



KA WAI OLA

WATER FOR LIFE

Honolulu Board of Water Supply

Stakeholder Advisory Group Meeting 59

Thursday, March 19, 2026, 4:00 – 6:00 pm

Online via Zoom

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 17 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:

Alison Richardson	Coca-Cola Company
Bob Leinau	Resident of Council District 2
Brian Miyamoto	Hawaii Farm Bureau
Cynthia Rezendes	Resident of Council District 1
Dana Okano	Hawaii Community Foundation
Dean Okimoto	'Nalo Farms, Inc.
Elizabeth Reilly	Resident of Council District 4
Helen Nakano	Resident of Council District 5
Jicky Ferrer	AARP Hawaii
Josh Stanbro	
Kaleo Manuel	Kamehameha Schools
Mahealani Cypher	Resident of Council District 3
Mark Fox	Environmental
Mary Kishimoto	Chamber of Commerce Hawaii
Matt Bailey	Castle Hospitality Group
Ryan Obrero	Honolulu Board of Realtors

WELCOME

Facilitator Dave Ebersold welcomed everyone to the 59th meeting of the BWS Stakeholder Advisory Group.

Meeting objectives were identified as:

- Provide BWS updates
- Climate Vulnerability Assessment Findings
- Reservoir Condition Assessment Findings
- Accept notes from meeting #57
- PFAS and Emerging Contaminants Management

PUBLIC COMMENTS: None.

BWS UPDATES

Dave invited Ernest Lau, BWS Manager and Chief Engineer, to share BWS updates. Ernest thanked participants for attending virtually and noted recent operational challenges during Kona Low Storm #1. He reported that despite intermittent power outages across O'ahu, BWS was able to maintain uninterrupted water service islandwide. He emphasized that during power outages, BWS relies on stored water in its approximately 172 reservoirs, which collectively hold nearly 200 million gallons when full, and encouraged the public to conserve water during such events to help maintain supply.

Ernest also provided an update on reservoir conditions in Nu'uuanu Valley, noting that Reservoirs #1 and #4 are classified as high-risk dams. During the recent storm, Reservoir #1 reached high levels, which prompted BWS staff to pump and siphon water from the reservoir to lower water levels. He explained that the reservoir is relatively small and supported by an earthen dam over 100 years old, requiring close monitoring during heavy rainfall events. He noted that a capital improvement project to upgrade the reservoir is planned but will take approximately three to four years to complete, including permitting, design, and construction. Ernest also recognized the Honolulu Fire Department for assisting with emergency pumping efforts during the storm.

QUESTION: Josh Stanbro asked whether the permitting timeline for reservoir upgrades could be expedited, particularly for public safety and climate resilience projects. Ernest Lau explained that expediting permitting would likely require a governor's emergency proclamation and noted that some required federal permits and may not be affected by state-level actions.

CLIMATE VULNERABILITY AND ASSESSMENT FINDINGS

Dave invited Brian O'Connor, Structural Engineer with CDM Smith, to present findings from the Climate Vulnerability Assessment. Brian thanked the group and noted this was a follow up to the July presentation, outlining the assessment scope, key findings, and preliminary recommendations.

Brian explained that a team of engineers inspected 15 BWS facilities across O'ahu, including pump stations and well sites, evaluating structural, electrical, and control systems with a focus on climate risks such as hurricanes, flooding, and wildfires. He noted the use of drone technology and LiDAR to assess hard to reach areas, flood risk, and vegetation conditions, particularly during the dry season.

For hurricane vulnerability, Brian said the team evaluated building envelopes, openings, and structural load paths. A common issue across sites was unprotected doors and louvers that are not rated for future wind pressures or windborne debris. He explained that many facilities were built before current

standards, and features like decorative concrete blocks and unprotected ventilation openings increase the risk of wind driven rain intrusion that could damage electrical systems.

For flood vulnerability, Brian noted that while many facilities are not currently in flood zones, projected sea level rise and increased rainfall could place them at risk. Common vulnerabilities included unprotected openings at grade, floor drains that allow water to enter buildings, below grade conduits that bypass building protections, and electrical equipment located at ground level that could be inundated.

For wildfire risk, Brian described the use of defensible space zones. He said BWS generally performs well in maintaining Zone 0 (0-5 feet from your building) and Zone 1 (5-30 feet from your building) areas with minimal vegetation, but challenges arise in Zone 2 (30-100 feet from your building) where BWS does not control surrounding lands. He added that most BWS buildings are constructed with noncombustible materials, though some sites had vegetation or stored materials that could pose risks.

Brian emphasized that many vulnerabilities can be addressed using existing, proven solutions rather than new technologies. Recommendations include installing hurricane rated louvers, impact resistant doors and windows, flood resistant doors, and improving wildfire protections such as ember resistant screens and maintaining defensible space. He noted that future work will focus on updating BWS design standards and specifications so new and replacement projects incorporate these resilience measures.

QUESTION: Bob Leinau asked how BWS addresses vandalism on its properties and challenges with fast growing vegetation like guinea grass. Brian explained that most sites have security measures such as fencing, cameras, lighting, and motion detection systems. He added that vegetation maintenance is ongoing, with crews regularly managing grass and fuel loads, especially during dry conditions.

COMMENT: John Reppun raised concerns about corrosion of aluminum materials in Hawai'i's coastal environment. Brian acknowledged corrosion challenges and explained that while alternatives like fiberglass materials resist corrosion, they are not suitable for wildfire conditions because they can melt. He said options such as coated aluminum, stainless steel, and regular maintenance are used to balance durability and fire resistance.

Brian concluded his presentation by saying that the next steps include updating BWS design standards and developing standard details to guide how resilience improvements can be incorporated into future designs and maintenance projects.

RESERVOIR CONDITION ASSESSMENT FINDINGS

Brian O'Connor presented findings from the reservoir condition assessment, explaining that 15 reservoirs were evaluated as part of the Water Master Plan update. He noted that 13 reservoirs maintained the same condition rating compared to prior assessments, one showed improvement following significant rehabilitation, and one experienced a decline due to accelerated corrosion in structural steel components.

Brian explained that the assessments function similarly to routine checkups, confirming that most reservoirs are structurally sound, appropriately designed for current conditions, and being properly maintained. He highlighted examples where previously identified issues, such as leaks and concrete deterioration, had been successfully repaired and remained in good condition years later, demonstrating effective maintenance practices.

He also noted that many reservoirs previously identified as lower condition have since been repaired or replaced, indicating that BWS has been actively addressing past recommendations. For the one reservoir with declining condition, he explained that corrosion in steel components was occurring faster than expected, prompting BWS to initiate a focused inspection program for similar structures and prioritize future repairs or replacements.

QUESTION: Jicky Ferrer asked whether reservoirs are fully drained during maintenance or if it depends on the type of work needed. Brian O'Connor explained that it depends on the repair type; minor external repairs can be done while the tank remains in service, while more extensive work requires draining, isolating the tank, and coordinating system operations to maintain service continuity.

QUESTION: Jicky Ferrer asked whether maintenance impacts water service for surrounding neighborhoods. Brian O'Connor stated that BWS aims to make the process seamless, using system adjustments and temporary measures to maintain uninterrupted service.

QUESTION: Bob Leinau asked about inspection and maintenance of the interior of reservoirs. Brian O'Connor explained that interior inspections are conducted using remote submersible equipment by specialized contractors and noted that exterior issues often correlate with interior conditions, helping guide maintenance priorities.

ACCEPT MEETING 57 NOTES

Meeting 57 notes were approved.

PFAS AND EMERGING CONTAMINANTS MANAGEMENT

Dave introduced the PFAS and Emerging Contaminants Management presentation by first revisiting a question raised in a prior meeting about why water utilities do not remove all contaminants down to zero. He explained there are practical and scientific limitations, noting that treatment technologies are not capable of removing contaminants to absolute zero, and laboratory methods themselves cannot reliably detect concentrations below certain thresholds.

Dave emphasized that regulatory limits, such as maximum contaminant levels (MCLs), are established based on extensive health research and are designed to protect public health with significant safety margins. As a result, treating water below those thresholds does not necessarily provide meaningful additional health benefits. He also explained that treatment processes often do not destroy contaminants but instead transfer them to another medium, such as granular activated carbon, which then requires proper handling and disposal.

Dave further highlighted that more aggressive treatment comes with substantial costs and energy demands, which would ultimately impact ratepayers. He used the example of legacy agricultural contaminants on O'ahu to illustrate how treatment works in practice and how utilities must balance effectiveness, risk, and cost.

Dave then introduced Michelle Sorensen and Sierra Johnson to continue the presentation. Michelle Sorensen began by outlining the purpose of the presentation, which was to introduce PFAS, explain how it enters water systems, and align ongoing planning efforts with the Water Master Plan. Sierra Johnson provided background on PFAS, describing it as a large class of synthetic chemicals used since the 1940s, characterized by strong carbon-fluorine bonds that make them highly persistent in the environment. She emphasized that PFAS is widespread across consumer products and environmental

pathways, requiring a multi-pronged approach beyond drinking water management alone.

Sierra explained the regulatory framework, noting that the U.S. Environmental Protection Agency (EPA) establishes national drinking water standards under the Safe Drinking Water Act, while the Hawai'i Department of Health enforces those standards and may adopt more stringent requirements if needed. She described the EPA's process for regulating emerging contaminants, including identifying contaminants, assessing occurrence and health risks, evaluating treatment feasibility, and ultimately establishing maximum contaminant levels (MCLs). She noted that current PFAS regulations are set at very low concentrations (parts per trillion) and that BWS is planning to meet compliance requirements by 2029, despite potential federal extensions.

Michelle Sorensen continued by outlining BWS's proactive approach to PFAS management, stating that PFAS has been detected at 16 well sites, with four exceeding regulatory limits. Affected wells are either being treated or taken offline. Immediate actions include installing temporary treatment at Ka'amilo Wells due to rising PFAS levels and limited system redundancy, as well as developing permanent treatment at three priority sites. She emphasized that site prioritization is based on detection levels, system importance, and vulnerability.

Michelle further explained that BWS is developing a long-term, island-wide PFAS management strategy that includes groundwater risk assessments, identification of potential contamination sources, evaluation of treatment technologies, and establishment of monitoring and response protocols. This effort is integrated with the Water Master Plan and Capital Improvement Program to ensure funding, implementation, and adaptability as regulations and scientific understanding evolve.

Michelle noted that near-term efforts focus on designing and implementing treatment at priority sites while continuing technical analysis beyond the master planning timeline. She added that BWS aims to meet regulatory deadlines proactively and is coordinating ongoing stakeholder engagement to inform communication strategies and public outreach.

QUESTION: Bob Leinau asked about long-term accountability and whether data collection could support future legal action related to PFAS contamination. Sierra Johnson explained that PFAS is more difficult to attribute to specific sources due to its widespread use, though cost-recovery litigation is ongoing nationwide. Ernest Lau added that BWS is exploring legal options, including existing litigation related to Red Hill, and noted that the State of Hawai'i has filed lawsuits against chemical manufacturers such as DuPont and 3M.

Michelle Sorensen concluded her presentation by adding that BWS is working to strengthen sampling and monitoring programs to ensure PFAS levels remain below regulatory limits. She emphasized the importance of early detection systems to provide advance notice of potential contamination so that proactive actions can be taken.

COMMENT: Jicky Ferrer raised concerns about the cumulative effect of contamination from military activities and whether broader environmental impacts are being considered. Ernest Lau acknowledged that military sources, including use of firefighting foam, are a concern and noted that investigations have been limited in scope. He emphasized the need for stronger regulatory oversight and broader investigation of potential PFAS sources.

COMMENT: Dana Okano commented on the BWS's lack of testimony on a PFAS-related bill (SB2096). Ernest Lau acknowledged the oversight and stated that BWS would review the bill and submit testimony, noting that wastewater systems also contribute to PFAS presence and that utilities are

often passive recipients of contamination.

COMMENT: John Reppun raised concerns about former military sites like Waikāne, He'eia Kea, Waihe'e, Ha'ikū and asked how other regions across the nation are addressing PFAS. Sierra Johnson confirmed that historical land use is being considered in groundwater risk assessments and noted that while the U.S. has some of the most stringent drinking water standards, other countries may have stricter environmental discharge limits.

Dave Ebersold asked the group about what questions the public is likely to have about PFAS.

COMMENT: Dana Okano emphasized the importance of clearly communicating that BWS is not the source of PFAS contamination, but rather a recipient that must manage its impacts.

COMMENT: Pono Chong highlighted the need for science-based, relatable explanations to help the public better understand PFAS. He noted that the topic can be emotionally charged due to media coverage and stressed that communication should balance clarity with context, including the widespread presence of PFAS in everyday products.

COMMENT: Bob Leinau asked about cumulative health impacts of PFAS exposure and suggested the public would want to know about that. Michelle Sorensen agreed that cumulative effects are a key public concern and should be addressed in outreach and communication.

COMMENT: Mark Fox suggested providing accessible, science-based explanations and directing the public to reliable information sources, while being mindful of limitations around providing medical or legal guidance. Michelle Sorensen acknowledged the importance of clear messaging and noted that curated informational resources would be included in outreach materials.

COMMENT: John Reppun suggested using surveys to help the public recognize their own role in PFAS usage. Michelle Sorensen agreed that increasing awareness of personal contributions could help shape more constructive discussions.

COMMENT: Josh Stanbro emphasized that industry responsibility should also be highlighted, noting that alternatives to PFAS have long been available. Michelle Sorensen agreed and added that recent regulatory and market shifts have begun reducing PFAS use in certain products.

QUESTION: Ernest Lau asked whether PFAS levels in human blood are declining following regulatory actions. Sierra Johnson noted that she had heard similar findings but could not confirm specific data.

COMMENT: Mark Fox emphasized the importance of balanced messaging that helps the public understand both their role in the issue and available solutions, without creating alarm or a sense of helplessness.

Dave thanked the group for their attention and input.

NEXT STEPS

Dave shared the list of stakeholder advisory group meetings for 2026:

- April 16 (in person)
- July 16 (in person)
- September 17 (virtual)

- October 15 (in person)
- November 19 (virtual)

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