

COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAI'I

REGULAR MEETING

June 20, 2023, 9:03 a.m.

DLNR Boardroom, Kalanimoku Bldg.
1151 Punchbowl Street, 1st Floor
Honolulu, Hawai'i 96813
& Online Via Zoom

Online link to the video recording of the June 20, 2023
Commission on Water Resource Management meeting:
<https://vimeo.com/838441296>

BEFORE: SANDRA J. GRAN, CSR NO. 424
Registered Professional Reporter

1 COMMISSION MEMBERS PRESENT:

2 Dawn N. S. Chang, Chair
3 Michael G. Buck, Commissioner
4 Neil J. Hannahs, Commissioner
5 Aurora Kagawa-Viviani, Ph.D., Commissioner
6 Wayne K. Katayama, Commissioner
7 Joanna L. Seto, Department of Health
8 Designee

9 STAFF PRESENT:

10 Miranda Steed, Deputy Attorney General
11 Alexa Deike, Legal Fellow
12 Ryan Imata, Groundwater Regulation Branch Chief
13 Katie Roth, Planning Branch Chief
14 Ayron Strauch, Ph.D., Hydrologist
15 Dean Uyeno, Stream Protection and Management Branch Chief
16 Barrett Won, IT Specialist
17 M. Kaleo Manuel, Deputy Director, CWRM
18 Kathy Yoda, Commission Secretary, Pro Tem
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1 P R O C E E D I N G S :

2 CHAIR CHANG: (Gavel.) Aloha mai kākou. My name is
3 Dawn Chang, and I am chair of the Water Commission. Thank you
4 very much for joining us today. This is the June 20th, 2023,
5 meeting of the Commission on Water Resource Management. It is
6 now 9:03. We are holding this meeting as a hybrid meeting;
7 some of us are here in person -- actually, most of us -- in
8 the Kalanimoku Building Boardroom in Honolulu, and we're also
9 holding this meeting remotely via Zoom, and it can be watched
10 live on YouTube.

11 For those who are here to testify on Zoom, we will
12 let you into the meeting when we will be hearing the item you
13 wish to testify on. Please remember to turn off your YouTube
14 when you are in the main Zoom meeting room, or we will get an
15 echo. When you enter, please be sure to keep your camera off,
16 microphone muted, until the commission calls on you for your
17 public testimony. We ask that members of the public
18 testifying on agenda items limit your testimony to three
19 minutes so that we can get to -- get to hear from everyone.
20 And please remember not to use the chat for any comments
21 because that presents a Sunshine issue. People may also
22 testify via telephone at the number posted online. Please let
23 our commission secretary know your name and what agenda item
24 you are here to testify on. You can also email your testimony
25 via email kathy.s.yoda@hawaii.gov or dlmr.cwrn@hawaii.gov.

1 For all meeting participants, I would like to stress the
2 importance of speaking slowly.

3 I am now going to read the contested case statement
4 for the record if I can find it. Yikes.

5 DEPUTY MANUEL: It should be at the back of the
6 agenda.

7 CHAIR CHANG: Back of the agenda. Aha, I found it.
8 I found it.

9 In some of the matters before the commission, a
10 person may wish to request a contested case hearing. If such
11 a request is made before the commission's decision, then the
12 commission will consider the request first before considering
13 the merits of the item before it. A person who wants a
14 contested case may also wait until the commission decides the
15 issue, then request a contested case after the decision. It
16 is up to you. Any request made -- must be made orally by the
17 end of the meeting and followed up by written writing within
18 ten days. If no request for a contested case is made, the
19 commission will make a decision. The department will treat
20 the decision as final and proceed accordingly.

21 All right. I am now going to take roll call of the
22 commissioners. I will go first in -- those that are present
23 in the room.

24 I'll start first with Wayne.

25 COMMISSIONER KATAYAMA: Wayne Katayama.

1 COMMISSIONER HANNAHS: Neil Hannahs.

2 CHAIR CHANG: Dawn Chang.

3 COMMISSIONER BUCK: Michael Buck.

4 COMMISSIONER KAGAWA-VIVIANI: Aurora Kagawa-Viviani.

5 MS. SETO: Joanna Seto for the Department of Health.

6 CHAIR CHANG: And I also have on the line -- oh, do
7 we -- do we not have --

8 DEPUTY MANUEL: Yeah, he's excused.

9 CHAIR CHANG: Oh, okay. I'm sorry. Wayne Meyer is
10 excused, so we -- actually, Paul Meyer. I am going to get it
11 together. I'm just so excited because I've got [my bud]Mike
Buck sitting
12 next to me, but I apologize. So our commissioner, Mr. Meyer,
13 is not here today, so all of the commissioners are here in the
14 boardroom.

15 And we actually have a reason why we're all here
16 today. It's because today is Commissioner Mike Buck's last
17 meeting. Let's give him a round of applause.

18 (Applause.)

19 CHAIR CHANG: We are extremely grateful for the time
20 that Mike has been here. I mean, Mike has been here both --
21 he sat on the other side of the table as -- as a member of
22 DLNR staff for many years, retired, thought he was going off
23 into the sunset and do farming, but we pulled him back to sit
24 on the Water Commission. We've been extremely grateful for
25 his -- eight years?

1 COMMISSIONER BUCK: Yeah.

2 CHAIR CHANG: Eight years. This won't be the last
3 time we see Mike.

4 (Laughter.)

5 CHAIR CHANG: I suspect that we are going to find an
6 opportunity for our paths to cross again.

7 Taking Mike's place will be a new commissioner, who
8 is -- who is new, but not necessarily new to the commission,
9 Larry Miike, so he'll join us at the meeting in July.

10 But thank you again on behalf of both the department
11 and the commission, Mike, for your years of dedicated service
12 and for providing this commission -- I've read through many
13 minutes -- just great guidance here. So thank you very much.

14 (Applause.)

15 CHAIR CHANG: I'd also like to introduce staff.
16 Kaleo, if you could introduce yourself?

17 DEPUTY MANUEL: Aloha, Chair and Commission. Kaleo
18 Manuel, Deputy, Water Commission. In person, we have Katie
19 Roth, who's the head of our Planning Branch. We also have Dr.
20 Ayron Strauch, who is with our In-Stream Protection Branch.
21 We also have Kathy Yoda, who is TAing into our commission
22 secretary position. And then we have Alexa Deike; she's our
23 legal fellow. And then Barrett Won, obviously, with our IT.
24 And then online, we have Ryan Imata, head of our Groundwater
25 Regulation Branch, and then Dean Uyeno, head of our Stream

1 Protection and Management Branch. And at that time, I think
2 that's -- that's all the staff that's present, Chair.

3 CHAIR CHANG: Thank you very much.

4 We also have present Deputy Attorney General Miranda
5 Steed. Thank you, Miranda.

6 So with that, we do have an agenda. I don't believe
7 we're taking anything out of order, Kathy, and we're going in
8 the order of the agenda. Okay.

9 So, Commissioners, the first item on the agenda is
10 Item A1. It is the approval of the minutes of June -- nope.
11 It is the approval of the minutes of May 16th, 2023.

12 Is there any written testimony, Kathy, on this
13 agenda item?

14 MS. YODA: No.

15 CHAIR CHANG: Okay. Anybody here in the public to
16 testify?

17 (No response.)

18 CHAIR CHANG: I'm not seeing any.

19 Any comments or questions by the board members on
20 the minutes of May 16th, 2023?

21 COMMISSIONER KAGAWA-VIVIANI: I just have minor
22 correction of some acronyms and grammar.

23 CHAIR CHANG: Okay.

24 COMMISSIONER KAGAWA-VIVIANI: So we'll be working on
25 the words and then send it to Kathy.

1 CHAIR CHANG: Thank you very much.

2 Any other comments or questions to the minutes?

3 (No response.)

4 CHAIR CHANG: Do I have a motion to approve the
5 minutes as -- with minor corrections?

6 COMMISSIONER HANNAHS: Moved.

7 COMMISSIONER KATAYAMA: Second.

8 CHAIR CHANG: The motion has been moved and seconded
9 to approve the minutes of May 16, 2023. We're going to take a
10 roll call vote.

11 Kathy, do you guys usually do that for the first
12 one?

13 MS. YODA: Yes.

14 CHAIR CHANG: Okay. We'll take a roll call vote.
15 Wayne? Oh, go ahead.

16 MS. YODA: Wayne Katayama.

17 COMMISSIONER KATAYAMA: Approved.

18 MS. YODA: Neil Hannahs.

19 COMMISSIONER HANNAHS: Approved.

20 MS. YODA: Michael Buck.

21 COMMISSIONER BUCK: Approved.

22 MS. YODA: Joanna -- oh, I'm sorry. Aurora Kagawa-
23 Viviani.

24 COMMISSIONER KAGAWA-VIVIANI: Approved.

25 MS. YODA: Joanna Seto.

1 COMMISSIONER SETO: Approved.

2 MS. YODA: Chair Chang.

3 CHAIR CHANG: Approved.

4 Thank you very much. The meeting minutes of May
5 16th, 2023, have been approved.

6 *MOTION: (HANNAHS/KATAYAMA)*

7 *To approve the minutes with minor corrections.*

8 *CHANG/BUCK/HANNAHS/KAGAWA-VIVIANI/KATAYAMA/SETO*

9 *UNANIMOUSLY APPROVED*

10 CHAIR CHANG: The next item on the agenda is Item
11 B-1, it is the adoption of the Maui Water Development Plan,
12 and if you can put the testifiers into the Zoom room and we'll
13 call you when we're ready to take public testimony.

14 Thank you, Katie.

15 So we'll take a staff presentation. Thank you.

16 MS. ROTH: Morning, Chair and --

17 CHAIR CHANG: Good morning.

18 MS. ROTH: -- Commissioners. Katie Roth, Planning
19 Branch of the commission. Item B-1 is the adoption of the
20 Maui Island Water Use Development Plan for incorporation in
21 the Hawai'i Water Plan. You may remember a few months ago,
22 back in March, staff gave an overview of the (inaudible)
23 submittal and the plan itself, so in the interest of time, I'm
24 not going to go into the details that were presented then.
25 That is available; that recording is available on the website.

1 Those that -- that presentation included an overview of some
2 of the major themes and concerns that were raised during
3 public testimony as well as staff's recommendations and
4 responses to those concerns. The submittal you have before
5 you includes the same items. That begins on page 7, and then
6 the staff recommendation on page 11 includes the underlying
7 items that you'll see.

8 I wanted to highlight that after the March 21st
9 presentation, there was additional outreach done by staff with
10 DWS, Maui County, and members of the Haiku community. That
11 was in response to certain items and themes that were
12 identified. We really wanted to make sure that we addressed
13 them sufficiently so that we could come to you today with
14 recommendations and an item that you felt comfortable
15 approving, knowing that we had done our due diligence and
16 additional outreach. So some of the recommendations you see
17 have been tweaked slightly based on those conversations with
18 certain stakeholders and the county.

19 I guess at this time, I would just say that staff
20 believes that the plan itself meets all the statutory
21 requirements set forth in the State Water Code, and it
22 sufficiently addresses the recommended elements in the Hawai'i
23 Water Plan framework pertaining to updates of the County Water
24 Use and Development Plan. So we feel that the plan you see
25 today is sufficient and meets every -- all of the requirements

1 needed to be approved.

2 I will reiterate the recommendation, so we have that
3 on record. Staff recommends that the commission adopt the
4 Maui Water Use and Development Plan for incorporation into the
5 Hawai'i Water Plan. Commission staff will also commit to work
6 with the County of Maui on the following:

7 1. Maui DWS will hire a consultant to write a Maui
8 Island Water Use and Development Plan summary document of the
9 plan for public consumption. The summary document should
10 clearly articulate what charts, figures, tables, and data have
11 been amended and, when relevant, provide links to the updated
12 data source.

13 2. Commission and Maui DWS will incorporate the
14 findings of the USGS Study on Climate Change Impacts on
15 Groundwater Recharge into water planning documents, including
16 the Maui Island Water Use and Development Plan and updated
17 sustainable yields.

18 3. Maui DWS will organize meetings annually with
19 the Kahikinui, Hana, Koolau, Central, Lahaina, and Wailuku
20 Aquifer Sectors stakeholder groups to better quantify the
21 water needs of residents, including traditional kuleana users,
22 rural residents, and small farmers. Feedback and data from
23 these meetings will be incorporated into a future update of
24 the Maui Island Water Use and Development Plan.

25 Maui DWS will report back -- 4. Maui DWS will

1 report back to the commission within one year with an update
2 on the status of the USGS hydrological study of the Haiku
3 Aquifer.

4 And 5. Commission staff will continue to work with
5 Maui DWS to support development of their water conservation
6 programs, including water loss control components that
7 implement the findings of completed annual water audits.

8 I'd also like to mention that we have Council Member
9 Shane Sinenci on the line along with Eva Blumenstein for DWS,
10 and I believe Director Stufflebean is also in attendance
11 virtually if you have additional questions.

12 CHAIR CHANG: Thank you.

13 MS. ROTH: And with that, I will be available for
14 any questions you have.

15 CHAIR CHANG: Commissioners, do you have any
16 questions for staff?

17 COMMISSIONER BUCK: Maybe a quick recommendation on
18 your Recommendation 3 is all-encompassing; you might want to
19 at least recognize this soon-to-be-formed East Maui Water
20 Authority or something just to -- just to make sure that we're
21 aware of what's going on 'cause that probably includes three
22 or four of these annual meetings.

23 MS. ROTH: Yes, absolutely. And that was something
24 that was discussed during public testimony and in
25 conversations with the County.

1 COMMISSIONER KAGAWA-VIVIANI: So -- sorry.

2 COMMISSIONER BUCK: No, go ahead.

3 COMMISSIONER KAGAWA-VIVIANI: I have a question on
4 Recommendation 5, which focused on working with Maui DWS to
5 support development of [fair]their water conservation programs.
And
6 given Maui DWS is, like, one of several providers, you know,
7 how -- is there a -- when you say their water conservation
8 programs, that is limited to Maui DWS. [This may be]Is there
[broadened]broaden
9 [to] support for island-wide conservation.

10 MS. ROTH: Yes, absolutely. So the water audits
11 themselves include more than just the DWS systems, but I think
12 that's some good feedback. (Inaudible) is only referring to
13 Maui DWS. So if that's something you want to amend --

14 COMMISSIONER KAGAWA-VIVIANI: Yeah.

15 MS. ROTH: -- we can definitely do that.

16 COMMISSIONER KAGAWA-VIVIANI: Okay.

17 MS. ROTH: I will say that the -- the water audits,
18 especially in the Lahaina area, are being used as part of our
19 assessment of the water use permit applications that we've
20 been receiving --

21 COMMISSIONER KAGAWA-VIVIANI: Right.

22 MS. ROTH: (Inaudible), so we're trying to
23 understand where efficiencies can be made not just in the
24 public, but in the private systems as well.

COMMISSIONER KAGAWA-VIVIANI: Yeah. So, I mean --

1 yeah, I was gonna propose that you just change it from "their"
2 to "island."

3 CHAIR CHANG: Any other questions?

4 COMMISSIONER HANNAHS: Yes. Katie, the submittal is
5 really clear that this fulfills a statutory obligation that we
6 have to have a plan. How does this strengthen our water
7 management? These will be the County of Maui.

8 MS. ROTH: That's a good question. So these plans
9 themselves, obviously, as you know, are often imperfect. It
10 takes many years to write them, so they're never going to be
11 perfect (inaudible). That's why we try to approach them as
12 living documents where they can be refined and updated as
13 needed. I'd probably refer to -- to the county and their
14 implementation plan for specifics on how this will be used to
15 move Maui County forward in terms of their water development
16 and water resource protection initiatives, but that's also
17 part of the exhibits that needs to be -- that needs to
18 (inaudible).

19 I think one of the important points to keep in mind
20 is that this plan was developed in accordance with the old
21 Hawai'i Water Plan framework from 2000, and we are in the
22 process of updating that framework. And so we hope to
23 consider a lot of other issues, cultural issues that aren't
24 specifically maybe brought out or explicit in the existing
25 plans that you see coming before you, but it's something that

1 we want to incorporate into future updates as it's a huge
2 component that is often missing from these plans.

3 COMMISSIONER HANNAHS: Thank you. And I'll wait to
4 hear more from Maui, Maui officials. Thank you.

5 CHAIR CHANG: Okay. Oh, go ahead, Joanna.

6 COMMISSIONER SETO: For Item 1, is there a due date
7 for that summary?

8 MS. ROTH: So it's in process now, but I can let Eva
9 comment more specifically on where they're at, but I believe
10 it's in process, and they should have it done in six to nine
11 months.

12 COMMISSIONER SETO: Okay, thank you.

13 CHAIR CHANG: My question -- my only question is,
14 what is the impact if we don't approve this plan?

15 MS. ROTH: That's a good question. Well, it's
16 already being used by the county for a lot of their capital
17 improvement projects and planning efforts. So if we do not
18 approve it, I believe they're still going to use it in some
19 way to guide their process and what -- and what they hope to
20 achieve with water resource protection on the island. Again,
21 defer it probably to the county to provide more specific
22 information about how not approving at this time would impact
23 the outcome. I know that they've worked very hard many
24 years --

25 CHAIR CHANG: Yes.

1 MS. ROTH: -- to get to this point. I know that
2 it's been a long process, and not all the parties have been
3 satisfied. Unfortunately, I think that's just how it goes
4 sometimes when you do outreach over many, many years. But
5 yeah, I think the county might be able to comment a bit more
6 about what impacts specifically not adopting the plan would
7 have.

8 CHAIR CHANG: Okay, awesome.

9 If there are no other questions, I'm going to invite
10 the county to provide us comments.

11 COMMISSIONER BUCK: Very diplomatic.

12 (Laughter.)

13 CHAIR CHANG: Council Member Shane Sinenci, would
14 you like to speak first?

15 COUNCIL MEMBER SINENCI: Okay. Aloha kākou and
16 aloha, Chair Chang.

17 CHAIR CHANG: Aloha.

18 COUNCIL MEMBER SINENCI: I'm happy to be -- aloha nō. I'm
19 happy to be here in support of the commission's
20 recommendations. We are supportive of the commission creating
21 a summary of the report, and also we support having regular
22 updates made to the plan, including the Board of Water Supply
23 and the council's input. This will be important for community
24 outreach and -- and just general awareness. We've heard loud
25 and clear from the community that they want to see up-to-date

1 data within the plan, and I'm supportive of having the
2 Department of Water Supply update those numbers over time. So
3 again, we just wanted to express our mahalo and -- for your
4 consideration of this plan. As Katie said, it has been a
5 monumental task over the last couple of years, and many
6 stakeholders were involved in the process, and so -- and
7 again, mahalo for coming to our communities and hearing their
8 concerns. Thank you.

9 CHAIR CHANG: Council Member.

10 Commissioners, do you have any questions for Shane?

11 Shane, I just had a clarification. In what you --
12 your comments this morning was that the commission will
13 provide a summary. Is that -- that's the Maui -- it's not --
14 you're not looking at the -- the Water Commission staff to do
15 the summary, right?

16 COUNCIL MEMBER SINENCI: Yeah, we're -- correct.
17 We're just supportive of the commission's recommendations.

18 CHAIR CHANG: Okay, okay, okay. Very good, very
19 good. Thank you.

20 No other questions?

21 (No response.)

22 CHAIR CHANG: I have Director John Stufflebean, Maui
23 County Department of Water Supply.

24 DIRECTOR STUFFLEBEAN: Aloha.

25 CHAIR CHANG: Aloha.

1 DIRECTOR STUFFLEBEAN: Nice to meet you all
2 virtually. Again, John Stufflebean. I've been the director
3 since January, so I'm -- I'm new here. And I understand that
4 there were many concerns and opposing testimonies in adopting
5 the plan, and I believe that the commission deputy and his
6 staff have worked diligently with -- with both the Department
7 of Water Supply county staff and community members to address
8 these concerns. So, you know, I've read through the plan, and
9 I found that it reflects many of -- kind of the department
10 goals and is guiding us in the right direction. And it -- it
11 spells out strategies that both diversify our water supply,
12 work towards solutions and work closer with other water
13 purveyors -- there are several other water purveyors on Maui
14 -- and with other county agencies to consider all the
15 resources.

16 And I want to just kind of briefly go through a few
17 of the things that we're working on now that -- that kind of
18 came out of the plan that are, you know, basically
19 implementing the plan. As was said earlier, even though it
20 hasn't been adopted, we're using it. You know, it's -- it's a
21 very valuable plan in that it just -- it utilized so much
22 input from the community and other sources, so --

23 So, first of all, in terms of watershed protection,
24 we are -- we are -- for years, we've been doing grant funding
25 to -- to fund non-profits to do watershed protection. We're

1 looking at increasing that in the future. Maybe that's --
2 that might even be the most important thing that we're doing
3 to protect the source, so that will continue.

4 We're also protecting our water from contamination.
5 We have a bill that's just been introduced to county council
6 to establish wellhead protection in overlay districts so that
7 there's less risk of well contamination, you know, in the area
8 of the wellheads.

9 We've got a lot going on in water conservation. We
10 -- we're retrofitting all of our meters with Smart Meters.
11 Smart Meters allow the meters to be read remotely, which has a
12 couple of advantages. One is the meter reader doesn't have to
13 physically go to the meter, but the other advantage is it
14 provides real-time information on water use. And back in my
15 -- I came from California. My career back there, we did a
16 study in one of the cities I was in, and the Smart Meters
17 decreased water use 15 percent -- we did a pilot study --
18 because people can get real information on how much water
19 they're using and it also detects leaks. So if -- like, if
20 the meter is running 24 hours non-stop, you get a note, hey,
21 you may have a leak, so it really helps with water
22 conservation.

23 We're also -- have landscape incentives and
24 guidelines as well as requirements. And we're working out a
25 water conservation bill to introduce to the -- to the county

1 council and our water board that will -- it will beef up our
2 water conservation requirements.

3 And a big one is our tiered structure. As the other
4 islands do, we have a tiered structure, and council has just
5 approved a revision to our tier structure where we increase
6 the upper tier a lot. And so basically, you know, the -- the
7 lifeline water rate didn't change much, but the top tier, we
8 increased 24 percent. So that's -- that was found to be maybe
9 one of the most important things you can do. You know, money
10 talks, right? So to -- you know, to -- to encourage people to
11 -- to reduce water use, especially those that are using a lot.
12 We also implemented -- council will be -- has approved a new
13 rate for hotels and resorts that's a higher rate so that they
14 pay more for the water.

15 And we do have some gray water initiatives going as
16 well. We've got one going in one of our parks and getting
17 ready to put in another one. So we see those as templates
18 that can help, you know, increase gray water use throughout
19 the county.

20 We also have some strategies that deal with climate
21 change. We're supporting the collaborative hydrological
22 efforts studies of impacts of climate change and future well
23 development on groundwater health. And we have an ongoing
24 study with USGS to -- to assess the effects of scenario-based
25 recharge change on groundwater in the Maui aquifers as demand

1 increases. And we're adding stream gauges and monitoring
2 wells and other tools to assess what's happening with climate
3 change.

4 In terms of source, we are -- for our central system
5 -- you probably know Maui has 12 separate water systems, which
6 is so interesting 'cause I'm fairly new here. On our central
7 system, we're exploring new basal well development in the
8 southern portion of the Waihee Aquifer and East -- East Maui
9 well development as well.

10 And we're currently conducting a feasibility study
11 to be followed by USGS assessment on the interaction between
12 the groundwater and surface water and potential impacts from
13 pumping the Haiku Aquifer.

14 For Upcountry, we're exploring new well development
15 in the Makawao Aquifer and the Haiku to meet demand on the
16 Upcountry meter priority list. And we're assessing the new
17 raw water reservoirs to increase reliable supply with
18 consideration adopted to other in-stream flow standards. And
19 we're also considering alternative structures and processes to
20 expedite the issuing of meters. And that's a whole 'nother
21 meeting. I won't get into the meter list, but we're looking
22 at about four or five different strategies to help us -- to
23 help us address that meter list in a more efficient way.

24 And on the west side over at Lahaina-Kapalua area,
25 Kaanapali, we're pursuing new wells and also working with Maui

1 Land and Pine and Hawai'i Water Services to integrate -- you
2 know, to look at how we can integrate our systems better to
3 most efficiently utilize the water in the area.

4 And then, finally, to address drought and system
5 resiliency, we're formalizing demand response plans and mutual
6 agreements with the private water purveyors to address water
7 shortages. It was said earlier when -- we can declare a water
8 shortage, but it's really helpful if all the other water
9 companies on the island also declare a water shortage. So
10 we're looking -- you know, we see that as a really important
11 element.

12 We're developing wells to improve reliability as it
13 a -- as a contingency in areas that are dependent on surface
14 water. The wells are -- you know, tend not to respond as
15 quickly to -- obviously, to rainfall events. And then we're
16 looking to -- you know, three of -- three of our main water
17 supplies in three of our main areas are the ditch systems, and
18 so we'll continue relying on those, so we're exploring how we
19 invest in those systems to make sure that they're -- they're
20 adequately maintained. And we're assessing the Wailuku Water
21 Company system and potentially other legacy systems as well.

22 So, in summary, the plan serves us as a long-term
23 guide; that's the value of it. It provides us a framework in
24 which to -- to plan our efforts, and I believe it's a good
25 foundation that we can update. Obviously, that's mentioned

1 many times. We need to update this regularly and -- and we'll
2 work with the community and commission staff to do that in
3 each sector.

4 And we're also -- just as a reminder we're tackling
5 the Molokai Water Use and Development Plan, and we also have
6 funding for the Lanai Plan coming up in this fiscal year.

7 So mahalo for your attention. Thank you.

8 CHAIR CHANG: Thank you very much, Director.

9 Any questions?

10 COMMISSIONER HANNAHS: Yes, Director. So
11 congratulations on your -- your new post. We welcome you to
12 this role of public service, and we thank you for your
13 testimony. We're particularly grateful that the county is
14 taking upon itself to kind of invest in watershed protection
15 and in those transmission systems, those ancient transmission
16 systems which are really -- really undermining the prudent use
17 of a very valuable resource.

18 My question is, you've got different bodies there.
19 You've got the administration's water management team, you've
20 got boards, and then you've got a new board for -- coming,
21 that's coming up on the scene. Will the plan help in put --
22 giving them one page to work off of and kind of get everybody
23 on the same page? And you might have a different role in
24 that, but we're all working for the same set of objectives.
25 Is this -- is this plan kind of a navigational star in that

1 sense?

2 DIRECTOR STUFFLEBEAN: That's an excellent point.

3 Yeah, there are many players involved in the water world, and,
4 you know, really, partnerships are essential to making
5 progress in water and, again, to making sure that everyone's
6 kind of heading true north together. And so, yes, absolutely,
7 this plan -- this plan will help guide all of us to make sure
8 we're all headed the same direction and -- and making progress
9 towards a better future. That's a really good point. Thank
10 you.

11 COMMISSIONER HANNAHS: That's it. Thank you.

12 CHAIR CHANG: Any other questions? Mike.

13 COMMISSIONER BUCK: Yeah, a comment. Again,
14 congratulations on your new post, and I echo Commissioner
15 Hannahs's comments. Maui County was the first county that
16 established a watershed partnership and the first county that
17 actually (inaudible), so I -- I definitely encourage that.
18 Just really curious. Briefly, you came from California; you
19 guys don't lack for water issues. What's it like coming to
20 Hawai'i? Are there things that you brought that can help, or
21 are we out in front, or are we way behind?

22 DIRECTOR STUFFLEBEAN: I wouldn't say you're in
23 front or behind. It's different, for sure. I mean, there are
24 -- there are certainly some -- you know, many of the kind of
25 skills and knowledge I developed in California that are very

1 helpful here. They're very -- a lot of similarities. But for
2 sure, there are unique situations on the islands and on Maui,
3 especially, which I'm having a fascinating time learning
4 because, you know, I -- well, I've never seen that one before.
5 I've -- you know, I've certainly had many of those moments,
6 you know. So I -- you know, I bring in, you know, 40-plus
7 years of water experience in California and Arizona. And
8 actually, in Missouri as well, but that isn't quite as
9 relevant because they have lots of water there. But, you
10 know, so certainly it helps and, you know, and there's certain
11 basic principles that -- that I bring with me.

12 For example, the value of partnerships which we just
13 talked about. In California, there's 400 water and wastewater
14 agencies, you know, that have to work together and, you know,
15 not to mention the state and the federal and cities and
16 counties and so on. And then also kind of the -- the need to
17 have -- and I'll just say one more thing, the need to have
18 what we call a diversified water portfolio where, you know,
19 you need to have multiple sources of water and be -- have a
20 resilient redundant system. And so we're working on that both
21 in terms of the sources and then also in terms of the -- the
22 transmission and delivery systems to make sure they're --
23 they're, you know, robust and redundant and can handle the --
24 you know, the things that always happen to disrupt the system.

25 COMMISSIONER BUCK: All right. So thanks very much.

1 CHAIR CHANG: Any other questions?

2 I -- I have one. John, this plan -- undoubtedly,
3 there were challenges with communities, so -- but it seems
4 like, you know, Council Member Sinenci did a lot of good work
5 in reaching out, as did the rest of the commission. How are
6 you proposing to engage -- continue to engage the community in
7 this ongoing dialogue on water?

8 DIRECTOR STUFFLEBEAN: Well, sure, I mean, very
9 actively and -- you know, and, you know, Eva -- Eva leads that
10 effort, and I think a lot of good work has been done and --
11 and Shane has been also great in this, from my understanding.
12 You know, I believe there's a -- certainly the -- we need to
13 engage with the community in many ways, robustly, often, and
14 listen to the community. You know, we can't always do exactly
15 what the community wants, you know, sometimes you have to say,
16 Well, that's not exactly what we can do, but -- but
17 absolutely, we need to listen.

18 And so, you know, it's -- I go out in the community,
19 I've been to hundreds and hundreds of community meetings in my
20 career. And, you know, we had just one -- we had a couple up
21 in recently Upcountry, and it was extreme. It was 300 people
22 at the Kula Community Center. And, you know, listening to
23 their concerns, they bring a lot of valuable information which
24 we need to hear, and we need to understand it, and we need to
25 consider that as we make our decisions. So I'm a strong

1 advocate of community participation and will continue to do
2 that, very actively be involved with that. And then, you
3 know, Eva will help me with how that's done here in Hawai'i,
4 which is -- there's a lot to it here, for sure.

5 CHAIR CHANG: I'm encouraged by your comments.
6 Thank you very much.

7 Any other comments?

8 COMMISSIONER KATAYAMA: Chair, may I ask?

9 CHAIR CHANG: Sure. Yes, please.

10 COMMISSIONER KATAYAMA: Thank you, Chair.

11 Hi, John. Thank you for the presentation. The
12 action list that you just described, how and when would that
13 be embedded in the water use plan that's before us today?

14 DIRECTOR STUFFLEBEAN: I think it's in there. I
15 mean, almost everything -- I believe everything I said has a
16 direct link to the plan. So I didn't -- I didn't quote the
17 sections, but, you know, essentially everything that we're
18 doing has a link back to the plan.

19 COMMISSIONER KATAYAMA: So, is there a quantitative
20 measure of what your targets are for reuse and reduction
21 that's part of the plan and as it's tied into your general
22 development plan for Maui as well as community development
23 plans? Because at some point, you know, these uses will come
24 before us for us to approve, and I guess it'd be helpful if we
25 had some assurances that -- that the allocations are based on

1 action plans that you've just described.

2 DIRECTOR STUFFLEBEAN: Right, yeah, that is the
3 case. I'll probably -- I think I will defer to Eva for that
4 in terms of the -- the quantitative connection to the plan
5 because she's much more familiar with it than I am, having
6 worked on it for -- for many years.

7 So, Eva, I'll let you -- let you tackle that one if
8 you don't mind.

9 CHAIR CHANG: Go ahead. Eva, go ahead.

10 MS. BLUMENSTEIN: Mahalo, Chair. Yeah, in response
11 to the commissioner's question, yes, there are quantified
12 targets for each strategy, in fact, that relates to resource
13 use. So in terms of recycled water, you -- you have the
14 demand and supply projected through year 2035, so in terms of
15 targeting buildout of R1 or other recycled water use, or
16 whether it's groundwater development or conservation targets,
17 you have those quantified, you know, in five-year increments.

18 And then the strategies kind of have the short- to
19 long-term implementation range. Some of these projects will
20 be, you know, further scoped out over a very long time, and
21 some of them, like the director mentioned, are already in the
22 works. So, yeah, so there are targets in there that we are
23 working through tracking in the implementation matrix so we
24 can report progress to our board and council and to you folks.

25 DIRECTOR STUFFLEBEAN: And I'll only add to that

1 that I will not hesitate to exceed the targets.

2 (Laughter.)

3 COMMISSIONER KATAYAMA: Does that also -- those
4 targets apply to the other purveyors other than the Board of
5 Water Supply, or these action items -- basically, you control
6 all of those a hundred percent? As we go into the different
7 regions, how are those going to be managed, under whose
8 auspices?

9 MS. BLUMENSTEIN: That's a really good question. I
10 mean, this is one of the challenges, right, with having the
11 county developing a water use development plan that applies to
12 private water purveyors and other users. So in terms of the
13 county agencies investing in recycled water expansion,
14 stormwater use, etc., you know, the plan does that, so it's --
15 you know, that -- this is also the driver or the guidance for
16 capital improvement program and budget priorities for other
17 agencies that, you know, recycle water falls under the
18 Department of Environmental Management, etc.

19 For private purveyors, you know, there's subtle
20 incentives in the plans, and there are other -- there are
21 tools that on the county level can be -- we can implement
22 strategies through land use controls or land use approvals.
23 So if this is, say, in a new development, the strategy in the
24 water use development plan is to use x resource, and that
25 project comes in for land use approvals, and we ask the

1 planning commission to -- to look at that as a guidance, and
2 we put those comments in already in discretion of permit
3 review. But yeah, we don't -- obviously, we don't have the
4 authority to impose conservation or allocations on the private
5 providers. That's, you know --

6 COMMISSIONER KATAYAMA: Yeah, I think that's a good
7 model to be actively commenting on land use issues. Good.
8 Thank you.

9 CHAIR CHANG: Any other -- yeah.

10 COMMISSIONER KAGAWA-VIVIANI: Yes, I have a comment.
11 Thanks, Eva. I think one thing that -- I'm excited
12 to hear what Director Stufflebean said. You know, I mean, one
13 thing, it sounds like Maui DWS can do a -- sort of set the
14 pace and set an example with, say, Smart Metering and kind of
15 setting new standards for monitoring uses and -- and
16 conservation. I know it's not in the plan, but it would be
17 exciting to see -- you know, as you guys get more data and
18 more real-time data, to be able to have dashboards or
19 something and -- and it doesn't need to be put in the plan,
20 but just to have that in mind as to where things -- where you
21 folks maybe can take it. I think Maui is really setting --
22 has the opportunity to set new models for the rest of the
23 islands given the whole array of challenges and opportunities,
24 so --

25 Yeah, thanks for articulating that, I guess, and --

1 and helping us kind of listen and see where some of those gaps
2 are too. You know, because if you guys set -- set an example,
3 then maybe the -- it allows us as a commission to then point
4 out to the other private purveyors like, Hey, look, it's
5 doable, and we should all be doing this in terms of
6 conservation and kind of innovating. So, kind of appreciate
7 the work that's been put in to take in that feedback and --
8 and be more responsive.

9 CHAIR CHANG: Great comment. Thank you.

10 Any other questions?

11 Eva, did you want to -- did you want to add anything
12 more to the discussion? Because --

13 MS. BLUMENSTEIN: Well, thank you, Chair. Well, I
14 just want to really say we really appreciate the -- both the
15 commission staff and the deputy that they -- you know, they're
16 taking the time to scrutinize the plan and to further engage
17 with the community members, you know, after this went through
18 council here on our end. So, yeah, I just want to assure you,
19 you know, every voice that came forward was heard and
20 considered to craft these strategies, and we think that the --
21 the proposed conditions in the staff's submittal, you know, we
22 can do that, that can be implemented, and that would allow the
23 plan, you know, to go forward.

24 Oh, I want to respond also to Commissioner Hannahs's
25 question -- or was it the Chair's question on what happens if

1 the plan is not approved. So as Director Stufflebean -- you
2 know, he gave a couple of examples of how we already lean on
3 the plan. We're using it as the guidance for capital
4 improvement programs and budget priorities. You know, it was
5 adopted by ordinance. But, of course, the plan has a dual
6 function. It should be a guidance document for the commission
7 as well, so -- so I think that is -- you know, for us, if it
8 was not approved, the next update will go through the whole
9 process again with community engagement, going to our board,
10 public hearings, new council review and approval.

11 But if it's not approved by the commission, of
12 course, it's not incorporated into the Hawai'i Water Plan, so
13 you -- you don't have a tool, you know, to serve that, that
14 purpose. I think that would be the real downside, you know.
15 There's a lot of valuable guidance in there, we believe, for
16 the -- for the commission as well. So yes, I mean, we feel
17 this is already -- we're gonna continue scoping out project
18 strategies in the plan so there will be even more opportunity
19 for community participation there over the time, so -- even
20 revisiting demand and supply as we're scoping out this
21 project. So it's a living document. And I just want to
22 mahalo everyone that put so much effort into the process.

23 COMMISSIONER KAGAWA-VIVIANI: All right. So I do
24 have a quick question on the living nature of the document.
25 Right now, it's a PDF posted to the county website, and as it

1 gets updated, I noticed some sections had the draft watermark.
2 Does that mean the -- the document itself will be versioned,
3 or is it going to be -- I want to understand how the public is
4 going to access the living document as it gets updated. Just
5 the technical details, yeah.

6 MS. BLUMENSTEIN: Yeah, yeah. So the PDF document
7 that now has the links to come from the table of content, we
8 have the draft watermark removed, of course, then I think you
9 have the tracking -- the matrix of -- you know, the summary of
10 the implementation of the strategies and, you know, a tracking
11 sheet. So we will have that available to the public as well,
12 so that's something that gets shared with our land use
13 planning departments, our board, and council as needed so we
14 can kind of just track and see how that evolves over time.

15 Then in further updates of the plan, I'm pretty sure
16 we're not going to tackle the island as a whole again. It
17 could be by aquifer sector or by, you know, watershed or moku
18 or whatnot, so that way, it's a little more manageable. I
19 mean, it's still, you know, a year-long process, but -- so I
20 see that as the updates are done, you know, it would be
21 focused on -- on a particular aquifer sector and the same
22 thing, just posted, you know, for -- for public review as we
23 go through that process.

24 COMMISSIONER KAGAWA-VIVIANI: I have a simple
25 suggestion. Actually, I started doing it. You can create a

1 navigation pane in PDF, so a senior version, because it allows
2 you to navigate from page 1300 back to the TOC back to -- you
3 know, and jump around sections. So I think that would ease
4 access and review and feedback and maybe ameliorate any kind
5 of frustrations. So, thank you.

6 CHAIR CHANG: No, thank you. That was very helpful.

7 COMMISSIONER KATAYAMA: Chair, quickly.

8 CHAIR CHANG: Go ahead.

9 COMMISSIONER KATAYAMA: Eva, what's the status of
10 the Molokai and Lanai Water Use Development Plans?

11 MS. BLUMENSTEIN: Mahalo, Commissioner. We have the
12 consultant, Townscape, halfway through, a little more than
13 halfway through, updating the Molokai Water Use and
14 Development Plan. A lot of the community engagement is
15 completed, demand projections are done, and we're now vetting
16 resource options or presenting resource options to the
17 community. So they have still a ways to go.

18 We put in -- we had funding approved for this next
19 fiscal year, FY '24, to commission a consultant to help us
20 update the Lanai Water Use and Development Plan. So, you
21 know, it's a multi-year process, but thinking, you know, we'll
22 contract towards the end of this year to begin that process.

23 COMMISSIONER KATAYAMA: So what -- where do you view
24 the horizon for these plans that you'll have something that --
25 to present?

1 MS. BLUMENSTEIN: So for -- for Molokai, I'd say
2 earliest March 2024 to be -- a draft plan to be presented to
3 our board. We will brief the commission at the same time.
4 The board has 180 days to review and provide their comments
5 before we present a bill for an ordinance to our county
6 council. This Maui plan took three years through county
7 council, so I'm not guaranteeing how long that's gonna take.

8 (Laughter.)

9 MS. BLUMENSTEIN: You know, as soon as that's been
10 adopted, then it'd be presented to the commission. And for
11 Lanai, I would say, you know, a minimum of three years as
12 well.

13 MS. ROTH: And I will also mention that the Molokai
14 Plan will be -- there will be a briefing (inaudible) group
15 that are the consultants to the commission.

16 COMMISSIONER KATAYAMA: Okay.

17 MS. ROTH: So we are going to organize that.

18 COMMISSIONER KATAYAMA: Great, that's great. Super,
19 thank you.

20 DEPUTY MANUEL: There -- just to add, there's going
21 to be a bunch of planning components of the Hawai'i -- parts
22 of the Hawai'i Water Plan coming to the commission. Oahu, we
23 have a couple that the board wants to present on as well.
24 We're trying not to have more than one per meeting because
25 it's so thick and it's robust, and it is a planning document.

1 So it's just trying to manage the agendas, but they're coming.
2 You will -- you will see a bunch of these planning documents
3 coming in the near future.

4 CHAIR CHANG: Very good.

5 Any other questions?

6 (No response.)

7 CHAIR CHANG: Eva, this is a rather large document.
8 Is it nimble enough? 'Cause you say it's a -- it's a living
9 document, but I'm assuming you also use -- utilize the
10 adaptive management approach that -- as things change. Do you
11 feel that the document and the process is nimble enough that
12 as you get information, you can make appropriate -- whether
13 it's changes or updates? And how does that work out as a
14 practical matter?

15 MS. BLUMENSTEIN: Thank you, Chair. I appreciate
16 that. And I think we're still figuring out, you know, for the
17 different kind of strategies, how we apply them, but in
18 general, I mean, we use it frequently because, I mean, this is
19 -- since it was adopted by council, it kind of gives us the
20 justification to, you know, whether it's investing in water
21 resource protection or, you know, well-head protection or
22 funding projects, so -- so as a tool, it is useful, you know.
23 We have -- we have the implementation matrix to refer to.

24 But in terms of updating data for -- I mean, for
25 example, we have -- we're looking at feasibility studies to

1 assess resources in different aquifer systems right now, and
2 part of that process, we have a consultant kind of vet or
3 revisit the demand and supply projections to see, are they
4 still valid? You know, they were done -- they're five years
5 old and whatnot. Then, you know, turns out they're fairly
6 valid, but for Central -- so, for example, we had projected we
7 need another 8 million gallons a day by year 2035; turns out
8 we need 11 mgd by year 2040. So it's -- it's a living
9 document in that it's constantly -- you know, we track private
10 purveyors' water use, those that report, and we track our own
11 water use, obviously, and kind of adjust those projections as
12 we go and as projects are scoped out.

13 CHAIR CHANG: No, thank you, that's very helpful. I
14 mean, I think it is helpful to have a document that can be
15 sort of the central location of current information, you know,
16 a framework for planning, but it is helpful to have the
17 document that is, you know, constantly updated and reflects
18 real-time, but it is something -- a document that it's not --
19 it can be a guiding document for more than just government or
20 the county, but others as well, so that's good. Okay, thank
21 you very much.

22 Any other questions? I've also -- thank you, Eva,
23 and thank you, John, for your testimony, your comments.

24 I also have on -- is it Gina Young? Is Gina on?

25 DEPUTY MANUEL: I don't see her, Chair.

1 CHAIR CHANG: Not there?

2 DEPUTY MANUEL: Maybe Red Hill.

3 CHAIR CHANG: Is Don Lono?

4 (No response.)

5 CHAIR CHANG: Nope. Anybody else, then, Kathy, on
6 the line -- on Zoom?

7 COUNCIL MEMBER SINENCI: Those are my committee
8 staff members, Chair.

9 CHAIR CHANG: Oh, okay, all right. Thank you.
10 Thank you.

11 Is there anyone else in -- on Zoom that would like
12 to participate or provide us a comment on Item B-1?

13 (No response.)

14 CHAIR CHANG: Okay. Seeing no hands being raised.

15 COMMISSIONER BUCK: Move to approve Item B-1.

16 CHAIR CHANG: Okay, I have a motion to approve. Do
17 I have a second?

18 COMMISSIONER KATAYAMA: I'll second it.

19 CHAIR CHANG: Okay, very good. I have two seconds
20 and -- a motion and two seconds. All in favor, say aye.

21 (Response.)

22 CHAIR CHANG: Any opposed?

23 (No response.)

24 CHAIR CHANG: The motion has been unanimously
25 approved.

1 *MOTION: (BUCK/KATAYAMA/SETO)*

2 *To approve B-1 as submitted.*

3 *UNANIMOUSLY APPROVED*

4 (Applause.)

5 CHAIR CHANG: Congratulations, County of Maui.

6 Thank you very much. Thank you, Katie. All right. Thank you
7 again.

8 So now we will move on to Item B-2, and Item B-2 is
9 approval of Stream Channel Alteration Permit Application,
10 SCAP.5954 -- dash -- well, 6, and special conditions.

11 Do we have a staff presentation?

12 DEPUTY MANUEL: Yep, Dean.

13 CHAIR CHANG: Okay. Oh, Dean. Go ahead, Dean.

14 MR. UYENO: Good morning, Commissioners. Dean Uyeno
15 with the commission's Stream Protection and Management Branch,
16 presenting on Item B-2. This is, as Chair mentioned, approval
17 for -- requesting approval of a Stream Channel Alteration
18 Permit SCAP.5954.6 by the County of Maui Department of Public
19 Works. The project proposes to restore a section of an
20 embankment covering an area of approximately 5,000 square feet
21 along the Wailuku River for flood protection purposes in the
22 Millyard Light Industrial Subdivision at Wili Pa Loop,
23 Wailuku, Maui. Commission staff stands by the submittal, and
24 if I may, I'm just gonna read through the recommendations.

25 So Recommendation 1 is that the commission approve

1 the Stream Channel Alteration Permit subject to the standard
2 conditions in Exhibit 4 and the special conditions below.

3 Condition 1A. In conformance with the County of
4 Maui Planning Department's recommendations incorporated by
5 reference in Exhibit 1, the permittee shall certify to the
6 Maui Planning Department that no increase in base flood water
7 surface -- water -- excuse me, base flood water surface
8 elevation will occur.

9 Item 1A. In conformance with the Division of
10 Forestry and Wildlife recommendations incorporated by
11 reference in Exhibit 2, the permittee shall avoid construction
12 and operational impacts of state-listed species, minimize the
13 movement of plant or soil material between work sites as they
14 may contam- -- contain detrimental fungal pathogens such as
15 rapid ohia death, vertebrate and invertebrate pests such as
16 coqui frogs and little fire ants, or invasive plant parts such
17 as miconia moling which could harm our native species and
18 ecosystems. And consult -- and lastly, consult with the
19 Native -- excuse me, Maui invasive species community to help
20 plan, design, and construct the project, learn of any
21 high-risk invasive species in the area and ways to mitigate
22 their spread.

23 Item 1C. In accordance with the proposal by the
24 Maui Department of Public Works acknowledging the sensitivity
25 of the project location, the permittee shall implement the

1 following best management practices:

2 Limiting repair activities to one-half of the stream
3 cross-section at a time.

4 Limiting construction work to what can be installed
5 and stabilized by the end of the working day for areas within
6 the ordinary high water mark.

7 Use of a plastic-lined sandbag coffer dam around the
8 stream work area.

9 Use of silt fence above the ordinary high water mark
10 around the construction access operating area and staging in
11 stockpile areas.

12 Use of dust fences around the staging and stockpile
13 area.

14 And lastly, sediment filtering and treatment for
15 dewatering discharge.

16 Item 1D. Issuance of the permit is subject to SHPD
17 concurrence. If SHPD requires conditions, we'd delegate to
18 the deputy director to attach those as conditions.

19 Item 1E. The permittee shall ensure streamflow
20 connectivity around the project site at all times, with no
21 more than 50 percent of the stream channel width being
22 diverted around the project area to enable fish passage.

23 And lastly, Item 1F. To ensure coordination through
24 the project, the permittee shall notify the Commission on
25 Water Resource Management staff and representatives of Hui o

1 Nā Wai 'Ehā within one week of when the project is scheduled
2 to start, any issues that may arise during the project work,
3 and when the project is scheduled to be completed.

4 And that concludes staff's presentation.

5 CHAIR CHANG: Thank you, Dean.

6 MR. UYENO: I believe -- I believe we do have
7 consult -- the consultants for the project on the call.

8 MS. RIVERA: Hi, good morning. Thank you, Dean.
9 Thank you, Commissioners and Chair. My name is Gwendolyn
10 Rivera. I'm with Munekiyo Hiraga. We're the consultants for
11 the County of Maui on this project. Also on the call, we have
12 Kristi Ono from the County of Maui Department of Public Works.
13 We also have Mark Roy from Munekiyo. And from Austin Tsutsumi
14 & Associates, the engineers, we have Adrienne Wong and Rick
15 Evans to address any questions you may have.

16 CHAIR CHANG: All right, thank you.

17 Commissioners, do you have any questions either for
18 staff or for the consultant?

19 COMMISSIONER KAGAWA-VIVIANI: I do.

20 CHAIR CHANG: Yes.

21 COMMISSIONER KAGAWA-VIVIANI: So maybe this is for
22 the engineers. I was just -- in reviewing the Fish and
23 Wildlife comments about kind of the -- the hardening of the
24 stream bank, I just was wondering if you could explain or
25 recap your response on how this wouldn't. I was particularly

1 concerned about the potential for downstream scour right below
2 and is that an issue and why it's not, and how -- how the
3 design of the structures addresses that. So I'm not sure who
4 the best person to -- to respond would be. Maybe PE.

5 MR. EVANS: Yeah, I guess I can take that. I'm with
6 Austin Tsutsumi, the civil engineer on this project. We --
7 you know, it's not gonna speed up the flow beyond this -- this
8 bank. It's going to -- just in the area where -- where it
9 interacts with the hardening, it'll -- it'll accelerate in
10 that area, but then we used a roughened grouted riprap edge so
11 that it mitigates the velocity increase there, and we don't
12 expect any increase in velocity downstream. And we did a
13 hydraulic analysis throughout the area from upstream of the
14 project through to downstream to verify those hydraulic
15 conditions.

16 COMMISSIONER KAGAWA-VIVIANI: I think just -- yeah,
17 it just helps to know that -- how you guys have thought about
18 it and considered, so thank you.

19 CHAIR CHANG: Any other questions or comments? Yes,
20 Wayne.

21 COMMISSIONER KATAYAMA: Just a quick question. The
22 600 cubic yards that will be excavated, to meet the Forestry
23 requests of minimizing the movement of soil, how would that be
24 reused or recycled? Would it be on-site?

25 MR. EVANS: The 600 --

1 COMMISSIONER KATAYAMA: -- cubic yards of excavation
2 that's listed.

3 MR. EVANS: Yeah, so what -- what's happened with
4 the stream bank is it's eroded into a near -- you know, it
5 used to be at a -- at a sloping embankment, and now it's
6 eroded to a near vertical condition. And replacement without
7 doing a vertical wall, which we wanted to avoid doing a wall,
8 is -- we sloped it at the maximum possible gradient that we
9 could, and that is what's required in -- bringing in a fill to
10 sort of replace what -- what has been lost from past erosion.
11 Does that answer your question?

12 COMMISSIONER KATAYAMA: So, no. Well, the material
13 that's being excavated, Forestry is concerned about vectoring
14 pathogens, so would that material be reused in sort of
15 reconstruction of the embankment, or are you gonna store it on
16 site, or what's the -- how are you going to handle that?

17 MR. EVANS: That is a -- I would expect that the
18 material wouldn't be removed from the site, that it would be
19 -- whatever is excavated would be reused on-site, so I don't
20 -- I'm not sure what the -- how to better answer that.

21 Gwen, would you have anything to add on that one?
22 It's more of a biological kind of question.

23 MS. RIVERA: In terms of the -- the placement of the
24 excavated material?

25 MR. EVANS: Yes.

1 MS. RIVERA: Perhaps I could --

2 COMMISSIONER KATAYAMA: I guess, is it leaving the
3 site?

4 MS. ONO: Excavating. This is Kristi Ono with the
5 County of Maui Department of Public Works. Given the concern,
6 I'm sure within the area, we could find a use for that
7 material, and it does not need to leave the site.

8 COMMISSIONER KATAYAMA: Yeah, it's not a lot. It's
9 only 600 yards. So the plan is that you will reuse it
10 somewhere backfilling in that area to address Forestry's
11 concern?

12 MS. ONO: Yes. If it's not appropriate material to
13 reuse specifically for this project, I'm sure within the area
14 of the Wailuku River, we can find a use for it as there are,
15 you know, maintenance practices done nearby that could likely
16 use material.

17 COMMISSIONER KATAYAMA: Okay, good. Thank you.

18 CHAIR CHANG: Any other questions or comments?

19 (No response.)

20 CHAIR CHANG: Do I have any -- those are the only
21 people on the list. Do I have any other -- Kathy, anybody
22 else on the Zoom that is here to provide comments on Item B-2?

23 MS. YODA: No.

24 CHAIR CHANG: Okay. Hearing no other comments, do I
25 have a motion on this matter?

1 COMMISSIONER KATAYAMA: So moved to approve.

2 CHAIR CHANG: The motion has been moved --

3 COMMISSIONER KAGAWA-VIVIANI: Second.

4 CHAIR CHANG: -- and seconded. A motion has been
5 moved and seconded to approve Item B-2, the approval of the
6 Stream Channel Alteration Permit. All in favor, please say
7 aye.

8 (Response.)

9 CHAIR CHANG: Any opposed?

10 (No response.)

11 CHAIR CHANG: All right, thank you very much. The
12 commission has approved Item B-2.

13 *MOTION: (KATAYAMA/KAGAWA-VIVIANI)*

14 *To approve B-2 as submitted.*

15 *UNANIMOUSLY APPROVED*

16 CHAIR CHANG: So let's -- you know, I'm going to
17 take a five-minute break, and then we will come back to do
18 Item B-3.

19 (Pause in proceedings: 10:00 a.m.-10:07 a.m.)

20 CHAIR CHANG: All right. (Gavel.) We're back in
21 session. Thank you very much. We are going to go to Item B-2
22 -- B-3, B-3, B-3. B-3, approve Stream Channel Alteration
23 Permit SCAP.5974.3 by Castle & Cooke Homes Hawai'i.

24 Staff, is there --

25 MR. UYENO: Aloha and good morning again,

1 Commissioners.

2 CHAIR CHANG: Good morning.

3 MR. UYENO: Item B-3, this is Dean Uyeno again with
4 the Stream Protection and Management Branch presenting Item
5 B-3. And this is requesting approval of the Stream Channel
6 Alteration Permit, SCAP.5974.3, by Castle & Cooke Homes
7 Hawai'i, Incorporated. The project proposes to convey and
8 discharge on-site stormwater runoff into Kipapa Stream that
9 has been consolidated and treated in the Koa Ridge Stormwater
10 Treatment Facilities. The proposed Drain Line 2, or DL2, is
11 designed to accommodate the peak runoff from the second phase,
12 which is the northern portion of the Koa Ridge Development.
13 The drain line will be approximately 1600 feet in length and
14 will consist of two box culverts that discharge into a 12-foot
15 wide trapezoidal channel with articulated concrete blocks that
16 terminates in a riprap channel lining and concrete rubble
17 masonry stream bank protection at Kipapa Stream. A 10-foot by
18 8-foot box culvert would be constructed in Row G to connect to
19 the upstream portion of Drain Line 2. And staff stands by its
20 submittal.

21 And if I may just read the recommendation that the
22 commission approve the Stream Channel Alteration Permit
23 application that proposed to convey and discharge on-site
24 stormwater runoff into Kipapa Stream that has been
25 consolidated and treated in the Koa Ridge Stormwater Treatment

1 Facilities subject to the standard conditions in Exhibit 3 and
2 the special condition below, which is approval of subject of
3 -- approve -- excuse me, approval is subject to SHPD
4 concurrence. If SHPD requires conditions, authority shall be
5 delegated to the deputy director to attach those as a
6 condition of the Stream Channel Alteration Permit. And that
7 concludes staff's recommendations.

8 CHAIR CHANG: Thank you.

9 Commission, do you have any questions for Dean?

10 (No response.)

11 CHAIR CHANG: Dean, I would -- I have this little --
12 I have to be careful -- concerns regarding the SHPD. Do they
13 ultimately send you a letter of concurrence?

14 MR. UYENO: Yes. It may take a little while. I was
15 in communication with Susan Lebo on this one, and she did --

16 CHAIR CHANG: Okay.

17 MR. UYENO: They were trying to push through this
18 thing. They did admit, admittedly, that they were a little
19 behind.

20 CHAIR CHANG: Okay, very good. Thank you so much.

21 Neil.

22 COMMISSIONER HANNAHS: Dean, what's the risk of this
23 stormwater runoff containing chemicals, petroleum in
24 particular, from the roadway systems or from which they're
25 gathered and depositing that into our -- our streams?

1 MR. UYENO: I would -- actually, I'll probably defer
2 to the consultant who is on the call, but my understanding of
3 the stormwater retention facilities is that they will -- they
4 are intending to construct detention basins upstream to settle
5 out any -- any particulate matter and all of that.

6 COMMISSIONER HANNAHS: Particulate, but not
7 necessarily, you know, chemical that's --

8 MR. UYENO: Right. And maybe the consultant can
9 speak to that more in detail.

10 COMMISSIONER HANNAHS: Thank you.

11 CHAIR CHANG: Is that Mr. Russell Arakaki? Are you
12 the consultant?

13 MR. ARAKAKI: Yes, I am.

14 CHAIR CHANG: Okay, go ahead.

15 MR. ARAKAKI: Good morning, Chair, Members of the
16 Commission. My name is Russell Arakaki. I work for Park
17 Engineering, and I am the principal design engineer for the
18 Koa Ridge Off-Site Drain Line No. 2.

19 To answer the question about chemicals, the Koa
20 Ridge project is designing stormwater best management
21 practices to meet the City and County of Honolulu Department
22 of Planning and Permitting's requirements for water quality,
23 so we are following their rules. As far as the design, we are
24 designing infiltration methods to get stormwater runoff in the
25 ground where appropriate. There's also filtration systems.

1 It could be either vegetated filtration or these manufactured
2 treatment devices. So that's all designed or will be designed
3 as part of the Koa Ridge Drainage System. City's reviewing
4 it, they have been reviewing and approving construction plans
5 for the roadways and subdivisions.

6 COMMISSIONER HANNAHS: Thank you, Mr. Arakaki. So
7 in your professional view, it'll be effective in mitigating
8 any of those concerns?

9 MR. ARAKAKI: Yes, it should be.

10 COMMISSIONER HANNAHS: Thank you.

11 MR. ARAKAKI: That's -- that's the best technology
12 that's available now, yeah.

13 COMMISSIONER KAGAWA-VIVIANI: I have a question.
14 This is maybe for Stream Protection, for maybe Dean. What's
15 the sort of ecological status of Kipapa Stream?

16 MR. UYENO: Kipapa Stream is a fairly -- so it's a
17 tributary to Waikele Stream, which is a pretty urbanized
18 stream. Ecologically -- let me see. I don't have it on hand,
19 but it's -- it's pretty filled with invasive species,
20 especially the lower reaches. If I recall correctly -- I'm
21 trying to pull up the -- sorry, if you'd give me a minute, I'm
22 trying to pull up the -- there was also a biological -- a
23 stream assessment that was completed by ECOS as part of the --
24 what's it called -- environmental impact statement, and they
25 basically found that there'd be no impacts to the biological

1 resources on the stream.

2 COMMISSIONER KAGAWA-VIVIANI: Great. Yeah, yeah.
3 It'd just be nice to sort of have a little bit more detail
4 around it to demonstrate that. So, okay, I mean, I don't know
5 this stream, so it would help to understand because, I mean, a
6 big construction project will have short-term and long-term
7 implications for this.

8 CHAIR CHANG: If I can kind of just add on, Dean,
9 and maybe Kaleo, what I am finding is that we don't -- we
10 don't have really good baseline data on a lot of our streams,
11 so, you know, it's very difficult. We're all -- and Mr.
12 Arakaki, I don't question your -- your comments; however, I
13 think scientific data is gonna be really helpful to us in the
14 long run. I am -- I believe if we had good stream gauges --
15 is there a possibility that we could ask -- or maybe I should
16 ask you, Mr. Arakaki, given -- given the project that you're
17 doing, are you guys willing to put in a stream gauge in Kipapa
18 to at least give us some good data to monitor the impacts? We
19 hope you are absolutely correct; no impacts by this activity
20 in the stream, but a -- anecdotal is nice, but having some
21 scientific measure -- so we have a really hard time, the
22 state, putting on stream gauges, but is that a possibility
23 that you could do that?

24 Oh, Ayron, what do you think?

25 DR. STRAUCH: (Inaudible) to let him dance.

1 (Laughter.)

2 CHAIR CHANG: Well, only if he's gonna say yes, he
3 can do it.

4 (Laughter.)

5 CHAIR CHANG: You're open to -- well, I've -- go
6 ahead, Ayron, introduce yourself.

7 DR. STRAUCH: Ayron Strauch, Stream Protection
8 Management Branch.

9 CHAIR CHANG: Yes.

10 DR. STRAUCH: Waikele Stream is monitored --

11 CHAIR CHANG: Okay.

12 DR. STRAUCH: -- long-term monitoring stations
13 across the state, but it's also heavily regulated.

14 CHAIR CHANG: Okay.

15 DR. STRAUCH: There are other upstream diversions.
16 When you say monitored, Kipapa Stream has been monitored in
17 terms of flow, but you're interested in more the ecological
18 impacts.

19 CHAIR CHANG: Yes, yes, yes.

20 DR. STRAUCH: Which a U.S. stream gauge is not gonna
21 help you with.

22 CHAIR CHANG: Okay. So what will help us with that?

23 DR. STRAUCH: Encouraging DAR or the legislature to
24 fund a stream program in the Division of Aquatic Resources.

25 CHAIR CHANG: Wayne.

1 COMMISSIONER KATAYAMA: Chair, may I ask a question,
2 please?

3 CHAIR CHANG: Yes

4 COMMISSIONER KATAYAMA: Mr. Arakaki, once the
5 stormwater is collected and passed through whatever filtration
6 or processing that you're planning, is that covered by NPDES?

7 MR. ARAKAKI: Yes, it is. It will be. It'll be
8 under the City and County's NPDES permit.

9 COMMISSIONER KATAYAMA: So, isn't there a
10 requirement to measure water quality in the discharge?

11 MR. ARAKAKI: I'm not sure if measurement and
12 analysis of stormwater is in their NPDES program. I would
13 have to get back to you.

14 DR. STRAUCH: So the City and County monitors across
15 the -- across the island to ensure compliance with the NPDES
16 program, but, you know, they're not monitoring daily, they're
17 monitoring --

18 COMMISSIONER KATAYAMA: But isn't the permit issued
19 to --

20 DR. STRAUCH: -- (inaudible) every year.

21 COMMISSIONER KATAYAMA: -- a system, a person?

22 DR. STRAUCH: The -- it's the accumulation of every
23 point (inaudible). So it's -- so, like, for every -- in the
24 lake (inaudible), for example, every storm drain outfall,
25 there is a permit for the accumulative impact of that.

1 COMMISSIONER KATAYAMA: But isn't one of the
2 requirements looking at analysis of what is in that discharge?

3 DR. STRAUCH: Not on a specific basis, no, and not
4 -- and this is a DOH issue that doesn't fall under us, but
5 they -- they don't monitor specifically any individual
6 outfall.

7 COMMISSIONER KATAYAMA: Should they be?

8 DR. STRAUCH: That -- that would be a monitoring
9 burden that would bankrupt the island.

10 COMMISSIONER KAGAWA-VIVIANI: Can I ask a question
11 then of her, DOH?

12 DR. STRAUCH: Yes.

13 COMMISSIONER KAGAWA-VIVIANI: Commissioner, I mean,
14 how does DOH -- just for our understanding, how does DOH kind
15 of consider the NPDES setting of a project like this? This
16 project or a project like this.

17 COMMISSIONER SETO: So I've been out of the Clean
18 Water Branch, which manages the NPDES program, for over ten
19 years, so from what I recall, the municipal separate storm
20 sewer system, the MS4 permit, requires the permittee, the City
21 and County, to -- to pre- -- to impose BMPs on themselves as
22 well as like those construction projects where you see the --
23 the BMPs in front of the catch basin inlets, things like that.
24 And then, as Mr. Arakaki was saying, the constructed
25 filtration systems, the actual monitoring of the discharge

1 into state waters -- I don't recall the frequency of that
2 monitoring, but you need to understand that runoff into the
3 storm drains is going to be varying on -- on a daily basis
4 because you don't know if somebody had a breakdown on the road
5 and caused an oil spill that might have happened there. So
6 there's monitoring that is done, but I don't know how we can
7 tie it into --

8 COMMISSIONER KATAYAMA: At this point, it's going
9 through a very specific system --

10 COMMISSIONER SETO: Yes.

11 COMMISSIONER KATAYAMA: -- with an outfall --

12 COMMISSIONER SETO: Yes.

13 COMMISSIONER KATAYAMA: -- that is very specific.
14 So it's being engineered to certain standards.

15 COMMISSIONER SETO: Yeah.

16 COMMISSIONER KATAYAMA: And I guess to Mr. Arakaki,
17 what are those standards? I mean, you must be anticipating
18 some kind of input in terms of water quality. So as you're
19 going through the process of treating the water, are you just
20 looking at solids, or are you looking at other things?

21 MR. ARAKAKI: No, it's -- it's solids such as
22 sediment.

23 COMMISSIONER KATAYAMA: Right, soluble solids.

24 MR. ARAKAKI: Trash debris -- right, trash debris.
25 But I think the BMPs that meet the City and County rules also

1 look at the removal of other chemical constituents. So one
2 example is a vegetated swale or just a grass swale where
3 you're allowing the runoff to flow through the soil, removing
4 whatever contaminants that are in there.

5 COMMISSIONER KATAYAMA: Okay.

6 CHAIR CHANG: Ayron, can I kind of follow up with
7 you? I am -- at DLNR, we not only look at -- I mean, we do a
8 lot of -- DAR has a lot of fishing activities. Right? We get
9 a lot of concerns raised by fishermen that they get criticized
10 for impacts to the near shore waters by their fishing
11 activity. We regulate the fishing, but they're saying it's --
12 a lot of it is the mauka activities. So when a permittee
13 comes before us like on a project like this, what -- what
14 mechanisms do we have to try to utilize this process to --
15 because you said, oh, DAR could go to the legislature and
16 develop a -- you know, like a stream program, but what -- and
17 I -- and I want to be very reasonable to -- to the applicants.
18 I mean, I'm not gonna hold them responsible, but what -- what
19 is it that -- is there anything that we can do in our process
20 to help more equitably distribute or at least monitor impacts
21 of different activities that may -- that may have an effect on
22 the streams that eventually flow down to the nearshore waters?

23 DR. STRAUCH: So I think there are two not unrelated
24 issues, but one is the ecosystem --

25 CHAIR CHANG: Yes.

1 DR. STRAUCH: -- the biota and monitoring the biota,
2 and the other is water quality and the impacts on the
3 ecosystem both in the stream and in the near shore. And best
4 management practices, which they're very well articulated,
5 that control, say, sediment and nutrients in runoff would
6 benefit both the in-stream and nearshore. But as a -- take a
7 step back and look at the entire watershed, managing
8 impervious surfaces, managing invasive species in the forest,
9 managing riparian zones, which we, as a whole, don't do a
10 great job of. There are definitely specific instances where
11 the state is doing an excellent job managing the forest, but
12 we have lots of forests that don't fall under the state, and
13 so -- and whether it's on private land or whether it's on City
14 County, Federal, coordinating management activities to reduce
15 runoff to increase native vegetation, to improve the health of
16 our ecosystems both within the stream and in the near shore
17 would benefit a host of values: Fisheries, cultural
18 practices, whatever, and both from a water quality perspective
19 and an ecosystem perspective.

20 So what can CWRM do? I think I'm going to get
21 (inaudible), but we do our best.

22 CHAIR CHANG: No, you're -- absolutely. But I'm
23 looking more at like -- and bear with me, Mr. Arakaki, you're
24 not -- you know, I mean, I'm not just looking at targeting
25 you, but I mean, applicants come before us, and they're

1 proposing activities. We have conditions, and people can do
2 BMPs, and they can -- but unless we have good data to monitor,
3 we now have -- you know, to have a baseline as to, okay, at
4 this point in time, this is the condition of -- of the stream
5 or the water quality or the ecosystem. However, over time,
6 we've noticed, based upon new information or some
7 measurements, the changes. Now, that may be due far beyond
8 just -- just this particular project, but I think -- how to --
9 sharing the opportunity of participation by our community
10 members, including our developers, to help the state better
11 manage our resources. And I'm -- I'm just kind of struggling.

12 But I think, Kaleo, as a matter of policy -- and I'm
13 not going to just pick on Mr. Arakaki, but I think we need to
14 kind of think about that, you know, as conditions. What --
15 what is it that we can ask the applicant that comes before us?
16 And it might be contributing to a fund so that we can work
17 with DAR on doing, you know, better -- better management. But
18 I just think that the opportunity presents itself when we're
19 going through an application on the known activities that
20 could have an impact on -- on water quality, ecosystem, and --
21 I'm just -- you know, how do we as -- as citizens of this
22 state collectively try to do -- to do better.

23 DEPUTY MANUEL: Maybe just -- I totally get it, and
24 we've talked about these issues --

25 CHAIR CHANG: Yeah, yeah.

1 DEPUTY MANUEL: What is before us and I think
2 what --

3 CHAIR CHANG: Yeah.

4 DEPUTY MANUEL: -- kind of limits us in certain
5 situations, and this is maybe where statutory amendments --

6 CHAIR CHANG: Yeah, yeah.

7 DEPUTY MANUEL: -- or other types of rules are
8 required, is the SCAP is a construction permit. It's a
9 two-year permit --

10 CHAIR CHANG: Yeah, yeah.

11 DEPUTY MANUEL: -- specific to that, and so a lot of
12 the conditions that are recommended --

13 CHAIR CHANG: Sure.

14 DEPUTY MANUEL: -- are tied to that period of time.

15 CHAIR CHANG: Yeah, yeah.

16 DEPUTY MANUEL: What you're talking about is like
17 pre, during, and post --

18 CHAIR CHANG: Right, right.

19 DEPUTY MANUEL: -- kind of monitoring and
20 compliance. And so, tying in other conditions that go beyond
21 that two-year period, we have to have a conversation about how
22 to make that happen, right?

23 CHAIR CHANG: Yeah.

24 DEPUTY MANUEL: And what are -- what are the tools
25 available to us. But understanding like these individual

1 projects are all part of this larger ecosystem --

2 CHAIR CHANG: Right, right.

3 DEPUTY MANUEL: -- ahupua'a and the moku that we
4 work within, and we all have impacts, whether positive or
5 negative, on those resources. So totally open to strategize
6 --

7 CHAIR CHANG: Okay.

8 DEPUTY MANUEL: -- and look at opportunities, and
9 then -- and hear you, basically.

10 CHAIR CHANG: Okay. I do want you guys to think
11 about it 'cause, I mean, I want to be equitable like -- you
12 know, this project has a very limited, like, life and
13 potential impact, but if we keep on kicking the can down the
14 road, I mean, we'll never --

15 DEPUTY MANUEL: There's cumulative impacts --

16 CHAIR CHANG: Yeah.

17 DEPUTY MANUEL: -- yeah, over time.

18 CHAIR CHANG: Exactly, so -- but I don't know how to
19 differentiate that.

20 COMMISSIONER KAGAWA-VIVIANI: I have a thought and a
21 suggestion.

22 CHAIR CHANG: Yeah.

23 COMMISSIONER KAGAWA-VIVIANI: As an educator and also just
24 watching the color of Mānoa Stream change over the last week
25 very quickly with rain and no rain, would it be --

1 would this applicant be willing to -- and I've seen people do
2 this with the telecam, like ecologists put a camera on a -- on
3 a plant so that you can just watch it as it flowers. You
4 know, would the applicant be willing to maybe work with a
5 local school -- 'cause that's Mililani, right, right nearby?

6 CHAIR CHANG: Yeah.

7 COMMISSIONER KAGAWA-VIVIANI: You know, I mean,
8 potentially work -- for educational and outreach purposes, put
9 a camera above the project site and below, and just let people
10 kind of watch the stream. It's not -- I mean, it is a form of
11 data, but it's --

12 CHAIR CHANG: Yeah.

13 COMMISSIONER KAGAWA-VIVIANI: Maybe there's a better
14 idea, but I just wanted to put it out there as a way for
15 people to engage with their streams. 'Cause I'm currently
16 working on urban equality. On Maui, we have people who are
17 organized, who are constantly watching the stream, who are in
18 the stream. We don't really have that on Oahu, and so we
19 forget that the stream exists and don't care about it, don't
20 (inaudible) put cash into it on all kinds. So I -- I think,
21 you know, would people be willing to entertain that as an idea
22 for -- for the duration of the project?

23 CHAIR CHANG: I mean, I think that's an excellent --
24 I think for me, it's -- the community needs to feel a sense of
25 ownership to these resources. If they don't see it, they

1 don't know about it, and who best but -- but kids. But it
2 does make a difference, and I think -- I'm just trying to find
3 different opportunities and venues and platforms where, one,
4 we're not only engaging and educating, but we're also getting
5 good data for us to make better-informed decisions because
6 that's -- that is my -- you know, there's so much unknown, I
7 mean, I don't even know what questions to ask. But I think
8 when -- when a project comes before us --

9 DEPUTY MANUEL: I don't know when.

10 CHAIR CHANG -- you know, sort of that shared
11 responsibility.

12 So I don't know, Mr. Arakaki, you -- I think you're
13 getting -- this is like, I only came in here for this permit,
14 what -- what is all this about? But, I mean, I think -- I'm
15 hoping you're hearing. I -- obviously, we've got a lot, you
16 know, more to think about with the -- within the department,
17 but I think you kind of hear some of our sentiments. I don't
18 know if you have any thoughts or comments.

19 MR. ARAKAKI: I just want to add that -- I did
20 mention we're following the city's rules. Part of that rule
21 allows the use of manufactured treatment devices, so these are
22 prefabricated units; they also remove nutrients, heavy metals,
23 other hydrocarbons, other contaminants, so that's also being
24 designed with this drainage system.

25 CHAIR CHANG: And that I think is significant, one,

1 to do a comparison between someone who's using sort of this --
2 this less intrusive material versus others who are doing
3 traditional construction. Is there a difference on the
4 impacts to our -- our ecosystem? I -- I don't know. All I'm
5 suggesting is if there's a mechanism for us to utilize these
6 applications and these projects as they come before us to sort
7 of share in this inquiry.

8 DEPUTY MANUEL: And maybe -- maybe if I can, Chair,
9 and maybe a recommendation is we can maybe tap City and County
10 of Honolulu as well as Department of Health's Clean Water
11 Branch to maybe come in and use their, you know, NPDES permit
12 as a way to kind of share, right, the BMPs, the technologies,
13 the work that they have and are currently doing. And then
14 maybe areas where they need more help --

15 CHAIR CHANG: Yeah.

16 DEPUTY MANUEL: -- or more data, and that's where
17 maybe we could fill the gap on the policy side. Maybe that's
18 a recommendation I can propose and can bring it -- bring them
19 to the commission and see if they're willing to engage at that
20 level.

21 CHAIR CHANG: I just want to be constructive, but
22 I --

23 DEPUTY MANUEL: Yeah.

24 CHAIR CHANG: -- I also realize DLNR, we don't have
25 enough resources to do what needs to be done, but we know

1 things need to be done. So, okay, thank you for letting me
2 speak. Go ahead.

3 COMMISSIONER HANNAHS: Well, I -- I appreciate your
4 line of discussion, and it gets to, really, if having this
5 body be more informed as to what those best practices are so
6 that when different consultants or different applicants come
7 before us, we can kind of --

8 CHAIR CHANG: Right.

9 COMMISSIONER HANNAHS: -- check their proposal
10 against our knowledge. But right now our -- I think our
11 knowledge may be --

12 CHAIR CHANG: Right.

13 COMMISSIONER HANNAHS: -- you know, fragmented
14 across the spectrum of membership. And I'm wondering if
15 there's some space or a way we can have an informational
16 briefing from the industry, from the regulatory bodies, as you
17 -- as you have suggested, Kaleo, from landowner developers in
18 terms of what are the -- what should we expect of modern
19 developments these days? What is the highest, you know,
20 standard for what we're creating that would really allow for
21 the development of lands and -- in ways that really are
22 beneficial to the environment and not harmful to the
23 environment.

24 CHAIR CHANG: Right.

25 COMMISSIONER HANNAHS: So I think there's -- a lot

1 has changed, I mean, in the industry, and I'm -- they're
2 attending to the impacts that they have, and I think it's
3 incumbent upon them to raise the standard to be -- to create a
4 competitive edge for themselves as consultants, as developers.
5 And so let's get a briefing and figure out what those -- where
6 they are.

7 DEPUTY MANUEL: Yeah, and then -- I'll just jump in.
8 And this -- this is actually really exciting because water
9 quality is -- is going to be the next -- the focus, in my
10 opinion, of this commission and Department of Health --

11 CHAIR CHANG: Right, right.

12 DEPUTY MANUEL: -- in the next couple of years.

13 CHAIR CHANG: Right.

14 DEPUTY MANUEL: With new emerging contaminants and
15 regulations, but also just how do we holistically manage that?
16 And then, as you mentioned, Chair, the real ripple effect it
17 has, the mauka-to-makai connection on all of our resources,
18 all of our programs here at DLNR. It's real, and finding out
19 how those are connected is going to be really, really
20 important.

21 CHAIR CHANG: Very true. And I guess I'm also just
22 trying to be more equitable. I mean, we cannot hold the last
23 developer responsible for all of the past. So how do we share
24 some of that management responsibility, whether it's
25 monitoring, whether it's, you know, BMPs? But I recognize

1 that we do have to be -- we have to be more proactive. We are
2 constantly reacting to a crisis, so how do we have good
3 information to be more proactive and have -- make an informed
4 decision, but also share proportionately with those that come
5 before us to utilize our public resources. And, you know, how
6 do we get them to help share in that, that opportunity to meet
7 these challenges, but --

8 Oh. And thank you for entertaining sort of my -- my
9 little -- what I'm -- I am trying to use every opportunity to
10 help supplement DLNR meet its goals and its missions. But
11 thank you very much.

12 And thank you, Mr. Arakaki. Is there -- do you have
13 anybody else from your team that would like to speak or -- you
14 know, because I noticed you do have several from Castle &
15 Cooke that are here as well as from PAR Engineering.

16 MR. ARAKAKI: There's one other person from
17 Engineering Concepts, also a design consultant. I don't think
18 Castle & Cooke is on the -- on the video.

19 CHAIR CHANG: Okay, okay.

20 COMMISSIONER KAGAWA-VIVIANI: Well, actually there
21 -- can you just -- because I didn't pull it out mentally from
22 the submittal, just explain -- you mentioned you're aligned
23 with best management practices, and you gave more detail about
24 it's not just a sediment retention basin, but there are more
25 filtration processes. Do you have any pictures? I mean, I

1 think I saw a, you know, kind of conceptual design. So we can
2 better understand, you know, what -- what you folks are doing
3 and -- and how it is -- you know, it's -- you're not just
4 trying to do minimal compliance, you're actually trying to
5 really clear the -- the stormwater.

6 MR. ARAKAKI: Let's see if I can pull up a website.

7 COMMISSIONER: You're asking someone older to
8 (inaudible).

9 MR. ARAKAKI: And I'm gonna see if I can share my
10 screen. Oh, I -- okay, I'm disabled from sharing the screen.

11 CHAIR CHANG: Can we do that, Kathy?

12 DEPUTY MANUEL: Yeah. You should be able to share
13 now.

14 MR. ARAKAKI: Got it. Can you see my screen now?

15 CHAIR CHANG: Oh, yes.

16 MR. ARAKAKI: Okay. This is one product that we are
17 -- Castle & Cooke is installing. Stormwater goes in this
18 chamber, and it gets filtered through these cartridges --

19 CHAIR CHANG: Okay.

20 MR. ARAKAKI: -- which removes the sediment, trash,
21 debris, as well as heavy metals, hydrocarbons. So that this
22 is just one product.

23 COMMISSIONER BUCK: Just gotta be sure you don't
24 release the Kraken.

25 MR. ARAKAKI: Yes.

1 COMMISSIONER KAGAWA-VIVIANI: So you've gotta clean
2 it a bit before it gets -- gets to that stage, right?

3 MR. ARAKAKI: That's right. So maintenance, removal
4 of trash and debris. Let's see. This kind of shows
5 stormwater going through the chamber, but there's also a trash
6 and debris collection area here; these are the filters, and
7 then it goes out downstream to Kipapa Stream.

8 COMMISSIONER BUCK: Compared to what comes off the
9 stream.

10 CHAIR CHANG: Yeah.

11 COMMISSIONER BUCK: (Inaudible)

12 COMMISSIONER KAGAWA-VIVIANI: What's the capacity of
13 that? Because, like, you know, larger --

14 MR. ARAKAKI: Sure.

15 COMMISSIONER KAGAWA-VIVIANI: -- could easily exceed
16 that.

17 MR. ARAKAKI: Yeah. The capacity is nowhere near
18 the peak flows that we're designing the off-site drainage
19 system for. It's typically -- it's very small. It's a
20 smaller storm, one inch, one inch of rainfall.

21 COMMISSIONER KAGAWA-VIVIANI: But then the swales,
22 too, should also function as well. I guess I'm thinking most
23 sediment transport happens in the bigger events anyways, and
24 so if you're only designing for the small events and -- you're
25 kind of maybe missing some of the most significant --

1 MR. ARAKAKI: Sediment shouldn't be released.
2 Whatever gets in here, the -- the city's design criteria is
3 not to treat the -- the peak flow, you know, whether it's the
4 ten-year or -- or larger storms.

5 COMMISSIONER KAGAWA-VIVIANI: Okay. So it sounds
6 like a conversation with the city.

7 DEPUTY MANUEL: Yeah, I mean -- yeah.

8 MS. YOUNG: Russell, can I add to that?

9 MR. ARAKAKI: Okay. Doraine Young is on.

10 CHAIR CHANG: Okay.

11 MS. YOUNG: Okay. I'm Doraine Young, and I'm with
12 Engineering Concepts. Sorry, I was having problems with my
13 camera. But I wanted to add that the reason why the city
14 chose a one-inch rainstorm is that's usually 80 percent of the
15 frequency of the rainfall that occurs. So that's the reason
16 why the one-inch storm is used.

17 COMMISSIONER KAGAWA-VIVIANI: Yeah.

18 COMMISSIONER BUCK: Makes perfect logic, right?
19 Eighty percent of the runoff.

20 COMMISSIONER KAGAWA-VIVIANI: Probably. Eighty
21 percent of the runoff happens two percent of the time, you
22 know, so, yeah. I mean, if the coral's getting blanketed,
23 it's happening at the high end. So that sounds like a good
24 conversation to have across the city (inaudible).

25 DEPUTY MANUEL: Yeah. I think it'll be good to talk

1 with the city. I mean, even all of the counties on how
2 they're managing stormwater. I mean, we haven't engaged in
3 stormwater, but it is a big -- a big issue that we have to
4 talk about and falls within the context of the commission
5 Water Resource Division. So we'll -- we'll try to bring
6 forward, you know, this thread of conversation to the
7 commission. It's something that we haven't really focused on,
8 but I do think it does have impacts on the commission's
9 overall policy setting and decision making, so --

10 COMMISSIONER KATAYAMA: All right. Russell, when
11 you designed this system, you must have looked at the effluent
12 that you are planning to handle in the one-inch events. Have
13 you -- what's the analysis of that water sample?

14 MR. ARAKAKI: We did not do any water quality
15 analysis. Currently, it's not a requirement.

16 COMMISSIONER KATAYAMA: But you're designing a
17 system to do something.

18 MR. ARAKAKI: Correct, correct.

19 COMMISSIONER KATAYAMA: But you don't know what
20 you're gonna -- that something is that you've gotta handle,
21 right?

22 MR. ARAKAKI: That's right. So all the --

23 (Laughter.)

24 MR. ARAKAKI: All the test -- yeah. All --

25 COMMISSIONER KATAYAMA: I mean, shouldn't you sort

1 of know what you're gonna handle even at the one-inch events?

2 MR. ARAKAKI: Umm.

3 COMMISSIONER KATAYAMA: I'm assuming that it had
4 historical one-inch flows or some flows currently.

5 MR. ARAKAKI: Correct. All of the testing of these
6 systems that we're specifying are done by the manufacturer,
7 and they follow guidelines of, let's say, New Jersey and other
8 jurisdictions. So they need to meet the water quality
9 treatment requirements that were established. This is all
10 approved by EPA and then passed down to Department of Health,
11 and then on to the City and County as part of their NPDES
12 program. So at this time, there's no requirement to look at
13 or measure the pollutants that enter the system and leave the
14 treatment system.

15 COMMISSIONER KATAYAMA: Okay. No, that's fine. A
16 different conversation, but thank you.

17 CHAIR CHANG: I know -- Russell, I'm sure this is
18 much more than you had thought you were gonna get into.

19 (Laughter.)

20 CHAIR CHANG: He's like, Am I here for the
21 (inaudible)? No, we appreciate you, your patience, and, you
22 know, answering our questions.

23 Any more questions, comments, Commission?

24 (No response.)

25 CHAIR CHANG: Anybody else, Kathy, in the audience?

1 MS. YODA: (Inaudible.)

2 CHAIR CHANG: Commission, are you ready for the
3 vote? Call for the vote.

4 COMMISSIONER HANNAHS: Move to approve.

5 COMMISSIONER KATAYAMA: Second.

6 CHAIR CHANG: Okay. The motion has been moved and
7 seconded to approve staff's recommendation for Item B-3. All
8 in favor, say aye.

9 (Response.)

10 CHAIR CHANG: Any opposed?

11 (No response.)

12 CHAIR CHANG: The motion has been unanimously
13 approved. Thank you very much, Russell and your team. Thank
14 you, Dean.

15 *MOTION: (HANNAHS/KATAYAMA)*

16 *To approve B-3 as submitted.*

17 *UNANIMOUSLY APPROVED*

18 MR. ARAKAKI: Thank you.

19 MR. UYENO: Thank you, Commissioners.

20 CHAIR CHANG: So now we're going to move on to --
21 Kathy, is it item C?

22 DEPUTY MANUEL: C-1.

23 CHAIR CHANG: C-1.

24 MR. IMATA: Ready? Good morning, Chair and
25 Commissioners. Ryan Imata. I am the program manager for the

1 Groundwater Regulation Branch. Today I'm going to be
2 presenting to you a briefing on Item C-1. This will be a
3 briefing on the commission's data on wells related to the Red
4 Hill fuel tank crisis. So let me share my screen first. I
5 think you can all see that now, so I'm going to give you a
6 little bit of an overview of my presentation today. It should
7 take about maybe 10 minutes or so. And this is kind of a
8 little bit of a spoiler for you.

9 So the items I'm gonna go over, first of all, are:
10 What are the commission's deep monitor well data, and what
11 does that tell us about the aquifers in question? Well, the
12 punch line is the aquifers are robust, and they're relatively
13 healthy right now.

14 The second item I'm gonna be going over is the well
15 pumpage for the three wells on the Navy system, and the good
16 news about that is the Navy wells are being pumped within the
17 allocated amounts that the commission has allocated to them,
18 and chlorides are stable.

19 The final point I'm going to discuss is the Navy
20 monitor wells that have been both drilled so far and what is
21 being proposed.

22 So my next slide is showing you the aquifer system
23 areas on Oahu, and that our primary -- can you see my cursor?
24 Our primary area of concern is generally Waipahu-Waiawa
25 because this is the extent of the Navy's water system and

1 their source -- the Waiawa Shaft is up here -- and primarily
2 Waimalu and Moanalua where the Red Hill Tank Farm is located.

3 So, first of all, let's talk about our deep monitor
4 well data. I'm going to show you the areas that -- the three
5 deep monitor wells that I'm gonna sort of talk to you about
6 with respect to what we're seeing in the aquifer.

7 First of all, there's the Waipio Mauka well. This
8 is -- if you know the area, this is located on the road headed
9 up to the Mililani Mortuary. This is located within the
10 Waipahu-Waiawa Aquifer system area.

11 We have a Waimalu deep monitor well that's located
12 within the Waimalu Aquifer system area, and we also have our
13 Halawa deep monitor well, which is also actually located
14 within Waimalu, and then this -- this boundary right here is
15 the Moanalua Aquifer system.

16 So I want to show you -- this is a little bit of a
17 blowup. So these are the Halawa and the Waimalu deep monitor
18 well locations relative to some critical shafts. Right? So
19 this is Halawa Shaft that the board operates, and this is --
20 this, as you know, has been shut down for quite a while. This
21 is the Red Hill Shaft that the Navy operates. And so I just
22 wanted to give you some -- some reference for the location of
23 the Halawa deep monitor well and the Waimalu deep monitor
24 well, and what this is -- what the data is telling us about
25 the aquifer relative to the shafts.

1 And feel free to stop me if you have questions on
2 specific slides or anything that I'm saying. That might be
3 easier than -- than going -- going back at the end, but it's
4 certainly up to -- up to you guys.

5 So let's talk about the aquifer health and those
6 deep monitor wells. The commission looks to aquifer health by
7 assessing data which we plot showing historic elevations of a
8 couple of things: The water level that we initially encounter
9 when we drop our equipment down the well, the top at midpoint
10 of the transition zones from fresh to saltwater.

11 In the following slides, you're going to see data
12 compiled from field investigations that our survey branch has
13 done near our Red Hill facility, and these data are presented
14 as a time series. So, first of all, if you can remember
15 Halawa deep monitor well, Halawa deep monitor well is located
16 on the Halawa Prison site. And this is something that we're
17 not quite sure about, but the thickness of the freshwater lens
18 -- and I'll show you the profile in the next slide. The
19 thickness of the freshwater lens located near Halawa deep
20 monitor well is obscured by an up flow of brackish water in
21 the well. And so I'll explain that a little bit more in the
22 next slide. However, the elevations of the top of the
23 transition zone, midpoint of the transition zone, and the
24 location of seawater indicate that the conditions are
25 relatively stable in this region of the aquifer.

1 So going to the next slide, you'll see that there --
2 there were some -- I think a little bit of decline prior to
3 2010. We're trying -- still trying to figure out what that's
4 attributed to, but as you can see, since -- since around
5 2010-2011, this is the water table. This is the top of the
6 transition zone, this is the midpoint of the transition zone,
7 and this is seawater. And I will note that, again, the -- the
8 brackish up-flow has kind of made us question the thickness of
9 the -- of the brackish lens, but I will also note that -- this
10 gets a little bit technical, but we have a way of estimating
11 the midpoint of the transition zone through the -- through the
12 Ghyben-Herzberg equation.

13 The Ghyben-Herzberg equation takes into account the
14 water table above mean sea level and calculates the midpoint
15 of the transition zone is about 40 -- 40 times initial head.
16 So if it's one foot, it's 40 feet. If it's two feet, it's 80
17 feet, and so on. So this line here represents what we would
18 calculate from Ghyben-Herzberg as the midpoint of the
19 transition zone. Fortunately, it appears that the midpoint of
20 the transition zone is still far below the Ghyben-Herzberg
21 calculated midpoint of the transition zone.

22 So what is this telling us? It's telling us that
23 based on what we know, despite the up-flow or (inaudible) flow
24 of the -- of the brackish water, we think that it's both
25 relatively stable and relatively healthy because this midpoint

1 is far below what we would calculate as the midpoint of the
2 transition zone. So that's data on our Halawa deep monitoring
3 well.

4 Next, let's go to Waimalu. So Waimalu is located, I
5 suppose, northwest of the Red Hill fuel tank storage facility.
6 It does appear that the freshwater lens in Waimalu continues
7 to thicken, indicating that it's probable that there's a
8 long-term influx of fresh water from the Ko'olaus.

9 And the second point is just -- it's something that
10 we're kind of speculating, so it's by no means definitive, but
11 the presence of this increasing thickness of fresh water makes
12 us theorize that there may be a hydraulic buffer for the
13 Halawa Shaft that the deflects releases migrating northwest
14 across Halawa Valley from the storage facility. Again, that's
15 a theory, so we can't define that yet, but as you'll see at
16 the end of my presentation, data is being collected to
17 understand what's happening with respect to the plume and --
18 and so you'll see that at the end. Okay? So that's Waimalu.

19 COMMISSIONER BUCK: Yeah, Ryan.

20 MR. IMATA: Yeah.

21 COMMISSIONER BUCK: So the theory, that theory, how
22 would that affect contaminants that would come out of the Red
23 Hill facility?

24 MR. IMATA: Yeah. Thank you, Commissioner Buck. So
25 I guess our theory is that if there is a high flux of water

1 coming from the Ko'olaus, there could -- there could
2 potentially be a hydraulic buffer between Halawa -- between
3 the bulk storage facility and Halawa Shaft, but that sort of
4 remains to be seen with the data that we are collecting from
5 -- or not that we're collecting, but the Navy is, and their
6 consultants are collecting from the deep water -- from the
7 monitor wells. Does that answer your question?

8 COMMISSIONER BUCK: So the volume of the water would
9 deflect any contaminants and stop its westward movement? Is
10 that -- is that what I'm hearing?

11 MR. IMATA: Yeah, I mean --

12 COMMISSIONER BUCK: In theory.

13 MR. IMATA: I mean, you're -- in theory, I don't
14 know if -- that it would deflect it, but it would suggest that
15 because there's a large quantity of water coming down from the
16 Ko'olaus -- and again, you know, the location of --

17 Let me back up a couple of slides. So the location
18 of -- the location of Waimalu deep monitor well, it's -- you
19 know, it's all the way over here. The facility is actually
20 around here. Right? So --

21 COMMISSIONER BUCK: Yeah.

22 MR. IMATA: So, you know, there's this -- you know,
23 one of the -- one of the thoughts that our geologists had was
24 that because so much water is coming down and we see a
25 thickening of the lens here, that it -- could that suggest

1 that there's -- rather than having lateral flow this way,
2 'cause it's helped to deflect the flow away from Halawa Shaft
3 if there's contaminants coming from the fuel storage tank
4 facility. That's just -- again, it's just a theory, so I
5 don't want to really put too much weight into that right now
6 until data is collected from -- from the monitor wells.

7 COMMISSIONER BUCK: Ryan, if the theory is
8 important, what's the process for either proving it or
9 negating it?

10 MR. IMATA: So I know that as part of the -- and
11 perhaps Commissioner Seto can -- can address this. I know
12 that there were portions of the administrative order on
13 consent that required determination of groundwater flow
14 patterns and -- and groundwater modeling. So I don't know
15 that our theory would necessarily be -- how do I say this? I
16 think that we would -- we would understand better if the --
17 the thickening of the lens in the context of what the models
18 are estimating. Does that make sense?

19 COMMISSIONER BUCK: Not -- not to me.

20 (Laughter.)

21 MR. IMATA: Okay, okay. Just --

22 COMMISSIONER [SETO] KAGAWA-VIVIANI: Let me --

23 MR. IMATA: Go ahead.

24 COMMISSIONER [SETO] KAGAWA-VIVIANI: Go ahead and
 finish this.

25 MR. IMATA: Oh, no. I was just gonna say that I

1 don't think that that -- I mean, it could be -- the data that
2 we're collecting from this deep monitor well could certainly
3 be used by whoever is preparing the model in estimating
4 groundwater flow, but in and of itself, I don't know that --
5 that we -- that that provides us enough data to really make a
6 defining statement on groundwater flow patterns. Because,
7 again, you'll see the proximity of this well to the fuels tank
8 -- fuel tank facility, and you see the location of Halawa
9 Shaft, it's far enough away that it -- it really is just a
10 theory right now that would be validated once the model gets
11 created and -- and if it's -- if our data can be used as an
12 input parameter to the model, that's a good thing. Right?
13 But I -- I'm not a modeler, I don't understand that component
14 of it, so, again, I -- I think that perhaps our theory may be
15 validated by whatever the model tells us, but I'm not sure
16 that we can really make any definitive statement about it. I
17 hope that made sense.

18 COMMISSIONER [SETO] KAGAWA-VIVIANI: Yeah, quick
question. Oh, I'm

19 sorry.

20 COMMISSIONER BUCK: No, go ahead.

21 COMMISSIONER [SETO] KAGAWA-VIVIANI: Question, Ryan.
So we -- you're

22 groundwater, and you focus on --

23 MR. IMATA: Yep.

24 COMMISSIONER [SETO] KAGAWA-VIVIANI: -- sort of what
you can measure

25 from a borehole, and that's just -- but that's just like one

1 sort of way of looking at health. Have there been --

2 MR. IMATA: Yep.

3 COMMISSIONER [SETO]KAGAWA-VIVIANI: -- seepage runs
done in this

4 area? Can we consider health -- you know, if -- if we have
5 gaining streams in this area, and I don't know if there are,
6 can we get a sense of the health? Has -- has staff kind of
7 considered sort of multiple streams of data together? Because
8 we might just be looking at, like, the pulse and blood
9 pressure when we need to be looking at, I don't know, lung
10 capacity, you know, like other -- multiple metrics of -- of
11 aquifer health.

12 MR. IMATA: No, that's --

13 COMMISSIONER [SETO]KAGAWA-VIVIANI: Have we kind of
fully squeezed
14 the CWRM USGS data?

15 MR. IMATA: Thank you. That's a -- that is a great
16 question. Right now, you know, we're sort of tasked -- we are
17 a very small branch within CWRM and really focusing a lot of
18 our efforts on statewide monitoring, especially as emerging
19 issues come out in Kona -- that's not emerging, it's been --
20 it's been emerged for quite a while now -- and Lahaina. And
21 so we -- we have a staff of basically two guys that are going
22 out to -- to evaluate (inaudible). We are, incidentally --
23 and thank you to Deputy Manuel. We are expanding our monitor
24 well program to expand out, but, you know, regarding seepage

25 runs and stream data, you know, I'll let maybe Dr. Strauch and

1 -- and the branch lead, Dean, maybe comment on that to really
2 assess aquifer health as a -- in a more holistic manner.

3 DEPUTY MANUEL: I'll -- I'll jump in real quick, and
4 then if Ayron comes back, he can jump in. So I think you hit
5 it on the head. Our groundwater guys are good at what they
6 do, right, evaluating water levels, chlorides, the -- the
7 profile, right, of our aquifer, and oftentimes the changes in
8 -- in groundwater take years, if not decades to see, right,
9 over time. So it's kind of just monitoring that. It's not a
10 -- you know, a rain event that all of a sudden our aquifer
11 increases exponentially. But with that said, we do know
12 there's interaction, and there's additional data sets and data
13 gaps that we potentially need to fill. Kind of we're -- you
14 know, (inaudible) of what Chair Chang had mentioned, we -- the
15 more data we have, the better and more informed decisions we
16 can make holistically as it relates to aquifer health. So
17 there -- there are studies here. These are some gaining
18 streams, so there is a groundwater-surface water connection
19 per my initial conversations with Dr. Strauch. And if that's
20 him, he can also add in.

21 (Laughter.)

22 DEPUTY MANUEL: Perfect timing. But there are
23 spring sources, as we're aware of, along the coast which also
24 indicate kind of this interaction or something -- geology,
25 right, creating that space for ground and surface water

1 interaction. So we do look at it holistically. A lot of it's
2 just taking the components of groundwater's research, the
3 components of surface water's research, data from Department
4 of Health and UH, and kind of putting that together and then
5 looking at, okay, well, what is the management recommendations
6 that we want to propose?

7 Our primary tool in this region is water use
8 permits, right, and the conditions of how -- you know, the
9 withdrawal of water and the impact that it has on both ground
10 and surface water resources as well as public trust uses. So
11 it's all connected. I just want to -- I think we can add more
12 to this. This is just one component, and we wanted to respond
13 to the question from -- I think (inaudible) question about,
14 Can we -- Can we have a conversation about the data that we're
15 collecting? We hear a lot of DOH data, we hear a lot about
16 Navy data, but what is the data that we're collecting? That's
17 the purpose of today's presentation, to share that with you,
18 get feedback on if you want us to focus or if there's things
19 that you're seeing are missing, let us know, and we can look
20 at what resources we have to try to -- try to fill those gaps.

21 COMMISSIONER [SETO] KAGAWA-VIVIANI: Okay. So the --
22 so the short
23 answer is data streams, we don't have -- we haven't put
24 together the multiple streams of data, but according to deep
25 monitor wells, it looks pretty good.

DEPUTY MANUEL: The groundwater aquifer health --

1 COMMISSIONER [SETO]KAGAWA-VIVIANI: Yeah, yeah.

2 DEPUTY MANUEL: -- at this point. And he'll keep
3 going through the rest of the system.

4 COMMISSIONER [SETO]KAGAWA-VIVIANI: Yeah. I don't
5 want to hold that
6 up.

7 DEPUTY MANUEL: No, no, no. That's -- yeah, that's
8 the general summary. I think you'll be hearing that as well.

9 MR. IMATA: Okay. So I -- I believe this is where I
10 left off, I think. We were looking at particularly Waimalu
11 deep monitor well and how that thick -- lens thickening is --
12 is maybe suggesting a hydraulic buffer.

13 So as you can see as a time series, we have -- the
14 water table actually rose. It rose about maybe 18 and a half
15 feet from May to April, May -- from 2005 till 2023. We do see
16 again a thickening of the transition zone here. And this is,
17 again, Ghyben-Herzberg. So this is telling us that where it
18 should be, and maybe it's -- maybe it's arriving at a steady
19 state condition, I don't know, but that this is -- this is the
20 data that we're collecting from the Waimalu deep monitoring
21 well.

22 So the last well that we're going to look at is the
23 Waipio mauka deep monitor well. And again -- shucks, you know
24 what? We'll -- I'll give you a little bit better information
25 on this as we go through the Navy system wells. But again,
this is the Waipio mauka deep monitor well that's located

1 right off of the road going up towards the -- towards that
2 Mililani Cemetery. So we see in this well the freshwater lens
3 continues to slowly thin about may -- well, about 100 feet. I
4 don't know if you can say that's slow, but -- but it's been 37
5 years since we've seen that. The elevation of the midpoint of
6 the transition zone shows a gentle rise, but again, the
7 current elevation is still below the calculated Ghyben-
8 Herzberg elevation, which indicates to us that the current
9 thickness is greater than expected.

10 So going to the next slide, you can see again, this
11 is -- this is Ghyben-Herzberg, that's the midpoint of -- this
12 is the midpoint of the transition zone. So this is the top of
13 the transition zone. So we are quite significantly below the
14 calculated Ghyben-Herzberg midpoint of the transition zone.
15 And again, this well is located kind of close to the Navy's
16 Waiawa Shaft, which they are -- they've placed a hundred
17 percent reliance on to supply water for existing.

18 So that's a good segue into the next portion of my
19 presentation, which is talking about Navy system pumping
20 centers. So --

21 COMMISSIONER BUCK: Ryan, Ryan, excuse me. Before
22 you go on to the next subject.

23 MR. IMATA: Sure.

24 COMMISSIONER BUCK: I'm curious. The thickening has occurred
25 since 2005. Could -- might the Waiāhole water

1 decision and/or the diminished use of water for sugar have
2 contributed to less withdrawal and more retainment?

3 MR. IMATA: So -- so it appears that Waipio mauka
4 has actually -- the water level is rising, but we're also
5 seeing a rise of the midpoint -- at the top of the transition
6 zone and the midpoint of the transition zone, so, you know,
7 that would suggest some -- some kind of -- I don't know. I
8 mean, at this point, could that suggest some kind of
9 depletion? I'm not really sure. Yeah, that's a great
10 question.

11 I mean, we -- with respect to Waiāhole, we see
12 development tunnels are quite -- still actively in use, and I
13 believe that though the development tunnels are on the
14 windward side, they do extend -- it appears that they may
15 extend hydrologically possibly into the Waipahu-Waiawa Aquifer
16 system. So whether the development tunnels are depleting
17 recharge of Waipahu-Waiawa, that's a -- that's a great
18 question. Although, you know, I think that -- you know, I'm
19 trying to think of the timeline now. I'm trying to think of
20 Waiāhole Ditch with respect to, you know, the pineapple fields
21 on the Kunia side, and when things started actually
22 transitioning over from -- the transition from sugar to
23 pineapple and then pineapple to what's being seen in Kunia is
24 -- you know, what we're seeing is diversified crops and some
25 seed corn. I think seed corn is kind of diminishing.

1 I've really gotta take -- take a look at the data
2 for what's -- you know, for the Waiāhole withdrawals. Waiāhole
3 is interesting, right, because they -- what they do is there's
4 a valve at the -- at the north portal that -- I think it's the
5 north portal that they turn on and off depending on how much
6 rainfall they get on the leeward side. There's also a
7 development tunnel, Waiawa development tunnel, that actually
8 develops water on the leeward side that --that's never really
9 sort of shut off. Right? So I -- it's hard for me to -- all
10 that to say that I think it's hard for me to attribute any
11 kind of changes in the aquifer, you know, mauka or even within
12 Waipio mauka as being attributed to sugar -- the reduction of
13 sugar production or the change in agricultural use. So the --
14 I guess the short answer is I don't know.

15 (Laughter.)

16 MR. IMATA: I know I can be wordy, but it takes up --
17 sometimes I'm processing my thoughts as I'm speaking.

18

19 (Laughter.)

20 CHAIR CHANG: I can tell.

21 (Laughter.)

22 COMMISSIONER KAGAWA-VIVIANI: If I can interject,
Chair, I

23 wanted to suggest -- Scott Izuka from USGS, they released a
24 really interesting groundwater availability scenarios report
25 in April, and so maybe that can be --

1 DEPUTY MANUEL: They're coming next month.

2 (Laughter.)

3 COMMISSIONER KAGAWA-VIVIANI: Okay. They're already
on it, yeah.

4 DEPUTY MANUEL: Sorry, we try to get you the
5 cutting-edge data.

6 COMMISSIONER KAGAWA-VIVIANI: Yeah. Well, WRRC
7 hosted him, so the -- the recording might -- there might be a
8 previous recording online, and then we'll hear next month. So
9 I think that'll help us because it was really helpful to see
10 his maps and -- and have that dialogue, so -- okay.

11 MR. IMATA: Shall I continue?

12 COMMISSIONER KAGAWA-VIVIANI: Yep.

13 CHAIR CHANG: Yes, go ahead.

14 MR. IMATA: Okay, okay. So again, talking about --
15 now we're segueing into the Navy pumping centers. So I'm
16 gonna show you on the next map the three shaft sources that
17 the Navy has for the system. Aiea Halawa Shaft is the
18 smallest source. This has an allocation of 0.697 mgd. Red
19 Hill Shaft is sort of a -- I want to say a medium-sized
20 source. It's definitely a lot smaller than the Board of Water
21 Supply's Halawa Shaft, but it does have an allocation of 4.659
22 million gallons per day. Waiawa Shaft is the most productive
23 shaft in the Waipahu-Waiawa Aquifer system, and it has an
24 allocation of 14.977 mgd. And I will note that these are --
25 all are under a public water system.

1 So here's a map that shows you basically the extent
2 of the Navy system. You can see how far -- I mean, it extends
3 all the way out into Ford Island, and then obviously out into
4 the West Loch portion, airport point. Again, the Waiawa Shaft
5 is the farthest sort of -- it's not -- farthest north, I
6 guess, on the system, and I was mentioning that the -- our
7 Waipio mauka monitor well is like around here somewhere. This
8 is -- this is the Navy's Aiea-Halawa Shaft, which this is a
9 small allocation, like 0.497, and this is Red Hill Shaft,
10 which is located right next to the field tank farm, so -- and
11 this one has the allocation of about 4 point -- I don't know,
12 under 5 mgd.

13 So again, here's -- here's a better map showing the
14 location of the shafts. Here is -- here's Waiawa Shaft,
15 here's Aiea-Halawa, here's Red Hill Shaft.

16 So let's look at the pumpage prior to the fuel
17 release and the resulting change in pumpage as a response. So
18 in November of 2021 -- oh, this doesn't look good. Right?
19 Like in -- they were pumping 0.272; they were within their
20 allocation for Aiea-Halawa Shaft. Again, that's a small
21 source. Waiawa Shaft, they were over-pumping at a very --
22 very small on a 12-month moving average, but they were
23 over-pumping it. And Red Hill Shaft was over-pumping by about
24 a half a million gallons per day. So this doesn't look good.
25 Combined 12-month moving average monthly pumpage of 20.363

1 mgd.

2 So the following three slides are just an indication
3 -- and this is kind of -- it's a little bit -- I don't want to
4 be misleading about it because it's hard to tell by the scale.
5 Right? If we're looking at the scale of this, this is really
6 just 0.8 million gallons per day. So we're seeing -- we saw a
7 decrease in -- in time series of the 12-month moving average
8 from about -- so we -- so the graphs I'm providing you are
9 from 2020 to the present, and you see a reduction of Aiea --
10 they basically took Aiea-Halawa Shaft offline. I think they
11 were pumping it for some testing purposes or whatever.

12 Red Hill Shaft -- let's see. So I think since -- I
13 can't remember the date, but they started pumping Red Hill
14 Shaft in order to induce like a plume -- plume containment
15 situation.

16 Is that right, Commissioner Seto?

17 And -- and so they exceeded their allocation. Of
18 course, you know, the allocation that the commission issued
19 was -- was for consumptive purposes, but they converted Red
20 Hill Shaft over to pumping it for plume containment. So
21 you'll -- again, I don't want -- I don't want this to be sort
22 of -- well, you can see. I mean, it's a -- it was about --
23 above their allocation. Maybe they -- they peaked by about
24 0.2 mgd at one point and then started stepping down their
25 pumpage of Red Hill Shaft.

1 And then the last graph, again, I think this is --
2 this one's a little bit confusing because you'll see my time
3 series goes from 12.5 to 17. So if I had -- if it went all
4 the way down to zero, I think you'd have a better idea of how
5 much they were over-pumping Waiawa Shaft. And I'm not making
6 excuses for the Navy, by any means, but Waiawa Shaft was -- is
7 the only source that's online to supply their entire water
8 system. So you can see how much in excess they did pump. We
9 did -- we are keeping tabs on their -- both their pumpage and
10 the chlorides of Waiawa Shaft on a more -- a finer scale.

11 So let's talk about the change in pumpage as -- in
12 response to the release. Red Hill Shaft stopped in December
13 2021 and resumed on January 29, 2022, for plume containment,
14 and they've been pumping an average of about 4.2 mgd.

15 Pumpage ceased at Aiea-Halawa Shaft at the same
16 time. Pump started up again in September of 2022, and I think
17 they just run the pumps periodically just for a couple of days
18 a month, and they only pump about a hundred thousand gallons a
19 month.

20 And then -- oh, I'm sorry. And then Waiawa Shaft
21 has always -- again, that's the one that they exceeded their
22 allocation for, and we've discovered -- or they've discovered
23 leaks in the system that can be -- can speak to why they were
24 over pumping. And at a certain point, they pumped 16.993
25 million gallons per day, but they -- again, they're reducing

1 pumping Waiawa Shaft, I think partly due to some efficiency
2 measures, and also, they had fixed -- there was a big leak in
3 the Pearl Harbor Peninsula that they fixed. And so you see
4 that their 12-month moving average as of May 2023 is 14.9 mgd,
5 which is below their allocation.

6 DEPUTY MANUEL: And again, just a leak in the water
7 system just for verification because that was -- we did this
8 presentation prior, and there was concern that it was in the
9 actual fuel system. No, it's the water system that Ryan's
10 talking about.

11 MR. IMATA: Thank you. Yeah, that -- I should have
12 been a little clearer about that. I think it was -- it was
13 those kinds of water distribution leaks that you see in all
14 big water systems, right, Board of Water Supply. And so they
15 discovered one. And I think this is -- I think maybe that's
16 part of the silver lining in this whole situation is it --
17 it's caused us to put a lot more scrutiny on the Navy's data
18 with respect to both the pumpage, aquifer health, and -- and
19 particularly salinity.

20 So this slide shows the current pumpage, and then
21 you'll see that, okay, Aiea-Halawa Shaft is basically offline.
22 Waiawa Shaft, they were brought -- you know, they brought
23 their pumpage down below their allocation. Red Hill Shaft,
24 again below their allocation, although this is for plume
25 containment. This is not feeding into the system. And you'll

1 see that the combined 12-month moving average is 18.972 from
2 20.363 as of November of 2021.

3 So can they sustain running the system with one
4 source? Yes. Is that a good idea? Probably not, because if
5 Waiawa Shaft pulls down, they don't have water for their
6 system.

7 The one thing that we -- we wanted to make sure that
8 we looked at was chlorides and -- because chlorides give us an
9 indication of aquifer health too. And so this is a plot of
10 chlorides. So you'll see this scale is pumpage in million
11 gallons per day. This scale is parts -- in terms of parts per
12 million. So you see some variability. The orange dots are
13 the chlorides, and you see some variability, but it's
14 relatively -- pretty stable and pretty good at about maybe
15 130, 130 parts per million.

16 Waiawa Shaft is the one that I think we're really --
17 that we're a lot more interested in because as they increase
18 pumpage from Waiawa Shaft to support the system, what does
19 that tell us about the chlorides? Well, the chlorides -- I
20 mean, this is -- it's relatively fresh water, right? Like
21 between 35 and maybe a high of 44 parts per million. So we
22 see -- we see some variability with respect to pumpage, but
23 not too much.

24 That takes me through the Navy's water sources. Did
25 you guys have any questions on that section before we move on?

1 CHAIR CHANG: Ryan, Aurora has a question.

2 MR. IMATA: Sure.

3 COMMISSIONER KAGAWA-VIVIANI: So Waiawa pumping is
4 declining, but we're heading into summer, and do you have any
5 -- in general, that's, you know, high water demand time is --
6 I mean, the implication there is that it's probably not going
7 to continue going down over the summer and they will be
8 exceeding that specific -- likely be exceeding that specific
9 allocation for that. So what measures or have there been any
10 dialogues around that?

11 DEPUTY MANUEL: I mean, I can start, Ryan, real
12 quick.

13 The graph here shows summer month usage. So if you
14 look at it on the 12 MAV, they still fall within their
15 allocation.

16 COMMISSIONER KAGAWA-VIVIANI: Okay, all right.

17 DEPUTY MANUEL: So, in the bottom frames, right?

18 COMMISSIONER KAGAWA-VIVIANI: Right.

19 DEPUTY MANUEL: You know, basically July through
20 August or that period, those are summer months where you would
21 see higher use. So, I mean, in general, we are -- we're --
22 what's been great is they've been reporting daily pumpage
23 (inaudible).

24 COMMISSIONER KAGAWA-VIVIANI: Okay.

25 DEPUTY MANUEL: Which we -- we don't ask of anybody

1 else in the state.

2 COMMISSIONER KAGAWA-VIVIANI: Right, yeah.

3 DEPUTY MANUEL: So the Navy's been really, really,
4 really good at getting us this data; that's the only reason
5 why we're able to track it at this scale --

6 COMMISSIONER KAGAWA-VIVIANI: Yeah.

7 DEPUTY MANUEL: -- over time. And then we -- it is
8 on a 12 MAV, right --

9 COMMISSIONER KAGAWA-VIVIANI: Yeah.

10 DEPUTY MANUEL: -- with the idea that during summer
11 periods, there might be increased pumping to meet demands and
12 needs, but we also ramp up our conservation efforts working
13 with our planning office and our conservation work. So those
14 are some of the strategies, at least right now, we're working
15 with the Navy -- even anybody throughout the state on is
16 conservation strategies and drought preparedness.

17 COMMISSIONER KAGAWA-VIVIANI: Right, yeah. 'Cause
18 it's not looking -- you know, the prospects are not looking
19 great.

20 DEPUTY MANUEL: It is gonna be a prolonged drought
21 per -- per models, right, and predictions.

22 So, Ryan, sorry. Sorry to jump in, but go ahead.

23 MR. IMATA: No, no. No, that's a -- that's a great
24 thing to add.

25 So we also -- as Kaleo mentioned, we are looking at

1 both pumpage and chloride data on a finer scale. And
2 normally, what we would require of any well owner or shaft
3 owner or whatever is monthly water use and monthly chloride
4 data to be submitted. We -- because of this -- because of the
5 concern that we brought up not just for the summer months, but
6 just in general as they increase the pumpage, we were -- we
7 were looking at daily pumpage and weekly chloride data to be
8 submitted so that we can kind of start to get a handle, are we
9 seeing -- are we seeing chloride starting to increase as their
10 pumping higher? Again, if this is -- if the past, you know,
11 two years of data is any indication, I don't think we're going
12 to see chloride increases if -- you know, as they approach the
13 summer months. But we'll continue to keep a handle on the
14 data and -- and present anything to you if we see that
15 anything is -- you know, if there's any adverse impacts on the
16 aquifer.

17 COMMISSIONER KAGAWA-VIVIANI: Okay, thanks.

18 MR. IMATA: Okay, thanks.

19 So I'll -- I'll move on to the next -- the final
20 section. I wanted to give you guys a briefing on the Navy
21 monitor well permit. So it's -- this is -- this is an
22 interesting -- and I should preface this by saying that
23 typically the commission approves well permits for -- I mean,
24 I would say 90 percent of our permitting is for production-
25 type wells, right, where people drill wells to produce water.

1 We also permit deep monitor wells and permanent deep monitor
2 wells, but a lot of environmental wells that are being done to
3 assess, you know, aquifer water quality are done through --
4 you know, via the underground storage tank program at DOH or
5 other environmental programs. So typically, we hadn't been --
6 been permitting these types of environmental monitor wells.

7 Well, back in around, I think, 2015, and maybe prior
8 to that, we started permitting the monitor wells for the Navy.
9 And I think it's a good -- it's a good thing for the
10 commission to be involved because, as we know, there's
11 contamination in the area. For the Navy to be constructing
12 the wells in accordance with our well standards will help us
13 to ensure that if there's contamination in the vadose or the
14 unsaturated zone above the aquifer, you know, adhering to our
15 well standards will help prevent a contaminant from entering
16 the aquifer from above. And not to say that DOH wouldn't be
17 able to do that, but I think our well standards are -- are
18 sufficiently designed to protect both that from happening and
19 also from maybe perched water from entering an ungrouted
20 annular space and entering the basal nodes. So -- so all that
21 to say that we have been permitting Navy monitor wells. There
22 are 23 existing Navy monitor wells right now in all -- all of
23 these various locations. There are eight new proposed Navy
24 monitor wells that we have applications in for that we're
25 under -- that are under review. This shows the location of

1 the Navy monitor wells with respect to the fuel tank farm. So
2 this is the fuel tank farm right here.

3 And then water quality data from the monitor well --
4 so we don't have the expertise within groundwater to analyze
5 water quality data, but thank you to Commissioner Seto for
6 sending me this yesterday. Here are some websites that
7 anybody can go to, the commissioners and general public can go
8 to to get water quality data from the monitor wells. So
9 there's the -- DOH's Red Hill information website. There's
10 the EPA's groundwater results application which was just
11 released, I think, last month or two months ago. And then
12 there's the Navy's Joint Base Pearl Harbor-Red Hill
13 environmental website.

14 And that's basically all I -- oh-oh. Start the
15 recording again?

16 DEPUTY MANUEL: Yeah, you can just press start
17 recording, Kathy.

18 MS. YODA: It's connecting. Like it's not sensing
19 or something.

20 CHAIR CHANG: So can we confirm --

21 DEPUTY MANUEL: Is it -- is it on --

22 MS. YODA: It's a hard connection.

23 DEPUTY MANUEL: Okay, there we go.

24 DEPUTY MANUEL: It came back.

25 MR. IMATA: Okay, there we go.

1 So that concludes my presentation. I'm happy to
2 answer any questions that you guys have or -- I think I see
3 Commissioner Seto smiling, so I'll deflect some questions to
4 her too, but -- okay, thank you.

5 CHAIR CHANG: So, Mike.

6 COMMISSIONER BUCK: Yeah, Ryan, thanks a lot. I
7 know the monitoring wells are critical, especially the ones in
8 the west, to get a much better idea of what's in the aquifer
9 and the plume flow. And I know we've got some issues with
10 liability and trying to put the appropriate monitoring wells
11 in, but let's say we put them in there -- and again, the --
12 the commission's kuleana is really gonna be long-term aquifer
13 remediation and recovery. What kind of time frame -- assuming
14 we get the wells in -- did you project before we could start
15 making some determinations of kind of the plume? And I know
16 theoretical, we don't know, but this is an issue that is gonna
17 be with the commission for quite a while. Do you have any --
18 any projections of time frames once the monitoring wells are
19 in for us to begin to draw some -- some kind of rational, you
20 know, observations?

21 MR. IMATA: Yeah, and I don't want to misspeak, and
22 Joanna's certainly here to correct me if I say anything wrong
23 or -- or even expand on what I might say. But I know that
24 initially -- was it at an FTAC, a Fuel Tank Advisory Committee
25 meeting, Joanna, that I think that either EPA or DOH presented

1 on some sort of -- some sort of spatial analysis on plume
2 locations? But I don't know that there's been a time series
3 to represent any sort of changes with respect to how plume
4 containment was -- and maybe -- and so I'll let Commissioner
5 Seto sort of expand on that if she can.

6 COMMISSIONER BUCK: Just real quick, Ryan, most of
7 the monitoring wells are just around the -- the Red Hill
8 facility. We really have not collected data -- the wells
9 aren't even in yet, so (inaudible) --

10 MR. IMATA: Yeah, thank you. So I will say that I
11 think that there are -- like the majority, I'd say just about
12 all of the wells are Navy wells. I know that the Board of
13 Water Supply has, I believe, one monitor well in, and I
14 believe they're applying or are looking to apply for one or
15 two more. So I think that the -- you know, I kind of see
16 where you're going with this because I know we had talked
17 about this before, but I'm trying to establish sentinel wells
18 between the fuel tank facility and -- and Halawa Shaft. But I
19 don't -- I don't have a timeline for the -- for that. I think
20 that's a -- that's going to be a Board of Water Supply
21 question.

22 COMMISSIONER BUCK: But with an assumption,
23 basically we're talking years having to put the wells in, and
24 hopefully we'll get that done, and then actually getting the
25 data over a certain amount of time frames until there's a

1 comfort level that Board of Water Supply could open up their
2 shafts again. That's really more like years rather than
3 months.

4 MR. IMATA: That -- you know, that's kind of hard to
5 say. I mean, the -- we, staff has been sort of -- staff has
6 been addressing the deep -- the monitor well applications as
7 fast as we can in order to aid in the -- in assessing what's
8 happening. And, you know, they've been coming in for maybe --
9 I want to say maybe 15 wells a year or so, and they've been
10 getting them online relatively quickly, maybe -- maybe within
11 about a year. Again, I'm not -- I can't speak on behalf of
12 the Navy, but they've expanded out their -- their drilling
13 sort of roster into maybe three or four drillers at this
14 point, whereas they only had one driller prior. And I think
15 they're just trying to accelerate drilling monitor wells all
16 over the place. So it's hard for me to say, but based on the
17 plan, it would appear that maybe within a year or two as far
18 as what has been planned so far, I think all of the wells
19 should be in place and online. I -- that's my best estimate.

20 DEPUTY MANUEL: And, Commission Buck, maybe real
21 quick, we did make a request -- because they are collecting
22 data now in whatever wells have been completed -- to the Navy
23 in their next quarterly update, which is next month,
24 unfortunately, to provide kind of like -- if possible, a
25 summary of what they're seeing.

1 COMMISSIONER BUCK: Yeah.

2 DEPUTY MANUEL: You know, we have some wells
3 completed. What is the data showing us now, and can that help
4 to inform some of our management decisions? So we put in the
5 requests and hoping to get some report back from the Navy next
6 month.

7 COMMISSIONER BUCK: I mean, I've been to the
8 meetings. The Navy is -- we're ready, they're ready to go.
9 The major issue is a lot of them are on private land --

10 DEPUTY MANUEL: Right.

11 COMMISSIONER BUCK: -- and the private land owner is
12 not comfortable. They want some liability protection in case
13 they find something, and so that's -- and I know DOH has been
14 working with -- I mean, that's something, but -- yeah, until
15 we get those west monitoring wells in, we're still -- really
16 have -- don't have much of an idea --

17 DEPUTY MANUEL: Yeah.

18 COMMISSIONER BUCK: -- of what's going on.

19 DEPUTY MANUEL: It's definitely isolated around the
20 fuel facility.

21 COMMISSIONER BUCK: All right.

22 CHAIR CHANG: Yeah. Ryan, do you have a -- an
23 opportunity to sort of -- I don't know if synthesize is the
24 right word, but take in, like, EPA, Board of Water Supply, and
25 -- and put them all together so that we have a -- a larger

1 visual of all of the different wells? And are they all -- are
2 they all in sync, or are they different? Or what impacts do
3 those additional well information have for you?

4 MR. IMATA: Yeah, let me think about this. So I
5 think that at a certain point, we did a -- we did a
6 collaborative effort with USGS. Shoot, I can't -- I wish
7 Patrick were here. Patrick is our geologist that can -- and
8 Bob, I wish they were here talking about how they calibrated
9 the elevation surveys of all of the wells in the area.

10 But in terms of syncing data, I mean, I think that
11 the websites that I had mentioned have results of all of the
12 monitor wells in the area. I'm not sure that they have
13 permission receipt -- I don't think they have Board of Water
14 Supply data in the area, but there's only one Board of Water
15 Supply monitor well, so -- yeah, I think that that would be
16 the best opportunity to see data results from, you know, a
17 more comprehensive scale.

18 DEPUTY MANUEL: And maybe just -- you know, a lot of
19 -- we trust in our link, right?

20 CHAIR CHANG: Yeah.

21 DEPUTY MANUEL: So we're really focusing on a lot of
22 times the aquifer health from a quantity and chloride
23 perspective, which is kind of the sweet spot we fit in in
24 relation to Department of Health, EPA, who is -- is managing
25 the water quality data sets from these well fields. Putting

1 them together is definitely something that we need --

2 CHAIR CHANG: Yeah.

3 DEPUTY MANUEL: -- to try to do more of and be
4 better at, but a lot of the focus has been quality metrics
5 that have been presented. So we can talk about it and see if
6 there's a way for us to use some of maybe the existing data
7 sharing sites that DOH or EPA or the Navy has set up, and then
8 plug in some of our, you know, quantitative data --

9 CHAIR CHANG: Yeah.

10 DEPUTY MANUEL: -- into that.

11 CHAIR CHANG: Okay. And maybe that's a -- that's a
12 -- that's a task for UH.

13 COMMISSIONER KAGAWA-VIVIANI: Yeah, I was gonna
14 suggest -- I mean, you know, the USGS is --

15 CHAIR CHANG: Yeah, yeah.

16 COMMISSIONER KAGAWA-VIVIANI: -- very well -- you
17 know, they have a really stronger group of geologists,
18 hydrologists, and then UH as well. So I think kind of helping
19 the different organizations find their role in -- in the --
20 sort of the network would be good. And I think oftentimes
21 from the researcher's side, you know, people want to help, but
22 they don't know what the right questions are --

23 CHAIR CHANG: Yeah, yes, yes.

24 COMMISSIONER KAGAWA-VIVIANI: -- and they don't know
25 where the data is. And once the data is available, they --

1 you just point them, and that's --

2 CHAIR CHANG: Right.

3 COMMISSIONER KAGAWA-VIVIANI: People get very
4 excited when there's (inaudible).

5 CHAIR CHANG: Yeah.

6 COMMISSIONER KAGAWA-VIVIANI: Yeah.

7 CHAIR CHANG: Okay. So --

8 COMMISSIONER KAGAWA-VIVIANI: I'll pass that word
9 back.

10 CHAIR CHANG: Yes.

11 Thank you, Ryan.

12 Any -- has any board members -- commission have any
13 questions for Ryan or staff?

14 COMMISSIONER KAGAWA-VIVIANI: I -- sorry, I have one
15 other.

16 CHAIR CHANG: Go ahead.

17 COMMISSIONER KAGAWA-VIVIANI: So this is going back
18 to the chlorides being stable at Red Hill Shaft, and I was
19 wondering because Halawa's shut off, you know, I mean -- and
20 Halawa used to be a big draw, is -- do you think that plays
21 into the chloride story there or it's just the aquifer can
22 handle and, you know?

23 MR. IMATA: You know, that's a -- that is a good
24 question. I would have to look at the data for -- the water
25 use reported data from Red Hill Shaft and compare that to, you

1 know, prior to Halawa and then -- and then post-shutdown of
2 Halawa Shaft.

3 COMMISSIONER KAGAWA-VIVIANI: Okay.

4 MR. IMATA: Again, if our theory or if our
5 geologist's theory holds true, that large influx of water from
6 the Ko'olaus would -- would maybe -- could possibly suggest
7 that the shutdown of Halawa Shaft wouldn't impact Red Hill
8 Shaft in a significant way.

9 CHAIR CHANG: Any other questions or comments? Do
10 we have -- Jonathan, you've been with us the whole meeting.
11 Did you wanna -- were you here to participate on a particular
12 item?

13 MR. SCHEUER: Not at this time, mahalo. Other than
14 I was going to, when it comes to it, thank Commissioner Buck
15 for his years of service.

16 CHAIR CHANG: Oh, okay. Thank you very much. I
17 thought so.

18 Okay. Anybody else?

19 COMMISSIONER HANNAHS: So my takeaway is generally
20 good news, nothing disturbing in your -- in the data you
21 presented, Ryan?

22 MR. IMATA: Well, not from a water quality
23 standpoint, right, because again, we can't really --

24 COMMISSIONER HANNAHS: Right.

25 MR. IMATA: We can't really comment on -- on the

1 perspective of the presence of contaminants in the aquifer.
2 As far as aquifer health and depletion, that's really where --
3 again, as Kaleo mentioned, that's our sweet spot, right? So
4 based on our increased monitoring of what's happening with
5 respect to Waiawa Shaft and looking at our deep monitor well
6 data, we are relatively confident that any changes in system
7 pumpage isn't affecting the aquifers in a negative way.

8 COMMISSIONER HANNAHS: Okay, thank you.

9 And second to Kaleo, the last -- I don't know if it
10 was last month or the month before, the Navy made a
11 presentation which really created an opportunity to kind of
12 create a dashboard of various important task completions or
13 objectives and milestones that we could track. Have we kind
14 of done anything with that? Will we be seeing that on some
15 routine basis, quarterly perhaps, or some --

16 DEPUTY MANUEL: I'm hoping to try to figure out
17 whether it's some kind of informational briefing submittal
18 that we have that we can kind of evaluate what we're seeing
19 related to what they've presented or just have the Navy
20 present on those three things every quarter. So they've
21 agreed -- I've consistently reached out, and they agreed to be
22 back in July to update us on those kind of three focal points
23 of the work that they're doing. I'm hopeful that until the
24 fuel is removed or the facility is closed, that they're
25 committed -- at least we've gotten commitments from leadership

1 right now that they'll be here. So it is -- those three
2 threads and those focuses are where we want to have them
3 provide those updates.

4 COMMISSIONER HANNAHS: But I like the idea of kind
5 of keeping the destination targets --

6 DEPUTY MANUEL: Yeah, yeah.

7 COMMISSIONER HANNAHS: -- solid, and then measuring
8 milestone and progress --

9 DEPUTY MANUEL: Yeah, I think --

10 COMMISSIONER HANNAHS: -- of those milestones along
11 the way.

12 DEPUTY MANUEL: I think one of the -- in my opinion,
13 kind of seeing the big picture of things, that the biggest
14 issue is the remediation.

15 COMMISSIONER HANNAHS: (Inaudible.)

16 DEPUTY MANUEL: And we haven't got there yet.
17 Right? The focus right now has been on defueling safely the
18 facility. But, you know, I think we've been really consistent
19 at the Fuel Tank Advisory Commission -- Committee meetings and
20 others, at our subject matter expert meetings, that we've
21 really got to start thinking about what does remediation look
22 like for this -- these aquifers.

23 COMMISSIONER HANNAHS: Yes.

24 DEPUTY MANUEL: -- and start that conversation now
25 and not afterwards when you're done reviewing. But we need to

1 have those conversations now --

2 COMMISSIONER HANNAHS: Right.

3 DEPUTY MANUEL: -- and set those goals. We can
4 change --

5 COMMISSIONER HANNAHS: Yeah.

6 DEPUTY MANUEL: -- as we get more data, but we
7 really need to, yeah, know where it is we're going.

8 COMMISSIONER HANNAHS: Okay.

9 CHAIR CHANG: Wayne.

10 COMMISSIONER KATAYAMA: Hi, Ryan. Has the Navy
11 formed and stood up an organization to meet your expectations
12 moving forward to provide you timely data? And how does
13 that --

14 MR. IMATA: Yes.

15 COMMISSIONER KATAYAMA: -- organization look as to
16 what they've had historically there?

17 MR. IMATA: I mean, what we're -- I guess it depends
18 on what you mean by what we're looking at. From staff's
19 perspective, we are primarily looking at getting like a
20 finer-tuned reporting of their water use, which that -- that
21 came from NAVFAC directly. So in that sense, no.

22 As Kaleo mentioned, we are -- the commission is part
23 of the -- both the Fuel Tank Advisory Committee as well as
24 various subject matter expert groups, maybe the most
25 significant being the Remediation Roundtable. So as far as

1 particular commission objectives, yeah, there's -- there's
2 really -- there's really nothing that we look at in terms of a
3 larger group. Although, you know, informally, we do consult
4 with several geologists throughout the state about geologic
5 issues as they pertain to monitor wells. Otherwise,
6 commission staff is advisory to the Field Tank -- well, we're
7 a part of the Fuel Tank Advisory Committee as well as subject
8 matter experts.

9 COMMISSIONER KATAYAMA: Well, Ryan, is there an
10 opportunity -- one of the, to me, issues is that your
11 groundwater staff is sort of limited. Could we avail the
12 Navy's conscience and hopefully, you know, some of their
13 accountability to help improve getting groundwater data to you
14 to -- you know, what would normally be your function in doing
15 it, but take advantage of that if they're putting in, you
16 know, 35 sentinel wells around the area? Can we --

17 MR. IMATA: No, that's --

18 COMMISSIONER KATAYAMA: -- task them to do more?

19 MR. IMATA: That's a great question and -- and
20 actually, timely for me to let you know that the legislature
21 approved four positions under groundwater regulation for that
22 very purpose. So, you know, my thing has always been I would
23 prefer for us to be collecting the data rather than the Navy
24 to be collecting the data because, you know, validation --
25 data validation is an issue. And for us to do that stuff

1 in-house, it gives me much more confidence that we can make
2 better assessments on aquifer health. So we did get four new
3 positions. I'm in the process of trying to figure out how to
4 fill those positions and how to write the position
5 description, so -- but whether the Navy can contribute to
6 that, yeah, I would love that, you know.

7 COMMISSIONER KATAYAMA: Well, I think they're
8 obligated to do something.

9 CHAIR CHANG: Now, if I can add to that, so, you
10 know, the -- well, the State of Hawai'i, the state and the
11 counties created this unified statement. Part of the -- the
12 goal of this unified statement or this coalition is to bring
13 all of the different agencies together, including the county,
14 to hold the -- the Navy accountable for more than just
15 remediation. I mean, so we sit on that and, you know, my
16 concern is it's -- it's not just water quality and water
17 quantity, but the health of our ecosystem. Like what impact
18 does this have to the nearshore waters, up on the streams, up
19 mauka? So we are trying to leverage the Navy through this
20 opportunity to require them to do more data, you know, have
21 them responsible because there's a whole question as to, as
22 you say, Ryan, the validation. I mean, we're only getting
23 information from what the Navy's providing us. We are not
24 having the opportunity to necessarily ground truth that. And
25 that's why to me, having collaboration with other -- you know,

1 other monitoring wells, whether the Board of Water Supply --
2 but I think it -- right now is the opportunity for us to hold
3 the Navy accountable. Because if our -- our goal is not just,
4 you know, clean water with infiltration. I mean, far from
5 that. I mean, we want to be able to have clean water for
6 future generations that doesn't have to all have to go through
7 filtration. We also want to have clean water so our resources
8 are taken care of. So the -- part of the mission of this
9 unified statement, this coalition, is to draft federal
10 legislation and to get money to finance this. And it
11 shouldn't be funded by the State of Hawai'i; it should be
12 financed by the United States.

13 So we are, as we're speaking, going through that
14 process to try to be very comprehensive and inclusive and
15 bring the right people to the table to begin to identify
16 what's -- you know, what's our long-term goal, and then
17 working backwards, how do we -- how do we get sufficient
18 information, data, resources to get us to that point. So we
19 are being very --

20 COMMISSIONER KATAYAMA: Good.

21 CHAIR CHANG: -- cognizant of that.

22 COMMISSIONER KATAYAMA: Good.

23 CHAIR CHANG: Yeah. Any other questions or comments
24 to staff, Ryan or anybody else, on this update? And Kaleo's
25 right, I think, you did confirm with the Navy they'll be here,

1 so --

2 DEPUTY MANUEL: Yeah, they'll be here next -- in
3 July.

4 CHAIR CHANG: Yeah. So they are keeping to their
5 commitment to do quarterly updates to us following up on that
6 first meeting. So with that, being this was just an
7 informational briefing, right?

8 DEPUTY MANUEL: Just informational.

9 CHAIR CHANG: So, having no other comments or
10 questions, thank you very much, Ryan, for a very comprehensive
11 overview.

12 COMMISSIONER BUCK: And think of all our
13 (inaudible).

14 (Laughter.)

15 CHAIR CHANG: Yeah, yeah, you're right. I'm
16 trying --

17 COMMISSIONER BUCK: And throwing ones at the wall.

18 CHAIR CHANG: Yeah, there you go.

19 COMMISSIONER BUCK: I'm sure we've got plenty more.

20 CHAIR CHANG: I want to be cautiously optimistic
21 about the -- the data that you gave us and the health, but,
22 you know, preliminary, we've still got a lot more.

23 So with that being said, this item is closed and --

24 DEPUTY MANUEL: One more item.

25 CHAIR CHANG: One more item.

1 DEPUTY MANUEL: Yes. Item D-1 is just a chance for
2 a farewell address from Commissioner Buck and just to --

3 CHAIR CHANG: Yes, yes.

4 COMMISSIONER BUCK: Super. And --

5 DEPUTY MANUEL: -- (inaudible).

6 COMMISSIONER BUCK: You know, informal. You guys
7 got some formal written comments over there for the record,
8 but I do have some other comments. It's the last time you'll
9 hear me talk, at least on this side of the table.

10 I know many of you were here when Mr. Beamer gave
11 his goodbye comments. I think he identified 41 different
12 streams that we set in-stream flow standards during his
13 tenure, which somewhat overlap, and so it had me thinking
14 about, you know, why -- what's happened over the past eight
15 years that we've been so productive? You know, a lot of our
16 decisions were called historic and -- and surprising, and I
17 think we've been really blessed 'cause the time was really
18 ripe to have those decisions. Plantation agriculture was
19 totally gone. We had lengthy contested cases that were ready
20 to be resolved. We had a really diverse range of
21 commissioners as well.

22 And so, I want to reflect a little bit on what did
23 we learn over the past eight years and how might the
24 commission improve how it works? So I came up -- the
25 commission is more effective when we have time to work

1 together, when we have adequate and timely data from the
2 staff, when we have an understanding of stakeholder issues,
3 and we have ability to address those issues over larger
4 geographical areas. I think those -- let me drill down a
5 little bit.

6 You know, as we know, it's all frustrating that the
7 commissioners cannot talk to one another and -- only in
8 public. And I think some of our best work has been in some of
9 the protracted contested case issues when we really can sit
10 down together, and we come up with value-added products from
11 our different perspectives and -- and so I think it's
12 important to try to increase that. We did the permitted
13 interaction group, which I think is really useful, and I think
14 that's an underutilized thing, a way to have a certain number
15 of commissioners -- and I understand the evolution of the
16 legal issues, we're not doing backroom, smoke-filled things,
17 we're not, but -- and I think it's important for the public to
18 actually see us interact. I don't think they realize after
19 four or five hours of public testimony we don't know what
20 we're going to say to each other yet. You know, the show
21 hasn't really even started yet. So I think the interaction
22 between the commissioners is really important.

23 And that -- the issue of the contested case issue
24 and where that is. I understand why it's there. I'm not
25 suggesting -- but broken, it's kind of a broken system. It

1 does allow us -- you guys were on Kaua'i when we did the
2 Wai'ale'ale Stream, four or five hours of pretty heated public
3 testimony. We had just started deliberations, someone called
4 for a contested case; everything stopped. No more discussion.
5 And it turned out that entity did not even have, you know, the
6 proper standing. So I think there's -- we should really think
7 about how we reform the contested case because I think if the
8 commission and staff have time for a couple months to try to
9 work out a compromise and work with stakeholders and then come
10 back and maybe make a decision, I think we can resolve a lot
11 of that stuff.

12 You know, if people want a contested case, that's
13 fine. There are advantages. We get to sit together and deal
14 with it. It takes too long, it's too expensive, legal issues,
15 and we might not even agree with the hearings officer's report
16 and end up having to go back. And I think we found in
17 numerous situations where we go back and ask people, Can you
18 rescind your contested case so we can actually sit down and
19 talk? So maybe legally there's a two or three months timeout,
20 we're not making a decision, but we're going to work on the
21 issue, come back in a public forum, try again, and maybe
22 there's a way that we can actually work. So I'm not
23 suggesting we get rid of the contested cases, but it's time to
24 have a -- kind of a serious discussion how to re-reform that
25 with stakeholders. So that's one.

1 Obviously, adequate and timely data from staff is
2 critical. And we're sitting with some of our best staff right
3 here that does it. I think it's time -- I know it's hard.
4 You know, when I was at DOFA, we reorganized to have
5 decentralized so we could have someone on each island who had
6 the authority and the responsibility to make decisions. And
7 we have so many in-stream flow standards; we can't manage this
8 from -- as effectively from Honolulu anymore. And we only
9 have one Ayron. And so eventually setting up some sort of
10 organization where you have someone on each island, especially
11 on Maui where we have really active community groups. And I
12 know, Claire, you're well aware of that, but it's time to kind
13 of move toward that. We've gotten bigger now; we have
14 enforcement and regulatory structures, you know. I mean,
15 in-stream flow standards all over the island. And so I think
16 it's time to -- however you can manage that, to start doing
17 that.

18 The third one is, you know, the more we know about
19 our stakeholders, the better. You know, COVID has changed our
20 public hearings forever. I don't think we're ever gonna go
21 back to in-person. I think it's been an improvement. We're
22 getting testimony from all sorts of people. It's hard for the
23 chair to manage sometimes as a three-minute warning and, you
24 know, after four or five hours of public testimony, the
25 commission has a pretty good idea where people are, and our

1 people the same thing.

2 So I don't have any suggestions, but I think it has
3 changed the way we'll be doing hearings forever now, and maybe
4 there's ways to make it more efficient. Somehow having the
5 testifiers know what other people are testifying so they can
6 consolidate. Maybe pre-recording public testimony so people
7 have a chance -- I haven't really thought that through, but we
8 know these hybrid meetings are a way of the future, and we
9 have to deal with that.

10 And then finally, wherever we can, if we can do
11 larger geographical areas, you know, and look at the
12 difference between the East Maui decision -- and I go back to
13 Kaua'i, Wai'ale'ale, where we were stuck with one stream
14 because of a time limit on an application to the Board of Land
15 and Natural Resources. There's more water in that drainage
16 than any other drainage in the whole state, and if we would
17 have an ability -- I think we're trying -- to really look at a
18 larger geographical area, we can deal with the ecosystem
19 issues, we can deal with the balancing that we need to do
20 between our public trust priorities. And so wherever we can
21 -- sometimes we're stuck with having to deal with a stream,
22 but any way we can combine that within the larger area. And I
23 think East Maui was a classic example where really we had a
24 clean pallet for almost the first time to really implement the
25 Water Code because we had 27 streams, we had really enough

1 water, we had -- we really could make the balancing. Nā Wai
2 'Ehā was a lot harder and -- well, apologized to staff because
3 we know implementation of that was going to be horrible
4 because we had private delivery systems, we had contested
5 already with the water use, and so -- and so I know as you
6 start dealing with Lanai, I'm so glad we didn't, Oh, let's
7 just take this aquifer. You know, take as large a
8 geographical piece as you can because that allows you to make
9 the appropriate decisions.

10 It'd be remiss not to talk about Red Hill. We
11 talked about it a lot and -- and I'll just say shortly, I'm --
12 I'm okay where we are right now. We have the Navy's
13 attention, DOH is all in, and that's good; EPA is all in, and
14 that's good, although you can never trust a federal agency to
15 stick up for what the state's interests are. But I still
16 would urge in this all-in concept that the State of Hawai'i
17 needs a comprehensive legal regulatory and enforcement
18 strategy because we're gonna have to put constant pressure.
19 And it is all about our kuleana aquifer remediation and
20 recovery. And knock on wood, once the fuel is out, you know,
21 people -- the energy is gonna let down, and we are still stuck
22 with some of the issues that we've been talking about.

23 And so, this commission unanimously recommended
24 modifying their water permit. Take a look at their water
25 permit. There is none; it's grandfathered in. We're giving

1 20 million gallons a day to the Navy with no conditions
2 whatsoever. And, you know, you ask in the public meetings,
3 people ask EPA, Well, what happens if they don't -- you know,
4 if they don't follow the plan? Oh, we'll fine them. You
5 know, that's just taxpayer money. You know, DOH can fine
6 them, but that's just money. But connecting their
7 responsibility to clean up the aquifer with their use of the
8 water. If we need to cut back, they need to cut back.

9 So I still would urge the Water Commission, when the
10 time is right and when we know more about the monitoring data
11 so we have a better feel of what is involved in aquifer
12 recovery remediation, we start the public process -- because
13 it'll be commission-oriented -- where we go out to the public
14 and say, We want a plan for aquifer recovery remediation.
15 What does it look like? And I think that's the time for the
16 commission to step up in its regulatory role.

17 Like I said, I'm happy where we are right now.
18 We've got people's attention; DOH is all in, and, you know,
19 I've been to every one of the FTAC and all of the different
20 meetings. And so we have their attention, but once they
21 safely defuel, we're still left with those issues which are
22 gonna probably transcend the time frame of most everyone here
23 at the table, so it's important that we do that.

24 And my last one, and this one is I'm not giving up
25 yet. You know, in '78, they made water -- there is no private

1 ownership of water, the Water Code in '81. Sustainability,
2 you know, is a three-legged table: Biological, social, and
3 economic. There is no economic underpinnings for the Water
4 Commission and the Water Code. We don't have -- we're not
5 connected at all -- outside of potential fines and
6 administrative fees, we don't charge anything for water.
7 Water is not free, the public trust responsibilities that
8 we're supposed to manage are not free, and we haven't yet made
9 that connection. And even now, the Board of Land and Natural
10 Resources is struggling to try to figure out -- well, at least
11 in our designated area in the lease, how much do we charge
12 people for water? But basically, to be sustainable, the Water
13 Code has to have an economic underpinning, which means there
14 needs to be some way to connect the value of the water with
15 the management of the water resource. And so that's still an
16 outstanding issue. I've talked to Kaleo about it a lot, I've
17 talked to Neil about it a lot, you know.

18 You know, when we did the watershed partnerships, we
19 came up with the conveyance tax and, I mean, we've come up
20 with ways to do that, but it's important that this commission
21 -- and maybe you can hold some workshops or bring some people
22 in, just a way to kind of have people understand. 'Cause when
23 you talk about money and water, people -- people freak out.
24 You know, the counties don't want to deal with it, they don't
25 want to raise their rates, but we need to find a way that we

1 could fund the public trust 'cause that's our responsibility.

2 That's kind of some suggestions I might have,
3 observations of how we've been very productive. I want to
4 thank you all. I'm not going away. I'm actually chair of the
5 Malama Honua Public Charter School Foundation. You know,
6 we're raising money to build our school; it's based on the
7 values of ocean navigation. The kids -- actually, we have a
8 sublease from DLNR. The kids are unbelievable. I mean, that
9 is the next generation of leadership, and so I'm really
10 dedicated to try to build that school. And it happens to be
11 in Waimānalo, so I might be asking you guys for donations at
12 some time.

13 (Laughter.)

14 COMMISSIONER BUCK: But it's been a pleasure. You know, when
15 I was with DOFAW, you know, and this was maybe when we were
16 starting the East Maui partnership, and that was when Waiāhole
17 was just going, and I was going, God, these commissioners,
18 they're fighting over this drop in the bucket when we're
19 dealing with all the source water stuff. I said, One of these
20 days, I'm gonna be on that commission. And we have so many
21 converts now in watershed protection, I feel very comfortable,
22 especially with Commissioner Hannahs. I don't need to -- like
23 I don't need to spout off anytime. But it's been great, thank
24 you very much. Keep up the great work. You're doing important
25 -- and the Water Code is probably one

1 of the most innovative and aspirational water legislations in
2 the world. It really is. It's not -- it's a challenge to
3 implement, but, you know, I've worked all over the US and
4 internationally, and when I asked the Maui chair comparing
5 California and Hawai'i, he obviously doesn't know much about
6 Hawai'i yet because we are so far ahead of what they're doing
7 in California about regulatory structures and indigenous
8 rights. So it's been a pleasure, and thank you all for your
9 work. Stay happy and healthy.

10 CHAIR CHANG: Thank you. Before -- I know that
11 Jonathan and Lucienne are also on the Zoom and probably want
12 to say something, so go ahead, Jonathan.

13 MR. SCHEUER: Aloha mai kākou, Commissioners. My
14 name, for the record, is Jonathan Lakeke Scheuer. And while I
15 often appear in front of you as a testifier on behalf of DHHL
16 or other entities, this is just my personal testimony. Just
17 wanting to thank Commissioner Buck for his years of service
18 and say from the perspective of somebody who's been observing
19 this commission for almost three decades now, that I just want
20 to highlight three things which came out in -- in his very
21 thoughtful closing remarks that I think really mark something
22 very special and at times completely unique that Commissioner
23 Buck has brought to this commission.

24 The first is really the matter he last talked about.
25 He's always approached the commission with an understanding of

1 how innovative and how unusual and how profound the Water Code
2 is. And he's really sort of come with that understanding that
3 it means a huge deal to walk into a role of having to try and
4 implement and uphold that.

5 That relates to my second thing that I wanted to
6 highlight about his tremendous service is that I certainly
7 have not always agreed with some of the decisions that he's
8 made, but unlike some other people I've observed over three
9 decades, there was never a question in my mind that, first and
10 foremost, he understood the duties of a trustee which first is
11 duties to be faithful to the trust corpus itself. He -- I
12 might have disagreed with the decision he reached, but it was
13 always in trying to further what was best for the resource and
14 best for the implementation of the code, and that really
15 increased the amount of trust that this body has had over the
16 time of his service.

17 And finally, and this is also something he remarked
18 on, his continual drumbeat about us needing to connect how we
19 manage our forested watersheds and how we manage the water
20 derived from them is an incredibly important message, and I
21 think that as we slowly make progress on that over the next
22 years and decades, his voice in the wilderness will be one
23 that will continue to guide us and be seen as a guiding light
24 in that process.

25 So I'm just personally very, very grateful for your

1 service and for your closing remarks. Thank you for the
2 opportunity to offer these few comments. Aloha.

3 CHAIR CHANG: Thank you, Jonathan. That was very
4 well said. Thank you so much.

5 Lucienne, I see you on the call as well.

6 MS. DE NAIE: Indeed. Mahalo and thank you all.
7 Thank you all for a long day. Thank you all for the service
8 that each of the members puts into this very important board.
9 But, you know, I've known Mike since back in the days of DOFAR
10 and, you know, we've had discussions about forestry issues and
11 this and that 'cause I've been here watching these meetings
12 for about three decades too. And those of us who represent,
13 you know, groups that are trying to be part of the -- kind of
14 watchdog for the public trust always appreciate when there's a
15 person who's willing to listen. And like Jonathan says, you
16 don't always come to the same agreement. In the end, that is
17 not the whole point. The point is, is that there is a
18 respectful and engaged dialogue. And Mike just really has
19 gone the extra mile in every facet of his service on the
20 commission.

21 And I have to say, you -- your closing words, Mike,
22 I agree a hundred percent with every thoughtful suggestion you
23 brought up. They are things that are on the minds of all of
24 us who have been watching our water policy evolve from, you
25 know, the 1980s when it first kind of took form, and all of

1 these are important things. I join with Jonathan. Connecting
2 our watersheds and caring for the whole watershed, and
3 involving the communities in that caring is one of the most
4 important things that we can do if we really don't want to be
5 fighting over less and less water in the future. We need to
6 envision a future when we -- where we -- as we grow water, and
7 that means cooperating with nature.

8 I also very, very much appreciate your remarks about
9 working with stakeholders to try to avoid contested cases
10 being the only option. Now, obviously, you know, I've been
11 party to many contested cases. Sometimes they are the best
12 option because the story is just too full to tell through
13 even, you know, meeting a few times. But even if you look at
14 Nā Wai 'Ehā and working towards some of these brokered
15 settlement agreements, it saved everybody time. It is not
16 perfect; we do need more enforcement of what's on paper so it
17 doesn't become just a good-looking decision on paper that on
18 the ground, where's the water? But the idea of bringing
19 people together when possible to find common ground over a
20 shared resource, I think, should be very, very high on the
21 purview of the commission like this, and I applaud your
22 efforts. I -- you know, you've made many suggestions to that
23 that -- that type of resolution. And Director Chang is really
24 heading in that way as well; your staff is heading in that
25 way.

1 So just from the bottom of our hearts in our
2 communities, you know, most people are not like me, they're --
3 they're not, like, kind of retired and, you know, just
4 dedicated to sign up to wait in line to testify for hours, but
5 they do care and the -- this attitude is being appreciated.
6 So I hope everything that's ahead for you, Mike, allows you to
7 see some of these dreams come true and do many other wonderful
8 things for our community. So God bless you, and thank you for
9 your service.

10 CHAIR CHANG: Thank you, Lucienne. You are indeed a
11 great representative of the community. Mahalo for signing up
12 and being there.

13 I'm gonna -- I'm gonna let Kaleo say the final
14 words, but I'm going to go around, either staff or commission,
15 if you want to say something to Mike as well.

16 DEPUTY MANUEL: Sure.

17 CHAIR CHANG: Aurora.

18 COMMISSIONER KAGAWA-VIVIANI: I didn't draft
19 anything.

20 CHAIR CHANG: Oh, that's okay.

21 COMMISSIONER KAGAWA-VIVIANI: I should've.

22 CHAIR CHANG: From the heart, from the heart.

23 COMMISSIONER KAGAWA-VIVIANI: I'm pretty bad at
24 impromptu speaking. But I do appreciate the opportunity I had
25 to get to know you on the permitted interaction group. And

1 also, you know, as sort of the -- the junior member on the
2 commission, really watching you kind of be the tip of the
3 spear and the first person to make a motion and -- and to know
4 -- because I think I first interacted with you through -- when
5 I was working at conservation. So I knew your name, I knew
6 your work in forestry, and to understand how -- like the role
7 you played in the watershed partnerships and kind of this
8 stitching together for me of forest and water. And then to be
9 able to work with you on the permitted interaction group and,
10 oh, my gosh, like the phone calls, the text messages, the Zoom
11 calls, the meetings. I mean, the energy with which you
12 attended every single -- I don't know how many hours long
13 meetings and read -- actually, like read through the very long
14 reports. You know, I think I -- I was skimming and word
15 searching, but you, you read through and followed everything
16 with such a commitment. And I think for me, I don't know,
17 it's really great to see that as a model of this is what
18 public service is because I don't think the public really
19 understands. Not everybody does it, but I think you set, I
20 think, a high bar, at least for me personally, on how much to
21 research and do investigating and to learn more about -- you
22 said you came from a family of lawyers --

23 COMMISSIONER BUCK: And that's why I became a
24 forester.

25 (Laughter.)

1 COMMISSIONER KAGAWA-VIVIANI: And I studied
2 forestry, and I'm thinking like, Well, I need to understand
3 more, you know, about law. But I really appreciate what I've
4 been able to learn certainly (inaudible) especially working
5 more closely (inaudible).

6 Your comments about interactions, some of those
7 exchangers were really where we could not be so reactive in a
8 meeting, but really think hard and think creatively and think
9 around some really complex issues and, yeah, mahalo for those
10 -- those points. I haven't been in a contested case really
11 yet, so I'll be thinking about that.

12 COMMISSIONER BUCK: Don't worry, you'll get a
13 chance.

14 COMMISSIONER KAGAWA-VIVIANI: (Inaudible.) Yeah, so
15 -- so, yeah, mahalo for that. And we'll see you around --

16 COMMISSIONER BUCK: Oh, yeah.

17 COMMISSIONER KAGAWA-VIVIANI: -- in educational
18 spheres.

19 CHAIR CHANG: There you go.

20 COMMISSIONER BUCK: Yeah. Hey, for our legal
21 assistant, you know, we do have a mediation process that's in
22 our rules, but the commissioners are not allowed to
23 participate. It's an outside person, and we still are not
24 connected to that, so maybe there's something you can look at.

25 CHAIR CHANG: Yeah, we are looking.

1 Joanna, do you want to --

2 COMMISSIONER SETO: Just a short one.

3 Thank you for all the hard work that you've put in
4 on the commission, eight years and plus. We appreciate
5 everything that you've done for the water and the big picture
6 of water, not just one focus of quantity. So, yes, there is
7 the overlap between quantity and quality, and we do need to
8 work together. So thank you for also being on the PIG --
9 sorry, the permitted interaction group -- and providing the
10 input that we needed for the Red Hill situation.

11 COMMISSIONER BUCK: And thank you for what you do.
12 You've been in the spotlight the last couple of years. I know
13 it hasn't been easy.

14 CHAIR CHANG: Wayne, did you want to say anything to
15 Mike?

16 COMMISSIONER KATAYAMA: Yeah. Thanks, Mike. I
17 think one of the signature characteristics of an effective
18 organization is the composition of its members in that each
19 member provides a very distinct and unique skill set and a
20 point of view. As you look at the composition of our members
21 today, I think we have that, Mike, and your perspective has
22 filled a very important segment of how we approach issues and
23 how we resolve that. So, you know, again, thank you, Mike.
24 And unfortunately, our first interaction was I replaced you on
25 your seat, so I apologize for that.

1 (Laughter.)

2 COMMISSIONER BUCK: You know, when I looked at your
3 -- your resume because obviously I wasn't reappointed, I did
4 have like a three-month gap, and I said, No, no, he's okay.

5 (Laughter.)

6 COMMISSIONER KATAYAMA: Anyway, Mike, thank you very
7 much for being you and thank you very much for, I guess,
8 helping me see a far broader perspective of what needs to be
9 encompassed in managing and ensuring that we have a
10 sustainable water supply that provides for a healthy community
11 in terms of growth. So again, Mike, thank you very much.

12 CHAIR CHANG: Neil.

13 COMMISSIONER HANNAHS: Yeah. Mike, our paths have
14 crossed many times prior to being on the Water Commission, and
15 during these last, I guess, seven years of overlap, and I have
16 no doubt that they'll cross again in the future. And there
17 are four things I've really come to appreciate in this term of
18 service is that you really love Hawai'i, and your aloha, you
19 know, factor metric is really up there, and I really
20 appreciate that, and you're courageous about it. You put it
21 on the line, and you fight for it, so that's awesome. You
22 show up, you know, you have a -- you bring a lot to the table
23 when you do. You are prepared, and you engage, and you take
24 the time to take -- if you're gonna take a seat on this table,
25 you know, be there, be present, and be ready and do your job.

1 So you've done it really well and set a model and an example
2 for all of us.

3 As you come here, you don't know a lot, but yet
4 you're very respectful of everybody else, a good team member.
5 And as Wayne has said, you recognize that these decisions have
6 to balance a lot of interests. You have -- you have some,
7 others have other perspectives, and I've always felt this
8 great sense of respect for your peers and for the testifiers
9 and the diverse constituencies out there that need to be
10 served. I appreciate that.

11 And finally, you made a special effort to be
12 transparent, and your -- you kept those humongous decisions,
13 you know, East Maui and Nā Wai 'Ehā and so forth, you know,
14 you were the one who fought for executive summaries. So the
15 public really needs to not get mired in all the details or
16 just the one line item that affects them and so forth; they
17 need to see the big picture, and I think it really helps
18 people. It creates the common ground, the higher -- the
19 higher sense of vision and value that helps bring people
20 together. So it's -- it's considerate of them to -- they
21 should -- they need to know, but it's also unifying for those
22 that can share this, and I think that's helped us a lot.

23 So I hope part of your future is not just building a
24 wonderful school, but also maybe playing a little music.

25 COMMISSIONER BUCK: Oh, yeah, yeah.

1 COMMISSIONER HANNAHS: Aloha to you.

2 COMMISSIONER BUCK: Thank you so much.

3 CHAIR CHANG: I'm gonna let Kaleo have the last
4 words as you both have come to know each other well. All I
5 can say is from -- I've always -- I think it's -- what I
6 appreciate is sort of this full circle, being part of -- you
7 never leave DLNR. I mean, I say that because I guess I can
8 state that firsthand. And it's -- it is a very different
9 perspective to sit on this side of the table versus that side
10 of the table because we do have this awesome kuleana that the
11 decisions we make have broad implications far beyond us and
12 our generation, but generations to come. And I have just
13 appreciated watching you afar sitting on here, but as well as
14 when you were with DLNR. Water and land are inseparable, and
15 sitting here, we have the ability to always ensure that we are
16 taking into consideration all of that and how intertwined and
17 interconnected and that we as decision-makers cannot separate
18 that but ensure that we are considering all of those. And I
19 always talk to the staff about staying in our lane, but I
20 think as a decision maker, we have to take the much broader
21 view. And I've appreciated the lens upon which you have
22 brought to the Water Commission just that -- the broader
23 kuleana of recognizing, again, that our decisions have broad
24 implications, but that it is -- it is a very heavy
25 responsibility, and you have worn that well and have accepted

1 that with such honor and privilege. And so it -- likewise, it
2 has been a privilege for me to share this time we see
3 together, as short as it is. But we're going to probably see
4 you on that side of the table.

5 (Laughter.)

6 CHAIR CHANG: Yeah, who knows, maybe as a hearing
7 officer or as a -- I mean, you can help to -- you can help to
8 correct this broken contested case hearing process. But, like
9 Neil, our paths will cross again, so thank you very much.

10 Kaleo.

11 DEPUTY MANUEL: Yeah, I mean, I'm -- on behalf of
12 the staff, you've always been really respectful of the team
13 and super supportive, and it's been really great to work with
14 you for four and a half years on your tenure. I really just
15 -- you know, I mean, everybody's kind of touched on your
16 great, you know, attributes and the work that you've done and
17 the space that you've held, and you've held it really well,
18 but I really just appreciated like your storytelling in space
19 and kind of connecting people through this scene versus kind
20 of using the seat from a place of power. You've really found
21 a way to make this a people's -- you know, the community a
22 space in and have been a staunch advocate for the public
23 trust, but also holding ourselves as -- as trustees
24 accountable and to look and innovate and continue to push,
25 push the envelope. So I've appreciated that, and I've learned

1 a lot from you. And yeah, just the beginning of another
2 story, so good luck, and we will miss you. We will miss you
3 on this, this body.

4 COMMISSIONER BUCK: I wish you would replace me with
5 someone who has a little bit of knowledge.

6 (Laughter.)

7 DEPUTY MANUEL: You know, I, unfortunately, have
8 zero clout in that process, and so that -- you know, we -- we
9 look forward to, you know, Dr. Miike joining the commission
10 again and his expertise --

11 CHAIR CHANG: Oh, yes.

12 DEPUTY MANUEL: -- in this space. But again, like
13 Commissioner Katayama said, I mean, what I've really loved is
14 the diversity of perspectives and world views that each and
15 every one of you bring to this space. And it really helps
16 build the capacity of our staff and our agency, and I think we
17 do a lot with so little and -- and build that trust over time,
18 yeah, with community.

19 COMMISSIONER BUCK: Yeah, I think it'd be really --
20 he'll be really interesting, just the history of the Water
21 Code, you know, what happened between '78 and '81, and how was
22 this established, all the different compromises and things to
23 make it. Because, you know, people are gonna go after the
24 Water Code, I think eventually because let's say in Lahaina, I
25 mean, we made some pretty big decisions that pissed some

1 people off, they were not ready, and yet I don't think people
2 realized what the Water Code was. And I think over the last
3 eight years; we're really implementing it. We've had an
4 opportunity that other commissioners haven't to really
5 implement it for the first time over large areas. And so I
6 think people are now just like thinking about it and what it
7 means and -- yeah. So I think he'll bring an incredibly
8 useful perspective because he was there, you know, during that
9 time. I wasn't -- you know, between '78 and '81, I was here,
10 but I wasn't part of any of that process, but -- and I don't
11 know if anyone's really kind of documented that, you know, all
12 of the push-pull and the Homeland issues and -- Homeland, how
13 did they actually come up with that because I think eventually
14 someone needs to tell that story because it is a unique story.

15 COMMISSIONER HANNAHS: Well, you wrote a book?

16 COMMISSIONER BUCK: Yeah, but have you read the
17 book? It's a tough read.

18 (Laughter.)

19 COMMISSIONER HANNAHS: It needs an executive
summary.

20 (Laughter.)

21 CHAIR CHANG: He will definitely add a different
22 dynamic to this commission.

23 COMMISSIONER BUCK: Yeah.

24 CHAIR CHANG: We're gonna have to put a special

25 seat --

1 COMMISSIONER BUCK: Yeah.

2 CHAIR CHANG: -- way in the back.

3 (Laughter.)

4 CHAIR CHANG: No, I -- undoubtedly, big shoes to
5 fill. You bring a very different perspective than he does,
6 but, you know, I think that is -- yeah, as you say, Wayne,
7 that is the wonderful value. I mean, we were all here when we
8 had man boards and water commissions that were very different
9 composition that didn't necessarily reflect this kind of
10 wealth of expertise and communities. So, yeah, we've come a
11 long way.

12 COMMISSIONER BUCK: Yeah. One other suggestion I
13 forgot that because of Zoom, there should be at least -- like
14 once every quarter that the commissioners could come together
15 so you actually could be in the same room. Because it's so
16 much easier to go on Zoom, we all know that, and we prefer
17 that mostly, but especially (inaudible), it's really important
18 for people to sit face to face.

19 CHAIR CHANG: I think more people have been trying
20 to make an effort, so yeah. But thank you for bringing --
21 creating the opportunity for everybody to be here today.

22 COMMISSIONER BUCK: Yeah.

23 (Laughter.)

24 CHAIR CHANG: Don't do it again.

25 (Laughter.)

1 CHAIR CHANG: All right. With that being said
2 (gavel), the commission meeting is closed.

3 (The proceedings were adjourned at 12:19 p.m.)
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