

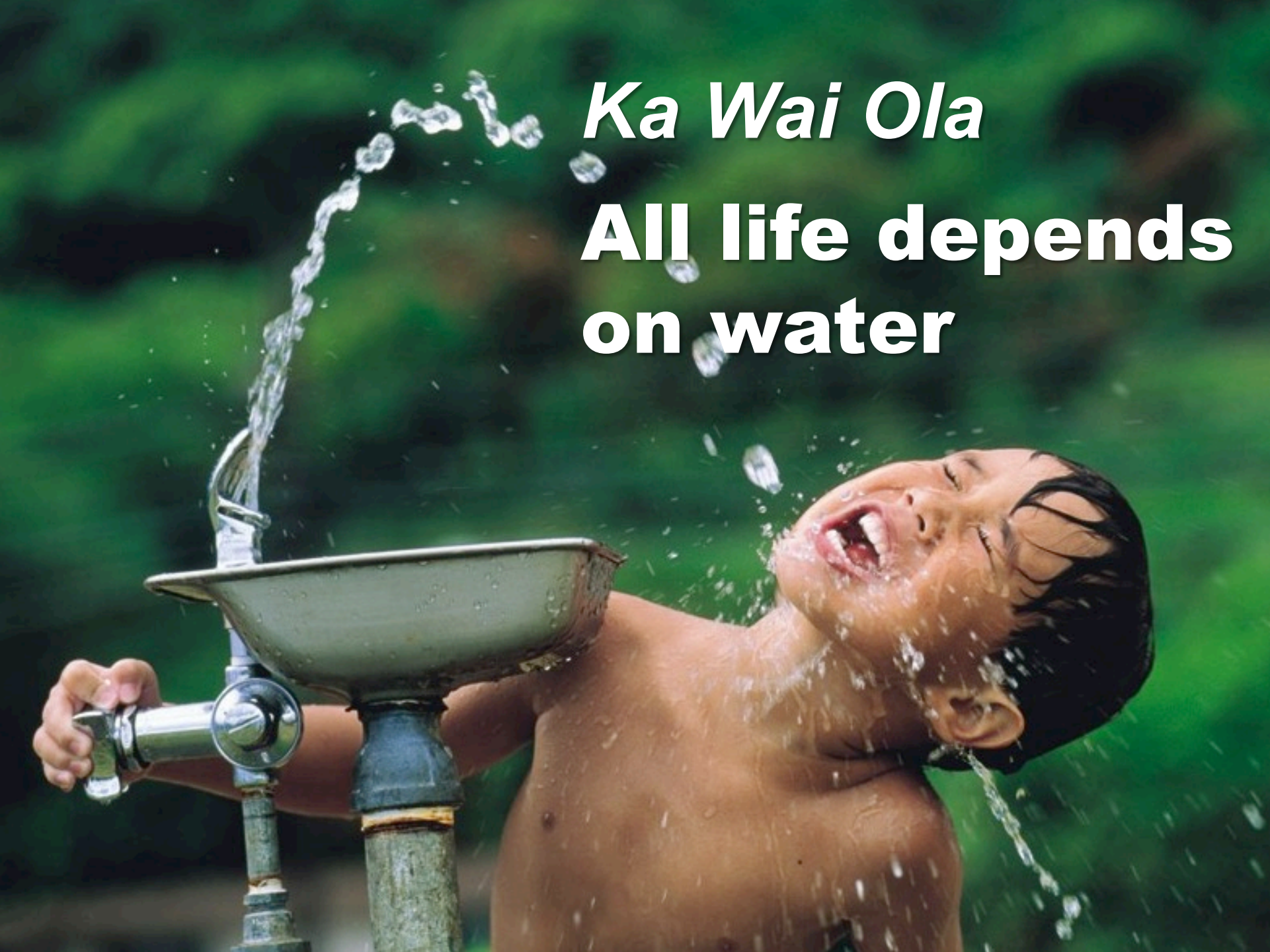


WAI'ANAE COAST ROTARY CLUB

Blaine Fergstrom

October 15, 2019

www.boardofwatersupply.com



Ka Wai Ola
**All life depends
on water**





ENTRUSTED TO US TO

PRESERVE

FOR FUTURE GENERATIONS

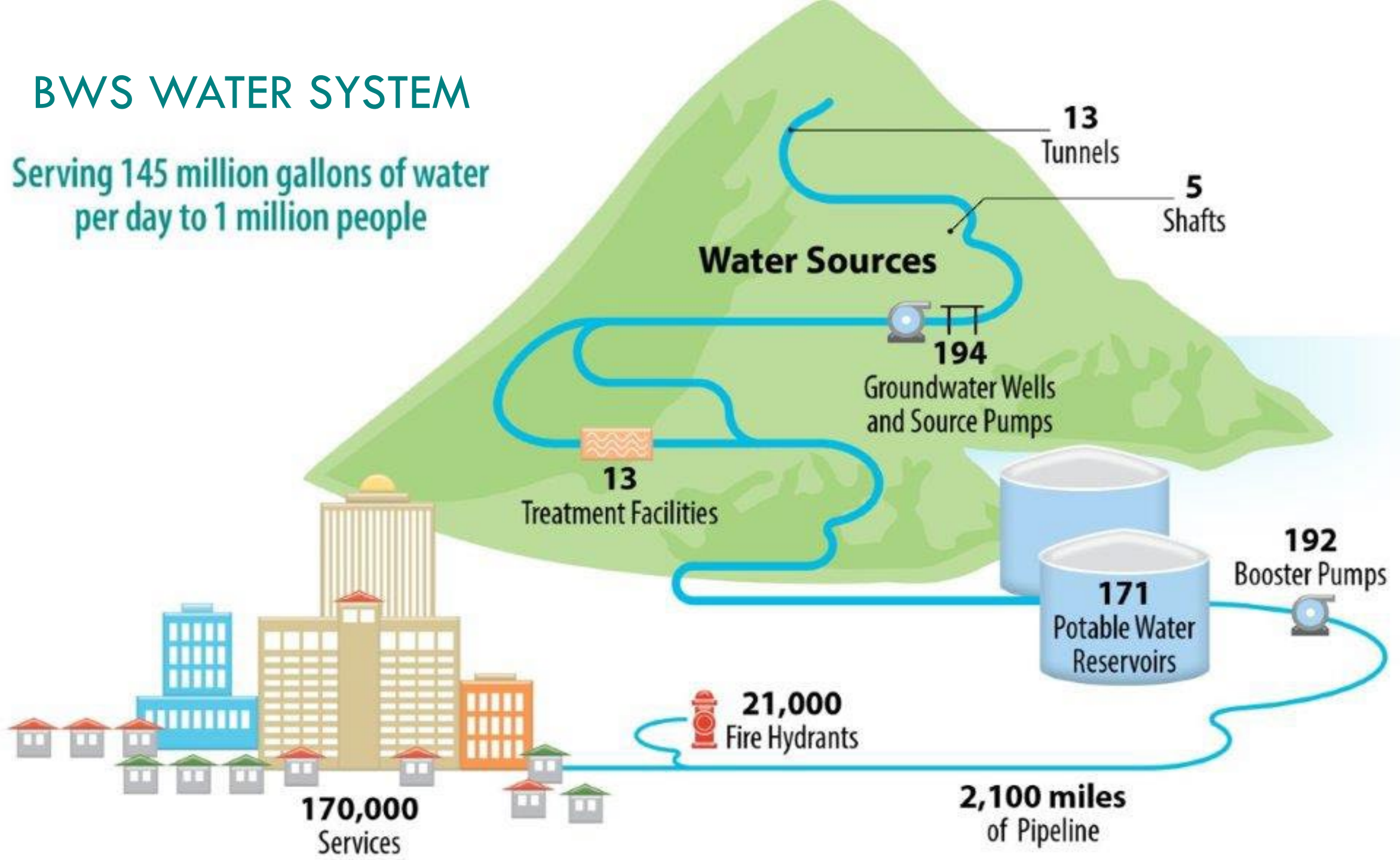
BWS VISION AND MISSION

- Vision: Ka Wai Ola – Water for Life
- Mission: To provide safe, dependable, & affordable water now and into the future



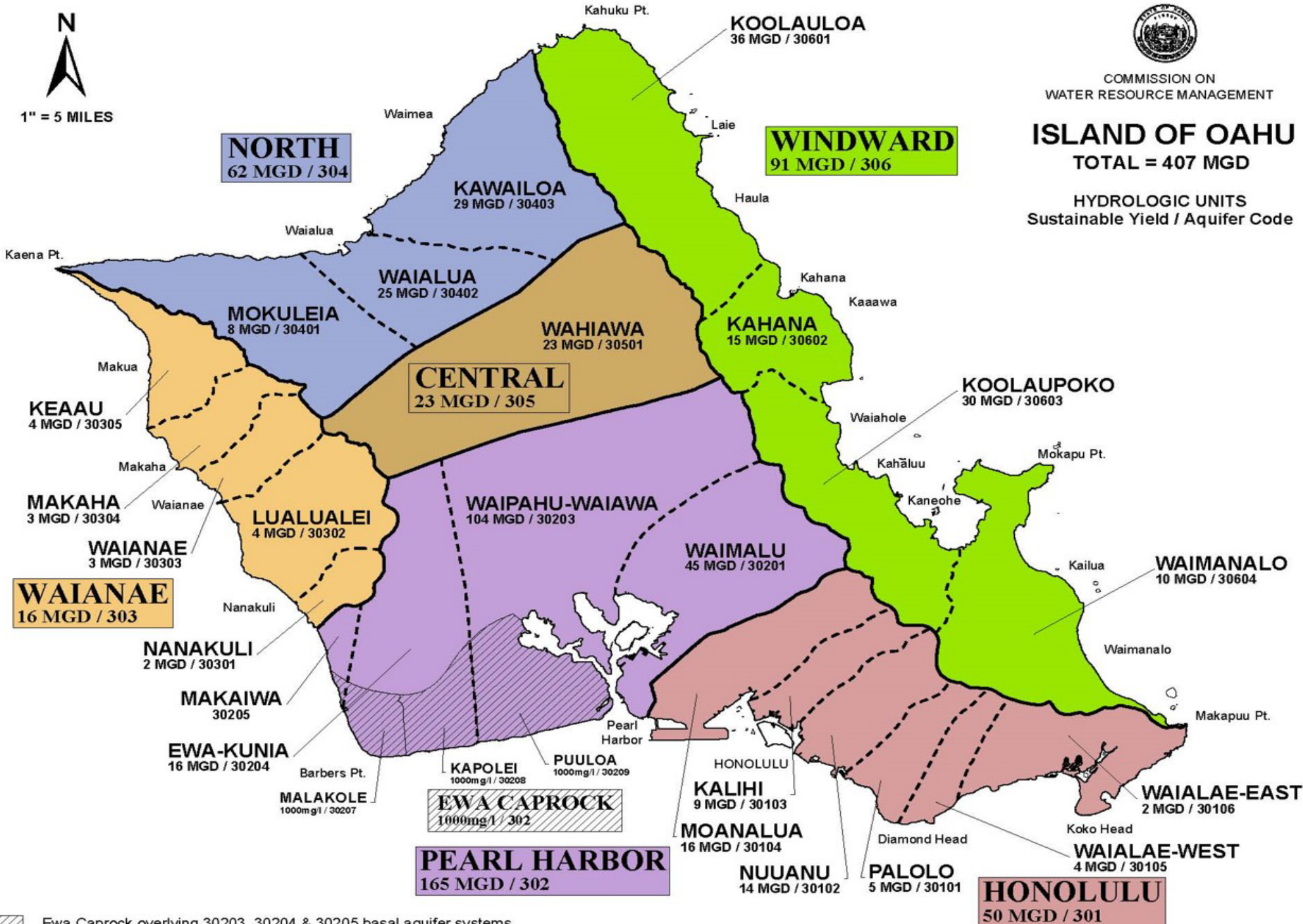
BWS WATER SYSTEM

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





1" = 5 MILES




COMMISSION ON WATER RESOURCE MANAGEMENT

ISLAND OF OAHU

TOTAL = 407 MGD

HYDROLOGIC UNITS
Sustainable Yield / Aquifer Code

 Ewa Caprock overlying 30203, 30204 & 30205 basal aquifer systems



LARGE WATER MAIN BREAKS

- Punalu‘u 30” – March 22, 2019
- Farrington Hwy. 24”, Nānākuli,
– September 28, 2017
- Kalaniana‘ole Highway, Kahala 24” –
January 21, 2017



PUNALU'U 30" – MARCH 22, 2019

PUNALU'U 30" CONCRETE CYLINDER PIPE FAILURE





PUNALU'U 30" CONCRETE CYLINDER PIPE FAILURE





PUNALU'U 30" - SITE DAMAGE





PUNALU'U 30" - SITE DAMAGE





PUNALU'U 30" - SITE DAMAGE



FARRINGTON HWY., NĀNĀKULI 24" – SEPTEMBER 28, 2017



© 2017

Farrington Hwy 24" Transmission Main



Kalaniana'ole Hwy 24" Transmission Main Break



KAHALA 24" TRANSMISSION MAIN – JANUARY 21, 2017

Waialae Country Club

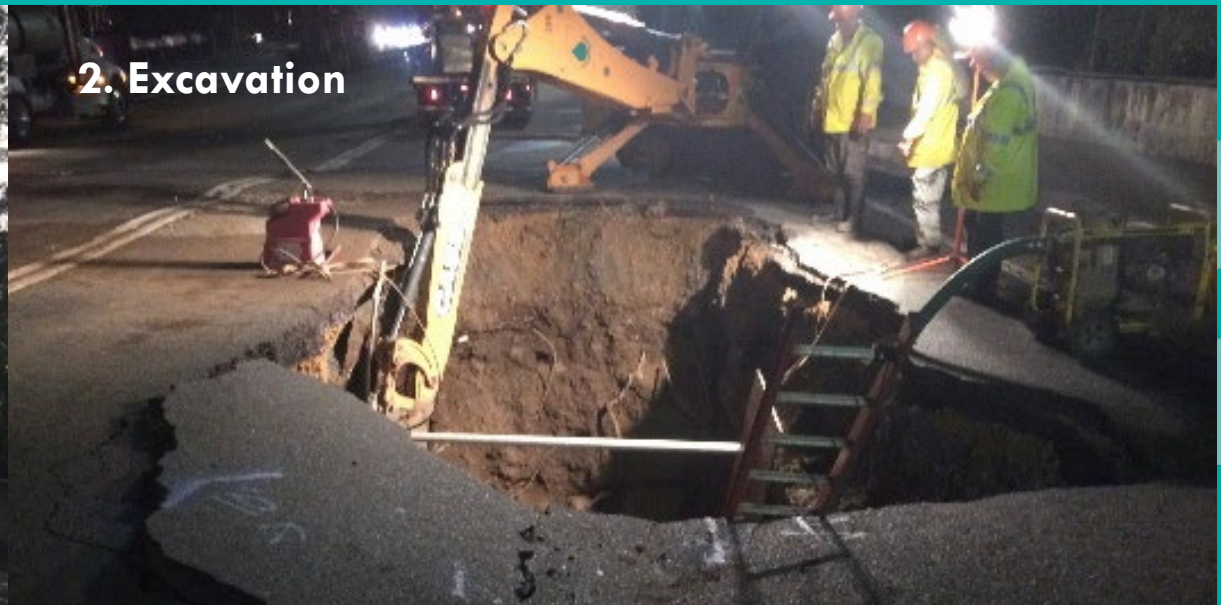


SAT, JAN 21 – SUN, JAN 22



1. Sink-hole

2. Excavation



3. Abandoned Main

KAHALA 24" TRANSMISSION MAIN – JANUARY 21, 2017



Abandoned Main on Top, Live Main Underneath





Trench Box Shoring



Damaged Pipe



Removing Shoring



Prep for Paving



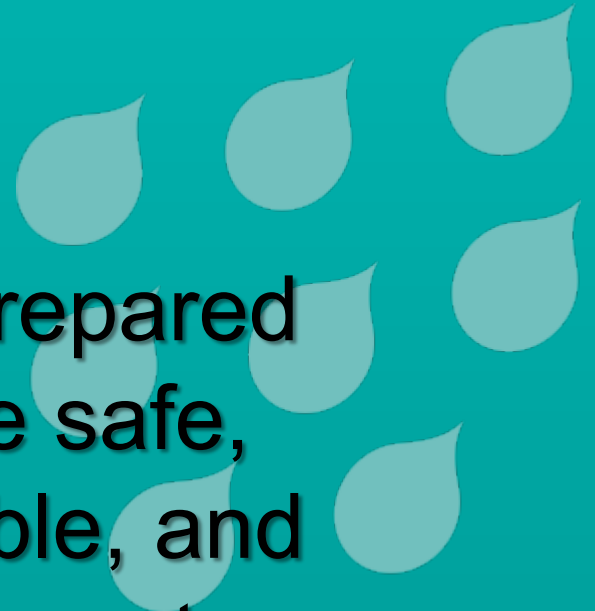
WAI'ANA'E WATER MAIN BREAKS

<u>Date</u>	<u>Size</u>	<u>Matl</u>	<u>Address</u>	<u>Year</u>
2/1	12	CI	87-118 Helelua St	1974
3/8	8	PVC	84-767 Upena St	2007
3/10	8	CI	87-140 Maaloa St	1962
3/14	8	DI	87-992 Hakimo Rd	1983
4/19	8	PVC	86-283 Kawili St	2008
5/3	6	CI	87-118 Hookele St	1947
5/6	8	PVC	84-215 McArthur St	2008
5/8	16	CC	85 625 Farrington Hwy	1998
5/8	8	PVC	85-277 McArthur St	2008
5/22	12	C	84-545 Kili Dr	1975
5/23	20	CC	86-197 Maililii Rd	???
5/29	8	CI	87-177 St Johns Rd	1969
5/29	8	CI	87-521 Manuaihue St	1969
6/22	8	CI	85-329 Alohiki St	1960
7/11	8	C	85-54 Kaupuni St	1958
8/28	6	PVC	84-228 Holt St	2007
8/31	8	PVC	86-281 Kawili St	2000
9/11	8	C	89-682 Mokiawe St	1981
9/12	8	C	89-618 Mokiawe St	1981
9/19	8	CI	86-261 Farrington Hwy	1974
9/21	6	CI	87-118 Hookele St	1947
9/29	8	PVC	84-259 Holt St	2007

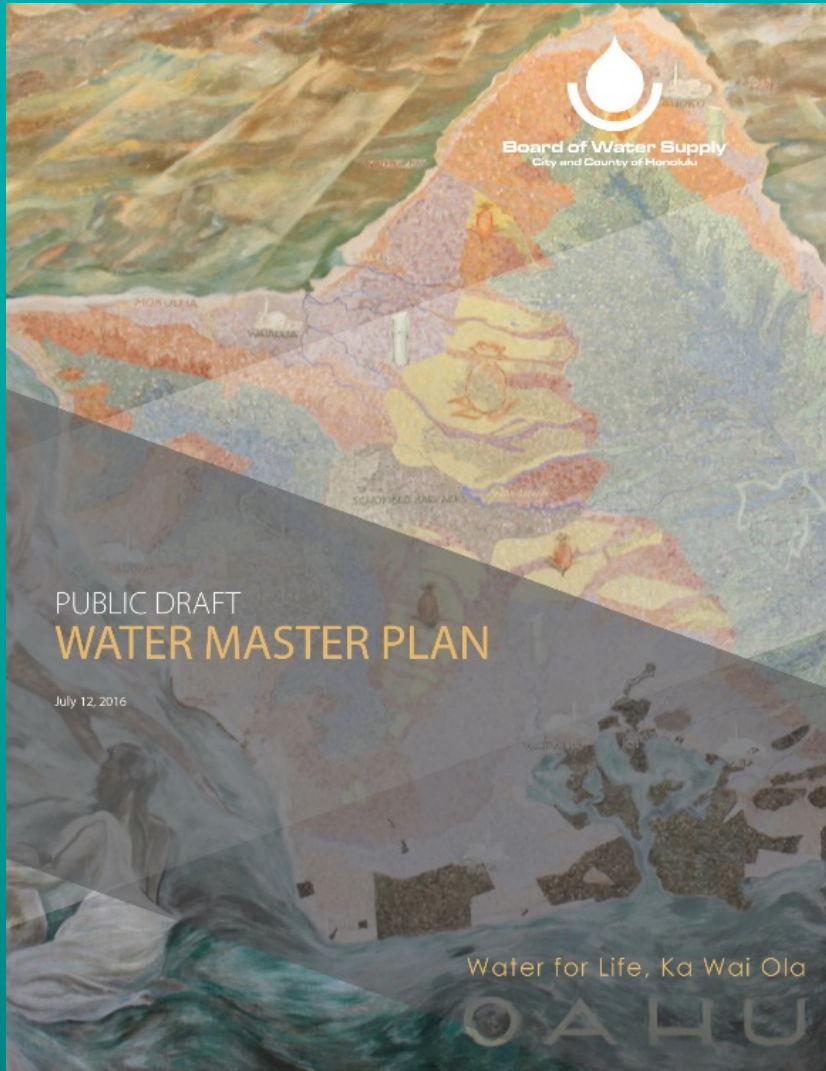




Are we prepared
to provide safe,
dependable, and
affordable water
for **the next
generation?**

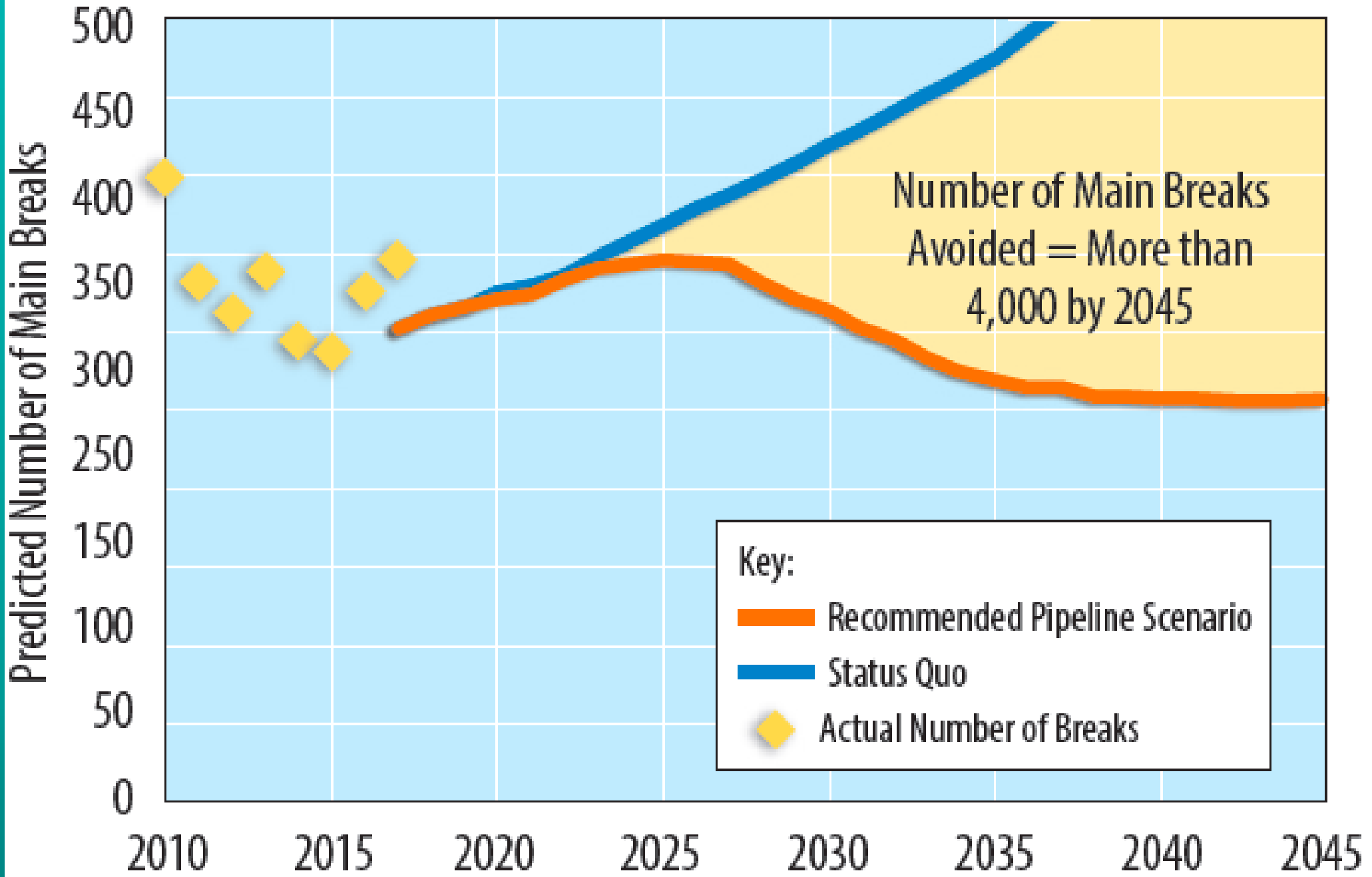


WATER MASTER PLAN



- **Looks ahead** 30 years
- **Evaluates** the entire water system
- **Identifies** necessary improvements
- **Balances needs with costs** of providing water to our customers
- **BWS Board adopted** Water Master Plan October 2016





Number of Main Breaks Avoided = More than 4,000 by 2045

Key:


- Recommended Pipeline Scenario
- Status Quo
- Actual Number of Breaks

Annually replacing 21 miles of pipeline is recommended to reduce main breaks





Action: Over the next decade, BWS is ramping up to **replace 21 miles of pipeline per year** – about 3 x today's replacement rate.




Over the next **30 years**, BWS will invest in **800+ infrastructure projects** island-wide, with total costs above **\$5.3 billion**.



Over the next 10 years:

Results	Investment
💧 Reliability and resiliency of our water system will increase	\$511 million
💧 The number of main breaks will go down	\$876 million
💧 Increased investments in conservation will preserve existing supplies and delay the need for new ones	\$3.4 million (per year, 4% of infrastructure investments)
💧 Targeted funding for watershed protection will help us adapt to a changing climate	\$3.4 million (per year, 4% of infrastructure investments)



A young child with wet hair is smiling and splashing water under a waterfall. The child's arms are raised, and water is spraying around them. The background is a lush green forest with a waterfall.

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Mahalo!

BOARD OF WATER SUPPLY

Wai'anae Coast Rotary Club

October 15, 2019

Blaine Fergerstrom

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Download at hbws.me/presentations

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