

Slide 1



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

Board of Water Supply
City & County of Honolulu

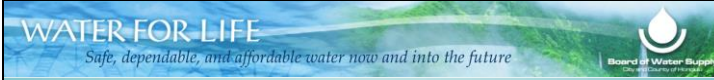
Stakeholder Advisory Group

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

Tuesday October 17, 2017

The slide features a teal-to-blue gradient background. At the top, there is a banner with a landscape image of water and green hills. The banner contains the 'WATER FOR LIFE' logo and tagline on the left, and the Board of Water Supply logo on the right. The main text is centered on the slide.

Slide 2



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

Board of Water Supply
City of Phoenix

Dave Ebersold
Facilitator

WELCOME

The slide features a teal background with a decorative border at the bottom. The top banner includes the 'WATER FOR LIFE' logo and the Board of Water Supply logo for the City of Phoenix.

Slide 3



WELCOME NEW STAKEHOLDER

Brian Uemori
Executive Vice President
Bank of Hawaii

The slide features a teal background with a decorative border at the bottom. The top header includes the 'WATER FOR LIFE' logo and the Board of Water Supply logo.

Slide 4



WELCOME (BACK) STAKEHOLDER

Pono Chong
Chamber of Commerce Hawaii



Slide 5



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

Board of Water Supply
City of Phoenix

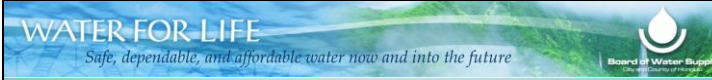
Public Comments on Agenda Items

The slide features a teal background with a decorative border at the bottom. The top banner includes the 'WATER FOR LIFE' logo and the Board of Water Supply logo for the City of Phoenix.

Meeting Objectives

- ◆ Receive updates regarding the BWS
- ◆ Discuss non-residential water rate structure
- ◆ Provide recommendations on agricultural, non-potable, and recycled water rates
- ◆ Provide recommendations on monthly charges for all customer classes
- ◆ Consideration of a fire meter standby charge

Slide 7



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

Board of Water Supply
City of Phoenix

Action

Review and accept notes from
Stakeholder Advisory Group Meeting #19
held on Tuesday, September 12, 2017

The slide features a decorative border at the bottom with a repeating geometric pattern.

Slide 8



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

Board of Water Supply
City of Honolulu

Ernest Lau P.E.
BWS Manager and Chief Engineer

BWS UPDATES

The slide features a teal background with a decorative border at the bottom. The top banner includes the 'WATER FOR LIFE' logo and the Board of Water Supply logo.



Board Approves Formation of Permitted Interaction Group for Water Rates Process

- ◆ Enables Board members to observe, discuss, and contribute to the rate-making process outside of their regular meetings.
- ◆ Findings and recommendations must be shared with the full board in a timely manner, for deliberation and decision making



Bryan Andaya
Chair



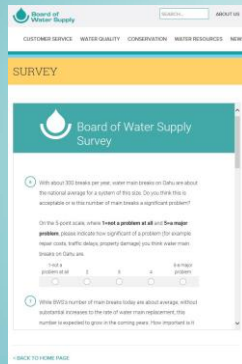
Kapua Sproat
Vice Chair



Kay Matsui
Member

Authorized under HRS Section 92-2.5b

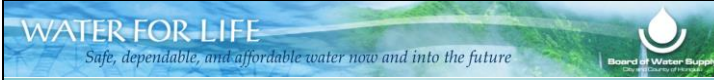
BWS Launches Web Survey to Seek Public Input on Financial Plan and Water Rates



Take the survey

Share this information

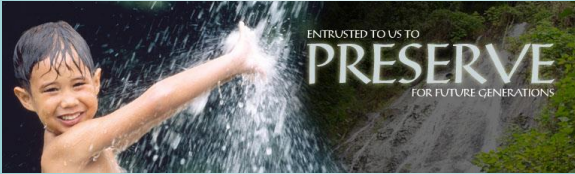
<http://www.boardofwatersupply.com>



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

Board of Water Supply
City and County of Honolulu

Mahalo! **Questions & Answers**



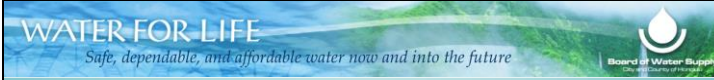
ENTRUSTED TO US TO
PRESERVE
FOR FUTURE GENERATIONS

The slide features a light teal background. At the top is a banner with a blue and green landscape. Below the banner, the text 'Mahalo!' and 'Questions & Answers' is displayed in a dark teal font. In the center is a photograph of a young boy splashing water, with the text 'ENTRUSTED TO US TO PRESERVE FOR FUTURE GENERATIONS' overlaid on the right side. The bottom of the slide has a decorative border with a repeating geometric pattern.

**Follow-up from September Meeting:
Number of BWS Accounts and Amounts
Written Off**

Year	2013	2014	2015	2016	2017
Number of Accounts	1,943	2,154	1,684	1,560	1,313
Amounts	\$331,127	\$363,603	\$355,027	\$524,566	\$348,136

Slide 14



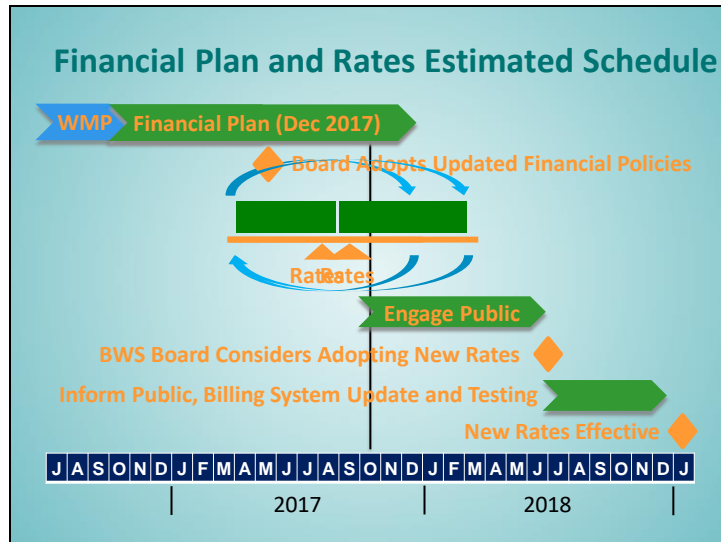
WATER FOR LIFE
Safe, dependable, and affordable water now and into the future

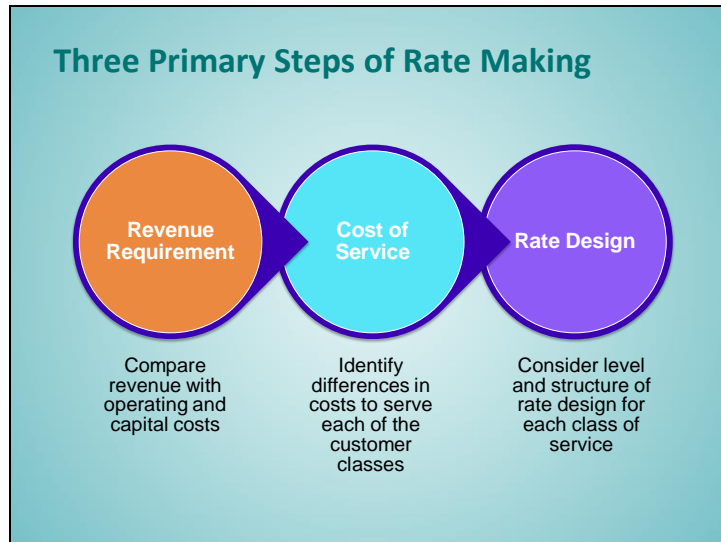
Board of Water Supply
City of Phoenix

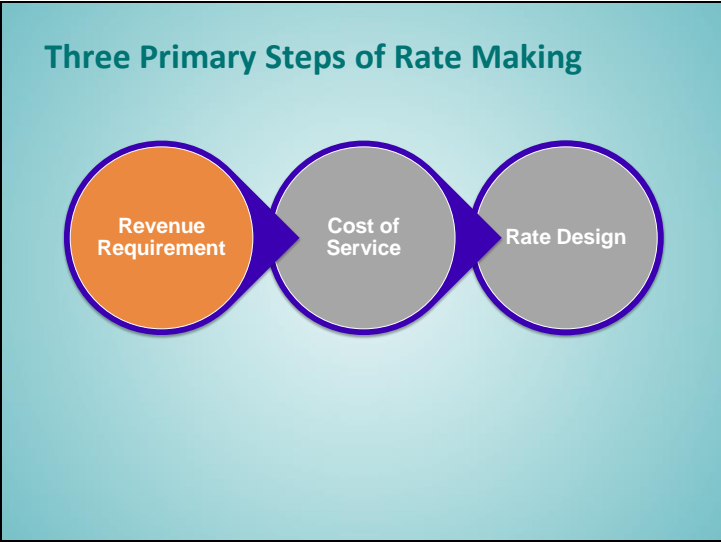
David Ebersold
Facilitator

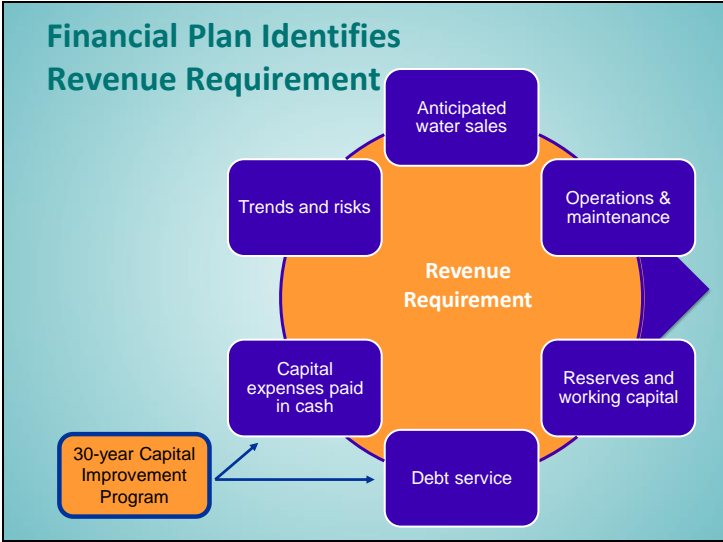
**FINANCIAL PLAN AND RATES
PROCESS UPDATE**

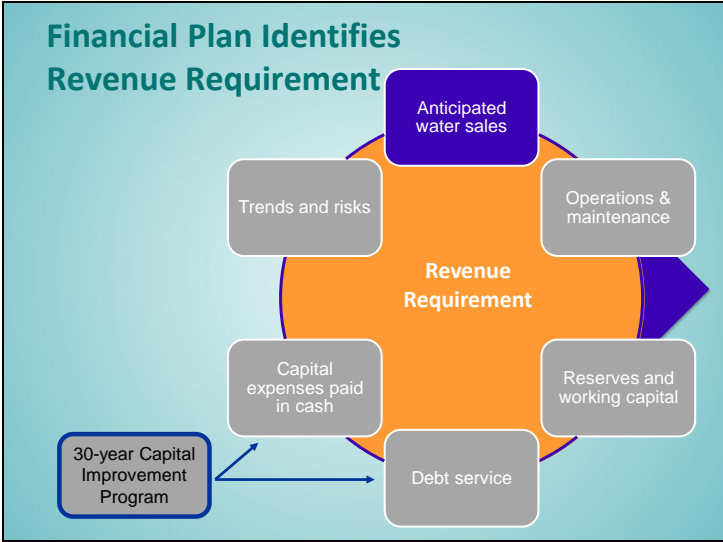
The slide features a teal background with a decorative border at the bottom. The top banner includes the 'WATER FOR LIFE' logo and the Board of Water Supply logo for the City of Phoenix.

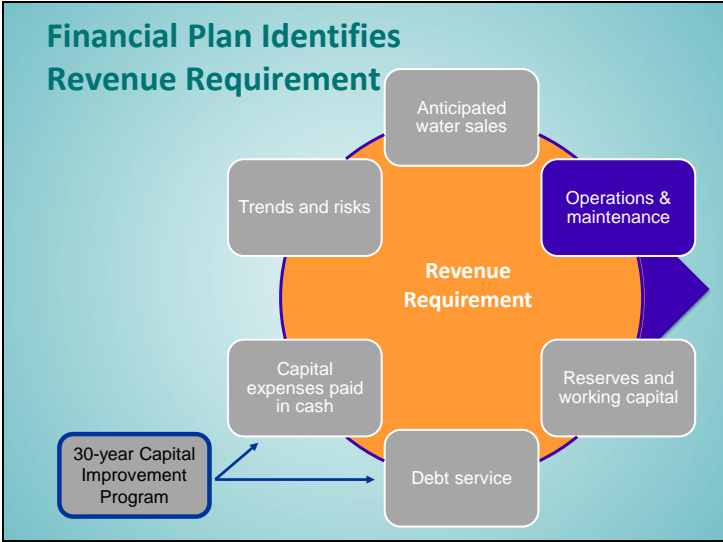


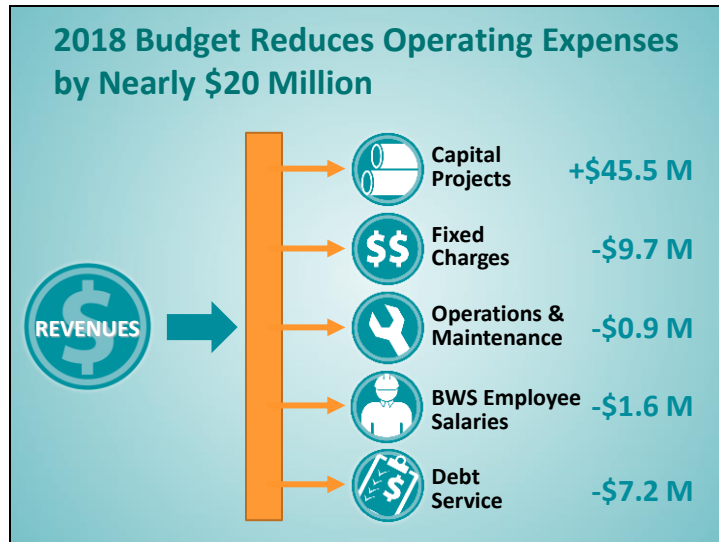


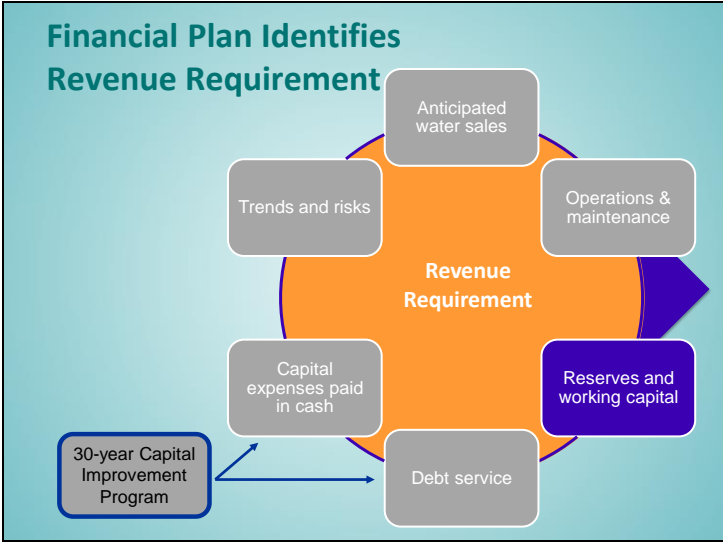












Updated Financial Policy Framework

1. **Fund balance / working capital**
Amount of Cash on Hand
2. **Purposes and uses of debt**
When and Why to Borrow
3. **Debt to net assets ratio**
How Much can be Borrowed
4. **Debt service coverage ratio**
Ability to Make Loan Payments

Your Recommendations for Updated Financial Policies

1. Fund balance / working capital

- Target 180 days, never less than 60 days
- Achieve gradually over 10 years to minimize rate impacts
- Supplement cash with other cost-effective financial tools, e.g. insurance, lines of credit, commercial paper
- >180 days may be re-programmed to fund CIP

2. Purposes and uses of debt

3. Debt to net assets ratio

4. Debt service coverage ratio

Your Recommendations For Updated Financial Policies

1. **Fund balance / working capital**
2. **Purposes and uses of debt**
 - Select most economical financing source
 - Term of debt limited to life of facility it is funding
 - Cannot fund operations & maintenance
 - No more than 20% variable rate debt
3. **Debt to net assets ratio**
4. **Debt service coverage ratio**

Your Recommendations For Updated Financial Policies

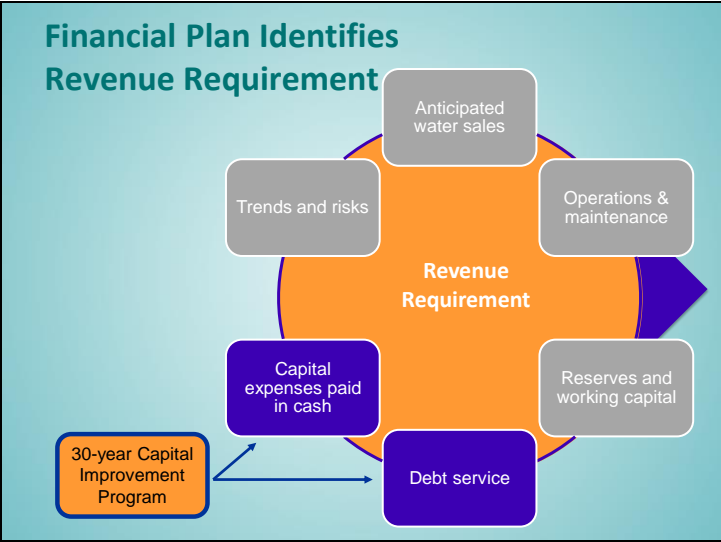
1. **Fund balance / working capital**
2. **Purposes and uses of debt**
3. **Debt to net assets ratio**
 - No more than 50% debt to net assets ratio
4. **Debt service coverage ratio**

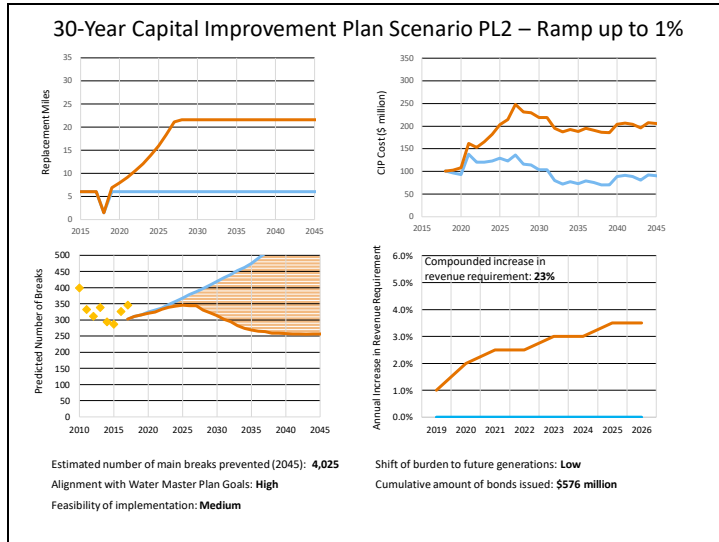
Your Recommendations For Updated Financial Policies

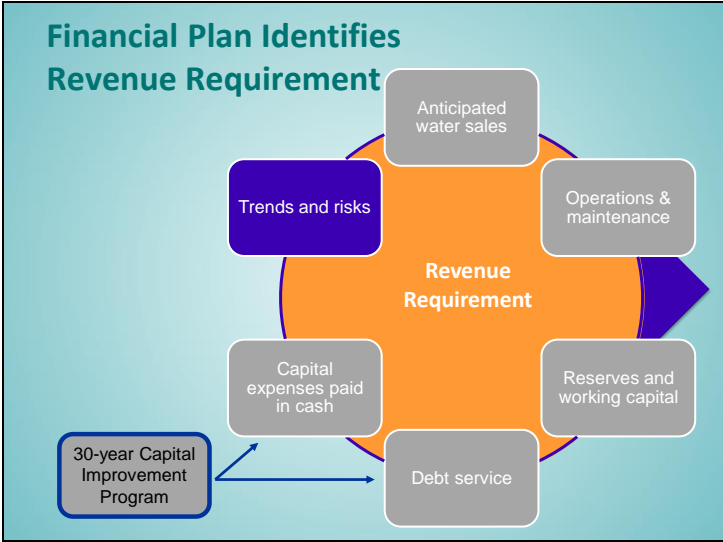
1. **Fund balance / working capital**
2. **Purposes and uses of debt**
3. **Debt to net assets ratio**
4. **Debt service coverage ratio**
 - 1.7x senior annual debt service
 - 1.6x total annual debt service "all in"

**BWS Board Adopted All Recommendations
for Updated Financial Policies on May 8**



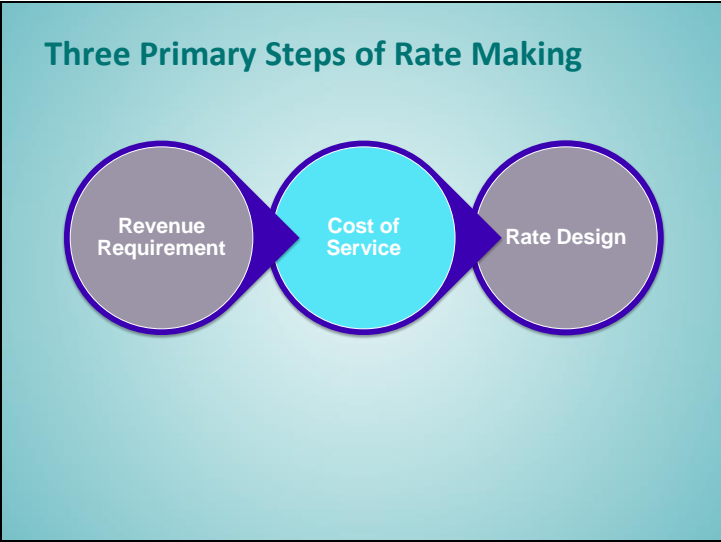










Upcoming Financial Plan Agenda Items:

- ◆ Trends and risks being considered in the Long-Term Financial Plan
 - Aggressive Conservation
 - Aggressive Growth
 - Major Natural Disaster
 - Major Water Source Contamination
 - Climate Change
 - Economic Cycles
- ◆ 10-year revenue requirement projections



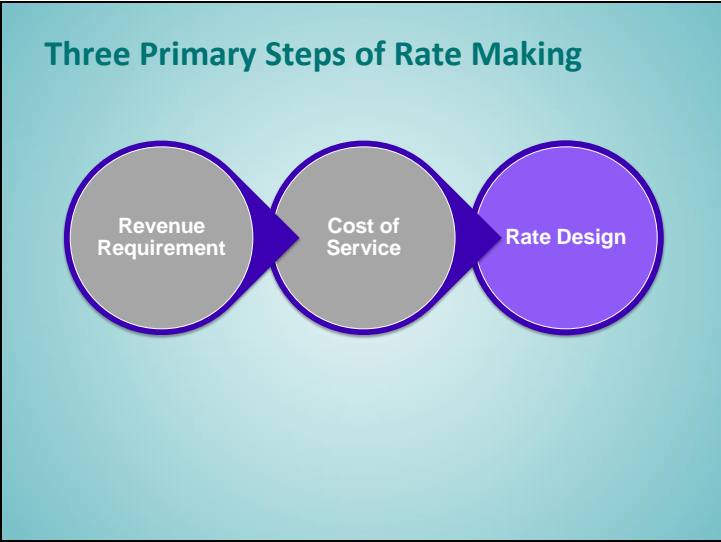
Cost of Service Summary		Revenue \$M	Cost of Service \$M	Diff. \$M	Diff. %
 Single Multi		\$96.6	\$107.4	-\$10.8	-11%
		\$45.4	\$39.9	\$5.4	12%
 Non- residential		\$82.2	\$67.5	\$14.8	18%
 Ag		\$2.4	\$3.8	-\$1.4	-60%
 Non- potable		\$1.6	\$2.4	-\$0.8	-46%

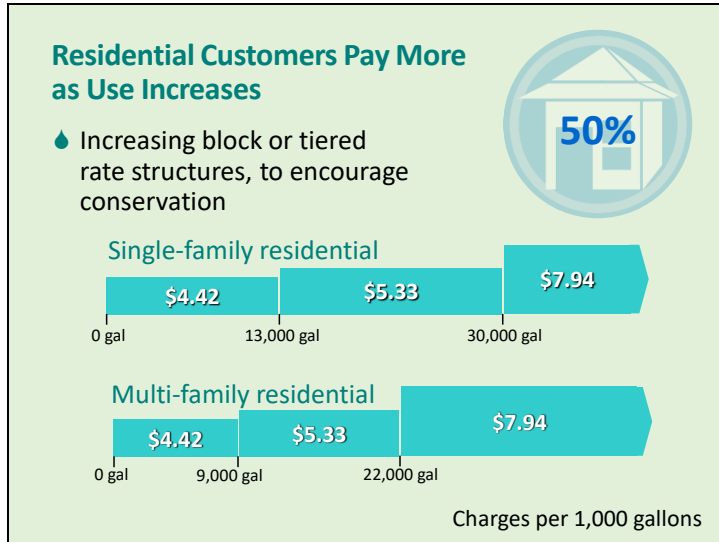
Looking at the % difference column, a positive number means that more money is being collected than the cost to serve that class. This money is making up the differences in the cost of service for those classes that have a negative number.

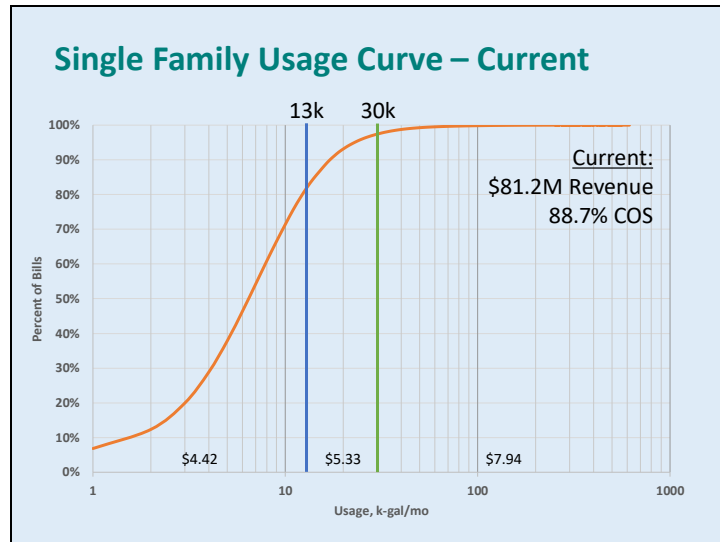


Trends Among All 3 Groups

- ◆ All customers benefit from having local agriculture, so all customers should contribute to the agricultural water rate subsidy
- ◆ Reduce single-family residential subsidy, especially from multi-family residential
- ◆ Continue non-potable and recycled water subsidies







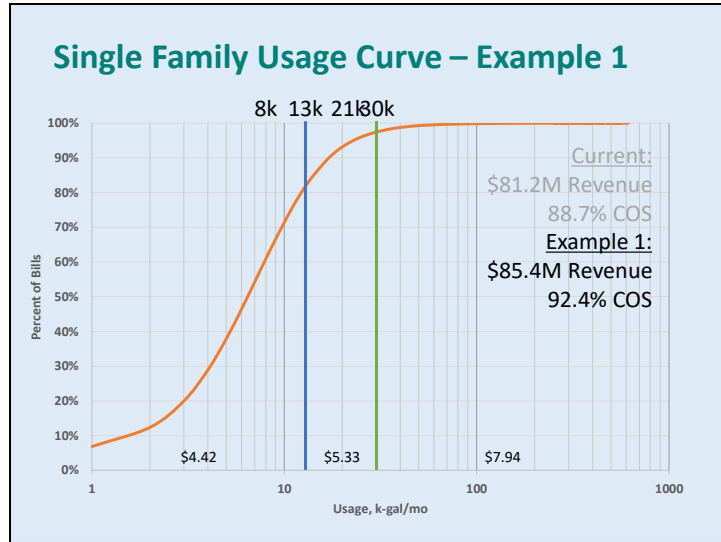
50% of usage occurs at about 5.5 k-gal/mo/du
80% of usage occurs at the current Tier 1 set point

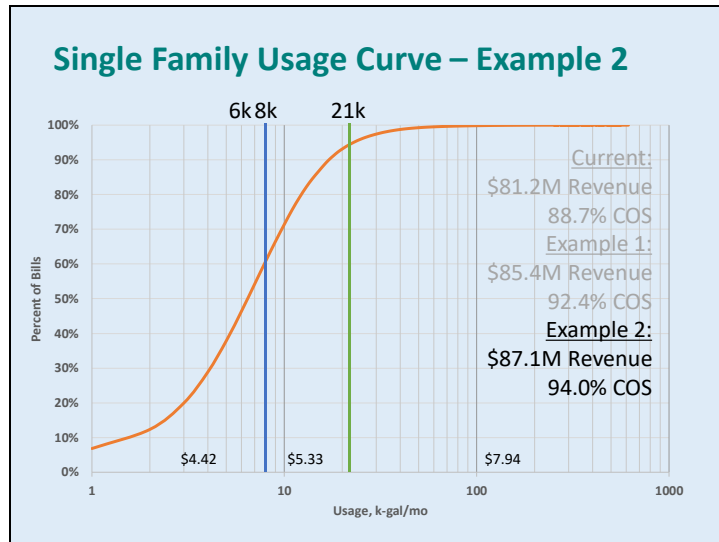
Top 10% of usage occurs at 20 k-gal/mo/du
Top 1% of usage occurs at 90 k-gal/mo/du

Bottom 10% of usage occurs at 1 k-gal/mo/du

Blue line is Tier 1 set point of 13 k-gal/mo/du
Green line is Tier 2 set point of 30 k-gal/mo/du

Du = dwelling unit

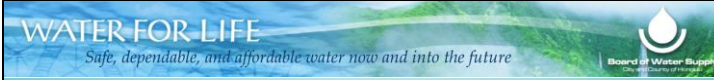




Single Family Example – Tier Shift Sample Bill Amounts

Bill Amount, k-gal/mo	Cumulative % of Bills	Current 13k/30k	Example 1 8k/21k	Example 2 6k/21k
2	12.7%	\$18.10	\$18.10	\$18.10
5	38.2%	\$31.36	\$31.36	\$31.36
9 (Avg.)	66.8%	\$49.04	\$49.95	\$51.77
18	91.4%	\$93.37	\$97.92	\$99.74
45 (Top 1%)	99.1%	\$276.43	\$304.47	\$306.29
% COS		88.7%	92.4%	94.0%

Bill amounts include monthly billing charge of \$9.26



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

Board of Water Supply
City of Denver, Colorado

Dave Ebersold
Facilitator

Brian Thomas
Public Financial Management

NON-RESIDENTIAL RATES

The slide features a teal background with a decorative border at the bottom. The top banner includes the 'WATER FOR LIFE' logo and the Board of Water Supply logo. The text is centered and presented in a clean, sans-serif font.

Non-Residential Customers Drive our Island's Economy

- All non-residential customers pay the same rate

32%

\$4.96 per 1,000 gallons



The slide features a light green background. At the top left, the title 'Non-Residential Customers Drive our Island's Economy' is written in a bold, teal font. Below it, a teal bullet point with a water drop icon is followed by the text 'All non-residential customers pay the same rate'. To the right of this text is a circular icon containing a white shopping bag with a price tag that says '32%'. In the center of the slide, a teal rectangular box contains the text '\$4.96 per 1,000 gallons' in white. At the bottom, there are three rounded rectangular images: the first shows a chef in a white uniform working in a professional kitchen; the second shows a baseball field with a person sitting on the grass; the third shows a modern, multi-story apartment building with many balconies.

Non-residential customers account for about 32% of BWS's revenue.

Comparison of Non-Residential Rates 1-Inch Meter

Agency	BWS	Maui	Kauai*	Hawaii*	San Diego	Portland*
Monthly Charge	\$9.26	\$46.00	\$36.50	\$39.00	\$32.08	40.82
Tier 1	All \$4.96	5 \$2.00	3 \$3.80	5 \$0.91	All \$7.64	All \$6.01
Tier 2		15 \$3.80	68 \$4.85	15 \$1.88		
Tier 3		>15 \$5.70	137 \$5.65	40 \$3.30		
Tier 4			175 \$9.50	>40 \$4.35		
Tier 5			>175 \$10.00			

* No difference between residential and non-residential rates

Comparison of Non-Residential Rates 3-Inch Meter

Agency	BWS	Maui	Kauai*	Hawaii*	San Diego	Portland*
Monthly Charge	\$9.26	\$242.00	\$181.00	\$207.00	\$125.28	\$40.82
Tier 1	All \$4.96	5 \$2.00	50 \$3.80	5 \$0.91	All \$7.64	All \$6.01
Tier 2		15 \$3.80	600 \$4.85	2,000 \$1.88		
Tier 3		>15 \$5.70	1,200 \$5.65	5,000 \$3.30		
Tier 4			1,750 \$9.50	>5,000 \$4.35		
Tier 5			>1,750 \$10.00			

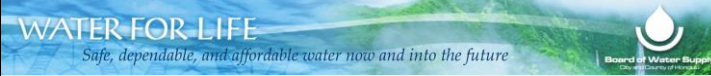
* No difference between residential and non-residential rates

Examples of Other Non-Residential Rate Structures

- ◆ Tiered declining block rate (e.g. Louisville, KY)
- ◆ “Base plus excess” based on average monthly use (e.g. Boulder, CO)
- ◆ Water budgets based on site specifics, productivity, employees, water use efficiency practices (e.g. Irvine, CA)
- ◆ Water budgets for irrigation customers (e.g. Redwood City, CA)

BWS would Prefer to Keep Uniform Non-Residential Rate


- ◆ Addresses wide diversity of customer types and usage characteristics
- ◆ Cost and usage data by customer type not available; expensive and time consuming to develop
- ◆ Provides usage-based price signal
- ◆ Does not penalize large, EFFICIENT water users
- ◆ Easy to understand and administer
- ◆ Additional conservation can be more effectively achieved through tailored programs



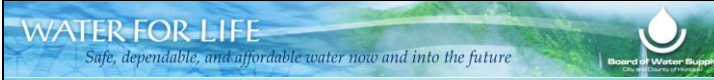
WATER FOR LIFE
Safe, dependable, and affordable water now and into the future

Board of Water Supply
City and County of Honolulu

Mahalo! **Questions & Answers**



ENTRUSTED TO US TO
PRESERVE
FOR FUTURE GENERATIONS



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

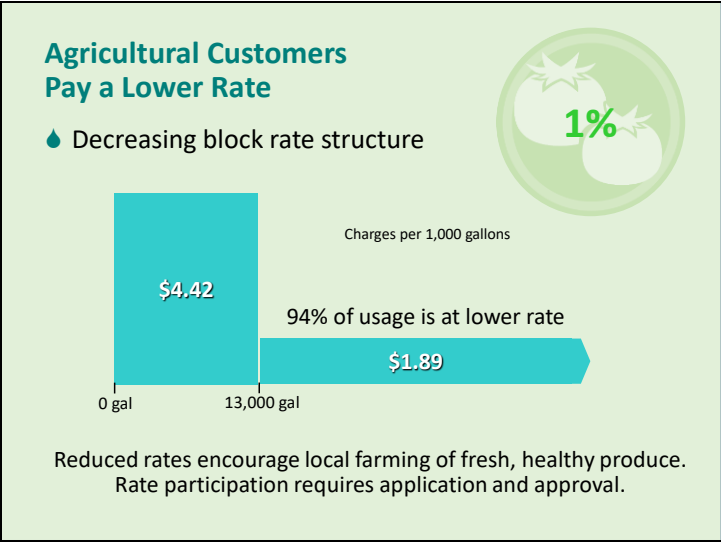
Board of Water Supply
City of Phoenix

Dave Ebersold
Facilitator

Brian Thomas
Public Financial Management

**SUBSIDIES FOR AG, NON-POTABLE
AND RECYCLED WATER**

The slide features a light blue background with a decorative border at the bottom. The top banner includes the 'WATER FOR LIFE' logo and the Board of Water Supply logo for the City of Phoenix. The main content area lists the names and roles of Dave Ebersold and Brian Thomas, followed by the title of the presentation in large, bold, teal letters.



Agricultural water sales are about 1% of BWS’s revenue.

BWS has Offered Ag Rates for Well Over 50 Years

To secure an Ag Rate, a customer must:

- ◆ Apply to BWS
- ◆ Actively engage in commercial crop production, stock raising, or dairy farming
- ◆ Submit to a field inspection for verification
- ◆ Provide a copy of their General Excise License
- ◆ Meet cross connection and backflow prevention requirements
- ◆ Re-apply annually, including their most recent General Excise Tax Return

BWS has about 500 Agricultural Customers

- ◆ ~2.5% of total water usage
- ◆ 60% subsidy compared to cost of service
- ◆ Amount of subsidy \$1.4 million
- ◆ Even though the dollar amount is small overall, it is very important to this class of customer

Comparison to Other Islands' Ag Rates (Usage in k-gal/month)

Maui	Kauai	Hawaii
>15 = \$1.10/k-gal (~20% of the charge for other customers usage in that range)	\$2.20/k-gal (~60% of first block)	0-5 = \$0.92/k-gal 5-15 = \$2.01/k-gal >15 = \$1.27/k-gal
5/8" = \$19.25	5/8" = \$17.75	5/8" = \$18.30
3/4" = \$31.00	3/4" = \$24.75	--
1" = \$46.00	1" = \$36.50	1" = \$39.00
1.5" = \$88.00	1.5" = \$65.50	1.5" = \$73.00
2" = \$137.00	2" = \$100.00	2" = \$113.00
3" = \$242.00	3" = \$181.00	3" = \$207.00
4" = \$420.00	4" = \$297.00	4" = \$342.00
6" = \$770.00	6" = \$587.00	6" = \$678.00
8" = \$1,215.00	8" = \$934.00	8" = \$1,081.00
		10" = \$1,560.00
		12" = \$2,720.00

Questions About the Agricultural Water Rate

- ◆ Should the same declining block structure and subsidized rate be maintained?
- ◆ Why or why not?
- ◆ If not, how would you recommend changing it?
- ◆ What would be the intended purpose of any change(s)?

Lower Non-Potable and Recycled Rates Benefit All Customers



- ◆ Non-potable rates are historically lower than potable rates
- ◆ Some non-potable customers and all recycled water customers have negotiated agreements
- ◆ Non-potable water is billed at a uniform rate:

\$2.47 per 1,000 gallons

2 mgd of Non-Potable Supplies for Irrigation Customers

💧 3 Non-Potable Sources

- Glover Tunnel in Makaha (Makaha East Golf Course)
- Barbers Point non-potable well (Ko Olina Resort)
- Kalauao Spring in Pearlridge (Hawaiian Cement, DOT, Aloha Stadium)

💧 90 customers

- 655 million gallons per year
- 1% of total water usage
- 43% subsidy compared to cost of service
- Amount of subsidy \$705,000



R-1 Water is for Irrigation and Industrial Use

- ◆ Up to 10 million gallons per day (mgd)
- ◆ 25 customers, all contractual
 - Irrigation customers throughout Ewa
 - Most golf courses in Ewa
 - Some City of Kapolei parks and schools
- ◆ \$0.55/k-gal for golf courses
- ◆ \$1.75/k-gal for all others
- ◆ 5.5% of total water usage
- ◆ 211% subsidy compared to cost of service
- ◆ Amount of subsidy \$6.9 million

RO (Demineralized) Water for Specialized Industrial Use

- ◆ Up to 2 mgd
- ◆ 7 contracts
 - Campbell Industrial Park
 - Kahe Power Plant
- ◆ Terms and conditions vary, most between \$5 - \$6/k-gal,
- ◆ 1 % of total water usage,
- ◆ Costs more to produce than R-1
- ◆ Charged 19% more than COS
- ◆ Provides ~ \$500,000 per year



Sampling of Recycled Water Rates

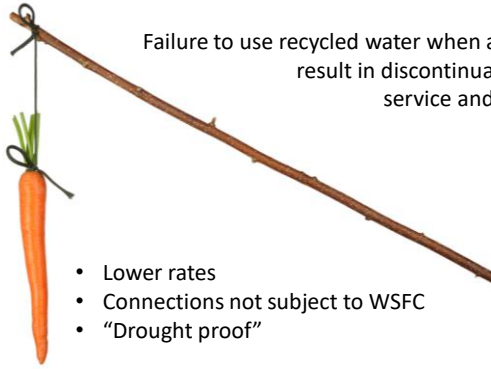
Utility	Recycled % of Non-Residential	Recycled \$/HCF	Non-Residential \$/HCF
San Diego	13%	0.80	6.23
Los Angeles DWP	18%	1.06	6.03
BWS	35%	1.31	3.71
Santa Clara Valley Water District	40%	0.68	1.71
Newport Beach Water Dept.	46%	1.42	3.08
Long Beach Water Dept.	50%	1.32	2.64
Escondido Water Division	57%	3.85	6.80
Glendale	82%	2.39	2.90
Irvine Ranch Water District	91%	0.80	0.88
Burbank	144%	2.58	1.79
Average of 18 Utilities	71%	--	--

[Los Angeles Department of Water and Power, March 2015]

Recycled Water is Discounted due to Customers' Higher Costs

- ◆ Dual piping
- ◆ Compliance with Best Management Practices (BMPs)
 - Designation of a Recycled Water Manager
 - Minimization of spray or mist
 - Specialized hose bibs
 - Prevention of runoff
 - Backflow prevention
 - Training
 - Signage
- ◆ Risk of fines from Department of Health for runoff, nuisance, etc.

A Goal of Water Master Plan is to Double Recycled Water Use



Failure to use recycled water when available may result in discontinuation of water service and/or penalties

- Lower rates
- Connections not subject to WSFC
- "Drought proof"

Questions About the Non-Potable and Recycled Water Rates

- ◆ How should non-potable and R-1 be priced compared to potable water? Why?
- ◆ Should there be “published rates” for R-1 and RO water instead of negotiated contracts?
- ◆ Should golf courses be charged less than other R-1 customers?
- ◆ RO costs more to produce than potable. Should there be a “premium” charged for this specialized water? Why or why not?
- ◆ Any additional thoughts?

Slide 65



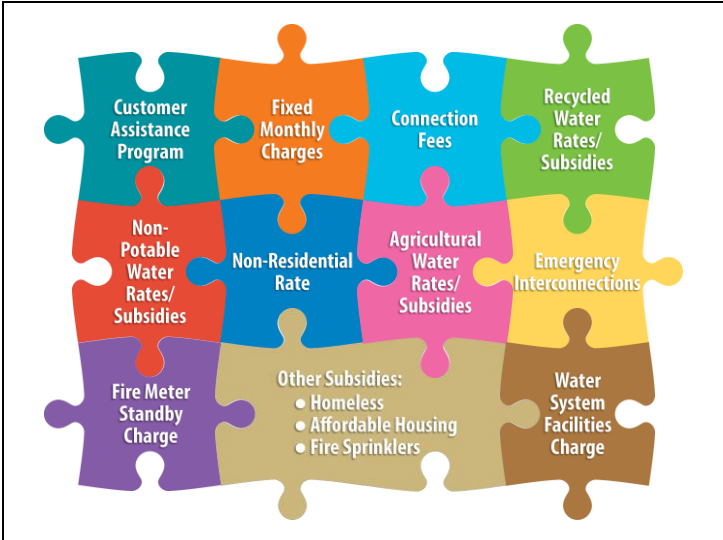
WATER FOR LIFE
Safe, dependable, and affordable water now and into the future

Board of Water Supply
City of Denver, Colorado

Dave Ebersold
Facilitator

SUMMARY AND NEXT STEPS

The slide features a teal background with a decorative border at the bottom. The top banner includes the 'WATER FOR LIFE' logo and the Board of Water Supply logo. The main text is centered and includes the name 'Dave Ebersold', his role 'Facilitator', and the title 'SUMMARY AND NEXT STEPS'.



Other Items

- ◆ Next Meeting
Tuesday, November 14, 2017
4:00 – 6:30 pm

Blaisdell Center
Maui Suites

Slide 68

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

Board of Water Supply
City and County of Honolulu

ENTRUSTED TO US TO
PRESERVE
FOR FUTURE GENERATIONS

Mahalo!

The graphic features a teal background with a decorative border at the bottom. At the top, there is a banner with the text 'WATER FOR LIFE' and the tagline 'Safe, dependable, and affordable water now and into the future'. To the right of the banner is the Board of Water Supply logo. In the center, there is a photograph of a young child splashing water, with the text 'ENTRUSTED TO US TO PRESERVE FOR FUTURE GENERATIONS' overlaid on the right side of the photo. Below the photo, the word 'Mahalo!' is written in a bold, teal font.