



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**

**Thursday, July 16, 2020
Meeting 35 - Virtual**

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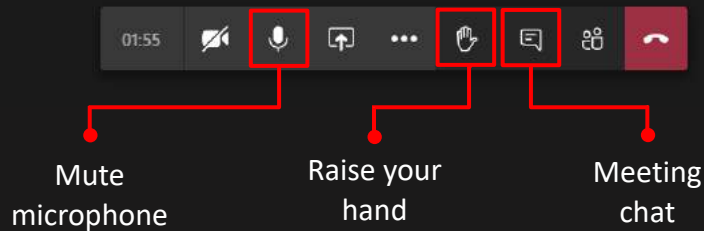
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City & County of Honolulu

Dave Ebersold
Facilitator

WELCOME


2

3 Important Controls



3

Virtual Meeting Best Practices

- ◆ Please stay muted unless you are speaking
- ◆ Use  or meeting chat to let us know you want to ask a question
- ◆ If you don't have the "raise hand" function or meeting chat, unmute your mic/phone and speak
- ◆ Speak one person at a time
- ◆ Expect something to go wrong
- ◆ Remember that patience is a virtue

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Meeting Objectives

- ◆ Receive updates regarding the BWS
- ◆ Accept notes from meeting #34
- ◆ Discuss the One Water Framework and opportunities for stakeholder input
- ◆ Hear about the BWS Financial Update

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Public Comments on Agenda Items

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Ernest Lau
BWS Manager and Chief Engineer

BWS UPDATES

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Red Hill Update

Halawa Shaft

Red Hill Shaft

Moanalua Wells

WAIMALU AQUIFER

MOANALUA AQUIFER

Red Hill Bulk Fuel Storage Facility

Red Hill Tank

Water Supply Well

Aquifer Boundary

0 300 600 900 1,000
Meters
0 300 600 900 1,000
Feet

8



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Mahalo! **Questions & Answers**



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Action

Review and accept notes from

- ◆ Stakeholder Advisory Group Meeting #34 held on Thursday, May 28, 2020

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Barry Usagawa
BWS Water Resources Program Administrator

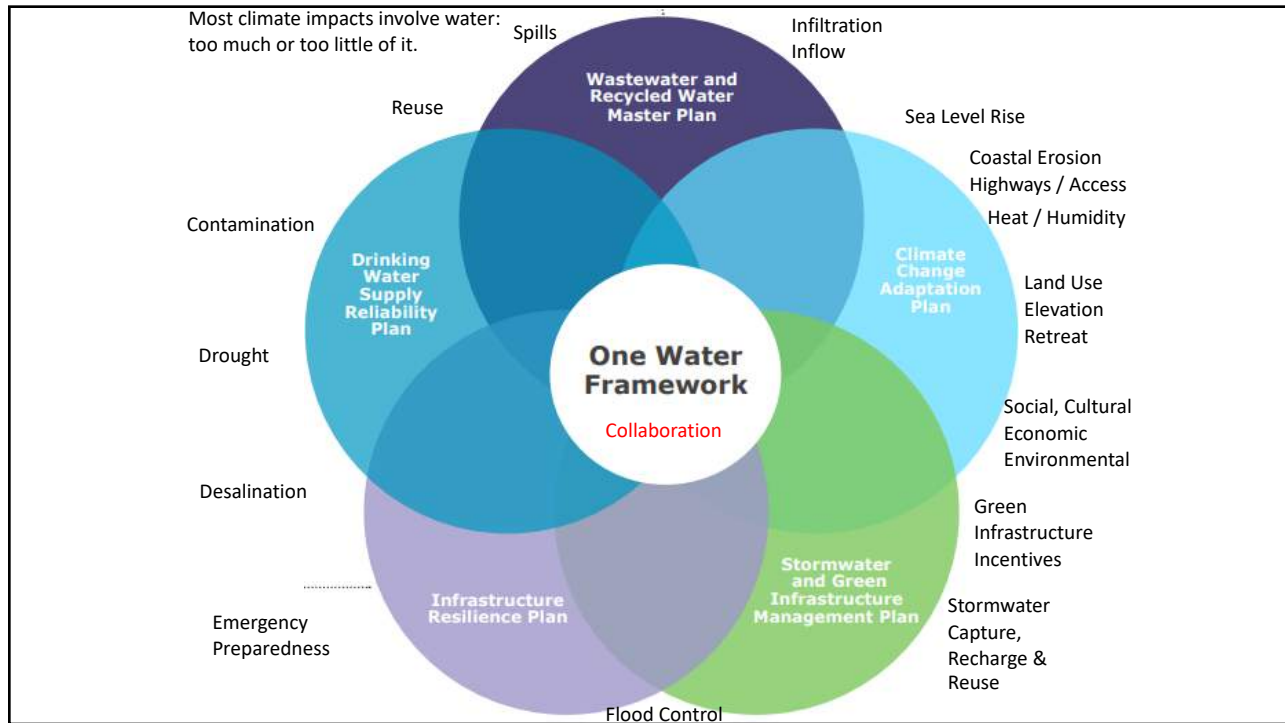
ONE WATER FRAMEWORK



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WHAT IS ONE WATER

‘ONE WATER’ – ONE WATER IS AN INTEGRATED PLANNING AND IMPLEMENTATION APPROACH TO MANAGING FINITE WATER RESOURCES FOR LONG-TERM RESILIENCE AND RELIABILITY, MEETING BOTH COMMUNITY AND ECOSYSTEM NEEDS. (WRF, 2017)

*Ahupua'a- a section of mountain, valley, and sea.
Image courtesy of Matt Foster published by Maui Nō Ka 'Ōi
<https://mauimagazine.net/about-us/>.*

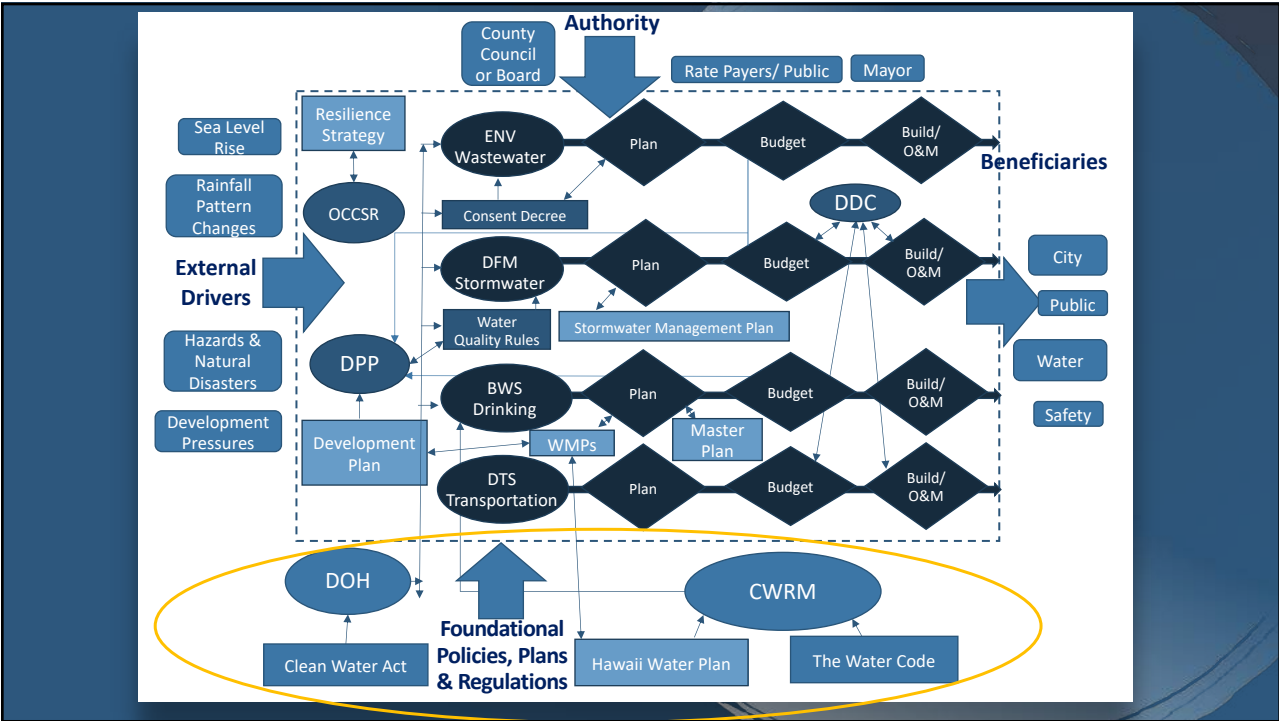
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HOW TO APPLY ONE WATER

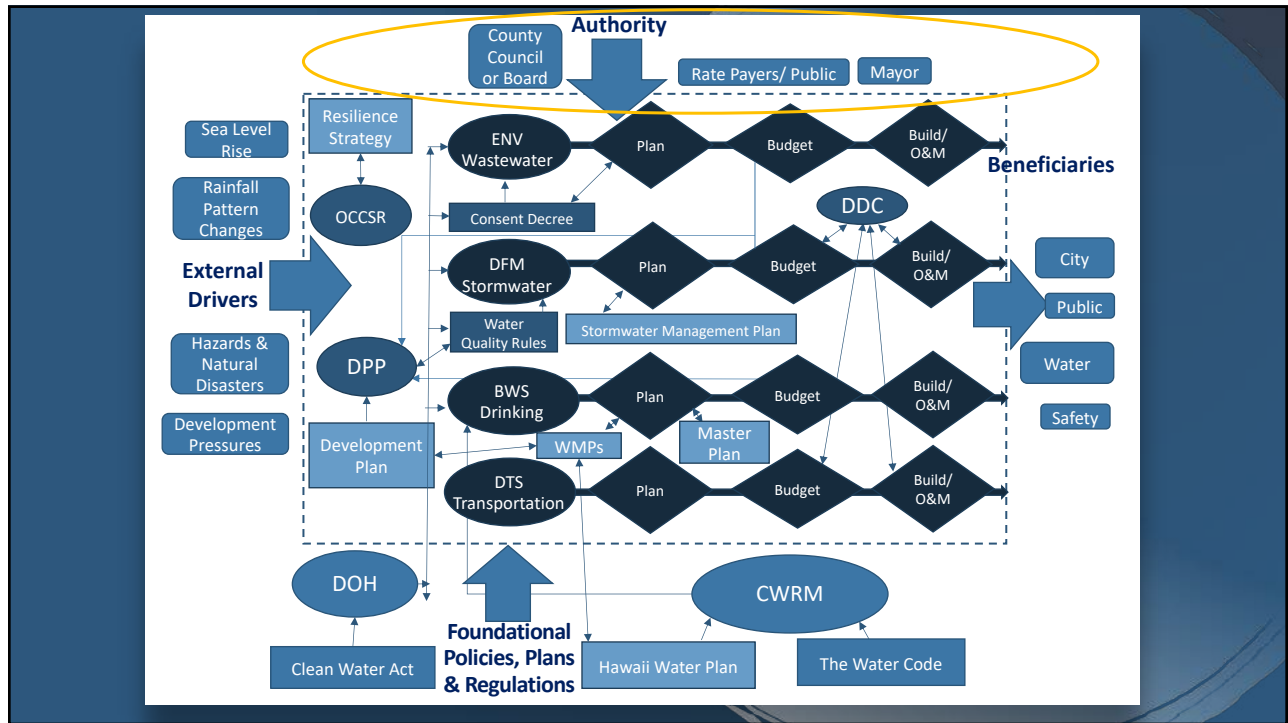
1. START WITH EXISTING PLANS & PROGRAMS
2. LAYOUT CITY STRUCTURE, LOOK FOR INTEGRATION POINTS
3. FORMALIZE INTEGRATION POINTS/ COLLABORATIVE ACTIONS
4. ESTABLISH SCOPE OF WORK, WITH SHARED PRIORITIES & DEMO PROJECTS



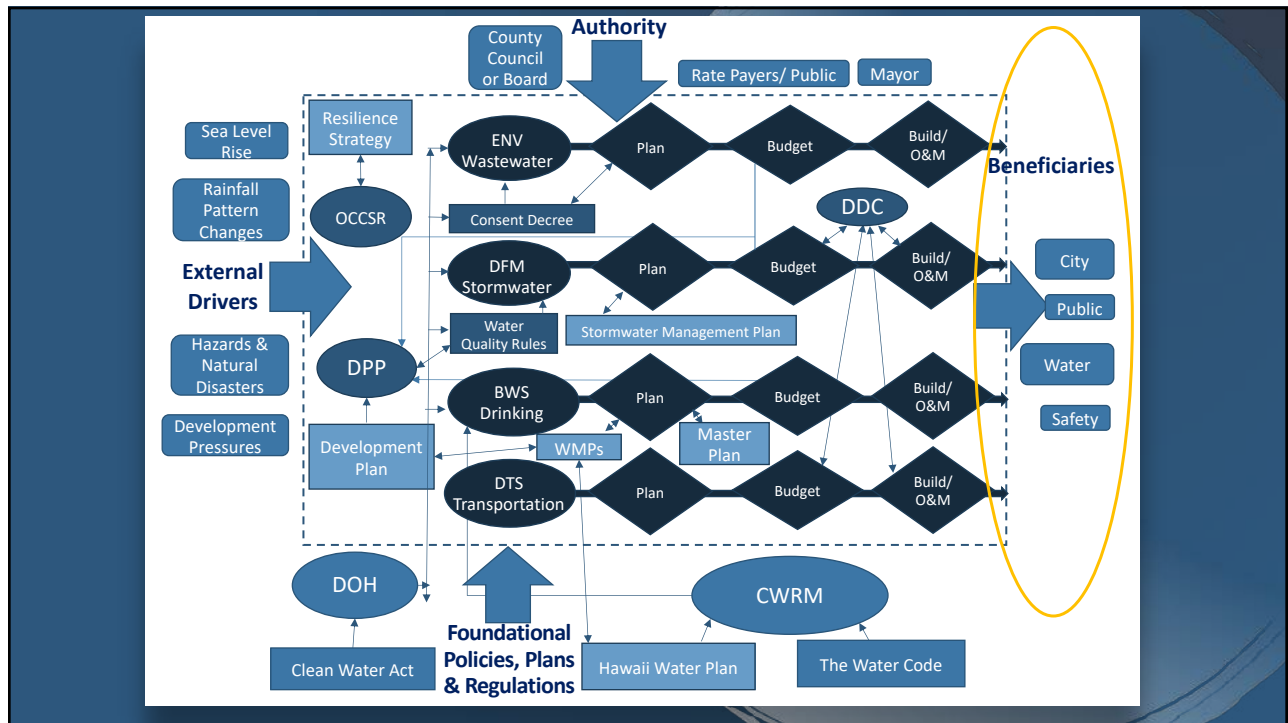
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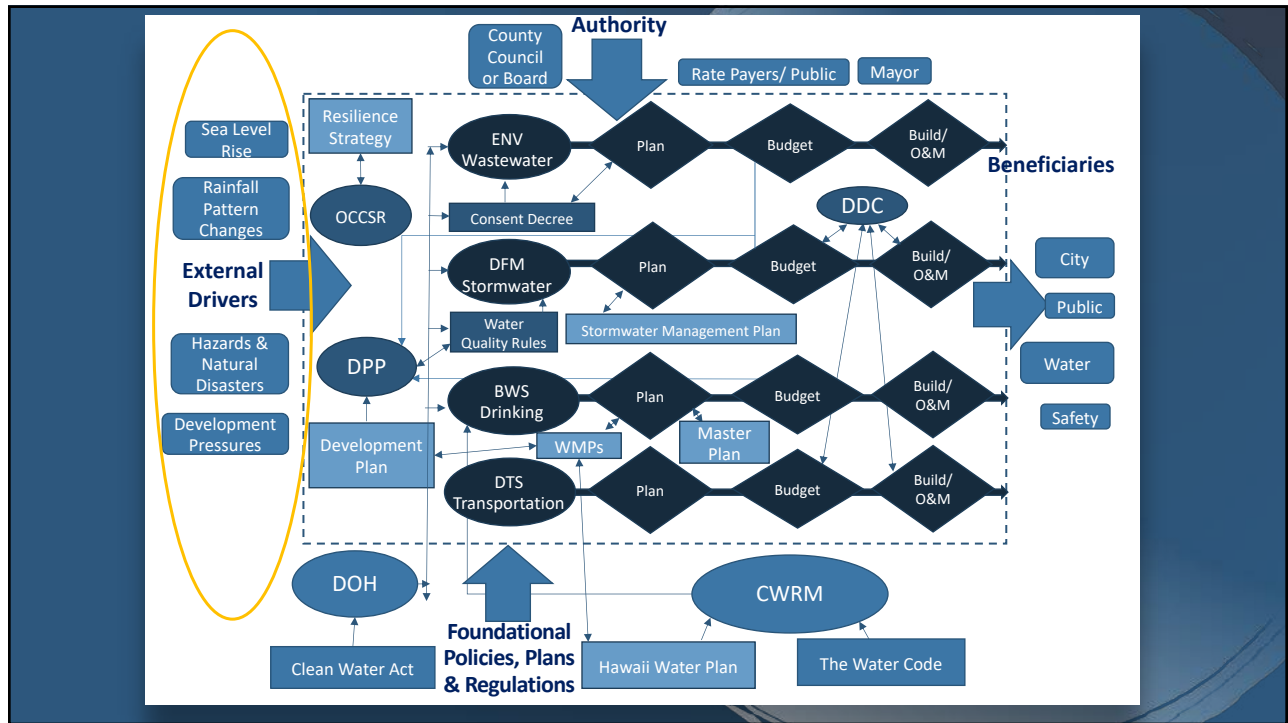
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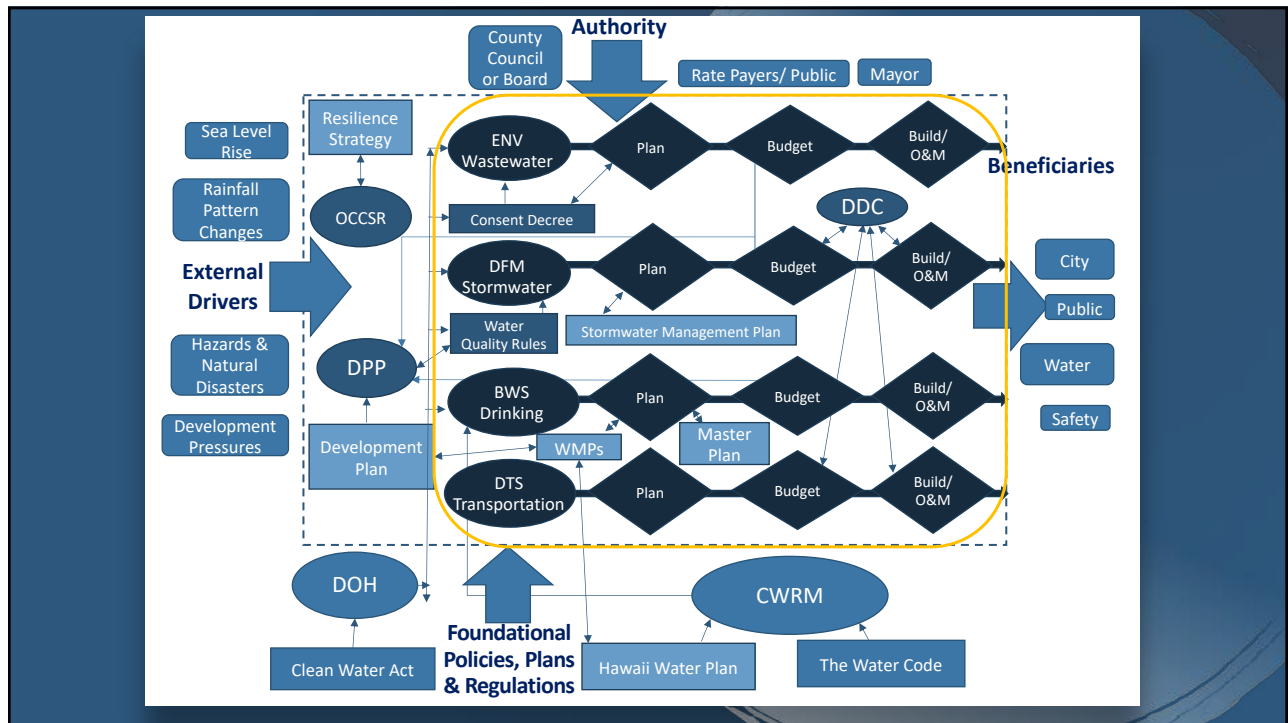
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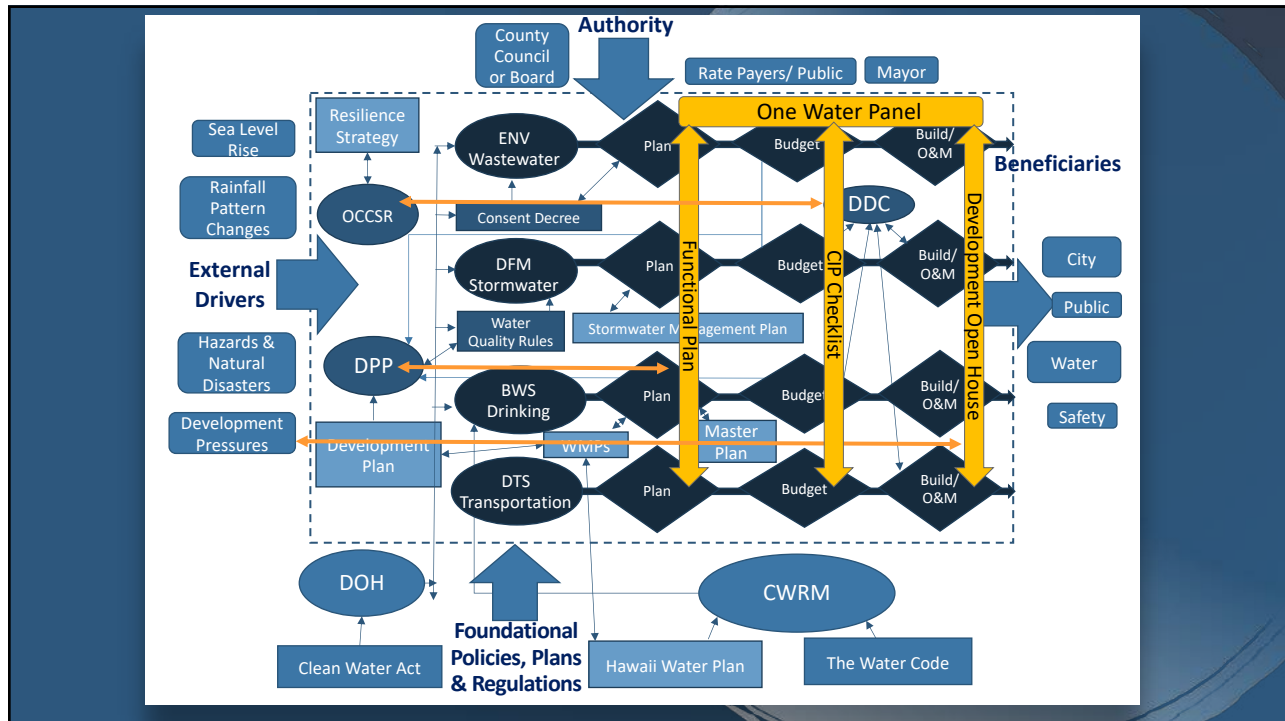
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ACTION 1

FORMALLY ESTABLISH A ONE WATER FRAMEWORK.

- ORDINANCE

What is a One Water framework?

A One Water approach considers the water cycle as an integrated system, recognizing the interconnectedness of surface water and groundwater supply, stormwater, wastewater, and energy.^{2,3} Many utilities have already developed plans associated with various elements captured in a One Water approach including drinking water supply reliability, climate change adaptation, stormwater management, green infrastructure, and wastewater infrastructure resilience.

A One Water framework builds on the interconnectedness of these plans and identifies efficiencies. The result of this effort may take the form of a separate comprehensive plan, but the end product can also be a framework, guiding the collaborative actions of a group of separate but connected entities; a document describing how to leverage existing plans; or a simple scope defining the prioritized water resource management initiatives. An outcome of the plan or framework can be the identification of projects with multiple benefits.

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ACTION 2

DEVELOP INTERAGENCY MEMORANDUM OF UNDERSTANDINGS

- PURPOSE: INTERAGENCY COLLABORATIVE AGREEMENT TO ADVANCE CLIMATE RESILIENCE
- INCLUDES: COMMON 'ONE WATER' OBJECTIVES & PRIORITIES
- MUTUALLY BENEFICIAL 'ONE WATER' DEMONSTRATION PROJECTS
- COOPERATIVE FUNDING, AS AVAILABLE



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ACTION 3

ESTABLISH A ONE WATER PANEL.

- CONSULT ON CITY PROJECT & PROGRAMS
- COORDINATE PRIVATE DEVELOPMENT MASTER PLANS
- UPDATING BUILDING CODES & DESIGN STANDARDS
- AUTHORIZED AT DEPARTMENT HEAD LEVEL
- PARTICIPANTS FROM DIVISION HEAD LEVEL




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ACTION 4

ESTABLISH A 'ONE WATER' COMPONENT IN BROADER PLANNING FRAMEWORK.

- AT FUNCTIONAL PLANNING LEVEL
- CONNECTING TO DP, SCP & WMPS



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ACTION 5

COORDINATION ON CIP AND ANNUAL BUDGET FOR 'ONE WATER RESILIENCE CHECKLIST'



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CHECKLIST FOR CLIMATE RESILIENCE

- **RESEARCH & MONITORING**
 - SLR Modeling and Groundwater Monitoring Well Network
- **POLICY & REGULATION**
 - Mayor's Directive; Land use plan policies; SLR and Flood Insurance Rate Maps, Inundation Areas, and Shoreline Setbacks with SLR
- **FINANCING**
 - Appropriations over time, FEMA for Repetitive Loss areas, Tax incentives, Improvement Districts, Fees
- **PLANNING & ENGINEERING FEASIBILITY STUDIES AND INFRASTRUCTURE PLANNING**
 - Infrastructure Vulnerability Assessments, SLR Priority Criteria, Adaptive Strategies, Drainage Master Plans, On-site Reuse, Elevate or Retreat Criteria, Post-Disaster Reconstruction Plans, Coastal Erosion Strategies
- **PUBLIC OUTREACH AND COMMUNICATION**
- **DESIGN**
 - High Priority Areas: Mapunapuna, Waikiki, Iwilei, Kakaako, Aiea Kai
- **CONSTRUCTION**
 - Lift all utilities concurrent with roads if possible
- **NUISANCE FLOODING TRIGGER BY MID-CENTURY AS STREETS BECOME TRAFFIC HAZARDS**

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ACTION 6

COORDINATING AND CONDITIONING PRIVATE DEVELOPMENTS FOR CLIMATE RESILIENCE AROUND CAPACITY & ADAPTATION

- PROJECT OPEN HOUSE FOR DEVELOPERS TO COLLECTIVELY MEET WITH 'ONE WATER DEPARTMENTS'



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ACTION 7

IDENTIFY AND IMPLEMENT 'ONE WATER' DEMONSTRATION PROJECTS

- MAPUNAPUNA SEA LEVEL RISE ADAPTATION
- UNIVERSITY AVENUE COMPLETE STREETS
- EWA WATER REUSE
- ALA WAI STORMWATER MANAGEMENT PLAN
- CESSPOOL CONVERSIONS
- WAIHEE LOI RESTORATION



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ONE WATER ACTIONS

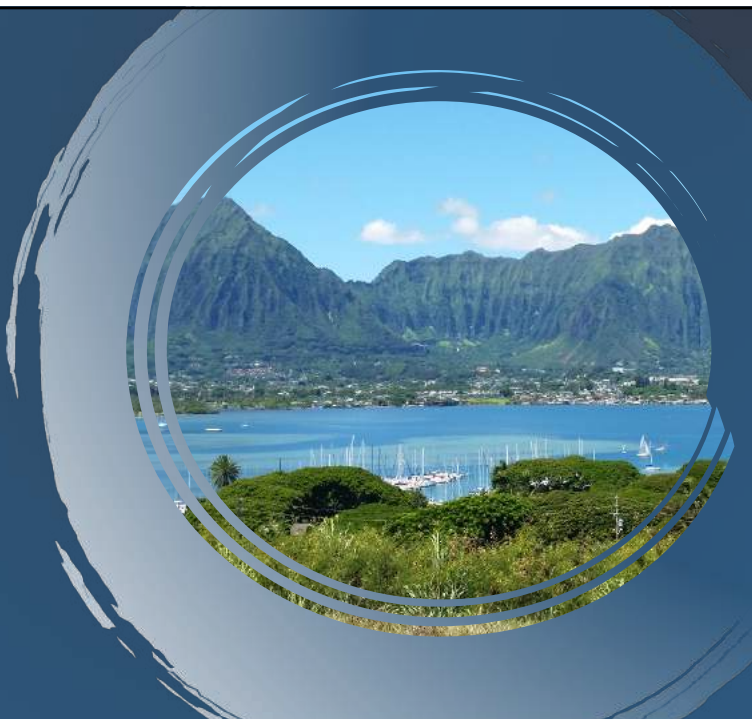
1. ESTABLISH ONE WATER FRAMEWORK
2. DEVELOP INTERAGENCY MOU'S
3. ESTABLISH ONE WATER PANEL
4. INTEGRATE IN PLANNING
5. COORDINATE ON CIP (RESILIENCE CHECKLIST)
6. PRIVATE DEVELOPMENT CONDITIONS AND CO-MEETING WITH DEVELOPERS
7. DEMONSTRATION PROJECTS



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HAWAII LEADS?

- 2018 CLIMATE CHANGE DIRECTIVE
- FULL POLITICAL CONTROL OVER WATERSHEDS
- ONE WATER -> ADAPT TO CLIMATE, IMPROVE INFRASTRUCTURE RESILIENCE, PROTECT OUR RESOURCES




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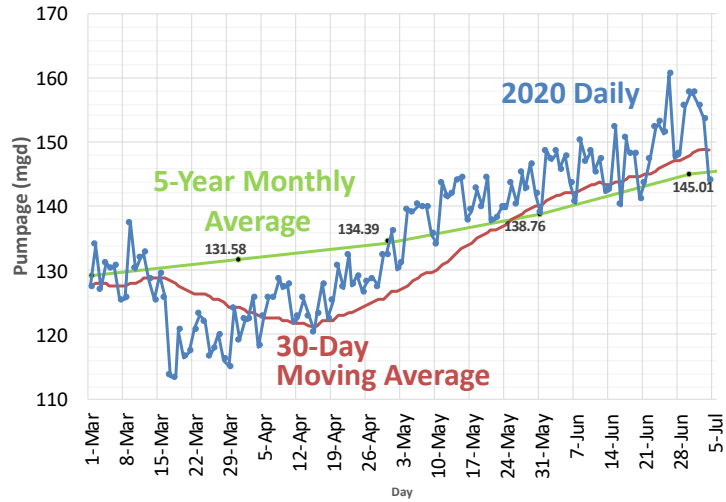
Barry Usagawa
BWS Water Resources Program Administrator

Ellen Kitamura
BWS Deputy Manager and Chief Engineer

BWS FINANCIAL UPDATE

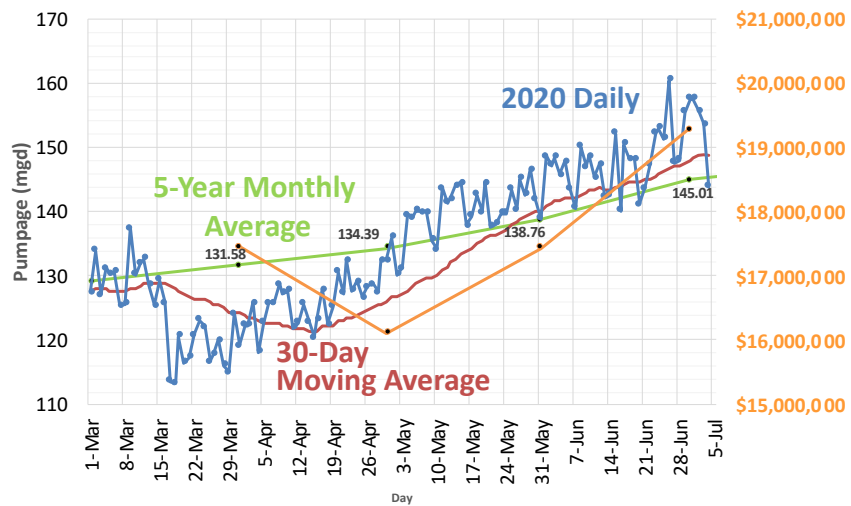
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Total Island Potable Water Production Since March 1, 2020



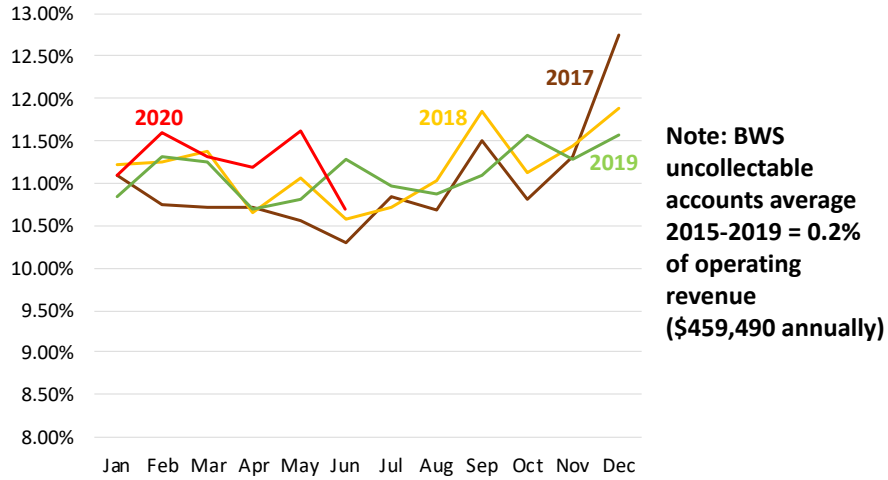
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Total Island Potable Water Production Since March 1, 2020, With Revenue



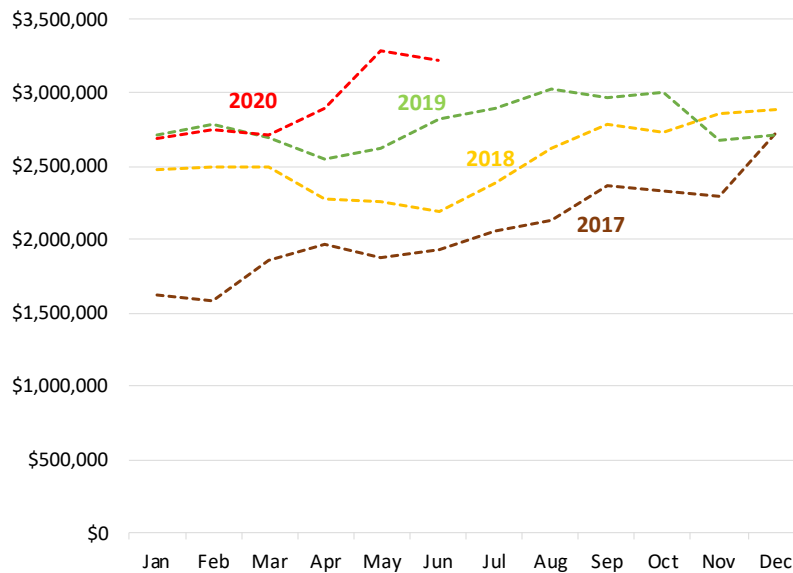
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Percentage of Water Accounts 30 Days Past Due – 2017 to Present

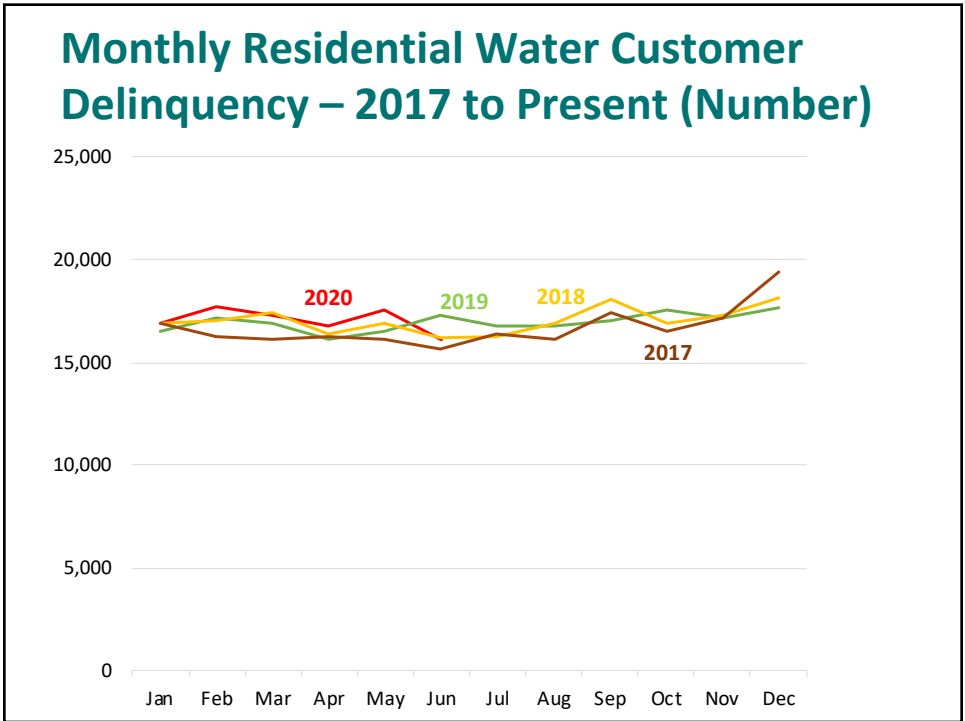


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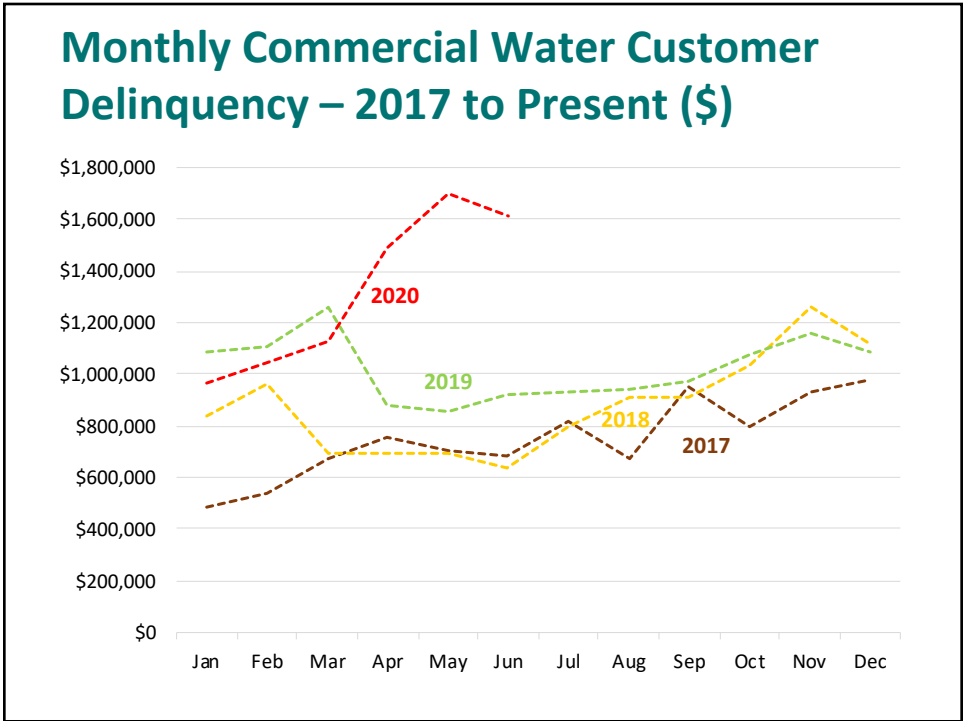
Monthly Residential Water Customer Delinquency – 2017 to Present (\$)



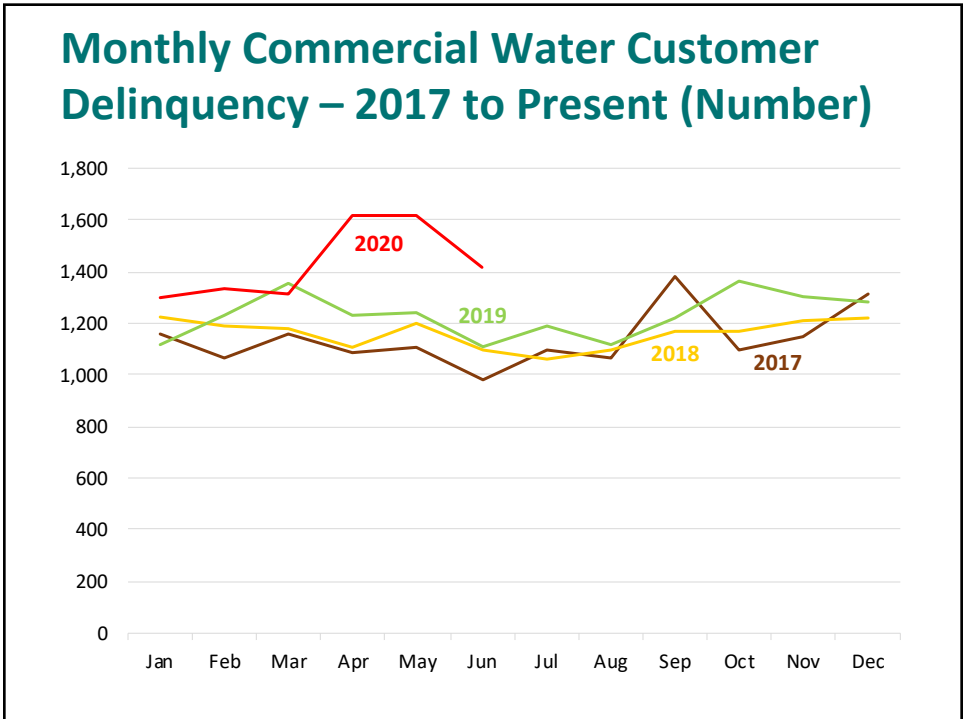
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Facilitator

SUMMARY AND NEXT STEPS

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Next Meeting

- ◆ The next scheduled meeting is Thursday, October 15, 2020
- ◆ We are actively evaluating meeting location options
- ◆ We will not meet in person if it is not safe

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