

WATER FOR LIFE

Safe, dependable, and affordable water now and into the future



Board of Water Supply
City & County of Honolulu

Stakeholder Advisory Group

**Board of Water Supply
City & County of Honolulu**

Tuesday March 13, 2018

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Board of Water Supply
City and County of Honolulu

Dave Ebersold
Facilitator

WELCOME

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Public Comments on Agenda Items

Meeting Objectives

- ◆ Receive updates regarding the BWS
- ◆ Seek your recommendation on draft new water rates
- ◆ Seek your input on draft Water System Facilities Charge

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Ernest Lau P.E.

BWS Manager and Chief Engineer

BWS UPDATES

U.S. Navy sponsored Red Hill Fuel Storage Tank Project Update Meeting

- ◆ **When:** March 14, 2018, from 6:00 pm – 8:30 pm
- ◆ **Where:** Moanalua Middle School, 1289 Mahiole Street, Honolulu
- ◆ Information about the ongoing work at Red Hill and the AOC between the U.S. Navy, DLA and the Regulatory Agencies can be found at:
 - <https://www.epa.gov/red-hill>
 - <http://health.hawaii.gov/shwb/ust-red-hill-project-main>
 - www.cnmc.navy.mil/redhill



Summary of Estimated BWS Meter and WSFC Subsidies (For 5-Year Period)

Description	Estimated Subsidy
DPP Affordable and Homeless Housing on City Properties	\$5,248,046
City Council Resolutions for Affordable Housing 2012 to present	\$1,626,495
Homeless Projects	\$107,410
Fire Sprinkler Retrofit (6" meter)	\$201,390
Important Agriculture Lands (IAL)	???
SUBTOTAL	\$7,183,342
TOTAL SUBSIDIES = : \$7,183,342 OR ~ \$1,436,668/YEAR	

Proposed Water Conservation Incentive Measures

Measure	Proposed Measure Approach	Proposed Start Date	Target Audience
Clothes Washer Rebate	Providing a rebate on the purchase of a water efficient clothes washer to residential account holders	Q2 2018	Residential
Residential Rain Barrel Rebate	Providing a rebate on the purchase of a rain barrel to residential account holders	Q2 2018	Residential
Weather Based Irrigation Controller Rebate	Providing rebates for WBICs to residential account holders	Q3 2018	Residential
Food Service Incentives	Incentivizing pre-rinse spray nozzles and faucet aerators to commercial account holders	Q3 2018	Commercial
Commercial Rain Barrel Rebate	Providing a rebate on the purchase of a rain barrel to commercial account holders	Q4 2018	Commercial



Unfortunately, Ellen and Joe are off the air



Mike and Barry are the new sensation!



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Mahalo!

Questions & Answers





Action

Review and accept notes from

- ◆ Stakeholder Advisory Group Meeting #23
held on Wednesday, January 10, 2018
- ◆ Stakeholder Advisory Group Meeting #24
held on Wednesday, February 21, 2018

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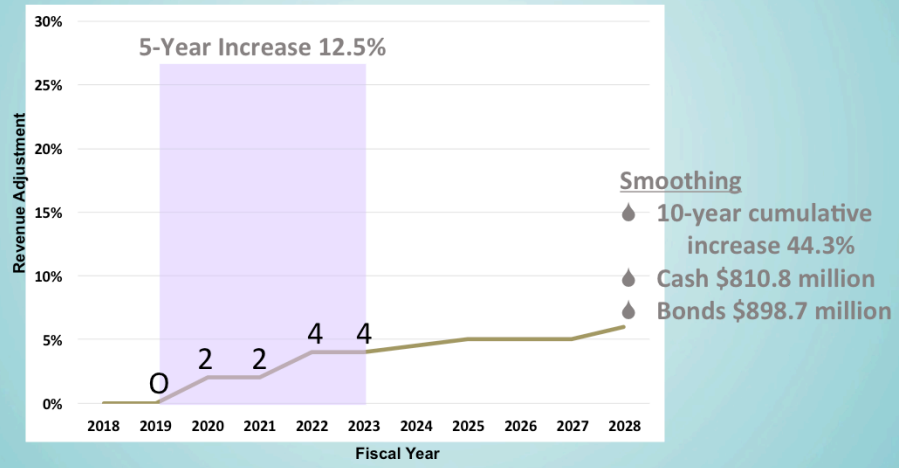
Facilitator

Brian Thomas

Public Financial Management

ITERATIVE RESULTS OF THE RATES MODELING

Revenue adjustment needed



What we're trying to do with rates

- ◆ Implement the Water Master Plan
- ◆ Reduce main breaks
- ◆ Invest in our infrastructure for our future
- ◆ Provide an "Essential Needs" tier
- ◆ Encourage conservation
- ◆ Reduce subsidy to single-family residential
- ◆ Bring multi-unit down to cost of service
- ◆ Avoid rate shock
- ◆ All rates go up some

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Public Financial Management

DRAFT UPDATES TO WATER SYSTEM FACILITIES CHARGE

Water System Facilities Charge (WSFC)

- ◆ A one-time charge based on water use capacity
- ◆ Applies to
 - All new development and residential properties requiring water from the BWS's system
 - Additional supplies needed from an existing water service
- ◆ Excludes
 - Developments that have paid for and installed all of a water system;
 - Portion of the system installed by developers e.g., source, transmission and/or storage

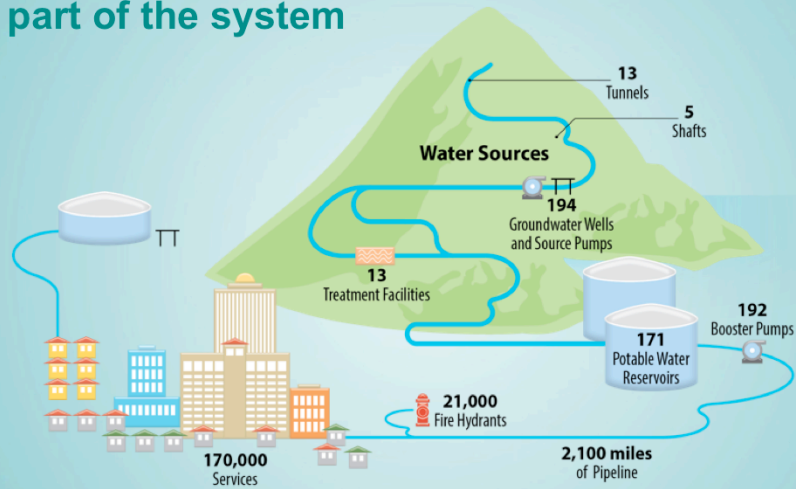
WSFC Purpose

- ◆ Equitably reimburse the existing rate payers for their investment in oversizing of infrastructure to accommodate future customers
- ◆ Fund growth-related capacity expansions

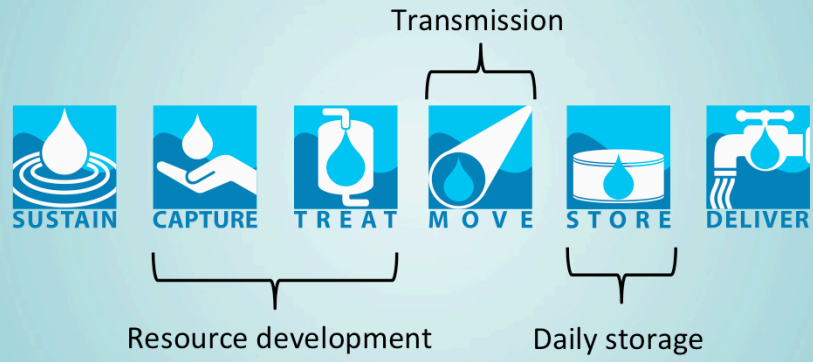
BWS's authorization for WSFC

- ◆ Hawaii Revised Statutes Chapter 46, Sections 141 – 148
 - **46-142(a)(2)**: Impact fees may be assessed, imposed, levied, and collected by: Any board for any development, or portion thereof, involving water supply or service
 - **46-143(d)**: An impact fee shall be substantially related to the needs arising from the development and shall not exceed a proportionate share of the costs incurred or to be incurred in accommodating the development
 - **46-146**: Assessment of impact fees shall be a condition precedent to the issuance of a grading or building permit and shall be collected in full before or upon issuance of the permit
- ◆ Rules and Regulations, Chapter I, Section 1-102
 - Stipulates who is charged the WSFC and allows the Department to negotiate a charge, when appropriate

Water System Facilities Charge pays for your part of the system



WSFC is for the backbone system only (general use facilities)



[AWWA M1 Manual]

Why update the WSFC now?

- ◆ Current rates adopted in 1993
- ◆ Water use patterns have changed
- ◆ Growth needs have changed
- ◆ Available capacities in existing system have changed
- ◆ Costs have increased
- ◆ Technical analysis needs to be updated
- ◆ Concurrent with other changes to BWS's rates and charges

Four basic steps to updating the WSFC

1. Determine existing available capacity and its monetary value
2. From WMP and 10-year CIP, identify planned additions and upgrades to meet growth, and their cost
3. Estimate how much capacity each customer type needs (gallons per day per fixture unit)
4. Do a bunch of math

What's a fixture unit (fxtu)?

- A unit of measure, based on the rate of discharge, time of operation and frequency of use, that expresses the hydraulic load of that fixture on the system
- Equal to one cubic foot of water drained in an 1 1/4" pipe over one minute



1.6 fxtu



1.6 fxtu



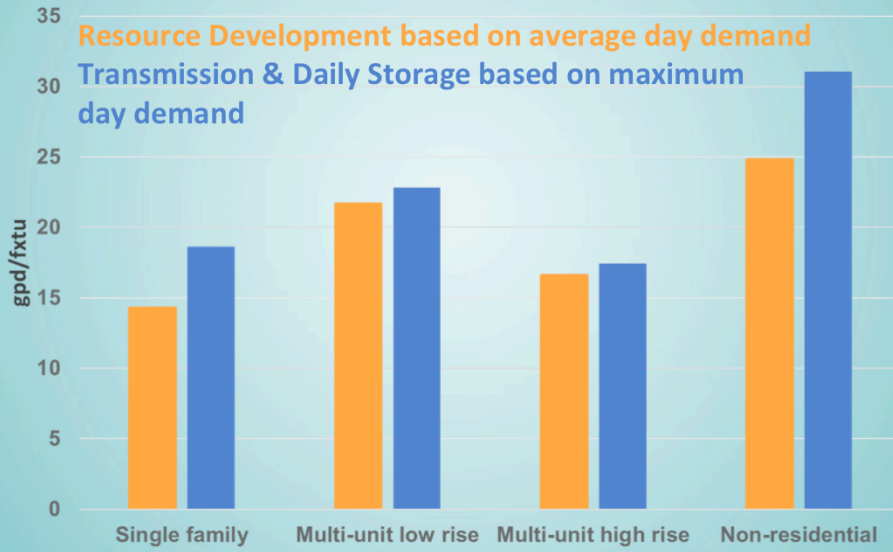
2.0 fxtu



2.5 fxtu

Source: 1997 Uniform Plumbing Code

Step 3: Estimate customer capacity needs



Agricultural WSFC currently based on single family residential (SFR) usage

- “The WSFC for the selected meter size is based on an average single-family residential fixture unit count for that meter size and the correlated average water use for a single-family residential unit.”

Ernst & Young 1993

Meter size	Existing fxtu for SFR	Updated fxtu for SFR
3/4"	36	20.0
1"	59	34.8
1 1/2"	160	63.5
2"	350	147.4

In 1 day, the average agricultural customer uses 6,000 gallons, more than half of BWS's single family residential customers use in an entire month

Alternative agricultural calculation method based on usage and meter size

1. Use the backbone unit costs (\$/gpd)
2. Calculate average usage per account (gpd/account) and estimate the peak usage per account
3. Calculate base meter size using equivalent meter ratios
4. Multiply the backbone unit cost by average or peak usage as appropriate = the charge for the base meter size
5. Determine charge for sizes other than the base meter size using equivalent meter ratios

Considerations for your input

- ◆ The draft charges presented recover the full cost of the impact of growth on the water system. Should any customer class be charged less than this full cost?
- ◆ Should changes to the WSFC be implemented as soon as possible, or on July 1, 2019 along with changes to rates?
- ◆ Should there be a phase-in period for changes to the WSFC?

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SUMMARY AND NEXT STEPS

Next Stakeholder Advisory Group meeting

- ◆ Wednesday, April 11, 2018
 - 4:00 – 6:30 pm
 - Neal S. Blaisdell Center, Hawaii Suites
- ◆ Future meetings:
 - *Would this group be willing and interested in continuing to advise the Board of Water Supply on a range of water-related issues?*
 - *We would meet less frequently*
 - *Ideas? Suggestions?*

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