

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

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

August 20, 2024

NOTICE

The Board of Water Supply, City and County of Honolulu, Regular Meeting will be held on Monday, August 26, 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, August 26, 2024, at noon. Submit written testimony by:
 - Email to board@hbws.org
 - Online at 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
 - Online at boardofwatersupply.com/testimonyZoom 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, August 23, 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, August 26, 2024:
 - Email to board@hbws.org
 - Online at 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.

MATERIALS AVAILABLE FOR INSPECTION

Meeting materials (“board packet” under HRS §92-7.5) are accessible at www.boardofwatersupply.com/boardmeetings.

VIEWING THE MEETING

The meeting will be viewable via live streaming on the BWS website: 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 **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 August 26, 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 June 24, 2024
2. Approval of the Minutes of the Regular Meeting Held on July 22, 2024
3. Authorizing a Public Hearing to Consider a Proposed Amendment to the Fiscal Year 2025 Operating and Capital Improvement Program Budget of the Board of Water Supply

ITEMS FOR INFORMATION

1. Review of the Navy's Technical Memorandum of Elevated Total Petroleum Hydrocarbon (TPH) Levels in the Joint Base Pearl Harbor Hickam (JBPHH) Water System
2. Polycyclic Aromatic Hydrocarbon (PAH) Detection at the Board of Water Supply (BWS) Aiea Wells
3. Status Update of Groundwater Levels at All Index Stations
4. Water Main Repair Report for July 2024

EXECUTIVE SESSION

1. Approval of the Minutes of the Executive Session Held on May 28, 2024
2. Approval of the Minutes of the Executive Session Held on July 22, 2024
3. To Consult with the Board's Attorney on Questions and Issues and to Make a Determination Pertaining to Notices of Proposed Class Action Settlements in Regards to Aqueous Film-Forming Foams Products Liability Litigation MDL No. 2:18-mn-02873 (refers to: City of Camden et al., v. BASF Corporation, No. 2:24-cv-03174-RMG and City of Camden et al., v. Tyco Fire Products LP, et al., No. 2:24-cv-02321-RMG) [HRS §92-5(a)(4)]
4. To Consult with the Board's Attorney on Questions and Issues Pertaining to the Board's Powers, Duties, Privileges, Immunities, and Liabilities Pertaining to Matters Concerning the Red Hill Bulk Fuel Storage Facility [HRS §92-5(a)(4)]
5. To Consult with the Board's Attorney on Questions and Issues Pertaining to the Board's Powers, Duties, Privileges, Immunities, and Liabilities Pertaining to Matters Concerning the Evaluation of the Chief Engineer [HRS §92-5(a)(4)]

MINUTES

To watch the recording of this meeting, please click on the following link:
<https://vimeo.com/bwshonolulu/june-24-2024>. Closed captioning is available.

THE REGULAR MEETING OF THE BOARD OF WATER SUPPLY

June 24, 2024

At 2:00 PM on June 24, 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
Kapua Sproat, Vice Chair via Zoom
Bryan P. Andaya, Board Member via Zoom
Jonathan Kaneshiro, Board Member
Edwin H. Sniffen, Ex-Officio

Also Present: Ernest Lau, Manager and Chief Engineer
Erwin Kawata, Deputy Manager
Patrick Chun, Acting Assistant Program Administrator,
Capital Projects Division
Jewel Pharms, Assistant Program Administrator,
Customer Care Division
Jennifer Elflein, Program Administrator,
Customer Care Division via Vimeo
Kathleen Elliott-Pahinui, Information Officer,
Communications Office
Raelynn Nakabayashi, Executive Assistant I,
Executive Support Office
Wayne Tello, Acting Program Administrator,
Field Operations Division
Glenn Ah Yat, Acting Assistant Program Administrator,
Field Operations Division
Kaliko Lum Kee, Acting Waterworks Controller,
Finance Division
Michele Thomas, Executive Assistant I,
Human Resources Office via Zoom
Henderson Nuuhiwa, Program Administrator,
Information Technology Division
Michael Matsuo, Land Administrator, Land Division
Roland Fenstemacher,
Acting Program Administrator,
Water Quality Division
Barry Usagawa, Program Administrator,
Water Resources Division

Pekelo Martin, Water Pumping Plants
Superintendent,
Water System Operations Division
Kimberly Kuwaye, Manager Secretary
Joy Cruz-Achiu, Board Secretary
Sheri Mikami, Community Relations Specialist II,
Communications Office
Genna Kaneshiro, Student Aide II,
Communications Office
Kathy Mitchell, Administrative Services Officer
via Vimeo
Keoni Mattos, 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: Gene C. Albano, Ex-Officio

Chair Nā'ālehu Anthony opened the Board meeting with an 'ōlelo 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: Aloha from the rising to the setting sun. Thank you all for coming together today for the people, the land, and the water. Today's Hawaiian Proverb helps us remember the importance of fresh water and land.

'Ōlelo 1652: **Ka wai huahua'i o Kewalo.**

Chair Anthony translated 'ōlelo 1652: The bubbling water of Kewalo. Kewalo once had a large spring where many went for cool, refreshing water.

Chair Anthony welcomed everyone to the June 24, 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. 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. We have been accepting written or oral testimony for today's meeting. Instructions and an online submittal form are available at 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 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. Requestors will receive an email containing links and instructions on how 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 and asked those participating remotely to give the appropriate disclosures when responding.

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

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

Chair Anthony announced that he would be taking the agenda out of order.

REGULAR MEETING

“June 24, 2024

ELECTION OF
THE CHAIR AND
VICE CHAIR OF
THE BOARD OF
WATER SUPPLY
BEGINNING
JULY 1, 2024

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

Chair and Members:

Subject: Election of the Chair and Vice Chair of the Board of Water
Supply Beginning July 1, 2024

The Bylaws of the Board of Water Supply provide that the Chair and Vice
Chair of the Board shall be elected annually from among and by the
appointed members of the Board.

Accordingly, election of the Chair and Vice Chair of the Board for the
ensuing year commencing July 1, 2024, is on the agenda for this June 24,
2024 regular meeting.

Respectfully Submitted,

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

Attachment”

DISCUSSION: Ernest Lau, Manager and Chief Engineer of the Honolulu Board of Water
Supply, gave the report.

NOMINATION AND MOTION Edwin Sniffen nominated Nā’ālehu Anthony to continue as Chair. The
motion was seconded by Jonathan Kaneshiro. Kapua Sproat amended
Mr. Sniffen’s motion to add Jonathan Kaneshiro to serve as Vice Chair.
Chair Anthony accepted the amendment. The amended motion was
seconded by Jonathan Kaneshiro.

Ms. Joy Cruz-Achiu conducted a roll call vote:

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

Ms. Cruz-Achiu announced that the motion passed with five ayes.

NĀ'ĀLEHU ANTHONY WAS ELECTED AS CHAIR, AND JONATHAN KANESHIRO WAS ELECTED VICE CHAIR OF THE BOARD OF WATER SUPPLY BEGINNING JULY 1, 2024, TO JUNE 30, 2025, WAS ADOPTED ON JUNE 24, 2024

	AYE	NO	COMMENT
NĀ'ĀLEHU ANTHONY	X		
KAPUA SPROAT	X		
BRYAN P. ANDAYA	X		
JONATHAN KANESHIRO	X		
EDWIN H. SNIFFEN	X		
GENE C. ALBANO			ABSENT

APPROVAL OF MINUTES

Approval of the Minutes of the Public Hearing and Regular Meeting Held on May 28, 2024.

MOTION TO APPROVE

Jonathan Kaneshiro and Kapua Sproat motioned and seconded, respectively, to approve the Minutes of the Regular Meeting Held on May 28, 2024

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

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

THE MINUTES OF THE PUBLIC HEARING AND REGULAR MEETING HELD ON MAY 28, 2024, WAS APPROVED AT THE JUNE 24, 2024, BOARD MEETING			
	AYE	NO	COMMENT
NĀ‘ĀLEHU ANTHONY	X		
KAPUA SPROAT	X		
BRYAN P. ANDAYA	X		
JONATHAN KANESHIRO	X		
EDWIN H. SNIFFEN			ABSTAIN
GENE C. ALBANO			ABSENT

“June 24, 2024

ADOPTION OF
RESOLUTION NO.
986, 2024,
ACCEPTANCE OF
GIFT TO THE
BOARD OF WATER
SUPPLY FROM
HAWAIIAN
EARTH
RECYCLING, IN
SUPPORT OF
THE 2024
ANNUAL HALAWA
XERISCAPE
GARDEN
UNTHIRSTY
PLANT SALE

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

Chair and Members:

Subject: Adoption of Resolution No. 986, 2024, Acceptance of Gift to the Board of Water Supply from Hawaiian Earth Recycling, in Support of the 2024 Annual Halawa Xeriscape Garden Unthirsty Plant Sale

We recommend the adoption of the attached Resolution No. 986, 2024, that accepts the proposed gift to the Board of Water Supply (BWS), City and County of Honolulu, from Hawaiian Earth Recycling, in support of our 2024 Annual Halawa Xeriscape Garden Unthirsty Plant Sale. The donor's total value of this gift is \$1,963.35.

The BWS's Annual Halawa Xeriscape Garden Unthirsty Plant Sale is a well-established, successful public outreach program. It educates Oahu residents about the importance of outdoor water conservation and sustainable gardens. Studies show that more than 30 percent of residential water use occurs outdoors, so it makes sense for the BWS to promote water-saving methods in this area, which in turn can reduce the customer's combined water and wastewater bill.

This donation from Hawaiian Earth Recycling allows the BWS to give free compost to Plant Sale visitors and encourage them to incorporate into their own home gardens some of the techniques they learn at the event.

We deeply appreciate the continued support of this Board for this very valuable and worthwhile public outreach program. Plant Sale attendees are encouraged to use the information we provide at the event to become better stewards of our precious water resource.

Respectfully Submitted,

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

Attachment”

DISCUSSION: Sheri Mikami, Community Relations Specialist II, Communications Office, gave the report.

Chair Anthony inquired if the BWS still offers tours at the Halawa Xeriscape Garden.

Ms. Sheri Mikami stated that tours at the Halawa Xeriscape Garden have been suspended due to ongoing renovations and improvements to the

facility. However, will be reopening the garden for the Halawa Xeriscape Plant Sale on Saturday, August 3, 2024.

Chair Anthony encouraged everyone to attend and shared that there was a time in his life when he was part of the Halawa Xeriscape Garden team.

Manager Ernest Lau invited the Board Members to join him in packaging free compost to distribute to all attendees.

Chair Anthony announced that Board Member Jonathan Kaneshiro would abstain from voting since he is affiliated with the donation.

**MOTION
TO APPROVE**

Edwin Sniffen and Kapua Sproat motioned and seconded, respectively, to approve the Adoption of Resolution No. 986, 2024, Acceptance of Gift to the Board of Water Supply from Hawaiian Earth Recycling, in Support of the 2024 Annual Halawa Xeriscape Garden Unthirsty Plant Sale.

In lieu of a roll call vote, Chair Anthony requested a voice vote on the motion and requested that Board Members in favor of the motion say “Aye.” The Board members present responded with a verbal “Aye.” Chair Anthony then inquired if any Board Members would like to object or vote “Nay” on the motion. There were no objections or “Nay” votes. Chair Anthony announced that the motion was unanimously carried.

ADOPTION OF RESOLUTION NO. 986, 2024, ACCEPTANCE OF GIFT TO THE BOARD OF WATER SUPPLY FROM HAWAIIAN EARTH RECYCLING, IN SUPPORT OF THE 2024 ANNUAL HALAWA XERISCAPE GARDEN UNTHIRSTY PLANT SALE WAS ADOPTED ON JUNE 24, 2024			
	AYE	NO	COMMENT
NĀ'ĀLEHU ANTHONY	X		
KAPUA SPROAT	X		
BRYAN P. ANDAYA	X		
JONATHAN KANESHIRO			ABSTAIN
EDWIN H. SNIFFEN	X		
GENE C. ALBANO			ABSENT

“June 24, 2024

ADOPTION OF
RESOLUTION NO.
987, 2024,
ACCEPTANCE OF
GIFT TO THE
BOARD OF WATER
SUPPLY FROM
THE U.S. WATER
ALLIANCE

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

Chair and Members:

Subject: Adoption of Resolution No. 987, 2024, Acceptance of Gift to the Board of Water Supply from the U.S. Water Alliance

We recommend the adoption of the attached Resolution No. 987, 2024, that accepts the proposed gift to the Board of Water Supply (BWS), City and County of Honolulu, from the U.S. Water Alliance for complimentary membership for Fiscal Year 2024 (October 1, 2023 to September 30, 2024). The total value is estimated to be \$11,750.

The U.S. Water Alliance is a national membership organization transforming the way the nation values and manages water – our most precious resource. The Alliance inspires and sustains a diverse movement to advance transformative solutions to pressing water challenges so communities can thrive.

Last year, the Manager and Chief Engineer, through the support of the Hawaii Community Foundation, was able to attend the U.S. Water Alliance’s One Water Summit held in Tucson, Arizona, and found it enlightening and beneficial, especially from the sessions on affordability and equity.

Respectfully Submitted,

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

Attachment”

DISCUSSION:

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

MOTION TO APPROVE

Jonathan Kaneshiro and Edwin Sniffen motioned and seconded, respectively, to approve the Adoption of Resolution No. 987, 2024, Acceptance of Gift to the Board of Water Supply from the U.S. Water Alliance.

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

Ms. Cruz-Achiu announced that the motion passed with five ayes.

ADOPTION OF RESOLUTION NO. 987, 2024, ACCEPTANCE OF GIFT TO THE BOARD OF WATER SUPPLY FROM THE U.S. WATER ALLIANCE WAS ADOPTED ON JUNE 24, 2024			
	AYE	NO	COMMENT
NĀ'ĀLEHU ANTHONY	X		
KAPUA SPROAT	X		
BRYAN P. ANDAYA	X		
JONATHAN KANESHIRO	X		
EDWIN H. SNIFFEN	X		
GENE C. ALBANO			ABSENT

“June 24, 2024

ADOPTION OF
RESOLUTION NO.
988, 2024,
REIMBURSEMENT
OF CAPITAL
EXPENDITURES
FROM THE
PROCEEDS OF
INDEBTEDNESS

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

Chair and Members:

Subject: Adoption of Resolution No. 988, 2024, Reimbursement of
Capital Expenditures from the Proceeds of
Indebtedness

We recommend the adoption of Resolution No. 988, 2024, Declaring the Official Intent of the Board of Water Supply of the City and County of Honolulu to Reimburse Itself for Certain Capital Expenditures from the Proceeds of Indebtedness.

The Resolution establishes the time limit for reimbursement of capital expenditures at eighteen months. This brings the Board of Water Supply into compliance with Section 1.150 of the U. S. Treasury Regulations and does not bind the Board to make any expenditure, incur any indebtedness, or proceed with the Project.

The Resolution establishes a limit of \$310,291,000 and attaches the F.Y. 2025 Capital Improvement Program.

Respectfully Submitted,

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

Attachment”

DISCUSSION:

Kaliko Lum Kee, Acting Waterworks Controller, Finance Division, gave the report.

Board Member Jonathan Kaneshiro inquired if the Reimbursement of Capital Expenditure from the Proceeds of Indebtedness was done in last year.

Manager Lau responded the BWS does it every year.

Chair Anthony asked if the Reimbursement of Capital Expenditures from the Proceeds of Indebtedness allows the BWS to spend money from bonds.

Mr. Kaliko Lum Kee explained that Resolution No. 988, 2024, would allow the BWS to reimburse prior incurred expenditures up to the time that the

bond was issued if the BWS were to issue bonds after the fiscal year begins in July.

MOTION
TO APPROVE

Edwin Sniffen and Jonathan Kaneshiro motioned and seconded, respectively, to approve the Adoption of Resolution No. 988, 2024, Reimbursement of Capital Expenditures from the Proceeds of Indebtedness.

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

Ms. Cruz-Achiu announced that the motion passed with five ayes.

ADOPTION OF RESOLUTION NO. 988, 2024, REIMBURSEMENT OF CAPITAL EXPENDITURES FROM THE PROCEEDS OF INDEBTEDNESS WAS ADOPTED ON JUNE 24, 2024			
	AYE	NO	COMMENT
NĀ’ĀLEHU ANTHONY	X		
KAPUA SPROAT	X		
BRYAN P. ANDAYA	X		
JONATHAN KANESHIRO	X		
EDWIN H. SNIFFEN	X		
GENE C. ALBANO			ABSENT

ITEM FOR INFORMATION NO. 1

“June 24, 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

Erwin Kawata, Deputy Manager, 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:

Erwin Kawata, Deputy Manager, Office of the Manager and Chief Engineer, gave the report.

Vice Chair Sproat asked what happens next, especially since the Department of Health (DOH) agrees with the BWS on various issues.

Deputy Manager Kawata shared that the DOH requires the Navy to perform extended testing and conduct forensic testing with the United States (U.S.) Environmental Protection Agency (EPA) 8015 method. The BWS is currently having the Navy’s report independently peer-reviewed and hopes to share the results in a report to the Board next month.

Vice Chair Sproat inquired if the BWS could access the appendices, which could provide additional data and information.

Deputy Manager Kawata responded the BWS received that information after sending a letter to the Secretary of Defense requesting additional data cited in the Navy’s report. The BWS found the laboratory reports on the Navy’s Safe Water website, which the peer reviewers are reviewing. The BWS is also reviewing a copy of the Navy’s water system model, which showed that the Red Hill Shaft serves only certain parts of the Joint Base Pearl Harbor water system. He shared that data in the Navy’s water system model report is redacted, which poses challenges to connecting the data with the model conclusions.

Manager Lau stated that the Red Hill Shaft water system model report is difficult to analyze because data and information have been redacted. Included in the report is the daily water demand graph, which should provide data on water demand variation over time. The graph pictures the horizontal axis indicating time value and a line graph; however, the values on the vertical axis are missing, making it difficult to agree with the model conclusions if the BWS is unable to see the data.

Board Member Bryan Andaya shared that at a conference he attended a few weeks ago, there was a lot of discussion about gases and granular activated carbons (GAC). He asked if the Navy tried using GAC and whether the BWS is exploring this type of water treatment option.

Deputy Manager Kawata replied that the Navy plans to install an activated carbon facility to remove residual petroleum contamination from the Red Hill Shaft. The BWS is also conducting a treatment study to look into the different technologies, individually and in combination, to see what would be effective in removing large amounts of petroleum contamination from water. When the analysis is completed, the BWS will share its findings.

Chair Anthony commented that the Navy's plan to build the GAC facility at Red Hill will cost nearly half a billion dollars – an expensive and significant effort. A persistent challenge with treatment systems is discussing the need for a GAC system if the water is not contaminated compared to when there is known contamination.

Chair Anthony expressed interest in the low-level contaminants the DOH found in the water at Pearl Harbor as a microcosm for what could potentially happen if such contamination affected the BWS water system. Does Total Petroleum Hydrocarbons (TPH) persist? How do you flush the water system to get rid of it? He referred to the Newfield Report Test Results slide of the PowerPoint. Chair Anthony inquired about the low-level TPH detected and the report stating the findings, which are not TPH but some other organic compound.

NEWFIELD REPORT TEST RESULTS

"J" flagged as estimates when results near and below reporting limits
 "B" flagged due to contamination in laboratory method blank

Sample Location	Sample Date	Field ID	CL2 (mg/L)	Reporting Limit	TPH Result	Units	Lab qualifier
5792A Erne Avenue	2/12/2024	021224-002-01	0.79	32	72	ppb	
1824 Madrona Place	2/12/2024	021224-002-02	0.71	32	27	ppb	JB
6363 Papaya Lane	2/12/2024	021224-002-03	0.55	32	42	ppb	B
6653 Plumeria Loop	2/12/2024	021224-002-04	0.63	32	24	ppb	JB
419 Valley View Loop	2/12/2024	021224-002-05	0.66	32	15	ppb	JB
269 Etccll Court	2/12/2024	021224-002-06	0.21	32	19	ppb	JB
319 Lexington Blvd, Bldg 570, Ford Island CDC	2/12/2024	21224-009-01	0.59	32	57	ppb	B
4655 Catlin Dr, Bldg 4655, Catlin School Age Center	2/12/2024	021224-009-02	0.61	32	54	ppb	B
15 Julian Ave	2/12/2024	021224-009-03	0.69	32	55	ppb	B
546 Ohana Nui Circle	2/12/2024	021224-009-04	0.76	32	61	ppb	B
Waiawa Shaft	2/13/2024	021324-009-01	0.02	32	6	ppb	J
Navy Aiea Halawa Shaft	2/13/2024	021324-009-02	NA	32	87	ppb	
Red Hill Shaft- Adit 3	2/13/2024	021324-009-03	0.04	32	19	ppb	J
417 Valley View Loop	2/13/2024	021324-009-04	0.58	32	61	ppb	
731 Ohana Nui Circle	2/20/2024	022024-009-01	0.67	32	2	ppb	J

Deputy Manager Kawata explained that the DOH used the EPA's standard Method 8015 test to do the test and reported the results shown in the slide above. He explained that the highlighted results were those that measured more than the reporting limit of 32 and were not affected by any contamination in the method blank. The DOH had additional forensic analysis performed, and it was determined that a non-petroleum contaminant was being detected in all the samples. Further testing is being done to identify the type of contaminant.

Chair Anthony commented that when the results are graphed, they are outside the graph range of where one would normally see them.

Deputy Manager Kawata agreed with Chair Anthony's comment. The results should not have been reported as TPH with these numbers and should have been reported as non-detect if the forensic analysis had found the contaminant not to be a petroleum hydrocarbon.

Chair Anthony inquired about when the BWS performs tests on its water system and whether it sees the same results.

Deputy Manager Kawata responded that the BWS does not see the same test results as the NewField Report Test Results. He shared that when the BWS conducts the same analysis, the BWS compares it to the certified TPH standard. He stated he does not know what standard the Newfield used and, therefore, cannot comment further. The BWS uses a certified diesel range or TPH diesel standard and then creates a calibration curve based on that standard and the lowest concentration that can be measured with confidence. The lowest concentration on that calibration curve represents the BWS's minimum reporting limit.

Chair Anthony commented that everyone involved, the community, the regulators, and the purveyors, are working to identify and agree on how to test to the lowest results possible.

Deputy Manager Kawata explained that Method 8015 is meant to test for high contamination levels well above 200 parts per billion (ppb). He shared that the same method could be used to calibrate it against a lower value or standard to establish a lower detection limit; however, when doing so, a method of detection limit (MDL) study is also required. The Code of Federal Regulations requires conducting an MDL study to help determine the lowest level that can be measured with 99% confidence. Deputy Manager Kawata shared that the BWS conducts an MDL study when the BWS contract laboratory or sub-contract laboratory takes a non-standard method and applies it to drinking water samples or uses it at a lower level. The contract laboratory must pass the MDL study, and all quality controls must meet the method standard before the testing is applied to real-world water samples.

Chair Anthony commented that it is important to be transparent so the community can trust that their drinking water is safe and that there is public trust.

There was remote testimony:

Meredith Wilson	<i>Submitted a written testimony commenting on the Navy's tracer study and hydraulic model, along with a couple of questions.</i>
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1. *Has the BWS received a response from the SecDef's office or from the Navy itself about the request for more information on the studies?*

Ms. Meredith Wilson stated her question was answered during the presentation.

2. *Does the BWS think this reduction in the surrogate is appropriate? How should this be taken into account for the interpreting of new Extended Drinking Water Monitoring Plan results due to the expected decrease in low-level TPH detect?*

Deputy Manager Kawata responded that the BWS looked at the Navy's data. The laboratory that the Navy used added 2000 micrograms per liter (mg/L) of surrogate. The BWS adds 20 micrograms per liter of the same surrogate, which relates to the levels that the BWS measures.

Ms. Wilson asked if the amount of surrogates added to all the testing for the past two years by the Navy's laboratory was inappropriate.

Deputy Manager Kawata replied that from the BWS's standpoint, 2000 micrograms per liter is inappropriate.

Ms. Wilson inquired, based on the Navy's rationale, if that is the reason for their TPH detections.

Deputy Manager Kawata responded that that was not the entire reason; there were other issues. For example, the Navy did not dechlorinate the samples collected. He explained that Method 8015 requires dechlorinating if collecting and analyzing chlorinated water samples. The Navy's water system is chlorinated; therefore, the laboratory should have been notified, and the sample bottles should have had a dechlorinating agent.

Ms. Wilson commented that it is a shame that the person who signed on the long-term monitoring (LTM) did not check that all requirements were met.

Jamie Simic	<i>Mentioned and commented on the 2005 - January 2016 COPC Recommendation Long Term Monitoring of 10 wells surrounding the Red Hill Bulk Fuel Storage, and a response letter dated June 2024 from the Navy regarding AFFF found.</i>
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Manager Lau asked Ms. Jamie Simic if the letter she mentioned was available on the Navy's Safe Water website.

Ms. Simic replied that the letter was shared amongst advocates and would forward a copy to Manager Lau.

Ms. Simic inquired about how to move forward now that the Navy has admitted that they cannot test further due to degrading lines and pipes.

Manager Lau responded that the community must continue to demand transparency from the Navy. As mentioned earlier, there is no need to redact information regarding the Red Hill Bulk Fuel Storage facility since it is near closure. This is a community-wide concern; therefore, the Navy and the regulators need to continue to engage and inform the community.

Ms. Simic asked if the BWS knew the 77,000 gallons of fuel and water mixture was removed via suction and another 140 gallons skimmed via skimming pads in December 2021.

Manager Lau replied that the BWS had heard that those amounts of fuel had been recovered by divers when they were sent into the Red Hill Shaft.

Ms. Simic asked if anyone knew where that fuel went.

Manager Lau replied that the BWS does not know exactly where it went in the environment; however, the remaining fuel may have traveled into the unsaturated rock, into the ground, or moving with the groundwater.

Ms. Simic inquired if that is the reason that the Navy customers are still experiencing issues since the contamination could be moving with the groundwater.

Manager Lau responded that the Navy is pumping water from their Waiawa Shaft to supply their customers with drinking water and no longer pumping water from the Red Hill Shaft and the Aiea/Halawa Shaft. Further investigation must be done on the Navy's water system to

determine what may have been absorbed and what still resides in the water system or the plumbing.

Ms. Simic asked if the multiple mixtures of leaks over the years into the water system, the environment, the groundwater, and travel could have been absorbed into the homes' plumbing, causing the different sicknesses in the community.

Manager Lau replied that the Navy's Red Hill Shaft has had various leaks and has detected various fuel components in their drinking water.

Ms. Simic stated she was referring to leaks in 2010 and 2014.

Manager Lau shared that the BWS has raised questions over the last ten years. Since then, the BWS has observed that over the years, the test results from the Red Hill Shaft indicated higher concentrations of petroleum products and chemicals and elevated to higher concentrations months prior to the November 2021 leak.

Ms. Simic shared that she got very sick during 2021.

Chair Anthony commented that sharing information, data, and details surrounding the different contaminants and the amount of contamination affecting the community, the environment, and the aquifer has been very slow and excruciating. It is imperative that everyone is aware so that information can be shared.

Manager Lau added that the ongoing water testing in the Navy's water system also needs more objectivity to ensure the integrity of those test results and how they were taken.

Chair Anthony agreed with Manager Lau.

ITEM FOR INFORMATION NO. 2

“June 24, 2024

WATER SYSTEM REVENUE BONDS - COMPLIANCE WITH RATE COVENANT
Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawai'i 96843
Chair and Members:

Subject: Water System Revenue Bonds – Compliance with Rate Covenant

In accordance with Article VIII, Section 8.02, Rates and Charges, of the Water System Revenue Bonds, Resolution No. 717, 2001, we have completed a review of the financial condition of the Board of Water Supply for the purpose of estimating whether the Net Revenues for the current fiscal year and the next succeeding fiscal year will be sufficient to comply with the rate covenant in Section 8.02.

Our review included an examination of the financial and accounting records, which we considered necessary to express an opinion on the adequacy of the department's rates and other charges such that Net Revenues shall not be less than the Net Revenue Requirement in each fiscal year.

In our opinion, Net Revenues for fiscal years 2024 and 2025 will not be less than the Net Revenue Requirement for such fiscal years.

The attached schedules present the actual and estimated revenues and expenditures in compliance with the above rate covenant.

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, Finance Division, gave the report.

Board Member Andaya thanked the BWS for staying in compliance with the rate covenant. He shared that he heard great feedback on the BWS's bond rating.

Manager Lau expressed his appreciation to the Finance Division for taking the lead.

Chair Anthony commented that the difference in the last fiscal compared to this fiscal indicates some flexibility.

Mr. Kaliko Lum Kee stated that the ratio comparison in Fiscal Year 2023 was above three; therefore, the BWS is doing well financially.

ITEM FOR INFORMATION NO. 3

“June 24, 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

Four aquifer index stations were in low groundwater condition for the production month of May 2024. Kaimukī, Pearl City, Punalu'u, and Waialua are in Caution Status. The monthly production average for May 2024 was 127.73 million gallons per day.

The Board of Water Supply rainfall index for the month of May 2024 was 283 percent of normal, with a 5-month moving average of 131 percent. As of June 4, 2024, the Hawai'i Drought Monitor shows no drought conditions across O'ahu. The National Weather Service is forecasting below-normal precipitation through at least October 2024.

Most monitoring wells exhibited stable to slightly increasing head levels for the month of May 2024, likely reflecting the seasonal lower production combined with relatively high rainfall for the past two months. Average monthly production for May 2024 was very similar to May 2023 and lower than the 5-year monthly average. Increased conservation messaging is recommended over the summer months.

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. There were no comments or discussion.

Manager Lau commented that there was amazing rain in May, which affects the island positively and negatively. Normally, drier areas are wet, and vegetation is growing, which means that during drier months, the vegetation will become fuel for potential wildland fires. He shared that Hawaiian Electric will conduct a public safety power shutoff beginning July on the Leeward coast.

Chair Anthony commented that the public safety power shutoff would affect the BWS as well since the BWS is limited to backup generators.

Manager Lau stated that the BWS has 90 plus wells and 90 plus booster pump stations throughout the BWS water system. The BWS has approximately a dozen backup generators to assist areas as necessary. During the public safety power shutoff, the BWS will have generators prepared to address the Leeward coast. As a reminder, Manager Lau mentioned that hurricane season began on June 1, 2024.

ITEM FOR INFORMATION NO. 4

“June 24, 2024

WATER MAIN
REPAIR
REPORT FOR
MAY 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 May 2024

Glenn Ah Yat, Acting Assistant Program Administrator, Field Operations Division, will report on water main repair work for the month of May 2024.

Respectfully submitted,

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

Attachment”

The foregoing was for information only.

DISCUSSION:

Glenn Ah Yat, Acting Assistant Program Administrator, Field Operations Division, gave the report.

Manager Lau and Chair Anthony thanked the Field Operations Division for their hard work in repairing main breaks and working on leaks detected.

MOTION TO
ADJOURN

There being no further business, Chair Anthony, at 3:11 PM, called for a motion to adjourn the Regular Session. Edwin Sniffen so moved, seconded by Jonathan Kaneshiro, and unanimously carried.

The minutes of the Regular Meeting held on June 24, 2024, are respectfully submitted,

JOY CRUZ-ACHIU

APPROVED:

NĀ'ĀLEHU ANTHONY
Chair of the Board

Date

MINUTES

To watch the recording of this meeting, please click on the following link:
<https://vimeo.com/bwshonolulu/july-22-2024>. Closed captioning is available.

THE REGULAR MEETING OF THE BOARD OF WATER SUPPLY

July 22, 2024

At 2:00 PM on July 22, 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, via Zoom
Jonathan Kaneshiro, Vice Chair
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
Jewel Pharm, Assistant Program Administrator,
Customer Care Division
Kathleen Elliott-Pahinui, Information Officer,
Communications Office
Raelynn Nakabayashi, Executive Assistant I,
Executive Support Office
Wayne Tello, Acting Program Administrator,
Field Operations Division
Glenn Ah Yat, Acting Assistant Program
Administrator,
Field Operations Division
Kaliko Lum Kee, Acting Waterworks Controller,
Finance Division
Michele Thomas, Executive Assistant I,
Human Resources Office via Zoom
Henderson Nuuhiwa, Program Administrator,
Information Technology Division
Michael Matsuo, Land Administrator, Land Division
Roland Fenstemacher,
Water Quality Laboratory Director,
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-Achiu, Board Secretary
Kathy Mitchell, Administrative Services Officer
via Vimeo
Stella Bernardo, Information Specialist II,
Communications Office via Zoom
Michele Harman, Community Relations Specialist I,
Communications Office via Zoom
Keoni Mattos, Information Specialist II,
Communications Office
Ronald Wada, Assistant Program Administrator,
Information Technology Division
Kenrick Wong, Data Processing Systems Analyst V,
Information Technology Division
Sandra Moriki, Data Processing Systems Analyst V,
Information Technology Division
Jesse Kanda, Data Processing Systems Analyst IV,
Information Technology Division
Lyann Okada, Civil Engineer VI,
Information Technology Division
Chesley Calma, Data Processing Systems
Analyst III,
Information Technology Division
Genna Kaneshiro, Student Intern,
Communications Office
Ella Foley Gannon, Morgan,
Lewis, and Bockius, LLP
David Brown, Morgan, Lewis, and Bockius, LLP

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

Absent: Bryan P. Andaya, Board Member
Kapua Sproat, Board Member
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 'olelo no'eau e kālele ana i ke ko'iko'i o ka wai.

Chair Anthony translated: Aloha from the rising to the setting sun. Thank you all for coming together today for the people, the land, and the water. Today's Hawaiian Proverb helps us remember the importance of fresh water and land.

'Ōlelo 2482: **Ola i ka wai a ka 'ōpua.**

Chair Anthony translated 'ōlelo 2482: There is life in the water from the clouds.

Chair Anthony welcomed everyone to the July 22, 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.

Chair Anthony stated that providing safe, dependable, and affordable water requires the whole BWS team's efforts and may require staff to work during late hours and into the weekend. He recognized the Information Technology (IT) Division and a few team members for their performance in dealing with the challenges CrowdStrike brought on July 19 – 20, 2024.

Manager Ernest Lau shared that he was made aware of the CrowdStrike on the evening of Thursday, July 18, 2024, by Raelynn Nakabayashi, Executive Assistant I, Executive Support Office, which began affecting the BWS personal computers (PC). Kenrick Wong, Data Processing System Analyst V, IT Division, explained to Manager Lau the effect of CrowdStrike and got his team working to protect the BWS's water data system. Manager Lau recognized the IT team members who assisted with CrowdStrike.

Mr. Kenrick Wong shared that although CrowdStrike was not a cybersecurity issue, he expected it would be a long recovery process. He stated with dedicated team members and their efforts, the BWS was able to recover more quickly than expected from the CrowdStrike issue.

Manager Lau inquired how many computers were affected.

Mr. Wong replied that up to 300 servers plus personal computers (PCs) were affected. Approximately 1,000 total computers were affected, and the IT team was required to work on each affected computer individually.

Henderson Nuuhiwa, Program Administrator, Information Technology Division, shared that he was on vacation when the CrowdStrike issue occurred. He explained that Mr. Wong, who was in charge of the division while on vacation, contacted him about the situation and shared his plan to address the issue. He was comfortable with Mr. Wong's plan and supported his actions to take charge of the situation. Mr. Nuuhiwa expressed his appreciation for his team's immediate response to the CrowdStrike issue and his confidence in the division's performance.

Manager Lau and Chair Anthony expressed their gratitude for the IT Division's diligence.

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. 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. We have been accepting written or oral testimony for today's meeting. Instructions and an online submittal form are available at 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 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. 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.

Vice Chair Jonathan Kaneshiro responded, aye, and was present in the Board room, and Board Member Gene Albano responded, aye, and was present in the Board room. He welcomed the BWS's newest Board Member, Board Member Lance Wilhem, who responded, aye, and was present in the Board room. Chair Anthony disclosed that he was joining Zoom and was alone at his location. Board Members Bryan Andaya, Kapua Sproat, and Edwin Sniffen were absent.

Chair Anthony introduced those in the Boardroom: Manager Ernest Lau, Deputy Manager Erwin Kawata, Board Secretary Joy L. Cruz-Achui, Manager Secretary Kimberly Kuwaye, and Information Specialist II Keoni Mattos. 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 June 24, 2024.

MOTION
TO APPROVE

Jonathan Kaneshiro and Gene Albano motioned and seconded, respectively, to approve the Minutes of the Regular Meeting Held on June 24, 2024.

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

Due to the lack of aye votes, the Approval of the Minutes of the Regular Meeting Held on June 24, 2024, was deferred to the August 26, 2024 Board meeting.

ADOPTION OF
RESOLUTION NO.
989, 2024,
AUTHORIZING THE
MANAGER AND
CHIEF ENGINEER,
BOARD OF WATER
SUPPLY, TO ACT
ON THE BOARD'S
BEHALF IN ALL
MATTERS
RELATED TO THE
ABROGATION OF
QUITCLAIM DEED,
DATED APRIL 5,
2001, CONTRACT
No. 09-HI-2223,
RELATING TO
THE KALAELOA
SEAWATER
DESALINATION
FACILITY
PROPERTY
SITUATE AT
HONOULIULI,
'EWA, O'AHU,
HAWAI'I, TMK:
9-1-31:028

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

Chair and Members:

Subject: Adoption of Resolution No.989, 2024, Authorizing the Manager and Chief Engineer, Board of Water Supply to Act on the Board's Behalf in All Matters Related to the Abrogation of Quitclaim Deed, Dated April 5, 2001, Contract No. 09-HI-2223, Relating to the Kalaeloa Seawater Desalination Facility Property Situate at Honouliuli, 'Ewa, O'ahu, Hawai'i, TMK: 9-1-31:028

We recommend approval of Resolution No. 989, 2024, authorizing the Manager and Chief Engineer, Board of Water Supply (BWS), to act on the Board's behalf in all matters related to the abrogation of Quitclaim Deed, Contract No. 09-HI-2223, relating to the Kalaeloa Seawater Desalination Facility site.

The U.S. Department of Health and Human Services (DHHS) is requiring a Board resolution to pursue abrogation of the deed requirements and possible payments and credits, as determined in subsequent abrogation discussions. Abrogation is a release or buyout from the restrictions contained in the Deed used to transfer the property to the Grantee pursuant to 40 U.S.C. §550(d), specifically the time period in which the desalination facility would need to be constructed and placed in use. BWS met with DHHS on July 11, 2024, to discuss the abrogation process and was informed that any costs BWS has expended for improvements to the site, design and due diligence work, procurement of the design operate-build-maintain service agreement, etc., could be credited against the fair market value of the site. Fair market value would be based on an appraisal that we are in the process of conducting.

BWS acquired the 20.029-acre parcel for a seawater desalination facility through a public benefit conveyance as part of the Base Realignment and Closure process for Naval Air Station Barbers Point. The quitclaim deed requires the desalination facility be built and placed in operation within three (3) years. We were unable to meet this deadline and received approval to extend the deed requirements to have the desalination plant built and in operation by May 2024. Project and procurement complexity, inflationary pressures, and delays and supply chain issues resulting from the COVID-19 pandemic, however, affected the project schedule. Our request for another deed extension, dated April 2, 2024, was denied by DHHS in June 2024, despite the fact that BWS had entered into a long-

term design, build, operate, and maintain service agreement with Kalaeloa Desalco, LLC in June 2023.

The Kalaeloa seawater reverse osmosis desalination facility in James Campbell Industrial Park will provide high-quality potable water to meet the growing water needs of the 'Ewa District, the secondary urban center. In addition, seawater desalination will supplement existing groundwater supplies and increase system resilience during periods of intense drought from climate change.

Respectfully Submitted,

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

Attachment”

DISCUSSION: Michael Matsuo, Land Administrator, Land Division, and Barry Usagawa, Program Administrator, Water Resources Division, gave the report.

Board Member Gene Albano inquired if the BWS anticipates any issues with the government regarding the abrogation of the Quitclaim Deed.

Mr. Michael Matsuo responded that once the abrogation is approved, the BWS is considered to have bought the property from the government; therefore, all restrictions will be lifted.

Manager Lau shared that the Department of Health and Human Services (DHHS) recognizes the BWS's efforts and its investments in the property; therefore, it will work with the BWS. He stated that the DHHS will no longer be involved once the BWS purchases the property.

Mr. Barry Usagawa commented that the credits for project infrastructure costs should minimize the BWS payments for the abrogation to the DHHS.

Manager Lau asked for the Board's support in adopting resolution no. 989, 2024, so the BWS can move forward with the purchase of the property with the credits and conditions that the DHHS has on the property.

Vice Chair Jonathan Kaneshiro asked if the Board approves the abrogation, would the BWS own the parcel in terms of fees.

Manager Lau replied no, there will be a quitclaim deed.

Mr. Matsuo added that the abrogation will allow the BWS to move forward with its plan to complete the Kalaeloa Seawater Desalination Facility without the time constraints imposed by the quitclaim deed.

Vice Chair Kaneshiro asked when the groundbreaking for the Kalaeloa Seawater Desalination Facility will begin.

Mr. Barry Usagawa stated that the project permitting and design are very complex. The BWS is currently in the design phase. Construction is currently scheduled to start by Fall 2025 and be completed in late 2027 or early 2028. Mr. Usagawa shared that the Design-Build-Operate-Maintenance (DBOM) contracts were awarded to Kalaeloa Desalco, LLC.

Manager Lau added that Nordic PCL Construction is the local contractor.

Mr. Usagawa shared that Kalaeloa Desalco, LLC., is a limited liability company that includes Perc Water, which owns and operates seawater desalination facilities based on the West Coast, and Consolidated Water, owns and operates desalination facilities in Florida and the Caribbean.

Vice Chair Kaneshiro inquired how technology has changed since venturing into desalination 20 years ago.

Mr. Usagawa stated that technology has improved significantly since 20 years ago. The reverse osmosis membrane and energy recovery technology are more efficient, and control systems have improved. He mentioned that the BWS's conservation and recycled water program helped defer the need for the project for two decades.

Chair Anthony shared that as an intern at the BWS many years ago, he heard that seawater desalination one day would come to fruition. Now, as part of the Board, he is glad to know of technology's progress over the years. He expressed his gratitude for the BWS's continued efforts.

MOTION
TO APPROVE

Gene Albano and Jonathan Kaneshiro motioned and seconded, respectively, to approve the Adoption of Resolution No. 989, 2024, Authorizing the manager and Chief Engineer, Board of Water Supply, to Act on the Board's Behalf in All Matters Related to the Abrogation of Quitclaim Deed, Contract No. 09-HI-2223, Dated April 5, 2001, Relating to the Kalaeloa Seawater Desalination Facility Property Situate at Honouliuli, 'Ewa, O'ahu, Hawai'i, TMK: 9-1-031:028.

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

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

ADOPTION OF RESOLUTION NO. 989, 2024,
 AUTHORIZING THE MANAGER AND CHIEF ENGINEER,
 BOARD OF WATER SUPPLY, TO ACT ON THE BOARD'S
 BEHALF IN ALL MATTERS RELATED TO THE
 ABROGATION OF QUITCLAIM DEED, DATED APRIL 5,
 2001, CONTRACT NO. 09-HI-2223, RELATING TO THE
 KALAELOA SEAWATER DESALINATION FACILITY
 PROPERTY SITUATE AT HONOULIULI, 'EWA, O'AHU,
 HAWAII, TMK: 9-1-31:028 WAS ADOPTED ON JULY 22,
 2024

	AYE	NO	COMMENT
NĀ'ĀLEHU ANTHONY	X		
JONATHAN KANESHIRO	X		
BRYAN P. ANDAYA			ABSENT
KAPUA SPROAT			ABSENT
LANCE WILHELM	X		
EDWIN H. SNIFFEN			ABSENT
GENE C. ALBANO	X		

“July 22, 2024

APPROVAL TO
ACCEPT
DESIGNATION
OF THE
BOARD OF
WATER SUPPLY
(BWS) AS THE
PERMITTING
CITY AGENCY
UNDER CITY
ORDINANCE
22-1

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

Chair and Members:

Subject: Approval to Accept Designation of the Board of Water
Supply (BWS) as the Permitting City Agency Under
City Ordinance 22-1

City Ordinance 22-1 creates a requirement to obtain a permit from the City to operate an underground storage tank or tank system that has a capacity to store more than 100,000 gallons of any regulated substance. The ordinance further requires the mayor to designate the department or agency responsible to issue and enforce the permit. The purpose of the ordinance is to protect the purity of Oahu’s limited groundwater resources, given the past fuel releases and the detection of petroleum contaminants in groundwater from the Red Hill Bulk Fuel Storage Facility.

Mayor Rick Blangiardi, in the attached letter, has selected the Board of Water Supply (BWS) as the permitting agency pursuant to Ordinance 22-1. We support this selection and request Board approval to accept such designation of BWS as the responsible city agency under Ordinance 22-1.

Respectfully Submitted,

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

Attachment”

DISCUSSION: Erwin Kawata, Deputy Manager, gave the report.

Board Member Lance Wilhelm inquired if the BWS had a sense of how many permit applications the BWS would be responsible for annually.

Manager Lau responded that the BWS does not anticipate many permit applications since O’ahu does not have a lot of tank facilities with a capacity of over 100,000 gallons. The City Council passed Ordinance 22-1 in February 2022, after the November 2021 Red Hill contamination spill. The Ordinance 22-1 allows the City to regulate facilities storing regulated substances. It is important that the City have a role in regulating such facilities. He shared that, for example, if the Navy decided to reuse the Red Hill Bulk Fuel Storage Tank Facility after the tanks had been emptied, it would be required to apply for a permit with the BWS.

Vice Chair Kaneshiro asked if the purpose of the permit is to provide safety or limit regulated substances that could cause danger to water resources.

Deputy Manager Kawata replied that the permit regulates storage facilities storing regulated substances of over 100,000 gallons, including hazardous materials such as various oils or diesel.

Vice Chair Kaneshiro inquired if the permit would apply to private water well systems.

Manager Lau responded that the permit would not apply to private water well systems managed by the Commission on Water Resources (CWRM) under the Hawai'i State Water Code, Chapter 174C. He explained that Ordinance 22-1 would allow the BWS to assist the Hawai'i State and the Department of Health (DOH) in regulating storage facilities containing regulated substances.

Board Member Wilhelm inquired if the application for a permit includes the installation of a tank and is not necessarily for ongoing operation and whether the permit needs to be renewed over time.

Deputy Manager Kawata stated that the permit would be for storage and operation of the storage facility.

Manager Lau added that before a permit is granted, the applicant would be subject to various requirements, such as leak maintenance, monitoring, and inspections, similar to the existing DOH regulations. The BWS would assist with managing and overseeing the operations of an underground storage facility.

Board Member Wilhelm inquired if ongoing reports would be shared with the BWS.

Deputy Manager Kawata responded yes.

Manager Lau stated that the DOH currently regulates underground storage tanks under the Environmental Protection Agency (EPA). Ordinance 22-1 authorizes the BWS as an additional regulator and requires a permit that meets state statutory requirements.

Chair Anthony asked how the DOH's authority is affected by Ordinance 22-1.

Manager Lau replied that Ordinance 22-1 enables the BWS to complement the DOH's authority.

Chair Anthony agreed that the DOH and the BWS working together to review and oversee is complementary.

Manager Lau shared that Ordinance 22-1 gives the BWS a new role as a regulator and a major stakeholder in the use and preservation of water.

Deputy Manager Kawata further added that as a regulator, the role complements the BWS source water protection program and its development in providing additional oversight and management.

Board Member Wilhelm inquired if the BWS will require additional staffing to fulfill the responsibility of a regulator.

Manager Lau replied that the new role as a regulator may require additional staffing to implement the program. The BWS will study and build its staffing as necessary to perform its duties according to Ordinance 22-1.

Chair Anthony shared that the BWS was once a water regulator. He commented that the BWS has worked hard to ensure that the regulations regarding Red Hill are upheld to the law and meet the charter. Chair Anthony asked Deputy Manager Kawata if the BWS would be able to up perform its duty as a regulator.

Deputy Manager Kawata replied yes; from inception, the BWS has managed, oversaw, and protected our island's water resources. The regulatory role this ordinance brings is somewhat new, but the BWS has always historically adapted to the challenges that have come up and has always been able to find a way to adapt and meet those challenges. He stated, from that standpoint, this is nothing new.

Chair Anthony thanked Manager Lau and Deputy Manager Kawata for their leadership at the BWS.

MOTION
TO APPROVE

Jonathan Kaneshiro and Gene Albano motioned and seconded, respectively the Approval to Accept Designation of the Board of Water Supply (BWS) as the Permitting City Agency Under City Ordinance 22-1 and to Authorize the Manager and Chief Engineer to take all actions, reasonable, necessary, and appropriate to develop and implement a regulatory program under the City Ordinance 22-1

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

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

APPROVAL TO ACCEPT DESIGNATION OF THE BOARD OF WATER SUPPLY (BWS) AS THE PERMITTING CITY AGENCY UNDER CITY ORDINANCE 22-1 WAS APPROVED ON JULY 22, 2024

	AYE	NO	COMMENT
NĀ'ĀLEHU ANTHONY	X		
JONATHAN KANESHIRO	X		
BRYAN P. ANDAYA			ABSENT
KAPUA SPROAT			ABSENT
LANCE WILHELM	X		
EDWIN H. SNIFFEN			ABSENT
GENE C. ALBANO	X		

ITEM FOR INFORMATION NO. 1

“July 22, 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 asked Ms. Joyce Lin, who ordered the report from the Rand
Corporation.

Ms. Lin replied that the Navy ordered the report because Congress
required the Navy to submit a report.

Manager Lau inquired if Congress had responded to the report.

Ms. Lin shared that Congress is still reviewing the report submitted by the
Navy; therefore, no response has been released.

Vice Chair Kaneshiro asked if Congress reviews all available documents
and information before making any recommendations and deciding what
is to happen with Red Hill.

Manager Lau replied that he was unsure who would make the final
decision on the closure method of the Red Hill fuel tanks. He shared that
Congress controls the budget; however, the National Defense
Authorization Act (NDAA) states Congress's intent and direction but not
the funding source.

Chair Anthony referred to the PowerPoint (PPT), slide seven, titled PFAS
Detection in Soil. He asked for clarification; the report states that 4700

environment and does not degrade very easily. He is interested to see how PFAS is detected in the future.

Chair Anthony commented that he hopes the Navy consistently tests the affected area. He understands that soil was removed from the area, but the question still remains: Was all the soil removed or in time? If not, where is the contamination moving to? Chair Anthony would like to know more about how it affects the land before it reaches the water and monitoring wells.


Manager Lau shared that the Navy shared their PFAS and remedial investigation work plans at the Restoration Advisory Board (RAB) meeting.

Manager Lau shared some of his frustrations, referring to slide 5 of the PowerPoint (PPT), and shared that after the November 2022 spill, he asked the Navy if PFAS was used at Red Hill. The Navy responded that PFAS was not used at Red Hill. However, the Navy's report included the photo below, indicating that between the 1960s and 2018, a 200-gallon aqueous-film-forming foam (AFFF) above-ground tank was installed and used at the Red Hill facility. Manager Lau stated that 1,300 gallons of concentrated liquid spilled into the environment in November 2022 due to human error. The lack of transparency continues – how can one rebuild public trust without being transparent?

Known AFFF Sources within Red Hill Facility

- **1960s:** 200-gallon aqueous film-forming foam (AFFF) aboveground storage tank (AST) installed
- **2008:** AFFF AST removed
- **2018:** New AFFF system installation complete
- **November 29, 2022:** **AFFF Accidental Spill at Adit 6**
—1,100 gallons of AFFF concentrate were spilled from the fire suppression system

May 2024: All AFFF removed from Red Hill Facility



June 2024 AFFF = aqueous film-forming foam; AST = aboveground storage tank 44

Source: June 24, 2024, RAB Meeting Presentation

Chair Anthony agreed with Manager Lau that it is difficult to move forward without all the information and data shared.

ITEM FOR INFORMATION NO. 2

“July 22, 2024

RECRUITMENT
STATUS

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

Chair and Members:

Subject: Recruitment Status

Michele L. Thomas, Executive Assistant, Human Resources Office, will be presenting an update on the Recruitment Status for the period of April 2024 to June 2024.

Respectfully Submitted,

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

Attachment”

The foregoing was for information only.

DISCUSSION:

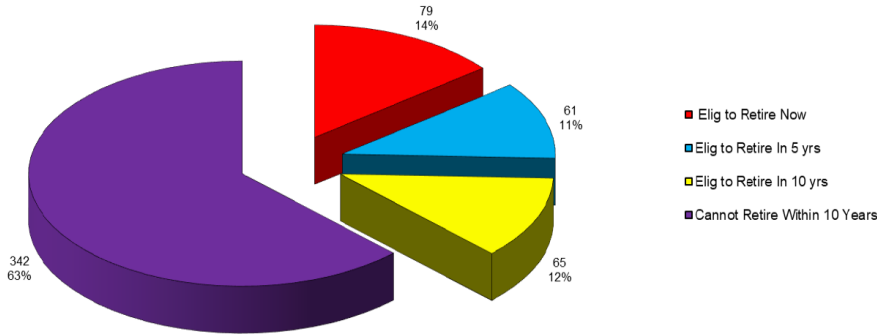
Michele Thomas, Executive Assistant I, Human Resources Office, gave the report.

Chair Anthony requested at the next Recruitment Status update that Ms. Michele Thomas provide how the different recruitment efforts are helping with filling vacant positions and the challenges the BWS face to fill positions. He suggested that the BWS form a permitted interaction group (PIG) to brainstorm and discuss different strategies and options to fill positions.

Ms. Michele Thomas replied that the BWS has an ongoing PIG to discuss recruitment strategies. The PIG has had one meeting and will be scheduled to meet again.

Chair Anthony commented that the retirement projections pie chart is very helpful. However, it would also be helpful to understand how many of those positions are technical or leadership positions so there would be a better understanding of the urgency of filling those positions.

**BWS Retirement Projections
As of June 30, 2024**



ITEM FOR INFORMATION NO. 3

“July 22, 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

Four aquifer index stations were in low groundwater condition for the production month of June 2024. Kaimukī, Pearl City, Punalu'u, and Waialua are in Caution Status. The monthly production average for June 2024 was 138.70 million gallons per day.

The Board of Water Supply rainfall index for the month of June 2024 was 61 percent of normal, with a 5-month moving average of 133 percent. As of July 2, 2024, the Hawai'i Drought Monitor shows abnormally dry conditions across the entire island of O'ahu. The National Weather Service is forecasting below-normal precipitation through at least October 2024.

Most monitoring wells exhibited slightly increasing head levels for the month of June 2024, likely reflecting the relatively high rainfall in April and May. Average monthly production for June 2024 was slightly higher than for June 2023 but lower than the 5-year monthly average. Increased conservation messaging is recommended over the summer months.

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. There were no comments or discussion.

ITEM FOR INFORMATION NO. 4

“June 24, 2024

WATER MAIN
REPAIR
REPORT FOR
JUNE 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 June 2024

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

Manager Lau asked Mr. Wayne Tello to explain the satellite leak
detection process since the BWS welcomed a new Board member.

Mr. Wayne Tello explained that the BWS uses a satellite program
(Asterra) to help detect leaks by sending a signal to the BWS Leak
Detection Team. Upon receiving a signal, the BWS investigative team
would check the area with pipe locators and sounding equipment to set
overnight, determine the type of leak, and fix the issue.

Manager Lau stated that the program began as a pilot program. The
satellite can take photos, detect chlorinated water at the surface or below
the ground, and identify points of interest. The efficiency of locating leaks
has improved by 50% due to the use of the satellite.

Mr. Tello added that the number of main breaks has increased since the
use of the satellite, which helps identify points of interest but also helps
prevent some of the possible catastrophic breaks. He shared that the
investigative crew is made up of four team members who travel island-
wide.

Board Member Wilhelm asked if the satellite had ever detected a false
leak.

Manager Lau replied that the leaks detected by satellite technology were 50% actual leaks and 50% no leaks. However, satellite technology has improved the BWS's efficiency in finding leaks. He shared that the BWS water system is 2,100 miles long. Before using the satellite technology, the BWS's goal was to survey up to 700 miles of the water system, which would take up to three years to investigate the whole water system. Since implementing the satellite, the BWS has become more efficient in locating and repairing leaks.

MOTION TO
RECESS INTO
EXECUTIVE
SESSION

There being no further business, Chair Anthony, at 3:24 PM, called for a motion to adjourn the Open Session. Jonathan Kaneshiro so moved; seconded by Gene Albano and unanimously carried.

Upon unanimous approved motion, the Board recessed into Executive Session Pursuant to [HRS § 92-5 (a)(4)] at 3:25 PM to Consider Issues Pertaining to Matters Posted for Discussion at an Executive Session.

OPEN
SESSION

The Board reconvened in Open Session at 4:31 PM.

MOTION TO
ADJOURN

There being no further business, Chair Anthony, at 4:32 PM, called for a motion to adjourn the Regular Session. Lance Wilhelm so moved, seconded by Jonathan Kaneshiro, and unanimously carried.

The minutes of the Regular Meeting held on July 22, 2024, are respectfully submitted,

JOY CRUZ-ACHIU

APPROVED:

NĀ'ĀLEHU ANTHONY
Chair of the Board

Date

**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

RICK BLANGIARDI
MAYOR
MEIA

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

ERWIN M. KAWATA
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HOPE MANAKIA



NĀ'ĀLEHU ANTHONY, Chair
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EDWIN H. SNIFFEN, Ex-Officio
GENE C. ALBANO, P.E., Ex-Officio

August 26, 2024

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

Chair and Members:

Subject: Authorizing a Public Hearing to Consider a Proposed Amendment to the Fiscal Year 2025 Operating and Capital Improvement Program Budget of the Board of Water Supply

We recommend that the Board authorize a public hearing to be held at 2:00 p.m. on September 23, 2024, to consider a resolution to adopt the proposed Amended Operating and Capital Improvement Program (CIP) Budgets for the fiscal year beginning July 1, 2024, and ending June 30, 2025 (FY25).

This amendment is necessary to:

1. Increase funding in the Operating Budget of the Office of the Manager and Chief Engineer. The additional funds are required to evaluate and prepare the department to implement the authorities granted and delegated to the Board of Water Supply (BWS) via Ordinance 22-1, Relating to Underground Storage Tanks. The BWS approved acceptance of the designation as the permitting city agency under Ordinance 22-1 during the July 22, 2024, Board Meeting. Funding for a consulting contract will be required to assess feasibility and operational impacts.
2. Amend funding sources and amounts in the Capital Improvement Program Budget (CIP). These changes are required, specifically for the following FY25 CIP Projects:
 - a. Project No. 6: Environmental Investigation of Emerging Contaminants. Funding of \$4,900,00.00 was originally budgeted in the State Revolving Fund (SRF) to reflect an anticipated low-interest loan from

the Department of Health (DOH). Since the adoption of the FY25 Budget, the DOH has informed the BWS that the requested funds will be provided in the form of a Grant and on an annual reimbursement basis, subject to availability of federal appropriations. This amendment will reflect funding in the Operating Fund to cover project expenditures while the BWS works with the DOH to finalize the grant agreement.

- b. Project No. 7: Construction Management for Various BWS Construction Projects. Funding of \$2,000,000 was originally budgeted in the Operating Fund to support selected BWS construction projects. As our CIP grows and the regulatory environment changes, our workload in managing active construction projects increases. Additionally, as we deploy diversified funding strategies, the BWS will require additional Construction Management support to ensure projects remain on track and follow all legal and regulatory requirements.
3. Add funding for a new CIP Project in Section II. Renewal and Replacement, Treatment. This new project line is required to address the temporary installation of water treatment systems at various locations throughout the island.
4. Make amendments to the provisions of the Budget resolution, thereby allowing for temporary transfers. This will allow the BWS Manager and Chief Engineer to make temporary transfers, no longer than 12 months, from the Operating Fund to other Funds, as needed. This flexibility is required as the BWS pursues additional financing opportunities, such as grants, which may operate on a reimbursable basis only.

Attached is the draft of the "Notice of Public Hearing" to be published prior to the hearing date.

Respectfully submitted,



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

Attachment

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the BOARD OF WATER SUPPLY (BWS), CITY AND COUNTY OF HONOLULU, will hold a PUBLIC HEARING in the Board Room, Public Service Building, 630 South Beretania Street, on Monday, September 23, 2024, at 2:00 p.m. or soon thereafter, where all interested persons shall be afforded the opportunity of being heard on the adoption of the Proposed Amendment to the Fiscal Year (FY) 2025 Operating and Capital Improvement Program Budgets of the Board of Water Supply, beginning July 1, 2024, and ending June 30, 2025.

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

TESTIMONY CAN BE SUBMITTED AS FOLLOWS:

- Written testimony should include the submitter's address, email address, and phone number. Testimony should be received by Monday, September 23, 2024, at noon.

Submit written testimony by:

- Email to board@hbws.org
 - Online at boardofwatersupply.com/testimony
 - Mail to Board of Water Supply, 630 S. Beretania St., 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
- Online at 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, September 20, 2024, at noon.

- To testify in person at the Board of Water Supply, Public Service Building, 630 S. Beretania St., Honolulu, HI 96843, please pre-register by submitting your request by Monday, September 23, 2024:

- Email to board@hbws.org
- Online at 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.

MATERIALS AVAILABLE FOR INSPECTION

Meeting materials (“board packet” under HRS Section 92-7.5) are accessible at boardofwatersupply.com/boardmeetings.

VIEWING THE MEETING

The meeting will be viewable via live streaming on the BWS website:

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 (808) 748-5172 or email your request to board@hbws.org **at least three (3) business days prior to the meeting date**. If a response is received after the requested three (3) business days before the meeting date deadline, we will try to obtain the auxiliary aid/service or accommodation, but we cannot guarantee that request will be filled.

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

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

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GENE C. ALBANO, P.E., Ex-Officio

August 26, 2024

Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Chair and Members:

Subject: Review of the Navy's Technical Memorandum of Elevated Total Petroleum Hydrocarbon (TPH) Levels in the Joint Base Pearl Harbor Hickam (JBPHH) Water System

In April 2024, the Navy announced its technical memorandum report explaining the uptrend of TPH levels in drinking water samples from the Joint Base Pearl Harbor-Hickam (JBPHH) water system occurring in late 2023. The Navy report concluded the detections were the result of laboratory contamination and not the November 2021 jet fuel release from the Red Hill Bulk Fuel Storage Facility.

The department conducted an independent review of the Navy's technical memorandum. Erwin Kawata, Deputy Manager, will lead a discussion to present the review results.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Ernest Y. W. Lau', written in a cursive style.

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

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August 26, 2024

Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Chair and Members:

Subject: Polycyclic Aromatic Hydrocarbon (PAH) Detection at the
Board of Water Supply (BWS) Aiea Wells

Erwin Kawata, Deputy Manager, will discuss the detection of polycyclic aromatic hydrocarbons (PAH) at BWS Aiea Wells.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Ernest Y. W. Lau', is written over a white background.

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



POLYCYCLIC AROMATIC
HYDROCARBONS
DETECTED IN BOARD OF
WATER SUPPLY
AIEA WELLS

August 2024

boardofwatersupply.com

POLYCYCLIC AROMATIC HYDROCARBONS (PAH) DETECTED IN BWS AIEA WELLS

- Polycyclic aromatic hydrocarbons (PAHs) are a class of chemicals that occur naturally in coal and petroleum products like crude oil, and gasoline.
- PAH occur as complex mixtures of multiple related compounds and are persistent in groundwater.
- The PAH detections at BWS Aiea Wells (inactive wells) are the first time that BWS has observed PAHs in this well.



WHERE IS BWS AIEA WELLS ?

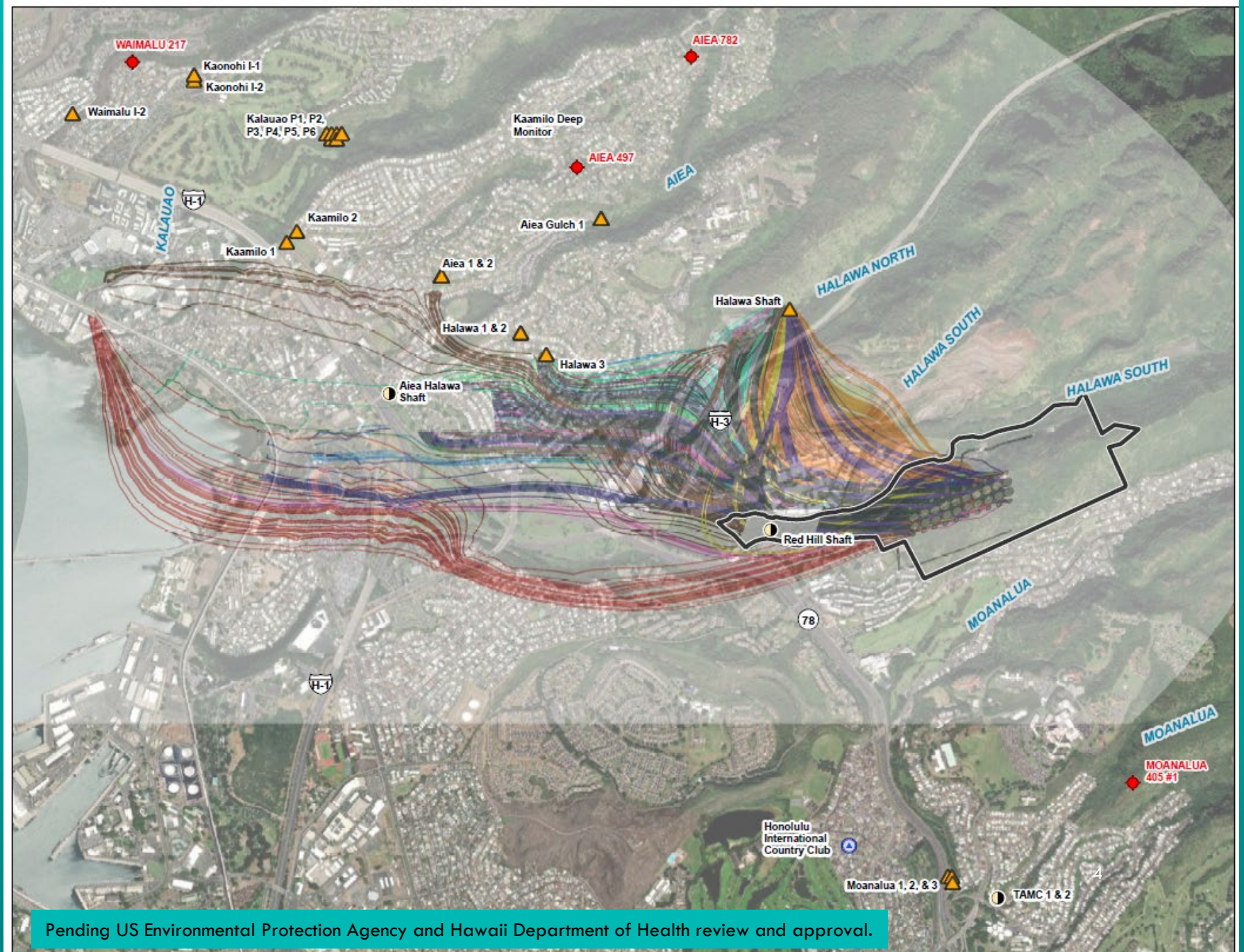
- 2.16 miles west of the Red Hill facility



Navy groundwater model predicts possible directions of contamination from Red Hill facility.

Navy particle track show BWS Aiea Wells to be potential receptor.

BWS stopped pumping Aiea Wells on December 8, 2021, soon after the Navy Red Hill Shaft contamination incident on November 20, 2021.



Pending US Environmental Protection Agency and Hawaii Department of Health review and approval.

PAH results for a water sample collected on 6/4/24.

Samples collected before and after this date showed no detection or exceedances of the Hawaii DOH action levels.

All values in µg/L	Sample Date	EPA Method 525.2		EPA Method 625		EPA MCL	Hawaii DOH Action level
		Result	MRL*	Result	MRL*		
1-Methylphenanthrene	6/4/24	<0.098	0.098	0.0113	0.005	None	None
Anthracene	6/4/24	<0.020	0.020	0.00852	0.005	None	1,600
Benz[a]anthracene	6/4/24	0.20	0.049	0.27	0.005	None	0.052
Benzo[a]pyrene	6/4/24	0.13	0.020	0.0999	0.005	0.2	0.2
Benzo[b]fluoranthene	6/4/24	0.19	0.020	0.213	0.005	None	0.058
Benzo[e]pyrene	6/4/24	NA	NA	0.0857	0.005	None	None
Benzo[g,h,i]perylene	6/4/24	<0.049	0.049	0.0489	0.005	None	65
Benzo[k]fluoranthene	6/4/24	0.077	0.020	0.189	0.005	None	0.36
Chrysene	6/4/24	0.11	0.020	0.199	0.005	None	0.24
Dibenz[a,h]anthracene	6/4/24	<0.049	0.049	0.0269	0.005	None	0.0048
Dibenzo[a,l]pyrene	6/4/24	NA	NA	0.0172	0.005	None	None
Fluoranthene	6/4/24	0.33	0.098	0.324	0.005	None	110
Indeno[1,2,3-cd] pyrene	6/4/24	<0.049	0.049	0.0786	0.005	None	0.018
Perylene	6/4/24	NA	NA	0.0361	0.005	None	None
Phenanthrene	6/4/24	<0.039	0.039	0.0231	0.005	None	250
Pyrene	6/4/24	0.31	0.049	0.356	0.005	None	110

*Minimum reporting limit
 NA = Not available
 < means less than

Navy Monitoring Well (NMW24)		BWS Aiea Wells		8/14/2024		
Sample date: 6/26/2024		Sample Date: 6/4/2024				
Analyte	Results	EPA Method 525.2 Result	EPA Method 625 Result	Navy SL ¹	EPA MCL ²	Hawaii DOH EAL ³
1-Methylnaphthalene	ND	<0.098	0.0113	10	none	10
2-Methylnaphthalene	ND	NA	NA	10	none	10
Anthracene	ND	<0.020	0.00852	0.18	none	1,600
Benzo(a)anthracene	0.099	0.2	0.27	0.029	none	0.052
Benzo(a)pyrene	0.092	0.13	0.0999	0.2	0.2	0.2
Benzo(b)fluoranthene	0.1	0.19	0.213	0.22	none	0.058
Benzo(e)pyrene	ND	NA	0.0857	NA	none	None
Benzo(g,h,i) perylene	0.065	<0.049	0.0489	0.13	none	65
Benzo(k)fluoranthene	0.099	0.077	0.189	0.4	none	0.36
Chrysene	0.09	0.11	0.199	1	none	0.24
Dibenz(a,h)anthracene	0.06	<0.049	0.0269	0.22	none	0.0048
Dibenzo(a,l)pyrene	ND	NA	0.0172	NA	none	None
Fluoranthene	0.23	0.33	0.324	13	none	110
Indeno(1,3,4-c,d)pyrene	0.08	<0.049	0.0786	0.095	none	0.018
Naphthalene	ND	NA	NA	17	none	17
Perylene	ND	NA	0.0361	NA	none	None
Phenanthrene	ND	<0.039	0.0231	214.076	none	250
Pyrene	ND	0.31	0.356	67.5	none	110

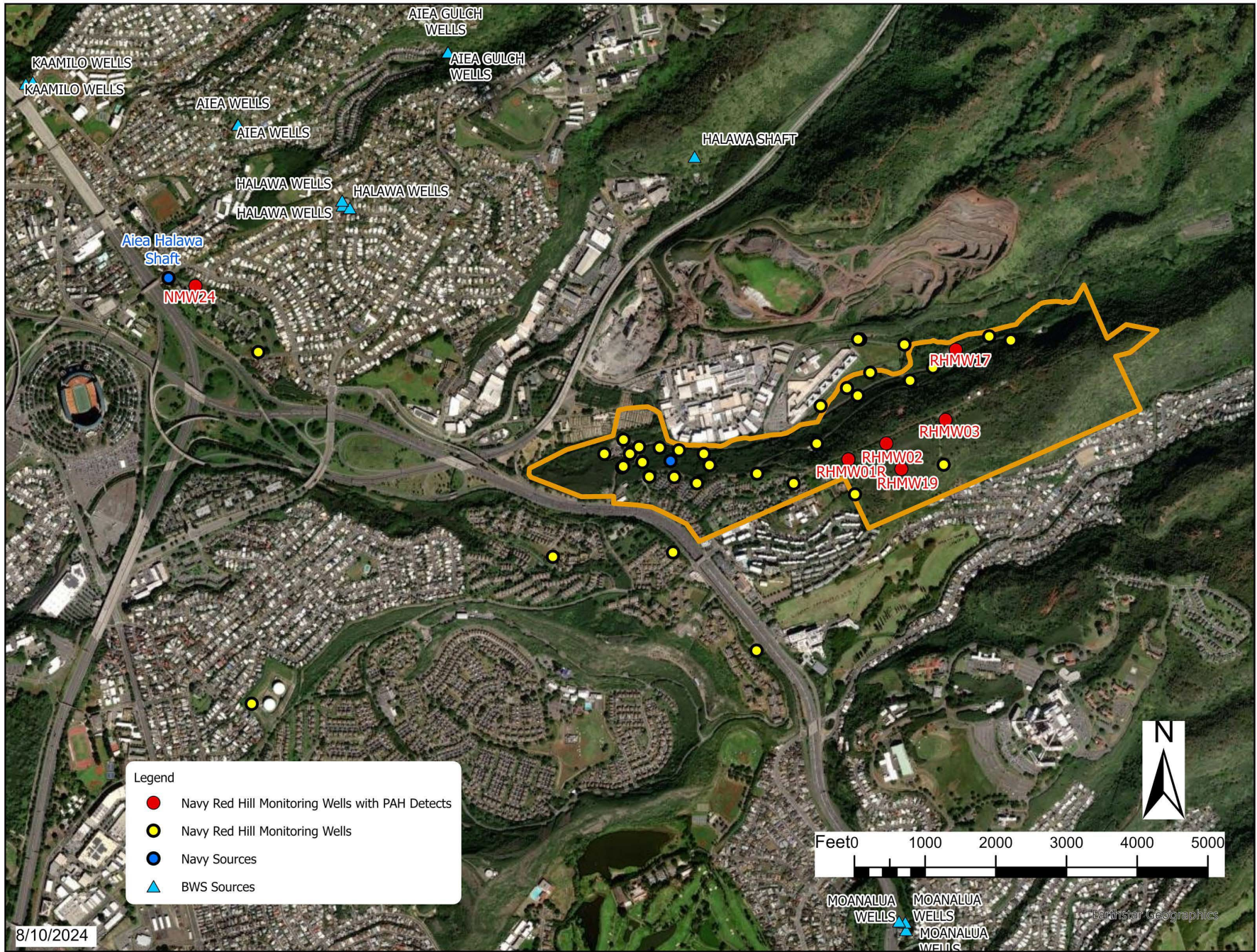
Note: all values in ppb or ug/L

1: Screening Level

2: Maximum Contaminant Level

3: Department of Health Environmental Action Level





TPH-Oil Plume Distribution over Time

Prepared for the Fuel Tank Advisory Committee Meeting
May 13, 2022



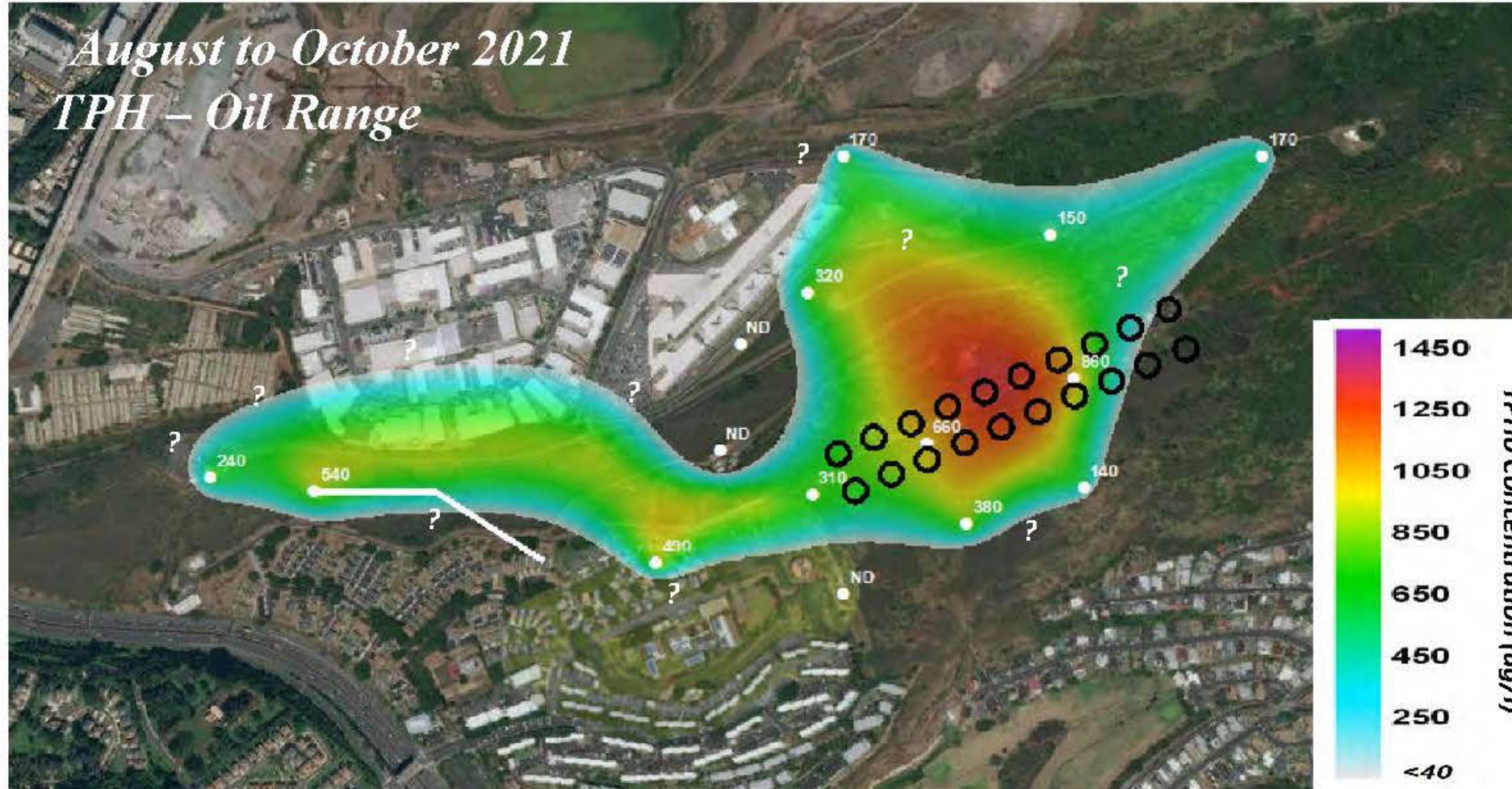
TPH-Oil Plume Distribution over Time

Prior & following May 2021 Release(s) EAL 500 ug/l



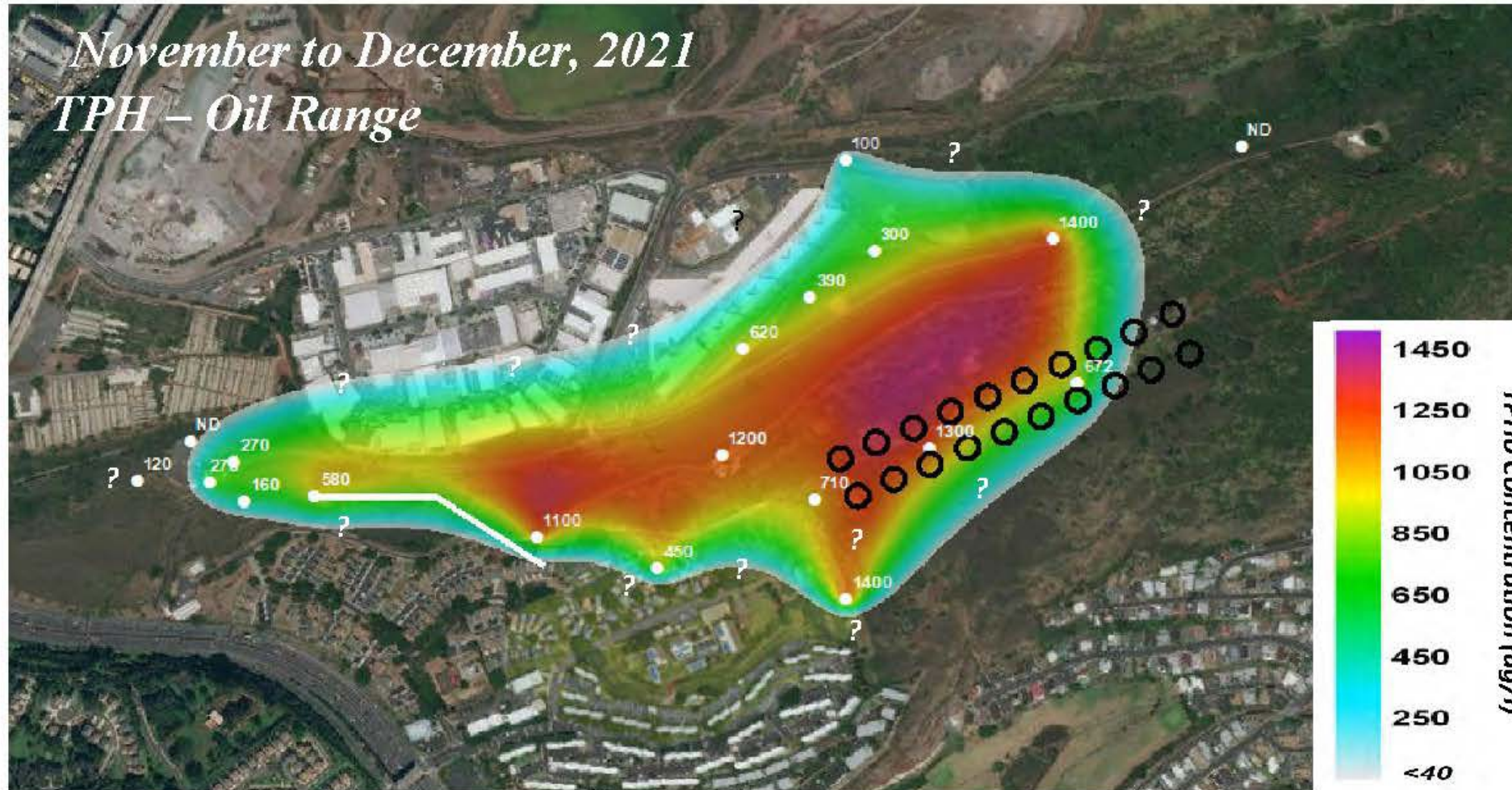
TPH-Oil Plume Distribution over Time

August to October 2021



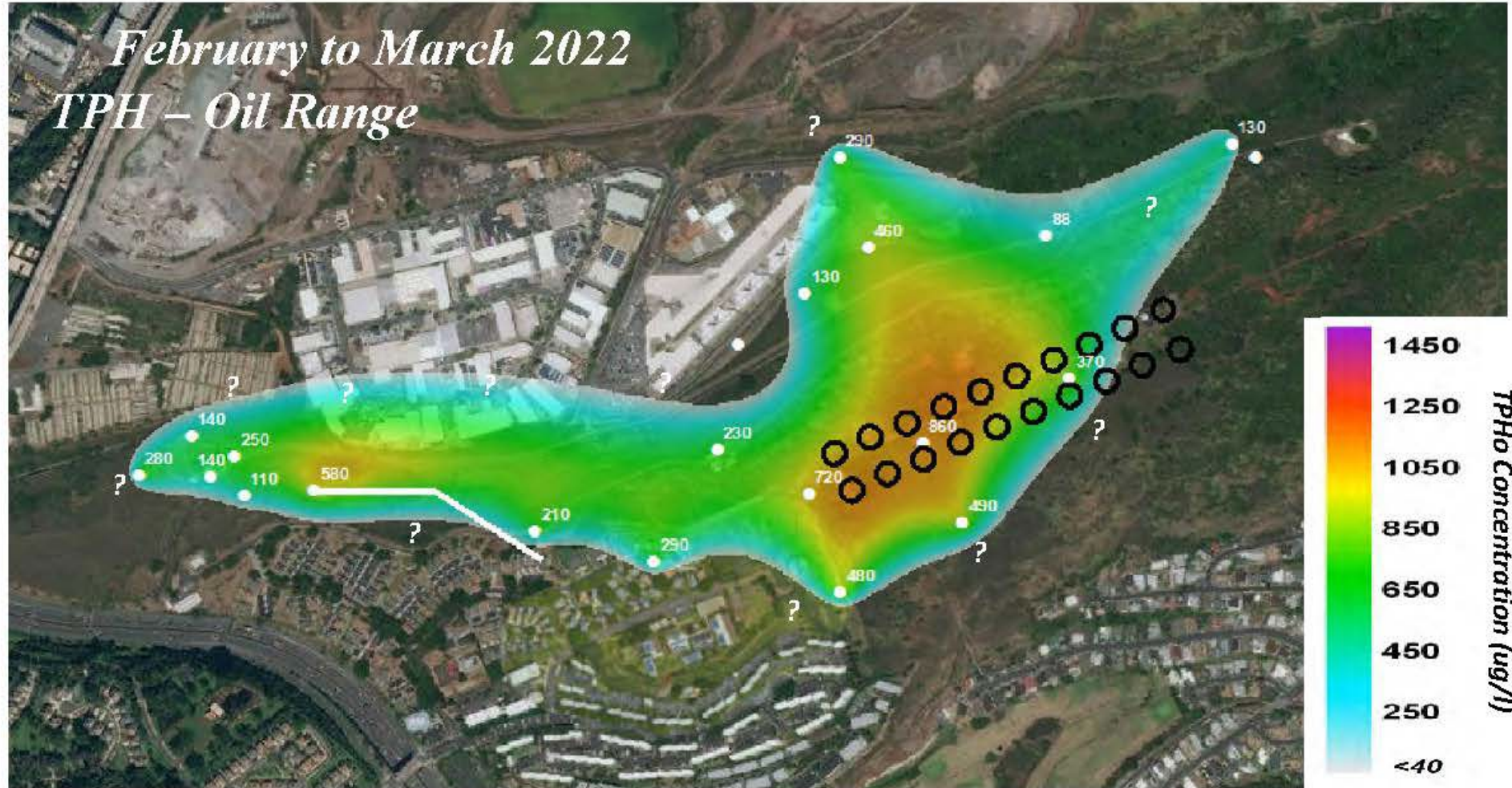
TPH-Oil Plume Distribution over Time

November to December, 2021



TPH-Oil Plume Distribution over Time

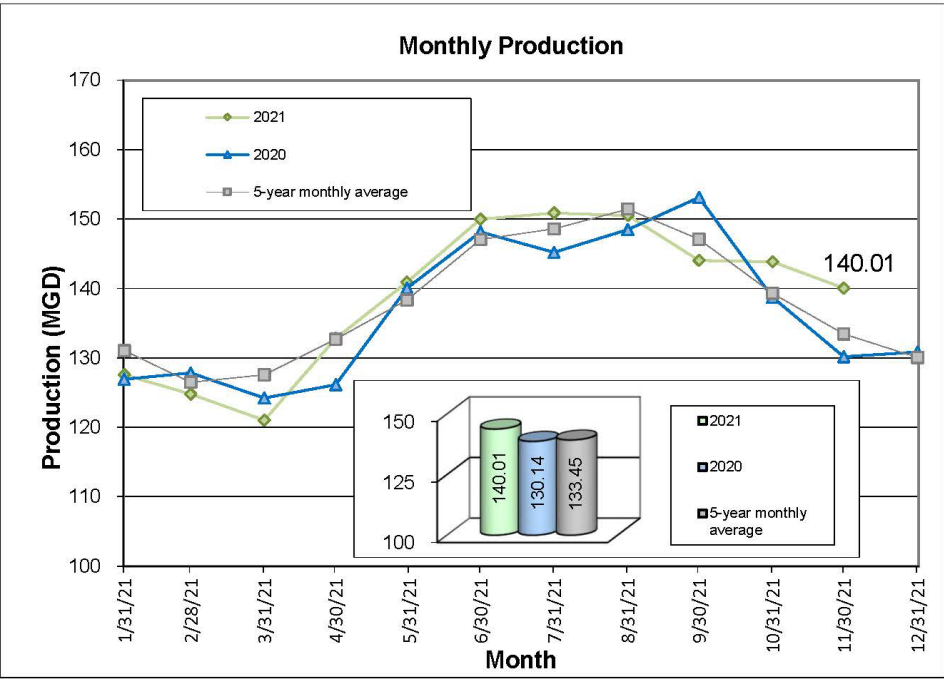
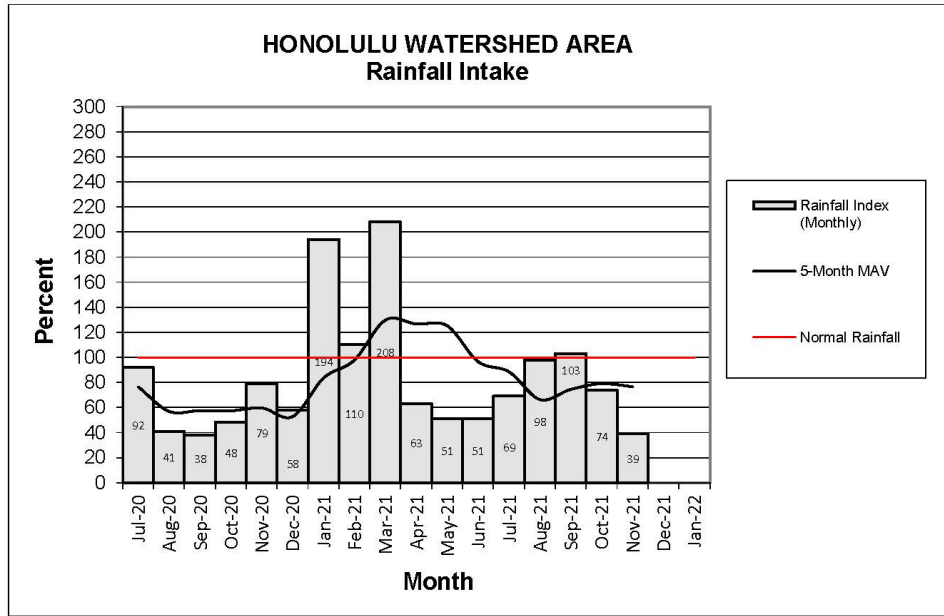
February to March 2022



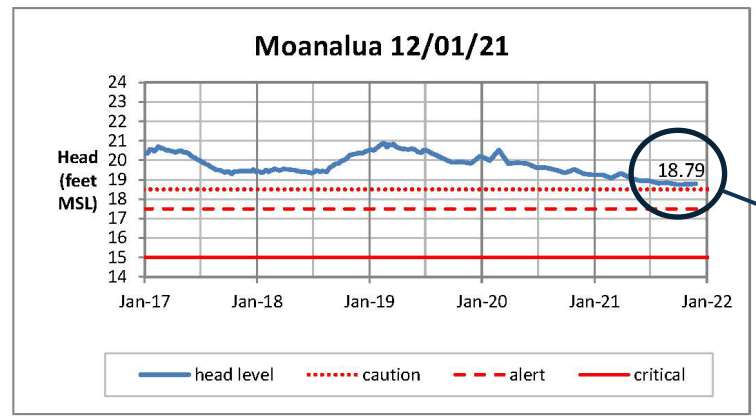
TPH-Oil Plume Distribution over Time

April 2022

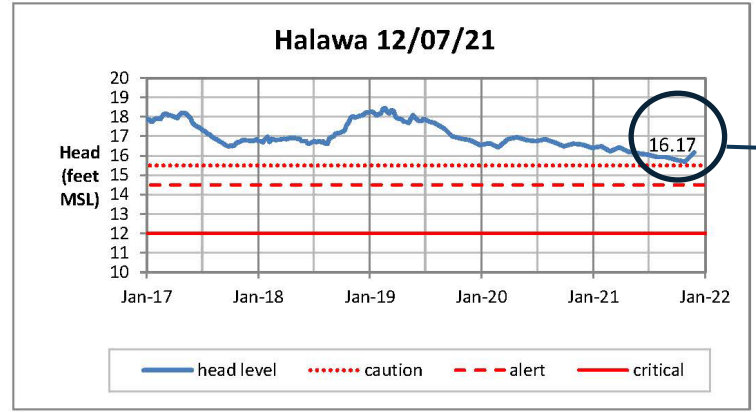




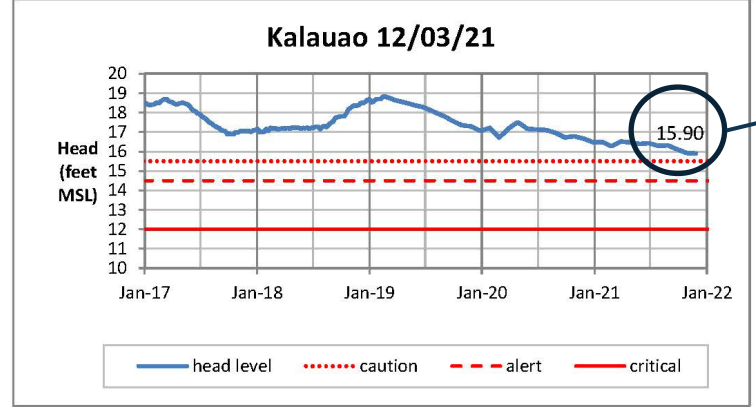
Head Report



18.79

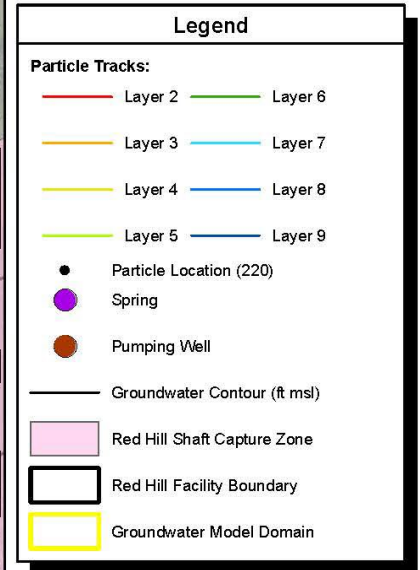
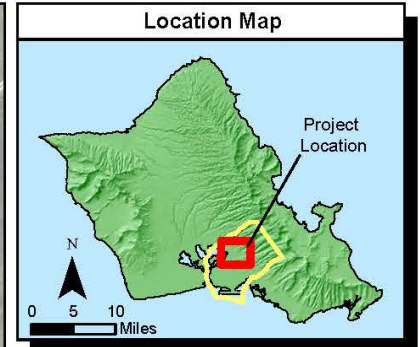
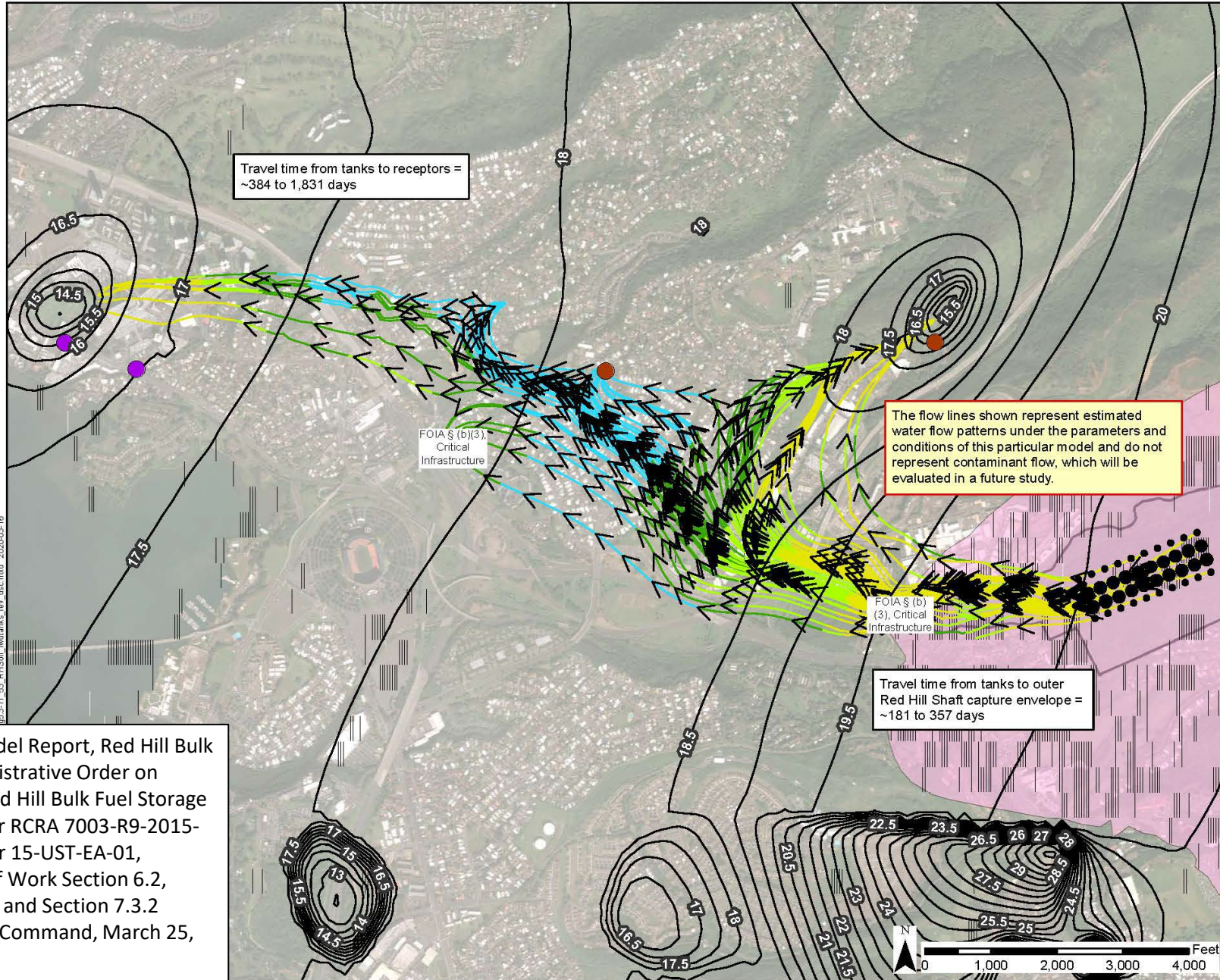


16.17



15.90





- Notes**
1. Map projection: NAD 1983 UTM Z4N feet.
 2. Base Map: DigitalGlobe, Inc. (DG) and NRCS. Publication Date: 2015
 3. Facility forward pathline arrows = 90 days.

Ref: Groundwater Flow Model Report, Red Hill Bulk Fuel Storage Facility, Administrative Order on Consent in the Matter of Red Hill Bulk Fuel Storage Facility, EPA Docket Number RCRA 7003-R9-2015-01 and DOH Docket Number 15-UST-EA-01, Attachment A, Statement of Work Section 6.2, Section 7.1.2, Section 7.2.2, and Section 7.3.2 Naval Facilities Engineering Command, March 25, 2020, Revision 00

Figure 5.3-11
 Model #53: Heterogeneous Basalt – Migration from Tanks and Red Hill Shaft Capture Zone for Red Hill Shaft Not Pumping and Hālawā Shaft Pumping at 12 MGD Groundwater Flow Model Report Red Hill Bulk Fuel Storage Facility JBPBH, O'ahu, HI

BWS notifies EPA and Hawaii DOH of PAH detections by letter dated July 8, 2024

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



July 8, 2024

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 SPRIGAT
EDWIN H. SNIFFEN, Ex-Officio
GENE C. ALBANO, P.E., Ex-Officio

Ms. Martha Guzman
Regional Administrator
US Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105

And

Dr. Kenneth S. Fink, M.D.
Director
State of Hawai'i
Department of Health
P.O. Box 3378
Honolulu, Hawai'i 96801-3378

Dear Ms. Guzman and Dr. Fink:

Subject: Polynuclear Aromatic Hydrocarbons (PAHs)
Detected at Board of Water Supply 'Aiea Wells

The Board of Water Supply (BWS) would like to inform the United States Environmental Protection Agency (EPA) and Hawai'i Department of Health (DOH) (collectively referred to as the "Regulatory Agencies") that we have detected polycyclic aromatic hydrocarbons (PAHs) at the BWS 'Aiea Wells in water samples collected on 5/13/24 and 6/4/24 using EPA Methods 525.2 and 625. The findings are summarized in the tables below, which include sample results collected before and after these dates for comparison purposes.

All values in µg/L	Sample Date	EPA 525.2 EEA 380-95827-1		EPA 625 EEA 380-95821-1	
		Result	MRL*	Result	MRL*
1-Methylphenanthrene	5/13/24	<0.097	0.097	<0.005	0.005
Anthracene	5/13/24	<0.019	0.019	<0.005	0.005
Benzo[a]anthracene	5/13/24	<0.048	0.048	0.0077	0.005
Benzo[a]pyrene	5/13/24	<0.019	0.019	<0.005	0.005
Benzo[b]fluoranthene	5/13/24	<0.019	0.019	0.0104	0.005
Benzo[e]pyrene	5/13/24	NA	NA	<0.005	0.005
Benzo[g,h,i]perylene	5/13/24	<0.048	0.048	<0.005	0.005

0.005
0.005
0.005
0.005
0.005
0.005
0.005
0.005
0.005

25.2 and EPA 625.

PAH Results by EPA 525.2
Not detected
Not detected

PA 625 also

PA 625 80-98637-2
MRL*
0.005
0.005
0.005
0.005
0.005
0.005
0.005
0.005
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0.005
0.005

awa Wells.

owed no PAH detections by EPA 525.2 and EPA 625.

PAH Results by EPA 625	EEA Lab Report	PAH Results by EPA 525.2
Not detected	380-97851-1	Not detected
Report pending	380-99971	Not detected

ed herein are enclosed for your review.

ember 8, 2021, soon after the Red Hill Shaft
The PAHs detections at BWS 'Aiea Wells are the first

nt plume moving through the aquifer in the area of the
24. The 5/13/24 samples may have recorded the leading
the well in the 6/4/24 sample as indicated by the higher
s compared to the results of the 5/13/24 sample. The
r these dates may represent the plume moving past the
fs in crude oil, we believe the contamination may be
elease into Red Hill Shaft and/or past fuel releases from
sults also indicate that contaminants can move in the
pumping conditions and can appear without warning in
akes the sizing and design of any contaminant removal
otentially cost prohibitive.

f the BWS' decision to shut down Hālawā Shaft, Hālawā
mber 2021 Joint Base Pearl Harbor Hickam (JBPHH) fuel
reated request to fully and expeditiously characterize and
the groundwater aquifer underlying the Red Hill facility.
er system to be exposed to fuel contamination appearing in
d be highly variable and unpredictable.

e Navy expedite characterizing the nature and extent of the
numerical groundwater flow model and the fate and
in the aquifer.

n Kawata, Deputy Manager, at 808-748-5066.

Very truly yours,

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

BWS receives reply letter from EPA and Hawaii DOH dated August 9, 2024



UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105



STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
P. O. BOX 3378
HONOLULU, HI 96801-3378

August 9, 2024

Ernest Y.W. Lau, P.E.
Manager and Chief Engineer
Honolulu Board of Water Supply
630 South Beretania Street
Honolulu, Hawai'i 96843
[via email only: elau@hbws.org]

Dear Manager and Chief Engineer Lau,

**SUBJECT: Request for Information Regarding Polycyclic Aromatic Hydrocarbons
Detected at Board of Water Supply 'Aiea Wells**

Thank you for your July 8, 2024 letter¹ notifying us of polycyclic aromatic hydrocarbons (PAHs) detected in samples taken from Honolulu Board of Water Supply (BWS) 'Aiea Wells on May 13 and June 4, 2024. We appreciate BWS' efforts to uphold our shared commitment to protecting public health and the environment and want to work together to accurately identify the root cause of these detections. We understand BWS believes these detections may be related to the November 2021 fuel spill from the Red Hill Facility. To better understand and further investigate these detections, we are interested in receiving additional background and data from the BWS about these detections. Both DOH and EPA would like to receive the following information as soon as possible:

1. Specific locations in BWS 'Aiea Wells where the samples were taken.
2. Sample collection methodology used.
3. Sample type (pre-/post-treatment).

¹ https://www.boardofwatersupply.com/bws/media/redhill/bws%20letters/BWS-Letter-to-EPA-DOH-re-PAH-at-Aiea-Wells-Draft2-Rev3_Final_EL-with-enclosures.pdf

attenuation of fuel
ume persistent

during and after

formation that

July 8, 2024 letter,
since the November
been relatively static
(detected)
e wells. Therefore, it
WS 'Aiea Wells.

oy sources, although
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mile northeast of the
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sugar mills in the
wells area in 1930.

S detected PAHs in

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were detected in
results could
sustained rains.

wa Wells are
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quivalent or greater
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Therefore, the

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limit) for Method

PAH detections.

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essment, Red
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regulators. As
the models
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forward to
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the Navy on the

EPA Red Hill
Ann Lee, DOH
226.

mmental Health
nt of Health



WHAT DOES THE PAH RESULTS MEAN?

- Reaffirms BWS concerns with past fuel releases from Red Hill and impact to aquifer and environment.
- Reaffirms decision to shut down three BWS wells (Halawa Shaft, Aiea Wells and Halawa Wells) soon after JBPHH water crisis.
- The three BWS wells to remain shut down indefinitely – Restart is uncertain.



WHAT DOES THE PAH RESULT MEAN? – CONT.

- Need better understanding of groundwater flow direction in the aquifer and how past fuel releases can be cleaned up.
- Further study is warranted to assess the potential long-term impact to the aquifer.
- Every Navy monitoring well and water source needs to be tested weekly for all PAHs using EPA method 525.2 and 625.



WHAT DOES THE PAH RESULTS MEAN? – CONT.

- Reaffirms the Red Hill WAI Alliance call for remediation and monitoring in the region.



QUESTIONS / DISCUSSION



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

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LANCE WILHELM
EDWIN H. SNIFFEN, Ex-Officio
GENE C. ALBANO, P.E., Ex-Officio

August 26, 2024

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

Four aquifer index stations were in low groundwater condition for the production month of July 2024. Pearl City, Punalu'u, and Waialua are in Caution Status. Kaimukī is in Alert Status. The monthly production average for July 2024 was 144.62 million gallons per day.

The Board of Water Supply rainfall index for the month of July 2024 was 93 percent of normal, with a 5-month moving average of 135 percent. As of August 6, 2024, the Hawai'i Drought Monitor shows moderate drought conditions across O'ahu, with severe drought conditions along the leeward coast. The National Weather Service is forecasting below-normal precipitation through October 2024.

Most monitoring wells exhibited stable to slightly decreasing head levels for the month of July 2024, likely reflecting the seasonal increase in production. Average monthly production for July 2024 was higher than for July 2023 and similar to the 5-year monthly average. Increased conservation messaging is recommended over the summer months.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Ernest Y. W. Lau'. The signature is fluid and cursive, with a long horizontal stroke extending to the left.

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

Attachment

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

POTABLE

STATION	MGD
HONOLULU (1)	
KULIOUOU	0.07
WAILUPE	0.00
AINA KOA	0.00
AINA KOA II	0.60
MANOA II	0.89
PALOLO	1.43
KAIMUKI HIGH	2.51
KAIMUKI LOW	2.67
WILDER	8.94
BERETANIA HIGH	1.13
BERETANIA LOW	2.46
KALIHI HIGH	3.47
KALIHI LOW	2.16
KAPALAMA	0.39
KALIHI SHAFT	8.33
MOANALUA	2.62
HALAWA SHAFT	0.00
KAAMILO	0.92
KALAUAO	9.28
PUNANANI	9.25
KAAHUMANU	0.33
HECO WAI AU	2.70
MANANA	0.34
WAIALAE IKI	0.53
WELLS SUBTOTAL:	61.00
MANOA TUNNEL	0.17
PALOLO TUNNEL	0.00
GRAVITY SUBTTL:	0.17
HONOLULU SUBTTL:	61.17

STATION	MGD
WINDWARD (2)	
WAIMANALO II	0.88
WAIMANALO III	0.00
KUOU I	1.56
KUOU II	0.13
KUOU III	0.75
LULUKU	0.86
HAIKU	0.68
IOLEKAA	0.00
KAHALUU	0.57
KAHANA	1.03
PUNALUU I	0.00
PUNALUU II	2.03
PUNALUU III	1.14
KALUANUI	1.29
MAAKUA	0.40
HAUULA	0.20
WELLS SUBTOTAL:	11.50
WAIM. TUNNELS I & II	0.00
WAIM. TUNNELS III&IV	0.19
WAIHEE INCL. WELLS	0.39
WAIHEE TUNNEL	4.51
LULUKU TUNNEL	0.22
HAIKU TUNNEL	0.28
KAHALUU TUNNEL	1.53
GRAVITY SUBTOTAL:	7.12
WIND. SUBTOTAL:	18.62

STATION	MGD
NORTH SHORE (3)	
KAHUKU	0.43
OPANA	0.99
WAIALEE I	0.35
WAIALEE II	0.01
HALEIWA	0.00
WAIALUA	1.88
N.SHORE SUBTOTAL:	3.66

STATION	MGD
MILILANI (4)	
MILILANI I	4.04
MILILANI II	0.00
MILILANI III	0.73
MILILANI IV	0.00
MILILANI SUBTOTAL:	4.77

STATION	MGD
WAHIAWA (5)	
WAHIAWA	0.00
WAHIAWA II	3.41
WAHIAWA SUBTOTAL:	3.41

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	1.64
WAIMALU I	0.00
NEWTOWN	1.91
WAI AU	1.92
PEARL CITY I	0.78
PEARL CITY II	1.12
PEARL CITY III	0.20
PEARL CITY SHAFT	0.93
PEARL CITY-HALAWA SUBTOTAL:	8.71

STATION	MGD
WAIPAHU-EWA (7)	
WAIPIO HTS.	1.97
WAIPIO HTS. I	0.00
WAIPIO HTS. II	0.29
WAIPIO HTS. III	1.41
WAIPAHU	6.70
WAIPAHU II	2.07
WAIPAHU III	2.00
WAIPAHU IV	3.10
KUNIA I	6.05
KUNIA II	1.97
KUNIA III	1.33
HOAEAE	7.50
HONOULIULI I	0.00
HONOULIULI II	5.54
MAKAKILO	0.00
WAIPAHU-EWA SUBTOTAL:	39.95

STATION	MGD
WAIANAE (8)	
MAKAHA I	0.73
MAKAHA II	0.00
MAKAHA III	0.41
MAKAHA V	0.27
MAKAHA VI	0.00
MAKAHA SHAFT	0.00
KAMAILE	0.06
WAIANAE I	0.00
WAIANAE II	0.35
WAIANAE III	1.00
WELLS SUBTOTAL:	2.82
WAI A. C&C TUNNEL	1.40
WAI A. PLANT. TUNNELS	0.12
GRAVITY SUBTOTAL:	1.52
WAIANAE SUBTOTAL:	4.34

NONPOTABLE

NONPOTABLE	MGD
KALAUAO SPRINGS	0.60
BARBERS POINT WELL	1.53
GLOVER TUNNEL NP	0.31
NONPOTABLE TOTAL:	2.44

RECYCLED WATER (JUNE 2024)

RECYCLED WATER	MGD
HONOULIULI WRF R-1	6.58
HONOULIULI WRF RO	1.41
RECYCLED TOTAL:	7.99

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

PRODUCTION SUMMARIES

TOTAL WATER	MGD
PUMPAGE	135.81
GRAVITY	8.81
POTABLE TOTAL:	144.62
NONPOTABLE	2.44
RECYCLED WATER	7.99
TOTAL WATER:	155.05

CWRM PERMITTED USE AND BWS ASSESSED YIELDS FOR BWS POTABLE SOURCES				
WATER USE DISTRICTS		A	B	C
		PERMITTED USE/ BWS YLDS	JUL 2024	DIFF. A-B
1	HONOLULU	83.32	61.00	22.32
2	WINDWARD	25.02	18.62	6.40
3	NORTH SHORE	4.70	3.66	1.04
4	MILILANI	7.53	4.77	2.76
5	WAHIAWA	4.27	3.41	0.86
6	PEARL CITY-HALAWA	12.25	8.71	3.54
7	WAIPAHU-EWA	50.63	39.95	10.68
8	WAIANAE	4.34	4.34	0.00
TOTAL:		192.06	144.45	47.60

CWRM PERMITTED USE FOR BWS NONPOTABLE SOURCES				
WATER USE DISTRICTS		A	B	C
		PERMITTED USE	JUL 2024	DIFF. A-B
7	WAIPAHU-EWA (BARBERS POINT WELL)	1.00	1.53	-0.53
TOTAL:		1.00	1.53	-0.53

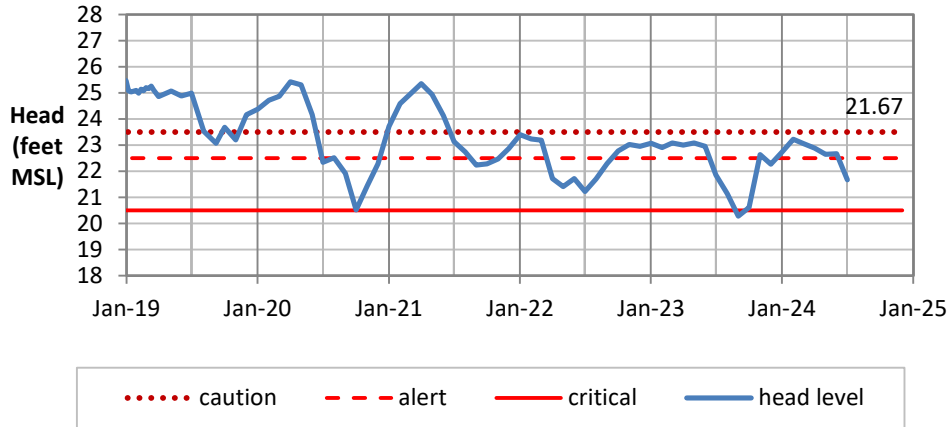
EFFECTIVE WATER DEMAND PER DISTRICT

IMPORT/EXPORT BETWEEN WATER USE DISTRICTS			
FROM	TO		MGD
2	1	WINDWARD EXPORT	0.14
7	8	BARBERS PT LB	5.90

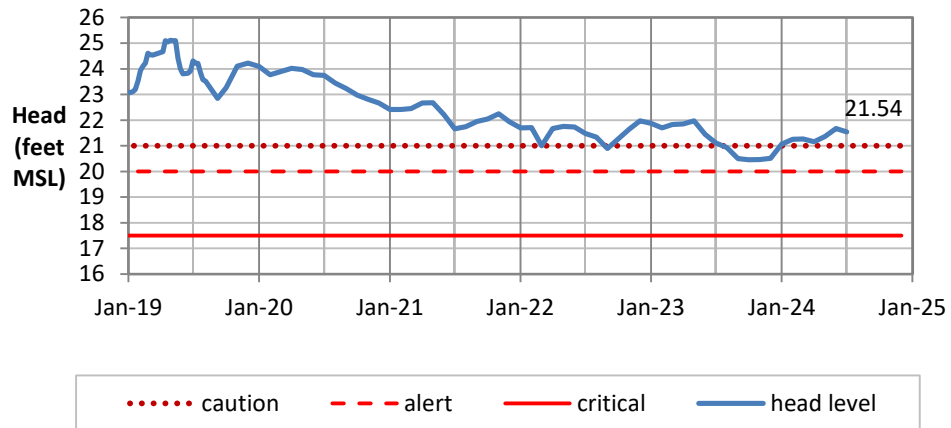
WATER USE DISTRICTS		SUBTOTAL	IMPORT	EXPORT	EFFECTIVE WATER DEMAND
1	HONOLULU	61.17	0.14	-	61.31
2	WINDWARD	18.62	-	0.14	18.48
3	NORTH SHORE	3.66	-	-	3.66
4	MILILANI	4.77	-	-	4.77
5	WAHIAWA	3.41	-	-	3.41
6	PEARL CITY-HALAWA	8.71	-	-	8.71
7	WAIPAHU-EWA	39.95	-	5.90	34.05
8	WAIANAE	4.34	5.90	-	10.25
TOTAL:		144.62	6.04	6.04	144.62

Head Report

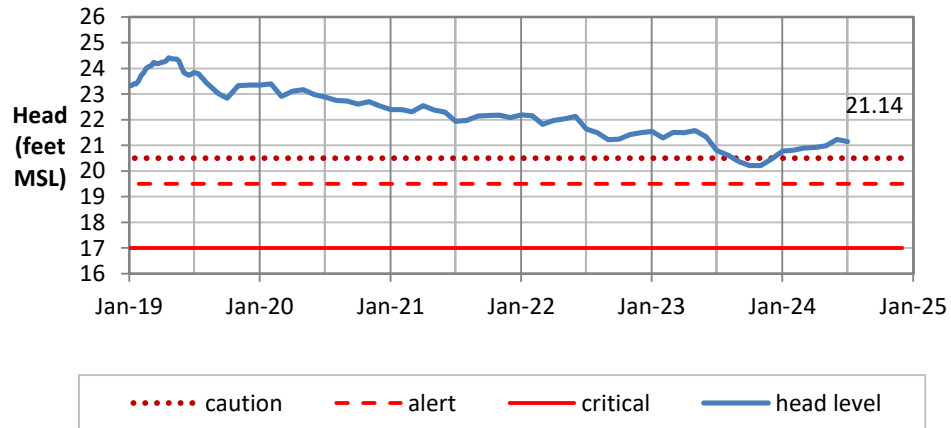
Kaimukī 07/01/24



Beretania 07/01/24

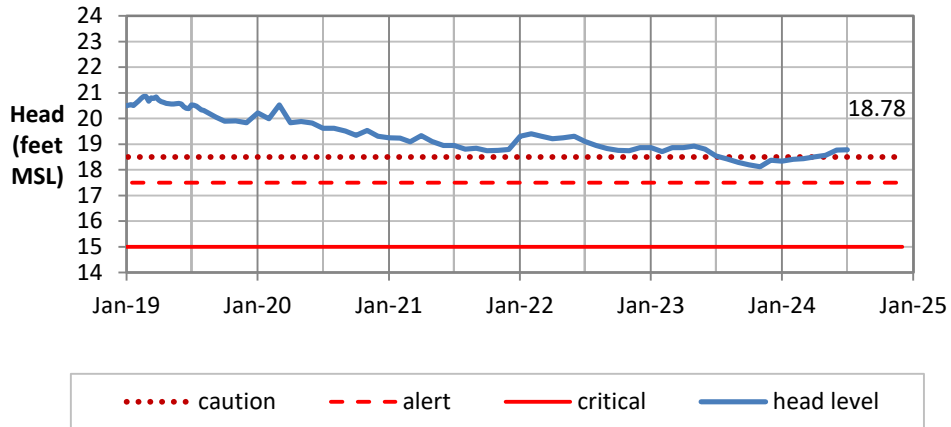


Kalihi 07/01/24

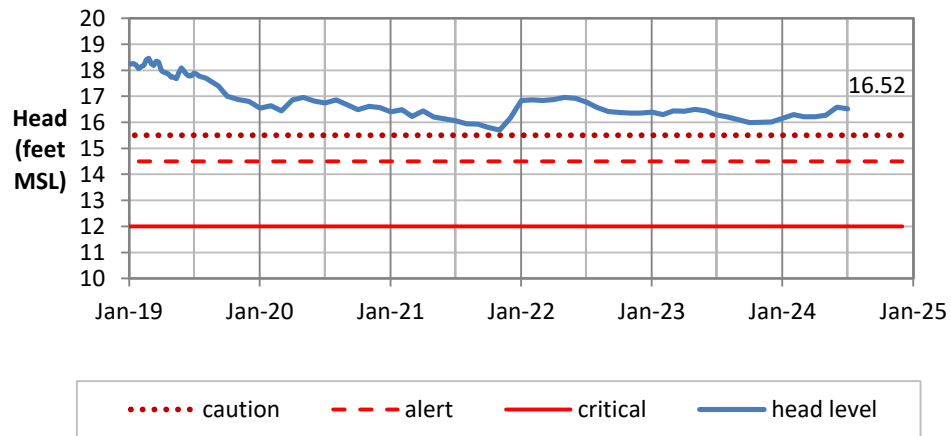


Head Report

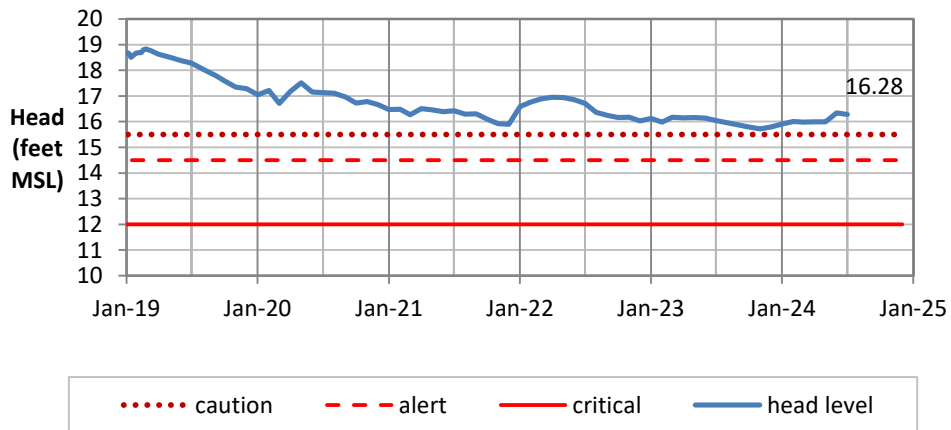
Moanalua 07/01/24



Hālawā 07/01/24

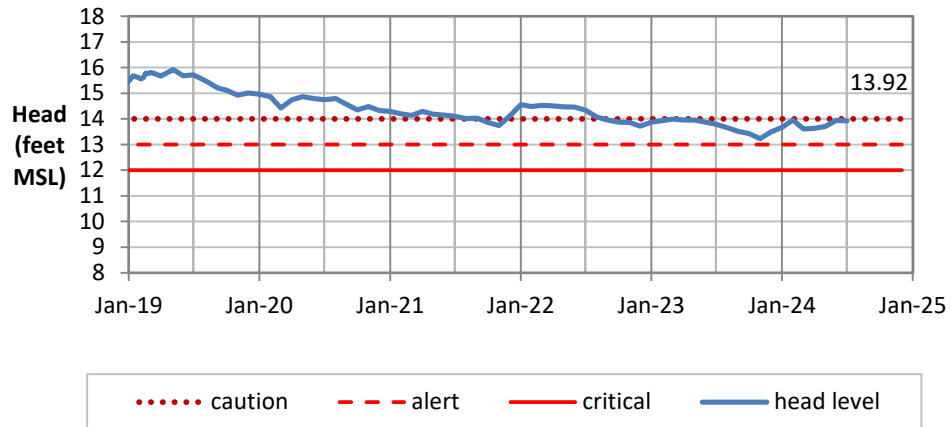


Kalauao 07/03/24

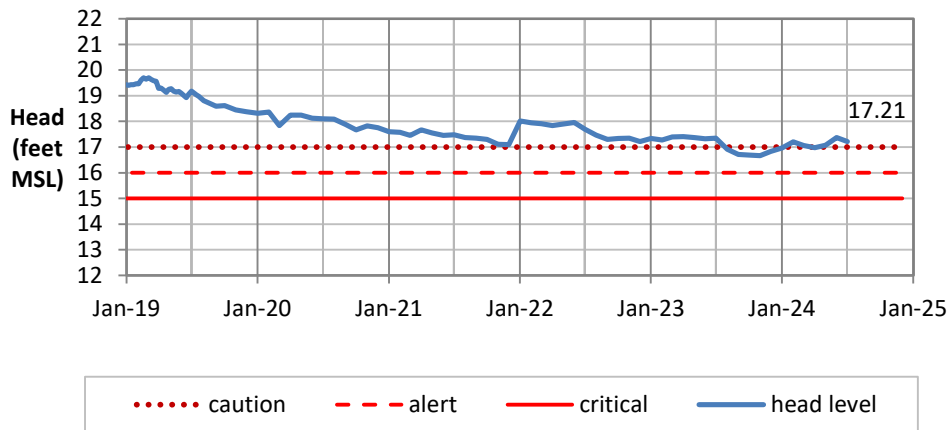


Head Report

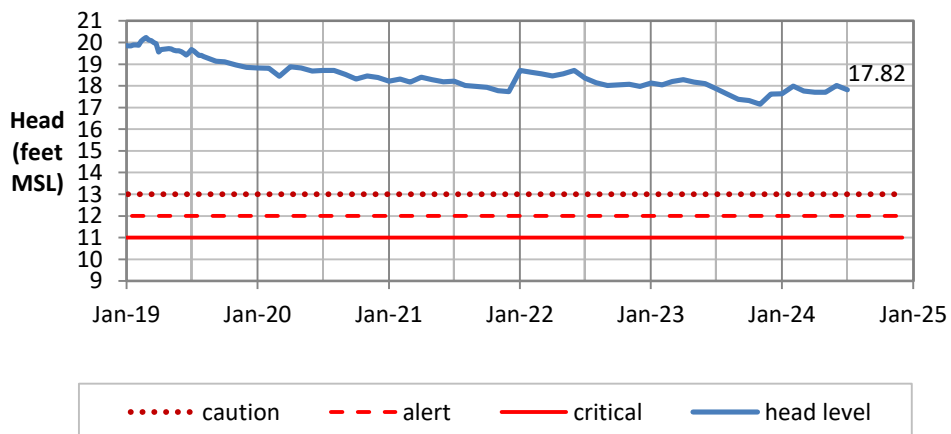
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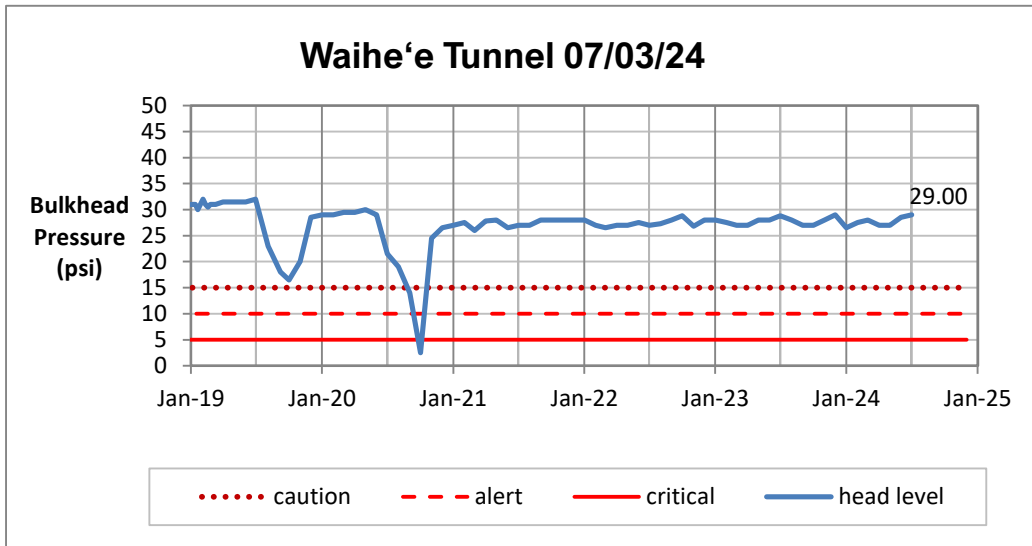
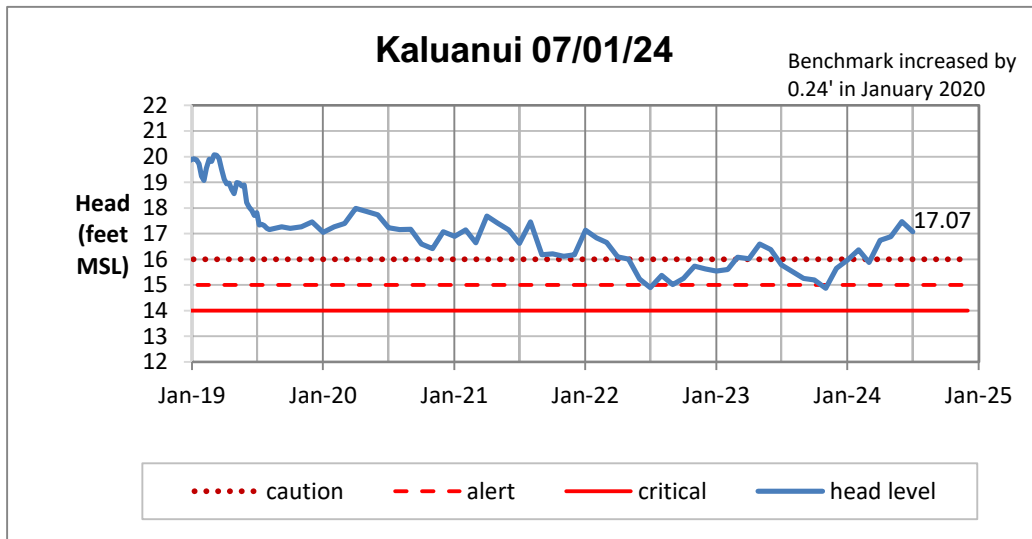
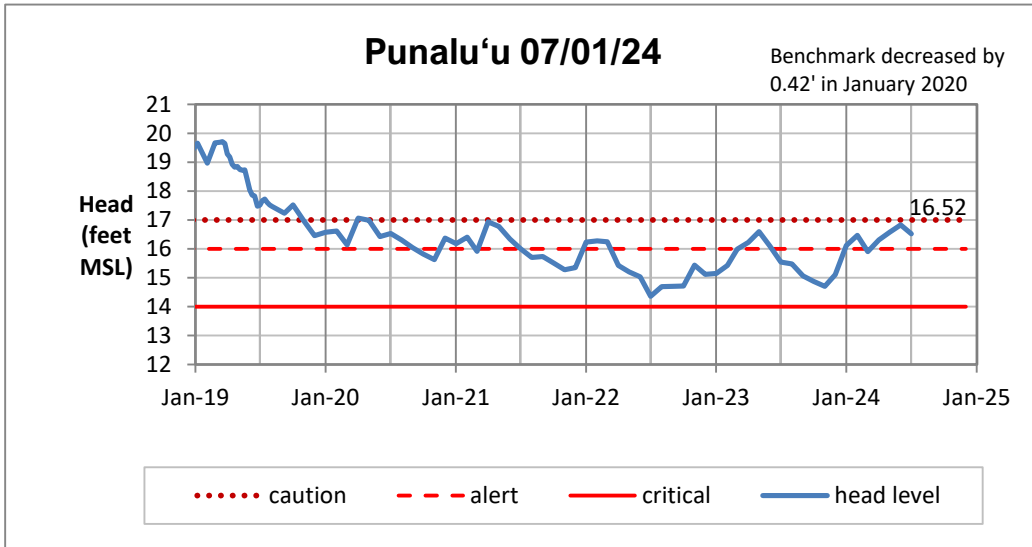
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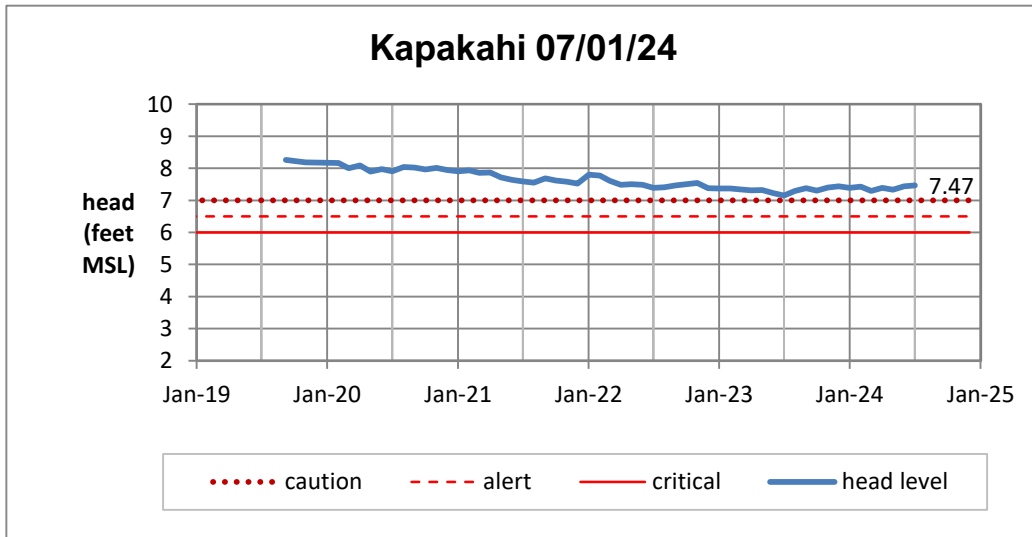
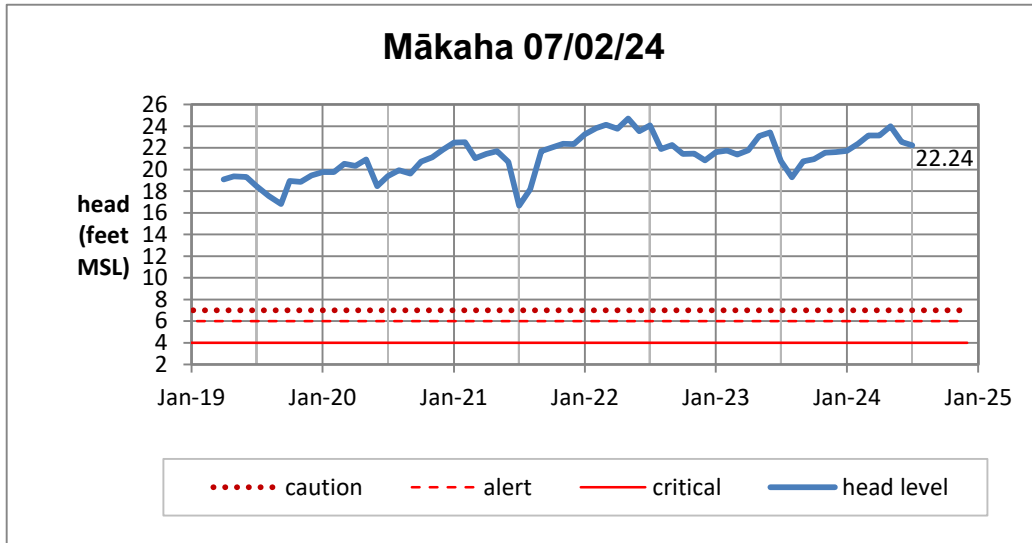
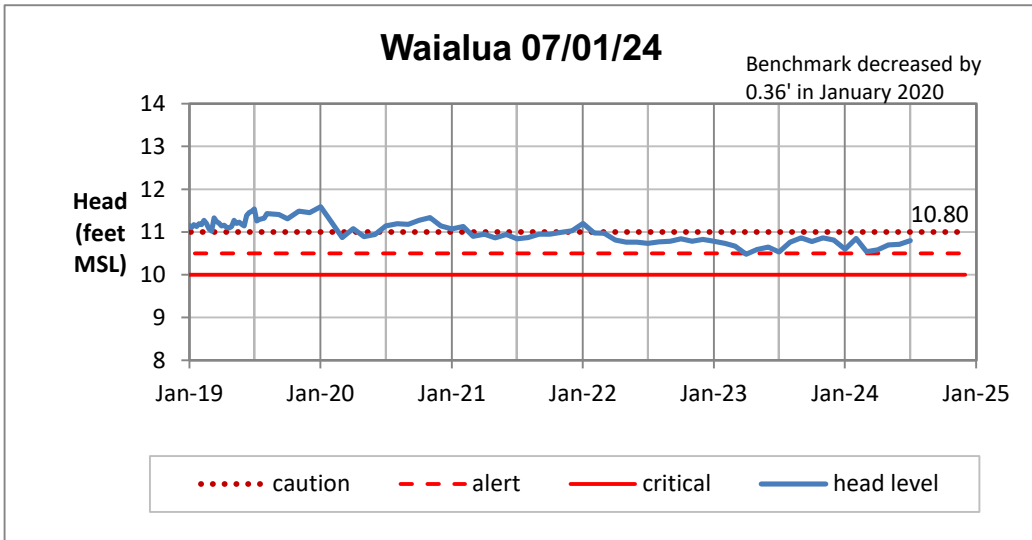
Hō'ae'ae-Kunia 07/01/24



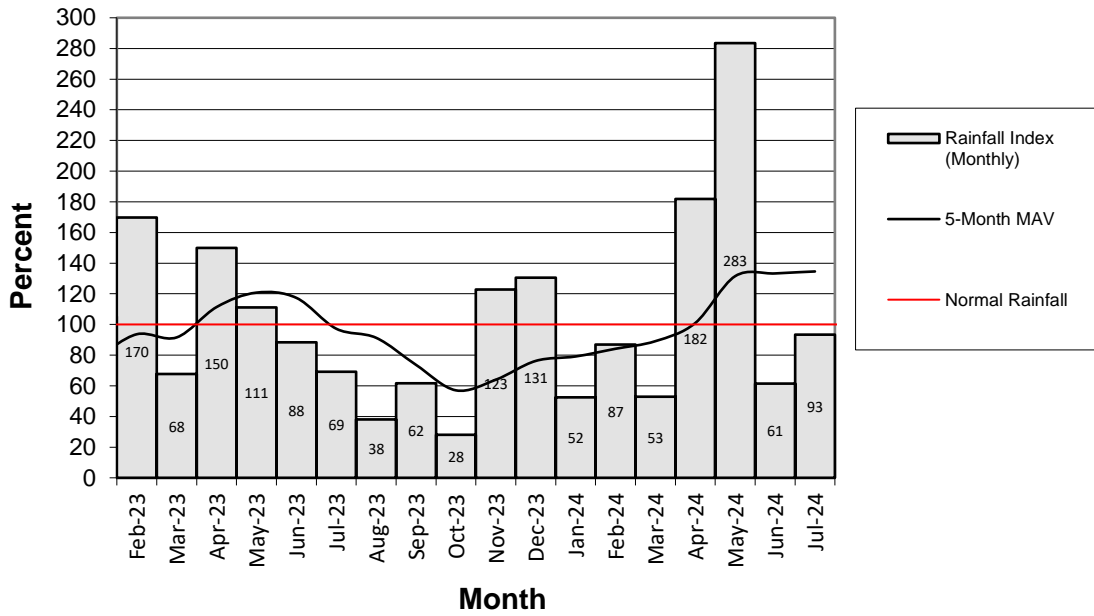
Head Report



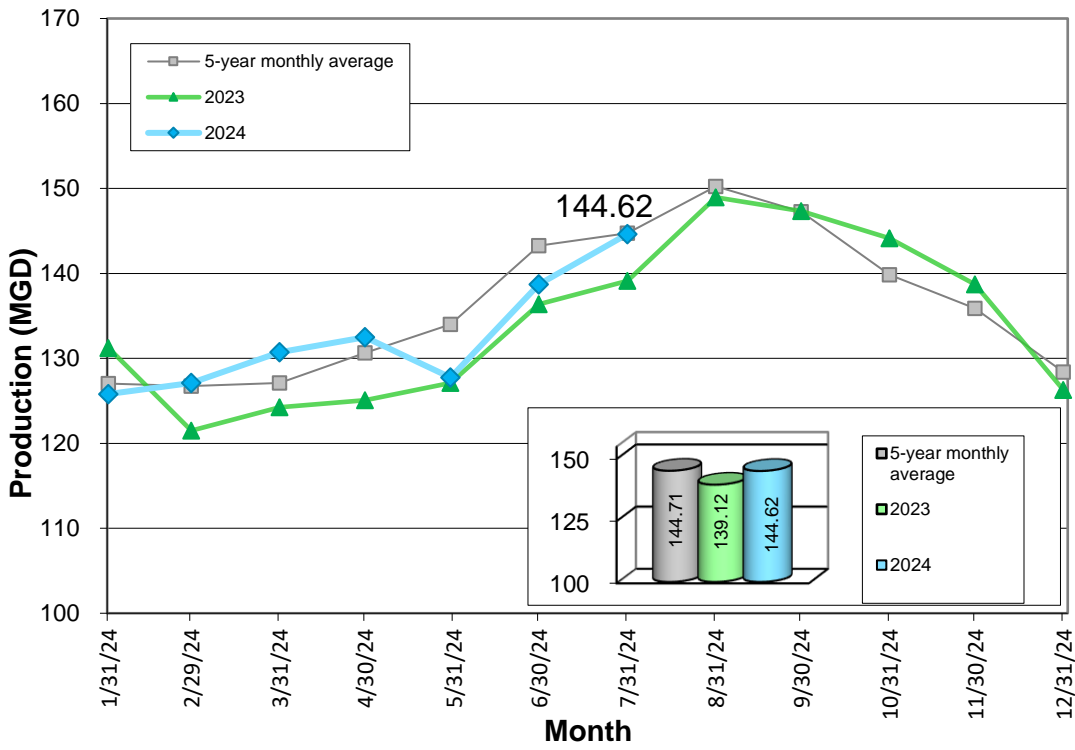
Head Report



HONOLULU WATERSHED AREA Rainfall Intake



Monthly Production



**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

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



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JONATHAN KANESHIRO, Vice Chair
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August 26, 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 July 2024

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

Respectfully submitted,

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

Attachment

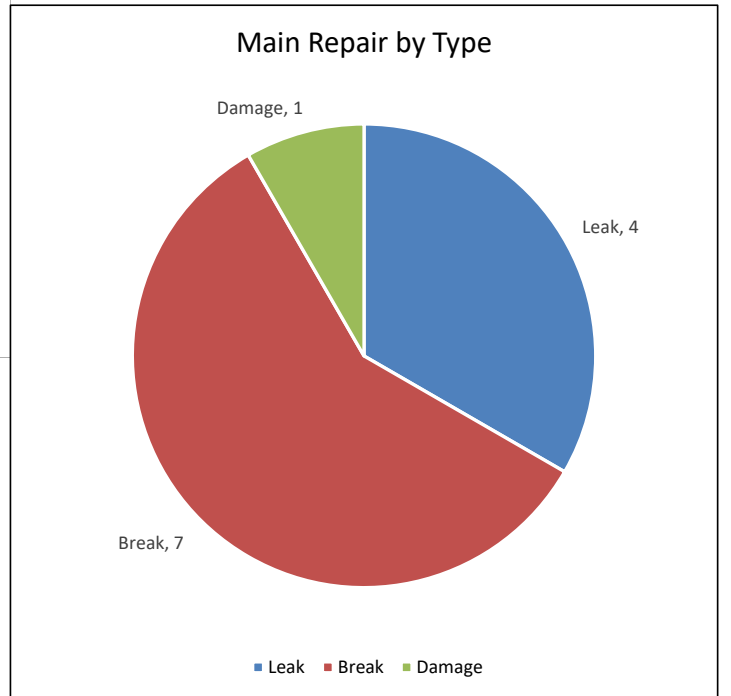
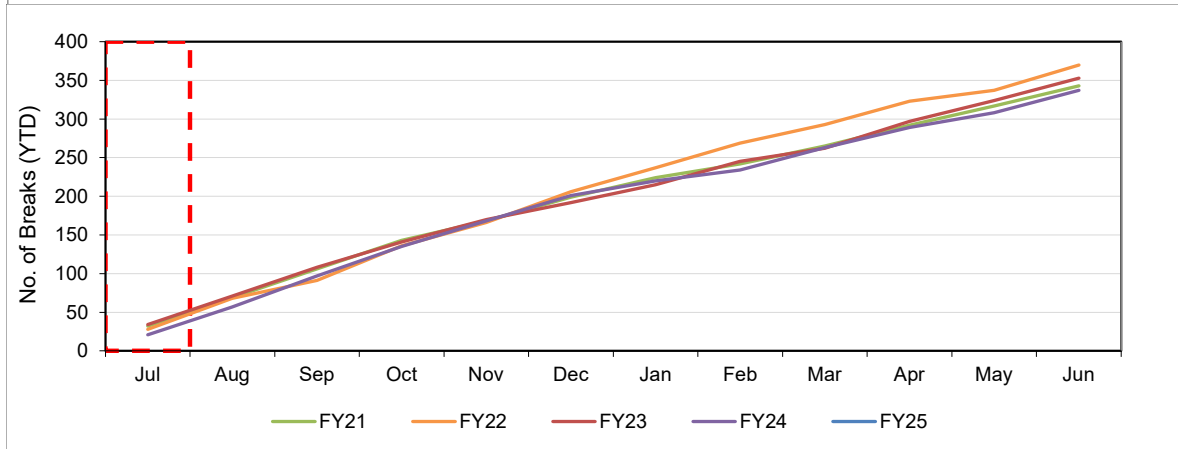
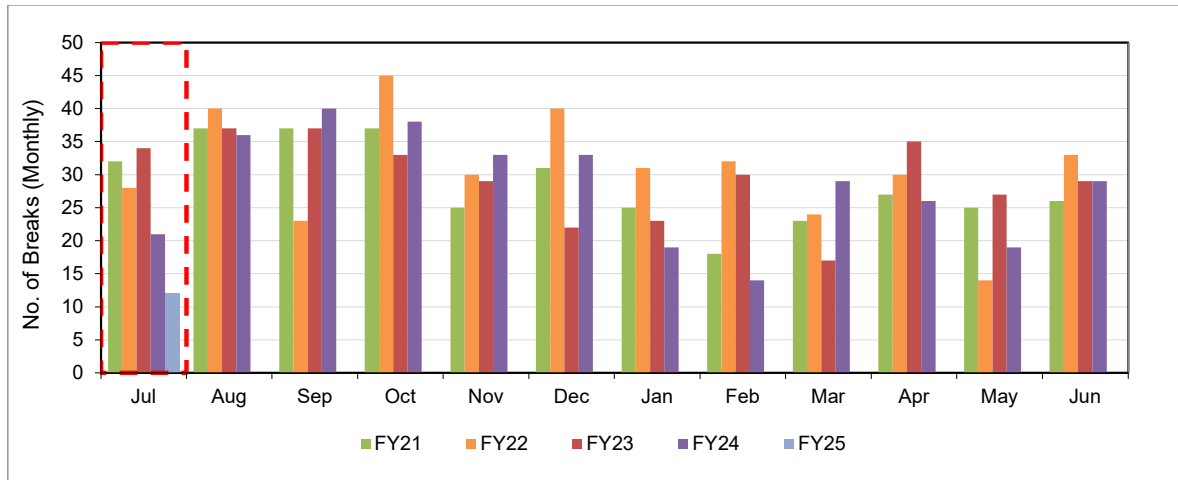
WATER MAIN REPAIR REPORT
for July 2024

Monthly Main Breaks

FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2025	12	--	--	--	--	--	--	--	--	--	--	--	12
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	--	--	--	--	--	--	--	--	--	--	--	4
Break	7	--	--	--	--	--	--	--	--	--	--	--	7
Damage	1	--	--	--	--	--	--	--	--	--	--	--	1
Total	12	0	0	0	0	0	0	0	0	0	0	0	12



Date	Address	Size (In)	Pipe Type	Date	Address	Size (In)	Pipe Type
7/6/2024	91-1076 Kaunolu St, Ewa Beach	8	CI				
7/6/2024	91-1733 Kikoo St, Ewa Beach	8	DI				
7/7/2024	140 Dowsett Ave, Honolulu	8	CI				
7/8/2024	2464 Kanealii Ave, Honolulu	8	CI				
7/9/2024	66-939 Kuewa Dr, Waialua	6	CI				
7/9/2024	553 Iana St, Kailua	8	AC				
7/9/2024	1968 Makiki Heights Dr, Honolulu	6	CI				
7/11/2024	5414 Kirkwood Pl, Honolulu	6	CI				
7/11/2024	200 Kamani St, Honolulu	8	CI				
7/13/2024	Hamama Falls Trail, Kaneohe	4	DI				
7/14/2024	47-661 Melekula Rd, Kaneohe	6	CI				
7/15/2024	844 9th Ave, Honolulu	6	CI				
7/16/2024	1477 Humuwili Pl, Kailua	8	CI				
7/16/2024	98-432 Ponoana Lp, Aiea	8	CI				
7/19/2024	94-987 Lumihoahu St, Waipahu	8	CI				
7/20/2024	1314 Akele St, Kailua	8	CI				
7/22/2024	1220 Palolo Ave, Honolulu	8	PVC				
7/22/2024	2677 Ipulei Pl, Honolulu	8	CI				
7/30/2024	1154 Gulick Ave, Honolulu	6	CI				
7/31/2024	912 Waiiki St, Honolulu	8	CI				

LEAK DETECTION for July 2024

POIs Investigated

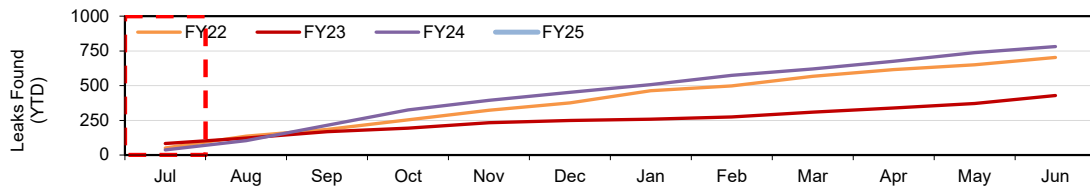
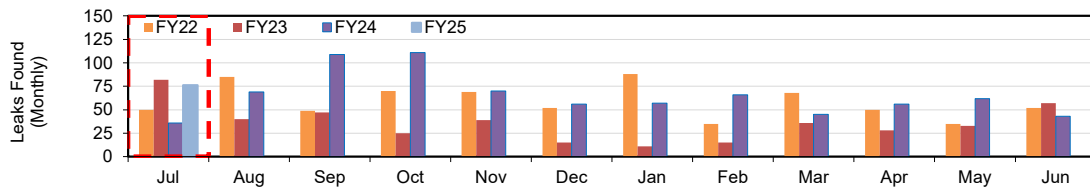
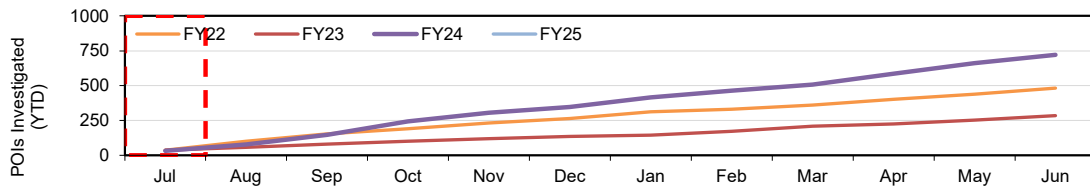
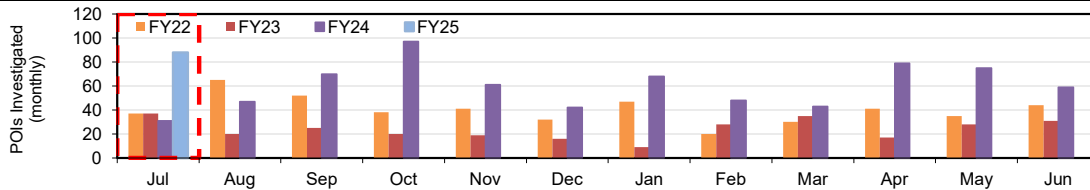
FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2025	88	--	--	--	--	--	--	--	--	--	--	--	88
2024	31	47	70	97	61	42	68	48	43	79	75	59	720
2023	37	20	25	20	19	16	9	28	35	17	28	31	285
2022	37	65	52	38	41	32	47	20	30	41	35	44	482

Leaks Found

FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2025	76	--	--	--	--	--	--	--	--	--	--	--	76
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	--	--	--	--	--	--	--	--	--	--	--	8
Coupling	62	--	--	--	--	--	--	--	--	--	--	--	62
Customer	3	--	--	--	--	--	--	--	--	--	--	--	3
Service	3	--	--	--	--	--	--	--	--	--	--	--	3
Total	76	0	0	0	0	0	0	0	0	0	0	0	76



Satellite Leak by Type

