TRANSCRIPT OF MEETING OF THE

COMMISSION ON WATER RESOURCE MANAGEMENT

Held on

Tuesday, February 14, 2017,

at West Hawaii Civic Center, Council Building A,

Council Chambers, 74-5044 Ane Keohokalole Highway,

Kailua-Kona, Hawaii 96740

9:29 a.m.

REPORTED BY: PAIGE CHRISTIAN, CSR 426
Registered Professional Reporter
Certified Realtime Reporter

Approved by Commission on
Water Resource Management
at the meeting held on
May 16, 2017 - approved as amended
See page 264 (attached) for amendment

very important, kind of, shot across the bow that they've given us and that we should be happy to have, because we need to keep our eye on these questions so that we -- we really protect the Hawaii that we love.

So, again, thank you, everyone, for -- for all of your time and thought and for making this process better.

So, with that, take a vote. All right. All in favor of the motion as amended. Aye.

MR. PAVAO: Aye.

MR. BUCK: Aye.

MR. BALFOUR: Aye.

MR. HANNAHS: Aye.

CHAIRPERSON CASE: ~~Opposed.~~ Aye.

MR. BEAMER: Opposed.

CHAIRPERSON CASE: Thank you.

So, the motion to adjourn.

MR. PAVAO: Motion to adjourn.

MR. HANNAHS: Second.

CHAIRPERSON CASE: All in favor. Aye.

MR. BUCK: Aye.

MR. BEAMER: Aye.

MR. BALFOUR: Aye.

(Proceedings adjourned at 4:35 p.m.)

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APPEARANCES

MEMBERS:

SUZANNE D. CASE, CHAIRPERSON

MILTON D. PAVAO

MICHAEL G. BUCK

KAMANA BEAMER

WILLIAM D. BALFOUR, JR.

NEIL J. HANNAHS

DEPARTMENT OF HEALTH'S DESIGNEE:

KEITH KAWAOKA

DEPARTMENT OF THE ATTORNEY GENERAL:

LINDA CHOW, ESQ.

SPEAKERS:

LENORE OHYE

KEITH OKAMOTO

KALEO MANUEL

LEIMANA DAMATE

HARRY KIM, MAYOR

RUTH ALOUA

BO KAHUI

ROY HARDY

SPEAKERS CONT'D:

TAMMY DUCHESNE

PAULA CUTILLO

PETER FAHMY

JONATHAN LIKEKE SCHEUER

KEN MELROSE

DORI INGALLS

FRED CACHOLA

TERESA NAKAMA

PETER YOUNG

TANYA POWER

TAIMIROA PAJIMOLA

KIMBERLY CRAWFORD

LOWREY POWER

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DAVID HONMA

SHARON WILLEFORD

RICK VOLLSTEDT

REGGIE LEE

JOHN KENNEDY

SHANNON RUDOLPH

NANCY BURNS

MANA PURDY

JANICE PALMA-GLENNIE

THOMAS YEH

SPEAKERS CONT'D:

ALEX LEONARD

RILEY SMITH

GRETCHEN OSGOOD

DAVID RAIKOW

IAN SWEET

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TUESDAY, FEBRUARY 14, 2017; KAILUA-KONA, HAWAII

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CHAIRPERSON CASE: Good morning, everyone. Welcome. This is the February 14, 2017, meeting of the Commission on Water Resource Management here, in Kona. Happy Valentine's Day.

Our agenda has minutes and then the -- the first item on the agenda, just so everybody's on the same page, is the action and acceptance of the County of Hawaii Water Use and Development Plan Update Phase 2, and then after that, we have the petition for the Keauhou Aquifer System Area. So, with that, we're going to start with the approval of the minutes.

Board members, commissioners, do you have any comment?

Let's start with the August 16, 2016, minutes.

Any comments on the August 16, 2016, minutes?

I have a motion to approve.

Is there a second?

MR. PAVAO: Second.

CHAIRPERSON CASE: Any testimony?

All in favor. Aye.

MR. PAVAO: Aye.

MR. BUCK: Aye.

MR. BEAMER: Aye.

MR. BALFOUR: Aye.

MR. HANNAHS: Aye.

CHAIRPERSON CASE: September 21, 2016, minutes.

Any comments on those?

Is there a motion to approve?

How about testimony?

All in favor. Aye.

MR. PAVAO: Aye.

MR. BUCK: Aye.

MR. BEAMER: Aye.

MR. BALFOUR: Aye.

MR. HANNAHS: Aye.

CHAIRPERSON CASE: November 15, 2016.

Any comments on those?

No.

Any testimony?

All in favor. Aye.

MR. PAVAO: Aye.

MR. BUCK: Aye.

MR. BEAMER: Aye.

MR. BALFOUR: Aye.

MR. HANNAHS: Aye.

CHAIRPERSON CASE: December 20, minutes, 2016.

MR. PAVAO: Move to accept.

CHAIRPERSON CASE: Any testimony?

All in favor. Aye.

Thank you very much. Okay. Item B.1 on the agenda, acceptance of County of water -- Hawaii Water Use and Development Plan Update Phase 2, Keauhou Aquifer System Area.

MS. OHYE: Good morning, Commissioners. Agenda Item B.1 requests your acceptance of the Phase -- Phase 2 -- okay.

Good morning, Commissioners. Agenda Item B.1 is -- requests your acceptance of Phase 2 of the County's water use and development plan.

If you recall, back in August 2015, here, in Kona, you gave preliminary acceptance for the Phase 1 part of this plan, which outlined the demands to be met in the area of Keauhou. And the findings from Phase 1 was that authorized planned use would be about 28 mgd. And so, this second phase is the County's strategies to meet those demands.

So, just a bit more background. On January of 2016, you took a look at the County's proposed project description for Phase 2, suggested some amendments to it, and based on those comments, the County has gone ahead. And so, again, we're looking at meeting 28 mgd,

about, of authorized planned use, and this 28 also includes the Department of Hawaiian Home Lands reservation request that you granted for 3.398 mgd. So, that's also included.

So, the plan outlines the near-term infrastructure development plans. It's part of the CIP. And it also looks at longer term conceptual strategies for meeting demands. So, basically, the long-term strategy is to go farther south and develop high level water towards the southern part of the aquifer system. And so, the general strategy here is to move water from the south to the north and from mauka to makai.

And you can see -- we've given you maps here of the -- that shows how the County plans to move water over the longer term. The arrows indicate how the water will be moving from the southern part of the aquifer, generally, to the northern part to meet demands. The blue dots are the areas of anticipated future water demands.

So, on November of last year, couple months ago, the County did brief you on the draft Phase 2. You had some comments. The three major comments were concerning watershed protection, source interference, and also the process for private well approvals. And so, based on those concerns you raised and those

issues, the County has updated the Phase 2 draft plan. You have a copy of that as an exhibit, and the changes are shown on your draft in Exhibit 6.

So, just a little note about the Department of Hawaiian Home Lands reservation request. How that is going to be protected in a nondesignated area was a question that was raised, and so, the staff is keeping track of the reservation request in its Water Resource Protection Plan. All the counties should understand that that request is out there. When -- if and when the aquifer is designated, then we will proceed with rulemaking under 174C-49 --

(Whereupon, the reporter interrupts to preserve the record.)

MS. OHYE: We'll proceed with rulemaking under HRS 147C-49 for the -- turn that reservation into an actual rule. That's the process laid out in the Water Code, and that reservation will then be detracted from sustainable yield along with existing uses.

So, in summary, the Phase 2 fulfills the project description that you approved, and it also -- it also -- this approval and acceptance would allow the County then to have some assurance that they can package Phase 1 and Phase 2 together into one complete document that will then go through the County's approval process.

And so, that concludes the staff's presentation. We're recommending that you accept the Phase 2 for the purposes of allowing the County to take it through their own adoption process. If the County does approve that plan, then it comes back to the commission where again we'll hold a formal public hearing in Kona and then submit it to you for formal adoption after that.

I just want to read into the record two testimonies we received prior to this meeting. You might have other testimonies that were submitted more recently. These came in from the National Park Service. You have a copy of their testimony, dated January 23rd, in front of you, as well as from -- the Aha Moku Advisory Committee has submitted testimony, dated February 6. So, you should have those two testimonies also in front of you. And that concludes the staff's presentation.

CHAIRPERSON CASE: Thank you.

Commissioners, do you have any questions?

MR. BEAMER: Is Keith going to also come up, or are you --

MR. OKAMOTO: No.

MR. BEAMER: No.

MR. OKAMOTO: Good morning. Keith Okamoto, Manager-Chief Engineer, Department of Water Supply,

County of Hawaii.

MR. BEAMER: Thank you, Keith. Again, I think this whole process has really -- you know, you guys have really improved your planning and efforts and really consulted a lot of data, reached out to a number of (indiscernible), so I applaud your efforts.

My question is actually a little more immediate but, you know, moving the wells further south, I guess, was the plan (indiscernible) described here. I was wondering if you could comment. Probably the last several weeks driving through Kona, I noticed there's 25 percent water reductions up mauka and wondering if this -- that relates to this plan or what the impetus with that is --

MR. OKAMOTO: Okay. Great question, actually.

MR. BEAMER: I think your mic is off.

MR. OKAMOTO: Oh. Is it on? Okay.

CHAIRPERSON CASE: Just talk closer. If you can move it closer.

MR. OKAMOTO: Hello. Okay. Well, I'll just speak louder.

So, basically, that is a separate issue. That's an operational issue. So, what happened with the water restriction in the area was due to four out of our

seven high level wells being inoperable concurrently. So, that did put a strain on our operations. So, basically, we needed to request that our customers cut back their use so that we could maintain continuous service to everybody in the region. So, that's really what that restriction was related to, not so much the water use and development plan.

MR. BEAMER: But, it -- the issues are going to get resolved in the plan, or it's just a matter of fixing the existing --

MR. OKAMOTO: Yeah. So, the first order of business for us is to get those wells repaired, back into service, and that will help our operations resume its normalcy, basically. And that -- so for the water use and development plan is -- in addition to that, our plans are to construct two additional wells in the high-level aquifer but to the south, and that will further provide redundancy in our system and reduce our reliance on the basal sources, as well, so that we can provide more higher quality water from the mauka side to the region, if that makes sense.

MR. HANNAHS: I have two questions with respect to watershed protection. Number one, have you calculated the impact of ROD on recharge?

MR. OKAMOTO: I guess I'm maybe not quite

understanding the question. The calculation of --

MR. HANNAHS: Would not the ohia trees provide superior watershed quality and enhance the capture? And if they die in large numbers, what happens to that capture and to recharge?

CHAIRPERSON CASE: Could you explain ROD?

MR. HANNAHS: Rapid ohia death.

MR. OKAMOTO: Rapid ohia death. Yeah. We have not on our end participated in that research. Our understanding is that the native forests are supposed to have a better rate of capture than the invasive, so we're just taking that as truth at this point. But, as far as a specific evaluation on our end, whether or not the ROD, rapid ohia death, has an impact on our recharge and the possible sustainable yield rates in various regions, I guess, that might be a better question for -- for Roy folks on efforts in that regards.

MR. HANNAHS: If it does, does it shake any of your confidence in your predictions or projections of sustainable yield?

MR. OKAMOTO: Sure. If, you know, numbers -- new numbers come out that it affects the sustainable yield, I think we'll have red flags on our end, definitely.

MR. HANNAHS: And if it does, does it -- does it indicate there might be more cost stewardship to mitigate this issue?

MR. OKAMOTO: Sure.

MR. HANNAHS: So, that leads to the second question. You know, there was a good discussion in the staff submittal about when you use water, we need to give back to the resource from which we're taking.

MR. OKAMOTO: Uh-huh.

MR. HANNAHS: And the language in the plan includes an encouragement of users to invest in stewardship. And I didn't see in the revision any -- that that was addressed.

Are we -- is there a way, a mechanism that you've considered, to really require more investment from all users of the system, you know, in back into the watershed so we create an abundance and mitigate these risks that would diminish the resource --

MR. OKAMOTO: Right.

MR. HANNAHS: -- is that not fair?

MR. OKAMOTO: No. That's a fair question. Fair question. So, things that we talked about as far as how we can contribute to that effort is -- you know, we understand that it's a -- it's a very real and very -- what do you call? -- a valid concern. So, things

that we've talked about -- and we haven't really gone into the details yet, but in order to provide such a funding, we've done -- and for our utility, we need to go through the public hearing process. We have a governing water board that we need to present our ideas to and things like that.

So, we've had preliminary discussions already of a potential water rate, a special water rate, that could feed into a watershed protection plan. So, that's something we're thinking about.

We have a four-block rate structure, so in other words, the more water you use, the higher the rates become, partly to encourage conservation, good practical use of -- you know, the highest best use for this quality water. Our first rate is actually a -- it's almost like a sale rate, where it's lower than the cost of service, actually. So, it's even more of an incentive to encourage conservation. And then, on the other end, the fourth block rate is an elevated rate to discourage via financial means the wasteful use of water.

So, one thing that we're thinking about is maybe supplementing that fourth block rate and having, maybe, a surcharge. And these are things that we need to go through the process and vet through the public hearing

process with our water board. But, that's some of the ideas that we've been tossing around at this point, and that that fund could specifically go into watershed management, you know, not to be used for anything else. It would go into a special fund. And what we -- you know, then what we would probably need to do is enter into MOUs with various watershed partnerships or the -- like Three Mountain Alliance, because we like -- if there's a fund created, we'd like that to be used in a specific location, where it could service, you know, the community the best way. So, that's things we're talking about.

MR. HANNAHS: Just comment that if our policies -- respective policies are to protect traditional customary practices, it's not just at the activity level of a gathering. It is at the world view level. At the world view level, it begins with a sense of reciprocity in the sense that you cannot take without accepting the kuleana to give.

MR. OKAMOTO: Right. Understood.

MR. PAVAO: During several of these meetings, there was some extreme concerns about the current levels in the Kahaluu Shaft.

With the development of the southern high-level wells, it is your intent -- or is it your intent to

supplement, or even replace, the Kahaluu Shaft, at least supplement, to bring the current levels down? And if that's the plan, could you, kind of, briefly explain how you intend to do it so that Kahaluu Shaft no longer becomes a problem?

MR. OKAMOTO: Okay. Thank you for that loaded question, Mr. Pavao. You have no former background in this seat.

But, anyway, so as we all know, the shaft was a terrific gift from the State that we gratefully accepted back in the '70s that didn't quite pan out the way we had hoped it would. But, yeah. So, basically, our -- what we're trying to do for the long-term -- and this is, you know, again, for the whole benefit -- our stewardship for future generations. We want to make sure that this high-quality water in the whole region is available for generations down the road, after we're long gone, and everything like that.

So, our intent is definitely to move away from our basal sources because of the chloride levels. Fortunately, that high-level aquifer was discovered. So, that is our plan, is to move a more heavy reliance on that mauka.

But, as you know, these are mechanical infrastructure that break down, and we've recently seen

four went down in a relatively similar timeframe. And, you know, when things like that happen, we still need to go back and utilize those sources that we prefer not to, but we have to in order to provide the service that we do provide.

You know, we're kind of proud to report that even with those wells down, nobody lost water. There may have been a few cases where people experienced reduced pressure, but we were able to still provide all our customers with the water that is a potable water quality. I want to clarify that even with the chlorides, it does meet all the potable water quality standards. So, but our intent is to minimize our dependence on those sources -- the basal sources.

MR. PAVAO: Just out of curiosity, I think, for the commission's information, what four wells are down?

MR. OKAMOTO: So, we brought one of them back up. One that we brought up recently is the Queen Liliuokalani Trust. The other one that is down is Hualalai, Palani Ranch, and Waiaha. So, GLT is what we call Queen Liliuokalani Trust. That was repaired. And we have Waiaha under contract for repair. And Hualalai is also being prepared for bid process, and we're working with our engineers to develop a bid process for

the repair of the Palani Ranch Well, also.

MR. BEAMER: Mahalo, Keith. Building off of Milton's question, you know, this plan -- a portion of this plan sort of relies on going towards these high-level wells and moving away from, you know, the basal lens, the Kahaluu shaft (indiscernible). And you kind of explained four out of the seven are out right now, so that's over half.

I'm just wondering, you know, as a commissioner, we're going to, you know, approve this plan that calls for high-level water moving away from the basal.

But, is there -- four of seven are down.

Is there more complexity in dealing with these high-level water management issues, keeping the wells alive?

If you can, sort of, speak towards that, because that's what we're banking on for future water source for this side of the island. So, we need to be fairly certain that it is something we can achieve, that we can accomplish.

MR. OKAMOTO: That is a terrific question. So, actually, it is -- it does present different challenges from basal sources. Basically, because of the high level, the elevation that we need to pump. So, these are high force power, high head

infrastructure under a lot of stress, maybe 700 horsepower lifting 1,600 foot elevation. So, you know, there's mechanical stresses.

So, basically, what we've tried to do to help our situation knowing that this is the case that we're dealing with, we've had -- we put out bids for spare pumps and motors to have some standing by. Unfortunately, not all these wells operate the same. Some of them have different size casing, so you can't fit a certain well and pump from one hole to the next. They're specifically designed based on the head that its lifting to operate at an optimal power efficiency range to have certain impeller sizes, things like that. So, each one is almost a custom build.

So, that's the challenge, and that's one that we understand that we need to be responsible for, basically, to continue to provide service to the region. So, you know, it's something that we need to build into our budget, into our planning, but...

MR. BEAMER: We're learning enough and you're confident we'll be able to make that transition?

MR. OKAMOTO: Yes. We're confident. We're also very hopeful in a potential new resource, right, that's been recently discovered, and that would help alleviate some of those challenges, that midlevel, deep

set, confined aquifer. So, you know, we like to continue to partner with the commission. We're continuing to partner with the ikewai process with the National Science Foundation and the UH to further explore that potential resource, as well. So, we're looking forward to that.

MR. HANNAHS: Keith, thanks for putting the engineering into language that non-engineers can understand.

MR. OKAMOTO: Sure.

MR. HANNAHS: In the investment world, when you have uncertainties like that, when you have high risk, you tend to risk adjust your expectations. And here's an example. Four out of seven are out. So, then, do you risk adjust your projections of the production from these wells so that maybe they're not going to produce at, kind of, a normal level that -- but, you know, the risk adjusts a little lower?

MR. OKAMOTO: Well, yeah --

MR. HANNAHS: Is that in your projections?

MR. OKAMOTO: So, how it works is sometimes these wells will show signs of failure. The production amounts will drop. So, it's not typically an instant failure. So, that's how we can compensate and, I guess, get some prewarning.

As far as adjusting what we think we can get out of the wells, if that's what you're asking, some of that is -- what we're trying to do is build a redundancy so we have wells that can, you know, be off service at some times, but when called to duty if one other well goes down, we can bring that one up to full service.

It does affect -- so, the other challenge that we're facing is those wells, because of the horsepower and the depth, use a lot of energy, and as we all know, we're trying to be a lot better as far as energy management. So, there's new technology. There's variable frequency drives that -- it's almost like a dimmer switch. So, instead of having one well totally on or off, maybe we can throttle back wells, maintain demand without putting such a burden on the system at certain spots but maybe spread it out. So, things like that. There are operational issues that we're working towards.

MR. PAVAO: Not a question. Just a comment. With four out of seven wells down and yet you're able to provide the entire region with only a 25 percent reduction, my compliments go to the department. You guys must be working really hard. Operations must be really out there 24/7. I think it's a real testimony

on your department serving the entire region with only three out of seven wells. That's fantastic. I'm sure everyone thanks you.

MR. OKAMOTO: Thank you.

MR. BUCK: Keith, you know this one's coming. But, first, I commend you. I want to commend you. I think it's a very -- much more comprehensive, I think, as a result of this three-year process we've been through. This (indiscernible) may not look like it does today, so I appreciate your reaction to that.

I just need to follow up with Hannahs, Commissioner Hannahs, about the watershed protection.

MR. OKAMOTO: Okay.

MR. BUCK: Actually, you could be living on the high-level water now, and I think the consumers in Hawaii are ready to hear that a small portion of their water bill goes to protect the natural source tank. And so, I hope when we see this plan again in the future, that you have some time to do some of the work that you need to do. But, I encourage you.

And just one quick question. We have some testimony from DHHL that they would like to be consulted on any well construction and pump installation within the Keauhou aquifer as an additional reference for protecting.

Would you have any problem with that?

MR. OKAMOTO: No, no problem.

MR. BUCK: Thank you.

MR. OKAMOTO: And so, you do have our commitment, Mr. Buck, and, you know, we share another seat on another body that is also concerned with continuing our freshwater availability within our state. So, I know I'll continue to see you. And so, you have our commitment, and we do have some board members here and things like that. So, we'll agendize for either next month or the following month this proposal for a possible watershed protection --

MR. BUCK: Small bit.

MR. OKAMOTO: Small bit. So, we'll encourage all of those willing to help back us up in that regards to come out and testify on that behalf.

MR. BEAMER: Okay. Keith, I wanted to ask. I think this is probably the last one, but I wasn't sure if another commissioner would ask it, so I didn't want to bombard you in the beginning. Kala mai.

But, you know, it's come up over the course of these several years. Commissioners ask questions about well spacing and, in particular, what control, you know, you folks have in dictating the space in the wells within a known aquifer, a known ahupuaa. And in

the past, you said it's kind of beyond your jurisdiction. So, I just want to ask that question.

MR. OKAMOTO: Yeah. So, I think, we do have those limitations on our jurisdiction and what we can or cannot require of certain entities. But, you know, we have thought about it long and hard. And we all understand that -- you know, just common sense. We have this whole big aquifer. You want your sources spatially distributed as best you can. So, we're -- you know, on our side, we're committed. If we're going to drill something, we're going to put it south. We're going to put in whatever transmission infrastructure required to bring that water to where it needs to end up.

What we can do when we work with private entities is, again, encourage that -- that viewpoint, let's say. But, the other thing that really -- the primary leverage we have with these agreements that we go into with private entities is basically how much water they get out of this infrastructure investment. So, when we're thinking about it, we're saying, okay. Well, let's monitor this on a higher level than we have in the past. So, let's monitor over a longer term, the impact.

And for high level, all we have is static water

level at this point. It's not like the chlorides are going to reveal whether or not there may be some potential adverse impacts to the aquifer. So, what we'll do is we'll look at long-term monitoring plan for water levels in the high-level aquifer, see if there's any interaction with adjacent wells.

And what we'll do is we'll -- you know, we haven't entered into any agreement thus far with this framework in mind, but what we're planning to do is incorporate things like that, you know, longer term monitoring, potential to lose water units if there's a possibility that the aquifer could be impacted, because again, we're all in here for the long run. We don't want to end up in a situation where, you know, an entity has so many units based on this well, and you really can't pump that much out of the well, really.

So, the -- you know, and the reality is developments don't infill overnight. Typically, it takes time. So, our water development agreements typically have a 20-year term on them. So, I think there's language that we can incorporate.

Even if we may not have the ultimate ability to say where somebody wants to plant a well, we can say, well, there might be impacts, and if those impacts come true, your water units will be impacted. And then, it

becomes a business decision. Do I want to take that risk and invest in a well here? I might lose some water units. Or do I move it elsewhere and pay a little bit more up front?

So, that's what we're hoping to see out of that process.

MR. PAVAO: Just a word of caution. We have extensive history on basal wells, and you pretty much can guess interference of one well on the other well based on spacing. But, now we're dealing with high-level water which is virtually unknown. As you know, every well has a different head, which means there's many, many compartments, and nobody really knows how each compartment relates to the other compartment. So, while the spacing theory works well on a basal lens, nobody's really certain how it works on the high-level water. And I think this is something that we need to develop, and, you know, sometimes the best things come out of mistakes. So, you may make a mistake. You may have it 3,000, 4,000 feet apart, and you still might have some interference. But, that's not based on you being careless. I think it's based on the fact that nobody really knows what's going on up there. Your guess is as good as anybody else's as far as how the compartments are arranged. So, just a word

of caution.

MR. OKAMOTO: And, yeah, that's -- so, that's a good point, and that's why we're thinking that monitoring will provide us information. You know, if we commit to continual long-term monitoring, we'll all get better information and be able to see if, you know, there's -- there's information come in that might cause us some concern. And these are things that we're working with the commission already. We have a consultant on board doing long-term monitoring of water levels, and we're giving that information to the commission.

MR. KAWAOKA: My question evolves from operational -- or long-term operational sustainability. You mention that these wells are -- they're pretty old?

MR. OKAMOTO: No. So, a lot of the basal -- so, the Kahaluu shaft was constructed a long time ago, but the pumps and motors have been replaced periodically. As they wear down, break down, we've been replacing pumps and motors as needed.

MR. KAWAOKA: So, that was my question, not to get into engineering, but in terms of preventive maintenance, like asset management part, is that being incorporated into the planning?

MR. OKAMOTO: Yeah. So, we're -- we have

that incorporated into our -- definitely the deep wells. Preventive maintenance really cannot be accomplished on these, particularly because they're 1,600 feet below ground, the pump and motor. You know, they're in the water cable below ground. All we have for prevention is the safety features that we have up top. You know, say, there's unbalanced load from the power utility, there's equipment up top so that that unbalanced load doesn't burn the motor downhole. So, in other words, it will shut off the motor before something like that damages it.

MR. KAWAOKA: So, in your -- asset management part, I guess, you don't have control over all these wells, correct?

MR. OKAMOTO: Yeah. They -- I mean, what we do have is we have history on about how long we expect one of them to last. And sometimes that works out, sometimes not. Numerous issues can cause a well failure. Could be a lightning strike, as freakish as that, or -- you know, these are mechanical, again, so, you know, they're spinning at high RPM under heavy load. Bearings wear out over time, things like that. So, we just -- you know, we budget for well replacement every year. We just -- it's a best guess on what will fail when, basically.

MR. KAWAOKA: Thank you. Thank you, Chair.

CHAIRPERSON CASE: Any other questions?

Let's move to public testimony. We're going to take public testimony on this first item, which is the plan update.

Is anyone -- mostly people signed up to testify on the next agenda item. I want to check if anybody wants to testify on this item.

Okay. Oh, okay.

MR. MANUEL: Aloha, Chair and Commission. Aloha, community of Kona and the County. I'm just -- I was asked to present testimony on behalf of our chairman, Jobie Masagatani, related to Item B.1. So, I'm just going to --

CHAIRPERSON CASE: Your name.

MR. MANUEL: Kaleo Manuel, acting program manager, for the Department of Hawaiian Home Lands. So, I'm just going to read through the testimony.

Aloha, Chairman Case and distinguished members of the Commission on Water Resource Management. Thank you for this opportunity to provide testimony on Item B.1, acceptance of County of Hawaii Water Use and Development Plan Update Phase 2, Keauhou Aquifer System Area, Kona, Hawaii.

We appreciate the work of CWRM, staff, County of

Hawaii Department of Water Supply, and consultants to update the County of Hawaii Water Use and Development Plan as a means to integrate land and water planning to meet existing and future water needs and its attempt to recognize, respect, and protect public trust resources and uses.

The Hawaiian Homes Commission and the Department of Hawaiian Home Lands adopted a Water Policy Plan in 2014 that guides the Hawaiian Homes Commission and DHHL in making proactive decisions and advocating for its kuleana related to water. In this context, DHHL offers the following comments on this item for the commission's consideration:

DHHL currently holds in trust a little over 1,500 acres of lands in north Kona that include the areas of Kalaoa, Kealakehe, Honokohau, and Keahuolu. We have approximately 500 residential homestead lessees in the Village of Lai Opua. Because of its landholdings and Native Hawaiian beneficiaries that reside within the Keauhou Aquifer System Area, DHHL takes a strong interest in CWRM's actions and decision as it relates to this aquifer, specifically in the interest of protecting Native Hawaiian beneficiary rights.

Phase 2 final report of the Keauhou Water Use and Development Plan is a good start towards protecting the

traditional and customary practices of Native Hawaiians and other public trust uses of water. However, it's still unclear as to the actual mechanics or the process the County or CWRM will pursue to protect or address these trust uses of water beyond -- beyond a consultation process or program tied to the Well Construction and Pump Installation Permit process. Therefore, DHHL requests and recommends the following:

1. Provide greater clarity on the consultation process and details that CWRM, County, and Aha Moku will undergo. The selected -- the selected consultants do not appear to fully vet all of the issues associated with traditional and customary practices in the Water Use and Development Plan as drafted. Without understanding the process, we, DHHL, don't have the confidence that the complexity of issues related to these rights will be addressed.

2. The burden to assess impacts on traditional and customary practices should be placed on the applicant, not practitioners. The applicant should demonstrate that their action will not impact DHHL's water needs or rights, traditional and customary practices, and other public trust purposes.

3. At minimum, consult with our Native Hawaiian homestead community who may rely and depend on the

resources found in the region to ensure their traditional and customary rights are protected.

4. The Commission for Water Resource Management and the County Department of Water Supply should implement a pilot project for the Keauhou Aquifer System Area to engage with DHHL and OHA as part of its well construction and pump installation permit approval process. DHHL and OHA can help to identify the potential well impacts on DHHL reservations and traditional and customary practices, assist in consultation with affected beneficiaries, and help to determine appropriate mitigation measures related to specific new well source development.

5. We recommended that the Commission for Water Resource Management revise the proposed well construction and pump installation permit process could -- and could include public notice and targeted outreach paid for by the applicant, as well as potential CWRM approval. Currently, these items are handled administratively by CWRM staff with little experience or knowledge relevant to the fulfillment of CWRM's responsibilities to traditional and customary practices of Native Hawaiians. Accordingly, there's little to no opportunity for experts, the public, or even agencies to weigh in on the potential impacts of

wells and water withdrawals. A public process and sunshine law-based decision by CWRM members would be a meaningful way to implement changes to well permitting intended to address the impacts on traditional and customary practices of Native Hawaiians.

Mahalo again for the opportunity to submit testimony for your consideration on B.1. We look forward to working collaboratively with CWRM and the County of Hawaii in protecting the public trust and the traditional and customary practices of Native Hawaiians. Thank you.

CHAIRPERSON CASE: Thank you.

Anyone else on B.1?

MS. DAMATE: Thank you, Chair, members of the commission. Leimana DaMate with the Aha Moku Advisory Committee.

CHAIRPERSON CASE: Could you speak up closer to the mic, please.

MS. DAMATE: Thank you for the opportunity to testify. Leimana DaMate with the Aha Moku Advisory Committee. You have received the Aha Moku testimony, and I stand on that testimony.

But, I would just like to mention that the Aha Moku actually worked with site specific ahupuaa in bringing forth lineal descendent generational knowledge

of the resources to the DLNR, to the different DLNR divisions, including the Water Commission. In this respect, the Aha Moku has been working with the Department of Water Supply, Hawaii County Water -- Department of Water Supply, through the Water Commission for the past, I would say, almost a year.

Our Aha Moku representative, Kawehi Nguyen, has been working on getting the ahupuaa communities, and these are -- and this can answer some of the questions that I've just heard from the Hawaiian Homes and also the questions that were mentioned by Commissioner Hannahs. In the sustainability of the watershed, the ahupuaa lineal descendants of a place are working with the Department of Water Supply and the Water Commission in the proposal of new wells to let them know if there is a wahi pana, if there are endemic indigenous plants and flora or fauna that will be impacted by new wells.

If there's any kind of damage that is perceived to come to the watershed, one of the main things that they're looking at -- and this is coming from our Moku representative -- is that when these people are consulted, the first thing they do being -- you know, Native Hawaiians are the best conservationists in Hawaii. The first thing we do is to see how the water can be sustainable. So, they're -- little by little,

we're starting to work with the ahupuaa families, because it boils down to the families of the place, our lineal descendants of that place who know the resource the best.

And we're happy to say that in the past year, the Aha Moku people of West Hawaii have been able to work with the Department of Water Supply and with the Water Commission in promoting this type of manao, which was never, ever given before. So, in that respect, they have agreed that we support this plan for the Department of Water Supply and continue to look forward to working with the Water Commission on bringing forth traditional generational knowledge of the different ahupuaa and sites that are proposed for well development. Thank you.

CHAIRPERSON CASE: Thank you.

Other testimony on B.1?

Mayor.

MAYOR KIM: Good morning. Thank you very much. I want to, kind of, move away from the prepared testimony, except for the first paragraph. To members of the commission, thank you very much for your work. We share petitioner's concern to develop this area with respect to nature and culture, but we do not support designation as the appropriate way to achieve that

mission.

We believe we have gained tremendous knowledge from the scientific studies to the update of the Keauhou Water Use and Development Plan as a result of the petition. We support the measures that the staff report recommends to monitor the impacts and to improve our knowledge, and we intend to do our part to implement the recommendations.

I'd like to take this opportunity to thank Superintendent Tammy Duchesne that even before I became mayor, she took the initiative for her and her staff to drive all the way to Hilo and to spend lengthy time with me in private to explain to me about what we're trying to do and why and also the Department of Water Supply staff to do the same in regards to their position and why.

I know I'm asking a lot of this commission members who do not know me, especially the members of the public in the back. But, I do ask that you trust of what I say as when I committed to the national park superintendent in conversation thereafter of our total commitment to work with them to ensure that we do not endanger the aquifer system with human use, that we will do everything possible and even beyond what is required by regulation with the Department of Water

Supply to ensure that we achieve their goals, which is a goal that we all must have, and that is to ensure the monitoring of the very precious system, the water supply, that we do not endanger a sustainable level. And I know these are figures that you already know better than I do, but I think you know that as far as a sustainable level, what is drawn now totally by the private and the Department of Water Supply sector is less than 40 percent of the sustainable level established, which is on the very low side. Of that figure, I think you know that the Department of Water Supply is responsible for approximately 80 percent of that draw. So, we do know the extreme of responsibility of our usage of government for the people. And I have committed to, again, national park that we will do everything we can to ensure that we do not endanger the sustainable level because that is our responsibility to everyone.

I do ask you to realize that -- I don't know of anybody I've talked to, especially at the national park, but also with our Water Department that understand the seriousness of what we are committing to you. We will do our job. We do know the importance of never endangering and approaching a sustainable level of the most precious of our resources, and we will do

that. We commit that to the community. We commit that to the national park people, who are doing a great job on that of that responsibility, and we commit that to you. Thank you.

CHAIRPERSON CASE: Thank you.

Anyone else wishing to testify?

And again, we're on the plan update, not on the petition. So, if you have something for the plan update, please come testify.

MS. ALOUA: Aloha mai kakou.

Can you folks hear me?

Okay. I apologize, but I got to be honest with you. I have to go to court, and I cannot stay and wait for us to go through the agenda items. So, I am just humbly asking that you hear me, and hopefully, some of what I say can enter your hearts in the decision concerning our water use. And again, I apologize to everyone sitting behind me. I know there's a process, and I don't mean to disrespect that. But, I'm being called to the stand after lunch at Hilo, and I got to get there. And so, this is why I'm speaking now, but it does involve Item B.1.

So, my name is Ruth Aloua. I'm from Kailua-Kona. My grandmother's family is the Hoomanawanui. We come from the Kona district, from south to north. My

grandfather's lineage is Hoapili. We come from Maui. We have ancestral connections to Kaloko as kia'i, kia'i of that place. I'm a kia'i loko of Kaloko loko i'a, Kaloko Fishpond, this place that is currently under the stewardship of the National Park Service. And I guess, if you're looking at the terms that we use today, I am a traditional and customary practitioner of our culture.

Professionally, I'm an organic farmer. I just grow food, and I take care of animals. I try and feed our people. And when I'm not on the aina, I'm in the loko i'a. I'm trying to help that fishpond, rehabilitate it, so our families can eat from it once again. And when I'm not in the loko i'a, I'm at these meetings in the spare time that I have and like you folks, who are just sitting here, trying to help our people, and protect our resources.

So, what I need to do is I need to reframe this, because we're talking about the park service, the park service, the park service. Out of all due respect, you guys are the stewards of this aina, of this very special place. But, this place for us, the kanaka of Hawaii, has existed for hundreds of years, and the loko i'a here -- the fresh water is so, so crucial to the existence of the fishpond. And there's an urgency.

And the scientific evidence being presented by the National Park Service is being rebutted on various points, but the fact stands that our waters are getting saltier, and the fishpond needs us to stand.

And that's why I'm here today with such an urgency is because the spirit beings of this loko i'a have asked me to come. And they said, Remind them, talk to their hearts, remind them of our love for Hawaii, because they need us to stand for them. And if we do not stand for them, they will leave. So, we talk about climate change. We're talking about where wells are going. On the human realm, this is very real, but on the spiritual realm, there's an urgency, because no matter where we put these wells and no matter when -- how fast climate change is going to affect us or not, there's an urgency for us to protect our water because the spirit beings who are on the higher level, the higher order of providing us this water, they're going to leave us. And with that, our vine will diminish quicker than we could ever expect. So, I'm for designation.

And when I read through Items B.1, I got to admit, I went to their meeting that they presented, the County, and I had questions. And my questions -- as a community member, as a traditional Native Hawaiian

practitioner, I was attacked. I was told water does not flow mauka to makai. I asked about environmental studies that would be conducted to assess the impacts of our withdrawals from our southern aina or from our mauka lands on endangered species, on threatened species, on species that exist. I was told to go and conduct my own studies. All of this is recorded. Like, I can give you all of this.

So, I respect their plan, and I know that everybody's trying to come forward with a solution. And I -- and I got to say, designation is not going to be harmful. It's not a federal takeover. It's not going to stop development. There's other aquifers on other islands that are developed that are protected, and it hasn't stopped. Oahu hasn't slowed down in any bit in development that's happening.

And I got to address -- another thing I wanted to address is the Aha Moku system. As a -- if anybody heard about Mauna Kea, what's happening up on the mountain, if you heard of Kahu Ku Mauna, they're kind of the middleman in all of this, this advisory capacity. And what we're learning is that these advisory boards don't actually have any real decisionmaking power. They're just advisory to the people who make the decisions. And sometimes, our

messages as practitioners are getting crossed in the mixing, or it's getting ignored. Or these advisory boards, even when they try and uphold our voice and present it to other individuals in decisionmaking seats, were being ignored. So, I highly caution against allowing an advisory board to be the middleman in this process. That's not okay with me. That's not enough, because I already know that's going to cause problems.

We keep talking about community. I don't know who in this room -- I mean, out of respect for who is in this room and all the ancestors that is here with us, I don't know who in this room is not working for a Realtor, does not work for a Realtor company, does not work for a private firm, does not want to put a well on their land, does not work at Kohanaiki Shores, does not work for the National Park Service. We keep talking about community, but I actually haven't really seen any real community involvement. We're talking about going into Kealakekua.

Has anybody talked to the ohana from these aina to let them know that we want to tap into their water?

And I'm not trying to be mean, but I'm just trying to say, like, have we talked to them? And I'm trying my best on my end, on the community end, to -- to bring

these families forward. And it's not to sway them, but it's to just say, hey, this is happening. Do you folks know this is happening? How you folks feel about this?

And again, I'm sorry. I'm going to submit written testimony to you folks, but these are just -- these are just some of the things that I just -- I just needed to say is that our wai needs us. And it's more than just this meeting. And I'm for designation. And if you don't designate, delay.

And come. Please come. I came to the last meeting, and I asked folks to come. And I didn't see any of the commissioners come. And I know you're busy, but please, don't -- don't go with the host being the park service. Come with me. Please come with me. Come with me. Come with our hui. Let us show you what we see. Let us show you what is at risk if we're going to protect our water.

Thank you again. And I apologize for jumping the gun, but I got to go to court. Thank you.

CHAIRPERSON CASE: Thank you.

If there's further testimony, I -- we're only going to hear testimony on Item B.1. And if not, we're going to -- and we have a lot of people in the room, so I am going to say now that I'm going to ask that we limit testimony to three minutes a piece. Otherwise,

it will take us six hours to get through the testimony. So, we're going to try to ask everybody to limit their testimony. And right now, only on the plan update, and then we will make a decision on the plan update.

And then we will go to the -- I'll let the staff submit -- staff present their submittal on B.2, on the petition, and then we'll let the National Park Service present their case for the petition, and then we will go to public testimony on the petition.

Okay. B.1.

MR. KAHUI: Good morning, Commissioners. My name is Bo Kahui, and I'm the executive director for Lai Opua 2020, a beneficiary -- Native Hawaiian Beneficiary Organization, 501(c)(3) corporation. I also serve as director for the Villages of Lai Opua here, in the homestead community, in the Kealakehe ahupuaa. We are the community, and I've been involved in this process from the beginning. I've attended every commission hearing, and I've participated in this process.

With respect to Item B.1, we support the water -- the County's water use plan. It's not perfect. Nothing's going to be perfect. If it was perfect, we wouldn't be here today. But, it allows us to address a lot of the issues we're confronted with today -- how we

going manage that water, what we going to do about our future sustainable yield, how we going to do some of the -- I think hypothetical scenarios that were proposed by Commissioner Hannahs about what do we do about rapid ohia death. I agree that that should be in the plan. But, rapid ohia death is a recent phenomena that we don't quite understand and how that is going to impact our forest. I totally agree with that idea. And we would push to support a studies to see the effects of the rapid ohia death to our forest and to our sustainable yield and to our project.

When we look at the department's testimony today, we look for partnerships. Over the last three years, we tried to find solutions for our water. We were the only community in West Hawaii that went to try and fix the sewer treatment plant. We tried to find capital to bring that and use that water, change it from R2 to R1 so we can conserve our water. Nobody else took that task. We did.

The outcome of that was we never get the 25 million we wanted. We got 2.5. We couldn't take that risk. We're just a small nonprofit corporation. But, in the end, we were qualified for USDA assistance through rural utility service to build a well. And since that time, we've worked with the County and have

located a site to provide water resources for our community. Our own community. That's more than anybody can expect from a nonprofit beneficiary organization. Fifteen years we waited for our four-acre park, and today, we still waiting for that four-acre park.

Now, the Department of Hawaiian Homes and beneficiaries here, in this community --

CHAIRPERSON CASE: Could I ask --

MR. KAHUI: -- we worked together on that. So -- so, in essence, then, we support -- the Villages of Lai Opua 2020 as well as the Lai Opua 2020 corporation and association supports the water use plan. Thank you.

CHAIRPERSON CASE: Thank you very much.

Other testimony on B.1?

Okay. If not --

UNIDENTIFIED SPEAKER: Are you guys born and raised here? I ask you guys one question. Is Hawaii one state or is it Hawaiian Kingdom? Huh? Cat got your tongue?

Well, I'm here to for speak for my country. The land that you guys talking about. Keawe. Okay? Kimokeo Timoteo Keawe. Honokohau Harbor. Okay? Go look over there. You guys homework. You going see the

guy's name over there, July Simeona. I'm an heir to all of this. Stop what you guys doing. This is not -- you guys are conspiracy against our country. I want the FBI and everybody in the world to look at all --

MR. PAVAO: Madame Chairman, this is out of order.

UNIDENTIFIED SPEAKER: -- including Japan and everybody else. This is all to do with our water --

CHAIRPERSON CASE: We're going to let him finish three minutes.

UNIDENTIFIED SPEAKER: -- that is not yours, that is not -- that is not the national park. This is not the State of Hawaii or the County. This is Hawaiian Kingdom land. It's our country. Japan, all you guys have no right over here for go claim our water or our land or our resources. That belongs to us, the kanaka, you looking at. We -- I'm not the crime here. It's you folks doing this against us and our country and our people.

I'm 73 years old. I had enough of your guys' nonsense. My grandfather, Ikiole, the one that went build all the road. The Battle of Kuamoo. Timoteo. That's my grandfather's tutu man, one of 32 siblings.

We are the heirs of this thing, of all the resources over here. It's not the County or the State

or the federal government or the national park. You guys have no right over here to claim anything, at all. That is not your kuleana. (Speaking in Hawaiian). You guys come over here and abuse our aloha. How dare you guys come over here and make decisions over our land and our water --

CHAIRPERSON CASE: Can you wrap up your testimony, please, sir.

UNIDENTIFIED SPEAKER: -- and all of this. And you going tell me I only get two minutes for speak? Huh?

CHAIRPERSON CASE: Yes. You have --

UNIDENTIFIED SPEAKER: Get real, lady. Who you?

Suzanne case.

Are you related to Ed Case them?

CHAIRPERSON CASE: You have ten seconds left, sir --

UNIDENTIFIED SPEAKER: Huh?

CHAIRPERSON CASE: -- can you please wrap up your testimony.

UNIDENTIFIED SPEAKER: I get plenty more to say. I opposed to this and I want one investigation by the world out there. Japan, China, Russia, all you guys get -- you guys got treaties with us.

CHAIRPERSON CASE: Thank you.

UNIDENTIFIED SPEAKER: Ua mau ke ea o ka aina i ka pono. That means to malama, to take care. Evidently, you guys are not --

CHAIRPERSON CASE: Does anyone else want to testify on --

UNIDENTIFIED SPEAKER: -- you guys over here to rip us guys off and make all of these things into one parking, God damn --

MR. BUCK: I'd like to make a motion. I'd like to recommend that commission accept Phase 2 --

UNIDENTIFIED SPEAKER: -- it's to do with money. It's to do with our culture. You guys using our country against us and fighting with our families over here. That is pilau.

There's our mayor. He knows about it because it's to do with --

CHAIRPERSON CASE: Sir, can I ask you to sit down, please --

UNIDENTIFIED SPEAKER: -- I'm the one that they removed.

Why?

Now they're making 'em into one park. They like the water. (Indiscernible) --

CHAIRPERSON CASE: Okay. We'll take a

recess. We're in recess.

(A recess was taken from 10:32 a.m. to 10:34 a.m.)

CHAIRPERSON CASE: Thank you.

MR. BUCK: Chairperson, I'd like to make a motion to accept -- the commission accept Phase 2 Water Use and Development Plan Update for the Keauhou Aquifer System Area.

MR. PAVAO: Second the motion.

CHAIRPERSON CASE: Any further discussion?

MR. HANNAHS: I just want to reconcile a couple of the testimonies that we heard regarding the burden of proof regarding the impacts upon traditional customary practices, whether that falls unevenly upon the practitioner or upon the applicant.

Is there some clarification as to -- as to whether that's an equitable process or system provided by the policy and plan creates an adequate protection or levying the burden upon both the applicant as well as the opportunities for the Aha Moku Council and others (indiscernible) engagement for the practitioners to (indiscernible)?

MR. OKAMOTO: Was that question for me?

MR. HANNAHS: I guess it's under the County plan.

What is -- what is your expectation of the applicant to demonstrate impacts, and is that working adequately?

MR. OKAMOTO: So, I think I may need assistance from CWRM staff on this, Roy. In our Water Use and Development Plan, our proposal is to incorporate that Aha Moku process. You know, we're trying to step up to the plate and be the guinea pig here. We think it's a valid resource that we can reach out to.

I don't know if we have all the details worked out yet, but basically, it's going to be -- from our understanding, it's that for an applicant, even if it's us, for a new well -- so this process will apply to us, as well. So, for a new well in Kona, we would present this proposed well development to the Aha Moku group to then be what I understand is the liaison to reach out to the particular -- the lineal descendants, wherever that well is proposed to be constructed. And so, we would have the burden as, I guess, in this case, the applicant to vet whatever concerns that the lineal descendents may bring forth because of this project, and then we, as the applicant, would need to satisfy their concerns before the commission proceeds with the well permit application, is my understanding.

MR. HANNAHS: I would just encourage, based on what we've heard today, that that be viewed upon as a minimal policy, not an optimal policy, in the sense that there are other people out there, as well, with all due respect to the Aha Moku Council, as you heard from Mr. Kahui and so forth, really valuable resources, and Ms. Aloua. So (indiscernible) brought into the process, so kind of having a system that reaches out broadly to catch a broad net --

MR. OKAMOTO: Our system --

MR. HANNAHS: -- input to ensure the protection from all who have a view on traditional customary practices.

MR. OKAMOTO: So noted. So, for our wells, Chapter 343 applies. So, that's the open system that anybody can comment on our proposed projects. So, now, it may be up to commission staff on other wells that may not fall under 343, how that broader net could possibly be cast. But, we're open to getting input to our process and our projects, for sure.

MR. BEAMER: Thank you. Just a couple comments. You know, I do want to mention that the last testimony and historical injustice that we deal with in Hawaii is really, really complex. And I have tremendous amount of aloha for, you know, the diverse

sets of arguments seeking justice. And they're going to come up in hearings like this, and at times, it may not seem relevant, but it's -- it's the historical legacy that we all inherit here. And we're uncovering how to resolve it. So, I feel like that needs to be said.

In regards to this management plan, you know, building off of Commissioner Hannahs' comments, would it be -- you know, maybe we could add DHHL in this instance to the Aha Moku in terms of consultation, given the landholdings, you know, the beneficiaries that reside in Kona. That might be -- and I'm speaking -- thinking out loud. I don't know if this would resolve the issue for DHHL, but I wonder if that might be something that could work.

MR. PAVAO: (Indiscernible).

CHAIRPERSON CASE: Okay. All in favor. Aye.

MR. BUCK: Aye.

MR. PAVAO: Aye.

MR. BEAMER: Aye.

MR. HANNAHS: Aye.

MR. BALFOUR: Aye.

CHAIRPERSON CASE: Opposed.

Thank you. Okay. The plan is adopted. The plan update is adopted.

Anybody need a break?

All right. Thank you.

All right. We are going to go to Item B.2, and our CWRM staff, commission staff, will present the staff submittal on this. And then, we are going to give the National Park Service, petitioner, a significant amount of time to speak, as well, and then we will go to public testimony.

MR. HARDY: Can you hear me?

Okay. Thank you, Chair Case. And good morning, commissioners. Good morning, members of the public. Aloha kakou. My name, for the record, is Roy Hardy. I'm the ground water hydrologic program manager, and I'll be making a presentation today to you.

Just a few comments before we get into it is that the submittal and this presentation may take a little while, but it's trying to distill the issues that are important, from the staff's perspective. And I kind of like to analogize it as we're looking at an iceberg here. We can see a lot on the surface, but there's a lot below. And it's the one just in the thin layer, you know, that a ship may hit that we really need to pay attention to, and that's what we hope and attempt to do here today so that we can take the proper course safe -- safe navigation through this -- all the issues.

So, Item B.2, again, is the -- I have a presentation here -- is the petition for designation of -- sorry. Okay -- from the National Park Service -- Kaloko-Honokohau National Historical Park.

Thank you for the lights. It's a little bit easier to see.

And it's the petition for groundwater management area designation, Keauhou Aquifer System. We're all familiar with the where here, and this is, of course, the Big Island. And the red area is the aquifer system that we're talking about.

And this issue, as you've heard from many of the testifiers, has been going on a long time, since September 2013. That's three and a half years, almost, since this process began, just on this petition. There's a little bit more background to it, as well. I'll get into that further in the presentation.

And again, just to orient ourselves, what is the map where we're talking about?

The green area is -- everyone's familiar with the national park area and issues within the Keauhou system bordered by Kiholo and Kealakekua. This is the way the commission manages and spreads out -- recharge spreads out. Pumpage come up, things like sustainable yield.

So, what's -- you know, what? What -- so what?

What is the management area?

The main difference is that there's groundwater use permits. And this chart -- little bit difficult to see with this -- highlights this. And this is actually presented, I think, by the national park. And in statewide areas and in designated areas, we have both of those first two items -- well construction pump installation permits. We have standards for those. It's statewide. There's also water use reporting. That's to measure what is being taken. If you can't measure it, you can't manage it. And that's statewide, regardless of designation.

When you get to the third bullet there on designated areas, that's water use permits, and that's where you start paying attention closer to the end-of-the-pipe issues. So, everything is from the beginning of the pipe, the resource itself, making sure things are constructed properly statewide.

This (indicating) is the process itself. You're familiar with it, but I did want to highlight a few changes here. And I'm sorry. I apologize. It is a long process, but we are still up in this -- this top area here (indicating) today. Just for clarification, this is where we are today, at this -- the big box. The commission decides whether to continue the

designation process. That's what it's been termed in the past. But, actually, more properly and the way the law reads, it's whether the chair makes a recommendation to continue for or against designation. So, we're updating that to make it clear.

There's a recommendation today from the chair, and it's going to be against. But, if there was a recommendation for designation, we would continue down into this lower portion, where if today you were to decide, well, we want to -- we want to go towards designation, there would be a public hearing and then a chair recommendation and then a final decision and then a findings of fact.

We had a draft earlier. I think caused some confusion. We really were up in this -- this part with the investigations. Part of that was from the declaratory order that you folks had made for a number of things -- more information, more investigations. The Water Use and Development Plan update was one of those. There's a number of others, as well, and we'll go through those today.

So, again, we're up in that first portion. And all the information that we compiled over the past three and a half years is on our web site. This (indicating) is it. And it starts from the petition

itself all the way through. The petition is included in your submittal as Exhibit 1. This (indicating) is from the petition, and it highlights the fact, as you know, that the national park was concerned about the wells that are being -- that are being drilled above, in the high-level aquifer. Actually, to the south, as you know, with the Kahaluu Shaft and the basal aquifer, the petition says because of the rise in chlorides there, that prompted the County to spread out the pumpage, which is actually a good thing, to the north. However, it was above and mauka of the park, so that was their concern, how it will impact them and, of course, not to mention all the -- sorry again -- all the yellow area, which is all the development that's around the park and, maybe, water quality issues from runoff from those, as well. So, that encapsulates a lot of -- you know, the bare bones, I think, of the petition.

People said they've been here a long time, since three and a half years since the petition came in. It actually was much further back, almost ten years, when the national park approached staff. They were talking about designation so long. We have community working groups and so forth. There was a working group set up by the national park, roundtable by the County, and

then at that time, we had the Water Resource Protection Plan update.

So, there was a lot of discussion, and there were a lot of studies. Some of the studies are repeated in your submittal. Some of them have come to fruition. Some of them are still in process, like the 3D numerical model. We're still waiting on that. That's going to be, I think -- July of this year is the latest we got.

So, the petition itself, though, looked at this, and what they said was despite all this, there was no plan that came out to protect the park. I think, today, we are part of that plan with your acceptance of the Phase 2 of the Water Use and Development Plan.

Okay. There are eight criteria that you must consider. I'm not going to spell them out here, but here are the first four. Next four. And we're going to go through those real quickly, one by one. So, this is framed in the context of what the Water Code specifies as something you need to consider when you're doing designation. It's a minimum. It doesn't prohibit you from considering other things.

So, first off is whether -- is the 90 percent, which many people are familiar with. This here (indicating), the chart shows the ranges of sustainable

yield, recharge in the blue, and discharge to the ocean. Okay? So, if you start with recharge in the middle, we get those recharge estimates, and there are a bunch of them out there, studies that we've done. The latest we have is from the U.S. Geological Survey, and it's a good one. One of the studies seen there was mentioned three years ago. They were going to update that. They looked at it. They said, actually, it's good. There's no reason to update that. And that came up with, actually, a higher number, this one, 183. So, it extended the range from 104 to 183 on the recharge. Sustainable yield is a percentage of that. And from the -- the point I'm trying to make here is that from these ranges, to apply the precautionary principle, what we do is we take the minimum number in that range. And there's -- there's alternatives and reasons you can go beyond that minimum. We've done it in other areas, but you have to have things in numerical models. You have to have things like a very good monitoring network to help you navigate through and manage the system.

So, the 38 million gallons I highlighted there, that's a minimum, and that's what it is today. That's the sustainable yield as established in the Water Resources Protection Plan by the commission. That's the number that guides us.

This is -- what does that number mean?

100 percent of that recharge that goes into the aquifers, and you got high level and basal there. In Keauhou, it's 44 percent, so it's a smaller amount. It's a fraction of that with 56 percent continuing to the ocean. And that is from not only near-shore waters, anchialine ponds, even submarine discharges on the ocean, but if you notice -- and we all understand it's this deep freshwater resource. It's a confined aquifer we discovered, and we're actually working to get a better handle the extent of that resource.

Point I want to make is that even though we find this deeper resource, it's all part of the whole system. So, if you were to take water from the deep, that would count towards the 44 percent. Okay? It's not something separate. It's not a freebee. Okay?

Okay. So, that's the resource itself.

How much is there?

38 million gallons. Now, this is the actual use from all the information we've gathered through our water use reporting program. And the present, as of November 2016 for all the wells that usually report, it's about 39 percent. So, there really hasn't been much change since three and half years ago. It goes up and down. You can see that. And we govern by an

average. But, I guess, the point I'm trying to make here is that the rate since 1971 has been about 334,000 gallons per year. Goes up and down. If you use this trend to project future needs, the red line on the top is the 38 million gallons. Usually, in that same trend, you reach that in about 69 years, which is a while from now. And I won't be around. I don't think a lot of people in this room will be around. But, our task is to make sure we don't hit that or go above it.

So, this here (indicating) is to emphasize -- I guess, put into a map and a picture the southern portion where the Kahaluu Shaft is which had the chloride problems and then the expansion into the high level. Very good -- very good chloride behavior up there but sensitive to water levels. And then, the puka down here (indicating) is where the plan is saying they want to move the high-level pumpage. Good idea. The 15 million gallons is really spread out between 9 in the basal and 6 in the high level, so that number's going to switch with time, okay, as well as that 15 might increase with time, as well.

So, the authorized plan use, much of it was in Phase 1 of the use and development plan that you folks approved. You've seen this chart before. The red line is the sustainable yield again. These were -- this was

the authorized plan use way back in some of the former public hearings. These are the projected population growth and the demand from that, but through the reservations -- well, actually, Phase 1 of the Keauhou Water Use and Development Plan came up with that figure of 28. You're familiar with that.

So, that includes DHHL's reservation, so public trust. It also includes State water projects of about 5 million gallons per day on top of (indiscernible) through the water -- the water department has right now. So, it seems that we have a pretty good handle on that authorized plan use as of this date and -- if you take those numbers, 28 over 38 to 74 percent. So, that's the first criteria. Hasn't reached 90. It's at 74 percent.

Okay. Second, is there actual or threatened water quality degradation as determined by the Department of Health?

We had received -- and it's in your testimony -- in our consultation with Department of Health that in their opinion, they don't have or see any water quality degradation, and actually, mitigative components are in place with outlawing the cesspools and the requirement to upgrade existing cesspools within 750 feet of the shore to protect the near-shore waters.

MR. BEAMER: Sorry. Just a quick question --
MR. HARDY: Sure.
MR. BEAMER: -- about water quality. So, the chloride issues in Kahaluu Shaft aren't --
MR. HARDY: They're of concern, and actually, I have -- I'll get into that a little bit later, in a later criteria. But, primarily, to get to your question more, is the water department looks at all the other things besides chlorides. It's, you know, pesticides, nutrients, all those types of things. Your staff doesn't -- we rely on the Department of Health, and that's what the code directs us to look to.
MR. BEAMER: No. I understand that --
MR. HARDY: Yeah.
MR. BEAMER: -- but, you're saying the Department of the Health said there is an issue --
MR. HARDY: They didn't have any issues with water quality in the Keauhou Aquifer System Area. Yeah. We had asked prior to coming here if there's any updates, and there were none. So, it's been three and half years, but they stand on the same testimony.
MR. BEAMER: Okay.
MR. HARDY: Okay. So, onward to Criteria 3 -- almost halfway -- whether regulation is necessary to preserve diminishing groundwater for future needs as

evidenced by excessively declining groundwater levels. This is something that, actually, staff brought up. It really isn't talked too much, and I'll get to it real quick. But, first off, this is the information you've seen before, water levels, but this is in the basal portion. And these are from monitor wells within the park in the top graph and from next door, from -- I think it's eight water wells in Kohanaiki, which is real close.

They've been monitoring water levels pretty well. In the park, you can see, actually, since -- this is about ten years' worth, but there's a gap here. But, water levels have actually gone up, so not declining in the basal. It's been steady at Kohanaiki. So, in the basal aquifer -- and this is, actually, kind of typical. You're not going to have huge fluctuations. And what you're watching for is trends that are going down. And actually, in the basal aquifer, what we like to look at is not so much the water levels here but water levels in a deep monitor well to see how the transition zone is reacting, because what happens on top happens quickly with the climate. Tides are in here (indicating), all those kinds of things, but the midpoint down deep is the one that is capturing the momentum and the cumulative effects in a bigger area.

And we have a few wells like that, and they seem to be steady, as well.

Now, it's a different story when you look at the high water levels, the ones that the County is looking to move and have moved into the south. These are two -- right now, basically, kind of, two observation wells. You've seen this before. This (indicating) is the Komo, and this (indicating) is the -- this is Doutor Coffee. So, we're talking about 40-foot levels. This is typical on high-level aquifers. You're not talking about few tens of feet. You're getting -- once you start getting past 25 feet, you're starting to get into high-level aquifers, very sensitive to water level changes but insensitive to chlorides. Chlorides usually stay very (indiscernible).

Slight trend of decline. Wouldn't say it's excessive. And then, you have this Doutor Coffee, which is about less than a mile south. And although the data is recent, it's been -- you know, we've been looking at it because of the increased interest of the petition. There's actually been a trend going up, so you have these compartments that are behaving differently. I think Commissioner Pavao was pointing that out earlier. We don't really know in the high level. It acts differently than a basal aquifer.

This here (indicating) is the Honokohau Well. It pumps -- it had pumped, I think, about -- you can see there's a trend going down. And this is twice the height of the two wells you saw earlier, about 80, or so, feet above sea level. Trend is going down. But, you have to remember that the earlier trend on the left is when they were pumping about one and a half million gallons, and that's a lot for a high-level source. Typically, you won't see that. You don't get that kind of production without really, you know, big drawdowns. Here you got about four-foot -- five-foot drawdown from that amount of water. The lower portion on the right is they increased the pumpage up to 2 million gallons, so there's going to be, obviously, a decrease in water level. Whether they can maintain that, I guess, time will tell. So, that's new data.

Here (indicating) is Keopu Well in the vicinity of the park, as well. This one pumps, I think, half a million gallons per day. It's been doing it for a long time, and it's been pretty steady at about 40 feet, 38 feet above sea level. This one seems to be reacting okay. No excessive declines.

And then, this (indicating) is the QLT, Queen Liliuokalani Trust Well, which has been pumping one and a half to two, I think, million gallons per day. And

at least since August of 2015, there's been a rise. So, I don't know if it's -- you know, why that's happening, but it could be a number of factors, climate as well as changes in pumpage.

So, basically, we don't see -- you know, we don't see excessive water levels changing. Enough said about Criteria No. 3.

Now, 4 and 5 are actually -- they speak to chlorides, and the petition itself kind of combines them into one, so that's what we're going to do, as well. And the key point here is whether the rates and times, spacial patterns, depths of existing withdrawals are endangering the stability or optimum development of the ground water due to upconing or encroachment of salt water. So, I think the keyword there is optimum development. And there's a D word, but that's what the law says.

Okay. And No. 5 is whether the chloride contents of existing wells -- so it's speaking to water development wells -- are increasing which reduce the valve -- materially reduce the value of their existing uses. So, that's kind of the lens we're looking at, these chlorides. Are they affecting wells and the development of the utility of the aquifer?

Map just repeats what we showed earlier, but

that's, in fact, what the County has been doing by moving off of the Kahaluu Shaft, the Kahaluu Shaft in the south. Way back in the '70s, when the State developed it, it was projected to be about a 10-, 12-million-gallon-per-day source. Didn't pan out that way. Chlorides were increasing and you'll see in the next few slides how much.

And so, they moved -- tried to reduce the pumpage. The big green circle is still big green. That's showing the relative amounts of pumpage as opposed to the spreading out for the blue wells in the high level. They were trying -- they were trying to optimize development of the aquifer, so it's actually -- it's kind of ironic that the actions in trying to optimize the aquifer is actually -- it's a concern to the park because of their location, which is -- which is valid, I think, and the leakages and so forth. But, it's really the optimization, and that's what the County's trying to do.

This here (indicating) is the pumpage of the shaft since the late '70s, and you can see the pumpage height was right -- just about the late '80s, early '90s, and then there was a decline since then. And the reason for that was because the chlorides.

This (indicating) is a chart of the chlorides.

And it's hard to see. I apologize. But, 1990 is right about here (indicating), and that's when -- that's when they started cutting back on their pumpage. Well, the reason for that is because that happens to be where the Environmental Protection Agency's secondary guideline of 250 is. So, they started, hey, we can't pump so much. Let's keep it down.

And the interesting thing here is you see the orange is -- that's the left side. There's two galleries in this shaft. They're trying to skim the aquifer. They're not going down deep near the interface of the transition zone. They're trying to skim. The left gallery has never gone above 250, but the right side has gone above. And I believe the top is the mixture of the two. So, that's why they start -- and they've been cutting back ever since from that rate of 10 to 12 and they're down to about 6. They might have to cut back a little more and move that pumpage to the high level.

Just for information purposes, the World Health Organization has 500 parts per million as their, I guess, secondary guideline or suggested limit, and that well hasn't ever -- that source hasn't ever exceeded that.

So, that's all I need to say about that.

Let's see. Hang on just a second. A lot of stuff to go through.

So, again, just to repeat, Items 4 and 5 in which the petition claims the salt water encroachment of the Kahaluu Shaft has affected the park and necessitated development of high-level wells in the park is a reason to designate. But, staff -- your staff is really rejecting that analysis for two reasons, because the evidence shows there has been no increases in the park by the earlier monitor wells, and also the criterion really relates to the development of ground water for the public trust uses like domestic use that the County provides. There's other nonpublic trust uses, as well, but there are public trust uses that the municipal system supplies. So, that's why your Hawaii staff is rejecting that analysis and looking at the Water Use and Development Plan to address it properly by spreading pumpage to the south. We think that's a good idea.

So, moving on with No. 6, excessive preventable waste is occurring. The petition -- I think they quoted in the petition something on the order of like 1,000 gallons per day, which, I think, came from more north in the Kiholo resort areas and things like that. But, part of the Phase 1 Water Use and Development

Plan, the single-family residences, they actually looked at and did the analysis within their system, and they came up with the bottom number 430 gallons per day per unit for the Keauhou area and the system down here (indicating). The water system standards, which is -- all the counties use that. It's a planning number. It's 400. Staff doesn't really think that's excessive, although it's understandable in a hot area like this, people can use -- can use more.

However, you may recall -- and we think it was a good thing as part of this investigative stage in considering designation when Barry Usugawa came before you to present what the Board of Water Supply on Oahu had done. And this chart was a good -- good piece of information to show the effects of conservation and wastewater reuse and also, thirdly, increases in the pricing structure. And I think Keith talked about that earlier in his testimony in the plan about pricing structures.

So, there has been a decline, a 10 percent reduction on Oahu. Even though the population and all that development since the early '90s has taken off, it's amazing that the water use is less now simply through conservation, wastewater reuse, and pricing structure changes. So, that's something that could

bring that 430 number down even more.

So, this is actually the biggie, I think, and it's in the submittal, as well, is the serious disputes respecting the use of groundwater. I think that can be encapsulated into two broad categories. Basically, the -- and what we said in the submittal, the two categories are the protection of public trust uses and scientific opinions about the aquifer, about traditional and customary, about the ecosystem, things like that.

So, we're all familiar with the spirit of Kaloko and the reason the national park came to be -- traditional and customary, perpetuate that. Also, the ecosystem within that park. And we talked about a whole litany of biology there from the mullet, the damselfly, waterbirds, the limu. All that testimony was discussed.

So, again, maybe starting off with the protection of public trust uses in those two broad categories, in the plan, it was described. It was discussed a little bit earlier in testimony about the Aha Moku system. That's been established with work with Leimana and the Aha Moku luna that we've been in contact with. Kawehi Nguyen is a representative. In fact, we have a water -- a well construction permit we've already sent to

them for comments. Haven't heard anything back yet, but we're already moving this into place.

And that's what we want to do as far as looking at trying to get input for traditional and customary practices. It's not everything. I think, you, commissioners, have pointed out there's more than just that, but it's a start. We actually in the past have always looked to historic preservation. We always review the well construction permits through them. If there's any archaeological sites, if a permit needs some kind of assessment like that -- and this is any well -- we hold up the permit until it's done.

There's also -- we also look at the OHA's kipuka database. It's kind of more the archaeological things, and we look at that, as well. But, OHA's asked us not to use it, you know, by itself and we don't, but it's still a resource. It's still a tool. And with the Aha Moku, that's another way of trying to get at traditional and customary, so we're hopeful that that gets some more information.

Our permits are also on our bulletin. It's always online. Month to month, anyone can ask for a copy of that, and that helps to get the word out to people who have traditional and customary. By law, we're obligated to address those. If we can identify them,

by law, that's -- the staff, not just the applicant. If it's there, we have to look. If there are things there, how do we mitigate it, and we can attach special conditions to permits for them to address that. So, that's the way we're looking at how we can address the public trust uses is through the well permitting review, upping our review to include things like Aha Moku.

So, scientific opinions, the ecology. This is from the petition, and I know it's busy, but the key graph, really, is, I guess, what kind of summarizes what became -- you know, that part of the iceberg that was just below the surface that we really got to watch out for. It's that bottom portion, and this speaks to -- the orange -- black damselfly and the limu, the other -- the other biology and organisms such as opae ula and the mullet.

I've come to learn all these scientific names from biologists -- euryhaline, stenohaline, and so forth. But, they've evolved in that tidal zone area. They can -- they've adapted to a wide range. But, these others are the ones that -- and specifically the damselfly is the one that's very sensitive in its life cycle. The limu, it's an optimum growth thing. It's not a -- like an upper threshold or anything like that. And on this

chart, they're showing various chlorides or percentages of sea water, actually, and the limits.

So, what's key, I think -- and this is also from the petition. The bottom chart shows the increases in salinity since the '50s, I believe, '60s of three select anchialine ponds. So, there has been increases in the pond now. And it's hard to see, but on the left side, it shows -- and this is salinity -- 12 to the low about 15 percent salinity right now. And it's been around that range, I guess, for about -- for ten years now.

And what that means to the damselfly survival -- this is a laboratory data and study that they had done. And you can see this chart, the survival of the larva, you know, the young. When it reaches 20 on the right there, they all die off. There's no survivability. That bar shows from that previous graph where we are in on that range of the tidal range of all the anchialine ponds. So, they're on the downward side of their survivability, but they're not up to where they all die off.

In looking at one of the pieces of information from the investigation, from the order that the commission made, it asked the national park, you know, what -- you know, what are the traditional and

customary. They did talk to the damselfly, saying it was used for spiritual purposes. Just wanted to note that on the record.

This here (indicating) is a blowup of their monitoring wells. Little bit difficult to see, but actually, they have improved from these -- from here (indicating) back in the early 2010 to 2016. The red goes with the red. Green goes with the green. They don't have data for the blue. These are three monitor wells that are within the park.

So, actually, chlorides have gotten better in the observation wells, but curiously, the anchialine ponds have increased. Different time scales, but that's just what the data shows.

Table 1 in your submittal kind of, I think, encapsulates maybe the argument in the end. And this is comparing sustainable yield with what the park was answering to the questions from the commission of how much water do you need for traditional and customary ecosystem. And the national park said the 2014 average pumpage or existing pumpage at that time. And if you look at the percentages of sustainable yield against what it is now -- 37 percent pumpage right now -- it's a little bit lower because, of course, this is 2014. 2015, there's a little bit -- we're up to 39 percent.

And coastal leakage would be not quite double that but 63 percent.

But, if you look at recharge, which is actually the whole picture, because sustainable yield is only part of it, the actual pumpage is 16 percent of all the water that's in the -- what we think is the entire aquifer system area moving through different paths towards the ocean. And 84 percent would continue to the ocean.

So, that's the -- I guess, the balance, if you will. And really, you know, whether this is enough or not enough for the ecosystem, I think that's one of the more unclear, murkier things right under the water in this iceberg we're trying to deal with and navigate around. We did ask the department's aquatic resources -- it's Exhibit 12 -- and they feel that there's -- that the integrity of the park right now is okay. So, you have differences of opinion from all the scientists like most sciences.

So, really, in the end, ultimately, it's up to the commission to decide to balance between all the public trust uses -- domestic, DHHL, reservations, the resource itself, and traditional and customary. And staff feels that it's -- you know, the petition isn't really the venue to do this and approach this large

question. It's more properly addressed in the Water Resource Protection Plan, which the commission also has the authority to approve these numbers. It's better to get more information on that in that venue.

Just to, again, summarize on the No. 7 point, the water resource protection is the appropriate process to address sustainable yield modifications or changes. 2017, we're working on it. And we're also trying to say affirmatively that petitions for designation are not the appropriate process to update sustainable yield. So, that's staff's position.

Last but not least, No. 8, is whether water development projects have received any approvals that will result in the former seven criteria. We don't think that that's occurred. Some of the points brought out in the petition were talking about EISs, installed pump capacities, and so forth.

Just to throw out and address those -- some of the number, the current installed capacity right now is 93 percent of sustainable yield, but as you know from the testimony and the data, it's, you know, less than half of that. It's 39 percent right now, and that's understandable because nobody pumps 24/7. There's fire and -- fire backup. There's redundancy in the system. So, you never go up to the capacity, even though those

developments go over 90 -- 90 percent. So --

MR. BEAMER: Roy, just a question --

MR. HARDY: Sure.

MR. BEAMER: -- on that for clarification. So, you're saying the existing pump capacity for what's in the ground, what's installed, is -- if it were pumped to its fullest capacity, it would be 93 percent of sustainable yield?

MR. HARDY: Right.

MR. BEAMER: But, you haven't allocated that. You don't pump wells to its --

MR. HARDY: Typically, yeah.

MR. BEAMER: So, if our reporting is accurate, then we want to say it's more like 39 percent of sustainable yield?

MR. HARDY: Yes, correct.

MR. BEAMER: Okay.

MR. HARDY: And it's under -- you now, and it's understandable because nobody pumps 24/7, and there's on times, off times, you know, electrical demand, pricing, and all that. And there's overestimates for, you know, growth and fire, you know, protection, things like that.

MR. PAVAO: And, Roy, if I may --

MR. HARDY: Sure.

MR. PAVAO: -- you might want to clarify, too, that some of these wells are purely standby --

MR. HARDY: Yeah.

MR. PAVAO: -- they will never run. You know, two of them will never run at the same time, but they're on the same site. And it's just standby. So, although the number of wells is great, the actual pumpage is not.

MR. HARDY: Right. So, we're just addressing one of the issues that the petition brought up and saying that's true, but the reality is you never pump up to the capacity. And, you know, if you look at other areas like on Oahu, I think the capacity is way above the sustainable yield, but they don't pump near the sustainable yield because standby, fire protection, all those type of things, on and off times.

And so -- and then the second part is that Phase 1 and 2 of the Water Use and Development Plan, we feel, will help to avoid any of the previous seven criteria. That's a goal. And I think the commission was wise in having the County update the Water Use and Development Plan so we can tie what are your planned uses and how are you going to meet those demands so that you don't hit those criteria.

So -- so, in conclusion, staff doesn't really feel

that any of the eight criteria are met clearly. And there -- but we also understand that there's a need to protect all the public trust uses and resources of both the park and the larger community. So, that's why in some of the discussion about the well construction, you want to include more input for the traditional and customary as is required by law by us as well as the applicant.

But, we also came up with a number of other issue -- alternative actions to designation, as well. It's not just the traditional and customary, although we have it first on the list there with the Aha Moku.

We also added that new private wells in the ahupuaas directly around the park would be encouraged to put in a deep monitor well, if none already exists. That's actually already happened when we went with the well approvals at Kohanaiki. They put in three wells, actually, and, you know, it's in a deep monitor well. That's part of the information on the water levels and chlorides you saw earlier, so it's a good thing. If there's other private, county -- if there's wells that go in, we're going to encourage them to put in a deep monitor well around the park in that area.

Third, this is a staffing -- and most of these are staff things to do. We're doing the remediation of the

Keopu deep monitor well. I'm happy to say we actually stopped the leakage from the deep freshwater confined aquifer. That's not happening anymore. That's a good thing, although, I guess, maybe in some other perspective, people say, hey, that was freshening up the deep salt water. I don't know if it ever got to the basal, but in any case, that's not a good thing to do. We fixed that.

And we're working on its sister deep monitor well to get a better production -- better monitor well so we don't have all that leakage right next to it. And we're still going through the construction on that as we speak. About 80 percent finished.

Fourthly, I guess, it's on Hina Lani Road. Kaloko irrigation well. One, it's a private well, but we've been in discussions. And this is directly above the park. We want to change that into a deep, deep monitor well, see if the freshwater aquifer also exists below that, as well, because you have the Keopu. You may recall Kamakana Well, which is a little bit further north and closer to the park. That one would be right above the park. And we have the CIP funding for that, and we're working on getting that to happen.

Fifth, what we're saying -- and this is a staff thing, too, that we need to up the enforcement of

monthly water well reports from all production and monitor wells. We really haven't in the past gone after people for not reporting. We tend to pay attention more to the people who are doing work without a permit. But, what we're suggesting is in the Keauhou area, we have to start enforcing and saying if you're late, you know, there's some consequences. And we have some things within the department, civil resource violations and so forth. We got to work out some of the details, but what we're suggesting here is that we have to start upping the enforcement so we get very timely data. It's pretty good right now, but even so, it's just a good thing to have.

Sixth, if the authorized plan use reaches 80 percent or 30.4 million gallons per day, staff will commence public information meetings about the aquifer, the status, and designation. This is in the code. It's actually something we're supposed to do, anyway.

Seventh -- and this is the one that might confuse most people, so I'll discuss it a little bit. If the plans of the Keauhou Water Use and Development Plan are not followed, if they don't drill in the south, or they don't, you know, do Aha Moku review or they don't try wastewater reuse, and the 12-month moving average of pumpage reaches 17.1 mgd, yeah, throughout the whole

aquifer, we will treat that like No. 6, okay, at 80 percent. And that number happens to be -- that 17.1 is -- is 4 -- it's 45 percent of the sustainable yield. So, it's actually kind of -- the idea was if you go to the south, you should split half of the 38 to the south, half in the north. And so, if you take half of that 90 -- 45 percent of the sustainable yield up in the north, so that's how you come up with that 17.1. So, we just didn't pull it out of the air. There's a little bit of reason -- reasoning behind it.

MR. PAVAO: Roy, excuse me.

MR. HARDY: Yes.

MR. PAVAO: Do you even have the target to do this? I mean, is this kind of -- 45 percent. That's -- how can you explain this?

MR. HARDY: I think, again, it's part of the commission's role in being precautionary and trying to -- and with the idea of we're trying to optimize the pumpage. We don't want to take, you know, all the water out in one spot like was shown in the Kahaluu Shaft --

MR. PAVAO: No. I understand that --

MR. HARDY: But --

MR. PAVAO: -- I understand that --

MR. HARDY: Yeah. But, the authority here is

we're just holding public informational meetings. So, I think we can do that at any time, but it's just we're saying that we're being precautionary. If that happens and none of the -- none of the plans are being followed, well, then, you know, what was -- you're starting to hit inoptimal situation.

MR. PAVAO: So, is this like a penalty for not following the plans?

MR. HARDY: I guess you could look at it that way, if a information meeting is a penalty.

MR. PAVAO: Well, informational meeting, you're forcing the participants to attend, which, you know, costs money.

MR. HARDY: Yeah. I guess you could say that, yeah, that penalty. But, again, I think it's in the spirit of being precautionary. And then --

MR. PAVAO: 45 percent. You just took half of the 90, and that's the reason for that?

MR. HARDY: With the understanding -- with the understanding that in spreading out pumpage, you know -- yeah. And you're right. I think, earlier, you said we really don't know the high level, whether you can do that in a high level. But, at this point, we really don't know. You've seen the different behaviors in water levels in a high level, which is kind of

typical and some of them atypical --

MR. PAVAO: No. I guess what I'm saying is you took 45 percent. Is that what you're averaging, or because it's half of 90?

MR. HARDY: Half of 90, which is designation for the entire aquifer.

MR. PAVAO: Yeah.

MR. HARDY: So, that was the reason. It's just a proposal by staff for alternatives.

Do you have a question? Yeah.

MR. BEAMER: (Indiscernible).

MR. HARDY: And then, one more.

MR. BEAMER: (Indiscernible) --

MR. HARDY: Yeah. Let me finish the one more. And then, the last one is the USGS has been working long time on this 3D model, which will help to estimate what's going to happen to chlorides, which will be a really good thing. Again, they said they won't have anything for another six months. That's July of this year. Whenever they finish this model, what we're saying is we will bring that to the commission for your consideration. With that new information, you know, that will be in your hand, we'll decide what path to take and navigate through the protection of the resources.

CHAIRPERSON CASE: Okay. Thank you, Roy.

I'm going to take questions from the commissioners. Let's start with Kamana.

MR. BEAMER: Mahalo, Roy. And again, mahalo to the staff and the department as well as NPS for this, you know, fairly lengthy and thorough process. Again, I really feel like we've grown from the three years, at least, that I've been involved in this and hopefully are getting closer to resolution.

If you can explain, Roy, you know, throughout this process, one of the questions that I've gotten, you know, from community members deals with chlorides in Kahaluu Shaft. And then, you know, if you can, sort of, explain, since we have you here, the relationship between that, that we have chlorides in one well but we're not, you know, going above the sustainable yields of the entire aquifer. And -- just so the community can, kind of, have clarity on how that happens, and we can continue to pump in other places in spite of this one particular well having high chlorides.

Does that make sense?

MR. HARDY: Yeah. And, yeah, when you get to the chlorides, there's two parts of it. It's the localized versus, you know, what's happening in the entire aquifer. So, if you see chlorides going up all

over the place excessively, hey, something's wrong with the sustainable yield number for this area. But, if you -- I always like to use the analogy. Like, it doesn't rain in one spot over that entire area. You cannot pull all the water out from that one spot. And that shaft, as big as it is, is a very tiny spot. You're talking about taking one third of the sustainable yield from that. You're going to have chloride problems.

And so, it's a localized issue, and it can be mitigated as, I think, the County was attempting to do by spreading out pumpage as they found resources in the north in the high level. They were moving and reducing. So, chlorides -- and you could see the chlorides were recovering at times, and then, they've upped their pumpage again. And they're trying to, I guess, zero in on what's an optimal amount of pumpage to stay within the desired chloride limits for that well. And it's a well-by-well thing.

Basal wells are more sensitive. One of the things in the County plan said they're not (indiscernible). Aren't going to be developing any more basal. They're looking to the high level. High-level sources are very insensitive from everywhere we see to chlorides. In fact, all the wells we've showed with those water

levels going up and down, they're like less than 10 parts per million, which is basically like rain water, and that's what they're capturing.

When you get into the basal, you start floating on top of salt, and you get that mix going in the transition zone. Our construction standards limit the depths of wells, because a well is a straw. It's a three-dimensional straw. The bigger the hole, the longer the hole, more surface area, more water can flow, more productive that well. But, you don't want to make that straw too big because -- in that one spot, because if you go drill too deep, you get close to the transitional zone, and you're going to start sucking up salt water. So, we limit the depths on an wells to a quarter depth towards the transition zone. All new wells.

Old wells -- and a lot of them are on Oahu -- they did it the old way. You know, drill that one spot, get the biggest bang for your buck, and pump a lot. But, those are the ones that get chloride problems, and so, they have to back off down the road as the lens adjusts to the new equilibrium.

MR. PAVAO: Roy, I might, because I was involved in that shaft issue many, many, many years ago, might share some information. When they drilled

that -- exploratory well and they only hit four feet of water sitting above sea -- of salt water, they knew they were going to run into problems, because the well was intended for a large capacity. So, what it decided to do was do infiltration galleries, go both ways, and they stretched couple hundred feet, you know, tie actual tunnels that central -- I think it was a series of five, six pumps that was supposed to pump from the infiltration galleries.

Whether it was a design mistake or a construction mistake, the column that the pump sat it, the bottom was open. So, instead of sucking from the galleries, they were sucking from the bottom column, which started the upconing of salt water, that they never got over it. Many years ago, water supply investigations found out that the bottom of the column was open, and they had a major project to redo the pumping columns.

MR. HARDY: Right.

MR. PAVAO: And they did plug the bottom, and they allowed for suction from the top, which means now instead of upconing, you were sucking from the galleries.

MR. HARDY: Right.

MR. PAVAO: At that point in time, the chlorides got better, in fact, very brief time, because

they wanted to get so much water out of that well because there was so much commitments out of the well. As a result, we have what happened today. And fortunately, water supply now is not relying heavily on that well because they know the chloride's bad. And that's the reason why the southern wells are being developed.

MR. HARDY: Right.

MR. PAVAO: But, it was a big mistake made way back when that well was first installed -- that the shaft was installed, rather.

MR. HARDY: Right. So, I guess, the nexus here is that -- the link is that that open --

MR. PAVAO: Yeah.

MR. HARDY: -- was like having a well that was too deep.

MR. PAVAO: Yeah.

MR. HARDY: Close to the transition zone.

MR. PAVAO: And that started the upconing of salt water. Instead of coming from gallery, they were sucking from the bottom.

MR. HARDY: Right.

MR. PAVAO: Because that column was probably 10, 12 feet into the salt water area, so it was sucking up salt water.

MR. HARDY: So, in -- sorry. In any case, the construction standards, nobody can go beyond, you know, quarter of the depth to the --

MR. PAVAO: Right.

MR. HARDY: -- middle of the transition zone. So --

MR. PAVAO: Yeah.

MR. HARDY: -- in essence, trying to encourage a skimming type of approach with these --

MR. PAVAO: Yeah --

MR. HARDY: -- vertical wells --

MR. PAVAO: -- like I said, that was either a design error or a construction error. I don't know which, but it did happen.

CHAIRPERSON CASE: Mike.

MR. BUCK: Yeah. Thank you, Roy, and thank you very much for that presentation. I know we are blessed to have a civil servant like Roy Hardy, who's giving you the straight truth all the time.

So, the staff recommendation is to deny the petition but to include the eight recommendations that you have. And I'd like to ask you a couple questions --

MR. HARDY: Sure.

MR. BUCK: -- about the eight.

MR. HARDY: Sure.

MR. BUCK: On the first one, which has to do with consultation, would you agree that we could add DHHL for consultation as well as the Aha Moku --

MR. HARDY: Sure.

MR. BUCK: -- that that wouldn't be a problem?

And number two, about encouraging applicants to install a deep monitor well, can you add a little flesh on encouragement and what does that mean? What happens if they're not able to or they don't want to or the cost? What's the additional cost of --

MR. HARDY: Right.

MR. BUCK: -- what that would be?

MR. HARDY: Well, I'll lean back on the example of Kohanaiki that we did years ago in that we knew that they're going to be putting in seven wells in the basal right next to the park and pumping for that golf course. That's a lot. And they're going to desalt it. And so, obviously, hey, wait. Something has to happen here because that's right next to the national park. That's traditional and customary uses. It's the point of the park. And what we did was speak with them, talk with them, and the national park actually, you know, raised their concerns through the

bulletin and so forth.

And in the end, there was -- we suggested, hey, you should put in monitor wells along the boundary between the two, and they -- we were suggesting just one. They actually put in three, which is -- and we said great. So, they put them in and we monitor them.

Had they not agreed to it, what we probably -- what we told them is that, well, you know, this is too big of an issue for the staff just to, you know, say. We want to bring it to the commission if you don't.

And so, that's, I guess, how -- what we would do is we'd encourage. And I guess the encouragement is, well, if we think it's important enough of an issue, then we would bring it to the commission.

MR. BUCK: Okay. And we heard from the County that -- as far as production of the water units is some leverage that they have, but your Item 2 doesn't say you would bring it in front of the commission. It just says encouragement.

But, you're saying that that would be the leverage you'd use, from the State perspective?

MR. HARDY: Right.

MR. BUCK: So, that might be something you might want to add to the No. 2, that specifically, you'd bring it forward to the commission.

MR. HARDY: If they -- if they --

MR. BUCK: If you encourage them and they decided no --

MR. HARDY: And they say no?

MR. BUCK: -- they don't -- they didn't plan to do it. But, we're hoping with encouragement of the State as well as the ability for the County to leverage water units, that they'll see that that's just the wise decision.

MR. HARDY: Okay.

MR. BUCK: But, Item 3 and 4 about the deep water wells, we do have the financing to do that on our own?

MR. HARDY: Yeah.

MR. BUCK: Okay. Item No. 5. This is about report -- the reporting. You says it will be brought to the commission for enforcement and sanctions at the discretion of the chairperson.

If you can bring it in front of the commission, why -- why would it be at the discretion of the chairperson?

MR. HARDY: Well --

MR. BUCK: Is that to bring it forward to the commission, or -- I'm just trying to get clarity --

MR. HARDY: Yeah. Well, we're -- yeah. I

guess, that was in the details. One of the things is we're trying to work out the civil resource violation system, which (indiscernible) you know, former employee of DLNR. We're tying to work it out so we can work on the enforcement so that it's more like a -- you know, it's like a traffic ticket, because people -- they're supposed to report every month. We haven't decided, well, gee, what's -- you know, three months, six months. Probably more than six months is way too long.

But, on top of that, there's just not pumpage. There's chlorides and water levels. And a lot of people don't have the means to do some of that, too. So, we have to work out the details of this enforcement.

MR. BUCK: Okay.

MR. HARDY: And then, hopefully, do it more at a -- within the department, like traffic ticket, because there would probably be a lot of people if -- once we decide on it. Hey, you're behind or you didn't report your chlorides this month or conductivity. And I don't think that's something the commission really wants to look at --

MR. BUCK: We talked about smaller users. They don't have the wherewithal --

MR. HARDY: But, if it's a big thing --

MR. BUCK: -- it was a bigger user --

MR. HARDY: Yeah.

MR. BUCK: -- that was not reporting, that that could be brought to the commission directly to make sure that we follow through.

MR. HARDY: Right. That's another encouragement thing.

MR. BUCK: Yeah. And then, finally, on No. 6 and 7, I look at those as triggers in case the County's not following the plan, the pumpage. You showed the chart of the designation process, where we are right now.

If No. 6 and 7 were, indeed, triggers -- for some reason, no one's following the plan, we're overpumping -- would that require another petitioner to come in to designate, or is that something --

MR. HARDY: To start the process again, yes.

MR. BUCK: But, that's something the commission could do on its own?

MR. HARDY: Yes.

MR. BUCK: Okay. Thank you.

MR. HANNAHS: Thank you. Thanks, Roy, very much. Catching me up on your ten years of experience on this issue.

First, with regard to traditional and customary

knowledge, in this day of most cultural Hawaiian -- Hawaiian cultural renaissance -- and we're pretty blessed to have in our community a number of people who are starting to access the Hawaiian language newspapers and really recognize the treasure trove that they represent, not just events of the day but, really, scientific data and environmental data that really help us understand trend and to start to tap that (indiscernible) Aha Moku people here with us today. We have a lifetime of 50, 60, you know, years. So, this extends our knowledge base and the database that you're basing your decisions on, much, much deeper. And you're blessed with a scholar like Dr. Beamer here on the commission who's personally accessed a lot of that (indiscernible) in our community. But, that's just one of the (indiscernible) and really not understanding not only literal meanings but their metaphoric meanings and how metaphors are really capturing environmental data.

And so, as we want to look to understand the traditions, customs, and practices and trend, just encourage you to find ways with our team, with Aha Moku and others in our community, to start to access that kind of information. So, as I -- I mean, we have fiduciary duty for all water resource, notwithstanding geography, notwithstanding whether things are

designated or not; is that not correct? Getting that?

MR. HARDY: Yeah.

MR. HANNAHS: And so, your feeling is that the triggers aren't met in this -- in the case of Keauhou, to warrant your -- your practice and process to moving it into the process of water resource -- water -- additional water resource permits. But, nonetheless, your view is that we still have an obligation to prudently manage the resource under our current process and systems without designation. And in fact, you're recommending eight specific steps to help us better do that. Am I --

MR. HARDY: Yes.

MR. HANNAHS: That's correct. So, we don't trigger this -- what would be the difference -- what would -- what additional -- how would we strengthen protection for it to move in -- where it could hit those triggers? What additional things would you be doing that you're not doing now?

MR. HARDY: Well, then we would start regulating. It gets into the -- the balance question --

MR. HANNAHS: That's a process issue, but what would be the things you'd do to the water? I mean, how would we better -- would we reduce --

MR. HARDY: Yeah. Things like that --

MR. HANNAHS: -- reduce --

MR. HARDY: It would reduce loads, our uses -- commercial, you know, irrigation, golf courses. Things like that might occur if there's not enough to go around to meet the public trust needs.

MR. HANNAHS: Got it. And so, you've heard that we don't trigger that, and so -- but we are concerned about the resource?

MR. HARDY: Right.

MR. HANNAHS: So, we --

MR. HARDY: Right. The resources is a public trust, as well --

MR. HANNAHS: -- your recommendations. Thank you.

MR. BEAMER: Thank you again, Roy. So, building off the questions of Commissioner Buck and Hannahs, looking through this eight criteria -- and the -- the Ka Pa'akai case really requires us, as a commission -- and we have the fiduciary duty, really, to assess, you know, the threat to traditional and customary rights and the impact.

Do you feel that we've adequately assessed the existing threats on the management for traditional and customary rights in this aquifer?

MR. HARDY: In the past, probably not as well as we should have. But, what we're saying from this point forward is to add those additional reviews and, you know, seeking out the information from traditional and customary practitioners. And it's really a localized thing at this point because it's going to be by well. What are -- you know, that particular area, you know, what were the issues there.

MR. BEAMER: So -- and one of those that came up, again, multiple times over the course of years is the spacing issue, right, of wells, and you mentioned Kahaluu Shaft. You don't want too big of a straw. You don't want it too deep --

MR. HARDY: Right.

MR. BEAMER: -- too powerful, because (indiscernible) saltwater intrusion. And you also mentioned we don't necessarily -- we see that there, but we don't see it across the aquifer right now, which is a sign that overall, healthy aquifer. Seems to be pretty well.

These recommendations, does it -- where do we deal with the spacing issue of wells? In these eight criteria, where does that fall?

You said if the plan isn't followed or -- is that being adequately addressed is what I'm asking --

MR. HARDY: Well, I think -- I believe, in the -- that Phase 2 -- oh, one thing about spacing, no more County wells in the basal, so we don't have to worry as far as the County is concerned, like another Kahaluu Shaft.

Private may be different, but at least want to be user -- is it going to go there?

For the high-level, I think it's between the Liliuokalani Trust Well and all the way down the Halekii Well that's in Kealakekua.

MR. BEAMER: Yes.

MR. HARDY: So, that -- that's the southern portion. And you have some existing wells there already that's not being used, like by Kamehameha Schools, a high level that never -- they invested in drilling, discovering that, which probably contributed to the (indiscernible) water. There's a source up there, but they haven't turned on the pump. They don't have pumps in them, but they're monitor wells.

But, in terms of the spacing, it's -- I think, as Commissioner Pavao pointed out, we really don't know, and in some of the data I was showing, the Komo and the Doutor Coffee, they're right next to each other. There's two wells, but very different behaviors.

So, it's one of those -- you can't really -- you

can't really say, hey, you know, you're too close, or it has to be a minimum distance apart, that kind of thing. I think the County has some minimum distances within their system, but we don't. What we are really looking at are things like with the national park and Kohanaiki. Hey, you guys are right next door to each other. You got look. Got to pay more attention.

In other areas that aren't designated, when -- and this is just another example of how we look at it. If they're going to put a well in next to a stream, hey, you know, it's a -- be careful here, because you might start impacting that stream, which then you start getting into instream flow standard issues.

Sometimes they're able to, based on the hydrology, avoid that, and in the construction standards, there are tests, aquifer tests, pump tests, that help to gather data to establish that connection. If it exists, then there's -- there's more regulation (indiscernible) instream flow standards. And there's been a couple wells where that happened, actually, where the data showed that it was impacting a well -- a stream. And we said, okay. You need to cover for instream flow standard amendment, and then that was the end of that. They didn't move any further from that.

But, I guess, that's the way -- we do want to have

a minimum distance. It's so localized and it's -- just given the -- given the hydrology of the islands or just hydrology in general, you drill two wells right next to each other, sometimes they exhibit very different behavior.

CHAIRPERSON CASE: I'd like to suggest we take a short break, and I think we have further questions later for Roy. We can ask you back. Timing is a little tricky now because we're approaching lunchtime, but we wanted to give the National Park Service a significant amount of time to present, as well.

So, let's take a five-minute break and then come back. And I'm pretty sure we won't be doing any public testimony until after lunch.

(A recess was taken from 11:47 a.m. to 11:57 a.m.)

CHAIRPERSON CASE: Okay. We have a quorum.

Next, we're going to have the park service come up and present.

Ready when you are.

MS. DUCHESNE: Aloha, Chairperson Case and distinguished commissioners. My name is Tammy Duchesne, and I'm the superintendent of Kaloko-Honokohau National Historical Park.

We believe that the National Park Service's petition meets several of the criteria and contains all the scientific, policy, and legal information needed to warrant designation now. I urge you to act to protect public trust resources as called for by the Precautionary Principle and vote to continue the designation process by holding a hearing.

Kaloko-Honokohau's founding document, the spirit report, was written by prominent Native Hawaiians in 1974 and explicitly states the importance of managing the water flow from mauka to makai to preserve public trust resources and uses. Our congressionally mandated enabling legislation from 1978 further states that the National Park Service shall preserve, interpret, and perpetuate Native Hawaiian activities and culture and enter into agreements to protect air and water quality. The 1916 National Park Service Organic Act, like the Precautionary Principle, mandates that the National Park Service be proactive and manage resources and uses so that they are not harmed, rather than waiting for damage to those resources to occur and then trying to mitigate the damage.

In order to fulfill the vision of the kupuna, comply with the parks' enabling legislation, and adhere to the National Park Service's Organic Act, we filed a

petition in 2013 to seeking protection of these resources and uses.

Between 2007 and 2013, the National Park Service engaged stakeholders to find a means other than designating a water management area to protect the freshwater flow that flows through the national park and discharges to the near-shore environment. But, no legally enforceable alternative to manage the placement of wells was offered. Private developers continued to propose, construct, and operate wells near the park, and these well permit applications cannot be legally denied by the commission outside of a water management area.

We acknowledge that the petition has been divisive which was never our intention. However, a water management area was the only known tool to ensure the protection of fresh water into the park.

Since filing the petition in 2013, we have twice proposed alternatives that would allow existing groundwater withdrawal to continue in the area that contributes fresh water to the national park thereby allowing development to continue throughout the Keauhou Aquifer System. We also filed a petition for declaratory orders to see if an area less than an entire aquifer could be designated. But, these

alternatives were denied. We have worked diligently to find adequate alternatives to designation since filing the petition.

We commend Mayor Kim and the Department of Water Supply for adopting measures to protect public trust resources and the Water Use and Development Plan. They have done everything within their authority to manage the location of their own wells in the area of the national park. But, private wells can still be constructed within an area that contributes fresh water to the park.

Our ultimate goal and mission is the protection of public trust resources and uses, the same as yours. The National Park Service will accept protective measures such as monitoring and legally enforceable triggers in lieu of designation if they are, indeed, able to protect public trust resources and uses in our care. However, the proposed actions and the current staff submittal do not accomplish this goal. Peer review science indicates that public trust resources and uses are threatened and may be harmed if pumping near the National Park Service increases.

I urge you to honor the Precautionary Principle and heed your staff's recommendation that there is a need to protect public trust needs and resources of

both the park and the larger community in the Keauhou Aquifer System. I request that the commission vote to continue the designation process today in order to properly adopt enforceable triggers that are actually protective of the freshwater dependent public trust resources and uses that our kupuna directed the National Park Service to protect over 40 years ago. Thank you.

MS. CUTILLO: I have a short presentation, maybe 25 minutes, and then we also have remarks from two other -- two other representatives of the park service. So, my name is Paula Cutillo, and I'm a groundwater hydrologist for the National Park Service Water Resources Division. I've been working with Kaloko-Honokohau National Historical Park on this issue since about 2005, and during that time, I've worked with different parks in different states. And what I found is that water managers everywhere, they're concerned about sustainability. They want to know how much groundwater they can pump without causing unacceptable impacts. And most often, they rely on the rate that --

CHAIRPERSON CASE: I just want to get --

MS. CUTILLO: Okay. And most often, why managers rely on the rate that recharge -- or that

rainfall recharges in aquifers to guide these limits on pumping. But, pumping wells capture and reduce discharge from the aquifer, and this causes impacts like saltwater intrusion and depletion of springs and streams. Therefore, to protect springs and streams and parks, the NPS must proactively ask water managers to also explicitly consider where and how much discharge is lost before they permit new pumping wells.

This thermal infrared image shows the discharge that we are asking you to preserve and protect in Kaloko-Honokohau. It shows cooler, fresher water in blue and warmer, more saline water in red. Fresh water mixes with salt water and discharges the fishponds, wetlands, anchialine pools, and submarine seeps in the park. This discharge creates estuary-like conditions that provide nursery habitat for culturally important fish, anchialine pool shrimp and an endangered damselfly, optimal conditions for limu, and breeding habitat for endangered waterbirds.

We're asking you to preserve and protect this groundwater discharge because it is essential to the mission of the park and because it supports public trust uses of water within the park.

More specifically, we provided information that shows that salinity in the park is at the limits of

survivability for the native striped mullet, the endangered orange-black Hawaiian damselfly, the endangered Hawaiian stilt, and the endangered Hawaiian coot. There is no scientific evidence that these species can complete their full lifecycles with half of the water that they have now.

As Roy summarized, there -- this issue did start with -- for -- a while before we filed the petition, and we worked for many years to find ways to protect existing flows through the environmental review and well permitting processes, and through working groups and roundtables. This timeline shows Hualalai Users group actually formed in the early '90s, and in the late '90s, the National Park Service funded the USGS to develop a groundwater flow model. We continued to fund monitoring and research activities and formed a working group around 2008. The Kona Water Roundtable formed about the same time, and a Water Professionals Group also met with CWRM staff several times.

But, wells continued to be proposed, constructed, and operated in close proximity to the park, in the basal and high-level aquifers. As a result, about three and a half years ago, we filed -- we asked you to consider designating the Keauhou Aquifer a water management area.

We hope you reviewed the petition and the additional information requested by the commission. The additional information includes corrections to the preliminary findings of fact and two reports submitted in response to the commission's preliminary order, one on traditional and customary practices in the park and then another report on how much groundwater is needed to keep cultural and natural resources healthy.

Today, you can deny our petition or decide to hold a public hearing on the matter. We agree with staff that protective measures are needed if you deny the petition. In our opinion, the actions recommended in staff submittal will not preserve discharge and protect public trust resources in the park. Therefore, I would like to discuss four measures that you could adopt in lieu of designation that would preserve and protect public trust resources.

These measures include two changes to the well permitting process and two triggers for management action. The changes to the permitting process will empower your staff to explicitly consider where and how much discharge is lost before they permit new wells, and identifying where discharge may be lost is a critical step.

This image shows the impacts of pumping in a

coastal aquifer. All of the pumping from the wells is balanced by a loss of water somewhere. Ultimately, a well like this pumping 1 million gallons per day will reduce discharge from springs and seeps by 1 million gallons per day at the coast.

Doesn't matter if pumping aquifer wide is 10 percent of the sustainable yield or 90 percent of the sustainable yield or if recharge is 50 millions gallons per day or 100 million gallons per day. This well will reduce discharge by 1 million gallons per day in this coastal area. And this is where the park is located. It's located in the area where discharge from springs and seeps can be reduced.

So, the first measure we're proposing asks an applicant to explicitly consider whether reduced discharge will impact traditional and customary practices, fish and wildlife, and the rights of DHHL. These questions are on the water use permit application in designated areas, but they're not on the well construction and pump installation permit application.

I'm actually doing something similar right now for parks in Colorado and Oregon. We want to permit water supply wells in the parks with these states, and the states are asking us to consider where and how much streamflow will be depleted. Permitting these wells is

very difficult because these states have already overallocated water in these basins. In Oregon, it's the Klamath Basin, and they said, hey, it's not going to get any easier. Waiting won't make it any easier than it is right now. And I think that's true here, too.

Another change you could adopt is to give the public an opportunity to present their concerns about traditional and customary practices and fish and wildlife before a well is permitted. Outside of water management areas, there is no requirement that wells be given public notice before they're permitted.

This is a diagram of the well construction and pump installation permit process. It indicates that staff receive public comment before a permit is issued, but that doesn't always happen. Some wells are permitted before they appear in the bulletin. For example, the Palani Ranch Deepwell is located -- the Palani Ranch Deepwell is located directly upgradient of the park. And this map shows wells in the area of the park.

Commission staff confirmed that a well for the Palani Well -- I'm sorry, the permit for the Palani Well was issued in 2006. This was three years before an environmental assessment was completed and five

years before it appeared in the monthly bulletin.

Requiring applications to be noticed for a specified period of time, like 60 days, before issuing a permit would give the public proper due process, the opportunity to present their concerns to you before a decision is made.

So, the two measures I just described will give you more information from the applicant and more information from the public. So, let's say you receive information that indicates a well is too close to habitat that supports traditional and customary practices or endangered species.

At this point, what can you do?

Staff has stated that a well permit cannot be legally denied for a properly constructed well outside of a water management area. There are two more measures that you can adopt to preserve discharge and protect public trust resources under these circumstances. They include monitoring with triggers for management action. A pumping-based trigger can help manage how pumping is distributed, and a salinity-based trigger can help you minimize saltwater intrusion.

A pumping-based trigger involves identifying an area within which a pumping well will capture and

reduce discharge to the resources you want to protect. For example, this figure shows that the delineated capture zones for Oahu's groundwater sources. To protect water-supply wells, the Department of Health uses numerical models to identify areas that contribute groundwater to a well over time, or capture zones. So, numerical models are good tools for identifying areas that may be impacted by a pumping well.

We asked the USGS to use their new numerical model to identify the area within which a well will capture and reduce discharge in the park. So, this slide (indicating) shows the model domain of the new model.

And you could adopt a measure that would trigger designation if pumping exceeds the current rate within the area that contributes water to the park. And this area could be described in terms of ahupuaa boundaries or other administrative boundary.

The last measure is a salinity-based trigger. For example, when chlorides exceed the maximum limit for drinking water in the Kahaluu Shaft, the Department of Water Supply can issue public health warnings, and they can reduce the pumping rate. But, no such management triggers exist for non-consumptive public trust uses.

This (indicating) is chloride in the Kahaluu Shaft again, this chart, but the scale is now from 0 to 100

percent seawater.

And this (indicating) is salinity in two observation wells. One well at the top is on the boundary between the park and the golf course, and the other one is salinity in an observation well a little further north near seawater disposal trenches. The rise in salinity in these two wells is much greater than what is occurring at the Kahaluu Shaft. The changes are also greater than the decline in salinity in two wells in the park. So, this (indicating) is continuous data from two wells in the park.

As staff indicated, salinity appears to be declining in these wells due to irrigation return flows, but there are no triggers for managing or mitigating these impacts. We proposed a measure that would trigger designation if salinity continues to increase on two deep observation wells in the area of the park. One is MW401. That's the well at the top here (indicating) shown in green, and the other is the Kamakana Well. And the NPS would consider purchasing two transducers to implement this measure. The measures we're recommending allow you and your staff to hear from the public about changes in discharge that they think are acceptable.

According to the USGS, the amount of groundwater

that is available for development is determined by the degree to which impacts like saltwater intrusion and the depletion of springs and seeps and wetlands, the degree to which impacts to these resources are deemed acceptable. Therefore, this feedback from the public is critical. We've determined that further reductions in discharge are not acceptable in the park.

So, to summarize, we're asking you to preserve and protect existing discharge in the park like an instream flow for groundwater. Designation provides a management tool for you to do this, and we believe there is sufficient information to continue the process at this time.

Instead of designation, though, you can deny -- you can change the well permitting process to explicitly consider how reductions in discharge affect public trust resources. You can provide due process for the public, and you can adopt effective pumping-based and salinity-based triggers for management action. We propose these measures. We propose measures such as these to staff, and we hope that you consider them today.

That's the end of my prepared remarks, but I also have a few slides with information that was not included in the staff submittal. So, I think there are

several inaccuracies in the staff submittal, but I'm just going to focus on some data that I think will help inform your decision today.

I'd like to clarify that the National Park Service measures salinity, temperature, and groundwater levels every ten minutes at four sites in the park. These data are available on a public website, and we've provided this link and the data itself to staff multiple times.

These (indicating) are water level data and salinity data from two wells near Kaloko Fishpond, and a link to the data is on the slide.

And these (indicating) are data from a well and piezometer in the area of Aimakapa Fishpond. And for some reason, these full records were not incorporated into the staff submittal. The staff submittal also states that no data between 1996 and 2009 have been produced from the wells in the park, but the continuos data do start in 2007. And periodic salinity measurements have been collected since the wells were installed in 1996. This chart (indicating) shows periodic data collected from various studies and researchers over time. A table with links to these data were sent to staff on three occasions.

The staff submittal also states that observation

wells on the golf course show little to no increases in chlorides. Simple linear trend indicates that chlorides appear to be increasing in at least two of the wells on the golf course, and these changes are greater than what was -- what has been observed at the Kahaluu Shaft.

So, commission staff have required golf course to collect monthly conductivity profiles in MW401 as a condition of the pump installation permits. And conductivity -- so, this (indicating) is -- the data at the top, that's from the conductivity profiles, and the two data sets closer to the bottom are monthly chloride data. And conductivity appears to be increasing in the -- in MW401, and these increases in specific conductivity and chloride, they are indications of saltwater intrusion, so I think it's important to acknowledge them.

And we also understand that there are data quality issues with the monthly chloride and conductivity data. We've asked staff multiple times to address these issues, but the problems persist. And this is unfortunate, because a lot of time and money are spent to collect these data, and I think everyone would agree that if we're going to rely on monitoring to protect public trust resources, then the data should be

reliable and actionable.

What we have found -- on this chart (indicating) compares monthly chloride data from one of the wells on the boundary to the continuous data that's being collected in the park. And what we found is that continuous data from fixed transducers are more reliable in this tidally-influenced setting. They can reduce error and uncertainty.

So, in closing, I'd like to thank you very much for your time and attention to this matter, and I hope this information will help you form your decision today. I can take questions now, or if you would like to wait for the rest of our testimony --

CHAIRPERSON CASE: Let's wait for the rest of your testimony.

MS. CUTILLO: Okay.

CHAIRPERSON CASE: Hit the lights back up, please.

MR. FAHMY: Good afternoon, commission members and Chairperson Case. My name is Peter Fahmy. I'm a policy analyst and also served as a legal counsel for the National Park Service's Water Resources Division. Like Paula and like everyone else in park service, we very much appreciate the time and effort that the commission has spent in considering the

petition that was filed by the National Park Service.

As has been mentioned earlier, the National Park Service is not fixated on obtaining designation of the Keauhou Aquifer as a water management area. Since first raising its concerns regarding the potential effects of groundwater withdrawals on public trust uses and resources at Kaloko-Honokohau National Historical Park, the National Park Service has first and foremost been focused on seeking substantive and enforceable protections for those uses and resources. This commitment was exemplified by the filing of a petition for declaratory order in March of 2015 wherein the National Park Service sought to focus the commission's attention on a smaller area of special concern adjacent to the park.

The National Park Service believes that it is vital that the commission understand that an essential element of all the National Park Service's efforts to protect the public trust uses and resources is that there be a legally recognized basis for the management action that is being sought to be implemented by the commission. Without such assurance, the protective effect of any commission action would undoubtedly be immediately suspect.

It is on that basis that the National Park Service

believes that the -- the proposed actions contained in the staff submittal, the eight actions that were presented by your -- your staff, would not provide enforceable protection for the park's public trust uses and resources. In particular, the National Park Service is concerned about one of the proposed actions contained in the staff submittal. The proposed action -- one of the proposed actions that was focused on was a procedure for evaluating well construction permits outside a water management area in which an application for a well construction permit had been made.

Now, it was suggested that if there could not be some sort of agreement with regards to conditions on -- protective conditions, essentially, for that well construction permit application, that the matter would simply be referred to the commission. The National Park Service's interpretation of Hawaii Revised Statute 174-84 is that, that review can only occur after there's been an actual denial of an application for a well construction permit; that it -- that the legal basis for such a review really is in the hands of the applicant; that it's the applicant that can ask for, essentially, a -- well, it's essentially an appeal of the denial and having that denial being reviewed by the commission.

So, we're concerned that under the proposed action, there might be, essentially, a denial of a permit application on the basis of some unarticulated public trust considerations that would almost certainly be found to be legally defective in the absence of properly conducted rulemaking. There -- as you know from the standards that are applied to well construction permits and pump installation permits, there are standards that are the results of rulemaking, rules that this commission has imposed with regards to well construction, to pump installation. But, those standards, as I said earlier, were adopted through rulemaking. They gave notice to a potential applicant for a well construction permit, for a pump installation permit, as to how that application would be judged.

What we suggest is that what's being proposed is being proposed without ruling. Now, I certainly believe -- park service believes that this proposed action that would incorporate the consideration of traditional and customary practices, the effects of -- on public trust resources and uses, could be incorporated into your well construction permitting and pump installation issuance procedures. But, we think that for it to be done right, for it not to be susceptible to legal challenge, and for it to be,

essentially, enforceable and have the effect that, I believe, the staff has suggested it should have, that you would have to go through rulemaking.

So, we just want to get it on the record that what we're concerned about -- and we think staff is moving in the right direction with regards to incorporating these concerns (indiscernible) raised by the petition is that it be done in a way that is enforceable, that is defensible, that will survive legal challenge if such occurs.

So, in light of the requirement that, you know, any management actions that the commission takes to be legally sound, the National Park Service believes that the commission should conduct a hearing, okay, because as we suggested in Dr. Cutillo's remarks, we believe that the most effective way to protect traditional and customary practices, to protect public trust uses and resources, is the adoption of a trigger.

There's (indiscernible) for having a trigger. It was done in the case of Iao, okay, where this commission essentially adopted a trigger that eventually led to designation. That's a truly protective measure that this commission could adopt. But, it has to be done in a way that establishes a proper administrative record. And that gives the

petitioner, interested parties, and the general public the required due process. Moreover, such an action by the commission would provide the commission the opportunity to assess whether such an approach would effectively discharge the commission's obligation to act in accordance with the Precautionary Principle. Only through this process can the commission address the staff submittal's recognition in the submittal where the staff stated that there was a need to protect public trust needs and resources in both the park and the larger community in the aquifer.

I want to thank you all for your time and attention, and I look toward to answering any questions you might have with regards to (indiscernible).

MR. SCHEUER: Aloha mai kakou. For the record, my name is Jonathan Likeke Scheuer. I have been retained as a consultant to the National Park Service on this issue since 2011.

I want to start off just by thanking you for your service. In other hats, I've sat for (indiscernible) on the Oahu Island Burial Council. I know that seems -- means to serve as a volunteer on these boards and commissions and the duties that you, sort of, take up of weighing law and facts and the emotions of issues. So, I personally really appreciate it, and I just want

to share thoughts and observations I have, just about two things, about the submittal and about where we are in the process that hopefully might be of use to you as you consider what to do today.

And really, I think -- I mean, the good news is we're close. I mean, we're not just close to lunchtime -- we're almost done with our presentations -- but I think we're actually really close to what, through this difficult ten-year process, we've been trying to do, which is can we find a way to protect these resources, and what people have made very clear, can we do so with avoiding designation? I don't think we're there with the staff submittal, but I think we're really close. And the reasons for that -- and I'll share those observations now.

The first thing -- category thing about the staff submittal is that while it's really good -- and I really aloha Roy for the efforts that he's put into it, and I particularly appreciate Jeff Pearson getting that submittal to us two weeks in advance so we had a chance to look at it -- it really doesn't reflect the whole record, this ten-year record of effort, this three years since we filed the petition. So, it's really important when you sit here as commissioners, what is the record that you're making your decision on, what

are you basing your decision on.

The submittal references findings of fact which were issued then pulled. What's missing in the record and the submittal is that in response to a direct minute order from the commission, the park services turned in 38 pages of errata to those findings of fact by January 31st of 2015. Those can't be found on your web site. Those can't be found referenced in the submittal.

And what's important is some of the issues that we believe we had corrected on the record are now repeated in the staff submittal. For instance, we've also turned in a report on traditional and customary practices, and when we delivered that report to you, we also made it clear that we thought that the commission had an affirmative duty to look at traditional and customary practices and the impacts of water withdrawal, not just within the boundaries of the national park but everywhere in coastal portions of Keauhou Aquifer. The submittal only addressed the exercise of traditional and customary practices within the park's boundaries. It doesn't address at all T&C practices outside of the park's boundaries.

And it also, in some ways -- you know, I appreciate that Roy drew a distinction in the salinity

tolerances between damselflies, which will truly not survive if the water gets saltier, versus mullet, which have an optimal thriving, and limu that have an optimal thriving at a certain band of salinity. But, to say that we're only going to focus on the damselflies and not those because it's not like a critical point misses the point of we want harvestable quantities of these fish and limu. We don't want to just have mullet to look at. We want to have mullet to share, harvest, eat.

We also -- and Superintendent Duchesne and Dr. Cutillo have mentioned we submitted twice full offers of what we believe are conditions that could be put into place in lieu of designation, instead of designation, avoiding designation, to the commission staff. And we find it very regrettable that those aren't presented to you as alternatives within the staff submittal.

I also just want to observe that -- so there's issues with the completeness of the staff submittal and what's the record you're choosing to vote on today, but also, what are the standards that are implicit in the staff submittal? The standards seem to be shifting. In your December 2014 order, one of the reasons why you justified -- and I realize some of you were not on the

commission at that time, but one of the reasons why the commission justified extending the process was they said, hey, there's going be to be this key U.S. Geological Survey study that's going to really -- an enhanced model that will really identify the capture zone for the national park. It was strong enough to justify delaying decisionmaking in 2014, but now there's just a note in the staff submittal that says, well, we're going to get the report in six months, and we'll report to you on it rather than we're going to actually have that factual basis in hand before we make a decision.

I'd also just like to note that, you know -- and again, Roy, who did, in many ways, just a really great job of a tough assignment, he talked about the National Park Service submitted peer-reviewed scientific research showing that this damselfly is right at the cusp of its ability to survive, and it's now a listed endangered species. And then, there's a memorandum from a DAR staff member, and that was presented as, well, there's conflicting scientific opinion. I just want to draw out for you, I think there's an important difference between peer-reviewed scientific research and a memorandum that somebody was asked to draw up on what they personally think about the issue. And those

things are not captured in the submittal.

Now, this ties into, I think, where we are procedurally. As, I believe, many of you know, if not all of you know, this -- if you voted to deny today, this would not be the first time the water commission has voted to deny a petition. In fact, it was done three times in Iao. In 1986, actually, not even by the commission. The previous groundwater control statute had a designation process, and the State Department of Land and Natural Resources tried to designate the Iao Aquifer in 1986. It was controversial. They stopped. Then under the Water Code both in 1996 and 2002, the commission voted to deny a designation of the Iao Aquifer. But, all three of those times, as is being suggested here, in lieu, instead, of designation, the commission put in conditions. This also happened on the island of Lanai in 1990.

The difference is in all four of those cases, you held a public hearing first, before putting conditions on. So, you didn't stop at this part of the process. A recommendation was made to go to a public hearing process. Public notice was put out in the papers. A public hearing was held, and findings of fact were generated.

So, that did a couple things. First of all, it

made it really clear. When you guys chose to deny, when the commission chose to deny those other petitions, what was the factual basis? Did you consider the full record in choosing to deny? And by putting out going through the public hearing process -- and I really heard Commissioner Pavao's concerns, do we have the authority to do it? When you go through a public hearing, you put out notices in the paper. The legal standard had been met that anybody with a property interest in that area has been notified that their rights might be affected, and so, you actually have the chance to put in binding conditions.

Trying to put in conditions at this stage of the process, before going to a public hearing, doesn't allow you that coverage of having fully notified everybody that their rights might be affected and the ability to deny based on a findings of fact that is a very clear expression of the record.

The last point I'll add -- and, you know, I spent, actually, quite a long time looking through all of your previous records on designation attempts. As controversial as this is, this is not the first time designation has been controversial. This is not the first time people have feared about what the effects would be on how their area feared State control. And

the commission has, particularly in the 2001 attempt to designate the Iao Aquifer -- they did not continue the process to the hearing stage because they (indiscernible) definitely going to designate. They continued the process to the hearing stage because they wanted to convey to all the parties we believe this issue is serious. We believe this issue is serious enough that we're going to continue this process so that we can either go to designation or get some alternatives in place.

Thank you very much. I'd be very happy to answer any questions.

CHAIRPERSON CASE: Thank you.

Commissioners, questions.

MR. SCHEUER: Or for Dr. Cutillo or Ms. Duchesne.

CHAIRPERSON CASE: All four would like to come up. We can just see.

MR. BEAMER: So, I do have a couple of questions to get us started.

Dr. --

DR. CUTILLO: Cutillo.

MR. BEAMER: Cutillo. I'm sorry. My language skills are less than perfect sometimes. Excuse me. But, you showed us these updated graphs,

and you submitted just some conflicted science. Some things that were in our staff submittal weren't necessarily accurate. I'm not sure I understood, though, your analysis of these graphs and exactly what they're telling us.

Can you just expand on that a little bit?

DR. CUTILLO: Sure. The first two slides that I showed were just to complete the record. These are continuous data from two wells in the park, salinity and water level data. And they start in 2007 and continue to present. The most recent data we've downloaded and had -- had approved by the USGS goes to September 2016. So, I just wanted -- there were big data gaps in the data presented in the staff submittal. I just wanted to show that we actually have a lot more data than that.

And these are same thing, continuous data but from two newer sites. We were monitoring water levels at a well near Aimakapa since 2009. But, more recently, we started continuous conductivity data there and also at a piezometer, which is a small diameter well, that is located in Aimakapa Fishpond. And these slides also provide the link to the data, so this data can be accessed by the public and downloaded by anybody.

These data -- I'm not sure how helpful they are,

but the reason I presented them is because the staff submittal noted that there were no periodic data or no data from the wells between 1996, when they were installed, and, I think, 2009. And so, what I wanted to show is that people over time have collected data from these wells, and these data were consolidated into a table with links to the data given to all stakeholders, including the commission staff, on several occasions.

I think they're hard to get linear long-term trends from these data because they're reflected by different people, different methods over time. But, this is a visual summary of that data, but I would hesitate to use it to identify long-term trends.

And this (indicating) was -- this is a chart. This chart shows the -- data from the Kahaluu Shaft at the bottom. That's for reference. We know the chlorides are increasing there, and it has initiated some management actions. But, the increase is very small compared to the changes that have been observed in wells in the area of the park.

These (indicating) data are from two wells on the boundary. The dataset at the top is from MW401. It's the deeper observation well that, Roy mentioned, was required to be installed as a permit condition for the

golf course. So, the idea -- the commission staff said we want you to put in a deep well so we can monitor the change in the thickness of the freshwater lens or see if salt water is rising in the well. So, this was a really important well that the golf course, the applicant, complied. And then, as a permit -- as a condition of the permit, staff said you should -- you need to collect conductivity profiles in this well, measure salinity from top to bottom on a monthly basis. So, that data are collected monthly. They are given to the commission staff.

But, these profiles were completely ignored in the staff submittal, and so, I wanted to show them, because there's the -- what I did was extract maximum salinity from those profiles over time, and there are two trends. There's a break when they switch to a new logger. So, it's not clear why salinity would change with a new instrument, but regardless, salinity conductivity -- there's an increasing trend at the bottom of the well. And those changes are greater than the changes that were identified in the staff submittal and prior, as well.

So, salinity might be getting fresher. Shallow levels in the park. Those changes are important. We should -- we will continue to investigate why that's

occurring. But, when there are greater changes in the other direction, I -- you know, just want to make sure that everybody has all the data.

So, the other two datasets are monthly chloride, and they kind of represent conditions -- shallower conditions in that deep well and then another shallow well near the coast. And so, these are data that are reported to (indiscernible) commission.

And this (indicating) slide -- purpose of this is just to show that we have continuous data. And there is a fluctuation in salinity in two -- these two wells near Kaloko Fishpond in the park, and these fluctuations are due mostly to the tide. So, you can see there's some fluctuation from the ocean tide, and then there's also long-term trend. In at least one of these wells, salinity appears to be declining. So, when you have continuous data, you can separate what is caused by the tide, changes in fluctuations caused by the ocean tide, from longer trends. And so, that's why I think these data are more reliable. They reduce uncertainty.

And if you compare it to chloride, monthly chloride, from a well on the boundary -- this is MW400 -- there's much more variability, higher variance, and that is a result -- in part, it's due to the way the

data are collected. It's the sample methodology. It's only as accurate to the nearest 500 milligrams per liter. So, you're going to get a lot more variance, and it's going to -- it's only monthly. Frequency is less, and so, it's a lot harder to identify long-term trends when you're collecting data like that on a monthly basis. So, that was -- the point of the slide was to encourage fixed transducers as a monitoring -- as a way to monitor salinity changes.

MR. BEAMER: Okay.

MR. BUCK: I have a couple. Just -- you talk about some specific recommendations. You talk about the, you know, discharge, evaluating discharge.

Is there a one to one, you said --

DR. CUTILLO: Yeah --

MR. BUCK: -- so that would be any -- a million gallons taken from anything would end up with a million gallons of less discharge --

DR. CUTILLO: Yes --

MR. BUCK: -- and measure -- how would you actually measure that? because there's so many points (indiscernible) discharge.

DR. CUTILLO: So, yes. Ultimately, when you take water -- when you pump water from a well, that has to be balanced by a loss of water somewhere else. And

mass balance requires that the loss is either from storage or -- from aquifer storage or from discharge or a combination of both. Over the long term, it's one to one with discharge, so that that's true with streams. And here, where diffuse -- where discharge -- groundwater discharge is not just the streams but springs and seeps. So, it is one to one.

It is hard to monitor or identify, so what I was encouraging is that the applicant first acknowledge that there will be this loss in discharge somewhere and then identify the area where it might occur. So, we don't have the tools to say it will -- precisely what spring or what pool, but you could identify the area. For example, would it -- would that area intersect with the park or another resource that you're trying to protect?

MR. BUCK: But, knowing that points of diffusion and discharge are varied, it would really be hard to correlate exactly. That would be an estimate.

DR. CUTILLO: But, depends on how far away the park is -- the well is from the resource. So, if it's close, it would be easier. If it's farther away, there would be more uncertainty. So, we're talking general areas, maybe ahupuaa.

MR. BUCK: Okay. Then, I heard you talk

about pumpage models that you would recommend that we might use before approval of any well construction.

What's the reliability of those models? What's the standard deviation? Or just give us some idea.

DR. CUTILLO: So, the models are good tools for identifying the area that may be impacted by a well. So, I wasn't suggesting (indiscernible) you have a new well but that the models be used to identify areas that contribute fresh water to the areas you want to protect.

MR. BUCK: And I'm just curious. Has there been any data feedback about the standard deviation and reliability of the models? And the models are representations (indiscernible) measurement.

DR. CUTILLO: Well, so the example I used -- the Department of Health uses numeric models to guide their policy decision -- decisionmaking. The USGS model that -- it's actually completed. It was presented not -- over a year ago at a sustainability conference.

Right now, they're just working on scenarios, things that we asked them to do with the model before they write up their report. And that model is calibrated to field data.

So, the progress that that model represents is

that the salinity profile and temperature profile from the Kamakana Well -- it's the deepest well in this area. It -- so it's really good field data. And what Delwyn Oki was able to do is construct a model that is calibrated to that data. So, he could move -- he could reproduce the salinity and temperature profile that's found in that well.

And so, that's -- one of the best ways to using the numeric model is to confirm or reject what your conceptual model of the aquifer system is. So, by matching the profile, what he was able to do is say to produce this profile, to reproduce these conditions, you -- water from a high-level aquifer has to -- he set it up to have a deep confined aquifer, but that water has to leak back up into the basal aquifer to create and reproduce that salinity profile.

So, to answer your question, I think that if you can satisfactorily reproduce conditions that you're observing in the field, then you have a higher degree of confidence in projections that you use that model to make.

MR. BUCK: Okay. One more. And then, you offered transducers, to put in permanent transducers, to better monitor the salinity.

Is that contingent on -- you said if the area was

designated.

Is that also --

DR. CUTILLO: Oh --

MR. BUCK: -- contingent on being --

DR. CUTILLO: Oh, you know what? No. I'll reclarify. I said we would consider buying those transducers to implement the salinity trigger, and it would be in lieu of designation. It would be a measure that you would set up, you know, as a management trigger based on monitoring data.

And the only reason I can't commit is just with budgets and -- continue resolution, and so, we would just -- we would sit down and talk about it, and -- but we would -- we have set money aside, and we would be willing to help implement that measure by purchasing transducers.

MR. BUCK: Great. Thanks for that offer.

DR. CUTILLO: Okay.

MR. PAVAO: I have two comments. When you're talking about the million gallons going out means a loss of a million gallons on the coast -- and Commissioner Buck made the comment, yeah, but it's spread, and you agreed. But, in your speech, you made it seem that you would lose a million gallons specifically at the park. So, it seems like you're

using general occurrences to specific areas, which really is not fair.

The other concern I have, you also talk about the Kahaluu Shaft and the chlorides. I'm just kind of curious as to what science are you using to say that the chlorides at the shaft will affect the park when the park is over 10 miles away from the shaft.

How can that be?

The shaft elevation is at 600 feet. Any effect would be in Keauhou Bay, at the hotel areas.

How can you distinguish -- or how can you testify some sort of science that says from 10 miles away, it's going to affect your park?

I don't understand that.

DR. CUTILLO: Okay. So, the question was will -- well, I agree with you, Commissioner Pavao. The pumping --

MR. PAVAO: You agree with me. Why do you keep commenting on it?

CHAIRPERSON CASE: Wait, wait.

DR. CUTILLO: Well, I can clarify. I use the Kahaluu Shaft data, like on this graph, to give some perspective on the changes that we're seeing in the aquifer. I was not implying that pumping at the Kahaluu Shaft is directly affecting the park. I don't

-- I don't agree with that. I agree with you. Pumping at the Kahaluu Shaft does not affect resources in the park. It's being used as an example of impacts of pumping a coastal aquifer.

MR. PAVAO: You said it.

CHAIRPERSON CASE: She --

MR. PAVAO: Yeah. You said that. I distinctly heard you say that what's happening in the shaft affects the park, and that's not true. That's not true at all. And you just admitted it.

DR. CUTILLO: I respectfully disagree. I did not make that statement. And perhaps, we could have the record read.

CHAIRPERSON CASE: I think we're okay. She said she agrees with you. So, you know --

MR. HANNAHS: What I heard it was an example of when you monitor, you have data. You can -- that can then become a trigger for action, just as the Kahaluu data triggered action with respect to (indiscernible). You're proposing a trigger for action of similar type of data, you know, for nonconsumptive uses --

DR. CUTILLO: Yes.

MR. HANNAHS: -- in your condition. So, I think that's -- over time, I think (indiscernible) get

on the same page there.

I appreciate that over the -- though frustrated or the relationship and some of the encounters between the park and the commission has not been to your liking in the past, you've stuck with it, and we're that close. And with your four, you know, proposals added to the other recommendations of our staff, some of which, I think you know, we believe are effective or not effective, but with that total package, you would achieve some measure of protection for traditional and customary practices and rights and so forth there and that this issue, at least for the moment, is addressed until we see that it isn't. And then, I guess, we'll all be back here when that unfortunate day occurs.

Environmental conditions are certainly critical to the practice of these traditions and customs. Human conditions are important, too.

To what degree is the park really allowed to embrace this notion that our kanaka need to be connected to the resource? They should be managing the pond. They should be active, not just as a park employee here and there, but really, to what degree do you really engage the community and allow them to really have a relationship to a wahi pana?

MS. DUCHESNE: Thank you for that question.

I would just like to say that for about the last two and a half years, we have had a fishpond hui. They gather every Sunday. And these practitioners are very, very committed. They came to the park and asked to be more involved in helping steward and manage the park.

They -- what we are doing as a group led -- you know, they take the lead on this. We identify different actions that we will take on, you know, each Sunday, whether it be jellyfish removal or -- and removal of an invasive pickleweed. So, together we work to -- to make the pond more healthy.

We're also mapping different areas of where we've remove vegetation and also areas where plants like makaloa are thriving once again thanks to their removal of invasive species and fresh water that is able to flow more freely. So, together we are working to monitor the pond health and make it healthy.

We were proposing to do a fishpond harvest last year, but we met with our kupuna, and they said that the resource was not ready yet. So, we look forward to gathering more information and getting that information so that we can involve the fishpond hui and all the volunteers that come to our park who are here today to be able to engage them to help us manage our park as directed in the spirit report.

Oh, my apologies. It's monthly Sundays. My apologies.

MR. HANNAHS: I think those things are awesome.

MS. DUCHESNE: Well, we invite you to please come down anytime.

MR. HANNAHS: I have little practice with fishpond stuff, so I'm happy to. I went there years ago, and I didn't see those people present, when the first fishpond hui was formed, and we had a lokai over there. So, that's a wonderful development.

As we look forward to a new federal administration, is there anything at risk, any of this at risk?

MS. DUCHESNE: I think parks are always at risk, and it doesn't depend on the administration. It depends on many things. So, that's why we are looking for proactive measures. So, we want to make sure that we have a margin of safety to protect public trust resources. So, it's not just politics that affects it. It's climate change. It's budgets. It's a whole bunch of things.

Our mission hasn't changed, and it's consistent no matter what happens.

MR. KAWAOKA: Park service, thank you for

that information (indiscernible). You mentioned there are several other states with similar situations (indiscernible).

Was -- I don't know if you mentioned it, but was there a reasonable resolution or conclusion? Did it result in designation or not?

DR. CUTILLO: I think Peter and I can probably offer some comments on this. But, the one thing that, I think, is common with -- well, so in parks, we -- sometimes we have water supply wells. We're actually pumping the water. Then we need to protect those. And then, we also have nonconsumptive uses that we need to protect.

In terms of the nonconsumptive uses, what I've seen is most states are moving towards protection areas. So, this is what Nevada did to protect Devils Hole. This is what the state of Montana did to protect the hydrothermal features in Yellowstone. And protection areas were used by Utah, the state of Utah, to protect springs in Arches National Park. And it's the direction that Oklahoma is moving to protect springs and streams that emanate from the Arbuckle-Simpson Aquifer. So, I think that this idea of identifying an area where you want to either maintain existing conditions or improve conditions and

then managing development to achieve that goal is one commonality.

MR. FAHMY: I might just add that what we do is we look first to the states to help protect what we believe are legitimate needs for protection of the resources that these parks were designated for. And we're -- in the case of Nevada, we actually asked the State engineer to help protect an area having endangered species, the Devils Hole pupfish, and the State engineer created an area within which he applied special management actions with regards to conserving new well permits and changes of water rights within that area.

So, we always look to the state to ask the state what is in your toolbox? What can you do, you know, that's legally enforceable and that's substantive to protect these resources? because we recognize the primacy of states in allocating and managing their water resources, and we've always looked to states. And we realize that states -- their water laws, their management procedures, have evolved over time and continue to evolve as things change with regards to their management actions.

MR. SCHEUER: Just to add briefly, Commissioner, Hawaii's -- well, Hawaii's Water Code was

adopted largely as part -- part of the model Water Code. The whole designation process is unusual in Hawaii, so the success in other national park efforts in other jurisdictions is not to avoid designation, per se, because that process doesn't exist. But, if the question is was the park able to offer alternatives that protected the park's resources and allowed other productive uses of water to occur outside the areas of sensitivity, the answer is yes.

MR. KAWAOKA: So, there is a -- thank you for that response.

Just to -- did you consider, or you are considering, possible preemption options, as well?

MR. FAHMY: Well, that -- we try to avoid that. We only do that when there is no alternatives remaining, when we've reached -- and I might say that sometimes it's other third parties who will take action against the park service for the park service's failure to abide by its mission. The park service has suffered legal reverses where third parties who have a very strong view with regards to protecting natural resources have sued the park service and have gotten judgments against the park service, or it's been determined that the park service did not act proactively, did not fulfill its mission to protect

resources for future generations.

We would prefer not to be in that position. We would prefer -- as Paula mentioned, we've been very active in the states. Just last month, before this new administration came in to being, we concluded our ninth settlement with the state of Utah. We have nine water right settlements in the state of Utah. Out of 13 national parks, we have completed nine, and we are working on the tenth. We have -- make it our concerted, you know, efforts to work with states to encourage them to use their tools and generate new tools, if need be, to protect these resources.

CHAIRPERSON CASE: Can I ask a follow-up question to that from your experience in the states? When you talk about that trigger, what, exactly, are you triggering? What are you -- I mean, do you -- is your suggested condition if these triggers are met -- is -- what's the next step? I mean, is it -- it comes back to the commission to decide what to do about -- about initiating a petition?

MR. FAHMY: Absolutely. In one case, in the state of Oklahoma, they actually (indiscernible) passed a new statute to protect springs and seeps in Arbuckle Aquifer, which protected springs and seeps within Chickasaw National Recreational Area. So, it's --

oftentimes is something where there's a dialog that continues to occur. And once a trigger is reached, I think, given the responsibility the commission has, you could say, well, what's the next step for us? What can we do? And maybe designation, maybe something else. What -- and you, obviously, have competent and capable legal advisors who can map out alternative courses of management actions that you can take.

But, fundamentally, as I said earlier, we believe in the primacy of state control over water resource allocation and management. We believe that states have the ability to solve and address these complicated issues of protecting public trust uses and resources and, in the case of Hawaii, traditional and customary practices.

MR. KAWAOKA: Chair, I have one more question with your permission. I call Roy Hardy.

Roy, I don't mean to put you on the spot, but I mean, you've heard park service recommendations. I don't know if you heard it before or this is the first time you're hearing it.

Do you have any reaction to it if you did, or -- at this point?

MR. HARDY: For the four that they mentioned?

I don't have my notes in here, but yeah. We look

-- I mean, it was presented to us, and some of those triggers were -- I guess, in staff's mind, they were immediate triggers, meaning no change, which is what the park has been talking about, like no -- no changes in water levels, no changes in chlorides, and so forth. And rather than that, we had, kind of, different triggers, so it gets into the details. It's kind of like that iceberg I was talking about, the real deep stuff. So, we were familiar with that.

The other two about the -- a reduction in the discharge, there's been some discussion about it. It's very localized. Hard to do without numerical model. The sustainable yield we use right now, it's not going to give you localized things. Pump tests will do that, so we do that. But, having an applicant do that without a numerical model and without actually drilling a well and pump testing it, hard to do. So, that's our feeling on that, as well.

And the second one was what?

DR. CUTILLO: Oh, adding the questions from the water use permit to the well construction --

MR. HARDY: Yeah. On the public notice, and adding some -- yeah. And many of those were actually changing the well construction permit into, de facto, a water use permit. So, we're talking about changing --

that's what designation does is we start doing water use permits. Adding those things to the well construction, de facto, turns it into, basically, a water use permit.

MR. KAWAOKA: One of the assertions was to basically do the ruling thing, enforcement in the permit. If I can put my regulator hat on, I mean, that's a long onerous process, as you well know.

But, do you feel you could do that kind of rulemaking without designation, or is that possible to do? Do you feel you have enough teeth in your rules now to do those kinds of things, or do you need to go through --

MR. HARDY: In the current process -- well, take specific public notice. It's not a public notice as far as what's specified in a water use permit. But, what we do right now is we notice it in the bulletin. I mean, that's a notice.

Is that enough?

I guess, that's the question. But, again, I think, staff's feeling is that many of the suggestions are really changing the well permitting process into more of a water use permit process.

MR. KAWAOKA: Do you feel that's the direction it's heading, or --

MR. HARDY: I don't think we need to go to that point yet, based upon the designation process. That's what the law and the Water Code dictates.

MR. KAWAOKA: Thank you.

Thanks, Chair.

CHAIRPERSON CASE: Kamana Beamer.

MR. BEAMER: Thank you. Roy, I don't know if you might want to sit up there. Some of it might bleed over into your kuleana. But, it's primarily for the park, so just so I'm super clear and, I think, for the sake of the public, as well.

So, you're contending there are significant impacts right now to some of the natural species, the damselfly, the -- sort of an ideal state for limu growth and mullet and that that might, you know, adversely impact -- it affect traditional and customary practice, you know, in the future, right, so moving forward. Might.

I want to get to the question about findings of fact and, you know, I think, that point. I've been on this commission for almost four years now, and, you know, I want to know why do we not have a finding of fact, or did we decide not to put that out, you know, if everyone to, sort of, see so if we do make a decision today, it's very clear for future bodies to

understand, sort of, the merits of our decision and the logic?

MR. SCHEUER: Commissioner Beamer, so two things. First, I believe that the staff and your attorney general were correct that findings of fact did not need to be prepared during this 60 days or such-time-as-may-be-necessary stage that we have been on for three and a half years. But, I think you're significantly hampered in making a thoughtful decision absent findings of fact, which are developed after the public hearing process if you continue.

To reflect what I believe is on the record, I believe the park has shown various ways in the petition as well as in subsequent presentations and written submittals that the species within the park are right now existing at their thresholds for salinity. So, with increasing withdrawals of fresh water, those thresholds would be crossed.

But, I think it's also clear and uncontroverted in the record -- and these were people who we were not in touch with, did not know about it. But, at least one Native Hawaiian came forward attesting to his exercise of traditional and customary practices in the southern coastal portion of the Keauhou Aquifer around the Kahaluu Shaft while he was growing up and that species

-- and he named them from octopus to mullet to other things -- were abundant and disappeared at the time the shaft was -- started to pump and have not returned since. So, outside of the park boundaries -- and just to be very clear, I'm not suggesting the Kahaluu Shaft has affected the park, but I'm saying the Kahaluu Shaft has affected, according to the record the commission has, the exercise of traditional and customary practices within the coastal portions of the Keauhou Aquifer.

MR. BEAMER: And then, also, just so I'm really clear, you guys have suggested several additional, you know, conditions or salinity triggers, other processes, you know, that we discussed because you're not comfortable with these eight suggestions, and you don't feel that there's adequate protection that's accomplished through these eight provisions; is that pretty accurate?

MR. SCHEUER: Yes, that's accurate. Certainly, the superintendent or others could respond. Many of the suggestions, while they are going in the right direction, there's -- you know, we want to encourage monitoring wells. We're going to, you know, suggest various things. These are not binding kinds of conditions that we know -- we can tell people who

(indiscernible) are going to protect resources.

MR. FAHMY: And if I may elaborate, one of my concerns in reading these proposed actions as they're termed is -- oftentimes there's a suggested action, but there's no timeframe given. It's very unclear, for instance, if you look at Condition No. 1, which talks about referral of a well permit -- permit application (indiscernible) what the timeframe for the review is or how the proposed permit area that they be affected by the proposed action will be determined.

Who's going to determine what that area that's going to be evaluated will be? And who will be involved in that evaluation?

This is, you know, certainly, some -- some early suggestions about what you could do in that process, but I think they're -- they really haven't been fully developed as potential actions that the commission and staff could undertake. So, there are concerns that we have.

I think Commissioner Buck mentioned this issue of encouraging the installation of a deep monitor well, and what question that came to my mind was, would that -- this proposed action require condition on a well construction permit? Would you actually say, okay. As a condition of the issuance of this well construction

permit, you shall, prior to the construction of that well, construct a deep monitor well?

This does not provide that level of detail.

MR. BEAMER: Maybe the last one.

And, Roy, if you can help me, so -- you know, I do remember those requests -- or, you know, short of designation, could we look at an ahupuaa level basis and what the sustainable yield might look like in a locality, that ahupuaa, and maybe it looks different. But, as a staff and as a commission, we didn't include those recommendations because it -- can you help me to understand, you know, some of the earlier recommendations about --

MR. HARDY: The smaller area --

MR. BEAMER: -- the smaller area to designate, right? I mean, we had this sort of mediation process where they sat down with the County and tried to come up with different ways to mitigate this, but I guess, today they're saying none of those are effectively in our recommendations.

Is that -- is that accurate, or --

MR. HARDY: It's not in the recommendation, correct. I mean, it's in the record.

MR. BEAMER: Okay.

MR. HARDY: The commission already acted on

the smaller area.

MR. BEAMER: Yeah.

MR. HARDY: Mediation, you know, took its course. It wasn't as fruitful as we had hoped or any of the parties had hoped, I think.

MR. BEAMER: And even something like a salinity trigger, you feel, is too strict in this instance because it doesn't -- you're saying, basically, there was no change, right?

MR. HARDY: The ones presented by the national park.

MR. BEAMER: Yeah.

MR. HARDY: (Indiscernible) had, as well, based on the long-term record, and we had some discussion about that. But, yeah, I don't think we need to go there.

MR. BEAMER: Okay.

CHAIRPERSON CASE: I'm going to suggest we break for lunch.

MR. BUCK: I'd like to make a motion that we break in executive session so we can consult with our legal during lunch.

MR. BEAMER: Second.

CHAIRPERSON CASE: Okay. All in favor. Aye. Okay. Let's take -- let's plan -- let's aim for half

an hour, so let's aim to come back at 1:45.

(A lunch recess was taken from 1:16 p.m. to 1:55 p.m.)

CHAIRPERSON CASE: Thank you, everyone. Back from lunch. Hope you got to eat.

We're going to move on to public testimony now. As I said, we have a lot of people who want to give testimony, so I kindly ask you to keep your testimony to three minutes. And we want to start with the Honorable Mayor Kim.

You can have more than three minutes. No.

MAYOR KIM: Can you hear me? Am I on?

CHAIRPERSON CASE: No. It's got to be red.

MAYOR KIM: All right. Thank you very much for taking me first. I appreciate it. I wanted to just comment, because Mr. Hardy mentioned waste water, R1, R2. I just wanted to say to the board and the public, you know, I know they hear it all. Guys, please trust us. I met with national park and Department of Water Supply, and one thing that was very obvious to me, they both had the same mission of protection of people and their water. And I just -- my position was just a little different than designation. (Indiscernible) to make sure we do our job as far as working with them to establish a really, really good

monitoring system that they would approve of and promote, even if it would cost us extra money and saying that to the water department.

The point I wanted to make here was what was already talked about, those R1, R2, and commit to you that we have made a commitment to convert from R1 -- R2 to R1, and what that does is -- we inject into the earth now roughly over million and a half gallons a day, and we will have that converted to R1 where regulations now say we can use it for irrigation. And therefore, instead of just injection -- we're making good use, but the use also means less water usage from the Department of Water Supply.

I don't know how else to say to you, members of the board, that I really feel that Mr. Hardy's recommendation of staff is solid. It will do what, I think, they want us to do, Water -- national park, because the protection of the water for all usage.

The second thing is I really want to thank you for your treatment of Abel. Abel and I go a long ways back. He considers me family because our tutu man. I have sat down with him for hours down the beach totally alone, just to talk and understand. The reason I do that with him and others -- I'm not Hawaiian. I don't pretend to be. I need to know, you know, why they feel

or how they feel. I'll never be able to know how they feel. It's too deep. My job is to understand why they feel that way so I can do my job better and balance what I have to do. I thank you for your treatment of him.

(Indiscernible) I think it says a lot, especially the group behind me on my left. He always uses the word -- he goes, You know, Harry -- when we went outside, he says, You know how sore, touching his heart. I think for you old-timers out there, you know, they use that word when it means it really hurts, sore. I know, as I told him, what you say how sore it is.

And we do understand how serious that means. We will do our job. National parks' concern and ours is the same. We need to balance -- the usage. We need to monitor. We will work with them and establish an award monitoring system to help them do their job for us. Us means the people. And we will do that.

I think this is the first public statement we made in regards to commitment of the R2 to R1, and it's not because of this. We had that meeting long time ago. And said we can start next year, and hopefully, you know, be finished before 2020, around 2020, and that will convert close to 2 million gallons of water for irrigation purposes.

I thank you for your work. We will do our work, as we promise you. Thank you.

CHAIRPERSON CASE: Thank you very much. Thank you for spending the time with us today, as well.

Okay. The next is Ken nah rows.

MR. MELROSE: Thank you. Chairman, members of the commission, my name is Ken Melrose. I've been a resident of Hawaii since it was a territory. And I testified a number of times during these proceedings over the last several years. I do not support the designation, and I ask you not to, either, and accept your staff report as -- and their recommendations in denying this petition.

The Kona community selected its preferred growth scenario and overall strategy in the Kona Community Development Plan, which was adopted in 2008. Approval of the staff recommendation by CWRM will reinforce that strategy to direct future growth north of Keauhou through roads that can be connected. Travel distances between home and work can be shortened, and utility services, government services, and recreational opportunities are available.

The alternatives to designation called for in the staff recommendation present a reasonable framework to monitor future impacts of the aquifer. With them,

Water Supply can pursue -- be encouraged to pursue sources to the southern part of this aquifer, and the division of environmental management can be encouraged, as Mayor Kim has pointed out, to help with the water budget overall and reclaim the water that comes out of the ground, put it back on top. And that's an important.

The Kona Community Development Plan envisions the national park at Kaloko-Honokohau at the core of a 17-mile protected shoreline and its open space components. I am hopeful that the national park can redirect its resources away from this petition and toward enhancing the vitality of its own ponds like its neighbors do.

I ask that the commission expand on the staff recommendations related to monitoring and to ask -- and direct the national park to cooperate, to provide their raw data openly so that it can be placed into a regional monitoring program. It's been in place for decades through the Department of Health for regional coastal near-shore and groundwater. So, I ask that you accept the staff recommendation and deny the petition. Thank you.

MR. BUCK: Mr. Melrose, everything I heard from the park seems to indicate that the data is

available. They're willing to share it. It's on their web site.

Have you found that not to be the case --

MR. MELROSE: For a period, it's my recollection in this process, for a period of well over a year in the middle of this process, that data was not available and not opened and shared, not placed into a framework that is used for the Department of Health.

The Department of Health has a challenge in its divisions, so a lot of data comes in and it's all in silos. And if they can work -- the Department of Health can work to find a way to reinforce that data across the silos so that it has better reporting, it's going to help. But, the national park data was AWAL for a long time.

MR. BUCK: Okay. Everything I heard to date seems to indicate the data's available and online or open to the public.

MR. MELROSE: Yeah. And now it is.

MR. BUCK: Oh, good. Thank you.

MR. MELROSE: And the other point, I think, I would make -- and Commissioner Buck has said -- is that if you looked at one of the tables that Roy Hardy presented related to monitoring data that was in the national park, there's a big wide gap in between there.

And, you know, it's my understanding that that's probably a result of lack of funding for them to maintain their own monitoring requirements. And, you know, the monitoring requirement that's -- it's in the staff recommendation. It's not a cheap thing. You know, everyone that's involved in water resource and on both sides -- all sides of the table, it's going to cost them more to do that monitoring.

It's important to do. We need the do it, particularly in this more limited resource, this smaller bucket that we have underneath us. But, it's going to be more expensive for everybody.

CHAIRPERSON CASE: Thank you.

Tony Carrasco. David Kadowaki. Jon Nishimura. Lance Fukumoto. Dori Ingalls.

MS. INGALLS: Thank you very much. My name is Dori Ingalls. I am a product of Bernie Sanders. I was born and raised in Vermont and moved here in 1971.

So, my only thought was to present my feeling at this hearing was that I felt the Hawaii staff put together an extraordinary, detailed, 38-page report, which I read a couple of times. And at this hearing today, I wanted to come hear the other side, and I don't feel that the parks department had a good case to establish this water management area because -- and I

understand why Mr. Hardy wouldn't -- there's a little bit of compromise. But, if they don't feel there's an issue, then a compromise would have been a more difficult place to be.

So, from the outside looking in -- and I'm not a scientist. I do know water. It just -- I feel that the State has done a great program with their staff. I think that the monitoring they've done so far is great.

We all know more can be done. I have a program called realsimplegreen.com, so I know how to -- I think we should educate our people to use less water, and that's a possibility. So, when I heard all of these encouragements, I thought that that's another step that the State could take to, in a fun way, teach people how to conserve water and put that in a program somewhere along the line as an educational thing starting with kids in school. So, thank you very much for listening.

CHAIRPERSON CASE: Thank you.

Fred Cachola.

MR. CACHOLA: Aloha, Chairman Case, members of the commission. Aloha kakou. I appeared to you before, and I'd like to submit my written testimony. I'll make it as brief as I can. Thank you very much.

I am Fred Keakaokalani Cachola. I was born and raised in Kohala. I'm very, very familiar with West

Hawaii and the Kona area. And I wear many hats that service the communities and West Hawaii.

The hat that I'd like to wear today is the one that I wore 40 years ago when I was with 13 half Hawaiians who were appointed by the secretary of interior to determine whether the historic settlement at Kaloko-Honokohau should, indeed, maybe, become part of the national park system. I was very proud to be with those Hawaiians and wanted to make my first point today that this national park, Kaloko-Honokohau, is not a product of some Washington backroom bureaucracy. This park was instilled and initiated and established by Hawaiians.

And I was very proud to be with two of them, Mauna Roy and Abbie Napeahi (indiscernible), when we presented this report to the Secretary of Interior in 1974. I was very proud to be there, because as we've said, this place, this special place, got to be preserved. The environment, the ecosystem, all that is required for Hawaiians to perpetuate who they are, where they came from, and what they do here today. Then we will continue to have a place to build upon and work on and perpetuate our traditional and customary rights and responsibilities as Hawaiians to the aina, to the community, and everybody else in the world.

I really like this place that we signed when we submitted this report in 1974. We said we take special pleasure in presenting this study because, perhaps, for the first time, Native Hawaiians have been able to tell their story and tell it in their own way. This is in 1974.

Forty years later, we are still doing that. We're still trying to tell our story and tell it in our own way. And point number one is that all of the staff from the NPS are doing exactly what Hawaiians told them to do -- preserve, protect this place, allow Hawaiians to perpetuate their customs and traditions. I'll just name a few of these Hawaiians that served with us. Hormer Hayes, Iolani Luahine, George Naope, David Roy, Abbie Napeahi, Colonel Arthur Chun, Kwai Wah Lee, Emily Ka'ai Thomas, Nani Bowman, Keoki Pinehaka, Henry Boshard, Pilipo Springer, and yours truly, Fred Cachola.

So, I come before you, and I know that their spirit is with me. And essentially, this is what I 'm asking you to do. Fulfill your constitutional and statutory responsibilities to reaffirm and protect all rights customarily and traditionally exercised for subsistence, cultural, and religious purposes by Hawaiians. You have that responsibility, ladies and

gentlemen. And I just respectfully say that you -- you do so.

And I -- I just have four other points to make real quick in support of that (indiscernible) testimony for you to complete those statutory and constitutional responsibilities. The commission does not have a thorough inventory or assessment of the Hawaiian customs and traditional practices here in this ahupuaa, here in this area, Kaloko-Honokohau.

How can you determine whether you have, indeed, reaffirmed and protected those customary rights and traditions if you don't have an inventory and assessment of what they are? At what point will you be able to say we've met these requirements when you don't know what some of those customs and traditions are?

And I urge you not to just limit your discussions with the Aha Moku Council (indiscernible). There are many, many Native Hawaiian organizations that you may go to. Just as the Advisory Council on Historic Preservation that recommends -- when they encourage Hawaiians to consult under the terms of Section 106 of the native -- of the National Historic Preservation Act. I urge you to use that definition when you consult with Hawaiians to determine what are your traditions, what are your customary practices. You've

got to get an inventory.

And just a reminder, the Hawaii Supreme Court have given clear guidance to State agencies like the water commission on how to address traditional and customary rights in the Ka Pa'akai case. The very first step an agency's supposed to take is to make specific findings as to the identity and scope of valued cultural, historical, or natural resources in the petition area, including the extent to which tradition and customary Native Hawaiian rights are exercised in the petition area.

Have you made specific findings, as the court suggested that you do -- not suggested, mandated that you do? Have you -- have you found specific findings? Have you determined the extent to which those findings are affected by your decisions?

Number two, I don't think the commission has any data now on the effects of rapid ohia death. I'm so glad to hear that point being brought up earlier this morning by my friend and colleague, Neil Hannahs.

Without knowing the extent of the damage of this occurring, how fast, where, and how it affects watersheds in this area, how can you make a decision?

I think that would be irresponsible. Thousands and thousands of trees and thousands and thousands of

acres of forest are being destroyed right now on the slopes of Mauna Kea, Mauna Loa, and Lualualai.

Do we know what the diminishing forest do for watersheds and for replenishing the aquifer here?

We don't.

Three -- and I just got two more. Recently, the legislature legislated that DLNR consider and encourage traditional Hawaiian customs and beliefs in the management of our cultural and natural resources and encourage the practice and establishment of the Aha Moku Councils. This is -- that's just a recent entity, Aha Moku Councils, and it's -- Mrs. DaMate and others are working hard to try to get it going.

But, do not look at just that council. Look at the entire Hawaiian community as was so well discussed by (indiscernible) today. Look at the Hawaiian community, not just a council. And again, I would encourage the use of Native Hawaiian organizations as defined by the Advisory Council on Historic Preservation when you consult with them.

My last point is that loko ia, traditional Hawaiian fishponds, as developed by our ancient kupuna are ingenious and unique methods of fish ponding and are undisputedly part of the traditional, customary Hawaiian practices. A study in 1989 found 480 -- 488

loko ia. Ninety of them were in production.

Has this commission ever wondered how your decisions affect this tremendous source of food and protein for not just Hawaiians but for this entire state?

I would consider that. Before you make a decision, you consider exactly how it's going to affect not just Kaloko and Aimakapa here but the decisions here and how it's going to affect the other 400 fishponds throughout the state and the customary practices that go with it. So, in essence, I'm suggesting that -- strongly suggesting that you fulfill your constitutional and statutory requirements before you make this final decision. And I would suggest that you encourage as many Native Hawaiians to be involved with you.

And by the way, there was a sign I saw on upper highway, big sign with flashing words. Reduce water production by 25 percent.

Was that yours? Was it the County's? Doesn't that tell you that -- doesn't it tell you something already?

And it's right in this aquifer. Reduce water by 25 percent. There must have been a reason for doing that.

Have you guys figured out who did that and why?

At any rate, commissioners, I really appreciate doing this, and I urge you to look at yourselves and tell yourself, have we met our constitutional and statutory responsibilities? Have we met them to the degree that you can stand firm and clear with everything that you're doing?

Please ask yourself that question. Mahalo. Mahalo nui loa.

CHAIRPERSON CASE: Thank you.

MR. BUCK: I got one question. Excuse me. One question, please.

MR. CACHOLA: Sure.

MR. BUCK: Thank you very much for your testimony.

Do you have any other Hawaiian organizations you would recommend?

MR. CACHOLA: Royal Order of Kamehameha, Moku O Kona, and Moku O Kohala, the Hawaiian civic clubs. The senior citizens have a lot of kupuna, and that's who you got to go to, the people who have lived here whose ancestors go back generations. And if you like, I can get the list of Native Hawaiian organizations that the Advisory Council on Historic Preservation uses when they encourage agencies to consult with Native

Hawaiians. Here's a list. The Department of Defense has a list, and whenever they affect historic sites like in Pohakuloa (indiscernible), they send notices to everybody, the NHOs. Use that list. Mahalo.

CHAIRPERSON CASE: Thank you.

MR. PAVAO: Mr. Cachola, that sign that you saw on the highway.

MR. CACHOLA: Yes.

MR. PAVAO: That has nothing to do with the health of the aquifer. That's only because some of the pumps have burnt or are not working. So, it has nothing to do with the healthiness or the effectiveness of the aquifer.

MR. CACHOLA: Thank you very much for that clarification, Mr. Pavao, but when I saw that sign, the first thing that comes to me is we don't have enough water. That's what comes to my mind. And nobody explains, oh, because the pumps are not working correctly.

CHAIRPERSON CASE: Thank you.

MR. CACHOLA: Thank You.

CHAIRPERSON CASE: Yvonne Izu, Yvonne Izu. No. Nakama, Teresa.

MS. NAKAMA: Aloha. I know it's been a long day. This is just the beginning of testimony. I'm

Teresa Nakama, born and raised and will die here on the island. This is what we are. We are an island. But, you can put all the other islands on this island, and we still have more room for another island to be here.

This island is forever evolving. It changes. The ecosystem changes. Along with the changes are shoreline changes. We can compare what's happening to this island to what has happened on the other islands of Maui, Oahu, and Kauai. We need to take a look at the whole picture.

Protection is vital.

What are the future developments of this area? Is it 25,000 house lots going south of Keauhou? Is it another 2,500 house lots just mauka of this area? What is the future when you look at the whole picture when you make a decision here? Is it just a protection of water and why we must protect the water and why this designation is needed? Do you protect your bodies? Do you protect your kidneys?

Water is life. If we don't have this layer of protection for our water, what is future development effects going to come about?

This is -- this is something that's vital, to have another layer of protection.

Our ahupuaa system, mauka to makai, you all have

that knowledge. You've all looked at it.

But, do you implement what you've learned? Do you know the waters from mauka, makai nourishes our shores?

This is how replenishment is done for our limu and our marine species.

If development comes without this layer of protection, is there a lack of responsibility from our State and County to fulfill their obligations? And if it wasn't for the national park bringing this about, would they have still looked at how they're looking at it now?

I think because of the national park asking for this protection, everybody is on their toes to bring about this protection. This is why this designation is needed, not because developers are not going to get what they want, not because of homeowners who have large track of properties to develop, they're not going to get what they want. This is a layer of protection. This is what we're looking at. Let's integrate what the County has to do with this layer of protection.

I support the designation.

As far as the rapid ohia death, I was at a meeting last night, and JB Friday, the person involved in looking into what's really happening, they're not even close to solving the problem. And mainly, it's the

Puna area right now that's been affected. They're looking at temperature control, heat and cold. They have not found a resolution as to how they can stop the spreading of the sap when it's attacked by this -- by this fungus. It is at the very core of the ohia tree, and they found two areas that it comes from, one from Asia and one from Central America. And they -- they're still asking for questions. They don't have any answers to the rapid ohia death at this time.

Have you asked indigenous knowledge? Did you go and find out from our kupunas what is the replenishment of our natural resources? What is the effect that we have on your decision today that's going to have on our water uses of tomorrow? Do we have all the facts in front of us?

This is important. This is my life. This is my kidney. This is the water I drink. This is the food I eat. Me and many others behind me.

It is not about development. It is not about people wanting to develop. It's not about the homeowner. It has nothing to do with that. It's not about people's pocket.

This is about life-sustaining water because our island is alive. It lives. It has an ecosystem. But, it cannot speak for itself.

So, look at this layer of protection as something as if you were to protect your body from any disease. This is how your na'au must tell you that we need this designation because our government fails us time to time.

CHAIRPERSON CASE: Can I ask you to wrap up your testimony?

MS. NAKAMA: Yeah. So, I ask you to allow this designation to happen, the process to continue, public hearings to come about, and let's look at indigenous knowledge. Mahalo.

CHAIRPERSON CASE: Thank you.

Judith Hayducsko. Peter Young.

Just because we haven't been successful with our time so far, if you don't mind, I'm going to put my timer on.

MR. YOUNG: Okay. I understand the importance of meeting management.

CHAIRPERSON CASE: That's why I'm starting with you.

MR. YOUNG: So, now my time starts?

CHAIRPERSON CASE: Go ahead.

MR. YOUNG: Thank you. I wasn't sure I was going to testify, but I decided I would. I provided written testimony before, but there are some things I'd

like to call attention to.

Just in a broader case, if you think about it, what this is, is a federal agency using a state law to take jurisdiction away from a County agency. Yet, they say they want to work with everyone. But, effectively, that is what it is.

The premise of their petition is that withdrawal from wells, high-level water wells, will increase the salinity in the park's water resources. The first bit of paper that I gave you, this one (indicating), is something that they finally disclosed in May of 2016 that said, actually, the contrary is what's happening in the park. The salinity in the park's water resources, their ponds, is decreasing, not increasing. So, what they want is what they're getting.

The next one, quotes from the hydrologist from the national park as well as the park's superintendent. There is no evidence of negative impact of withdrawing water from the wells. And it's not just those guys that are worried about it. Other people that have studied the water resources in the national park for 20 years or more, guys like Tom Nance and Steve Dollar and Richard Brock and Steve Bowles and others all say there is no evidence of any impact. And in fact, Dr. Don Thomas says neither the National Park Service or anyone

else's field data has shown a likely impact from use of high-level water to supply the Kona residents.

Department of Health has said there's no quality issue at the national -- at -- for groundwater in the Keauhou Aquifer.

The Department of Water Supply shows you that we are well under sustainable yield, well under. Out until 2035, we're still well under sustainable yield. There is no problem of quantity or quality of water in the Keauhou Aquifer, and there is no evidence of impact at all from -- from drilling.

The national park also has a -- kind of a do as I say, not as I do kind of thing, and they'll pull out of the spirit report and their management plan information when it's convenient.

I'll skip through this (indicating) one. This is some background on it. This is -- that wasn't three minutes.

CHAIRPERSON CASE: It was. That's the sound I woke up to 5:00 this morning. Sorry. I can't stop it.

MR. YOUNG: It's been 1,000 -- it has been 1,250 days since the national park petition was filed September 13, 2013. If they had removed one kiawe tree per day, we would have 1,250 kiawe not in the -- not in

the national park. UHERO did a study at Kiholo and said that there's a net positive gain if you remove the kiawe. Kiawe is sucking up the fresh groundwater. Kiawe is growing all around the parks -- the ponds. A hundred acres in the -- of the 600 acres is kiawe forest. The anchialine pond that you guys were taken on a tour to go see had Christmas berry growing over the anchialine pond. Half of the pond is covered by that Christmas berry, and the leaf litter is falling and clogging it up.

It is not the time to designate. It doesn't mean it shouldn't be followed. The staff recommendation is reasonable.

The addition of the four things that the national park is asking for is -- is effectively an end run around designation. It's going to require a water use permit process subject to a contested case, and it's just not fair to Kona because there is no evidence of any quantity or quality problem.

And I think you should go with the staff recommendation. I worked with those guys for four and a half years. I know they look at all of the data that's given to them, and I know that they make a recommendation based on what they think is best for the aquifer, not best for the people, not best for the

politics. It's best for the aquifer. I lived with a that with them for four and a half years. Their recommendations are reasonable. Don't pile on with these other ones. Thanks.

CHAIRPERSON CASE: Thank you. Halealoha Ayau. Taimiroa Pajimola. Kim Crawford.

UNIDENTIFIED SPEAKER: Hold on. Taimiroa will be right up.

CHAIRPERSON CASE: Okay. Tanya Power.

MS. POWER: Good morning. As I'm not orator, I'm going to have to read. I apologize.

MR. PAVAO: Good afternoon.

MS. POWER: Oh, yeah. Afternoon. I was reading. Good morning. Good morning. I'm Tanya Power. I'm a resident of Kailua Kona.

When this issue was first brought to my attention several years ago, I felt the responsibility to learn about it. I first attended a forum where both sides were presented. And then, every time you've had a meeting here, in Kona, I've made the time to come and listen.

There was hours and hours of testimony, scientists, environmentalists, and conjectures. After all these hours, this is the first time I've chosen to testify. In all those hours of listening and learning,

in the end, there has been no science to support the designation of Keauhou Aquifer at this time. None of the eight criteria used in considering designation have been met. After all the hours of studying and listening, I cannot find any science to warrant the designation at this time.

Continuing monitoring would be prudent. Rather than designation, I think The Kaloko-Honokohau National Historic Park can use its resources, money, tax dollars, and energy to clear out the invasive species that are competing for the fresh water adjacent to the pond, ensuring more fresh water to the ponds. Further, they could benefit by joining the watershed partnership in this area. I don't believe they belong. And the Volcanoes National Park did join the watershed partnership on their side. I'd rather them become a contributing member to this local community rather than being so divisive.

Thank you for hearing my testimony. Have a great day. Thank you.

CHAIRPERSON CASE: Thank you. You, too. (Indiscernible). Yeah.

MS. PAJIMOLA: Hi. Sorry. I was outside. Aloha, everybody --

CHAIRPERSON CASE: You got to press the

button so it turns red.

MS. PAJIMOLA: Okay. Hello. Aloha, everybody. My name is Taimiroa Pajimola. I'm born and raised in Kona. For the past five years, I've been living over in Maui. We were fortunate enough -- my other half and my baby, while I was pregnant, we got to go to COP 21, Conference of the Parties, in Paris, France, and we got to learn a lot about climate change and what's happening with our earth right now. And I just want to say that we're in a very critical state.

Something that I'd like to comment on that I think is very important, that's something that we should recognize, is that earlier, when we had first come in, my baby was making a little bit of noise, and then there was a comment that someone said, you know, someone should get that baby out of here. I think it's very important that we recognize this because I think that a lot of the decisions that we're making right now is in dismissal of that future generation.

I also want to, you know, make note that what the hydrologist, Roy, was saying is that in 69 years from now, that's when our 90 percent sustainability will be reached. And yeah. A lot of us will have passed away. But, my baby girl will still be alive, and her children will be alive, yeah, and I don't want her to have to

come back to these meetings and beg you guys to petition again to support a water designation again.

And I would also like to make note that in 1992, the water commission did designate Molokai, the entire island of Molokai, as a water management area despite finding that none of the eight criteria were met. I believe that this was what's called seven generation decisionmaking. They thought about not just their future but their future's future and beyond that. And even though none of the eight criteria were yet met, they decided collectively that this is something that we need to protect before we come back to one of these meetings and before we have to petition again to designate this water management area.

And it's not going to stop development, because I was living in Maui for five years, and I was part of the Na Wai Eha cases. I was not directly a petitioner, but I was involved in sign waving. And we did go and testify at every meeting, and we did go and sign wave.

And let me tell you, there's plenty of development still going on. It doesn't stop it. It does slow it down and allow developers to become accountable for the sustainable yield and sustainable practices that they should be already implementing in their developments because our island is only small. We can only put so

much concrete on this island.

So, I just want to mahalo you guys for staying and coming and listening to all of us give our thoughts. And I just want to say that I'm in support of the national park designating this water management area as a -- yeah, as an area for -- we're protecting. Mahalo. Thank you.

CHAIRPERSON CASE: Thank you. Lowrey Power.

MS. CRAWFORD: I think I was after Taimiroa, and we just got passed up real quick, so is it okay if I go?

Kimberly Crawford.

Kala mai for the stuttering. I'm terrible at public speaking. I'm better at working in the loi and the loko. My name is Kimberly Makalapua Crawford. I'm 23 years old, and I'm submitting this testimony as a lifelong resident of Hualalai, a mother, and a kiai loko. From the waters of Hualalai, my family will be nourished and cleansed for our entire lives.

When I think of the increase in development and population in my short time alive combined with the proposed and upcoming development in the Kona region, I am fearful for my daughter's quality of life and the kanaka maoli. She descends from a people who are not only deeply connected with all of their resources but

also more times than not improve the quality and functionality of them. And that's something that we are lacking in these formal meetings, and that needs to change.

As a young kiai loko at Kaloko-Honokohau -- I am one of the practitioners that he asked Jonathan about -- I spiritually and visibly understand the importance in ensuring our estuaries, anchialine ponds, and loko ia are receiving the highest quantity and quality of water possible. It is my duty to make sure these unheard voices are heard, and right now, they are asking for help. The limu, the ia, the native flora and fauna, the birds, the puhi, the damselflies, and the native people are asking for help. And right now, I am here to fight for their right to thrive.

When I hear you want to begin pumping waters from South Kona, I worry about our people who can no longer afford to live in Kona and are being pushed to those more southern rural areas. And I worry about their future of their water. When I hear we haven't met the criteria for designation, I reflect on all the water wars around the world, and I ask you to implement these measures of designation to safeguard our keiki from having to make this -- to having to fight for this vital resource in the future.

It's our kuleana as makua to ensure our keiki a good future, and I think it's important you know that we're not going anywhere.

Thank you for your time.

CHAIRPERSON CASE: Thank you. Lowrey Power.

MR. POWER: Good afternoon. My name is Lowrey Power, and I'm fourth generation resident of Hawaii. Been in Kona since 1973. I grew up in Honolulu.

And at this time, I do not support the designation. I have many concerns about designating the Keauhou Aquifer as a special management area at this juncture without more convincing evidence of the impact that the community will endure once a designation is enacted.

It would be prudent for the decision process to gather all the facts in all areas before plowing into a situation prematurely that many -- excuse me -- that many have -- that many would have unintended consequences both good and bad. I feel the current findings do not warrant designation at this time while future monitoring and additional studies as to the impact of the designation should be studied in order to make the best decision for all concerned. Mahalo.

CHAIRPERSON CASE: Thank you.

Martha Tumbleson. Jean Gray. Kamalani D.

MS. D: Aloha, Commissioners. Thank you for the opportunity for members of the community to voice their opinions, whether in proactively wanting the designation or not. My name is Kamalani, and I am kanaka. I am of this land. Kona is my home.

I'm here today to urge the commission to accept the staff's recommendation to deny the designation of the Keauhou Aquifer. There are hugely adverse consequences in designating the aquifer for the community and ultimately water access for locals.

A result of the designation means no new water permits or water meters will be issued. Existing water permits will be subject to review and need to be reapproved or possibly revoked. So, no new water access means no new development or construction. Even for individuals wanting to build or improve on a single lot, it can become very difficult.

So, according to the science, there is not enough water -- or there is enough water to go around and sustain our community. The scientific evidence shows that the quality of water and quantity of water is in no way endangered at this time, based on the commissioners' staff report.

From the Natural Energy Laboratory of Hawaii

Authority, or NELHA, which neighbors the Kaloko-Honokohau park -- says 32 years of monitoring results. NELHA's monitoring program has no evidence of harmful change to its anchialine pond communities.

Community members, residents, and locals are not disconnected or unaffected by this decision. Designating the Keauhou Aquifer is harmful to the people of Kona. Our community, our economy, our housing, and our culture rely on access to this water.

According to the research and environmental impact studies done, there's no need for water management area designation at this time. The scientific evidence has determined that none of the eight criteria cited in the HAR statute which the commission must put into consideration have been met. The national park's own studies have concluded that designation of the aquifer is not necessary. The salinity levels are going down, as Peter Young stated.

According to the park's own superintendent, she says we do not have any evidence that pumping wells have adversely affected water resources in the park. There are a number of proactive members -- measures and actions that the national parks can implement and continue to do to improve grounds and cultural practices within Kaloko-Honokohau area.

The commission's own staff has urged that the designation is not needed, and staff recommends that the national park's petition be denied. So, I urgently plead the commission to please accept the staff's recommendation to not designate the Keauhou Aquifer at this time. Mahalo.

MR. BUCK: Thank you very much for your testimony. It's more of a comment. The last three and a half years, I've heard a lot that if somebody's a water management unit, no new permits would be. And that's just wrong. It's important that we don't, kind of, demonize what the Water Code is. Most of Oahu's a water management unit. There's plenty permits. It's not the same process and it might be longer, but to be able to state that, it's just wrong. And it's really important that we respect the Water Code as the (indiscernible).

MS. D: Mahalo, Commissioner, but the intent of my statement is to really urge the commission to accept the staff's recommendation to not approve the designation. Mahalo.

CHAIRPERSON CASE: Thank you.

Henry Giltner. David Honma.

MR. HONMA: Good afternoon, Chairperson Case and commission members. My name is Dave Honma, and I

have the privilege of serving as a chairman of the board for Hawaii Planning Conference -- Leeward Hawaii Planning Conference here in West Hawaii. It's a member based 501(3) -- 501(c)(3) organization incorporated in 1974. Since the inception of our organization, we've been working diligently with both the private and public sector to advocate for sound planning decisions that promote the long-term benefits of the Hawaiian community in general.

With regards to the petition, HLPC maintains its opposition submitted -- as submitted by the National Park Service. And while HLPC recognizes and fully supports protecting the natural and cultural resources including, but not limited to, water, we strongly feel there is no strong evidence to indicate the need for this designation at this time, as supported by what Roy mentioned earlier and what Peter mentioned.

So, HLPC humbly requests the commission deny the petition and approve the County of Hawaii Water Use and Development Plan Phase 2 update.

And just wanted to thank you for the opportunity.

CHAIRPERSON CASE: Thank you.

MR. HANNAHS: Question. David, how many members (indiscernible) of the land use? How many of your members are -- have joined the watershed

partnership (indiscernible)?

MR. HONMA: That's a good question. We got 72 members, businesses, individuals, in the organization, so I would say at least a third of it.

MR. HANNAHS: Good to have that number higher.

MR. HONMA: Yeah. Thank you.

MR. BUCK: I'm just wondering. The staff had eight recommendations.

MR. HONMA: Yes.

MR. BUCK: Would you have any problem with that?

And I'm curious how your members would react to us encouraging you -- an applicant to install a deep monitoring well within the specific area of concern.

Do you sense that's going to be a problem with your members?

MR. HONMA: Well, we need to do what's right for the community and -- to protect our natural resources. So, you know, I would probably defer to our board and our members. But, I would feel strongly that what's to the best interest of the public would be okay with the organization. Obviously, it would be okay with the organization, with HLPC.

MR. BUCK: Thank you.

CHAIRPERSON CASE: Thank you.

Alapai Kaulia. Sharon Willeford.

MS. WILLEFORD: Aloha. My name is Sharon Willeford. I've lived in Keauhou for 35 years as a dedicated teacher, elementary school, third grade. I try to teach the children to aloha aina, and we all must do that now. It is a critical time, as you've heard.

Water is an issue. Water is life. Hopefully, you've all been following what's happening in North Dakota, and that Nestle is selling all of the water out of the lakes and all around.

I would like to challenge the fact that it was stated that the Department of Health did not determine that the water was contaminated. I lived in Keauhou adjacent to a golf course where they sprayed over a hundred different chemicals -- herbicides, fungicides, pesticides. I watched the white residue go down the driveway into Keauhou Bay. I was poisoned there, forced to retire, and in bed for two years. It shuts down all your systems, and it's a horrible thing.

And we need to really test the water. We need to test for the sewage that's going in the water. I don't know if you folks have anything to do with the ocean, but you are water protectors, I hope.

And I'm very concerned for the community. Every well that's drilled, it seems that more homes are built, and the people are foreigners that are coming here. The local people, we can't find affordable rentals because of what's going on here. We are stuck in traffic for hours, but the highway's going north for the rich, the wealthy people.

And we need to take care of the local people, especially the Hawaiians. There are so many Hawaiians that are homeless, and they're forced out of Kona. This is their home. This is their place. And we need to be careful not to overdevelop and not to use all the water now.

They're saying now these studies are valid, but what about the future? If you drill all the wells you can drill, then all the water's gone and what happens?

So, I'm not quite sure about the designation, but I'm quite sure that we need to be careful and protect the water.

Thank you so very much.

CHAIRPERSON CASE: Thank you.

Rick Vollstedt.

MR. VOLLSTEDT: Thank you. Rick Vollstedt. I've been following this process for the last couple of years. I've attended several formal meetings

discussing the pros and the cons. From what I've heard and read plus staff's analysis that I've also read, I see no logical or scientific reason to designate the Keauhou Aquifer System as a groundwater management area.

I live in the Palisades area, and this past year, there have been a number of new homes constructed. Typical purchaser is local, full-time resident.

Why?

Because they're affordable.

There are several condo projects in the planning stages right now that will also be affordable within the next year. And just recently, in the paper, legislation was talking about floating a big bond issue for affordable and low-income housing.

We're also seeing a lot of -- or seen a number of large expensive projects currently happening -- Kohanaiki, Hokulea, Waikoloa Beaches. Obviously, purchasers will probably not be local, but the construction jobs are for locals, good paying jobs for engineers, contractors, electricians, plumbers, and laborers, plus ongoing jobs needed to support these developments. All this would come to a halt or be severely cut back if a designation goes through. We have a shortage of good paying jobs on the island, and

this would only further to exacerbate that issue, which the health of our local economy does not need.

On page 2 of my report, something that Peter kind of alluded to, too, was the parks management system of 1994 was very clear. Remove all alien vegetation from in and around the ponds. And yet, they showcase their pond in the park surrounded by that Christmas berry tree and invasive species, which is kind of interesting.

If you turn to the third page, their neighbor, Kohanaiki, did a cleanup project on their grounds prior to the development and everything, but they cleared away a pond area that was full of vegetation sucking the life bread out of that pond thirty days later (indiscernible). 30 days. Amazing.

And then, Hualalai, another neighbor of theirs, has won numerous awards for their stewardship of the land. And I think the protection, really, starts within the park boundaries, and they should take heed of their neighbors and what they've been able to accomplish by eradicating these invasive species. And I think if they did that, they would find that those ponds would come back to full life.

Thank you.

CHAIRPERSON CASE: Thank you.

Mike Druter. Stephen Arnett. Kaleo Manuel. Leimana DaMate.

MS. DAMATE: Thank you, Chair. You have my written testimony, and so, I'll stand on that.

What I wanted to just bring up is that in all the testimony that I've heard today, nobody has brought up the lineal descendents of Honokohau Iki, the ahupuaa where Kaloko-Honokohau is. When the park became a park in the '80s, there were families that were living there for generations who were displaced.

The -- we have so much respect for kupuna, for Mr. Cachola. As I know it now, he has also been selected by our po'o of Moku O Keawe for the Aha Moku to be the Moku representative of Kohala. And nobody would ever question his knowledge of Kohala.

When he was talking about the people who founded the park, the Hawaiians who brought this forward, I'm intimately acquainted with most of them. Four of the names he mentioned, two are from Kona. The rest are not. None of them, as far as I know, are actually lineal descendents of Honokohau Iki.

So, the point that I'm trying to make is that the traditional practitioners, the descendents, lineal descendents, of that particular place have brought forward their information to the water commission, to

the Department of Land and Natural Resources through the Aha Moku system, which is not just an organization but an entity that was created by over 200 kupuna from all eight islands to address and bring forth generational knowledge of each site-specific place in the 46 moku and 606 ahupuaa within the pae'aina. So, the information in my testimony comes directly from the lineal descendents of that place who now tell me that they're forced to go over to Kona Iki to clean that place because that's the closest they can get to their traditional place, Kaloko-Honokohau, now.

This is not information that they're willing to come forward in public to talk about, although some of them did say that in the last water commission meeting that was held. So, I was asked to put it into the testimony so it does come forward.

The lineal descendents of that place do not support the petition and stand in opposition. They need to have a stronger relationship with the park. They need to have a stronger relationship with the young people who are now there trying to do what's right but do not have the historical generational knowledge that the families have. So, I just wanted to bring that forward.

Thank you.

CHAIRPERSON CASE: Thank you.

Linda Riviere. Charlie Parry. Delania -- can't read the last name. Savannah Lights. Reggie Lee.

MR. LEE: Aloha, Commissioners. You know, today, we're here to represent our family. We are born and raised here, and we never left here. We've -- you know, we've visited this whole area, the whole Kekaha area, you know, that belongs to our ohana, and there were just limited families here. And we know who we are, and we know, you know, what we did back then.

But, one of the main reasons we're here for is to keep -- my mom just passed away in August, and we're trying to keep her spirits alive to being here. She always was involved in this -- in this process here, and we want to just keep it alive. And one of her -- her famous saying back then was, you know, Kekaha area, (speaking in Hawaiian). You know, we come from a darkness. This area was all dark, you know, and now to live there, you need money. And we lived in the darkness back then, and we know what happened here.

We don't come from any other place. We don't come from Oahu. We don't come from Kohala. We don't come from any place. And it's not our -- it's not our job to go to these ahupuaas and tell these people what to do, you know, or families from the area, the kanaka

maolis from this area. We are from Kekaha area, and we are so protective of what we have. And we know that the water resource is so important to us. We're back in the days where our first water came off the roof, catching it in tall barrels, you know, to feed the hogs, to take a bath, you know, water tanks. And as I look around this room, I see just a handful of people that remember those days, and they were the Kona that we have today.

My -- I just want to thank the County. I want to thank the County for being transparent, you know, all the studies that they did, and came out first with all the studies so we could catch up. And, you know, takes us some time to read on it. And they were very transparent in producing all their manao to us and -- with their management plans and everything. And we're -- you know, we're able to -- you know, to study it, and we're very confident, you know, that this -- you know, the water will be protected.

We -- we've been in this process for couple years. I see some new faces. I see, you know, a lot of old faces. But, I just want to thank everybody that -- and hopefully, we can come to, you know, a compromising decision where we can all work together and make -- and take care of this aquifer, you know. And I just want

to thank everybody for their time together. I know it's a long day, and I think it's going to be a longer day, too, you know. Mahalo.

CHAIRPERSON CASE: Thank you.

Susan Kim. Sharon Diedrichs. Aki Lindstrom. John Kennedy.

MR. KENNEDY: Good afternoon. My name is John Kennedy. I've been a resident of the Big Island for about five years. I've been a resident of the planet earth for a little over 50 years.

Water's precious. It's my heart's desire that my grandchildren have a sustainable, adequate, affordable supply of water, and it's my heart's desire to see historical sites preserved so they can enjoy the history that they grow up with.

Looking at the data, I think there are some valid concerns being raised today with the fishponds and with the -- with the shaft that had the increase in salinity, it's interesting to know that the salinity increased even while pumping decreased.

I'm an optimistic kind of guy. I'm very glad to see that our glass is more than half full. 61 percent. That's worst case scenario. I'd like to think it's more like 84 percent full as far as what the aquifer can supply. So, that -- the data really doesn't show

that there's a correlation between increased pumping and problems with fishponds.

So, I would like to respectfully request that we do not consider designation at this time. Time is also a valuable resource, and so, I would request that we spend our time and efforts and energy in resources that we have working together for a solution. And I think there will be other solutions presented today besides designation, so please do not consider designation at this time.

Thank you.

CHAIRPERSON CASE: Thank you.

Shannon Rudolph.

MS. RUDOLPH: Aloha. Thanks for coming to Kona. And first off, I want to say hallelujah for the National Park Service because we would be in big trouble without them.

I've been -- I've been a resident -- average resident of Kona, and I have real no academic expertise on water issues. But, I have been interested in Kona water resources, and I have attended many, many water meetings over the past 25 years.

It's hard to separate the actual facts from the alternative facts. Past County administrations and water officials. Many rumors and scare tactics are

spread throughout the community. Every time there's a water meeting, they say that the water management area designation will stop all water meter permits and the feds are trying to steal our water. But, these alternative facts have proven not to be true on other islands with water management areas.

I was shocked at one meeting where the water board was forced to admit they were counting a million gallons of (indiscernible) water. And if water's so plentiful, a water management area should not cause any alarm. The practical and pragmatic provisions only kick in if there's a problem.

I strongly support the national park in its petition and hope that you decide this issue very carefully. I also support the constitutional and customary rights of the Native Hawaiian people, and I hope your actions do not lead to costly lawsuits.

Thank you.

CHAIRPERSON CASE: Thank you.

Linda Johnson. Malvina Mikelson. Duke Kamaka. Shani Armbruster. Teri. Dwayne Fong. Nancy Burns.

MS. BURNS: Good afternoon. My name is Nancy Burns, and I'm a civil engineer. I've been in Kona, Hawaii, for 27 years, and I live in the ahupuaa of Kaloko Mauka.

Anyway, I've heard a lot of interesting conversation. I'm -- I was trained as a hydrologist, and I worked with water resources for 20 -- for 35 years. A lot of the statements made by the National Park Service, they were very confusing to me as, I think, Commissioner Pavao, too. And -- for instance, I was -- when they say -- if a million gallons comes out of the ground, it disappears. But, I live in Kona, and I know that most people in Kona have septic systems, and the water goes directly to the ground from your faucet. So, water that's pulled from the high level down at 1,400 feet gets distributed in the shallow aquifer which may reach the basal a lot better than if it didn't get pulled from the -- from the 1,400.

So, you question, okay. So, salinity is decreasing.

Why? Why is it decreasing? If climate change is causing less rainfall and sea level is rising, how are we getting a decrease in salinity?

Well, maybe we're putting more water where those ponds need it, and maybe that's coming from the high-level aquifer. And maybe we're managing a watershed not by ahupuaa but water is pumped across. So, water is coming from the south. The shaft was always in the south, was feeding North Kona for many,

many years, and so, the park started out with maybe a net positive on water injected into the ground.

These are all things that should be considered if you're talking about a decision based on science. So, I think we need to really dig into the science a little more and see if this petition is science based or not. That was my first thing.

And then, the second thing that has bothered me as I sit here and listen is everybody keeps saying, well, manage -- water management area will not create a problem for people wanting a water meter. I disagree. I was at a meeting with the National Park Service, and I asked them pointblank, if this area gets designated, will you file a contested case, and I was told by the National Park Service representatives that are sitting here today that they will have to file a contested case for every single water use. It's what they have to do to protect their resource.

So, I don't know how the other islands -- maybe the National Park Services there don't have the same group that we have, but that was the answer that was given to me, and that scares me as far as future generations having to fight the federal government to get a water meter.

Anyway, those are my -- that's my input, and thank

you for coming to Kona.

CHAIRPERSON CASE: Thank you.

Anne Harvey. Bo Kahui. Avery Kramer.

MR. KAHUI: Good afternoon. Good afternoon again, commissioners. My name is Bo Kahui, and I'm the executive director for Lai Opua 2020 --

CHAIRPERSON CASE: Is the microphone on?

MR. KAHUI: Test, test. Oh, okay. Here we go. Okay. Start the clock again.

CHAIRPERSON CASE: Gosh, forgot to start it.

MR. KAHUI: Oh, shucks. Okay. Yeah. For the record, my name is Bo Kahui, and I'm the executive director for Lai Opua 2020. I'm also director for the Villages of Lai Opua Homesteaders Association here, in Kealakehe.

We are in support of the staff's recommendation to deny the national park's petition for area management. We take this matter seriously. We believe that the report is not just suspect by Roy. It's not a suspect document that they provided this commission and the public. They worked diligently to provide accurate data that we rely on. I'm taken aback by the national park's analysis that would then say that, you know, the report is suspect.

The other thing is that we -- we would request

that this commission deny the national park additional four requests to be added on to the staff's recommendation. It's like going -- getting another bite at the apple. We don't think it's fair. We've done and gone through the petition. The commission went through a mitigation process in which they -- in which the national park sought a smaller area management petition, and we were taken aback by that, the community was. So, we are opposing any additional recommendation with respect to what the staff is proposing.

We, Lai Opua 2020, the Department of Hawaiian Home Lands, are involved in major home development. Native Hawaiians are at the top of the homeless -- homelessness crisis. We have a problem. But, we need to build homes. To do that, we need water. We need to build community facilities. We need water. We need to create economic opportunities for our homesteaders. We need water.

So, it's not just, oh, we going designate because we want to take either the Precautionary Principle or some emotional respect to the others in which they want to designate. I applaud those guys, you know, from that perspective.

But, the evidence, the data, the information you

have before you, and the recommendation by staff is to not -- to deny the petition. Thank you.

CHAIRPERSON CASE: Thank you.

MR. KAHUI: That was my cue, right?

CHAIRPERSON CASE: You're right on, so thank you.

Avery Kramer. Okay. Leanora Prince. Cherie Griffore. Ronnie Strickler. George Bennett. Mana Purdy. Janice Palma-Glennie -- sorry.

MR. PURDY: Aloha, Chair Case, and members of the Commission on Water Resource Management. My name is Mana Purdy, and I am submitting the written testimony on behalf of the Queen Liliuokalani Trust. And this is in opposition to the National Park Service petition to designate Keauhou as a water management area.

I -- I was going to read this testimony, but I think I'm just going to speak to what's on my mind, a couple things that popped up.

So, I think it's unfair that some of the staff in the national parks are, I guess, putting the blame on others and pointing fingers for something that may or may not be happening in the national park under their -- under their management. I think there's a lot of really good people, conscious people, up and down this

coast that are doing, and have been doing, work for many years, the restoration work to restore the health and balance of their loko ia, their loko waiopai, and the near-shore environment. And we're -- I mean, we're all in this together. We're all trying to accomplish the same thing. But, it's the hana, it's the actual real work, that should be the first step, the first action step, before looking to external sources.

But, don't get me wrong. There's a lot of really good people in national parks that are doing really good work right now, and some of those are -- are my friends I've gained really good relationships with in the last year or two. And I think the national parks are doing a really good job in terms of this conservation movement or the efforts that are happening right now. And I like the fact that they're now hiring local brothers and sisters to do the work. I mean, I really appreciate that good work. However, that movement has happened after the petition has been submitted, actually, a couple years after the petition was submitted.

And so, I guess, what I'm trying to say is we -- we cannot -- we cannot put the blame on other (indiscernible) external sources if we cannot malama our kuleana first.

So, I guess, that's all I wanted to say on behalf of the Queen Liliuokalani Trust. We are opposed to national park's petition, and we stand behind the CWRM staff submittal. And we believe that this designation is premature, and if anything were to change, we'd be the first one to reevaluate our land use and our water -- and our water use, as well, because that is our kuleana as stewards of Keahole.

So, mahalo for your time. Appreciate the opportunity.

MR. BUCK: Sir, a question.

CHAIRPERSON CASE: Yes.

MR. BUCK: Yeah. Mana, well, it's, you know, divisive -- has been a divisive issue. One reason we ordered in late December in (indiscernible) was trying to give the community a little more time to, kind of -- kind of -- what specific actions would you recommend (indiscernible) after whatever ruling we have that we, kind of, heal some of the wounds that this might have (indiscernible) at that point because of the petition?

MR. PURDY: Are you speaking directly to natural resource action --

MR. BUCK: Just from your position within a Native Hawaiian organization, Queen Liliuokalani Trust, and a member of this community. You know, we are going

to make a decision today one way or another, but how does the community begin to heal some of the divisiveness that has occurred?

MR. PURDY: That's a -- that's a good question. I honestly just think we need to work together. A lot of the efforts -- I can only speak to what I -- what I do as far as my role in the trust, and that's -- that's malama our aina and what we own. And I feel that a lot of the community groups that have been happening in terms of malamaing Kaloko loko -- loko ia, I think that should continue, and I think it should grow. And I think we -- we actually have a loko ia and a loko waiopai network where managers get together, and we discuss strategies on how to manage our resources, what's the challenges, and how we can get together to solve those changes. And I think if that continues and grows in capacity, that we're on our way to solving some of the challenges.

MR. HANNAHS: Chair, one more question.

Mana, thank you for your testimony. (Indiscernible).

What's been -- how have they fared? Are you seeing any increased salinity, or are they degrading?

MR. PURDY: So, when I got on board about three and a half years ago, prior to that, there hasn't

been any water quality -- formal water quality testing, because back then, the uncles who have been there for 30-plus years, they just go. They just do the work. So, since I've got on board, we've done in-house as well as contract Steve Dollar at UH Hilo to do water quality for us. Since then, we haven't seen an increase or decrease, more or less, in the (indiscernible). So, yeah, pretty same, yeah.

CHAIRPERSON CASE: Thank you.

Janice Palma-Glennie.

MS. PALMA-GLENNIE: Aloha, Commissioners. My name is Janice Palma-Glennie. I'm testifying on behalf of the Kona Kai Ea Chapter of Surfrider Foundation.

Our members strongly agree that the national park's petition has serious merit and that regulations or designation is a preemptive commonsense tool for managing the resources upon which our group's members and all the people who live in and visit Hawaii Island depend. Fake news is getting a lot of press on the national stage. But, that's not the only place where it can do damage. These days, like with the current designation petition, Goliath tends to use fake news or at a minimum stretch-the-truth news to conquer David, this community, and available avenues for protecting critical and diminishing natural and cultural

resources.

So, what's the fake news surrounding this petition?

First, there's no truth that designation stops development nor that it harmfully slows it down. Second, there's no truth that the County's threat to suspend water meters is related to aquifer designation, as testifiers have continued to say in error. There's no truth that the National Park Service has overreached or hasn't tried hard to work with private and public entities to avoid the need for designation.

I sat in the same room for years listening to the County reps say that they're just about to take care of what's been neglected, the issues that led to this petition being filed. Yet, unfortunately and for unclear reasons, that has never happened, including the staff recommendations that have no teeth and exclude public input into the placement of wells as we continue with the County recommendation.

CHAIRPERSON CASE: Do you mind slowing down just a little bit --

MS. PALMA-GLENNIE: I'm always afraid I'm going to --

CHAIRPERSON CASE: No. I'll give you an extra 30 seconds, but she needs to be able to follow

what you're saying.

MS. PALMA-GLENNIE: Thank you. Sorry.

Okay. Fourth, there's no truth that designation will result in federal control of our watershed. National Park Service is clearly petitioning the State to do its job since state waters are under State jurisdiction.

Fifth, there's no truth that the Kona community at large is against designation, but many who have heard or read about it are afraid of its ramifications due to the lies that have been spread about it. As a fox and other fake news, just because it's loud and persistent doesn't mean it's true. And I appreciate Commissioner Buck pointing out that same fact regarding the water meters.

What is true is that the development in real estate community have made a big deal with false claims, and just like national fake news, they do it to create fear around proposed actions that would, in other more civilized times, like when most of Oahu and large portions of Maui were designated, be welcomed as sensible methods for protecting the water upon which all of us depend for life, culture, and economy.

Coastal resources are critically important for all people in Kona and especially members of our

organization, and all of us in the web of life depend upon the flow of fresh water. This is a critical time for progressive state governments to protect public trust resources despite the pressure by corporate and other development interests. The current staff submittal appears to ignore the public interest as included in the petition as it contains no teeth and no room for public input. And it tries to make this an issue just about the park, but it's about all of us.

To close, we feel that denying the petition at this time will increase already significant disputes over water in Keauhou, not to mention foot dragging and avoiding a sensible and legally viable way to protect our region's waters for the future.

The commission should not vote to deny the petition today but should hold a formal public hearing and develop new findings of fact as a basis of their decision. And (indiscernible) include the four compromised suggestions presented by the park to avoid designation while still securing safety of our public trust resources in a way that acknowledges our community's needs, not just those of developers.

Mahalo for your time.

CHAIRPERSON CASE: Thank you.

MR. PAVAO: Question.

CHAIRPERSON CASE: Yeah.

MR. PAVAO: In your mind, what good does designation do?

MS. PALMA-GLENNIE: I think designation provides a layer of public input that is otherwise lacking in the permitting of wells on private lands. I think that's one (indiscernible) I am not an expert, but that's the thing that I feel is very important.

I feel like it also encourages the State to do -- do its kuleana, which is to take care of state's waters. And I believe that is their kuleana, and so, I do believe this designation is wise. And I feel that it's been a helpful thing for the other islands where there is designation. I don't see it being harmful.

And I just feel that the public has an inherent distrust of how things are going as far as protecting our public -- our natural resources. In every survey and everything I've worked in and everything I've seen, the public is very concerned -- conservation of our natural resources is their top priority which, of course, they understand is part of their economic security and our quality of life as -- and -- and very important, if not most important, is protecting the culture of our islands, which depends upon (indiscernible) natural resources.

MR. PAVAO: It seems that the public referred to -- more people than not that come here is in favor of it, so I was just kind of wondering about what you think good will come out of it.

MS. PALMA-GLENNIE: Well, I think, Commissioner Pavao, that the people that come here to testify, if you asked where a lot of them worked, a lot of them work in the real estate development industry. And other than that, I respect those people. There's a good -- you know, a lot of good people. They can be my friends. But, at the same time, a lot of the regular public -- I'm here representing at least 150 people. They're working people. A lo of them are parents. They couldn't -- I mean, it was so unbelievably awesome that there were people here today with their keiki. That's how committed they were to being here and protecting their island an our resources. But, a lot of people just can't do that. And, you know, I don't blame any of them for not being here.

And the other thing is I think that there's been a lot of misinformation spread, as my testimony said, about what this designation would do. And I think that has just seeped into the community, and I think a lot of people are just -- I think that they're just sick of politics and political things, and they feel they have

no power.

So, I applaud everyone who's here today, but I think that you should take the testimony -- I don't think that you can say, well, the people sitting in this room are exactly what the community represents. I think that the facts are really important, and I've listened to all the facts. And I think if other people in the community have had the opportunity to listen, they would hear that the National Park Service is not out to do anything except for protect the natural resources which you and I, all of us, own and care about.

CHAIRPERSON CASE: Thank you.

MS. PALMA-GLENNIE: Aloha. Thanks very much for spending so much time with us here.

CHAIRPERSON CASE: Abel. Lindsey Kramer. Thomas Yeh.

MR. YEH: Aloha, Madame Chair and members of the commission. I have submitted written testimony previously. We do represent one of the owners of property that is mauka of the park that has 1,400 units of water. It and its predecessors have already developed and provided a substantial investment in this area in the way of Hina Lani Street, a water well development at Holualoa that the -- worked with the

County with, developed a 1 million gallon reservoir.

So, we talked about investment-based decisionmaking and reliance that can be undertaken on that kind of entitlement. There is a level of uncertainty that exists with respect to this current proceeding.

In looking at, and listening to, the staff's recommendation, which we fully support, and listening to the National Park Service's presentation, I did have some comments or questions about some of the staff's recommendations only with respect to, I believe, No. 7. And I think it's pretty clear that, you know, with additional studies and modeling, we'll get a better idea to where a take of water can be, for instance. So, No. 7, when it talks about the commission will commence public informational meetings when a certain threshold is met, I think that question is really going to be dependent on what the models that are upcoming are going to be able to establish. So, I think it probably better to say may, because then you're not -- you're taking away some of those assumptions themselves.

With respect to the National Park Service's recommendations, you know, I do agree that currently, under the current statute and regulatory framework,

when a well permit is issued, it doesn't call for a public hearing or contested case in that context. Based on National Park Service's trying to accomplish what denial of a designation would, the National Park Service also recommended that -- or is requesting the commission issue findings of fact. I looked at the statute while this testimony was occurring, and under 174C-42, they only require a public hearing or findings of fact once a determination is made -- been made to proceed to a public hearing.

So, based on the record today, I think there's very clear, substantial, reliable, and probative evidence that would support this commission's denial of the petition as is. There's plenty on the record to sustain that. I don't think you need to go through this findings of fact process. You've got clear record that exists at this point in time that would support -- support that.

Let's not talk about triggers. There are plenty of tools that are available to you. We have staff that's going to be monitoring well -- well production. We have the Water Use and Development Plan that the County submitted that you've approved. There's plenty of stuff along the way that allows you to continue to monitor and regulate the take of water in the aquifer.

Some of the calculation that I did -- even to get to APU, it would be 38 years from now.

The end thing that I want to say is that, look, the sky is not falling. You've got plenty of tools in front of you and plenty of public input. Thank you.

CHAIRPERSON CASE: Thank you.

MR. HANNAHS: Question.

MR. YEH: Yes.

MR. HANNAHS: So, you're representing a client who's a landowner developer?

MR. YEH: Yes.

MR. HANNAHS: Are they members of the watershed partnership?

MR. YEH: Not at this time. They recently acquired it. Basically, they took it over because of financial issues from the previous owner. But, certainly, something I would recommend -- one of the other things that we did raise in our letter is when we look at planning policies and things like plan approval, one thing that really wasn't mentioned was landscaping. We talked about irrigation and recharge and what water goes back in the ground. Let's talk about using native landscaping in the area that your development is. That would probably reduce -- substantially reduce water input.

MR. HANNAHS: Appreciate you being here. Appreciate that kind of counsel to your client, because that's going to help a lot --

MR. YEH: Thank you.

MR. HANNAHS: -- creating a culture, you know, not only the landowner's role to being in watershed partnership of -- with the 1,400 unit owners becoming part of that culture of conservation and understanding that they draw a perpetual benefit from a watershed that they should be investing in and protecting.

MR. YEH: Right. And one of the other portions of the public trust concept is, of course, we mentioned that we're developing at least 80 affordable housing units along with multiple-family residential, which does tend to be more affordable in that context. So, this public trust action is for everybody.

MR. BUCK: Chairman, just a comment. Folks, you know, the watershed partnerships are nonregulatory, voluntary agreements among landowners that are interested in protecting the source water supply, completely nonregulatory. People can join and it is voluntary. There are no dues. But, people are asking people to kind of -- to hui up and take care of the mauka lands. So, that's just for people -- we keep

referring to watershed partnerships.

MR. YEH: Thank you.

CHAIRPERSON CASE: Thank you.

Alex Leonard.

MR. LEONARD: Aloha, Commissioners. I don't have any written testimony today. Hadn't thought I would speak today. But, I felt it important. I thought, perhaps, valuable to you, too, to point out some -- some observations that I've made today.

And I have been following this proceedings for, you know, quite some time. And in my training as a scientist, I try to be very critical of the facts that are presented, and I think that you've been presented with some information that maybe needs to be clarified somewhat. I believe that in the absence of a smoking gun with respect to effects -- direct effects on salinity by water withdrawals mauka, I believe the National Park Service is asking you to add -- or pay particular attention to the potential effects on endangered species and, in particular, the damselfly.

The science that they have presented to you has -- they've presented to you as peer reviewed, and they've asked you to place particular stress on the fact that it's peer reviewed by comparison to other studies and reports that you have seen. The fact of the matter is

that that science, that report, is actually a master's thesis by a young lady that -- you know, she was from the University of Hawaii Hilo in 2010. It was never published in the peer review journal. And I believe that most of my science colleagues would agree that a master's thesis would not qualify for the designation of peer review. And I think it's important that you realize -- that you understand that when one looks at the facts behind that study, it's -- the data are based on an analysis of the project of exactly 10 damselflies, not hundreds, not thousands, but a project of 10 damselflies that were collected over three separate collection trips, not hundreds of collection trips. These were collected in one particular area.

I'm not saying that the science is bad. I'm just saying it's very limited, and I think that it does not necessarily point in -- in the direction at least as strongly as these -- as the results that are presented would have us -- would have us go.

That said, there are couple of other observations that I'd like to -- that I'd like to bring forward since I -- since I am here. The recommendation by the National Park Service of alternatives to designation that, perhaps, we place upon the petitioner the onus of demonstrating the effect or no effect of water

withdrawals on cultural, traditional practices makai of a well or on water seepage into the near-shore -- near-shore environment. I believe that this is not appropriate. I believe it's technically not feasible at this point in time, and I think it really does not -- although it sounds good, I don't think that it really gives us an opportunity to make a fair evaluation, because right now, the fact of the matter is that the science can't tell us what's happening to the entire recharge mauka as it flows through -- flows into the -- into basal water lens.

How is it -- how would we possibly use those same models to predict how a million gallons per day would flow through or the withdrawal of simply a million gallons would flow through the aquifer?

We have -- we don't have the information to make those evaluations, so putting that onus on the petitioner, all we're doing -- all we would be doing is asking them to bring their experts forward to argue with experts on other side, and we'd be going around in circles. I don't think it solves the problem.

Lastly, I do believe that we do need more data in order to solve this -- to answer these questions and to approach this from a logical and well reasoned perspective. And so, I do support the idea of

collecting more information. Particularly, I believe the use of deep water monitoring wells is particularly appropriate. However, I don't believe that that is, again, the kuleana of a well developer. I believe it's the kuleana of the State, because it's the State's kuleana to -- to manage the resources. And I think that asking -- asking private developers to do that would just -- would be inappropriate.

That's what I have.

CHAIRPERSON CASE: Thank you.

Riley Smith.

MR. SMITH: Aloha, Chair Case, members of the water commission. Thank you very much for coming to our island to listen to our manao about the issue that directly affects us. Each of you should have a copy of my testimony. I'm going to try to highlight components of it.

As included in there, I'm the president of Lanihau Properties. We manage 10,000 acres on Palani Ranch in North Kona. We used to own the ahupuaa of Honokohau, the entire ahupuaa, the portion that ended up being purchased by the federal government for the Honokohau part of Kaloko-Honokohau National Park. Our family business has been around for 165 years. We take our responsibilities very seriously.

I ask that you take Roy's report, the staff report -- take it seriously. They put a lot of work into it. They've listened to a lot of the members of the community. I think their eight conditions that are included in there are appropriate. I do not think that the four national park additional conditions are appropriate for the many reasons that were stated earlier.

One of the reasons I ask that you deny the petition is that I believe that the National Park Service should focus on the Spirit of Kaloko-Honokohau Report from 1974. Earlier, Fred Cachola talked about that -- he was one of the steering committee members on that report -- all the many things that that report was supposed to focus on. Instead, what the national park does, as Peter's family spoke earlier -- he was quoted in 2014 in saying that many people think the National Park Service, or NPS, stands for the national protest service, because they protest when they don't get their way. They have the resources of the federal government and we don't.

If you look at some of the pictures I included in here, one of the goals of the spirit report was to develop a cultural and educational live-in center. When Nainoa Perry and Isaac Harp, members of Makani

Hou, approached the Greenwell family to ask if they could source ohia logs to build this hale at the national park, we cooperated with them. We thought it was appropriate that the ohia logs that would be used in the ahupuaa of Honokohau originated from the mauka lands in Honokohau.

So, we collected about 100 logs. Some of them you can see in the pictures. They're probably 40, 50 feet long. We harvest them by hand. We haul them down to the park. Built the hale. Hale was finished in 2013. It's been sitting since that time unused. It still has an orange fence around it.

Makani Hou -- I'm surprised that Fred Cachola didn't mention this in his testimony. Makani Hou, because of their frustration not being able to utilize this hale as part of the first step of the cultural learning center, has asked the superintendent to dismantle the hale, provide the materials back to them, and they're going to rebuild it on Kamehameha Schools' land in Keauhou in a cooperative project with the Royal Order of Kamehameha.

So, again, I ask you to do the right thing. Help the community give the message to National Park Service to do what they said they were going to do when they purchased that land in the 1980s, and continue the loko

ia projects that they're doing. But, more importantly, support our (indiscernible) culture in this community.

Thank you very much.

CHAIRPERSON CASE: Thank you.

MR. HANNAHS: Quick question.

MR. SMITH: Yes.

MR. HANNAHS: Has Palani moved up all the cattle from the (indiscernible) land? In the old days, that's where -- ranching occurred, but it's now pretty much being deemed a watershed purpose.

MR. SMITH: You may have a thousand other spots. They're primarily in mauka lands. As you know from your time at Kamehameha Schools, it's really a matter of resource -- resources you have. So, when we have feed, we graze. When we have water, that's when we rotate our cattle. Modern animal husbandry, you rotate your animals often so that you get the prime growth spurt of your pasture grasses. So, more fences allow us more management control to move our cattle. But, most of them are primarily in the mauka area because that's where all the feed and the water resources that we retain in our catchments are.

MR. HANNAHS: You think it's impaired the watershed at all?

MR. SMITH: I think it's helping it. We've

got three fairly large water catchments. Anybody that's grown up in Kona knows how precious water is. When you get it, you save it. Reggie talked earlier about living on catchment, and you only use what you have. So, when we have water, we've got -- our largest catchment is about million and a half. We take that water when it rains, and we save it. And then, we utilize it for our cattle.

Thank you.

CHAIRPERSON CASE: Thank you. I think I called Gretchen Osgood.

MS. OSGOOD: Good afternoon, Commissioners. Thank you for hearing us today. Sorry it took so long.

My name is Gretchen Osgood. I'm a Realtor here, in Kona. I write for West Hawaii Today as a real estate writer to real estate experts on economics in Kona and the viability of housing.

I'm here to talk to you today about how less housing impacts the ability of local residents and their children to buy and rent and stay in Kona. I've been here 27 years. I raised five stepchildren here. One owns a house. The other four do not because they can't afford it. Rent is astronomical. House prices are exceptionally high. They've actually surpassed where we were in 2004, and we're not even selling that

many because there's not very many available.

Kona has a limited inventory of affordable housing hence a lot of the homeless population issues we're here hearing. And if we put a restriction on being able to build in Kona affordable, luxury, mid range, we're going to end up with more housing problems. The people aren't going to go away.

The U.S. Census Bureau says between North Kona and South Kohala, we're going to add 10,000 people in ten years. The last U.S. census. These people need water. These people are not necessarily newcomers to the island. These are people that are having children, and their children are increasing the populations, or their grandparents are moving over to live with them to help them raise their children. This is a natural increase in our population.

Most of the guests we have here only stay a short time and turn their units into an economic generator for our island. They buy things. They rent their properties. They pay GET and TAT tax. That cycle of life on the other side is what feeds taking care of our state and county parks. It's what feeds our education system in Kona and the state. We need housing to continue to be able to house those who want to stay here for the next generation.

And I don't think this small section of how the water decision is made has been clearly looked at. It's been looked at in scientific terms. It's been looked at in natural Hawaiian practices. It hasn't been looked at, at how it's going to affect the next generation.

I sat here for probably several hours today and listened to testimony and listened to people talk about how it's going to affect their children. Well, it can only affect their children if they house their children. If they can't house their children, they're going to go live somewhere else. We have the lowest priced real estate in all of Hawaii. Let's keep it that way.

Thank you.

CHAIRPERSON CASE: I have one question.

Do you at least agree that water is one of the limiting factors, ultimately, in how many houses we can build in certain areas?

MS. OSGOOD: Actually, the current price increase in Kona can be tied almost directly back to the lack of building in the last five years. As the economy has turned up, none of the developers are breaking ground because they know they can't get water. Everybody's been waiting for this decision.

CHAIRPERSON CASE: Right. But, I mean, at some point, in a dry area, there are some limits on how much -- how much -- how much you can build --

MS. OSGOOD: Agree.

CHAIRPERSON CASE: -- because of water supply.

MS. OSGOOD: I agree. And I think several of the testifiers talked about changing how we use water in Kona. And I'm a big proponent of how we use water. We have a recycling facility down in Kealakehe that has never been made fully operational to use purple -- you know, purple pipe water, recycled water, for landscape irrigation. And I think there's a whole 'nother way to look at our water issues rather than constraining just the well. We need to look at the bigger picture and, I think, as a community, we have failed to map our way as to what that all looks like.

And stopping it -- the lack of new development in Kona in the last few years is dramatic compared to just before the big uptick. We have roughly 800 houses and condos built before 2007, roughly from about 2001 to about 2007. There was 800 houses and condos built and new development. You could see them, not just one-off houses here and there.

We've had none of that this time, except for

Hualani Estates finishing their project. Other than that, we haven't had any developments break ground. And we have seen a dramatic price increase in our housing and in our rental rates, which are -- I would say they're up at least 30, 40 percent at this point. I have a small property management company. It's outrageous.

CHAIRPERSON CASE: I mean, I appreciate you looking at it from the housing supply angle, which is important. And I think one of the things that's been driving this process is -- has been in the past -- the sense that there wasn't a close tie in the planning process between planning for development and keeping an eye on water --

MS. OSGOOD: There used to be. I actually used to work for developers. That's what I did when I first got here 27 years ago. I helped build Hualalai Resort. Was at Hokulia.

And Nancy Burns, who testified, she's a fabulous engineer, which she didn't tell you. She's actually one of our top engineers here.

CHAIRPERSON CASE: I'm not talking about the public planning process.

MS. OSGOOD: Right. But, in that process, in that development process, we were required to show

where the water was going to come from, how we were going to do the water, what that was going to look like in wells that we dug and drilled. And all of that was part of the process for us. And I don't understand how it's not part of the planning process now.

If one of our developers wants to go build a condo project and he has the water commitment rights that went with the land, he should be able to develop it. That was the promise that was made when they got the land. Now, they're concerned that that promise won't be kept, so they're failing to build in Kona.

And we've artificially jacked up our prices to where nobody here locally can afford it, unless they're making a hundred thousand dollars a year combined income. That's a lot of money to be able to buy a half-million-dollar house, which is the average price at things listed under a million. If you take that million-dollar cap off, the average price of a home in Kona goes up to $800,000.

So, to afford a house here, we've got to get it down. Real estate is supply and demand. If we don't have enough supply, our prices go through the roof, which is exactly what they've just done, because we can't get any developers to build because everyone's afraid of what the decision is going to be from this

committee and that they're going to lose their ability to be able to get water permits in a timely fashion as they break ground.

CHAIRPERSON CASE: Okay. Thank you.

David Raikow.

MR. RAIKOW: Hello. My name is Dave Raikow. I'm an employee of the National Park Service, but I'm not here in any kind of official capacity. I'm only here as a concerned citizen and resident of the island.

You know, America's been designating national parks for over a hundred years. And at the time, it made sense. You find something you want to preserve, some kind of character that defines what America is, we draw a line around it on a map and we call it protected. But, we know that these ecosystems exist imbedded within a larger context here in the watershed and the movement of groundwater. So, it's up to the community and local governments to -- if they share any of the values that are (indiscernible) in the national park -- at least some protection in order to maintain the values therein.

Secondly, any evidence that's provided that shows that we currently have a development and multiple use within this watershed but we also cannot currently see any impact only speak to current conditions, only speak

to the status quo. And we're not talking about that. We're talking about the future.

And this leads to my last point, which is if you deny the petition, you are hamstringing yourselves and hamstringing future government's tools that would allow fine scaled adjustments to be made to land use and land management plans. Thank you very much.

CHAIRPERSON CASE: Thank you.

We went through the list of everyone who had signed up, so who else would like to testify who hasn't already testified?

Wait. You already testified, didn't you?

MR. OKAMOTO: No.

CHAIRPERSON CASE: You didn't testify?

MR. OKAMOTO: Not on B.2.

CHAIRPERSON CASE: Oh, sorry. Okay. Go ahead.

MR. OKAMOTO: And I was kind of wondering because I thought I signed up first. But, anyway, you're saving the best for last, right?

CHAIRPERSON CASE: My mistake.

MR. OKAMOTO: Oh, no problem, no problem. Yeah. So, thank you, Chair Case. Sorry I didn't formally welcome you folks to our island earlier, but I had good morning. Cross that out. Put good afternoon.

Might cross that out and put good evening.

But, anyway, so Keith Okamoto, manager and chief engineer, Department of Water Supply. Again, this is regarding B.2.

First off, I want to say totally respect the national park. We understand their mission. We're not opposed to the national park. We're in disagreement on their method and means as far as the designation of the Keauhou Aquifer, but we understand the mission. We understand they have a job to do. We have a job to do. So, I wanted to get that stated for the record.

Also wanted to thank Deputy Director Pearson, senior staff members Roy Hardy and Lenore Ohye, because, you know, they've been doing this for over three decades each. You know, we trust them. We trust that they're looking out for the best interest of the resources of the State. We trust them as our regulators to work collaboratively with us -- wow, that was fast.

CHAIRPERSON CASE: That's not you.

MR. OKAMOTO: Oh. -- to make sure that the resources are protected for perpetuity. And that's our commitment, like the mayor, Harry, said earlier. This County is committed. Our previous administration expressed the same thing, and hopefully, our actions

with our Water Use and Development Plan and the things we've done thus far indicate our level of commitment to preserving and doing our parts as stewards for this resource, as well.

I do want to clarify. And, you know, part of the fault can be a test -- attributed to me on some of the concerns, because my understanding is if there is designation and each well has to undergo a water use permit, my understanding is that no new wells can be turned into production wells until those existing water use permits are finalized, and the allocations of each are then given to the well owners by the commission.

So, our concern with, you know, our adoption of the Water Use and Development Plan, we hope that -- you know, it's a good start. I know it's not perfect but committed to -- to moving in the right direction -- is that designation or even possible additional requirements that might have been proposed that essentially become designation without going through the process is -- something we want to caution this body on, also, is you don't want to call it a trigger when it's actually a designation and open to contested case hearings. And basically, we're not going to be able to drill those wells down south that we'd like to and help preserve the health of this aquifer, which

means we'll have to go back and rely more heavily on the basal sources again. So, that's one thing that I wanted to bring to light and caution a possibility on.

Anyway, so in summary, we concur with the staff's conclusions and recommendations including all the eight recommended actions. We did have concerns about No. 7, but bottom line, all that does is keeps us accountable. Basically, it says if we don't abide by our own plan, we're going to bring this back for public hearing. And we're fine with that. We're fine with that. That means we got to do what we say we're going to do, and that's what we intend to do.

So, again, I wanted to just express that we are committed. We live here. We grew up here. We have families here, also, and we want to make sure that this resource here is available for everybody seven generations, ten generations down the road.

So, thank you.

CHAIRPERSON CASE: Sir.

MR. SWEET: Thanks for giving me the opportunity to speak. My name is Ian Sweet (phonetic), and you can guess by my accent I'm not from here. I am a future resident of Hawaii because of my wife.

The first thing I thought of when I thought about coming to Hawaii was your natural resource. You're in

the middle of the Pacific Ocean. You're talking about fresh water. You're surrounded by salt water. I would have thought a lot of resources of this state would be going into desalination plants. I know they're expensive. I came here first in 1988. I'm in the television business. I was filming the Ironman and discovered there's a Japanese company out in the lab, the natural energy lab, bottling your -- bottling your salt water, changing it into fresh water, exporting it to Japan. I think that's incredible.

Secondly, there was another company that does have a huge desalination plant in the natural energy lab.

And thirdly, pine trees -- now, konohiki, I think, you call it. Their deep water well is actually a desalination well.

So, people are looking at desalination. Water is a valuable resource, and yeah, keep as much of it as you can, but please look to the future. Someone mentioned 60 years, the fresh water available. Well, I think, now thinking of these babies, or keiki, as the local lady called them, you should be looking to the future.

Bring in, finally, a little levity into the situation. I did hear the national parks people. I think they mentioned three species. The damselfly. I

know nothing about the damselfly, but they did mention the mullet. The mullet lives in salt water or fresh water, so it doesn't care.

Thank you very much.

CHAIRPERSON CASE: Thank you.

Anyone else who has not testified who wants to testify?

Sir, I think you already testified, yeah?

MR. KAHUI: I'd like to put on the record some other people that weren't here that had e-mailed me.

CHAIRPERSON CASE: Why don't you pass them here, and we'll pass them around.

MR. KAHUI: Okay. I was just going to read their names off the record.

CHAIRPERSON CASE: Okay.

MR. KAHUI: Okay. If I might. Again, Bo Kahui from Lai Opua. We received communication by e-mail from members of our association. Daisy Miller opposed -- supports the commissioner's staff position. And all of these are in support of the staff recommendation to deny the petition. So, Daisy Miller. We have Mr. Karin (phonetic). We have Howard and Camille Kent (phonetic). There is Myron Goshasama (phonetic). Mr. Lyman Newton -- excuse me, Newton

Lyman (phonetic). And that's it.

Thank you.

CHAIRPERSON CASE: Thank you very much.

Okay. I think we will close testimony.

Need a break?

Five-minute break.

(A recess was taken from 4:01 p.m. to 4:12 p.m.)

CHAIRPERSON CASE: All right. We're going to proceed to decisionmaking on the staff submittal of B.2. I would like -- Mr. Balfour.

MR. BALFOUR: I just want to say that the last time, somebody stopped me and asked me if I was a mute, and I said certainly not. On the contrary, you don't really want to get me started. So, everybody else talked, so I'll save the best for last.

I want to say that the water -- bring a couple of points up. The Water Code says that there are eight criteria the commission shall consider when deciding whether to designate an area for groundwater management. The eight items, or eight criteria, were well vetted by Mr. Roy Hardy and his crew. I think everybody has complimented him so much that he's just -- he's floating on Cloud 9 with all the accolades. But, anyway, he did an outstanding job on it, so I

don't think there's any question there.

And then, there's the -- there's the points that -- that they were going to do -- things that they were going to do if designating -- designation was not -- was not passed and things that he would do to follow up and make things go smoother and (indiscernible).

So, having said that, I would like to make a motion that the designation of the aquifer be denied.

MR. PAVAO: Second the motion.

CHAIRPERSON CASE: Okay. Discussion.

MR. BUCK: Commissioner, would you consider a slight amendment to that motion that -- on the conclusion that the number one, we would add Department of Hawaiian Home Lands as well as the Aha Moku Council as people that the commission will refer all water permits --

MR. BALFOUR: I thought that was already decided.

MR. BUCK: Well, it's not specifically in. We're making the final decision now. So, I would consider that -- would you consider that a friendly -- a friendly amendment to your motion?

MR. BALFOUR: Yes.

CHAIRPERSON CASE: Any other comments or proposed amendments?

MR. BEAMER: I'd like to make some comments. So again, thank you, everybody, for ten years and three-plus years that I've been a part of this.

You know, having discussions -- I haven't been a mute, but, you know, there's been some really good discussions with people outside over the course of these last several years. And at least, I'm certainly convinced that this entire process has elevated our understanding of water resource management in Keauhou, very important place that many of us live in, perhaps, our future keiki will live in, and many of us value from multiple perspectives. And so, I thank everyone for that process, even though in hindsight, I wish it may have been smoother and less contentious at times. But, the point is where we're at now and where we're going. So, thank you, everyone, for that.

I will be voting against this particular motion on this instance. And I feel it's my duty as a commissioner to really lay out the logic to each of you folks on why I'll be voting against this motion.

You know, what we have, in my estimation, is clearly a serious dispute with respect to the use of groundwater resources in Keauhou. Incredibly complex with multiple perspectives and, at times, seriously conflicted science. It's very difficult. As a

resident of this island, I -- you know, I want to value and respect multiple opinions -- and I do have perspectives as well as arguments -- at the same time, knowing the fiduciary duty that I have here on the commission, you know, as a commissioner on water resource management and my fiduciary duties to protect the resource.

So, you know, in instances where it's very clear -- the Waipoo (phonetic) case, the Palakai case -- in instances where we're lacking clear scientific evidence, we're actually required as a commission to take on the Precautionary Principle and to side on the air of managing resource and perpetuity. I can see how that, from some perspectives, could feel difficult. I'm a scientist myself. I value as much as possible objectivity and certainty. But, it's really the mandate of this commission to do that, to take the Precautionary Principle, when we have issues of serious water disputes and to air on the side of caution for the resource and the protection of public trust and traditional and customary rights.

So, I respect all decisions of my fellow commissioners, and, you know, in many ways, I would love to have a unanimous decision because of my respect I'll offer each of you and the complexity of these

arguments that we've been a part of the last three-plus years.

But, you know, I want to make sure that my comments are on record. And I'll be voting against this particular motion.

MR. PAVAO: I guess, I'm the vocal mute, if everybody -- referring to mute. This issue has been going on for three and a half years at considerable expense for everybody, moneys that could be spent probably more beneficial someplace else. But, I think this commission has bent over backwards to take into consideration the issues brought up by the National Park Service.

I kind of disagree with my distinguished colleague, Kamana. I think there's been a lot of science put into this. You talk about the anchialine ponds.

How many studies has been made?

You talk about the salinity. It's proven that it's not an issue. We've had scientists come and tell us the ponds are healthy. There's nothing wrong with the ponds. There's no degradation. I think we've done more than we should, I think, sometimes, although talking to some of the fellow commissioners, I guess, the only beneficial thing came out of three and a half

years is that we have a wonderful water use development plan now that can be followed and can be used for many years into the future.

But, I think we've done enough. I think enough is enough. I honestly believe that no matter what we come up with, there will be more and more that they want us to do. I think we've done enough. I think it's time to stop the bleeding and get on with the rest of our lives.

And for that reason, I'll be voting for the -- for the motion to deny and approve the eight conditions that will guarantee there will be no problems. And I urge my fellow commissioners to vote the same way so we can put this to past. It's been too long, way too long.

MR. BEAMER: Just a couple things for me. You know, the findings of fact. Given the process that we've gone through, I would feel a high level of comfort as a commissioner if we had very clearly articulated reasons for our rationale. And that's just my personal. And I completely respect Commissioner Pavao. And there is a case to be made to vote for that in that fashion, so I absolutely respect it.

But, for myself, I think, we had clear findings of fact as well as -- you know, at least if -- on some of

these issues in terms of protection of the resource, you know, the two parties have agreed to -- where we're at right now, I mean, we have basically one petitioner saying they don't feel like any of these criterions end up with better protection. But, you know, again, that's just my own personal manao. I live on the island. I'm going to look everybody in the eye and smile, and I hope you'll do the same. But, just one small opinion.

MR. BUCK: I'll be voting in favor of the motion. Just a couple comments. One is I wouldn't be voting in favor of it if I didn't -- had seen the water use development plan that the County put forward this morning. And I think everyone knows that without the petition of the national park, that plan would not look like it looks like today. So, I want to thank the national park for what they've done.

And really, for me, without the other eight -- the eight recommendations, the conditions that we're putting on, I think we're giving the County -- when the Water Code was first established, not every place was a water management area. And there was a lot of (indiscernible) issues (indiscernible) the state and the counties. So, we're giving the County of Hawaii -- it's time to walk the walk. You've talked the talk.

You've come a long way in three years. We think we have safeguards here. We're denying this petition at this time. That doesn't mean that in the future, if conditions change, that it doesn't.

But, to me, if we all can step back a little bit, it's really a celebration of the Water Code that we have. It's the most innovative framework, and it provides a finality to how we deal with issues. They all don't have to be dealt with designation and -- but, you know, I trust the people that live here are going to do the right thing. But, we're watching and we're going to continue to watch. And based on what I've heard and the progress that's been made in the last three years, I'll be voting in favor of this motion.

MR. KAWAOKA: Thank you, Chair.

First of all, I want to thank all of the hard work and dedication that everybody's put into this thing. Like everything in life, there's no black and white type of matters here. There's a lot of gray. There's no 100 percent information that you can gather. You can always get more, actually. If I can put my other everyday hat on as a regulator, there is no zero risk. You know, I tell my children that all the time.

Certainly, in terms of this situation, we have to look to the future, as well, and see that, you know, we

do protect the resource that we have, because it's the only resource we have. But, in that respect, we also have to achieve some balance in all of our endeavors in life. Certainly, in terms of this situation, there's a lot on both sides of the matter. Everybody puts up good arguments. That's because they are good arguments.

But, certainly, in terms of right now, I'll be voting for the motion as described.

Thank you, Chairman.

MR. HANNAHS: As the latecomer to this -- the commission -- I just joined in July (indiscernible), I want to thank everybody for indulging my questions to get a lot of background that I didn't have. I recognize a lot of emotion, energy, and effort was spent on getting this to this point today (indiscernible) predecessor board, as the commission, as well as the public. So, thanks for that.

I don't care what the science says. Water is an issue. We got to wake up. It is. It's the life of the land. And if -- we're not making any more unless we get it here. And so, that's our job. Pua Kanahele told us as a -- when we were managing labs at Kamehameha Schools, your job is to make it rain -- that's all our jobs -- and to hold that rain with the

way we landscape. So, I have no doubt that water is a serious issue no matter who's disputing what peer reviewed science. But, I don't see this as an end state, this decision we make today.

And by the way, Kamana, you know, I applaud your courage. You stand up, step up for your rights. Your (indiscernible) would be proud. That's the way she rolled, and that's the way the Beamers rolled. And you're going to stand up, and I feel no less affinity. I'll vote in favor of the motion, but I feel no less affinity for a difference in vote (indiscernible) because the values are the same. And I think that's the point.

This is not a matter of whether we should take care of the water resource. You know, it's about how. I trust Roy's judgment. Staff says we have the tools. We're going to pay attention to these tools. We can use some additional recommendations. He's given us one how. National Park Service believes they had a different how to do it. We're going to choose one, and we're going to do it, and it's going to work or not work. And then, we're going to come back, and we're going to pay attention and say what are we going to do if it doesn't work as well as we thought. And so, I have that expectation in the vote that it doesn't end

here. We then have to monitor the impact of our decision in terms of the vote.

Secondly, it's not about a Hawaiian issue, tradition and customary right. It's about a human issue. And we have to -- what I've seen -- I've heard based on the clammer or the discord of earlier meetings is that there's a coming closer together. And we need all of us to come closer together as one whole community in order to take care of the resources, the scarce resources, that we have. We're sending a canoe around the world to carry that message of malama honua. And what's good to see is that we're doing it right here. And I see the casting of this vote and taking this action not as a perfect step, you know, in terms of resource management but as a pulling together of community that was fractured previously. And we're still not perfectly together, and it seems like we've got to keep doing more of that.

So, finally, it's not really about regulatory. Policy's not going to solve our problem. We have to -- it's -- we have to create a culture of stewardship, a culture of care and malama. And that comes from practice. We got to roll up our sleeves and get to the aina. We have to take care of that aina. That will lead to values, and that will lead to the

(indiscernible) and, you know, and where we can start to think about leading a world that's abundant for our children and grandchildren and multiple generations thereafter.

So, yeah, not a perfect world, not a perfect body of information to act upon. But, it seems decisive. It seems like we can take a step. And I see in this step many good outcomes.

Thank you.

CHAIRPERSON CASE: Thank you.

You want to go ahead?

MR. PAVAO: Yeah. As my fellow commissioner said, this is about water. You're correct, absolutely correct. This is about water. And you also mention that you trust Roy. I trust Roy with my life. I mean, Roy and his staff has been wonderful.

And, Roy, don't take advantage of that. But, I trust you.

But, by the same token, I trust the Department of Water Supply and the integrity and the fact that I know it will do the right thing. They will not let anything degradate the purity and quantity of our water resources, and I know they will do that. So, I have no problems with that.

MR. BEAMER: I just want to be clear with my

perspective. It's not an issue of trust with me. I certainly trust Department of Water. You guys are doing an incredible job. You know, our island is so spread out, difficult to connect water resources, limited funding. And so, it's certainly not a matter of trust by any stretch.

I certainly trust -- don't quite trust you with my life, Roy, but maybe we can work towards it at some point.

But, I want to tremendously applaud our staff and the County, you know, in getting to this process where we're at and putting together an incredible Phase 2 water development plan.

I guess, I recognize that there seems to be structural barriers that -- short of designation with the tools that we have that I'm not convinced are enabling us to protect the resources, and one of those is that spacing of wells issues for me. I mean, you were clear it's, sort of, outside of your guys' jurisdiction. Short of designation, you know, we can't, sort of, space out the amount of straws that are in one area, and we've already experienced upwelling in one of our wells as a result.

So, again, it's a structural issue. It's not trust at all with anyone. And I respect, you know, the

real estate development community. We're doing a lot of lead work here. We need homes for residents. And so, it's nothing about trust by any stretch for myself.

CHAIRPERSON CASE: Thank you. I guess I have closing remarks. I want to thank everyone so much for hanging in with us on a very long process, and I want to thank very much the National Park Service for bringing these issues to our attention collectively as a community over a long period of time. I don't think we would have nearly the quality of the plan that we have now or the attention to the connection between -- between development in Kona and our available water and the impacts of using that water on our natural and cultural resources.

I'm going to be voting for the submittal, but I do look at it a little bit. Somebody -- I think somebody said they look at it from makai to mauka, and that's kind of my view of this, because I was born in Hilo and I lived on this island till I was ten. I really feel this is my place, and I spent a lot of time in Kona when I was growing up. I went off to college, and the first year I was in college, the highway was put in here, in Kona, and I cried the whole year. My mother would send me newspaper articles about it, and I just -- I must have just felt what it was going to do to

this place that is about incredible anchialine ponds on the coastline and the cultural resources and the open space that is -- we're losing here in Kona which is part of what people love about Kona.

And so, I think it's critical to have a very, very clear plan that is tied to our available resources and that we keep a constant eye on that and keep a very careful eye on how -- as we move along in that plan and what we do here, in Kona, that we don't cross -- cross over the line. And so, that's the -- that's the purpose of the -- of the eight conditions. I'm quite comfortable with -- that the criteria are met for designation.

When I started in this job, one of the first meetings that I went to early on was one of the meetings here, in Kona. And I was first petrified, really, because it was such a big issue, and I -- you know, I didn't have enough information to really understand, kind of, what the issues were. And I'm very happy that we took our time to carefully listen to everyone and study it and -- because I really do feel comfortable with the decision today because I -- I just -- I think -- I think the National Park Service has absolutely asked the right question. I just think the answer is we're not there yet. And to me, it's a very,

very important, kind of, shot across the bow that they've given us and that we should be happy to have, because we need to keep our eye on these questions so that we -- we really protect the Hawaii that we love.

So, again, thank you, everyone, for -- for all of your time and thought and for making this process better.

So, with that, take a vote. All right. All in favor of the motion as amended. Aye.

MR. PAVAO: Aye.

MR. BUCK: Aye.

MR. BALFOUR: Aye.

MR. HANNAHS: Aye.

CHAIRPERSON CASE: ~~Opposed.~~ Aye.

MR. BEAMER: Opposed.

CHAIRPERSON CASE: Thank you.

So, the motion to adjourn.

MR. PAVAO: Motion to adjourn.

MR. HANNAHS: Second.

CHAIRPERSON CASE: All in favor. Aye.

MR. BUCK: Aye.

MR. BEAMER: Aye.

MR. BALFOUR: Aye.

(Proceedings adjourned at 4:35 p.m.)

C E R T I F I C A T E

I, Paige Christian, C.S.R., in and for the State of Hawaii, do hereby certify:

That I was acting as shorthand reporter in the foregoing matter on the 14th day of February, 2017;

That the proceedings were taken down in computerized machine shorthand by me and were thereafter reduced to print under my supervision; that the foregoing represents, to the best of my ability, a correct transcript of the proceedings had in the foregoing matter;

I further certify that I am not counsel for any of the parties hereto, nor in any way interested in the outcome of the cause named in the caption.

Dated: April 14, 2017

Paige Christian, C.S.R. 426
Registered Professional Reporter
Certified Realtime Reporter