Water Board of the County of Hawai'i, Department of Water Supply Meeting Minutes

May 22, 2018

MEMBERS PRESENT:	Mr. Craig Takamine, Chairperson Mr. William Boswell, Jr., Vice-Chairperson Mr. David De Luz, Jr. Mr. Nestorio Domingo Mr. Leningrad Elarionoff Mr. Eric Scicchitano Mr. Kenneth Sugai Mr. Bryant Balog (10:24 a.m.) Mr. Keith Okamoto, Manager-Chief Engineer, Department of Water Supply
ABSENT:	Ms. Kanoe Wilson, Water Board Planning Director, ex-officio member Public Works Director, ex-officio member
OTHERS PRESENT:	Ms. Jessica Yeh, Deputy Corporation Counsel Mr. Tyler Milare, BEI Hawai'i Mr. Jeff Zimpher, National Park Service Mr. Max Dible, West Hawaii Today (10:18 a.m.) <u>Department of Water Supply Staff</u> Mr. Kawika Uyehara, Deputy Ms. Nyssa Kushi, Public Information Specialist Mr. Kurt Inaba, Engineering Division Head Mr. Richard Sumada, Waterworks Controller Mr. Daryl Ikeda, Chief of Operations Mr. Clyde Young, Operations Division Mr. Eric Takamoto, Operations Division

I. CALL TO ORDER

Chairperson Craig Takamine called to order the regular meeting of the Water Board at 10:00 a.m. on **May 22, 2018, at the West Hawai'i Civic Center, Community Center, 74-5044 Ane Keohokalole Highway, Kailua-Kona, Hawai'i**. He introduced Mr. David De Luz, Jr., new to the Water Board, representing District 3, and asked if he wished to say a few words. Mr. De Luz stated he is here to learn, and it is a pleasure to serve. This is one of the Boards he wanted to attend because he believes that other than energy, water is the most important resource we have. It is very critical to our livelihood, and more important for the growth of our island.

II. STATEMENTS FROM THE PUBLIC - none

III. APPROVAL OF MINUTES

ACTION: Mr. Elarionoff moved for approval of the Minutes of the May 7, 2018, Special Water Board Meeting; seconded by Mr. Scicchitano and carried unanimously by voice vote.

IV. APPROVAL OF ADDENDUM AND/OR SUPPLEMENTAL AGENDA

Chairperson Takamine announced that, per advice of Corporation Counsel, the Department would like to amend its recommendation for what is stated in Item 7(C) Material Bid No. 2018-06 of the Agenda for District II, Items 2A to 2D and instead recommend deferral of that section pending Board of Ethics clearance by the low bidder. Additionally, the Department would like to add an East Rift Zone Update as Item 3 to the Manager-Chief Engineer's report. He called for a Motion to adopt the Agenda, as amended by the above, and approve the Supplemental Agenda.

ACTION: Mr. Boswell so moved; seconded by Mr. Scicchitano and carried unanimously by voice vote.

V. SOUTH HILO

A. MAINTENANCE BID NO. 2018-12, REPAIR AND MAINTENANCE OF AIR CONDITIONING SYSTEM, WAIĀKEA OFFICE PLAZA, DEPARTMENT OF WATER SUPPLY

Bid opening was on May 17, 2018, at 2:30 p.m. No responsive, responsible bids were received. Staff will seek alternate methods of procurement per Hawai'i Administrative Rules Section 3-122-35(b) in accordance with procurement rules. The Manager-Chief Engineer added that the Department was not able to get any bids on this and will be seeking to procure these services through alternate procurement.

B. COST SHARING FOR KALANIANA'OLE AVENUE WATERLINE IMPROVEMENTS AND INTERGOVERNMENTAL AGREEMENT BETWEEN THE STATE OF HAWAI'I, DEPARTMENT OF TRANSPORTATION, AND THE COUNTY OF HAWAI'I, DEPARTMENT OF WATER SUPPLY

The State Department of Transportation, Harbors Division (HDOT) is participating in the Kalaniana'ole Reconstruction – Kamehameha to Kauhane roadway widening and resurfacing project with the County Department of Public Works. As part of the project, the HDOT Harbors Division is proposing to bring the water system servicing the harbor up to current standards by installing a 12-inch waterline from Kamehameha Avenue to the harbor, should the Department of Water Supply (DWS) be willing to share its

proportionate cost of the installation. The improvements contemplated by HDOT are consistent with the DWS 20-Year Master Plan for the Kalaniana‘ole Avenue Waterline Improvement project, which also include upgrading the existing 6-inch waterline from Kamehameha Avenue to the Hilo Harbor to a 12-inch waterline to bring the system up to current standards. The project is not on the current five-year Capital Improvements Projects; however, this is an opportunity to partner with HDOT to accomplish our capital improvement replacement project sooner than originally contemplated and at a lesser cost to DWS. It is proposed that DWS, through a Memorandum of Understanding (MOU) with HDOT Harbors, commit to funding up to one-half of the actual water system upgrade costs in an amount not to exceed one half of DWS cost estimate of $1,600,000.00 plus a 10% contingency. If approved, DWS would reimburse HDOT Harbors in an amount not to exceed $880,000.00. DWS staff has based the cost estimate on the preliminary construction plans; and HDOT Harbors, through the MOU, is willing to bear all costs for the waterline improvement project above and beyond DWS cost estimate and contribution. The subject intergovernmental agreement authorizes the DWS to reimburse HDOT for its portion of the improvements per the terms outlined above.

The Manager-Chief Engineer recommended that the Board approve the funding of the Kalaniana‘ole Waterline Improvement Capital Improvement Project up to $880,000.00 and the Agreement with the HDOT for the reimbursement, subject to review and approval of the Manager-Chief Engineer and Corporation Counsel and to allow either the Chairperson or the Vice-Chairperson to execute the document.

MOTION: Mr. DeLuz moved for approval of the recommendation; seconded by Mr. Sugai.

The Manager-Chief Engineer explained that this is a good example of how various agencies can collaborate, partner, and share costs. This is a great deal because the Department can have what it wants done at a fraction of the cost.

In response to Mr. Boswell’s question of whether this Department’s number stays firm as the project bids out, the Manager-Chief Engineer replied the Department is comfortable proposing this to the Board and setting a cap. If it comes out more, the Department’s cap is $880,000.00.

Mr. De Luz asked what happens if it comes in lower.

Mr. Inaba replied 50% if it is lower.

Mr. De Luz stated the Department did a good job in negotiating this. Chairperson

Takamine noted it is very good to have taken advantage of this opportunity.

The Manager-Chief Engineer stated that this project will be administered by the Department of Public Works. Notice to Proceed has already been issued and the contractor is on site doing preliminary work.

In response to Mr. Elarionoff's question about the size of line the 12-inch line will come from, the Manager-Chief Engineer replied that it comes off a 12-inch line except for a small area where it was reduced to a 6-inch line. That will be brought up to current standards to meet fire-flow protection. Mr. Inaba added that this is in the industrial area where fire-flow protection requires a 12-inch line. Residential areas would not require the same sizing. In response to Mr. Domingo's question of the distance for the line in this project and if there are any pumps included in this work, Mr. Inaba replied it will be close to one mile and there no pumps; only pipes and lateral relocation work.

ACTION: Motion was carried unanimously by voice vote.

VI. SOUTH KOHALA

A. WATER TREATMENT BID NO. 2018-10, FURNISHING AND DELIVERING OF VARIOUS TREATMENT CHEMICALS (LIQUID AMMONIA; 50% LIQUID CAUSTIC SODA; C-9 POLYPHOSPHATE; 38% SODIUM BISULFITE; 50% SULFURIC ACID; 12.5% SODIUM HYPOCHLORITE; AND 50% SODIUM HYDROXIDE) TO THE WAIMEA WATER TREATMENT PLANT, DISTRICT OF SOUTH KOHALA (ON AN AS-NEEDED BASIS)

Bids were opened on May 10, 2018, at 2:30 p.m.; and the results are as follows:

	Phoenix V LLC dba BEI Hawai'i	Shannon Chemical Corporation	Airgas USA LLC	JCI Jones Chemicals, Inc.
A~ Liquid Ammonia (50 per year) Cost per 100 pound cylinders	No Bid	No Bid	$553.43	No Bid
B~ 50% Liquid Caustic Soda (15 per year) Cost per dry ton	$1,756.83	No Bid	No Bid	No Bid
C~ C-9 Polyphosphate (60 per year) Cost per 30 gallon drum	$1,002.29	$911.11	No Bid	No Bid
D~ 38% Sodium Bisulfite (2 per year) Cost per 275 gallon tote	$1,898.22	No Bid	No Bid	No Bid

E~ 50% Sulfuric Acid (6 per year) Cost per 750 pound drum	$697.64	No Bid	No Bid	No Bid
F~ 12.5% Sodium Hypochlorite (4 per year) Cost per 330 gallon tote	$1,485.96	No Bid	No Bid	No Bid
G~ 50% Sodium Hydroxide (6 per year) Cost per 650 pound drum	$330.52	No Bid	No Bid	No Bid

The Manager-Chief Engineer recommended that the Board award the contract for Water Treatment Bid No. 2018-10 to Phoenix V LLC dba BEI Hawai'i for Parts B, D, E, F, and G; to Shannon Chemical Corporation for Part C; and to Airgas USA LLC for Part A for the unit prices listed above for the period from July 1, 2018, through June 30, 2020, and that either the Chairperson or the Vice-Chairperson be authorized to sign the contracts, subject to review as to form and legality of the contracts by Corporation Counsel.

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

The Manager-Chief Engineer stated that the Department was just made aware that for Item C which was intended to be awarded to Shannon Chemical Corporation, the company was deemed to be non-responsive. He recommended the recommendation be amended to award Item C to Phoenix V LLC dba BEI Hawai'i for the amount that is on the table.

Mr. Elarionoff asked about the chemicals and whether they were safe for the water.

Mr. Uyehara explained that these chemicals are not in the finished water product. The sodium bisulfite, sulfuric acid, sodium hypochlorite, and sodium hydroxide are used as part of the maintenance process for the Department's new membrane filtration facility. These natural fabric membranes need to be cleaned frequently. The process is done in a basin and the cleaning water created is taken to a neutralization tank afterwards where it is neutralized and put into an open sludge or processed water area. The liquid ammonia, C-9, and caustic soda are used for the corrosion control program. This is based on Department of Health requirements.

AMENDMENT TO MOTION: Mr. Boswell moved to amend the Motion per the Manager-Chief Engineer's recommendation above; seconded by Mr. De Luz.

Mr. De Luz asked if this is a surface water system.

The Manager-Chief Engineer replied that was correct. It is the only surface water system this Department has.

Mr. De Luz asked about the Clean Water Act regulations regarding maintenance of this system.

The Deputy explained that Parts A through C are part of the corrosion control treatment program required by the Department of Health, and Parts D through G are for cleaning of the membranes. In response to Mr. De Luz's question of when the plant was upgraded to comply with the Clean Water Act, he stated that the upgrades were recently completed, although the plant was always in compliance with the Surface Water Treatment Rule. A more conventional sand filter filtration process was used; but this new membrane filtration is a physical barrier or filaments what is used to process the water.

Mr. De Luz stated that his understanding was that the Department of Health just updated its rules a couple of years ago. His only concern was if the State was not current with its regulations because surface water is a different ball game and more difficult to manage.

The Deputy replied that as the Manager-Chief Engineer mentioned earlier, this facility and the technology being used are all under the Department of Health's Safe Drinking Water Branch.

Chairperson Takamine thought it would be a good opportunity, once this project is completed, to have the Board conduct a site visit to get an understanding of the treatment plant process.

The Manager-Chief Engineer stated the Board is always welcome to visit sites; and this is a major project. The other thing accomplished by converting the conventional treatment process of media filtration to a membrane filtration plant is the ability to downgrade the Department's operator certification from a Grade IV to a Grade II. Grade IV treatment plant operators are very hard to find in the State of Hawai'i. This will make recruitment of quality personnel certified by the State more available to the Department.

In response to Mr. De Luz's question of whether it would help mitigate the amount of chlorination that is used in the system, the Manager-Chief Engineer replied it is all monitored and controlled to meet the disinfection requirements and other requirements of the Safe Drinking Water Act.

ACTION: A vote was taken on the Motion as amended and carried unanimously by voice vote.

(Mr. Milare left the meeting at 10:20 a.m.)

B. **JOB NO. 2017-1084, PARKER #1 DEEPWELL EXTRACTION, BOREHOLE ALIGNMENT SURVEY, AND PUMP AND MOTOR REFURBISHING**

Bids for this project were opened on May 17, 2018, at 1:30 p.m.; and the results are as

follows:

Bidder	Bid Amount
Derrick's Well Drilling & Pump Services, LLC	$215,000.00

Project Costs:

1) Low Bidder (Derrick's Well Drilling & Pump Services, LLC)	$ 215,000.00
2) Contingencies (10%)	$ 21,500.00
Total Cost:	**$ 236,500.00**

This project consists of furnishing all labor, materials, tools, and equipment necessary to remove the existing pump, motor, and column assembly; perform borehole survey; and refurbish existing pump and motor set, in accordance with the specifications. Funding for this project will be from the Department of Water Supply's Capital Improvements Budget under Deep Well Pump Replacement. The contractor will have 60 calendar days to complete the well extraction and 90 calendar days to refurbish the existing pump and motor set for the Department's future use. The engineering estimate for this project was $200,000.00. This well was originally installed in January of 1998 and has subsequently been repaired on August 2000, February 2001, December 2001, and September 2016.

The Manager-Chief Engineer recommended that the Board award the contract for Job No. 2017-1084 to the lowest responsible bidder, Derrick's Well Drilling & Pump Services, LLC, for their bid amount of $215,000.00 plus $21,500.00 for contingencies, for a total contract amount of $236,500.00. It is further recommended that either the Chairperson or the Vice-Chairperson be authorized to sign the contract, subject to review as to form and legality by Corporation Counsel.

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

The Manager-Chief Engineer noted that this is not listed as a well repair. It is a deepwell extraction, alignment survey, and pump and motor refurbishing. The plan for this one is to take out the pump and motor and do the gyroscopic alignment survey to see if there is a possibility that this well could be converted to a line shaft, which is one of the things the Department is looking at being easier to do maintenance on. Part of the scope is to

also refurbish the existing pump and motor being pulled out of the hole. Once that alignment survey is done, it will give direction on what the next step will be, to either stick with submersible or if a line shaft can be done instead.

Mr. Boswell asked if the equipment would be put back into operation in a future project in a different well.

The Manager-Chief Engineer replied that was correct.

Mr. De Luz stated he had to abstain from voting on this item because he has a current ongoing proposal with Derricks Well Drilling.

Chairperson Takamine asked when it goes through the refurbishing process if there are going to be heat sensors or additional equipment installed on that motor.

Mr. Takamoto replied the bid specifications include addition of temperature sensors on this motor.

Mr. Domingo commented that he hopes this contractor has learned from working on the Waiʻaha Well extraction and will be successful.

ACTION: Motion was carried by seven ayes (Messrs. Balog, Boswell, Domingo, Elarionoff, Scicchitano, Sugai, and Chairperson Takamine) and one abstention (Mr. De Luz).

VII. MISCELLANEOUS

A. DEDICATIONS

The Department received the following documents for action by the Water Board.

Grant of Easement and Bill of Sale
Subdivision Number 95-000119
Grantor: Graphic Images Hawaii Inc.
Tax Map Key (3) 1-6-003:010 (portion)
Facilities Charge: $89,190.00 Date Paid: April 10, 2018
Final Inspection Date: April 18, 2018
Water System Cost: $255,800.00 (Phase 1)

The water systems have been constructed in accordance with the Department's standards and are in acceptable condition for dedication.

The Manager-Chief Engineer recommended that the Water Board accept these documents, subject to 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.

(Mr. Balog joined the meeting at 10:24 a.m.)

Mr. Inaba showed the location of this project on a map and informed the Board that Phase 2 of this project will be on next month's agenda. This is across from Kea'au High School.

ACTION: Motion was carried unanimously by voice vote.

B. **MATERIAL BID NO. 2018-03, FURNISHING AND DELIVERING PIPES, FITTINGS, WATER METERS, FIRE HYDRANTS, BRASS GOODS, VALVES, ELECTRICAL SUPPLIES, ELECTRICAL EQUIPMENT, SCADA, WATER QUALITY EQUIPMENT, CHLORINATORS, MOTORS, AND MISCELLANEOUS ITEMS FOR THE DEPARTMENT OF WATER SUPPLY STOCK**

Bids were opened on May 9, 2018, at 1:30 p.m.; and following are the bid results:

The contract period for all Parts is one year, from July 1, 2018, to June 30, 2019. All Parts are established price agreements for materials on an "As-Needed basis."

The Manager-Chief Engineer recommended that the Board award the contract to the following bidders for Material Bid No. 2018-03 on an as-needed basis, as listed below, and that either the Chairperson or the Vice-Chairperson be authorized to sign the contracts subject to review as to form and legality of the contracts by Corporation Counsel. The contract period shall be from July 1, 2018, to June 30, 2019.

PART NO.	DESCRIPTION	BIDDER	AMOUNT
1	DUCTILE IRON PIPE, PUSH-ON TYPE JOINT	Ferguson Enterprises, Inc.	$57,750.00

PART NO.	DESCRIPTION	BIDDER	AMOUNT
2	DUCTILE IRON FITTINGS	Ferguson Enterprises, Inc.	$54,243.90
3	DUCTILE IRON SOLID BODY SLEEVES	Pacific Pipe Co., Inc.	$31,705.80
4	FLANGE GASKETS	Ferguson Enterprises, Inc.	$6,460.22
5	NUTS, BOLTS, AND THREADED RODS	Fastenal Company	$38,729.68
6	COPPER TUBING	Pacific Pipe Co., Inc.	$70,507.70
7	GALVANIZED PIPES T&C (THREADED & COUPLED)	Ferguson Enterprises, Inc.	$18,067.50
9	METER BOXES	Ferguson Enterprises, Inc.	$48,300.00
10	METER COVERS	Ferguson Enterprises, Inc.	$3,425.00
11	AUTOMATIC METER READING UNIT	Ferguson Enterprises, Inc.	$56,100.00
12	5/8" WATER METERS	Ferguson Enterprises, Inc.	$95,382.00
13	NEPTUNE T-10 SERIES METER PARTS	Ferguson Enterprises, Inc.	$718.30
15	1"- 2" WATER METERS	Ferguson Enterprises, Inc.	$22,875.00
16	COMPOUND WATER METERS	Ferguson Enterprises, Inc.	$12,735.00
17	DETECTOR CHECK METERS	Ferguson Enterprises, Inc.	$6,600.00
18	FIRE SERVICE METERS	Ferguson Enterprises, Inc.	$40,000.00
19	FIRE HYDRANTS	Ferguson Enterprises, Inc.	$100,825.00
20	MUELLER FIRE HYDRANT PARTS	AP Water Supply, Inc., dba HIW Hawai'i	$5,249.65
21	MUELLER FIRE HYDRANT EXTENSION KITS	AP Water Supply, Inc., dba HIW Hawai'i	$5,127.00
22	AMERICAN DARLING FIRE HYDRANT PARTS	Ferguson Enterprises, Inc.	$9,000.00

PART NO.	DESCRIPTION	BIDDER	AMOUNT
23	AMERICAN DARLING FIRE HYDRANT EXTENSION KIT	Ferguson Enterprises, Inc.	$47,450.00
24	BALL METER VALVES	AP Water Supply, Inc., dba HIW Hawai‘i	$54,140.00
25	BALL VALVE, PACK JOINT X METER COUPLING / FIP	Ferguson Enterprises, Inc.	$38,180.00
26	COMPRESSION JOINT COUPLING	Ferguson Enterprises, Inc.	$5,800.00
27	METER FLANGE COUPLING	Ferguson Enterprises, Inc.	$4,150.00
28	PACK JOINT COUPLING	Ferguson Enterprises, Inc.	$40,811.00
29	CORPORATION AND CURB STOPS – BALL TYPE	Ferguson Enterprises, Inc.	$95,557.50
30	PRESSURE REGULATORS	Ferguson Enterprises, Inc.	$1,177.41
32	INVERTED MARKING PAINT	Fastenal Company	$8,276.00
33	AIR RELIEF VALVES	Ferguson Enterprises, Inc.	$24,875.00
34	SLOW CLOSING AIR/VACUUM VALVES	Ferguson Enterprises, Inc.	$146,981.72
35	SILENT CHECK VALVES	Engineered Systems, Inc.	$81,835.28
36	DUCKBILL CHECK VALVES	Ferguson Enterprises, Inc.	$109,597.75
38	GATE VALVES – 3” AND LARGER, 125# CLASS	AP Water Supply, Inc., dba HIW Hawai‘i	$34,486.00
39	GATE VALVES – 3” AND LARGER, 250# CLASS	Ferguson Enterprises, Inc.	$62,650.00
40	BUTTERFLY VALVES	AP Water Supply, Inc., dba HIW Hawai‘i	$10,524.00
41	AUTOMATIC CONTROL VALVES	Ferguson Enterprises, Inc.	$2,263,753.39
43	RESERVOIR LEVEL INDICATOR	TK Process Hawai‘i, LLC	$5,751.99
44	HATCH FRAMES AND COVERS	Ferguson Enterprises, Inc.	$27,850.00

PART NO.	DESCRIPTION	BIDDER	AMOUNT
45	ARC FLASH PPE – DAILY WEAR	Fastenal Company	$2,272.59
46	ARC FLASH PPE - SUPPLEMENTAL	OneSource Distributors, LLC	$17,925.00
47	ELECTRICAL GLOVES	OneSource Distributors, LLC	$1,232.00
48	DIGITAL MULTIMETER & TESTING	Graybar Electric Company, Inc.	$3,165.66
49	ELECTRICAL SAFETY EQUIPMENT	Graybar Electric Company, Inc.	$3,040.61
50	ELECTRICAL EQUIPMENT TESTING SERVICES	TK Process Hawai‘i, LLC	$3,754.05
51	ELECTRICAL TAPE	Graybar Electric Company, Inc.	$10,714.54
52	ELECTRICAL SPLICING AND TERMINATION	Graybar Electric Company, Inc.	$7,233.05
53	ELECTRICAL CONNECTORS & TERMINATIONS	Graybar Electric Company, Inc.	$4,918.50
54	INDUSTRIAL MOTOR LEAD CABLE	Graybar Electric Company, Inc.	$86,948.40
55	INDUSTRIAL CONTROL WIRING	Alpha Electric Supply Company	$4,473.00
56	JUNCTION BOXES & ENCLOSURES	Graybar Electric Company, Inc.	$78,029.70
57	HEAVY-DUTY SAFETY SWITCH	Wesco Distribution, Inc.	$52,667.81
58	SOLID STATE REDUCED VOLTAGE SOFT STARTER	TK Process Hawai‘i, LLC	$14,903.02
59	MAGNETIC CONTACTORS	TK Process Hawai‘i, LLC	$40,237.60
60	MEDIUM-VOLTAGE REDUCED VOLTAGE SOFT STARTER	TK Process Hawai‘i, LLC	$28,115.12
61	VARIABLE FREQUENCY DRIVES	TK Process Hawai‘i, LLC	$3,120,243.29
62	POWER QUALITY EQUIPMENT	TK Process Hawai‘i, LLC	$531,095.50

PART NO.	DESCRIPTION	BIDDER	AMOUNT
63	PAD-MOUNTED STEP-UP TRANSFORMER	Wesco Distribution, Inc.	$443,913.33
64	MOLDED CASE CIRCUIT BREAKERS	TK Process Hawai‘i, LLC	$92,513.48
65	SURGE PROTECTION DEVICES	TK Process Hawai‘i, LLC	$69,157.91
66A	POWER MONITORING EQUIPMENT	OneSource Distributors, LLC	$98,628.00
68	RETROFIT RTU PANEL	TK Process Hawai‘i, LLC	$16,200.00
69	PRE-FABRICATED SCADA SOLUTIONS	Control Systems West, Inc.	$2,392,495.29
70	AUTOMATION AND CONTROL COMPONENTS	Control Systems West, Inc.	$21,336.31
71	AUTOMATION SOFTWARE	SCADA & Control Systems, LLC	$297,224.64
72	PROGRAMMING SERVICES	SCADA & Control Systems, LLC	$1,275.00
73	UNINTERRUPTIBLE POWER SUPPLY (UPS)	Graybar Electric Company, Inc.	$3,101.05
74	UPS BATTERIES	TK Process Hawai‘i, LLC	$3,125.42
75	COMMUNICATION HARDWARE	TK Process Hawai‘i, LLC	$6,524.87
76	LEGACY RADIO EQUIPMENT	TK Process Hawai‘i, LLC	$11,578.93
77	LICENSED RADIO EQUIPMENT	TK Process Hawai‘i, LLC	$20,392.89
78	UNLICENSED RADIO EQUIPMENT	TK Process Hawai‘i, LLC	$3,661.60
79	WELL PRESSURE TRANSDUCER	TK Process Hawai‘i, LLC	$25,555.19
80	PRESSURE TRANSDUCER – RESERVOIR LEVEL	HD Supply Facilities Maintenance dba USABlueBook	$2,042.30
81	PRESSURE TRANSMITTER	HD Supply Facilities Maintenance dba USABlueBook	$2,192.20

PART NO.	DESCRIPTION	BIDDER	AMOUNT
82	FLOW SWITCH	TK Process Hawai‘i, LLC	$1,360.92
83	ZERO-CLEARANCE ELECTROMAGNETIC FLOW METERS	TK Process Hawai‘i, LLC	$481,186.40
84	BATTERY ELECTROMAGNETIC FLOW METERS	Ferguson Enterprises, Inc.	$291,155.00
86	REAGENTLESS CHLORINE RESIDUAL ANALYZER	OneSource Distributors, LLC	$36,468.00
87A	WATER QUALITY EQUIPMENT	HD Supply Facilities Maintenance dba USABlueBook	$66,554.45
88A	REAGENTS AND STANDARDS	HD Supply Facilities Maintenance dba USABlueBook.	$3,159.54
89	MULTISTAGE BOOSTER PUMPS	Engineered Systems, Inc.	$356,827.93
90	CHEMICAL FEEDER PUMP	HD Supply Facilities Maintenance dba USABlueBook.	$6,944.54
91	DIGITAL CHLORINE CYLIDER SCALE	HD Supply Facilities Maintenance dba USABlueBook.	$3,491.46
93	CHLORINE GAS FEEDER	OneSource Distributors, LLC	$18,358.00
95	MECHANICAL SEALS	Engineered Systems, Inc.	$94,773.56
97	LEAK NOISE DATA LOGGERS	TK Process Hawai‘i, LLC	$28,846.56
98	REMOTE PRESSURE MONITORING SYSTEM	Ferguson Enterprises, Inc.	$4,120.00
99	LIGHT EMITTING DIODE LUMINARIES	Alpha Electric Supply Company	$2,812.50
100	INDUSTRIAL LUBRICANTS	Big Island Energy, Co., LLC	$70,756.00

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

The Manager-Chief Engineer noted that two handouts were available today with more detailed information and showing who the other bidders were. One of the handouts is an example of how some of the bid amounts are calculated. It has come up in the past where some items looked like they were costing too much and this is being provided to help avoid confusion. The total is not what one particular valve costs. It is based on the estimated year's supply and the quantity associated with it.

In response to Mr. Elarionoff's question about Section 41 costing $2 million, Mr. Ikeda explained that Part No. 41, Automatic Control Valves, is similar to the example provided. For Part No. 61, Variable Frequency Drives, it shows over $3 million. It is made up of 42 items that, in total, sum up to the $3.1 million. For Item 41, he would expect the same thing--various types of valves, sizes, etc. Mr. Takamoto added there are 435 items in Section 41.

Mr. Elarionoff asked if these are things the Department solicits bids for to keep on stock.

The Manager-Chief Engineer replied that was correct. It is on an as-needed basis. Example; the Department needs a 4-inch Cla Valve. Instead of having to go through the procurement for that particular valve at that particular moment, the Department does this big bid so that when it is awarded by the Board and the Department needs that one valve, it would use this contract to order it.

Mr. Scicchitano asked if that meant the Department may not reach the maximum limit.

The Manager-Chief Engineer replied that was correct. Basically, it is the Department's way to make purchasing throughout the year more efficient.

Mr. Sugai asked if that means the vendor is required to have the items in stock.

Mr. Ikeda stated that they are not expected to have everything in stock. The larger items need to be ordered and may take several months to come in.

The Manager-Chief Engineer gave an example of certain flow meters when even the manufacturersdo not have them on the shelf. They have to manufacture it when the order is placed.

Mr. De Luz asked if this allows the Department to lock them in on the pricing for the

items for the contract period without having to pre-purchase it.

The Manager-Chief Engineer replied that was correct.

ACTION: Motion was carried unanimously by voice vote.

C. **MATERIAL BID NO. 2018-06, FURNISH BASE COURSE, SAND, COLD MIX, HOT MIX, AND NUMBER 3F ROCK TO THE DEPARTMENT OF WATER SUPPLY**

Bids were opened on May 10, 2018, at 1:30 p.m.; and the bid results were shown in the Agenda.

The Manager-Chief Engineer recommended that the Board award the contract for Material Bid No. 2018-06 by Parts to the following for the amounts shown above, **with the exception of District II, Items 2A through 2D**, and that either the Chairperson or the Vice-Chairperson be authorized to sign the contracts, subject to review as to form and legality of the contracts by Corporation Counsel:
District I – Parts 1A, 1B, 1C, and 1G to Puna Rock Company, Limited
Parts 1D, 1E, 1F, and 1H to Jas. W. Glover, Ltd.
Part 2E to WHC, Ltd. dba West Hawai‘i Concrete
District III – Parts 3A, 3B, and 3E to WHC, Ltd. dba West Hawai‘i Concrete
Parts 3F and 3G to Grace Pacific, LLC.

MOTION: Mr. Boswell moved for approval of the recommendation.

The Manager-Chief Engineer clarified (not included in the recommendation) this is also for the contract period of July 1, 2018, through June 30, 2019.

Mr. Domingo noticed that for Item 1G, two bid prices are very close, at around $50.00; however, this bid from Puna Rock Company is fifty percent lower than the other bids, at $22.40.

Mr. Ikeda stated that he contacted Puna Rock Company to make sure their bid was correct, and they acknowledged it was.

ACTION: Motion was carried unanimously by voice vote.

D. **GASOLINE BID NO. 2018-07, FURNISHING AND DELIVERING GASOLINE AND DIESEL TO THE DEPARTMENT OF WATER SUPPLY**

Bids were opened on May 10, 2018, at 2:00 p.m.; and following are the bid results:

Part "A"	**Hilo Baseyard**	Aloha Petroleum LLC	Big Island Energy Co., LLC dba Akana Petroleum	Hawai'i Petroleum Inc.
1.	Unleaded Gasoline (delivered gallon price) *Estimated 50,000 gallons/year **x** 2 years*	$2.7080/gals. = $270,800.00	$2.86/gal. = $286,000.00	Non-Responsive
Part "B"	**Kona Baseyard**			
1.	Unleaded Gasoline (delivered gallon price) *Estimated 25,000 gallons/year **x** 2 years*	$2.8434/gal. = $142,170.00	$2.93/gal. = $146,500.00	Non-Responsive
2.	Low-Sulfur Diesel (delivered gallon price) *Estimated 2,000 gallons/year **x** 2 years*	No Bid	$3.24/gal. = $12,960.00	Non-Responsive
Part "C"	**Waimea Baseyard**			
1.	Unleaded Gasoline (delivered gallon price) *Estimated 25,000 gallons/year **x** 2 years*	$2.8226/gal. = $141,130.00	$2.93/gal. = $146,500.00	Non-Responsive

The Manager-Chief Engineer recommended that the Board award the contract for Gasoline Bid No. 2018-07 for Parts A1, B1, and C1 to Aloha Petroleum, LLC; and Part B2 to Big Island Energy Co., LLC, at the bid prices listed above and that either the Chairperson or the Vice-Chairperson be authorized to sign the contracts, subject to review as to form and legality of the contracts by Corporation Counsel. The **correct**

contract period shall be from July 1, 2018, to June 30, 2020.

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

Mr. Balog asked if fuel costs rise, was there a factor in the contract to allow for it.

Mr. Ikeda replied that there is an escalation clause in the contract where the vendor can supply proof if the oil prices went up, and they would be allowed to raise their price; the same going for lowering the price.

ACTION: Motion was carried unanimously by voice vote.

E. **SERVICE BID NO. 2018-11, HAUL AND DELIVER ONE-TON CHLORINE CYLINDERS AND 150-LB. CHLORINE CYLINDERS TO VARIOUS LOCATIONS ISLANDWIDE (ON AN AS-NEEDED BASIS)**

Bid opening was May 17, 2018, at 2:00 p.m. No responsive, responsible bids were received. Staff will seek alternate methods of procurement per Hawai‘i Administrative Rules Section 3-122-35(b) in accordance with procurement rules.

F. **MONTHLY PROGRESS REPORT**

Mr. Scicchitano asked at what point do projects drop off the list.

Mr. Inaba replied it would be after final payment is made.

Mr. Scicchitano stated it might be helpful to see those completed projects in a report.

The Manager-Chief Engineer stated staff would try to report on it, perhaps at fiscal-year end. He added that sometimes the project may be done but the Department is waiting for closing documents.

Mr. Balog asked if the Department is expecting the Waikoloa Reservoir project to bid next month. The report indicates second quarter.

Mr. Inaba replied the Department is still shooting for that time period.

Mr. Domingo noted that the Arc Flash Study indicates 90% complete. He asked if the

Board would we be able to see the report.

The Manager-Chief Engineer replied the Board would be able to see the report.

Mr. Inaba added that the Department is planning to have the contractor come to the next Water Board meeting to do a presentation.

Chairperson Takamine noted that since the Waimea Water Treatment Plant project is being wrapped up, perhaps the Board can look ahead to its next Kona meeting and schedule a site visit before or after the meeting on that day. The next meeting in Kona will be August 28, 2018.

G. REVIEW OF MONTHLY FINANCIAL STATEMENTS

Mr. Elarionoff asked why, on Page FS2, Total Assets and Total Liabilities and Equity, for 2017 were off by $1.00.

Mr. Sumada explained it is because of the formulas in the spreadsheet.

Mr. De Luz asked for an explanation of Deferred Outflow.

Mr. Sumada replied that the deferred account was created specifically for the pension accounts that was required of the Department about three years ago. Basically, it is to capture monies that the Department is going to have to pay in the future. It is an outflow of resources that is expected to occur; but because it has not gone out, it is classified as an asset.

Mr. De Luz noted that it is similar to accrued prepaid to some degree.

Mr. Sumada replied that was correct.

Mr. Domingo stated he was trying to understand the Income Statement and the Total Operating Revenues and Total Operating Expenses. He asked if it meant you subtract revenue from the expenses, resulting in the operating account.

Mr. Sumada replied that the confusion may be because the negative $2.4 million is titled operating income, but it is not income. It is an operating loss. That would have been a better term.

Chairperson Takamine asked where water usage was in this report.

Mr. Sumada noted that consumption is shown on Page FS2, last paragraph. Consumption July through April is at $7.5 million. He noted it is still lagging.

Mr. De Luz asked if depreciation is more of a cost depreciation of the assets.

Mr. Sumada replied it is non-cash.

Mr. De Luz asked if it has a summary of replacement costs because it could be a potential future liability under replacement costs.

Mr. Sumada replied that the Department is not tracking replacement costs.

Mr. De Luz stated that the only reason he was looking at the assets would be for what is critical with regards to lifespan. His gut feeling is that even with a rate increase, the reserves are not sufficient for eventual replacement of some of the major assets. One of the challenges with depreciation is it does not necessarily reflect operating performance other than profit. There is no tax consequence. He thinks it would be interesting when the Department does its inventory asset review, to do a reserve study to see what critical assets may need replacing, looking five to fifteen years down the road. He thought of it as a shortfall when looking at this, not realizing the potential lack of capacity or reserves the Department is maintaining. He just went through a reserve study and it is almost impossible to be able to achieve the necessary reserves, but he thinks when reality sets in to the policy makers as well, to understand if something is not done now, down the road it will be a bad situation.

The Manager-Chief Engineer stated that is something the Department needs to get a better handle on. Some people call it asset management. That, plus Mr. Sumada's reporting will probably need to be blended together.

H. MANAGER-CHIEF ENGINEER'S REPORT

1) North Kona Wells – the Manager-Chief Engineer reported that on May 9, the Palani Well went down. The equipment will be torn down, inspected, and a report generated on the cause of the failure. This needs to be thoroughly looked over to see why it failed prematurely. There were temperature sensors installed but there was no indication that anything was going wrong. Mr. Takamoto stated that the contractor is currently working on the ʻŌlaʻa No. 6 project; and once completed, they will move over to this well. Mr. Young noted that everything looked normal until it failed. Hawaiʻi Electric Light Company's initial data showed nothing unusual, but their report is expected soon. The

Manager-Chief Engineer noted that motor megged zero, so it is not operational. Mr. Balog stated he would be curious to see how many line shafts the Department has that failed versus submersible. He wondered if would be possible to change the type. The Manager-Chief Engineer noted the Department's preference would be line shaft, if that configuration can be implemented. The criteria are depth of the well and alignment or plumbness of the casing. This one is beyond anything the Department could have a line shaft for. The most shallow, high-level well the Department has is Hualālai and for that one, the Department is contemplating doing the gyroscopic survey to see if there is a possibility of converting it to line shaft. Because of the need to get the wells up and running, that has not been done yet. Chairperson Takamine stated he would be hesitant to put anything else down the Palani Well until finding out what happened. In response to Mr. Boswell's question on whether there were any Brown and Caldwell recommendations on this Palani Well, Mr. Inaba replied they did look at a different set up regarding voltage. They will want to know what happened with this well. The Manager-Chief Engineer stated the Department would like them to take a close look at this one so it may come back before the Board for additional funding. If he had heard the Chair correctly, he would like to have the third party look through all the components from topside down to the motor down the hole. Chairperson Takamine stated that he would like to see them onsite to do an analysis on the hole, the gyroscopic test and all of that; and if there is something that could be more accurately besides that, to look at all options. Mr. Domingo wondered whether the Department could consult with an expert who perhaps has a very deep-configured well and look at all the challenges being discussed such as casing diameter, depth, flow, overheating motor, line shaft, stresses on the shaft, etc. Chairperson Takamine mentioned the third party coming in will be investigating all those factors. The Manager-Chief Engineer noted that the third party will indeed look at everything; and even though the Department would prefer to have slim line units, that is not always possible, especially in these deep wells. One positive is that the Makalei Estates Well is now operating and putting water into the Department's system; there are now 14 sources in the system of which ten are operational. In response to Mr. Elarionoff's question about the public relations with the residents in Kona, he replied it has been okay. Mr. Dible has been covering this for a while and has been giving factual reports. The Department is on its way in doing better, having gone through the Permitted Interaction Group and solutions that have yet to be implemented. He is confident it will put the Department in a better position. The community has been following the 10% water conservation notice. Mr. Inaba added that after the water restriction last year, some residents have found and repaired leaks on their property, which may add to the decrease in consumption, and they may have fine-tuned their irrigation systems. Mr. Sugai noted it has been raining more and some of his irrigation systems have been turned off. Mr. De Luz asked if it was possible to get a bit more demographic specifics; for example, a survey on how people feel about getting

information on a timely basis. He thought one of the challenges is people are very reactionary when they assume they have the entitled right to have water come out of their faucet when they turn it on, which is a predicament that creates issues when there is an interruption in service. For himself, if he can get information up front, at least he may not have to call to get the same answer. That might be a good opportunity to gather that information. The Manager-Chief Engineer stated that Ms. Kushi is helping with the various types of communications such as social media, email, etc., and trying to see what fits best with the Department. The Department probably will take a survey on it. The other thing to clarify, and he expressed his appreciation to Mr. Ikeda and his staff, is when the five wells were down, nobody had interruption in service. There were some glitches but not related to the failures. It was a result of the Kahaluʻu system when one of the low-level monitor alarms did not go off. Through this whole event with the Department's staff working hard and the community doing their part, everybody still had water. Mr. Domingo stated he did not want to sound like a pessimist but asked if the Department has a contingency plan if other wells that the Department has fixed go down. The Manager-Chief Engineer stated there are contingency plans. Mr. Young and Mr. Takamoto are working on their spare pump and motor priority list. Mr. Inaba is working on the Waiʻaha transmission and additional wells, but this will take time. It is not going to happen quickly. Right now, the focus is on putting in the hole what is thought will bring the most success and making sure the spare pumps and motors procurement is continuing. Mr. Domingo stated that the Permitted Interaction Group should take a hard look at this and come up with sensible, viable, full proof solutions very soon. Chairperson Takamine added that if the Department had all the money in the world, it could probably do more. Mr. De Luz stated that when you look at the budget, and now with what is going on with Puna Geothermal, Hawaiʻi Electric Light Company is losing one of its options and may be relying more on oil generation in the near future. He asked if the Department is anticipating what the energy cost is going to be. He has a feeling it would be a 10-15% increase with the volatility in oil prices in the market. The Manager-Chief Engineer stated that to comment on that would be outside his comfort level. Mr. De Luz stated that distribution is the biggest expense and the Department is at the mercy of a third party and the delivery of that energy. Consumers will need to have an appreciation that this is all going to come at a cost. He personally expects his utility bill to go up 10-15% in the next 90 days.

2) Hawaiian Ocean View Estates Well – Mr. Young recapped that the well failed in November of 2017 and was subsequently repaired in February of this year. An attempt to put it online failed during start up. All indications are the problem is down hole. The pump and motor were pulled in March. It was verified that the motor megged zero. There was a short circuit in the motor and it had to go back to the factory. On April 24, the manufacturer commenced tear down. The Department received the formal report and

they have indicated it would be covered under warranty. They have begun repair process on the motor and hope to have it done by end of this month, ship it back, and the Department expects to have it back online the end of June or early July. Mr. Boswell commented that they sent a pump that was never going to work straight out of the factory and then it got put down the hole. Mr. Young stated that the failure was where the motor leads connect to the internal motor. In response to Mr. Elarionoff's question of who eats the expense of pulling it out and dropping it back down the hole, the Manager-Chief Engineer replied that is something the Department is working through because it was not explicit in the contract. The challenge is that, with the spare pump and motor situation, the Department has them procured under a material bid; and when the need arises to place it in a well, the Department has to find a contractor to put it in. It is not their fault that it did not work. Pulling out the old one and putting in the new one is the extent of their contract. It failed under warranty, but there is the additional cost to push/pull it again. In that case, the Department has to bear the cost. The Department is now talking with Corporation Counsel to see how it can be made clearer in the material bid that if the unit fails, the manufacturer is going to have to cover the cost for the labor. Mr. Boswell noted that will reflect in the pricing. The Manager-Chief Engineer stated that you may see them do a few more double checks to make sure the equipment is working before shipping it out. Mr. Boswell mentioned setting the parameters for it not performing. It has got to be within the sealed unit and not within the installation method. The Manager-Chief Engineer agreed. It is not going to be foolproof, but the Department will try to put language in there as best as it can.

3) East Rift Zone Lava Eruption Update – the Manager-Chief Engineer reported that since the eruption began, he and the Deputy have been at the Emergency Operations Center every day at the 7:00 a.m. briefings, with support from Mr. Ikeda, Mr. Inaba, and Ms. Kushi. It is a constantly changing, evolving event. The Department has a waterline in the area. From the Pāhoa System, it feeds down to Pohoiki, Lanipuna Gardens, Kapoho Vacationland, and Kapoho Beach Lots. Early on, one of the fissures damaged that waterline. The Department was able to run a bypass line, hydrant to hydrant, of 2-inch Drisco line to at least get water down to those areas. That bypass line lasted until Friday of last week when lava covered the area. Right now, the Department has no means of getting water to those lower areas. There are water tankers down in the Vacationland and Beach Lots area, and the Department is currently working on an old Kapoho Well at Green Lake which has not been in use for over 25 years because of high chlorides. The Department will try to put in a pump and motor to push water from that well up to the Green Lake Tank that could feed the makai areas. Also being looked at is running Drisco pipe down Highway 132 but that would be 4½ miles and nobody has that pipe in stock. It would take two months to manufacture and ship and would take some time to install. The concern is not knowing how long this will go on and where new

fissures might open up. Gas levels and safety of personnel are a concern as well. Personnel go out in teams of two and have constant communication. Protocol is to check in at the Incident Command Center to maintain information on who is being sent into the area. Mr. De Luz did not mean any insensitivity when he asked about possible modifications to the budget for this emergency. The Manager-Chief Engineer replied it is not likely. The Department has enough contingency to cover. Right now, the cost is not that high. The replacement pump is $35,000.00 and the highest cost would be laying that pipe. However, that will not be done if there is a risk that fissures could cross it. In response to Mr. Elarionoff's question of whether laying pipe would be cheaper than having a water truck, Mr. Ikeda replied that the pipe would cost about $130,000.00. Mr. Elarionoff was asked if he meant hauling water to the tank, and he confirmed that. Mr. Inaba stated that even with a water hauling truck, it could not get to the tank because of the condition of the unpaved road. Mr. Domingo asked where the funding for this related work would come from. The Manager-Chief Engineer noted it comes from Capital Improvement Project reserves. Mr. Domingo asked if that is all that would be used or if there are outside sources. The Manager-Chief Engineer replied there are hopes that the Federal Emergency Management Agency (FEMA) can reimburse costs, if they consider it a reimbursable expense. The same happened for the earthquake of 2006. The Department will keep records of its expenditures. Mr. Balog thought that perhaps a less permanent solution should be looked at, such as fixing the road for the water haulers to get to the tank instead of putting a pump and motor in a well and if something happens closer to Kapoho, that pump and motor would be lost. Nobody knows what direction the lava is going in. In the long run, it may save the Department money. The Manager-Chief Engineer replied that all options would be looked at.

I. CHAIRPERSON'S REPORT

1) Chairperson Takamine mentioned that he had run into some past Board Members from years back and they mentioned when they were on the Board, there was not much activity and wondered why all this activity is going on. He said his thoughts were that we have just reached a rough spot and part of it is bad luck; but we have to look at the bright side and take away from this the improvements that have been made within the Department. In his last year on the Board, he is motivated to do whatever he can to help the Department. He thanked management and staff for their hard work and long hours and hopes when he leaves, the newer members will be trending into a more positive time and joked that they can blame him for all of the problems. But in the end, he hopes the Department will come out stronger and better.

2) Chairperson Takamine followed up on the final report of the North Kona Permitted Interaction Group and asked for the Board's comments.

Mr. Elarionoff commented that the way he looks at it, this is a good report; but by the

same token, until you get the equipment out of the hole and find out the reason for the failures, there is nothing you can do. You can only guess at it. We need an analyst from whomever takes it apart and looks at it.

Mr. Sugai asked what the cost difference would be between drilling two smaller wells as opposed to one large one.

The Manager-Chief Engineer replied it would probably be more than double the cost. It is not directly proportionate. The factors going in is you have to space them far enough apart so they do not influence each other if they are both pumping at the same time. Therefore, you have to acquire bigger property or two properties instead of one and then they are probably going to pump into the same tank so you would need easements from both wells going into that one tank. That means more infrastructure for the lines, starting equipment, etc., which is going to be more than double the cost of putting a single 1,400 gpm (gallons per minute) well instead of two 700 gpm. The evaluation has not been done on it yet.

Mr. Domingo stated that one of the advantages of the two-hole system is they complement each other. If one is down, the other will take over. It would also make it easier with storage pumps.

The Manager-Chief Engineer stated we would probably want to run two at the same time because otherwise, we would have to drill twice as many wells to have standby. Mr. Boswell stated that was the idea--smaller pumps but still two running at the same time. Less electrical demand.

The Manager-Chief Engineer stated we will have better flexibility if we have enough of them. Hopefully, we can take some out of service proactively in advance of failure rather than react. Those are values that are hard to quantify at this point but there is value to fixing before breakage.

Chairperson Takamine stated he was in favor if the mid-level source proves to be positive. He thinks it would probably be the best way to go because you are not pumping from very deep so that is a more attractive solution.

Mr. Boswell stated it also involves going into the line shaft.

Mr. Domingo suggested seeing which one worked best and leave no stones unturned. Mr. De Luz stated that just looking at it from a lay person, this is what he got out of it. An in-depth and ongoing process is in place to look at the current resources and looking

to see how the resources can be prioritized as to either keeping it in service or enhancing service; looking at processes in equipment and including the monitoring of all the wells and then looking at how to not only currently, but for future, to create some kind of redundancy within that capacity. The devil is in the details. By no means, the implementation is going to be the tough part about this. He sees this as a 10-year plan. This is a massive undertaking. It is almost like redefining the system. It took a lot of fortitude in identifying what the issues were and the sad reality is even after having the redundancy of extra pumps, it is not the cure-all that most people think it would be.

The Manager-Chief Engineer agreed. He hopes to some way communicate to the general public that this is a good foundation and a basis to move it forward. The Department will continue to be better and communication is the key.

Mr. Domingo stated there is also the economic aspect. We might spend a lot of money make the system practically fail proof but to spend in exchange for that, a lot of money is going into it so you have to balance it.

VIII. ANNOUNCEMENTS

1) Next Meeting: The next meeting of the Water Board will be June 26, 2018, 10:00 a.m., at the Department of Water Supply, Hilo Operations Conference Room, 889 Leilani Street, Hilo, Hawai‘i
2) The following meeting of the Water Board will be July 24, 2018, 10:00 a.m., at the Department of Water Supply, Hilo Operations Conference Room, 889 Leilani Street, Hilo, Hawai‘i

IX. ADJOURNMENT

ACTION: Mr. Boswell moved for adjournment; seconded by Mr. Balog. Meeting adjourned at 11:38 a.m.

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Recording Secretary