

Honolulu Board of Water Supply
Stakeholder Advisory Group Meeting 46
Thursday, April 20, 2023, 4:00 – 6:00 pm
Blaisdell Center

Meeting Notes

PURPOSE AND ORGANIZATION OF MEETING NOTES

The purpose of these notes is to provide an overview of the Board of Water Supply (BWS) Stakeholder Advisory Group meeting. They are not intended as a transcript or as minutes. Major points of the presentations are summarized herein, primarily for context. Copies of presentation materials were provided to all participants and are available on the BWS website. Participants made many comments and asked many questions during the meeting. These are paraphrased to be more concise.

ATTENDEES

This was an in-person meeting in which 12 stakeholders participated, in addition to BWS staff, consultants and members of the public. The stakeholders represent diverse interests and communities island wide.

The following Stakeholders Advisory Group members attended:

Shari Ishikawa	Hawaiian Electric Company
Bob Leinau	Resident of Council District 2
Helen Nakano	Resident of Council District 5
Christine Olah	AARP Hawaii
Dick Poirier	Resident of Council District 9
Cynthia Rezentes	Resident of Council District 1
Alison Richardson	Coca-Cola Co.
Chace Shigemasa	Resident of Council District 7
Cruz Vina Jr.	Resident of Council District 8
Cheryl Walthall	General Contractors Association of Hawaii
Guy Yamamoto	YHB Hawaii

WELCOME

Facilitator Dave Ebersold welcomed everyone to the 46th meeting of the BWS Stakeholder Advisory Group.

Meeting objectives were identified as:

- Provide update on BWS leak detection program
- Explore efficient indoor water use
- Accept notes from meeting #45

- Seek input on Cost of Service and Water Rate Study
- Provide BWS updates

PUBLIC COMMENTS: None.

UPDATE ON LEAK DETECTION

Dave introduced Jason Nikaido, BWS Program Administrator for Field Operations, to provide a presentation on the BWS's leak detection program.

Jason began his presentation with an overview of the traditional leak detection program. It involves going neighborhood by neighborhood to deploy loggers that listens to sounds in our water mains. They then gather and evaluate that data to see if there are any leaks in the system. They then return to those areas to correlate that data and pinpoint where those leaks are for future repair.

Jason shared various images to depict the leak detection processes and the equipment involved:

- **Data Logging.** Loggers are installed on valves or other assets to listen and record sound in water. As water flows normally through pipes, there is no sound. If there is a leak, water is escaping from the pipe, and it makes a turbulent noise.
- **Sounding.** Technicians in the field use sounding equipment to locate a leak. They use headphones and move the equipment along the ground to pinpoint its location.
- **Correlation.** These devices use two sound loggers and monitors the sound that travels between both points to precisely calculate the location of a leak.
- **Repair.** The final step is for a crew to visit the location a perform the leak repair. Leaks can be on water mains, laterals, or other assets within the system.

Jason continued his presentation with discussion on new leak detection technologies. From 2019-2021, BWS conducted a pilot program to test Satellite Leak Detection. The satellite would pass over island to collect water data, specifically looking for chlorine in groundwater within 6-feet of ground level, which would indicate a leak. The program would analyze the entire water system and provide a Point of Interest (POI) report of where potential leaks could be. The goal of the pilot program was to verify if the technology works, reduce non-revenue water, and increase leak detection efficiency.

Each POI found by the satellite has an accuracy of 600-feet in diameter on the ground. BWS staff would then need to do traditional leak detection within 600-feet of that POI to pinpoint the location. Since the report found over 1,000 POI, BWS prioritized them by: main break history, number of service laterals, largest pipes in the area, transmission mains in the area, risk score, and pipe material.

To measure the results of the Satellite Leak Detection pilot program, Jason compared leak detection statistics from the first full year of the program (2020) to a full year of traditional leak detection (2019). The Satellite Leak Detection was 4-times more effective when comparing the number of leaks found per mile of pipeline investigated. This accomplished all three goals of verifying if the technology works, reducing non-revenue water, and increasing leak detection efficiency.

Jason showed a screenshot of the Satellite Leak Detection dashboard used by his team. Over the three-year period of the pilot program, the technology identified a total of 1,566 POIs and his team located 1638 total leaks, including 50 leaks on main lines. Proactive leak detection reduces cost and risk.

Jason concluded his presentation by discussing the next steps, which are to develop a contract to

incorporate Satellite Leak Detection technology into their operations. They plan to schedule 2 satellite passes a year and to increase the leak detection team from 4 to 6 employees to cover the increased workload.

This concluded Jason's presentation on the BWS leak detection program and opened the floor for questions and further discussion.

Q: What is considered a significant leak?

A: Jason explained that significant leaks are identified as they prioritize POIs. For example, larger diameter pipes have larger leaks compared to 1-inch diameter service laterals. They also consider pressure within the system, proximity to reservoirs, and other factors that help them to evaluate what to investigate first.

Q: If you defer repairs on a small leak, how long does it take for it to turn into a catastrophic leak that requires immediate repair?

A: Jason replied that it could take months or even years. Factors such as the size of the crack in the pipe and how it propagates, as well as the pipe material can affect that.

Q: How do you take data and prioritize which lines to fix first?

A: Jason explained that the proactive leak detection program is for repairing leaks, not water main replacement projects in the Capital Improvement Program. BWS Water Resources, Long Range Planning staff looks at water system data, such as water main break history and customer impact, to determine future water system improvement projects. BWS Manager and Chief Engineer Ernest Lau commented that prioritization of pipeline replacement is based on an initial risk analysis and considers consequence of failure. Additional information gathered from leak detection and water main repairs can help to adjust the prioritization of certain projects, but the initial prioritization is based on a risk score.

Q: Were there any false positive POIs?

A: Jason replied that yes, out of all the POIs investigated so far, there was a 50/50 rate of leaks found and leaks not found.

Q: How does the satellite technology compare to traditional leak detection cost-wise?

A: Jason replied that the satellite technology is an added cost of \$307,000. However, if the leak detection and repair can prevent claims and disruption to the community, it makes up that value. Dave Ebersold commented that it doesn't take much time and disruption of traffic and inconvenience to make up \$300,000.

Q: Not all companies have access to this advanced technology. What would BWS recommend companies to do to locate and fix leaks?

A: There are private companies that offer private leak detection services.

COMMENT: Jason commented that another benefit to the Satellite Leak Detection technology looks at the entire island at once, whereas traditional leak detection focuses on an individual neighborhood.

Q: Does the total cost of the project include just the software, or does it also include staff cost?

A: Jason replied that the project cost is solely the vendor's cost.

Q: There are approximately 286 POIs that have not been investigated. Do you think that you can get 100% investigation of all POIs with the 2 additional staff being requested?

A: Jason said yes, the goal is for a satellite pass every 6-months and for the two additional staff to evaluate all POIs over that period.

Q: Did you find anything in common with the false positives? Was it the area, depth, or something else?

A: Jason replied that they did not find any commonality between the 500 false positives. He also commented that the project's 50% rate of leaks found versus not found was higher than the company's claims of 25%.

Seeing no further questions, Dave thanked Jason for his presentation and introduced the next item on the agenda.

ACCEPT MEETING 45 NOTES

Meeting 45 notes were approved. BWS Information Officer Kathleen Elliott-Pahinui commended BWS Information Specialist Keoni Mattos for his work on the meeting notes.

EXPLORING EFFICIENT INDOOR WATER USE

Dave introduced a tabletop activity that explored efficient indoor water use for residential customers. The stakeholders were separated into groups and provided poker chips that represent the amount of water used for various indoor activities for personal hygiene, cooking, and household cleaning. The groups used the chips to add up the indoor water use for families of 2 and 10 people.

At the end of the group activity, Dave stated that the average indoor water-use for a family of 2 is about 1,600-1,700 gallons per month, while the average indoor water-use for a family of 10 is approximately 14,000 gallons per month. He also noted that the current water consumption tiers for residential water rates are 2,000 gallons per month for the lowest tier and usage over 30,000 per month for the highest tier.

In the group activity where they estimated water use for a household of 10, none of the estimates were close to 30,000 gallons per month, though there is some variability because outdoor water usage must be factored in. However, as the group considers where the tiers are set, note that it is possible for families to keep their water usage at that lowest tier, and it takes an exorbitant amount of use to get into the highest tier.

COMMENT: A member asked what the capacity of the average BWS water wagon is, to which Jason Nikaido answered 300 gallons. That can help everyone visualize just how much 30,000 gallons of water is.

This concluded the tabletop activity exploring efficient indoor water use and Dave invited Joe Cooper to provide an update on the BWS water rate study.

WATER RATE STUDY UPDATE

Joe started his presentation by discussing the objectives for the water rates update presentation, which include:

- Are the reductions to the Operation & Maintenance (O&M) and Capital Improvement Program (CIP) budgets appropriate and acceptable?
- Are we in the kind of crisis that was anticipated in the Long Range Financial Plan? If so, is it acceptable to temporarily drop below our working capital targets to maintain rate affordability as we recover?
- Should we consider non-uniform rate increase across the residential rate tiers, e.g. hold Essential Needs Tier 1 to 0%?

Joe continued by providing a summary of the water rate study presentation from the previous meeting, starting with an overview of the three primary steps of rate making, which include:

- **Revenue Requirement.** (Comparing revenue with operating and capital costs)
- **Cost of Service.** (Identifying differences in costs to serve each of the customer classes)
- **Rate Design.** (Consider level and structure of rate design for each class of service)

The Revenue Requirement has four major categories:

- **Operations & Maintenance costs.** (Daily costs and operation of the BWS)
- **Capital Expenses Paid in Cash vs. Debt.** (How the CIP is financed)
- **Reserves and Working Capital.** (Financial policies for credit ratings and stability)
- **Trends and Risks.** (Preparedness to respond to changing trends and risks)

Joe continued by discussing four factors that are impacting the operations and maintenance costs:

- **Inflation's impact on purchasing power.** From fiscal years 2019 – 2023, the rate of inflation outpaced BWS revenue increases by 7.6%.
- **Power costs trending sharply upward.** The cost of oil, coal, and power has gone up. In fiscal year 2023, electricity costs are projected to be \$10 million over budget.
- **Red Hill Response.** The required investment of new BWS facilities will be more than \$200 million. Increases in operations and maintenance expenses are currently unknown.
- **PFAS Impacts to the BWS System.** The Environmental Protection Agency (EPA) is developing new enforceable standards for Per- and polyfluoroalkyl substances (PFAS) which may require investment in testing and treatment systems.

Dave Ebersold commented that a presentation on PFAS and the new maximum contaminant level (MCL) can be discussed at a future meeting. He also commented that the proposed MCL is 4 parts per trillion. As a visual, one part per trillion is equivalent to 1 drop in a 2-foot-wide by 1-foot-deep trench dug around the entire 227 mile shoreline of the island of Oahu.

Joe continued by discussing how rate increases are required to maintain current levels of service by balancing water service adequacy & dependability with infrastructure costs & rate affordability. He discussed several scenarios:

- Prioritizing Water Service Adequacy & Dependability, such as staying on plan with the 30-year Water Master Plan, increasing pipeline replacement, meeting Working Capital targets, maintaining strong bond ratings, and improving levels of service, that would cost annual

- revenue increases of 12- or 13-percent per year.
- Prioritizing Rate Affordability by deferring any rate increases could cause Bond Ratings to drop, lose the ability to borrow affordably, halt Capital Projects, cut O&M costs by 16%, and result in more water service interruptions. This would also lead to bigger rate increases in the future to make up for lost revenue.

Dave commented that a 13% rate increase per year over five years sounds expensive, but a 0% increase doesn't work. The challenge is coming up with an alternative that is more palatable. Joe commented that the BWS values the stakeholders' feedback that balances these interests.

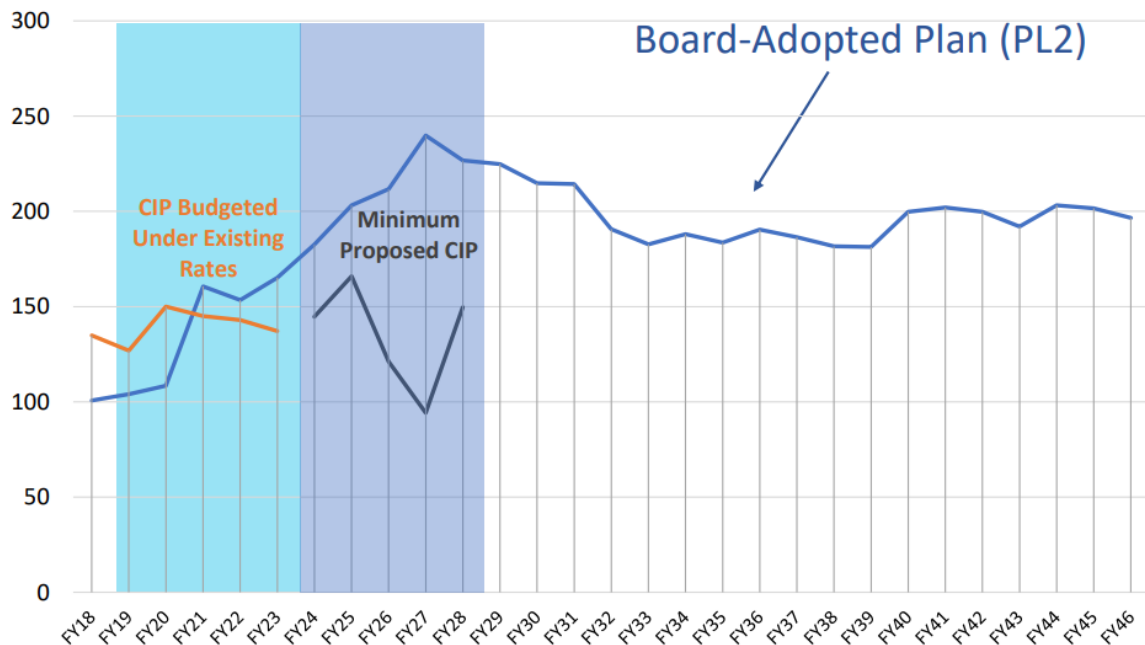
Joe shared a graph depicting the actual and projected O&M costs from 2013 – 2029. The average annual budgeted O&M increase over the past 10-years was 3.78%, while the actual costs were at 3.85%. If we project budgeted increases that are in line with estimated inflation rates over the next 5 years, annual operations and maintenance costs will increase to nearly \$250 million per year.

Dave commented that if budgeted increases match the estimated inflation rate, it's essentially a flat budget with no net revenue increase.

Joe continued by discussing how the CIP is financed by the revenue requirement. He shared a table showing the minimum proposed capital spending over the next five years, and where those funds are coming from. The yearly capital spending ranges from \$146 million to \$240 million depending on the availability of funding sources such as bond issuance, State Revolving Fund loans, Water Infrastructure Finance and Innovation Act (WIFIA) loans, grants, American Rescue Plan Act (ARPA) funds, and Special Expendable Funds.

In 2016, the BWS board adopted a 30-year pipeline replacement plan with a goal of accelerating to replace 21 miles of pipeline per year to reduce main breaks. Joe shared a graph depicting how the Minimum Proposed CIP projects over the next 5-years compared to what was planned in 2016. The proposed investment does not keep up with the proposed pipeline replacement plan. These are some of the considerations when planning to change or modify CIP to meet the many factors that impact the operations and maintenance costs. Dave commented that the orange line in the graph (see below) depicts what the rate increases 5-years ago paid for. This group's recommendations on upcoming rate increases will impact the Minimum Proposed CIP over the next five years.

30-YEAR CAPITAL IMPROVEMENT PROGRAM (\$ MILLION 2016)



Q: What is the BWS doing to acquire more grants for capital spending?

A: Ernest commented that the BWS is more aggressively pursuing capital funding from external sources. These funding sources don't require repayment, so it would minimize impact to ratepayers. He also acknowledged BWS has received \$50.3 million of federal grant funds through ARPA.

Raelynn Nakabayshi, head of the BWS Executive Support Office, talked about various funding and grants BWS is pursuing, including pending requests for Congressionally Directed Spending Appropriations totaling \$15.1 million. She thanked Stakeholder members and other leaders for submitting letters of support to get those funds. She is also monitoring two bills for State funding for grant-in-aid and general appropriations. She also mentioned low-interest loan programs such as the EPA's WIFIA funds and Drinking Water State Revolving Fund (DWSRF) program. Her team is exploring more opportunities and working on applications for more external funding.

COMMENT: WIFIA grants are available, they are not just low-interest loans. There have been several grants given out across the U.S. Ernest said his staff will investigate it and asked that any information on these grants to be shared with him or his staff.

COMMENT: The Hawaii Community Foundation (HCF) is tracking federal funding opportunities and is happy to connect with BWS staff. Ernest commented that the BWS has been part of HCF's Freshwater Council for 9 years and will continue this partnership for the good of the community.

Q: How is the BWS affected by Build America Buy America (BABA)? Certain industries have been able to delay in the implementation of BABA, which restricts purchasing supplies and materials from outside of

the U.S.

A: Ernest commented that State Revolving Funds require BABA implementation, but EPA WIFIA loans include a BABA waiver. He also commented that projects that were in the planning stages prior to May 2022 could be exempt from BABA requirements.

Dave continued the presentation on the Water Rate Study, discussing the third major cost driver of revenue requirement and rates, Reserves and Working Capital. As part of the previous water rate study, the BWS developed a working capital target financial policy, which includes:

- The objective to maintain 180 days cash on hand
- Providing funds for unplanned events such as disaster recovery and rate stabilization
- Achieving the target gradually over an approximately 10-year period to minimize rate impacts
- Maintaining a minimum of 60 days cash on hand

The current rate study considered the operating budget and minimum capital improvement budget and evaluated two alternatives to the working capital target financial policy:

1) Project rate increases to maintain a 60-day working capital balance requirement. To do this, an annual rate increase of 19.6% would be required in FY 2024 with smaller increases in subsequent years in the five year rate schedule.

2) Project rate increases without the 60-day working capital balance requirement, while also

- Smoothing rates over a 5-year period with equal annual percentage rate increases.
- Maintaining positive cash balance each year for 5-year period, and
- Aiming for cash balance at end of the 5-year period to meet 60-day working capital balance requirement

This alternative would result in an annual rate increase of 8.4% per year over the five year rate schedule. This would be accomplished by spending down existing cash on hand, which lowers the estimated working capital, then gradually build back up to 60 days working capital at the end of the five year period.

Dave asked the group for their input on whether these reductions to the O&M and CIP budgets strike an appropriate balance between infrastructure investments and rate affordability? Also, as we recover from this multi-pronged crisis, is it acceptable to temporarily drop below our working capital targets to maintain rate affordability?

Q: If we lower working capital and a “worst case scenario” situation occurs, what contingencies are in place for raising capital to continue operations?

A: Joe commented that BWS would re-evaluate its budget and potentially defer projects and/or non-essential services. Ernest commented that whatever is remaining in the working capital will be spent first, then cash-funded CIP projects will be deferred or cancelled. He also commented that, in the event of a catastrophic disaster, we may not be able to bill customers, which would further impact revenue. Upgrading insurance policies and disaster relief assistance from the Stafford Act are other considerations to defray costs.

COMMENT: In Alternative 2, the estimated working capital days is as low as 9 days in FY 2025, which does not cover a salary period for employees. Any time reserves are below one pay period, you're asking for disaster. Ernest commented that the BWS pay period is 14 days and thanked the group for the suggestion because it's important to pay employees as they respond and restore service to our island.

Dave asked the group to comment on the projected 30-year CIP and how the minimum proposed CIP falls below projects. Is it ok to postpone those projects?

COMMENT: Based on the level of staffing available and the BWS's ability to implement 21 miles of pipeline replacement per year, the CIP may need to be pushed out further. Ernest commented that the BWS is experiencing serious challenges with building the capacity needed to deliver the CIP. The BWS Capital Projects Division, which is responsible for the CIP, has 14 engineering vacancies and it has been difficult to compete in the job market due to low salaries.

COMMENT: There are other huge projects coming down the pipeline, such as a rail construction and Aloha Stadium, which will significantly impact contractors' capacity to perform BWS projects.

COMMENT: It is disappointing to see how significantly labor and supply shortages are impacting BWS's ability to reach its goal of 21 miles of pipe replacement per year. It may sound optimistic, but if BWS can somehow fund those projects it may encourage more engineers to join the BWS.

Dave continued the presentation by discussing the third primary step of rate making, Rate Design, which involves considering level and structure of a rate design for each class of service. The remainder of the presentation will focus on the tiered water rate structure for residential customers.

Residential water rates for Single-Family and Multi-Unit residential customers are designed into 4 tiers. The first tier is an Essential Needs tier, where the first 2,000 gallons of water per month are set at a rate lower than cost of service to assure affordability. The other tiers charge higher rates as usage goes up. Approximately 3% of single-family customers are in the highest water rate tier and 10% are in the first tier. The average usage is 9,000 gallons per month while the median usage is 6,000 gallons per month, which is the tier break for the second tier.

TIERED RESIDENTIAL WATER RATES



Single-Family

Tier	Gallons/du/month	Current Rate
1 - EssN	0 to 2,000	\$4.46
2	2,001 to 6,000	\$5.25
3	6,001 to 30,000	\$5.85
4	More than 30,000	\$9.25

Multi-Unit



Tier	Gallons/du/month	Current Rate
1 - EssN	0 to 2,000	\$3.77
2	2,001 to 4,000	\$4.43
3	4,001 to 10,000	\$5.03
4	More than 10,000	\$5.98

EssN – Essential needs
Rates are in \$ per thousand gallons
du – dwelling unit

The water bill consists of two parts – the consumption rate and the monthly customer charge. The monthly customer charge is based on water meter size and most customers have a 5/8” or 3/4” meter. Dave shared two tables calculating these charges after a uniform 8.4% increase over 5 years (see below).

MONTHLY CUSTOMER CHARGE BASED ON WATER METER SIZE

8.4% Increase in Monthly Customer Charge



Meter Size	Current Charge	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	12.09	13.11	14.21	15.40	16.69	18.10
3/4"	12.09	13.11	14.21	15.40	16.69	18.10
1"	15.28	16.56	17.95	19.46	21.10	22.87
1.5"	17.41	18.87	20.46	22.18	24.04	26.06
2"	43.45	47.10	51.06	55.34	59.99	65.03
3"	53.55	58.05	62.92	68.21	73.94	80.15
4"	101.92	110.48	119.76	129.82	140.73	152.55
6"	181.64	196.90	213.44	231.37	250.80	271.87
8"	276.78	300.03	325.23	352.55	382.17	414.27
12"	598.53	648.81	703.31	762.38	826.42	895.84

SINGLE-FAMILY RESIDENTIAL 8.4% UNIFORM INCREASE

Tier	Existing Rate	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Tier 1: 0 - 2,000 gal	\$4.46	\$4.83	\$5.24	\$5.68	\$6.16	\$6.68
Tier 2: 2,001 - 6,000 gal	\$5.25	\$5.69	\$6.17	\$6.69	\$7.25	\$7.86
Tier 3: 6,001 - 30,000 gal	\$5.85	\$6.34	\$6.87	\$7.45	\$8.08	\$8.76
Tier 4: Over 30,000 gal	\$9.25	\$10.03	\$10.87	\$11.78	\$12.77	\$13.84
Monthly Customer Charge	\$12.09	\$13.11	\$14.21	\$15.40	\$16.69	\$18.10

Dave then shared calculations that compare the water bills for single-family residential customers at 8.4% yearly increases over the next 5 years for low, average, and high water users.

- Low water users are in the essential needs tier and use 2,000 gallons per month. These customers will see their bills increase from \$21.01 to \$31.45 by July 2027.
- Average water users consume 9,000 gallons per month. These customers will see their bills increase from \$59.56 to \$89.15 by July 2027.
- High water users consume 35,000 gallons per month. These customers will see their bills increase from \$228.66 to \$342.24 by July 2027.

Dave also shared a pie chart depicting the average monthly utility bills to put the cost of water in context with other utility costs. The average water customer is billed \$64.56, which is 10% of total average monthly utility bills.


Dave then shared two tables that showed scenarios where the tier 1 essential needs tier is not increased, and those costs are instead shifted to tier 4 or tier 3 and 4 customers. Those tables are shown below:

SINGLE-FAMILY RESIDENTIAL NO INCREASE TO TIER 1 ESSENTIAL NEEDS, SHIFT COSTS TO TIER 4

Tier	Existing Rate	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Tier 1: 0 - 2,000 gal	\$4.46	\$4.46	\$4.46	\$4.46	\$4.46	\$4.46
Tier 2: 2,001 - 6,000 gal	\$5.25	\$5.69	\$6.17	\$6.69	\$7.25	\$7.86
Tier 3: 6,001 - 30,000 gal	\$5.85	\$6.34	\$6.87	\$7.45	\$8.08	\$8.76
Tier 4: Over 30,000 gal	\$9.25	\$11.68	\$14.31	\$17.17	\$20.26	\$23.62
Percentage Changes by Tier						
Tier 1: 0 - 2,000 gal		0.00%	0.00%	0.00%	0.00%	0.00%
Tier 2: 2,001 - 6,000 gal		8.40%	8.40%	8.40%	8.40%	8.40%
Tier 3: 6,001 - 30,000 gal		8.40%	8.40%	8.40%	8.40%	8.40%
Tier 4: Over 30,000 gal		26.27%	22.55%	19.95%	18.03%	16.56%
Monthly Bill Amount for High Water User 35,000 gallons per month						
8.4% for all Tiers	\$228.66	\$247.87	\$268.69	\$291.26	\$315.72	\$342.24
Shift Costs to Tier 4	\$228.66	\$255.38	\$284.35	\$315.75	\$349.78	\$386.68

SINGLE-FAMILY RESIDENTIAL NO INCREASE TO TIER 1 ESSENTIAL NEEDS, SHIFT COSTS TO TIERS 3 AND 4

Tier	Existing Rate	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Tier 1: 0 - 2,000 gal	\$4.46	\$4.46	\$4.46	\$4.46	\$4.46	\$4.46
Tier 2: 2,001 - 6,000 gal	\$5.25	\$5.69	\$6.17	\$6.69	\$7.25	\$7.86
Tier 3: 6,001 - 30,000 gal	\$5.85	\$6.52	\$7.25	\$8.04	\$8.89	\$9.82
Tier 4: Over 30,000 gal	\$9.25	\$10.31	\$11.46	\$12.71	\$14.06	\$15.53
Percentage Changes by Tier						
Tier 1: 0 - 2,000 gal		0.00%	0.00%	0.00%	0.00%	0.00%
Tier 2: 2,001 - 6,000 gal		8.40%	8.40%	8.40%	8.40%	8.40%
Tier 3: 6,001 - 30,000 gal		11.47%	11.16%	10.88%	10.64%	10.42%
Tier 4: Over 30,000 gal		11.47%	11.16%	10.88%	10.64%	10.42%
Monthly Bill Amount for Average Water User 9,000 gallons per month						
8.4% for all Tiers	\$59.56	\$69.99	\$75.87	\$75.87	\$82.24	\$89.15
Shift Costs to Tiers 3 and 4	\$59.56	\$64.35	\$69.55	\$75.18	\$81.29	\$87.90
Monthly Bill Amount for High Water User 35,000 gallons per month						
8.4% for all Tiers	\$228.66	\$247.87	\$268.69	\$291.26	\$315.72	\$342.24
Shift Costs to Tiers 3 and 4	\$228.66	\$252.85	\$279.08	\$307.51	\$338.33	\$371.73



These scenarios are just one consideration for a non-uniform rate increase. By not increasing the essential needs tier, all customers benefit because all tiers benefit from the essential needs tier.

Q: Who are these high-use customers? Are they businesses?

A: Dave replied that these are single-family residential customers, not businesses. 3% of single-family residential customers use more than 30,000 gallons per month.

COMMENT: Shifting the costs to tier 3 and tier 4 users may encourage those high water users to use less water.

Q: Are you sure the high tier users are not multigenerational homes?

A: Dave replied that they will look at how cost shifting could impact multigenerational homes that may be living paycheck to paycheck.

COMMENT: All things being equal, it's a good thing to shift costs to higher tiers. This could help households that have less opportunity to increase their income.

BWS UPDATES

Dave invited Ernest Lau, BWS Manager and Chief Engineer, to share any BWS updates.

Ernest acknowledged BWS Communications Office staff, who are coordinating the in-person Stakeholder Advisory Group meetings moving forward. He also mentioned that he is leaving early to attend a Mayor's Town Hall meeting in Laie and thanked the stakeholders for attending the first in-person meeting in 3 years.

NEXT STEPS

Dave reminded the group of the dates for upcoming stakeholder advisory group meetings: Thursday, July 20, 2023; and Thursday, October 19, 2023. These meetings may be in a different room, but they will continue in-person at the Blaisdell Center.

Dave thanked the attendees for their attention and participation and concluded the meeting.