

**BOARD OF WATER SUPPLY  
KA 'OIHANA WAI  
CITY AND COUNTY OF HONOLULU**

630 SOUTH BERETANIA STREET • HONOLULU, HAWAII 96843  
Phone: (808) 748-5000 • [www.boardofwatersupply.com](http://www.boardofwatersupply.com)

RICK BLANGIARDI  
MAYOR  
MEIA

ERNEST Y. W. LAU, P.E.  
MANAGER AND CHIEF ENGINEER  
MANAKIA A ME KAHU WILIKI

ERWIN KAWATA  
DEPUTY MANAGER  
HOPE MANAKIA



NĀ'ĀLEHU ANTHONY, Chair  
JONATHAN KANESHIRO, Vice Chair  
BRYAN P. ANDAYA  
KAPUA SPROAT  
LANCE WILHELM  
EDWIN H. SNIFFEN, Ex-Officio  
GENE C. ALBANO, P.E., Ex-Officio

**November 19, 2024**

**NOTICE**

The Board of Water Supply, City and County of Honolulu, Regular Meeting will be held on Monday, November 25, 2024, at 2:00 p.m. in the Boardroom, Public Service Building, 630 South Beretania Street, Honolulu, HI 96843.

Limited seating will be available for in-person testifiers in the Boardroom. The public may also view the livestream of the meeting from the lobby of the Board of Water Supply, Public Service Building, 630 South Beretania Street, Honolulu, HI 96843.

Public parking for this meeting is available in the Public Service Building customer parking lot.

**TESTIMONY**

Testimony may be submitted as follows:

- Written testimony should include the submitter's address, email address, and phone number. Testimony should be received by Monday, November 25, 2024, at noon. Submit written testimony by:
  - Email to [board@hbws.org](mailto:board@hbws.org)
  - Online at [boardofwatersupply.com/testimony](http://boardofwatersupply.com/testimony)
  - Mail to Board of Water Supply, 630 South Beretania Street, Honolulu, HI 96843
  - Fax to (808) 748-5079
- Oral testimony will be accepted remotely and in person during the meeting. Pre-registration is encouraged to facilitate as much remote and in-person testimony as reasonably possible during the time allotted. Testifiers should also consider submitting a written version of their oral testimony.
  - To testify remotely by phone or video using the Zoom videoconferencing platform, please submit your request by:
    - Email to [board@hbws.org](mailto:board@hbws.org)
    - Online at [boardofwatersupply.com/testimony](http://boardofwatersupply.com/testimony)Zoom registration instructions, as well as participant guidelines, will be sent to the contact information provided. Once confirmed as registered, testifiers will receive an email containing the links and instructions to join the Zoom session. Submit your request to testify remotely by Friday, November 22, 2024, at noon.
  - To testify in person at the Board of Water Supply, Public Service Building, 630 South Beretania Street, Honolulu, HI 96843, please pre-register by submitting your request by Monday, November 25, 2024:
    - Email to [board@hbws.org](mailto:board@hbws.org)
    - Online at [boardofwatersupply.com/testimony](http://boardofwatersupply.com/testimony)

In-person testifiers should check in with building security and then with testimony staff located in the lobby. Testifiers will be escorted to and from the Board Room. On-site registration will be available for walk-in requests.

Testimony is limited to two (2) minutes and shall be presented by the registered speaker only. Testimony submitted in writing or orally, electronically or in person, for use in the meeting process is public information. All testimony will be included as part of the approved meeting minutes at [boardofwatersupply.com/boardmeetings](http://boardofwatersupply.com/boardmeetings).

### **MATERIALS AVAILABLE FOR INSPECTION**

Meeting materials ("board packet" under HRS §92-7.5) are accessible at [www.boardofwatersupply.com/boardmeetings](http://www.boardofwatersupply.com/boardmeetings).

### **VIEWING THE MEETING**

The meeting will be viewable via live streaming on the BWS website: [www.boardofwatersupply.com/live](http://www.boardofwatersupply.com/live). Video will appear on screen. You may have to click the arrow on video to start it. You may have to unmute audio, as muted audio tends to be the default setting.

### **SPECIAL REQUESTS AND ACCOMMODATIONS**

If you require special assistance, an auxiliary aid or service, and/or an accommodation due to a disability to participate in this meeting (i.e., sign language interpreter, interpreter for language other than English, or wheelchair accessibility), please call Joy at (808) 748-5172 or email your request to [board@hbws.org](mailto:board@hbws.org) **at least three business days prior to the meeting date**. If a response is received after the requested three business days before the meeting date deadline, we will try to obtain the auxiliary aid/service or accommodation, but we cannot guarantee that the request will be filled.

Upon request, this notice is available in alternate formats such as large print, Braille, or electronic copy.

The agenda for November 25, 2024, Regular Meeting of the Board of Water Supply is as follows:

**ITEMS REQUIRING BOARD ACTION**

1. Approval of the Minutes of the Regular Meeting Held on October 28, 2024
2. Adoption of Resolution No. 994, 2024, Resolution of Appreciation for Board Member Kapua'ala Sproat

**ITEMS FOR INFORMATION**

1. Update on the Board of Water Supply's Response to the Potential Impacts of the Red Hill Fuel Contamination
2. Financial Update for the Quarter Ended September 30, 2024
3. Schedule of Monthly Board Meetings for Calendar Year 2025
4. Status Update of Groundwater Levels at All Index Stations
5. Water Main Repair Report for October 2024

## MINUTES

To watch the recording of this meeting, please click on the following link :  
<https://vimeo.com/bwshonolulu/nov-25-2024>. Closed captioning is available.

### THE REGULAR MEETING OF THE BOARD OF WATER SUPPLY

November 25, 2024

At 2:00 PM on November 25, 2024, in the Public Service Building Board Room at 630 South Beretania Street, Honolulu, Hawai'i, Board Chair Nā'ālehu Anthony called to order the Regular Meeting.

Present: Nā'ālehu Anthony, Chair  
Bryan P. Andaya, Board Member via Zoom  
Kapua Sproat, Board Member  
Lance Wilhelm, Board Member  
Gene C. Albano, Ex-Officio

Also Present: Ernest Lau, Manager and Chief Engineer  
Erwin Kawata, Deputy Manager  
Patrick Chun, Acting Program Administrator,  
Capital Projects Division  
Jennifer Elflein, Program Administrator,  
Customer Care Division via Vimeo  
Jewel Pharm, Assistant Program Administrator,  
Customer Care Division  
Kathleen Elliott-Pahinui, Information Officer,  
Communications Office  
Raelynn Nakabayashi, Executive Assistant I,  
Executive Support Office via Vimeo  
Wayne Tello, Acting Program Administrator,  
Field Operations Division  
Kaliko Lum Kee, Acting Waterworks Controller,  
Finance Division  
Michele Thomas, Executive Assistant I,  
Human Resources Office via Vimeo  
Ron Wada, Assistant Program Administrator,  
Information Technology Division  
Michael Matsuo, Land Administrator, Land Division  
Roland Fenstermacher,  
Acting Program Administrator, Water  
Quality Division  
Barry Usagawa, Program Administrator,  
Water Resources Division  
Kevin Ihu, Program Administrator,  
Water System Operations Division  
Joyce Lin, Civil Engineer IV, Office of the Manager  
and Chief Engineer

Kimberly Kuwaye, Manager Secretary  
Joy Cruz-Achui, Board Secretary  
Kathy Mitchell, Administrative Services Officer  
via Vimeo  
Steven Norstrom, Information Specialist II,  
Communications Office  
Stella Bernardo, Information Specialist II,  
Communications Office via Zoom  
Michele Harman, Community Relations Specialist I,  
Communications Office via Zoom  
Wayne Maria, Information Specialist II,  
Communications Office

Others Present: Jeff Lau, Deputy Corporation Counsel  
via Zoom  
Jessica Wong, Deputy Corporation Counsel  
via Zoom

Absent: Jonathan Kaneshiro, Vice Chair  
Edwin H. Sniffen, Ex-Officio

Chair Nā'ālehu Anthony opened the Board meeting with an 'olelo no'eau:

**Aloha mai kākou e nā hoa makamaka mai ka lā hiki a ka lā kau. Welina nui me ke aloha!**

**Mahalo nui no kēia 'ākoakoa 'ana o kākou no ka pono o ka lāhui, no ka pono o ka 'āina, a no ka pono o ka wai nō ho'i. Eia he 'ōlelo no'eau e kālele ana i ke ko'iko'i o ka wai.**

Chair Anthony translated the 'olelo no'eau: Aloha from the rising to the setting sun  
Thank you all for coming together today for the people, the land, and the water. Here is a short Hawaiian Proverb that helps us remember the importance of the people who protect the water.

**'Ōlelo 592: He ho'okele wa'a no ka la 'ino.**

Chair Anthony translated 'ōlelo 592: A canoe steersman for a stormy day. A courageous person.

Chair Anthony welcomed everyone to the November 25, 2024, Regular Meeting of the Board of Water Supply (BWS). He stated that the Board of Water Supply is dedicated to providing safe, dependable, and affordable supply of water now and into the future.

Before continuing the meeting, Chair Anthony stated that a recording would be played to share reminders for public participation and the virtual meeting regulations required by law.

The recording played: Goals for this meeting under Hawai'i Revised Statutes, Section 92-7.5 are accessible at [www.boardofwatersupply.com/boardmeeting](http://www.boardofwatersupply.com/boardmeeting). The public may attend this meeting in person at the Public Service building located at 630 South Beretania Street. The public may also view a live stream of today's meeting on our website at [www.boardofwatersupply.com/live](http://www.boardofwatersupply.com/live). We have been accepting written or oral testimony for today's meeting. Instructions and an online submittal form are available at [boardofwatersupply.com/testimony](http://boardofwatersupply.com/testimony). The deadline to submit advance written testimony has passed. Testimony received by noon today has been distributed to the board members. We will continue to accept written testimony today through our online form. Oral testimony in person or remotely will be accepted during today's meeting. To facilitate as much in-person and remote testimony as reasonably possible during the time allotted, preregistration and submittal of a written version of testimony at [boardofwatersupply.com/testimony](http://boardofwatersupply.com/testimony) is strongly encouraged. To testify in person, please register using our online form or come to the public service building at 630 South Beretania Street. We have a representative in the lobby to provide intake and further instructions. To request to testify remotely, please complete the online form at [boardofwatersupply.com/testimony](http://boardofwatersupply.com/testimony). Requestors will receive an email containing links and instructions to join the Zoom session. Testifiers will have two minutes to state their position. A timekeeper will alert testifiers when there is one minute remaining. Once the two minutes are up, please summarize to allow time for questions from the Board. Then, make room for the next testifier. Board members attending any board meeting remotely must be visible to the public to be considered, present, and meet quorum guidelines. Board members participating remotely must also disclose their location and anyone present at their location during roll call. Meeting participants who are calling or video conferencing in, please mute your microphone when you're not speaking. If you have a question, comment, or wish to enter or second a motion on an action item, please unmute your microphone and identify yourself before continuing to speak. If you encounter technical issues during today's meeting, please use the Zoom chat to send a

direct message to our support team. Their names are listed in the message to all participants. To open the chat window, please click the text Bubble icon on the Zoom Toolbar.

Chair Anthony requested a roll call for the Regular Meeting. He asked those participating remotely to give the appropriate disclosures up responding.

Board Member Bryan Andaya joined via Zoom, responded aye, and disclosed that he was alone at his location; Board Member Kapua Sproat responded aye, and was present in the Board room; Board Member Lance Wilhelm responded e'o, and was present in the Board room; and Board Member Gene Albano responded aye, and was present in the Board room. Chair Anthony was present in the Boardroom. Vice Chair Jonathan Kaneshiro and Board Member Edwin Sniffen were absent.

Chair Anthony introduced those in the Boardroom: Manager Ernest Lau, Deputy Manager Erwin Kawata, Board Secretary Joy L. Cruz-Achiu, Manager Secretary Kimberly Kuwaye, and Information Specialist II Wayne Maria. Deputy Jeff Lau and Deputy Jessica Wong joined via Zoom from the City and County Corporation Counsel.

## REGULAR MEETING

### APPROVAL OF MINUTES

Approval of the Minutes of the Regular Meeting Held on October 28, 2024.

### MOTION TO APPROVE

Kapua Sproat and Gene Albano motioned and seconded, respectively, to approve the Minutes of the Regular Meeting Held on October 28, 2024.

Ms. Cruz-Achui conducted a roll call vote: Board Member Kapua Sproat, aye; Board Member Bryan Andaya, aye; Board Member Lance Wilhelm, aye; Board Member Gene Albano, aye; and Chair Nā'ālehu Anthony, aye. Vice Chair Jonathan Kaneshiro and Board Member Edwin Sniffen were absent. Ms. Cruz-Achui announced that the motion passed with five ayes.

THE MINUTES OF THE REGULAR MEETING HELD ON OCTOBER 28, 2024, WERE APPROVED AT THE NOVEMBER 25, 2024, BOARD MEETING			
	AYE	NO	COMMENT
NĀ'ĀLEHU ANTHONY	X		
JONATHAN KANESHIRO			ABSENT
KAPUA SPROAT	X		
BRYAN P. ANDAYA	X		
LANCE WILHELM	X		
EDWIN H. SNIFFEN			ABSENT
GENE C. ALBANO	X		



"November 25, 2024

ADOPTION OF  
RESOLUTION  
NO. 994, 2024,  
RESOLUTION OF  
APPRECIATION  
FOR BOARD  
MEMBER  
KAPUA'ALA  
SPROAT

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawai'i 96843

Chair and Members:

Subject: Adoption of Resolution No. 994, 2024, Resolution of  
Appreciation for Board Member Kapua'ala Sproat

Board member Kapua'ala Sproat's term after serving for ten years has come to an end. We are grateful for her dedication and leadership as she has been an invaluable part of our Board.

We recommend the adoption of Resolution No. 994, 2024, to recognize and thank Ms. Sproat for her service, contributions, and dedication to the Board of Water Supply.

Respectfully Submitted,

/s/ ERNEST Y. W. LAU, P.E  
Manager and Chief Engineer

Attachment"

DISCUSSION:

Ernest Lau, Manager and Chief Engineer, gave the report.

Manager Ernest Lau stated that Board Member Kapua Sproat's term as a Board Member at the BWS has come to an end. He read and shared her resolution.

Chair Anthony stated that he is incredibly thankful for Ms. Sproat's guidance, wisdom, and expertise as a Board Member. He expressed his appreciation for the work that she continues to do at Ka Huli Ao and outside of the BWS, which helps keep Hawai'i, Hawai'i.

Board Member Gene Albano expressed his appreciation for Ms. Sproat's passion and hopes to match her enthusiasm that exudes the importance of water. He wished Ms. Sproat the best in her future endeavors.

Board Member Lance Wilhelm said that he is grateful and humbled to have the opportunity to follow in Ms. Sproat's footsteps and pledge to be as effective as she has been as a Board Member.

Board Member Bryan Andaya shared that he and Ms. Sproat served on the BWS Board of Directors for nearly ten years. He expressed his gratitude for Ms. Sproat's expertise in Native Hawaiian and environmental

issues and thanked her for the teamwork and support throughout the years when they served as Chair and Vice Chair. There was in-person testimony:

<b>Hinaleimoana Wong-Kalu</b>	<i>Provided an ‘oli on behalf of Kuhio Lewis, the Council for Native Hawaiian Advancement, and herself.</i>
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Manager Lau stated that he would miss Ms. Sproat being on the Board. He shared that he had known Ms. Sproat for over 20 years and had the honor of also working with her father, a former Kaua‘i Fire Chief. Ms. Sproat became a Board Member in 2015, not long after the Red Hill issues began unfolding in 2014, and helped the BWS navigate its path to hold the US Military accountable for what was done to our resources. Manager Lau thanked Ms. Kapua for sharing ike or knowledge about the importance of Public Trust in our water to the Kanaka Maoli and the community. He said, “I want to thank you for everything you have done for the Board and the BWS. You helped steer us through difficult waters.”

Board Member Sproat expressed her mahalo and stated that it has been an honor and a privilege to have served on the BWS Board and a learning experience. She recalls going through her confirmation and the Red Hill issues just beginning; she would have never imagined the community facing the greatest threat to Oahu’s drinking water a decade later. Though the BWS faces unprecedented times, she has high hopes and expectations for this Board and its leadership. She reminisced back to the Waiahole days, when some sitting in the Board room sat on the opposite side of the table, looked around, and stated that, in many ways, it had come full circle; now we are all together working towards the same goal—that’s where we all need to be.

Chair Anthony asked if she had any advice she learned during her tenure at the BWS.

Board Member Sproat replied, “I always stay true to my name,” and “I am always down for the lā hui,” which will be needed for our resource. She encouraged the BWS to do what is right.

Manager Lau shared that while on a Red Hill Bulk Fuel Storage Facility tour with Board Member Sproat, the military tried to evade the many questions she asked throughout the tour.

Board Member Sproat commented that something she learned from Chief Justice Richardson was always tough on the issues but easy on the people. It will be necessary for the BWS to use kapu aloha to guide any decisions the BWS has to make as times become increasingly difficult. She stated she has complete confidence in the Board and the BWS.

There was remote testimony:

<b>Wayne Tanaka</b>	<i>Expressed his gratitude for Board Member Sproat's leadership during her tenure.</i>
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**MOTION  
TO APPROVE**

Bryan Andaya and Gene Albano motioned and seconded, respectively, the Adoption of Resolution No. 994, 2024, Resolution of Appreciation for Board Member Kapua'ala Sproat.

Ms. Cruz-Achiu conducted a roll call vote: Board Member Bryan Andaya, aye; Board Member Kapua Sproat, abstain; Board Member Lance Wilhelm, aye; Board Member Gene Albano, aye; and Chair Nā'ālehu Anthony, aye. Vice Chair Jonathan Kaneshiro and Board Member Edwin Sniffen were absent.

Ms. Cruz-Achiu announced that the motion passed with four ayes and one abstention.

ADOPTION OF RESOLUTION NO. 994, 2024, RESOLUTION OF APPRECIATION FOR BOARD MEMBER KAPUA'ALA SPROAT WAS ADOPTED ON NOVEMBER 25, 2024			
	AYE	NO	COMMENT
NĀ'ĀLEHU ANTHONY	X		
JONATHAN KANESHIRO			ABSENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSTAIN
LANCE WILHELM	X		
EDWIN H. SNIFFEN			ABSENT
GENE C. ALBANO	X		

At 2:28 PM, Chair Anthony called for a recess for picture-taking of the honoree.

At 2:34 PM, Chair Anthony called the meeting back to order.



**BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU**

**RESOLUTION NO. 994, 2024**

**KAPUA‘ALA SPROAT  
IN APPRECIATION FOR SERVING AS A MEMBER  
OF THE BOARD OF WATER SUPPLY**

**WHEREAS**, KAPUA‘ALA SPROAT has ably served as a member of the Board of Water Supply, City and County of Honolulu, since May 2015 and as Vice Chair from August 2017 through June 2024, her term will be ending on November 25, 2024; and

**WHEREAS**, as a Professor of Law at the University of Hawai‘i at Mānoa’s William S. Richardson School of Law’s Ka Huli Ao Center for Excellence in Native Hawaiian Law and Environmental Law Program, Director of Ka Huli Ao, Co-Director of the Native Hawaiian Law Clinic, and Counsel for Earthjustice’s Mid Pacific Regional Office, MS. SPROAT’s reputation in academic and legal spheres, coupled with the esteem of her colleagues, has resulted in additional confidence in and respect for the Board; and

**WHEREAS**, The Board of Water Supply has greatly benefitted from MS. SPROAT’s experience with an extensive knowledge of Hawai‘i’s environmental law and natural resource protection and management that lent to her credibility in discussions as she provided useful insights and guidance to its members and served as a helpful resource in its deliberations; and reminded its member of their public trust responsibilities; and

**WHEREAS**, as Vice Chair and board member, MS. SPROAT has staunchly defended the BWS’s semi-autonomous governance model, supported and encouraged initiatives that improve day-to-day operations, and volunteered her time and expertise to affect business and policy decisions for the Board that will positively impact the direction and operations of the Board of Water Supply for many years to come; and

**WHEREAS**, MS. SPROAT’s service is a testament to her commitment to maintaining a municipal water system that is safe, dependable, affordable, and worthy of trust from the public it serves; now, therefore

**BE IT RESOLVED** by the Members of the Board of Water Supply, City and County of Honolulu, that we do hereby express to KAPUA‘ALA SPROAT our deep appreciation and gratitude for her committed service to this Board and Department; and

**BE IT FURTHER RESOLVED** that the Members of this Board extend to KAPUA‘ALA SPROAT our sincere aloha and best wishes for continued success in all her future endeavors; and

**BE IT FINALLY RESOLVED** that this Resolution be presented to KAPUA‘ALA SPROAT.

Adopted this 25<sup>th</sup> day of November 2024  
Board of Water Supply, Honolulu, Hawai‘i



Resolution No. 994, 2024

NĀ‘ĀLEHU ANTHONY  
Chair of the Board

ITEM FOR INFORMATION NO. 1

"November 25, 2024

UPDATE ON  
THE BOARD OF  
WATER SUPPLY'S  
RESPONSE TO  
THE POTENTIAL  
IMPACTS OF  
RED HILL FUEL  
CONTAMINATION

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawai'i 96843

Chair and Members:

Subject: Update on the Board of Water Supply's Response to the  
Potential Impacts of the Red Hill Fuel Contamination

Joyce Lin, Civil Engineer IV, Office of the Manager and Chief Engineer,  
will give an Update on the Board of Water Supply's Response to the  
Potential Impacts of the Red Hill Fuel Contamination.

Respectfully Submitted,

/s/ ERNEST Y. W. LAU, P.E  
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION:

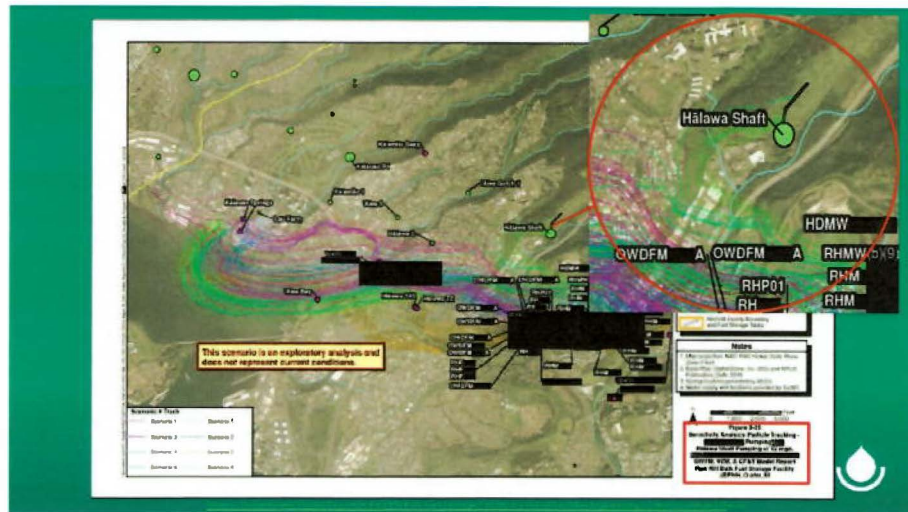
Joyce Lin, Civil Engineer IV, Office of the Manager and Chief Engineer,  
gave the report.

Manager Lau mentioned that he noticed that the Navy sent an email  
inviting all BWS Board Members to the December 10, 2024, swarm  
meeting. The swarm meeting will discuss the Navy's water quality tests  
over the last two years. He reminded Board Members of the Sunshine  
Law, which states that if more than two Board Members attend a meeting,  
it becomes a public meeting and allows the public to participate.  
Manager Lau said he would be responding to their email to determine the  
Navy's intentions.

Chair Anthony inquired if the meeting was in person or hybrid.

Manager Lau responded that the meeting is hybrid.

Chair Anthony referred to slide 4, picturing the particle tracks, and asked  
if the particle track shown was an updated version from the one shared  
two years ago.



Ms. Joyce Lin replied yes and that the Navy had done multiple updated iterations and runs for particle tracking; however, all versions were heavily redacted, as shown above. The BWS source conditions are provided, but the Navy's water source conditions are not shared; therefore, it is challenging for the BWS to comment.

Chair Anthony inquired if the previous particle tracking shared by the Navy was as heavily redacted.

Manager Lau responded that the particle tracking pictured above is more redacted than the 2020 version. The BWS believes the heavily blacked area at the bottom right of the picture was the Red Hill Shaft and the surrounding tanks. The blacked-out area in the middle of the page is the Navy's Aiea - Halawa Shaft, where they are installing a water treatment system with 12 granular activated carbon (GAC) contractors and ion exchange.

Chair Anthony asked whether any of the simulation runs showed particle tracks running toward the BWS Halawa Shaft when it was running.

Ms. Lin replied that she had noticed many simulated runs showing particle tracks running toward the Halawa Shaft when it was on and at least one simulation where the Halawa Shaft was off.

Manager Lau asked the Board Members to read the three reports released by the Department of Defense's Office of Inspector General (OIG). He mentioned that back in 2014, when the BWS learned about the leaks at the Red Hill Bulk Fuel Storage Facility, the BWS asked many questions, confirming the BWS's worst fears in the OIG report.

Manager Lau mentioned that the Navy's invitation to their meeting is a rare opportunity for everyone to ask questions. He stated that only two Board Members can attend without violating State and Sunshine Law.

Chair Anthony stated he will attend the meeting. If Board Members have any questions, please send them to the Board Secretary.

Manager Lau shared that the BWS plans to have their laboratory experts attend to hear the rebuttal from the Navy.





# NOVEMBER 2024 RED HILL UPDATES

November 25, 2024  
[boardofwatersupply.com](http://boardofwatersupply.com)



## RECENT EVENTS



11/13

- Subject Matter Expert Meeting

11/14

- Navy Closure Task Force -Red Hill Open House

11/21

- Community Representation Initiative Meeting #14



# NAVY'S GROUNDWATER MODEL REPORTS



Naval Facilities Engineering Systems Command Hawaii

**Groundwater Model Report**  
**Red Hill Bulk Fuel Storage Facility**  
JBPHH, O'ahu, Hawai'i

**Volume 1: Main Report, Appendixes A-C**

**September 24, 2024:**  
**Revised September 26, 2024**

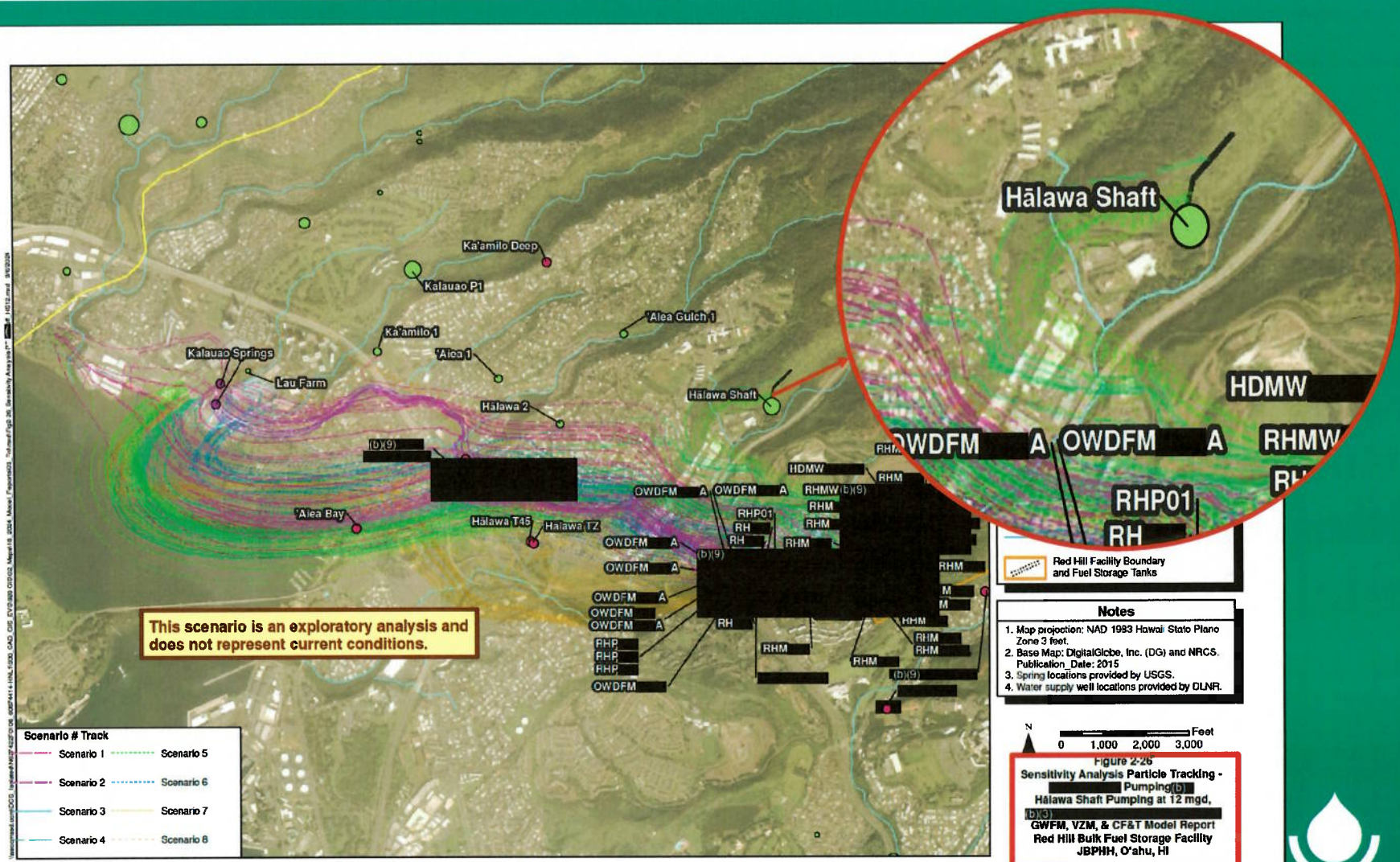
Distribution Statement F: Further distribution only as directed by NAVFAC Hawaii,  
July 26, 2024, or higher DoD authority.  
Draft / Deliberative Process Not Subject to FOIA.

Reports were released for public review  
on the [EPA's website](#):

1. [Groundwater Model Report –  
September 26, 2024](#)
2. [Contaminant Fate and Transport Model  
Technical Memorandum –June 26, 2024](#)
3. [Groundwater Flow Model Technical  
Memorandum –May 17, 2023](#)





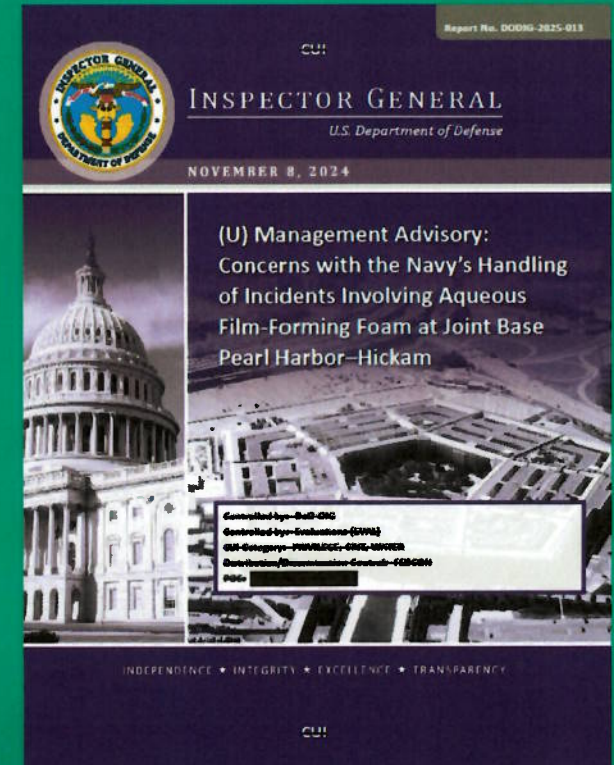
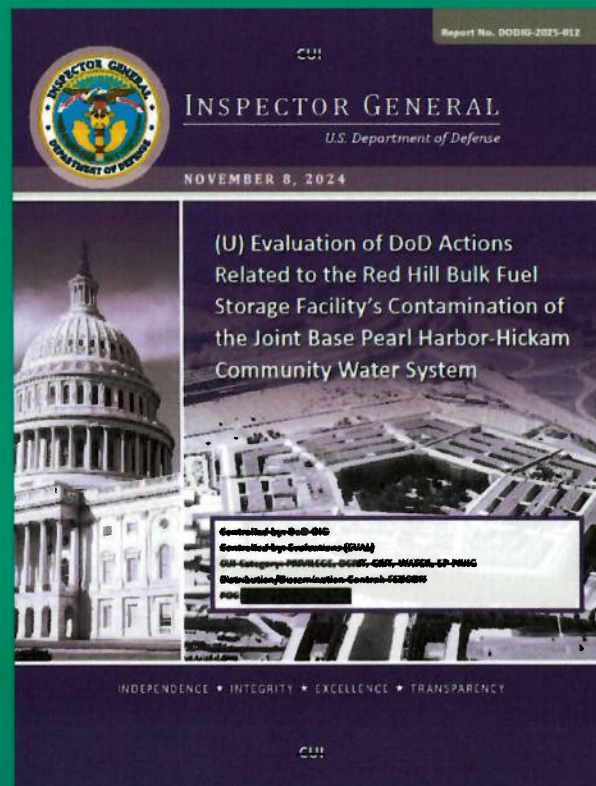
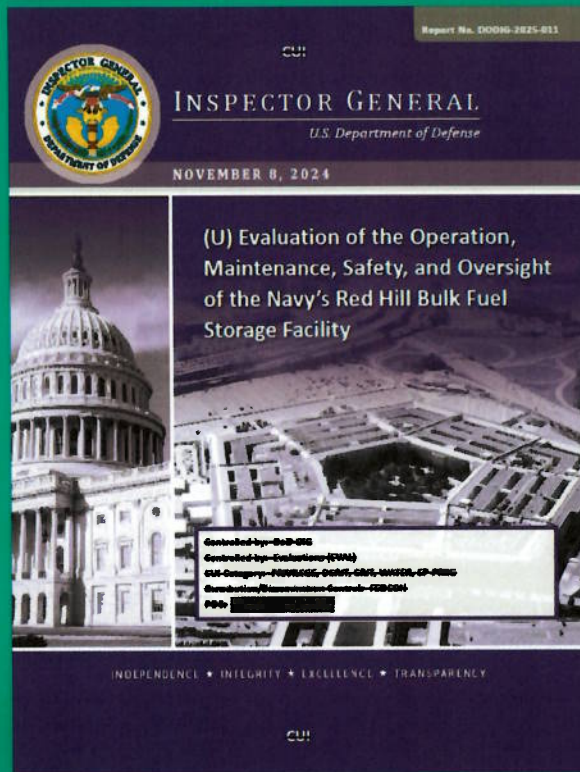


Source: Groundwater Model Report on Red Hill Bulk Fuel Storage Facility by Naval Facilities Engineering Systems Command Hawaii



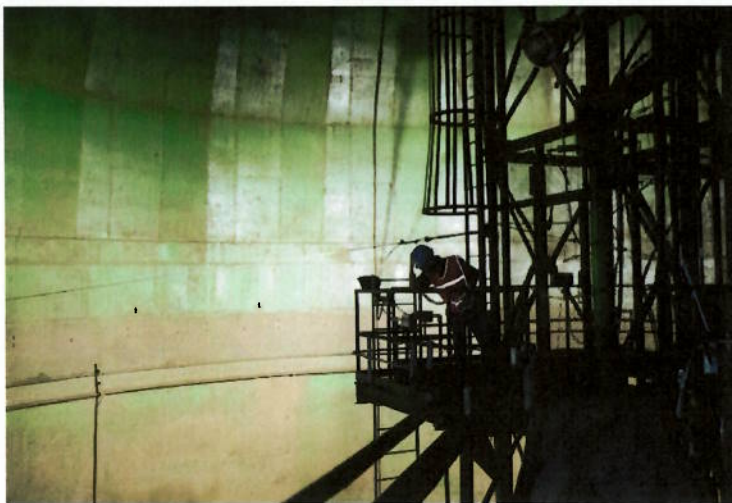


# U. S. DEPARTMENT OF DEFENSE OFFICE OF INSPECTOR GENERAL'S REPORT ON THE JOINT BASE PEARL HARBOR





# DEPARTMENT OF DEFENSE INSPECTOR GENERAL'S REPORT ON THE JOINT BASE PEARL HARBOR



## **Red Hill Crisis: Pentagon reports detail poor recordkeeping across Oahu fueling operations**

On Thursday the Pentagon's Inspector General office released long-awaited reports on the Navy's fuel and water systems on Oahu.

By Kevin Knodell • Last updated 11:31 p.m.

Source: Star Advertiser, November 15, 2024

“The DoD OIG determined that **Navy officials did not effectively manage** Defense Fuel Support Point **JBPHH** operations, maintenance, safety, and oversight in accordance with federal and state laws and DoD policy.

The DoD OIG determined that **Navy officials missed multiple opportunities to prevent or mitigate the November 2021 fuel incident** and subsequent contamination of drinking water.

**Navy officials failed to take all precautionary measures to protect human health**, including not issuing adequate or timely public notices to warn users of the contamination and not immediately providing alternate drinking water.”



## UPCOMING EVENTS

- More information on Navy's groundwater model and updates on remediation efforts at the Red Hill Bulk Fuel Storage Facility.







# MAHALO!

November 2024 Red Hill Updates

Providing safe, dependable, and affordable  
drinking water, now and into the future.

ITEM FOR INFORMATION NO. 2

"November 25, 2024

RECRUITMENT  
STATUS

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawai'i 96843

Chair and Members:

Subject: Financial Update for the Quarter Ended  
September 30, 2024

The following Board of Water Supply's financial reports and graphs are attached:

- Budget vs Actual Revenue and Expense Totals
- Statement of Revenues, Expenses and Change in Net Assets
- Balance Sheet
- Budget vs Actual Appropriation Budget – Total BWS Summary
- Graph Representing Operating Expenditures by Category
- Graphs of Total Budgeted Operating Expenditures and Total Budgeted Operating Revenues

Respectfully Submitted,

/s/ ERNEST Y. W. LAU, P.E  
Manager and Chief Engineer

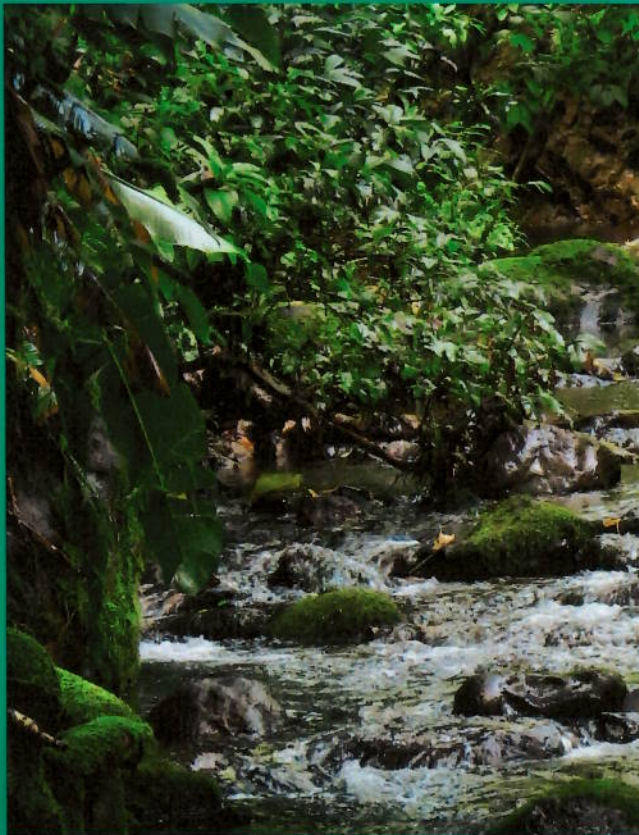
Attachment"

The foregoing was for information only.

DISCUSSION:

Kaliko Lum Kee, Acting Waterworks Controller, gave the report. There were no comments or discussion.





# FINANCIAL PERFORMANCE JULY 2024–SEPT 2024

Kaliko Lum Kee  
November 25, 2024  
[boardofwatersupply.com](http://boardofwatersupply.com)



## BUDGET TO ACTUAL JULY 2024 – SEPT 2024

- Actual Revenue \$81.9 million vs.
- Budgeted Revenue \$80.4 million
  
- Operating costs are \$64.5 million vs.
- Budgeted costs of \$69.4 million
  
- Actual Net Revenue \$17.4 million vs.
- Budgeted Net Revenue \$11.0 million



## COST DRIVERS

Year to Date SEPT 2024

	Actual (millions)	Budget (millions)
• Personnel	\$11.5	\$14.3
• Material, Supplies & Services	\$20.2	\$23.3
• Equipment	\$ 0.0	\$ 1.3
• Debt Service	\$ 8.9	\$11.9
• Utilities	\$ 8.5	\$10.2





## OPERATING BUDGET VS ACTUAL

FY2025 1<sup>ST</sup> QUARTER - YEAR TO DATE: JUL 24 – SEP 24

BUDGETED EXPENDITURES ARE \$69.4M VS. ACTUAL EXPENDITURES OF \$64.5M  
OF THE \$4.9M VARIANCE...

### Fixed Charges - \$2.3M Over Budget

- Other Post Employment Benefits (\$6.3M Over)
- SRF Notes Payable (\$3.1 Under)

### Information Technology - \$1.8M Over Budget

- Other Contractual Services (\$1.9M Over)

### Field Operations - \$2.8M Under Budget

- Salaries and Wages (\$949K Under)
- Meters (Storeroom) (\$569K Under)
- Other Contractual Services (\$570K Under)

### Water System Operations - \$1.8M Under Budget

- General Plant and Equipment over \$5K (\$1.1M Under)
- Salaries and Wages (\$549K Under)
- Professional Services (\$304K Under)

### Water Resources - \$1.7M Under Budget

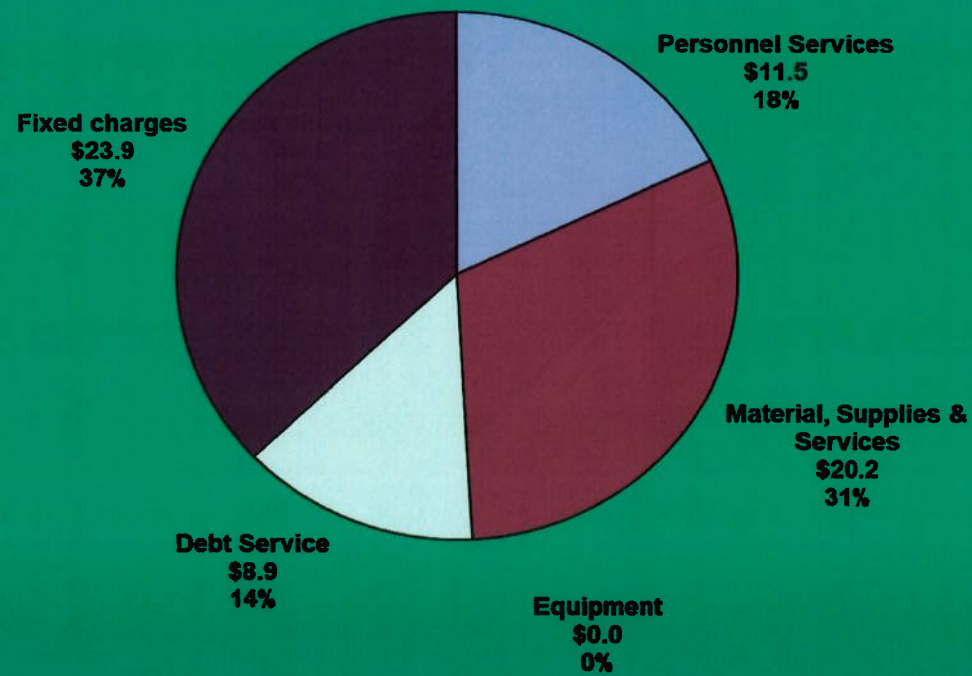
- Non-Potable Water Treatment Plant Costs (\$1.5M Under)

### Executive Support Office - \$1.6M Under Budget

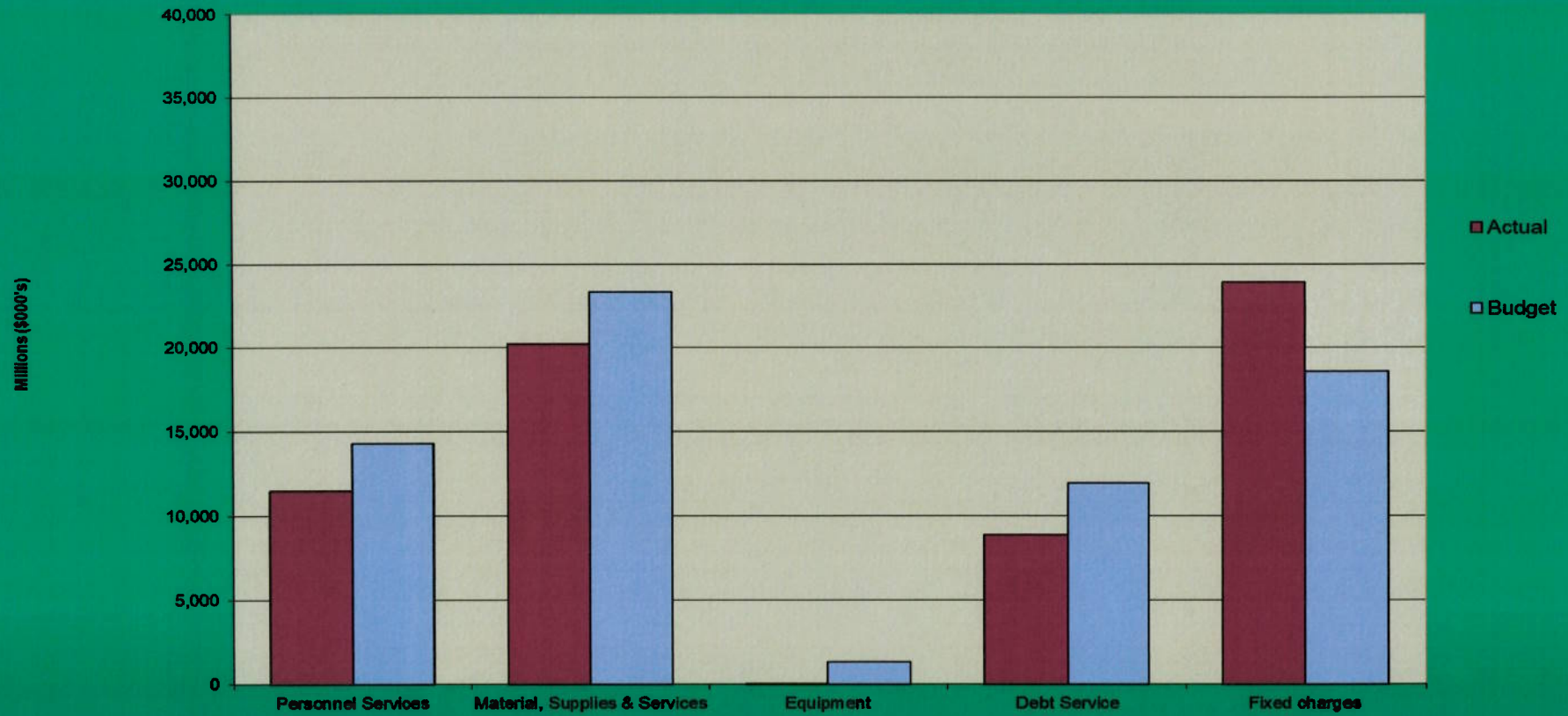
- Other Contractual Services (\$1.7M Under)



**Total Operating Expenditures - \$64.5**  
**As of September 30, 2024**  
(millions of dollars)

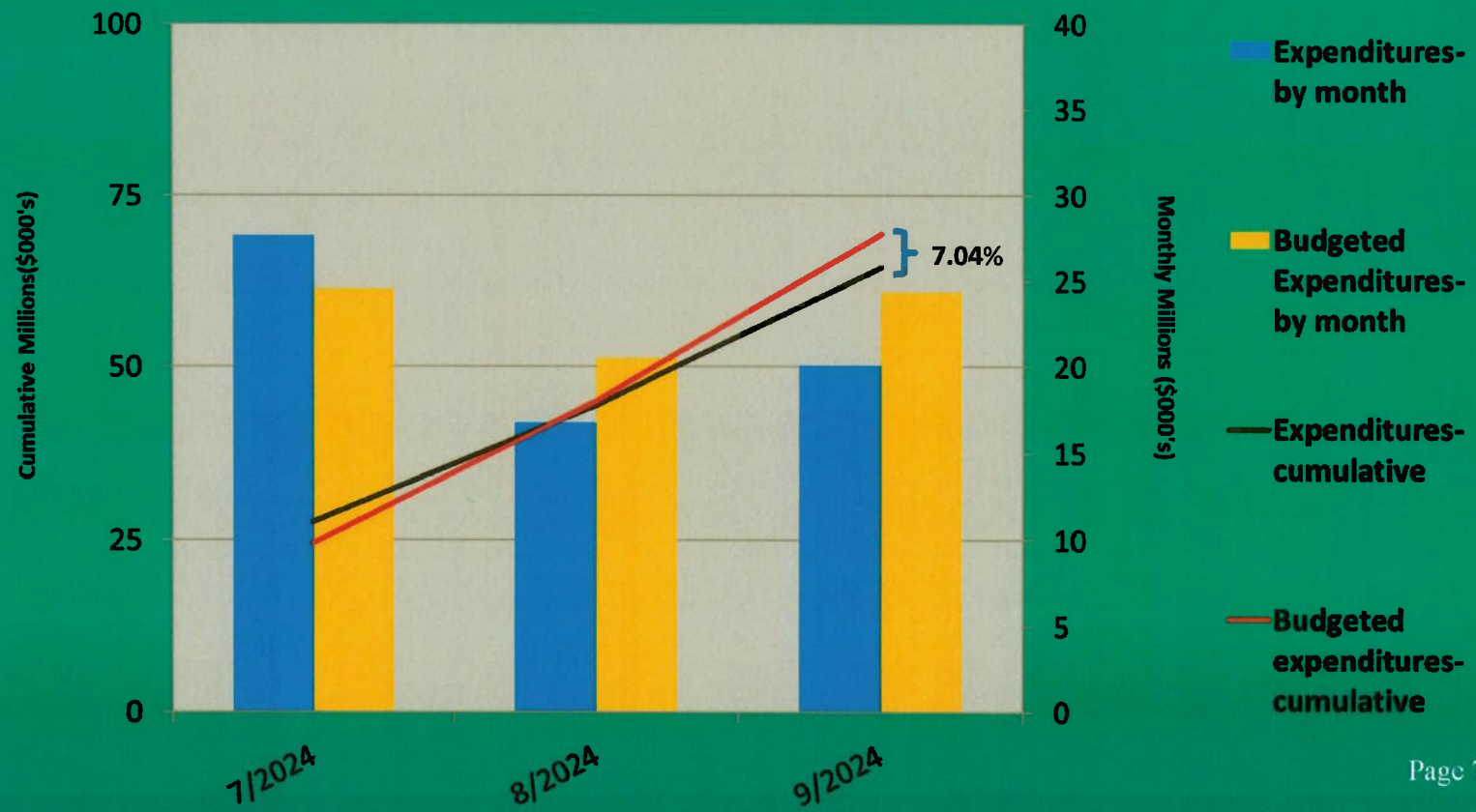


**Operating Expenditures by Category (Budget vs. Actual)**  
**As of September 30, 2024**

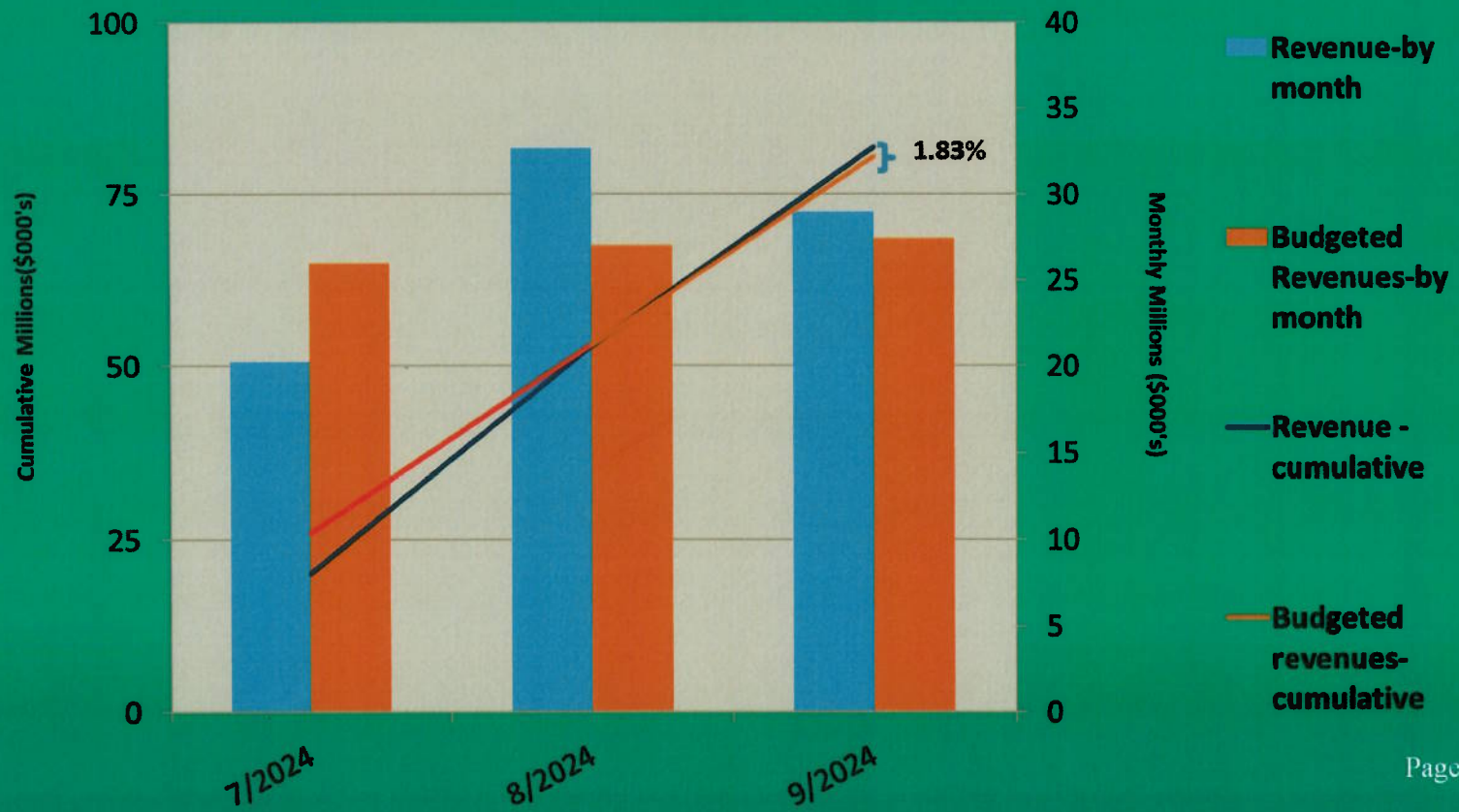




### BUDGETED OPERATING EXPENDITURES FY 2025



### BUDGETED OPERATING REVENUES FY 2025







# Mahalo!

BOARD OF WATER SUPPLY

[WWW.BOARDOFWATERSUPPLY.COM](http://WWW.BOARDOFWATERSUPPLY.COM)

Page 9



	YTD Actuals	YTD Budget	Favorable/ (Unfavorable) Variance
Revenues	81,918	80,443	1,475
Operating Expenses	(64,517)	(69,405)	4,888
Net Revenues (expenditures)	<u>17,401</u>	<u>11,038</u>	<u>6,363</u>

Board Of Water Supply  
Statement of Revenues, Expenses And Change In Net Assets  
As of September 30, 2024

Current Month Actual	% Revenue	Last Year Actual	% Revenue	Description	Year to Date Actual	% Revenue	Last Year to Date Actual	% Revenue	% Change
				REVENUE					
27,470,643.03	100.00	24,227,442.00	100.00	OPERATING REVENUE	78,163,497.87	100.00	67,263,799.42	100.00	16.20
27,470,643.03	100.00	24,227,442.00	100.00	REVENUE	78,163,497.87	100.00	67,263,799.42	100.00	16.20
				OPERATING EXPENSES					
3,731,176.39-	13.58	3,371,635.20-	13.92	LABOR COSTS	10,666,910.51-	13.65	10,042,429.07-	14.93	6.22
3,422,180.45-	12.46	4,688,852.03-	19.35	SERVICES	6,455,149.64-	8.26	7,972,616.17-	11.85	19.03-
252,770.00	.92	283,083.87-	1.17	SUPPLIES	1,360,326.39-	1.74	1,290,921.53-	1.92	5.38
4,972.06-	.02	445.62		EDUCATION & TRAINING	9,649.48-	.01	2,335.55-		313.16
2,662,418.13-	9.69	2,606,134.32-	10.76	UTILITIES	5,977,885.99-	7.65	5,186,583.58-	7.71	15.26
126,237.54-	.46	213,712.72-	.88	REPAIR AND MAINTENANCE	301,666.08-	.39	1,091,797.50-	1.62	72.37-
4,424,236.03-	16.11	1,890,541.34-	7.80	MISC	6,693,073.83-	8.56	3,358,785.70-	4.99	99.27
145,538.68-	.53	4,040,394.94-	16.68	RETIREMENT SYSTEM CONTRIBUTIO	13,055,730.01-	16.70	8,365,609.35-	12.44	56.06
75,224.33-	.27	10,650.93	.04	MISC EMPLOYEES' BENEFITS	269,609.50-	.34	21,733.46	.03	1,340.53-
14,339,213.61-	52.20	17,083,257.87-	70.51	OPERATING EXPENSES	44,790,001.43-	57.30	37,289,344.99-	55.44	20.11
				NON OPERATING REVENUE AND EXPE	11,776,701.82	15.07	2,136,907.02	3.18	451.11
6,635,769.47	24.16	1,691,346.41	6.98	CONTRIBUTION IN AID	2,044,358.25	2.62	940,547.58	1.40	117.36
1,642,881.87	5.98	359,847.21	1.49	LEASE	225,825.32-	.29	212,949.40-	.32	6.05
225,825.32-	.82	212,949.40-	.88	OTHER EXPENSES	12,083,022.42-	15.46	12,475,146.05-	18.55	3.14-
3,532,417.70-	12.86	3,513,825.88-	14.50	Change In Net Assets	34,885,708.77	44.63	20,363,813.58	30.27	71.31
17,651,837.74	64.26	5,468,602.47	22.57						

Board Of Water Supply  
Balance Sheet  
As of September 30, 2024

Description	***** Amounts *****			***** Change *****	
	Current	Last Month End	Last Year End	This Month	This Year
<b>ASSETS</b>					
CURRENT ASSETS	68,734,242.27	60,426,516.36	57,517,335.79	8,307,725.91	11,216,906.48
RESTRICTED ASSETS	20,825,771.66	16,057,558.46	31,983,661.15	4,768,213.20	(11,157,889.49)
INVESTMENTS	718,131,418.36	725,373,972.30	748,196,553.97	(7,242,553.94)	(30,065,135.61)
OTHER ASSETS	13,508,013.52	13,732,067.77	14,330,634.83	(224,054.25)	(822,621.31)
PROPERTY / PLANT	1,435,987,291.68	1,430,270,332.05	1,433,736,995.20	5,716,959.63	2,250,296.48
DEFERRED OUTFLOWS OF RESOURCE	10,639,878.00	10,639,878.00	10,639,878.00	-	-
DEFERRED OUTFLOWS OF RESOURCE	33,954,744.14	33,954,744.14	33,954,744.14	-	-
<b>ASSETS</b>	<b>2,301,781,359.63</b>	<b>2,290,455,069.08</b>	<b>2,330,359,803.08</b>	<b>11,326,290.55</b>	<b>(28,578,443.45)</b>
<b>LIABILITIES</b>					
CURRENT LIABILITIES	22,730,438.73	24,077,113.90	75,162,033.55	(1,346,675.17)	(52,431,594.82)
OTHER LIABILITIES	89,091,815.47	92,281,644.13	94,641,880.41	(3,189,828.66)	(5,550,064.94)
BONDS PAYABLE, NONCURRENT	524,635,531.18	526,130,432.43	529,823,881.53	(1,494,901.25)	(5,188,350.35)
LEASE LIABILITY	4,115,289.34	4,409,431.45	4,409,431.45	(294,142.11)	(294,142.11)
NET PENSION LIABILITY	128,552,203.00	128,552,203.00	128,552,203.00	-	-
NET OPEB LIABILITY	47,203,284.00	47,203,284.00	47,203,284.00	-	-
DEFERRED INFLOWS OF RESOURCES	16,099,869.00	16,099,869.00	16,099,869.00	-	-
<b>LIABILITIES</b>	<b>832,428,430.72</b>	<b>838,753,977.91</b>	<b>895,892,582.94</b>	<b>(6,325,547.19)</b>	<b>(63,464,152.22)</b>
<b>NET ASSETS</b>					
RETAINED EARNINGS	290,996,693.18	282,730,868.89	254,340,236.12	-	-
FUND BALANCE	594,633,831.66	594,633,831.66	594,633,831.66	-	-
RESERVE FOR ENCUMBRANCES	548,836,695.30	557,102,519.59	585,493,152.36	-	-
CURRENT YEAR CHANGES TO FU	34,885,708.77	17,233,871.03		17,651,837.74	34,885,708.77
<b>NET ASSETS</b>	<b>1,469,352,928.91</b>	<b>1,451,701,091.17</b>	<b>1,434,467,220.14</b>	<b>17,651,837.74</b>	<b>34,885,708.77</b>
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>2,301,781,359.63</b>	<b>2,290,455,069.08</b>	<b>2,330,359,803.08</b>	<b>11,326,290.55</b>	<b>(28,578,443.45)</b>

## Budget vs Actual Appropriation Budget - Total BWS Summary

Page -

1

(\$000's)

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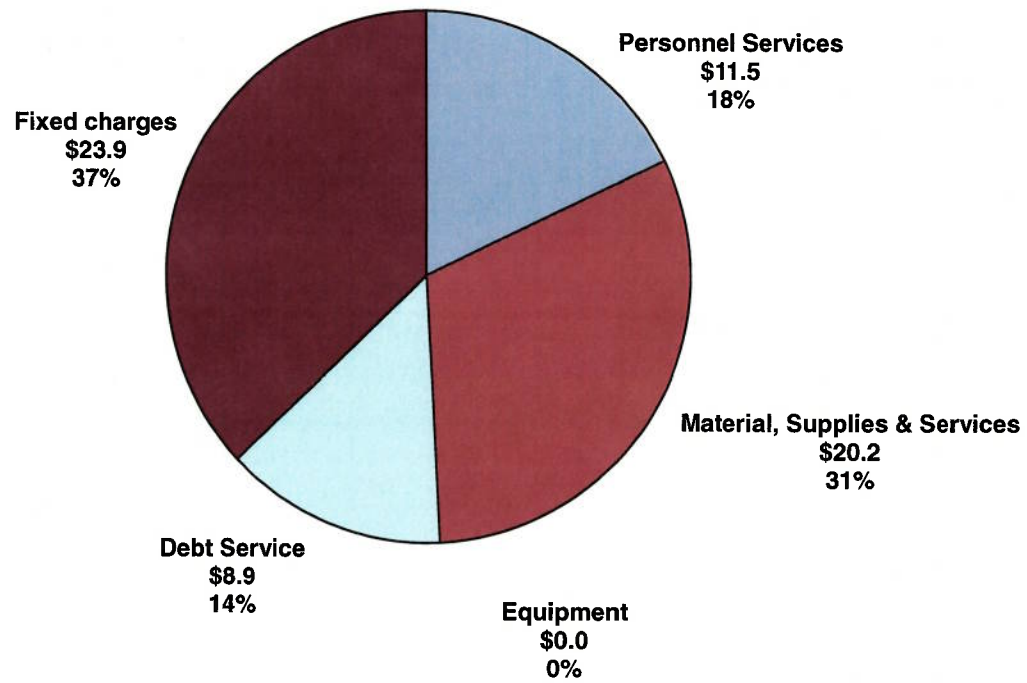
AS OF 9/30/2024

OPER UNIT ALL

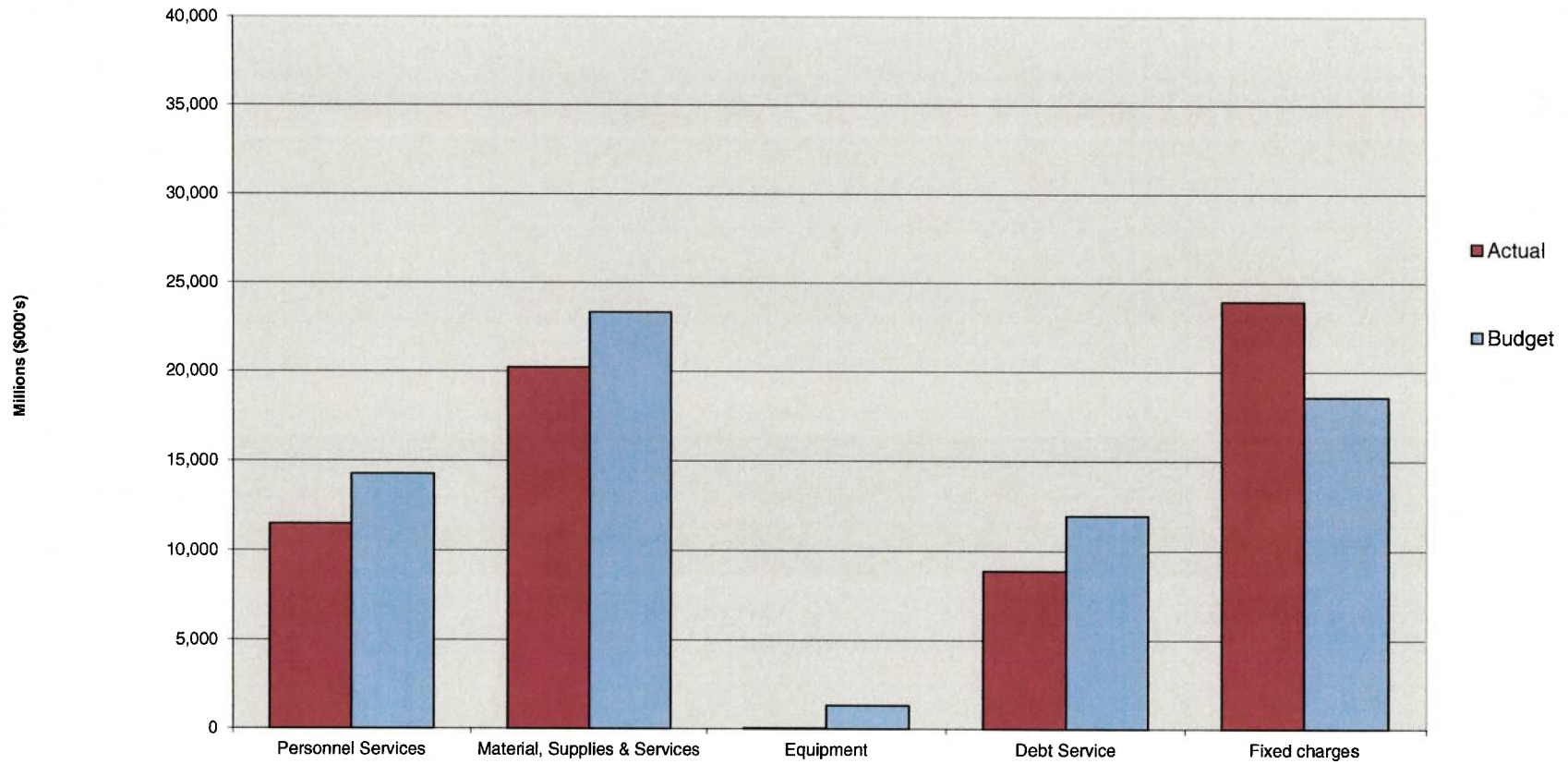
BUSINESS UNIT ALL

YTD-TO-DATE				Object Description	FOR THE FISCAL YEAR				
YTD Actuals	YTD Budget	Avail/ (Over)	%		Revenues/ Expend	Open Encumb	Annual Budget	Avail/ (Over)	%
<u>81,918</u>	<u>80,443</u>	<u>(1,475)</u>	<u>1.83-</u>	<u>REVENUE</u>	<u>81,918</u>		<u>299,200</u>	<u>217,282</u>	<u>72.62</u>
OPERATING EXPENSES:									
11,487	14,265	2,778	19.47	Personnel Services	11,487		57,209	45,722	79.92
MATERIALS AND SUPPLIES									
12,685	12,136	(549)	4.52-	Services	4,370	8,315	48,671	35,986	73.94
3,267	4,344	1,077	24.79	Supplies	2,090	1,177	18,637	15,370	82.47
25	97	72	74.23	Education & Training	22	3	447	422	94.41
				Utilities					
746	1,425	679	47.65	Repairs & Maint	281	465	4,453	3,707	83.25
3,488	5,309	1,821	34.30	Misc	2,915	573	16,077	12,589	78.30
38	1,316	1,278	97.11	Equipment	10	28	5,857	5,819	99.35
8,862	11,962	3,100	25.92	Debt Service	8,862		42,497	33,635	79.15
FIXED CHARGES:									
8,548	10,155	1,607	15.82	Utilities	8,548		38,444	29,896	77.77
825	880	55	6.25	Case Fees	825		3,519	2,694	76.56
4,872	4,133	(739)	17.88-	Retirement System Contribution	4,872		16,529	11,657	70.52
9,674	3,383	(6,291)	185.96-	Misc Employees' Benefits	9,674		20,280	10,606	52.30
<u>64,517</u>	<u>69,405</u>	<u>4,888</u>	<u>7.04</u>	<u>TOTAL OPERATING EXPENDITURES</u>	<u>53,956</u>	<u>10,561</u>	<u>272,620</u>	<u>208,103</u>	<u>76.33</u>
<u>17,401</u>	<u>11,038</u>	<u>(6,363)</u>		<u>NET REVENUES (EXPENDITURES)</u>	<u>27,962</u>	<u>(10,561)</u>	<u>26,580</u>	<u>9,179</u>	

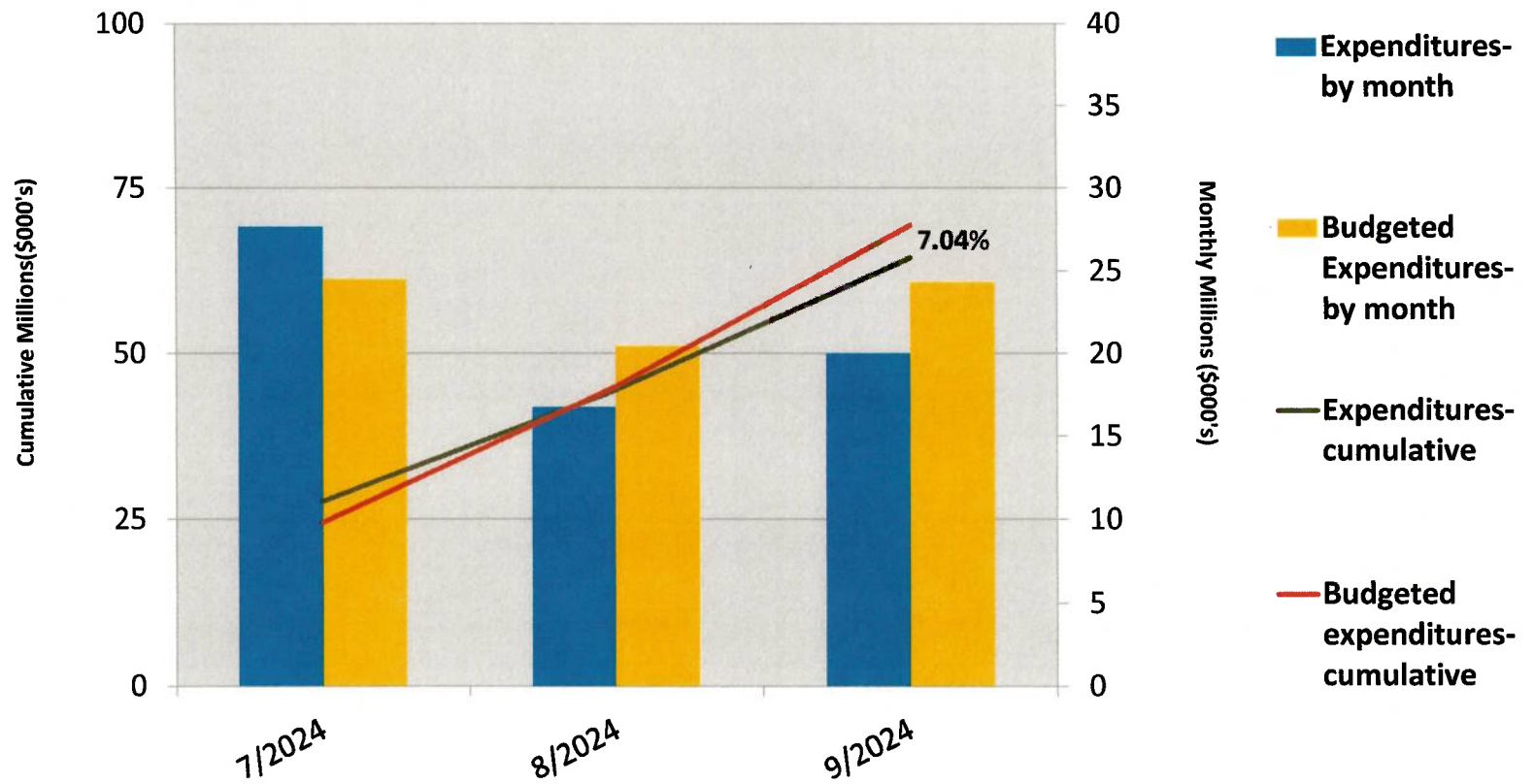
**Total Operating Expenditures - \$64.5**  
**As of September 30, 2024**  
(millions of dollars)



**Operating Expenditures by Category (Budget vs. Actual)**  
**As of September 30, 2024**

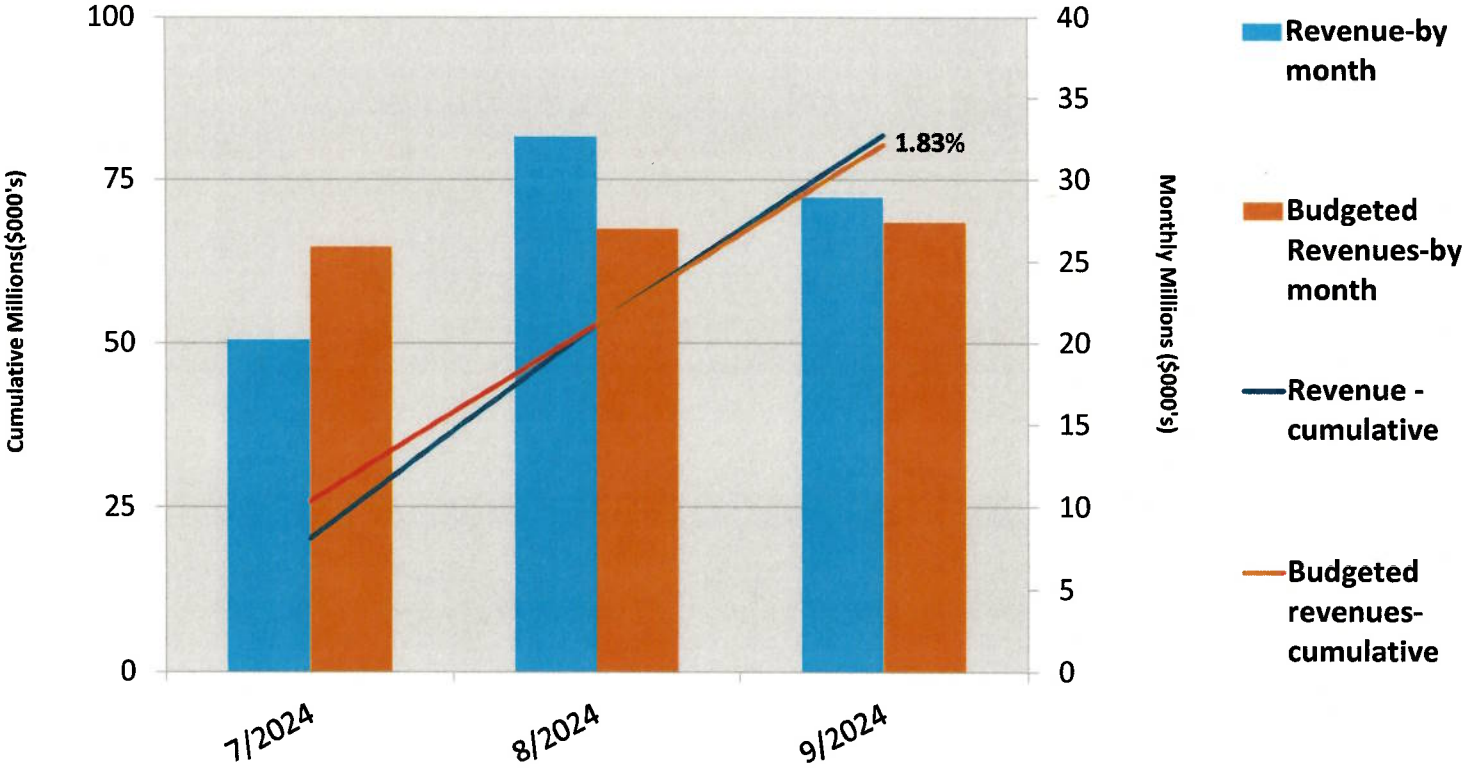


### BUDGETED OPERATING EXPENDITURES FY 2025





BUDGETED OPERATING REVENUES FY 2025



ITEM FOR INFORMATION NO. 3

"November 25, 2024

SCHEDULE OF  
MONTHLY BOARD  
MEETINGS FOR  
CALENDAR  
YEAR 2025

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawai'i 96843

Chair and Members:

Subject: Schedule of Monthly Board Meetings for Calendar  
Year 2025

Attached for your information is the schedule of Board Meetings for  
the calendar year 2025.

Respectfully Submitted,

/s/ ERNEST Y. W. LAU, P.E  
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION:

Ernest Lau, Manager and Chief Engineer, gave the report. There were  
no comments or discussion.

BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU

2025 BOARD MEETING SCHEDULE

Board Meetings are scheduled for the fourth Monday of each month at 2:00 p.m. in the Public Service Building (PSB) Board Room unless otherwise noted.

January 27

February 24

March 24

April 28

May 5 – Annual Budget Workshop

May 27

June 23

July 28

August 25

September 22

October 27

November 24

December 15

ITEM FOR INFORMATION NO. 4

"November 25, 2024

STATUS  
UPDATE OF  
GROUNDWATER  
LEVELS AT  
ALL INDEX  
STATIONS

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawai'i 96843

Chair and Members:

Subject: Status Update of Groundwater Levels at All Index Stations

Three aquifer index stations were in low groundwater condition for the production month of October 2024. Punalu'u and Waialua are in Caution Status. Kaimukī is in Critical Status. (Subsequent water level measurements at Kaimukī show a slightly rising trend, over 20 feet MSL by beginning of November). The monthly production average for October 2024 was 142.35 million gallons per day.

The Board of Water Supply rainfall index for the month of October 2024 was 120 percent of normal, with a 5-month moving average of 79 percent. As of November 5, 2024, the Hawai'i Drought Monitor shows a band of abnormally dry conditions running through the central axis of O'ahu, grading to severe drought conditions along the leeward coast. The National Weather Service is forecasting above-normal precipitation through March 2025.

Most monitoring wells exhibited stable head levels for the month of October 2024. This likely reflects the higher rainfall and the seasonal decrease in production. Average monthly production for October 2024 is slightly less than October 2023 and close to the 5-year monthly average.

Respectfully Submitted,

/s/ ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION: Barry Usagawa, Program Administrator, Water Resources Division, gave the report.

Mr. Barry Usagawa thanked Board Member Sproat for her friendship, wisdom, and humor throughout the years. He shared that Board Member Sproat helped the BWS interpret the Waiahole Ditch contested case Supreme Court decisions to incorporate public trust and protect and restore Native Hawaiian rights, which were extended into the watershed management plans. Mr. Usagawa also mentioned Board Member

Sproat's assistance and guidance with the Freshwater Council, the freshwater blueprint for 100 million gallons per day (mgd) climate-resilient freshwater to 2030.

**PRODUCTION, HEAD AND RAINFALL REPORT  
MONTH OF OCTOBER 2024**

**POTABLE**

STATION	MGD
HONOLULU (1)	
KULIOUOU	0.06
WAILUPE	0.00
AINA KOA	0.00
AINA KOA II	0.61
MANOA II	0.95
PALOLO	1.43
KAIMUKI HIGH	2.43
KAIMUKI LOW	1.33
WILDER	8.77
BERETANIA HIGH	1.35
BERETANIA LOW	3.05
KALIH HIGH	3.77
KALIH LOW	5.03
KAPALAMA	0.24
KALIH SHAFT	8.34
MOANALUA	0.00
HALAWA SHAFT	0.00
KAAMILO	0.66
KALAUAO	9.26
PUNANANI	9.19
KAAHUMANU	0.25
HECO WAIU	2.73
MANANA	0.24
WAIALAE IKI	0.53
WELLS SUBTOTAL:	60.24
MANOA TUNNEL	0.17
PALOLO TUNNEL	0.00
GRAVITY SUBTTL:	0.17
HONOLULU SUBTTL:	60.41

STATION	MGD
WINDWARD (2)	
WAIMANALO II	0.78
WAIMANALO III	0.00
KUOU I	1.56
KUOU II	0.10
KUOU III	0.71
LULUKU	0.85
HAIKU	0.35
IOLEKAA	0.00
KAHALUU	0.57
KAHANA	0.81
PUNALUU I	0.00
PUNALUU II	2.62
PUNALUU III	1.21
KALUANUI	1.31
MAAKUA	0.25
HAUULA	0.26
WELLS SUBTOTAL:	11.38
WAIM. TUNNELS I & II	0.00
WAIM. TUNNELS III&IV	0.19
WAIHEE INCL. WELLS	0.39
WAIHEE TUNNEL	4.02
LULUKU TUNNEL	0.24
HAIKU TUNNEL	0.30
KAHALUU TUNNEL	1.43
GRAVITY SUBTOTAL:	6.56
WIND. SUBTOTAL:	17.94

STATION	MGD
NORTH SHORE (3)	
KAHUKU	0.35
OPANA	0.92
WAIALEE I	0.10
WAIALEE II	0.33
HALEIWA	0.00
WAIALUA	1.77
N.SHORE SUBTOTAL:	3.47

STATION	MGD
MILILANI (4)	
MILILANI I	2.35
MILILANI II	0.00
MILILANI III	0.69
MILILANI IV	1.63
MILILANI SUBTOTAL:	4.66

STATION	MGD
WAHIAWA (5)	
WAHIAWA	0.84
WAHIAWA II	2.25
WAHIAWA SUBTOTAL:	3.08

STATION	MGD
PEARL CITY-HALAWA (6)	
HALAWA 277	0.00
HALAWA 550	0.00
AIEA	0.00
AIEA GULCH 497	0.00
AIEA GULCH 550	0.21
KAONOHI I	2.15
WAIMALU I	0.00
NEWTOWN	1.97
WAIU	1.91
PEARL CITY I	0.77
PEARL CITY II	1.03
PEARL CITY III	0.22
PEARL CITY SHAFT	0.94
PEARL CITY-HALAWA SUBTOTAL:	9.20

STATION	MGD
WAIPAHU-EWA (7)	
WAIPIO HTS.	2.02
WAIPIO HTS. I	0.00
WAIPIO HTS. II	0.37
WAIPIO HTS. III	1.11
WAIPAHU	6.74
WAIPAHU II	2.09
WAIPAHU III	3.41
WAIPAHU IV	2.83
KUNIA I	5.14
KUNIA II	1.86
KUNIA III	1.41
HOAEAE	6.90
HONOULIULI I	0.00
HONOULIULI II	5.34
MAKAKILO	0.15
WAIPAHU-EWA SUBTOTAL:	39.37

STATION	MGD
WAIANAE (8)	
MAKAHA I	0.88
MAKAHA II	0.00
MAKAHA III	0.65
MAKAHA V	0.51
MAKAHA VI	0.00
MAKAHA SHAFT	0.00
KAMAILE	0.05
WAIANAE I	0.00
WAIANAE II	0.35
WAIANAE III	0.26
WELLS SUBTOTAL:	2.71
WAI. C&C TUNNEL	1.40
WAI. PLANT. TUNNELS	0.11
GRAVITY SUBTOTAL:	1.51
WAIANAE SUBTOTAL:	4.21

**NONPOTABLE**

NONPOTABLE	MGD
KALAUAO SPRINGS	0.44
BARBERS POINT WELL	1.29
GLOVER TUNNEL NP	0.31
NONPOTABLE TOTAL:	2.03

**RECYCLED WATER (SEPTEMBER 2024)**

RECYCLED WATER	MGD
HONOULIULI WRF R-1	6.36
HONOULIULI WRF RO	1.50
RECYCLED TOTAL:	7.86

# **PRODUCTION, HEAD AND RAINFALL REPORT** **MONTH OF OCTOBER 2024**

## **PRODUCTION SUMMARIES**

TOTAL WATER	MGD
PUMPAGE	134.11
GRAVITY	8.24
POTABLE TOTAL:	142.35
NONPOTABLE	2.03
RECYCLED WATER	7.86
TOTAL WATER:	152.24

CWRM PERMITTED USE AND BWS ASSESSED YIELDS FOR BWS POTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE/ BWS YLDS	B OCT 2024	C DIFF. A-B
1	HONOLULU	83.32	60.24	23.08
2	WINDWARD	25.02	17.94	7.08
3	NORTH SHORE	4.70	3.47	1.23
4	MILILANI	7.53	4.66	2.87
5	WAHIAWA	4.27	3.08	1.19
6	PEARL CITY-HALAWA	12.25	9.20	3.05
7	WAIPAHU-EWA	50.63	39.37	11.26
8	WAIANAE	4.34	4.21	0.13
TOTAL:		192.06	142.18	49.88

CWRM PERMITTED USE FOR BWS NONPOTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE	B OCT 2024	C DIFF. A-B
7	WAIPAHU-EWA (BARBERS POINT WELL)	1.00	1.29	-0.29
TOTAL:		1.00	1.29	-0.29

## **EFFECTIVE WATER DEMAND PER DISTRICT**

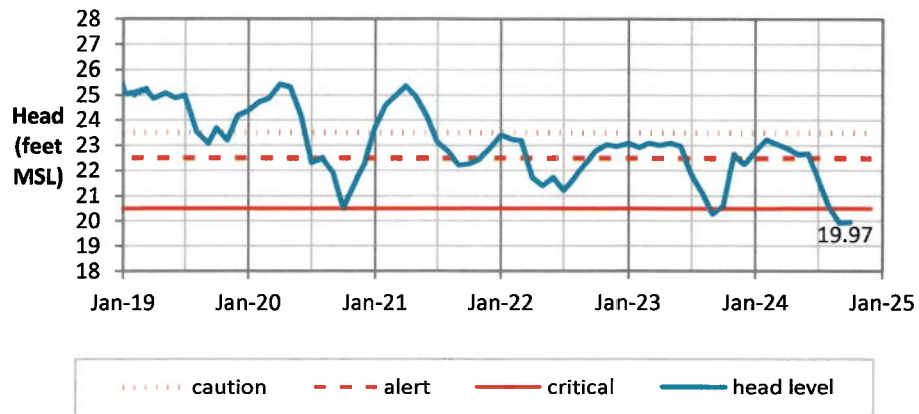
IMPORT/EXPORT BETWEEN WATER USE DISTRICTS			
FROM	TO		MGD
2	1	WINDWARD EXPORT	0.10
7	8	BARBERS PT LB	6.09

WATER USE DISTRICTS		SUBTOTAL	IMPORT	EXPORT	EFFECTIVE WATER DEMAND
1	HONOLULU	60.41	0.10	-	60.51
2	WINDWARD	17.94	-	0.10	17.84
3	NORTH SHORE	3.47	-	-	3.47
4	MILILANI	4.66	-	-	4.66
5	WAHIAWA	3.08	-	-	3.08
6	PEARL CITY-HALAWA	9.20	-	-	9.20
7	WAIPAHU-EWA	39.37	-	6.09	33.29
8	WAIANAE	4.21	6.09	-	10.30
TOTAL:		142.35	6.19	6.19	142.35

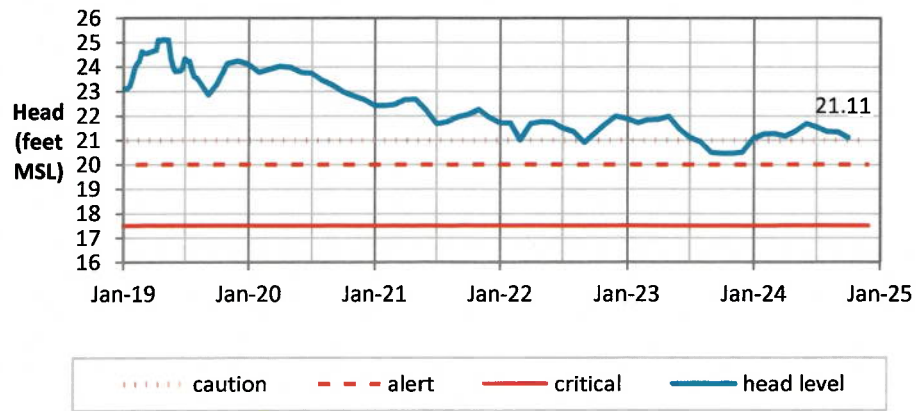


# Head Report

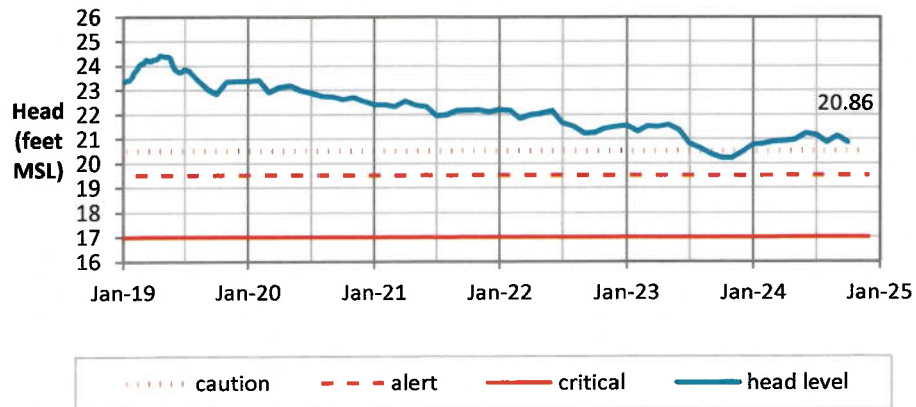
## Kaimukī 10/01/24



## Beretania 10/01/24

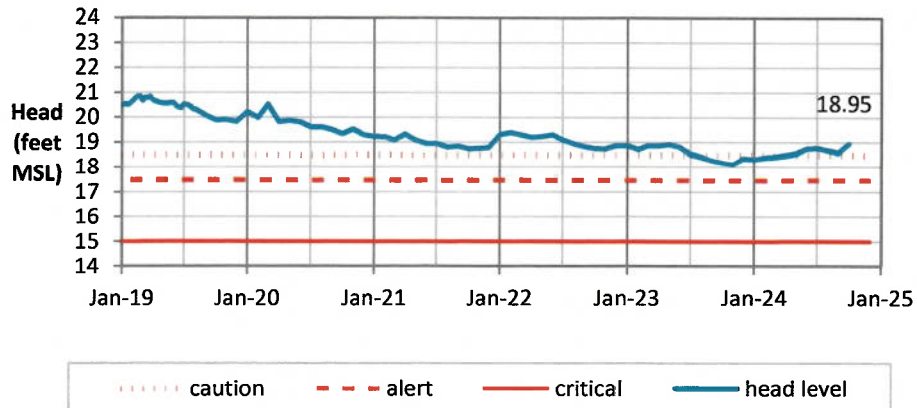


## Kalihi 10/01/24

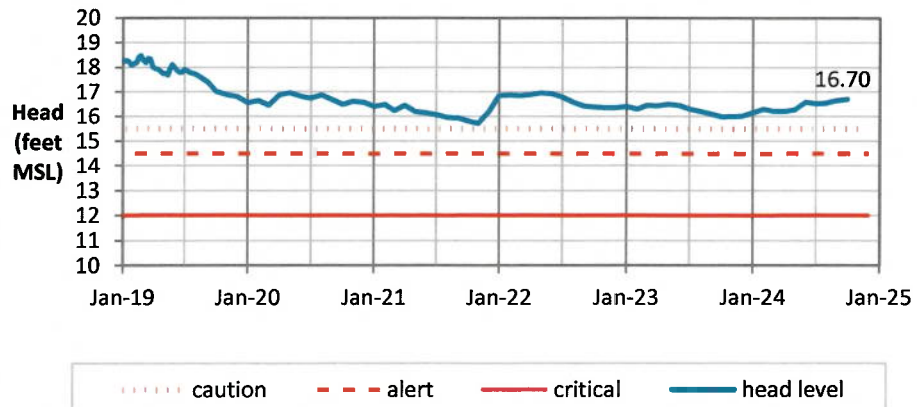


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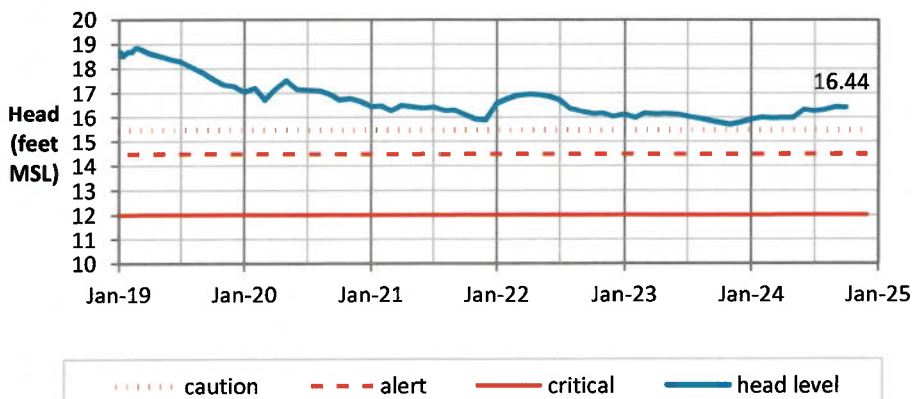
## Moanalua 10/01/24



## Hālawā 10/01/24

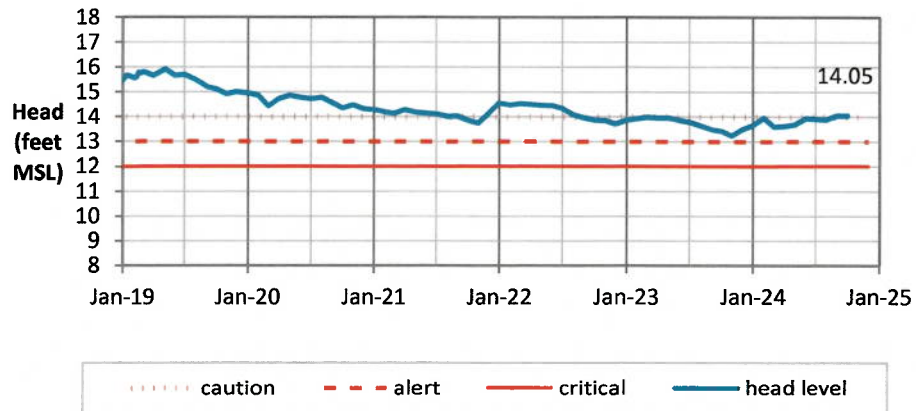


## Kalauao 10/03/24

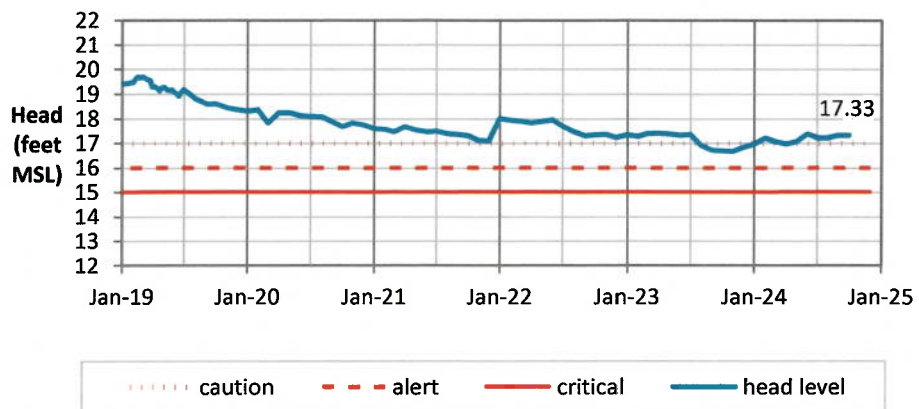


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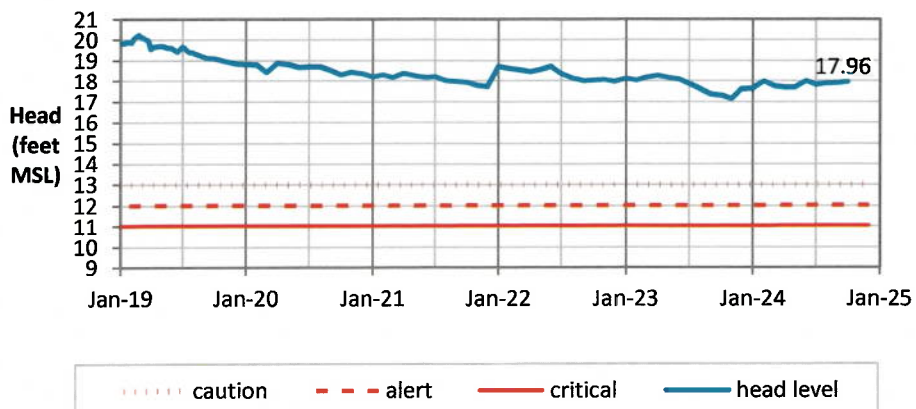
## Pearl City 10/07/24



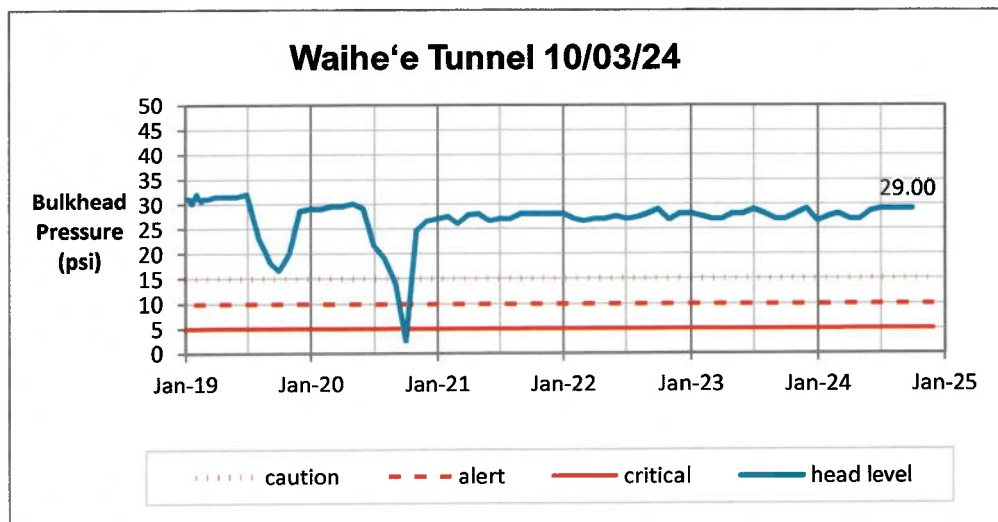
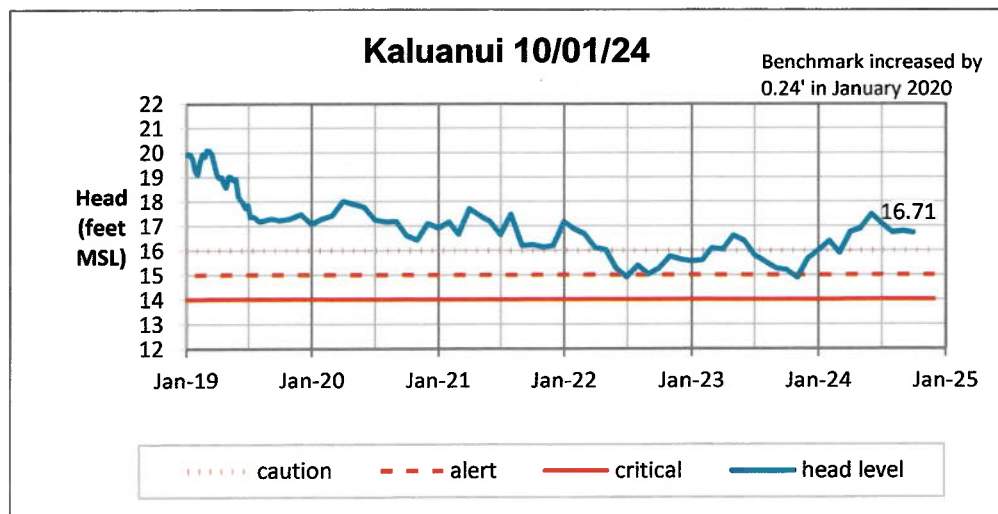
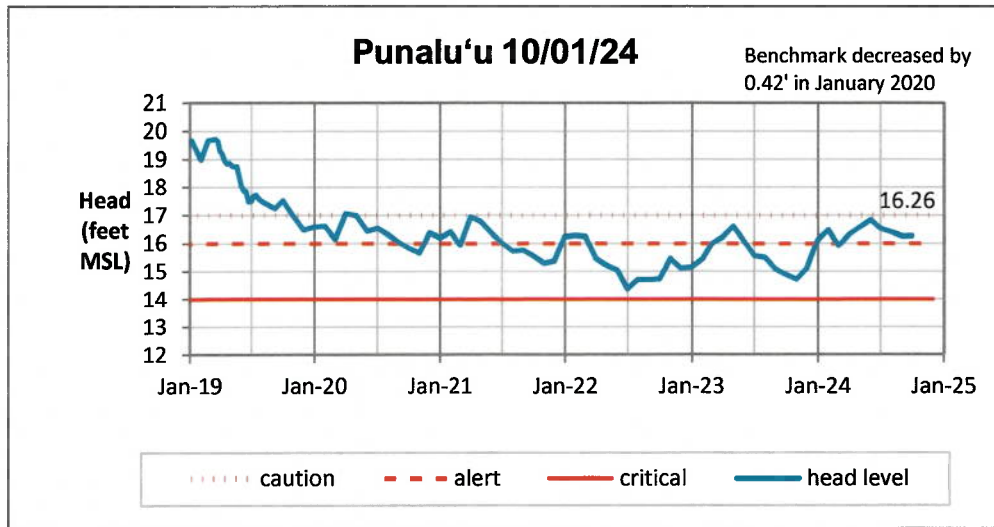
## Waipahu 10/01/24



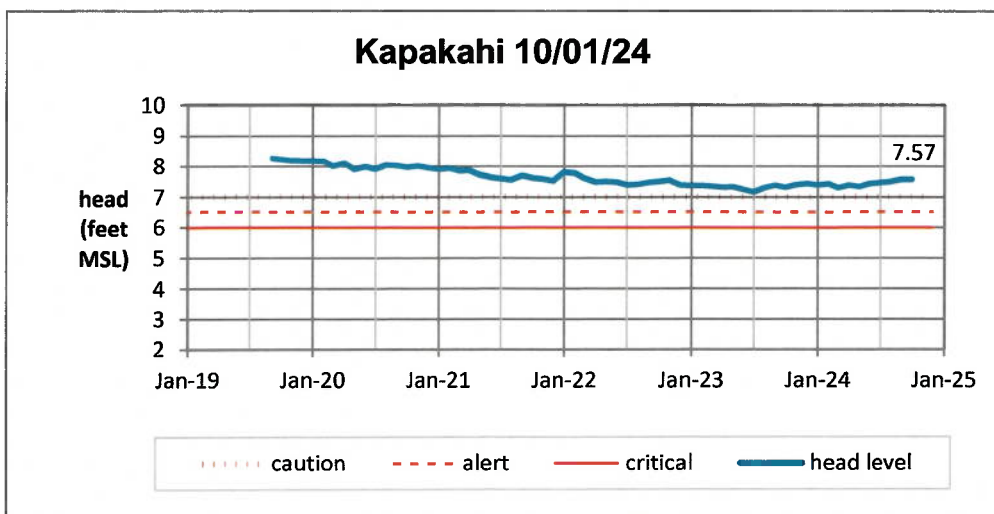
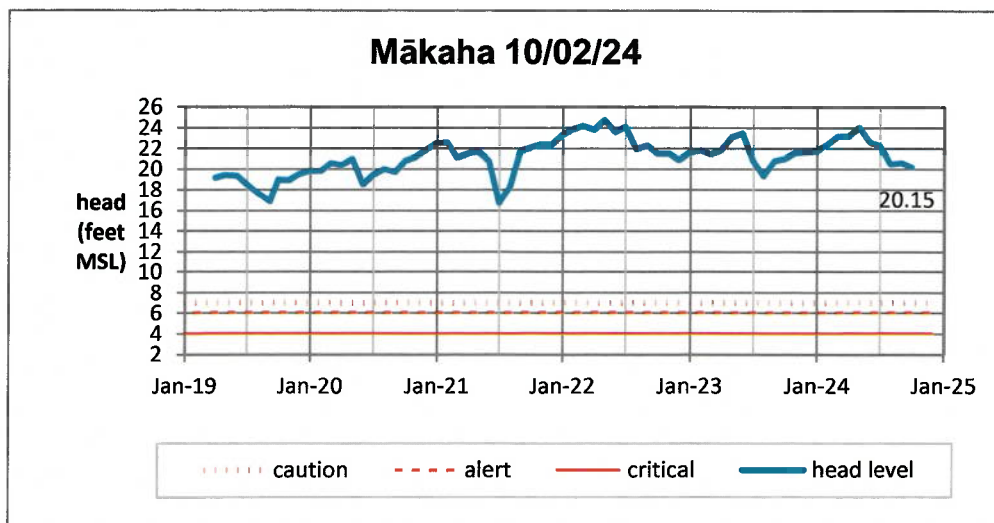
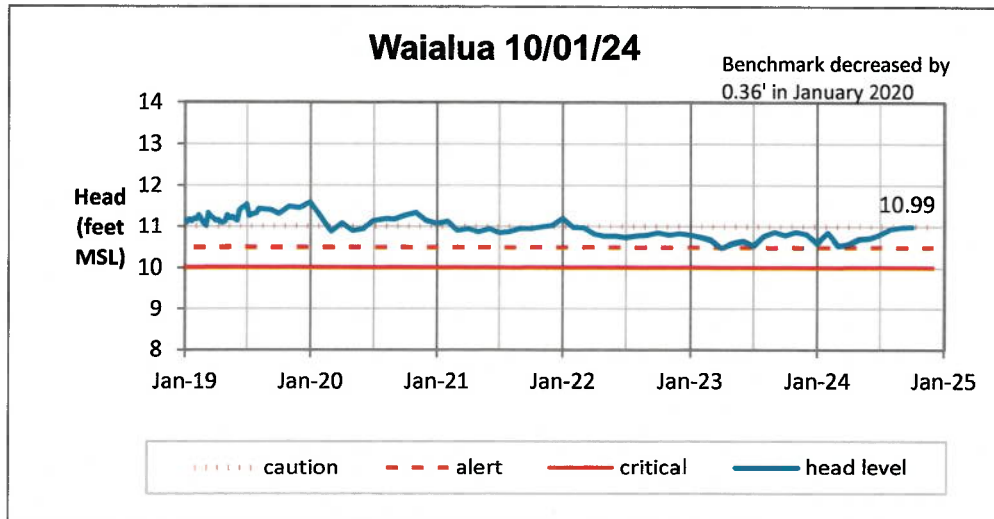
## Hō'ae'ae-Kunia 10/01/24



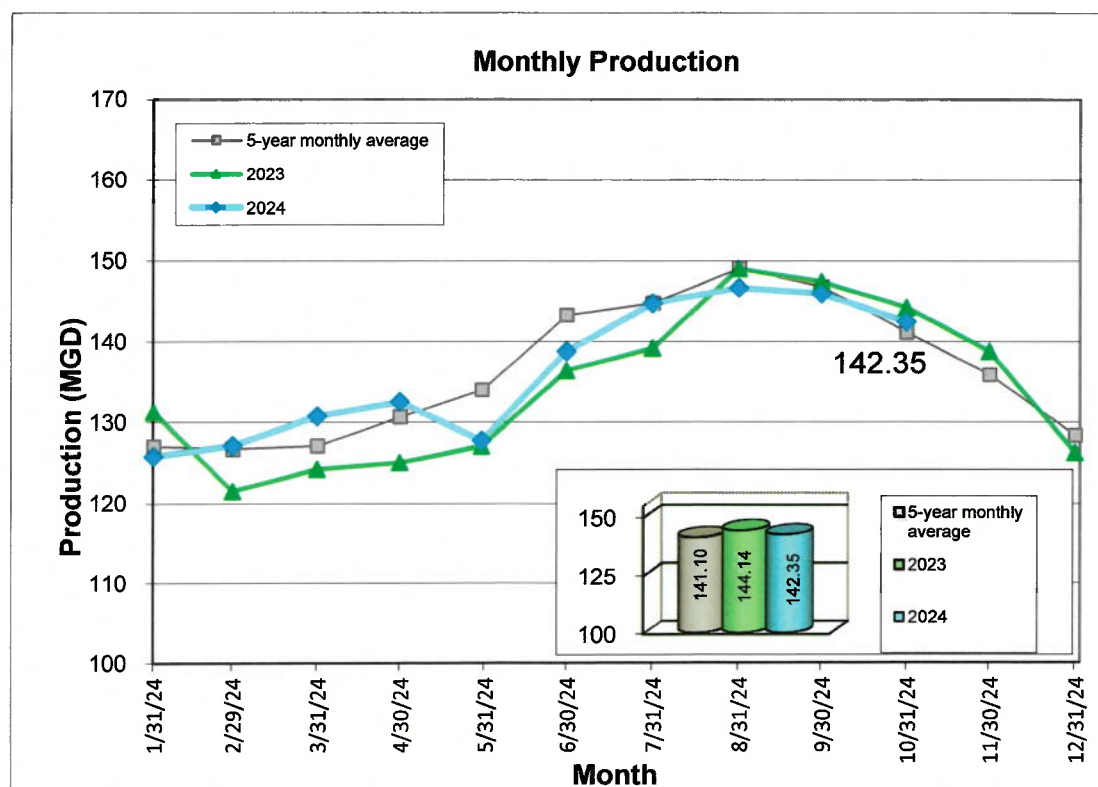
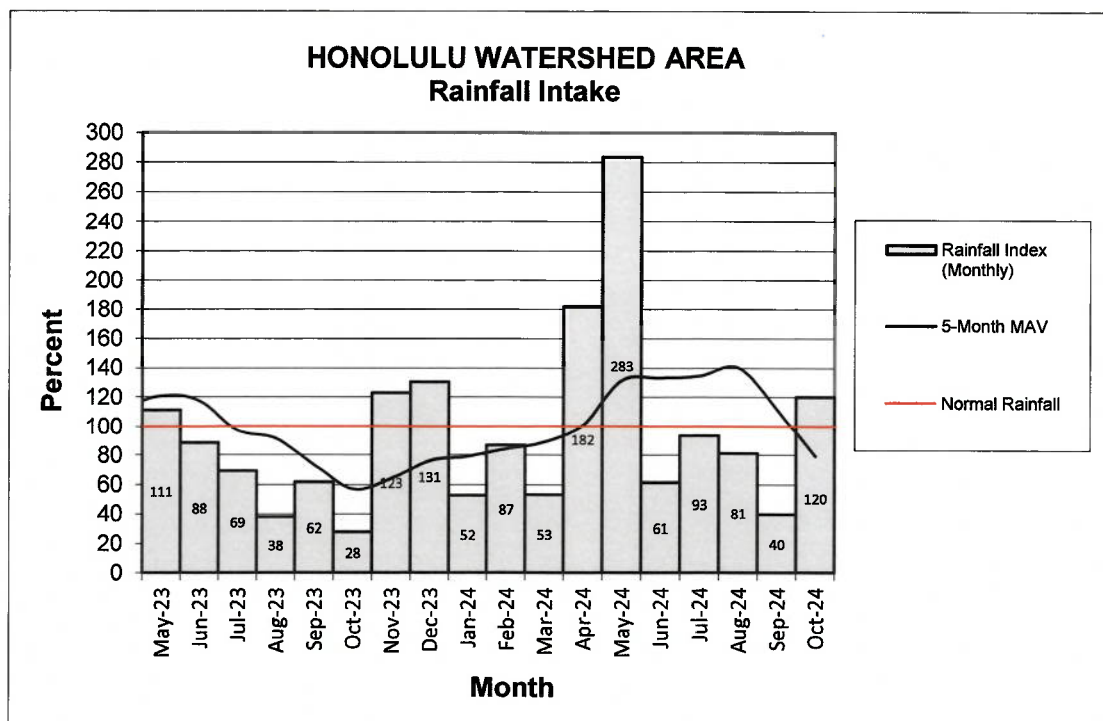
# Head Report



# Head Report







ITEM FOR INFORMATION NO. 5

"November 25, 2024

WATER MAIN  
REPAIR  
REPORT FOR  
OCTOBER 2024

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawai'i 96843

Chair and Members:

Subject: Water Main Repair Report for October 2024

Wayne Tello, Acting Program Administrator, Field Operations Division,  
will report on water main repair work for the month of October 2024.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E  
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION: Wayne Tello, Acting Program Administrator, Field Operations Division,  
gave the report.

## LEAK DETECTION for October 2024

### POIs Investigated

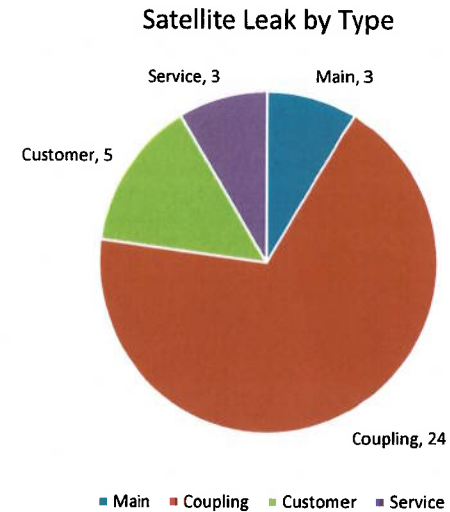
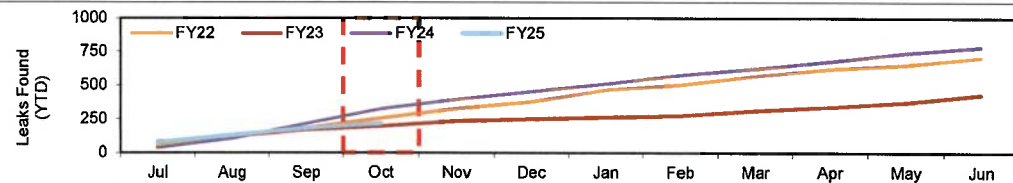
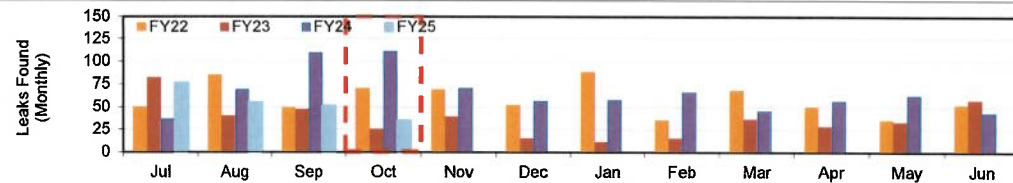
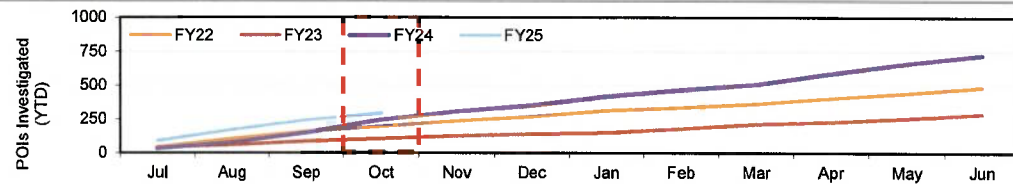
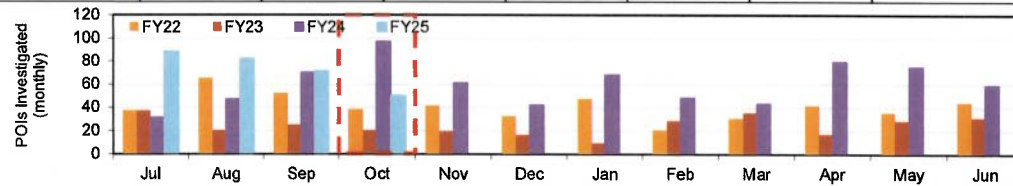
FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2025	88	82	71	50	--	--	--	--	--	--	--	--	291
2024	31	47	70	97	61	42	68	48	43	79	75	59	720
2023	37	20	25	20	19	16	9	28	35	17	28	31	285
2022	37	65	52	38	41	32	47	20	30	41	35	44	482

### Leaks Found

FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2025	76	55	51	35	--	--	--	--	--	--	--	--	217
2024	36	69	109	111	70	56	57	66	45	56	62	43	780
2023	82	40	47	25	39	15	11	15	36	28	33	57	428
2022	50	85	49	70	69	52	88	35	68	50	35	52	703

### Satellite Leak by Type

Type	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Main	8	6	2	3	--	--	--	--	--	--	--	--	19
Coupling	62	41	43	24	--	--	--	--	--	--	--	--	170
Customer	3	4	1	5	--	--	--	--	--	--	--	--	13
Service	3	4	5	3	--	--	--	--	--	--	--	--	15
<b>Total</b>	<b>76</b>	<b>55</b>	<b>51</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>217</b>



Date	Address	Size (In)	Pipe Type	Date	Address	Size (In)	Pipe Type
10/1/2024	1065 Kelou Dr, Kailua	12	CI	10/20/2024	1030 Nanialii St, Kailua	8	PVC
10/2/2024	3515 Alani Dr, Honolulu	8	CI	10/21/2024	660 California Ave, Wahiawa	12	CI
10/3/2024	651 Pohukaina St, Honolulu	8	DI	10/23/2024	1276 Mahiole St, Honolulu	4	CI
10/3/2024	1925 Kalakaua Ave, Honolulu	8	CI	10/23/2024	91-038 Hailipo St, Ewa Beach	6	CI
10/4/2024	1728 Onipaa St, Honolulu	4	CI	10/23/2024	759 Alakea St, Honolulu	8	CI
10/4/2024	1366 Dillingham Blvd, Honolulu	12	CI	10/25/2024	47-170 Kamehameha Hwy, Kaneohe	6	CI
10/5/2024	87-1695 Mohihi St, Waianae	8	PVC	10/28/2024	2746 Dow St, Honolulu	6	CI
10/6/2024	98-1258 Akaaka St, Aiea	8	PVC	10/29/2024	41-1101 Kalaniana'ole Hwy, Waimanalo	8	DI
10/7/2024	84-221 Holt St, Waianae	8	PVC	10/31/2024	1854 Kilohi St, Honolulu	8	CI
10/8/2024	1958 Kamehameha IV Rd, Honolulu	8	CI				
10/9/2024	2248 Hikino St, Honolulu	8	DI				
10/10/2024	87-171 Mamoalii Pl, Waianae	8	PVC				
10/10/2024	3258 Oahu Ave, Honolulu	8	PVC				
10/12/2024	1583 Hoaaina St, Honolulu	8	CI				
10/12/2024	94-277 Haaa St, Waipahu	8	CI				
10/14/2024	2131 Makiki Heights Dr, Honolulu	8	DI				
10/15/2024	1752 Kino St, Honolulu	8	CI				
10/16/2024	2345 Maunalaha Rd, Honolulu	4	GALV				
10/16/2024	1262 Honokahua St, Honolulu	8	DI				
10/16/2024	67-354 Kukea Cir, Waialua	8	CI				
10/16/2024	99-1440 Aiea Heights Dr, Aiea	12	AC				
10/18/2024	1514 Dillingham Blvd, Honolulu	8	CI				
10/18/2024	1453 Ala Iolani St, Honolulu	8	PVC				
10/19/2024	46-045 Kuneki Pl, Kaneohe	8	CI				
10/19/2024	91-086 Kaomi Lp, Kapolei	8	PVC				
10/20/2024	38 Bates St, Honolulu	6	CI				



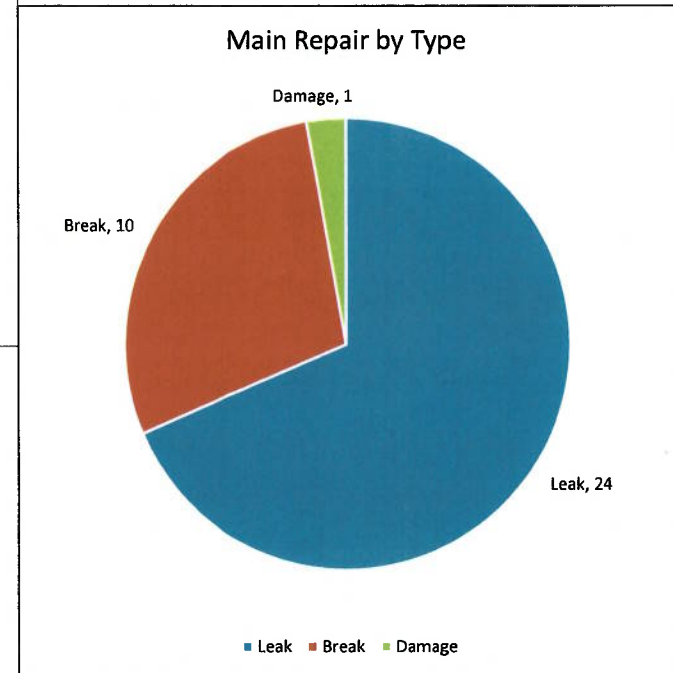
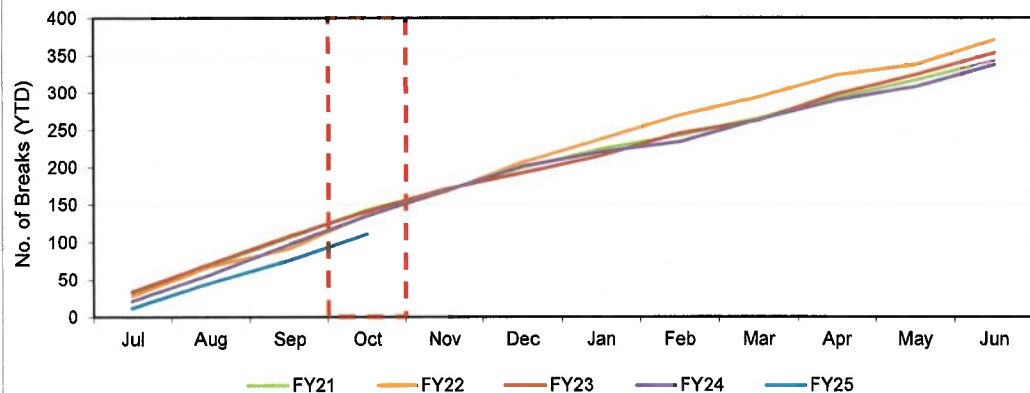
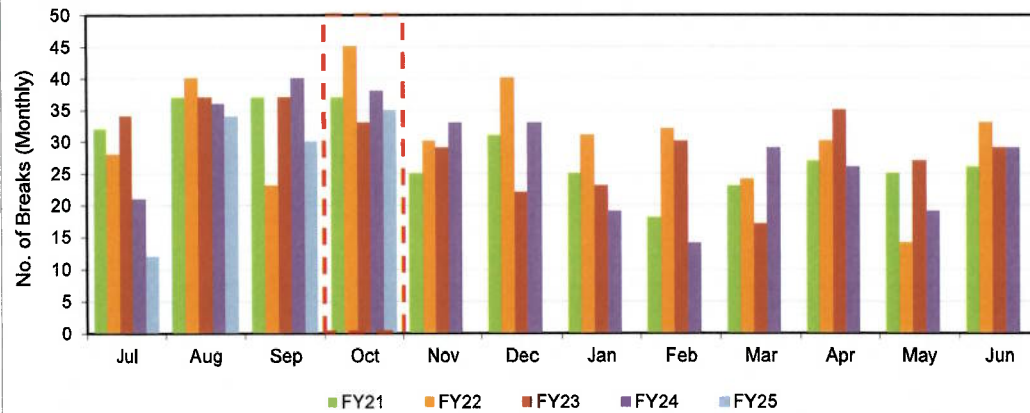
**WATER MAIN REPAIR REPORT**  
**for October 2024**

**Monthly Main Breaks**

FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2025	12	34	30	35	--	--	--	--	--	--	--	--	111
2024	21	36	40	38	33	33	19	14	29	26	19	29	337
2023	34	37	37	33	29	22	23	30	17	35	27	29	353
2022	28	40	23	45	30	40	31	32	24	30	14	33	370
2021	32	37	37	37	25	31	25	18	23	27	25	26	343

**Main Repair by Type**

Type	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Leak	4	27	14	24	--	--	--	--	--	--	--	--	69
Break	7	7	15	10	--	--	--	--	--	--	--	--	39
Damage	1	0	1	1	--	--	--	--	--	--	--	--	3
<b>Total</b>	<b>12</b>	<b>34</b>	<b>30</b>	<b>35</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>111</b>

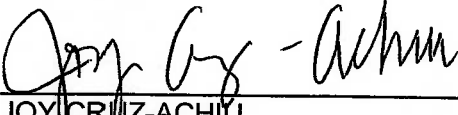


MOTION TO  
ADJOURN

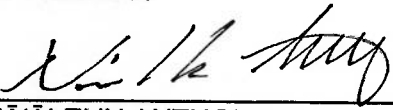
There being no further business, Chair Anthony, at 2:56 PM, called for a motion to adjourn the Regular Session. Kapua Sproat so moved, seconded by Lance Wilhelm, and unanimously carried.

The minutes of the Regular Meeting held on November 25, 2024, are respectfully submitted,

THE MINUTES OF THE REGULAR MEETING HELD ON NOVEMBER 25, 2024, WERE APPROVED AT THE DECEMBER 16, 2024, BOARD MEETING			
	AYE	NO	COMMENT
NĀ'ĀLEHU ANTHONY	X		
JONATHAN KANESHIRO			ABSTAIN
BRYAN P. ANDAYA	X		
LANCE WILHELM	X		
KĒHAULANI PU'U			ABSTAIN
EDWIN H. SNIFFEN			ABSENT
GENE C. ALBANO	X		

  
JOY CRUZ-ACHUI

APPROVED:

  
NĀ'ĀLEHU ANTHONY  
Chair of the Board  
DEC 16 2024  
Date