

MINUTES

REGULAR MEETING OF THE BOARD OF WATER SUPPLY

December 15, 2014

At 2:02 PM on December 15, 2014 in the Board Room of the Public Service Building at 630 South Beretania Street, Honolulu, Hawaii, Board Chair Miyashiro called to order the Regular Meeting.

Present: Duane R. Miyashiro, Chair
Mahealani Cypher
Theresa C. McMurdo (arrived at 2:06 p.m.)
David C. Hulihee
Ross S. Sasamura
Ford N. Fuchigami

Also Present: Ernest Lau, Manager and Chief Engineer
Ellen Kitamura, Deputy Manager and Chief Engineer
Erwin Kawata
Daryl Hiromoto
Henderson Nuuhiwa
Alex Ubiadas
Shawn Nakamoto
Joe Cooper
Karen Tom

Others Present: Krishna Jayaram, Deputy Corporation Counsel
Marilyn Ushijima, Deputy Corporation Counsel
Craig Von Bargaen, CDM Smith

Absent: Adam C. Wong, Vice Chair

APPROVAL
OF MINUTES

Approval of the Minutes of the Regular Meeting held on November 24, 2014

DISCUSSION

Manager Lau announced that there is one correction to page 5 of 21, Item for Information No. 1, Revision of the 2014-2015 Capital Improvement Program Budget – Amendment No. 1, No. 2, Item No. 39, Fire Hydrant Installations at Various Locations. The current source of funds is designated as Operating Fund. That needs to be corrected to Special Expendable Fund.

MOTION
TO APPROVE

David Hulihee and Mahealani Cypher motioned and seconded, respectively, to approve the Minutes of the Regular Session Meeting of November 24, 2014, as amended. The motion was unanimously carried.



BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 850, 2014

MAHEALANI CYPHER
IN APPRECIATION FOR SERVING AS A MEMBER
OF THE BOARD OF WATER SUPPLY

WHEREAS, MAHEALANI CYPHER has ably served as a member of the Board of Water Supply (BWS), City and County of Honolulu, since February 2011, and as Vice Chair from September 2011 through June 2014, and has recently notified the Board of her resignation at the end of this year; and

WHEREAS, as a former BWS Information Officer and former City Clerk of the City and County of Honolulu, as well as her current roles as an active community volunteer and the owner of Native Knowledge, LLC, MS. CYPHER's reputation in government and the local community and the esteem of her colleagues has resulted in additional recognition and respect for the Board; and

WHEREAS, the Board of Water Supply has greatly benefitted from MAHEALANI CYPHER's skills, experience, and extensive knowledge of BWS and City operations, water issues, communications, and Native Hawaiian concerns that lent to her credibility in discussions regarding a wide range of departmental and community matters; and

WHEREAS, as a Board member, MAHEALANI CYPHER has staunchly defended the BWS's semi-autonomous governance model, supported and encouraged initiatives that improve efficiency in overall Departmental operations, attended events in support of the Department's employees and programs, and has volunteered her time and expertise to help effect business and policy decisions for the Board that will impact the direction and operations of the Board of Water Supply for many years to come; and

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

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

BE IT FURTHER RESOLVED that the Members of this Board extend to MAHEALANI CYPHER our sincere aloha and best wishes for continued success in all her future endeavors; and

BE IT FINALLY RESOLVED that this Resolution be presented to MAHEALANI CYPHER.



Resolution No. 850, 2014

Adopted this 15th day of December 2014
Board of Water Supply, Honolulu, Hawaii

DUANE R. MIYASHIRO
Chair of the Board

DISCUSSION: Mr. Lau stated that Board Member Cypher submitted her resignation a month ago and that this Resolution is in appreciation for her service as a member, and also her service as part of the BWS Ohana as Information Officer in the Community Relations Office. Mr. Lau read the Resolution.

MOTION TO ADOPT David Hulihee motioned to adopt Resolution No. 850, 2014, Mahealani Cypher – In Appreciation for Serving as a Member of the Board of Water Supply. The motion was seconded by Ford Fuchigami and unanimously carried.

DISCUSSION: Mr. Lau expressed his sincere appreciation to Ms. Cypher, especially for urging and reminding him that it was his kuleana to come back to BWS as Manager and Chief Engineer to give back to the Department. Mr. Lau continued by saying that Mahealani Cypher is a good friend, and he will miss her dearly.

Chair Miyashiro personally thanked Ms. Cypher for her service on the Board and for being a friend and a mentor. He thanked her for expressing her feelings, providing her view points, and engaging the Board in healthy discussions, and assured Ms. Cypher that it will continue in her absence. Mr. Miyashiro expressed his sincere appreciation for what Ms. Cypher has taught the Board and Department about what is “pono” about water. Mr. Miyashiro presented a framed signed resolution along with a commemorative mug to Ms. Cypher.

RESOLUTION NO. 850, 2014, MAHEALANI CYPHER -
IN APPRECIATION FOR SERVING AS A MEMBER OF
THE BOARD OF WATER SUPPLY, ADOPTED ON
DECEMBER 15, 2014

	AYE	NO	COMMENT
DUANE R. MIYASHIRO	X		
ADAM C. WONG			ABSENT
MAHEALANI CYPHER	X		
THERESIA C. MCMURDO	X		
DAVID C. HULIHEE	X		
ROSS S. SASAMURA	X		
FORD N. FUCHIGAMI	X		

ITEM FOR INFORMATION NO. 1

"December 15, 2014

MOANALUA AND
WAIMALU
AQUIFER
SYSTEMS
UPDATE

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

Chair and Members:

Subject: Moanalua and Waimalu Aquifer Systems Update

Erwin Kawata, Program Administrator of our Water Quality Division, will present an update of our Moanalua and Waimalu Aquifer Systems.

Respectfully submitted,

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

Attachment"

The foregoing was for information only.

DISCUSSION:

Water Quality Program Administrator Erwin Kawata gave the presentation. He explained that BWS hired a consultant to review the Navy documents and to provide an understanding of the groundwater in the Red Hill area. The consultant validated BWS's concerns about the northwest component, the direction of water flow going towards Halawa Shaft. They also validated that the data shows contamination existing underneath the Red Hill facility, in the rocks and in the groundwater underneath the tanks. BWS is working with the United States Geological Survey to identify some locations to design and site some sentinel wells for future monitoring and use. Mr. Kawata stated that in mid-October, they did testing at a Commission of Water Resource Management's (CWRM) monitor well and detected toluene at 3.9 parts per billion (ppb). It was the first time that toluene was detected in this sample location, and the Navy's groundwater test results had no detection of it. The Navy has sporadically detected it in a number of their monitor wells underneath Red Hill, but this is the highest level that has been recorded. This detection was obtained using two different test methods, getting the exact same result. One method is used for standard environmental monitoring and the other method is used for drinking water. Lead was also detected in both sample locations and has also been detected in the Navy's groundwater monitor wells. Detections are not continuous, sometimes it shows up and sometimes it doesn't. Confirmation testing of both toluene and lead will be done and everything will be taken into account.

Ms. McMurdo inquired about the safety level of toluene. Mr. Kawata replied that for toluene in regulated drinking water, the safety level is 1000 ppb and for lead in regulated drinking water, it's 15 ppb. Both are well below the

safety level but they are detections nonetheless. Ms. McMurdo asked if lead is contained in all water. Mr. Kawata replied that lead normally comes from plumbing fixtures and what normally is found is less than 1 ppb, but that is not seen all the time. Anything more than 1 ppb is something to take notice of. For the finding of lead in both sample locations, the Department will continue to collect samples to see if there's continuing presence and to see if there are any trends. Ms. McMurdo asked if BWS should let the public know. Mr. Kawata replied that they want to do additional testing first, and if they get confirmation on the detections, then BWS will inform the State Department of Health (DOH) and then discuss any type of notification to the public. Mr. Lau added that the Red Hill task force, created by the legislature during its last session, is nearing its completion of the task force report for the 2015 legislature. Hopefully the legislature will recommend to DOH to continue with the task force so it could be used as a venue to share information with the public. There is a court reporter at the task force meeting to record and post everything on DOH's website.

Ms. McMurdo inquired when the confirmation testing would be done.

Mr. Kawata replied that he is trying to schedule the testing before the end of December.

Mr. Kawata informed the Board that the Navy drilled two additional monitor wells in October. Mr. Lau stated that the Navy verbally informed BWS that they had detected TPH diesel and also 2-methyl naphthalene, both at low levels.

Ms. McMurdo stated that the Department has a responsibility, not just to DOH, but also to the public to let them know what was found. Mr. Lau stated that once they confirm that the second set of results is similar to the first set, they will be looking at communicating that to the public and to the regulators.

Mr. Miyashiro asked if the chemicals could be taken out of the water using granular activated carbon technology. Mr. Lau replied that there is technology to remove petroleum contaminants from the groundwater, but it would be costly to construct and operate the system. Mr. Miyashiro inquired about other alternatives. Mr. Kawata stated that discussions were held at their task force meetings to see if the Navy could mitigate the contamination that exists under and around their facility by doing soil vapor extraction before it leaves their property. Ms. McMurdo asked if people are drinking from these wells and Mr. Lau replied that these are not drinking water wells, and that the nearest drinking water source is the Navy's Red Hill Shaft and the nearest BWS sources are Halawa Wells to the Northwest and Moanalua Wells to the South. Ms. Cypher stated that although the aquifer is not contaminated yet, the test results are indicators that contaminants are present and could move toward the drinking water wells. Mr. Kawata stated that the Department's concern is that the Navy's newest monitor well and the CWRM's well both show some kind of contamination as groundwater moves, so the question is can this contamination also move with the groundwater and approach BWS's drinking water wells. Mr. Kawata stated that this is why Mr. Lau indicated that BWS has been advocating for the Navy to clean up the contamination around the Navy's facility to reduce what could spread beyond their property boundaries.

Ms. Cypher asked what the Navy is offering to do. Mr. Kawata replied that right now all they are doing is monitoring. Mr. Lau informed the Board that the Navy has a tank maintenance program which has been completed for five or six of their tanks, but it will take about another 20 years or more to complete the program for the rest of the tanks.

Ms. McMurdo asked how the Navy would clean up the contamination. Mr. Lau replied that one way is to pump air into the ground and then to extract that air out and volatilize all the contamination that's in there and extract it out. Ms. McMurdo asked why the Navy won't do this and Mr. Kawata replied that there are cost concerns. Mr. Lau added that he feels maybe because the Navy is well below allowable regulatory limits, they don't feel further action needs to be taken. Mr. Lau stated that the Department's preference is not to even detect minute amounts of petroleum contaminants in the aquifer because it could have the potential of being pumped out of Halawa Shaft or Moanalua Wells and served as a drinking water source for the community. It also limits BWS's ability to develop other wells closer to the Red Hill Fuel Facility because of the contamination.

Ms. McMurdo inquired if a private company owned the Red Hill facility, would they be exempt from cleaning up the contamination. Mr. Lau stated that the owner would not be exempt, but certain field-constructed underground storage tanks are exempt from existing federal underground storage tank regulations. This is why the Department asked the Board to pass a Resolution and wrote a letter to The President to direct the Office of Management and Budget to approve the Environmental Protection Agency's (EPA) changes to cancel the deferral of field constructed tanks from the underground storage tank regulations. BWS also has been encouraging DOH to adopt stricter regulations by going through the formal rule making process and require field construction underground storage tanks to follow the same regulation and requirements as any other underground fuel storage tank.

Ms. McMurdo asked who the aquifer belongs to. Mr. Lau replied that under the State Constitution, which was amended to create the State Water Code, the aquifer is a trust resource. Mr. Lau assured the Board that they have been aggressive from day one and have expressed their concerns to the regulators, the government, the Congressional Delegation, the City Council, the community and to the media.

Ms. Cypher asked if BWS has written a formal letter to the Navy or to the Department of Defense asking for these remedies to be done. Mr. Lau stated that they tried to express this through the Task Force's report, but they haven't written a formal letter.

Ms. McMurdo encouraged the Department to be more aggressive and requested to make a motion on this. She stated that it's been a year since BWS found out about the Red Hill fuel leak, and she feels that BWS's opinion will be buried within Task Force's document. Mr. Kawata explained that the Task Force's report allowed for all of the different agencies to state

their own positions and comments. All of BWS's action items and comments are inserted verbatim in this report, and once the report is completed, it will become a public document. Ms. Cypher requested to second the motion for the Department to be more aggressive in protecting the public's interest. Mr. Miyashiro questioned the Board's Deputy Corporation Counsel Krishna Jayaram if the Board could vote on this. Mr. Jayaram advised that since this is an item for information, it would be better if the Board just expressed their opinions so that the Department knows what direction the Board is headed. Ms. McMurdo inquired why the items on the agenda are separated as items for action and items for information and requested that the items not be separated so that if the Board needs to take action, they can. Ms. McMurdo asked if they can at least take a $\frac{3}{4}$ vote on this. Mr. Jayaram replied that a $\frac{3}{4}$ vote would have to be added to the agenda and that it is typically not allowed if the item is something that the general public would be greatly interested in. Mr. Lau suggested that this item be placed on the January agenda with a Resolution for the Board to vote on. Mr. Miyashiro agreed that this would be appropriate so there would be no violation of the Sunshine Law and to allow for public comments. He also requested that the Department place this item back on the regular agenda on a monthly basis again, instead of quarterly, and have it as an action item instead of an information item. Mr. Lau agreed.

Mr. Miyashiro commended the Department for their best efforts to exhaust every avenue to try to get the Navy to act. His concern is that the Navy doesn't comply, so he asked the Department if they could start looking at a contingency plan. Mr. Lau suggested that discussion of this type might require an executive session because it might relate to the Board's liabilities.

Ms. Cypher commented that she understands this is a complicated situation, but feels that action should have been taken earlier. She stated that this Board has an obligation to be assertive and aggressive with the Navy, otherwise they are not going to do anything. Mr. Lau stressed that the Department has been aggressive from the beginning, even to the point where he and Mr. Kawata traveled to Albuquerque, New Mexico to meet with their Congressional Delegation and staff members because they are dealing with a similar situation. Mr. Lau appreciates the Board's support and encouragement and assured the Board that they are pressuring all of the stakeholders to do the right thing and will not give up because that is the Department's role as trustee of this resource.

Ms. McMurdo asked if any of the Congressional Delegation is spearheading anything on this issue. Mr. Lau replied that Senator Schatz seems to be most supportive and they would also have to reach out to Congressman Mark Takai, who was involved in creating the Task Force when he was in the legislature.

Ms. McMurdo requested an update in January and also sending out invitations to the Congressional Delegation and the Navy to attend January's Board meeting so they could discuss their plans and hear the Board's concerns. Mr. Lau suggested inviting DOH also.

Mr. Fuchigami stated that he has worked with DOH and EPA in past situations and they are known to be pretty aggressive. He asked Mr. Lau if he could let them know that the Board wants to know exactly what they're doing to resolve this situation. Mr. Lau stated that he knows the Deputy Director of DOH, Gary Gill, is very concerned and he is really trying to push the Navy. Mr. Lau added that keeping Gary Gill as the Deputy Director of DOH would be very helpful so he can stay on this issue with the Navy. Mr. Fuchigami recommended that Mr. Lau contact Chief of Staff Mike McCartney to brief him on Red Hill.

Mr. Lau proposed that the Department would invite the Navy, DOH, and EPA to the January Board meeting and have each of them do a short presentation to the Board, then allow time for the Board to ask each of them questions. Mr. Lau proposed that the Department also invite the Congressional Delegation to attend.

Mr. Miyashiro thanked everyone for expressing their opinions.

WATER FOR LIFE

Safe, dependable, and affordable water now and into the future



Board of Water Supply
City and County of Honolulu

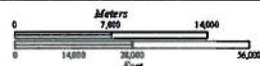
Moanalua and Waimalu Aquifer Systems Update

December 15, 2014



Figure 1-1
Regional Location Map
 Red Hill Fuel Storage Facility
 Oahu, Hawaii

Figure 1-1
Regional Location Map
Red Hill Fuel Storage Facility
Oahu, Hawaii



WATER FOR LIFE

Safe, dependable, and affordable water now and into the future



Board of Water Supply
City and County of Honolulu





December 2014 Update

- Met with EPA Region 9 – October 30th.
 - Funding for Red Hill impacts on ground water.
- Consultant peer review of past Navy studies completed.
 - BWS concerns validated.
 - Site and design sentinel wells. USGS work on GW flow direction continues.
- Completed GW testing (October 14-15).
 - CWRM – Toluene (3.9 ppb) and Lead (6.3 ppb).
 - DH-43 (Moanalua Valley) – Lead (2.7 ppb).





December 2014 Update – continued

- City Council Public Works Committee Meeting – 11/19/14.
- Red Hill Task Force (SCR 73) – Dec. 11.
 - Finalized Task Force report to the legislature.



WATER FOR LIFE

Safe, dependable, and affordable water now and into the future



Board of Water Supply
City and County of Honolulu

Questions/ Discussion



ITEM FOR INFORMATION NO. 2

"December 15, 2014

RESULTS OF
THE SALE OF
BWS WATER
SYSTEM
REVENUE
BONDS

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

Chair and Members:

Subject: Results of the Sale of Board of Water Supply Water
System Revenue Bonds, Series 2014A, Series 2014B,
and State Revolving Fund Refinancing Loan Series 2015

Pursuant to Board of Water Supply Resolution No. 849, 2014, authorizing the issuance of water system revenue bonds, the Board issued a total of \$144,985,000 principal amount of Board of Water Supply Water System Revenue Bonds, Series 2014A and Series 2014B dated December 9, 2014. The proceeds of the Series 2014A and Series 2014B bonds will be used: (1) to fund an escrow account to provide for the refunding and redemption of all of the Water System Revenue Bonds, Series 2006A; (2) to fund an escrow account to provide for the refunding and redemption of a portion of the Water System Revenue Bonds, Series 2006B; and (3) to pay the costs of issuance of the Series 2012A and Series 2012B bonds.

The bonds were assigned underlying ratings of Aa2 from Moody's Investors Service and AA+ from Fitch Ratings. The Series 2014A and Series 2014B bonds were sold on November 20, 2014 at a true interest cost of 3.36 percent. The bonds were issued at a total premium of \$12,661,761.

Pursuant to Board of Water Supply Resolution No. 847, 2014, authorizing the issuance of water system revenue refinancing loans, the Board received loan proceeds of \$26,400,910 principal amount from the State Revolving Fund for Water System Revenue Loan Series 2015 dated November 3, 2014.

The combined net present value saving of \$19,182,207 will be realized with the refunding. The Board will realize approximately \$1,072,460 annually in debt service savings.

Net proceeds of \$183,212,090 will be deposited into escrow funds to defease the refunded bonds. The new bond issue and loan are structured so as to match the terms of the refunded bonds.

Bank of America Merrill Lynch served as underwriter and Orrick, Herrington & Sutcliffe LLP served as bond counsel to the Board. The Hawaii Department of Health funded the refinancing loan through the Drinking Water State Revolving Fund.

Respectfully submitted,

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

The foregoing was for information only.

DISCUSSION:

Waterworks Controller Joe Cooper gave the report. Mr. Lau recognized and thanked other members of the BWS staff; Ellen Kitamura, Paul Kikuchi and Lori Miyashita; the underwriter and bond council; Budget and Fiscal Services Director Nelson Koyanagi and his staff member Edlyn Taniguchi for their hard work and efforts in making this possible.

Mr. Fuchigami asked what the current credit rating is. Mr. Lau replied that it's an Aa2 for Moody and an AA+ for Fitch. Mr. Fuchigami found it interesting that with all the revenue the Department has, a better credit rating wasn't awarded. Mr. Lau expressed the frustration they had in trying hard to achieve an Aa1 rating by justifying a strong capital program, the ongoing water master plan project, the stable customer base, and the excellent and reliable groundwater resources. Part of the reason the rating agencies didn't give that rating was because BWS is based on revenue bonds and the City is based on general obligation bonds, and they didn't want to rate BWS higher than the rest of the City. Mr. Fuchigami congratulated the Department for a great job. Mr. Cooper stated that it was a team effort, and he congratulated and thanked his staff and everyone else in the Department for their contributions that went into developing the bond presentations. Mr. Lau also mentioned the loan proceeds from the State Revolving Funds, which amounted to a \$6 million in savings.

Ms. McMurdo asked what the rating was before. Mr. Lau replied that it has been the same from 2012. Ms. Cypher replied that it was a triple A back in the 1980s and at that time it was higher than the City's double A rating. Ms. McMurdo inquired if the double A1 rating is right below the triple A rating. Mr. Cooper explained that it is right below for Fitch, but two steps below for Moody's.

Mr. Fuchigami questioned if the Department is not required to get a rating from Standard & Poor's. Mr. Lau replied that they didn't go there because the City only requires two ratings, but acquiring three ratings may be something BWS may consider. Mr. Lau explained that the ratings depend on the rating agency, the staff, and the committees. Standard & Poor's has been a challenge, but going to New York and talking to the people that are closer to the committees that make the final decision may be something to consider.

2015 WATER
CONSERVATION
WEEK POSTER
AND POETRY
CONTESTS

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

Chair and Members:

Subject: 2015 Water Conservation Week Poster and Poetry Contests

We are pleased to announce the upcoming 37th Annual Water Conservation Week Poster Contest and 7th Annual Water Conservation Week Poetry Contest. Students in grades K-6 are eligible to enter the poster contest, and students in grades 7-12 are eligible to enter the poetry contest.

The 2015 Water Conservation Week theme, "Water Matters – Conserve It," is intended to educate students of the incomparable value of Oahu's drinking water supply and the importance of protecting and preserving it.

There are four poster contest categories – kindergarten, grades 1 and 2, grades 3 and 4, and grades 5 and 6. There are three poetry contest categories – grades 7 and 8, grades 9 and 10, and grades 11 and 12.

This year's contest deadline is February 25, 2015. Posters and poems may be submitted to our Communications Office or any Satellite City Hall on Oahu. The winners of both contests will be announced in April 2015, at an Awards Ceremony at Mission Memorial Auditorium. Winning and honorable mention entries will be featured in our 2016 Water Conservation Calendar, which will be available to the public at the end of 2015.

Contest information and entry forms are posted on the Board of Water Supply (BWS) website and included in the 2015 Water Conservation Calendars, which are being delivered to teachers at Oahu's public, private, and charter schools. The 2015 Water Conservation Calendar you received today features the winning poster and poetry entries from last year's contest.

As in years past, we are seeking sponsors to help offset costs to produce the annual Water Conservation Calendar and Poetry Contests. Sponsorships allow for a win-win marketing opportunity with tax-deductible benefits for our sponsors, while providing the BWS with financial support for this key effort to protect Oahu's precious and finite water supply.

We look forward to seeing how Oahu students creatively express their thoughts on the true value of water in the 2015 contests entries. The thousands of entries submitted each year continue to demonstrate that the

Department's work to educate our island youth is effectively promoting our message of resource sustainability -- Water for Life.

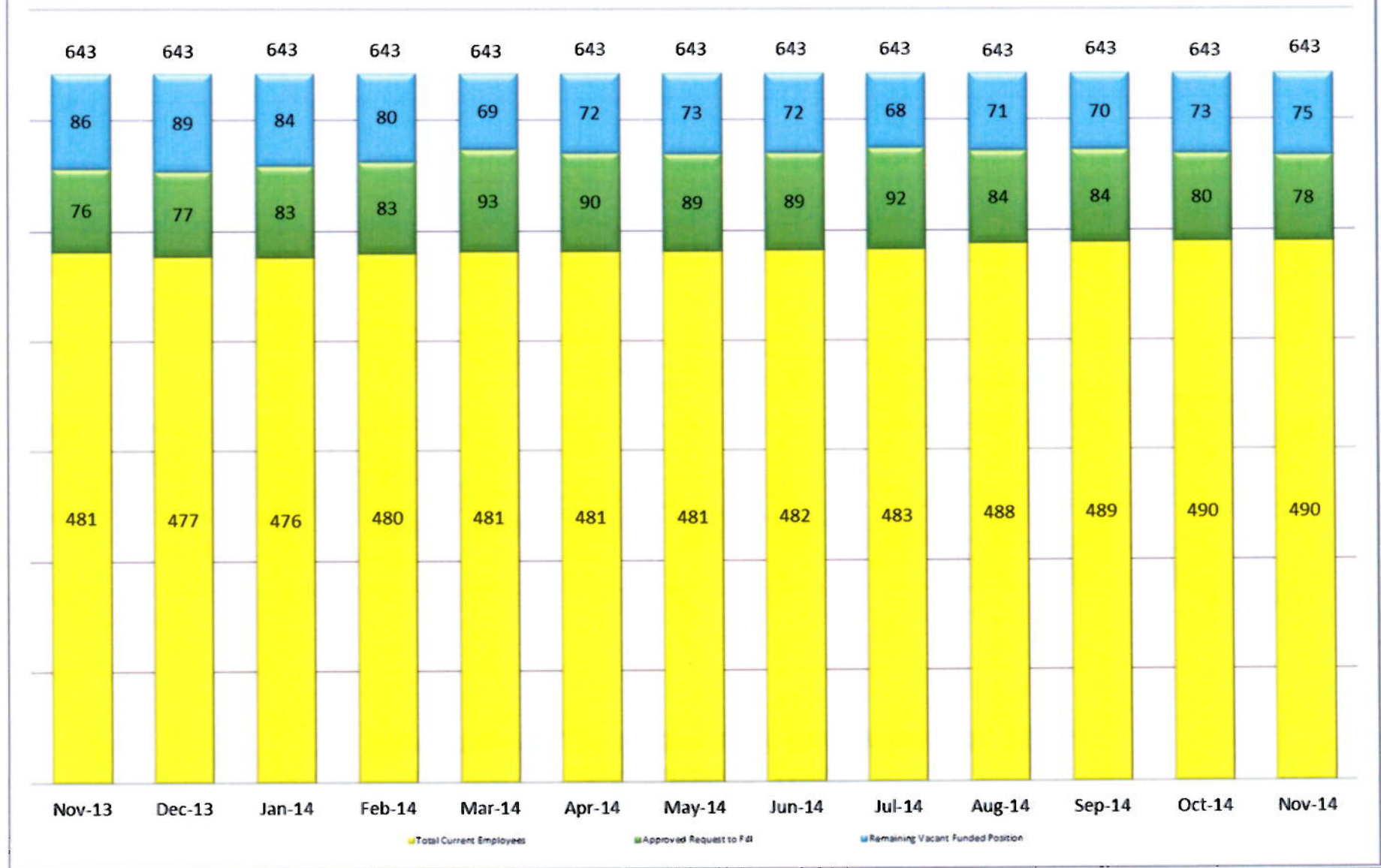
Respectfully submitted,

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

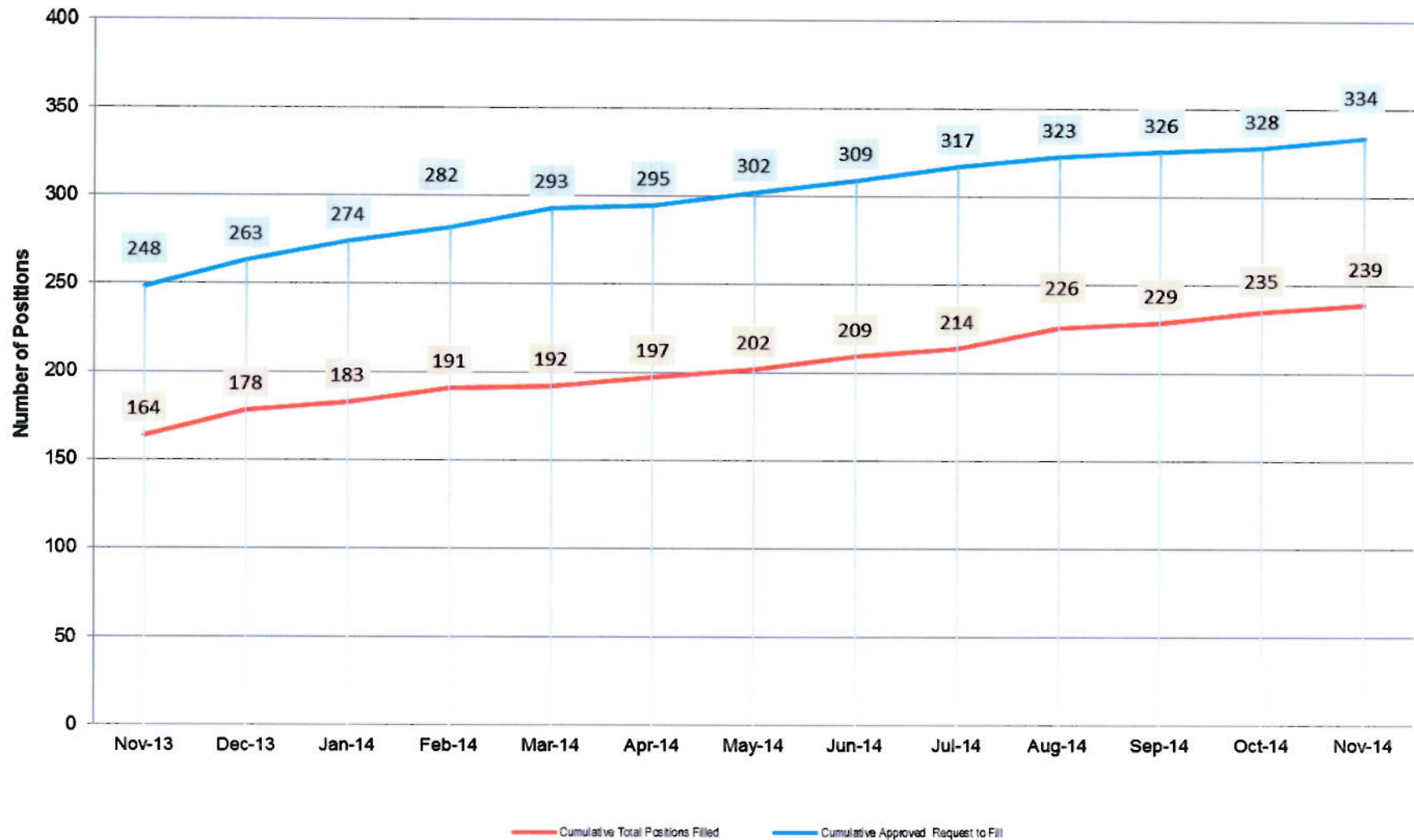
The foregoing was for information only.

DISCUSSION: Mr. Lau introduced the new Information Officer, Shawn Nakamoto, who gave the report. There were no comments or discussion.

Positions Filled November 1, 2013 through November 30, 2014



Cumulative Totals November 1, 2013 through November 30, 2014



DISCUSSION:

Karen Tom of the Human Resources Office gave the report. Ms. Cypher asked if a lot of employees were going to retire at the end of the year. Ms. Tom replied that about 11 are retiring. Ms. Cypher was concerned that next month's report will show 11 vacancies. Ms. Tom explained that although it will show that, there have been a lot of positions to fill and the Board's report does not reflect that positions are filled until the employees actually start work.

ITEM FOR INFORMATION NO. 5

"December 15, 2014

GROUNDWATER
LEVELS

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

There is one aquifer index well within low groundwater status for the production week that ended on December 6, 2014. Kaimuki is under a caution status. The weekly production average for the period was 132.40 million gallons per day.

The Board of Water Supply rainfall index for the month of November 2014 was 54 percent of normal, with a 5-month moving average of 95 percent. The Hawaii Drought Monitor shows abnormally dry conditions for leeward Oahu, as of December 9, 2014. The National Weather Service is forecasting below normal rainfall through May 2015, associated with El Niño. However, most index monitor wells are exhibiting level to slightly increasing trends, reflecting seasonal reductions in pumpage.

Respectfully submitted,

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

Attachment"

The foregoing was for information only.

DISCUSSION: Mr. Lau gave the report. There were no comments or discussion.

PUMPAGE, HEAD, AND RAINFALL REPORT

Week of 11/30/14 to 12/06/14

STATION	MGD	HEAD	STATION	MGD	HEAD	STATION	MGD	HEAD	STATION	MGD	HEAD
METRO			WINDWARD			EWA-WAIAANAE (CONT)			PH (CONT)		
KULIQUOU	0.00					MAKAHA IV	0.00		PEARL CITY II	0.88	
WAILUPE	0.00		WAIMANALO II	0.35		MAKAHA V	0.00		PEARL CITY III	0.49	
WAIALAE-IKI	0.00		WAIMANALO III	0.36		MAKAHA VI	0.62		WAI'AU	0.73	
AINA KOA	0.48		KUOU I	1.01		MAKAHA SHAFT	0.00	12.48	NEWTOWN	2.10	
AINA KOA II	1.01		KUOU II	0.08		KAMAILE	0.23		KAONOHI I	0.79	
WAIALAE SHAFT	0.00		KUOU III	0.33		WAIANAE I	0.09		WAIMALU I	0.00	
MANOA II	0.76		LULUKU	0.97		WAIANAE II	0.70		AIEA	0.00	
PALOLO	1.04		HAIKU	0.37		WAIANAE III	0.32		AIEA GULCH 497	0.46	
KAIMUKI HIGH	3.01	23.16	IOLEKAA	0.23		MAKAKILO	0.56		AIEA GULCH 550	0.22	
KAIMUKI LOW	0.03		KAHALUU	0.49		HONOULIULI I	3.72		HALAWA 277	0.92	
WILDER	4.87		WAIHEE	0.00		HONOULIULI II	6.59		HALAWA 550	0.00	
BERETANIA HIGH	4.18	22.88	KAHANA	0.71		SUBTOTAL:		14.22	KAAHUMANU MTR(-)	0.00	
BERETANIA LOW	2.75		PUNALUU I	0.00	18.05	IMPORT FROM PH			KAAMILO FLO MTR (-)	0.00	
KALIHI HIGH	1.81	22.28	PUNALUU II	0.43		KAPOLEI LINE BSTR	14.50		KUNIA I	4.77	18.98
KALIHI LOW	2.91		PUNALUU III	1.24		HONOULIULI LB FLOW	16.25		KUNIA II	0.95	
KAPALAMA	0.49		KALUANUI	0.12		EWA BEACH FLOW	4.23		KUNIA III	1.38	
KALIHI SHAFT	8.38		MAAKUA	0.15		HONOULIULI I (-)	-3.72		HOAEAE	5.94	
MOANALUA	0.49	18.71	HAUULA	0.00		HONOULIULI II (-)	-6.59		EWA SHAFT	0.00	
SUBTOTAL:		32.21				SUBTOTAL:		24.68	WAIPAHU INTCON. (-)	0.00	
			KAHUKU	0.00					EWA-WAIAANAE (-)	-24.68	
IMPORT FROM PH			OPANA	1.02		PEARL HARBOR			PH LOCAL USE:	13.14	
HALAWA SHAFT	6.31	16.83	WAIALEE I	0.99		WAHIAWA	1.76		TOTAL SUBURBAN:		62.84
KAAMILO	0.00		WAIALEE II	0.24		WAHIAWA II	1.67				
KALAUAO	8.46	17.36	SUNSET BEACH	0.00		MILILANI I	3.23		KALAUAO SPRINGS	0.61	
PUNANANI	10.72		SUBTOTAL:		9.10	MILILANI II	0.00		BARBERS POINT (NP)	4.35	
KAONOHI II	0.00					MILILANI III	0.65		GLOVER TUNNEL (NP)	0.48	
WAIMALU II	0.00	15.29	WIND. EXPORT	0.14		MILILANI IV	0.69				
KAHUMANU	0.87					WAIPIO HTS.	0.18		HEAD CONDITION		
HECO WAI'AU	2.79		HALEIWA-WAIALUA			WAIPIO HTS. I	0.10		CAUTION	ALERT	CRITICAL
MANANA	0.48		HALEIWA	0.00		WAIPIO HTS. II	0.00		Kaimuki		
KAHUMANU FLOW MT	0.00		WAIALUA	1.85		WAIPIO HTS. III	1.23				
KAAMILO FLOW MTR	0.00		SUBTOTAL:		1.85	WAIPAHU	3.07	18.70			
TOTAL IMP/EXP WAI'P. INT:	0.00					WAIPAHU II	0.93				
IMPORT FRM WIND:	0.14		EWA-WAIAANAE			WAIPAHU III	1.50				
SUBTOTAL:		29.77	MAKAHA I	0.89		WAIPAHU IV	1.97				
			MAKAHA II	0.30		PEARL CITY SHAFT	0.95	14.98			
TOTAL METRO:		61.98	MAKAHA III	0.22		PEARL CITY I	0.28				

CWRM PERMITTED USE FOR BWS POTABLE SOURCES						PUMPAGE	2014	2013	GRAVITY	2014	2013
	A	B	C	D	E	SUBURB.	62.84	51.80	SUBURB.	7.12	6.42
WATER DISTRICTS	PERMITTED USE	2014	DIFF. B-A	YEAR/ DATE	DIFF. D-A	METRO	61.98	63.67	METRO	0.45	0.30
HONOLULU	45.27	32.66	-12.61			TOTAL:	124.83	115.47	TOTAL:	7.57	6.72
WINDWARD	25.21	12.42	-12.79			NUUANU #5			Manoa	0.17	
NORTH SHORE	4.08	4.10	0.02			(rainfall)	0.72"	0.05"	Palolo	0.28	
WAHIAWA	4.27	3.43	-0.84						Waim. I&II	0.08	
WAIANAE	4.34	4.69	0.35						Waim. III&IV	0.19	
EWA-KUNIA	15.88	10.86	-5.02						Waihee incl.	0.98	
PEARL HARBOR	92.66	64.02	-28.64						Waihee tun.	1.92	
TOTAL:		191.71	132.18	-59.53					Luluku	0.08	
									Haiku	0.12	
									Kahaluu	2.20	
									Waia. C&C	1.40	
									Waia plant.	0.16	

DROUGHT STATUS REPORT
DRAFT IN MGD

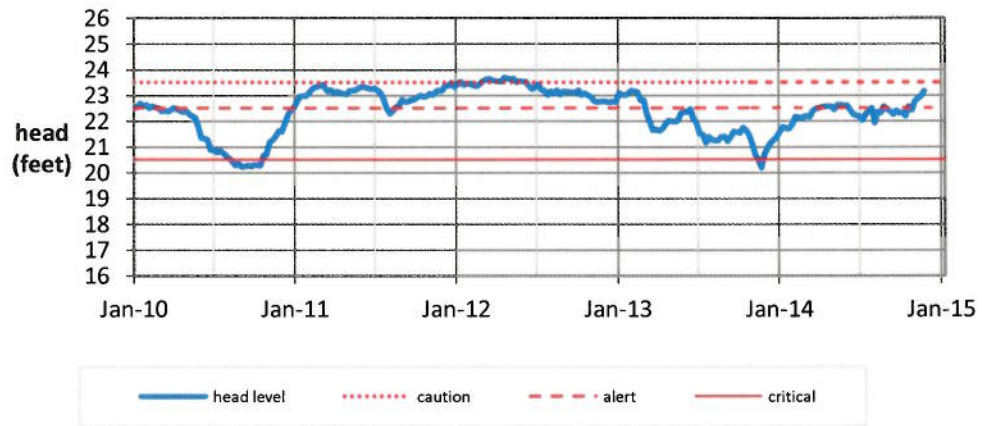
WATER USE DISTRICT	AUTHORIZED USE	2013	11/30-12/06 2014						
HONOLULU	45.27	34.20	32.80						
WINDWARD	25.21	10.77	12.28						
NORTH SHORE	4.08	3.79	4.10						
WAHIAWA	4.27	3.46	3.43						
EWA-WAIAANAE	20.22	22.61	40.45						
PEARL HARBOR	92.66	47.36	39.34						
TOTAL	191.71	122.19	132.40						

Accounts for in-district pumpage and transfers

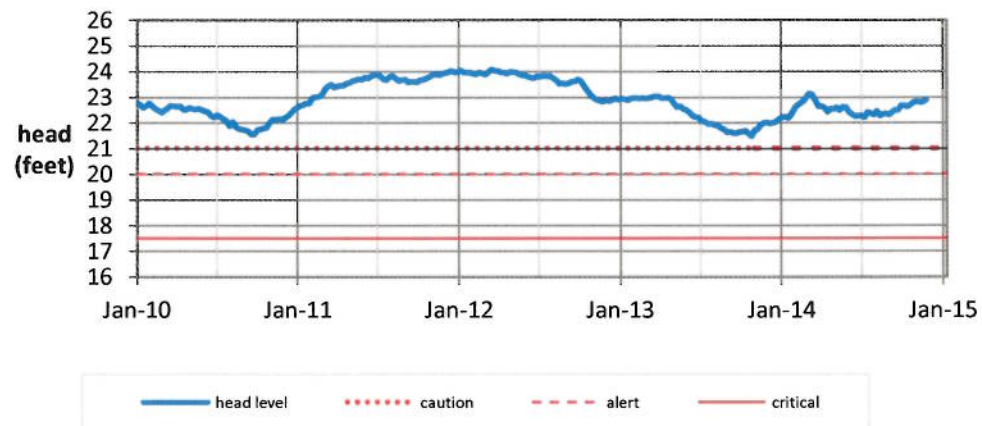
HEAD IN FEET

		2013	11/30-12/06 2014						
HONOLULU									
KAIMUKI		20.70	23.16						
BERETANIA		22.00	22.88						
KALIHI		21.71	22.28						
MOANALUA		18.63	18.71						
PEARL HARBOR									
HALAWA		16.55	16.83						
KALAUAO		17.01	17.36						
PEARL CITY		14.70	14.98						
WAIPAHU		18.35	18.70						
KUNIA		18.67	18.98						
EWA-WAIAANAE									
MAKAHA		10.12	12.48						
WINDWARD									
PUNALUU		17.00	18.05						
KALUANUI		16.74	18.18						
NORTH SHORE									
WAIALUA		11.34	11.09						

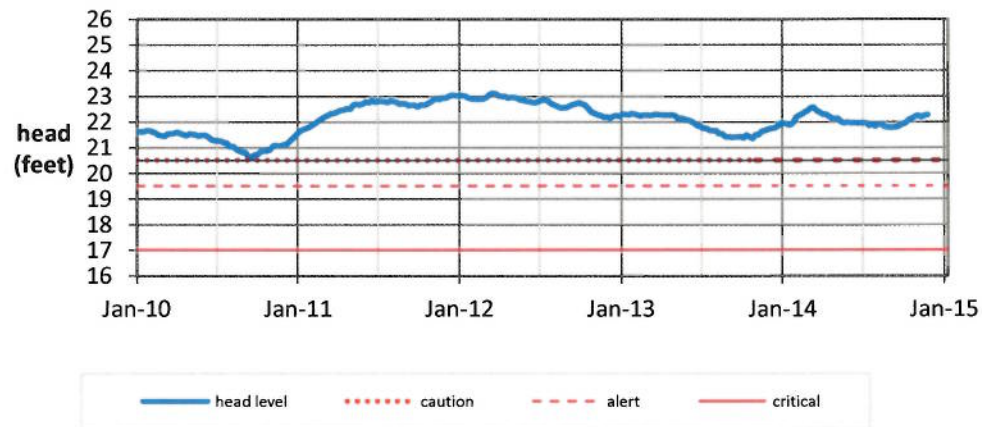
Kaimuki



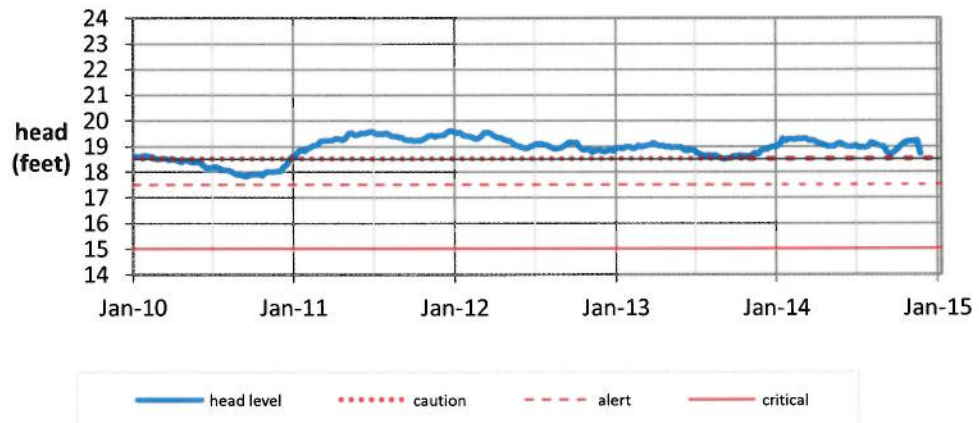
Beretania



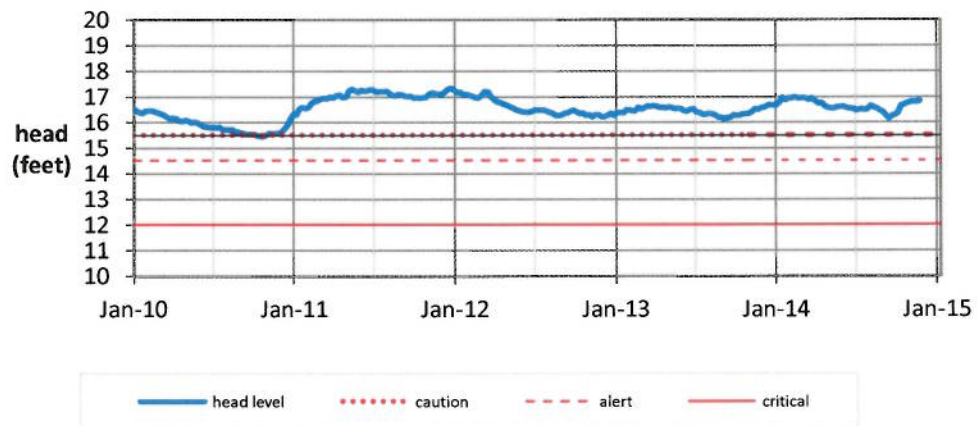
Kalihi



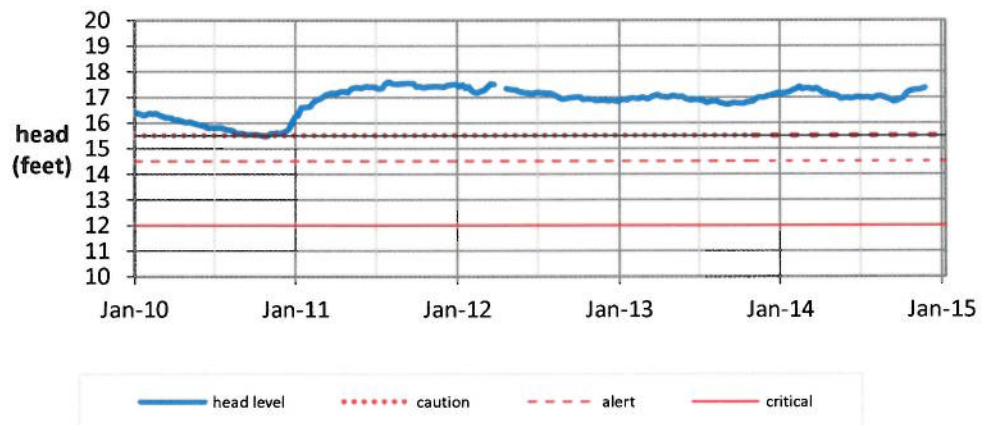
Moanalua



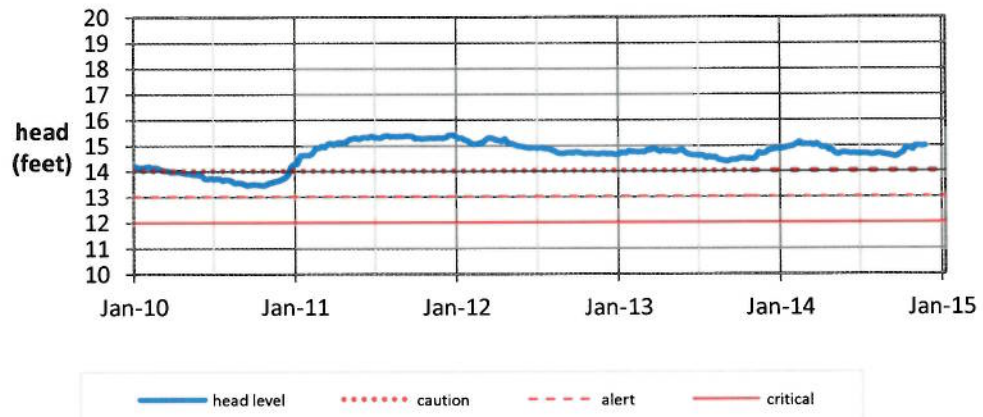
Halawa



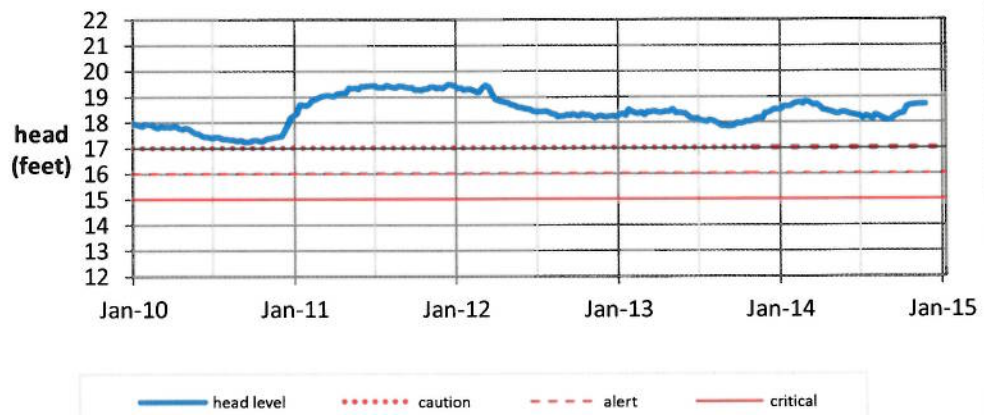
Kalauao



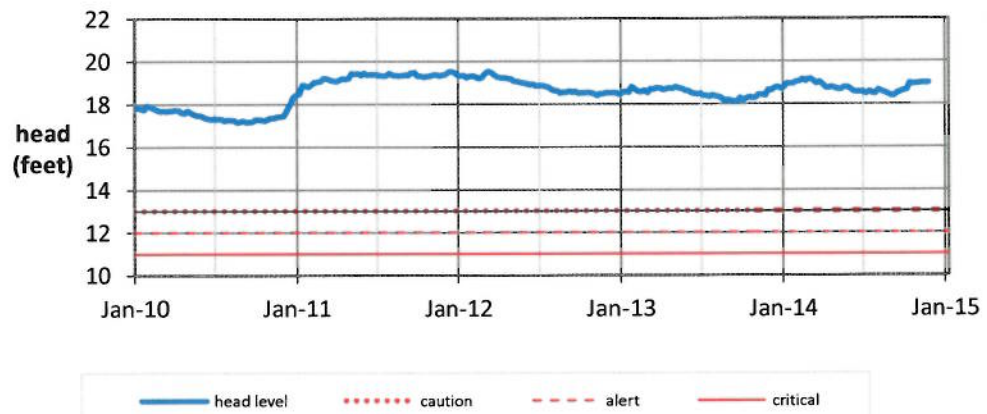
Pearl City

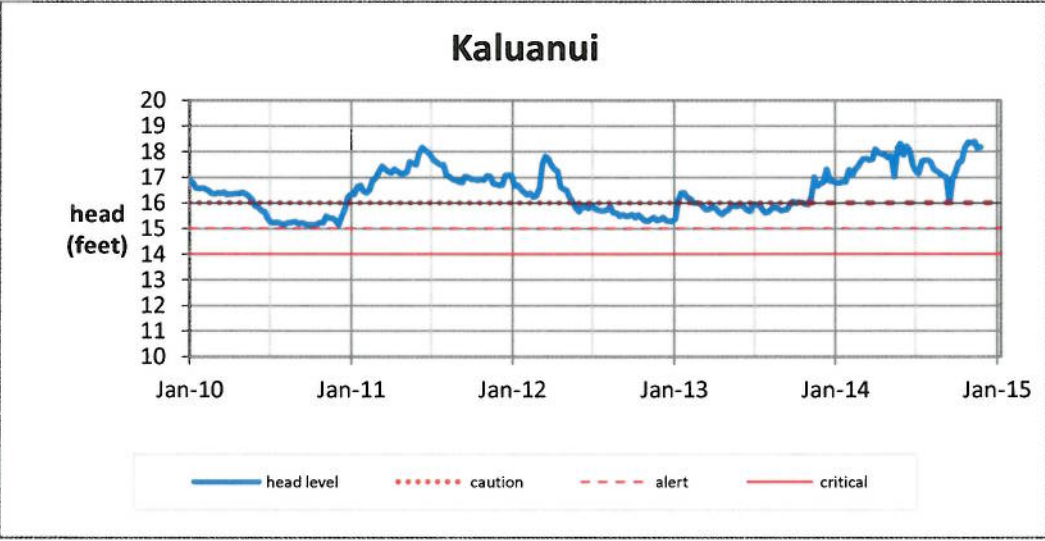
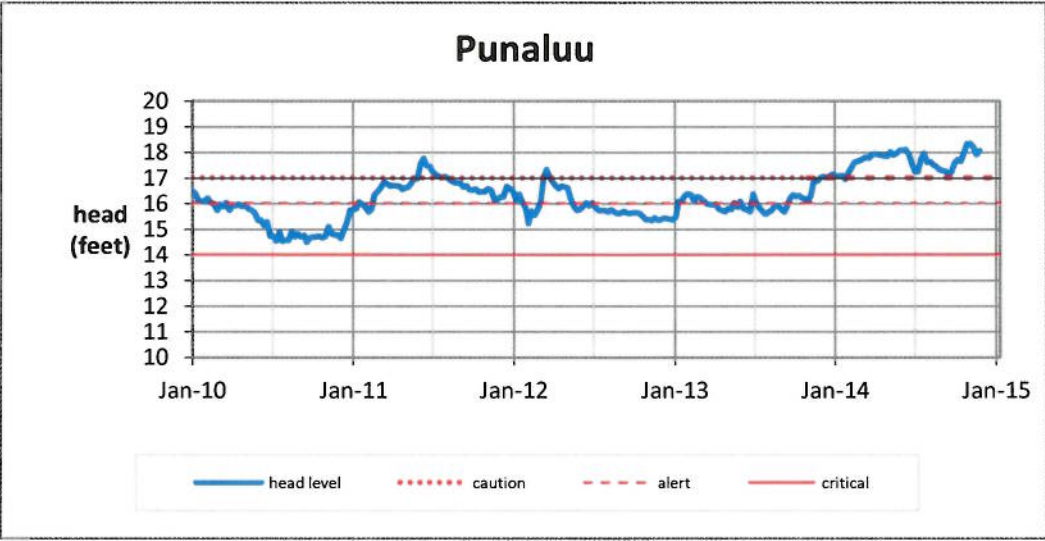
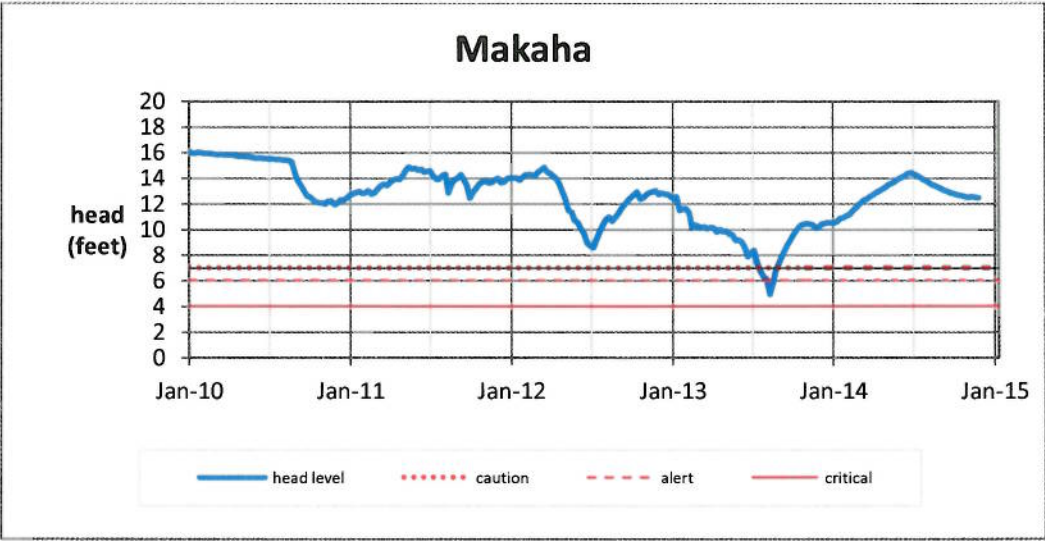


Waipahu

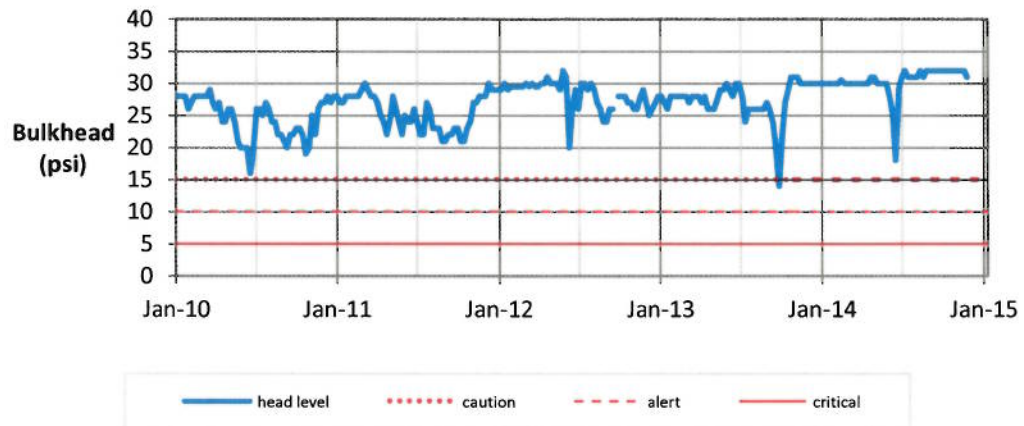


Hoeaee-Kunia

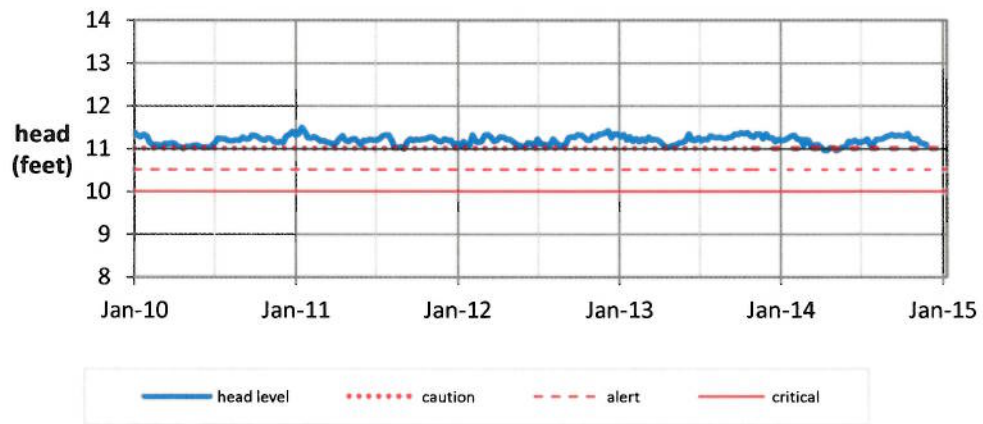


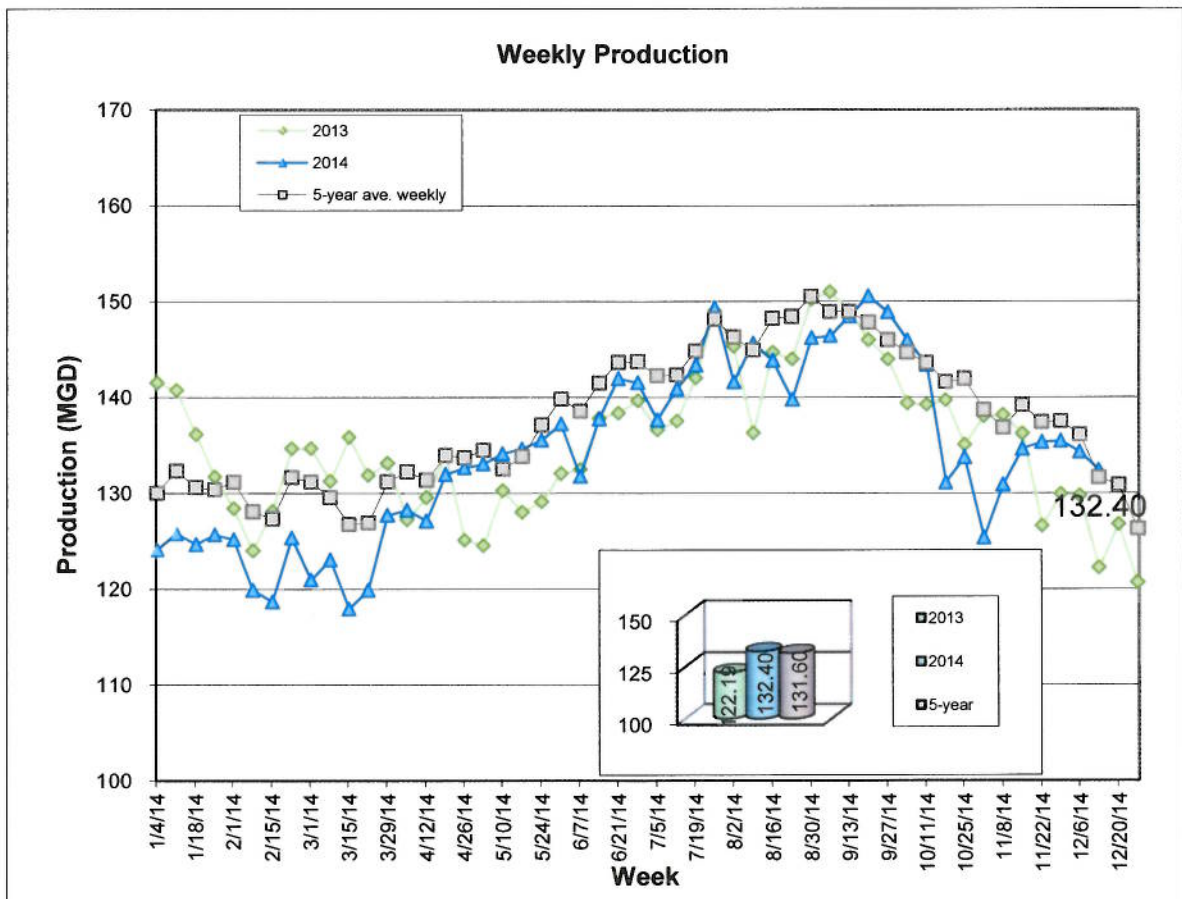
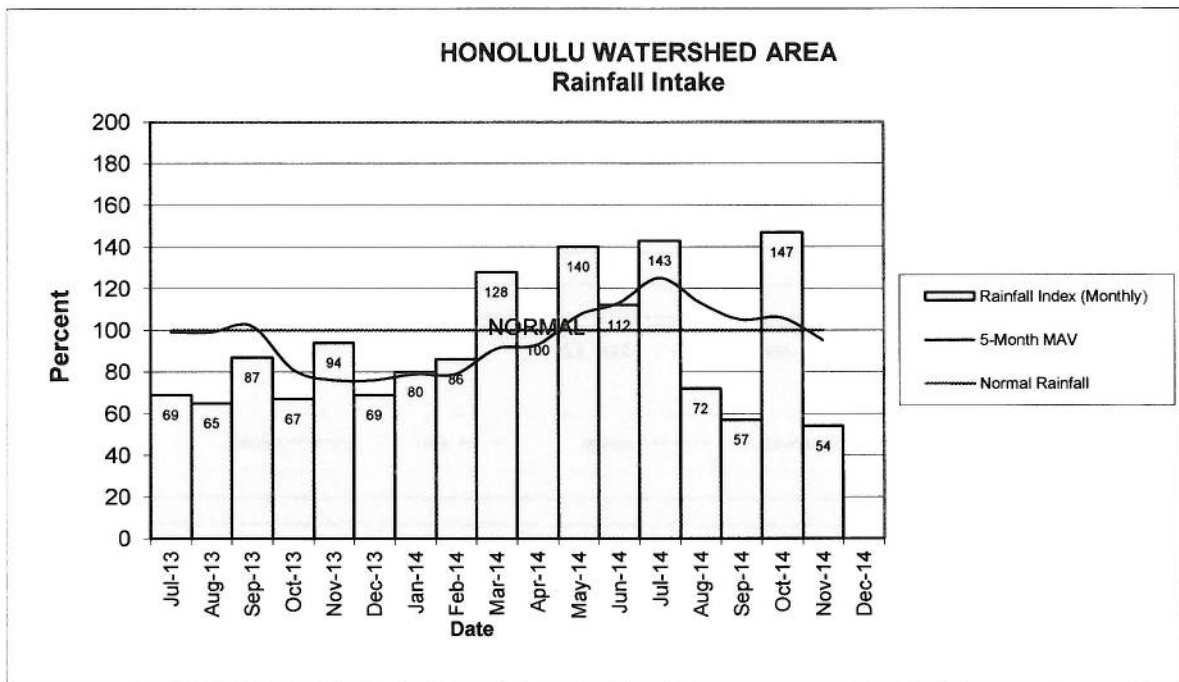


Waihee Tunnel



Waialua



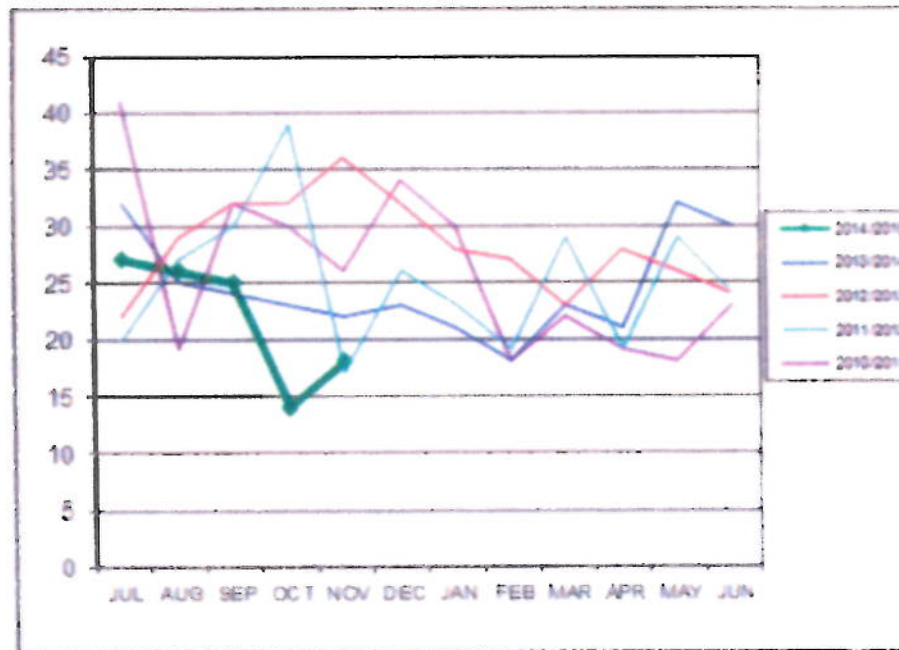


ITEM FOR INFORMATION NO. 6

WATER MAIN REPAIR REPORT for November 2014

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
14/2015	27	26	25	14	18								110
13/2014	32	25	24	23	22	23	21	18	23	21	32	30	294
12/2013	22	29	32	32	36	32	28	27	23	28	26	24	339
11/2012	20	27	30	39	17	26	23	19	29	19	29	24	302
10/2011	41	19	32	30	26	34	30	18	22	19	18	23	312

Date	Address	Size	Cause
11/1	94-896 Moalo St	8" C.I.	Damage
11/1	94-732 Haakoa Pl	6" C.I.	Corrosion
11/6	2570 S. Beretania St	6" C.I.	Damage
11/9	91-733 Makale Rd	8" C.I.	Corrosion
11/10	1421 Lalamilo St	6" C.I.	Corrosion
11/12	1479 Kalaupio St	8" C.I.	Corrosion
11/13	1479 Kalaupio St	8" C.I.	Unknown
11/14	2265 Makenani Dr	6" C.I.	Corrosion
11/14	91-1107 Uu Pl	12" D.I.	Corrosion
11/16	91-1107 Uu Pl	12" D.I.	Clamp
11/17	96-1326 Akaaka St	8" P.V.C.	Settlement
11/17	3322 Ala Lehua Pl	4" C.I.	Unknown
11/17	513 Iliaia St	8" A.C.	Joint
11/21	995 Kalia Pl	8" D.I.	Corrosion
11/21	24 Puwa Rd	8" P.V.C.	Settlement
11/22	2127 Paula Pl	4" D.I.	Corrosion
11/24	905 Kapapala Pl	8" D.I.	Corrosion
11/26	522 Palawiki St	12" A.C.	Joint



Bold * - Pro-active Leak Repair

46.66 miles of pipelines were surveyed by the Leak Detection Team
in the month of November

DISCUSSION: Field Operations Program Administrator Daryl Hiromoto gave the report. Mr. Miyashiro told the Department to keep up the good work. There were no comments or discussion.

DISCUSSION:

Mr. Miyashiro stated that before they move to adjourn the meeting, he wanted to go back to Item for Action No. 2, the Resolution of appreciation for Mahealani Cypher because she wanted to share a few words. Ms. Cypher expressed her appreciation to everyone on the Board and the BWS staff. She stated that everyone has been so patient with her, as she has been a "nag", but hopes that everyone knows that it was always for the right reasons and hopes they all appreciate where she was coming from. She stated that she is looking forward to the day when she sees only green vehicles and employees with only green shirts because this is branding. She stated that she is also looking forward to the day when the BWS cafeteria is restored because the hard working employees deserve a place to have their lunch. Ms. Cypher thanked everyone and stated that this was a great meeting and was sorry that she would not be able to attend next month's meeting for the Red Hill discussion. She stated that this is a great Board and thanked them all. The Board Members and the Manager thanked Ms. Cypher.

MOTION TO
ADJOURN

There being no further business Chair Miyashiro at 3:13 PM called for a motion to adjourn the Open Session. Ford Fuchigami so moved; seconded by Ross Sasamura and unanimously carried.

THE MINUTES OF THE REGULAR SESSION BOARD MEETING ON DECEMBER 15, 2014 WERE APPROVED AT THE JANUARY 26, 2015 BOARD MEETING			
	AYE	NO	COMMENT
DUANE R. MIYASHIRO	X		
ADAM C. WONG	X		
THERESIA C. MCMURDO	X		
DAVID C. HULIHEE	X		
ROSS S. SASAMURA	X		
FORD N. FUCHIGAMI			ABSENT

Respectfully submitted,



LISA K. KIM

APPROVED:



DUANE R. MIYASHIRO
Chair of the Board

JAN 26 2015

Date