

Honolulu Board of Water Supply Stakeholder Advisory Group

Meeting 2 – July 21, 2015, 4:00 pm to 6:30 pm
Honolulu Club, Hawaiian Electric Co. Training Room

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 workshop. These are paraphrased to be more concise.

ATTENDEES

There were 22 stakeholders in attendance, 2 members of the public, and BWS and CDM Smith staff. BWS division heads were also in attendance. The stakeholders represented diverse interests and communities island-wide.

The following Stakeholders Advisory Group members attended:

Eric Au	Sheraton Waikiki
Bill Clark	Resident of City Council District 6
Pono Chong	Chamber of Commerce
Richard Dahl	James Campbell Company, LLC
Mark Fox	The Nature Conservancy of Hawaii
Gregg Fraser	Hawaii Restaurant Association
Neil Hannahs	Kamehameha Schools
Rick Hobson	Building Industry Association of Hawaii
Shari Ishikawa	Hawaiian Electric Co.
Micah Kane	Pacific Links Hawaii
Ralph Mesick	First Hawaiian Bank
Helen Nakano	Resident of City Council District 5
Robbie Nicholas	Hawaii Kai Golf Course
Dean Okimoto	Nalo Farms
Alison Omura	Coca-Cola Bottling Co.
Kathleen Pahinui	Resident of City Council District 2
Dick Poirier	Resident of City Council District 9
Francois Rogers	Blue Planet Foundation
Josh Stanbro	Hawaii Community Foundation
Cruz Vina Jr.	Resident of City Council District 8
Lee Yamamoto	Marine Base Corps Hawaii
Suzanne Young	Honolulu Board of Realtors

MEETING AGENDA

- **Welcome**
- **Public Comment on Agenda Items**
- **Welcome from Meeting Host (Information Only)**
- **Accept Notes from Meeting 1 (For Possible Action)**
- **Objectives of the Water Master Plan (For Possible Action)**
- **BWS Updates (Information Only)**
- **Customer Survey and Focus Groups (Information Only)**
- **Summary and Next Steps (Information Only)**

WELCOME

Dave Ebersold, Facilitator and Vice President of CDM Smith, welcomed stakeholders and members of the public to the second BWS Stakeholder Advisory Group meeting. Dave also welcomed new participants and asked them to introduce themselves and share what they each expect from their participation.

New participants were Pono Chong, Richard Dahl, Dean Okimoto, and Cruz Vina Jr. They expressed interest in Red Hill issues, water for agriculture, and water for O‘ahu’s future.

PUBLIC COMMENT ON AGENDA ITEMS

None.

WELCOME FROM MEETING HOST

Shari Ishikawa, Hawaiian Electric Co., welcomed the stakeholders to their Training Rooms in the Honolulu Club.

ACCEPTANCE OF NOTES FROM MEETING 1

Notes from Meeting 1 held May 5, 2015, were accepted.

BWS AND STAKEHOLDER ADVISORY GROUP COMMITMENT

Dave reviewed commitments expected from both the BWS and Stakeholders.

The BWS commits to:

- Conduct open public meetings.
- Provide staff and resources to support the group's meetings and activities.
- Provide accurate and transparent information.
- Fully consider the Stakeholder Advisory Group’s recommendations and advisement.

Stakeholders are asked to commit to:

- Attend and participate in all meetings.
- Be prepared to discuss the issues on agenda and any information distributed by staff in advance.
- Be willing to explore goals, constraints, and options.
- Listen attentively with an open mind. Respect ideas and perspectives of others. Give everyone a chance to speak. Avoid side discussions. Don’t interrupt.
- Maintain focus on the topic currently under discussion. Avoid repeating issues that have already been raised or recorded.
- Achieve consensus.

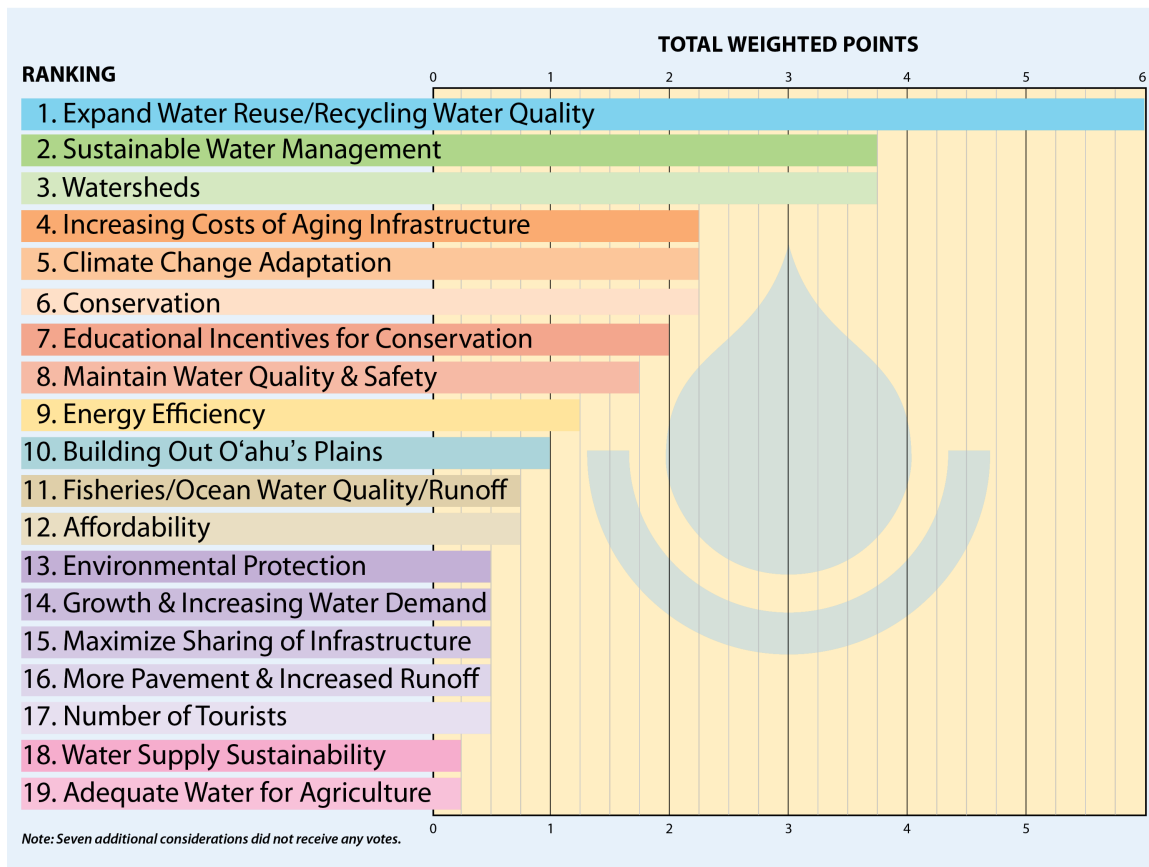
OBJECTIVES OF THE WATER MASTER PLAN (WMP)

Relating Stakeholders' Priorities to the Water Master Plan

As background for the discussion of WMP draft objectives, Dave summarized the outcome of the Stakeholders' Priorities Exercise that was completed in Meeting 1:

1. The BWS drafted a list of initial priorities based on information gathered from stakeholders during interviews and other discussions.
2. Stakeholders were asked to edit or add to the list of initial priorities. All of the priorities – such as water recycling, climate change adaptation, etc. – were written on large post-it notes taped on the wall.
3. Each stakeholder voted for his or her #1, #2, and #3 priorities.

The exercise resulted in a ranking of the 19 topics below:



Dave asked the group if the priorities shown reflect the Stakeholder Advisory Group's preferences.

Comment: We need to define what “sustainable water management” means.

Comment: The priorities should be considered as totally integrated rather than stand-alone. The priorities are shown as “lines”. If they were integrated, the priorities would be shown as circular. Integration is essential to develop a good Water Master Plan.

Comment: The results are surprising, particularly seeing that adequate water for agriculture is “dead last, which is worrisome.”

Comment: There is redundancy within the list of priorities. “These are all great issues and it appears that 5-6 themes stand out.”

Comment: Seeing that adequate water for agriculture ranked last is concerning, although water for agriculture seems to be included in a lot of other priorities. Agriculture uses the most water on O’ahu. Water that passes through the soil when irrigating crops goes back into the aquifers. Water for agriculture is essential. If we do away with agriculture, we won’t have a sustainable water supply.

Dave said that these were all great comments. He further explained that stakeholders’ priorities were viewed as so important that the BWS wants to incorporate them, and other stakeholder input, into the development of objectives for the WMP. This is a significant addition to WMP process.

Building Draft WMP Objectives Based Upon Stakeholders’ Priorities

As presented in Meeting 1:

“A WMP is a best practice of water utilities to ensure stewardship of water supplies and infrastructure. The BWS’s WMP will provide vital information for policy makers to consider when deciding how to balance water service adequacy and dependability with the cost of infrastructure improvements and rate affordability to the BWS’s customers. As future decisions about water system improvements are made, they will be based upon a tradeoff between these two ideals. Input from the Stakeholder Advisory Group is the key to the critical issue of balancing water service adequacy and dependability with infrastructure costs and rate affordability. The WMP is infrastructure intensive, but with input from the Stakeholder Advisory Group, the plan can embody the group’s priorities and values.”

To prepare for discussion with stakeholders, the BWS developed the first draft of WMP objectives by reviewing:

- Stakeholder priorities identified in the May meeting
- Comments and ideas shared in stakeholder interviews and subsequent conversations.

These initial draft objectives were meant to be a starting point for the stakeholders to review and edit to reflect their perspectives and interests.

The Draft WMP Objectives included:

1. Water Quality, Health and Safety
2. System Reliability and Adequacy
3. Cost and Affordability
4. Conservation and Efficiency
5. Water Resource Sustainability

Questions, Comments and Answers:

Comment: Governance will be a priority as it relates to being able to execute the WMP, which should be kept in mind as we discuss these objectives.

Question: Are we looking at all water or just that provided by the BWS?

Question: Are we going to discuss reusing water from treatments plants?

Question: Will the WMP include O’ahu’s many privately controlled wells?

Answer: The WMP focuses on water provided by the BWS. Water reuse and private wells are covered in the BWS’s Watershed Management Plans, to be discussed later during today’s meeting.

Discussion of Draft WMP Objectives

Dave said that in this meeting, stakeholders would first discuss five draft objectives for the WMP and then edit them as group, striving for consensus.

1. Water Quality, Health and Safety	
Draft text prior to Stakeholder Advisory Group review and edits	Draft text incorporating Stakeholder Advisory Group edits (discussion to be continued)
Water is consistently safe to drink. Water served meets or is better than regulatory standards and is also suitable for the intended water use, including recycled water. Water system facilities are secure as well as structurally and operationally sound, protecting the public, employees and the community. The exceptional natural quality of O’ahu’s source water is sustained.	<ul style="list-style-type: none">• Potable water is consistently safe to drink.• Water served meets or is better than regulatory standards and also is suitable for the intended water use, including recycled water.• Water system facilities are secure as well as structurally and operationally sound, protecting the public, employees and the community.• The exceptional natural quality of O’ahu’s source water is sustained.

Stakeholders discussed the draft definition of the objective. Discussion included these observations, ideas, and edits:

Comment: Not all water is “safe to drink”, nor is all water intended for drinking uses. The list isn’t consistent.

Comment: It would be better to put the information in bullet points rather than a paragraph.

Comment: What does “exceptional natural quality of O’ahu’s water” mean? The “exceptional” statement contradicts the first point that not all water is safe to drink.

Comment: In the second sentence, instead of “Water served meets or is better than regulatory standards ...”, the text should reflect that water meets or exceeds regulatory standards.

Comment: A lot of people do not believe their water is safe to drink and give their babies bottled water. This stakeholder suggested polling the Stakeholder Advisory Group to learn how many drink filtered water instead of tap water from the faucet. The informal poll showed that one person drinks bottled water, three use water filters, and the rest of the group drinks tap water from the faucet.

Comment: Pipes play a big part in how the water tastes. People who filter their water may be doing so to improve the taste of water that was degraded by their pipes.

2. System Reliability and Adequacy	
Draft text prior to Stakeholder Advisory Group review and edits	Draft text incorporating Stakeholder Advisory Group edits (discussion to be continued)
Water service is uninterrupted and at proper pressures, when and where it's needed. Water system is designed to consistently support vital emergency services, such as hospitals and fire protection. System protections support basic functions during natural disasters.	<ul style="list-style-type: none"> • Water service is uninterrupted and at proper pressures, when and where it's needed. • Water system is designed, constructed and maintained to consistently support vital emergency services, such as hospitals and fire protection. • System protections support basic functions during natural disasters.

The Stakeholders discussed the draft definition of the next objective. Discussion included these observations, ideas, and edits:

Question: What does “uninterrupted” mean? That service will never be interrupted?

Answer: There will be times of interruption but hopefully not for long.

Question: What does “system protection” mean?

Answer: During a natural disaster, like a tsunami or hurricane, it is possible that the entire water system may not work. But in meeting the “system protection” component of the objective, water to emergency services like hospitals and fire protection would continue to be delivered without interruption. Some parts of the BWS water system are vulnerable to failure in the event of natural disasters. These are being addressed in the WMP.

Comment: In addition to designing the water system to consistently support vital emergency services, the definition should include “constructed, and maintained”.

Question: Our hospitals and fire protection services are very important. In addition to those, how will the WMP address others (e.g., homes and businesses)? What about system reliability overall in the event of a natural disaster? This definition sounds like it has a narrow focus of emergency services.

Answer: The BWS Mission Statement is that water will be supplied when and where it is needed overall.

Question: Who decides “when and where it’s needed”? Does this reliability apply also to agricultural customers, for example?

Answer: It basically means that water will be delivered to you, where you are, when you turn the faucet on. This applies to residential customers as well as agricultural customers and others.

Question: A “what if” scenario should be added to the first sentence. Is it realistic that water service overall would always be uninterrupted and at proper pressures?

Answer: No. For example, some homes will temporarily go without water while the BWS crews repair a break in the system.

Comment: An objective should be written as something yet to be achieved. For example, in the first sentence, instead of saying, “Water service **is** uninterrupted ...”, the definition should read, “Water service **should be** uninterrupted ...”.

Comment: An objective is something you want to do, and so the proper wording is as the sentence is written (“Water service is uninterrupted ...”).

Comment: The difference between “is” and “should be” is that one is active and the other is passive. (This person preferred the active.)

Comment: Using the words “should be” applies to when the sun is shining. Using the word “is” applies to times when it’s not.

3. Cost and Affordability	
Draft text prior to Stakeholder Advisory Group review and edits	Draft text incorporating Stakeholder Advisory Group edits (discussion to be continued)
Infrastructure project expenditures balance system needs, community values, and affordability for ratepayers. Water system is designed and operated to deliver water at the most responsible cost to the customer.	<ul style="list-style-type: none">• Infrastructure project expenditures balance system needs, community values, and affordability for current and future ratepayers.• Water system is designed and operated to deliver water at the most responsible (or reasonable) cost to the customer.• The price of water reflects the whole cost of providing water to (present and) future generations (e.g., protecting watersheds, investing in infrastructure maintenance, and land management).

Stakeholders discussed the draft definition of the objective. Discussion included these observations, ideas, and edits:

Question: What does “community values” mean?

Answer: The answer was given in examples: “What level of conservation do we want?” “How much system reliability do we want?” Another example of community values offered was that we

want to support agriculture on O‘ahu, and because of this value, the cost of water for agricultural uses is subsidized.

Question: How do we factor in inter-generational equity?

Answers: Examples of inter-generational equity in Water Master Planning were given as deciding when to implement desalination to add to water supplies, and how much recycled water to pursue now vs. later. Climate change adaptation was another example. If we wait to implement climate change adaptation projects, we may have to ramp up quickly to implement many projects all at the same time and the cost would be paid by future generations. If we implement some climate adaptation projects now, current generations can share the cost with those that follow.

Comment: The idea of inter-generational equity and costs brings up how projects and programs are paid for: cash [pay now] vs. bond [pay later] financing.

Comment: Instead of just “rate payers”, a better term would be “current and future rate payers”.

Comment: It seems early to be developing objectives without first conducting the research [described as part of the WMP in Meeting #1] and discussing the findings. It would be useful to gather that information, conduct a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats), look at climate change projections, look at population trends and projections, and then consider what the objectives should be. The planning process is important. It would be helpful to the Stakeholder Advisory Group to know what the BWS considers to be the “theory of change” to see how the objectives align. The respect shown to the Stakeholder Advisory Group – listening and responding to stakeholder priorities -- is appreciated, but planning is based upon facts and more information.

Dave said that the comments are appreciated. We initiated the discussion of objectives early in the series of Stakeholder Advisory Group meetings because the priorities identified in the first meeting were broader than the WMP technical criteria. Based upon this input, we will need to circle back to the discussion of objectives after we present the research.

Ernest Lau said that some of the issues of the planning process will be addressed when the Stakeholder Advisory Group discusses the future rate structure. The discussions of tradeoffs and achieving our objectives will become very important.

Barry Usagawa said that when the BWS went to the community about watershed management planning, people were interested in more than just water use and development. They insisted the plan be broadened to the protection and management of watersheds and water resources. BWS is a water purveyor responsible to maintain the water systems but BWS is also a public agency responsible for a public trust resource. It’s part of our *kuleana* [responsibility] to protect the resource.

Comment: Analyses of Impacts to watersheds should make sure we’re not drawing down too much of the water supply now at the expense of future generations.

Comment: Add that the “cost” of water should be reflected as the “full cost of water”. This supports the interest in inter-generational equity.

Comment: The language should be: “The price of water shall reflect the whole cost of water for present and future generations.”

Comment: Land management and management of our resources are very important issues. We need to capture what the whole cost of water is. We currently have cheap water. There is opportunity here to support the utility in this concept.

Comment: It’s important to talk about what the cost will be over the long run, for future generations.

Question: What is “responsible cost”? Does it mean that if a tradeoff is expensive, we therefore won’t implement it? Might there be projects or programs that would benefit the system, but the tradeoff is with a financial responsibility to maintain low costs, therefore we’re not going to implement them?

Answer: This is the crux of our conversation with the Stakeholder Advisory Group. We’re discussing what you want, what you are willing to pay, and balancing the tradeoffs between benefits and costs and risk. This is a big issue to grapple with.

Question: What about recycled water projects and the sewerage system?

Answer: By City Charter, BWS has authority over all water systems. BWS owns and operates the Honouliuli water recycling facility, the largest in the State.

Comment: Look for opportunities around who has the operational mobility.

Comment: Change the last sentence to read: “... at the most reasonable cost to the customer.”

Comment: Keep it “responsible”.

Comment: “Responsible” implies “fiduciary responsibility”. “Reasonable” implies a shorter time frame.

Comment: Who’s to say a tradeoff is responsible? Looking at projects and programs with the future generation point of view, they [future generations] would pay the costs. We don’t want carte blanche to say “no” based upon “responsible” costs.

Comment: We can have an ongoing discussion about “responsible” and “reasonable”. “Reasonable” is associated with the customer. “Responsible” refers to the utility.

4. Conservation and Efficiency	
Draft text prior to Stakeholder Advisory Group review and edits	Draft text incorporating Stakeholder Advisory Group edits (discussion to be continued)
Achieve water and energy efficiency via water conservation, infrastructure design, system operations and maintenance, and consideration of renewable energy options.	Achieve water conservation and energy efficiency via infrastructure design and construction, system operations and maintenance, and consideration of renewable energy options.

Stakeholders discussed the draft definition of this objective. Discussion included these observations, ideas, and edits:

Comment: Change the text to “... infrastructure design, installation, and operations and maintenance; and consideration of renewable energy options.”

Comment: This implies efficiency by using less, but there is no notion that reuse has been included in this definition.

Question: Is “conservation” broken down into more precise terms anywhere in these objectives?

Answer: Dave said that “conservation” has not been defined further.

Response: Barry Usagawa added that the BWS has an important role in conservation. It is a shared responsibility. On the “external” side, the BWS has worked with customers in demand-side management, efficient use and low-flow fixture programs to conserve water in homes and businesses. On the “internal” or infrastructure side, the BWS is focusing on water loss control and system efficiency to move water at lower operational costs. Accurate, calibrated source and customer meters are important to determine water loss in the distribution system. Conservation is a responsibility of our customers and BWS. It takes both.

Comment: This objective addresses just water and energy. It could be broader to take in a spectrum of conservation and efficiency possibilities.

Response: Yes, “Efficiency” also encompasses BWS work practices, that we are using our ratepayers money wisely.

Question: “Conservation” is one of the actions listed in the text to be undertaken to achieve the objective of Conservation and Efficiency. Why is “conservation” in both the title and the text?

Answer: Conservation was included in the definition because it is so important.

Some participants said the objective needs to be broader; others said it was okay as-is.

Question: The objective states that we’re achieving water and energy efficiency via water conservation, infrastructure design and implementation, and system operations and maintenance. From the perspective of developing clear objectives, if we are achieving conservation and efficiency with the means identified in the text, it follows that we would not need to include “consideration of renewable energy options”. Is this what we really mean to say?

Answer: You can be energy efficient without the renewable options; however, if there is an opportunity to pursue renewable energy, it should be included in the objective definition.

5. Water Resource Sustainability	
Draft text prior to Stakeholder Advisory Group review and edits	Draft text incorporating Stakeholder Advisory Group edits (discussion to be continued)
Water sources are protected and available now and into the future by managing the watershed and groundwater supply, conducting long-range planning (including risks due to climate change), and considering alternative sources of water (e.g., stormwater, recycled water, brackish water and seawater).	Water sources are protected and available now and into the future by: <ul style="list-style-type: none"> • Coordinated management and improvement of the watershed and groundwater supply • Conducting long-range planning (including risks due to climate change) • Collaborate with DLNR and other relevant land owners • Considering alternative sources of water (e.g., stormwater, recycled water, brackish water and seawater)

Stakeholders discussed the draft definition of the objective. Discussion included these observations, ideas, and edits:

Comment: This reads like the objective is to keep the status quo in our watersheds. There’s a lot of land in watersheds that we need to restore back to forests. We need to turn the dial back.

Response: Barry Usagawa suggested changing the text to: “... into the future by managing and improving the watershed and ...”

Comment: This gets back to the issue of jurisdiction. We need to have integrated planning with the Department of Land and Natural Resources (DLNR). If the DLNR does something to increase the water supply, we need to integrate the benefit of it in our plans and our protection of water resources. The efforts need to connect.

Response: Barry Usagawa said this is a good example of watershed partnerships. The BWS should invest in watershed partnerships with owners of the land above and below the land where the BWS owns sources.

Comment: We need intentional collaborative planning. The process might be sharing of plans to see how we could benefit.

Comment: Rephrase to: “... now and into the future by coordinated management and improvement of the watershed and groundwater supply ...”

Comment: Add “other” or “relevant” to “landowners”.

Question: We don’t say who this objective is meant for. Who is the water going to? How do we make that water sustainable?

Answer. Barry Usagawa said that the BWS mission is *Ka Wai Ola* – Water for Life – that he sees as all water for all life. The BWS’s infrastructure plan should get the water needed for the system,

but not at the expense of other uses. Water is a shared resource. The BWS is not going to drill new wells that affect the surface water supply to respect water rights and existing surface water uses.

Comment: The statement about collaboration with DLNR should be stronger: “DLNR is required to collaborate with the BWS.”

Comment: These are objectives for the BWS. Say that the BWS is collaborating with the DLNR, not “seeking collaboration”.

Additional discussion followed clarifying that the BWS and stakeholders cannot “require” the DLNR to do something. The phrase was modified to “Collaborate with”.

Aligning Stakeholder Priorities with the WMP and Watershed Management Plans

The participants were shown a matrix of how their priorities align with the five draft objectives of the WMP, just discussed:



Barry explained that stakeholders’ priorities were also crosschecked with the objectives of the Watershed Management Plans.

The Watershed Management Plans are inclusive of the whole island’s water supply. The plans are authorized by ordinance and adopted by the City Council and the State Commission on Water Resource Management. The plans apply to the City and County of Honolulu, not just the BWS. The goal of the Watershed Management Plans is:

To formulate an **environmentally holistic, community-based, and economically viable** watershed management plan that will provide a balance between:

- The protection, preservation and management of O‘ahu’s watersheds.
- Sustainable ground and surface water use and development to serve present users and future generations.

To achieve that goal, five Watershed Management Plan objectives were developed and are being applied to all watersheds on O‘ahu:

1. Promote Sustainable Watersheds
2. Protect and Enhance Water Quality and Quantity
3. Protect Native Hawaiian Rights and Traditional and Customary Practices
4. Facilitate Public Participation, Education, and Project Implementation
5. Meet Future Water Demands at Reasonable Rates

Barry said extensive community outreach drove the development of the plans. He explained the reasoning behind each objective:

1. To *promote sustainable watersheds*, we consider the whole ecosystem. Our Watershed Management Plans include projects that are specifically designed to promote watersheds. Infrastructure planning depends in part upon sustaining O‘ahu’s watersheds.
2. The objective to *protect and enhance water quality and quantity* reflects the community’s intent to ensure a water supply for this and future generations.
3. The objective to *protect native Hawaiian rights* is tied to surface water. Conservation projects and programs that lead to using less water help keep water in O‘ahu’s streams (surface water). Projects that keep water in streams help achieve this objective.
4. Members of the community who took part in writing the Watershed Management Plans always brought up education. The objective to *facilitate public participation, education and project implementation* reflects our desire for kids to grow up with *kuleana* to protect their watersheds.
5. The fifth objective to *meet future water demands at reasonable rates* reflects a balance between needs and costs. By diversifying the water sources, we are more resilient.

Other Hawaii counties prepare one plan for their entire island. The BWS is preparing eight plans for O‘ahu that tie directly with the eight Sustainable Communities and Development Plans for Oahu. The BWS is currently working on the North Shore Watershed Management Plan with Kathleen Pahinui [North Shore Neighborhood Board Chair] and other members of that community. Policies that come out of the Watershed Management Plans advise the development of the BWS’s infrastructure. By protecting watersheds, we protect our water resources.

Barry then showed a chart of the stakeholders’ 19 priorities and how they align with the objectives of the Watershed Management Plans.



Another chart showed how Stakeholder Advisory Group priorities align with both the draft WMP objectives and the Watershed Management Plans objectives. Barry emphasized that, together, the objectives of the WMP and the Watershed Management Plans will address all of the Stakeholder Advisory Group priorities.

Questions, Comments and Answers:

Questions: How will recycled water be included in the WMP? New homes are incorporating dual plumbing systems. Does the BWS have information for consumers that encourage a change to water conserving plumbing like dual plumbing to flush toilets with recycled water? This was likened to the information for consumers letting them know how much energy is saved by changing to CFL and LED light bulbs.

Answers: Barry said that the BWS has the largest recycled water facility in the state of Hawaii and recycled water has replaced high quality potable water that was used for nonpotable uses. In future meetings, we can discuss how to incorporate green infrastructure and gray water; what incentives might be offered; and how far to go with alternative water resource options.

Barry said that the BWS had a rebate program for customers to replace their old toilets with low-flow toilets. About 65% of O'ahu's residences now have low-flow toilets, and today you can't buy anything but a low-flow toilet. As homes age and repairs are made, the remaining old toilets will be replaced with low-flow toilets.

Comment: The objectives don't mention data collection and analysis, which are valuable for decision-making. If we're not constantly monitoring, we won't be ready for things like climate change.

Response: Barry Usagawa explained that the BWS partners with the U.S. Geological Survey to collect and analyze relevant data, but the BWS needs to do more.

BWS UPDATES

Status of Red Hill Fuel Facility and Aquifer Protection

Dave Ebersold introduced Ernest Lau, Manager and Chief Engineer of the BWS. Ernest updated the Stakeholder Advisory Group on the status of the Red Hill Bulk Fuel Storage Facility and the BWS's efforts to protect the aquifer that supplies water for much of O'ahu. He said that on January 13, 2014, the Navy reported a 27,000-gallon leak of jet fuel from the facility.

The facility was constructed between 1940 and 1943 to supply fuel to the Pacific Fleet at Pearl Harbor. Located near Moanalua, the facility consists of 20 tanks, each 250 feet high and 100 feet in diameter. Each tank holds 12.5 million gallons of fuel and the total capacity is 250 million gallons. Rock samples taken from under each tank show petroleum stains in 19 of 20 tanks from investigations conducted 1998-2002. Estimates are that up to 200,000 gallons of fuel were released from 1947-1980s.

Ernest explained that the BWS is taking a strong stand on the Red Hill issue because the safety of the island's water supply is at risk. We are depending on the Navy to take protective measures. The tanks are only 100 feet above the irreplaceable Moanalua and Waimalu aquifer systems, which supply five of the BWS's wells nearby. These wells contribute about 9% of our average daily supply and about 25% of the water serving the Metro Honolulu system, which extends from Moanalua all the way to Hawaii Kai. Contamination will be difficult to treat and there is no replacement for this pure water source.

Ernest said that the BWS wells show no sign of contaminants from the Navy's fuel storage. However, diesel and gas have been found in almost every monitoring well surrounding the Red Hill facility.

Ernest reviewed what the EPA and the Department of Health are doing about the tanks that have leaked. A proposed Administrative Order of Consent (AOC) and Statement of Work were issued June 1, 2015. An AOC is a negotiated agreement that requires the Navy and Defense Logistics Agency to take actions to minimize the threat of future leaks. The Statement of Work describes the actions for the Navy and Defense Logistics Agency to comply with the AOC.

Ernest told the group why the BWS does not support the current version of the proposed AOC:

1. It lacks public transparency, corrective action specificity, and the immediate implementation of improvements that would protect our groundwater and the environment.
2. The recent Tank 5 leak, which occurred after a multi-year clean/inspect/repair/ modernize process, demonstrates that the status quo approach is not protective of our drinking water and the environment.
3. It does not require cleanup of the contamination present in the rocks and groundwater beneath the tanks to prevent it from migrating to uncontaminated parts of the aquifer.
4. Stakeholders and the public were not included in an open process of developing it.
5. It doesn't require full disclosure and access to all records, data, and studies about fuel leaks, which allows the Navy to override compliance with existing and future regulations.
6. It lacks a written commitment to fund all of the tasks and improvements in a timely manner. There are concerns about corrosion of the inside and outside of the tanks.
7. The Red Hill storage tanks should comply with the EPA's new regulations for underground fuel storage facilities.

Ernest said that the EPA and Department of Health held a public meeting on June 18, 2015. About 200 people attended, with about 30 providing public comment. Ernest thanked Stakeholder Advisory Group members who attended. He continued by stating that the BWS submitted comments on the AOC and Statement of Work and encouraged the stakeholders to view them (for details, go to www.boardofwatersupply.com).

Ernest said that the BWS is conducting a groundwater study, a health effects study, and a modeling study with the U.S. Geological Survey and promised that the BWS will remain vigilant and inform stakeholders and customers of the latest developments.

Questions, Comments and Answers:

Question: Why is the EPA and DOH taking action now, in 2015, if they found samples with contamination in 1998 and 2000?

Answer: The BWS does not know the answer. Ernest said that when regulations were passed in the 1980s to control contamination from gas stations with underground fuel storage, these facilities were not required to meet them.

Question: Can you tell us about the about the levels of contamination and is the Navy giving its own soldiers contaminated water?

Answer: The map shown earlier reflects *maximum* levels of contamination as monitored over 10 years. The answer to the latter question is, essentially, yes.

Comment: It is important for the government to take responsibility for its own problems. Ernest responded that in 2010, the Navy conducted a study of air stripping and activated carbon methods of removing contamination. The study summary indicated that it would cost between \$41 and 51 million to construct those facilities and another \$6-7 million to operate. A groundwater study commissioned by the Navy recognized the risks to their water supply. The BWS respects the military. The BWS is concerned about contamination of the Halawa Shaft and the Navy's own water supply.

Question: Did the BWS send a letter to the whole island informing customers about the concerns and the public meeting?

Answer: Yes. Ernest said that the BWS recognized that if treatment were required as a result of contamination, all customers would share in the cost of those facilities. For that reason, he decided to send the letter to customers, island-wide.

Question: What would the BWS do if it had the money and the authority to deal with these tanks?

Answer: The BWS concurs with the Navy that the Red Hill facility is needed for national security. Ernest indicated that if the BWS had the money and authority, it would double-line the existing tanks and construct state-of-the-art tanks inside. The BWS also would inspect the existing tanks and the 3-mile pipeline to Pearl Harbor, and upgrade as needed.

Management and Performance Audit One Year Later

Ernest introduced Ellen Kitamura, the BWS Deputy Manager and Chief Engineer, to give an update on improvements made since September 2014 when the City Auditor completed and published an audit of the BWS's management and operational practices.

Ellen said that the audit included positive findings:

- Confirmation that the BWS's policies and procedures are consistent with the City Charter and ordinances, as well the BWS's own mission and objectives.
- The BWS's financial tools and resources are adequate to support operations.
- The BWS complies with majority of best practices established by consortium of industry experts.
- The BWS's water rates are among the lowest of 30 water agencies studied.

Increasing oversight by the City is not likely to increase the BWS's operations, efficiency or effectiveness. Based on this last finding, Ellen stated that the BWS's governance should remain as a semi autonomous agency.

Ellen covered progress in key areas of recommendations made since the audit was performed:

Plan and Prepare for New System Implementations:

The BWS hired additional staff and a new Customer Service Program Administrator, Jennifer Elflein, who worked closely with staff to develop and implement service standards. The BWS has also conducted training for all customer service representatives to improve the quality and consistency of their interactions with customers. As a result of the improvements in staffing levels and processes, call volume has dropped, the percentage of calls answered is over 92% and the number of hang-ups is far below 2012 levels. The average wait time decreased dramatically from about 14 minutes in 2012 and 2013 to less than 1 ½ minutes in 2014.

Substantiate Water Rates and Monthly Charges:

The BWS commissioned an independent review of its rate development process. The final draft of the report is due shortly. Preliminary findings are that the BWS's water rates are justified, an adjustment to rates is not necessary and a refund is not warranted.

The audit said the BWS should increase public involvement in its ratemaking processes. Late in 2016, the BWS will begin a new rate development process that incorporates needs identified by the WMP. The Stakeholder Advisory Group will be very involved. The BWS is fully committed to following industry best practices and engaging our stakeholders through an open and transparent process.

Improve Meter Reading Processes:

Another area identified for improvements was the BWS Automatic Meter Reading program. The BWS is pilot testing new methods and equipment to improve first-time drive-by meter reads, including optimizing the driving routes to increase efficiency. The BWS just completed a comprehensive study that assessed the existing system and developed short and long term plans for the program. They will continue to upgrade and maintain the existing system and monitor advances in the industry to determine the best fit for the BWS in the long term.

The BWS's actions have resulted in some real improvements including:

- There has been a 3% - 5% increase in first-time drive-by meter reads.
- The BWS has been able to keep the amount of estimated bills well below their target of 2%. There is no industry standard set by the American Water Works Association for estimated bills. However, the BWS participated in a survey in 2012 and utilities reported estimating anywhere from 0 to 30% of their bills, with most in the 1 – 2% range.

Improve Communications:

The audit pointed out that the BWS needs to have better communication with the public about the utility's activities. The BWS agrees and has implemented several initiatives as part of the Public Engagement Program for more proactive, open and timely communication.

This includes:

- Launch the “Water Matters” newsletter, which is published quarterly and sent to all customers with their bills.
- New short, detailed handouts describing the BWS's operations and other activities. These and future publications will be distributed to the Neighborhood Boards, community groups and the general public.
- Establishment of this Stakeholder Advisory Group.

Improve Operations:

Lastly, there was a recommendation to improve operations by seeking input from customers by conducting customer surveys and focus groups. A survey and focus groups were completed in February and March 2015, which you will hear about next.

CUSTOMER SURVEY AND FOCUS GROUPS

Dave Ebersold introduced Becki Ward, President of Ward Research, a market research firm in Honolulu.

Becki told the Stakeholder Advisory Group that her firm conducted an island-wide telephone survey in February 2015. The objective of the survey was to establish baseline measures of satisfaction and other key metrics related to perceptions of the BWS and the fulfillment of its mission. 685 O'ahu residents were surveyed on landlines and cell phones.

Key findings of the phone survey were:

- The majority of residents are strongly satisfied with the BWS overall.
- Non-bill payers, renters, and residents with lower household income are more satisfied with the BWS than are bill payers, homeowners and residents with higher household incomes.
- Satisfaction was highest for attributes relating to service, lowest for attributes relating to rates.

Regarding people's contact with the BWS, few of those surveyed had actually contacted the BWS about a bill or question, but those who did were generally satisfied with response. Telephone response issues from a few years ago [following a new billing system implementation] seem to have been forgotten.

Becki said that the survey revealed a lack of awareness that water and sewer charges are set by different agencies. This was explored further in focus groups held in March 2015. Another significant finding was that the BWS is second-most trusted to provide information about water issues in Hawaii (after scientists).

She went on to discuss the focus groups, which were designed to dig deeper into questions and/or issues from survey results. The objective of the focus groups was to assist the BWS in

understanding customer satisfaction, with an eye toward developing plans for addressing any areas of needed improvement. Four focus groups included 32 O'ahu residents as participants.

Becki reported that perceptions of the BWS reported in the focus groups are very positive : The BWS “quietly” does its job every day to provide safe, “good tasting” water that reliably flows to homes. Other overall focus group highlights included:

- Including sewer charges on the bill along with charges for water (negatively) influences customers' satisfaction with BWS.
- Residents generally do not think about the BWS unless there is a water main break.
- There is an opportunity to talk more with residents about the BWS's plans to replace aging infrastructure and provide for future water needs.

The public finds *satisfaction* with the BWS in these areas:

- Reliability of water service
- Quality of water (taste, cleanliness, and availability of an annual Water Quality Report)
- Customer service

The public finds *dissatisfaction* with the BWS in these areas:

- Rising cost of water bill overall (although it includes cost of sewer, it is still viewed as a “water bill”)
- Aging infrastructure

Questions, Comments and Answers:

Question: Will this survey serve as a baseline for future surveys? Were there other surveys to compare findings?

Answer: Dave Ebersold said that it will serve as a baseline and that the BWS plans to conduct the survey again in about 2 years. He said there did not appear to be other surveys with which to compare findings.

SUMMARY AND NEXT STEPS

Dave reminded stakeholders that upcoming meetings will be held September 16 and November 18, 2015. The BWS will set meeting dates for 2016 soon. He said that the speakers would be around to talk more after this meeting and thanked everyone for terrific input.