MINUTES

DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAIʻI
WATER BOARD MEETING

Waimea Community Center, 65-1260 Kawaihae Road, Kamuela, Hawaiʻi
Site Visit: Waimea Water Treatment Plant

February 25, 2025

MEMBERS PRESENT:
Mr. Stephen Kawena Lopez, Chairperson, Dist. 8
Mr. Michael Pono Kekela, Vice-Chairperson, Dist. 4
Mr. Michael Bell, Water Board Member, Dist. 7
Mr. Benjamin Ney, Water Board Member, Dist. 9
Ms. Emily Taaroa, Water Board Member, Dist. 5
Mr. Keith Unger, Water Board Member, Dist. 6
Mr. Keith K. Okamoto, Manager-Chief Engineer, Department of Water Supply (ex-officio member)

ABSENT:
Mr. James Kimo Lee, Water Board Member, Dist. 2
Director, Planning Department (ex-officio member)
Director, Department of Public Works (ex-officio member)

OTHERS PRESENT:
Ms. Diana Mellon-Lacey, Deputy Corporation Counsel
Mr. Ippy Aiona, guest
Dr. Jeff Zimpfer, NPS guest

DEPARTMENT OF WATER SUPPLY STAFF:

Mr. Kawika Uyehara, Deputy
Mr. Kurt Inaba, Engineering Division Head
Ms. Candace Gray, Waterworks Controller
Mr. Gregory Goodale, Chief of Operations
Mr. Alvin Inouye, Water Operations Superintendent
Mr. Warren Ching, Energy Management Analyst
Ms. Shari Uyeno, Civil Engineer V
Mr. Samuel Adler, Mechanical Engineer I
Ms. Kaʻiulani Matsumoto, Private Secretary
Ms. Nora Avenue, Recording Secretary

1) **CALL TO ORDER** – Chair Lopez called the meeting to order at 10:01 a.m. Seven Board Members were present: Ms. Taaora; and Messrs. Bell, Kekela, Lee, Ney, Unger, and Chair Lopez).

2) **STATEMENTS FROM THE PUBLIC** – Pursuant to HRS §92-3, oral testimony may be provided entirely at the beginning of the meeting or immediately preceding the agenda item. There were no statements from the public at this time.

(There were none.)

3) APPROVAL OF MINUTES:

Minutes of January 28, 2025, Public Hearing on the Power Cost Charge:

ACTION: Mr. Ney moved for approval of the Minutes of January 28, 2025, Public Hearing on the Power Cost Charge, seconded by Mr. Unger and carried unanimously by voice vote (Ayes: 6 – Ms. Taaroa, and Messrs. Bell, Kekela, Unger, Ney, and Chair Lopez.)

Minutes of January 28, 2025, Water Board Meeting:

ACTION: Mr. Unger moved for approval of the Minutes of the Water Board Meeting, seconded by Mr. Kekela and carried unanimously by voice vote (Ayes: 6 – Ms. Taaroa, and Messrs. Bell, Kekela, Unger, Ney, and Chair Lopez.)

4) APPROVAL OF ADDENDUM AND/OR SUPPLEMENTAL AGENDA – None.

5) MISCELLANEOUS:

Chair Lopez asked if there was any testimony for this item. There being none, he continued with the agenda item.

A. JOB NO. 2023-1233, EMERGENCY POWER TRANSFER SWITCHES AT ʻŌLAʻA #3, ʻŌLAʻA #4, PIʻIHONUA #1, and PIʻIHONUA #3:

Chair: Is there any testimony for this item?

This project consists of furnishing and installing power transfer switches, conduit, conductors, supports, accessories, and incidentals, in accordance with the plans and specifications.

Bids for this project were opened on February 6, 2025, at 2:00 p.m., and the following are the bid results:

Bidder	Bid Amount
Jas. W. Glover, Ltd.	$1,227,000.00
Wasa Electrical Services, Inc.	$838,105.00

Project Costs:

1)	Low Bidder (Wasa Electrical Services, Inc.)	$ 838,105.00
2)	Contingencies (~10.0%)	$ 83,795.00
	Total Cost:	**$ 921,900.00**

Funding for this project will be from DWS's CIP Budget and the Housing and Urban Development, Community Development Block Grant - Hazard Mitigation. The contractor will have 510 calendar days to complete this project. The Engineering estimate for this project was $775,000.00.

RECOMMENDATION: It is recommended that the Board award the contract for JOB NO. 2023-1233, EMERGENCY POWER TRANSFER SWITCHES AT ʻŌLAʻA #3, ʻŌLAʻA #4, PIʻIHONUA #1, AND PIʻIHONUA #3, to the lowest responsible bidder, Wasa Electrical Services, Inc., for their bid amount of $838,105.00, plus $83,795.00 for contingencies, for a total contract amount of $921,900.00. 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.in July

CHR.LOPEZ: Do I hear a motion to approve?

MOTION: Mr. Kekela moved for approval of the recommendation; seconded by Mr. Ney.

CHR.LOPEZ: Discussion?

MR. OKAMOTO: Yes, Mr. Chair. This project is another great example of the department's efforts to leverage federal funding for Hazard Mitigation and improve the department's resiliency during long-term power outages. This is a 75/25% split?

MR. CHING: This one is 100% up to $835,000. Part of that was already used on the consultant to do the design drawings.

MR. OKAMOTO: If there are any other technical questions, that's why Warren is here.

CHR.LOPEZ: So if we're on the hook for $3,105.

MR. OKAMOTO: A little more.

CHR.LOPEZ: Oh, it was a contingency.

MR. OKAMOTO: And the consultant fee, but it's a great deal regardless.

CHR.LOPEZ: Any other discussion? (none) All in favor say "aye."

ACTION: Motion was carried unanimously by voice vote (Ayes: 6 - Ms. Taaora; and Messrs. Bell, Kekela, Ney, Unger, and Chair Lopez).

B. DISCUSSION OF EFFECTIVE UTILITY MANAGEMENT ROADMAP

Chair Lopez asked if there was any testimony for this item. There being none, he continued with the agenda item.

CHR.LOPEZ: So at our last Board meeting we had a discussion of ideas for blending into goals and expectations for the purpose of improvement and review. We all took home the homework to review this 80-page document; it was sent to you. Do I hear any inputs? So all of you did review? All right, I did. I did my homework. It was really, really tough to go through this thing. First of all, it's difficult to understand how to read it and how to process this. There are 10 different categories, and each one of those categories is broken down into its various component parts, and then there are characteristics on how you would measure performance within that, 1 or 2 to 10 or fifteen.

Keep in mind that I have a background as a Six Sigma Process Improvement, so I started going through this and that's probably and that's what motivated me to bring this up . This is a good document, and I started checking, checking, and checking, and pretty soon I found myself there is no way that we can put this on the department, which is way too much in total practice. I thought if all nine members came up with two ideas that would lend themselves to a measurement that we could ask the department to address in performance, I mean that's 18. Lack of any other inputs I threw all that out actually, then after going through this I sat down, and after reading all of this, here's some that I have put down, and it's still too

many. I don't want to dominate this. It's really got to be the Board. This is the board that's setting the parameters for improvement expectations of the Water Department; it's not Kawena. I really do need your participation in this if we were to do it otherwise we'll just go on limping the way we are.

So here are some ideas and that's all they are. The Kona wells, we've been hearing for three years I've been on the Board that we have 14 Kona wells and anywhere from 10 to 12—10 or so are operating, 10 or 11 sometimes, and we never get above that threshold over the years, and there are reasons for it. Maybe we could dive deeper into what the reasons are by mitigating this. So I suggest of the 14 wells maybe by the end of the year we have 12 in operation, which shows the measure of accomplishment,

Reduce delinquent accounts, not the account numbers but the value, like 20% that have done something to help with the problem we've been going through for a long time on this delinquency thing.

Complete the Disaster Recovery Plan for IT. When we went through that process, there were still some holes out there that are being worked on, well I think the Board should know what is being done to take care of those things.

This comes from an aspect of my career examples that was a real drive to talk to the real experts, and to me the real experts are the people out there doing their jobs: the engineers, the accountants, the meter readers, and they are the ones that are the experts.

Maybe there should be a suggestion box with some kind of reward and incentive for people to just submit a suggestion. In my area, I see this as a possibility, but we have to really not just accept the recommendations, we got to have a process to do it, actually look at it; accept or deny, or table, whatever it may be. An internal newsletter, "What's Up? What's going on with the department? " Awards perhaps, a recognition, and maybe we're already doing that, and as a Board member I'm just ignorant out there. So if I am ignorant, then that says you're not doing a job communicating. So, that's an idea.

How about sponsoring an intern program with the University of Hawai'i, or even the high school? The university, perhaps potential engineering candidate, people that are interested in water, Water Distribution Systems, Water Management. I wouldn't see it as a forte, but as a cooperation with the university where maybe they earn credit for coming onsite, on the job, tagging along with Kurt, tagging along with Greg or their staff, learning what it's all about; and even stretch it out to accounting or meter reading, just get these young people involved in understanding how this department operate and maybe getting their interest.

For me, driving a one water consortium with other departments in the County. One water being wastewater, a reclamation, Water Supply, and probably more than two others. But it's a big topic in the state and national level. It's been picked up; I think O'ahu is doing it. I don't know another county in Hawai'i, but it's nationwide. There is one water initiative, where instead of these silo departments, they come together and discuss the subject of water, and all those parts and components. I think we need to get somebody that has traction if we're serious, about where we need the global discussion. We're serious about one water, and I think this department is in a position to bring those people together and at least begin the conversation. Whether you get them to sign up or not is a whole other thing. That's an item.

How about a web presence of community interest and impact. So right now we have, and I know it's true in West Hawai'i, we have a group of people and it's kind of like their own water mindset. They've got a lot of input, and they've got ideas. They also got complaints, and they don't always present them in the best format for us to listen to them. But perhaps giving those bodies, whether there's others in other part of the County, giving them a place where they can learn what's going on at the department, offer some

inputs to us, because right now it's very different. They've been invited to the meetings, and they haven't come, shame on them. I know it's happening, and they're not going to go away.

Lastly, complete the Five-Year Business and Strategic Plan. So that's what I have for 2025, and it's a lot. I would suggest, as an example, maybe we take two, three or four of these, whatever the high priorities are, and that's up to the Board to determine. So that's my input on moving towards sustainability, as part of the discussion of the Business Strategic Plan. The department took the ownership to, within three months, to have a consultant or retain a consultant, bring him on board to develop that long-term Five-Year Plan, which is somewhat independent but it's wrapped up in discussion. So, anybody else?

MR. NEY: Just on that note too, I think I might be a benefit to—that Keith and the department look at areas of efficiency in what they need. I mean I know like when we came up with recruitment issues, creating different positions. But I'd like to get some feedback I guess from them on what's the areas that they want to put some of the resources and energy into. I looked this over, and you know it's good to ask a lot of different questions and things to think about, but it's very broad. I'd like to kind of have you guys outline what areas you would like to maybe focus on also with that plan.

MR. OKAMOTO: Maybe just a few comments, Mr. Chair. Thanks for going through it, that's a lot of homework you did; and thanks for that list, I think I counted about 10 items on that list.

We did have discussions with some folks on next steps, hiring a professional consultant to assist us with strategic planning, and it is quite a significant lift, but I think it's worth doing because the last time we went through a real formal process was over 20 years ago, so it's long overdue and it will involve Board input. I think some of the information about getting some of these details to the Board will come out of that process because that's what happened the last time.

This document is something that's being used nationwide by water and wastewater utilities, Effective Utility Management. We're trying to find a consultant who will incorporate this framework into that Strategic and Business Plan because it all kind of goes together. I think at that point you'll be able to see some of the details on our operations. It's just been updated, I think it was August of last year, so this version that was provided to you was 2017, so they just did an update nationally in August 2024. It's basically the same thing. They might have used slightly different terms; it's still 10 attributes. It's being utilized nationwide by both small to large water utilities, so it's proven to be a real good framework for our business to measure how well we're doing.

So I think that's our plan, we're going to hire that consultant, and we'll go through the scoping process. At some point in the next couple of months, we'll probably bring him before you folks to explain what they're thinking of and how many interactions it will take with the Board and with our leaders within our department as well as staff to develop this long-term Strategic and Business Plan. You folks will all be part of it. This is going to be what I foresee is really our roadmap for the next 5, 10, 20 years, with specifics that we've all kind of collaborated and come up with to move this department forward, so that's what we're looking at.

Mr. Chair, you gave us a good start with the specifics. We can work on this regardless of that effort. But if anybody has any other specific task that you'd like to see us make improvements on, send it through the Chair and we can put it on another agenda, and then that way we can have it transparent for everybody to—that the public is aware that this is what the Board and the Department will be looking at improvements on. I don't know, that's just my thoughts right now.

CHR.LOPEZ: Very good.

MR. UNGER: Have you picked up a consultant?

MR. OKAMOTO: Not yet, we are having discussions. We're trying to see who might have experience in doing this kind of stuff. There's a Professional Services Procurement process that we need to follow. Once we can figure out where this fits in those professional services—there are different service types I guess that people have to submit their statement of qualifications; so once we get through that process, then we'll be able to move forward.

MS. MELLON-LACEY: I was just going to say notwithstanding all the issues going on in the Federal Government, historically the Federal Government agencies have been going to provide a lot of consultant services for free, and I'm wondering if the EPA (Environmental Protection Agency) human resources since this is their document.

MR. OKAMOTO: The EPA worked with pretty much a committee to develop this guideline, and the committee was made up of various folks from different utilities across the nation, both small and large utilities; but as far as we know, they put out resources like this for utilities to use free of charge, but to get into each utility specifics, we kind of got to do it on our own.

MR. UNGER: I think my question was parallel to that because I was just concerned about the cost of hiring. I think members of the public always cringe when they see a consultant who's hired to start a plan and stage of a planning to plan a plan, and we're talking about $300,000, to $400,000, to $500,000, I don't think we need to be there. And then another question, do you have anything allocated in the budget to hire a consultant to help us with this?

MR. OKAMOTO: Yes, we do. We always put aside money for contractual services. This one I really feel—because we've done it 20 years ago, and it did develop a useful roadmap for us to follow. I think it's worth the investment to update it because if any government entity should operate with a strategic and business plan, it's a water utility. I hear you. We don't want to study to give us a document that sits on a shelf, that's for sure. So the last one we did actually had specific action items that they call "tactics," that gave us measurables, you know, we got it done, we could check it off.

MR. UNGER: It sounds like you were part of that.

MR. OKAMOTO: Oh yes, some of us who were here long enough.

MR. UNGER: So actually that's going to help because you're not starting from ground zero, you're starting with a template, and it's okay, let's update it. We like this template, and let's update it as needed.

MR. OKAMOTO: Back then they didn't have this as a framework, so this helps out even further, so we're not hiring somebody that basically has a blank sheet with no guidebook.

MR. UNGER: Right.

CHR.LOPEZ: Any further discussion?

MR. NEY: Just to the areas that you guys focused on in terms of thinking impact, what's going to have the greatest impact? You read the news nowadays and there's not a lot of forward-looking government agencies. You see the problem when you don't have a strategic long-term goal. I would try to think in terms of what items are really going to fundamentally improve. I mean that's kind of things that I've

thought about in my term here, it's like what could really make improvement, what is just kind of things that are so small that they wouldn't have an impact. Get rid of those. Just a thought.

CHR.LOPEZ: Anybody else? Okay, let me try to wrap this up. Consulting in the plan, what Keith is talking about, is wonderful. It's great for the long term. Where this started was in the review process, we didn't have a plan as indicated by the review instructions to refer to that wasn't up to date. This attempt to go through this and the list that I came up with is for the short-term. We can't wait for the new plan to come up or we won't have any way to measure the department goals in December as we do every year. I'm going to recommend, and just by acclamation, I don't think we need a vote to do this, but correct me if I'm wrong, my recommendation is that I put these in a format, the ones I've suggested put them in a format and send them to Nora for distribution to the Board, and then you add your own; and prioritize the list, what ones do you vote for; so that my goal would be in the next meeting to have this list of priorities, maybe we pick the top just four that everybody voted on as the discussion point to begin, discuss with the department, this is what the Board would like to see for this calendar year as goals and accomplishments. That's my recommendation. Then if we disapprove or have something different.

Okay, so we'll put it on the agenda for next month. Please, Board members, I need your attention to this because we're already in February and our next meeting is in March, the review is in December, so please pay attention to this. You are serving your community, you're serving your district, and you're serving your members of the Board, that's why you're here. So, please pay attention to that and I'll proceed with that. I'll pick that out early next week at the latest, maybe this weekend; and then because for the minutes it has to go out—we have like two weeks, not your responses, but this has to get to you. Then you send back your responses, and we will collect them right here in the Board meeting and we make a decision. Is that all right? Okay, thank you. Thank you very much.

C. DEPARTMENT OF WATER SUPPLY PROPOSED OPERATING AND 5-YEAR CAPITAL IMPROVEMENT PROJECTS (C.I.P.) BUDGETS FOR FISCAL YEAR 2026:

Chair: Is there any testimony for this item?

The Department's Fiscal Year 2026 Operating Budget, totaling $77,597,000.00, and 5-Year C.I.P. Budget for Fiscal Year 2026-2030, totaling $235,500,000.00 have been distributed for the Board's review.

RECOMMENDATION: It is recommended that the Board approve a public hearing to be held on Tuesday, March 25, 2025, at 9:30 a.m., prior to the Water Board's regular meeting, to accept public testimony regarding the Department's Fiscal Year 2026 Operating and C.I.P. Budgets.

ACTION: Mr. Unger moved for approval of the recommendation; seconded by Mr. Ney and was carried unanimously by voice vote (Ayes: 6 - Ms. Taaora; and Messrs. Bell, Kekela, Ney, Unger, and Chair Lopez).

D. MONTHLY PROGRESS REPORT:

Chair Lopez asked if there was any testimony for this item. There being none, he continued with the agenda item.

Submission of Progress Report on Projects by the Department. Department personnel will be available to respond to questions by the Board regarding the status progress of any project.

MR. INABA: I just wanted to bring to the Board's attention, for Hala'ula, not what we want to see up there, but I did confirm—asked the contractor to ensure that he may give us at least bi-weekly updates now to follow up with the manufacturer. So delay in getting the replacement pump. It's under warranty, so the manufacturer is obligated to supply the new pump and send that over. Not coming in as expected.

Basically, Lālāmilo will be starting up probably a little later, next month again, the 10mg reservoir. Material arrivals should be complete mid-month, so they can get started up there again, that's probably the tank.

Pretty much the same thing right now for the FEMA projects. Right now, one is actually construction, it's just for the Kapoho portion, and they're finalizing the contract for the other portion, Pohoiki, so that's the waterline that will bring the existing water down to Kapoho. So we have two projects that will be going simultaneously by two separate contractors.

MR. OKAMOTO: Thanks, Kurt. Does anybody have any questions?

MR. NEY: Question about the warranty and the pump. Unfortunately, there's some impact to us not having that in service, but it's actually good because of the warranty window we have, like one year that this appeared, that's not out of the threshold or warranty. Once they get it fixed, do they restart that one-year warranty period? How does that play out? If it's repaired, do they have to give us another year?

MR. INABA: So on that new material, we'll require a one-year warranty for that piece of equipment.

MR. NEY: Okay, good. Okay, that's good then.

CHR.LOPEZ: Question on Nalani Street Water System, it says DWS to procure a consultant. Would you comment on that?

MR. INABA: We were assuming that we would get the resolution directing us,

CHR.LOPEZ: Community meeting?

MR. INABA: At that time it was kind of anticipated that it would happen and that still hasn't come through. Basically, it's a County Council resolution and that directs us to start the process.

CHR.LOPEZ: I'll take that up with the Council Member who introduced it.

MR. INABA: Sorry, I know it's not a very simple process.

CHR.LOPEZ: Oh, heck no. Funding, resolutions, community meetings, I've been through one of those. All right, any other discussion on this worksheet?

E. REVIEW OF MONTHLY FINANCIAL STATEMENTS:

Chair Lopez asked if there was any testimony for this item. There being none, he continued with the agenda item.

Submission of financial statements and information relating to the financial status of the Department. Department personnel will be available to respond to questions by the Board relating to the financial status of the Department.

(At this time, Finance Controller Candace Gray came forward and provided a brief overview of the Financial Statements for January 2025 to the members of the Board. A hard copy of the Financial Statements is available for viewing in the Department of Water Supply office.)

MS. GRAY: Does anybody have any questions?

MS. TAAROA : Are there any techniques you're using to decrease the delinquent balances that may be going down?

MS. GRAY: I would say our processes are still—we're still striving for improvement; the fluctuations do happen from month to month.

MR. TAAROA: Do you have more people working on it, or is it just normal?

MS. GRAY: I would say we are working on it, probably we could spend a little bit more time on it.

CHR.LOPEZ: Emily, the question I think of for me is can you attribute any of these decreases to actions you've taken in the department?

MS. GRAY: I wouldn't say specifically at this month—

CHR.LOPEZ: Just a normal fluctuation.

MR. OKAMOTO: Yes. Just as a reminder, great question, Emily, this is a snapshot of what it looked like in February 2024 to what it looked like in February 2025, so that's the comparison. It's always something that we're working on, but some months will look better than others. But long term like Candace said, it's always something that we're trying to look at in ways we can do better at.

MS. TAAROA: What is the long-term trend?

MR. OKAMOTO: The long-term trend I believe can be seen more towards, you know when we do kind of like the True-Up after Fiscal Year-End, where we present it in July but then we got to account for things that come in or go out that last month, and then we really true it up in August and that's where you can kind of see fiscal year to fiscal year comparison.

MS. GRAY: I would also like to add to what we are looking at as far as long-term, because it is a continuous improvement process. We are going to focus a little bit more on our collections, collection agencies, and performance because a lot of our delinquencies already referred to collection, so we'll focus a little bit more on that area, on how we can maybe collaborate a little bit more to hopefully accelerate the collection process, hopefully reducing the write-offs.

CHR.LOPEZ: So communication, we recognize that there's an issue, but there are some things that you are already considering and doing that lend themselves through this whole process. Thank you.

MR. NEY: Just a little background for Ippy coming into this, replacing me. We had a write-off of a lot of collectible funds that somehow amassed to a big amount and how that went unnoticed or wasn't dealt with. We're trying to reconcile this problem of collections because we wrote off a big amount and we don't want to have that happen again, that's kind of the issue. I presented some ideas; you'll probably be filled in on it. Historically it's been an issue that it was not fixed and they're trying to get it fixed on some.

CHR.LOPEZ: Any other discussion?

MR. UNGER: Thank you, Emily for bringing that up. Like we've been saying, this is an issue, and running a business, being a million dollars and delinquent accounts is not acceptable, like what are we doing? You brought it up in one of your (inaudible), you just showed a 20% decrease. The number I ran from February fiscal year had a 6% decrease. Maybe we could consider asking the Water Board to come back at next meeting and say, "Hey, we decreased 6% from last fiscal year, what do you think is reasonable?" —You threw out 20%, I don't know where I can—but I'd like them to come back and really take a look at this and say, "I think we can decrease this by 20% or 15%. We can ask questions about what recommendations there are going to be to get to that percentage, and we can have a more detailed discussion, I think.

CHR.LOPEZ: No, I think that's a great suggestion. My thought process going through this was to just come up with these—and if that's one of them that we come up with as a high priority, then we begin the discussion of what's the reasonable amount, for now, just to throw something out there.

MR. NEY: Not to attribute any blame to it, like how did this kind of (inaudible) to become such a—I mean it's like compounded; before you know it, "Wow, there's a million dollars that the department never collected." How did that just kind of never get on anyone's radar?

CHR.LOPEZ: I believe that's off-topic. We've been through this months—to get back on agenda—because that could take us into—

MR. NEY: Yeah, okay, I mean if it takes us off on a tangent then.

CHR.LOPEZ: Anything else? Moving on.

F. MANAGER-CHIEF ENGINEER'S REPORT:

The Manager-Chief Engineer to provide an update on the following:

1. North Kona Wells:

MR. UYEHARA: Okay for this month North Kona Wells update, so same as last month, we have 10 of the 14 operational, and four are offline. I'm going to go in the order of anticipated return to service:

Mākālei well, we're expecting hopefully mid-March of this year.

Wai'aha well, hopefully May of this year.

Honokōhau well, July of this year.

Hōlualoa, that one is going to be put out to bid, but we are anticipating October of this year for return to service.

Wai'aha, Honokōhau, they have some product submittals that we're still working through with the contractors to get approved ordered a driver to get it delivered to the site. If anybody has any specific questions?

CHR.LOPEZ: What did you say target for Honokōhau?

MR. UYEHARA: Honokōhau is July of this year.

CHR.LOPEZ: And you just said something regarding Honokōhau. It's two different wells, yet it's common.

MR. UYEHARA: They are both product submittals, so basically we have to review and approve the products that are going to be ordered and delivered. Those are in that stage right now.

CHR.LOPEZ: Thank you.

MR. OKAMOTO: No. 2, Department of Water Supply Quarterly Energy Report.

(At this time, Energy Management Analyst Warren Ching provided a brief overview of DWS's Quarterly Energy Report to the members of the Board. A hard copy of the report is available for viewing in the Department of Water Supply office.)

MR. OKAMOTO: Any time there are power outages, we get affected. We have our liaison over at Hawaiian Electric, and they're communicating with our guys throughout the whole event. They actually know which of our systems is on what circuit, and they really do prioritize getting that circuit back online. We have the benefit of having water storage which lets us ride out the short outages. If they turn into multiple day outages, that's when really, we got to look at our backup power for those types of events.

MS. TAAROA: So just one day, 24 hours because you have that.

MR. OKAMOTO: We're good. Usually, we're good unless we have a really undersized storage tank. Then our guys are really good at putting out temporary like water buffalos for that community to at least access potable water for their basic needs.

MR. UNGER: Not a question, just to comment. Moving back to hiring a consultant to do some long-range planning, I definitely see a consultant really hone in on sustainable planning, energy use, going out into the next 10 years. We all know HELCO is not going to get any cheaper in power, and we really get to hone in on how to harness other than diesel fuels. Going forward the next 10 years to somehow we would love to see as a consultant spending some time on it.

MR. OKAMOTO: That's 1 of the 10 attributes, it's called Enterprise Resiliency, that falls under that.

MR. UNGER: And also looking at, and we've talked about this here, I think we're the number one customer to help them, and we have. So at point too, looking at trying to sit down with HELCO. I don't know anything about trying to negotiate with HELCO, but as a point, we're their number one customer, and I would think that we would be able to try to negotiate a better rate, but again that's getting into some details that we don't want to get into. But if we're looking 10 years down the road, and at the point where this is we're talking $5 million and $6 million of our budget, this is something that we really do need to hone in on.

MR. OKAMOTO: Yes, and I've tried to get a different rate and it's not possible, but there are other programs that could potentially help us save money. One of the priorities was to actually have a position to oversee how we can do better energy-wise, which is why Warren has the job he has now. But moving forward, I hear you. We can definitely make that part of the Strategic Plan.

CHR.LOPEZ: I see a couple places here, FEMA grant, FEMA assistance. Is that monies we already spent or is it monies we have yet to spend?

MR. CHING: We already spent it.

MR. NEY: Is this a stationary generator unit or is it a mobile? I don't think there's been much time that HELCO hasn't been able to get the power on, for days and days, but in the event that you potentially have, you know, we're not going to have the power on for an extended period of time, do have something that's ready to deploy to any of our well sites, kind of ready to go in that event?

MR. CHING: Yeah, this one is portable.

MR. NEY: So this one would be taken—

MR. OKAMOTO: It's on a trailer. Most of our gen sets are portable. We have only one or two that are stationary for that site, and that's more our Micro Lab, our baseyard, and our treatment plant.

MR. NEY: Yeah, just getting a sense of like what's the timeframe you could respond with the generator, just to kind of have the time involved.

MR. OKAMOTO: Within the day, typically.

MR. NEY: Within one day?

MR. OKAMOTO: Yes.

MR. NEY: Okay.

MR. OKAMOTO: And that's if access is available. So that's why the transfer switches are key too, because if you don't have that transfer switch—it's not like you plug it into an outlet. It takes a lot of work electrical-wise if you don't have the transfer switch set up at the facility. You can bring a gen set there, but if you don't have the transfer switch, it may take several days to weeks to actually wire up the generator to the control building.

CHR.LOPEZ: Warren, when we talk about this generator, you maybe mentioned it because of the size, and that it served Mountain View town?

MR. CHING: The well site it serves Mountain View town, so provides water service to Mountain View town.

CHR.LOPEZ: So this is for the water service.

MR. CHING: It is for the well site, yes.

CHR.LOPEZ: All right, thank you.

MS. TAAROA: What I'm hearing, essentially these generators don't get used very often if ever because it's just a (inaudible).

MS. TAAROA: How many do we have?

MR. CHING: We have I would say 15, that's including the portable and the stationary generators. Some get used more often than others.

MR. OKAMOTO: We have a maintenance contract, too.

MS. TAAROA: Right, they get on it.

MS. MELLON-LACEY: Well, what's important, the concern, fires and the potential of HELCO shutting it down in high risk.

MR. OKAMOTO: There's a new PSPS (Public Safety Power Shutoff) Program that HECO has implemented, may end up with longer term shutoffs than the ones due to wind events or storms.

MS. TAAROA: That was in preparation for that.

MR. OKAMOTO: Yes.

CHR.LOPEZ: Anything else?

MR. CHING: No, I have just the last page goes over the projects we're working on, but that's it that I have.

CHR.LOPEZ: Thank you.

MR. OKAMOTO: The last item, just to notify the Board that there is the annual AWWA Conference coming up June 8th to 11th, so same deal. If you're interested, let Nora know, and we have a budget for four Board members to attend.

CHR.LOPEZ: Where?

MR. OKAMOTO: Denver, Colorado.

CHR.LOPEZ: Thank you. Ben, you're still going to go?

MR. NEY: Where's that?

CHR.LOPEZ: To Denver.

MR. NEY: Oh, I don't know.

MR. OKAMOTO: It will be on his dime though at that point, sorry.

MR. NEY: Yeah, I would take advantage of these conferences. There are different sessions: educational sessions, vendors, products, overview of the industry, new materials, people involved, that kind of a thing, so I would highly recommend you attend.

G. CHAIRPERSON'S REPORT:

1. Chairperson to report on matters of interest to the Board.

CHR. LOPEZ: One of them is that we all got an email, it's time again for the Hawaiian Water Rights. There is a legal process for determining Hawaiian Water Rights. When I went through confirmation to be on this Board, I was asked if I was familiar with Hawaiian Water Rights, and I said "no," they encouraged me. In fact several of them encouraged me to become knowledgeable, and here I am in my third year and—Nora sent you all by email this "I Mana I Ka Wai" Statement of Interest. The form, you can sign up from there. It's not during working hours. It's four Mondays in a row, beginning March 24, from 5:30 to 8:30 by Zoom, and you get a Certificate of Completion, but you have to attend all the sessions—and hone your skills and advocacy, organizing, and leadership skills. They're particularly looking for people in the community who are oriented toward water and processes, and they also mentioned Board members.

Again this came up once before, during my first year, and it didn't fit the schedule, but who knows when this will come up again. Again, I personally am going to attend, and I encourage you to attend, just because it is our kuleana. It's on your own, you have got the good material to attend.

2. Report of AWWA Conference from Board members that attended.

CHR.LOPEZ: I attended. Ben, you want to give a report.

MR. NEY: One thing I noticed is you know what Keith said earlier, he enjoys the network and part of it, but you see the same faces year after year and just shows you it's the people out there and the resourcing is a very part of the industry. You'll get to know these people when you come on, and you definitely leave having a relationship and bond to these people. I enjoyed that last conference just to say my goodbyes to a lot of people. Nice for us to go, and they'll take us to basketball games and take us, but it goes beyond just the business side of it. The personal relationship side of it. That was what was enjoyable for me.

CHR.LOPEZ: Okay, thank you. I have to echo that sentiment, it's the same. This is my third year, and I've attended almost all of them by now. The unfortunate part, and many of us, is that if you are a working individual, it's different. You've got to dedicate three days, and I'm sure you have got to take vacation time to go, so that's an obstacle in itself; and if you're in business, get away from your business for three days, it's probably near impossible. But if you can squeeze it out at all—

Some of the things that I bring forth here are as a result of my going to these sessions is talking to people. This organization, filled with lawyers in their capacity; and people who are practitioners, people in the business, people who are laying pipes, people who are administrators dealing with issues like the Red Hill on Oʻahu, learn a lot about what's really going on, and how it could have been if it gets anything—

It's good to go out and learn and hear, and as Ben said, you establish relationships. It's a way of networking. But more specifically, this particular one in February is the State of Hawaiʻi, and that's what makes it for me the most valuable of the ones we go to. There's another one in the Fall, there's each island host their conference, and last year it was Kauaʻi, prior to that it was us.

MR. OKAMOTO: This year it's going to be Oʻahu hosting.

CHR.LOPEZ: If you can get away even for just day, and you'll have a catalog with the sessions, pick the day that's most interesting. It will help you, fulfill your mission as a Board member to serve your community.

One of the things that I really enjoyed in these sessions was the shoreline, how indigenous people in Hawaiʻi, Hawaiians, and indigenous people on the mainland, Indians, dealt with flooding and drought.

Development dramatically changes watersheds. Post war development dramatically changed the watersheds. On a website (soest.hawaii.edu/crc/slr-viewer/#) you can actually go out and look at the January 2100 low tide 1.9 to high as 7.9, if that were the case of rising sea levels. So when saltwater comes in, pushes up the aquifers, creating new wetlands, and affecting building foundations, so it has a big impact, and it trickles down, and learning about that and understanding how it could happen to us is valuable.

One Water is water people environment. Tucson, Honolulu, Vancouver, Winter Haven, they're all involved in this One Water concept they're talking about, how do you deal with recycle storm water, groundwater, surface waste, sewage, so on, that's all compassed in the one water topic.

I also met Judith Hayduckso for clear water initiatives, and she said that of our 23 systems that she was very instrumental in coming up with like $50,000 for the service laterals in that lead copper initiative, so thank you very much for that. The more they know of us, the more they recognize when something comes in, "Oh yeah, I know those people. It's just the way it works. Same thing in business, any business. Mutual relations.

Again, I enjoyed this conference. Looks like I may have one or two more to attend. I encourage you all if you can at any point try to attend one or more these. Thank you very much.

6) ANNOUNCEMENTS:

1. Next Meeting – March 25, 2025, 10:00 a.m., West Hawai'i Civic Center, Building G, 74-5044 Ane Keohokālole Highway, Kailua-Kona, Hawai'i

2. Site Visit Today**:**
Site visit to Waimea Water Treatment Plant, (65-1190 Spencer Road, Kamuela, HI). **Directions:** From Kawaihae Road, turn on Lindsey Road past Parker School and continue mauka; turn right onto Kapi'olani Street and keep going to the end of the street. Turn left onto Spencer Road. On the first paved driveway to the right is the Department of Water Supply gate (this is the *first* gate leading to the Waimea Water Treatment Plant). *Meeting will take place at the Waimea Water Treatment Plant site, which is at the end of the road after passing through a second gate.*

RECESS: The Board recessed at 11:03 a.m.

SITE VISIT:

RECONVENE: The Board reconvened the meeting at 11:35 a.m. at the Waimea Treatment Plant.

MR. OKAMOTO: We will now reconvene the meeting of the Water Board at our site visit.

MS. MELLON-LACEY: And we have a quorum.

MR. OKAMOTO: I'll have Greg introduce his team that will be providing information on this tour.

MR. GOODALE: Our group here: William O'Neil is our District Supervisor II for our Waimea Baseyard; and Lindo Matsu, he's going to actually lead our tour for the day. Lindo was one of our lead pipefitters here at the Waimea Baseyard. William and Lindo, I'm turning it over to you guys.

MR. MATSU: Okay, this Reservoir No. 2. We have two intakes that feed this reservoir. One is about three miles that side, Kohākōhau Stream; and one is in the forest, about three miles also, that is Waikōloa Stream.

MR. O'NEIL: We have Marine Dam on that side with an intake box that pipes water into this reservoir. It's interconnected, and from Kohākōhau Stream, there's a dam up here, and that's piped in also. So that water can be put in any one as far as the reservoirs go. You can see we're running a little dry right now. This reservoir, usually we try to keep full.

MR. OKAMOTO: That overflow is that structure over there, William?

MR. KEKELA: Where does that go, to another reservoir?

MR. O'NEIL: No, that will just go back to Kohākōhau Stream.

MR. OKAMOTO: But normally we don't let it overflow.

MR. O'NEIL: There's a dam that crosses the river with an intake box that we pipe water from through a screen.

MR. UNGER: What is the average fill, is it the whole 50,000 gallons.

MR. O'NEIL: 50 million gallons most of the time.

MR. UNGER: What is it now do you estimate?

MR, O'NEIL: Right now we're at 27.5 million.

MR. UNGER: About half then?

MR. O'NEIL: In this reservoir. So we have 77.5 right now, total.

Pretty much we try to keep it almost full. The other thing is we do try to overflow it every once in a while, trying to keep the water fresh, so that you can see we're not overflowing algae blooming right now. It just clogs up the filter down at the treatment plant a lot faster.

MR. UYEHARA: Kurt, you want to explain the liner thing, what we did here for the last repair?

MR. INABA: So after the 2006 earthquake, this reservoir had the damage, actually it was leaking all the way from the bottom. We took this one out of service first, and it took up until 2011 I think, 2012 maybe, to repair this, just the concrete before. It would have taken a whole lot more effort to try and repair just the concrete, so they decided to make the concrete good enough to place a membrane under this liner, this liner on top to waterproof this reservoir.

MR. UYEHARA: So it's the same plan for Reservoir No. 1.

MR. INABA: Yeah, pretty much the same plan for Reservoir No. 1.

MS. MELLON-LACEY: What's the life expectancy of the membrane?

MR. INABA: The membrane has a warranty of 30 years. They also did some improvements along the embankment. We rebuilt it so that there are zones of different backfill material, so if there's groundwater trying to get underneath, it will make the embankment unstable, and it would trap that. We have drainage trenches around it. And there's also piezometer, which is basically a well, that we have an instrument down

there that measures the moisture basically in the embankment. At some point if it gets too wet, then the soil becomes unstable, so basically we have that in place.

I know after every large rain event or after any significant earthquake, William, you know the crew comes out, or whoever has to come out, we do a physical inspection. They check if there are outfalls.

MR. O'NEIL: Because of the size of it, it's considered regulated dam, so it falls under dam safety requirements with DLNR. If we have at least a 4.0 earthquake within a 25-mile radius, we automatically come out here and check to make sure there's no ground shifting and sloughing on the slopes, and we monitor it for about 24 hours after the earthquake. If it's 4.0 within 25 miles, 5.0 within 50 miles, and 6.0 within 75 miles, we are required to perform earthquake checks.

MR. INABA: Basically you check anyway pretty much. If you have any questions, I know you send someone out.

MR. O'NEIL: It might be 2.9, that's okay, we'll still do the checks to be safe. Also, if we got a storm coming in, Dam Safety, give us a call and have us drop our levels a little bit so we can take in the rain without overtopping. I know we had a couple of things that happened in Maui. Theirs one is a lot different because they're actually damming a river. So ours we can pipe in, we can control the water coming in here. It's controlled, yes.

MR. INABA: So if you look around really, if flood waters were to get in here, we have a whole a lot more to worry about than just this here, right? Yeah, it's designed differently, safer. Any other questions from the Board?

MR. O'NEIL: We can go down to the treatment plant. So I was kind of explaining in my car anyway about the drying beds and the 8-1/2 and stuff like that. I don't know if you guys remember, but we were passing the first sludge pond, so once we go through the whole treatment process, any stuff along with some water is going to get thrown in there, we'll recycle and pump up the water and try to get the water inside of the sludge, up into the 8-1/2 that was next to the other building that's above the treatment plant. So we can pump the sludge itself into there and dry it out and haul that away. Then we'll also take the water that's thrown away, bring it up to the 8-1/2, and we can flow it back down to the plant so we kind of don't waste.

MR. NEY: What's this pipe down here for?

MR. INABA: That's the controls.

MR. NEY: Oh, that's controls.

MR. UNGER: So Waikōloa No. 1 is down?

MR. O'NEIL: Yes.

MR. UNGER: You say you're going to reline for that, is that the project?

MR. INABA: Yes, so right now we're in the process; the State has new regulations from when we had it approved and bid it out. We're getting a professional services contract going with the consultant to bring that current design up to the current requirements. We actually have been working with the State; I think they identified some funding for us. We can double-check after all of this is happening if it's still there. But, that's the intent right now.

MR. INABA: Similar to this, I mean it's a different shape.

MR. UNGER: What kind of money are you talking about?

MR. INABA: We're looking at probably in excess of $10 million. It's a lot different. The contractor took a big hit on this, but they did it. This one was over $2 million at that time, and this was about 2008ish I think they started.

MR. UNGER: So where again is that money coming from? Is the source definite yet?

MR. INABA: Not definite yet. We worked with FEMA; we got about $1 million to do certain things. We had to cancel that contract because the conditions had changed so much. It took so long to get from the design to final approval from all of the agencies to actually get that bid out. When the contractor came out, from the assessment and the design to that period, when we had that thing half full, the panels were arranged a certain way, but when we took off all the water, drained it, there's no weight holding that down, and everything came back and the panel started to lift, hit each other and started cracking. So it was completely different than what the plan showed. When we went out there and did the survey and they did the design, it was not in that condition, so a lot to address by the contractor, and the consultant to even come up with what we need to do to make it acceptable for a liner.

MR. NEY: How much longer with the degradation? How time-sensitive is it to get that fixed before it's in worst shape than it is now?

MR. INABA: I think it's okay at this point. Without the weight of the water, it creeps back so much, and then it kind of stabilizes again at that point. I mean it's been long enough at this point that that's pretty stable. The one thing is just cleaning it out and everything, the vegetation in there, but I don't think that's too costly compared to concrete work and whatnot.

MR. OKAMOTO: So the more pressing issue is we need that thing in service. We need raw water storage, not to mention the fact that every year that goes by everything gets more expensive, so that's the pressing issue. We got to get that thing up and useful again.

MR. KEKELA: At the level it is now, like when do you guys start to draw some concern when you start seeing it goes a little bit lower, especially in the drought season?

MR. O'NEIL: So for as far as the liner stuff, we have got to keep at least five feet of water which I think is equivalent to about 8 million gallons, but it's just to keep the liner down because if you go too far from that, there's a chance of the thing lifting up and ripping out. So if we get to that point—we kind of use this as the primary one just because we're cycling the water through here, but we got another 50 million gallons in the No. 3. We also have two backup wells that we might start running back and forth into here from the well.

MR. KEKELA: And you guys pump into here from the well?

MR. O'NEIL: Pumped into the clear well because that's well water, so it doesn't have to be run through the process. We'll just chlorinate it and go straight into the clear well that was down at the treatment plant.

MR. NEY: This liner in here or is it just—how is this kept down, or is it just tension so tight?

MR. O'NEIL: No, it's just from the weight of the water. Bolted on the top, so there is a chance that if we get it too empty, it might lift, if there's some way that air can get underneath it, that's why we kind of want to make sure we keep at least 5 feet of water in it.

MR. INABA: At the top, right here you can see this bar, it pulls; and with the bolts sticking through that bar, bolt it down and presses on the edge up here.

MR. O'NEIL: Underneath that it just kind of cushion that so that it's not rubbing. It's always concerning when it's this low, but it's not like of great concern yet.

MR. OKAMOTO: The good part is we do have two wells operational now that help us ride out the dry periods, but they're more expensive to maintain and operate, again, they're prone to breakage too. They're one of our deeper well sets. It's deeper than the Kona ones.

MR. UNGER: Where are those wells?

MR. OKAMOTO: We passed one as we were driving up.

MR. GOODALE: Where you saw Isemoto truck.

MR. O'NEIL: Even with a lot of surface water and stuff, this year it's low, but we just had a tropical storm or something maybe about a month ago. So this mountain is covered with peat moss, so we've gone through droughts where we don't get anything for like seven months and everything just dries out. So you can have a big storm come in and it still takes like two, three weeks of heavy rain before the water will start to flow. Right now we're pretty short, so if it rains now we're going to start taking in water quickly. When it starts getting too long and everything starts drying out, then it takes a while for everything to absorb before it starts flowing down to the stream.

CHR.LOPEZ: You said there were two streams.

MR. O'NEIL: Yes, there's Waikōloa Stream coming down this side, and there's Kohākōhau Stream going this way. We're taking water from both. That is powering our electronic meter that measures the raw water that we are taking from Kohākōhau Stream.

MR. OKAMOTO: Okay, so down to the plant.

MR. O'NEIL: Sure.

(Note: At this time, the group viewed the control room which monitors of the entire process from the reservoirs out to distribution.)

MR. MATSU: Well water from the reservoir, where we just came from, comes down through this pipe right here; and then from here, we inject the coagulant, and it rapid mixes inside that small little piece over there, and then from there we try to create floc .

MR. GOODALE: Explain what the coagulant is.

MR. MATSU: Gravity-feed and the coagulant is like one (inaudible). So we try to get all the organic and whatever silt and whatnot try to come together. From the coagulant room it's injected into this rapid mixer right here.

MR. O'NEIL: That is kind of like an icky syrup. There's going to be rapid mixed into it and then it's going to start sticking to each other and grabbing all the silt. So as we go down, it's going to create floc. It should

be large and heavy, but large meaning you can see it. You can walk over here and see all those fluffy white things, so all of these fluffy stuff is what you call floc.

So inside here, we got a paddle that's just turning slowly now because you want everything to bind together and then drop to the bottom. If you kind of look at the color of the water over here and as we go down, the floc is sinking down to the bottom and you kind of notice that the water is clearing up prior to running through filtration.

MS. MELLON-LACEY: How long does the process take?

MR. O'NEIL: The process takes about half an hour. We got 1300 gpm coming in and going down at the same time, 24 hours a day, from the time it hits here to there, half an hour.

MS. MELLON-LACEY: Did you say like 24 hours a day?

MR. O'NEIL: 24 hours a day.

MS. TAAROA: These are all the same or are they different levels floc? They are all the same. Going through the same process at the same time, or is it moving?

MR. O'NEIL: There's water slowly moving down, but then as the floc is gathering, starts to sink.

MR. MATSU: Settling, that's why it's getting a little bit more clearer.

MS. TAAROA: Okay, it's slowly getting clearer as it goes.

MR. MATSU: If you kind of look down, it's right at the top and everything is slowly moving down. And then when we want to dump the sludge, we open up the valve right here, and then the sludge moves down to the first pond in the middle, where they were doing the construction.

CHR.LOPEZ: Somewhere in here, the separation?

MR. INABA: Yes.

CHR.LOPEZ: That is just taking the floc out?

MR. O'NEIL: That side of the basin is still stirring, and over here it's just letting it sit.

CHR.LOPEZ: You said this floc goes down through this way?

MR. O'NEIL: No. So it's settling inside here, so once a day they'll come up here and open the valve and it will take that sludge, then settle down on the bottom. Yes, we're taking that bottom layer out. It's just the valve opening up. Gravity-fed down on the bottom. So every so many months, that we'll actually turn the plant off, drain this all out, and they sit here with these big fire hoses, and push whatever sludge out, cleaned once a month. We kind of held off this one because we didn't want to shut the plant down when you guys show up. It looks a little dirty now, but usually it's cleaner.

CHR.LOPEZ: What is getting this floc into this pipeline?

MR. O'NEIL: There's a scraper on the bottom.

CHR.LOPEZ: Pushing it over?

MR. O'NEIL: Yes. And when you open the valve, it's pulling the water, and then it's pushing the sludge so we send that water down there. We try to pump the water without the sludge because it will settle down there, back up to 8-1/2.

MR. MATSU: And when we use the recycled water, we got to adjust portion of the chemical because it already has chemicals in the water already.

MR. O'NEIL: I guess you can kind of see too the color on that side where it's still mixing. We try to get it most of it out here before we run into that last filter, which we're going to see below.

MR. INABA: Now you really can see the settling beds get cleaner.

MR. GOODALE: We've done the chemical on that. That whole sheet is to determine the disposal mechanism. The guy who does the pumping out of the lowest lagoon, he actually takes it to a local farm.

MR. UNGER: We were concerned it went to the landfill.

MR. GOODALE: That's another option, but if we don't have to.

MS. TAAROA: Yeah, I hope not.

MR. GOODALE: There are a lot of utilities that they'll use that as their disposal mechanism, but some will try to mix it in with like compost or whatever.

MR. O'NEIL: Anybody else have questions?

CHR.LOPEZ: Is this just a screen, or this one moves?

MR. O'NEIL: No, this one stays separate. Over here is where everything gets filtered out. Originally, before the plant went through this, and then it went through just a pit of sand, and then that was the last filter. Everything was just gravity-fed. With these new filters, we actually have pumps pulling, so we got to kind of keep this level high. There's actually a little sawtooth that was supposed to be catching rubbish that's under water right now. In order to keep up with the pumps down there, we got to like almost bring this up more than it should be.

CHR.LOPEZ: What's the accumulation on this wall here?

MR. O'NEIL: That's whatever floc that didn't settle.

MR. GOODALE: I don't know if this came up, but this is actually our only surface water treatment plant we have on this island, so Waimea is unique in that regard that it's the only one that actually takes water out of the streams and goes through this process. Everything else is either a spring source or a ground water source, which doesn't require all this kind of treatment that this would.

MR. OKAMOTO: This has a lot of other requirements with the Federal Safe Drinking Water Act, the Department of Health monitoring and testing for contaminants, chlorine contact time, all that stuff. Not those specific contaminants—bacteria.

MR. GOODALE: Typically if your chlorine residual stays high, like what Keith was saying, then those other things—cause it will kill those things if that high at that level, the chlorine residuals.

MR. O'NEIL: We'll go see the membrane. The membranes are the ones that have that positive barrier that filters out certain kinds of microorganisms.

MR. KEKELA: Is there any significance with Waimea that they chose to have a groundwater source here—surface water?

MR. GOODALE: I guess hard to speculate, but maybe just because they're available, freshwater streams.

MR. KEKELA: You think this is something that the department would do in the future, maybe at a stronger scale?

MR. OKAMOTO: Not unless—I think it's good to have redundancy. Even though with all these processes, the upgrade to the plant to convert it to a membrane filtration system, it was a granular media that was still turning it before. It was a significant capital investment, but it still was more financially economical than continuing to pump wells that we know can fail, and if that's your only source and you have two of them going down, you're in a world to hurt. But looking forward, I'm not sure if we'd do this again, just because of all the requirements that come along with it.

MR. BELL: Do other islands use this same method?

MR. OKAMOTO: Yes, primarily Maui has the most treatment plants. I think all their treatment plants are membrane, too. At some point, technology, improvements, and cost of operation may change that, but I don't know if we're there yet.

MS. TAAROA: Are the wells significantly more expensive to maintain at this elevation? Is that another reason?

MR. OKAMOTO: Yes, the pumping cost I think, power.

MS. TAAROA: Because of the elevation.

MR. NEY: Does this get dense enough that it actually starts to sink once it—the pockets?

MR. O'NEIL: If you look from there, most of that is sunk already. Yeah, if you look at how cloudy it was and how big those clumps are, you know, they're very little here.

MR. NEY: But a lot of it still suspended. You backwash these cartridges?

MR. O'NEIL: They're backwash every 45 minutes.

MR. BELL: Every 45 minutes.

MR. O'NEIL: That's another thing that throws away a lot of water, so we have to recycle back up.

MR. BELL: This clogs up if you don't backwash.

MR. O'NEIL: The water once it gets down to the end is gravity-fed down to here. When you go downstairs, there are actually pumps pulling it through these filters. So every 45 minutes, whatever crap is on there, it will backwash and it actually pushes it away and drain that water out and then start to process it again.

MR. NEY: What's the lifespan of the cartridges?

MR. O'NEIL: Seven years.

MR. NEY: Seven.

MR. O'NEIL: We're at eight right now. Well, there's seven-year warranty, like if we start to see leaks, like you'll see bubbles if it's running, we can actually take it apart, open it up and start pinning it from the top. We've actually been doing that, but after a while if it gets too hard to upkeep, trying to keep it going, we'll just replace it.

MR. NEY: Probably not cheap either.

MR. O'NEIL: I think to change one cell like this, it's about $200,000, something like that.

MR. GOODALE: You might see this overhead Gantry crane because that's how you have to actually pull these things, obviously it's very, very heavy.

MR. KEKELA: How many gallons each of these holds?

MR. O'NEIL: 2500. This one is operating different, but they're all in sequence; so as one going up 94 backwash, always get two running at the same time.

MR. KEKELA: What is the cycle? How long does it cycle out?

MR. O'NEIL: Every 45 minutes one is going to backwash, and then another would be coming online, you know—Once it goes through a backwash, then it is placed on standby. Then another one goes into backwash. Everything is timing. And because it's surface water too, we got to be constantly monitoring pH ,turbidity, chlorine residual and temperature. From when the water is coming into the filters everything has got to be monitored, there are many reports that Department of Health may require, but there a lot more requirements. Also, because it's surface water and we do have organic matter that we're trying to get rid of too, we also use chloramination, that kind of helps with the DBPs, disinfection byproducts. So we actually chloraminate the water over here, using chlorine and ammonia together.

MR. KEKELA: After this step, is it potable?

MR. O'NEIL: No, we're still going to inject the chemicals. Actually once it goes through all of this, it goes upstairs, chlorine injected up there. Because of the contact time, this pipeline that's going through there is actually zigzags down from upstairs all the way down there before it comes around the building back here. That's just to make sure that we got enough contact time. We also inject ammonia and caustic soda, and we also inject ortho phosphate, that is to prevent lead leaching into the water.

We make about 1.8 million gallons a day. Consumption is 1.5 to 1.6 million daily. So what we make is 1.8 million a day, but for output distribution it's about 1.5 to 1.6 million every day.

MR. MATSU: This water goes all the way down to Waiemi.

MR. O'NEIL: The chicken farm.

MR. MATSU: Goes down that way, all the way up to Ahualoa.

CHR.LOPEZ: So is that output used daily or is there a storage place?

MR. O'NEIL: No, used. So we have 4-million-gallon storage right here. But Waimea fluctuates a lot and the rest could be good, we got a lot of ranchers and stuff, so on a hot day like this we probably going to use 1.6 to 1.7.

MR. UYEHARA: The project, built a generator over there, canopy of there, so if HELCO goes down, that generator can run the plant, so at least we have backup to HELCO, as long as we refuel it.

MR. O'NEIL: So it's every 24 hours probably, we get 24 hours' worth of fuel.

MR. UYEHARA: Mr. Chair, if there's no further questions, unless you have a question.

MS. MELLON-LACEY: There's a motion to adjourn.

MS. TAAROA: How deep does the tank go down.

MR. O'NEIL: When it's full at 17, 17 is down below the ground, so this is probably like over 25.

CHR.LOPEZ: Somebody correct me if I'm wrong, but routinely we'll approve expenses for the chemicals and the thing you see here, and also sludge removal. Motion to adjourn.

(The site visit ended at 12:20 p.m. and the group assembled outside.)

7) ADJOURNMENT:

CHR.LOPEZ: Motion to adjourn?

ACTION: Mr. Kekela moved to adjourn the meeting; seconded by Ms. Taaroa and carried unanimously by voice vote (Ayes: 7 - Ms. Taaora; and Messrs. Bell, Kekela, Ney, Unger, and Chair Lopez).

(Meeting adjourned at 12:25 p.m.)

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Recording Secretary

APPROVED BY WATER BOARD
(March 25, 2025)