

WATER AND INFRASTRUCTURE COMMITTEE

Council of the County of Maui

MINUTES

July 1, 2019

Council Chamber, 8th Floor

CONVENE: 1:31 p.m.

PRESENT: Councilmember Alice L. Lee, Chair
Councilmember Tamara Paltin, Vice-Chair
Councilmember Riki Hokama (in 1:36 p.m., out 2:30 p.m.)
Councilmember Tasha Kama
Councilmember Michael J. Molina
Councilmember Keani N.W. Rawlins-Fernandez
Councilmember Shane M. Sinenci

NON-VOTING MEMBERS:
Councilmember Yuki Lei K. Sugimura

STAFF: Christy Chung, Legislative Analyst
Rayna Yap, Committee Secretary
Zhantell Lindo, Council Aide, Molokai Council Office (via
telephone conference bridge)
(*Seated in the gallery*):
Dianne Shimizu, Executive Assistant to Councilmember
Alice L. Lee

ADMIN.: Jeffrey Pearson, Director, Department of Water Supply
Eva Blumenstein, Department of Water Supply
Jennifer Oana, Deputy Corporation Counsel, Department of the
Corporation Counsel

OTHERS: Joy Gannon, Lanai Water Company
Lynn McCrory, Pulama Lanai

PRESS: *Akaku: Maui Community Television, Inc.*

CHAIR LEE: . . .(*gavel*). . . As they say in Istanbul, good afternoon, everyone. Will the Water and Infrastructure Committee meeting of Monday, July 1, 2019 please come to order, it is 1:32 p.m. Everyone please silence all cell phones and other noise-making devices and that includes everybody in the gallery. In attendance today we have, Vice-Chair Tamara Paltin.

VICE-CHAIR PALTIN: Aloha, Chair.

CHAIR LEE: Aloha. We have Councilmember Tasha Kama.
COUNCILMEMBER KAMA: Aloha, Chair.

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CHAIR LEE: And right back at you. We have Councilmember Mike Molina.

COUNCILMEMBER MOLINA: Buenos dias, Madam Chair.

CHAIR LEE: Same to you. You know that Mike is actually Spanish? He's not Portuguese. Right? Yeah.

COUNCILMEMBER MOLINA. That's what I've been told. Yeah.

CHAIR LEE: Actually his uncle married my cousin, yeah, well not related, through marriage, yeah. And then we have, Vice-Chair Member Keani Rawlins-Fernandez.

COUNCILMEMBER RAWLINS-FERNANDEZ: Aloha auinala and as they say in Istanbul good afternoon.

CHAIR LEE: Right on. And good afternoon to you, Councilmember Shane Sinenci.

COUNCILMEMBER SINENCI: Aloha, good afternoon, Chair.

CHAIR LEE: Okay, and I believe, Mr. Hokama will be joining us very soon, and then myself, Chair of this Committee, Alice Lee. Other Members, non-voting Members include Councilmember Yuki Lei Sugimura, good afternoon.

COUNCILMEMBER SUGIMURA: Good afternoon.

CHAIR LEE: And then we also have another non-member who may or may not join us today is Council Chair Kelly King. Committee Staff includes Christy Chung.

MS. CHUNG: Good afternoon.

CHAIR LEE: Good afternoon. Rayna Yap, our Secretary. Okay and also only one member of our District Office is available today, Zhantell Lindo of the Molokai Office. Are you there?

MS. LINDO: Aloha, Chair.

CHAIR LEE: Aloha. The other two are not available today, Hana and Lanai. Okay I think they went shopping today, no, just kidding. Alright, from the Department of Water Supply, Director Jeff Pearson.

MR. PEARSON: Aloha.

CHAIR LEE: Aloha. He's in the audience. And with him the Planning Program Manager, Eva Blumenstein. Okay. Is it, Stine or Stein?

MS. BLUMENSTEIN: Stein.

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CHAIR LEE: Oh, Stein, okay. And from the Department of Corporation Counsel, Jennifer Oana.

MS. OANA: Good afternoon, Chair.

CHAIR LEE: Good afternoon. So, the first item on today's agenda is WAI-39, Water Conservation Pilot. In Fiscal Year 2020, the Budget, the Council approved our request to add a proviso in the Department of Water Supply's administration program for \$100,000 to develop a pilot project to...for water conservation measures. I added this proviso after learning of the success of the Lanai Water Company's smart meter program and the positive impacts of the program in terms of saving water and detecting leaks. I hope we'll be able to implement...oh excuse me I forgot something. We have no testimony unless somebody out there wants to testify. No one here? Any objections?

COUNCILMEMBERS: No objections.

CHAIR LEE: Dianne, you want to testify? No, okay. Any objections to closing public testimony?

COUNCILMEMBERS: No objections.

CHAIR LEE: And delay what?

UNIDENTIFIED SPEAKER: . . .*(inaudible)*. . .

CHAIR LEE: Oh, something else? Okay, your shopping list. Okay, thank you. Alright, sorry for the interruption, I...let me see. This afternoon the Committee will receive...and here's, Councilmember Riki Hokama joining us, good afternoon.

ITEM WAI-39: WATER CONSERVATION PILOT (MISC)

CHAIR LEE: The Committee will receive a presentation from Lynn McCrory, Senior Vice President of Government Affairs Pulama Lanai; and Joy Gannon, Director of Utilities Lanai Water Company. I ask that Ms. McCrory and Ms. Gannon be designated as resource persons pursuant to Rule 18A of the Rules of the Council if there are no objections.

COUNCILMEMBERS: No objections.

CHAIR LEE: Thank you. Ms. McCrory and Ms. Gannon, you could begin your presentation when you're ready.

MS. McCRORY: Good afternoon, Councilmembers and Committee Chair Lee. I'm Lynn McCrory.

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CHAIR LEE: A little closer, a little closer. Okay.

MS. McCrory: I'm Lynn McCrory of Pulama Lanai and with me is Joy Gannon and Joy is our Director of Utilities for the Lanai Water Company. And we're here to give you a presentation on the installation of the smart meters across Lanai. This is a part of a water program that Joy has taken to expanded levels that is making a difference for both the water company and for its customers. Joy came to Hawaii from the mainland where she was a public works director for a city in Arizona and one in Oregon. She has her bachelor's degree in environmental engineering and chemistry. She has 22 years of experience in the water business. Prior to joining Pulama Lanai in 2017 she worked for RCAC for ten years as a rural development specialist with water systems throughout the State of Hawaii. Joy's responsibilities for Pulama Lanai include management of two public water systems, an irrigation system, two recycle water treatment plants, one wastewater treatment facility, and a solar farm on Lanai. She is and has been for years the American Water Works Association Small System Chair for the State of Hawaii. She is a CEU course instructor for Hawaii, California and Guam and is a certified grade four water system operator. And most important to all of us at Pulama Lanai, she's an integral part of the management company. We rely on her for many, many questions and answers and she comes through for us so, Joy, I'll turn it over to you and you can begin.

MS. GANNON (*PowerPoint Presentation*): Thank you, Lynn. Thank you, Council and Chairman Lee. I'm gonna present our smart meter program. Please feel free to ask questions as I go along. Lynn covered most of what this slide has to say. We do...the scale of Lanai is quite a bit smaller than Maui County. We have nine source water wells, about 77 miles of active pipeline, about 1,600 water customers or utility customers so we are quite a bit smaller. However, this smart metering program has been done throughout the United States on utilities of much larger scales. One of the major differences for the Lanai utilities is our sustainable yield. Our sustainable yield on Lanai is 6 million gallons a day. So, significantly less than Maui County and actually the smallest sustainable yield of the major Hawaiian islands. What that means to us is we have to manage our water resources very carefully and very smartly. If you look at how much water Lanai was pumping during the pineapple days it was almost 3 million gallons a day during the peak of the pineapple days. Recently, we've been averaging about 2 million gallons a day pumping during kind of the tourist model of the economy. Currently, we're at 1.56 million gallons a day. Last year during 2018, which was a wetter year we were down to 1.4 so you'll see that we've had a significant impact with some of our conservation planning recently. Our conservation planning, as Lynn mentioned I came on board in 2017 and prior to that I was teaching throughout the State of Hawaii and one of the courses that I was teaching was AWWA water audit programs and water conservation programs. And in 2016, House Bill 169 was approved and that's the AWWA water audit and so Maui County became impacted by the water audit program last year and Pulama Lanai will be impacted by that this year. So, we started planning for this when I came on board in 2017 preparing for the water audit. Some of the things that we noticed is that the majority of our water meters had exceeded their anticipated lifespan. So, they had been installed in the

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1980s, they have an anticipated life span of about 10–20 years range so most of them had essentially expired. We also had a legacy utility billing system so that legacy utility billing system had some major limitations in our ability to get information out of it and our ability to download and use information. We also had our largest utility customer had major irrigation breaks and experienced numerous breaks in the system. So, we knew we had some problems and we also knew we had some opportunities. We knew that we had real losses, real losses are those that impact how much water's being used, those include water breaks or also leaks in the distribution system. So the Manele Golf Course had some major breaks and we also knew that in the Palawai area and Palawai old irrigation grid we also had some major breaks. What we didn't know was what our apparent losses were and so those apparent losses is how much loss we were showing in the utility billing program such as meters that weren't reading correctly and how much was not being going through, being read in our meters. Because of that we followed the AWWA recommendations and started to wrap our heads around what our apparent losses were. We had a few goals with our conservation program, our first one was to improve information to our customers. This year we have three different water rate cases that are going in front of the Public Utilities Commission, we wanted our customers to understand how much water they were actually using, we wanted our customers to get notifications of leaks, we didn't want to have anybody having surprise bills of oh my gosh I have a leak and this is how much my bill is. So, we wanted to provide that information to the customer on a timely basis. We also wanted to improve our customer service, if you go onto our website we now have a really nice paying online, but that's not where we were focused on, we wanted to resolve our billing discrepancies positively with our customers. A lot of customers think how is it possible for me to have used that much water, I don't see it so it's not possible, why is my bill so high? And we also wanted the ability to process the bills accurately and timely in a timely manner. We wanted to reduce the non-revenue water so that we...how much water was going through our system that was not being billed for. We wanted to improve our water audit score and we also wanted to address those leaks on a more timely manner and that's...we did that through district metering and I'll explain that in just a second. Additionally we wanted to improve our business model, we have some of the highest electrical costs in the United States, Lanai is even I believe higher than Maui and every gallon of water that we pump has a cost of electricity associated with that or power cost. So, we wanted to pump less and improve our electrical costs. So, with those goals in mind we had...we did the following three actions: we replaced the irrigation system at the Manele Golf Course which has nothing to do with smart meters, but that had a major impact; and then we replaced all the island's water meters with smart meters, we're currently at about 95 percent. In fact today they're installing another one, and we're still, we're working our way through the last 5 percent; and we replaced the utility billing program. So, the impacts of those two actions have been significant for us. We are pumping about 250,000 gallons less today than we were...per day than we were about two years ago. So, this chart shows the use, the pumping rates over time. It probably looks somewhat similar to Maui. it looks somewhat similar to the rest of the United States. You can see the boom of the early...the late 2000s, the construction period of housing, you can see the recession, what happens to water pumping during the recession rate. You can see when Mr. Ellison purchased and started investing

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significant funds into the island, and you can see when our conservation program really kicked in. Our estimated savings with our conservation efforts, we're estimating conservatively, this is actually on the low side I suspect, I've decided to be on the safe side is roughly about 90 million gallons a year. We've only been under this program since we started in the beginning of 2017. Two thousand eighteen was a very wet year for us on Lanai, 2019 we have been either under a mild drought or under abnormally dry conditions throughout the island.

CHAIR LEE: Yes, Ms. Paltin?

VICE-CHAIR PALTIN: Thank you, Chair. I just was wondering is all your non-potable wells brackish water or is some of it non-potable because you guys don't treat it?

MS. GANNON: They're all brackish.

VICE-CHAIR PALTIN: Okay, thanks.

MS. GANNON : So, conservatively we are at about 90 million gallons a year saved. So, 2019 is lining up with the 2018 pumping numbers even though we're in drought conditions. The cost of water, there's a lot of different cost of water, there's the socioeconomic costs, there's the dollar figure cost. The dollar figures cost you can argue the labor, the materials, the supplies, the electrical fuel, cost to pump, capital expenses, there's a lot of costs. So, you have fixed cost with water systems and then you have the variable costs with water, pumping the water out of the ground. Looking at just the variable costs so how much does it cost to pump the water out of the ground and the chemical cost to treat that water for making it safe to drink, that variable cost is \$1.83 to a \$1.90 per thousand gallons of water pumped on Lanai. So, our economic model for the smart meters, we're saving roughly 45 million gallons of brackish water, about 33 million gallons of that is on the golf course improvements, about 12 million gallons of that is directly associated with the smart meter program. Looking at the variable costs associated with that, that's about 23,000 gallons...\$23,000 per day. On the drinking water side again it's roughly 45 million gallons saved due to smart meters, that associate, is associated with about 82,000 in electrical and treatment costs annually. So, so far we're estimating the variable cost savings about \$105,000 a year, again we're only 95 percent complete with this project and we're still rolling this out and getting community buy-in throughout the island. So only 30 percent of our customers that have leaks have adopted the app or the computer program which provides leak notification. So, we're anticipating that we'll continue to have as more people buy in and adopt this program we'll have more savings.

CHAIR LEE: Excuse me, Joy, maybe you could explain a little bit about the app program.

MS. GANNON: Absolutely. Thank you, Chair. So, the program that we used with our meters, the meters have an encoder and a transmitter and so the smart meters have the ability to store the reads for 45 to 120 days data and once a day it sends a signal to the cell tower and transmits that data. That is stored on a cloud online and there's a whole bunch of security features with that and there's an app which customers can

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download and on your phone or on your computer and you can set up a leak alert and that leak alert will either send an e-mail or a text to the customer when they have a leak. Additionally, we wanted two goals, one to provide the customer the information, but also to provide Lanai Water Company that information. So, additionally I can see who has leaks and kind of poke at them a little bit and to prod them to fix their leaks. So, that software or that app on their phone or their desktop is called EyeOnWater.

CHAIR LEE: And then this app, this phone can tell you what time of the day that the leak is occurring so if it's at 2:00 a.m. in the morning you know your, you know, your pipe is leaking, you're probably not using that water. Yes, Ms. Paltin?

VICE-CHAIR PALTIN: I was wondering the cost difference between the smart meters and the old-school meters?

MS. GANNON: The additional hardware is about \$150 per unit roughly for a retrofit. So, a brand new one roughly altogether with installation is roughly about \$350 for a typical residential meter.

VICE-CHAIR PALTIN: And I'm not sure what a...so the \$350 is the old school one?

MS. GANNON: That's a smart meter, but it's from the meter itself, the transmitter, the encoder and then the installation costs as a round figure is about 350. You can retrofit some of those where you don't need all that and that's roughly 150.

VICE-CHAIR PALTIN: And what would be the cost for like the traditional type of meters, do you know?

MS. GANNON: I don't know what meters you're using here and Jeff's nodding his head so I can't...I'll defer to Jeff on that.

VICE-CHAIR PALTIN: Okay.

CHAIR LEE: Ms. Keani Rawlins-Fernandez?

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo, Chair. And mahalo for this discussion, I'm really excited about doing this Countywide. So, for the 300 retrofit, the 150 for the new equipment and the 150 for installation, who pays for that?

MS. GANNON: So, for us we had a \$10 million commitment for capital improvements made by Mr. Ellison when he purchased the utility and so that was part of our commitment for capital improvements to the system. We did it in three phases, phase one was kind of let's test this out and retrofit company-owned properties so that was phase one. Phase two was actually through a \$30,000 grant partially funded through...the 30,000 grant was from Commission on Water Resources, that was, a State program on water security, in other words if you don't pump the water out of the aquifer that water stays in the aquifer so it's a water security issue. And then we had, we were showing really good results and so we decided to complete the rest of the island.

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COUNCILMEMBER RAWLINS-FERNANDEZ: Quick follow-up. Mahalo, Chair. So, as of this point, all of the water meters are retrofitted with the smart meters?

MS. GANNON: We're at about 95 percent so we're--

COUNCILMEMBER RAWLINS-FERNANDEZ: Oh okay.

MS. GANNON: --finishing...we have about 80-some left to do, we're almost there.

COUNCILMEMBER RAWLINS-FERNANDEZ: Good job. Mahalo, Chair.

CHAIR LEE: Okay, you may proceed.

MS. GANNON: Okay. The app on the phone or on the computer considers it a leak if the water has been running for 24 hours straight. So, at 1:00 a.m. to 2:00 a.m. say five gallons was used, 2:00 a.m. to 3:00 a.m. five gallons was used and so on and so forth. So, it assumes that you're not up every single hour flushing the toilet or running the sink so that's its assumption. There are gonna be some customers where there is water being used 24 hours if they have a ice machine or a hotel or something to that effect so some of it you do have to have local knowledge on, but it's automatically defaults to that 24 hours. Going back to the impact, the brackish meters you notice that we had roughly 45 million gallons of savings or 12 million gallons due to the smart meters with brackish. Our largest impact with those brackish meters were actually with the roadside irrigation. So, almost 9 million gallons, almost majority of the brackish water meters, smart meter savings were due to the roadside irrigation. Turns out that when you program those landscape timers they're a little tricky and so a lot of those irrigation contractors said oh we're watering Monday, Wednesday, Friday between 3:00 a.m. to 5:00 a.m. or something to that effect, but when you open up the app you can say oh no you're watering seven days a week and it started at like Chair said it...you can see within 15 minutes breaks of when they start watering so you can say you started watering at such and such a time, you ended watering at such and such a time and when you stopped watering one of your valves didn't shut down all the way so you have a stuck valve. Because you start learning that system and saying okay one valve equates to approximately this amount of water. So, we had tremendous improvements with the irrigation systems. The drinking water, we have some customers that had large impacts with 10 million gallons here, 3 million gallons there, 2 million gallons, 1 million gallons, but the majority of that, the drinking water program were a lot of small changes so a lot of customers were learning about their leak in a more timely manner. So, Lanai bills every other month so instead of finding out 60 days oh I've had a leak all this time you're finding out that you have a leak in a more timely manner and able to address that. The success of this program is largely due to the app that we're using which is EyeOnWater. The customers see one screen, but actually the water utility sees a separate screen so this screen is what I see when I open up my computer every single day. I see how are the meters doing, I see if there's any issues or tampering which sometimes relates to somebody bypassing the meter, we've had...it'll also show if somebody is using water that doesn't have an account.

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It's showing a seven day comparison along with a 14 comparison, 14-day comparison of water usage. So, is my water usage going up or is it going down, it's just a quick little snapshot, but most importantly it showing the number of leak detected. So, if I clicked on that leak detected I'm going to see whose...who has the leak and by scale so the biggest leaks going down. Every single day we review the customers that have leaks and then we nudge the customers to respond. On a given day we have customers that have set themselves up leak alerts so we're sending out roughly 35 to 40 automatic leak alerts so we're not physically doing anything, but the app is automatically sending those out. Sometimes we will call people and say hey do you realize you have a giant leak. Every other month roughly we will send out letters letting people know hey you have a leak here's this EyeOnWater availability, and occasionally we will e-mail people. So, this isn't a static process, this is interaction between the utility and the customers. Another thing that we do look at, all of our source water meters have a smart meter attached to it. We used to check our source meters every 28 days, we're now checking our source meter pumpage every single day. So, instead of seeing a problem 28 days later we potentially are seeing an issue right away. So, district metering, this is essentially a master meter with many sub-meters behind it. So, in this particular picture we have a master meter coming out of a reservoir which is the dark blue line and then 47 sub-meters which is the light blue line. This is for the month of May, just last month and you can see at the beginning of the month it's tracking pretty well close to each other, that tells you hey it's a pretty tight system, we don't have a lot of leaks. Around the 8th of that month you can see that, that line diverges from itself and that tells me hey I have a leak somewhere in that system and so to start looking for a leak in the distribution system along this area, and ignore the end of that month, we had a meter that quit communicating so that's what happened there, but most importantly you can see the leak on this system around the 9th and 10th. Another benefit of the district metering is you can quantify the size of your leak, so this is another district meter typically is in the range of the end of that month, around again the 7th of the month we had a major leak and you can say okay this is how much water we lost due to that leak. We also set up a leak alarm for that so we can get notification of it at a earlier rate. So, we still have a ways to go, we're early on in the program, we've had some success, but we still have a long ways to go. So, on the day I made this slide we had 192 leaks with our meters, only 30 percent of them had EyeOnWater accounts. We also had the majority of those leaks and over 150 of them were small leaks, but we did have about 12 leaks that were considered critical or over 60 gallons per hour plus. Our current continuous flow rate with our EyeOnWater meters is about a little over 2,100 gallons per hour, that equates to about 19 million gallons a year. If you're looking at statistically, the EPA estimates that about 10 percent of homes have a leak past the meter of 90 gallons of water each day. Lanai is a little bit, is higher than that and I've talked to a bunch of communities and that turns out that their rates are higher than that as well. So, our average leak size 273 gallons a day. We started out initially with one out of six meters having a leak pass the meter. We've been working on getting those under control, we still have a ways to go, we're now down to one out of eight. So, some things I've learned along the way, the key to this has been the customer education and working with the customers so that they understand their water use. So they understand I do have a leak. Most of the leaks have been either irrigation or quite frankly toilets, leaking

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toilets and understanding that the toilet, how much water that toilet is using. I've gotten really good at irrigation timers this last couple of years. We learned...this technology has the ability to detect backflows and so we learned that we had some areas that we needed to make improvements on and we're working on that. Through the process we also did an audit of our billing data and our meter information and some...like I said we had a legacy billing program and some of that information in our billing program was not correct and so we have a few difficult conversations with customers that had been billed wrong for a long period of time so that was a learning process. We also are still working on how do we get customer buy-in and getting people to use the app and understand what that app means. E-mails are effective, phone calls are effective, the letters have been not great, but it's that process of getting people to adapt that. And with that I turn it over to questions.

CHAIR LEE: Thank you. Questions? Ms. Paltin?

VICE-CHAIR PALTIN: I just was wondering on your customer education portion did you notice that once folks were notified of the leak was a...did they fix it right away or?

MS. GANNON: The majority of them did. We did have some customers that maybe didn't know how to fix it and so we have a courtesy process where we will go and meet with them and help them troubleshoot it. Some of it has been how do you fix a running toilet and showing them examples of the toilet repair kit which you can buy at any hardware store. The majority of them have fixed it. Water is very cheap on Lanai right now and so we have had one conversation where oh it's cheaper for me to have the leak than to fix it. So, that has happened one time and that was another conversation.

VICE-CHAIR PALTIN: But they're responsible for fixing the leak themselves?

MS. GANNON: Correct. All but three of them have either been toilets or irrigation systems. We have had three that were the lines.

VICE-CHAIR PALTIN: And the brackish water, is there a need to conserve that?

MS. GANNON: With a sustainable yield of 6 million gallons a day we take conservation on both brackish and drinking water.

VICE-CHAIR PALTIN: Oh so the 6 million gallons a day is combined?

MS. GANNON: Correct.

VICE-CHAIR PALTIN: Okay. Thank you.

CHAIR LEE: So, Members, this is why I'm bringing this to your attention, because we could possibly save a couple of million if not 3 million gallons a day with instituting some type of similar project, because they're saving a quarter of a million gallons a day just

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from this leak detection program. And only with 1,300 meters right? And we have tens of thousands of meters. Mr. Hokama?

COUNCILMEMBER HOKAMA: Thank you, Chair. When you say savings I mean, you know, for me yeah I know this island, we've been there a hundred years so when you say savings to me you not really saving the water, 'cause the water is still going through the dikes, eventually it's gonna end up on the shoreline through seepage and whatnot, so. The 6 million gallons when was the last time CWRM verified that number? 'Cause I know we set the number during agriculture era and we practiced for how we did water and hanawai the island a lot different than what you guys do now. So, I'm not sure that 6 million is still the right number of sustainable.

MS. GANNON: So, I believe that the Hawaii Water Plan was updated in 2017 and they're going through the approval process. The estimated sustainable yield on the low end was 6 million and I believe they went up to 36 or 37 estimated sustainable yield, but because they're on the conservative side they they're placing it at six.

COUNCILMEMBER HOKAMA: Yeah, anybody wants to go 36 I'll shoot 'em myself.

MS. McCRORY: Member Hokama, CWRM went through all of the islands and looked at all of the sustainable yields at the same time in 2017 and they gave us the ranges for all the islands and that was the range. But they're --

COUNCILMEMBER HOKAMA: Right.

MS. McCRORY: --being very conservative and left it at six.

CHAIR LEE: I saw some other hands up. Mr. Sinenci?

COUNCILMEMBER SINENCI: Thank you, Chair. Just had a clarification, backflow events can you explain?

MS. GANNON: So, a backflow event is when water is intended to go from the distribution system to the customer's house. So, a backflow is when the water that was supposed to go from the distribution system goes back the other way through the meter. It's not supposed to happen, there is...again statistics, EPA statistics that it happens way more than we thought it did, and this new technology is showing that it happens way more than we thought it did. We found some of these old plantation houses and some of these old houses did not have a double-check to prevent that to happen so we have gone in and had to do some plumbing retrofits.

COUNCILMEMBER SINENCI: Okay. Thank you. Follow-up, Chair? Is there any other instances where you found something out of the ordinary if it was not just leakage but too much water being used in excess or other I guess abnormalities within the system?

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MS. GANNON: Yes. So, we did for example we've had one meter that had been recorded say as a two-inch meter and in reality it was a three-inch meter. So, what was being billed was one-tenth of the water that had been intended, so we saw that. We found one meter that had been installed backwards overtime and so when you have a meter that's been installed backwards it's not reading correctly. So, we did find...it's a good audit of that program, but yeah we found some stuff that we didn't anticipate.

COUNCILMEMBER SINENCI: Okay. And so the Lanai is a private water system. I believe us in Hana we also on the ranch system so you would encourage more the private owners of the system to be moving towards this system, Chair, or you're just talking about the County meters?

CHAIR LEE: Well, you know, we couldn't require private owners to use this model, but certainly we could use it for ourselves, the County we would be saving tons of water and we would also be preserving our aquifer. Yeah.

COUNCILMEMBER SINENCI: Preservation. Thank you.

MS. GANNON: From a...I'm sorry.

CHAIR LEE: Yes?

MS. GANNON: From a private side of this same software, the same model is being used in Olowalu, Launiupoko and now Kapalua there maybe others, but those are the ones I know of.

COUNCILMEMBER SINENCI: Okay great. Thank you. Thank you, Chair.

CHAIR LEE: Thank you. Yes, Mr. Hokama?

COUNCILMEMBER HOKAMA: So, on the smart meters program that you're doing and actually I appreciate what you're doing, because during the Murdock era, you know, the man did give funding, but we get some lousy management personnel on that island at that time that screwed up the replacements so you got what you got. Regarding the smart meters though like with electricity the customer or the resident can opt out of the program regarding the data yeah?

MS. GANNON: They don't have to use the data correct.

COUNCILMEMBER HOKAMA: Yeah, so you offer that same ability to opt out?

MS. GANNON: Yes.

COUNCILMEMBER HOKAMA: Okay. Does Lanai Water Company view the data as the customer's data or do you consider the data as your data? On regarding like say like for my house, my usage, my unique, oh, seems like he only hanawais from 2:00 in the morning to 6:00 in the morning, crazy, but that's his usage practice or whatever.

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MS. GANNON: So, in all honesty I only look at the leak...the customers with the leak, that's what I look at. Does it provide information, very detailed information? It does. So, a customer can opt out and say, you know what, I don't want you to have this and so a customer can say I want the traditional meter. We will propose as part of and whether the PUC approves this an additional meter reading fee where we associate a fee with the sending somebody going out to read that meter.

COUNCILMEMBER HOKAMA: So, those with the smart meter now you don't have a so-called traditional meter reader, you take it off the software printouts--

MS. GANNON: Correct.

COUNCILMEMBER HOKAMA: --or readouts.

MS. GANNON: Correct.

COUNCILMEMBER HOKAMA: Thanks. Is your smart meters running or connected to the 5G?

MS. GANNON: It's connected to the AT&T regular cell phone. Depending on which model of hardware we use some of them will connect to any available cell phone, the later models will only connect to AT&T cellular network.

COUNCILMEMBER HOKAMA: Okay 'cause my Committee has that jurisdiction of the 5G so I've been getting a lot of queries not only of Hawaii residents, but the non-Hawaii residents about what is Maui going to do with 5G. So our Chair has asked me to have a hearing shortly which I plan to hold regarding a potential Maui County policy regarding 5G usage in this County. So, I just share that with you so that, you know, you folks may want to participate if you choose when we have those public meetings on that subject. But currently there's no connection between the 5G and your smart reader for your water operation?

MS. GANNON: No. It's connected to the AT&T or the Verizon or any available network, but essentially what this meters doing is it's sending a text to the cell phone and so it doesn't need the full spectrum, it's just sending a text.

COUNCILMEMBER HOKAMA: Okay. Thank you very much. Thank you, Chair.

CHAIR LEE: Any other questions? Yes, Ms. Sugimura?

COUNCILMEMBER SUGIMURA: Thank you. This is exciting, I did see this on Lanai with Chair Lee and I was curious what...so once you install the smart meters, the customer which would be individual residents have to correct the problem so what has been the pushback if any on that or what has been your...

MS. GANNON: The initial pushback and this is, happens almost every time I'll be honest, the initial pushback is I can't have a leak that big, I don't...I'd see it, it'd surface. So,

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that's usually the first reaction it's I don't have it, then it's going through and saying okay, here's when it started, what it's looking like, and we do send the meter reader out to do a customary showing them that the waters flowing through the meter and so it's an education process.

CHAIR LEE: Excuse me, Joy, you also explain to them how much more they're paying.

MS. GANNON: Yes.

CHAIR LEE: They're wasting their money on water that's just leaking.

MS. GANNON: Yes. We don't want anybody to get a surprise bill, that's very key for us, nobody's happy when they get a surprise bill. The majority again it's how do you fix a toilet, how do you fix your irrigation system, but it's a customer education.

COUNCILMEMBER SUGIMURA: And the customer pays for it?

MS. GANNON: The customer pays for it? Yes.

COUNCILMEMBER SUGIMURA: So, the \$10 million that Mr. Ellison put out there for Lanai Water Company, you didn't use this for the \$350 right?

MS. GANNON: We used a portion of that 10 million but not the full amount.

COUNCILMEMBER SUGIMURA: And then the additional 30,000 for phase two, what was that used for did you say?

MS. GANNON: We were testing out what's called an ultrasonic meter. So, it's a...most of the meters that you probably have on your system as well as what we had on our system were a traditional meter where it spins and measures. The ultrasonic uses a different technology, no moving parts within the meter and so there's a 20-year warranty on those. So, we were testing them out seeing how well they work for us.

COUNCILMEMBER SUGIMURA: So, the water meter at my house I know we've never changed it. It has a ten-year lifecycle, I've been there over 20 years so were expecting a problem soon maybe?

MS. GANNON: So, you know, just like me as I've gotten older I've slowed down so most meters typically have a spinning device inside them where they have essentially two chambers that wobble and as they spin they slow down, because water wears out the little metal pieces and it'll...so, typically the meters as they age they're not registering the amount of water flowing through them. So, the way to think of that is your water meters are your little cash registers for your water company so if they're not reading right, you're not getting the right amount of money.

COUNCILMEMBER SUGIMURA: Could work for or against the customer right could be good or bad.

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MS. GANNON: It almost always benefits the customer.

COUNCILMEMBER SUGIMURA: Benefits the customer.

MS. GANNON: So, it's typically they'll read slow almost always.

COUNCILMEMBER SUGIMURA: So, I guess the Water Department would come to my house soon it's been a long time I've never changed it. So, does the smart meter replace my water meter at my house or does it supplement it?

MS. GANNON: It can go either direction so some of those meters that we replace we completely replace the meter itself so some of the meters that we had on Lanai were older than I am. I had some people look at some of our meters and say that they should be in museums, they're wonderful the pieces of art and technology but, you know, they weren't functioning as a water meter anymore. Some of them we basically did retrofits on and so we essentially changed out the top and added the cellular so it depends on the meter itself on which direction to go.

COUNCILMEMBER SUGIMURA: This is so phenomenal, I hope we can do this, Chair.

CHAIR LEE: Before I call on Ms. Kama I just wanted to say that the other thing--oh and Mr. Molina--is we are...our Staff and I are looking at the possibility of coming up with some kind of help to those who can't afford it, you know, those low-income folks or people who just can't afford it and we'll come up with maybe a package. I think she mentioned this packet cost like \$14 and maybe we can come up with either a volunteer pool or perhaps one or two more people in the Water Department who can go and help people, show them how to repair their systems especially if it's so minor if it needs a new washer or something like that, you know. So, there's a second part to this, we know that this is going to be a successful program provided all of you agree to it. But in addition to that we're gonna need to help others, in order to give complete customer service we need to help the disadvantaged. Ms. Kama?

COUNCILMEMBER KAMA: Thank you, Chair. So, forward thinking, at some point the water meters on many people that they have might have to be replaced at some point in time. So, are we looking at that replacement being the...this smart meter thing?

CHAIR LEE: Yes, we looking at a pilot project and which I will come back and ask you, you know, for your support on is perhaps a pilot project let's say, just an example in Wailuku Heights and we will work with the Department of Water to see how many, is it 500, is it 1,000 is it, you know, what number is manageable? And then we'll start with that as the pilot project and of course we would start in Wailuku because Wailuku doesn't have water, you know, Wailuku has...it's not like we don't have water completely, but we're almost up to the max on our aquifer so this would be the logical place to start if that's part of your question.

COUNCILMEMBER KAMA: That was part of my question and so do you have some sense of timing on this?

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CHAIR LEE: We're gonna have to find out more information on cost, we're gonna have to talk to our Budget Director, I mean our Budget Chair, we only set aside 100,000, it's probably not enough. I don't know. We're gonna have a short presentation from our Water Director next, because they had a pilot project planned too. But I don't think it was like this, you know, similar, it was a meter project, but not like this where, you know, we actually work with the customer to repair the leaks so that we can save the water and they save the money and it's a win-win. I don't think it was quite that extensive.

COUNCILMEMBER KAMA: Okay. Thank you, Chair.

CHAIR LEE: Mr. Molina?

COUNCILMEMBER MOLINA: Thank you, Madam Chair. And good afternoon, Ms. Gannon, and also, Ms. McCrory. Earlier, Ms. McCrory mentioned that you worked out in Arizona where I guess water conservation is a necessity out there and in about a week or so we've got our national conference in the State of Nevada and they're offering us a tour of I think out in Boulder to look at their water facility. So, this type of smart metering it's pretty much the real deal out there, can you comment on that and how would, you know, you see it from there and it could work for us here?

MS. GANNON: Boy, I don't want to speak for Boulder, Nevada, but smart meters are being rolled out throughout the country and are being used extensively throughout the country. The Bureau of Reclamation which is extensive throughout the West has funded a number of smart metering programs for water conservation projects. So, if you're talking with communities in the West you'll definitely hear of different communities who have implemented this for water conservation purposes.

COUNCILMEMBER MOLINA: Good, yeah 'cause upon hearing this really stimulated my interest, Madam Chair, now to go on that...they have that mobile workshop to go and see how they do it out there in Nevada and of course with Colorado River and everything else it's, you know, feeds a bunch of different places so, but thank you very much for that. Thank you.

CHAIR LEE: Yes, Ms. Rawlins-Fernandez?

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo, Chair, and I like the direction you're taking this. With the 100,000 at \$300 per meter for the equipment and the installation it looks like approximately 300 meters for the 100,000 that we allocated for this fiscal year and, you know, if we can work with the Department to figure out more details and everything sorry I just did the math real quick. Anyway, my question was on the 30,000 grant that you received from CWRM in testing the ultrasonic meter. What were your findings?

MS. GANNON: So, we were using it as a comparison purposes between the traditional meter with the traditional equipment and the ultrasonic. One of the things that we wanted to detect...the ultrasonic's have the ability to detect lower flows than the traditional

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meters so each type of meter has a range of flows that it is accurate on and believe it or not you can have a very small amount of leak and the traditional meters won't pick that up. So, we were seeing if we would have a spike or capture more of that low flow and in all honesty we did not see a difference between the traditional and the ultrasonic. Now that doesn't say that, that doesn't exist, but we did not see that.

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo for sharing that. Mahalo, Chair.

CHAIR LEE: Thank you. Thank you for that question. We also took down the information on how to apply for a grant. So, we're looking for all kinds of different ways. Yes, Mr. Hokama?

COUNCILMEMBER HOKAMA: You mentioned certain properties your smart meter is a supplement to the traditional meter, did I hear correctly?

MS. GANNON: Maybe I didn't phrase...

COUNCILMEMBER HOKAMA: Instead of replacement, you know...

MS. GANNON: So, some of the meters we left the existing meter in place and --

COUNCILMEMBER HOKAMA: Right.

MS. GANNON: --we changed out...basically...

COUNCILMEMBER HOKAMA: You left the body, changed the guts.

MS. GANNON: We left the body, we changed the top and we added something that talks to the cell tower essentially.

COUNCILMEMBER HOKAMA: Okay. So, there's no such thing as then two meters right?

MS. GANNON: No. There is but not with what we were doing.

COUNCILMEMBER HOKAMA: Okay. Does the customer or resident get charged for two meters?

MS. GANNON: No. So, the customer has...our utility, drinking water utility rates were formed in 1997, it's exactly the same rates today as they were in 1997. We do have a upcoming PUC case, but it has nothing to do with the smart metering program.

COUNCILMEMBER HOKAMA: So, I'm gonna ask you now, how smart is the smart meter? Because one of the biggest things for potable public entities like yourself, you're private but you're still a public utility right?

MS. GANNON: Correct.

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COUNCILMEMBER HOKAMA: Is E. coli, so is your smart meter have the ability to do salmonella analysis whereby you can say looks like the contents changing we better go do a test or something, because of potential E. coli issues? It's not that smart yet?

MS. GANNON: No, no, no. So we have...the Lanai utilities is regulated just like the County is from the Department of Health and Commission on Water Resources and the PUC. So, water quality we do separate tests on water quality just like County of Maui. What the smart meter does is it actually has a few tests that it does do. The one that we use it extensively for is the amount of water that's going through the meter either forwards or backwards, like I mentioned before we did have, we noticed that we had some backwards water which shouldn't be happening.

COUNCILMEMBER HOKAMA: Right.

MS. GANNON: So, that backwards water could actually impact water quality which is one of the reasons why we are addressing that. But it also monitors for temperature and it also monitors for meters that are being used outside the design parameters and so like I mentioned meters have a certain design you'd say 25 gallons per minute of water could go through it up to say let's say 50 gallons per minute. If that customer was using it outside of its design parameters we also have an alert for that. So, customers that are over using the meter.

COUNCILMEMBER HOKAMA: Okay. So, the meter can even measure temperature? You doing that at the well itself too? The temperature readings regularly?

MS. GANNON: You know, I'm not actually using the temperature one so I can't answer that but I know it does have that feature.

COUNCILMEMBER HOKAMA: 'Cause Palawai is hot, the water is hot in Palawai.

MS. GANNON: Yeah.

COUNCILMEMBER HOKAMA: I mean I'm surprised you guys didn't try do a spa with the water. No, I mean hey people pay money right to go into hot water. Thank you very much for your being here. Thank you, Chair.

CHAIR LEE: Thank you. Are there any more questions? If not I would like to thank you, Lynn and Joy, for coming here, flying here, appreciate the presentation, it was most informative, and you can be sure that we'll be in touch with you for more information very, very soon. Thank you.

COUNCILMEMBER HOKAMA: Chair, one last question for Ms. McCrory. What's your target date to complete 100 percent?

MS. McCRORY: I'm sorry repeat that please.

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COUNCILMEMBER HOKAMA: What's your target date to be 100 percent conversion or are you guys just doing it?

MS. GANNON: Target date I would say this year, but in all honesty the 80 some that we have left are all the tough ones so I'd say within the next two years.

COUNCILMEMBER HOKAMA: Okay. Thank you very much.

CHAIR LEE: Alright thank you. So, we do have another item on the agenda, WAI-30(6) Matters Within the Committee's Subject-Matter Jurisdiction Department of Water Supply, Water Conservation Presentation. Okay what did I forget? Oh, I thought I was gonna do both of them at the same time? Okay. But if you want to...they're the boss, so are there any objections to deferring this particular matter this is WAI-39?

COUNCILMEMBERS VOICED NO OBJECTIONS.

ACTION: DEFER PENDING FURTHER DISCUSSION.

ITEM WAI-30(6): MATTERS WITHIN THE COMMITTEE'S SUBJECT-MATTER JURISDICTION (DEPARTMENT OF WATER SUPPLY, WATER CONSERVATION PROGRAM PRESENTATION) (RULE 7B)

CHAIR LEE: Okay. Now, for the next item 30(6), Water Department. The Committee will receive a presentation from Jeff Pearson the Director of Water Supply and Eva Blumenstein, Planning Program Manager for the Department of Water Supply on the County's Water Conservation Program. So, whenever you're ready. Wait how many pages is this? Yeah, how many pages on the conservation program?

MS. BLUMENSTEIN: I have 11 slides or so. I can go as fast as you...

CHAIR LEE: How many?

UNIDENTIFIED SPEAKER: Eleven.

CHAIR LEE: Oh okay. Thank you. Proceed.

MR. PEARSON: I'll just do a quick introduction. Good afternoon, Members of the WAI Committee. Jeff Pearson, Director of Water Supply with Ava, Eva Blumenstein, Blumenstein with me here. Yes I think we'll reserve the questions, I guess it's up to you if you want to ask them during the presentation, but I'll just reserve any comment I have until we get through the presentation. I want to thank Joy Gannon for answering a lot of questions on meters and I want to know where Councilmember Yuki Lei lives, but what we'll...so I can work on that meter. But we'll move on now and then we can go with questions after.

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MS. BLUMENSTEIN (*PowerPoint Presentation*): Thank you, Chair. Okay I can go as quickly as you want. I want to go through, give you a little overview or context to how we develop our conservation program 'cause it's where the meter replacement fits. So, the framework and then how we develop conservation measures and based on some of community feedback and survey results that we have...

CHAIR LEE: Could you speak closer to the microphone please? Thank you.

MS. BLUMENSTEIN: And also what kind of savings that has resulted in, both in demand and dollars. So, for context, the Commission on Water Resource Management oversees water use and conservation throughout the State. They do that through the State Hawaii Water Plan of course so that's the over-guiding policy and rules for all the counties to develop their water use and development plan which addresses conservation measures Countywide so not just for the Department of Water Supply, there's private purveyors, recycled water, et cetera. So, on the County basis then in-house we develop our conservation program some of that is also some CIP, capital improvement projects. On the state side CWRM has developed its Statewide water conservation plan that also provides policy guidelines and technical assistance for us. Regulatory, we have two important act, 169 that Joy mentioned that established the water audit program which is required for us we started doing that in 2017. And also Act 172 which was a two-year water security pilot project to fund initiatives that would increase...find ways to offset potable water for non-potable purposes and increase water security throughout the State. And in our County Code there are a few provisions in there that specifically address water conservation, these apply to Department, not the private purveyors that we need to monitor water consumption, issue high-consumption notices, we need to prioritize replacing old and leak prone main pipes, distribute leak detection tablets and encourage water leak reporting, promote water conservation education, provide water efficient fixtures to our consumers, and implement incentives to replace old toilets and old water fixtures with water-efficient models. So, as we develop in-house measures this is sort of like a repetitive process that goes around and round as we learn what worked or we get results from surveys or pilot projects, but we have the overall Statewide framework as policy guidance and also guidance from the Board of Water Supply and this body. Then through polls, public meetings we get input on what the community support and, you know, what they're ready and what their priorities are, whether those fit our type of customers or certain target areas. If there is technology that is available, we've done research in a few different options both demands and supply side, and customer acceptance equity, so to say does this apply to just certain customer classes, and are the measures cost effective, are there better methods in place. Then of course budget and manpower and I'd say very often it comes down to just staff resources and time more than money. Okay, this is just a snapshot of some of the public outreach, community service that we've done throughout the years. The pie chart there shows you that most folks that responded, this specific sample is 650 respondents. Most of them are in Wailuku. We try to gauge both what people are interested in, what they want us to focus more on. You can see on the right graph there a lot of folks are interested in rainwater catchment, more water conservation and also alternative water reuse such as grey water, recycling grey water. And then we always tend to have this

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question in there too are you willing to pay more for you water to support additional conservation water source protection efforts. And that's kind of like a 50/50 so it's not a given. Okay so, meter replacement fits in...we divide conservation measures in supply side and demand side so what we start out with generally is the water audit which is identifying non-revenue water losses, if there's discrepancies between what we produce and what we bill so bill consumption. So, that informs our revenues and water losses can be both on the billing side, meters like old non-functioning meters, it can be on the...it can be leaks within the system and other inefficiency, it can also just be processes, you know, how we...the protocols and processes we have in place to account for water that we serve. That informs our leak detection program to identify priority areas where generally it's based on pipe type, diameter, age, material to prioritize areas. We have about 750 miles of pipe throughout Maui and Molokai. So, we have to sort of have a priority system in place, what to address first. Another supply side measure is CIP project where we know there's polyethylene pipe is prone to leak, that's just used in laterals so rather than waiting for multiple leaks throughout the subdivision we've been proactively going in and replacing all those p-laterals in a subdivision. The one we did a couple years ago was in Wailuku Heights I believe. Customer meter replacement, that is an ongoing effort. Of course we also have outdated meters that served their useful life. We are right now engaged a consultant to both...we're replacing 500 meters in Kehalani with smart meters, that is an advance metering analytics system and for FY '20 the Department is moving forward, we have a consultant to come up with a water replacement plan by the end of this calendar year, this is the goal. And once...right now the interface between our billing system, it's called a CC&B billing system and is a Cloud-based platform that the advance metering system is using that's being configured. But what I understand the benefits both to us in having quicker data reads which is cloud based and they're not manually read meters and the benefits to the customer as well so you can monitor your water use, getting quick leak reports, et cetera, should be available as soon as that program is implemented. So, we're excited about that. Pipe replacements that of course also inform from leak detection to prioritized maintenance repair and replacement proactively so you don't have costly main breaks. Okay the other part is the demand side where we do a lot, that is customer side can be regulatory, can be incentives. Some of the things that we've done last few years include toilet replacement program and the rain barrel program where pretty much giveaways as incentives for customers to replace old toilets with more efficient ones, giving away low-flow fixtures so fixtures are more efficient than what Plumbing Code allows, that could be kitchen and faucet aerators and showerheads. Direct install programs, that is when we go in and retrofit select targeted, could be multi-family, it could be elderly housing projects. I'll show you some of the results from that, we've done toilets and low-flow installations in the past. We've also done some high efficiency shower installations at parks, eight of them are higher used parks on Maui. And some of those would go around the circle and see what has worked well, turns out that well people don't like those low flow, it's just not enough to rinse off your surfboards and whatnot so they get ripped off and none of them are there any more so, you know, kind of lessons learned as we go. It seemed like a good idea, but it doesn't work in the end. Synthetic turf installation even for some high-activity areas, we did one at the homeless shelter in Wailuku, in Kahului, and reuse and harvesting, that is using

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alternative resources from non-potable needs. We're right now doing a grey water system to capture grey water from showers and sinks at the Launiupoko Beach Park on the west side, it's gonna be the first one in the County and that's a collaborative effort with Parks Department. We also recently got news we're getting State funding.

CHAIR LEE: Eva, I'd like to ask you a question. Okay. You seem to be covering a very wide range of issues yeah? And we're probably not prepared for all of that today 'cause, you know, our focus really was on leak detection and, you know, but yours has to do with major CIP projects yeah? And so, the area that we're talking about is saving water through leak detection and if you...how long ago did you initiate this project that you're talking about?

MS. BLUMENSTEIN: Are you talking about leak detection of main pipes or?

CHAIR LEE: Of consumers.

MS. BLUMENSTEIN: Conservation measures in general goes back about 20 years. So, I want to give you a context of the different supply and the demand side measures, you know, how they measure up if, you know...

CHAIR LEE: So, if you've been doing that for 20 years we should have been saving millions of gallons of water right? So, in your estimation how much water have we been saving per year --

MS. BLUMENSTEIN: Let me fast forward.

CHAIR LEE: --in Central Maui?

MS. BLUMENSTEIN: I have it system-wide, I can probably guesstimate it for Central. Let me move along...

CHAIR LEE: So, what page?

MS. BLUMENSTEIN: Water use statistics, this would be the third to the last slide. So, this shows 1998 to 2018 water use savings and statistics where the blue line shows...has number of services have increased with population growth, water use per service or per household have decreased over time. So, we started out 1998 at 1,100 gallons per day per service and we're now down to 876 gallons per day per service or meter. So, we know that part of that is due to conservation measures.

CHAIR LEE: Say that again please.

MS. BLUMENSTEIN: So, the number of services, the blue line on the slide have increased so that's just number of meters that been installed over the last 20 years. The red line shows you the water use per meter that have decreased over the same time frame. So, the right side you can see annual water use per service and the left side you see number of services. So, what that means is over the last 20 years the numbers of

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meters have increased about 36 percent, overall water use for all those services have increase by little less than 6 percent, and the water use per service or meter has decreased by over 22 percent. So, that is...

CHAIR LEE: And that's for Central Maui?

MS. BLUMENSTEIN: This is Countywide, this is all our services. So, I would say that Central Maui is very representative of this 'cause that's where most our services are.

CHAIR LEE: You know the reason I ask is because we've been having a problem with water in...water availability in Central Maui or do you agree with that?

MS. BLUMENSTEIN: Maybe I should let the Director respond, but so the one thing is the resource use in terms of available yield from the aquifer itself. And then it's the capacity of the system if what you're referring to is the shortages recently in some regions of Central Maui.

CHAIR LEE: I guess what I'm trying to say and I'll stick with you, Eva, because you're giving us the statistics. How is it that we have been told maybe not by you but others in the Water Department before you that we needed to have the "Show Me the Water" Bill, because we didn't have enough water in Central Maui to continue to build affordable housing and all kinds of housing in Central Maui. That's what we were told in 2006 yeah. So, we've been experiencing less and fewer and fewer and fewer affordable homes, because there wasn't enough water. Yet if you look at this graph you see that according to you we've been saving all this water, we've been saving millions of gallons of water, but yet we were told we don't have enough water. So, how much water do we have as of right this moment that's available in Central Maui?

MR. PEARSON: Chair, if I may, what Eva was trying to show is that the additional services that of course there's growth so we have additional meters that are coming online, but with all those additional meters the water use per meter has gone down so that's a conservation effort that I don't think we can take all the credit for, but there's a conservation by the customer, reduced usage by about 20-some percent. The total water use because all these meter are still coming on as according to her slide is still an additional 6 percent over the last 20-years. So, I'm not really answering your question, but there's less growth with additional water use due to good conservation methods both that we implement and that the customer follows. As far as "Show Me the Water" that's a lot of history there, I don't claim to be knowledgeable on the entire history of that issue. I know that it was intended that instead the idea and you can correct me please if I stray a little bit, but I think the idea of that was to put more onus on the developer to provide a source of water than to have the developer come and work hand in hand with the Department of Water Supply to work on a source of water. And part of that also I'm sure...

CHAIR LEE: No, but why? Why? Why if we had enough water why would we do that? If we had enough water?

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MR. PEARSON: Well, it was...I think it's a matter of trying to control and not have these...it's been used before, these sweet deals with the developer meeting with the Director behind the door and trying to figure out how we're gonna solve the developer's problem. So, that was...the second portion of that I know was all these agreements now are not just signed by the developer and the Department of Water Supply, they have to go in front of you. So, that also provides...I'm not assuming that other directors had sweet deals I'm just saying that that was the premise.

CHAIR LEE: Okay. Well, anyway we were sold a bill of goods because we were told the reason for the "Show Me the Water" Bill is 'cause Central Maui didn't have enough water so it was going...so the water that we did have would be reserved for affordable homes and not for market homes or anything else, that was the rationale. And so, the issue I have with this presentation it is so broad that it's hard to pinpoint exactly where we're saving money in terms of conservation. I mean versus the previous presentation where they can tell you on Fifth Street on Lanai these many people are saving, you know, so much water and on Lanai Street or Fraser Street they're saving so much water. This one you're taking into consideration the whole island and then trying to take an...extract an average out of the presentation, that's what I see. I don't see really specific information.

MR. PEARSON: I can take a little blame for that 'cause when we were working to put this presentation together we were working to determine how to present this and since it was our first presentation to the community we thought we'd try to give an overall understanding of where the Department of Water Supply is right now. So, I'll take a little bit of blame for that and I didn't realize that you wanted...I realized of course what the presentation was from Lanai, but I didn't know that you wanted that type of detailed presentation.

CHAIR LEE: Well...

MR. PEARSON: So, I apologize.

CHAIR LEE: We have nothing to do with East Maui, that's all surface water yeah. So, we not talking about surface water --

MR. PEARSON: Today.

CHAIR LEE: --and we're not talking about Lahaina 'cause that's a separate system so that only leaves Central Maui right?

MR. PEARSON: Oh correct.

CHAIR LEE: So, that's the reason why we're talking about Central Maui and Central Maui is, you know, under the management of CWRM so if any aquifer or any water system really needs help it's Central Maui right, because we...we're covering Wailuku, Kahului, Kihei, Makena. So, maybe I should have been more specific in asking you for detailed information on Central Maui. And let me ask you, the pilot project that we

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just received a presentation on, is there something that you folks have that can be compatible with that or can you just adopt that program?

MR. PEARSON: I did thank Joy again for giving you a lot of information on these smart meters and I appreciate that. That's what we're beginning to do, there's a brief mention in the presentation, but we have a consultant on board now for small fees to begin to evaluate the island-wide, not just Central Maui, but island-wide the meter situation that we have right now. Age...the two key factors are age and the volume of water that travels through the meter. So, we gave them tons of data, they're going to evaluate all this data and then begin to prioritize where the meter replacements are needed. And I agree with you one of the priorities is just, because it's in Wailuku and we have the designated aquifer that that's one of the priorities just hands down. So, they're gonna do that. They're already contracted they're gonna be out to Maui in a couple of weeks so do that evaluation. Following that in Fiscal 2020 we have \$2 million set aside that I'm sure you're aware of for meter replacement. So, that's not gonna save the world and it's only gonna be a start, maybe 10-15 percent at the max will be the meters that can be replaced for that 2 million.

CHAIR LEE: Okay. I don't know about the other Members, but I really not am not in a mood for another study from us to --

MR. PEARSON: No, I just...

CHAIR LEE: --start this other project, maybe it can be done concurrently. Any comments or questions? Yes, Ms. Rawlins-Fernandez?

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo, Chair. I have a lot of the same concerns that you just discussed. And I think the question is, is South Maui using the same water as Central Maui? And I think in previous meetings you said that's yes.

MR. PEARSON: Yes.

COUNCILMEMBER RAWLINS-FERNANDEZ: And so, during high demand, what is the policy of residents conserving water versus South Maui, you know, hotels, resorts, golf courses conservation? Are they being put on the same kind of water restrictions that our residents are and experiencing the kind of outages that our Central Maui or Wailuku residents experienced this past weekend?

MS. BLUMENSTEIN: Thank you. In terms of the notice that was just recent now that applied to that specific area where there was a distribution shortage, wasn't the source shortage per se. In general, because resorts and outdoor use is higher and that there are a lot of incentives to target those users for more conservation, we are looking at those specifically more to offset potable use for non-potable demand, incentives for irrigation systems, we look at smart irrigation systems. I know Wailea Condo Association has looked at that. But in terms of regulatory they're not treated differently. If there is a conservation notice because of a distribution system shortage

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within the system, not the source, not the aquifer per se, then they're treated the same as residences. Does that answer your question?

COUNCILMEMBER RAWLINS-FERNANDEZ: So, that notice that went out hotels in South Maui who are also users of the same system were also put on the same restriction?

MS. BLUMENSTEIN: They were not treated differently than the other users. But the shortage though was in a specific region it was Kehalani, Wailuku Heights I believe.

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo. Okay and then just one last question, I heard you say earlier that you have...your Department has plans to put 500 smart meters in Kehalani.

MS. BLUMENSTEIN: That's right.

COUNCILMEMBER RAWLINS-FERNANDEZ: And that's already been funded in the budget so that's...

MS. BLUMENSTEIN: Yeah that was FY '19.

COUNCILMEMBER RAWLINS-FERNANDEZ: And so, that's the 300 oh I don't know how much it's gonna cost for us, but Lanai said that the equipment is 150 and for the retrofit and then 150 for the labor for the installation, I'm guessing it's going to be approximately the same? And if so, who's going to be paying for the equipment and the installation for those 500 pilot program meters?

MS. BLUMENSTEIN: So, that's absorbed by the Department I understand. There's no...so you replace a meter both for the purpose that the meter is old and needs to be replaced 'cause it served it's useful life and then you're getting another technology so you paid your water system development fee the first time you got that meter. There's a small service fee associated with the smart meters, I believe that's absorbed by the Department too so you're not gonna be charged differently than your neighbor.

COUNCILMEMBER RAWLINS-FERNANDEZ: Okay. Mahalo. Mahalo, Chair.

CHAIR LEE: Ms. Paltin and Ms. Kama.

VICE-CHAIR PALTIN: Oh thank you, Chair. I just wanted to go on the record and say that all of the affordable housing projects that have stalled have been reviewed during the housing study and none of them were stalled because of water. The roadblocks for affordable housing are financing and permitting but not water.

CHAIR LEE: Yeah. Affordable homes are exempt from "Show Me the Water."

VICE-CHAIR PALTIN: Yeah. So...

CHAIR LEE: They're different.

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VICE-CHAIR PALTIN: Yeah. Just putting it on the record.

CHAIR LEE: Okay. Ms. Kama?

COUNCILMEMBER KAMA: Thank you, Chair. So, I wanted to ask why the 500 homes in Kehalani are gonna do...get new smart meters? I mean isn't that a new development out there so why would they need that?

CHAIR LEE: I was gonna to ask that same question. Mr. Pearson?

MR. PEARSON: We're making the change over to these Badger smart meters, the Badger end point with the beacon which was discussed. So, when we put in a meter I don't think it would be wise to put it in an older technology meter that we're gonna have to change out so these happen to be new homes, they're gonna get the new technology and then at the same time we're going to evaluate the existing meters and prioritize which existing meters should have these new beacon meters installed first.

COUNCILMEMBER KAMA: I don't understand that but you know, you can ask them some more if you like, but to me it makes more sense to replace the older meters first than the newer meters because they're probably more worn down.

CHAIR LEE: Well, that's the reason why eventually I was gonna suggest the Wailuku Heights because it's way older, it's maybe 30-35 years old compared to Kehalani's maybe ten years old.

COUNCILMEMBER KAMA: I was gonna suggest Paukukalo they've been there since 1964 so I mean and they only have 192 units there, so.

CHAIR LEE: I totally agree, you know, looking for an older place; however, I would guess the other things that were taken into consideration maybe they've had more complaints about pipes in Kehalani, I don't know, there are probably other reasons why you decided on that location right?

MR. PEARSON: Well, there are many reasons but we're trying to initiate a improved water meter program and part of that would be when the new meter is installed you initiate the new technology that you have available with these new meters. I realize they're new homes and so forth, but there's still gonna be leaks, there's still communication issues and we need to put a meter in the ground. So, I don't know why putting a low technology meter in the ground would make sense.

CHAIR LEE: Well, Mr. Pearson and Eva, I think this Council is also looking at how do we save water, how do we conserve our aquifer yeah. That's what we're thinking of and you're probably not gonna have that much leakage in kind of a new subdivision but you'll probably have tons of leakage in an older subdivision no? So, that's the reason why we're talking about older subdivisions 'cause we we're looking for results, you know, like now 'cause, you know, you, Eva, you were talking about over 20 years we've been doing this and now you're gonna do a study on something but, you know, we're

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more anxious than that, you know, we want results sooner than that. We want results...the Lanai Company project was...is like only a year-and-a-half old and they're saving a quarter of a million gallons a day. So, we're thinking wow, you know, maybe we can make it happen here on Maui and we realize that you guys have more to think about than individual households, you know, with leaky toilets, I'm sure you also have to worry about the big pipes that lead to the leaky houses, you know, and those kinds of issues. While we're thinking of how do we save water now. Am I...

COUNCILMEMBER RAWLINS-FERNANDEZ: You're on it, on point.

CHAIR LEE: Okay you guys agree. Okay I didn't want to say...

COUNCILMEMBER RAWLINS-FERNANDEZ: And, Chair, I think you're also trying to ask the Director like why was Kehalani chosen, I think that question wasn't asked like point blank why was Kehalani chosen, what factors were considered and how do we go about finding somewhere that would save us more water instead of...

MR. PEARSON: The initial reason Kehalani was chosen is because it's new homes that needed meters installed and we have to install a meter. So, we were going to move forward with the new technology and install the new technology meters that we're also going to install throughout the islands after we determine...after we prioritize. So, I guess the main reason is the fact that a meter has to be installed so we're moving towards new technology and we're installing these new technology meters. I get your point, I understand what you're saying, we can buy two sets of meters and put in the old meters and then wait and install later so I understand your point about there's other old meters out there that could be in poorer shape. I get the point.

CHAIR LEE: Ms. Kama?

COUNCILMEMBER KAMA: Okay. So, I just want to make sure that maybe I didn't get the point, maybe I misunderstood earlier but so, you're telling me that there are 500 new homes that are going up in Kehalani that don't have a water meter that are needing a water meter? Is that what you're saying?

CHAIR LEE: Is that what you're saying?

MR. PEARSON: Correct. It's a home that's being built and when they build it once it's going to be occupied, they're going to have a meter available and we're going to install that new technology meter.

COUNCILMEMBER SUGIMURA: Makes sense.

COUNCILMEMBER KAMA: I get the point, but I just got it now.

CHAIR LEE: Well, I don't agree, because it's not gonna save us one drop of water on a brand-new home, you know, like that's not your priority okay obviously, that's not your priority but our priority is how do we get more water, how do we save more.

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Okay this is...I don't know if you've been watching the budget, but we're trying to conserve water and reuse water, yeah, to preserve what we have. So, and that's why we put so much money into alternatives to injection wells and trying to find alternatives to use reused water yeah and the same idea with saving water and so I don't know can you do two projects at the same time?

MR. PEARSON: Conserving water is a high priority for me and I don't feel comfortable with you saying that you don't think conserving water is one of my priorities. So, I disagree with that comment, but yes we can do more than one thing at a time. Again you are against this study, this isn't going to be a three-year study to determine these meters, they have the data available, they just have to collate the data to determine the age and the usage of the meters, that'll be a short period of time where we'll be able to initiate one of our first phases of meter replacement where the meters are needed most.

CHAIR LEE: Ms. Kama?

COUNCILMEMBER KAMA: So, my next question is when do you anticipate these 500 new homes in Kehalani to be completed so you can insert or install these new smart meters?

CHAIR LEE: Mr. Pearson?

MR. PEARSON: I don't know the specifics on each of the projects, but probably within the next six to eight months.

COUNCILMEMBER KAMA: Thank you, Chair.

CHAIR LEE: Any other questions? Yes, Mr. Sinenci?

COUNCILMEMBER SINENCI: Thank you, Chair. I just had a question for the Director, I'm looking at slide eight where it has the usage, average water usage single family, but along the lines of Member Rawlins-Fernandez's questions about the larger corporations, the hotels down in South Maui. Is there a formula that the hotels get as far as water usage for their...whether it be golf courses or for their grounds-keeping? And I only ask that question is because constituents have asked if there's a formula that you have to keep at whereas I mean or that usage and if you don't use that usage then you're not allotted that amount of water for use for outdoor or maybe its potable. And the question was if you don't use that amount of money...water, do you have to keep at that rate to maintain that rate or if you use less you're gonna lose that rate and you're not gonna get that water usage, you're gonna have less water usage? Does that make sense?

CHAIR LEE: Mr. Pearson?

MR. PEARSON: Well, if it's a golf course there's a County Code that says you cannot use potable water on Maui to irrigate a golf course, they have to get some other source for

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that. Eva eluded to irrigation and working with the hotels to try to improve their irrigation in many ways so irrigation is another bird. As far as the water usage for the hotel, the engineers evaluate the fixture unit counts, the bathrooms, the toilets, the whole bit including irrigation and based on those calculations, it's a huge formula, but based on those calculations then the amount of gallons per minute that the hotel is needed to meet those requirements will be provided and then at that point we size the meter to meet sometimes it might be for example two two-inch meters, a three-inch meter and two one-inch meters however the sizing goes within engineering to provide the needed water that they have. As far as billing and so forth it's a tiered system, you may know that if you look at your water bill, you know, the first 5,000 gallons are at a certain rate and then the next five to ten I think are another rate and then when you have a higher usage then you have the much higher water rates for billing and those also apply to the hotels, those tiered rates.

COUNCILMEMBER SINENCI: Okay. Thank you for clarifying that. Thank you, Chair.

CHAIR LEE: Oh wait, Ms. Paltin and then Mr. Molina.

VICE-CHAIR PALTIN: Thanks, Chair. My question was if it's new installations of those smart meters and then the homeowner would be paying for the meters why don't we just have all new homeowners install the smart meters instead of just Kehalani?

MR. PEARSON: The homeowner doesn't pay for the meter any more than any other homeowner pays so there's a, like Eva eluded to there's a, you know, the fees for the development, but usually those are paid for by the developer, the source, the transmission, and the storage, those items are all paid for by the developer when they created the water availability for that area. So, the meter goes in and, you know, we install it and then they'll pay us a monthly fee and then whatever water usage is. So, the new homeowner doesn't pay for the meter, it's part of the purchase and it's part of the developer and the cost of the home.

VICE-CHAIR PALTIN: So, the developer pays for the meter or the County pays for the meter?

MR. PEARSON: The developer pays for the meter. Yeah.

VICE-CHAIR PALTIN: So, why are...why not all new meters become the smart meters? Is it Kehalani agreed to it or?

MR. PEARSON: That's what we're working towards.

VICE-CHAIR PALTIN: Oh.

MR. PEARSON: It's gonna be a long process and like I said I tried to prioritize, well we are going to prioritize, but with 36,000 meters and limited staff and funds it's gonna take probably...

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CHAIR LEE: Well, Mr. Director, I think she's asking why only Kehalani, why not everybody from this day forward install the new meter?

VICE-CHAIR PALTIN: Yeah, that's what I was asking.

MR. PEARSON: Yeah. That's...yeah okay I apologize I didn't understand your question. But yeah, that's what is going to take place, I'm sorry I didn't mean to mislead you or misunderstand, but that's correct.

VICE-CHAIR PALTIN: Oh so the 500 number I guess was kind of threw us off a little bit.

MR. PEARSON: Oh okay.

VICE-CHAIR PALTIN: Thanks.

MR. PEARSON: I apologize.

CHAIR LEE: So, that's not really a pilot project. What we're talking about is a pilot project in a certain area, in an old place, that has lots of leaks, you know, that's got the...what we were talking about. We're not talking about dissing or dismissing your project, we're just talking about, you know, having different kind of a pilot project. Okay, Mr. Molina and then Ms. Rawlins-Fernandez.

COUNCILMEMBER MOLINA: Thank you, Madam Chair. Good afternoon, Mr. Director. Staying on the water meter aspect, the maintenance of the existing meters, how often do you check on these meters if their functioning properly? 'Cause is it possible that a malfunctioning meter can be measuring water usage inaccurately and a resident could be getting billed unfairly? I mean I guess it works both ways yeah, so how are your meters, how often are these meters checked?

CHAIR LEE: Director?

MR. PEARSON: It rarely works in the favor of the Department of Water Supply. If the meter is not functioning properly, it's likely reading less, I think even Joy may have mentioned that. So, as far as servicing and maintaining and those type of issues, if there's a complaint or we know there's a leak or there's been something brought forward then we have our crews go out and evaluate. We can pull the meters and actually test them to see their, to test their accuracy, but right now we don't have a crew that's doing that specifically so it's kind of a case-by-case basis.

COUNCILMEMBER MOLINA: And as far as your...I guess when we heard the Lanai presentation, with residents, you know, they'll give the residents a little nudge that you got a leak. Does the Department do that as well too? Or you just have to, I mean do we face a penalty? Say you have a resident that says okay they acknowledge they got a leak, but they just letting it go, is there any punitive actions taken against a resident being warned that if you don't get this leak fixed, is a resident subject to some

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kind of fine or anything of that nature especially during like a drought restriction period?

CHAIR LEE: Mr. Director?

MR. PEARSON: Of course part of the drought we ask residents to look for leaks within their homes. The punitive part if it's...I don't know, I can't really say what major is, but the punitive part would be that they're gonna have a higher water rate based on the leaks that they have within their, on their side of the meter. But of course we encourage that to be repaired and to be...

COUNCILMEMBER MOLINA: But no fine per se?

MR. PEARSON: No.

COUNCILMEMBER MOLINA: If over 30 days you haven't fixed your leak or anything like that?

MR. PEARSON: No.

COUNCILMEMBER MOLINA: Okay. And finally what is I guess the hotline or pipeline number people can call the County for leak detection?

MR. PEARSON: Eight oh eight, two seven oh, seven six three three.

COUNCILMEMBER MOLINA: Okay.

MR. PEARSON: And we have someone that answers the phone 24 hours a day.

COUNCILMEMBER MOLINA: Twenty-four seven, okay good, yeah for the folks that are watching so that'd be good to go check your water 'cause I think I've been hearing my toilet running a little excessively lately, so anyway. Thank you. Thank you, Madam Chair.

CHAIR LEE: Thank you. Before I call on everybody else, the difference, Mr. Pearson, with this pilot project is as Joy mentioned a lot of community education. So, if you had an identified area, be it Paukukalo, be it Wailuku Heights, it's like the whole neighborhood would know about it yeah? And they would, you know, neighbors talk and so everybody will know the importance of this pilot project and the focus is on them and, you know, everybody would appreciate their cooperation and they would get like specialized service attention. So, it's better than saying, you know, if you have a leak call us, because I bet Molina's not gonna call you, I'll bet you 'cause he's gonna go home and he's gonna forget and, you know, watch the evening news and go to sleep and so he's not gonna remember to call you I just know it. Who was next? Ms. Rawlins-Fernandez?

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COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo, Chair. I know it too, you're not gonna call. Okay. So, I think there...I think in the first discussion that we had with Pulama Lanai and then in moving, transitioning to this presentation there is a little bit of confusion of what we're trying to do and what the Department has already planned. And so, I just want to put this out there and then get any correction so that I'm clear on what we're all talking about. Okay so, first we put a \$100,000 in this year's budget to do a pilot program for the smart meters or whatever technology would be best at the time that we start this pilot program. The vision was a replacement program to start saving water and to save our residents money, because then it would detect the leaks. And then when you did the presentation you spoke about these 500 smart meters going into Kehalani and a lot of us just automatically thought you were talking about the same thing that we were just talking about in the replacement program, but you weren't. You're talking about brand-new meters, these are gonna be brand-new houses or units 500 of them and instead of putting in old technology we're gonna right away put in these smart meters. And it's not only gonna stop at these 500 houses, it sounds like this is now going to be a new policy for any new house. Is that correct? And so, I have two questions, so I just want confirmation that I was correct on those two things what we were discussing for the pilot program for the \$100,000 and what the Department had already planned with the Kehalani project. I wanted to find out from the Department if the Department had also planned to have an app go with these smart meters? Pulama Lanai has the EyeOnWater, and then I'll follow-up with a last question. Go ahead.

CHAIR LEE: Director?

MR. PEARSON: Again similar to the program on Lanai these sound like they're actually the same meter, so there will be an app program as far as I know. We also have to work on revising our billing program so when these meters go in originally we might, you know, as it was discussed they can be read by cell phones and there's no additional infrastructure needed. But at the beginning of these installations prior to the whole billing program being improved, it'll be still a drive-by as what we're doing now, we actually just literally just drive by your home and we have the computer in the car and then as long as your close enough then it sends a signal and then we read your meters. So, that will take place originally, but as we move the technology forward and get our billing program in place then it'll be closer to that smart meter and then continuous meter.

COUNCILMEMBER RAWLINS-FERNANDEZ: Okay. Mahalo for answering that question and then to follow up on what I asked as far as this new idea that the Department has, with the 500 new homes in Kehalani this is actually going to be a new policy moving forward that any new home will then have a smart meter installed?

CHAIR LEE: Director?

MR. PEARSON: We haven't sat down and written a policy, but that's again that's the idea. There may be imperfections to that, but that's the direction yes. And if I may, Chair, you know, once we prioritize these things, these locations, we'll have our...well I don't

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want to call it a pilot program, but we'll have our own areas where these older meters are going to be replaced so we'll be doing some of the similar evaluations that you're proposing in your pilot program. Not to take away from your pilot program, but we're still gonna be evaluating, you know, the uses in the past versus the uses when we replace the meters.

COUNCILMEMBER RAWLINS-FERNANDEZ: Okay. And then my last question, Chair.

CHAIR LEE: Yes.

COUNCILMEMBER RAWLINS-FERNANDEZ: Okay. So, mahalo for all of that clarification. So, when I asked earlier about the water restrictions and the outages that Central Maui, specifically Wailuku and Kehalani, Waikapu, Wailuku Heights, I'm looking at the notification and it says that the Department is asking your cooperation, do not water your lawn or irrigate ground cover, if you need to wash your car go to the car wash, and then check in and around homes for leaks. So, what you're telling me is that these, what is this called, I don't know what these, these aren't...kinda restrictions, these requests or these restrictions that are being mandated on our residents are also being mandated on the hotels and resorts, and are there additional restrictions, because they use a lot of water? And I see here that there was like a water tank or truck that also...so this was also trucking in water to fill in the tanks. If the costs that these resorts where they're paying maybe like \$3 more than our residents per 1,000 so \$35,000 more, 35,000 gallons of water that they're using, what is that, per...that it's the cost that they're paying is covering the cost that we're having to compensate for the outages that we're experiencing and the amount of water we then have to truck in to make up for the lack of water in our tanks. Is that clear?

CHAIR LEE: Director?

MR. PEARSON: So I'm not sure I got the question. Well, I can comment to what you say, was there...did you ask a question in there?

COUNCILMEMBER RAWLINS-FERNANDEZ: I did. Okay.

MR. PEARSON: Was the question about if the hotels are going to be asked to reduce?

COUNCILMEMBER RAWLINS-FERNANDEZ: Okay. So, I asked two main questions, one in response to what you said earlier when I asked about hotels being under the same restrictions and the answer was yes. So, I went to notification to look at what kind of restrictions, because I'm not clear on what exactly what the restrictions are and so there's like three things, don't water your lawn, go look for leaks, and don't wash your car. These don't really seem like...so, are the hotels then not watering their lawn? For example.

MR. PEARSON: Okay. We did not put these restrictions on the hotels to answer that question.

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COUNCILMEMBER RAWLINS-FERNANDEZ: Oh okay so when I asked the question earlier and the response was same restrictions and now I'm asking for clarification on if they're not...if they're being restricted from watering their lawns and now you're saying it's they're not.

CHAIR LEE: Were there restrictions or not on the hotels?

COUNCILMEMBER RAWLINS-FERNANDEZ: Are they allowed to water their lawns while our residents are not?

MR. PEARSON: We always work towards the hotels to do the best conservation that they can.

COUNCILMEMBER RAWLINS-FERNANDEZ: The answer's no?

CHAIR LEE: Director?

MR. PEARSON: The issue with this situation now is mostly a mechanical issue for the, restricted to the area that we're talking about.

COUNCILMEMBER RAWLINS-FERNANDEZ: We're talking about water restrictions and the hotels are not being held to the same kind of restrictions as our residents? That's the question. And so I guess the answer is no they're not being held to the same kind of restrictions, they are allowed to water their lawn, wash their cars, and they don't have to walk around and look for leaks.

CHAIR LEE: Go ahead, Director.

MR. PEARSON: The reason for this issue and for the request that was put out in the media is due to a mechanical issue with the Waikapu Well that happens to be...that failed, unexpectedly failed. The Waikapu Well pumps about a million gallons a day, 900,000 gallons a day...

COUNCILMEMBER RAWLINS-FERNANDEZ: Well, my question is not why are they going through an outage right now. The question is there's an outage, there's a lack of water and now our residents are being asked to conserve. And I asked are the hotels and resorts being asked to conserve too and the answer earlier was yes and now it sounds like the answer is no.

MR. PEARSON: At this time the hotels are not being asked to conserve more than they...

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo for your honesty, I appreciate you answering the question. So, then my second question was the cost that they're being...the amount that they're being charged for the exuberant amount of water that they use versus a resident, is that making up for the cost of water being trucked in to fill up the tanks?

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CHAIR LEE: Go ahead, Director.

MR. PEARSON: We have two what they call water buffalos and I think they're what, 500 gallons...

COUNCILMEMBER RAWLINS-FERNANDEZ: No. My question was does the amount that they pay for the water that they're using right now make up for the amount of, for the cost of us trucking in the water to fill up the tanks so that our residents can have water?

MR. PEARSON: I'm trying to answer the question.

COUNCILMEMBER RAWLINS-FERNANDEZ: Okay, go ahead.

MR. PEARSON: The water buffalos, they call them water buffalos, they have about 500 gallons a piece that we have in our inventory at the baseyard. Because there's a chance that a home may at a certain short period of time be without water that evening or that afternoon or whatever, we're putting water buffalos in two areas in the area that's affected to allow the customer to go to that water buffalo and take potable water for their use in the slim event that they may might be without water for a shorter period of time due to the distribution of the tanks.

COUNCILMEMBER RAWLINS-FERNANDEZ: Okay, I understand the answer...

MR. PEARSON: The cost is a small cost because we have our inventory on, within the baseyard.

COUNCILMEMBER RAWLINS-FERNANDEZ: Okay. So, the water is not being trucked in to fill up the tanks, the water is being trucked in for people to go and fill up water --

MR. PEARSON: Correct.

COUNCILMEMBER RAWLINS-FERNANDEZ: --and the cost is their time and their energy and the convenience that they should have had if the resorts were being asked to conserve water during time of restriction. That's incredible, Chair, my mind is blown right now. Mahalo for giving me that time to really get the answers to my question, I appreciate it.

MR. PEARSON: If I may clarify?

CHAIR LEE: Sure.

MR. PEARSON: I've tried to explain it before but the issue is the physical area that we're at where we're not able to fill these tanks due to these mechanical issues. It's not specifically that we're low on source of water. These tanks in this area, the mid-level tank that would usually get water from Waikapu Well, with Waikapu Well down we have other variabilities [sic], we have redundancy, but the redundancy isn't the same

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quality of operation as it would be if Waikapu Well was running. I can give you the details but I don't know if it'd matter to you the details, but other booster pumps have a harder time getting water to that same tank than the Waikapu Well does. So, we're trying to catch up in getting these tanks full of water so they can serve that small location that we're discussing.

CHAIR LEE: Okay.

MR. PEARSON: I don't know...

CHAIR LEE: Well, Director, I think sometimes you use terminology that we're not always familiar with yeah. So, you know, it's like you take these buffalos and you take it to a certain location and people get their little containers and take water from yeah. We don't need to know about the boosters 'cause we don't even know what they do yeah, and we don't need to know about redundancy. But we just trying to picture these trucks going to a certain...and by the way what locations were they? Where you took your water trucks to? Some place in Kihei?

MR. PEARSON: No. The area's that affected is Waikapu, Wailuku area and the booster pumps are located up near the Wailuku Heights area, there's a park up there Wailuku Heights on South Alu Road and I'm not familiar, it doesn't, on this one it doesn't discuss the details of this.

CHAIR LEE: Okay. So, the people who had to conserve are those located where?

MR. PEARSON: Waikapu, Kehalani Mauka above Honoapiilani Highway, Wailuku Heights area, that area.

CHAIR LEE: Okay. So, the reason why you didn't ask the hotels because they weren't, nobody in Kihei and Makena were being affected?

MR. PEARSON: Correct.

CHAIR LEE: Okay. Why didn't you just tell her that? Why...

COUNCILMEMBER RAWLINS-FERNANDEZ: Thank you, Chair, that was very clear. Okay. So, may I follow-up?

CHAIR LEE: Sure go ahead.

COUNCILMEMBER RAWLINS-FERNANDEZ: 'Cause that was I appreciate you clarifying that for me. Okay. So, the wells that there was a mechanical error or mechanical problem, a failure is the well that only these areas draw from and not South Maui and not the resorts. So, if the hotels were asked to conserve water it wouldn't help this particular situation? Is that correct?

MR. PEARSON: Correct.

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COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo, I appreciate that.

CHAIR LEE: Okay, are there any more questions? Oh okay, Ms. Sugimura or Ms. Tasha? Okay, Ms. Sugimura.

COUNCILMEMBER SUGIMURA: Okay thanks. Thanks for all of that clarification and so what you basically are telling us today is that you're already doing what we're hoping this 100,000 project would do as a pilot project. So, sounds like you're already doing it and you have been implementing programs within the Department of Water that is exactly where we're trying to go to for water conservation right? I mean that sounds like it and then the Kehalani project or all new, at some point you've decided that all new projects and people who request water meters will get the smart meters. So, you're doing it already so that's good.

CHAIR LEE: Oh wait a minute, wait a minute, you're not exactly doing it because you're doing it on a really broad basis so it's very hard to quantify, you know, that this, these subdivisions over here have saved 200,000 gallons a day 'cause they got somebody in Makawao doing it and somebody in Lahaina doing it and somebody in Waihee doing it. It's, what we're trying to do is a, yeah, a specific pilot project in a specific area so that we can quantify --

COUNCILMEMBER SUGIMURA: Correct.

CHAIR LEE: --the results which is way different from what they're doing.

COUNCILMEMBER SUGIMURA: So, let me finish right. So, basically my next question to you 'cause sounds like you're thinking of it already or you are implementing it already and that the beauty with Lanai is like it's an island, they did it as a island project and they're seeing success and, you know, we got to see when we went to Lanai. So, could you do...and it sounds like you're doing an assessment to figure out where the problem areas are. I know the biggest problem is my house 'cause I have to change...I had a water leak. I mean you guys do a good job in terms of notification, but you're prioritizing the problem areas and you're basically gonna do exactly...except you're not calling a pilot project, but can you use this 100,000 that...I thought it was brilliant what Chair Lee had brought up during budget, because I didn't know that you were doing all of this and using smart meters, but can you just say yes you'll take the 100,000 or whatever you can do and implement a test project so you can assess whatever, you know, the idea was with the Council if it'll help you, you know, we can't tell you what to do, but sounds like you're doing it already, but can you kind of narrow it into a specific area so that we can see that it's working? And you can start at my house.

CHAIR LEE: No, not at her house. She's on surface water. It's different.

COUNCILMEMBER SUGIMURA: That's true I am on surface water.

CHAIR LEE: Gotta be Central Maui.

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COUNCILMEMBER SUGIMURA: Yeah, I'm on surface water. But anyway you are, right?

MR. PEARSON: She asked me to say, yes. So, I'll say yes. But I...

CHAIR LEE: Not to her. Don't say...I'm sorry we just can't do Kula at this time.

COUNCILMEMBER SUGIMURA: No I was just joking, I already confessed about all the problems with my water meter.

MR. PEARSON: I appreciate and support your pilot project, the pilot project that Council put, no doubt about it.

CHAIR LEE: Thank you.

MR. PEARSON: And when we move forward with this process of replacing additional new meters, after we evaluate the higher priority we'll do...we're not doing it today 'cause we haven't evaluated the priorities yet, when that result comes through we will do something similar to what you're doing, because the priority will show an area where all the meters are older meters and we will move to an area like that which will be similar to your...

CHAIR LEE: Sounds good.

COUNCILMEMBER SUGIMURA: Success. Thank you.

CHAIR LEE: Yes, Ms. Kama?

COUNCILMEMBER KAMA: So, my question is if I heard correctly what Councilmember Rawlins-Fernandez said was the \$100,000 was for replacement, the Kehalani is new so...

CHAIR LEE: That's a separate project.

COUNCILMEMBER KAMA: Correct. Okay just wanted to make sure. So, you'll be able to do both simultaneously new as well as replacement?

CHAIR LEE: Mr. Pearson?

MR. PEARSON: Yes.

CHAIR LEE: See we got it. We got it down we...okay.

COUNCILMEMBER KAMA: Thank you, Chair.

CHAIR LEE: Are there any more questions? You know, and please help Ms. Sugimura in Kula on your own. I mean, you know, we're talking two separate projects, two separate projects. Alright, are there any more...because there's more work to do on

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this subject so, you know, be thinking about it, be thinking about it, and also not only education, but how do we incentivize people, you know, to get off their duffs and fix their pipes. Yeah, Ms. Fernandez?

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo, Chair.

CHAIR LEE: Rawlins-Fernandez.

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo, Chair. So, I wanted to get an idea of the, like the next steps for this. I fully support the pilot program to replace, you know, so will we be meeting again in, you know, after they figure out what the priority area, do you want to discuss ideas that you had about like working with residents, you know, finding grants or working out like a payment plan with the \$100,000? So, I just, I wanted to get --

CHAIR LEE: Okay

COUNCILMEMBER RAWLINS-FERNANDEZ: --find out from you.

CHAIR LEE: I'd like to schedule this as soon as possible. It seems like the Director is asking for our direction aren't you? No, aren't you wanting suggestions on where... 'cause yours... what you're doing has to do with new homes, new meters yeah and you can decide where ever you want to do that right? You're starting with Kehalani. What we're talking about existing homes and I thought I heard you say well where ever you want it, but didn't you say that?

MR. PEARSON: Well, I said we're going to prioritize with this brief study with the statistics we have.

CHAIR LEE: Okay.

MR. PEARSON: And then we'll look to where the need is the greatest to replace additional, these meters.

CHAIR LEE: Okay, but I'm sure you want our suggestions.

MR. PEARSON: I would love to have your suggestions and would love to work with you and help --

CHAIR LEE: Yeah, because part of the...

MR. PEARSON: --give us the guidelines.

CHAIR LEE: Okay so, part of our work in the meantime is figure out a place to start this pilot project, you know, and then secondly how to incentivize people, educate people, and third if we need some kind of subsidy program. Okay.

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COUNCILMEMBER RAWLINS-FERNANDEZ: I think that's great, Chair.

MR. PEARSON: If I may suggest, Chair, once we get these meters prioritized then we can sit down with you to begin the support on determining where a good pilot project would be.

CHAIR LEE: Thank you. You'll be sitting down with all of us. Thank you.

COUNCILMEMBER RAWLINS-FERNANDEZ: Chair?

CHAIR LEE: Alright any more...yes, Ms. Rawlins-Fernandez?

COUNCILMEMBER RAWLINS-FERNANDEZ: When do you expect the study to be completed?

MR. PEARSON: Relatively soon, I don't know the exact date, I know that the contractor or the consultant is on board. I know he's going to be here in a few weeks, but I don't know the time it'll take for him to come up with...I would guess definitely before the end of the calendar year definitely.

COUNCILMEMBER RAWLINS-FERNANDEZ: End of the calendar year is good for you, Chair? It sounds like...

CHAIR LEE: Well, I guess it can wait, but, you know, the thing is, you know, I'll be happy to wait for the results of the study, but honestly I don't know why we need to, but I'll be happy to wait. Yes, Ms. Kama? Okay.

COUNCILMEMBER RAWLINS-FERNANDEZ: Last thing, Chair.

CHAIR LEE: Yes.

COUNCILMEMBER RAWLINS-FERNANDEZ: I just wanted to apologize to the Department for that confusion earlier. I got excited, I was a little passionate, sorry.

MR. PEARSON: My apologies for not being clear with my answers.

COUNCILMEMBER RAWLINS-FERNANDEZ: Mahalo. Mahalo, Chair.

CHAIR LEE: Well, this is a good note to end on. Any further questions or comments? If there are no objections we'll defer this item.

COUNCILMEMBERS: No objections.

COUNCILMEMBERS VOICED NO OBJECTIONS. (Excused: RH)

ACTION: DEFER PENDING FURTHER DISCUSSION.

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CHAIR LEE: And adjourn this meeting. Thank you. Aloha, everybody. . . .(gavel). . .

ADJOURN: 3:39 p.m.

APPROVED:



ALICE L. LEE, Chair
Water and Infrastructure Committee

wai:min:190701:cv

Transcribed by: Cheryl von Kugler

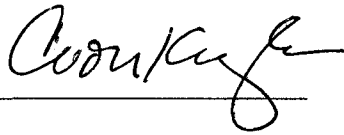
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CERTIFICATE

I, Cheryl von Kugler, hereby certify that the foregoing represents to the best of my ability, a true and correct transcript of the proceedings. I further certify that I am not in any way concerned with the cause.

DATED the 23rd day of July, 2019, in Kihei, Hawaii

A handwritten signature in black ink, appearing to read 'Cheryl von Kugler', is written over a horizontal line.

Cheryl von Kugler