

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com



August 16, 2022

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair
KAPUA SPROAT, Vice Chair
RAY C. SOON
MAX J. SWORD
NA'ALEHU ANTHONY

JADE T. BUTAY, Ex-Officio
DAWN B. SZEWCZYK, P.E., Ex-Officio

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

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

NOTICE

The Board of Water Supply, City and County of Honolulu, will hold a Regular Meeting on Monday, August 22, 2022, at 2:00 p.m. in the Boardroom, Public Service Building, 630 South Beretania Street, Honolulu, Hawaii.

The public may also attend the meeting from the lobby of the Board of Water Supply, Public Service Building, 630 S. Beretania St. Honolulu, HI 96843, via interactive conference technology.

TESTIMONY

Testimony can be submitted as follows:

- Written testimony may be emailed to board@hbws.org or faxed to (808) 748-5079. Testimony is requested by Monday, August 22, 2022, at noon. Written testimonies should include the submitter's address, email address, and phone number. Written testimony will be posted to the BWS website at boardofwatersupply.com.
- Mail written testimony to Board of Water Supply, 630 S. Beretania St., Honolulu, HI 96843. Testimony is requested by Monday, August 22, 2022, at noon.
- On-line testimony will be accepted at boardofwatersupply.com/testimony. Fill out the testimony form. It is requested by Monday, August 22, 2022, at noon.
- Telephone testimony will be accepted during the meeting at (808) 748-6040. Callers will be placed in a queue and brought up to testify one at a time.
- In-person testimony will be accepted during the meeting in the Board Room at the Board of Water Supply. In-person testifiers should check-in at the Lobby of the Public Service Building, 630 S. Beretania St. Honolulu, HI 96843 and they will be brought into the Board Room to present their testimony.

Testimony is limited to two (2) minutes and shall be presented by the registered speaker only.

MATERIALS AVAILABLE FOR INSPECTION

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

VIEWING THE MEETING

The meeting will be viewable via live streaming on:

- (1) 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 business days prior to the meeting date.

The agenda for the August 22, 2022, 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 July 25, 2022
2. Adoption of Resolution No. 945, 2022, Erwin Kawata, 2022 Manager of the Year
3. Adoption of Resolution No. 946, 2022, Steven Norstrom, 2022 Employee of the Year
4. Adoption of Resolution No. 947, 2022, Kathryn-Jean Hoffman, 2022 Employee of the Year
5. Adoption of Resolution No. 948, 2022, Adopting the Five-Year Board of Water Supply Strategic Plan for Fiscal Years 2023-2027
6. Authorizing a Public Hearing to Consider a Proposed Amendment to the Fiscal Year 2023 Capital Improvement Program Budget of the Board of Water Supply
7. Amending the Board of Water Supply Special Expendable Fund, Established via Resolution No. 555, 1990, which Accounts for Customer Deposits Collected from the Assessment of Water System Facilities Charges and Negotiated Agreements

ITEMS FOR INFORMATION

1. Update on the Board of Water Supply's Response to the Potential Impacts of the Red Hill Fuel Contamination
2. Financial Update for the Quarter Ended June 30, 2022
3. Capital Improvement Program Quarterly Update
4. Status Update of Groundwater Levels at All Index Stations
5. Water Main Repair Report for July 2022

MINUTES

THE REGULAR MEETING OF THE BOARD OF WATER SUPPLY

August 22, 2022

At 2:10 PM on August 22, 2022, in the Board Room of the Public Service Building at 630 South Beretania Street, Honolulu, Hawaii, Board Chair Andaya called to order the Regular Meeting.

Present: Bryan P. Andaya, Chair
Ray C. Soon, Board Member
Na'alehu Anthony, Board Member via WebEx
Jade T. Butay, Board Member, Ex-Officio via WebEx
Dawn B. Szewczyk, Board Member, Ex-Officio
via WebEx

Also Present: Ernest Lau, Manager and Chief Engineer
Jason Takaki, Program Administrator,
Capital Projects Division via WebEx
Jadine Urasaki, Assistant Program Administrator,
Capital Projects Division via WebEx
Lester Fujikami, Civil Engineer VI,
Capital Projects Division via WebEx
Michael Domion, Civil Engineer VI,
Capital Projects Division via WebEx
Jennifer Elflein, Program Administrator,
Customer Care Division via Vimeo
Kathleen Elliott-Pahinui, Information Officer,
Communications Office via WebEx
Raelynn Nakabayashi, Executive Assistant I,
Executive Support Office via WebEx
Jason Nikaido, Program Administrator,
Field Operations Division via WebEx
Joseph Cooper, Waterworks Controller,
Finance Division via WebEx
Michele Thomas, Executive Assistant I,
Human Resources Office via Vimeo
Ron Wada, Assistant Program Administrator,
Information Technology Division
via Vimeo
Michael Matsuo, Land Administrator, Land Division
via WebEx
Erwin Kawata, Program Administrator,
Water Quality Division via WebEx
Barry Usagawa, Program Administrator,
Water Resources Division via WebEx
Kevin Ihu, Program Administrator,
Water System Operations Division
via Vimeo

Kathy Mitchell, Administrative Services Officer
via Vimeo
Deanna Thyssen, Manager Secretary via WebEx
Joy Cruz-Achiu, Board Secretary
Steven Norstrom, Information Specialist II,
Communications Office
Stella Bernardo, Information Specialist II,
Communications Office via WebEx
Michele Harman, Community Relations Specialist I,
Communications Office via WebEx
Keoni Mattos, Information Specialist II,
Communications Office via WebEx

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

Absent: Kapua Sproat, Vice Chair
Max J. Sword, Board Member

REGULAR MEETING

Chair Bryan Andaya welcomed everyone to the August 22, 2022, Regular Meeting of the Board of Water Supply (BWS). He apologized for the delay in starting the meeting due to technical difficulties. Before beginning the meeting he went over a few meeting regulations required by law. Board Members attending the Board Meeting remotely must be visible to the public to be considered present and meet quorum guidelines. He also stated that during roll call Board Members participating remotely must disclose their location and anyone that may be present at their location.

Chair Andaya announced that the public would be allowed to attend Board Meetings at the BWS, Public Service Building, 630 S. Beretania Street, Honolulu, HI 96843, via interactive conference technology.

Chair Andaya requested a roll call for the Regular Meeting and asked those participating remotely to keep their cameras on during the meeting to comply and meet quorum guidelines. Chair Andaya asked each Board Member to respond verbally and state who is present in the room if participating via WebEx when their names were called. Board Member Ray Soon, aye and in the Board room; Board Member Na'alehu Anthony, aye and alone at his current location; Board Member Dawn Szewczyk, aye and alone at her current location. Chair Andaya was present in the Boardroom.

Chair Andaya asked all attendees calling in or video conferencing to please mute their microphones when not speaking to the audience. When intending to speak, unmute their microphone and identify themselves before speaking.

Chair Andaya introduced those present in the Boardroom, Manager Ernest Lau, Board Secretary Joy L. Cruz-Achui, and Steven Norstrom, Information Specialist II, Communications Office. Joining via WebEx to monitor public testimony is Keoni Mattos, Information Specialist II, Communications Office. Joining from the City and County Corporation Counsel were Deputy Jeff Lau and Deputy Jessica Wong via WebEx.

The following procedures are in effect for the meeting:

Chair Andaya shared the various ways to submit testimony: Written testimony may be submitted by email to board@hbws.org, by fax to (808) 748-5079; mailed to Board of Water Supply, 630 S. Beretania St., Honolulu, HI 96843; or online at the boardofwatersupply.com/testimony, which were all due on Monday, August 22, 2022, at noon. However, late testimony will be accepted by email, fax, or mail. Telephone testimony is accepted by calling (808)748-6040, where you will be put in the queue and allowed to testify one at a time. In-person testimony is being accepted at the Board of Water Supply, Public Service Building located at 630 S. Beretania St. Honolulu, HI 96843. Pursuant to HRS Section 92-7.5, Board Meeting materials are available to view on our website at www.boardofwatersupply.com/boardmeeting.

Chair Andaya also announced the Board Meeting is broadcasted live on the BWS website at www.boardofwatersupply.com/live.

Chair Andaya announced that he would be taking the agenda out of order, starting with the item for information item #1, "Update on the Board of Water Supply's Response to the Potential Impacts of the Red Hill Fuel Contamination".

ITEM FOR INFORMATION NO. 1

"August 22, 2022

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, Hawaii 96843
Chair and Members:

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

Ernest Lau, Manager & Chief Engineer; Erwin Kawata, Program Administrator, Water Quality Division; Barry Usagawa, Program Administrator, Water Resources Division; and Kathleen Elliott-Pahinui, Information Officer, Communications Office, will give an Update on 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:

Ernest Lau, Manager & Chief Engineer; Erwin Kawata, Program Administrator, Water Quality Division; Barry Usagawa, Program Administrator, Water Resources Division; and Kathleen Elliott-Pahinui, Information Officer, Communications Office, gave the report.

Mr. Erwin Kawata presented information on the recent detection of Polycyclic Aromatic Hydrocarbons (PAH) in a BWS monitor well (DH-43) located in Moanalua Valley.

Board Member Na'alehu Anthony asked Mr. Kawata if there is a connection between site DH-43 and Red Hill and if was PAH found or tested for at the time of the November spill.

Mr. Kawata responded that the BWS compared what was detected in the Navy's monitoring wells closest to site DH-43 and found that there were similarities in the amounts and types of PAHs as in previous test data. He stated that PAHs occur naturally in petroleum products, therefore, the data suggests that there is some correlation between what is observed between the Navy's property and site DH-43. However, it is undetermined and more studies must be done to understand the current groundwater flow which is currently understood to be moving away from Moanalua Valley from east to west.

Board Member Anthony inquired how often will testing be done on the monitoring wells that the BWS has access to.

Mr. Kawata replied that the BWS will be testing every three months and monitoring the trends.

Chair Andaya stated that there are established regulations for safe drinking water. He asked if the Department of Health (DOH) and the Environmental Protection Agency (EPA) are aware of the BWS findings.

Manager Lau explained that the test was performed on samples taken from a monitor well which is not a drinking water well. The data gathered has been shared with the DOH and EPA.

Chair Andaya inquired if the water remains safe to consume.

Manager Lau affirmed that water from the BWS is safe to use.

Chair Andaya announced that public testimony will begin. Before the regular meeting, the BWS accepted testimonies via email and regular mail but no written testimonies were received.

Chair Andaya shared that the BWS has one in-person testifying and will be taking telephone testimony thereafter.

REQUEST TO TESTIFY IN PERSON

Request Received	Submitter's Name	Format
August 22, 2022	Susan Pcola-Davis	In-Person

Ms. Susan Pcola-Davis inquired if PAHs were detected at the site DH-43 in the past.

Mr. Kawata replied that in 2015 site DH-43 was tested in response to the tank five leaks but there were no detections of PAHs at the time. There has been no PAH test performed since 2015, with the understanding that groundwater moves from east to west, until recently. Due to the size of the November 2021 fuel contamination, the BWS began collecting samples from DH-43 in early 2022. In March 2022 Total Petroleum Hydrocarbon (TPH) was detected. In April 2022 PAH was detected.

Ms. Pcola-Davis testified against the levels of allowable Total Petroleum Hydrocarbons (TPH) approved by the Department of Health (DOH) in drinking water which was the same month as the leak.

Board Member Soon asked to bring up the presentation slide showing the map. He asked if samples are being taken from site S monitor well.



WHERE IS DH-43 ?

- 1,500 feet (0.3 mile) southeast of the Red Hill facility
- 1.1 miles from Moanalua Wells

Mr. Kawata responded that site S is near the Moanalua Golf Course where the new monitoring well is proposed to be built. The BWS is in the process of acquiring landowner approval.

Board Member Soon inquired if the BWS has any monitoring wells southeast of the Red Hill tanks.

Mr. Kawata replied that the BWS does not have a monitoring well southeast of the Red Hill tanks.

Board Member Soon asked if the PAHs that were found in DH-43 were found in any other samples.

Mr. Kawata responded that PAHs were found in other samples.

The following individuals provided telephone testimony:

REQUEST TO TESTIFY BY PHONE

Request Received	Submitter's Name	Format
August 22, 2022	Meredith Wilson	Call-in Testimony
August 22, 2022	Jamie Simic	Call-in Testimony
August 22, 2022	Kelly Morris	Call-in Testimony

Ms. Meredith Wilson testified to share how the November 2021 Red Hill Fuel Leak affected her health while living on Joint Base Pearl Harbor. She echoed Ms. Pcola-Davis's concern.

Ms. Jamie Simic testified to express her appreciation for looking into the movement of the contaminated water. She expressed her concern for

those affected by the contaminated water and how the Navy continues to use the same water source.

Ms. Kelly Morris testified to express her appreciation for the BWS, allowing the public the opportunity to voice concerns of families affected by the Red Hill fuel leak. She shared the different health issues that she and her family have experienced since being exposed to the Red Hill contaminated water.

Chair Andaya stated that the phone lines will continue to stay open throughout the meeting.

Manager Lau suggested requesting the presence of DOH and EPA at a future Board Meeting to share some information on the Environmental Action Levels (EAL) as it was mentioned by the testifiers. Board Member Anthony also suggested that Mr. Kawata share his approach to testing for various contaminants at the Board Meeting that the DOH and EPA will be attending.

Board Member Soon also would like to discuss kuleana (responsibility). He stated that he empathizes with the individuals that testified and their families, however, the BWS is limited to helping those affected. Board Member Soon stated having this discussion may assist with pointing them in the correct direction, as the BWS continues to be diligent in its own responsibility.

Board Member Soon asked if the BWS should be testing samples more frequently than the three months.

Mr. Kawata responded that testing samples every three months are standard practice, but this does not preclude the BWS from testing more often. He explained that the BWS has coordinated with the laboratory to enhance the processing method to detect lower levels of PAHs up to 10 to 50 times lower than the typical test. He further explained that the testing requires up to 8-10 weeks to process for lower PAH levels, at nanograms per liter range.

Manager Lau shared that since the 1945 Moanalua Valley monitor well (DH-43) is located on homeowner property and the BWS will check into performing monthly testing.



BOARD OF WATER
SUPPLY
MONITORING WELL
DH-43

July 2022

boardofwatersupply.com

PETROLEUM CHEMICALS DETECTED IN DH-43

- Polycyclic aromatic hydrocarbons (PAHs) detected in BWS ground water monitoring well DH-43 located in Moanalua Valley
- PAHs occur naturally in coals and petroleum products like crude oil and gasoline
- In 2015 BWS tested DH-43 and found no PAHs at that time



WHERE IS DH-43 ?

- 1,500 feet (0.3 mile) southeast of the Red Hill facility
- 1.1 miles from Moanalua Wells



DH-43 Test Results (ug/L)

All samples collected 5/3/2022					
Purge volume (gallons)	15	25	50	75	75 (Dup)
Sample ID	DH-43-1	DH-43-2	DH-43-3	DH-43-4	DH-43-5
Analyte					
TPH-g	ND	ND	ND	ND	ND
TPH-d	ND	ND	ND	ND	ND
TPH-o	430	240	61	61	ND
1-methylnaphthalene	ND	ND	ND	ND	ND
2-methylnaphthalene	ND	ND	ND	ND	ND
1-methylphenanthrene	ND	ND	ND	ND	0.0109
Acenaphthene	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND
Benzo[a]anthracene*	ND	ND	ND	ND	0.00536
Benzo[a]pyrene*	ND	ND	ND	ND	0.0191
Benzo[e]pyrene	0.0103	0.0399	0.0373	0.0411	0.213
Benzo[b]fluoranthene*	ND	0.00947	0.00896	0.0101	0.0533
Benzo[g,h,i]perylene	0.00971	0.0371	0.0337	0.0377	0.195
Benzo[k]fluoranthene*	ND	0.0054	ND	0.00564	0.0236
Chrysene*	ND	0.0109	0.00978	0.0112	0.0506
Dibenz[a,h]anthracene*	ND	ND	ND	ND	0.016
Fluoranthene	0.00589	0.00694	0.00502	0.00578	0.0189
Fluorene	ND	ND	ND	ND	ND
Indeno[1,2,3cd]pyrene*	ND	0.0129	0.013	0.0142	0.0782
Naphthalene	ND	ND	ND	ND	0.00694
Phenanthrene	0.00746	0.00696	0.00559	0.00536	0.0207
Pyrene	0.00787	0.00999	0.00758	0.00801	0.0265

DH-43 and Navy RHMW Result Comparisons

All values in ug/L						
Sample Date	5/3/2022	3/9/2022	3/8/2022	3/14/2022	3/16/2022	2/22/2022
Sample Type	25 GAL Purge	Grab	Bailer	Bailer	Bailer	Bailer
Sample location	DH-43	DH-43	RHMW02	RHMW04	RHMW06	Red Hill Shaft
Analyte						
1-methylnaphthalene	ND	ND	15	ND	0.086	ND
2-methylnaphthalene	ND	ND	4.6	ND	0.14	0.053
1-methylphenanthrene	ND	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	0.27	ND	ND	0.032
Acenaphthylene	ND	ND	0.071	ND	0.021	ND
Anthracene	ND	ND	ND	ND	0.03	0.063
Benz[a]anthracene*	ND	0.0216	0.056	ND	0.048	ND
Benzo[a]pyrene*	ND	ND	0.035	0.027	0.028	ND
Benzo[e]pyrene	0.0399	0.156	ND	ND	ND	ND
Benzo[b]fluoranthene*	0.00947	ND	0.026	0.033	0.019	ND
Benzo[g,h,i]perylene	0.0371	0.192	0.016	0.044	0.012	ND
Benzo[k]fluoranthene*	0.0054	ND	ND	0.013	ND	ND
Chrysene*	0.0109	0.0695	0.09	0.02	0.068	ND
Dibenz[a,h]anthracene*	ND	ND	ND	ND	ND	ND
Fluoranthene	0.00694	0.0153	0.044	ND	0.044	0.063
Fluorene	ND	ND	0.14	ND	0.022	0.078
Indeno[1,2,3cd]pyrene*	0.0129	0.104	ND	0.044	ND	ND
Naphthalene	ND	ND	8.3	ND	0.041	0.048
Phenanthrene	0.00696	ND	0.11	ND	0.089	0.057
Pyrene	0.00999	0.0158	0.19	ND	0.19	0.044

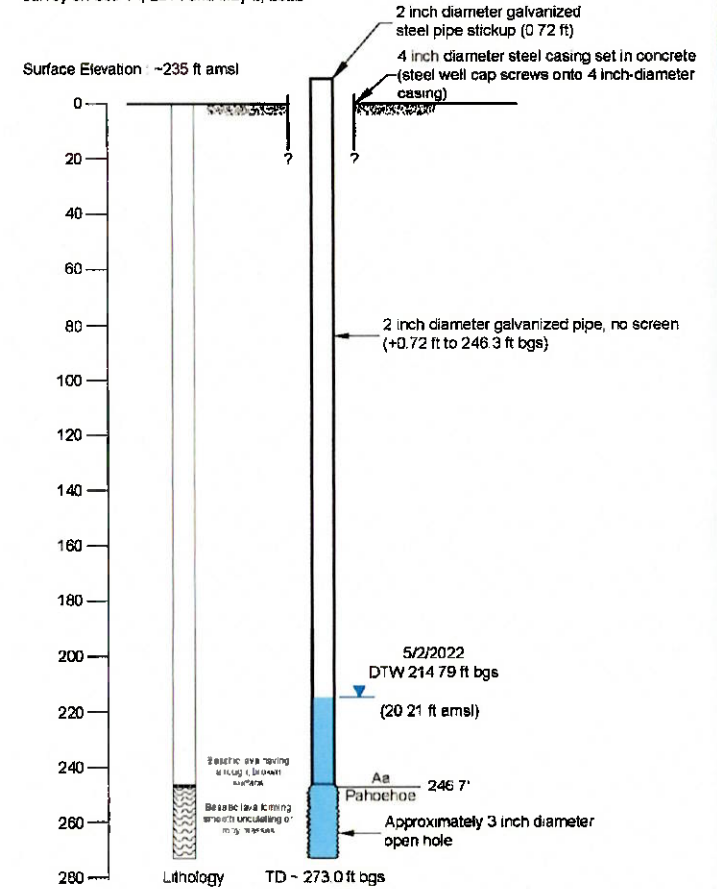
WHAT DOES DH-43 LOOK LIKE?



HBWS Well DH-43 (No. 2253-02)

No CWRM Well Construction information available

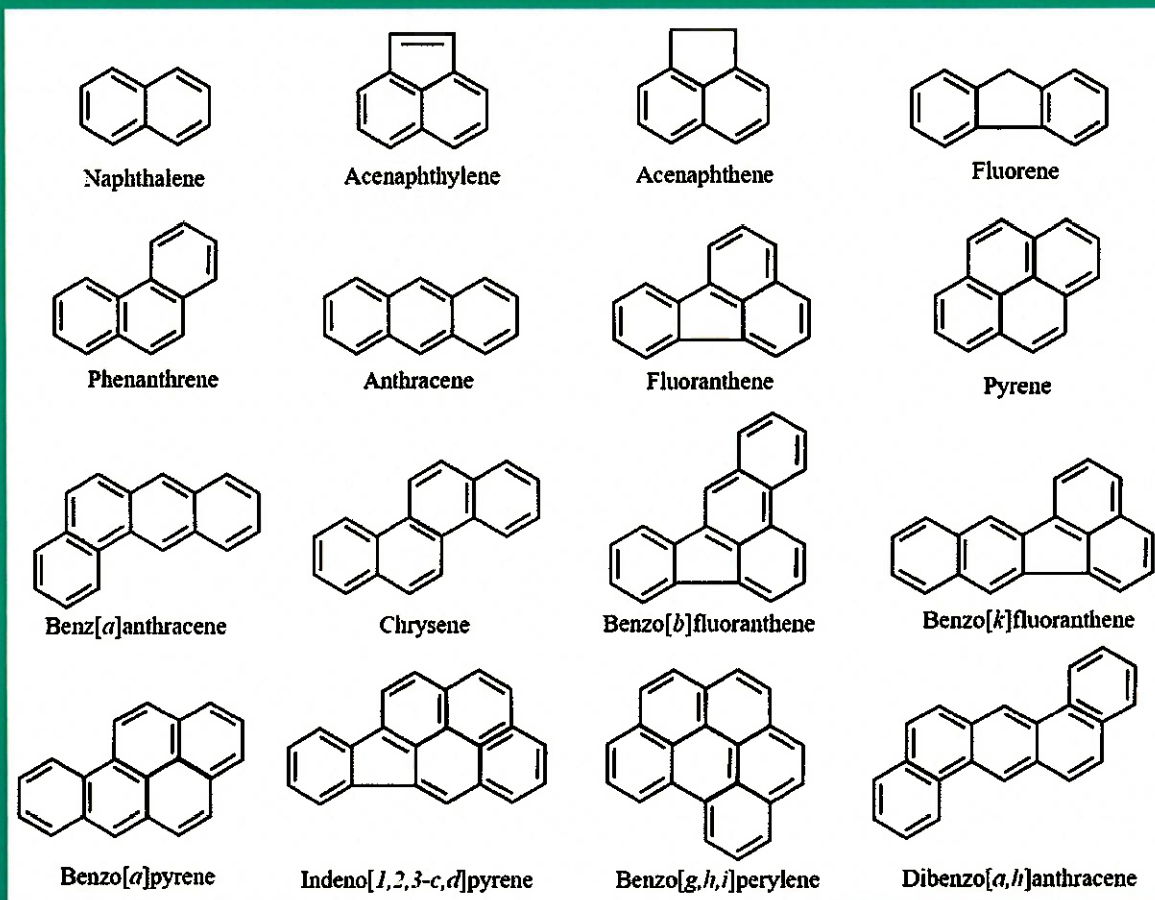
This well construction diagram based on well site description and video log survey on Oct. 14, 2014 and May 2, 2022



HBWS Well DH-43 (No.2253-02)
Well Schematic
 Halawa Valley Groundwater Study,
 Oahu, Hawaii

WHAT ARE POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)?

- 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.



WHAT ARE PAHS? – CONT.

- Forms from burning coal, oil, gas, wood, garbage, and tobacco.
- High heat when cooking meat and other foods will form PAHs.
- Cigarette smoke contains many PAHs.



WHAT DOES THE PAH RESULT MEAN?

- Petroleum contamination beyond Red Hill property detected.
- Groundwater from Red Hill can also flow toward Moanalua Valley.
- The PAH found in DH-43 is consistent with levels observed in the Navy's Red Hill monitoring wells.
- Dissolved fuel contaminants from Red Hill can be present at the surface of aquifer as well as deeper within the formation.
- PAHs in GW is persistent and do not readily decompose.



WHAT DOES THE PAH RESULT MEAN? – CONT.

- The individual PAH levels are very low and not expected to pose a significant threat to human health or the environment.
- Further study is warranted to assess the potential long-term impact to the aquifer.
- Testing every three months will be conducted to watch for any changes in the amounts detected.



WHAT DOES THE PAH RESULT MEAN? – CONT.

- The Red Hill tanks need to be defueled – sooner the better.
- The fuel in the tanks poses an imminent threat to the aquifer.



QUESTIONS / DISCUSSION



APPROVAL OF MINUTES

Approval of the Minutes of the Regular Meeting Held on July 25, 2022.

MOTION TO APPROVE

Ray Soon and Na'alehu Anthony motioned and seconded, respectively, to approve the Minutes of the Regular Meeting on July 25, 2022.

In lieu of a roll call vote, Chair Andaya 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 Andaya then inquired if any Board Members would like to object or vote "Nay" on the motion. There were no objections or "Nay" votes. Chair Andaya announced that the motion was unanimously carried.

THE MINUTES OF THE REGULAR MEETING HELD ON JULY 25, 2022 WERE APPROVED AT THE AUGUST 22, 2022 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		

"August 22, 2022

ADOPTION OF
RESOLUTION
NO. 945, 2022,
ERWIN KAWATA,
2022 MANAGER
OF THE YEAR

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

Chair and Members:

Subject: Adoption of Resolution No. 945, 2022,
Erwin Kawata, 2022 Manager of the Year

We are pleased to announce that the 2022 Manager of the Year for the Board of Water Supply is Mr. Erwin Kawata. He is the Program Administrator of the Water Quality Division.

We recommend the adoption of Resolution No. 945, 2022, to honor Mr. Erwin Kawata for his outstanding service, contributions, and dedication to the Board of Water Supply.

Respectfully Submitted,

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

Attachment"

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

Manager Lau expressed his gratitude for Mr. Kawata. He stated that Mr. Kawata has been a public servant for the last 40 years dedicating his career to keeping our drinking water safe for the community. "Mr. Kawata is the real person behind what the BWS has done with Red Hill." Manager Lau congratulated Mr. Kawata and his team.

Mr. Kawata thanked the BWS, he stated that it's been a terrific journey, and enjoys what he does. Mr. Kawata recognized his wife, Ms. Allison Kawata, for her continuous encouragement, understanding, and patience throughout the years.

Chair Andaya congratulated Mr. Kawata.

MOTION
TO APPROVE

Dawn Szewczyk and Ray Soon motioned and seconded, respectively, approve the Adoption of Resolution No. 945, 2022, Erwin Kawata, 2022 Manager of the Year.

In lieu of a roll call vote, Chair Andaya 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 Andaya then inquired if any Board Members would like to object or vote

"Nay" on the motion. There were no objections or "Nay" votes. Chair Andaya announced that the motion was unanimously carried.

APPROVAL OF THE ADOPTION OF RESOLUTION NO. 945, 2022. ERWIN KAWATA, 2022 MANAGER OF THE YEAR WAS APPROVED ON AUGUST 22, 2022			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		



BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 945, 2022

ERWIN KAWATA
2022 MANAGER OF THE YEAR

WHEREAS, ERWIN M. KAWATA, Program Administrator of the Water Quality Division, has been selected as the Board of Water Supply's (BWS) 2022 Manager of the Year; and

WHEREAS, over his 40-year BWS career that began as a Chemist II, MR. KAWATA acquired exceptional knowledge and skills that have made him into a highly respected subject matter authority on water quality as well as the administrator for the BWS division responsible for the continued safety of Oahu's groundwater supply for now and into the future; and

WHEREAS, under ERWIN M. KAWATA's strong planning, organizational, and collaborative leadership skills, the BWS's water quality laboratories conduct more than 30,000 tests annually to ensure that drinking water throughout our island water system meets or exceeds federal and state monitoring requirements to ensure that BWS ratepayers have safe drinking water; and

WHEREAS, since the BWS was notified in January 2014 about the 27,000-gallon fuel leak from the Navy's Red Hill Underground Fuel Storage Facility, MR. KAWATA has spent countless hours studying documents about the facility, coordinating and working with a team of experts to proactively protect the BWS's water supply, and tirelessly raising alarms about the facility's imminent threat to the aquifer and public health; and

WHEREAS, since the November 2021 Navy's Red Hill facility fuel leak that contaminated its own water system, MR. KAWATA has also been spearheading the BWS's response to that catastrophe. Efforts include locating new water supply wells to offset the closure of Halawa Shaft, Halawa Wells, and Aiea Wells; investigating water treatment to remove fuel contaminants; and establishing new sentinel monitor wells to detect any movement of fuel contamination across Halawa and Moanalua Valleys toward BWS wells; and

WHEREAS, ERWIN M. KAWATA has proven himself to be a champion of safe drinking water and a dedicated and dependable BWS management team member, having previously been named as Manager of the Year in 2014; and

WHEREAS, MR. KAWATA's selection as the 2022 Board of Water Supply Manager of the Year and his nomination to the City Manager of the Year Recognition Ceremony has brought pride and honor to the BWS and all his family and friends; now, therefore

BE IT RESOLVED by the Members of the Board of Water Supply, City and County of Honolulu, that we hereby do express to ERWIN M. KAWATA our heartfelt appreciation for his outstanding service to the Department and the City and County of Honolulu; and


BE IT FURTHER RESOLVED that the Members of this Board express our sincere congratulations upon his selection as the Board of Water Supply Manager of the Year for 2022; and

BE IT FINALLY RESOLVED that this Resolution be presented to MR. KAWATA with our warmest aloha and best wishes for all his future endeavors.



Resolution No. 945, 2022

Adopted this 22nd day of August 2022
Board of Water Supply, Honolulu, Hawaii


BRYAN P. ANDAYA
Chair of the Board

“August 22, 2022

ADOPTION OF
RESOLUTION
NO. 946, 2022,
STEVEN
NORSTROM,
2022 EMPLOYEE
OF THE YEAR

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

Chair and Members:

Subject: Adoption of Resolution No. 946, 2022,
Steven Norstrom, 2022 Employee of the Year

We are pleased to announce that a 2022 Employee of the Year for the Board of Water Supply is Mr. Steven Norstrom. He is an Information Specialist II in the Communications Office.

We recommend the adoption of Resolution No. 946, 2022, to honor Mr. Steven Norstrom for his outstanding service, contributions, and dedication to the Board of Water Supply.

Respectfully Submitted,

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

DISCUSSION:

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

Manager Lau expressed his appreciation for Mr. Norstrom, stating “he is an important part of the Communications Office”. He shared that when the BWS ramped up the water conservation program. Mr. Norstrom heeded the opportunity. Mr. Norstrom helped develop a large water user condominium outreach program with Ms. Lorna Heller, Civil Engineer VI, Water Resources Division and worked with the major property managers on the island.

Mr. Norstrom shared that the BWS was able to build relationships with various hotels and restaurants and conducted basic water audits to help promote water conservation. Mr. Norstrom thanked the BWS for the recognition.

MOTION
TO APPROVE

Ray Soon and Na’alehu Anthony motioned and seconded, respectively, to approve the Adoption of Resolution 946, 2022, Steven Norstrom, 2022 Employee of the Year.

In lieu of a roll call vote, Chair Andaya 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 Andaya then inquired if any Board Members would like to object or vote “Nay” on the motion. There were no objections or “Nay” votes. Chair Andaya announced that the motion was unanimously carried.

APPROVAL OF THE ADOPTION OF RESOLUTION NO. 946, 2022, STEVEN NORSTROM, EMPLOYEE OF THE YEAR WAS APPROVED ON AUGUST 22, 2022

	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		



BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 946, 2022

STEVEN NORSTROM
2022 EMPLOYEE OF THE YEAR

WHEREAS, STEVEN NORSTROM, an Information Specialist II with the Communications Office, has been a dedicated and exceptional employee since he joined the Board of Water Supply (BWS) in February 2019 and has been selected as a 2022 BWS Employee of the Year; and

WHEREAS, MR. NORSTROM is persistent and passionate about protecting Oahu's precious island water resource and has worked to develop partnerships with other government agencies and organizations to create water conservation awareness year-round; help set up a conservation education outreach program for large residential buildings, which is a hard-to-reach audience; and learn more about the latest water conservation ideas and methods to effectively promote them to all island water users; and

WHEREAS, MR. NORSTROM has improved the department's Neighborhood Board program by moving and storing BWS's monthly report files on an online app. This allows department representatives to remotely access the monthly BWS reports and share them at the meetings; and

WHEREAS, after last year's Red Hill fuel leak crisis, MR. NORSTROM coordinated the department's participation in various outreach events, media appearances, and public education efforts to remind the community about the crucial need for overall island water conservation and ways they can help to support the effort; and

WHEREAS, MR. NORSTROM is a good-natured, well-liked, and highly conscientious BWS employee that has quickly embraced his role to respond to public inquiries and concerns with patience and compassion, while publicizing the department's water conservation programs; and

WHEREAS, MR. NORSTROM has performed his tasks at the highest levels, demonstrating a level of professionalism that has earned him the respect of members of the media and the public; and

WHEREAS, STEVEN NORSTROM has been selected as a 2022 Board of Water Supply Employee of the Year and will go on to represent BWS in the upcoming City Employee of the Year Recognition Ceremony, bringing pride and honor to the Department, his family, and friends; now, therefore

BE IT RESOLVED by the Members of the Board of Water Supply, City and County of Honolulu, that we do hereby express to STEVEN NORSTROM our sincere appreciation for his outstanding service to the Department and the City and County of Honolulu; and

BE IT FURTHER RESOLVED that the Members of this Board express to STEVEN NORSTROM our sincere congratulations upon his selection as a Board of Water Supply Employee of the Year for 2022; and

BE IT FINALLY RESOLVED that this Resolution be presented to MR. NORSTROM with our heartfelt aloha and best wishes for success in all his future endeavors.



Resolution No. 946, 2022

Adopted this 22nd day of August 2022
Board of Water Supply, Honolulu, Hawaii

BRYAN P. ANDAYA
Chair of the Board

"August 22, 2022

ADOPTION OF
RESOLUTION
NO. 947, 2022,
KATHRYN-JEAN
HOFFMAN,
2022 EMPLOYEE
OF THE YEAR

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

Chair and Members:

Subject: Adoption of Resolution No. 947, 2022,
Kathryn-Jean Hoffman, 2022 Employee of the Year

We are pleased to announce that a 2022 Employee of the Year for the Board of Water Supply is Ms. Kathryn-Jean Hoffman. She is a Procurement & Specification Specialist VI in the Office of the Manager & Chief Engineer/Executive Support Office.

We recommend the adoption of Resolution No. 947, 2022, to honor Ms. Kathryn-Jean Hoffman for her outstanding service, contributions, and dedication to the Board of Water Supply.

Respectfully Submitted,

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

DISCUSSION:

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

Chair Andaya and Manager Lau congratulated Ms. Kathryn-Jean Hoffman.

Manager Lau stated Ms. Hoffman, Procurement and Specs Specialist VI, Executive Support Office, is responsible for the handling of procurement for the Board of Water Supply's construction, design consulting services, and goods and services. Ms. Hoffman helped the BWS move into the digital world by implementing electronic forms and digital signatures. Manager Lau expressed his appreciation for Ms. Hoffman and all the work she does for the BWS.

Ms. Hoffman appreciated the recognition. She stated that the transitions to electronic procurement and the use of electronic forms could not have been possible without the support and hard work of the entire Procurement Office team: Mr. Albert Mau, Mr. Brent Nakasuka, Ms. Francis Hasebe, and Ms. Pua Miura; and the support of her supervisor Ms. Raelynn Nakabayashi, all of the Divisions, and Manager Lau.

MOTION
TO APPROVE

Ray Soon and Na'alehu Anthony motioned and seconded, respectively, to approve the Adoption of Resolution 947, 2022, Kathryn-Jean Hoffman, 2022 Employee of the Year.

In lieu of a roll call vote, Chair Andaya 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 Andaya then inquired if any Board Members would like to object or vote "Nay" on the motion. There were no objections or "Nay" votes. Chair Andaya announced that the motion was unanimously carried.

APPROVAL OF THE ADOPTION OF RESOLUTION NO. 947, 2022, KATHRYN-JEAN HOFFMAN, EMPLOYEE OF THE YEAR WAS APPROVED ON AUGUST 22, 2022			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		



BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 947, 2022

KATHRYN-JEAN HOFFMAN
2022 EMPLOYEE OF THE YEAR

WHEREAS, KATHRYN-JEAN HOFFMAN, Procurement & Specification Specialist VI in the Office of the Manager & Chief Engineer/Executive Support Office, has been a dedicated and exceptional employee while working at the Board of Water Supply (BWS) from 2005 through 2011, and again since her return in 2019; and she was selected as the Department's 2022 Employee of the Year; and

WHEREAS, MS. HOFFMAN works tirelessly and resourcefully as a change-leader as the BWS grows its Operating and Capital Improvement Program Budgets, to carry out recommendations of the Water Master Plan while implementing major change initiatives to allow the department to successfully adapt, move forward, and continue procurement operations despite limitations imposed by the COVID-19 virus; and

WHEREAS, MS. HOFFMAN championed the usage of the Hawaii eProcurement System and BWS Procurement Portal to raise BWS visibility among potential vendors to promote increased competition and this has received positive feedback from the contractor and consultant communities; and

WHEREAS, MS. HOFFMAN effectively moved BWS into the future by seamlessly adapting and implementing various electronic procurement forms and programs, supporting employees who teleworked, and the BWS efforts to go paperless ensuring all priority procurements are made timely and in accordance with all regulations and statutes; and

WHEREAS, MS. HOFFMAN has taken a lead role in project procurement for the Kalaeloa Desalination Plant, even joining the Design-Build Institute of America to further her education and understanding of the Design-Build Operate and Maintain method of project procurement; and

WHEREAS, MS. HOFFMAN'S dedication to her job is the only way the BWS was able to maintain an over 90 percent capital improvement project execution rate in the face of both the COVID 19 pandemic and the Red Hill Disaster; and

WHEREAS, MS. HOFFMAN is well respected by department managers and her colleagues for her can-do attitude, dependability, and expertise, and she takes her duties very seriously and commits herself to carry them out with the highest degree of integrity; and

WHEREAS, KATHRYN-JEAN HOFFMAN has been selected as a 2022 Board of Water Supply Employee of the Year and will go on to represent BWS in the upcoming City Employee of the Year Recognition Ceremony, bringing pride and honor to the Department, her family, and friends; now, therefore

BE IT RESOLVED by the Members of the Board of Water Supply, City and County of Honolulu, that we do hereby express to KATHRYN-JEAN HOFFMAN, our sincere appreciation for her outstanding service to the Department and the City and County of Honolulu; and

BE IT FURTHER RESOLVED that the Members of this Board express to KATHRYN-JEAN HOFFMAN our sincere congratulations upon her selection as the Board of Water Supply Employee of the Year for 2022; and

BE IT FINALLY RESOLVED that this Resolution be presented to MS. HOFFMAN with our heartfelt aloha and best wishes for success in all his future endeavors.



Resolution No. 947, 2022

Adopted this 22nd day of August 2022
Board of Water Supply, Honolulu, Hawaii

BRYAN P. ANDAYA
Chair of the Board

“August 22, 2022

ADOPTION OF
RESOLUTION
NO. 948, 2022,
ADOPTING THE
FIVE-YEAR
BOARD OF
WATER SUPPLY
STRATEGIC
PLAN FOR
FISCAL YEAR
2023-2027

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

Chair and Members:

Subject: Adoption of Resolution 948, 2022, Adopting the Five-Year Board of Water Supply Strategic Plan for Fiscal Years 2023-2027

At the Board meeting held on July 25, 2022, the Board of Water Supply Management and the Permitted Interaction Group submitted a report and draft of the Five-Year Board of Water Supply Strategic Plan for Fiscal Years 2023-2027. We submit and recommend for adoption the final Board of Water Supply Strategic Plan for Fiscal Years 2023-2027.

Overview:

On January 24, 2022, the Board of Water Supply (BWS) Board of Directors (Board) approved the BWS request to update a new Five-Year Strategic Plan for Fiscal Years 2023-2027. At the same meeting, the Board created a Permitted Interaction Group consisting of 3 Board members to assist the BWS senior management team with the update of the Strategic Plan.

This project was a collaboration with the BWS Board in their role of providing oversight and foresight into the direction of the BWS. The Permitted Interaction Group and the BWS Senior Management Team participated in a series of facilitated virtual workshops between March to May 2022, to review, reconfirm and update the Vision, Mission, Shared Values, Sustainability Goals, and the Strategic Objectives and develop Key Action Plans with Performance Metrics and Milestones for the BWS.

The intent of this Strategic Plan is to provide guidance on how BWS employees will focus their commitment to deliver safe, dependable, and affordable water, now and into the future. The Plan’s timeframe is for Fiscal Years 2023-2027.

The Strategic Plan formalizes the BWS's Vision, Mission, Shared Values, Sustainability Goals, Strategic Objectives, Key Action Plans, Performance Metrics and Milestones

Key Elements of the Plan:

BWS Vision:

The vision of the BWS captures the critical need of water, which is the basis for life. With this vision comes the responsibility of the BWS's stewardship of, and the duty to manage, our natural water resources for the present and future generations.

BWS Mission:

The Board of Water Supply provides safe, dependable, and affordable water now and into the future.

Safe addresses the multiple areas of individual and community needs.

- Our water must meet all statutory and regulatory compliance standards in providing water for consumption and other uses.
- Our water must provide for public health and safety such as for firefighting and sanitation needs.

Dependable relies upon three factors:

- The **source of our water** must be sufficient and available now and into the future. The BWS ensures this through management of the watershed and groundwater supply, long-range planning, and possible development of alternative sources of water.
- A **water system** that is designed, constructed, and operated with system redundancy that continues delivery of water even with disruptions in the system.
- The **employees of BWS** who are committed to providing our customers with high quality water and excellent service.

Affordable water delivery that is safe and dependable is primary. We establish programs for efficiency in water use via conservation, infrastructure installation, and water system operations and maintenance. We continually implement changes to our systems to deliver water at the most responsible cost to the customer.

BWS Shared Values:

The Strategic Plan expresses the Shared Values that guide BWS employees, teams and the organization as we work together to accomplish our mission. These values reflect and reinforce our culture in our delivery of water service to our customers: 1) Respect and support each other, 2) Uphold our commitments, 3) Maintain trust through our relationships, 4) Invest in our staff, and 5) Embrace opportunities for innovation. Through our Shared Values, the Strategic Plan reinforces our all-encompassing responsibility as public servants to uphold the constitutional mandate of the Public

Trust "...all public natural resources are held in trust by the State for the benefit of the people."

BWS Sustainability Goals:

For many years, BWS has communicated its efforts through three Sustainability Goals: Resource Sustainability, Operational Sustainability, and Financial Sustainability. These over-arching goals create alignment with the Vision and Mission, program priorities, and action plans.

A major consideration of the five-year Strategic Plan is how we answer the challenges of protecting all of our precious water resources in the face of continuing stresses from climate change, economic adversities, and more recently from petroleum contamination from the Red Hill Fuel Storage Facility while upholding our continued commitment to provide safe drinking water to our customers.

Resource Sustainability (Safe)

Protect and manage Oahu's water supplies and watersheds now and into the future through adaptive and integrated strategies.

Operational Sustainability (Dependable)

Manage and continuously refine an effective organization that can evolve and adapt to its human and physical resources to provide dependable service.

Financial Sustainability (Affordable)

Implement sound fiscal strategies to provide to support our mission.

BWS Strategic Objectives, Key Action Plans, Performance Metrics and Milestones:

With the validation of the three Sustainability Goals, the Permitted Interaction Group and BWS Senior Management Team participated in facilitated virtual workshops to review the Strategic Objectives and identify Key Action Plans with Performance Metrics and Milestones to support the three overarching Sustainability Goals.

Periodic progress reports to the Board and an annual review by the senior management team will ensure that BWS meets these Strategic Objectives and Key Action Plans to reaffirm their alignment to the agency's strategic Sustainability Goals.

We respectfully recommend that the Board adopt the Board of Water Supply Strategic Plan for Fiscal Years 2023-2027 direct staff

to implement the Plan and require annual updates on the status of the Key Action Plans, Performance Metrics and Milestones.

Respectfully Submitted,

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

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

Board Member Soon indicated that the Five-Year BWS Strategic Plan for Fiscal Years 2023-2027 included Red Hill.

MOTION TO APPROVE

Dawn Szewczyk and Ray Soon motioned and seconded, respectively, to approve the Adoption of Resolution 948, 2022, Adopting the Five-Year Board of Water Supply Strategic Plan for Fiscal Years 2023-2027.

In lieu of a roll call vote, Chair Andaya 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 Andaya then inquired if any Board Members would like to object or vote "Nay" on the motion. There were no objections or "Nay" votes. Chair Andaya announced that the motion was unanimously carried.

APPROVAL OF THE ADOPTION OF RESOLUTION NO. 948, 2022, ADOPTING THE FIVE-YEAR BOARD OF WATER SUPPLY STRATEGIC PLAN FOR FISCAL YEARS 2023-2027 WAS APPROVED ON AUGUST 22, 2022			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 948, 2022

RESOLUTION ADOPTING THE FIVE-YEAR BOARD OF WATER SUPPLY
STRATEGIC PLAN FOR FISCAL YEARS 2023 – 2027

WHEREAS, the Board of Water Supply, City and County of Honolulu takes to heart and is committed to its vision of "Ka Wai Ola – Water for Life" which captures the critical need of water as the basis of life; and

WHEREAS, the Board of Water Supply's mission is to provide safe, dependable, and affordable water to our customers now and into the future; and

WHEREAS, the Board of Water Supply's Shared Values guide our employees, teams and the organization as we work together to accomplish our Vision and Mission; and

WHEREAS, the Board of Water Supply's Shared Values affirm our awareness of and attention to the impacts that our decision and operations have on the community and will actively pursue opportunities to engage the community to understand their needs and provide a quality experience with every customer interaction; and

WHEREAS, the Board of Water Supply has established three overarching Sustainability Goals to align with our Vision, Mission and Shared Values: Resource Sustainability – Protect and manage Oahu's water resources and watersheds now and into the future through adaptive and integrated strategies; Operational Sustainability – Manage and continuously refine an effective organization that can evolve and adapt its human and physical resources to provide dependable service; and Financial Sustainability – Implement sound fiscal strategies to support our mission; and

WHEREAS, the Board of Water Supply has developed Strategic Objectives, Key Action Plans with Performance Metrics and Milestones to support the three Sustainability Goals; and

WHEREAS, the Strategic Objectives, Key Action Plans, Performance Metrics, and Milestones were developed with due consideration of the challenges from climate change, economic adversities and more recently from petroleum contamination from the Red Hill Bulk Fuel Storage Facility as essential components to guide BWS operations; and

WHEREAS, the Board of Water Supply is firmly committed to delivering safe, dependable and affordable water service to our customers; and

WHEREAS, the Board of Water Supply Senior Management Team comprised of the heads and assistant heads of the BWS Divisions and Staff Offices and a Permitted Interaction Group comprised of Chair Bryan P. Andaya, Board Member Ray C. Soon and Board Member Na'alehu Anthony submitted a report and draft of the Board of Water Supply Strategic Plan for Fiscal Years 2023 – 2027 at the Board meeting held on July 25, 2022; now therefore

BE IT RESOLVED by the Members of the Board of Water Supply, City and County of Honolulu, that the Board of Water Supply Strategic Plan for Fiscal Years 2023 – 2027 be adopted, to provide the five-year strategic road map for the Board of Water Supply; and

BE IT FURTHER RESOLVED that the Board of Water Supply proceed with implementation of the Strategic Plan and empower the Manager and the Board of Water Supply Senior Management Team to carry out the Strategic Objectives and Key Action Plans. The Manager shall report to the Board on an annual basis the status of the Key Action Plans, Performance Metrics, and Milestones.

ADOPTED:


BRYAN P. ANDAYA
Chair

Honolulu, Hawaii
August 22, 2022

ADOPTION OF RESOLUTION NO. 948, 2022, ADOPTING THE FIVE-YEAR BOARD OF WATER SUPPLY STRATEGIC PLAN FOR FISCAL YEARS 2023-2027 WAS APPROVED ON AUGUST 22, 2022

	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		



Board of Water Supply

STRATEGIC PLAN FOR FISCAL YEARS 2023 – 2027

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Introduction

On January 24, 2022, the Board of Water Supply (BWS) Board of Directors (Board) approved the BWS request to update a new 5-Year Strategic Plan for Fiscal Years 2023 – 2027. At the same meeting, the Board created a Permitted Interaction Group consisting of 3 Board members to assist the BWS Senior Management Team with the update of the Strategic Plan.

This project was a collaboration with the Board in their role of providing oversight and foresight into the direction of the BWS. Members of the Permitted Interaction Group and the BWS Senior Management Team participated in a series of facilitated workshops between March to May 2022, to review, reconfirm, and update the Vision, Mission, Shared Values, Sustainability Goals, and the Strategic Objectives, and develop Key Action Plans with Performance Metrics and Milestones for the BWS.

The intent of this Strategic Plan is to provide guidance on how BWS employees will focus their commitment to deliver safe, dependable, and affordable water, now and into the future. The Plan's timeframe is for Fiscal Years 2023 – 2027.

The Strategic Plan formalizes the BWS Vision, Mission, Shared Values, Sustainability Goals, Strategic Objectives, Key Action Plans, Performance Metrics, and Milestones.

Letter from the Chair of the Board and the Manager and Chief Engineer

We, at the Honolulu Board of Water Supply, recognize and embrace our stewardship of Oahu’s most precious resource – water. Our vision – *Ka Wai Ola* or Water for Life, captures the essence of our responsibility to the community to preserve and protect our water resources as well as our duty to provide water today and for generations to come.

The Board of Water Supply has adopted an updated five-year Strategic Plan to reaffirm our commitment to our mission of providing our Oahu water customers with safe, dependable, and affordable water now and into the future. The updated Strategic Plan reviewed and revised our three overarching Sustainability Goals – Resource Sustainability, Operational Sustainability and Financial Sustainability – and our key action plans to meet these goals.

Resource Sustainability addresses the need to protect, conserve, and manage Oahu’s water resources and watersheds now and into the future through adaptive and integrated strategies. Operational Sustainability focuses on the need to manage and continuously refine an effective organization that can evolve and adapt its human and physical resources to provide dependable service. Financial Sustainability confirms the need to implement sound fiscal strategies to support our mission.

Our Strategic Plan expresses our Shared Values that guide our employees, teams and organization in how we work together to accomplish our mission. These values reflect and reinforce our culture in our delivery of water service to our customers: 1) Respect and support each other, 2) Uphold our commitments, 3) Maintain trust through our relationships, 4) Invest in our staff, and 5) Embrace opportunities for innovation. Through our Shared Values, the Strategic Plan reinforces our all-encompassing responsibility as public servants to uphold the constitutional mandate of the Public Trust “...all public natural resources are held in trust by the State for the benefit of the people.”

A major consideration of the five-year Strategic Plan is how we answer the challenges of protecting all of our precious water resources in the face of continuing stresses from climate change, economic adversities, and more recently from petroleum contamination from the Red Hill Bulk Fuel Storage Facility while upholding our continued commitment to provide safe drinking water to our customers.

Providing Water for Life to the citizens of the City and County of Honolulu is a uniquely vital responsibility. With the adoption and publication of our Strategic Plan, we establish the direction for our organization going forward. We are committed to our mission, and we ask that you join us in creating a strong and lasting shared stewardship of Oahu’s water resources.

Mahalo,

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

BRYAN P. ANDAYA
Chair

History of the Board of Water Supply

The Honolulu Board of Water Supply (BWS) was created in 1929. It was an action taken by the then-State Territorial Legislature in response to public outcry for a need for a truly effective water management system that was not influenced by politics.

In the previous years, droughts and the failure of the City Water Works Department to effectively manage uncontrolled drilling led to drastically decreasing aquifer levels and water shortages. Several important meetings were held in Honolulu during this time, with citizens, legislators, engineering experts, and water works officials all working together to solve the critical water problem.

Local citizens and experts alike recommended the establishment of a commission to manage the municipal water system. A prime consideration in the creation of this commission was to remove the operation and management of the waterworks from direct political influence and control. Both groups agreed that proper management of the water system would be most effectively accomplished through the establishment of an independent, non-political commission whose members would be responsible citizens serving overlapping terms to assure continuity.

The 1929 Legislature considered these recommendations and passed Act 96 that created and defined the powers and duties of the Honolulu BWS. With this Act, the Legislature took the control of water away from the City and turned it over to the newly-created, semi-autonomous City agency, the Honolulu BWS.

Although it remained with the City and County, it was designed to be semi-autonomous and self-supporting with the authority to charge for water usage to support its capital improvement and operating expenses and set long term plans for Oahu's water future.

Today, a seven-member Board of Directors (Board) presides over the agency and sets its policies. Five at-large members are nominated by the Mayor and approved by the City Council. Two serve as ex-officio members, the Director of the State Department of Transportation and the Chief Engineer of the City Department of Facility Maintenance.

This Board sets the policy of the BWS. It also appoints the Manager and Chief Engineer who is responsible for administering the BWS and its operation.

The monies collected from water usage are used to finance the BWS' operations and projects. The BWS does not receive nor request money collected from property or other City and County taxes or fees, or from the State, to manage and operate the water supply system.

Its semi-autonomous operations allow the BWS to continue to successfully fulfill its mission to provide Oahu water users with a safe, dependable, and affordable drinking water supply now and into the future.

BWS Vision

‘Ka Wai Ola – Water for Life’

The vision of the BWS captures the critical need of water, which is the basis for life. With this vision comes the responsibility of the BWS’s stewardship of, and the duty to manage, our natural water resources and watersheds for present and future generations.

The ancient Hawaiians valued water as one of nature’s greatest gifts and they lived in harmony with water. Land divisions (ahupua’a) mirrored the natural ecosystem – from the mountain top through upland forests to flatlands and the shore. Formal rules governed the use of water, and regulations were established and enforced over water use in upland areas so that a pure flow was always available to those who lived at lower elevations.

BWS Mission

The Board of Water Supply provides safe, dependable, and affordable water now and into the future

Safe addresses the multiple areas of individual and community needs.

- Our water must meet all statutory and regulatory compliance standards in providing water for consumption and other uses.
- Our water must provide for public health and safety such as for firefighting and sanitation needs.

Dependable relies upon three factors:

- The **source of our water** must be sufficient and available now and into the future. The BWS ensures this through management of the watershed and groundwater supply, long-range planning, and possible development of alternative sources of water.
- A **water system** that is designed, constructed, and operated with system redundancy that continues delivery of water even with disruptions in the system.
- The **employees of BWS** who are committed to providing our customers with high quality water and excellent service.

Affordable water delivery that is safe and dependable is primary. We establish programs for efficiency in water use via conservation, infrastructure installation, and water system operations and maintenance. We continually implement changes to our systems to deliver water at the most responsible cost to the customer.

BWS Shared Values

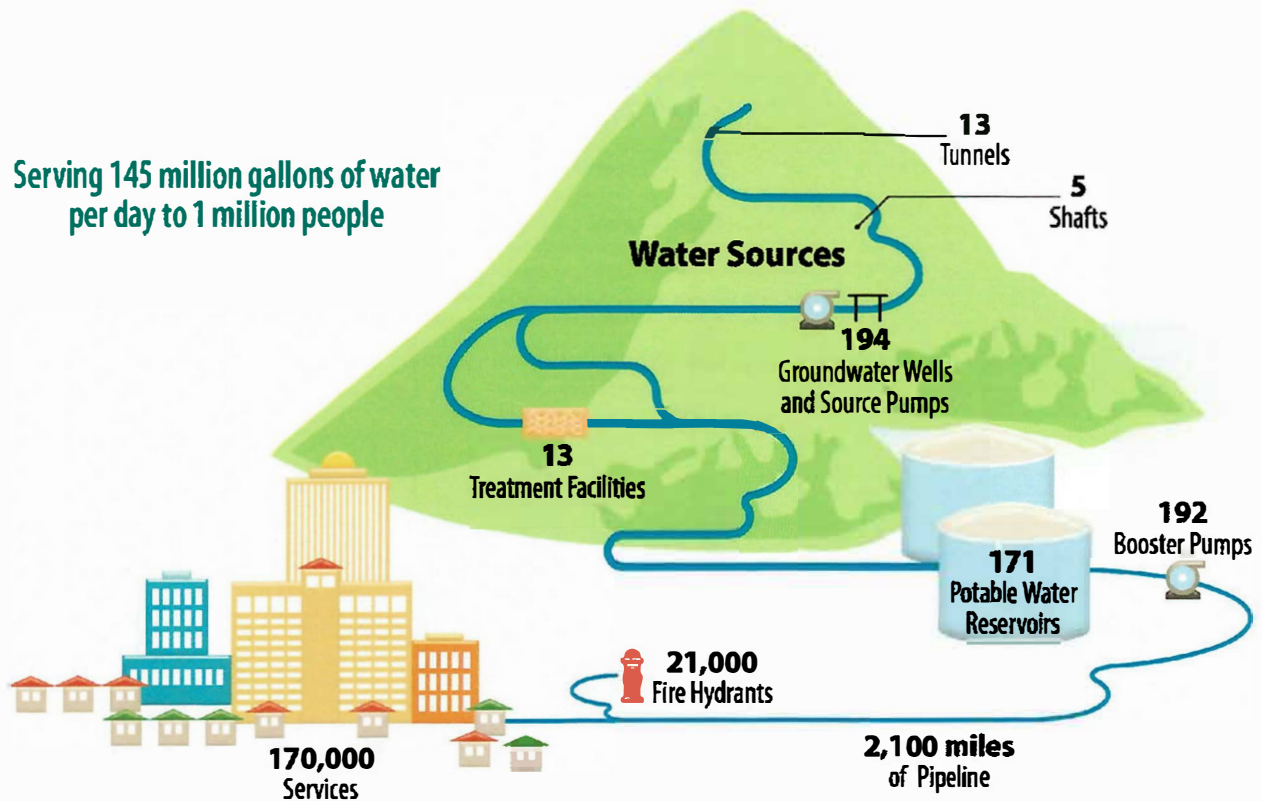
These values guide our employees, teams, and the organization in how we work together to accomplish our mission. The values reflect and reinforce our culture in our delivery of water service to our customers.

Catch Phrase – “We...”	Description
...respect and support each other.	We depend upon and support each other and treat each other with dignity and respect.
...strive to uphold our commitments.	We honor our commitments and communicate effectively with colleagues, partners, and stakeholders, to bridge differences and accomplish our collective goals.
...maintain trust through our relationships.	We uphold the Public Trust* by participating in community partnerships, collaborating with community leaders and other public agencies, and being advocates of Oahu’s water resources.
...invest in our staff.	We provide the necessary work environment, training, and tools for our staff to grow in the water utility business; and to complete their jobs safely, effectively and in support of our mission to provide safe, clean, affordable water.
...embrace opportunities for innovation.	We promote strategic innovation and new ideas in improving and maintaining our infrastructure to deliver water safely, reliably, and affordably to our customers.

**Public Trust – Principle embedded in Hawaii Law that recognizes that water is held in trust by the State of Hawaii for present and future generations. Pursuant to the Hawaii State Constitution, Article XI, Section 1, “For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii’s natural beauty and all natural resources, including land, water, air, minerals, and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people.”*

BWS Water System

For decades, the BWS has built, operated, and maintained a complex infrastructure to provide safe, dependable, and affordable service to our customers.



Source: BWS Water Master Plan, adopted October 2016

Six primary steps provide water from source to tap. These primary steps are managed and enabled on a daily basis through the water system infrastructure and workforce of the BWS.



Groundwater is O'ahu's only current supply source for potable water, coming from high quality, naturally filtered, reliable aquifer storage. The BWS manages **thousands acres of watershed area** on O'ahu to protect and preserve underlying water sources. Efforts to manage and protect the watersheds include limiting access and development, combatting invasive plants and animals, promoting healthy forests, and encouraging customer water conservation. The BWS also owns and maintains **5 dams or open reservoirs**, 4 of which currently provide flood control and the other storing non-potable water for irrigation.

Several approaches are used to capture groundwater. The BWS operates **194 groundwater wells**. Each well requires drilling into the ground, sometimes hundreds of feet below the surface. In addition, **5 water shafts** provide access to groundwater. Unlike wells that penetrate deeply with small-diameter holes, shafts are dug out of rock to reach groundwater. The BWS also maintains and operates **13 tunnels**, dug horizontally into the mountains to access stored groundwater.



The majority of the island's groundwater is exceptionally pure, requiring treatment only to assure it remains ready to drink as it travels through the distribution system that takes it from source to use. Some sources, particularly in Central O'ahu, require treatment primarily to address legacy agricultural contamination. The BWS operates **13 granular activated carbon facilities** to remove these contaminants. The BWS also operates the Honouliuli Water Recycling Facility that treats and supplies non-potable recycled water for industrial and irrigation uses.

Water sources on the island are sufficient, but are not always located where the supply is needed. Large transmission pipelines have been installed by the BWS to carry water from the source to the general area where it will be used. The **360 miles of transmission pipelines** vary from 16 to 42 inches in diameter. The BWS maintains **192 booster pumps** that keep the water moving through the piping system. This is in addition to **194 pumps, one at each well**.



Reservoirs (large covered tanks) have been built by the BWS at varied locations throughout the system to store water close to the point of use. The reservoirs store water for high demand periods and fire protection, and add dependability to the system. There are **171 potable water reservoirs** across O'ahu, together capable of storing about 196.5 million gallons. In addition, **7 non-potable reservoirs** can store approximately 15 million gallons of recycled or brackish water, used for irrigation or industrial purposes.

Once the water has been carried to the general area where it is needed, it moves into the distribution system to be delivered to its point of use through distribution pipelines that are less than 16 inches in diameter. In total, the BWS system includes **2,100 miles of pipeline**, necessary to serve water to nearly 1 million people across O'ahu through about **170,000 services**. The BWS's customers include residential, commercial, and industrial users. In addition to these potable water customers, the BWS serves non-potable water for use in golf course irrigation and industrial processes.



Source: BWS Water Master Plan, adopted October 24 2016

BWS Sustainability Goals

For many years, BWS has communicated its efforts through three Sustainability Goals: Resource Sustainability, Operational Sustainability, and Financial Sustainability. These overarching BWS goals create alignment with the Vision and Mission, program priorities, and action plans.

A major consideration of the five-year Strategic Plan is how we answer the challenges of protecting all of our precious water resources in the face of continuing stresses from climate change, economic adversities, and more recently from petroleum contamination from the Red Hill Bulk Fuel Storage Facility while upholding our continued commitment to provide safe drinking water to our customers.

Resource Sustainability (Safe)

Protect and manage Oahu’s water resources and watersheds now and into the future through adaptive and integrated strategies.

Operational Sustainability (Dependable)

Manage and continuously refine an effective organization that can evolve and adapt its human and physical resources to provide dependable service.

Financial Sustainability (Affordable)

Implement sound fiscal strategies to support our mission.



BWS Strategic Objectives

With the validation of the three Sustainability Goals, the Permitted Interaction Group and BWS Senior Management Team participated in facilitated virtual workshops to review the Strategic Objectives to support the three overarching Sustainability Goals.

Periodic progress reports to the Board and an annual review by the BWS Senior Management Team will ensure that BWS meets these Strategic Objectives to reaffirm their alignment to the BWS' Sustainability Goals.

Sustainability Goals	Category	Strategic Objective
Resource	Resource Sustainability	We will continuously adapt and implement resilient and sustainable solutions to mitigate climate and environmental changes to protect and manage Oahu's water resources and watersheds.
Resource	Water Quality	We will protect, preserve, and ensure the safety and quality of Oahu's water resources extending for at least seven generations.
Resource	Water Conservation	We will conserve Oahu's water resources, supply, and system capacity by reducing per capita demand and increasing water efficiency.
Resource	Resource Advocacy	Lead, promote, and sustain partnerships with stakeholders to advocate and support community-driven initiatives to protect Oahu's water resources and watersheds.
Operational	Organizational Resiliency	We will ensure the necessary workforce, competencies, tools, and resources to support current and future needs.
Operational	Infrastructure	We will proactively assess and address water system risks and vulnerabilities to ensure water system adequacy, dependable service, and operational efficiency.
Operational	Customer Service	We will consistently provide dependable service and a quality experience in every customer interaction.
Operational	Technology	We will ensure that our technology systems are current, secure, and leveraged to effectively support current and future BWS needs.

Sustainability Goals	Category	Strategic Objective
Operational	Strengthen Operational Partnerships	We will proactively collaborate with external government and community decision-makers and stakeholders to ensure that there is a holistic approach to critical environmental and social issues; and in so doing, reinforce the utility as a valued and trustworthy partner.
Financial	Financial Opportunities	We will strategically pursue and leverage financial opportunities.
Financial	Financial Planning	We will develop and implement short-, mid- and long-term financial plans and policies.
Financial	Financial Accountability	We will be accountable and transparent to our stakeholders through responsible and effective financial management.

BWS Key Action Plans, Performance Metrics, and Milestones

The following Key Action Plans, Performance Metrics, and Milestones help assess the progress of the BWS towards meeting the Sustainability Goals and Strategic Objectives identified in the Strategic Plan.

RESOURCE SUSTAINABILITY GOAL		
Protect and manage Oahu’s water resources and watersheds now and into the future through adaptive and integrated strategies.		
Strategic Objectives	Key Action Plans	Performance Metrics and Milestones
<u>Resource Sustainability</u> We will continuously adapt and implement resilient and sustainable solutions to mitigate climate and environmental changes to protect and manage Oahu’s water resources and watersheds.	Complete the Kalaeloa seawater desalination plant – 1.7 MGD.	<ul style="list-style-type: none"> Complete procurement by Fiscal Year 2023. Annual Board report on % project completion. Estimated project completion by Fiscal Year 2025.
	Appropriate up to 4% of annual Capital Improvement Program funding for watershed management and invasive species control.	<ul style="list-style-type: none"> Annual Board report on actual removal of invasive plant species and protection measures for BWS priority watersheds. Develop strategies by January 2023 to increase funding expenditures for watershed management.
	Diversify alternative water supplies to reduce impacts on natural water resources.	<ul style="list-style-type: none"> Budget for construction East Kapolei 215 3.0 MG reservoir and connecting pipelines in FY 2024. Initiate design of project for Kapolei Parkway 24” transmission main to Kapolei Business Park by FY 2024. Support of gray/on-site water reuse initiatives and assist ENV on expanding R-1 reuse at WWTPs.

RESOURCE SUSTAINABILITY GOAL		
Protect and manage Oahu's water resources and watersheds now and into the future through adaptive and integrated strategies.		
Strategic Objectives	Key Action Plans	Performance Metrics and Milestones
	Evaluate existing pumping operations to determine impacts to the aquifer and develop operational strategies and/or new sources to distribute source pumping.	Annual Board report on impact of existing pumping on aquifers. (Energy costs for pumping, chloride/head levels, ability to fill reservoirs, operation within permitted use).
<u>Water Quality</u> We will protect, preserve, and ensure the safety and quality of Oahu's water resources extending for at least seven generations.	Monitor the Red Hill groundwater contamination situation and take action to protect and preserve BWS wells near Red Hill fuel facility.	<ul style="list-style-type: none"> • Participate in DOH/EPA working group. • Install 4 or more sentinel/monitor wells in Halawa/Moanalua/Aiea areas by December 2026.
<u>Water Conservation</u> We will conserve Oahu's water resources, supply and system capacity by reducing per capita demand and increasing water use efficiency.	Reduce water loss by 2% in BWS water system.	<ul style="list-style-type: none"> • Calibrate largest source meters by 2027. • Continue leak detection and meter change out program (one cycle a year). • Complete AMR MXU change out program. • Continue replacement of priority pipelines to reduce main breaks and water loss. • Annual Board report on % non-revenue water loss.
<u>Resource Advocacy</u> Lead, promote and sustain partnerships with stakeholders to advocate and support community-driven initiatives to protect Oahu's water resources and watersheds.	Lead and engage with stakeholders and the community on resource protection initiatives.	<ul style="list-style-type: none"> • Development of Initiatives (SWAP-Source Water Assessment Program/SWPP-Source Water Protection Program) including stakeholder outreach and develop SWPP plan by 2024.

OPERATIONAL SUSTAINABILITY GOAL Manage and continuously refine an effective organization that can evolve and adapt its human and physical resources to provide dependable service.		
Strategic Objectives	Action Plans	Performance Metrics and Milestones
<u>Organizational Resiliency</u> We will ensure the necessary workforce, competencies, tools and resources to support current and future needs.	Develop recruitment plan with metrics and implementation plan for Department by end of FY2023.	<ul style="list-style-type: none"> • Determine a priority fill list for FY2023. • Recommend to the Board an acceptable vacancy rate based on historical data for approval by 2024. • Annual Board report on vacancy rate.
	Create a Facility Maintenance Division (FMD)	<ul style="list-style-type: none"> • Obtain approval from Manager to begin reorganization to create FMD by December 2022. • Gather data, complete analysis and submit justification memo to DHR by December 2023. • Create new FMD by 2027.
<u>Infrastructure</u> We will proactively assess and address water system risks and vulnerabilities to ensure water system adequacy, dependable service and operational efficiency.	Improve and maintain water infrastructure to ensure dependable service to our customers	<ul style="list-style-type: none"> • Annual Board report on number of main breaks per 100 miles of pipe with target of 15 or less. • Annual Board report on number of leaks located and repaired per 100 miles with target of 30 or more. • Annual Board report on number of switchgears maintained at pump stations with target of 15 facilities or more.
<u>Customer Service</u> We will consistently provide dependable service and a quality experience in every customer interaction.	Continue to improve work processes, efficiencies and quality assurance program.	<ul style="list-style-type: none"> • All divisions to submit a work process improvement plan and metric to measure success by December 2022. • Annual Board report on Resident Overall Satisfaction with BWS (%); survey taken every 2 years with target of 70% or more.
<u>Technology</u> We will ensure that our technology is current, secure, and leveraged to effectively support current and future BWS needs.	Update IT Strategic Plan	<ul style="list-style-type: none"> • Update plan by end of FY 2023. • Develop milestone for FY24-26 based on plan.
<u>Strengthen Operational Partnerships</u> We will proactively collaborate with external government and community decision-makers and stakeholders to ensure that there is a holistic approach to critical environmental and social issues; and in so doing, reinforce the utility as a valued and trustworthy partner.	Develop and adopt a plan to identify external public and private agencies with whom BWS should meet on an on-going basis (no less than annually) and assign a BWS division or office to nurture each relationship by FY2025.	<ul style="list-style-type: none"> • Develop plan with Divisions/Staff Offices to determine public/private stakeholders by 12/31/2022. • Manager to assign various Divisions/Staff Offices to begin outreach with stakeholders in 2023.

FINANCIAL SUSTAINABILITY GOAL		
Implement sound financial strategies to support our mission.		
Strategic Objectives	Action Plans	Performance Metrics and Milestones
<p><u>Financial Opportunities</u></p> <p>We will strategically pursue and leverage financial opportunities.</p>	<p>Effectively and strategically leverage debt and governmental funding for infrastructure investments.</p>	<ul style="list-style-type: none"> • Sept 2022 – submit WIFIA Letter of Interest. • Jan 2024 – submit WIFIA application (if 2022 LOI is selected). • Submission of grant and funding applications as they become available, e.g. USBR grant, American Rescue Plan Act projects. • May annually – submit projects eligible for SRF Intended Use Plan. • Annual Board report on outstanding debt.
<p><u>Financial Planning</u></p> <p>We will develop and implement short-, mid-, and long-term financial policies and plans.</p>	<p>Complete the cost-of-service study and water rate plan and update the financial model.</p>	<ul style="list-style-type: none"> • Sept 2022 – complete the financial model tool. • Oct 2022 – begin community and government outreach. • Dec 2022 – complete revised water rates. • Oct 2023 – issue final report. • Jan 2024 – new water rates become effective.
<p><u>Financial Accountability</u></p> <p>We will be accountable and transparent to our stakeholders through responsible and effective financial management.</p>	<p>Maintain and/or exceed current bond rating.</p>	<p>Annual Board report on bond ratings: AA+ - Fitch Aa2 – Moody’s AAA – S & P</p>



Report of the Permitted Interaction Group

Honolulu Board of Water Supply Draft Strategic Plan Fiscal Years 2023 - 2027 July 25, 2022

Members:

Bryan P. Andaya, Chair

Ray C. Soon

Na'alehu Anthony

Background

On January 24, 2022, a Permitted Interaction Group (PIG) comprised of three Board members (Bryan P. Andaya - Chair, Ray C. Soon - Member, and Na'alehu Anthony - Member) was approved by the Board. The PIG collaborated with the BWS senior management team to prepare the new FY 2023 - 2027 Strategic Plan. Four (4) workshops were held to prepare the draft Strategic Plan for submission to the Board at the July 25, 2022 Board meeting and possible adoption of the strategic plan at the August 22, 2022 Board meeting.

The following is a report of the topics and issues discussed in the workshops and the recommendations by the PIG for the updated 5-Year BWS Strategic Plan for fiscal years 2023 to 2027.

Workshop Schedule and Activities

From March to May 2022, four virtual workshops were conducted to update the strategic plan. The workshop participants included the PIG, the Manager and Deputy Manager, BWS Program Administrators, Staff Officers and their assistants (collectively, the BWS senior management team). The workshops were facilitated by Ann Hajnosz of Harris & Associates. Below is the workshop schedule and brief description of the activities conducted during each workshop.

Workshop 1 - March 1, 2022

Activity 1: Vision/Mission/Shared Visions Statements Review

The purpose of this activity was to review and validate the current BWS Vision, Mission and Shared Values Statement. Virtual polls were utilized to obtain feedback from the workshop participants. The results were as follows:

BWS Vision: Ka Wai Ola - Water for Life	
What do you think of the current Vision?	
Strongly Agree with it	87%
Agree with it	12%
Disagree with it	0%
Strongly Disagree with it	0%

BWS Mission: The Board of Water Supply provides safe, dependable, and affordable water now and into the future.

What do you think of the current Mission?

Strongly Agree with it	78%
Agree with it	21%
Disagree with it	0%
Strongly Disagree with it	0%

BWS Values:

- **Personal Responsibility:** We are water professionals who earn and uphold the community’s trust everyday through our actions and in doing our jobs right.
- **Team Responsibility:** We depend upon and support each other and treat each other with dignity and respect.
- **Organizational Responsibility:** We provide a healthy and safe work environment through cooperation, participation, and shared decision-making.
- **Societal Responsibility:** We provide quality service to our customers with the highest level of courtesy and efficiency.
- **Environmental Responsibility:** We uphold the Public Trust as thoughtful stewards of Oahu’s water resources and the environment

What do you think of the current BWS Values?

Strongly Agree with it	39%
Agree with it	60%
Disagree with it	0%
Strongly Disagree with it	0%

The poll results showed strong agreement with the current BWS Vision and Mission, but not with the current Shared Values Statement. A future workshop was used to hold more in-depth discussions on revisions to the Shared Values Statement.

Activity 2: Effective Utility Management (EUM) Discussion

The purpose of this activity was to review and discuss the results of the EUM survey tool.

The EUM survey tool is a self-assessment survey tool that was used by the BWS Board and BWS senior management team to evaluate BWS operations and identify priority areas for improvement. This survey tool was developed in 2008 and updated in 2017 by a national coalition of water and wastewater organization, including the American Water Works Association (AWWA), Water Research Foundation (WRF) and the Environmental Protection Agency (EPA). The survey tool was used to evaluate the 10 attributes of an effectively managed utility and prioritize improvement areas.

The results of the survey indicated that in general, the BWS has workable systems in place and achieves its management, operational and financial goals. However, both the BWS Board and the BWS senior management team identified “Employee and Leadership Development” as a priority area for improvement.

Activity 3 Review Goals and Objectives for the Strategic Plan Workshops

The purpose of this activity was to review with the workshop participants the tasks and deliverables for each of the strategic plan workshops.

- The assumption is that this is an update to the 2018 - 2022 strategic plan. The expectation is that the framework will generally stay the same.
- **Definitions:**
 - **Sustainability Goals** - 3 foundational building blocks in achieving BWS Strategic Plan
 - **Categories** - Sub goals that focus on specific areas within a Sustainability Goal
 - **Strategic Objectives** - Measurable activities that will achieve Sustainability Goals
 - **Action Plans** - Tactics to achieve Strategic Objectives
 - **Performance Metrics** - Measurable milestones and deliverables to measure success achieving the Action Plans
- **Workshop #1**
 - Revisit Sustainability Goals language
 - Revisit Strategic Objectives and associated language

- Workshop #2
 - Review Action Plans for Strategic Objectives and make adjustments
- Workshop #3
 - Review Performance Metrics for Action Plans and make adjustments
- Workshop #4 - Wrap up

Activity 4: Red Hill Bulk Fuel Storage Facility (Red Hill) Water Contamination

The purpose of this activity was to provide the PIG and the BWS senior management team an overview of the Red Hill contamination issue and its implications on the BWS operations, water resources and the community at large. The Red Hill water contamination issue is an important consideration in the update of the next 5-Year Strategic Plan. The Manager presented the update and ended with the following summary:

- BWS's Halawa Shaft, Aiea Wells, and Halawa Wells are shut down in response to Navy announcement of petroleum contamination at Navy Red Hill Shaft.
- Continued storage of Red Hill fuel above the aquifer endangers the resource to further contamination.
- Navy should immediately relocate the fuel away from over the aquifer and decommission the Red Hill fuel facility.
- Water conservation is critically important for these water systems areas: Metro Honolulu (Halawa to Hawaii Kai), Aiea-Halawa (Hekaha St. to Iwaena St.)
- Water demand can't exceed the supply from remaining BWS wells, or there will be water service disruption.

Activity 5: Sustainability Goals and Strategic Objectives

The purpose of this activity was to review and update, if necessary, the current BWS Sustainability Goals and Strategic Objectives.

The current strategic plan has 3 Sustainability Goals: Resource, Operational and Financial. The workshop participants were divided into 3 break-out groups to review and discuss the current goals and offer revisions which were presented to the entire group for further discussion. As part of the discussion, the workshop participants were asked to consider the Red Hill water contamination impacts to their operations and its impacts on the current Sustainability Goals and Strategic Objectives.



At the conclusion of Workshop #1, general consensus was reached by the workshop participants on the revisions to the three Sustainability Goals, however more discussion was needed for the Strategic Objectives to support the three Sustainability Goals.

Workshop 2: March 24, 2022

Activity 1: Continuation - Sustainability Goals, Strategic Objectives and Key Action Plans

The purpose of this activity was to review the revisions from Workshop #1 to the Sustainability Goals, then continue discussions on the Strategic Objectives to support the three overarching Sustainability Goals.

The workshop participants were also tasked to begin identifying Action Plans to ensure that the goals and objectives set in the 5-Year Plan would be accomplished.

At the conclusion of Workshop #2, general consensus was that the Sustainability Goals and Strategic Objectives were very close to being finalized. The Action Plans for each of the Strategic Objectives were still in draft form and would be a major part of the discussion in Workshop #3.

Workshop 3: April 18, 2022

Activity 1: Confirm Updated Sustainability Goals and Strategic Objectives

The purpose of this activity was to finalize the revised Sustainability Goals and Strategic Objectives.

Activity 2: BWS Shared Values

The purpose of this activity was to discuss revisions to the BWS Shared Values Statement. Feedback from Workshop #1 indicated that there was not strong agreement with the current Shared Values Statement.

The workshop facilitator, Ann Hajnosz, did a brief presentation on elements generally contained in value statements and offered samples from other agencies for the workshop participants to consider as they discussed revisions to the Shared Values Statement. After much discussion by the workshop participants, there was no consensus on revisions to the Shared Values Statement, except that the participants were in agreement that simplified Shared Values language would make it easier for managers to communicate the Shared Values to staff and embed the values into everyday operations. Using feedback from the group discussion, Ms. Hajnosz offered to draft a new Shared Values Statement for consideration at the next workshop.

Activity 3: Performance Metrics

The purpose of this activity was to review the Performance Metrics in the current strategic plan and begin identifying Performance Metrics and Milestones for the updated Action Plans. Sample performance metrics used by other utilities were presented. The facilitator recommended using the SMART criteria to guide in setting measurable and meaningful performance metrics.



Activity 4: Confirmation of Action Plans

The purpose of this activity was to confirm and refine as needed, the Action Plans developed in Workshop #3. The workshop participants were divided into the three breakout groups to discuss the Action Plans for their assigned Sustainability Goal: Resource, Operational or Financial, then share their discussions and proposed Action Plans with the entire group.

At the conclusion of Workshop #3, the general consensus was that the Action Plans were close to being finalized. The Performance Metrics associated with each of the Action Plan still needed to be identified and would be the major focus of the discussions for Workshop #4.



Stakeholder Advisory Group Presentation: April 21, 2022

The proposed revisions to the Sustainability Goals and Strategic Objectives were presented at the April 21, 2022, BWS Stakeholder Advisory Group (SAG) meeting. The purpose of the presentation was to obtain feedback from the SAG on the proposed direction of the BWS for the next 5 years. There were no major comments on the proposed revisions by the SAG and there was general agreement with the direction proposed by the BWS.

Workshop 4: May 26, 2022

Activity 1: Revisions to BWS Shared Values Statement

The purpose of this activity was to review the draft of the Shared Values Statement developed by the facilitator. The workshop participants were generally receptive to the draft Shared Values Statement. Proposed changes by the workshop participants would be used to finalize the Shared Values Statement.

Activity 2: Confirmation of Action Plans and Performance Metrics

The purpose of this activity was to confirm the Action Plans and identify the Key Action Plans that would be included in the Strategic Plan. Performance Metrics and/or Milestones to measure success in executing the Key Action Plans were also identified.

At the conclusion of Workshop #4, there was general acceptance of the revised Shared Values Statements, Key Action Plans and Performance Metrics and Milestones. No formal workshops were scheduled beyond Workshop #4 and any further changes/revisions to the elements of the Strategic Plan would be done through emails and small group discussions.

Findings and Recommendations

BWS VISION, MISSION AND SHARED VALUES STATEMENTS

The BWS Vision and Mission Statement remain unchanged. However, the Shared Values Statement were revised as follows:

OLD	NEW	
	Catch Phrase - "We..."	Description
Team Responsibility: We depend upon and support each other and treat each other with dignity and respect.	...respect and support each other.	We depend upon and support each other and treat each other with dignity and respect.
Personal Responsibility: We are water professionals who earn and uphold the community's trust everyday through our actions and in doing our jobs right.	...strive to uphold our commitments.	We honor our commitments and communicate effectively with colleagues, partners, and stakeholders, to bridge differences and accomplish our collective goals.
Environmental Responsibility: We uphold the Public Trust* as thoughtful stewards of Oahu's water resources and the environment.	...maintain trust through our relationships.	We uphold the Public Trust* by participating in community partnerships, collaborating with community leaders and other public agencies, and being advocates of Oahu's water resources. *Principle embedded in Hawaii Law that recognizes that water is held in trust by the State of Hawaii for present and future generations.
Organizational Responsibility: We provide a healthy and safe work environment through cooperation, participating, and shared decision-making.	...invest in our staff.	We provide the necessary work environment, training, and tools for our staff to grow in the water utility business; and to complete their jobs safely, effectively and in support of our mission to provide safe, clean, affordable water.
Societal Responsibility: We provide quality service to our customers with the highest level of courtesy and efficiency.	...embrace opportunities for innovation.	We promote strategic innovation and new ideas in improving and maintaining our infrastructure to deliver water safely, reliably, and affordably to our customers.

SUSTAINABILITY GOALS

The description of three overarching Sustainability Goals were amended as follows:

Goal	Old Description	New Description
Resource	Protect, conserve, and manage Oahu’s water supplies and watersheds now and into the future through adaptive and integrated strategies.	Protect and manage Oahu’s water resources and watersheds now and into the future through adaptive and integrated strategies.
Operational	Build an effective organization that continuously works to improve dependable service.	Manage and continuously refine an effective organization that can evolve and adapt to its human and physical resources to provide dependable service.
Financial	Implement sound fiscal strategies to provide safe, dependable, and affordable water service.	Implement sound fiscal strategies to support our mission.



STRATEGIC OBJECTIVES:

The Strategic Objectives to support the three overarching Sustainability Goals were amended as follows:

Resource Sustainability Goal:

OLD		NEW	
Category	Description	Category	Description
Climate Change	We will increase our understanding and mitigate and adapt to climate change to manage Oahu’s water resources and protect the limited water supply	Resource Sustainability	We will continuously adapt and implement resilient and sustainable solutions to mitigate climate and environmental changes to protect and manage Oahu’s water resources and watersheds.
Watershed Management	We will ensure healthy forests, recognizing the essential role of watersheds from mauka to		
Water Quality	We will protect, preserve, and collaborate to ensure the safety and quality of Oahu’s fresh water resource.	Water Quality	We will protect, preserve, and ensure the safety and quality of Oahu’s water resources extending for at least seven generations.
Water Conservation	We will conserve supply and system capacity by reducing per capita demand and increasing water efficiency.	Water Conservation	We will conserve Oahu’s water resources, supply, and system capacity by reducing per capita demand and increasing water use efficiency.
		Resource Advocacy	Lead, promote, and sustain partnerships with stakeholders to advocate and support community-driven initiatives to protect Oahu’s water resources and watersheds.

Operational Sustainability Goal:

OLD		NEW	
Category	Description	Category	Description
Organization	We will ensure the necessary workforce, competencies, tools and resources to support current and future needs.	Organizational Resiliency	We will ensure the necessary workforce, competencies, tools, and resources to support current and future needs.
Infrastructure	We will renew and improve the water system to ensure water system adequacy, dependable service and operational efficiency.	Infrastructure	We will proactively assess and address water system risks and vulnerabilities to ensure water system adequacy, dependable service, and operational efficiency.
Customer Service	We will proactively and consistently provide a quality experience in every customer interaction.	Customer Service	We will consistently provide dependable service and a quality experience in every customer interaction.
Technology	We will ensure that our technology systems are current and leverage opportunities in technology to efficiently support current and future BWS needs.	Technology	We will ensure that our technology is current, secure, and leveraged to effectively support current and future BWS needs.
		Strengthen Operational Partnerships	We will proactively collaborate with external government and community decision-makers and stakeholders to ensure that there is a holistic approach to critical environmental and social issues; and in so doing, reinforce the utility as a valued and trustworthy partner.

Financial Sustainability Goal:

OLD		NEW	
Category	Description	Category	Description
Financial Opportunities	We will pursue and leverage financial opportunities.	Financial Opportunities	We will strategically pursue and leverage financial opportunities.
Financial Planning	We will develop and implement short and long-term financial plans and policies.	Financial Planning	We will develop and implement short-, mid- and long-term financial policies and plans.
		Financial Accountability	We will be accountable and transparent to our stakeholders through responsible and effective financial management.

Key Action Plans and Performance Metrics and Milestones

The following Key Action Plans and Performance Metrics and Milestones were identified to help assess the progress of the BWS towards meeting the Sustainability Goals and Strategic Objectives identified in the new Strategic Plan.

RESOURCE SUSTAINABILITY GOAL		
Protect and manage Oahu’s water resources and watersheds now and into the future through adaptive and integrated strategies.		
Strategic Objectives	Key Action Plans	Performance Metrics and Milestones
<p><u>Resource Sustainability</u></p> <p>We will continuously adapt and implement resilient and sustainable solutions to mitigate climate and environmental changes to protect and manage Oahu’s water resources and watersheds.</p>	Complete the Kalaeloa seawater desalination plant - 1.7 MGD.	<ul style="list-style-type: none"> • Complete procurement by 2023. • Annual Board report on % project completion. • Estimated project completion by 2025.
	Appropriate up to 4% of annual Capital Improvement Program funding for watershed management and invasive species control.	<ul style="list-style-type: none"> • Annual Board report on actual removal of invasive plant species and protection measures for BWS priority watersheds. • Develop strategies by January 2023 to increase funding expenditures for watershed management.
	Diversify alternative water supplies to reduce impacts on natural water resources.	<ul style="list-style-type: none"> • Complete the Kalaeloa Seawater Desalination Plant (1.7 mgd) by 2025. • Budget for construction East Kapolei 215 3.0 MG reservoir and connecting pipelines in FY 2024. • Initiate design of project for Kapolei Parkway 24” transmission main to Kapolei Business Park by FY 2024. • Support of gray/on-site water reuse initiatives and assist ENV on expanding R-1 reuse at WWTPs.
	Evaluate existing pumping operations to determine impacts to the aquifer and develop operational strategies and/or new sources to distribute source pumping.	Annual Board report on impact of existing pumping on aquifers. (Energy costs for pumping, chloride/head levels, ability to fill reservoirs, operation within permitted use).

RESOURCE SUSTAINABILITY GOAL

Protect and manage Oahu’s water resources and watersheds now and into the future through adaptive and integrated strategies.

Strategic Objectives	Key Action Plans	Performance Metrics and Milestones
<p><u>Water Quality</u></p> <p>We will protect, preserve, and ensure the safety and quality of Oahu’s water resources extending for at least seven generations.</p>	<p>Monitor the Red Hill groundwater contamination situation and take action to protect and preserve BWS wells near Red Hill fuel facility.</p>	<ul style="list-style-type: none"> • Participate in DOH/EPA working group. • Install 4 or more sentinel/monitor wells in Halawa/Moanalua/Aiea areas by December 2026.
<p><u>Water Conservation</u></p> <p>We will conserve Oahu’s water resources, supply and system capacity by reducing per capita demand and increasing water use efficiency.</p>	<p>Reduce water loss by 2% in BWS water system.</p>	<ul style="list-style-type: none"> • Calibrate largest source meters by 2027. • Continue leak detection and meter change out program (one cycle a year). • Complete AMR MXU change out program. • Continue replacement of priority pipelines to reduce main breaks and water loss. • Annual Board report on % non-revenue water loss.
<p><u>Resource Advocacy</u></p> <p>Lead, promote and sustain partnerships with stakeholders to advocate and support community-driven initiatives to protect Oahu’s water resources and watersheds.</p>	<p>Lead and engage with stakeholders and the community on resource protection initiatives.</p>	<ul style="list-style-type: none"> • Development of Initiatives (SWAP-Source Water Assessment Program/SWPP-Source Water Protection Program) including stakeholder outreach and develop SWPP plan by 2024.

OPERATIONAL SUSTAINABILITY GOAL		
Manage and continuously refine an effective organization that can evolve and adapt its human and physical resources to provide dependable service.		
Strategic Objectives	Key Action Plans	Performance Metrics and Milestones
<u>Organizational Resiliency</u> We will ensure the necessary workforce, competencies, tools and resources to support current and future needs.	Develop recruitment plan with metrics and implementation plan for Department by end of FY2023.	<ul style="list-style-type: none"> • Determine a priority fill list for FY2023. • Recommend to the Board an acceptable vacancy rate based on historical data for approval by 2024. • Annual Board report on vacancy rate.
	Create a Facility Maintenance Division (FMD)	<ul style="list-style-type: none"> • Obtain approval from Manager to begin reorganization to create FMD by December 2022. • Gather data, complete analysis and submit justification memo to DHR by December 2023. • Create new FMD by 2027.
<u>Infrastructure</u> We will proactively assess and address water system risks and vulnerabilities to ensure water system adequacy, dependable service, and operational efficiency.	Improve and maintain water infrastructure to ensure dependable service to our customers	<ul style="list-style-type: none"> • Annual Board report on number of Main Breaks per 100 miles of Pipe with target of 15 or less. • Annual Board report on number of leaks located and repaired per 100 miles with target of 30 or more. • Annual Board report on number of switchgears maintained at pump stations with target of 15 facilities or more.
<u>Customer Service</u> We will consistently provide dependable service and a quality experience in every customer interaction.	Continue to improve work processes, efficiencies and quality assurance program.	<ul style="list-style-type: none"> • All divisions to submit a work process improvement plan with metrics to measure success by December 2022. • Annual Board report on Resident Overall Satisfaction with BWS (%); survey taken every 2 years with target of 70% or more.
<u>Technology</u> We will ensure that our technology is current, secure, and leveraged to effectively support current and future BWS needs.	Update IT Strategic Plan	<ul style="list-style-type: none"> • Update plan by end of FY 2023. • Develop milestone for FY24-26 based on plan.
<u>Strengthen Operational Partnerships</u>	Develop and adopt a plan to identify external public and private agencies with whom BWS should	<ul style="list-style-type: none"> • Develop plan with Divisions/Staff Offices to



OPERATIONAL SUSTAINABILITY GOAL

Manage and continuously refine an effective organization that can evolve and adapt its human and physical resources to provide dependable service.

Strategic Objectives	Key Action Plans	Performance Metrics and Milestones
<p>We will proactively collaborate with external government and community decision-makers and stakeholders to ensure that there is a holistic approach to critical environmental and social issues; and in so doing, reinforce the utility as a valued and trustworthy partner.</p>	<p>meet on an on-going basis (no less than annually) and assign a BWS division or office to nurture each relationship by FY2025</p>	<p>determine public/private stakeholders by 12/31/2022.</p> <ul style="list-style-type: none"> • Manager to assign various Divisions/Staff Offices to begin outreach with stakeholders in 2023.

FINANCIAL SUSTAINABILITY GOAL		
Implement sound financial strategies to support our mission.		
Strategic Objectives	Action Plans	Performance Metrics and Milestones
<p><u>Financial Opportunities</u></p> <p>We will strategically pursue and leverage financial opportunities.</p>	<p>Effectively and strategically leverage debt and governmental funding for infrastructure investments.</p>	<ul style="list-style-type: none"> • Sept 2022 - submit WIFIA Letter of Interest • Jan 2024 - submit WIFIA application (if 2022 LOI is selected) • Submission of grant and funding applications as they become available, e.g. USBR grant, American Rescue Plan Act projects • May annually - submit projects eligible for SRF Intended Use Plan • Annual Board report on outstanding debt
<p><u>Financial Planning</u></p> <p>We will develop and implement short-, mid-, and long-term financial policies and plans.</p>	<p>Complete the cost-of-service study and water rate plan and update the financial model.</p>	<ul style="list-style-type: none"> • Sept 2022 - complete the financial model tool • Oct 2022 - begin community and government outreach • Dec 2022 - complete revised water rates • Oct 2023 - issue final report • Jan 2024 - new water rates become effective
<p><u>Financial Accountability</u></p> <p>We will be accountable and transparent to our stakeholders through responsible and effective financial management.</p>	<p>Maintain and/or exceed current bond rating.</p>	<p>Annual Board report on bond rating:</p> <p>AA+ - Fitch</p> <p>Aa2 - Moody's</p> <p>AAA - S & P</p>

Next Steps

To comply with Hawaii Revised Statutes (HRS), Section 92.2.5(b)(1)(B), the Permitted Interaction Group report describing their findings and recommendations will be submitted to the Board at the July 25, 2022 Board Meeting. The findings will include a draft of the proposed Strategic Plan for FY 2023 - 2027. The Board may ask questions regarding the Permitted Interaction Group report to help get an understanding of the report and draft strategic plan. However, HRS, Section 92-



2.5.(b)(1)(C) requires that Board discussion, deliberation and decision-making occur at a subsequent meeting, tentatively scheduled for the next monthly Board meeting.

Using feedback from the Board on the PIG Report, the updated 5-Year Strategic Plan for FY 2023 - 2027 will be finalized and presented to the Board for adoption at the August 22, 2022, Board Meeting with implementation on September 1, 2022.

“August 22, 2022

AUTHORIZING
A PUBLIC
HEARING TO
CONSIDER A
PROPOSED
AMENDMENT TO
THE FISCAL
YEAR 2023
CAPITAL
IMPROVEMENT
PROGRAM
BUDGET OF THE
BOARD OF
WATER SUPPLY

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

Chair and Members:

Subject: Authorizing a Public Hearing to Consider a Proposed
Amendment to the Fiscal Year 2023 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 26, 2022, to consider the resolution to adopt the proposed Amended Capital Improvement Program Budget for the fiscal year beginning July 1, 2022 and ending June 30, 2023.

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

Respectfully Submitted,

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

DISCUSSION:

Raelynn Nakabayashi, Executive Assistant I, Executive Support Office, gave the report. There were no comments or discussion.

MOTION
TO APPROVE

Ray Soon and Na’alehu Anthony motioned and seconded, respectively, to approve the Authorization of a Public Hearing to Consider a Proposed Amendment to the Fiscal Year 2023 Capital Improvement Program (CIP) Budgets of the Board of Water Supply.

Chair Andaya requested Board Secretary, Ms. Joy Cruz-Achui conduct the roll call vote.

Ms. Cruz-Achui conducted a roll call vote: Board Member Ray Soon, aye; Board Member Na’alehu Anthony, aye; Board Member Jade Butay, aye; Board Member Dawn Szewczyk, aye; and Chair Bryan Andaya, aye.

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

APPROVAL TO AUTHORIZE A PUBLIC HEARING TO
 CONSIDER PROPOSED AMENDMENTS TO THE FISCAL
 YEAR 2023 CAPITAL IMPROVEMENT PROGRAM
 BUDGETS WAS APPROVED ON AUGUST 22, 2022

	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		

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 26, 2022, 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) 2023 Capital Improvement Program Budget of the Board of Water Supply, beginning July 1, 2022, and ending June 30, 2023.

Some Board members may be participating in the meeting by interactive conference technology from remote locations. The public may attend the meeting from the lobby of the Board of Water Supply, Public Service Building, 630 S. Beretania St. Honolulu, HI 96843, via interactive conference technology.

TESTIMONY CAN BE SUBMITTED AS FOLLOWS:

- Written testimony may be emailed to board@hbws.org, faxed to (808) 748-5079, or mailed to Board of Water Supply, 630 S. Beretania St., Honolulu, HI 96843. Testimony is requested by Monday, September 26, 2022, at noon. Written testimonies should include the submitter's address, email address, and phone number. Written testimony will be posted to the BWS website at boardofwatersupply.com.
- On-line testimony will be accepted at boardofwatersupply.com/testimony. Fill out and submit the form by Monday, September 26, 2022, at noon.
- Telephone testimony will be accepted during the meeting at (808) 748-6040. Callers will be placed in a queue and brought up to testify one at a time.
- In-person testimony will be accepted during the meeting at the Board of Water Supply, Public Service Building, 630 S. Beretania St. Honolulu, HI 96843.

MATERIALS AVAILABLE FOR INSPECTION

Meeting materials ("board packet" under HRS Section 92-7.5) are accessible at boardofwatersupply.com/boardmeetings. Persons requesting a printed copy of the materials should contact Luella Paekukui at (808) 748-5176.

VIEWING THE MEETING

The public may attend the meeting at the Board of Water Supply, Public Service Building, 630 S. Beretania St. Honolulu, HI 96843, via interactive conference technology.

The meeting will be viewable via live streaming on:

- (1) 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.

Persons wishing to present testimony are requested to register by 1:00 p.m. on Friday, September 23, 2022, with Luella Paekukui, (808) 748-5176, by providing your name, phone number, and subject matter of testimony. Testimony is limited to two (2) minutes and shall be presented by the registered speaker only. Any person requiring special assistance may contact Luella Paekukui at (808) 748-5176 no later than September 21, 2022, so that appropriate accommodations can be provided.

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

"August 22, 2022

AMENDING THE
BOARD OF
WATER SUPPLY
SPECIAL
EXPENDABLE
FUND,
ESTABLISHED
VIA RESOLUTION
NO. 585, 1990,
WHICH ACCOUNTS
FOR CUSTOMER
DEPOSITS
COLLECTED
FROM THE
ASSESSMENT
OF WATER
SYSTEM
FACILITIES
CHARGES AND
NEGOTIATED
AGREEMENTS

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

Chair and Members:

Subject: Amending the Board of Water Supply Special Expendable Fund, Established via Resolution No. 585, 1990, which Accounts for Customer Deposits Collected from the Assessment of Water System Facilities Charges and Negotiated Agreements

We recommend that the Board adopt Resolution 949, 2022 amending the Board of Water Supply Special Expendable Fund.

Attached is Resolution 949, 2022, Raelynn Nakabayashi, Executive Assistant, Executive Support Office, will give the report.

Respectfully Submitted,

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

DISCUSSION:

Raelynn Nakabayashi, Executive Assistant I, Executive Support Office, gave the report.

Chair Andaya requested an example of how adopting Resolution No. 949, 2022, would affect the original Resolution No. 585, 1990. Chair Andaya inquired if Resolution No. 949, 2022, amends Resolution No. 585, 1990 to broaden the use of fund limitations.

Ms. Nakabayashi explained that Resolution No. 585, 1990, established the Special Expendable fund and limited disbursements from the fund to costs for the construction of water system expansion projects and land acquisition. In 2006, the BWS realized the limitation of the original language and added that the Special Expendable fund may also be used for debt service costs related to debt issued to pay for water system expansion projects. This resolution, 949, 2022, would allow disbursements from the Special Expendable fund to cover expenditures arising from contractual obligations of contracts/projects issued for water system expansion.

Examples of this would be to allow Special Expendable Fund disbursements for delayed claims and change orders. As currently written, these may not be eligible costs as they are neither construction and land acquisition or debt service costs. But these are contractual obligations related to water system expansion projects that we could owe.

Chair Andaya asked if any projects will be affected by the amendment to Resolution No. 585, 2022.

Ms. Nakabayashi responded that there are no current change orders pending, but as we embark on larger expansion projects, this flexibility in fund disbursements is needed.

Chair Andaya inquired if there are more change orders that in previous years.

Manager Lau responded that there aren't more change orders. He explained that the CIP has focused on renewal and replacement projects, however, in the future the BWS will move forward with more capacity expansion projects.

Before adjourning the Board Meeting Chair made an announcement to amend the resolution number noted in the title "Amending the Board of Water Supply Special Expendable Fund, Established via Resolution No. 555, 1990, which Accounts for Customer Deposits Collected from Assessment of Water System Facilities Charges and negotiated Agreements". The correct resolution number is 585, 1990, and the correct title is "Amending the Board of Water Supply Special Expendable Fund, Established via Resolution No. 585, 1990, which Accounts for Customer Deposits Collected from Assessment of Water System Facilities Charges and negotiated Agreements". He also stated that Resolution 949, 2022, would be edited for language purposes.

**MOTION
TO APPROVE**

Jade Butay and Dawn Szewczyk motioned and seconded, respectively, to approve Amending the Board of Water Supply Special Expendable Fund, Established via Resolution No. 585, 1990, which Accounts for Customer Deposits Collected from the Assessment of Water System Facilities Charges and Negotiated Agreements.

Chair Andaya requested Board Secretary, Ms. Joy Cruz-Achiu conduct the roll call vote.

Ms. Cruz-Achiu conducted a roll call vote: Board Member Ray Soon, aye; Board Member Na'alehu Anthony, aye; Board Member Jade Butay, aye; Board Member Dawn Szewczyk, aye; and Chair Bryan Andaya, aye.

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

After the motion was passed, Board Member Soon inquired about the wording used in the resolution. He pointed out that when a resolution is amended that there should be a "therefore" clause. He suggested taking another look at the resolution.

APPROVAL TO AMEND THE BOARD OF WATER SUPPLY SPECIAL EXPENDABLE FUND, ESTABLISHED VIA RESOLUTION NO. 585, 1990, WHICH ACCOUNTS FOR CUSTOMER DEPOSITS COLLECTED FROM THE ASSESSMENT OF WATER SYSTEM FACILITIES CHARGES AND NEGOTIATED AGREEMENTS WAS APPROVED ON AUGUST 22, 2022

	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 949, 2022

**AMENDING THE BOARD OF WATER SUPPLY SPECIAL EXPENDABLE FUND,
ESTABLISHED VIA RESOLUTION NO. 585, 1990, WHICH ACCOUNTS FOR CUSTOMER
DEPOSITS COLLECTED FROM THE ASSESSMENT OF WATER SYSTEM FACILITIES
CHARGES AND NEGOTIATED AGREEMENTS**

WHEREAS, Section 7-112. Reserve Funds, of the Revised Charter of the City and County of Honolulu (RCH), provides the Board may provide for the accumulation of funds for the purpose of financing major replacements, or extensions and additions to the water systems; and

WHEREAS, via Resolution No. 585, 1990, attached hereto as Exhibit "A", the Board deemed it advisable and in the best interests of the water customers of the City and County of Honolulu to create and establish a special fund, the Special Expendable Fund, in which customer deposits collected from the assessment of Water System Facilities Charges and negotiated agreements shall be deposited; and

WHEREAS, on April 24, 2006, the Board amended Resolution No. 585, 1990 via Resolution No. 764, 2006, attached hereto as Exhibit "B", to allow for disbursement from the Special Expendable Fund for the payment of debt service and/or the defeasance of outstanding debt related to the construction of water source, storage and transmission facilities; and


WHEREAS, the Board now deems it advisable and in the best interests of its water customers to further amend the purpose and scope of the fund;

BE IT RESOLVED, pursuant to RCH Section 7-112, the second recital of Resolution No. 585, 1990 shall be amended and restated in its entirety as follows:

WHEREAS, disbursements from this fund shall be restricted to improvements involving water source, storage, and transmission facilities only, including the acquisition of land therefor and related engineering and design work and all other costs arising under the resulting contracts; and

NOW, THEREFORE, BE IT FINALLY RESOLVED by the Board of Water Supply, City and County of Honolulu, the special fund, known as the "Board of Water Supply Special Expendable Fund", held by the Treasurer of the City and County of Honolulu, is hereby amended.

ADOPTED:



BRYAN P. ANDAYA
Chair

Honolulu, Hawaii
August 22, 2022

APPROVAL TO AMEND THE BOARD OF WATER SUPPLY SPECIAL EXPENDABLE FUND, ESTABLISHED VIA RESOLUTION NO. 585, 1990 WHICH ACCOUNTS FOR CUSTOMER DEPOSITS COLLECTED FROM THE ASSESSMENT OF WATER SYSTEM FACILITIES CHARGES AND NEGOTIATED AGREEMENTS WAS APPROVED ON AUGUST 22, 2022

	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		

Exhibit A

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET

HONOLULU, HAWAII 96843



FRANK F. FASI, Mayor

DONNA B. GOTH, Chairman
SISTER M. DAVILYN AH CHICK, O.S.F.,
Vice Chairman

SAM CALLEJO
EDWARD Y. HIRATA

JOHN K. TSUI
WALTER O. WATSON, JR.
MAURICE H. YAMASATO

KAZU HAYASHIDA
Manager and Chief Engineer

September 27, 1990

Chairman and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii

SUBJECT: CREATION OF SPECIAL EXPENDABLE FUND AND GENERAL OBLIGATION BOND PROCEEDS CONSTRUCTION FUND

We recommend adoption of the attached resolutions which formally create the Board of Water Supply Special Expendable Fund and the Board of Water Supply General Obligation Bond Proceeds Construction Fund.

BOARD OF WATER SUPPLY SPECIAL EXPENDABLE FUND

During our efforts to document the administrative policies and accounting treatment regarding the collection, recording and use of the Water System Facilities Charges, we discovered that the Special Expendable Fund was never formally established, although the fund has been in existence for many years.

The initial deposit to the Special Expendable Fund was made in August, 1950 to accumulate cash received from the Robert Hind Tract agreement. This special agreement was followed by other developers and subdividers who agreed to contribute toward the costs of various facilities.

During the past decade, we continued to enter into special agreements with developers, but the most significant source for the Special Expendable Fund resulted from the assessment of the Water System Facilities Charges, previously called the Water Development Charges and Pro Rata Share Agreements. These were levies against all new developments requiring water from the Board of Water Supply system or additional water supplies from existing water services.

The Board's accounting staff during the early 1950's was aware of the restrictive use of these funds and therefore deposited these funds into a fund other than the Board of Water Supply Operating Fund and called it the



Chairman and Members
Board of Water Supply
Page 2
September 27, 1990

Special Expendable Fund. However, the formal step to establish this fund was never initiated.

We are, therefore, presenting Resolution No. 585 to formally establish the Board of Water Supply Special Expendable Fund which at July 31, 1990 had a fund balance of \$32,449,086.02.

BOARD OF WATER SUPPLY OBLIGATION BOND
PROCEEDS CONSTRUCTION FUND

We also recommend the creation of the Board of Water Supply General Obligation Bond Proceeds Construction Fund to account for the proceeds derived from time to time from the sale of general obligation bonds. The proceeds of such bonds shall be expended for the purpose of constructing and acquiring improvements and betterments to, and extensions of, the Consolidated System of the Board of Water Supply, including the acquisition of necessary lands therefor.

Currently, the proceeds from the sale of general obligation bonds are deposited to the Board of Water Supply Bond Proceeds Construction Fund which was established to record the proceeds from revenue bonds. Proper accounting requires that a separate fund be established to account for the proceeds of general obligation bonds.

Respectfully submitted,

KAZU HAYASHIDA
Manager and Chief Engineer

APPROVED

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 585, 1990

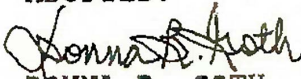
CREATING AND ESTABLISHING A BOARD OF WATER SUPPLY SPECIAL EXPENDABLE FUND TO ACCOUNT FOR CUSTOMER DEPOSITS COLLECTED FROM THE ASSESSMENT OF WATER SYSTEM FACILITIES CHARGES AND NEGOTIATED AGREEMENTS

WHEREAS, the Board deems it advisable and in the best interests of the water customers of the City and County of Honolulu to create and establish a special fund in which customer deposits collected from the assessment of Water System Facilities Charges and negotiated agreements shall be deposited; and

WHEREAS, disbursements from this fund shall be restricted to construct water source, storage, and transmission facilities only, including the acquisition of land therefor and related engineering and design work; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Water Supply, City and County of Honolulu, there is hereby created a special fund to be known as the "Board of Water Supply Special Expendable Fund" which shall be held by the Treasurer of the City and County of Honolulu.

ADOPTED:


DONNA B. GOTH
Chairman

September 27, 1990

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 586, 1990

CREATING AND ESTABLISHING A BOARD OF WATER SUPPLY GENERAL OBLIGATION BOND PROCEEDS CONSTRUCTION FUND TO ACCOUNT FOR THE PROCEEDS FROM THE SALE OF GENERAL OBLIGATION WATER BONDS

WHEREAS, the Board deems it advisable and in the best interests of the water customers of the City and County of Honolulu to create a general obligation bond proceeds construction fund to deposit the proceeds derived from time to time from the sale of general obligation water bonds; and

WHEREAS, the proceeds will be used to fund a portion of the cost to construct and acquire improvements and betterments to, and extensions of, the Consolidated System of the Board of Water Supply, including the acquisition of land therefor and related engineering and design work; and

NOW, THEREFORE, BE IT RESOLVED by the Board of Water Supply, City and County of Honolulu, there is hereby created a fund to be known as the "Board of Water Supply General Obligation Bond Proceeds Construction Fund" which shall be held by the Treasurer of the City and County of Honolulu.

ADOPTED:


DONNA B. GOTH
Chairman

Honolulu, Hawaii
September 27, 1990

11/1

Exhibit B

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843



April 24, 2006

MUFI HANNEMANN, Mayor

RANDALL Y. S. CHUNG, Chairman
HERBERT S. K. KAOPUA, SR.
SAMUEL T. HATA
ALLY J. PARK

RODNEY K. HARAGA, Ex-Officio
LAVERNE HIGA, Ex-Officio

CLIFFORD P. LUM
Manager and Chief Engineer

DONNA FAY K. KIYOSAKI
Deputy Manager and Chief Engineer

Chairman and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii

Chairman and Members:

Subject: Adoption of Resolution No. 764, 2006, Amending Resolution No. 585, 1990, Regarding Disbursements from the Special Expendable Fund

In 1990, the Board adopted Resolution No. 585, which created and established a Board of Water Supply Special Expendable Fund (the "Fund") to account for customer deposits collected from the assessment of water system facilities charges and negotiated agreements. The Resolution restricted the expenditure from the Fund to the construction of water source, storage and transmission facilities only, including the acquisition of land therefore and related engineering and design work.

Since then, the Department has secured bond financing for those activities covered under the Fund. Accordingly, we recommend that the Board adopt the attached Resolution No. 764, 2006, which amends the prior resolution to allow use of the Fund for the payment of debt service and/or the defeasance of outstanding debt related to the construction of water source, storage and transmission facilities.

Respectfully submitted,



CLIFFORD P. LUM
Manager and Chief Engineer

Attachment

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 764, 2006

**AMENDING RESOLUTION NO. 585, 1990 TO ALLOW THE
DISBURSEMENT FROM THE SPECIAL EXPENDABLE FUND FOR THE
PAYMENT OF DEBT SERVICE AND/OR THE DEFEASANCE OF
OUTSTANDING DEBT RELATED TO THE CONSTRUCTION OF WATER
SOURCE, STORAGE AND TRANSMISSION FACILITIES**

WHEREAS, in 1990 the Board adopted Resolution No. 585,
which created and established a Board of Water Supply Special
Expendable fund to account for customer deposits collected from the
assessment of water system facilities charges and negotiated agreements;
and

WHEREAS, a copy of Resolution No. 585 is attached hereto as
Exhibit "A"; and

WHEREAS, the Board deems it advisable and in the best
interests of the water customers of the City and County of Honolulu to
amend Resolution No. 585 to allow the disbursement from the Special
Expendable Fund for the payment of debt service and/or the defeasance of
outstanding debt related to the construction of water source, storage and
transmission facilities;

NOW, THEREFORE, BE IT RESOLVED by the Board of Water Supply, City and County of Honolulu, that Resolution No. 585 is hereby amended to allow the distribution from the Special Expendable Fund for the payment of debt services and/or the defeasance of outstanding debt related to the construction of water source, storage and transmission facilities.

ADOPTED:



RANDALL Y.S. CHUNG
Chairman

Honolulu, Hawaii
April 24, 2006

ADOPTED MEETING HELD	4	24	06
	AYE	NO	AVE
RANDALL Y.S. CHUNG	X		
HERBERT S.K. KAOPUA			X
SAMUEL T. HATA	X		
ALLY J. PARK	X		
RODNEY K. HARAGA			X
LAVERNE HIGA	X		

ITEM FOR INFORMATION NO. 2

"August 22, 2022

**FINANCIAL
UPDATE FOR
THE QUARTER
ENDED
JUNE 30, 2022**

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

Subject: Financial Update for the Quarter Ended June 30, 2022

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

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

Respectfully Submitted,

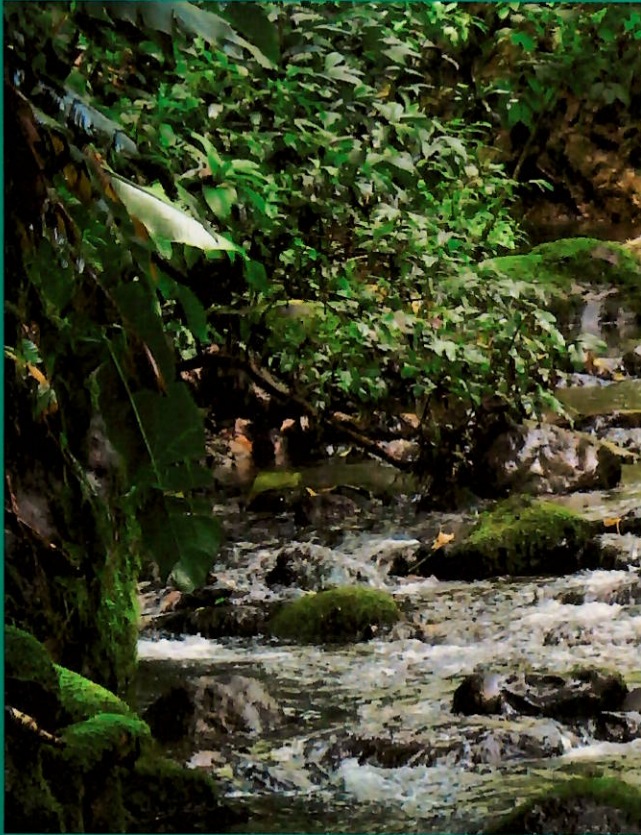
**/s/ ERNEST Y. W. LAU, P.E
Manager and Chief Engineer**

Attachment"

The foregoing was for information only.

DISCUSSION:

Joseph Cooper, Waterworks Controller, Finance Division, gave the report. There were no comments or discussion.



FINANCIAL
PERFORMANCE
JULY 2021–JUNE 2022

Joe Cooper
August 22, 2022
boardofwatersupply.com



BUDGET TO ACTUAL JULY 2021 – JUNE 2022

- Actual Revenue \$251.9 million vs.
- Budgeted Revenue \$248.8 million

- Operating costs are \$200.9 million vs.
- Budgeted costs of \$215.1 million

- Actual Net Revenue \$50.9 million vs.
- Budgeted Net Revenue \$33.7 million



COST DRIVERS

Year to Date June 2022

	Actual (millions)	Budget (millions)
• Personnel	\$41	\$51
• Services/Supplies	\$52	\$59
• Repairs & Misc.	\$15	\$16
• Equipment	\$ 4	\$ 5
• Utilities	\$ 27	\$ 23



OPERATING BUDGET VS ACTUAL

FY2022 4TH QUARTER - YEAR TO DATE: JUL 21 – JUN 22

BUDGETED EXPENDITURES ARE \$215.1M VS. ACTUAL EXPENDITURES OF \$200.9M
OF THE \$14.2M VARIANCE...

Fixed Charges & Debt Svc - \$4.8M Over Budget

- Electric Power – Water Distribution Fac (\$3.9M Over)
- Bonds Payable (\$540K Over)

Water Quality - \$1.2M Over Budget

- Professional Services (\$1.7M Over)

Communications - \$258K Over Budget

- Other Contractual Services (\$279K Over)

Field Operations - \$9.5M Under Budget

- Salaries & Wages (\$4.1M Under)
- Emergency & Contracted Road Repairs (\$1.5M Under)
- Meters (Storeroom) (\$1.5M Under)

Water Resources - \$2.3M Under Budget

- Professional Services (\$1.4M Under)
- Other Services (\$672K Under)

Water System Operations - \$1.9M Under Budget

- Salaries & Wages (\$1.5M Under)
- General Equipment over \$5,000 (\$687K Under)

Customer Care - \$1.5M Under Budget

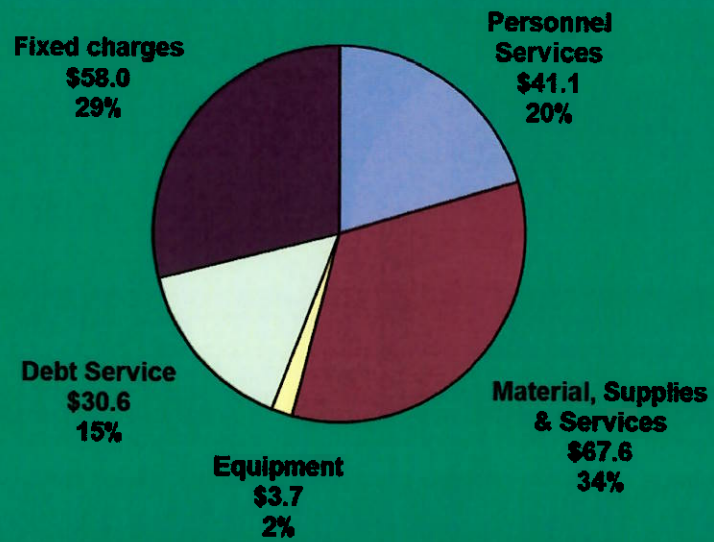
- Salaries & Wages (\$938K Under)
- Collection Fees (\$335K Under)

Capital Projects - \$1.4M Under Budget

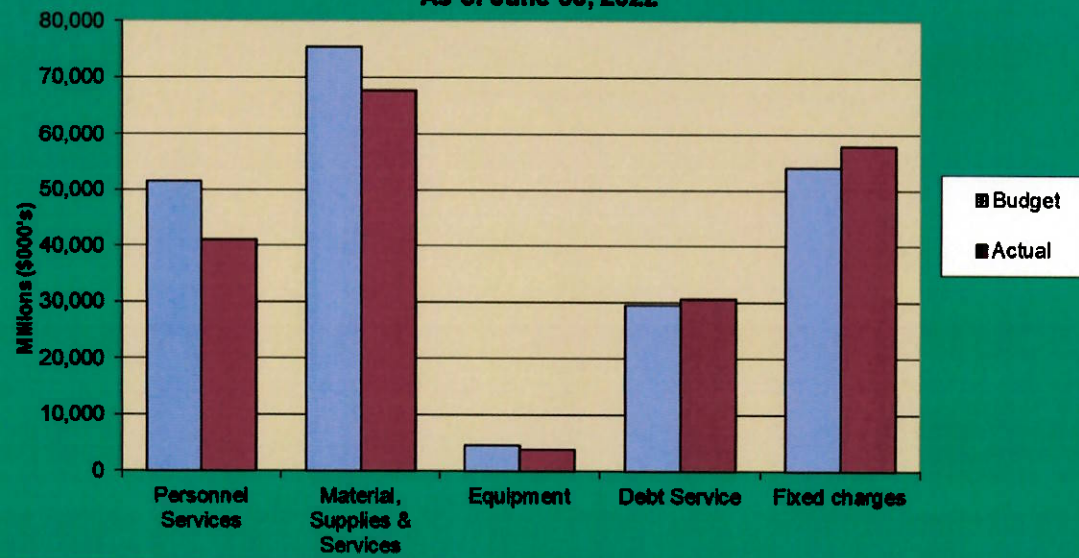
- Salaries & Wages (\$764K Under)
- General Equipment over \$5,000 (\$250K Under)



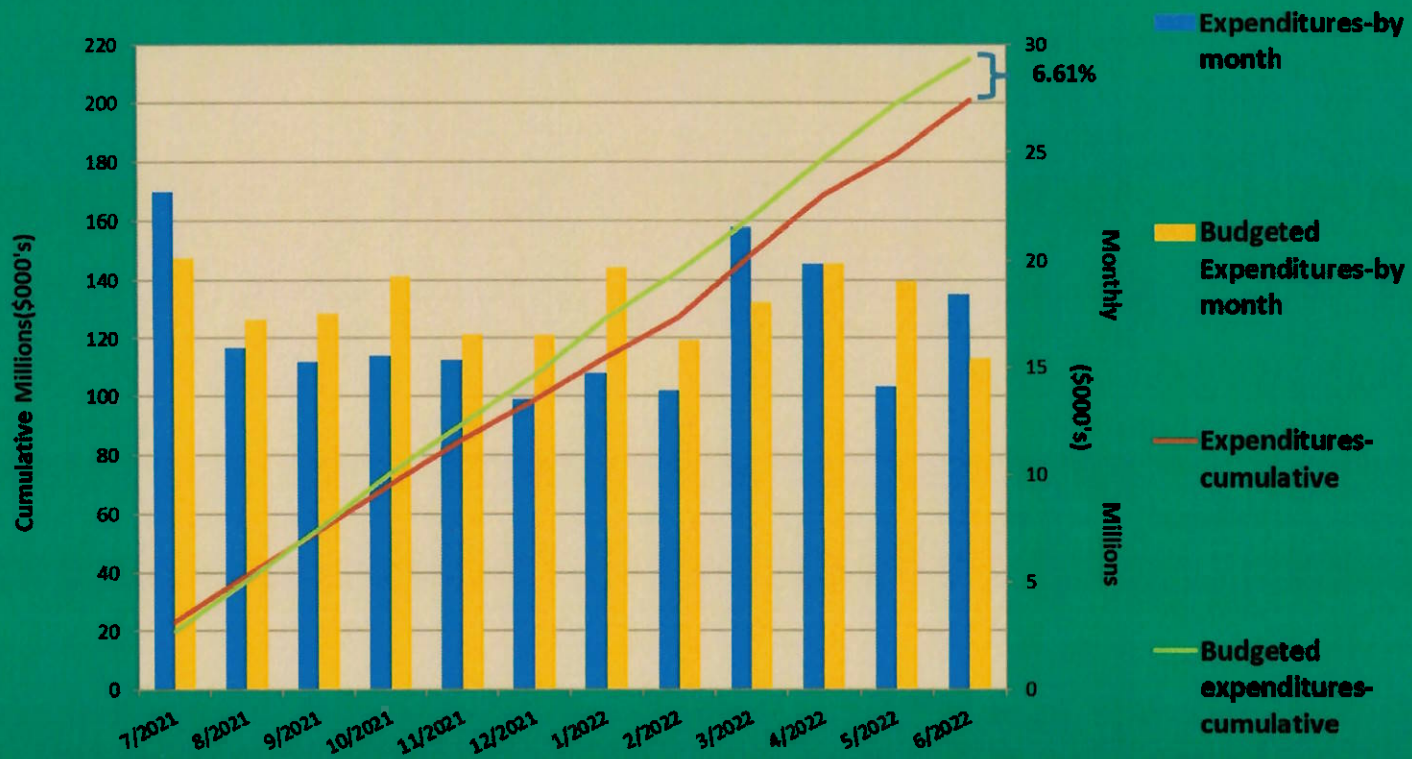
Total Operating Expenditures - \$200.9
As of June 30, 2022
(millions of dollars)



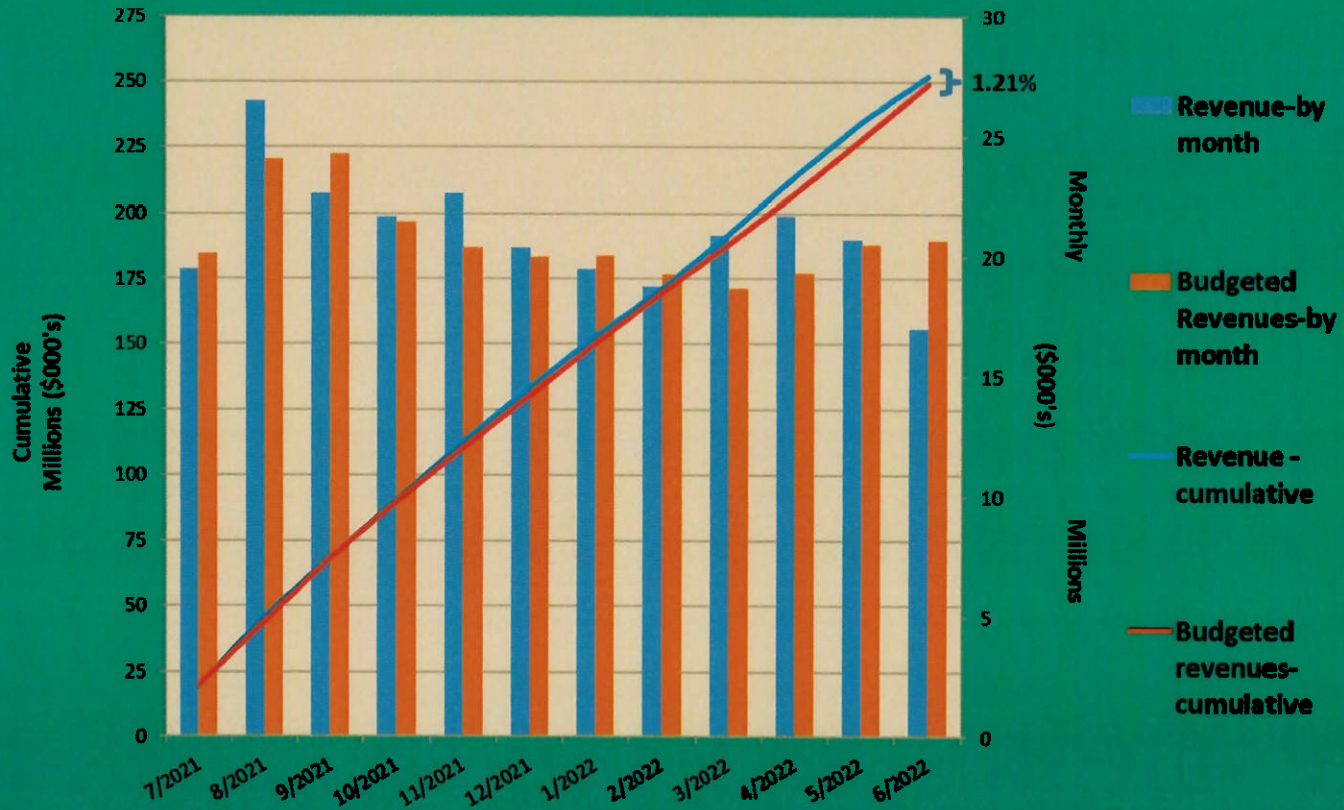
**Operating Expenditures by Category (Budget vs. Actual)
As of June 30, 2022**



BUDGETED OPERATING EXPENDITURES FY 2022



BUDGETED OPERATING REVENUES FY 2022





Mahalo!

BOARD OF WATER SUPPLY

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Budget vs. Actual
Revenue and Expense Totals
As of June 30, 2022

	YTD Actuals	YTD Budget	Favorable/ (Unfavorable) Variance
Revenues	251,858	248,848	3,010
Operating Expenses	(200,927)	(215,142)	14,215
Net Revenues (expenditures)	<u>50,931</u>	<u>33,706</u>	<u>17,225</u>

Board Of Water Supply
Statement of Revenues, Expenses And Change In Net Assets
As of June 30, 2022

Current Month Actual	% Revenue	Last Year Actual	% Revenue	Description	Year to Date Actual	% Revenue	Last Year to Date Actual	% Revenue	% Change
				REVENUE					
18,505,329.58	100.00	20,121,755.85	100.00	OPERATING REVENUE	247,871,179.91	100.00	238,003,482.07	100.00	4.15
18,505,329.58	100.00	20,121,755.85	100.00	REVENUE	247,871,179.91	100.00	238,003,482.07	100.00	4.15
				OPERATING EXPENSES					
3,173,555.79-	17.15	3,205,430.77-	15.93	LABOR COSTS	38,848,923.60-	15.67	40,622,606.80-	17.07	4.37-
3,203,051.33-	17.31	7,123,605.53-	35.40	SERVICES	34,673,269.47-	13.99	35,975,972.63-	15.12	3.62-
900,904.93-	4.87	894,372.76	4.44	SUPPLIES	6,276,112.15-	2.53	3,710,221.28-	1.56	69.16
20,831.05-	.11	34,079.60-	.17	EDUCATION & TRAINING	42,660.08-	.02	69,299.23-	.03	38.44-
1,723,842.49-	9.32	4,415,310.02-	21.94	UTILITIES	24,608,870.06-	9.93	22,537,627.20-	9.47	9.19
365,495.23-	1.98	315,023.57-	1.57	REPAIR AND MAINTENANCE	2,623,202.68-	1.06	2,654,048.13-	1.12	1.16-
1,318,138.87-	7.12	769,116.84-	3.82	MISC	19,909,693.43-	8.03	25,160,786.40-	10.57	20.87-
270,549.40	1.46	8,092,009.44-	40.22	RETIREMENT SYSTEM CONTRIBUTIO	23,164,379.12-	9.35	30,899,559.93-	12.98	25.03-
58,915.68-	.32	3,424,338.94-	17.02	MISC EMPLOYEES' BENEFITS	1,993,005.81-	.80	4,049,914.85-	1.70	50.79-
10,494,185.97-	56.71	26,484,541.95-	131.62	OPERATING EXPENSES	152,140,116.40-	61.38	165,680,036.45-	69.61	8.17-
1,035,131.79-	5.59	2,475,310.28-	12.30	NON OPERATING REVENUE AND EXPE	28,128,957.29-	11.35	10,751,312.53-	4.52	161.63
3,161,289.49	17.08	5,110,459.47	25.40	CONTRIBUTION IN AID	19,576,543.73	7.90	15,149,813.95	6.37	29.22
11,288.60-	.06			LEASE	175,890.09-	.07			
4,806,949.15-	25.98	15,810,175.29-	78.57	OTHER EXPENSES	54,575,294.83-	22.02	58,976,369.81-	24.78	7.46-
5,319,063.56	28.74	19,537,812.20-	97.10	Change In Net Assets	32,427,465.03	13.08	17,745,577.23	7.46	82.74

Board Of Water Supply
Balance Sheet
As of June 30, 2022

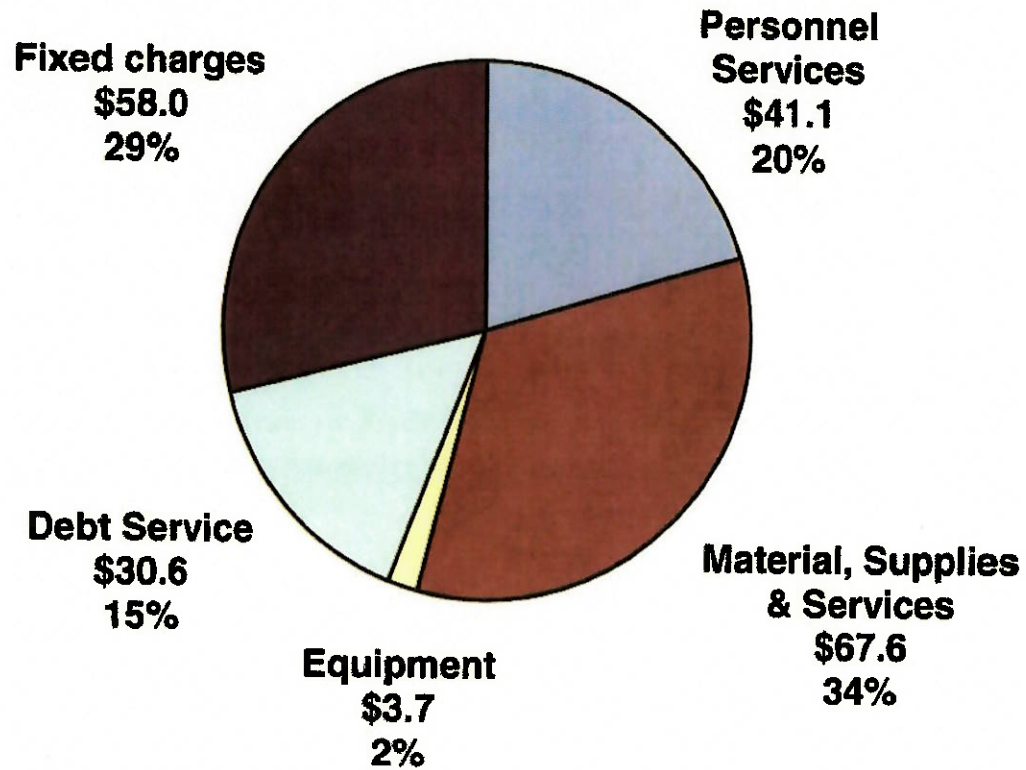
Description	Amounts			Change	
	Current	Last Month End	Last Year End	This Month	This Year
ASSETS					
CURRENT ASSETS	59,140,469.02	48,197,095.64	56,771,730.90	10,943,373.38	2,368,738.12
RESTRICTED ASSETS	33,507,596.41	15,487,545.25	23,656,197.45	18,020,051.16	9,851,398.96
INVESTMENTS	610,573,224.76	623,732,836.67	549,395,205.49	(13,159,611.91)	61,178,019.27
OTHER ASSETS	13,224,479.82	13,371,827.90	15,190,138.67	(147,348.08)	(1,965,658.85)
PROPERTY / PLANT	1,329,757,158.35	1,327,779,528.05	1,302,822,075.36	1,977,630.30	26,935,082.99
DEFERRED OUTFLOWS OF RESOURCE	14,778,103.00	14,778,103.00	14,778,103.00	-	-
DEFERRED OUTFLOWS OF RESOURCE	30,905,083.00	30,914,249.66	30,914,249.66	(9,166.66)	(9,166.66)
ASSETS	2,091,886,114.36	2,074,261,186.17	1,993,527,700.53	17,624,928.19	98,358,413.83
LIABILITIES					
CURRENT LIABILITIES	31,250,267.93	29,873,873.55	47,745,706.21	1,376,394.38	(16,495,438.28)
OTHER LIABILITIES	50,781,706.87	50,086,275.92	44,458,667.15	695,430.95	6,323,039.72
BONDS PAYABLE, NONCURRENT	488,676,813.88	478,407,230.53	414,022,196.70	10,269,583.35	74,654,617.18
LEASE LIABILITY	1,448,730.18	1,484,274.23		(35,544.05)	1,448,730.18
NET PENSION LIABILITY	132,989,070.00	132,989,070.00	132,989,070.00	-	-
NET OPEB LIABILITY	77,000,659.00	77,000,659.00	77,000,659.00	-	-
DEFERRED INFLOWS OF RESOURCES	9,150,001.00	9,150,001.00	9,150,001.00	-	-
LIABILITIES	791,297,248.86	778,991,384.23	725,366,300.06	12,305,864.63	65,930,948.80
NET ASSETS					
RETAINED EARNINGS	240,510,847.47	309,394,003.29	247,919,574.75	-	-
FUND BALANCE	594,633,831.66	594,633,831.66	594,633,831.66	-	-
RESERVE FOR ENCUMBRANCES	433,016,721.34	364,133,565.52	425,607,994.06	-	-
CURRENT YEAR CHANGES TO FU	32,427,465.03	27,108,401.47		5,319,063.56	32,427,465.03
NET ASSETS	1,300,588,865.50	1,295,269,801.94	1,268,161,400.47	5,319,063.56	32,427,465.03
TOTAL LIABILITIES AND NET ASSETS	2,091,886,114.36	2,074,261,186.17	1,993,527,700.53	17,624,928.19	98,358,413.83

Board Of Water Supply
 Budget vs Actual Appropriation Budget - Total BWS Summary
 (\$000's)
 CIFIS 22820-3021
 AS OF 6/30/2022

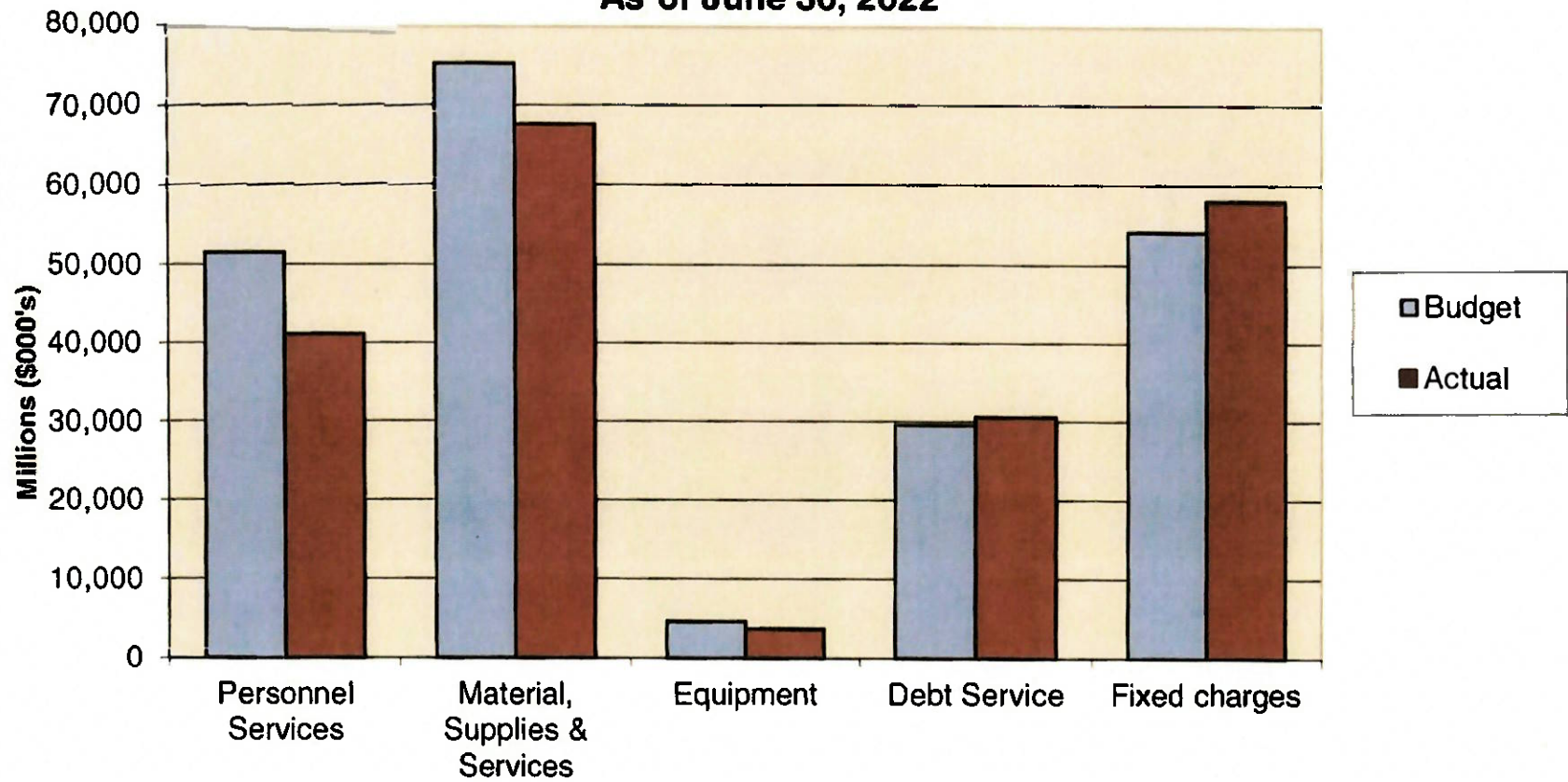
OPER UNIT ALL
 BUSINESS UNIT ALL

YTD-TO-DATE				FOR THE FISCAL YEAR					
YTD Actuals	YTD Budget	Avail/ (Over)	%	Object Description	Revenues/ Expend	Open Encumb	Annual Budget	Avail/ (Over)	%
<u>251,858</u>	<u>248,848</u>	<u>(3,010)</u>	<u>1.21-</u>	REVENUE	<u>251,858</u>		<u>248,848</u>	<u>(3,010)</u>	<u>1.21-</u>
				OPERATING EXPENSES:					
41,079	51,486	10,407	20.21	Personnel Services	41,079		51,486	10,407	20.21
				MATERIALS AND SUPPLIES					
38,687	44,086	5,399	12.25	Services	19,841	18,846	44,086	5,399	12.25
13,576	14,428	852	5.91	Supplies	11,836	1,740	14,428	852	5.91
68	474	406	85.65	Education & Training	59	9	474	406	85.65
	2	2	100.00	Utilities			2	2	100.00
2,349	2,571	222	8.63	Repairs & Maint	1,922	427	2,571	222	8.63
12,912	13,775	863	6.26	Misc	11,062	1,850	13,775	863	6.26
3,729	4,601	872	18.95	Equipment	182	3,547	4,601	872	18.95
30,553	29,588	(965)	3.26-	Debt Service	30,553		29,588	(965)	3.26-
				FIXED CHARGES:					
27,189	23,220	(3,969)	17.09-	Utilities	27,189		23,220	(3,969)	17.09-
3,300	3,300			Case Fees	3,300		3,300		
13,967	14,200	233	1.64	Retirement System Contribution	13,967		14,200	233	1.64
13,518	13,411	(107)	.80-	Misc Employees' Benefits	13,440	78	13,411	(107)	.80-
<u>200,927</u>	<u>215,142</u>	<u>14,215</u>	<u>6.61</u>	TOTAL OPERATING EXPENDITURES	<u>174,430</u>	<u>26,497</u>	<u>215,142</u>	<u>14,215</u>	<u>6.61</u>
<u>50,931</u>	<u>33,706</u>	<u>(17,225)</u>		NET REVENUES (EXPENDITURES)	<u>77,428</u>	<u>(26,497)</u>	<u>33,706</u>	<u>(17,225)</u>	

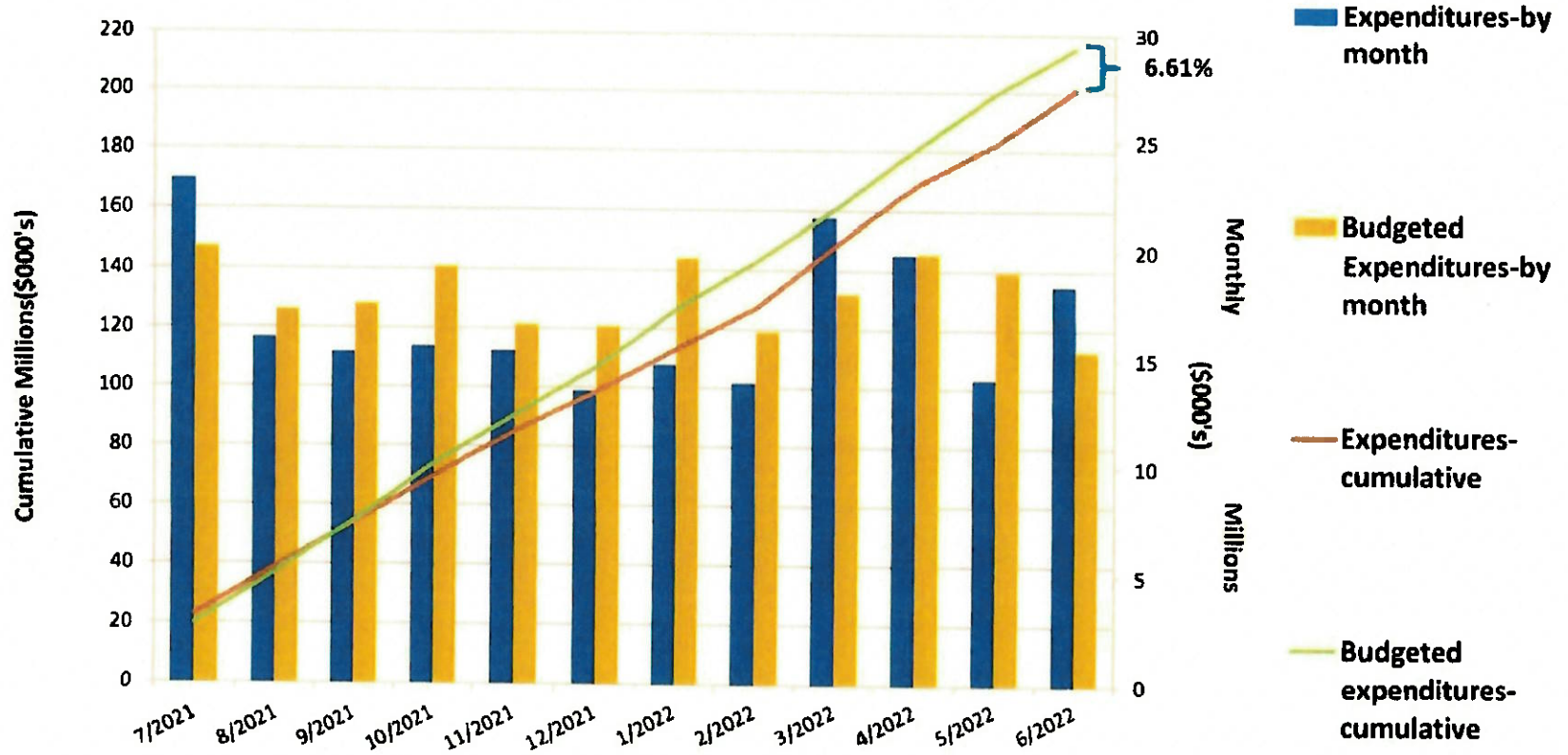
Total Operating Expenditures - \$200.9
As of June 30, 2022
(millions of dollars)



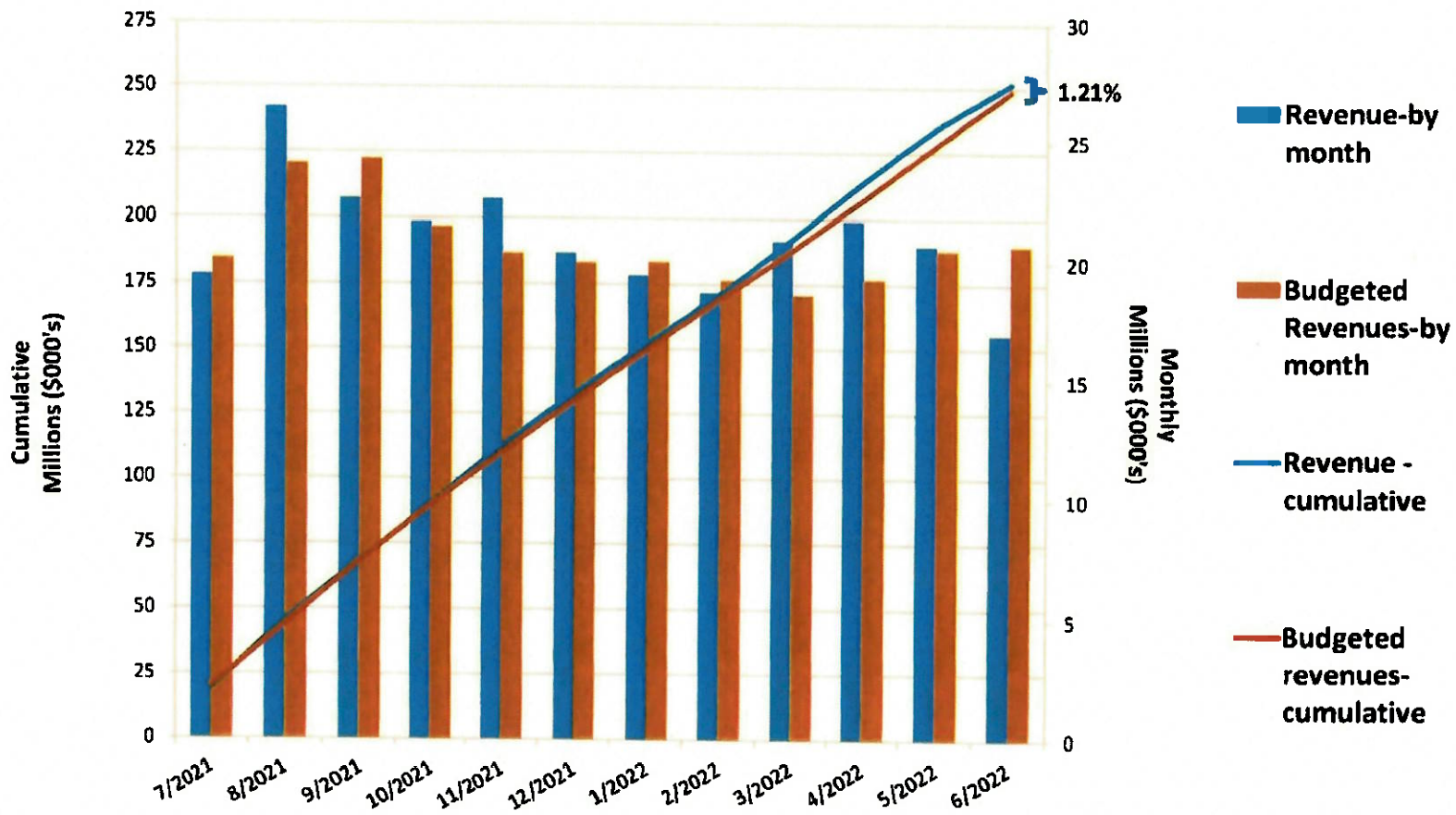
Operating Expenditures by Category (Budget vs. Actual) As of June 30, 2022



BUDGETED OPERATING EXPENDITURES FY 2022



BUDGETED OPERATING REVENUES FY 2022



ITEM FOR INFORMATION NO. 3

"August 22, 2022

CAPITAL
IMPROVEMENT
PROGRAM
QUARTERLY
UPDATE

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

Chair and Members:

Subject: Capital Improvement Program Quarterly Update

Jason Takaki, Program Administrator, Capital Projects Division, will provide an update on the Capital Improvement Program.

Respectfully Submitted,

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

Attachment"

The foregoing was for information only.

DISCUSSION:

Jason Takaki, Program Administrator, Capital Projects Division, gave the report.

Board Member Jade Butay inquired about the design, build, operate, and maintain procurement.

Chair Andaya announced that there was a testifier for information item #1, Update on the Board of Water Supply's Response to the Potential Impacts of the Red Hill Fuel Contamination.

REQUEST TO TESTIFY BY PHONE OR IN PERSON

Request Received	Submitter's Name	Format
August 22, 2022	Stacey Scott Harvey	Call-In Testimony

Ms. Stacey Scott Harvey testified to share the health issues that she and her family continue to experience since noticing the change in their water in May 2021. She inquired if the complaints made to DOH are shared with the BWS.

The Board meeting returned to the agenda, information item #3, CIP Quarterly Update.

Mr. Takaki mentioned that Mr. Barry Usagawa, Program Administrator from the Water Resources Division is currently setting up the design, build, operate, and maintain for procurement.

Mr. Usagawa replied that the BWS is still in the procurement process of reviewing submittals.

Mr. Takaki stated that at a previous meeting Capital Projects Division was asked to share the average cost for installed pipes over the years, and the process for design and planning. Mr. Takaki and Mr. Lester Fujikami, Civil Engineer VI, Capital Projects Division shared a PowerPoint (PPT).

Board Member Soon asked what usually dictates the cost of a project.

Mr. Fujikami responded that the cost of a project would depend on the project. One example is the Lanikai project which required traffic control.

Mr. Takaki also responded that some areas of the Lanikai project required more traffic control which increased the cost to up to 25%.

Board Member Butay inquired if contracts allow for price increases due to inflation.

Mr. Takaki replied that once a bid is submitted, the contract does not allow for price adjustments. However, if there is a price increase it may be considered.

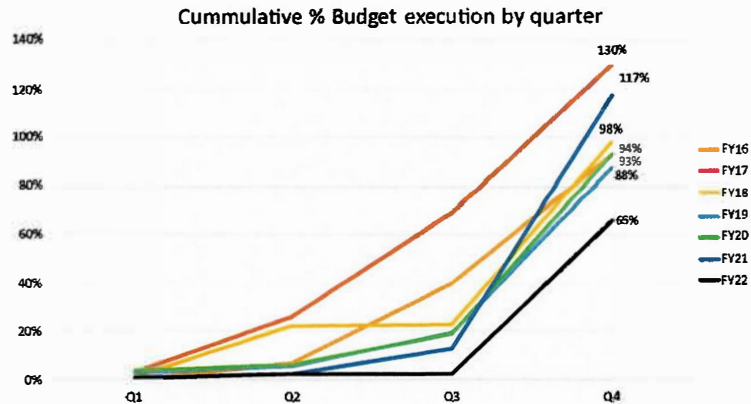
Board Member Soon asked if the BWS has any ideas on how to save money with consideration to the 21 miles of pipeline and main replacement.

Mr. Takaki responded that the BWS is discussing the different options. However, the cost of the materials for main replacements are shipped from the mainland.

Manager Lau suggested that in a future meeting the Capital Projects Division compare 1990 dollars to the current year dollars.

Chair Andaya commented that reaching the BWS's goals will take everyone's cooperation.

Chair Andaya asked to display the Cumulative Percent Budget Execution By Quarter PPT slide. He inquired if the percentage in the fourth quarter are the projects that were deferred.



Mr. Takaki explained that the chart indicates how much percent of the project budget was executed. In the fourth quarter, the BWS executed 65% of the project budget.

Board Member Soon inquired how much would the project budget increase if the six projects were not moved into the next fiscal year.

Mr. Takaki replied that the project execution would have increased by at least \$30 million (M), so at least 20%.

Chair Andaya asked why the projects were postponed till the next fiscal year.

Manager Lau responded that the BWS was not able to award the projects due to bid protests that were not resolved in time to meet the deadline of the closing of the fiscal year 2022.

Quarterly Capital Improvement Program Status Report
All Divisions
as of June 30, 2022

Quarter Awarded	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Awarded to Date	Total Budgeted
Design Contracts Awarded (#/\$)	0	\$0.00	0	\$0.00	0	\$0.00	27	\$19,013,693.96	\$19,013,693.96	\$23,425,000.00
Construction Contracts Awarded (#/\$)	3	790,781.00	8	2,388,313.00	1	173,048.00	20	68,281,972.61	71,634,114.61	115,150,000.00
Land Purchases (#/\$)	0	0.00	0	0.00	0	0.00	0	0.00	0.00	100,000.00
Project Totals	3	\$790,781.00	8	\$2,388,313.00	1	\$173,048.00	47	\$87,295,666.57	\$90,647,808.57	\$138,675,000.00

Quarter Completed	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Totals
Design Contracts Completed (#/\$)	0	\$0.00	13	\$5,096,880.70	0	\$0.00	0	\$0.00	\$5,096,880.70
Construction Contracts Completed (#/\$)	0	0.00	3	2,345,245.00	1	5,111,468.00	0	0.00	7,456,713.00
Totals	0	\$0.00	16	\$7,442,125.70	1	\$5,111,468.00	0	\$0.00	\$12,553,593.70

Ongoing Projects	
Ongoing Design Projects (#)	252
Ongoing Design Projects (\$)	\$114,331,940.24
Ongoing Construction Projects (#)	169
Ongoing Construction Projects (\$)	\$364,946,514.66

Quarterly Capital Improvement Program Status Report
All Divisions

DESIGN AND CONSTRUCTION PROJECTS AWARDED - FOURTH QUARTER FY 2022

Item #	Project Title	Expend Type	Budget Amount	Awarded
2022-030	Service Lateral Replacement at Various Locations (Kapahulu)	P & E	150,000.00	121,604.00
22-001	Kunia Wells IV Exploratory Wells	CONST	4,500,000.00	6,577,000.00
22-010V	Pump Renewal and Replacement - Kahana Wells Pump No. 1 Replacement	CONST	147,858.00	196,639.00
2022-011	Hawaii Loa Booster No. 2 Pump and MCC Replacement	P & E	580,000.00	453,075.06
2022-014	Pearl City Booster No. 3 MCC Replacement	P & E	320,000.00	425,947.80
2022-044E	Facility Repair and Renovation - Koko Head 405 Reservoir	P & E	144,849.00	144,849.00
2022-012	Waiiau Booster No. 2 Renovation	P & E	555,000.00	635,497.16
2022-029J	Water System Improvements at Various Locations - Hakimo Road 24-Inch and 20-Inch Water Mains	P & E	765,337.11	765,337.11
22-026A	Water Main Installation & Replacement - Pupukeya Iwi Kupuna Reinterment	CONST	100,000.00	257,070.00
22-005	Makaha Shaft Sediment Removal	CONST	7,500,000.00	1,632,558.25
22-009	Kamaile Wells Renovation, Drainage Improvements and Control Building Repairs, and Kamaile Plantation Wells Sealing	CONST	3,400,000.00	5,715,163.87
22-024	Water Sampling Stations at Various Locations - Kahuku (6), Waialea (6), and Waialua (10)	CONST	500,000.00	537,700.00
22-040G	Pump Renewal and Replacement - Waipahu Wells III GAC Valve Replacement	CONST	1,334,088.00	1,334,088.00
22-006	Kaamilo Booster and Kaamilo Wells Renovation	CONST	4,000,000.00	3,668,615.17
2022-002	Construction Management for Various BWS Construction Projects	P & E	2,000,000.00	1,993,244.00
2022-042	Waimanalo Tunnel I And II Renovation	P & E	350,000.00	408,861.00
22-004	Waihee Line Booster: Replace Pumping Units	CONST	5,100,000.00	10,355,644.00
22-007	Waipio Heights Wells and Wells I Renovation	CONST	6,000,000.00	4,311,164.00
2022-049	Mililani Wells II GAC Installation	P & E	800,000.00	800,000.00
2022-029G	Water System Improvements at Various Locations - Ilihu Street and Aikahi Loop Water System Improvements	P & E	742,069.00	742,069.00
22-041	Security Improvements at Various Locations - Security Fencing Improvements for Kunia 228 Reservoir No. 1 and 2, Well No. 1, and GAC Plant; and Waianae 390 Reservoir No. 1	CONST	1,500,000.00	3,391,236.00
22-034	Beretania IT Data Center Renovation	CONST	1,500,000.00	2,784,200.00
22-008	Waialae Iki Booster No. 1 Relocation	CONST	9,500,000.00	14,100,864.32
22-035	Storm Water Management Plan Improvements at Beretania Complex and Heeia Corporation Yard	CONST	1,000,000.00	2,234,467.00
22-026B	Water Main Installation & Replacement - Kailua Heights Iwi Reinterment	CONST	0.00	183,700.00
22-040D	Facility Repair and Renovation - Kalihi 614 Access Road Repair	CONST	596,300.00	596,300.00
22-003A	Halawa Valley Groundwater Monitoring Wells, Phase II	CONST	1,650,000.00	894,200.00
22-036	Beretania Public Service Building (PSB) 4th Floor Renovation	CONST	1,000,000.00	2,722,000.00
22-037	Piliuka PRV Replacement	CONST	600,000.00	1,089,363.00
2022-029E	Water System Improvements at Various Locations - Kellog Street: 12-Inch Water Main	P & E	468,478.17	468,478.17
2022-029K	Water System Improvements at Various Locations - Kaimalu Place and Mohihi Street: 8-Inch Water Mains, Pacific Heights Water System Improvements	P & E	1,206,109.21	1,206,109.21
2022-044A	Facility Repair and Renovation - Haiku Chlorinator and Haiku Well Fencing, Drainage and Pavement Improvements	P & E	241,039.00	241,039.00
2022-029L	Water System Improvements at Various Locations - Haleola Street Area Water System Improvements	P & E	1,531,032.69	1,531,032.69
2022-016	Wahiawa 1361 Reservoir No. 1 Demolition	P & E	100,000.00	237,005.58
2022-027	Nuuanu Pali Drive and Old Pali Road Area Water System Improvements	P & E	750,000.00	1,097,124.22
2022-028	Thomas Square 20-Inch Main Relocation	P & E	600,000.00	638,603.54
2022-013	Waipio Heights Wells II Pump Replacement and Electrical Upgrades	P & E	510,000.00	475,779.00
2022-043	Pipeline Tunnel Inspection (Lai Tunnel)	P & E	200,000.00	127,643.93
2022-029B	Water System Improvements at Various Locations - Kamehameha Highway 16-Inch Main, Part I, Sunset Beach	P & E	805,035.42	805,035.42
2022-044G	Facility Repair and Renovation - Halawa 550 Reservoir Repair	P & E	318,552.90	318,552.90
2022-044B	Facility Repair and Renovation - St. Louis Heights Booster No. 3 Facility Repairs	P & E	477,539.00	477,539.00
2022-029D	Water System Improvements at Various Locations - 8th Avenue and 9th Avenue Water System Improvements	P & E	1,159,881.00	1,159,881.00
2022-029H	Water System Improvements at Various Locations - Wyllie Street and Liliha Street Water System Improvements	P & E	1,211,647.00	1,211,647.00
2022-029A	Water System Improvements at Various Locations - Haleiwa Water System Improvements, Parts I and II	P & E	1,759,504.86	1,759,504.86
22-048	Honouliuli WWTP Expansion 16-Inch Main	CONST	4,300,000.00	5,700,000.00
2022-038	Pump Station Instrumentation & Controls and SCADA Upgrade	P & E	250,000.00	250,000.00
2022-044H	Facility Repair and Renovation - Waialae Nui Well	P & E	518,234.31	518,234.31
4th Quarter totals			\$72,742,554.67	\$87,295,666.57

DESIGN AND CONSTRUCTION PROJECTS COMPLETED - FOURTH QUARTER FY 2022

Job #	Project Title	Completion Date	Contract Amount
No completions reported in this quarter of the fiscal year.			
4th Quarter totals			\$0.00

Quarterly Capital Improvement Program Status Report
All Divisions
as of June 30, 2022

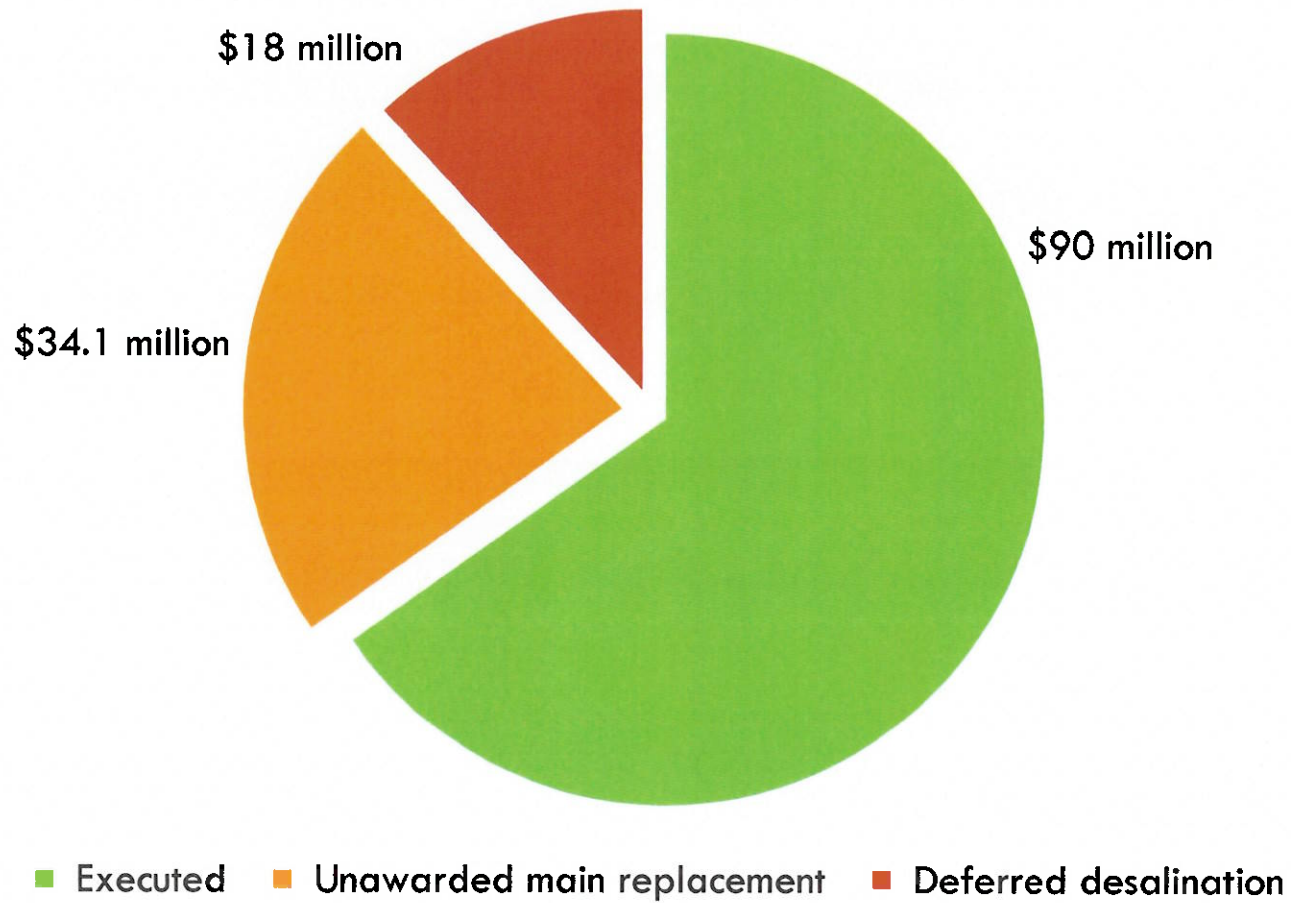
Quarter Awarded	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Awarded to Date	Total Budgeted
Design Contracts Awarded (#/\$)	0	\$0.00	0	\$0.00	0	\$0.00	27	\$19,013,693.96	\$19,013,693.96	\$23,425,000.00
Construction Contracts Awarded (#/\$)	3	790,781.00	8	2,388,313.00	1	173,048.00	20	68,281,972.61	71,634,114.61	115,150,000.00
Land Purchases (#/\$)	0	0.00	0	0.00	0	0.00	0	0.00	0.00	100,000.00
Project Totals	3	\$790,781.00	8	\$2,388,313.00	1	\$173,048.00	47	\$87,295,666.57	\$90,647,808.57	\$138,675,000.00

Quarter Completed	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Totals
Design Contracts Completed (#/\$)	0	\$0.00	13	\$5,096,880.70	0	\$0.00	0	\$0.00	\$5,096,880.70
Construction Contracts Completed (#/\$)	0	0.00	3	2,345,245.00	1	5,111,468.00	0	0.00	7,456,713.00
Totals	0	\$0.00	16	\$7,442,125.70	1	\$5,111,468.00	0	\$0.00	\$12,553,593.70

Ongoing Projects	
Ongoing Design Projects (#)	252
Ongoing Design Projects (\$)	\$114,331,940.24
Ongoing Construction Projects (#)	169
Ongoing Construction Projects (\$)	\$364,946,514.66



FY22 Capital Improvement Program



Quarterly Capital Improvement Program Status Report
All Divisions

DESIGN AND CONSTRUCTION PROJECTS AWARDED - FOURTH QUARTER FY 2022

Item #	Project Title	Expend Type	Budget Amount	Awarded
2022-030	Service Lateral Replacement at Various Locations (Kapahulu)	P & E	150,000.00	121,604.00
22-001	Kunia Wells IV Exploratory Wells	CONST	4,500,000.00	6,577,000.00
22-010V	Pump Renewal and Replacement - Kahana Wells Pump No. 1 Replacement	CONST	147,858.00	196,639.00
2022-011	Hawaii Loa Booster No. 2 Pump and MCC Replacement	P & E	580,000.00	453,075.06
2022-014	Pearl City Booster No. 3 MCC Replacement	P & E	320,000.00	425,947.80
2022-044E	Facility Repair and Renovation - Koko Head 405 Reservoir	P & E	144,849.00	144,849.00
2022-012	Waiau Booster No. 2 Renovation	P & E	555,000.00	635,497.16
2022-029J	Water System Improvements at Various Locations - Hakimo Road 24-Inch and 20-Inch Water Mains	P & E	765,337.11	765,337.11
22-026A	Water Main Installation & Replacement - Pupukeya Iwi Kupuna Reinterment	CONST	100,000.00	257,070.00
22-005	Makaha Shaft Sediment Removal	CONST	7,500,000.00	1,632,558.25
22-009	Kamaile Wells Renovation, Drainage Improvements and Control Building Repairs, and Kamaile Plantation Wells Sealing	CONST	3,400,000.00	5,715,163.87
22-024	Water Sampling Stations at Various Locations - Kahuku (6), Waialea (6), and Waialua (10)	CONST	500,000.00	537,700.00
22-040G	Pump Renewal and Replacement - Waipahu Wells III GAC Valve Replacement	CONST	1,334,088.00	1,334,088.00
22-006	Kaamilo Booster and Kaamilo Wells Renovation	CONST	4,000,000.00	3,668,615.17
2022-002	Construction Management for Various BWS Construction Projects	P & E	2,000,000.00	1,993,244.00
2022-042	Waimanalo Tunnel I And II Renovation	P & E	350,000.00	408,861.00
22-004	Waihee Line Booster: Replace Pumping Units	CONST	5,100,000.00	10,355,644.00
22-007	Waipio Heights Wells and Wells I Renovation	CONST	6,000,000.00	4,311,164.00
2022-049	Mililani Wells II GAC Installation	P & E	800,000.00	800,000.00
2022-029G	Water System Improvements at Various Locations - Iliha Street and Aikahi Loop Water System Improvements	P & E	742,069.00	742,069.00
22-041	Security Improvements at Various Locations - Security Fencing Improvements for Kunia 228 Reservoir No. 1 and 2, Well No. 1, and GAC Plant; and Waianae 390 Reservoir No. 1	CONST	1,500,000.00	3,391,236.00
22-034	Beretania IT Data Center Renovation	CONST	1,500,000.00	2,784,200.00
22-008	Waialea Iki Booster No 1 Relocation	CONST	9,500,000.00	14,100,864.32
22-035	Storm Water Management Plan Improvements at Beretania Complex and Heeia Corporation Yard	CONST	1,000,000.00	2,234,467.00
22-026B	Water Main Installation & Replacement - Kailua Heights Iwi Reinterment	CONST	0.00	183,700.00
22-040D	Facility Repair and Renovation - Kalihi 614 Access Road Repair	CONST	596,300.00	596,300.00
22-003A	Halawa Valley Groundwater Monitoring Wells, Phase II	CONST	1,650,000.00	894,200.00



Quarterly Capital Improvement Program Status Report
All Divisions

DESIGN AND CONSTRUCTION PROJECTS AWARDED - FOURTH QUARTER FY 2022

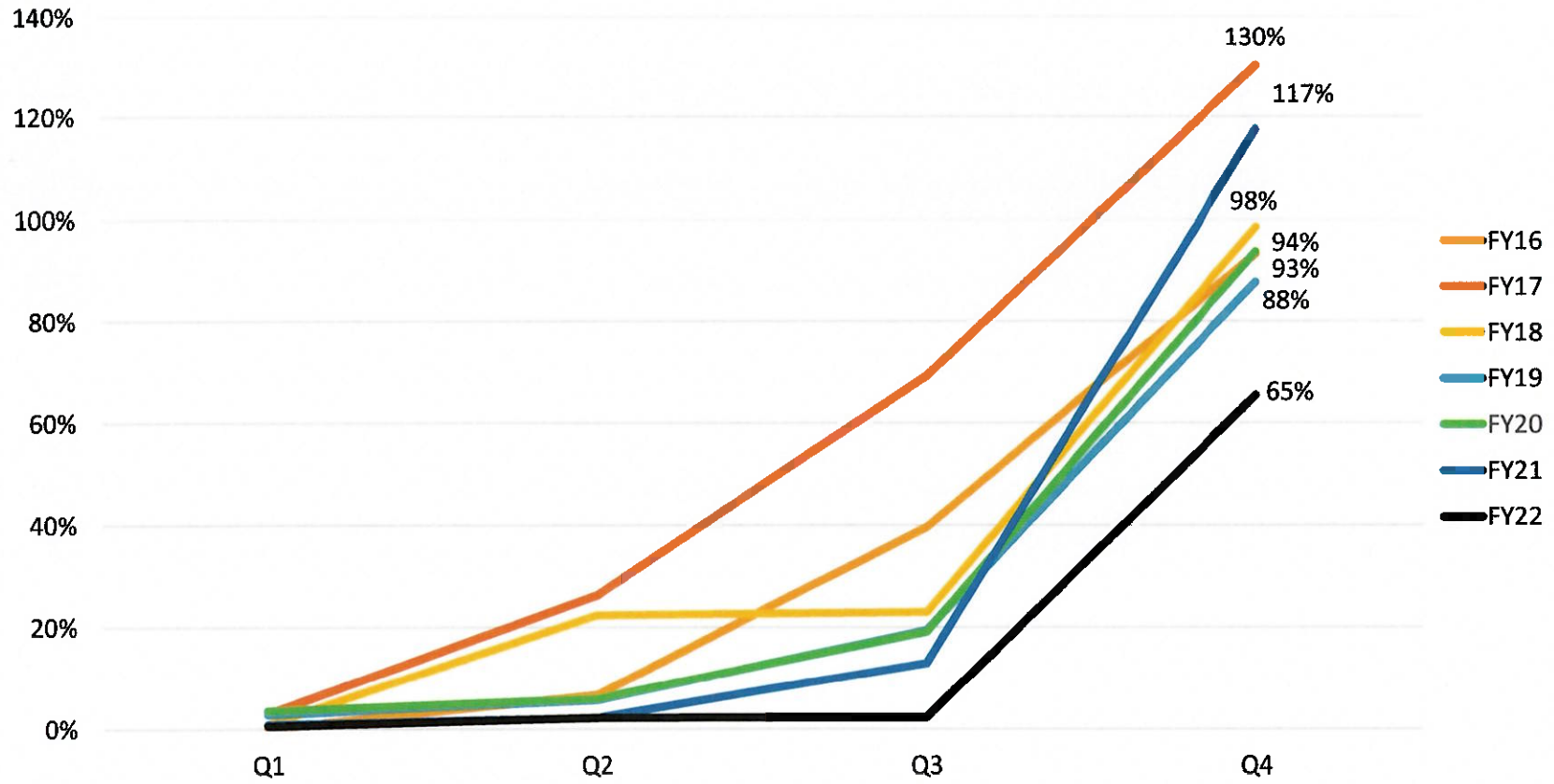
Item #	Project Title	Expend Type	Budget Amount	Awarded
22-036	Beretania Public Service Building (PSB) 4th Floor Renovation	CONST	1,000,000.00	2,722,000.00
22-037	Piliuka PRV Replacement	CONST	600,000.00	1,089,363.00
2022-029E	Water System Improvements at Various Locations - Kellog Street: 12-Inch Water Main	P & E	468,478.17	468,478.17
2022-029K	Water System Improvements at Various Locations - Kaimalu Place and Mohihi Street: 8-Inch Water Mains, Pacific Heights Water System Improvements	P & E	1,206,109.21	1,206,109.21
2022-044A	Facility Repair and Renovation - Haiku Chlorinator and Haiku Well Fencing, Drainage and Pavement Improvements	P & E	241,039.00	241,039.00
2022-029L	Water System Improvements at Various Locations - Haleola Street Area Water System Improvements	P & E	1,531,032.69	1,531,032.69
2022-016	Wahiawa 1361 Reservoir No. 1 Demolition	P & E	100,000.00	237,005.58
2022-027	Nuuanu Pali Drive and Old Pali Road Area Water System Improvements	P & E	750,000.00	1,097,124.22
2022-028	Thomas Square 20-Inch Main Relocation	P & E	600,000.00	638,603.54
2022-013	Waipio Heights Wells II Pump Replacement and Electrical Upgrades	P & E	510,000.00	475,779.00
2022-043	Pipeline Tunnel Inspection (Lai Tunnel)	P & E	200,000.00	127,643.93
2022-029B	Water System Improvements at Various Locations - Kamehameha Highway 16-Inch Main, Part I, Sunset Beach	P & E	805,035.42	805,035.42
2022-044G	Facility Repair and Renovation - Halawa 550 Reservoir Repair	P & E	318,552.90	318,552.90
2022-044B	Facility Repair and Renovation - St. Louis Heights Booster No. 3 Facility Repairs	P & E	477,539.00	477,539.00
2022-029D	Water System Improvements at Various Locations - 8th Avenue and 9th Avenue Water System Improvements	P & E	1,159,881.00	1,159,881.00
2022-029H	Water System Improvements at Various Locations - Wylie Street and Liliha Street Water System Improvements	P & E	1,211,647.00	1,211,647.00
2022-029A	Water System Improvements at Various Locations - Haleiwa Water System Improvements, Parts I and II	P & E	1,759,504.86	1,759,504.86
22-048	Honouliuli WWTP Expansion 16-Inch Main	CONST	4,300,000.00	5,700,000.00
2022-038	Pump Station Instrumentation & Controls and SCADA Upgrade	P & E	250,000.00	250,000.00
2022-044H	Facility Repair and Renovation - Waialae Nui Well	P & E	518,234.31	518,234.31
4th Quarter totals			\$72,742,554.67	\$87,295,666.57

DESIGN AND CONSTRUCTION PROJECTS COMPLETED - FOURTH QUARTER FY 2022

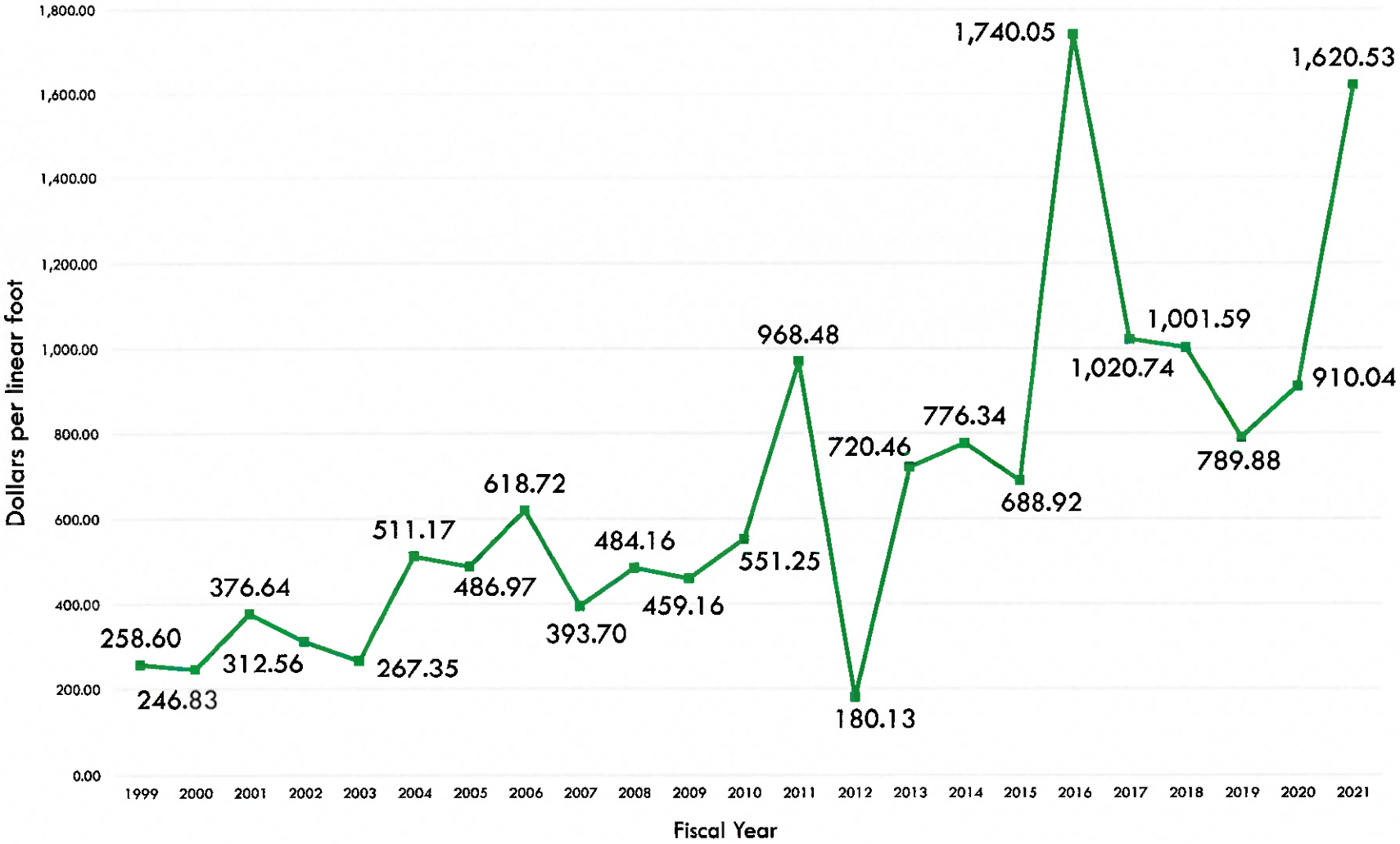
Job #	Project Title	Completion Date	Contract Amount
	No completions reported in this quarter of the fiscal year.		
4th Quarter totals			\$0.00



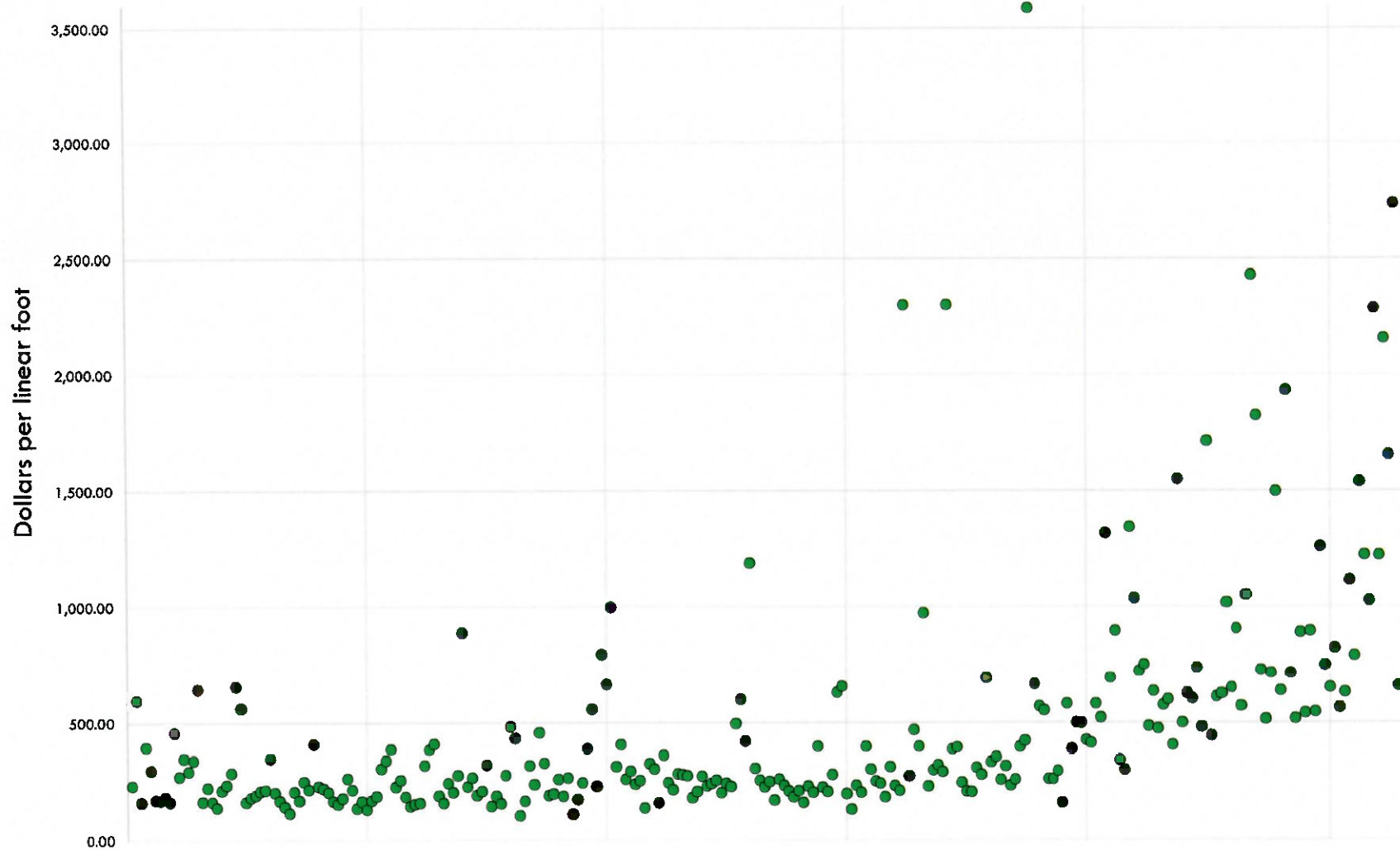
Cummulative % Budget execution by quarter



Awarded Price per Linear Foot FY1999-2021



Awarded Price per Linear Foot FY1999-2021





BOARD OF WATER SUPPLY

ESTIMATING CONSTRUCTION COSTS

Board Meeting

August 22, 2022

boardofwatersupply.com

CONSTRUCTION COST ESTIMATES

- Forecasting the construction cost based on the project scope of work
- Standard practice to create multiple estimates
- More accuracy as the project's level of definition increases
- CPD uses of cost estimates
 - Determine a project's scope and feasibility
 - Allocate budgets
- Design consultants' engineer's estimates
 - Input provided by CPD staff
 - Ensures estimate meets scope requirements



TYPES OF CONSTRUCTION COST ESTIMATES

- **Order of Magnitude Estimate:**
 - Design not yet under way
 - Used to determine the overall project feasibility
- **Schematic Design Estimate:**
 - Estimate in line with schematic design
- **Design Development Estimate:**
 - Estimated during the design development phase
- **Construction Document Estimate:**
 - Estimate based on the final bid construction drawings and specifications bid package



INFLUENCES ON CONSTRUCTION COSTS

- Site location
- Time-related aspects
- Size and complexity of the project
- Economic construction climate
- Other factors affect project cost
 - Example: Use of federal funds increases effort and overhead for completing forms and periodic reporting, and higher prices for domestic products
 - Example: Archaeological and/or cultural monitoring slows production and increases costs
- All cost estimates account for contingencies, i.e., allowances held in reserve for unexpected costs



ESTIMATING METHODOLOGY

Basis for construction cost estimates during design:

- Quantity take-offs from design documents
- General inquiries to vendors for equipment/materials quotes
- Labor estimates (often from nationally published sources)
- Recent bid information or geographical indexes may be used to adjust published data to be more site/project specific



EXAMPLE: PIPELINE PROJECT COST ESTIMATE

JOB 21-023A LANIKAI WATER SYSTEM IMPROVEMENTS, PART II

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

SPECIAL PROVISIONS
PROPOSAL
CONTRACT AND BOND

FOR

JOB 21-023A

LANIKAI WATER SYSTEM IMPROVEMENTS PART II
KAILUA, OAHU, HAWAII

CONTACT BWS PROCUREMENT OFFICE
PHONE NO. (808) 748-5071

BOARD OF WATER SUPPLY
CITY & COUNTY OF HONOLULU

JOB 21-023A

LANIKAI WATER SYSTEM IMPROVEMENTS, PART II

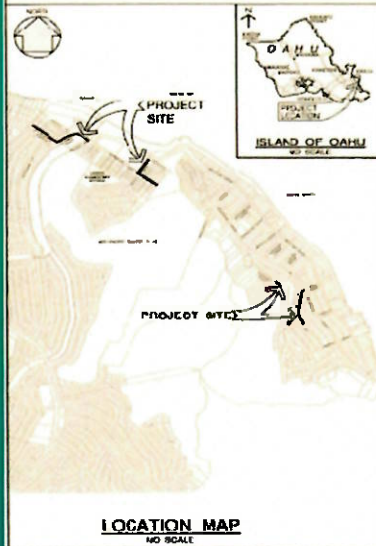
KAILUA, OAHU, HAWAII

TAX MAP KEYS: 4-0-024, 4-0-065, 4-0-060, 4-0-010 & 4-0-011

APPROVED

[Signature]
BERNARD Y. W. LAU, P.E.
Manager and Chief Engineer

[Signature]
Date



INDEX OF DRAWINGS

SHT	DWG	DESCRIPTION	SHT	DWG	DESCRIPTION	SHT	DWG	DESCRIPTION
1	T-1	TITLE SHEET, INDEX OF DRAWINGS & LOCATION MAP	28	S-1	EXISTING BRIDGE REPAIR LHM AND REPAIR SCHEDULES	54	C-37	TRAFFIC CONTROL PLAN-1
2	T-2	CONSTRUCTION NOTES	29	S-2	PYPHOS	57	C-38	TRAFFIC CONTROL PLAN-2
3	T-3	CONSTRUCTION NOTES	30	S-3	CONCRETE REPAIR NOTES AND DETAILS	58	C-39	TRAFFIC CONTROL PLAN-3
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5	T-5	CONSTRUCTION NOTES AND ABBREVIATING	32	S-5	CONCRETE REPAIR DETAILS	60	C-41	TRAFFIC CONTROL PLAN-5
6	C-1	GENERAL LAYOUT, EROSION AND SEDIMENT CONTROL PLAN-1	33	S-6	CONCRETE REPAIR DETAILS	61	C-42	TRAFFIC CONTROL PLAN-6
7	C-2	GENERAL LAYOUT, EROSION AND SEDIMENT CONTROL PLAN-2	34	S-7	GENERAL STRUCTURAL NOTES	62	C-43	TRAFFIC CONTROL PLAN-7
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9	C-4	GENERAL LAYOUT, EROSION AND SEDIMENT CONTROL PLAN-4	36	S-9	SECTION AND PIPE SUPPORT DETAILS	64	C-45	TRAFFIC CONTROL PLAN-9
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12	C-7	WATER SYSTEM LAYOUT PLAN-2	39	S-12	CONCRETE JACKET DETAIL	67	C-48	TRAFFIC CONTROL PLAN-12
13	C-8	WATER SYSTEM LAYOUT PLAN-3	40	S-13	CONCRETE JACKET DETAIL	68	C-49	TRAFFIC CONTROL PLAN-13
14	C-9	WATER SYSTEM LAYOUT PLAN-4	41	S-14	CONCRETE JACKET DETAIL	69	C-50	TRAFFIC CONTROL PLAN-14
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16	C-11	WATER SYSTEM LAYOUT PLAN-6	43	C-21	TRENCH RESTORATION DETAILS & TRENCH NOTES	71	C-52	TRAFFIC CONTROL PLAN-16
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18	C-13	WATER SYSTEM LAYOUT PLAN-8	45	C-23	TRENCH RESTORATION DETAILS & TRENCH NOTES	73	C-54	TRAFFIC CONTROL PLAN-18
19	C-14	WATER SYSTEM LAYOUT PLAN-9	46	C-24	TRENCH RESTORATION DETAILS & TRENCH NOTES	74	C-55	TRAFFIC CONTROL PLAN-19
20	C-15	WATER SYSTEM LAYOUT PLAN-10	47	C-25	TRENCH RESTORATION DETAILS & TRENCH NOTES	75	C-56	TRAFFIC CONTROL PLAN-20
21	C-16	WATER SYSTEM LAYOUT PLAN-11	48	C-26	TRENCH RESTORATION DETAILS & TRENCH NOTES	76	C-57	TRAFFIC CONTROL PLAN-21
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27	C-22	WATER SYSTEM LAYOUT PLAN-17	54	C-32	TRENCH RESTORATION DETAILS & TRENCH NOTES			
			55	C-33	TRENCH RESTORATION DETAILS & TRENCH NOTES			

APPROVED:

[Signature]
MANAGER & CHIEF ENGINEER, BOARD OF WATER SUPPLY, CITY & COUNTY OF HONOLULU

PROJECT LOCATIONS



PROJECT LOCATIONS

PHASES 4 & 5

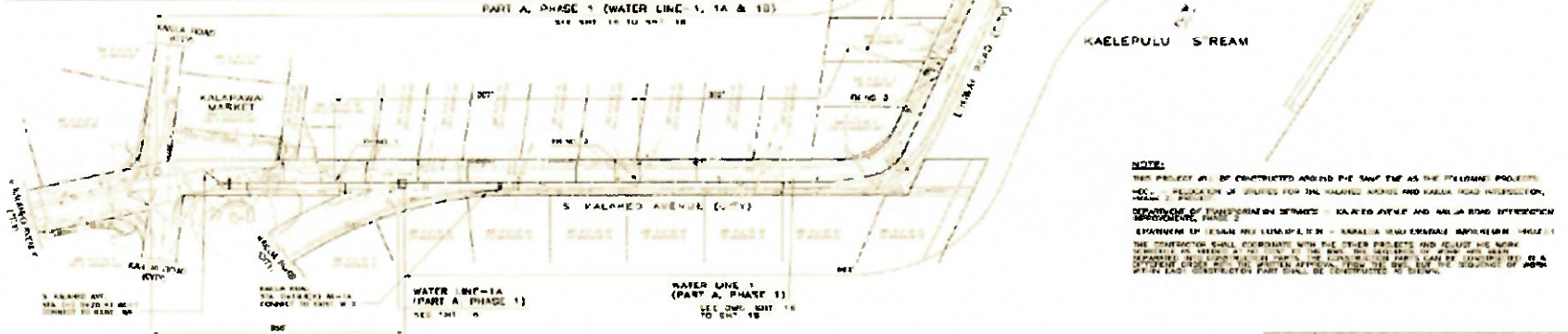


PHASES 6 & 7



EXAMPLE: PHASES 1, 2, AND 3 SEQUENCE OF WORK

NO.	PHASE	SHEET NAME	WATERLINE	STATION	DESCRIPTION
1	PART A	S. KALEPULU AVENUE (PHASE 1)	AL-10	0+00 TO 0+100.00	INSTALL NEW MS
2		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+100 TO 0+200.00	INSTALL NEW MS
3		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+200 TO 0+300.00	INSTALL NEW MS
4		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+300 TO 0+400.00	INSTALL NEW MS
5		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+400 TO 0+500.00	INSTALL NEW MS
6		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+500 TO 0+600.00	INSTALL NEW MS
7		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+600 TO 0+700.00	INSTALL NEW MS
8		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+700 TO 0+800.00	INSTALL NEW MS
9		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+800 TO 0+900.00	INSTALL NEW MS
10		S. KALEPULU AVENUE (PHASE 1)	AL-10	0+900 TO 1+000.00	INSTALL NEW MS
11		S. KALEPULU AVENUE (PHASE 1)	AL-10	1+000 TO 1+100.00	INSTALL NEW MS
12		S. KALEPULU AVENUE (PHASE 1)	AL-10	1+100 TO 1+200.00	INSTALL NEW MS
13		S. KALEPULU AVENUE (PHASE 1)	AL-10	1+200 TO 1+300.00	INSTALL NEW MS
14		S. KALEPULU AVENUE (PHASE 1)	AL-10	1+300 TO 1+400.00	INSTALL NEW MS
15		S. KALEPULU AVENUE (PHASE 1)	AL-10	1+400 TO 1+500.00	INSTALL NEW MS
16		S. KALEPULU AVENUE (PHASE 1)	AL-10	1+500 TO 1+600.00	INSTALL NEW MS
17		S. KALEPULU AVENUE (PHASE 1)	AL-10	1+600 TO 1+700.00	INSTALL NEW MS
18		S. KALEPULU AVENUE (PHASE 1)	AL-10	1+700 TO 1+800.00	INSTALL NEW MS
1	PART B	HAWAIIA ROAD BRIDGE	AL-10	0+00 TO 0+100.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
2		HAWAIIA ROAD BRIDGE	AL-10	0+100 TO 0+200.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
3		HAWAIIA ROAD BRIDGE	AL-10	0+200 TO 0+300.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
4		HAWAIIA ROAD BRIDGE	AL-10	0+300 TO 0+400.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
5		HAWAIIA ROAD BRIDGE	AL-10	0+400 TO 0+500.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
6		HAWAIIA ROAD BRIDGE	AL-10	0+500 TO 0+600.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
7		HAWAIIA ROAD BRIDGE	AL-10	0+600 TO 0+700.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
8		HAWAIIA ROAD BRIDGE	AL-10	0+700 TO 0+800.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
9		HAWAIIA ROAD BRIDGE	AL-10	0+800 TO 0+900.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH
10		HAWAIIA ROAD BRIDGE	AL-10	0+900 TO 1+000.00	INSTALL TEMPORARY 12" EXPOSED PRESSURE TEST, CLEANING AND FLUSH



NOTE:
 THIS PROJECT WILL BE CONSTRUCTED ACCORDING TO THE SAMP PLAN AS THE FOLLOWING PROJECTS:
 1. INSTALLATION OF BIDDING FOR THE KALEPULU AVENUE AND HAWAIIA ROAD INTERSECTION, PHASE 1.
 2. INSTALLATION OF BIDDING FOR THE KALEPULU AVENUE AND KALEPULU DRIVE INTERSECTION, PHASE 2.
 3. INSTALLATION OF BIDDING FOR THE KALEPULU AVENUE AND KALEPULU STREET INTERSECTION, PHASE 3.
 4. INSTALLATION OF BIDDING FOR THE KALEPULU AVENUE AND KALEPULU DRIVE INTERSECTION, PHASE 4.
 THE CONTRACTOR SHALL COORDINATE WITH THE OTHER PROJECTS AND ADJUST THE WORK SCHEDULE AS NECESSARY TO AVOID CONFLICTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE BOARD OF WATER SUPPLY AND THE BOARD OF PUBLIC WORKS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE BOARD OF WATER SUPPLY AND THE BOARD OF PUBLIC WORKS.

LINE NO.	STREET NAME	CONNECTION STA.	CONNECTION DATE	CONNECTION TIME	REMARKS (W.A. 5.0000)
1	S. KALEPULU AVE.	0+00 TO 0+100	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
2	S. KALEPULU AVE.	0+100 TO 0+200	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
3	S. KALEPULU AVE.	0+200 TO 0+300	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
4	S. KALEPULU AVE.	0+300 TO 0+400	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
5	S. KALEPULU AVE.	0+400 TO 0+500	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
6	S. KALEPULU AVE.	0+500 TO 0+600	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
7	S. KALEPULU AVE.	0+600 TO 0+700	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
8	S. KALEPULU AVE.	0+700 TO 0+800	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
9	S. KALEPULU AVE.	0+800 TO 0+900	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE
10	S. KALEPULU AVE.	0+900 TO 1+000	1/1/2020	8:00 AM	CONNECTION TO EXISTING WATERLINE

WATER SYSTEM LAYOUT PLAN



REVISION NO.	DESCRIPTION	DATE	APPROVAL
1	ISSUED FOR BIDDING	1/1/2020	[Signature]
BOARD OF WATER SUPPLY			
JOB 21-023A			
KALEPULU AVENUE AND HAWAIIA ROAD INTERSECTION, PHASE 1			
WATER SYSTEM LAYOUT PLAN-1			
APPROVED:	[Signature]	DATE: 1/1/2020	



BID PROPOSAL

JOB 21-023A
LANIKAI WATER SYSTEM IMPROVEMENTS, PART II
KAILUA, OAHU, HAWAII

Item No.	Est. Qty.	Description	Unit Price	Total
1.	2,034	Cu. Yds. trench excavation without classification, inclusive of backfill, pipe cushion, shoring and bracing, and dewatering for water mains and appurtenances, in place complete. Per Cu. Yd.	\$ _____	\$ _____
2.	1,715	Sq. Yds. 4-inch thick (minimum) asphaltic concrete pavement, inclusive of 6-inch thick (minimum) base course and subbase courses, cold plane, prime & tack coat, replacement of existing pavement markings, and adjustment of all monuments and manhole covers, in place complete. Per Sq. Yd.	\$ _____	\$ _____
3.	960	Sq. Yds. asphaltic pavement (City #4 mix) for temporary trench repaving, in place complete. Per Sq. Yd.	\$ _____	\$ _____
4.	52	Sq. Yds. 2-inch thick (minimum) asphaltic concrete pavement for repaving, in place complete Per Sq. Yd.	\$ _____	\$ _____

JOB 21-023A
LANIKAI WATER SYSTEM IMPROVEMENTS, PART II
KAILUA, OAHU, HAWAII

Item No.	Est Qty.	Description	Unit Price	Total
53e.	28	Lin. Ft., furnish and install 12-inch ductile iron pipe with bonded dielectric coating, all inclusive, in place complete. Per Lin. Ft.	\$ _____	\$ _____
53f.	1,204	Lin. Ft., furnish and install 16-inch ductile iron pipe with bonded dielectric coating, all inclusive, in place complete. Per Lin. Ft.	\$ _____	\$ _____
53g.	233	Ea., furnish, install, and test electronic marker, in place complete. Each	\$ _____	\$ _____
53h.	1	Ea., 4-inch gate valve, 150#, in place complete. Each	\$ _____	\$ _____
53i.	13	Ea., 6-inch gate valve, 150#, in place complete Each	\$ _____	\$ _____
53j.	5	Ea., 8-inch gate valve, 150#, in place complete. Each	\$ _____	\$ _____
53k.	1	Ea., 12-inch gate valve, 150#, in place complete	\$ _____	\$ _____

Questions?





Mahalo!

BOARD OF WATER SUPPLY

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

ITEM FOR INFORMATION NO. 4

"August 22, 2022

STATUS
UPDATE OF
GROUNDWATER
LEVELS AT
ALL INDEX
STATIONS

Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 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 2022. Waialua is in Caution Status. Kaimuki, Punaluu and Kaluanui are in Alert Status. The monthly production average for July 2022 was 143.76 million gallons per day.

The Board of Water Supply rainfall index for the month of July 2022 was 93 percent of normal, with a 5-month moving average of 72 percent. As of August 2, 2022, the Hawaii Drought Monitor shows abnormally dry to severe drought conditions moving southwest across Oahu. The National Weather Service is forecasting enhanced probabilities for below-normal precipitation through at least November 2022, possibly as late as March 2023.

Most monitoring wells exhibited relatively stable head levels for the month, likely due to the relatively lower overall groundwater production, and the increased rainfall compared to the prior month. Average monthly Production for July 2022 was lower than the previous year and the 5-year monthly average.

Respectfully Submitted,

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

Attachment"

The foregoing was for information only.

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

Board Member Na'alehu Anthony asked Mr. Usagawa to explain how water use would be affected on the windward side of the island if head levels were to fall below critical.

Mr. Usagawa shared that Punaluu Wells provides 1/3 of the water supply for Windward Oahu. He explained that if head levels approach the critical low groundwater level, the BWS would increase monitoring frequency to

weekly. The BWS can redistribute source production to other sources including Waihee Tunnel.

**PRODUCTION, HEAD AND RAINFALL REPORT
MONTH OF JULY 2022**

POTABLE

STATION	MGD
HONOLULU (1)	
KULIOUOU	0.01
WAILUPE	0.13
AINA KOA	0.00
AINA KOA II	0.72
MANOA II	0.87
PALOLO	1.11
KAIMUKI HIGH	2.30
KAIMUKI LOW	2.27
WILDER	8.94
BERETANIA HIGH	2.68
BERETANIA LOW	3.58
KALIHI HIGH	0.00
KALIHI LOW	5.10
KAPALAMA	1.27
KALIHI SHAFT	8.52
MOANALUA	0.83
HALAWA SHAFT	0.00
KAAMILO	0.61
KALAUAO	8.08
PUNANANI	11.53
KAAHUMANU	0.26
HECO WAIU	2.22
MANANA	0.23
WELLS SUBTOTAL:	61.26
MANOA TUNNEL	0.17
PALOLO TUNNEL	0.00
GRAVITY SUBTOTAL:	0.17
HONO. SUBTOTAL:	61.43

STATION	MGD
WINDWARD (2)	
WAIMANALO II	0.81
WAIMANALO III	0.00
KUOU I	1.00
KUOU II	0.33
KUOU III	0.74
LULUKU	0.85
HAIKU	0.35
IOLEKAA	0.00
KAHALUU	0.61
KAHANA	0.79
PUNALUU I	0.00
PUNALUU II	3.75
PUNALUU III	0.24
KALUANUI	1.56
MAAKUA	0.35
HAUULA	0.25
WELLS SUBTOTAL:	11.64
WAIM. TUNNELS I & II	0.00
WAIM. TUNNELS III&IV	0.19
WAIHEE INCL. WELLS	0.29
WAIHEE TUNNEL	4.04
LULUKU TUNNEL	0.18
HAIKU TUNNEL	0.44
KAHALUU TUNNEL	1.40
GRAVITY SUBTOTAL:	6.54
WIND. SUBTOTAL:	18.18

STATION	MGD
NORTH SHORE (3)	
KAHUKU	0.46
OPANA	0.97
WAIALEE I	0.09
WAIALEE II	0.40
HALEIWA	0.00
WAIALUA	2.13
N.SHORE SUBTOTAL:	4.04

STATION	MGD
MILILANI (4)	
MILILANI I	1.16
MILILANI II	0.00
MILILANI III	0.72
MILILANI IV	2.42
MILILANI SUBTOTAL:	4.31

STATION	MGD
WAHIAWA (5)	
WAHIAWA	1.33
WAHIAWA II	1.83
WAHIAWA SUBTOTAL:	3.16

STATION	MGD
PEARL CITY-HALAWA (6)	
HALAWA 277	0.00
HALAWA 550	0.00
AIEA	0.00
AIEA GULCH 497	0.72
AIEA GULCH 550	0.40
KAONOHI I	1.39
WAIMALU I	0.00
NEWTOWN	1.79
WAIU	1.93
PEARL CITY I	0.83
PEARL CITY II	1.14
PEARL CITY III	0.20
PEARL CITY SHAFT	0.89
PEARL CITY-HALAWA SUBTOTAL:	9.29

STATION	MGD
WAIPAHU-EWA (7)	
WAIPIO HTS.	1.46
WAIPIO HTS. I	0.00
WAIPIO HTS. II	0.41
WAIPIO HTS. III	1.19
WAIPAHU	5.13
WAIPAHU II	1.91
WAIPAHU III	4.02
WAIPAHU IV	2.63
KUNIA I	4.08
KUNIA II	2.04
KUNIA III	1.31
HOAEAE	6.65
HONOULIULI I	0.00
HONOULIULI II	8.45
MAKAKILO	0.15
WAIPAHU-EWA SUBTOTAL:	39.42

STATION	MGD
WAIANAE (8)	
MAKAHA I	0.41
MAKAHA II	0.00
MAKAHA III	0.13
MAKAHA V	0.29
MAKAHA VI	0.00
MAKAHA SHAFT	0.00
KAMAILE	0.08
WAIANAE I	0.30
WAIANAE II	0.35
WAIANAE III	0.84
WELLS SUBTOTAL:	2.40
WAI. C&C TUNNEL	1.40
WAI. PLANT. TUNNELS	0.13
GRAVITY SUBTOTAL:	1.53
WAIANAE SUBTOTAL:	3.93

NONPOTABLE

NONPOTABLE	MGD
KALAUAO SPRINGS	0.52
BARBERS POINT WELL	1.28
GLOVER TUNNEL NP	0.29
NONPOTABLE TOTAL:	2.09

RECYCLED WATER (JUNE 2022)

RECYCLED WATER	MGD
HONOULIULI WRF R-1	7.16
HONOULIULI WRF RO	1.32
RECYCLED TOTAL:	8.48

**PRODUCTION, HEAD AND RAINFALL REPORT
MONTH OF JULY 2022**

TOTAL WATER		MGD
PUMPAGE		135.51
GRAVITY		8.25
POTABLE TOTAL:		143.76
NONPOTABLE		2.09
RECYCLED WATER		8.48
TOTAL WATER:		154.33

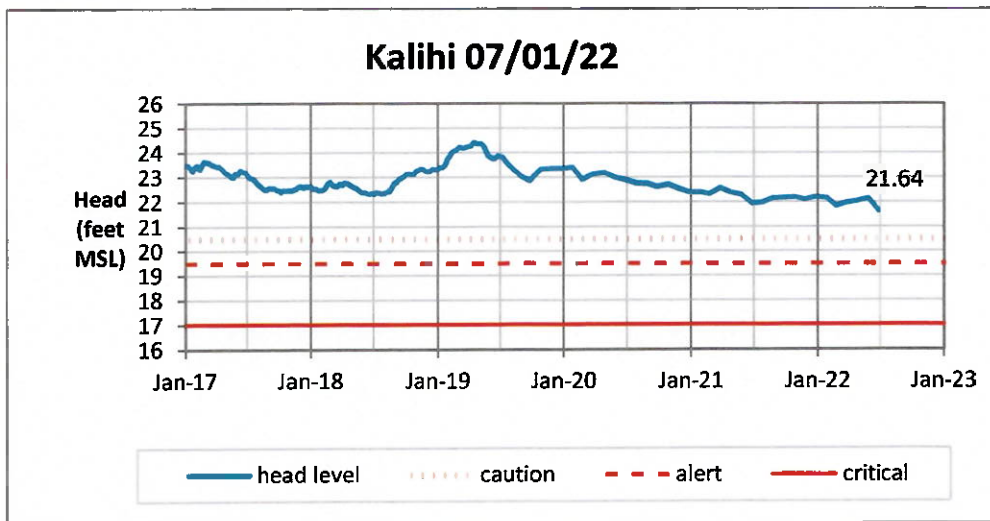
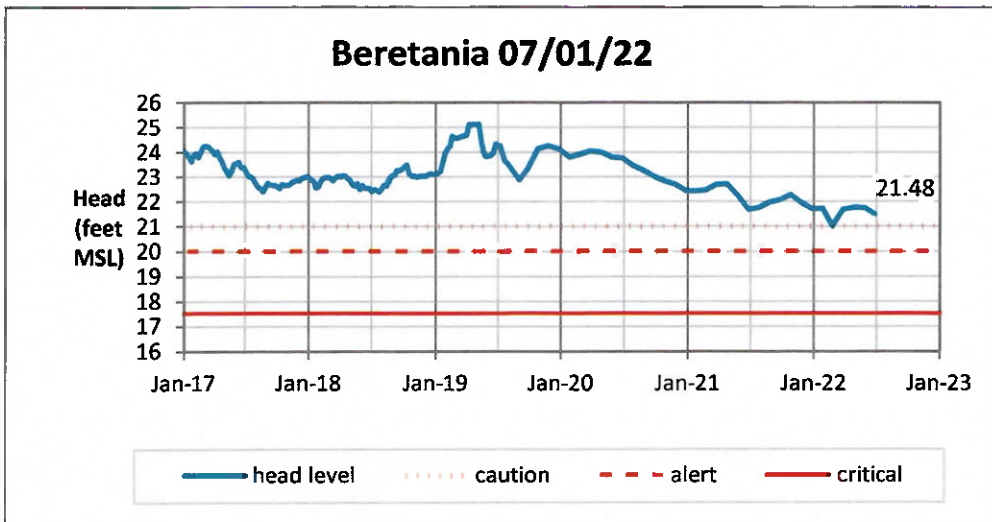
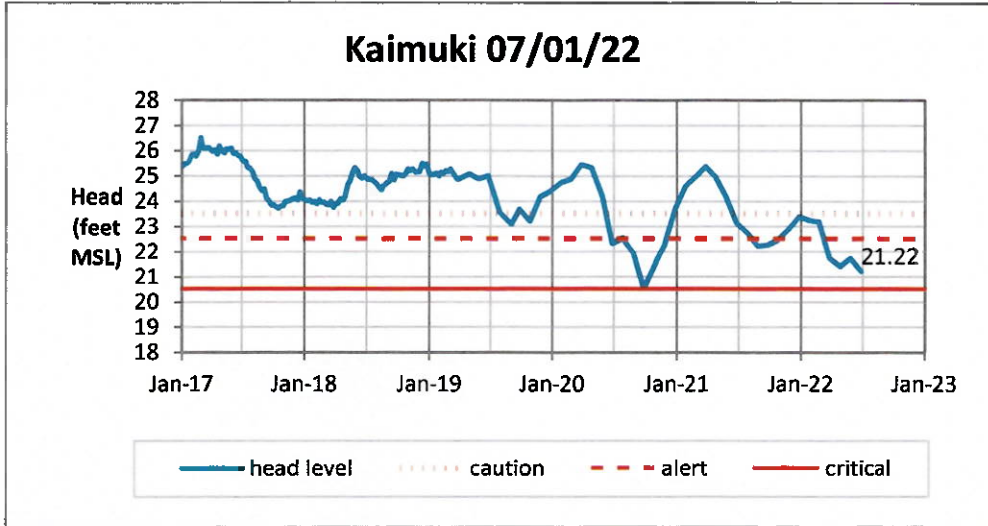
CWRM PERMITTED USE AND BWS ASSESSED YIELDS FOR BWS POTABLE SOURCES				
WATER USE DISTRICTS	A	B	C	
	PERMITTED USE/ BWS YLDS	JUL 2022	DIFF. A-B	
1 HONOLULU	83.32	61.26	22.06	
2 WINDWARD	25.02	18.18	6.84	
3 NORTH SHORE	4.70	4.04	0.66	
4 MILILANI	7.53	4.31	3.22	
5 WAHIAWA	4.27	3.16	1.11	
6 PEARL CITY-HALAWA	12.25	9.29	2.96	
7 WAIPAHU-EWA	50.63	39.42	11.21	
8 WAIANAE	4.34	3.93	0.41	
TOTAL:	192.06	143.59	48.46	

CWRM PERMITTED USE FOR BWS NONPOTABLE SOURCES				
WATER USE DISTRICTS	A	B	C	
	PERMITTED USE	JUL 2022	DIFF. A-B	
7 WAIPAHU-EWA (BARBERS POINT WELL)	1.00	1.28	-0.28	
TOTAL:	1.00	1.28	-0.28	

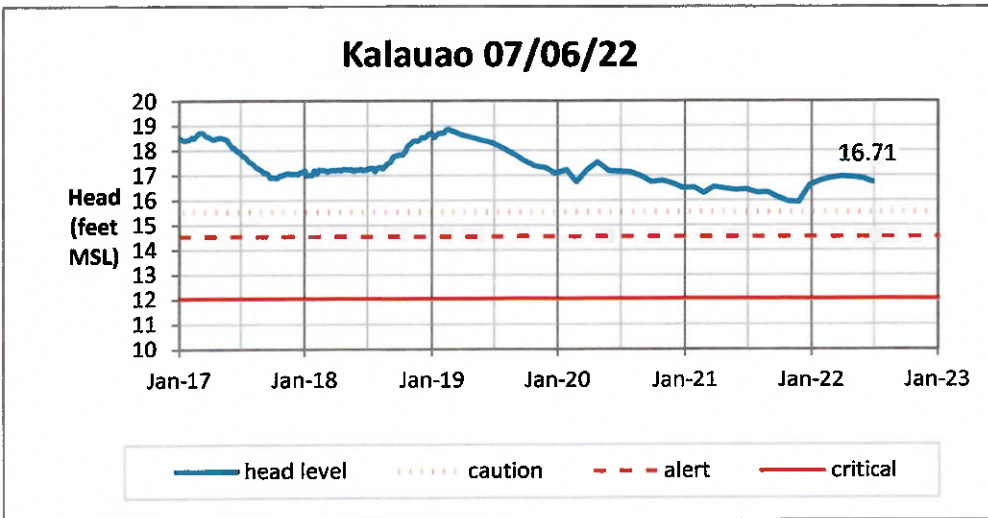
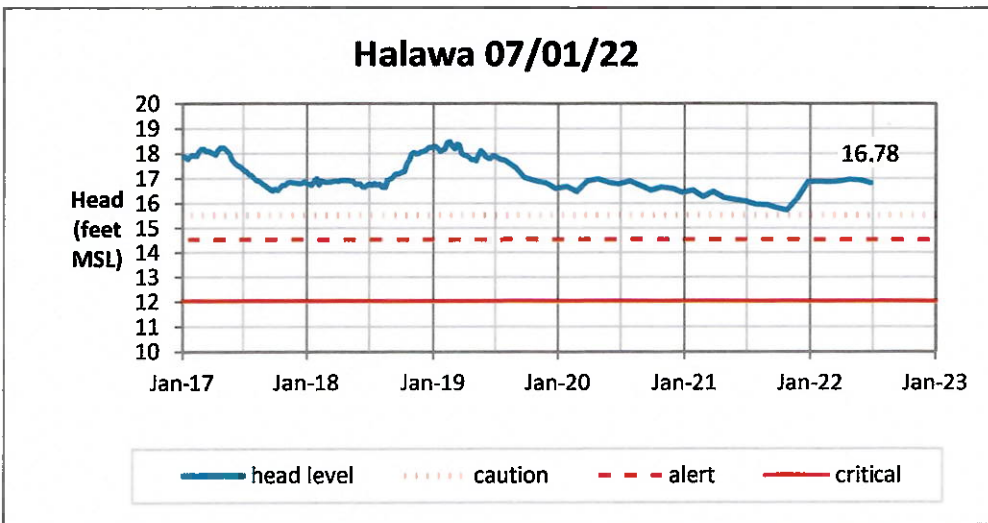
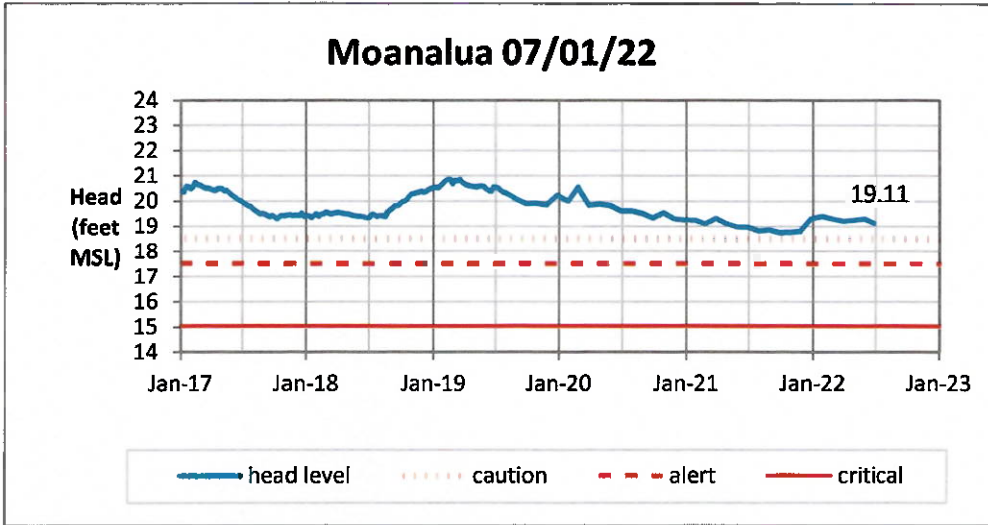
EFFECTIVE WATER DEMAND PER DISTRICT				
IMPORT/EXPORT BETWEEN WATER USE DISTRICTS				
FROM	TO		MGD	
2	1	WINDWARD EXPORT	0.91	
7	8	BARBERS PT LB	6.44	

WATER USE DISTRICTS		SUBTOTAL	IMPORT	EXPORT	EFFECTIVE WATER DEMAND
1	HONOLULU	61.43	0.91	-	62.34
2	WINDWARD	18.18	-	0.91	17.27
3	NORTH SHORE	4.04	-	-	4.04
4	MILILANI	4.31	-	-	4.31
5	WAHIAWA	3.16	-	-	3.16
6	PEARL CITY-HALAWA	9.29	-	-	9.29
7	WAIPAHU-EWA	39.42	-	6.44	32.98
8	WAIANAE	3.93	6.44	-	10.38
TOTAL:		143.76	7.35	7.35	143.76

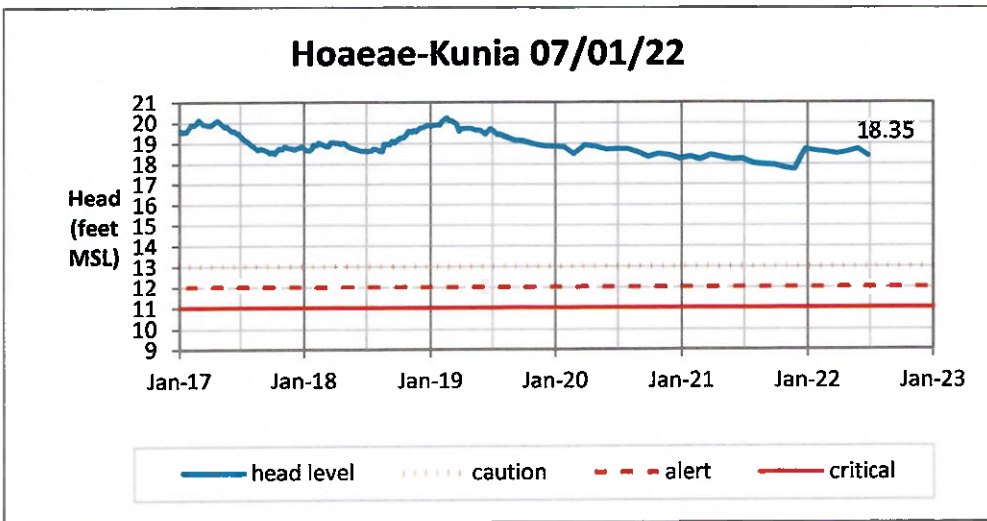
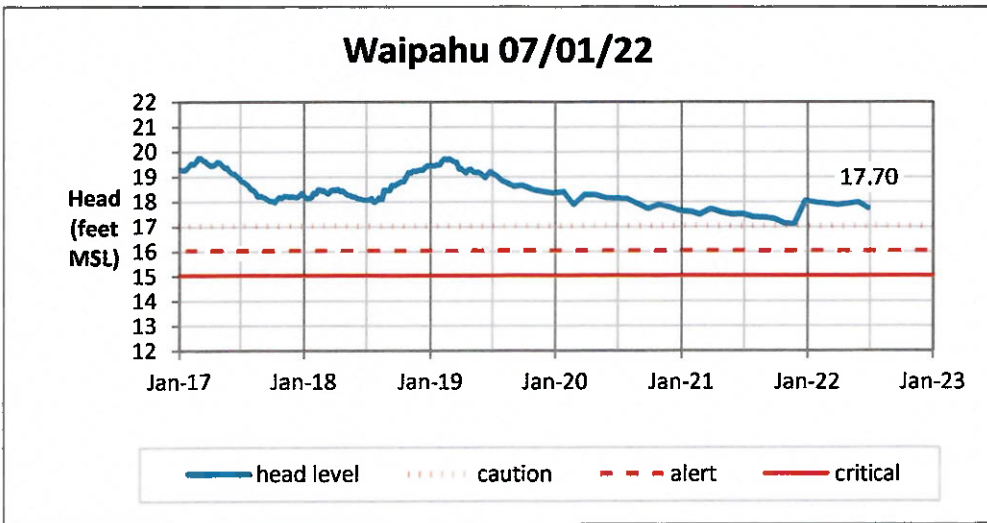
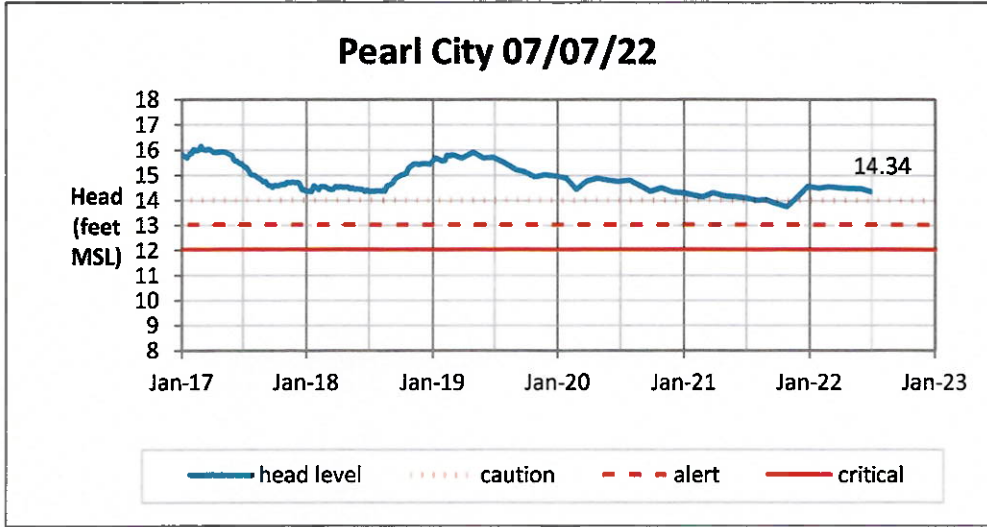
Head Report



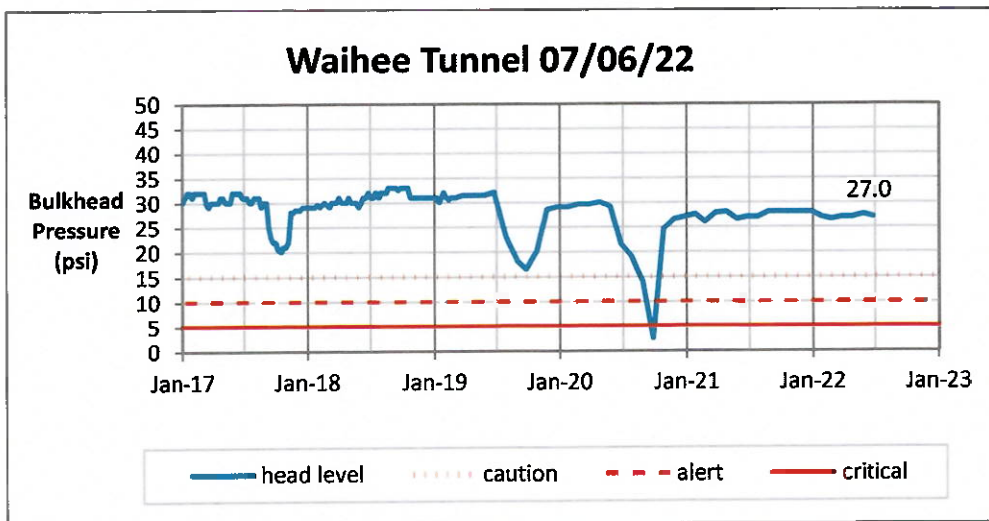
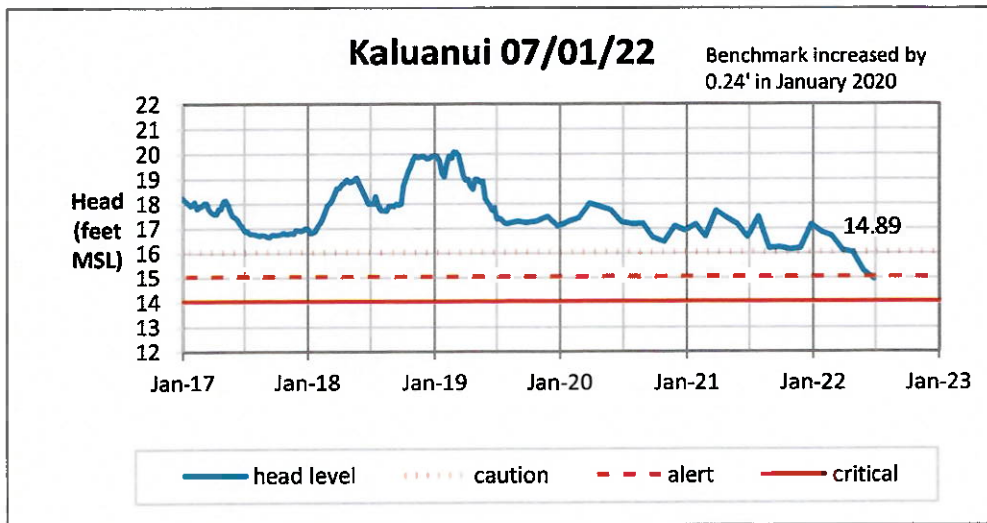
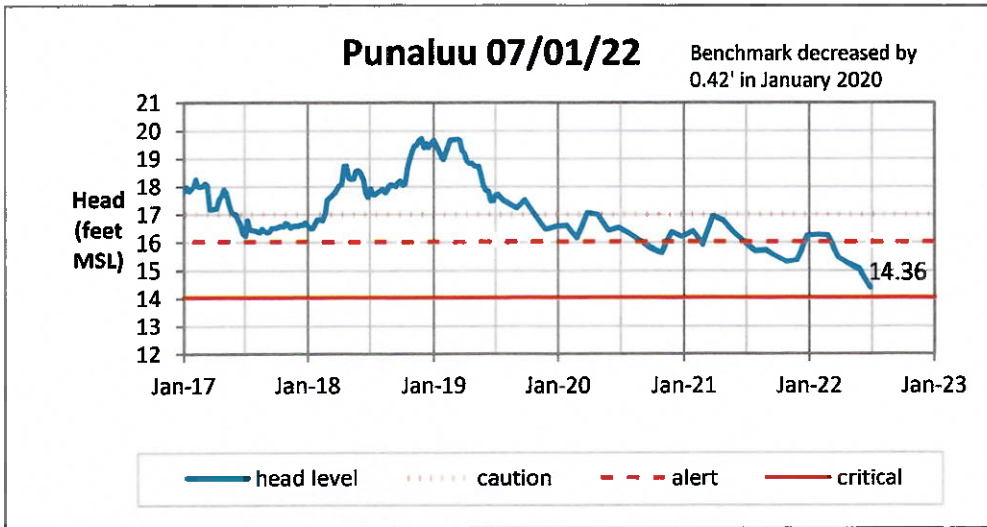
Head Report



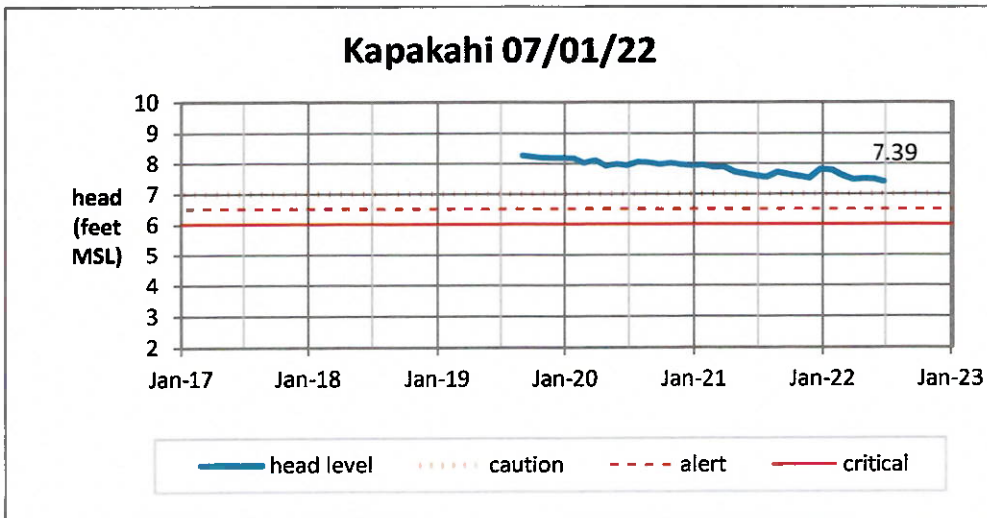
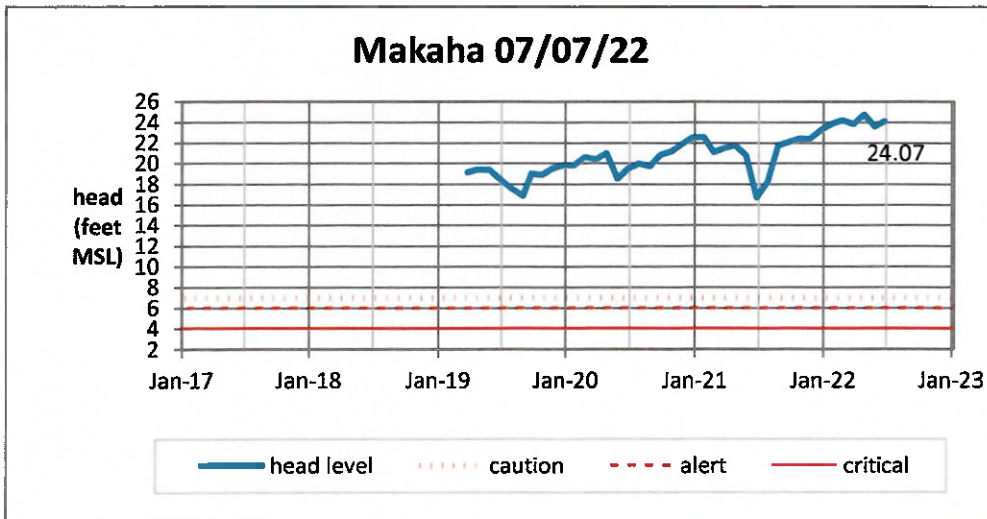
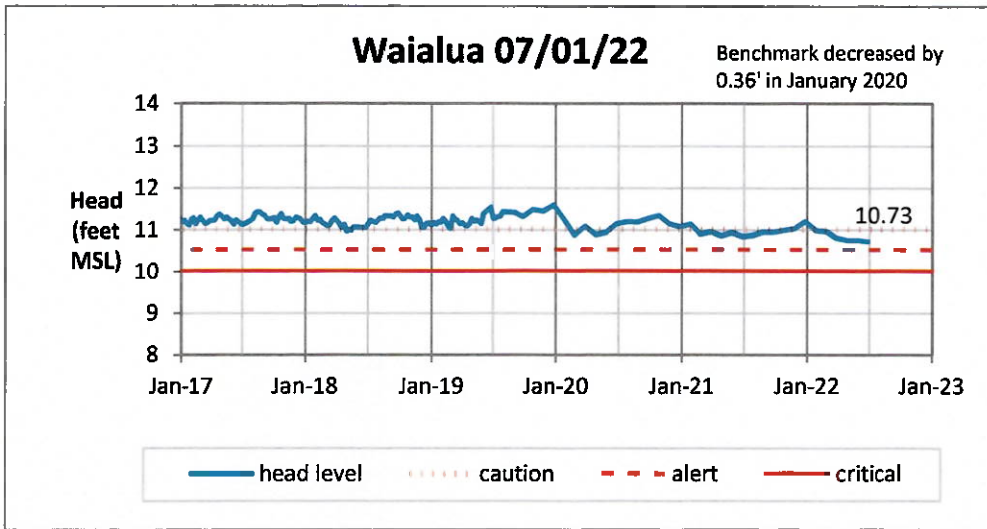
Head Report

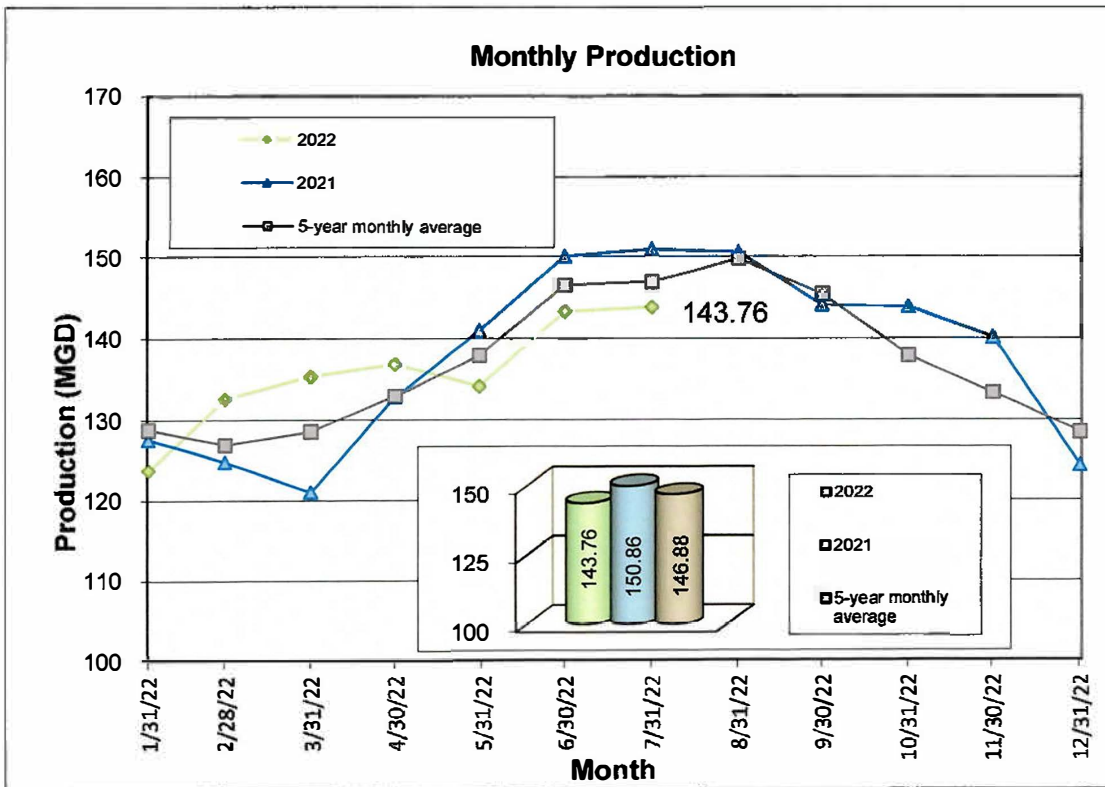
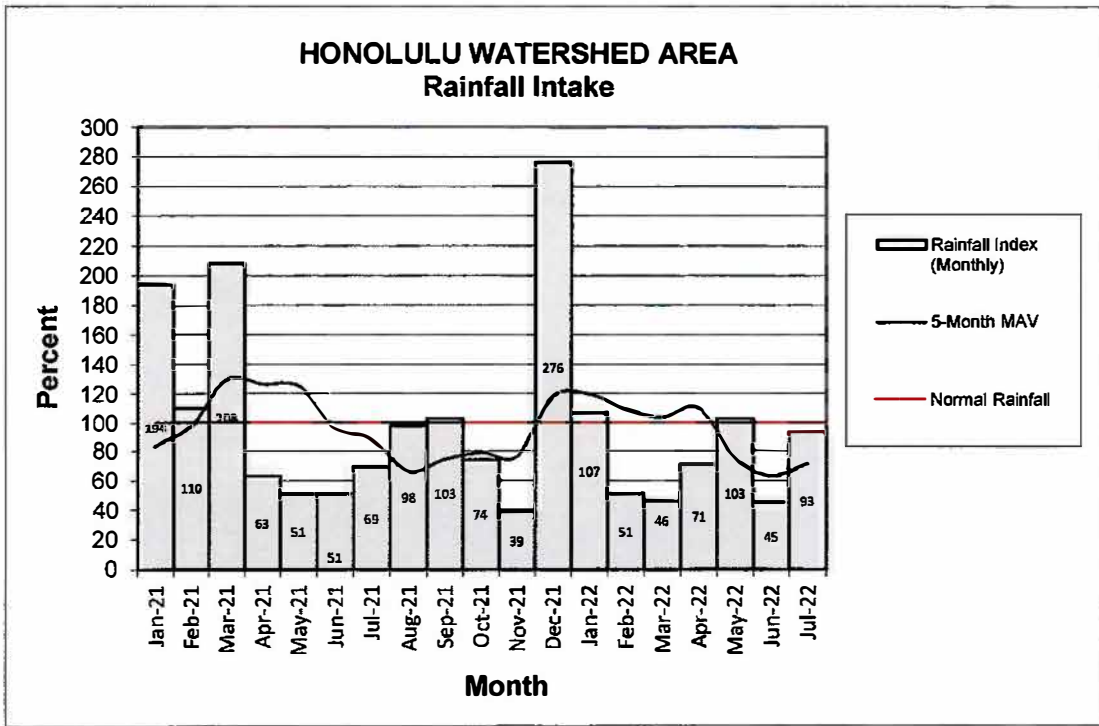


Head Report



Head Report





ITEM FOR INFORMATION NO. 5

"August 22, 2022

WATER MAIN
REPAIR
REPORT FOR
JULY 2022

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

Chair and Members:

Subject: Water Main Repair Report for July 2022

Jason Nikaido, Program Administrator, Field Operations Division, will report on water main repair work for the month of July 2022.

Respectfully submitted,

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

Attachment"

The foregoing was for information only.

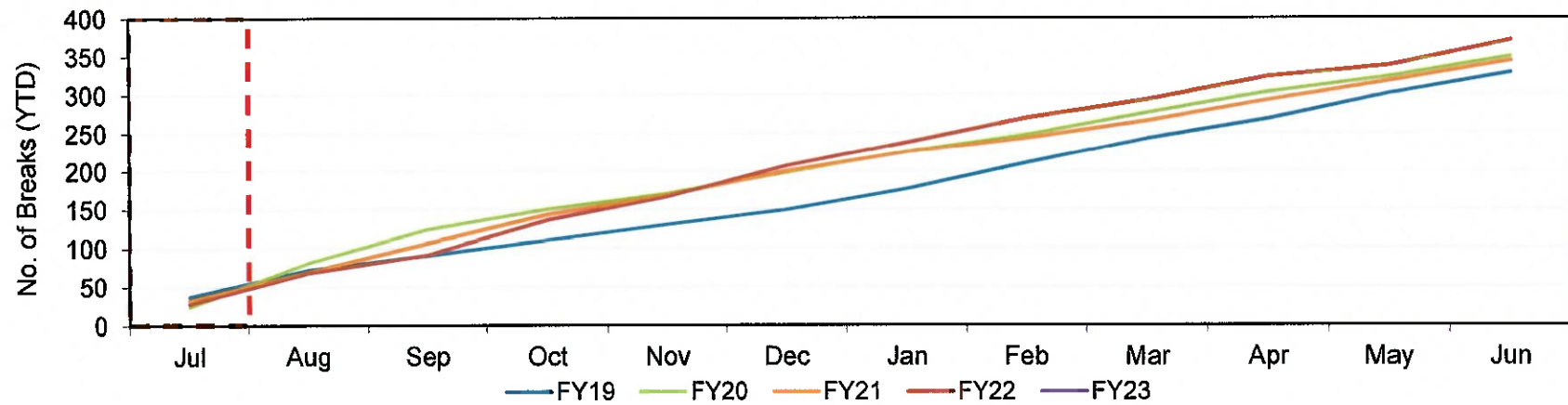
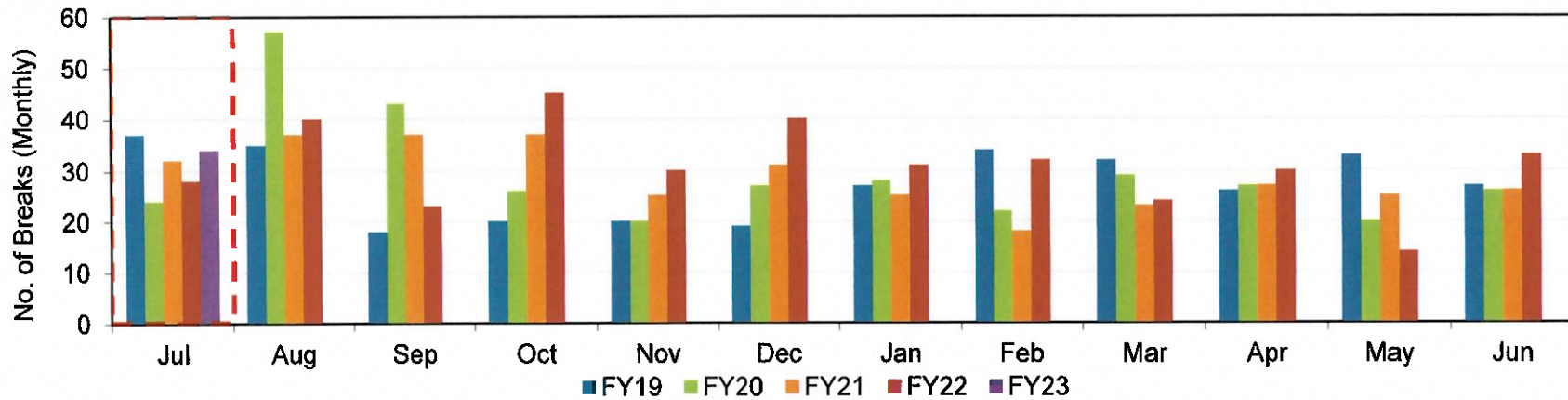
DISCUSSION:

Jason Nikaido, Program Administrator, Field Operations Division, gave the report. There were no comments or discussion.

**WATER MAIN REPAIR REPORT
for July 2022**

Monthly Main Breaks

FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2023	34												34
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
2020	24	57	43	26	20	27	28	22	29	27	20	26	349
2019	37	35	18	20	20	19	27	34	32	26	33	27	328

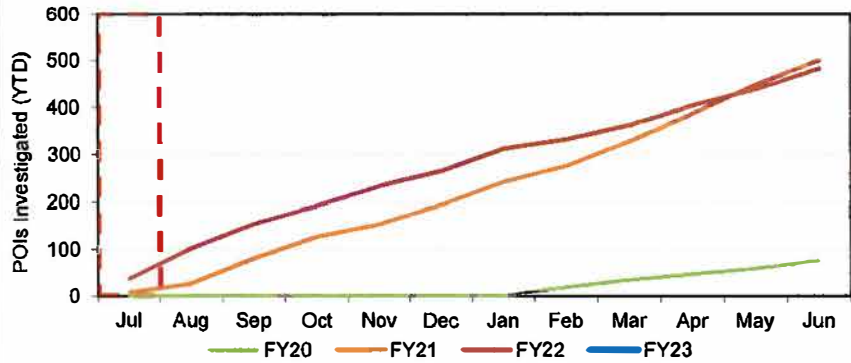
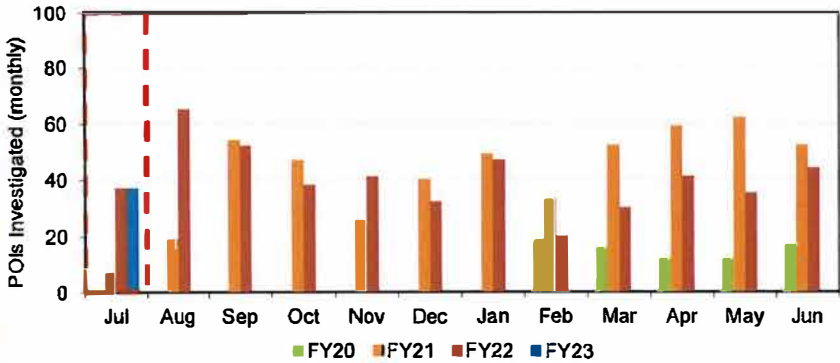


Date	Address	Size (In)	Pipe Type	Date	Address	Size (In)	Pipe Type
7/2/2022	646 Wyllie St, Honolulu	6	CI	7/29/2022	1205 Hoolaulea St, Pearl City	8	CI
7/4/2022	714 Puuloa Rd, Honolulu	36	CC	7/30/2022	2963 Numana Rd, Honolulu	8	DI
7/5/2022	41-502 Kumuhau St, Waimanalo	12	CI	7/31/2022	99-753 Pohue St, Halawa Heights	8	CI
7/5/2022	91-2141 Old Fort Weaver Rd, Ewa Beach	16	CI	7/31/2022	91-409 Ewa Beach Rd, Ewa Beach	12	PVC
7/5/2022	92-838 Kohupono St, Kapolei	8	CI				
7/5/2022	45-15 Kaneohe Bay Dr, Kaneohe	12	CI				
7/7/2022	94-1112 Kahuamo St, Waipahu	8	CI				
7/9/2022	2223 Aupaka St, Pearl City	8	CI				
7/11/2022	57 Wood St, Honolulu	8	PVC				
7/11/2022	2456 Aumakua St, Pearl City	8	CI				
7/12/2022	25 Wood St, Honolulu	8	PVC				
7/12/2022	84-625 Lahaina St, Makaha	8	CI				
7/13/2022	94-968 Awamoku Pl, Waipahu	6	CI				
7/13/2022	99-1386 Koaha Pl, Aiea	12	DI				
7/16/2022	962 Kealaolu Ave, Honolulu	6	CI				
7/17/2022	52-181 Kamehameha Hwy, Hauula	30	CC				
7/17/2022	51-636 Kamehameha Hwy, Kaaawa	8	CI				
7/17/2022	7305 Nuulolo St, Honolulu	8	CI				
7/18/2022	355 Hualani St, Kailua	8	CI				
7/18/2022	94-1047 Maikai St, Waipahu	8	CI				
7/21/2022	98-1125 Moanalua Rd, Aiea,	8	CI				
7/22/2022	1562 Ihiloa Loop, Honolulu	8	CI				
7/23/2022	1503 St. Louis Dr, Honolulu	4	DI				
7/25/2022	458 Olomana St, Kailua	8	AC				
7/25/2022	2058 St Louis Dr, Honolulu	8	CI				
7/27/2022	51-114 Kamehameha Hwy, Kaaawa	6	CI				
7/28/2022	1016 Apokula St, Kailua	12	CI				
7/28/2022	1269 Kina St, Kailua	8	CI				
7/28/2022	1468 Onioni St, Kailua	8	CI				
7/28/2022	84-314 Makau St, Waianae	8	PVC				

**LEAK DETECTION
for July 2022**

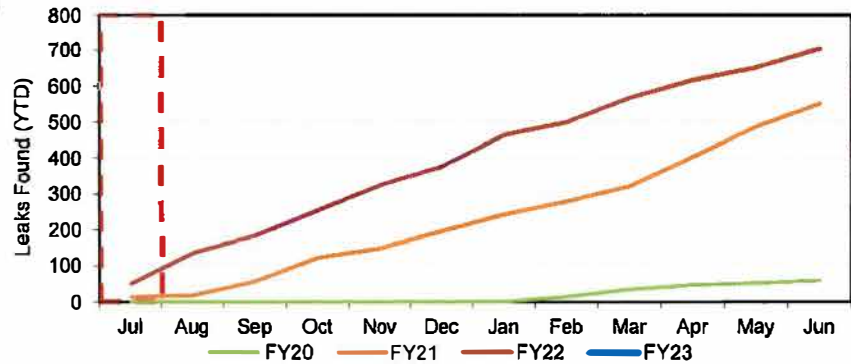
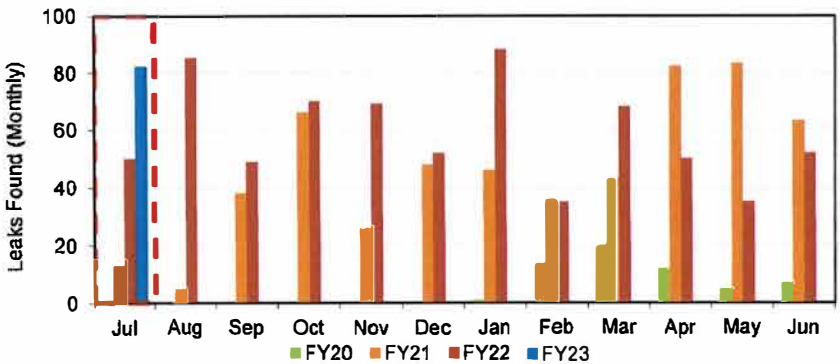
POIs Investigated

FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2023	37												37
2022	37	65	52	38	41	32	47	20	30	41	35	44	482
2021	7	19	54	47	26	40	49	33	52	59	62	52	500
2020							0	19	16	12	12	17	76



Leaks Found

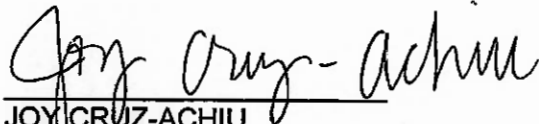
FY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
2023	82												82
2022	50	85	49	70	69	52	88	35	68	50	35	52	703
2021	13	5	38	66	26	48	46	36	43	82	83	63	549
2020							1	14	20	12	5	7	59




MOTION TO
ADJOURN

There being no further business Chair Andaya at 4:44 PM called for a motion to adjourn the Regular Session. Ray Soon so moved; seconded by Jade Butay and unanimously carried.

The minutes of the Regular Meeting held on August 22, 2022, are respectfully submitted,


JOY CRUZ-ACHIU

APPROVED:


BRYAN P. ANDAYA
Chair of the Board
SEP 26 2022

Date

THE MINUTES OF THE REGULAR SESSION BOARD MEETING ON AUGUST 22, 2022 WERE APPROVED AT THE SEPTEMBER 26, 2022 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON	X		
MAX J. SWORD			ABSTAIN
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
DAWN B. SZEWCZYK	X		