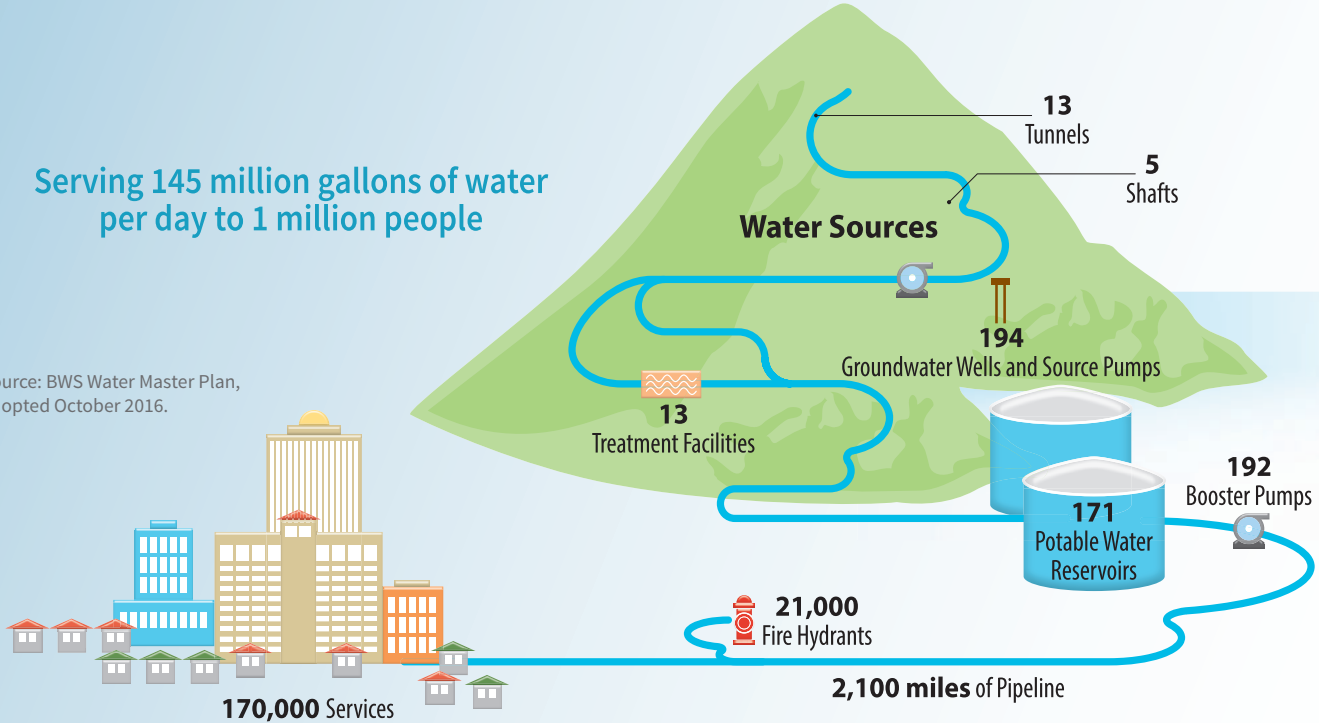
*Public Trust – Principle embedded in Hawaii Law that recognizes that water is held in trust by the State of Hawaii for present and future generations. Pursuant to the Hawaii State Constitution, Article XI, Section 1, "For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals, and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people."

BWS Water System

For decades, the BWS has built, operated and maintained a complex infrastructure to provide safe, dependable and affordable service to our customers.¹

Serving 145 million gallons of water per day to 1 million people

¹Source: BWS Water Master Plan, adopted October 2016.





- ◀ Six primary steps provide water from source to tap. These primary steps are managed and enabled on a daily basis through the water system infrastructure and workforce of the BWS.



BWS Sustainability Goals

For many years, BWS has communicated its efforts through three strategic goals: Resource Sustainability, Operational Sustainability, and Financial Sustainability. These over-arching agency goals create alignment with the vision and mission, program priorities, and action plans.



Resource Sustainability (Safe)

Protect, conserve and manage Oahu's water supplies and watersheds now and into the future through adaptive and integrated strategies.



Operational Sustainability (Dependable)

Build an effective organization that continuously works to improve dependable service.



Financial Sustainability (Affordable)

Implement sound fiscal strategies to provide safe, dependable and affordable water service.



BWS Strategic Objectives and Key Action Plans

With the validation of the three strategic goals, the Board Members and senior management team participated in a workshop to review the strategic objectives and identify potential strategic actions to support the three overarching sustainability goals.

Periodic progress reports to the Board and an annual review by the senior management team will ensure that BWS meets these strategic objectives and actions to reaffirm their alignment to the agency's strategic sustainability goals.

SAFE



DEPENDABLE



AFFORDABLE



SUSTAINABILITY GOALS AND STRATEGIC OBJECTIVES

Sustainability Goals	Category	Strategic Objective
Resource	Climate Change	We will increase our understanding and adapt to climate change to manage Oahu's water resources and protect the limited water supply.
Resource	Water Quality	We will protect, preserve, and collaborate to ensure the safety and quality of Oahu's fresh water resource.
Resource	Watershed Management	We will ensure healthy forests, recognizing the essential role of watersheds for a sustainable water supply (capture and recharge).
Resource	Water Conservation	We will conserve supply and system capacity by reducing per capita demand and increasing water efficiency.
Operational	Organization	We will ensure the necessary workforce, competencies, tools and resources to support current and future needs.
Operational	Infrastructure	We will renew and improve the water system to ensure water system adequacy, dependable service, and operational efficiency.
Operational	Customer Service	We will proactively and consistently provide a quality experience in every customer interaction.
Operational	Technology	We will ensure that our technology systems are current and leverage opportunities in technology to effectively support current and future BWS needs.
Financial	Financial Opportunities	We will pursue and leverage financial opportunities.
Financial	Financial Planning	We will develop and implement short and long term financial plans and policies.

STRATEGIC OBJECTIVES AND ACTION PLANS

Climate Change – We will increase our understanding and adapt to climate change to manage Oahu’s water resources and protect the limited water supply.

- Incorporate vulnerability assessment research to increase infrastructure resiliency.
- Complete hydro-geologic research on climate change impacts to the water supply.
- Continue active collaboration with water organizations and agencies on adapting to climate change. (Water Master Plan - WMP)
- Complete the Kalaeloa seawater desalinization plant - 1.0MGD. (WMP)

Water Quality – We will protect, preserve, and collaborate to ensure the safety and quality of Oahu’s fresh water resource.

- Perform water quality monitoring and reporting.
- Formalize the source water protection program.
- Monitor the Red Hill situation and take action to protect and preserve the groundwater resource, including, but not limited to participating in the Red Hill Underground Fuel Storage Facility Administrative Order on Consent.

Watershed Management – We will ensure healthy forests, recognizing the essential role of watersheds for a sustainable water supply (capture & recharge).

- Appropriate up to 4% of annual Capital Improvement Program funding for watershed management and invasive species control. Water Management Plan (WMP)
- Complete Watershed Management Plans for Ewa, Central Oahu, Primary Urban Center, and East Honolulu. (WMP)
- Promote Low Impact Development (LID) and stormwater capture for aquifer recharge. (WMP)
- Revisit sustainable yields for all major aquifer systems with Commission on Water Resource Management.

Water Conservation – We will conserve supply and system capacity by reducing per capita demand and increasing water efficiency.

- Appropriate up to 4% of annual Capital Improvement Program funding for conservation to reduce per capita demand toward 2040 goal of 145 gpcd. (WMP)
- Reduce water loss to less than 10%. (WMP)
- Increase use of non-potable/recycled water. (WMP)
- Establish mandatory and incentive-based rules for conservation/recycled water for all customers.
- Continue consumer education and expand partnerships with government agencies and private entities.

STRATEGIC OBJECTIVES AND ACTION PLANS (Continued)

<p>Organization – We will ensure the necessary workforce, competencies, tools and resources to support current and future needs.</p>	<ul style="list-style-type: none"> - Establish and implement leadership development program. - Incorporate the Field Operations Multi-Skilled Worker program into City civil service. - Incorporate workforce improvements and technology efficiencies into the organization.
<p>Infrastructure – We will renew and improve the water system to ensure water system adequacy, dependable service, and operational efficiency.</p>	<ul style="list-style-type: none"> - Expand preventative and predictive maintenance programs. - Initiate implementation of findings and recommendations of the BWS Water Master Plan and 30-Year Capital Improvement Program. (WMP)
<p>Customer Service – We will proactively and consistently provide a quality experience in every customer interaction.</p>	<ul style="list-style-type: none"> - Continue process improvement and quality assurance program in the Customer Care Division. - Improve accuracy and efficiency in meter reads collection.
<p>Technology – We will ensure that our technology systems are current and leverage opportunities in technology to effectively support current and future BWS needs.</p>	<ul style="list-style-type: none"> - Adopt user friendly technologies, tools, and applications to support the action plans in the BWS Strategic Plan. (customer improvements) - Increase customer satisfaction with IT Services rendered.
<p>Financial Opportunities – We will pursue and leverage financial opportunities.</p>	<ul style="list-style-type: none"> - Effectively leverage debt and governmental funding for infrastructure investments. - Develop other sources of revenue to supplement BWS water rate revenue. - Execute RFP for the Beretania Complex property development.
<p>Financial Planning – We will develop and implement short and long term financial plans and policies.</p>	<ul style="list-style-type: none"> - Develop 10-Year operating budget plan. - Complete 30-Year Long Range Financial Plan and water rate study in collaboration with BWS Stakeholder Advisory Group. - Update financial policies to support the financial plan.

Stakeholder Analysis

The BWS serves and interacts with many stakeholders in its actions to fulfill its mission to provide safe, dependable, and affordable water to the Citizens of the City and County of Honolulu. The strategic planning process included a discussion on the key stakeholders and considerations for support and collaboration were listed that could be included in future strategies of the BWS, based on future assessment and prioritization.

BWS Water Master Plan

The Board of Directors adopted the BWS 30-Year Water Master Plan (WMP) on October 24, 2016. The WMP is an essential component of the strategic plan as it serves the visionary 30-year road map for the department.

The WMP is a comprehensive, broad-based technical plan that determines the necessary water system improvements to support projected growth and provide safe, dependable, and affordable water service to our customers. The development of the plan included a rigorous condition assessment of the existing water system to prioritize investment in renewal and replacement projects and the use of sophisticated computer modeling and statistical tools to identify capacity expansion projects to support areas of growth. The plan is also taking into consideration the effects of climate change with recommended active collaboration with industry experts on climate change research to determine its impacts on water infrastructure and watershed sustainability.

The BWS is currently developing a 30-Year Capital Improvement Program, financial plan, and rate study to finance the infrastructure projects, programs, and recommendations identified in the plan. Several action plans in this strategic plan were the result of the findings and recommendations from the WMP.

Performance Metrics

The following performance metrics help assess the progress of the BWS towards meeting the Sustainability Goals, Strategic Objectives and Action Plans identified in the new Strategic Plan.



RESOURCE SUSTAINABILITY

Protect, conserve and manage Oahu's water supplies now and into the future through adaptive and integrated strategies.

METRIC	DESCRIPTION	PURPOSE
Stable Head Levels at Index Wells (%)	$\frac{\text{(Number of Index Wells above Low Ground Water Levels)}}{\text{(Total Number of Index Wells)}}$	Measures the water level at the index wells and which are stable above Low Ground Water Levels. The purpose of this metric is to monitor the health of the ground water aquifer and prevent detrimental impact to the ground water sources.
Days in Regulatory Compliance	$\frac{\text{(Number of Days in Compliance)}}{\text{(Total Days in Fiscal Year)}}$	Measures the compliance with water quality regulations. The purpose of this metric is to ensure supply of water that is safe for intended use
Per Capita Water Consumption	$\frac{\text{(Annual Gallons Water Delivered/365)}}{\text{(Total Population Served)}}$	Measures the effect of conservation programs on per capita consumption. The purpose of this metric is to determine if the target goal of 145 gpcd by year 2040 is being realized.
Area of Watershed Surveyed	Area of watershed surveyed for invasive plant species removal per year	Measures the area of BWS priority watersheds (26,085 acres) surveyed for invasive plant species per year. This purpose of this metric is to monitor invasive plant species removal.

OPERATIONAL SUSTAINABILITY

Build an effective organization that continuously works to improve dependable services.

METRIC	DESCRIPTION	PURPOSE
Resident Overall Satisfaction with BWS (%)	% Strong Overall Satisfaction with BWS	Measures the percentage of residents that are strongly satisfied with overall services provided by BWS. The purpose of this metric is to measure the perceived satisfaction of residents with BWS and determine areas for improvement in delivery of BWS services
Employee Turn-Over Rate (%)	$\frac{\text{(Total number of Employee Departures)}}{\text{(Average number of Regular FTE)}}$	Measure the rate of regular employee departure through voluntary, involuntary or retirement. The purpose of this metric to determine the rate of employee departs and develop strategies to retain employees.
Pipeline Leak Detection	$\frac{\text{(Miles of Pipes Tested for Leaks)}}{\text{(Total Miles of Pipe)}}$	Measures the percentage of pipelines that were checked for leaks. The purpose of this metric is to track progress toward the goal of surveying 25% of the water system pipelines annually.
Main Breaks (count per 100 miles of pipeline)	$\frac{\text{Total Number of Annual Mainbreaks}}{\text{(Total Miles of Pipe/100)}}$	Measures the annual number of main breaks per 100 miles of pipe. The purpose of this metric is to track the overall condition of the pipelines.

FINANCIAL SUSTAINABILITY

Implement sound fiscal strategies to provide safe, dependable and affordable water service.

METRIC	DESCRIPTION	PURPOSE
Bond Rating	AA+ - Fitch Aa2 – Moody's	Monitor and maintain the current ratings by the bond agencies. Measures financial strength and stability of the department.



Board of Water Supply
630 South Beretania Street
Honolulu, HI 96843
www.boardofwatersupply.com