



**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Honolulu

## **Board of Water Supply City and County of Honolulu**



UWE KA LANI OLA KA HONUA

General Contractors Association General Membership Meeting  
October 16, 2018  
Ernest Y. W. Lau, P.E., Manager and Chief Engineer

**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*




Board of Water Supply  
City and County of Honolulu

## **Capital Projects Division**

**Building our future with thoughtful,  
collaborative solutions**





**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*




Board of Water Supply  
City and County of Honolulu

## Oahu's Water System



- 94 active potable water sources
- 90 booster pump stations
- 171 reservoirs
- Nearly 2,100 miles of pipeline
- Average Daily Demand = 145 million gallons

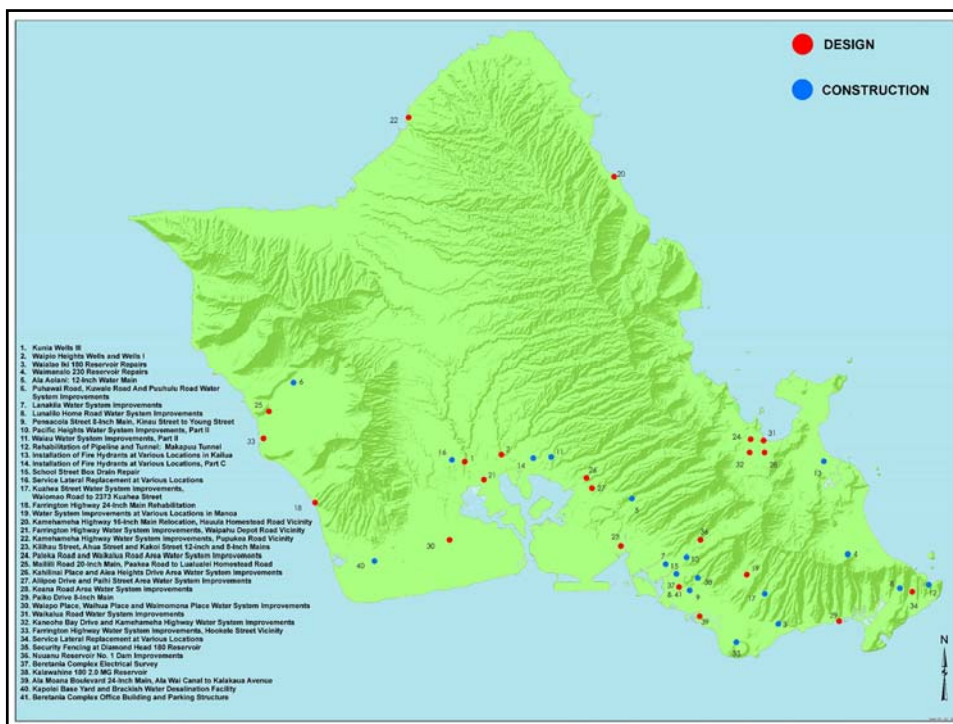
**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Honolulu

## FY19 CIP

- Supports the BWS mission of **Water For Life: Safe, dependable and affordable water now and into the future**
- Aligned with the BWS Strategic Plan 2018-2022, Divisions' Goals & Objectives and the Six-Year Capital Improvement Program



**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*

Board of Water Supply  
City and County of Honolulu

## Program Categories

- Research and Development
- Renewal and Replacement
- Capacity Expansion

**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*

Board of Water Supply  
 City and County of Honolulu

## Project Category Highlights

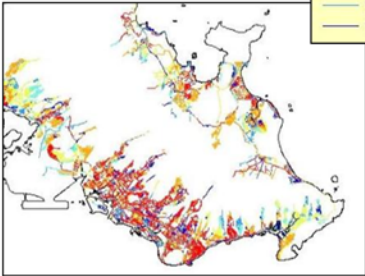
**Research and Development (\$4.4 million)**

- Construction Management for Various BWS Construction Projects
- Project and Program Management for Various BWS Projects
- Pipeline Condition Assessment

**Legend**

**INSTALLYEAR**

- 1903 - 1955
- 1956 - 1965
- 1966 - 1975
- 1976 - 1985
- 1986 - 1995
- 1996 - 2005



**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*

Board of Water Supply  
 City and County of Honolulu

## Project Category Highlights

**Renewal and Replacement (\$92.1 million)**

- Pump Renewal and Replacement
- Reservoir repairs
- GAC Facility Improvements
- Water Meter Transponders Replacement – Phase II
- Security Improvements at Various Locations



**WATER FOR LIFE**  
Safe, dependable, and affordable water now and into the future

Board of Water Supply  
City and County of Honolulu

## Project Category Highlights

### Renewal and Replacement (continued)

- Main replacement construction in Waianae, Moanalua Valley, Pacific Heights, Lanakila and Hawaii Kai – **7 miles**
- Main replacement design will be initiated in various location including Pupukea, Waipahu, Waiiau, Kaneohe, Manoa and Palolo – **18.5 miles**

Fiscal Year	Miles of pipeline replacement
2016	1
2017	2
2018	6
2019	7
2020	8
2021	9
2022	10
2023	12
2024	14
2025	16
2026	18
2027	20
2028	21

**WATER FOR LIFE**  
Safe, dependable, and affordable water now and into the future

Board of Water Supply  
City and County of Honolulu

## Project Category Highlights

### Renewal and Replacement (continued)

- Fire hydrant installations in Kailua
- Makapuu Pipeline Tunnel repair
- Service lateral replacements

**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*

Board of Water Supply  
City and County of Honolulu

## Project Category Highlights

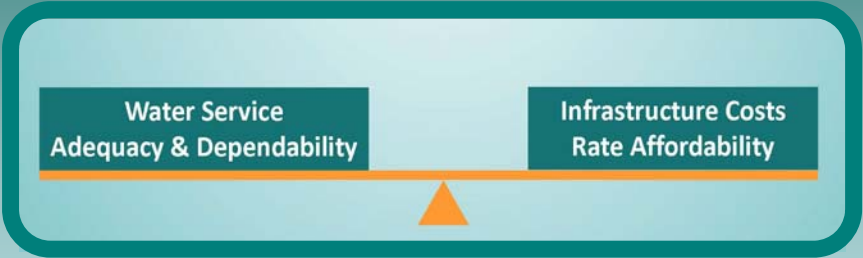
**Capacity Expansion (\$23.4 million)**

- Kalawahine 180 2.0 MG Reservoir
- Ala Moana Boulevard 24-inch Main upsized
- Kapolei Base Yard
- Beretania Complex Office Building/Parking Structure



**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*

Board of Water Supply  
City and County of Honolulu



**Water Service Adequacy & Dependability**

**Infrastructure Costs Rate Affordability**

**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*

Board of Water Supply  
City and County of Honolulu

## Improvements to BWS Management of Construction Activities

- GCA-BWS Committee
  - Continued collaboration
  - Improvements to specifications
  - Improvements in procurement methods
  - Quality management



**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*

Board of Water Supply  
City and County of Honolulu

## Working together

Water for Life:  
Safe, dependable and affordable water now and into the future



**WATER FOR LIFE**  
*Safe, dependable, and affordable water now and into the future*

Board of Water Supply  
The City and County of Honolulu

# ***Mahalo and Aloha***



ENTRUSTED TO US TO  
**PRESERVE**  
FOR FUTURE GENERATIONS