



**Honolulu Board of Water Supply  
Stakeholder Advisory Group**

Meeting 27 Tuesday, July 10, 2018 4:00 – 6:30 pm  
Neal S. Blaisdell Center, Hawaii Suites  
777 Ward Avenue, Honolulu, HI

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**

There were 13 stakeholders and 5 members of the public present, in addition to BWS and CDM Smith staff. The stakeholders represent diverse interests and communities island-wide.

The following Stakeholders Advisory Group members attended:

- |                  |                                |
|------------------|--------------------------------|
| Matt Bailey      | Aqua-Aston Hospitality         |
| Bill Clark       | Resident of Council District 6 |
| Shari Ishikawa   | Hawaiian Electric Co.          |
| Bob Leinau       | Resident of Council District 2 |
| Helen Nakano     | Resident of Council District 5 |
| Dean Okimoto     | Nalo Farms                     |
| Dick Poirier     | Resident of Council District 9 |
| Elizabeth Reilly | Resident of Council District 4 |
| John Reppun      | KEY Project                    |
| Cynthia Rezentes | Resident of Council District 1 |
| Francois Rogers  | Blue Planet Foundation         |
| Cruz Vina Jr.    | Resident of Council District 8 |
| Guy Yamamoto     | YHB Hawaii                     |

**WELCOME**

Dave Ebersold, meeting facilitator and Vice President of CDM Smith, welcomed the group and outlined the meeting objectives:

- Receive updates regarding BWS
- Discuss input from the public hearings and outreach on proposed water rate increases

- and reach consensus on making a recommendation for the Board's consideration
- Share the BWS operating budget for 2019
- Celebrate the BWS Stakeholder Advisory Group and discussion of continuation

#### **BWS UPDATE**

Ernest Lau, BWS Manager and Chief Engineer, talked to the stakeholders about hurricanes and emergency preparedness, because summertime is hurricane season. He gave a recent history of the hurricane threats Hawaii has faced. These prompted the Hawaii Emergency Management Agency (HI-EMA) to recently update its advisory to community members about keeping prepared. In August 2014 due to Iselle, there was a lot of damage from fallen trees, especially Albizia, on the Big Island and Kauai. This caused lots of downed power lines. In 2015, there were three category 4 hurricanes simultaneously in the Pacific. In 1992, hurricane Iniki destroyed homes on Kauai and people were killed. Because the island can lose power or water in addition to other devastation as a result of a major disaster like a hurricane, HI-EMA is advising community members to keep 14 days of food and water at their homes, with at least one gallon of water per person per day, in case the island is without power to move water to people's homes. They also need to keep close on-hand their prescriptions, medicine, glasses, infant formula, cash, checks, and family and legal documents.

Ernest showed slides/photos of the BWS backup power generators so the Stakeholder Advisory Group could see their size and where they are located around the island. Location of generators is one of the drivers of how the BWS plans to get water to customers in the event of power loss. BWS currently has six 900KW and one 500KW mobile backup generators. The BWS rents more mobile generators when needed. However, they plan to have at least eight mobile generators and to slowly increase the number of fixed generators in key locations around the island in the future. Funding has been set aside in the FY19 budget for another 500KW generator and BWS is applying for FEMA/Hawaii Mitigation Grant funds for another. Ernest showed a map of the locations that includes placement of both mobile and fixed generators and plans for building additional fixed generators. The BWS serves 145 million gallons of water per day and must plan backup power to provide water for a million people. Ernest pointed out that fixed emergency generators are under construction at Beretania, Halawa Shaft, Kunia Well, and Kalihi. Kuhuko and Barbers Point locations will be considered for backup generators in the future. Ernest said that BWS might switch to natural gas to serve the generator on Barbers Point, which serves 60% of the Waianae Coast.

**Comment:** I don't see any generators on that map that would supply any of the people on the North Shore who are on the west side of Kahuku point.

**A.** BWS does not have a fixed backup power/generator for the North Shore water system, but the plans are to move some of the mobile units to locations nearby as we complete construction of the fixed generators. Also, BWS has a great relationship with major rental companies and they provide almost immediate response to BWS needs. In the short term, BWS is trying to help meet the needs of the North Shore in addition to other communities that do not have fixed generators through a combination of mobile units, construction of more fixed units, and renting others as needed. The goal is to create a source of backup power in at least every water system so residents have a means of getting water at a station close to homes in case of emergency.

**Q.** Are you assuming that if you put a generator in Barbers Point and in Kunia Wells that it will produce enough water to serve the Waianae coast? Is that a safe assumption in the case of fallen power lines?

Also, there isn't a generator between Kahuku and the North Shore to sufficiently get water to that community if the electric lines go down along Kamehameha Highway. These generators are for your pump stations only, right?

**A.** That is right. They are meant for wells that pump water and for our Barbers Point line booster that is meant to pump water to the Waianae coast through our 24-inch transmission main. Gravity sources are key to certain systems. There are tunnels that have been dug into the side of the mountain, and the water flows out by gravity into the water system.

There are good-sized gravity sources in the back of the Waianae Valley and Honolulu. Manoa Valley has a tunnel. BWS and the community group *Be Ready Manoa* (with Helen Nakano) will identify areas with gravity flow. It may be possible to try this in the Leeward/Waianae area and pre-identify potential places for watering stations in the community.

BWS's largest tunnel is on the Windward side, the Waihee tunnel. It provides a lot of water for the 272 systems that serves Kahaluu, Kaneohe and Kailua. We also have the Kahaluu Tunnel and Haiku Tunnel in addition to the Waihee Tunnel.

Community members should keep reusable containers designated to fill at watering points in each community. BWS is looking at purchasing emergency temporary clean water containers through HI-EMA that people can use for this purpose. BWS will pilot test samples to find the right size. One gallon of water weighs over eight pounds so it may be necessary to have two-gallon containers so people can carry and re-use them. We might pilot these to get water to the community during main breaks. We're also thinking about printing on the side of the containers some information that will help people be prepared. We're also working on plans for how to help get water to community members who have mobility limitations. This is an area that needs a grassroots partnership with community members who are willing to help.

**Q.** How long do these water containers last and what are they made of?

**A.** Right now we're not sure about the shelf life or if they are UV resistant. We left water in a test container for a month, successfully. We are testing for anything that might come out of the plastic.

**Q.** Does the military have assets that could be made available in an emergency? Also, if we get stranded without water on the North Shore, is there a water catchment system with taps or anything else that you recommend?

**A.** You want to be very careful about how you catch the water and how safe that water is to drink. BWS is careful not to advocate for catchment for potable use, primarily because of safety issues. BWS does encourage people to establish rain barrels for flushing your toilet and washing your clothes. But in terms of drinking, you have to be very careful what might get in the water

from the roof. Keeping enough water for emergencies will help while BWS works to supply potable water from our wells.

**Q.** I appreciate BWS continuing to address this issue of getting ground water to people in the most affordable way and making sure that everybody continues to have water to drink. Have we ever stepped out of the box and looked at portable desalination plants? On long distance sailboats, you typically carry a portable desalination system. The system has a container for seawater and another container for fresh water, and you just allow it to sit under the sun. Have we looked at alternative methods as real options, especially for areas that are probably going to be more challenged with getting to drinking water?

**A.** This is a good point because there is the need for coordination among entities for emergency planning. It is time for entities to design real, practical plans on how to address emergency water supplies. Puerto Rico lost power island-wide and they struggled just to get safe drinking water to people. Some people boiled water. Others are drinking out of wells that were used for hazardous waste monitoring. Others were drinking from streams and getting exposed to disease. Looking at methods like evaporation is important. Real plans need to be made with the other entities.

The military does have portable reverse osmosis units. They generate their own power so they can be used in the field. Water taken from a stream gets filtered through membranes.

**Comment:** We used a ferric chloride flocculation unit to treat water when I was in the National Guard. We'd go out in swamps, which was a horrible water source, but we were helping to purifying water for fire fighters before they used it. A truck can haul it anywhere.

**A.** I think they are also using reverse osmosis, which uses fewer chemicals. We haven't considered that yet. We're focused on trying to get temporary power to BWS ground water wells so that they can start pumping water when needed. The sooner water can be restored, the better. Shipping bottled water to a large population is very expensive and poses challenges, so it's good to look for alternatives.

**Comment:** This kind of discussion should be coupled with where people will be sheltered if they lose their houses during a natural disaster – like public parks, regional parks, school facilities especially up and around on the North Shore. Reverse osmosis units can be kept at the public sites and deployed when needed.

**A.** Playing out this idea, one example could be the Manoa District Park. Perhaps what we could do is put water in the Manoa reservoir, isolate the pipeline so it feeds water to the park, which will be accessible via gravity flow. The park could be an emergency shelter and a point of distribution for supplies to the community, and include a medical assistance center. It is a large park, so those are some of the plans that are possible to develop. BWS would like to partner with grassroots organizations that are trying to prepare their communities for emergency response.

**Q.** Are there any areas in East Oahu/ Hawaii Kai/ Aina Haina designated for backup generators?

**A.** The challenge of East Honolulu is the lack of wells in the area and that water has to be brought through from the Windward side or from Honolulu. We should revisit this. It is going to be important to start developing plans with communities on how to develop water supplies for disaster response.

#### **ACCEPTANCE OF NOTES FROM MEETING 26**

The group accepted notes from the prior meeting.

#### **SUMMARY OF PUBLIC COMMENTS, QUESTIONS, AND TESTIMONY ON PROPOSED WATER RATES**

Kathleen Pahinui, Information Officer for the BWS, updated the group on the results of efforts to seek public input on proposed rates. She thanked the stakeholders who came out to one of the four public hearings including John Reppun, Cynthia Rezentes, Alison Omura, Dick Poirier, and Mark Fox. Cruz Vina Jr. came to all four hearings and Kathleen gave a special thank you to him.

She provided an overview of the public hearing and outreach process. There were four public hearings held across the island, giving ample opportunities for the public to participate at a location nearby. Sixty-five people attended the hearings in total. Five people gave official testimony at the hearings in total, and many people asked questions that BWS was able to answer right then. Of the five people who gave comments, one person was opposed to the proposed single-family rates, two people were opposed to BWS's involvement in Red Hill (not part of rates), one BWS employee shared some concerns, and one person was concerned that the increases would be an issue for retirees. Kathleen told the group that all four of the public hearings were publicized and people can download the rates-related materials from the BWS website.

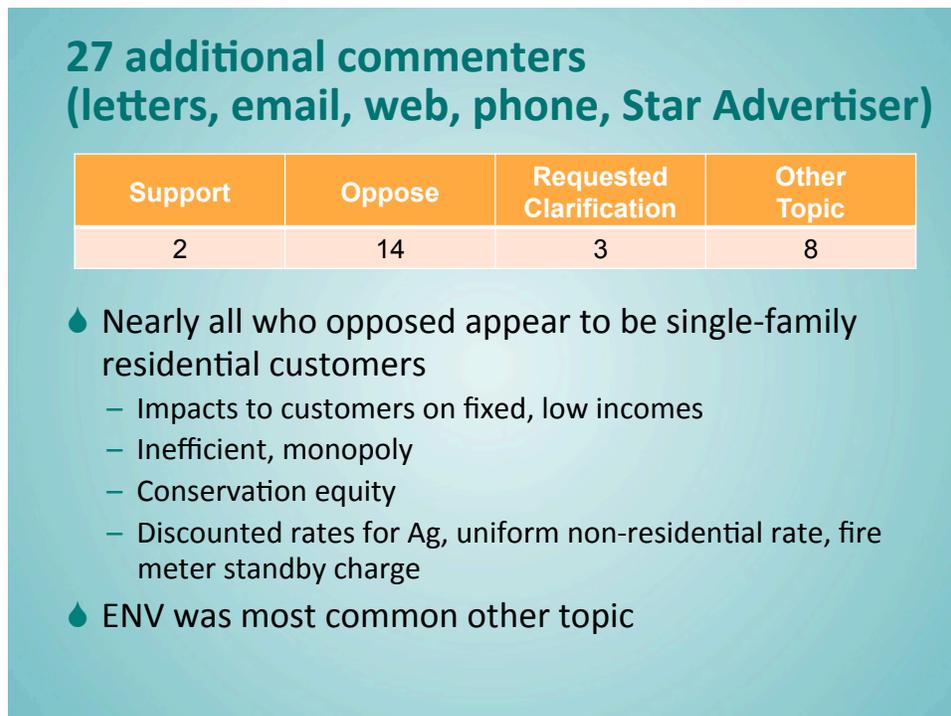
The outreach efforts included a bill insert with information about the hearings and proposed rates. This was sent to all of BWS's 170,000 account holders. The insert explained the proposed rate structure changes and provided additional transparency for what BWS is planning to do. A few community members sent in comments in response to the insert, including a homeowner who supports the rate increase and shift in the structure because it encourages conservation. On the website, BWS will share a summary of the public comments received.

The BWS has given updates about the proposed rates to 14 neighborhood boards, and the overall feedback has been extremely positive. BWS received questions that were similar to those asked by the stakeholder group, and Kathleen said that this is a great validation of the hard work that stakeholders put into preparing BWS to talk with the community about what the proposed rates would will pay for. Rate increases aren't usually popular, but this stakeholder group made sure BWS was prepared before they talked with the public. The effort was successful.

BWS has also completed 10 interest groups presentations and more are scheduled. The groups included Hawaiian Electric Co., Honolulu Board of Realtors, the Chamber of Commerce, two different presentations to AARP, golf course managers, and developers. Matt Bailey, with Aqua-Aston Hospitality, emailed information to the Hawaii Lodging and Tourism Association. BWS participated in six City Council briefings, and Ellen Kitamura briefed the Mayor's Cabinet.

BWS participated in 13 different radio shows and interviews. Three major newspaper articles were written about the proposed rates. This included a 4-page spread in the *Star Advertiser* on May 13th, which did an excellent job of explaining the rates. Ernest Lau also appeared on TV shows, including one with the League of Women Voters and Pearl Johnson. There were 1,200 visitors to the BWS website as of this stakeholder meeting, of which approximately 1,000 were unique views, so we know that many people are looking at the materials.

BWS received 27 additional comments via letters, email, the website, and phone calls in addition to the public hearings. Kathleen showed the following slide to give a breakdown or snapshot of the nature of the comments:



There were two callers who said BWS should raise rates. We just got a nice letter from a former employee supporting the rate increase. We had 14 people who opposed a rate increase, others who requested additional information, and a lot of people who commented on subjects unrelated to the rate increases. This was true at the public hearings too. BWS staff answered a lot of questions that didn't have anything to do with the proposed rates, like Red Hill and ENV.

Kathleen explained how BWS has been working with the Small Business Regulatory Review Board (SBRRB) to review rates before adoption. The SBRRB is a state commission that reviews regulations that have an impact on small businesses. Ernie gave a presentation to them on June 20th and answered their questions. Their feedback was that they are pleased BWS met with them, and that the proposed non-residential rate increases did not seem to have a significant impact on small businesses. BWS will follow up with the SBRRB after the final public hearing.

Kathleen closed by saying that BWS is still taking community input, comments, and questions until the August 27<sup>th</sup> BWS Board meeting.

**Q.** I notice the Hawaii Kai neighborhood board presentation is pending and want to know why.

**A.** We reached out to the neighborhood board chair twice. She wanted us to come and present, which is great, but we haven't heard back from our efforts to schedule the presentation.

**Response:** Elizabeth Reilly will help coordinate getting a presentation for the Hawaii Kai neighborhood board prior to the BWS Board meeting in August.

**Q.** Some of the farmers in Kamilo Nui Valley have specific concerns and would like BWS to talk to them before the August Board meeting. Is that possible? That communication doesn't necessarily have to happen at the neighborhood board level. Who would you want them to speak with?

**A.** Ernie asked to please have them reach out to him so BWS can arrange a meeting. He said that the Farm Bureau brought up concerns this week during a meeting at the capital and said some farmers want to know about the Ag water rates and the process of applying for them. BWS is verifying that each person applying for the Ag water rate is actually doing what is required to qualify for the rate. Ernest said that concerns related to cross connection requirements were also brought up during a meeting with farmers held in April. He asked if the farmers in East Honolulu want to ask about cross connection issues?

**Response:** The concerns are mainly about meters, moving forward into the future.

**Response:** Ernie said he would be glad to talk to them and then told the group that BWS is looking at updates to the Water System Facilities Charge (WSFC), but not before the proposed water rates are adopted. BWS hasn't made any final decisions and held two meetings with the farmers and Farm Bureau to learn about their concerns. Ernie shared some of their feedback with the stakeholder group in the April meeting. The amount of water being used by farmers is significant and has an impact on system capacity. The WSFC hasn't changed since 1993. BWS is very sensitive to the issue of rate shock and is open to continue having discussions with the agricultural community before decisions are made.

**Q.** When you spoke with the developers, what kind of feedback did you get? The stakeholders spent quite a bit of time talking about how developers might react to the proposed meter rates, and I would like to know the outcome.

**A.** They weren't particularly concerned about the proposed changes related to meter size. We were meeting with them about proposed changes to the WSFC and connection fees, because that's really where the bigger impact is for them. Developers aren't usually on the project when the water rate-related usage component kicks in. We haven't heard any real negative feedback from that group.

Ernie took the opportunity to add that since the last meeting, the BWS Board provided him with clarification about connection fee waivers for affordable housing. BWS has been asked to waive certain charges (related to connections, WSFC, and fire meters) to support the building of affordable housing and homeless units. The Board agreed to provide some waivers, but is

looking at setting a ceiling of around 500 units a year for developing affordable housing and homeless units.

Kathleen thanked Ernest and announced to the group that the BWS's annual unthirsty plant sale is taking place on August 4 at the Halawa Xeriscape garden. It is the 30th anniversary of this event, and everyone was invited to attend. Kathleen closed by encouraging stakeholders to look at the display boards around the room that were used at the various public hearings. They were excellent visuals to explain shifts in the rate block tiers, how these changes support conservation, and many other topics of interest to the public. BWS staff and administrators stood at the various stations with these display boards before the public hearings to explain proposed rates and answer questions the public asked about.

Kathleen turned the meeting over to Dave. He reiterated the tremendous effort that went into the outreach, public hearings, and clearly communicating information about the proposed water rates. He said that one of his greatest observations were of people's positive reactions when they found out BWS would answer their questions at the hearings. BWS managers even spent time off to the side helping people resolve issues.

#### **STAKEHOLDERS RECOMMENDATION TO BWS BOARD ON RATES**

Dave said the feedback received at the public hearings is important. None of it indicated a need to change the proposed rates that have been discussed extensively with stakeholders. He asked the stakeholders if they are willing to make a recommendation to BWS' Board to adopt the rates at the August meeting. He noted the shift in the proposed adoption to August was to honor the SBRRB review process, which requires 30 days notice for the public hearing where the proposed rates will be considered for adoption.

**Comment:** At the Pearl City neighborhood board meeting, Barry informed the public that the comment period for BWS rates extended to the end of July. This was great because it gave more time for people to state their concerns honestly. That was a good move.

**Comment:** BWS has done a thorough job of communicating with the public and it doesn't sound like there is a lot of recommendation for changes. The Stakeholder Advisory Group should approve and make a recommendation to the BWS Board to adopt the proposed rates.

Dave asked stakeholders whether there would be consensus to recommend that the BWS Board adopt the proposed rates. The group responded with a resounding "yes"!

Dave shared with the group that the spreadsheet of public comments regarding the new rates would be posted shortly on the BWS web site. He noted that that the BWS Communications Team responded directly to all individuals who contacted the BWS to express their opinions and who had provided their contact information.

#### **BWS OPERATING BUDGET – FISCAL YEAR 2019**

Dave then invited Joe Cooper, BWS Water Works Controller, and Jason Takaki, BWS Capital Projects Program Administrator, to give a presentation on the BWS's Fiscal Year 2019 (FY19) Budget and Capital Improvements Program (CIP).

Joe began with an update on the BWS FY19 budget approved by the BWS Board. The FY19 operating budget totals \$300m+. The operations budget portion, managed by Joe's group, is about \$186 million, divided among waivers (\$0.5m); personnel services (\$48.9m); materials, supplies and services (\$62m); equipment (\$5.4m); debt service (\$21.7m); and fixed charges (\$47.8m). The Capital Improvement Plan budget is \$118.6m.

Joe explained that hiring is a challenge throughout Hawaii. While BWS is authorized just over 700 staff members, currently there are just over 500 employed. Unemployment is down. There's a lot of salary competition on the island and grade levels for staff are citywide. During the recession in 2007-2009, there was a hiring freeze. The struggle to recover from the freeze is ongoing. In 2012, retirement benefits were reduced, making employment with the city less attractive than it's been in the past. Filling vacancies has been an ongoing struggle. Adding staff will have growing importance as the CIP grows.

Over the last 16 years, the population of Honolulu has gone up significantly, with associated growth in the water delivery system. The number of miles of water pipeline has increased from just under 1,400 miles in 1971 to more than 2,100 miles today. The number of BWS customers has increased from just over 100,000 to more than 170,000. At the same time, the BWS staffing level has been effectively flat. BWS has requested additional authorized positions (increasing from 714 to 732), but hiring is expected to be an ongoing challenge.

Joe then turned the mic over to Jason, to talk about the CIP. Jason began by explaining that the CIP is BWS's most significant annual undertaking and is aligned with most of the issues presented and discussed at Stakeholder Advisory Group meetings. The CIP addresses the immediate needs for continuous delivery of water as well as operation and maintenance of facilities.

The CIP is crafted around BWS's mission to provide safe, dependable, and affordable water now and into the future. It is closely aligned with the BWS strategic plan.

The CIP is organized in three categories:

1. Research and Development (R&D) explores resources and system improvement needs; for FY19, \$4.4 million is allocated in this category.
2. Renewal and Replacement (R&R) addresses the needs of the existing water infrastructure; for FY19, \$92.1 million is appropriated for this category.
3. Capacity Expansion (CapEx) provides for water supply facilities; for FY19 \$23.4 million is budgeted for capital projects.

The total CIP budget is \$138,461,000. Of this, \$110.4 million will be provided from the operating fund. Another \$8.2 million comes from State Revolving Fund (SRF) loans administered by the State Department of Health. Finally, \$19.9 million will be funded through the collection of Water System Facilities Charges.

Jason went on to describe some of the highlights of FY19 CIP. There are 66 budget line items in the program this year.

For R&D:

- BWS will continue to use construction management and project and program management services for select projects. This will provide internal training opportunities and help to build in-house capabilities to meet an expanding CIP.
- BWS will initiate a program to assess the condition of existing water transmission mains island-wide, to proactively address the highest risk components of the water system and avoid catastrophic failures

For R&R: (by far the biggest category)

- BWS will address the needs of the existing water infrastructure. Critical pumps will be assessed by the BWS Water Systems Operations Division to determine whether to repair or provide new infrastructure.
- Major repairs are scheduled for two reservoirs.
- Improvements will be made to extend the life of BWS's granular activated carbon water treatment systems.
- BWS will continue its water-meter transponder replacement program.
- R&R also includes the needs of the aging underground water transmission and distribution system, which is BWS's largest asset. Just under \$49 million will go into pipelines in FY19. Seven miles of main replacement are scheduled for FY19 in areas including Waianae, Waikele, and Pacific Heights. This aligns with the target to place 21 miles of water main annually by FY 27.
- In support of this expanding pipeline replacement program, BWS will begin new design projects starting with design on 18.5 miles of mains for replacement to address aging infrastructure in various locations including Pupukea, Waipahu, Kanehoe, and Manoa.

For CapEx:

- Storage within the metro system will be supplemented with a new 2 million gallon water tank.
- Transmission capacity to Waikiki will be improved by initiating design of an upsized water main to be installed along Ala Moana Boulevard.
- A new base yard in Kapolei, at the site of the brackish water desalination facility, will help to address evolving maintenance needs of the system.
- Design will begin for a new combination office building / parking structure at the current BWS headquarters site.

**Q,** There was mention of funding for security. What does this include?

**A.** Cameras, fencing, alarm systems, the whole bit. The BWS security office runs those projects. For example, we're changing our fencing from chain link, which is easily climbable, to expanded mesh and barbed wire. The expanded metal mesh is more difficult to cut. Safety is a challenge. BWS has 94 well stations, 90 booster pump stations, 171 reservoirs, and all sorts of facilities all over the island to keep secure.

**Q.** As you look ahead regarding the difficulty in hiring, are there internship programs, partnerships with universities, grad-level opportunities – building from the bottom up? I’m thinking of a “build a next generation” approach. It would be the place to capture interest and build it forward.

**A.** The answer to everything you mentioned is “yes”, particularly for the Capital Projects Division. The heart of our staff includes construction inspectors and engineers. Both career tracks not only have low unemployment, they are designated as “shortage categories” for the city. BWS is welcoming interns, and is reaching out to the universities. We are working with Honolulu Community Colleges with their associate programs in architecture, engineering and CADD. We think that will be a good place for us to get entering support techs that can supplement our staff and help our engineers get more work done.

**Q.** When we first got together, one of the things we discussed was that BWS was going to do an analysis of all pipes and prioritize them for repair or replacement. Are you meeting that objective with the pipelines that you're targeting in the CIP? Also, how are you working the seawater rise document that came out in December into your decision-making regarding which pipelines need to be addressed?

At the last stakeholder meeting, there was talk that it was necessary to wait on repairing a water main break until the tide went down. Besides water from the pipe itself, there was a capillary action from a high tide, which meant additional water to pump and more time to wait before you could even start on repairs. That’s an indicator that the line needs to be moved further inland to begin with. How is that being factored into this budget?

**A.** There are many groups looking at the impacts of climate change. University of Hawaii is doing a climate change study. BWS is doing a research project with the Water Research Foundation, which Barry is involved with. BWS is assessing our vulnerabilities and looking at actions we could take. The Governor’s Office of Conservation and Coastal Lands, (OCCL) has a sea-level rise committee.

BWS goes where the roads are. If the roads were to be moved further inland, we could move our utilities with them. Until then, we have mains that are subject to tidal influences.

Ernest called forward Mike Fuke, Manager of BWS’s Field Operations Division, to explain some of the challenges of the recent break. Mike explained that the Nimitz Highway in this area carries a lot of oil lines in the roadway. The BWS mains are right next to the ocean, and that whole area is saturated with oil. When it comes to dewatering, BWS cannot discharge oil-saturated water into the ocean. They had to collect the water then dispose of it safely.

BWS had only about 80,000 gallons storage space for the dewatering, which isn't very much, and time was of the essence. Dewatering was necessary to keep the water a little below the pipe. We don't want any debris to enter the pipe, particularly with the potential for oil in the water. Once the trench was dewatered it was necessary to work quickly and to keep pumping to make sure no water got above the pipe. An environmental consultant is testing the excavated material and the water for disposal.

**Q.** There was another part of this question about mains that are scheduled for replacement in the CIP and whether those are in line with the risk-based main replacement prioritization that came out of the Water Master Plan.

**A.** BWS used its award-winning geographic system that provides a digitized representation of the entire 2,100 miles of distribution and transmission mains. Using a program called InfoMaster, BWS assessed and prioritized all of its pipelines based on highest risk and consequence of failure. That information was used to formulate pipeline projects all around the island.

BWS understands the concerns about sea level rise and takes that into consideration as well. Climate change is a real phenomenon that our island community is going to have to continue to deal with.

**Q.** In the various discussion groups that are happening around climate change, are they looking at the problem of saturation of oil and how that will be affected by rising sea levels?

**A.** In the Nimitz area, there is the Iwilei District Participating Partners (IDPP). This is a group that's come together and has taken responsibility for the fuel that's in the ground in selected areas. The IDPP has worked with the Department of Health to determine where these areas are. They are setting up guidelines, precautions and procedures for work within those areas. The Department of Health (DOH) has decided they want to keep the contamination in place, as an encapsulation rather than removal.

The findings of this recent break should be shared with the City's Climate Change Commission. The fuel contamination will come to the surface eventually. Our concerns include the reefs.

**Q.** Is there a way to find out whether there are other areas affected by this and whether there are other areas that the IDPP is working in? BWS is aware of the Nimitz area, but I believe it has encountered a similar issue in Mapunapuna.

**A.** Ernie said IDPP is the only organization he knows of that has taken responsibility and is working things out. They must have a memorandum of understanding with the DOH. IDPP is limited to the Iwilei area, but the DOH should have information about various contamination sites. BWS has learned about other issues, for example Factory Street in Kalihi, where there are high levels of lead contamination. Also, the Radford High School was built on an old military dump site.

**Q.** I was curious about personnel. It was interesting you were able to retain personnel as long as you did. It seems like BWS's work goes in pulses. For instance, a big break requires "all hands on deck"; that's priority #1. What happens to these same employees when there are no broken pipes? How do you shuffle your labor around?

**A.** The primary job for field operations is maintaining the water systems, especially the pipes, the valves and the hydrants. Dealing with main breaks takes them away from maintenance, so when they are not doing emergency repairs on mains, which we have about 300 plus a year, they have other maintenance work. They also have to do new service installations, new water

meter installations, install fire hydrants, repair fire hydrants, etc. There are 2,100 miles of pipe to maintain, 170,000 service accounts, more than 40,000 valves, and 21,000 fire hydrants for them to take care of. BWS has reached a point where we need to increase staffing.

Ernest thanked Joe and Jason for their presentations and noted that for FY17, 18 and 19, the BWS operating budget has been on a downward trajectory. This demonstrates BWS's commitment to "right size" its operating budget and move more of the rate revenue into the CIP program, replacing infrastructure, installing new pipes, water tanks, pump stations, etc.

## **STAKEHOLDER ADVISORY GROUP – RECOGNITION AND CONTINUATION**

Speaking from the heart, Ernest told the group, "You are amazing. I've never seen a group like this that has 27 meetings. Many of you have been with us from the very beginning. I really appreciate all the input. Your input has been very valuable to our process of the Long Term Water Master Plan and in shaping how we look at water rates.

"Your dedication has been like a precious gem to us, a gift of your time that you've taken from your families, from your businesses and your willingness to come out to these meetings. I want to express our mahalo for your efforts. I hope that this effort doesn't end here, that we can continue to have this collaboration and this partnership with you.

"I feel like you've become part of our ohana to BWS. It started off that you were all community members from different parts of the island, but it feels like you are a part of our ohana. You know the challenges that we face and you've been part of the solutions. We hope that this journey won't end here, but we want to say mahalo today for these three years of effort."

Ellen Kitamura, BWS Deputy Manager and Chief Engineer, told the group how much she has appreciated all of the hard work, time and effort of the stakeholders. When she went out into public to talk about the work the BWS is doing, she could go back to discussions at the stakeholder group meetings and anticipate what the public might be asking. "I think that for me the biggest take back is the stakeholder's discussions, intellectual thought process, and comradery."

She said, "At public meetings, I could affirmatively say, 'Yes. We've reached out. We've talked to our stakeholders. We've had some really important discussions'. A lot of the questions that came from the public meetings were really reflections of the discussions that you've had here.

"This was a very valuable learning experience that I really enjoyed. I enjoyed the discussion and the amount of time and amount of effort you invested."

Barry Usagawa, Water Resource Program Administrator, said, "We really appreciate you volunteering time from your busy schedules to participate and help us with the master plan, the financial plan and the rate study. You helped us validate our water resource management and

conservation programs. You supported not only continued funding, but also ramping up that funding, confirming the importance of sustainability programs for Oahu's water future.

“By investing in Oahu’s natural water resources and water use efficiency, we will be able to collectively extend this island's water supply which, in turn, will minimize cost to existing and future customers. By allowing us to expand our water resources programs, our grandchildren and their grandchildren will always have fresh water access on this island.

“For the health of BWS as a semi-autonomous agency, it is important that we be as responsive as we can to our customers every day, in all that we do to provide vital water supplies and services to our community. Your Stakeholder Advisory Group validated our customer focus and expanded our thinking in many, many ways.

“I recall when the BWS was again in the sights of the City Charter Commission to take away our autonomy. As stakeholders, you stood up for BWS, standing up for safe drinking water. We cannot thank you enough for giving us that chance. BWS has a tremendous responsibility, and we appreciate your faith in our mission and in our staff.

“I sincerely hope that you choose to continue to participate in this group going forward, to ensure that we implement the plans set forth in this process. Our water resources need to be properly managed. Our community should expect no less, and with your help we can collectively achieve our goals. Thank you so much from the bottom of our hearts.”

Dave indicated that the BWS wished to present each of the stakeholders a small token of the BWS's appreciation. One by one, members of the group were called forward to receive from Ernest and Ellen a certificate of appreciation as well as a personalized, engraved paperweight acknowledging their exceptional service.

With the award distribution completed, Dave extended his appreciation to the group. He said that the BWS hopes the group will continue, and many of the stakeholders have expressed the same sentiment. In the coming months, Audrey Harris will call to set up some one-on-one meetings with members of the group, to talk in greater detail about next steps moving forward.