

**MINUTES**

DEPARTMENT OF WATER SUPPLY  
COUNTY OF HAWAI‘I  
WATER BOARD MEETING

March 27, 2018

Hilo Operations Conference Room, 889 Leilani Street, Hilo, HI

MEMBERS PRESENT: Mr. Craig Takamine, Chairperson  
Mr. William Boswell, Jr., Vice-Chairperson  
Mr. Nestorio Domingo  
Mr. Eric Scicchitano  
Ms. Kanoe Wilson  
Mr. Keith K. Okamoto, Manager-Chief Engineer, Department of Water Supply (ex-officio member)

ABSENT: Mr. Bryant Balog, Water Board Member  
Mr. Leningrad Elarionoff, Water Board Member  
Mr. Russell Arikawa, Water Board Member  
Director, Planning Department (ex-officio member)  
Director, Department of Public Works (ex-officio member)

OTHERS PRESENT: Ms. Jessica Yeh, Deputy Corporation Counsel  
Mr. Max Dible  
Mr. Jeff Zimpfer  
Mr. Roger Harris

Department of Water Supply Staff

Mr. Kawika Uyehara, Deputy  
Ms. Nyssa Kushi, Information and Education Specialist  
Mr. Kurt Inaba, Engineering Division Head  
Mr. Richard Sumada, Waterworks Controller  
Mr. Clyde Young, Operations Division  
Mr. Eric Takamoto, Operations Division  
Mr. Warren Ching, Energy Management Analyst

- 1) CALL TO ORDER – Chairperson Takamine called the meeting to order at 10:00 a.m.
- 2) STATEMENTS FROM THE PUBLIC
  1. Mr. Jeff Zimpfer

Aloha Chairman Takamine and members of the Board. Mahalo for this opportunity to provide the comments of the National Park Service regarding Item 6(a)(2) on the agenda, Bill of Sale for Palamanui Global Holdings. My name is Jeff Zimpfer and I am the Environmental Protection Specialist for Kaloko-Honokohau National Historical Park. It is my understanding that the Board is

considering accepting the Bill of Sale for the water system that will provide infrastructure to activate a new water source, the Kau #2 (Makalei) Deep Well. On March 9, 2018, a press release from the Hawai'i County Department of Water Supply indicates that the Kau #2 Well is a new "basal freshwater source" in the Keauhou Aquifer System. Our testimony today seeks to clarify whether this action is consistent with the goal of the Department's source development strategy for the Keauhou Aquifer as described in the update to the Water Use and Development Plan. More specifically, the updated Plan advises that "any increased draw on the basal aquifer is not recommended" and contains a number of commitments to "significantly reduce the use and dependence on basal sources" and to "replace basal sources with high-level sources." In addition, it appears that the Environmental Assessment for the Kau #2 Deep Well was published in June 1990, nearly twenty-eight years ago. The Water Use and Development Plan update acknowledges that of the 200 Environmental Assessments and Environmental Impact Statements filed since 1990, only one report (the Palani Ranch Well No. 1 report) addressed the potential impact to groundwater withdrawal on traditional and customary practices and wildlife habitat concerns. Based on these observations, the National Park Service respectfully raises the following questions for the Board: Does the Hawai'i County Department of Water Supply plan to, or has it already, analyzed the impacts of the Kau #2 Well on traditional and customary practices in the manner identified in the Water Use and Development Plan update? And, does the Department of Water Supply consider the Environmental Assessment prepared for the Kau #2 Well to be an adequate basis for determining whether there may be adverse impacts to groundwater-dependent ecosystems or traditional and customary uses from the operation of this well? We hope that these observations and questions are helpful to you as you pursue our shared commitment to protect water resources in the Keauhou Aquifer. Please do not hesitate to contact me or Dr. Paula Cutillo if there is anything you would like to discuss further. Thank you.

Chairperson Takamine: Thank you.

3) APPROVAL OF MINUTES

MOTION: Mr. Boswell moved for approval of the Minutes of the February 27, 2018, Water Board Meeting; seconded by Ms. Wilson.

Secretary noted two corrections: Page 41 – last sentence on the page, remove "or if they do it on the future." This correction was inadvertently left out after initial drafts. Also, on Page 43, second to the last line, under #3, the sentence "if interested, please (insert the word "let") the Department know. The word "let" was omitted. This correction was noted by Mr. Elarionoff who could not be present today.

ACTION: Motion was carried unanimously by voice vote.

4) APPROVAL OF ADDENDUM AND/OR SUPPLEMENTAL AGENDA

None

5) SOUTH KOHALA:

A. **JOB NO. 2010-964, WAIMEA WATER TREATMENT PLANT COMPLIANCE UPGRADES PHASE 2 – TIME EXTENSION:**

The contractor, Bodell Construction Company, submitted a request for contract time extension of 42 calendar days. This is the fifth time extension for this project.

Ext. #	From (Date)	To (Date)	Days (Calendar)	Reason
1	3/21/2017	6/11/2017	82	Additional work required to reroute unforeseen underground utilities discovered during earthwork excavation.
2	6/11/2017	8/10/2017	60	DWS's direction to delay demolition of basins #3 and #4 (36 calendar days), additional work to excavate unsuitable soils from under the building's footprint (10 calendar days), and additional work caused by inclement weather – Hurricane Madeline (14 calendar days).
3	8/10/2017	2/13/2018	187	DWS's direction to delay the work requiring a shut down of the existing water treatment plant (154 calendar days), additional work due to Fire Department's fire protection requirements (30 calendar days), and delays caused by inclement weather (3 calendar days).
4	2/13/2018	3/30/2018	45	Additional work to order and install new underground vaults to meet ADA requirements along the sidewalk from parking to building (30 calendar days). Additional work included retaining walls and grading to prevent drainage issues on the southwest side of new building's interface with the existing building (15 calendar days).
5	3/30/18	5/11/18	42	Delays in the chemical delivery and chlorine injection system postponed the start of the "30-day" testing period. Additional time (42 calendar days) is necessary for these delays.
Total Days (including this request)			416	

Staff has reviewed the request and is recommending approval of 42 calendar days, per the Department's General Requirements and Covenants.

The Manager-Chief Engineer recommended that the Board grant this contract time extension of 42 calendar days to Bodell Construction Company, for JOB NO. 2010-964, WAIMEA WATER TREATMENT PLANT COMPLIANCE UPGRADES PHASE 2. If approved, the contract completion date will be extended from March 30, 2018, to May 11, 2018.

**MOTION:** Mr. Boswell moved for approval of the recommendation; seconded by Ms. Wilson.

The Deputy reported that this request for additional time was not due to anything the contractor had responsibility for. There were some issues with the chlorine injection system when the Department of Health five-day testing was finished and the Department was ready to move up to the 30-day

operational testing. This 30-day testing had to be pushed back in order to resolve the chlorine injection issue, and the Department was also waiting for some chemicals to be delivered to the site for testing.

ACTION: Motion was carried by voice vote.

6) MISCELLANEOUS:

A. DEDICATIONS:

The Department received the following documents for action by the Water Board. The water systems have been constructed in accordance with the Department's standards and are in acceptable condition for dedication.

**1. GRANT OF EASEMENT AND BILL OF SALE**

SUB. No. 07-000554

Grantor: Andrew Queen

Tax Map Key: (3) 7-6-011: 034

Facilities Charge: \$5,500.00 Date Paid: 3/19/18

Final Inspection Date: 3/19/18

Water System Cost: \$99,694.00

**2. BILL OF SALE**

Seller: Palamanui Global Holdings LLC

Tax Map Key: (3) 7-2-015:083 and 7-2-035:046

Final Inspection Date: 3/7/18

Water System Cost: TBA

**3. GRANT OF EASEMENT AND BILL OF SALE**

SUB. No.: Phase 1: 2016-1633, Phase 2: 2015-1513

Grantor: Makana 1055, LLC

Tax Map Key: (3) 2-4-004: 004, 005 and 104

Facilities Charge: Phase 1: \$61,690.00 Date Paid: 1/18/18

Phase 2: \$12,190.00 Date Paid: 1/17/18

Final Inspection Date: 2/28/18

Water System Cost: \$306,980.00 (Total for Phase 1 & 2)

The Manager-Chief Engineer recommended that the Water Board accept these documents subject to the approval of the Corporation Counsel and that either the Chairperson or the Vice-Chairperson be authorized to sign the documents.

MOTION: Mr. Boswell moved for approval of the recommendation; seconded by Mr. Domingo.

The Manager-Chief Engineer noted that the water system cost for Item No. 2, Bill of Sale, is \$3.52 million.

Ms. Wilson asked about the testimony heard earlier and if there have been no Environmental Assessments done since 1990.

Mr. Inaba replied that was correct, for that particular source.

Ms. Wilson asked if it is common practice not to do anything until the well is going to be used.

Mr. Inaba replied that for this one, it was going to be dedicated in 2000; however, there were issues with start-up of the well.

Mr. Domingo asked if the questions raised by Dr. Zimpher have been responded to.

Chairperson Takamine stated that, technically, the testimony from the public is not addressed during the meeting.

The Manager-Chief Engineer added that as with any other written correspondence, the Department will draft a written response, and it will be provided to the Board at the next meeting.

Ms. Wilson asked about the reference to the Water Use and Development Plan and if it meant the whole plan or the update.

The Manager-Chief Engineer replied that he assumed it was the update.

ACTION: Motion was carried unanimously by voice vote.

(Mr. Harris left the meeting at 10:11 a.m.)

**B. DEPARTMENT OF WATER SUPPLY PROPOSED TABLE OF ORGANIZATION:**

The Department recognizes the need to revise and update its current table of organization to align with current needs and future goals. As such, the Department proposes the following changes:

1) REVISED POSITION ORGANIZATION CHART – ADMINISTRATION DIVISION – ENERGY MANAGEMENT BRANCH

The Department proposes to amend its Table of Organization (TO), Position Organization Chart to create an Energy Management Branch under the Administration Division and relocate the Energy Management Analyst (EMA) position from the Operations Division to the Administration Division. The EMA is a SR-24 position and is currently filled. The EMA will work with the Department's various divisions on setting and meeting Department-wide energy use and energy management goals. Thus, it is appropriate for this branch to be under the Administration Division.

2) REVISED POSITION ORGANIZATION CHART – ADMINISTRATION DIVISION – COMMUNICATIONS BRANCH

The Department proposes to amend its TO, Position Organization Chart to rename the Public Relations Branch to the Communications Branch. It is also proposed to add a new Public Information Officer (EM-5) and Community Relations Specialist II (SR-22) to this branch. These added positions will allow the Department to enhance and strengthen its public information dissemination, community outreach, education, and water conservation programs.

3) REVISED POSITION ORGANIZATION CHART – FINANCE DIVISION – CUSTOMER SERVICES BRANCH

The Department proposes to amend its TO, Position Organization Chart to relocate the Meter Reader I (SR-10), currently in the Finance Division – Customer Service Branch – Meter Reading Section to the Finance Division – Customer Service Branch – Auxiliary Support Services Section.

4) REVISED POSITION ORGANIZATION CHART – FINANCE DIVISION – MANAGEMENT ACCOUNTING BRANCH

The Department proposes to add an Account Clerk (SR-11) to the Payroll and Cost Distribution Section in the Management Accounting Branch. This added position will allow the Department to maintain the Department's payroll schedule and processing, which has become more complex due to collective bargaining agreements.

- 5) REVISED POSITION ORGANIZATION CHART – OPERATIONS DIVISION – ENGINEERING SERVICES BRANCH  
 The Department proposes to amend its TO, Position Organization Chart to create a Mechanical Engineering Section and Civil Engineering Section under the Engineering Service Branch. The proposed newly-created table of organization will add four Mechanical Engineer (SR-18, SR-20, SR-22, and SR-24) positions and four Civil Engineer (SR-18, SR-20, SR-22, and SR-26) positions. These added positions will allow the Department to enhance its Operations and Maintenance programs, such as water audit evaluations, asset management programs, preventative maintenance for facilities and waterlines, etc.  
 The Department proposes to add a Water Service Investigator I (SR-12) to the Unaccounted Water Program Section in the Engineering Services Branch. This added position will allow the Department to enhance its non-revenue water investigation and interaction with customers.
- 6) REVISED POSITION ORGANIZATION CHART – OPERATIONS DIVISION (DISTRICT I) – FIELD OPERATIONS SECTION  
 The Department proposes to amend its TO, Position Organization Chart to add a second Water Meter Mechanic (BC09) in the Meter and Hydrant Unit. The second Water Meter Mechanic will allow the Department to have two crews to handle the meter maintenance and repairs islandwide.
- 7) REVISED POSITION ORGANIZATION CHART – OPERATIONS DIVISION (DISTRICT II) – CUSTOMER AND CLERICAL SERVICE SECTION  
 The Department proposes to amend its TO, Position Organization Chart to add a third Clerk-Meter Reader (SR10) in the Customer Services Unit of District II. The third Clerk-Meter Reader will allow the Department to maintain its continuous meter reading and billing schedules and to provide customer service at this baseyard.
- 8) REVISED POSITION ORGANIZATION CHART – OPERATIONS DIVISION (DISTRICT II) – ELECTRICAL, MECHANICAL AND TREATMENT SECTION  
 The Department proposes to amend its TO, Position Organization Chart to add a second Assistant Water Treatment Plant Operator IV (BC11) in District II. The second Assistant Water Treatment Plant Operator IV will allow the Department to operate its facilities that require a Department of Health-certified Grade 2 operator.  
 The Department proposes to amend its TO, Position Organization Chart to add a second Water Plant Operator (BC09) to allow the Department to inspect and maintain its facilities in District II.
- 9) REVISED POSITION ORGANIZATION CHART – OPERATIONS DIVISION (DISTRICT III) – CUSTOMER AND CLERICAL SERVICE SECTION  
 The Department proposes to amend its TO, Position Organization Chart to add a third Clerk-Meter Reader (SR10) in the Customer Services Unit of District III. The third Clerk-Meter Reader will allow the Department to maintain its continuous meter reading and billing schedules and to provide customer service at this baseyard.
- 10) REVISED POSITION ORGANIZATION CHART – OPERATIONS DIVISION (DISTRICT III) – ELECTRICAL, MECHANICAL AND TREATMENT SECTION  
 The Department proposes to amend its TO, Position Organization Chart to add a second Water Plant Operator (BC09) to allow the Department to inspect and maintain its facilities in District III. The Department proposes to amend its TO, Position Organization Chart to create a Support Section and add an Electronic Technician (BC15) to allow the Department to develop and maintain its communication, monitoring, and analytical equipment in District III and islandwide. Please note that although numerous positions appear on the organization chart, positions will only be filled as needed. The proposed changes will also help the Department achieve its Strategic vision of being an “employer of choice,” as the changes will provide career paths for upward mobility.

The Manager-Chief Engineer recommended that the Water Board approve the proposed revised Table of Organization.

MOTION: Mr. Boswell moved for approval of the recommendation; seconded by Mr. Scicchitano.

The Manager-Chief Engineer stated that this is a substantial revision to the Department's Table of Organization. The reason behind it is to meet the Department's current needs as well as its future goals. Part of it is due to increased population and increase in the number of customers served. The Department does an employee count every year and is currently at about 160. Eight to nine years ago, it was up to 180. The decrease is due to retirements, etc. He did not feel the need to get back up to 180 at this point but would still want to stay within that 160 to 170 range. For the past number of years, the Department has been pretty much doing more with less. There have been major things have come up such as the aquifer designation in Kona and the Kona wells situation. The Department recognizes the need to be proactive and preventive on its maintenance schedules. This will provide the ability to recruit properly for entry-level positions. A lot of times with entry-level positions, you cannot fill them until the position is vacant. There are overlapping needs that the Department is trying to address with this revision as well as improving efficiency and meeting the heightened needs of the community. This revised Table of Organization includes enhancement of the public relations branch in the Administration Division to accommodate the public's requests for quicker information. Currently, the Department has one person, Ms. Nyssa Kushi; and he thinks there is a greater need to address conservation and water education. For the mechanical engineering series, the Department is looking at additional staff to focus on the asset management program and preventive, proactive maintenance and repair of the deep wells. Other revisions are due to those entry-level positions where the employee typically gets into the Department and will tend to move on, either to a higher-level position within the Department or within the County. Once the Department knows a position is going to be vacant, it would like to have the flexibility to recruit before the position is vacated. This revised Table of Organization is to meet current needs as well as future goals for efficiency, proactive maintenance, and proactive education.

Mr. Scicchitano asked what the additional headcount is going to be above and beyond what it is today if all of the positions are filled and what the financial impact would be.

Mr. Uyehara replied that this is a broad proposal. The Department will look at every position in the future and justify the need to fill that position. There is an internal process where justification is needed to fill a position.

In response to Mr. Boswell's question of whether the positions are only being created now and will not be filled right away, but on an as-needed basis, Mr. Uyehara replied that was correct. The procedure would be to have the Board's approval and then the County Human Resources Department's approval on the overall organization within this table.

The Manager-Chief Engineer added that in the existing table of organization, the positions are never all filled because a lot of times they are a series such as a Civil Engineer I, II, III, and IV. There might be one or two filled. Part of how it works with this Department and the rest of the County is to basically fill based on the need and not just because there is a position available. Example: if the need is identified for a licensed engineer, the Department would request to fill it, but not all four in that series. As Mr. Uyehara mentioned, each year, the Department comes to the Board with the annual budget for the following year, which includes positions that it is seeking to fund for that following year.

Chairperson Takamine stated that it is important that the Board give the Department the tools it needs to meet its goals and initiatives, especially since the Board is asking for better communication, improved efficiency, etc.

The Manager-Chief Engineer stated that part of the challenge it is seeing right now, as with the rest of the government agencies, is that without this flexibility and timeliness for recruitment, it compounds the fact that we are in a low unemployment rate at this point in time so it is hard to find a qualified, local job force.

Mr. Boswell mentioned that the private sector is seeing the same issues across the board.

Mr. Domingo asked if the Energy Management Analyst position has an engineering requirement.

Mr. Uyehara replied that the Energy Management Analyst is Mr. Warren Ching, former Mechanical Engineer, but the position does require some technical qualifications.

The Manager-Chief Engineer stated that the position description is not being changed, but merely being shifted from the Operations Division to the Administration Division because it affects the Department as a whole and works with all divisions.

Mr. Domingo stated that it makes sense that an engineer fills that position. He also asked why there was no provision for an electrical engineer, possibly in place of one of the civil engineer positions. He sees the need for an electrical engineer.

The Manager-Chief Engineer replied that some years back, the Department did get approval from the Board for an electrical engineering series and has electrical engineering positions available. However, the Department has not been able to find anyone for a position yet. That is the reason the Department has been outsourcing and hiring a consultant, but it will continue to explore options.

Mr. Boswell asked for clarification. In the engineering on the mechanical side, the head engineer is being put at a pay rate change, but there were already four positions. He asked if they are just being reclassified or if they were being recognized as open.

Mr. Uyehara replied there are four Mechanical Engineers I through IV, but the Department is considering adding so there would be two Mechanical I, two Mechanical II, two Mechanical III, etc.

The Manager-Chief Engineer added that the Mechanical Engineer V currently exists but is acting as an assistant to the Division Head. It is typical in government organizational structure where an Engineer V supervises their own class. They would be the lead in that series. That person is Mr. Clyde Young.

Mr. Boswell noted that on the Civil engineering side, new positions are being created where they are currently not on there.

Mr. Uyehara replied that was correct. In the Operations Division, there is a lot of civil engineer related work such as water audits required by State law, tank maintenance, and valve maintenance programs. The Department saw the need to create that series; and, hopefully, it will allow some moving up in the ranks, internally.

Mr. Boswell asked if those would be entry-level positions.

Mr. Uyehara replied that was correct. A Civil Engineer IV is a licensed position.

Mr. Domingo asked where the recruiting would be from, whether it be universities or industry.

Mr. Uyehara replied that the standard practice is once the need is identified, internal recruitment is first, then County-wide recruitment, and then open recruitment.

Mr. Domingo asked if it includes lateral transfers from other agencies.

Mr. Uyehara replied that was correct.

The Manager-Chief Engineer added that the Department is bound by County/State human resources procedures. There is a process that it has to go through. Ideally, the next step is to recruit the entry-level positions so the higher ones in the series can mentor them. The first step is to vet this through the Water Board and then get approval from the County Human Resources Department. Once that is done, the Department can budget for the positions and start recruiting.

ACTION: Motion was carried unanimously by voice vote.

**C. RENEWAL OF CONTRACT FOR MAINTENANCE AGREEMENT – SOUTH KOHALA, HĀMĀKUA, AND LAUPĀHOEHOE SITES (BRANTLEY CENTER, INC.):**

Brantley Center, Inc., presently has a Maintenance Agreement for site maintenance for the Department’s South Kohala, Hāmākua, and Laupāhoehoe tank and pump sites. They are requesting to renew the Agreement from July 1, 2018, to June 30, 2019. The rates would be as follows:

South Kohala -	\$4,392.35/month x 12 months	=	\$52,708.20
Hāmākua -	\$2,944.16/month x 12 months	=	\$35,329.92
Laupāhoehoe -	\$738.48/month x 12 months	=	<u>\$8,861.76</u>
	Total:		\$96,899.88

The Department has the right to award the contract to Brantley Center, Inc., without advertising or calling for bids, according to Subsection 103D-1010 of the Hawai‘i Public Procurement Code. Brantley Center, Inc., has submitted the necessary documents to meet the requirements as a qualified rehabilitation facility.

There is no increase from their proposal for Fiscal Year 2017-2018.

Brantley Center’s performance has been satisfactory and the costs are reasonable. A total of 41 sites are covered by this agreement.

The Manager-Chief Engineer recommended that the Board award the contract for the RENEWAL OF CONTRACT FOR MAINTENANCE AGREEMENT – SOUTH KOHALA, HĀMĀKUA, AND LAUPĀHOEHOE SITES to Brantley Center Inc., for a period from July 1, 2018, to June 30, 2019, at a total cost of \$96,899.88, and that either the Chairperson or the Vice-Chairperson be authorized to sign the documents, subject to approval by Corporation Counsel.

MOTION: Mr. Boswell moved for approval of the recommendation; seconded by Ms. Wilson.

The Manager-Chief Engineer noted that this is similar to last year. There is a provision in the procurement law that allows the Department to continue with Brantley Center if they meet certain qualifications. They have provided satisfactory service for numerous years at a good price.

In response to Mr. Domingo’s question of what is involved as far as site maintenance, Mr. Young replied it includes grass cutting, weeding, poisoning, and landscaping.

ACTION: Motion was carried unanimously by voice vote.

**D. ADOPTION OF PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECISION AND ORDER FOR 2-27-18 CONTESTED CASE HEARING REGARDING WATER SERVICE ACCOUNT NUMBER 9000360-10 (TMK 8-1-022:092), (IN THE MATTER OF THE APPEAL OF RYAN AND MAILE-LEI KOYANAGI):**

The above Contested Case Hearing took place on February 27, 2018, in accordance with Chapter 91 of the Hawai'i Revised Statutes and Rule 2-5 of the Rules and Regulations of the Department of Water Supply.

For review and adoption by the Board of the Findings of Fact, Conclusions of Law and Decision and Order.

Ms. Yeh stated that the Board was given copies of the Findings of Fact, Conclusions of Law and Decision and Order; but since the agenda mailing, the Koyanagi's have reached out to her office with changes to the proposed findings of fact and would like the findings to indicate that the leak occurred at 31 gallons every two seconds and that their meter read at 8 gallons per minute and the Department's ran at 8.5 gallons per minute. Initially, she thought it was a little obscure as to whether the Board was wanting to waive the entirety of their bill which was \$5,330.00 because that included their normal average use. When she had drafted the initial order and waived the whole thing, Ms. Koyanagi called and said they actually wanted to pay for their average use over the past six months of 13,000 gallons, and that is now up for the Board's adoption. The Board would need to move to adopt the proposed Findings of Fact, Conclusions of Law and Decision and Order with the Koyanagis' objections. She had a revised Order with her for signature.

MOTION: Mr. Domingo so moved; seconded by Mr. Scicchitano.

Mr. Boswell commented that he did not believe there was a leak that produced "X" number of gallons. That is what was believed to have happened; however, what actually happened is not understood.

ACTION: Motion was carried unanimously by voice vote.

**E. MONTHLY PROGRESS REPORT:**

Mr. Boswell asked about the Wai'aha Well extraction of the pump and motor.

The Manager-Chief Engineer asked Mr. Takamoto to provide an update.

Mr. Takamoto stated that the contractor completed the adjustments to the tool, and the Department is awaiting a revised schedule for when they will resume work on-site.

Mr. Boswell asked if they were able to remove any pieces with the original tool.

Mr. Takamoto replied they were not able to because the tool was too big.

Mr. Boswell asked if it was literally a "per application" type of work where if they remove something and go back in, the tool may need to be changed according to what they are going back in for.

Mr. Takamoto replied that was correct.

F. **REVIEW OF MONTHLY FINANCIAL STATEMENTS:**

Mr. Boswell asked about the cost of hauling water to the HOVE Well now that there is a cost and a period of time that cost was incurred. He wondered if it would come out cheaper to haul water rather than replacement of the pump and motor and going back to a well and fighting an issue that inherently appears will always be an issue. The source is not particularly favorable.

The Manager-Chief Engineer replied that the cost to haul water is approximately \$40,000.00 a month and would not be economical to haul on a continuous basis. That is just to provide water for the spigots.

Mr. Boswell also mentioned the disparity of the incoming power and how that could be balanced. He did not think it could be clean power unless HELCO puts a substation in the area.

The Manager-Chief Engineer stated that it would be covered more under his report but the issues learned from Kona may be implemented here as well; and having to clean the power before it gets down the hole is something the Department is continuing to evaluate.

G. **DEPARTMENT OF WATER SUPPLY PROPOSED OPERATING AND 5-YEAR CAPITAL IMPROVEMENT PROJECTS (C.I.P.) BUDGETS FOR FISCAL YEAR 2019:**

The Department's Fiscal Year 2019 Operating Budget, totaling \$53,864,000, and 5-Year C.I.P. Budget for Fiscal Year 2019-2023, totaling \$96,200,000, have been distributed for the Board's review. A public hearing was held prior to this meeting to accept testimony. The Board may change either Budget, or adopt them as presented over two readings.

The Manager-Chief Engineer recommended that the Water Board approve the Department's Fiscal Year 2019 Operating and 5-year C.I.P. budgets for Fiscal Years 2019-2023 on this first of two readings.

MOTION: Mr. Boswell moved for approval of the recommendation; seconded by Ms. Wilson.

Ms. Yeh stated that the Chairperson would need to make a statement that the Board opened the hearing and there was no oral or written testimony. The public hearing opened at 9:42 a.m., no testimony was made by any members of the public, and was closed at 9:43 a.m. with no written testimony being received either.

Chairperson Takamine so noted and called for a vote on the Motion.

ACTION: Motion was carried unanimously by voice vote.

H. **POWER COST CHARGE:**

The Department proposes to increase the Power Cost Charge from \$1.62 to **\$1.88** per thousand gallons, to reflect an increase in power costs for the Department's power costs. A Public Hearing will have been held prior to this Board meeting to accept public testimony on this change.

The Manager-Chief Engineer recommended that the Board approve the increase of the Power Cost Charge from \$1.62 to **\$1.88**, effective April 1, 2018.

MOTION: Mr. Boswell moved for approval of the recommendation; seconded by Ms. Wilson.

Ms. Yeh stated that the Chairperson would need to make a statement that the Board opened the hearing and there was no oral or written testimony. The public hearing opened at 9:47 a.m., no testimony was made by any members of the public, and was closed at 9:50 a.m. with no written testimony being received either.

Chairperson Takamine so noted and called for a vote on the Motion.

ACTION: Motion was carried unanimously by voice vote.

I. **MANAGER-CHIEF ENGINEER'S REPORT:**

The Manager-Chief Engineer provided an update on the following:

1. North Kona Wells

The Manager-Chief Engineer reported that currently, 10 out of the 13 wells in North Kona are operational, plus four out of the five in South Kona. We are still in the 10% conservation mode to keep the awareness up in the area to use water wisely. Since the well went down on March 9, 2018, the Department issued a press release on that same day. Since then, he has attended the Kona-Kohala Chamber of Commerce, a Kona Rotary meeting, and the Hawai'i Leeward Planning Conference to provide updates on the situation. The three wells still under repair are Wai'aha, Hualālai, and Honokōhau. Wai'aha is still in the extraction mode. Hualālai and Honokōhau are in procurement for repairs. He asked Mr. Takamoto for details on the pumps and motors.

Mr. Takamoto stated that for Honokōhau, a hybrid is planned, which a standard turbine pump and a slimline motor with a shroud. Hualālai is out to bid with a full slimline set.

Mr. Boswell asked if it would be the matching pump and motor from one supplier.

The Manager-Chief Engineer replied that was correct. For Honokōhau, the Department is using the pump and motor set that is coming off the spare pump and motor set procurement, which is why that combination is being used. For Hualālai, it will be the full slimline set, which is also going to have a shroud and may include additional monitoring sensors. Wherever possible, the Department is trying to put in sensors that will give more information. In the past, the Centrilift type units did not have that option. Staff has been in discussions with them as to exactly what kind of monitoring equipment they have available for the units the Department would like. For the SME ones, the Department was able to specify them with the RTD (temperature sensors) on them. They have been able to provide information which gives us a gauge on whether the motor is operating in a cool zone or is getting warm. At this point, more information is good in order to track various factors.

Mr. Domingo asked if the motor was overheating.

The Manager-Chief Engineer replied that for the latest one, Honokōhau, it was not overheating and was operating in a good temperature range until it tripped. After that, it would not restart.

Mr. Domingo asked if it was because of a possible stray of power.

The Manager-Chief Engineer replied that it had the power quality monitoring equipment on it. He asked Mr. Young and Mr. Takamoto if any abnormalities were present, and they replied there were none.

Mr. Boswell stated that those were the two lines of defense being looked at.

The Manager-Chief Engineer stated that it is still unknown what kind of impact, if any, lightening might have on it and whether it would show up on the power quality monitors. Lightening protection is also being looked into. There was no abnormal incoming power on this particular failure.

In response to Mr. Boswell's question of whether there was any weather activity noted at the time, staff replied there was none. Mr. Young stated it is one of the first things that is checked.

Mr. Domingo asked when this well came back online the last time.

The Manager-Chief Engineer replied it was November 2017.

Mr. Domingo commented that it was only in operation about three or four months and there should be a reason for these things happening. It is frustrating to bring it back on and it fails again.

The Manager-Chief Engineer stated that the tear down will be witnessed by a third-party consultant.

Mr. Boswell asked if there is an optimal casing size for this one or if there were clearance issues with it.

The Manager-Chief Engineer replied that there were some clearance issues because the motor was large. (Mr. Takamoto confirmed it was an 18" motor and a 20" casing.) That is another thing being looked at. SME motors are plump. They are large-diameter motors for that kind of capacity; and that is another reason the Department is looking into lower GPM.

Mr. Domingo thought there should be a way to dissipate the heat. It is part of the design.

The Manager-Chief Engineer stated that lately, the Department has been specifying heat exchanger type motors, meaning the motor plus another unit that allows the oil to cool better. It is in all of our repair provisions to address the heat, either with a heat exchanger type motor or a shroud. The shroud is basically when you cannot get that velocity past the motor fast enough to cool it as best as it can.

Chairperson Takamine asked if the Board can see the report once it comes from the third party and when that would be expected.

The Manager-Chief Engineer replied it will be provided.

Mr. Takamoto stated it still needs to be shipped to the manufacturer after procurement and award, so about two to three months.

## 2. Hawaiian Ocean View Well

The Manager-Chief Engineer asked Mr. Young if he had anything to add for this report.

Mr. Young stated that since the last update where the pump and motor were tested and megged zero, the motor was pulled on March 12 and looks like it burned. The pump and motor are currently on Oahu awaiting shipment to the manufacturer.

In response to Mr. Boswell's question if the RTD and PQM (power quality monitoring) process in the well were already set up, Mr. Takamoto replied it was.

The Manager-Chief Engineer replied that for this one, there will be a third-party consultant to witness the teardown and provide a report. Regardless whether or not it is a warranty issue, the Department will proceed with another repair. If it turns out to be warranty issue, that issue will be dealt with; but in the meantime, the Department cannot afford to wait for the final outcome of the warranty investigation.

Mr. Boswell asked if that means there will be a back up to the back up.

The Manager-Chief Engineer replied that was correct.

Mr. Young mentioned the power quality and voltage issues out there. The Department asked HELCO to balance the system as best they could, and they spent a lot of man hours doing that. It did improve, but there are still some issues during peak hours. Another thing that was addressed was oversizing the motor a little bit so it can handle the larger currents when the voltage drops on one of the three legs. Also, by putting in the VFD (Variable Frequency Drive), there is a little bit of voltage balance so it helps clean up the power somewhat. When all else fails, we can go to power conditioning. A HELCO substation would be more ideal but probably very expensive.

### 3. DWS Energy Report

The Manager-Chief Engineer stated it has been awhile since the Department has had an Energy Management Analyst, so it is good to have Mr. Warren Ching on board.

Mr. Ching provided some background on his report that was provided in the Board's packet. It included some background information on the Department's energy expenditures history and direction options that the Department is looking into to reduce its energy use. On the first page, it shows how HELCO's fuel charge affects the Department's power cost. It is one of the primary factors that goes into the power cost.

The Manager-Chief Engineer stated that Mr. Ching did a great job of trying to equate energy language with real-life examples. One of the confusing things is the power factor, which normally, average users are not affected by.

Mr. Ching stated that because of the type of motors the Department uses and the size of its accounts, that all comes into play.

The Manager-Chief Engineer stated that it is incentive or disincentive to use more efficient equipment because of the energy draw.

Mr. Boswell commented that because HELCO needs to leave that power on standby for the Department when it is ready to draw it, it is such a large demand that they cannot throttle down.

The Manager-Chief Engineer stated that was correct. They need some cushion. From what he understands, they really do not want to start/stop generation equipment on their end because of they need to do. For Kona, the Department is trying to get the most efficiency because the wells are some of the highest energy users. However, because of the situation dealt with last year, it will be something that will have to be evaluated and may need to be sacrificed on the top tier efficiency to get reliability.

Mr. Boswell commented that although there will probably be an increase in cost, the increase in reliability is obviously more favorable.

The Manager-Chief Engineer agreed. The Department needs to provide the water.

Mr. Domingo commented that the report is really good and asked if the reduction in total power cost is due to green initiatives or energy savings measures that were implemented.

Mr. Ching stated that Figure 1 shows the relation between total power cost versus HELCO's energy cost adjustment. They follow each other so it does not necessarily mean the Department is pumping less. The Department may be pumping the same amount but is just getting charged less per kilowatt-hour. It shows the recent power cost charge increase and how it relates to the HELCO energy cost adjustment. It plays a large role in the Department's power costs and is one of the more volatile factors in the kilowatt-hour cost. Just because the power cost goes up does not necessarily mean the Department is using more power. It probably means HELCO's fuel costs went up, which they passed on to the DWS.

Ms. Wilson asked how much the Department is actually putting onto the customer.

Mr. Ching replied that it will be the change passed today, which is \$1.88 per thousand gallons.

Ms. Wilson asked Mr. Ching if he sees it staying consistent or will it be something that will need to be forecast often.

Mr. Ching replied it is something that is going to change for sure, just based on the fuel cost. If fuel costs go up, most likely the Department will see an increase in its power cost.

Chairperson Takamine noted for the newer members that years ago, the Department was not able to change the power costs very often. The Department has changed those rules and has become more responsive and able to change rates as HELCO changes their rates.

Mr. Ching added that the change from the yearly rate to more often occurred in the 2008/2009 range because of a large spike, and the Department was way behind on its energy costs.

In response to Mr. Boswell's question of what the lag is now between HELCO making the change and the Department being able to trigger a power cost adjustment, the Manager-Chief Engineer replied that the Board changed it from annually to every two months.

#### 4. Retiree of the Department of Water Supply

The Manager-Chief Engineer reported that the Department has a retiree in the Finance Division, Mr. Harold Toyota, Accountant III. Mr. Sumada stated that Mr. Toyota is retiring at the end of this month. He has been with the Department for 36 years.

J. **CHAIRPERSON'S REPORT:**

1. Chairperson Takamine reported that going back to what Mr. Sumada said about having good employees, he was called to the office to sign a stack of perfect attendance slips. He said it felt good to go through and see the names of Mr. Sumada, Mr. Inaba, and the Deputy, people who are in charge of their respective divisions, and setting the lead. From his perspective, the private sector, it is known that public employees have paid sick leave; and it feels good to see so many employees getting this award. He congratulated those employees.
2. Chairperson Takamine went over the results of the Permitted Interaction Group and handed out their report. In response to some of the failures in North Kona, the Water Board formed a Permitted Interaction Group. This group was made up of three Board Members: Mr. Boswell, Mr. Scicchitano, and himself. Also in the group were various respected professionals from the water and engineering industry. The meetings that were held were very robust. He thanked the Department for also being in those meetings so they could get a good historical perspective of the history of the wells. The Department provided a lot of material and information on every particular well in North Kona and its repair history. The material was very technical, and it was good to have experts in the group. The results of the meetings were outlined in the 5-page report, which is a summary of the strategies and actions. What was interesting was that the Department had already started working on some of these issues concurrently with the Permitted Interaction Group meetings. The goal was to see how to improve redundancy, resilience, and efficiency for service and operations. Item No. 1 was Standardization of Equipment. One of the big things that came out of the conversations was the Department's accepting wells in the past that were done by developers for their respective developments. Moving forward, the Department would like to specify exactly what it needs. That way, everything can be standardized to ensure parts are on hand for any type of equipment that might break down in the future. Another item is the consideration of using smaller pumps and motors, using larger size casings, and gyroscopic alignment for each new well. There is information related to standardization and temperature sensors. An important factor is professional services contracts to review equipment and settings for each well, both new and existing. He asked if Mr. Boswell or Mr. Scicchitano had anything to add.

Mr. Scicchitano stated that when talking about standardization of equipment, it is important to identify and acknowledge up front that there are going to be some related costs around it. If the Department is going to maintain these wells, there may be some increased costs.

Mr. Boswell stated that they have gained a lot of knowledge and had a lot of people contribute, plus Water Supply staff. They came up with a great list of things to take care of the future; but every one of these wells has a pump in the hole which is operating and being relied on. The Department cannot go out there across the board and implement all of these changes at once. You would have to shut down the whole system. So we are still seeing issues come up and will continue to see that. It will be a long road to turn this thing around into a new program that has more modern engineering to it. The milestones that have been made and the considerations for what will be done are big and should cost more money; and we should pay a little bit more because up front, it will increase reliability. His hat goes off to the Department because it is going to suffer more burden of failures that cannot be explained because they are down in the hole from long ago.

Chairperson Takamine thought it was important to set those expectations and make it clear that it is not something that is going to be fixed overnight; but in making the needed changes, the future looks brighter.

He continued with Item #2 on the report related to an Asset Management Program. The Operations Division is currently working on procurement of a consultant to develop an Asset Management Program for existing facilities. The initial phase will focus on the Kona wells and booster pumps. Several of the goals of the Asset Management Program are to develop a logistical and systematic program to inventory the Department's current infrastructure, anticipate potential issues, schedule preventative maintenance, and schedule appropriate repairs ahead of failures. Basically, it means scheduling maintenance instead of having to fix failures. This Asset Management Program will go a long way into that.

Mr. Boswell added that one of the participants in the Permitted Interaction Group, from a private organization, said it candidly that in their Asset Management Program, they are prepared to pull pumps out of service that are operating just fine but have lost their power efficiency. At that point, they recognize it is costing them more money to run it than it was originally designed. The theory that you just run it until it breaks is contrary to asset management. You are supposed to be replacing parts when they are beginning to wear out early enough that they never lose efficiency. It was very eye opening to him to hear that.

Chairperson Takamine continued with Item #3, Power Quality Monitoring (PQM) Equipment. It is something the Manager-Chief Engineer spoke about earlier. This equipment will allow the Department to track and monitor the incoming electrical power from the utility and the power going to the motor. The overall goal will be to trend the data to identify abnormalities and anticipate issues. PQM's have been purchased and installed at the Kona wells: Palani, Honokōhau, Keopu, and Wai'aha. However, even with this equipment in place, it does not guaranty success.

Mr. Boswell stated that Item No. 4 is going to lean in that direction. He is aware that the Department of Water Supply is dealing with this old MOSCAD system. Upgrading above and beyond the power quality management where the data can be read in real time at the Operations Center is when the Department will be modern. The way it is set up right now, Department staff needs to be out in the field to view the data loggers. When it can be upgraded to SCADA systems to report directly back, then it will be operating from a command central. Item No. 4 is a big deal. Chairperson Takamine agreed.

Chairperson Takamine continued with Item No. 5, Spare Pump and Motor Inventory. The Department continues to evaluate and procure spare pumps and motors island wide. However, this is where you need a good balancing point because you do not want to overstock as there are issues with warranties. They looked at storage, which was thought to be a viable option, and is not closing the door on that yet; but when quotes came back, it was not economical to do it. He thinks the Department should continue to pursue storage on the mainland and have pumps and motors ready, on demand, more or less.

Mr. Boswell stated that it is caught up in the procurement methods the Department is using because it was dealt defeat by the bidding process; not in talking directly to the manufacturer, but by going through the procurement method and allowing it to be a bid item submitted by a contractor. That is where the fluctuation got out of control.

The Manager-Chief Engineer stated that the Department will continue to evaluate that.

Mr. Boswell asked if the Department is currently storing any pumps and motors on island.

The Manager-Chief Engineer confirmed that it is.

Mr. Boswell asked if it was being done on pallets, racks, in warehouses, in a horizontal fashion.

Mr. Young and Mr. Takamoto confirmed that they are stored at the Pana'ewa site and are in crates and stored horizontally.

Mr. Boswell asked what can be done because it is more than just storing them. If it sat at the manufacturer, there are a battery of things that are done to it such as keeping it tested, rotated, etc. It sounds like a huge capital expense to prepare to be involved in that here while still looking for someone on the mainland who is already built to do it and technically ready for it.

The Manager-Chief Engineer stated we should at least turn them. With our current set-up, that is basically all we can do is spin the shaft.

Mr. Boswell stated they are supposed to be spun in a vertical position and stored in a vertical position. He asked how tall that would be.

Mr. Young replied that the slimline is going to be 16 feet. SME's can be 15 to 20 feet.

Mr. Boswell thought of the Fire Department where they hang the hoses in a bell tower to dry. He stated that if we are going to be buying them, we need to be responsible for them because they are going to lose warranty by being stored.

Chairperson continued with Item #6, Third Party Reviews of Pumping Units, Motor Control Centers, Motor Settings, and Spare Pumps and Motors. The third-party review was contracted alongside an existing contract held with Brown & Caldwell. From what he understood, the Department had gotten a lot of good information from them and they were very responsive to questions and concerns from the Department. There is also Ron Ho & Associates who contracts with Filtronica, Inc., and John Pitz and who is currently under contract on an as-needed basis to provide third-party inspections and assessments of failures, investigations of the pumps and motors. During the tear-down procedures of the pumps and motors, Filtronica, Inc., is brought in for the electrical assessment and John Pitz is brought in for the mechanical assessment. This company is going to be used for the Hualālai Well.

The Manager-Chief Engineer confirmed that they will witness the motor tear down. The Department also intends to utilize this service for the tear down of both HOVE and Honokōhau motors. He confirmed Mr. Boswell's question that they will travel to the manufacturer's facility. They are actually already on the mainland.

Chairperson Takamine continued that for the future, it is part of the understanding that the Department will procure professional services for a consultant to assist the Department with new repair specifications to avoid equipment that may not be ideal for the site-specific conditions. He added that during their meetings, they received a lot of technical information, which is not published in this report, but that type of information is best left with the experts. He wanted this to be a summary of what occurred during the meetings. He concluded that the Board can go through this report in their own time and come back next month with any questions they may have. Hopefully by next month, there will be a full Board.

Mr. Domingo commented that this is a very good document and a step in the right direction, especially because the island is growing in population and there needs to be good management

of the water systems. He was especially encouraged because his initial recommendation for redundancy is number one on the list.

Ms. Wilson asked if this is affecting any kind of policies or procedures.

The Manager-Chief Engineer replied that it will not affect policy. A lot of people ask about rates; but as far as what the Department is going through, the rates are not affected. He thanked Chairperson Takamine for taking the lead on this Permitted Interaction Group, everyone who participated, and for Messrs. Boswell and Scicchitano for acknowledging that this may affect the Department's resources moving forward. All of this will be factored into upcoming CIP planning for well sites and upcoming budgets and the future 2020 rate study.

Mr. Scicchitano clarified that he was not suggesting there be an increase or cost to the customers, but more for internal budgeting purposes.

The Manager-Chief Engineer stated that the Department is shifting things around. Every year, repairs and maintenance are budgeted for. It is just that a large chunk was used in Kona last year whereas it is supposed to be spread island-wide. The Department is always monitoring the funds and is still in a good place. If there are any concerns to that regard, it is fine.

7) ANNOUNCEMENTS:

1. **Next Regular Meeting:**

The next meeting of the Water Board will be April 24, 2018, 10:00 a.m., at the Department of Water Supply, Hilo Operations Center Conference Room; 889 Leilani Street, Hilo, Hawai'i

2. **Following Meeting:**

The following meeting of the Water Board will be May 22, 2018, 10:00 a.m., at the West Hawai'i Civic Center, Community Meeting Hale (Building G); 74-5044 Ane Keohokalole Highway, Kailua-Kona, Hawai'i

8) ADJOURNMENT

ACTION: Mr. Boswell moved to adjourn the meeting; seconded by Ms. Wilson and carried unanimously by voice vote. Meeting adjourned at 11:24 a.m.

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Recording Secretary