

COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAI'I

REGULAR MEETING

July 26, 2023, 9:02 a.m.

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

Online link to the video recording of the July 26, 2023  
Commission on Water Resource Management meeting:  
<https://vimeo.com/852839853>

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

## 1 COMMISSION MEMBERS PRESENT:

2 Dawn N. S. Chang, Chair  
Neil J. Hannahs, Commissioner  
3 Kathleen S. Ho, Department of Health Designee  
Aurora Kagawa-Viviani, PhD, Commissioner  
4 Wayne K. Katayama, Commissioner  
Larry H. Miike, Commissioner  
5

6  
7 STAFF PRESENT:

8 Collin Lau, Deputy Attorney General  
Alexa Deike, Legal Fellow  
9 Neal Fujii, State Drought & Water Conservation  
Coordinator  
10 Ryan Imata, Groundwater Regulation Branch Chief  
M. Kaleo Manuel, Deputy Director, CWRM  
11 Katie Roth, Planning Branch Chief  
Ayron Strauch, PhD, Hydrologist  
12 Barrett Won, IT Specialist  
Kathy Yoda, Commission Secretary, Pro Tem  
13

## 14 OTHERS:

15 Major General Mark Hashimoto, INDOPACOM  
Sasha Dimond, INDOPACOM  
16 Sarah Moody, NAVFAC  
Captain James Sullivan, JTF-Red Hill  
17 Lieutenant Colonel Jason Wingear, JTF-Red Hill  
Donald Panthen, navy Region  
18 Mathew Geyer, Shut Down Red Hill Coalition  
Susan Gorman-Chang, Shut Down Red Hill Coalition  
19 Scot Izuka, PhD, USGS  
Susan Pcola-Davis  
20 Abbey Seitz, Planning for Community, LLC  
Barry Usagawa, Honolulu Board of Water Supply  
21  
22  
23  
24  
25

1 P R O C E E D I N G S:

2 CHAIR CHANG: I think that's my cue. I'm pounding  
3 my table, pretending that it's the gavel. So I'm gonna call  
4 this meeting to order. Aloha mai kākou. My name is Dawn  
5 Chang, and I am the chair of the Commission on Water Resource  
6 Management. I apologize for not being in -- not being there  
7 present, especially since this is the first meeting of our new  
8 commissioner, Larry Miike. This is the January 26, 2023,  
9 meeting of the Commission on Water Resource Management.

10 Oh, so sorry. I'm gonna turn my phone off.

11 And it is 9:00 a.m. We are holding this meeting as  
12 a hybrid meeting. Some of us are in person in the Kalanimoku  
13 Building in the boardroom in Honolulu, and we are also holding  
14 this meeting remotely via Zoom, and can be watched live on  
15 YouTube.

16 For those here to testify on Zoom, we will let you  
17 into the meeting when we will be hearing the item you wish to  
18 testify on. Please remember to turn off your YouTube when you  
19 are in the main Zoom meeting room, or we will get an echo.  
20 When you enter, please be sure to keep your camera off and  
21 microphone muted until the commission calls on your public  
22 testimony. We ask that members of the public testifying on  
23 agenda items limit your testimony to three minutes so that we  
24 can get everyone. Please be mindful of everyone, those who  
25 are here to testify. And remember not to use the chat for any

1        comments because that presents a Sunshine issue. People may  
2        also testify via telephone at the number posted. Please let  
3        our commission secretary, Kathy Yoda, know your name and what  
4        agenda item you wish to testify on so we can call on you for  
5        that item. You may also email your testimony via email, which  
6        we have received, to kathy.s.yoda@hawaii.gov or to dlnc.cwrn@  
7        hawaii.gov.

8                We will be having several presentations today.  
9        There will be no direct questions from the public to the  
10       presenters, only to the commissioners. And my intent is to  
11       provide the commission and the public with good, accurate, and  
12       current information but in a safe environment without  
13       contention, so I'd really appreciate it, those of you who have  
14       questions, if you direct them to the commission.

15               For all meeting participants, I would ask that you  
16       -- stress that you speak slowly, clearly, and directly.

17               I will now read the contested case hearing  
18       statement. In some matters before the commission, a person  
19       may wish to request a contested case hearing. If such a  
20       request is made before the commission's decision, then the  
21       commission will consider the request first before considering  
22       the merits of the item before it. A person who wants a  
23       contested case may also wait until the commission decides the  
24       issue, then request a contested case after the decision; it is  
25       up to you. Any request must be made orally by the end of the

1 meeting and followed up in writing within ten days. If no  
2 request for a contested case is made, the commission will make  
3 a decision. The department will treat the decision as final  
4 and proceed accordingly.

5 In addition, the commission may go into executive  
6 session pursuant to 92-5(a)(4) Hawai'i Revised Statutes in  
7 order to consult with its attorney on issues or questions  
8 pertaining to the commission's powers, duties, privileges, and  
9 immunities.

10 I'd like to now take roll call of all the  
11 commissioners. I'd like to first start with those  
12 commissioners that are in the boardroom, and then we'll go on  
13 those that are -- that are here remotely. And I am sorry, so  
14 if you could -- I not see the boardroom, I don't have that  
15 screen, so whoever's sitting next to Kaleo, if you could start  
16 first.

17 COMMISSIONER MIIKE: Larry Miike.

18 COMMISSIONER HANNAHS: Aloha. Neil Hannahs.

19 COMMISSIONER KAGAWA-VIVIANI: Aurora Kagawa-Viviani.

20 COMMISSIONER HO: Kathleen Ho.

21 CHAIR CHANG: And on remote, Wayne.

22 COMMISSIONER KATAYAMA: Good morning. Wayne  
23 Katayama. I'm here alone.

24 CHAIR CHANG: And, again, Dawn Chang, chair, and I  
25 am here alone too.

1 I would like us to all welcome Commissioner Larry  
2 Miike for his first meeting before -- with the commission.

3 And again, thank you all for -- I'm hoping that I'm  
4 gonna get this -- this remote thing without too many glitches.

5 I'd also like to introduce the staff, and I don't --  
6 and again, I can't see everybody on the other side, but we  
7 have Deputy Kaleo Manuel, and Kathy Yoda is our secretary, and  
8 we have Deputy Attorney General Collin Lau. And as the staff  
9 present -- do their presentations, I'll ask them to introduce  
10 themselves.

11 I'd like to do agenda items protocol. We will hear  
12 items generally in the following order that's been posted on  
13 the agenda unless there's been a request for an item to be  
14 moved up.

15 Ms. Yoda, have there been any agenda items that have  
16 been withdrawn or asked to be moved up?

17 MS. YODA: No.

18 CHAIR CHANG: All right. Thank you so much.

19 **Item A1**

20 So, the first item on the agenda is the approval of  
21 the minutes of June 2023, Item A. Do I have any questions or  
22 comments?

23 COMMISSIONER KAGAWA-VIVIANI: Commissioner Kagawa-  
24 Viviani.

25 CHAIR CHANG: Yes.

1 COMMISSIONER KAGAWA-VIVIANI: (Inaudible) how we're  
2 doing this with this one?

3 So I just have nonsubstantive corrections.

4 CHAIR CHANG: Okay.

5 COMMISSIONER KAGAWA-VIVIANI: (Inaudible.)

6 CHAIR CHANG: And, Commissioner Viviani, will you  
7 provide those comments to the staff?

8 COMMISSIONER KAGAWA-VIVIANI: Yes, I will.

9 CHAIR CHANG: Very good. Do I have any other  
10 comments from the commissioners?

11 (No response.)

12 CHAIR CHANG: Okay. I don't hear or see any. Is  
13 there a motion?

14 COMMISSIONER HANNAHS: So moved.

15 CHAIR CHANG: The motion has been made. Is there a  
16 second?

17 COMMISSIONER KAGAWA-VIVIANI: Second.

18 COMMISSIONER KATAYAMA: Second.

19 CHAIR CHANG: All right. A motion has been made and  
20 seconded to approve the minutes of June -- of June 20th, 2023.  
21 I'm gonna -- since this is the first vote, we will do it by  
22 roll call.

23 So, Kathy, could you do the roll call, please?

24 MS. YODA: Larry Miike.

25 COMMISSIONER MIIKE: Since I wasn't here for that,

1 I'll just abstain.

2 MS. YODA: Neil Hannahs.

3 COMMISSIONER HANNAHS: Aye.

4 MS. YODA: Aurora Kagawa-Viviani.

5 COMMISSIONER KAGAWA-VIVIANI: Aye.

6 MS. YODA: Kathleen Ho.

7 COMMISSIONER HO: Aye.

8 MS. YODA: Wayne Katayama.

9 COMMISSIONER KATAYAMA: Aye.

10 MS. YODA: Chair Chang.

11 CHAIR CHANG: Aye.

12 Thank you very much.

13 I am sorry. I did want to say that we have one more  
14 commissioner, Paul Meyer, who is excused; so otherwise, Paul  
15 would be here with us.

16 So the minutes have been moved -- have been  
17 approved.

18 *MOTION: (HANNAHS/KAGAWA-VIVIANI)*

19 *To approve the June 2023 minutes with recommended edits.*

20 *UNANIMOUSLY APPROVED*

21 *HANNAHS/KAGAWA-VIVIANI/HO/KATAYAMA/CHANG*

22 **Item B1**

23 CHAIR CHANG: The next item on the agenda is Item  
24 No. B1, it is the Navy -- Navy Region and Navy Facilities  
25 Overviews/Updates of Red Hill Remediation and Closure, Red



1 Hill Shaft Recovery and Monitoring, and Monitoring Well  
2 Development and Water Data. I think General Hashimoto, you  
3 are at the table. Again, thank you very much. This is the  
4 second update to the water commission. We have greatly  
5 appreciated the Navy appearance before the commission intended  
6 to provide us some good information about the current status  
7 of your -- the cleanup at Red Hill. So go ahead, General  
8 Hashimoto, and if you could also introduce your staff.

9 GENERAL HASHIMOTO: Aloha, Chair Chang, Deputy Chair  
10 Manuel, Commissioners, Ladies and Gentlemen. My name is Major  
11 General Mark Hashimoto, and I represent the United States  
12 Indo-Pacific Command. And mahalo for this opportunity to  
13 provide updates on matters that are directly related to the  
14 water itself and that are also forward-looking. We are going  
15 to provide updates on Red Hill site remediation and closure,  
16 shaft recovery and monitoring, and monitoring well  
17 development, as well as water data.

18 As Chair Chang mentioned, the last time we were here  
19 was the meeting on March 21st. During that meeting, we had a  
20 few follow-ups to -- besides providing a general update  
21 periodically, and those had to do with soil vapor extraction,  
22 as well as GAC flow optimization, so those will be covered as  
23 well as a general update as part of today's brief.

24 What I'd like to start with before we get into the  
25 specifics of the agenda item is I'd like to have the Joint

1 Task Force-Red Hill provide an update on the defueling  
2 operations. And we'll start with Lieutenant Colonel Wingear.

3 LIEUTENANT COLONEL WINGEART: Good morning. My name  
4 is Lieutenant Colonel Casey Wingear. I am the new chief of  
5 staff for the Joint Task Force-Red Hill. I replaced Colonel  
6 Kevin Williams, who briefed you last time in March. Although  
7 new to the position, I am not new to the joint task force. I  
8 joined the joint task force when it was stood up in September,  
9 and I've been serving as Admiral Wade's executive assistant  
10 and a planner on the team. Thank you for the opportunity to  
11 provide an update. It's truly an honor.

12 As you know, the mission is for the joint task force  
13 to safely and expeditiously defuel the Red Hill facility and  
14 to rebuild the trust with the people of Hawai'i. When we  
15 assumed this mission, Admiral Wade was committed to building a  
16 plan to iterate and increase our understanding of that plan,  
17 to learn, and in partnership with the regulators, find ways to  
18 speed up the process to start and finish defueling Red Hill.

19 Next slide, please.

20 As you may remember, this is our Integrated Master  
21 Schedule, and I want to draw your attention to the yellow box  
22 on the top (inaudible) when we updated you last time. The  
23 (inaudible) we are on plan to commence gravity defueling  
24 starting in August -- October of 2023 with a completion date  
25 of January of 2024. This is five months earlier than briefed

1 last time. This process will remove 104 million gallons or  
2 approximately 99 percent of the fuel in the facility. We  
3 realize that there still remains a substantial amount of fuel,  
4 approximately 100,000 gallons when we complete this phase, and  
5 to -- and we are -- to be clear, we will remove every last  
6 drop of fuel from the facility. We are currently in planning  
7 to determine how best to safely and expeditiously remove that  
8 residual fuel and we will add additional supplements that --  
9 to complete that plan that will address all actions to remove  
10 that fuel.

11 I want to draw your attention to the Plans line, a  
12 couple of key points along this one. First in May, Defuel  
13 Supplement 2 that was submitted by -- or was released by the  
14 Department of Defense on May 16th, and that plan outlines how  
15 we are going to execute defueling operations on this  
16 accelerated timeline. Since that release, it has since been  
17 approved by the Department of Health and the Environmental  
18 Protection Agency.

19 Moving a little bit further to the right, in July,  
20 you'll see a decision point for tankers for the October start  
21 date. We did, in fact, meet all conditions for that decision  
22 point, and Admiral Wade informed the Secretary of Defense and  
23 also the Defense Logistic Agencies to move forward with the  
24 contracting actions to have tankers online for this  
25 accelerated start date.

1           Moving down to the Response line, down in July,  
2       you'll see a fueling spill; that was our final interagency  
3       exercise that we just completed on the 13th of this month, and  
4       we are currently training our roving security and fire watch  
5       teams to complete a culminating capstone event to move a  
6       couple diamonds to the right for the fire watch capstone event  
7       in August, to be conducted on the 16th and 17th.

8           Moving down to the -- towards the bottom on the NEPA  
9       line, since our last update, we completed the 30-day public  
10      comment period in June, and we are on track to complete the  
11      NEPA process by the end of August.

12          Moving up one to the Ops line, we completed the  
13      dewatering process, which, as you may remember, removes water  
14      from the tanks and the pipelines to prevent corrosion and to  
15      ensure the quality of the fuel.

16          A little bit to the right there, we did complete  
17      tank tightness testing, which ensures the integrity of the  
18      tanks.

19          And a little bit further to the right there in July,  
20      we are currently in the process of draining the surge tanks.  
21      We should be complete sometime next week. This process will  
22      remove 480,000 gallons of fuel from the facility.

23          Each of these evolutions are meticulously planned,  
24      trained to, rehearsed, response drills are exercised, and they  
25      are all each approved by the regulators before execution.

1           We are currently in the process of that same  
2 methodology for the next one, as you can see if you go down  
3 from the August timeframe, fuel repacking. Repacking will be  
4 conducted at the end of August, and it will be the first time  
5 that we reintroduce fuel into the pipelines starting from the  
6 Joint Base Pearl Harbor-Hickam side up to the Red Hill  
7 facility since we actually unpacked the lines, as you may  
8 remember, back in October-November of last year.

9           And last on this slide, moving up to the Repair and  
10 Maintenance, you'll see in June, the DOD repairs need to be  
11 complete; in July, the third-party quality validation items  
12 need to be complete; and then in August, repair approval  
13 received which comes from the Department of Health.

14           Next slide, please.

15           This is our --

16           COMMISSIONER HANNAHS: Chair Chang. Chair Chang,  
17 may I?

18           CHAIR CHANG: Yes, please go ahead. Is that Neil?

19           COMMISSIONER HANNAHS: Before you leave -- before  
20 you leave the slide, Lieutenant Colonel Wingeart, thank you  
21 for using the dashboard and keeping the goalposts in place so  
22 we can see our progress toward the end line. I have two  
23 questions. What about that 6 percent of the fuel that you  
24 can't defuel immediately makes it problematic? Why is that a  
25 problem?

1           LIEUTENANT COLONEL WINGEART: It's not necessarily a  
2 problem in terms of it just randomly leaking out; it just  
3 takes a long time to remove because it's stuck in pipelines at  
4 bends or low points, and it takes a different process than  
5 gravity to remove it.

6           COMMISSIONER HANNAHS: I see. Thank you. And with  
7 your -- respect to your NEPA public comment, can you give a  
8 high-level summary of what the comments of the public were and  
9 what your responses were?

10          LIEUTENANT COLONEL WINGEART: There were, I want to  
11 say, approximately 20 comments, of which, if I remember right,  
12 I think six were substantial, and that process for reviewing  
13 those comments and addressing each of those concerns is  
14 ongoing.

15          COMMISSIONER HANNAHS: So what was the nature of the  
16 six that were --

17          LIEUTENANT COLONEL WINGEART: I'd have to come back  
18 to you with the -- those specifics.

19          COMMISSIONER KAGAWA-VIVIANI: Chair.

20          CHAIR CHANG: Yes, I see Aurora.

21          COMMISSIONER KAGAWA-VIVIANI: Yeah. While we're  
22 also still on this slide, what -- and I don't know if this is  
23 in your purview, but what kind of monitoring and surveillance  
24 is there to, say, quite quickly identify potential spills, you  
25 know, with repacking and defueling? Is that (inaudible) --

1           LIEUTENANT COLONEL WINGEART: Yeah, I can start.

2           COMMISSIONER KAGAWA-VIVIANI: Okay.

3           LIEUTENANT COLONEL WINGEART: So the roving security  
4 and fire watch team that I mentioned that we're currently  
5 training, that team will be a 68-person element that will be  
6 in the facility 24/7 roaming.

7           COMMISSIONER KAGAWA-VIVIANI: Uh-huh.

8           LIEUTENANT COLONEL WINGEART: So moving up and down  
9 the pipelines so that we can identify, if there is a problem,  
10 quickly, and then take action as required.

11          COMMISSIONER KAGAWA-VIVIANI: When you refer to  
12 facility, do you mean just around the tanks, or does that  
13 facility include all of the pipelines all the way down to the  
14 piers?

15          LIEUTENANT COLONEL WINGEART: It includes the  
16 pipelines.

17          COMMISSIONER KAGAWA-VIVIANI: And those are --

18          GENERAL HASHIMOTO: And if I could add, in addition  
19 to that, we are continuing with the groundwater monitoring  
20 that is occurring as well as the soil vapor monitoring that is  
21 occurring within the vicinity of the tank gallery.

22          COMMISSIONER KAGAWA-VIVIANI: Yeah. So my  
23 understanding is that is, again, around the tanks, but there's  
24 potential for --

25          GENERAL HASHIMOTO: Correct. So it --

1 COMMISSIONER KAGAWA-VIVIANI: So it's human --

2 GENERAL HASHIMOTO: -- has expanded. The original  
3 were all within the tank gallery, but it has expanded.

4 COMMISSIONER KAGAWA-VIVIANI: Okay.

5 GENERAL HASHIMOTO: (Inaudible.)

6 COMMISSIONER KAGAWA-VIVIANI: Okay.

7 LIEUTENANT COLONEL WINGEART: One other aspect,  
8 ma'am, if you may remember, we -- we have increased our video  
9 monitoring system as well. We've supplemented what was in the  
10 facility with some new purchases so that we can monitor --  
11 supplement our roving security watch with a little bit more  
12 camera ability.

13 COMMISSIONER KAGAWA-VIVIANI: If I can also turn to  
14 DOH, and is DOH working, and on which side?

15 COMMISSIONER HO: DOH is working along with EPA, and  
16 they are training their -- they go through the same -- the  
17 exercises with EPA and DOH along with the Navy (inaudible).

18 COMMISSIONER KAGAWA-VIVIANI: Thank you.

19 COMMISSIONER HO: I have a -- I have a question.  
20 You said a 68-team roving -- a 68-person roving team.

21 LIEUTENANT COLONEL WINGEART: Roving security and  
22 fire watch, yes, ma'am.

23 COMMISSIONER HO: Is that per shift, or is that in  
24 total?

25 LIEUTENANT COLONEL WINGEART: That's in total. The



1 shift will be broken down into multiple teams. Each of them  
2 will have a -- a lead who is a subject matter expert in -- in  
3 that field, and then each of them are going through our  
4 training process right now.

5 COMMISSIONER HO: And they're -- they're gonna be  
6 responsible for different sectors of the --

7 LIEUTENANT COLONEL WINGEART: When the team is on,  
8 each person will be identified into a certain section, yes.  
9 And then, obviously, when the new team comes on, they will  
10 cover the same areas.

11 COMMISSIONER HO: Thank you. I know that one --  
12 while we're at it, I'm assuming that means, like, 24-hour  
13 coverage.

14 LIEUTENANT COLONEL WINGEART: Yes, ma'am.

15 COMMISSIONER HO: And -- oh, okay.

16 CHAIR CHANG: Any other questions from the  
17 commissioners before we move on from this slide?

18 (No response.)

19 CHAIR CHANG: All right, thank you.

20 Go ahead.

21 LIEUTENANT COLONEL WINGEART: This is our defueling  
22 dashboard. We update this every other week, and it's posted  
23 to our website and to our apps. I want to draw your attention  
24 to the center of the slide, where you see the four gauges.  
25 This is how you can track our progress to maintain our

1 trajectory for the early-mid-October start date.

2 So on the far left, working left to right, you'll  
3 see that we have completed all 253 mandatory repairs as  
4 planned. We are complete with 246 through the third-party  
5 quality validation program. And all 46 of those packets have  
6 been submitted for -- to the Department of Health for their  
7 review and approval. Finally, on the far right, you'll see  
8 that the Department of Health has conditionally approved 178  
9 of those packets that we've submitted to them.

10 We feel like we're in a good place between us and  
11 the regulators, and we are on glide path to maintain an early  
12 start date of October 2023.

13 The last highlight on this slide is in the bottom  
14 right, you'll see two QR codes. These are to our apps to help  
15 you download them so that you can receive information and  
16 updates and track our progress as we defuel the facility.

17 In summary, we still have a lot of work to do, but  
18 we are on plan to start defueling early on a mid-October start  
19 date. I want to thank you for the time to provide you this  
20 update, pending any questions you have. Thank you.

21 CHAIR CHANG: Does anybody have any -- any  
22 commissioners, do you have any questions?

23 Can I just ask, actually, Kathy Ho, this is a  
24 question I have for you, what's DOH's capacity to review all  
25 of these -- the documents and materials that are being

1 submitted to you for review?

2 COMMISSIONER HO: We have a small but dedicated  
3 team, and we are on track for an August dead -- I think it's  
4 August 6th deadline to have reviewed and -- all of the packets  
5 that have been submitted to us.

6 CHAIR CHANG: Thank you. That's (inaudible).

7 COMMISSIONER HANNAHS: To check just with regard to  
8 the NEPA comments and your response, since I don't know when  
9 you're coming before the commission again, can you get that --  
10 work with our staff to get that to them, and they can get that  
11 information to us?

12 LIEUTENANT COLONEL WINGEART: Of course, we'll do  
13 so.

14 CHAIR CHANG: Any other comment, Commissioners?  
15 Questions?

16 (No response.)

17 CHAIR CHANG: I don't see any hands.

18 Okay, General Hashimoto, is there any other updates?

19 GENERAL HASHIMOTO: Yes, we do. I'd like to --

20 CHAIR CHANG: Okay.

21 GENERAL HASHIMOTO: -- pass it on to Don here. He  
22 can introduce himself and talk about tank closure plan  
23 timelines and status.

24 MR. HAMPTON: Okay. Good morning, everybody, and  
25 thank you for -- appreciate the invite down here today. I'm

1 Donald Hampton. I work for Navy region of Hawai'i, overseeing  
2 the tank closure plan for Navy Region of Hawai'i.

3 The slide you're seeing right now is a brief  
4 synopsis of all of the products we have submitted along the  
5 timeline that we have submitted them. We are making progress  
6 going forward. We're working with regulators through ongoing  
7 meetings, responding to the requests for additional  
8 information so we can provide -- provide them amplifying  
9 information to make informed decisions. We're on a good glide  
10 path right now, and we are moving the tank plan -- closure  
11 plan forward. As you're aware, we're -- we're still in the  
12 planning phase of the tank closure plan, and it's scheduled to  
13 start once defueling is completed with this last spec of it.

14 I'll pause there on this slide for any questions.

15 COMMISSIONER HANNAHS: If you can highlight  
16 Supplement 2.

17 MR. HAMPTON: Yes.

18 COMMISSIONER HANNAHS: That's something new.

19 MR. HAMPTON: And Supplement 2 is the one released  
20 since last time this group met and that provided amplifying  
21 information on closure in place, which is a recommendation for  
22 the tanks, and envisions a structural analysis report, and we  
23 responded to EPA's RFIs on the tank closure plan.

24 All of this information which you'll see on the next  
25 slide is in the -- I'll pause here. Any questions on this

1 slide?

2 CHAIR CHANG: Commissioners, any questions on this  
3 slide?

4 (No response.)

5 CHAIR CHANG: I don't see any hands.

6 Go ahead, Donald, the next slide.

7 MR. HAMPTON: The next slide, please.

8 This is just a (inaudible) on this (inaudible)  
9 changes in the graphic. The tank closure plan is broken down  
10 into four phases. Phase 1 and Phase 2 are in progress right  
11 now, which is the planning effort. Phase 3 and Phase 4 will  
12 commence once defueling is completed, and that's the physical  
13 aspect of the tank disclosure plan.

14 I'd also like to note right down here, on the bottom  
15 middle right there is also a QR code. All that information on  
16 the tank closure plan, also anything related to Red Hill and  
17 other websites, will be in the QR code. All this information  
18 that we're showing here today of all the plans, the  
19 supplementals, requests for information, our responses to the  
20 requests for information are all posted on the public-facing  
21 website via that QR code.

22 CHAIR CHANG: Commissioners, any questions on this  
23 slide?

24 COMMISSIONER KAGAWA-VIVIANI: Oh, it's on the next  
25 slide.

1 CHAIR CHANG: Commissioner Viviani.

2 COMMISSIONER KAGAWA-VIVIANI: Sorry, I think my  
3 question is addressed on the next slide, so --

4 MR. HAMPTON: Next slide, please.

5 Okay. This is a -- of the tank closure plan, this  
6 is Phase 2 of the tank closure plan that may be contracted out  
7 for public outreach on beneficial nonfuel reuse. This is  
8 Phase 2. Basically, what we need to do in Phase 2 is to  
9 identify, evaluate, and discuss options with a public outreach  
10 program for the state of Hawai'i. Nakupuna is doing this  
11 effort for us. It is broken down into three phases.  
12 Initially, there was an open survey requesting any feedback at  
13 all of any recommendations anybody might have. The second  
14 part of this was one-on-one interview with key stakeholders  
15 across O'ahu, which has been completed. And the third phase,  
16 which will be going out at the end of this month, is a mail  
17 survey to particular area codes -- zip codes here within  
18 O'ahu.

19 All of this information will be comprised into a  
20 final report; that final report will be publicly posted and  
21 released via our website. The public final report will also  
22 be briefed at the fall FTAC this year.

23 COMMISSIONER KAGAWA-VIVIANI: (Inaudible.)

24 MR. HAMPTON: Yes, ma'am.

25 COMMISSIONER KAGAWA-VIVIANI: So how did you -- oh,

1       sorry.

2               CHAIR CHANG:  No, no, no.  Go ahead, Vivian.  Go  
3       ahead.

4               COMMISSIONER KAGAWA-VIVIANI:  Can you describe how  
5       you identified the key stakeholders?

6               MR. HAMPTON:  The key stakeholders were brought in  
7       from all -- many aspects of -- a lot of them were  
8       recommendations going from people that have had a lot of  
9       involvement with Red Hill overall.  Some people that have been  
10      more outspoken with Red Hill, depending on any aspect of a  
11      reason why, people have sent in RFIs to us just with generic  
12      questions that we responded to; since they were interested in  
13      Red Hill, we actually reached out to them too.

14              COMMISSIONER KAGAWA-VIVIANI:  Okay.  So these are  
15      organizations?

16              MR. HAMPTON:  Organizations or individuals.  The key  
17      stakeholders are organizations, help me's, or just private  
18      citizens.

19              COMMISSIONER KAGAWA-VIVIANI:  Including groups that  
20      were highly critical of --

21              MR. HAMPTON:  Sierra Club was included in that,  
22      ma'am, and also Board of Water Supply.

23              COMMISSIONER KAGAWA-VIVIANI:  Okay.

24              CHAIR CHANG:  Any other -- oh, yes, Neil.  Go ahead.

25              COMMISSIONER HANNAHS:  What criteria have you

1 identified to be employed to make the decision as to  
2 repurposing --

3 MR. HAMPTON: Okay.

4 COMMISSIONER HANNAHS: -- of the fuel --

5 MR. HAMPTON: So I'll expand upon this a little bit.  
6 The tasking for -- the tasking for us in the tank closure plan  
7 was to go out and identify, evaluate, and discuss options.  
8 Okay? Taking this forward, honestly, there's three  
9 independent efforts going on in reference to beneficial reuse.  
10 There's the NDA effort looking at DOD reuse. There's --

11 GENERAL HASHIMOTO: National Defense Authorization.

12 MR. HAMPTON: Yeah, which was being led -- which is  
13 independent of this one, this effort here. And also Office of  
14 Naval Research gave a grant to University of Hawai'i to look  
15 at nonfossil fuel possible reuse. All these three independent  
16 efforts are gonna be consolidated into a final report the  
17 latter part of this year, and there will be a brief to  
18 Congress in February of 2024. Coming out of Congress, those  
19 next steps, I don't have all of those next steps at this time,  
20 but I know, finally, it will be an engagement between the  
21 Department of Defense and the State of Hawai'i of what the  
22 options -- future options could be.

23 COMMISSIONER HANNAHS: But there must be some  
24 criteria for analysis --

25 (Multiple speakers.)



1 MR. HAMPTON: Yes, there is.

2 COMMISSIONER HANNAHS: -- cost, time, safety, public  
3 -- so can you -- can you elucidate, yes.

4 MR. HAMPTON: So when we get all the options in,  
5 I'll say there's gonna be a handful that have merit, and the  
6 ones that are decided -- deemed to have merit are going to go  
7 through a feasibility analysis. Because they have merit  
8 doesn't mean they're environmentally approved or utility point  
9 of approval or structural, so we're gonna have to do a final  
10 feasibility analysis, and that feasibility analysis will  
11 narrow down the list of options that are feasible -- have  
12 merit, and that are feasible to implement.

13 COMMISSIONER HANNAHS: You're giving me process, but  
14 I'm not hearing the substance of the criteria. Like such as  
15 the --

16 GENERAL HASHIMOTO: Cost, time, feasibility, and  
17 sustainability.

18 COMMISSIONER HANNAHS: So what -- so sustainability,  
19 what does sustainability mean?

20 GENERAL HASHIMOTO: That it can -- it's something  
21 that can be sustained politically, environmentally,  
22 financially in the long term.

23 COMMISSIONER HANNAHS: And do you think that's  
24 reflective -- those criteria are reflective of the concerns of  
25 the public that you're getting from Nakupuna or any other

1 public input process?

2 GENERAL HASHIMOTO: Yes. A lot of the feedback  
3 we've gotten, sir, is something that would support -- benefit  
4 the State of Hawai'i that could be from a usage point of view,  
5 an economic point of view. It has to be -- also, the  
6 feedback, it has to be a hundred percent environmental  
7 compliance and protect the environment. So those, I'll say,  
8 themes are coming back.

9 COMMISSIONER HANNAHS: Yeah, I think that's what  
10 we're interested in here.

11 GENERAL HASHIMOTO: Yes, sir.

12 MR. HAMPTON: I think over time, it's a really good  
13 question because what we're talking about is one of the  
14 criteria, as you bring up, and then, as with any sort of  
15 decision of this magnitude, it's the weighting of each  
16 criteria.

17 COMMISSIONER HANNAHS: Correct.

18 MR. HAMPTON: And so I think this -- this effort to  
19 get as much input as possible would get, I think, at what  
20 you're talking about because while many of these -- these are  
21 all important decision-making criteria, there are some, I  
22 think, that would be reflective of, you know, what the public  
23 would expect. And so, again, we're just in the data-  
24 collection phase, and as, you know, we move into later  
25 decision-making, I think absolutely, you know, these kinds of

1 formalizing the decision criteria will come into play.

2 COMMISSIONER HANNAHS: If it's, as Lieutenant  
3 Wingear -- Lieutenant Colonel Wingear said, you want to  
4 rebuild trust, I think that there needs to be some  
5 transparency about that --

6 GENERAL HASHIMOTO: Absolutely.

7 COMMISSIONER HANNAHS: -- because the fear of  
8 somebody who doesn't trust assumes that maybe it's not their  
9 interest that's being -- that's prioritized, it's money --

10 GENERAL HASHIMOTO: Right, right.

11 COMMISSIONER HANNAHS: -- or it's something else.  
12 So if you lay those cards out on the table and we talk about  
13 the prioritization, I think it's -- it's more transparent, and  
14 there will be a balance, obviously, and I think that's --

15 GENERAL HASHIMOTO: I think that's (inaudible).

16 COMMISSIONER HANNAHS: And it'll all be for all to  
17 see.

18 GENERAL HASHIMOTO: It's a balance, you know. As I  
19 think we could appreciate, it's not -- probably won't be  
20 formulaic, you know, if you will, but yeah. Thank you.

21 CHAIR CHANG: General Hashimoto, can I ask you who  
22 will ultimately make the decision on the reuse?

23 GENERAL HASHIMOTO: Go ahead.

24 MR. HAMPTON: Ma'am, this is Donald Hampton. I  
25 would say the ultimate decision will be between the Department

1 of Defense engaging with the State of Hawai'i.

2 CHAIR CHANG: Engaging with the State of Hawai'i.

3 MR. HAMPTON: The State of Hawai'i. There will be  
4 very senior meetings going back and forth of this -- the ones  
5 that had merit and that are feasibly capable, and there will  
6 be some discussions between the Department of Defense and the  
7 State of Hawai'i to pursue an ultimate solution and  
8 recommendation.

9 CHAIR CHANG: Is the State of Hawai'i the governor?  
10 Is that -- who is the State of Hawai'i?

11 COMMISSIONER HO: Under -- under ordinary  
12 circumstances, when we're dealing with an underground storage  
13 tank, it would be the Department of Health. Obviously, the  
14 Department of Health would reach out to other agencies within  
15 the State of Hawai'i and have discussions with members of the  
16 public as well.

17 CHAIR CHANG: Next question.

18 COMMISSIONER KAGAWA-VIVIANI: I have two questions.  
19 Maybe for you, first, following the -- and then for Mr.  
20 Hampton. So given that -- would the process for public input,  
21 then, be through FTAC because DOH, you know, doesn't have,  
22 like C1, a regular open process? For helping make that kind  
23 of follow-up decision. Or is there gonna be another  
24 (inaudible)?

25 COMMISSIONER HO: It probably -- you know, we

1 haven't really thought that through yet --

2 COMMISSIONER KAGAWA-VIVIANI: Okay, okay.

3 COMMISSIONER HO: -- because we still have to see  
4 what is the outcome, but we will be seeking some public input  
5 either through FTAC or some other reaching out.

6 GENERAL HASHIMOTO: I concur with Kathy; you know,  
7 we have quarterly meetings to be transparent with the public,  
8 two a year with FTAC, two a year with the Navy working with  
9 the regulatories on the public meetings, and as we progress  
10 forward, that would be a great topic.

11 COMMISSIONER HO: Yeah. In addition, the -- there  
12 was a settlement, a consent order with the federal government,  
13 EPA, and the -- the Navy and others, and there -- on Thursday,  
14 they are going to be convening a -- their first meeting of --

15 GENERAL HASHIMOTO: This is a community outreach  
16 (inaudible).

17 COMMISSIONER HO: Community outreach and  
18 involvement, right. So that's also a good forum to talk about  
19 the reuse of the tanks.

20 COMMISSIONER MIIKE: I have a question for --

21 CHAIR CHANG: Yes, Larry.

22 COMMISSIONER MIIKE: -- for the Department of  
23 Health. When you say you're gonna be the decision-maker, you  
24 really mean the governor, right? The governor or the  
25 legislature? You know, this is a political issue. I mean, I

1 know you're the technical agency, but when you say that,  
2 you're not the ultimate decision.

3 COMMISSIONER HO: I would say we would have  
4 discussions with everyone about the --

5 COMMISSIONER MIIKE: But I -- but I'm asking who  
6 makes the final decision. It's not DOH, right?

7 COMMISSIONER HO: Well, ultimate --

8 COMMISSIONER MIIKE: I used to be in DOH, so I --

9 COMMISSIONER HO: I understand. I used to work for  
10 you when I was a DA, and you were the -- you were my client  
11 when you were the director, so I understand you understand the  
12 political nature of this. So yes.

13 COMMISSIONER MIIKE: So that's why I asked the  
14 question because it's not that it's gonna be DOH dealing with  
15 the Department of Defense, which is kind of an unequal  
16 partnership, which I accept. I just wanted clarification is  
17 that I know politics will be involved, and ultimately, I  
18 think, it's gonna be either the governor or -- I hope the  
19 legislature doesn't get involved with this; it'll just  
20 complicate things, but it's more a comment than a -- than a  
21 question.

22 COMMISSIONER HO: Right.

23 CHAIR CHANG: Okay. So --

24 COMMISSIONER HO: But I think that's the value of  
25 transparency. If we -- if the criteria are on the table and

1 the analysis is supplied in an ethical and -- and open way to  
2 each option, then everybody can see it. Somebody's gonna make  
3 that call who has the authority, but the consequences of the  
4 call will be clear, and there will be some accountability.

5 CHAIR CHANG: Well, I think both DOH and the Navy --

6 COMMISSIONER MIIKE: In a perfect world.

7 GENERAL HASHIMOTO: I've gotcha.

8 (Laughter.)

9 CHAIR CHANG: Okay. Will Congress have a -- have a  
10 role in this, or is that gonna ultimately be DOD? Do you  
11 know, General Hashimoto?

12 GENERAL HASHIMOTO: Is Congress going to have a  
13 role?

14 CHAIR CHANG: In the decision.

15 GENERAL HASHIMOTO: Ma'am, I'll tell you, I'm  
16 unclear on that right now.

17 CHAIR CHANG: Okay.

18 GENERAL HASHIMOTO: I think that will be one of the  
19 outcomes of the brief to Congress in February 2024, so we'll  
20 have to follow up on that at that point in time.

21 CHAIR CHANG: Very good.

22 COMMISSIONER HANNAHS: But this costs money that's  
23 not in a normal budget. Wouldn't that money be coming from  
24 Congress?

25 GENERAL HASHIMOTO: It all depends on if -- are you

1 talking about what is the final solution or the recommendation  
2 for beneficial use?

3 COMMISSIONER HANNAHS: Well, any solution would have  
4 to be funded.

5 GENERAL HASHIMOTO: Any solution -- it may -- it  
6 could be state, it could be DOD, it could be a corporation, so  
7 it would have to be funded. And so when we come down to that  
8 short list of options, that will have to be taken into  
9 consideration at that point in time. Because it might be a  
10 great option or recommendation, but if you can't get funded to  
11 -- I'm making this up right now -- to 2035, then maybe you  
12 might want to go with a different solution at that point in  
13 time, but that will be a future prize.

14 CHAIR CHANG: Well, I think the Navy is getting a  
15 real clear message. If you can kind of include this on your  
16 regular updates to us, you know, just the more transparency,  
17 the criteria that Neil is talking about, and process and  
18 substance. But I don't think -- the intention isn't to have  
19 all of the answers today, but clearly, we are looking at sort  
20 of the bottom line, who makes the ultimate decision on this  
21 very important issue of the reuse of those facilities.

22 Any other questions? Aurora.

23 COMMISSIONER KAGAWA-VIVIANI: Yeah. I just have a  
24 second question for Mr. Hampton, which was if you could recap  
25 the three parallel efforts, nation --



1 COMMISSIONER HO: NDA.

2 COMMISSIONER KAGAWA-VIVIANI: That are happening.  
3 NDA, National Defense Authorization Act, ONR has funded UH --  
4 not (inaudible) for nonfossil fuel reuse, and then -- and then  
5 this.

6 COMMISSIONER HANNAHS: And then Nakupuna is the  
7 third.

8 COMMISSIONER KAGAWA-VIVIANI: Nakupuna. So given  
9 that -- I guess having worked with the community, sometimes  
10 the perception can be that people's input will be considered  
11 in its full entirety, and the reality is that it will be -- it  
12 would be weighted. Do -- do people who are participating in  
13 these engagements understand that?

14 GENERAL HASHIMOTO: I think some more than others,  
15 ma'am.

16 COMMISSIONER KAGAWA-VIVIANI: Okay.

17 GENERAL HASHIMOTO: I can say we've collected  
18 probably about a thousand just open surveys from the website.  
19 There was another about 40 interviews, and we're expecting  
20 another couple of thousand from the mail order coming in.

21 COMMISSIONER KAGAWA-VIVIANI: Okay.

22 GENERAL HASHIMOTO: So you can have a wide range of  
23 recommendations there. And out of the wide range of  
24 recommendations, there -- it's only going to come down to a  
25 short list of two, three, or four that ultimately get -- have

1 merit and are for strong consideration as the final product.  
2 So we consider everything, and this is why it was open for a  
3 wide range.

4 COMMISSIONER KAGAWA-VIVIANI: Okay.

5 GENERAL HASHIMOTO: Not only did we get a lot of  
6 recommendations, but going back to criteria, saying -- some  
7 people said we don't care what it is, as long as it has this  
8 criteria in there to make sure the environment is protected  
9 and the public (inaudible). So we're collecting all of this  
10 data and information; we're in the data collection phase right  
11 now, so as we synthesize all of this information and move  
12 forward, we will have better clarity on the next steps.

13 But you're right, with all of these recommendations,  
14 it's gonna be a -- 99 percent of them won't -- the  
15 recommendation won't be (inaudible), and it's gonna be  
16 narrowed down to a couple. And there are some, I'll say,  
17 recommendations that are consistent between multiple  
18 individuals making their submissions.

19 COMMISSIONER KAGAWA-VIVIANI: Okay. So what is the  
20 process? We heard about the process for the selection will be  
21 based on certain criteria, but what's the process for  
22 shortlisting? Because there's a lot of stuff that can drop  
23 out, I bet.

24 GENERAL HASHIMOTO: Well, that's gonna go -- all of  
25 this will be -- okay. So the consolidated briefing is not

1       gonna be from here, okay?

2               COMMISSIONER KAGAWA-VIVIANI: Uh-huh.

3               GENERAL HASHIMOTO: All of these three inputs are  
4       being fed back into D.C. Okay?

5               COMMISSIONER KAGAWA-VIVIANI: Okay.

6               GENERAL HASHIMOTO: D.C. will be consolidating --  
7       folks in D.C. will be consolidating this report later this  
8       year. They're working on criteria on how they're gonna  
9       approach that right now. I'm not involved in that at this  
10      point in time, but that's what they're gonna be doing to make  
11      the recommendations to the final brief to Congress in February  
12      '24.

13              COMMISSIONER KAGAWA-VIVIANI: Is there -- and is the  
14      cri part of that process in D.C., or can it be? And I'm just  
15      asking because in, like, planning and participatory theory,  
16      there's rungs of engagement.

17              GENERAL HASHIMOTO: Yeah.

18              COMMISSIONER KAGAWA-VIVIANI: And consultation is  
19      sort of the lowest, and then, like, community decision-making  
20      is the highest, and the reality is it's gonna be somewhere in  
21      between. So is there -- you know, in this -- and it's really  
22      important for building trust to have more than that. So are  
23      you sort of engaging with those ideas of maybe shifting in  
24      order to build trust in the level of sort of community, say in  
25      at least that shortlisting?

1 GENERAL HASHIMOTO: So we do brief the community --

2 COMMISSIONER KAGAWA-VIVIANI: Yeah.

3 GENERAL HASHIMOTO: -- in each and every open house  
4 we go to.

5 COMMISSIONER KAGAWA-VIVIANI: Yeah.

6 GENERAL HASHIMOTO: As a matter of fact, we just  
7 came up with a new flier that is -- I mentioned the mail  
8 survey going out at the end of this month; it's being targeted  
9 through zip codes throughout O'ahu.

10 COMMISSIONER KAGAWA-VIVIANI: Okay.

11 GENERAL HASHIMOTO: We have a flier for that. We go  
12 to neighbor boards maybe two or three a week -- two or three  
13 per week, and we're presenting this at the neighborhood  
14 boards.

15 And as Kathy just mentioned that we have this  
16 initiative kicking off this Thursday with the CRI, which is  
17 the community relations team, which will be a small group,  
18 okay, of people that are interested in Red Hill, which they'll  
19 be talking about the progress towards Red Hill overall being  
20 environmental tank closure plan and beneficial nonfuel reuse,  
21 and maybe be meeting twice per quarter in addition to all of  
22 the other public meetings, our public outreach. So there's a  
23 lot of opportunities we've had where we do go out and speak to  
24 the public about where we are in the process and the next  
25 steps.

1 COMMISSIONER KAGAWA-VIVIANI: Right. But still very  
2 one -- one way.

3 GENERAL HASHIMOTO: It's priority -- I'll say it's  
4 priority right now, ma'am, because all of these three efforts  
5 are in the data-collection phase.

6 COMMISSIONER KAGAWA-VIVIANI: Uh-huh.

7 GENERAL HASHIMOTO: So until we get all of the data  
8 in --

9 COMMISSIONER KAGAWA-VIVIANI: Right, you can't --

10 GENERAL HASHIMOTO: That will help us narrow down  
11 some of the criteria and the next steps and how to synthesize  
12 the data and represent it and present it. So it's almost like  
13 a Scattergory going on right now --

14 COMMISSIONER KAGAWA-VIVIANI: Yeah.

15 GENERAL HASHIMOTO: -- collecting all the data, and  
16 then which will inform -- help formalize --

17 COMMISSIONER KAGAWA-VIVIANI: Okay.

18 GENERAL HASHIMOTO: -- how we -- how it's  
19 consolidated and sorted.

20 COMMISSIONER KAGAWA-VIVIANI: Yeah. I guess I'm  
21 thinking if -- just as you move along, considering how much  
22 say -- it's probably very different than how the Navy normally  
23 operates, but if the objective is to also build trust, then  
24 that feedback needs to come back. Because if you've taken a  
25 lot of people's time to get input --

1 GENERAL HASHIMOTO: Yeah.

2 COMMISSIONER KAGAWA-VIVIANI: -- and then don't take  
3 it into account, that actually puts you in a worse place  
4 afterwards because there's deeper cynicism.

5 GENERAL HASHIMOTO: So I think we'll have more  
6 clarity by the fall FTAC 2.

7 COMMISSIONER KAGAWA-VIVIANI: Yeah.

8 GENERAL HASHIMOTO: Which we will be presenting this  
9 final brief from Nakupuna of all of their results and -- and  
10 communicating some of the next steps that will follow on after  
11 that.

12 COMMISSIONER KAGAWA-VIVIANI: Yeah.

13 GENERAL HASHIMOTO: And so that's hopefully --  
14 that's one avenue.

15 COMMISSIONER KAGAWA-VIVIANI: Okay.

16 GENERAL HASHIMOTO: But whatever we do at the  
17 FTAC --

18 COMMISSIONER KAGAWA-VIVIANI: Uh-huh.

19 GENERAL HASHIMOTO: -- we have the same material  
20 that we use for community boards and other public meetings in  
21 addition to that.

22 COMMISSIONER KAGAWA-VIVIANI: So people will see it  
23 in different places, yeah.

24 GENERAL HASHIMOTO: Yeah. And all of this  
25 information I'm speaking of is currently with -- in reference

1 to Nakupuna, the survey results that we've received so far --

2 COMMISSIONER KAGAWA-VIVIANI: Yeah.

3 GENERAL HASHIMOTO: -- who -- the people that we  
4 interviewed one on one --

5 COMMISSIONER KAGAWA-VIVIANI: Yeah.

6 GENERAL HASHIMOTO: -- for the one on ones, that's  
7 all on the public-facing website right now through the QR code  
8 I showed you on the previous slide.

9 COMMISSIONER KAGAWA-VIVIANI: Okay.

10 GENERAL HASHIMOTO: So all of this is out there  
11 available to the public today --

12 COMMISSIONER KAGAWA-VIVIANI: Okay.

13 GENERAL HASHIMOTO: -- for what's going on with this  
14 effort.

15 COMMISSIONER KAGAWA-VIVIANI: Yeah.

16 GENERAL HASHIMOTO: It does not elaborate on the  
17 other two efforts I told -- spoke of --

18 COMMISSIONER KAGAWA-VIVIANI: Uh-huh.

19 GENERAL HASHIMOTO: -- because those are independent  
20 until they get completed when we'll post the final information  
21 for those too.

22 COMMISSIONER KAGAWA-VIVIANI: I understand.

23 GENERAL HASHIMOTO: And when the final report is  
24 publicized --

25 COMMISSIONER KAGAWA-VIVIANI: Yeah.

1           GENERAL HASHIMOTO:  -- I guess after the brief to  
2 Congress, that will also be posted here too.

3           COMMISSIONER KAGAWA-VIVIANI:  Okay.  Thank you for  
4 explaining this.  It does help.

5           GENERAL HASHIMOTO:  Okay, thank you, ma'am.

6           CHAIR CHANG:  Yes, Neil, go ahead.

7           COMMISSIONER HANNAHS:  Well, it strikes me that this  
8 briefing of Congress is very important in terms of creating  
9 their impression of the status of the -- of the issues and the  
10 background.  Will you -- is that an independent briefing?  Is  
11 it the Navy telling its story to Congress, or will it be  
12 reflective of Department of Health and state interests?

13          GENERAL HASHIMOTO:  So I'll have to get you more  
14 information on exactly who's gonna be presenting the brief  
15 itself, but it's gonna be input from those three independent  
16 efforts going on right now.  So it's not gonna be the Navy's  
17 or a point of view; it's gonna be the collective point of view  
18 of all of the input we received and recommendations that we  
19 received regardless of the source of that.

20          COMMISSIONER HANNAHS:  So unless you're gonna have a  
21 representative team presenting to Congress, there probably  
22 should be a process to see what you're gonna say so that DOH  
23 and CWRM and other -- Board of Water Supply can look at it and  
24 say, yeah, that's -- you got it, that's what's going on here,  
25 so we all feel like Congress is being given an accurate view



1 of all the parties.

2 COMMISSIONER HO: So are you -- in other words --  
3 sorry, Chair Chang.

4 CHAIR CHANG: No, go ahead, Kathy.

5 COMMISSIONER HO: In other words, are you suggesting  
6 that they -- that they present us the findings prior to the  
7 reports so we would have comment on it. Is that the --

8 COMMISSIONER HANNAHS: I'm not sure who will summon  
9 -- how this briefing occurs, whether it -- you know, anybody  
10 can jump on the agenda or -- but if we're not on the agenda,  
11 if it's just the Navy, then I think some prior -- before that  
12 occurs, some prior discussion with these parties, the  
13 stakeholders, would be healthy -- if not required, it would at  
14 least be healthy and transparent so that we know --  
15 understand, yeah, you've got our position accurately captured.

16 GENERAL HASHIMOTO: Okay, sir. I'll write that down  
17 as an action item for myself. I don't think -- I don't have  
18 an answer for that right now. I -- honestly, I don't think  
19 the brief to Congress is gonna be released intact before it  
20 goes to Congress, okay, but I think discussions could probably  
21 take place prior to that.

22 CHAIR CHANG: General Hashimoto, I think we agreed  
23 on, like, quarterly updates, so this is July, I think the next  
24 update would be very close to your -- I guess it's October.  
25 October, July -- yeah.

1           GENERAL HASHIMOTO: We'll come back with whatever  
2 frequency you require, Chair Chang.

3           CHAIR CHANG: Okay, yeah. I think -- I think we  
4 were looking at quarterly updates, so maybe the next one would  
5 be back in October, and hopefully, you'll have some greater  
6 updates. I was -- I was also hoping -- you know, I think  
7 you're -- you're getting sort of an inclination from this  
8 commission about the desire to be transparent. I have greatly  
9 appreciated the updates you've provided us, you know, sort of  
10 the candor in your process. It is so much better when you say  
11 -- if you don't know, don't -- you know, don't make something,  
12 but that you'll come back to us. So, again, we hope -- you  
13 know, please come back to us.

14           But in the desire for transparency, I am hoping that  
15 after the report on your findings in the outreach, that report  
16 is broadly distributed to everyone who participated and more  
17 so that they have an opportunity to provide you comments on  
18 the report as well. I think, you know, in the past, we have  
19 had other very important issues where we've had minority  
20 reports that go up that the report is, you know, reflects the  
21 authors, and it may be a majority report. There may be  
22 something -- there's an opportunity for someone who -- a group  
23 or, you know, entities who disagree to submit at least -- at  
24 least where there's additional comments or a minority report.  
25 But please think about that as a way to continue ongoing

1 transparency as providing us another opportunity -- us being  
2 the community, another opportunity to weigh in on the report  
3 that it does reflect the community's both process and  
4 substance.

5 GENERAL HASHIMOTO: Yes, ma'am. And Chair Chang,  
6 what I -- what I can promise you is when Nakupuna's report is  
7 final --

8 CHAIR CHANG: Yeah.

9 GENERAL HASHIMOTO: -- we'll have a press release  
10 announcing that it's final, along with the website where it's  
11 publicly posted. Also, there will be an email address. If  
12 anybody has any request for information or would like clarity  
13 or follow up any point, I will take all those in -- all those  
14 requests, and I will respond to them. And all the responses  
15 to anybody's questions, I will also post on the public website  
16 for everybody's information. So I can --

17 CHAIR CHANG: Excellent.

18 COMMISSIONER MIIKE: Chair. Chair Chang.

19 CHAIR CHANG: Yes, Larry.

20 COMMISSIONER MIIKE: Since I'm new to this process,  
21 this kind of briefing, where else have you been giving this  
22 to? The reason I ask is that the questions from the  
23 commissioners are like -- we want to be able to disseminate  
24 the information to as many people as possible, but what I want  
25 to know is, is this commission the proper one or the one

1       that's been doing this, or is there other places that you've  
2       been going?

3               MR. HAMPTON: I'll take that. There have been  
4       multiple venues where this team has presented information.  
5       You've already heard about the FTAC; that's pretty well-known.  
6       There's the House Special Committee on Red Hill, there's a  
7       Governor's Commission on Water, and there's also defueling --  
8       a specific defueling information-sharing forum as well as the  
9       -- all of the organizations have public facing websites and  
10      the ability to interact at any time.

11             COMMISSIONER MIIKE: Okay. I appreciate that  
12      because my impression was the questions were being asked by  
13      the commissioners as -- as like you guys gotta go out there  
14      and do more. I just want to know if this is the main forum,  
15      or do you have many forums?

16             MR. HAMPTON: I would say it's one of many that is  
17      attended by many of the commissioners here that have been  
18      ongoing.

19             COMMISSIONER KAGAWA-VIVIANI: I can respond, though.  
20      I mean, part of the feedback that we've gotten loud and clear  
21      and regularly from the public --

22             COMMISSIONER MIIKE: Can you -- I have a hard time  
23      understanding what you're saying.

24             COMMISSIONER KAGAWA-VIVIANI: Yeah, yeah. I have  
25      small kids who have germs, so --

1           So a lot of the feedback that we have gotten from  
2     the public from day one has been that the commission's regular  
3     open meetings have provided an important forum for exchange  
4     and questions at a time that there wasn't all of this public  
5     kind of facing organized communication. So we still get, you  
6     know, sort of that push from those who provide testimony to --  
7     to ensure that that transparency happens. So it's good that  
8     it's happening through other forums now and with more  
9     regularity.

10           CHAIR CHANG: And Larry, if I can just add to  
11     Aurora's comments, there was really -- I mean, I have -- since  
12     I've come on board as chair tried to use both the water  
13     commission and the land board as an opportunity for a public  
14     forum because we are one of the few agencies that actually  
15     open our meetings to the public. It was designed to create a  
16     safe space for informed decision-making, permitting, you know,  
17     issues before they are controversial, including the Navy, an  
18     opportunity. And General Hashimoto has been extremely  
19     cooperative and willing to do that, so it is -- and we've  
20     asked for a comprehensive update, not just on defueling, but  
21     on all of the aspects.

22           So I think the intention for CWRM was while some of  
23     these things may be out of our regulatory lane, it is  
24     nonetheless a public platform that the community can look both  
25     at our minutes, can review our transcripts, and can also

1 participate in our process through either YouTubing or coming  
2 and providing comment. So that's kind of the -- you know, the  
3 impetus of this.

4 But I do know that the Navy has been having numerous  
5 meetings. I did -- you know, I don't know how coordinated  
6 everyone is, but this has been just our platform to create  
7 another space for good information before decisions are being  
8 made.

9 COMMISSIONER MIIKE: Okay. I'm glad about that  
10 clarification because what I'm looking at is that we are the  
11 water commission, and my focus is on water issues.

12 CHAIR CHANG: Yeah.

13 COMMISSIONER MIIKE: And so I don't want to get into  
14 wide-ranging things where we're -- we're basically looking at  
15 stuff that we shouldn't be looking at. But as long as they  
16 want to be -- are willing to provide information to us, and as  
17 long as some of the commissioners think it's important that we  
18 be the conduit for the public, I'm fine with that.

19 CHAIR CHANG: Okay.

20 COMMISSIONER MIIKE: But I want to remind everybody  
21 that we're the water commission, okay?

22 CHAIR CHANG: Yeah. No, appreciate that reminder,  
23 Larry. I mean -- and I think that the commission is clear  
24 what our role is, but I think we also -- many, many members of  
25 the commission hear public comments, and General Hashimoto and

1 his team have been willing to utilize our -- our meeting as an  
2 opportunity for good, accurate, current information on a  
3 regular basis.

4 GENERAL HASHIMOTO: Also, I think I'd be remiss if I  
5 didn't add the open houses that these organizations hold, as  
6 well as using the City and County's neighborhood board system  
7 to get the information out. And I would like to say as  
8 valuable as it has been for us to be able to push information  
9 to the public and the commission via this meeting, I can speak  
10 for everyone here today; the insights that we have gained from  
11 your comments have been invaluable. And so making sure we  
12 meet accuracy and completion standards, we wouldn't have that  
13 without that kind of interaction, so mahalo for your input.

14 CHAIR CHANG: Okay, great.

15 Any other questions?

16 And General Hashimoto, do you have more  
17 presentations?

18 GENERAL HASHIMOTO: Oh, absolutely, Chair. I'd like  
19 to turn it over to Ms. Sarah Moody to continue information  
20 about the remediation efforts.

21 CHAIR CHANG: All right.

22 MS. MOODY: Good morning. My name is Sarah Moody.  
23 I appreciate the opportunity to speak with you today. I work  
24 for Naval Facilities Engineering Command Hawai'i overseeing  
25 the Red Hill environmental work that we're doing in regard to

1       that whole project. Specifically, I would like to speak to  
2       you today about water quality and efforts the Navy continues  
3       to do to ensure our water quality for our distribution system  
4       and do what we can to kind of protect and monitor and make  
5       sure that we're doing everything we can to ensure we have safe  
6       drinking water.

7               Currently, we are in Period 6 of a seven-period  
8       commitment that the Navy made in March of 2022 to collect 7800  
9       drinking water samples from the distribution system for the  
10      purpose of identifying clean water in locations, making sure  
11      that the recovery that we had done following the water crisis  
12      in November of 2021 had sustained and that we had no ongoing  
13      issues in the water system, as well as to build public  
14      confidence in the drinking water system by creating an avenue  
15      which we were consistently collecting data and posting it  
16      publicly and interacting with residents in the community to  
17      continue to show that the drinking water is safe.

18             So, so far, we have collected 6300 samples of  
19      drinking water that have been from residents and facilities  
20      throughout the distribution system, and we also have several  
21      locations where we continue to collect samples on a periodic  
22      basis repetitively, such as all of our schools, all of our  
23      child development facilities, our medical facilities, and any  
24      other high-risk locations. So we do that with the purpose of  
25      making sure that we are showing that the water is safe,



1 especially for communities with at-risk populations such as  
2 our keiki.

3 So all of that data is posted online, and it  
4 continues to be shared. We continue to see that the water  
5 remains safe to drink. We have not had a detection of JP5, of  
6 jet fuel, since we began the long-term monitoring program, and  
7 we continue to look at those results. And if we identify any  
8 concern, such as an exceedance like lead, it is immediately  
9 dealt with. The family is provided bottled water, or the  
10 school or whatever of that nature, and we do the process to  
11 remediate and close out that exceedance.

12 So, in addition to long-term monitoring and then the  
13 monitoring we're doing for total petroleum hydrocarbons or  
14 fuel, we have also sampled our Waiawa Shaft, our primary  
15 source, which is our sole source right now for the drinking  
16 water system, for PFAS to guarantee that we don't have PFAS in  
17 our drinking water and to guarantee that's not an area of  
18 concern for our drinking water constituents. And so that  
19 result was non-detect. We were able to verify that the  
20 drinking water is non-detect for PFAS.

21 We also continue to make sure we're sharing our data  
22 in a variety of avenues. So we've had -- we've created a  
23 website called Safe Waters, which is a sharing website that  
24 the Navy has utilized to make available the data to all  
25 members of our community. So we are able to share the data in

1 a variety of avenues. We have data for courts or files, so  
2 the actual laboratory reports from the files shared in the  
3 library. We have data summary reports at the end of each  
4 period to be able to attempt to better explain the data that  
5 residents in the community are looking at, help them explain  
6 what that means to them and how it's relevant. And then we  
7 also have an interactive map which allows residents or  
8 business owners, or community members to look up an address  
9 and be able to see the data history from that specific  
10 location.

11 And some of the feedback we've heard specifically is  
12 to make things like school names easy to search so that a  
13 parent that has a student in a school can easily look up that  
14 school name and identify what -- what the safety of the water  
15 at their child's school is and things of that nature.

16 So, in addition to these efforts, we also wanted to  
17 continue to promote the public outreach, the community  
18 outreach, so we've been setting up booths in things like the  
19 Naval Exchange facility in the lobby area, which is open to  
20 the public for people to interact with drinking water experts,  
21 be able to look up their results, ask questions, find out more  
22 information about the work that we're doing. We also are  
23 working with our schools, hoping this fall to set up those  
24 similar booths at maybe some back-to-school events or open  
25 houses so that parents of students -- to help feel confidence

1 in the drinking water for their children -- can interact and  
2 ask questions and get information about the water.

3 So those are just some of the efforts that we're  
4 doing to continue to show the water is safe and to also  
5 basically hold to our commitment that we were going to  
6 continue to sample the water.

7 In addition to all of the efforts we're doing here,  
8 we continue to pursue sampling at the Navy Aiea Hālawā Shaft.  
9 It is our current shaft that is offline; it's been offline  
10 since December 3rd of 2021; however, we felt it was important  
11 to build data history for that location. And so starting in  
12 September of 2022, we began doing every two to three weeks a  
13 flushing to over land for about 15 to 20 minutes for the  
14 purpose of collecting samples from that location to build data  
15 history so that we could see what the water quality is like in  
16 that location for future discussions with our regulators about  
17 reuse of that location.

18 So that's just some of the things we're doing in  
19 regards to our drinking water, and Captain Sullivan will share  
20 more about our remediation efforts and other environmental --

21 CAPTAIN SULLIVAN: And if I could also, on this same  
22 topic that we do have -- as Sarah mentioned, all of the  
23 testing going on, we also have a rapid response team that is  
24 available. If any resident has a concern about their water  
25 quality, if they're seeing anything unusual, they can call

1 over to our Emergency Operations Center, and then we'll  
2 dispatch a team to go look at the quality as well as take  
3 samples for an initial sample, and then we'll add them to make  
4 sure their location gets included within the period within the  
5 next few days for the long-term monitoring so that we can get  
6 those results. So that remains (inaudible).

7 COMMISSIONER HANNAHS: May I?

8 CHAIR CHANG: Yes.

9 COMMISSIONER HANNAHS: These -- these are your  
10 tactics. What indicators are you using to determine whether  
11 your tactics are successful so that the public feels a sense  
12 of high confidence in drinking that water?

13 MS. MOODY: So that's a -- that's a challenging data  
14 point to track. Obviously, we continue to take feedback from  
15 the community. If they're drinking bottled water, if they're  
16 not using their water, is that something where we can have  
17 conversations, actually go into their home and look at the  
18 water in their home and see if there's a specific issue that  
19 can be addressed. We have seen a distinct down -- down-shift  
20 in reports and calls of concerns and things like that over the  
21 last six months or so, and so we hope that's indicative that  
22 people are starting to have confidence in their water again.

23 But the challenge with public trust is that's a hard  
24 thing to quantify, and so all we can continue to do is to act  
25 to show, sustain that we continue to hold to our word. But

1 the best reports and the gauge I have is my interactions with  
2 the community.

3 CAPTAIN SULLIVAN: And if I could add to that, at a  
4 lot of these town hall events and our booths at different  
5 locations, we will have individuals that come up very  
6 concerned, very emotional at times, and take the time to walk  
7 through. We explain the results, we answer all the questions,  
8 and most of those interactions do leave with that individual  
9 feeling like they got their questions answered and at least  
10 understanding it. You know, sometimes -- sometimes we can't  
11 pull back and restore that full trust, but we at least -- by  
12 the mood, by the way those interactions go, and what might  
13 start as a very tense interaction, we do our best and receive  
14 indications that when that individual finally does leave the  
15 table, the booth, or the discussion, they seem to be satisfied  
16 and understanding at least of what we're doing (inaudible).

17 COMMISSIONER HANNAHS: As imperfect as any measure  
18 might be, I think making an effort to just kind of identify  
19 some things that you're tracking and seeing the delta over  
20 time I think would be beneficial.

21 CHAIR CHANG: Kathy.

22 COMMISSIONER HO: Yeah. So with what frequency are  
23 you -- this is the questions we get. So with what frequency  
24 is the Navy testing for PFAS?

25 MS. MOODY: So currently, we have tested the Waiawa

1 Shaft a single time under the UCMR5, the basically unregulated  
2 contaminates program under the EPA. And so we will -- we will  
3 collect another sample this fall, seven months after that  
4 sample, to verify that. We do not currently sample for PFAS  
5 within the distribution system just because of the sensitivity  
6 of that testing procedure and the risk of cross-contamination  
7 because PFAS is so prevalent in all sorts of things in our  
8 community, in popcorn packaging and Teflon pans and things  
9 like that. So we -- we've prioritized those efforts on the  
10 sources; both the Navy Aiea Hālawā Shaft has been tested as  
11 well as the Waiawa Shaft.

12 COMMISSIONER HO: I have a follow-up, then. So by  
13 that token, are you using EPA -- what is it? Method -- what  
14 methods are being used?

15 MS. MOODY: Sorry. So there are two separate method  
16 groups for PFAS.

17 COMMISSIONER HO: Yeah.

18 MS. MOODY: We -- for the Waiawa Shaft and the Navy  
19 Aiea Hālawā Shaft, we use Method 537.1 --

20 COMMISSIONER HO: Yes.

21 MS. MOODY: -- and 533, which are the EPA drinking  
22 water methods. For other PFAS efforts that we've done in the  
23 area, such as following the AFFF release or at the Red Hill  
24 Shaft, we have used Method 1633, which is the method that's  
25 been identified for environmental sampling.

1 COMMISSIONER HO: Okay.

2 CAPTAIN SULLIVAN: And to follow on to Kathy's  
3 question for the PFAS sampling, we do continue to monitor and  
4 sample for the groundwater monitoring wells in the vicinity of  
5 the AFFF release in November of '22. So those are collected.  
6 It was weekly for the first six months after the release, and  
7 it is now two-monthly testing of those monitor wells in that  
8 vicinity for PFAS.

9 CHAIR CHANG: Yeah.

10 COMMISSIONER HO: Oh, sorry. I asked because we  
11 know that those methods are limited to a certain set of known  
12 and regulated -- or not regulated, but, like, you know, a  
13 subset of the possible substances that can occur. And so I  
14 guess, are you considering -- maybe that's a silly question,  
15 but, you know, are there other methods that are coming online  
16 that are not regulatory or not, I guess, EPA approved yet,  
17 such as AOF or TOF that really look at, like, the full -- you  
18 know, you might have a contaminant event, and then it breaks  
19 down into other compounds that are still potentially harmful,  
20 but -- I -- and I'm saying this for the public too, like that  
21 our knowledge of how to regulate and monitor PFAS is evolving,  
22 but what are you guys doing to think about how to protect  
23 public health given the potential for contamination?

24 MS. MOODY: Absolutely. So we continue to work with  
25 the regulators to sample whatever methods are kind of

1 preferred and asked of us from the regulators. 1633 did  
2 extend to 40 different PFAS analytes.

3 COMMISSIONER HO: Right.

4 MS. MOODY: So it is a more extensive, comprehensive  
5 look; it has lower detection levels. And 537.1 and 533  
6 combined give us a pretty complete picture of the primary  
7 group of PFAS, so -- and also to -- under long-term  
8 monitoring, we're collecting for 60-plus analytes of all sorts  
9 of other constituents such as volatile organic compounds and  
10 semi-volatile organic compounds and anything related to total  
11 petroleum hydrocarbons. So we are already doing a pretty  
12 comprehensive sampling program; this is just adding those 40  
13 PFAS constituents in addition to that sampling.

14 COMMISSIONER HO: And that (inaudible) of Waiapo  
15 will be moving forward --

16 MS. MOODY: So -- so Waiapo is sampled every period.  
17 Our sources are sampled at the beginning of every period of  
18 long-term monitoring. So we do a threat -- so there are seven  
19 periods in the plan.

20 COMMISSIONER HO: Okay.

21 MS. MOODY: So we do a -- kind of a baseline sample  
22 to make sure we're reverifying that our source water is  
23 meeting safe drinking water standards, and then we move  
24 forward through that period. So we continue to sample the  
25 Waiawa Shaft, and we're committed throughout the defueling



1 process to be mindful of public trust in the community and  
2 needed to take a sample from Waiawa Shaft to continue to  
3 verify to the public that the water remains safe to drink  
4 because that location is six miles from Red Hill.

5 COMMISSIONER HO: Right.

6 CHAIR CHANG: Okay. Any other questions?

7 (No response.)

8 CHAIR CHANG: Thank you so much.

9 MS. MOODY: Thank you.

10 CHAIR CHANG: Do you have -- go ahead.

11 CAPTAIN SULLIVAN: Go on to the next slide, please.

12 So my name is Captain James Sullivan, and I'm the  
13 commanding officer of Naval Facilities System Engineering  
14 Command Hawai'i. I got an opportunity, I thank you for the  
15 opportunity last fall to also brief the commission, and the  
16 slide you're looking at now is actually one of the -- the  
17 results of that discussion and not just with -- with CWRM, but  
18 also discussions that I've had with Ernie Lau and many other  
19 key stakeholders, and that is to make sure that we have a very  
20 clear and transparent plan that's laid out so that you see all  
21 the activities that we're doing. It's updated and posted on  
22 our website, and you are able to hold us accountable just as  
23 we hold ourselves accountable for all of the actions that  
24 we're proceeding.

25 So while this focus is on the current remediation

1 and recovery efforts that are going on, we also have -- and  
2 the Navy is committed to the long-term remediation of the  
3 site. Long after defueling, long after closure, we know that  
4 we have that responsibility to remediate that site, and those  
5 steps are beginning right now with some of the site  
6 assessments that are looking at the site in its entirety and  
7 all contaminants that may exist so that we can have a plan for  
8 what our remediation efforts will be for many, many years.

9 In everything that we do, you know, my team is  
10 working directly with the DOH, the EPA, BWS, CWRM, USGS, and  
11 UH. Since last fall, there have been a lot of additional  
12 forums. As the general mentioned, we're briefing at whether  
13 it be the Governor's Water Committee, but we've also started  
14 -- there's SME roundtables that are conducted at both the  
15 senior level as well as the working level with the SMEs where  
16 we're pulling in folks from your team, folks from Board of  
17 Water Supply and USGS, University of Hawai'i, all to sit down  
18 and talk about are our tactics working? Are there new issues  
19 that are arising, or do we need to change something that we're  
20 doing right now? As well as receive any feedback that they  
21 might be receiving from their constituents. We also meet with  
22 Ernie Lau on a very regular basis. I know that there are  
23 sometimes we don't see eye to eye on an issue, but we  
24 definitely talk it out and make sure we're hearing what his  
25 perspective is so that it could influence our -- our decision

1 and our way forward.

2 So while I don't intend to go into great detail into  
3 everything on this slide -- again, this is what is posted on  
4 our website, and this is the -- really, the tool that I  
5 utilize every time I'm briefing in one of these major forums,  
6 but I did want to call out a few key efforts that I know have  
7 been part of the decisions within this committee in the past  
8 and are very important to our continued success in the  
9 remediation of Red Hill.

10 So moving down to the first section is the  
11 Monitoring and Sampling Effort, that first blue and the bars  
12 below it. Those are all related to our continued sampling to  
13 make sure we know what's going on in the soil but also below  
14 the soil all around Red Hill. The key area there is the  
15 monitoring well expansion. We've committed to 22 additional  
16 monitoring wells this year. We're making great progress on  
17 that. We've already got ten complete; there are four in  
18 progress, still have eight remaining. We also -- on that  
19 effort, there will be another discussion in October with all  
20 of those SMEs again, members from this commission, but also  
21 with DOH, EPA, and Board of Water Supply to talk about  
22 monitoring well locations that we currently are not proceeding  
23 with. Do we need to adjust where we're putting those to make  
24 sure we fully understand what the water underneath in the  
25 aquifer is doing?

1           CHAIR CHANG: Captain, excuse me. Oh, Captain,  
2 could you -- sorry. What's an SME? I'm not familiar.

3           CAPTAIN SULLIVAN: A subject matter expert.

4           CHAIR CHANG: Okay, okay. Thank you.

5           CAPTAIN SULLIVAN: Sorry. I apologize.

6           CHAIR CHANG: No. Sorry, sorry, sorry.

7           CAPTAIN SULLIVAN: Yeah.

8           CHAIR CHANG: Go ahead.

9           CAPTAIN SULLIVAN: So one of -- while it's much  
10 lower on the slide deck here, but what are we utilizing the  
11 data that we are getting for the monitoring wells? It is to  
12 also make sure and conduct modeling. So there are two  
13 parallel modeling efforts that we're proceeding with. We have  
14 both the Navy modeling effort where we're working with one of  
15 our contractors and have been for several years, and then  
16 there is an independent University of Hawai'i modeling effort  
17 that we are supporting, giving them -- make sure they have all  
18 of our data, any access, and helping them in any way we can,  
19 but that is a parallel modeling effort the University of  
20 Hawai'i is doing to, again, make sure we understand what's  
21 happening below the surface, where is the groundwater flowing.

22           Another item I would like to talk about is, you  
23 know, we mentioned -- I think at the last CWRM there was some  
24 discussion on what are your current actions. The soil vapor  
25 extraction is a technology that we are proceeding with right

1 now. So where we're getting the tunnel and the Adit close to  
2 where the November 20 release occurred and close to the Red  
3 Hill Shaft, preparing, getting the holes that we need and the  
4 equipment that we need to do the soil vapor extraction, where  
5 this is basically we're pushing air -- we've identified  
6 locations from below the surface of the tunnel all the way to  
7 the top of the aquifer where we believe there may be fuel  
8 that's trapped within those -- those layers to where we will  
9 be pushing in air and pulling back air, out air, sucking that  
10 air out to try to pull all of that fuel that might remain  
11 anywhere trapped within the soil. So that effort is currently  
12 in progress. We're getting the equipment ready; we're getting  
13 everything we need ready to -- to proceed with that.

14 We also have to be very careful that none of the  
15 efforts that we're doing now, we're not gonna do anything that  
16 could in any way slow down or impact the defueling operations.  
17 So it is a little bit -- there are some pauses at times, and  
18 there's a lot of working with the DOH where we know a lot of  
19 people on their team that would be reviewing and are working  
20 with this, on these plans, are also the same reviewers that  
21 are working on all of the defueling. So a little bit of  
22 patience, not moving as quickly as -- as we would like, but  
23 still an effort that we are fully pushing forward with.

24 Yes.

25 COMMISSIONER KAGAWA-VIVIANI: Oh, okay. A quick one

1 while you're on monitoring. So is the data from these new  
2 monitoring wells on the groundwater sampling?

3 CAPTAIN SULLIVAN: Yes, ma'am.

4 COMMISSIONER KAGAWA-VIVIANI: Okay.

5 CAPTAIN SULLIVAN: And so one thing of note, just  
6 like Sarah had talked about the Safe Waters website where we  
7 have interactive maps, all of the results are posted. We have  
8 developed a parallel site which is focused -- we have one on  
9 drinking water, our distribution system, and then we have  
10 developed a similar site on all of the environmental  
11 groundwater samples, any soil samples, and that is -- and  
12 that's where this remediation table is all on the  
13 environmental app. We have an interactive map on that one as  
14 well where you can click on any monitoring well that's in the  
15 network, and you can find out what the results were for that  
16 monitoring well, but we also have all of the full detailed lab  
17 reports and everything posted on that site as well.

18 And that was one of the things that we worked very  
19 closely with Ernie Lau and the team to make sure that he had  
20 access to all of the results and everything that was required  
21 of us, and we continue to every day improve the quality of  
22 that site and the user-friendliness of it.

23 COMMISSIONER KAGAWA-VIVIANI: Thank you.

24 CAPTAIN SULLIVAN: The only --

25 COMMISSIONER HANNAHS: Captain, with regard to this

1 monitoring and sampling, you're continuing to run the pumps  
2 and put the water into Wahiawa Stream, and there's been public  
3 concern about the effects of that water on the surface -- the  
4 surface water system itself as well as the life that's  
5 dependent upon it. Is that captured in the monitoring?

6 CAPTAIN SULLIVAN: It's in -- in the monitoring, but  
7 also one of the efforts that we -- that I was gonna talk about  
8 here in just a moment was halfway down the slide under the  
9 Adit 3 Remediation Efforts, the second -- the first and second  
10 bullet talk about the capture zone that we're maintaining  
11 within the Red Hill Shaft where we're pulling any  
12 contamination that might be in the aquifer towards the pumps  
13 so that we can collect them. If you go back to in the months  
14 following the release, you know, December all the way through  
15 the spring of '22, we recovered several hundred gallons of  
16 fuel off of the surface through the skimming operations and  
17 everything that was required. We've continued to maintain  
18 that capture zone, and we're to the point now where we're  
19 pulling about a teaspoon every 30 days off of the surface. So  
20 very, very little in quantity, but we are maintaining and  
21 pulling any contamination.

22 But we did start a pilot study in working with all  
23 the subject matter experts to -- we developed a pilot study to  
24 try to reduce the pumping to the least amount required to  
25 maintain that capture zone. So on the 20th of June, we

1 completed that pilot study. We have resumed up to the pumping  
2 rate we were at before, about 4.3 million gallons a day.  
3 We're gathering all the data, putting it all together, and  
4 then we're gonna be sitting down again with that same group of  
5 subject matter experts to verify did we maintain the capture  
6 zone effectively and can we permanently reduce our pumping  
7 down to that 1.8 million gallons a day average.

8 On a parallel effort to the reducing the capture  
9 zone -- or reducing the pumpage required at the capture zone,  
10 we have been proceeding with -- there's a military  
11 construction project, an effort for a water treatment facility  
12 that we will be installing at Red Hill. So that design has  
13 been proceeding, the design will be complete this fall.  
14 Obviously, there's still the Congressional approvals required  
15 to make sure that that military construction project is fully  
16 funded before it is awarded, but we are moving very quickly to  
17 make sure that we have that water treatment facility ready to  
18 go. Again, knowing that we do not want to forever --

19 COMMISSIONER HANNAHS: Make sure --

20 CAPTAIN SULLIVAN: (Inaudible.)

21 COMMISSIONER HANNAHS: -- my simple mind understands  
22 this. So the Board of Water Supply cuts off their pumps so  
23 that you're the only draw in that aquifer.

24 CAPTAIN SULLIVAN: Yes.

25 COMMISSIONER HANNAHS: So all of this is coming to



1     you.  You're getting a teaspoon out a month.  And then that  
2     draw then has to be -- exit the system, so it goes into  
3     Wahiawa Stream after you've taken the teaspoonful out and  
4     you're monitoring that there's no more in there that's causing  
5     damage to the -- the riparian?

6             CAPTAIN SULLIVAN:  So the -- within the capture zone  
7     within the Red Hill Shaft, we are pulling and skimming from  
8     the surface of the water.  The pump is pulling from 18 foot  
9     below the surface of the water to where we are testing the  
10    water quality there.  We are running it through granular  
11    activated carbon treatment to strip out any TPH-related  
12    components that could exist, and then we are again testing the  
13    water at the effluent side of those GAC treatments before it  
14    is going into the Wahiawa Stream.  So it's being tested prior  
15    to as well as at the exterior, and we are not pulling from the  
16    surface; we are pulling from 18 foot below.

17            COMMISSIONER HANNAHS:  And those tests are  
18    indicating no problem?

19            CAPTAIN SULLIVAN:  Correct.  Those -- yeah, there is  
20    not -- there is no TPH that is being released into the  
21    environment at all.

22            COMMISSIONER HANNAHS:  Okay, thank you.

23            CHAIR CHANG:  Okay.  Any other questions?

24            (No response.)

25            CHAIR CHANG:  Go ahead.

1           CAPTAIN SULLIVAN: Yeah, pending any questions, I  
2     know that there's a lot of detail to give. This is why we  
3     will always keep this updated on our website, and this is the  
4     tool that we're gonna utilize any time that I'm briefing,  
5     whether -- it doesn't matter what the forum is, this is --  
6     this is what we will utilize to make sure that that whole  
7     transparency is out there and we continue to move forward in  
8     it.

9           COMMISSIONER KATAYAMA: Excuse me, Chair. This is  
10    Wayne Katayama.

11          CHAIR CHANG: Yes.

12          COMMISSIONER KATAYAMA: May I ask a question?

13          CHAIR CHANG: Yes, Wayne.

14          COMMISSIONER KATAYAMA: Thank you.

15          Captain Sullivan, maybe you could help me with the  
16    eight remaining monitoring wells. What is your ETA on putting  
17    those online?

18          CAPTAIN SULLIVAN: Our goal for all of those eight  
19    remaining is to get them complete by the end of the calendar  
20    year, but we have run into substantial issues with some of the  
21    private landowners that are in the area that are -- that are  
22    not interested in us drilling a well within their area. So we  
23    continue -- again, Board of Water Supply has been very helpful  
24    in helping us to maybe encourage or to work through some of  
25    the permitting requirements. Obviously, we have to follow all

1 of the Section 106 and following all of the rules, but that's  
2 what some of our challenges have been. So I can't say that we  
3 are -- we are still tracking and pushing hard to complete all  
4 22 by the end of the calendar year, but we have some major  
5 challenges still to get through when it comes to some of  
6 especially those -- those land agreements that are required.

7 COMMISSIONER KATAYAMA: So the calendar year is FY  
8 '24?

9 CAPTAIN SULLIVAN: I'm sorry. What was that, sir?

10 COMMISSIONER KATAYAMA: Is your calendar year FY  
11 '24, or are you looking at December?

12 CAPTAIN SULLIVAN: Yeah, it would be into the  
13 beginning of fiscal year '24, end of calendar year '23. So by  
14 December of '23 is when we would like to have all 22 in place,  
15 but we are a little bit behind schedule due to those land  
16 issues right now.

17 COMMISSIONER KATAYAMA: Oh, thank you, Captain. And  
18 I guess this is for maybe either you or Sarah. You know,  
19 you've talked about long-term monitoring; what organization  
20 will be in place to carry out the monitoring requirements that  
21 you're presently on, or is that gonna be different?

22 CAPTAIN SULLIVAN: The --

23 COMMISSIONER KATAYAMA: 'Cause you have quite a few  
24 resources right now --

25 CAPTAIN SULLIVAN: Correct.

1 COMMISSIONER KATAYAMA: -- focused on monitoring.

2 CAPTAIN SULLIVAN: Yes, sir, so -- so as the -- I'm  
3 the commanding officer of NAVFAC Hawai'i, and NAVFAC Hawai'i  
4 will maintain the responsibility of proceeding with the long-  
5 term monitoring that exists currently as well as any  
6 additional follow-on monitoring that may be required. That  
7 would all fall within my organization, sir.

8 COMMISSIONER KATAYAMA: And have the resources been  
9 identified and funded?

10 CAPTAIN SULLIVAN: They have. The individuals, as  
11 well as the resources, at least for the next couple of fiscal  
12 years, are already in place or are being put in place.

13 COMMISSIONER KATAYAMA: Okay.

14 CAPTAIN SULLIVAN: So the funding right now is not a  
15 concern that I have.

16 COMMISSIONER KATAYAMA: Great. Thank you very much,  
17 Captain.

18 CHAIR CHANG: And Captain, this is Dawn. I just  
19 have a question about monitoring. I know that in response to  
20 Commissioner Hannahs -- are you also monitoring down in any of  
21 the stream outflow down by Pearl Harbor and its impacts to  
22 aquatic resources, marine resources?

23 MS. MOODY: Yes, ma'am. So one of the -- following  
24 the emergency order, there is a team from the University of  
25 Hawai'i that does ecological monitoring down in the Hālawā

1 Stream to ensure that we're not impacting any wildlife or  
2 causing any issues, and so that's been ongoing, and we haven't  
3 seen any significant issue from that water coming from the  
4 GACs. So because it is clean water, it's being tested; we  
5 haven't seen any impacts to the Hālawā Stream as it's entering  
6 Pearl Harbor.

7 CHAIR CHANG: Okay, thanks. That's really helpful.  
8 So at least we've got some baseline to -- to have some ongoing  
9 monitoring to look in the future whether there's any change.  
10 Okay, thank you for confirming that.

11 Any other questions? I note it's almost 10:30.

12 General Hashimoto -- oh, go ahead, Aurora.

13 COMMISSIONER KAGAWA-VIVIANI: Sorry, I'm keeping  
14 people from a coffee break.

15 So I just wanted to add, I think Ayron was working  
16 with that effort as I -- is that correct, Deputy Manuel, that  
17 Ayron Strauch is working with the UH team --

18 DEPUTY MANUEL: I will defer to Dr. Strauch.

19 COMMISSIONER KAGAWA-VIVIANI: -- on that?

20 DEPUTY MANUEL: But kind of answering that, we've --  
21 as part of that team, we set up kind of a monitoring program  
22 with the University of Hawai'i to be the lead on biological  
23 monitoring of Hālawā Stream, and then our staff coordinates  
24 and/or, you know, talk to the University of Hawai'i with that  
25 research that's done. And we -- we had them present, I think

1     it was maybe six months ago, on the findings or if there were  
2     any significant findings, and they -- they didn't find any  
3     impact at this time. But we can make the request maybe at the  
4     next quarterly to maybe do an update more formally on the  
5     Hālawā Stream biological monitoring if that's possible.

6             COMMISSIONER KAGAWA-VIVIANI: So I do have a  
7     question, and this is for Captain Sullivan or Ms. Moody.  
8     We've talked a lot about monitoring but -- and remediation at  
9     specific sites, but I think -- I'm curious because I think  
10    there's a way that the public understands the word  
11    "remediation" and the way that agencies use the term  
12    remediation. How do you define it under standard remediation?  
13    And then who is responsible not for Adit 3 or Adit 6 but  
14    aquifer cleanup if there is contamination? And maybe that's  
15    also between DOH. So I'm not sure who to direct the question  
16    to, but maybe we can start here.

17            MS. MOODY: So, part of our efforts is looking at  
18    Red Hill holistically, right? It is not just a situation at  
19    Adit 3 or a --

20            COMMISSIONER KAGAWA-VIVIANI: Right.

21            MS. MOODY: -- situation at Adit 6.

22            COMMISSIONER KAGAWA-VIVIANI: Yeah.

23            MS. MOODY: But because we are actively defueling  
24    right now, the goal right now is to pursue site assessment  
25    planning, which will be the comprehensive look at the entire

1 facility, all of Red Hill, and identify any historical events  
2 that may have occurred at Red Hill that we're not currently  
3 actively pursuing, and then we will begin the process of  
4 active remediation or exploration as needed once we don't have  
5 fuel in the hill. Right now, that risk is not really worth  
6 starting to drill and explore, the priority is defueling, and  
7 then as we move forward, we will look at Red Hill as a  
8 holistic site and identify what site remediation needs to  
9 occur. And this is a long-term effort. The Navy is committed  
10 to the environmental restoration of Red Hill in the long term,  
11 so we -- we anticipate a complete, comprehensive site  
12 assessment that could take several years, and so that is  
13 remedial project management work that will really be occurring  
14 with project engineers that are down in the details and  
15 looking at aerial view footage of the facility as a whole,  
16 pulling up historical data from the archives, identifying  
17 anything that could have potentially, you know, have been  
18 located or a certain piece of equipment or do we need to pull  
19 soil from this location or things of that nature. And so  
20 right now, we have very active efforts at Adit 3 because of  
21 the events in 2021, and we have -- when we had -- specific  
22 efforts at Adit 6 following the AFFF events, but right now  
23 monitoring is the -- is the key goal through defueling just to  
24 make sure nothing is changed in the landscape, and then we'll  
25 pursue the active remediation portion and site assessment.

1           COMMISSIONER KAGAWA-VIVIANI: And that would be for  
2 both land and water, right?

3           MS. MOODY: Okay, yeah.

4           COMMISSIONER HO: So there's two -- there's two  
5 separate and distinct studies that are gonna be done or  
6 remediation that's gonna be done, one for land and one for the  
7 aquifer. Okay. And so how does that -- that's not on this  
8 timeline, but at some point, it overlaps with the first  
9 timeline and --

10          CAPTAIN SULLIVAN: Right, if -- yeah, it will  
11 continue --

12          COMMISSIONER HO: Yeah.

13          CAPTAIN SULLIVAN: -- long, long after the bars on  
14 this timeline come and go. I mean, it will be ten-plus years  
15 of --

16          COMMISSIONER HO: And it would be an effort between  
17 the regulator -- the regulators, in this case, would be the  
18 Department of Health and the EPA reviewing the plans and  
19 getting input from the public on the remediation efforts.

20          COMMISSIONER KAGAWA-VIVIANI: Okay. But as a water  
21 person, I'm wondering how does the aquifer one work? Because  
22 you know, when you're cleaning up soil, it stays in place.

23          COMMISSIONER HO: Not necessarily, but yeah.

24          COMMISSIONER KAGAWA-VIVIANI: Right, no, not  
25 necessarily, but, you know, it's a little bit more



1 straightforward. You scrape up the dirty soil, you -- you  
2 know, you move it offsite and put it -- anyways. But how does  
3 -- do you guys have any sense of where that -- how that  
4 aquifer remediation is gonna proceed, or are you waiting for  
5 the groundwater monitoring -- modeling studies? You know,  
6 like --

7 COMMISSIONER HO: Yeah, I think -- I mean, I think  
8 it's a combination. We have -- we have to do the modeling to  
9 see what's -- where it's moving, but also, like Sarah had  
10 said, it really is -- we really do need to, in earnest, wait  
11 until it's defueled because we want to make sure that there --  
12 there are studies that are being done, but if there is a drop  
13 that enters the environment in any way as a result of the  
14 defueling effort, you know, we -- we're gonna have to analyze  
15 that as well.

16 COMMISSIONER KAGAWA-VIVIANI: Right.

17 CAPTAIN SULLIVAN: And we're very sensitive to any  
18 penetrations, any pathways that we could create --

19 COMMISSIONER KAGAWA-VIVIANI: Create.

20 CAPTAIN SULLIVAN: -- if there were an event to sort  
21 of --

22 COMMISSIONER KAGAWA-VIVIANI: Yeah.

23 MS. MOODY: And one of our primary efforts during  
24 defueling is groundwater protection efforts, so increased  
25 monitoring of the aquifer, of the soil vapor to be able to

1 quickly identify if anything changes. 'Cause that's the  
2 beauty of having these extended periods of data is you can see  
3 changes in the data trends and then act quickly and  
4 accordingly to make sure we're taking the most protective  
5 stance possible (inaudible).

6 COMMISSIONER KAGAWA-VIVIANI: Okay. I guess I just  
7 have a little bit of trouble seeing -- like we had a  
8 contamination event, it moved, it appears to not be as much of  
9 a problem anymore. It would be great to see the data that  
10 showed that if you have the data and if it is visualized. I  
11 know we can dig it up and look at it under tables, but then --  
12 and then there's a system in place to do a rapid response if  
13 something bad happens during defueling, but I guess, like,  
14 it's -- to me, it seems more important to have like a really  
15 tight monitoring system in place because the way -- I mean,  
16 the way model building works is like you need data to -- to  
17 validate your model, so you have to have your monitoring  
18 network and, like, it has to be high frequency, and then you  
19 can build the model. But the model is only gonna tell you  
20 something useful in the future if you have a release again,  
21 which we hopefully won't --

22 COMMISSIONER HO: Right.

23 COMMISSIONER KAGAWA-VIVIANI: -- if we're defueling.  
24 So I'm just trying to piece together what -- the logic of all  
25 of it.

1           COMMISSIONER HO: So there -- we have DOH, EPA, and  
2 the University of Hawai'i has a team that is -- is trying to  
3 understand the modeling efforts.

4           COMMISSIONER KAGAWA-VIVIANI: Right.

5           COMMISSIONER HO: Now, currently. So, you know,  
6 there are still inputs that need to be placed in to complete  
7 the model.

8           COMMISSIONER KAGAWA-VIVIANI: Yeah.

9           MS. MOODY: And you also have 37 monitoring well  
10 location inputs right now.

11          COMMISSIONER KAGAWA-VIVIANI: Right.

12          MS. MOODY: So we are actively monitoring those  
13 locations in addition to pursuing new locations.

14          COMMISSIONER KAGAWA-VIVIANI: I think -- yeah, I  
15 think this is great. I think there's a lot of conversations  
16 here. Everybody's working really hard. If there is a good  
17 opportunity for that information to sort of be packaged into  
18 something digestible so that the public can understand and --  
19 I mean, and I as a member of the public. And I have an  
20 advanced degree, and I really struggle with it. Like if we  
21 can understand the roles that everybody's playing on this more  
22 -- not looking up so much at what's happened, but how we're,  
23 you know, sort of building better responsiveness or awareness  
24 of what's in the aquifer.

25          CAPTAIN SULLIVAN: And I believe one of our big

1 efforts has been to improve the environmental side of our  
2 website to make it as clear as possible. So I'm not sure how  
3 familiar you are with the interactive maps that we put in  
4 place as well as --

5 COMMISSIONER KAGAWA-VIVIANI: I haven't looked at  
6 that, yeah.

7 CAPTAIN SULLIVAN: -- e-maps. So those --

8 COMMISSIONER KAGAWA-VIVIANI: They're there.

9 CAPTAIN SULLIVAN: -- discussions are occurring, and  
10 we're taking the recommendations from Kathy Ho and her team as  
11 well as Ernie and trying to incorporate and do just what you  
12 said, make it very easy to understand what's going on. It is  
13 a complex issue to where --

14 COMMISSIONER KAGAWA-VIVIANI: Oh, yeah.

15 CAPTAIN SULLIVAN: -- it's not easy to understand.

16 COMMISSIONER KAGAWA-VIVIANI: Right.

17 CAPTAIN SULLIVAN: But that's what the intent of  
18 that environmental half of the website is.

19 COMMISSIONER KAGAWA-VIVIANI: Okay, that's good. I  
20 mean, if I can request like maybe that -- if it's ready for  
21 like a public-facing presentation at the next meeting, I think  
22 that would be very helpful because, yeah, like Dr. Miike said,  
23 we're focused on the water.

24 MR. HAMPTON: Ma'am, I'd also like to add just a  
25 little snippet here. I know people heard there's a lot of

1 websites out there, and you're trying to say, okay, which  
2 website's for what.

3 COMMISSIONER KAGAWA-VIVIANI: Yeah.

4 MR. HAMPTON: Right? That QR code that I showed you  
5 in the tank closure graphic.

6 COMMISSIONER KAGAWA-VIVIANI: Yep.

7 MR. HAMPTON: Okay? You go there to that main  
8 website; you scroll to the bottom, and all of these other  
9 websites you heard about are listed right there at the bottom  
10 of that main page.

11 COMMISSIONER KAGAWA-VIVIANI: Okay.

12 MR. HAMPTON: You heard --

13 COMMISSIONER KAGAWA-VIVIANI: Yeah.

14 MR. HAMPTON: -- Safe Waters, you go to the QR code  
15 and scroll down, all -- it's one-stop shopping there.

16 COMMISSIONER KAGAWA-VIVIANI: Okay.

17 MR. HAMPTON: And you can go down and go to the Safe  
18 Waters and all of these other websites you heard through those  
19 links right there, so you don't have to remember six or seven  
20 different websites.

21 COMMISSIONER KAGAWA-VIVIANI: (Inaudible.)

22 MR. HAMPTON: (Inaudible.)

23 COMMISSIONER KAGAWA-VIVIANI: Yes.

24 CHAIR CHANG: Okay. Any other questions or comments  
25 before --

1           General Hashimoto, do you -- do you have additional  
2 presentation, or does this close your presentation?

3           GENERAL HASHIMOTO: Chair Chang, that concludes our  
4 slides. We want to say a big mahalo to everyone, the  
5 commissioners, for the opportunity to present this information  
6 about what we have been doing, what we are doing, what we plan  
7 on doing, and some things we really have to look forward to.  
8 Again, the big one, going back to Jason's initial  
9 presentation, is the start of the gravity train in mid-October  
10 for scheduled completion in January, which for historians of  
11 this crisis know that that will represent at least a year's  
12 worth of condensing of the timeframe for the safe and  
13 expeditious defueling of Red Hill, you know, which is about --  
14 it's not about the water itself, but it's about the removal of  
15 the threat to the aquifer. So really appreciate this  
16 opportunity. We greatly look forward to our next time showing  
17 up here in front of the commission, and we've got the things  
18 that we'll bring back the next time we're able to get  
19 together.

20           CHAIR CHANG: Very good. Thank you, General  
21 Hashimoto and the team.

22           Commissioners, do you have any final questions  
23 before I let the Navy team step down?

24           COMMISSIONER HANNAHS: I will just say even your  
25 characterization in your summary, it's not just what you're

1       doing, it's the impact and -- of those actions. It's like --  
2       you can tell me what phase you're in, but I want to know what  
3       the score is.

4               GENERAL HASHIMOTO: The true art and science of this  
5       effort, that's the big takeaway.

6               COMMISSIONER HANNAHS: Yeah, its impact, whether  
7       it's working.

8               CHAIR CHANG: Okay. Ready? Okay. And I do, on  
9       behalf of the water commission and at least the public that  
10      participates in our process, thank you very much, General  
11      Hashimoto, to you and your team. I think we have felt -- at  
12      least I have felt this increased level of confidence in this  
13      joint task force and the transparency. But, you know, every  
14      time you let your guard down, all it takes is one, so, again,  
15      mahalo to your continued commitment and your commitment to us  
16      to provide us updates.

17              So I'm gonna -- we're gonna move the Navy off, and  
18      then we're gonna open it up for public comments, but I'm gonna  
19      take a ten-minute break. We'll come back at 10:45. All  
20      right, everyone? Thank you very much.

21              (Pause in Proceedings: 10:33 a.m.-10:50 a.m.)

22              CHAIR CHANG: I'm gonna call the meeting back to  
23      order. And now -- thank you again to the Navy for the  
24      presentation. I'm now gonna take public comments. So we have  
25      received written testimony. Are -- is there anybody in the

1 room? I'm gonna go first there. Anybody in the room?

2 Okay. The woman in the back, why don't you come up  
3 to the table and identify your name.

4 DEPUTY MANUEL: You have three minutes.

5 CHAIR CHANG: You'll have -- yep, you'll have three  
6 minutes.

7 MS. GORMAN-CHANG: Okay.

8 CHAIR CHANG: And if you've submitted written  
9 testimony, know that we've reviewed your written testimony as  
10 well. Thank you.

11 MS. GORMAN-CHANG: Okay. Thank you for allowing me  
12 to testify. I'm Susan Gorman-Chang with Shut Down Red Hill  
13 Coalition.

14 First, I want to comment about the Navy. You know,  
15 there's an imbalance of power going on here. The Navy's  
16 presumption is they really are gonna have the final say;  
17 that's what I'm hearing. You know, when they say, We'll let  
18 you know after the briefing is written, and we'll share with  
19 you, and we'll take your comment; that is different than  
20 working alongside of us, and so the -- the empower -- the  
21 balance in power is not right. It is our water, not the  
22 Navy's water.

23 Okay. So first and foremost, I wonder if you have  
24 all read this from the Department of Health, Exposure  
25 Assessment, November 2021, "Release of Jet 5 Jet Fuel Into the



1 Joint Base Pearl Harbor Hickam Drinking Water System" by Dr.  
2 Roger Brewer. Has the Navy, the commission read this?

3 COMMISSIONER KAGAWA-VIVIANI: I'll admit not in its  
4 full entirety.

5 MS. GORMAN-CHANG: Oh, okay. Okay, great. Thank  
6 you. Thank you so much.

7 And I think the report shows that jet fuel is not  
8 the only thing that should be tested. The report and  
9 presentation reveal level -- the levels and seriousness of  
10 exposure that families endured regarding several chemicals in  
11 addition to JP5, and they continue to experience. To me, it  
12 is evidence of the US Navy's mishandling and lack of ability,  
13 lack of supervision of their contractors, lack of emergency  
14 preparedness to deal in any way with the November 2021 jet  
15 fuel, deicing agent, and solvents and other chemicals that  
16 were leaked into the drinking water system and ingested and  
17 inhaled by countless military and civilian households. I  
18 think the latest evidence and analysis shows without a doubt  
19 that the US Navy cannot be trusted to manage any water system  
20 without strong and continual oversight by the commissions.  
21 The most recent TFA leaks is further evidence of this  
22 mismanagement.

23 Commissioners, this happened on your watch and  
24 continues to evolve and unfold on your watch. Commissioners,  
25 you are not the helpless orchestra that played as the Titanic

1 sank. You have responsibility and power. You have access to  
2 our lifeboats which in this case is safeguarding our water.

3 CHAIR CHANG: I'm gonna ask you to summarize. I'm  
4 sorry. Go ahead and summarize.

5 MS. GORMAN-CHANG: Okay, I just have some more  
6 requests. I'd like you -- we'd like you to have a meeting  
7 every month; it would be nice if the Navy was here every month  
8 and to have Red Hill an action item. Ask the Department of  
9 Health to update their environmental action levels to protect  
10 all water drinkers. Do not give the Navy any more permission  
11 for any more water. Decrease the Navy's water by 20 percent  
12 or whatever the imbalance of those shafts that they're not  
13 gonna be reopened. And consider pursuing a lawsuit jointly  
14 with Board of Water Supply against the corporations that  
15 created the forever chemicals, PFAs, so the creators of the  
16 chemicals must pay for remediation to take PFAs out of the  
17 water. This has just last month been successfully  
18 accomplished to the tune of a one billion dollars agreement by  
19 Chemours, DuPont and Corteva, who agreed to provide more than  
20 one billion dollars to municipalities and water --

21 CHAIR CHANG: I'm going to ask you to -- this has  
22 been four minutes. But we've also received your written  
23 testimony, so thank you very much.

24 MS. GORMAN-CHANG: Okay. Thank you very much.

25 CHAIR CHANG: Thank you. Thank you very much.

1           The next -- the gentleman, why don't you come on up  
2           and identify yourself, please?

3           MR. GARRICK: Hello, I'm Matt Garrick, a member of  
4           the public living in Mānoa, and I really appreciate the  
5           commission for having these public meetings, for allowing  
6           public testimony, and for your -- your time and consideration  
7           of this matter in looking into it.

8           In one part of the meeting, I -- I heard a concern  
9           whether this is relevant, and we were on the slide that was  
10          talking about the repurposing of Red Hill and whether that's  
11          relevant for this commission. And I just want to ask, don't  
12          you think that given the tanks are located in or on -- right  
13          above the aquifer, depending on who you ask, that any  
14          repurposing of these tanks would have a relevant impact on our  
15          water, potentially permanent impact on our water. So I hope  
16          you consider that.

17          The other thing I noticed from the presentation was  
18          that I didn't see anything about ag land, and it's been known  
19          that these PFAS allow these chemicals that are being polluted  
20          into the water can be taken into fish, can be taken into  
21          plants, move up the food chain, entering into our bodies. I  
22          was recently -- someone recently reached out to me who lives  
23          on ag land in Aiea, and they said the military came, asked to  
24          make sure that no one was drinking any of the water that's  
25          being pumped into their homes, and then left without doing

1 anything. And then, the landlord on that property has tested  
2 the water but won't release the results to the residents. And  
3 their young children are bathing in this water, sometimes  
4 drinking it, even though they're being told not to, but  
5 they're little kids, so they do what they like.

6 And it's -- it's just something that I think we  
7 should look at also at the ag land because that's very  
8 important. And I know you're the Commission on Water Resource  
9 Management, but if not you, who? If not when -- if not now,  
10 when?

11 COMMISSIONER MIIKE: I need to -- I need to respond  
12 to what you're saying.

13 MR. GARRICK: Absolutely.

14 COMMISSIONER MIIKE: You're obviously referring to  
15 my comments when you said that I -- somebody said it was  
16 irrelevant. Wrong.

17 MR. GARRICK: Okay.

18 COMMISSIONER MIIKE: Okay?

19 MR. GARRICK: I apologize.

20 COMMISSIONER MIIKE: I did not say that. What I  
21 said was that we were starting to range too far away from the  
22 water issue, so don't -- don't go mischaracterizing my  
23 comments, please.

24 MR. GARRICK: (Inaudible.)

25 COMMISSIONER MIIKE: Other than that -- other than

1       that, I'm fine with what you said.   Okay?

2               MR. GARRICK:   Thank you.

3               COMMISSIONER MIIKE:   Thank you.

4               CHAIR CHANG:   Okay, thank you.   Could you wrap up?  
5       Could you summarize your testimony?

6               MR. GARRICK:   I'll just stop there.   That's fine.  
7       Thank you very much.

8               CHAIR CHANG:   All right.   Thank you very much for  
9       your testimony.

10              Is there anybody else in the room that would like to  
11       provide a public comment?

12              (No response.)

13              CHAIR CHANG:   Okay.   I'm going to go on the YouTube.  
14       I have Susan.   Go ahead.

15              MS. PCOLA-DAVIS:   Good morning.

16              CHAIR CHANG:   Good morning.

17              MS. PCOLA-DAVIS:   Can you hear me?

18              CHAIR CHANG:   Yes.

19              MS. PCOLA-DAVIS:   Okay.   My written testimony  
20       contains a slide show for you since that's one of your  
21       favorite ways of getting information.   In the slide show, I'm  
22       referring to several references when the Navy provides a  
23       supplement, the DOH and the EPA need to respond to it.   So  
24       some of these slide show -- the Navy's response to the DOH  
25       comments of 15 March closure plan, the Navy's response to EPA

1        comments of 7 April, some information from the Closure  
2        Supplement 2, which they received after they already provided  
3        the comments, and then because -- I transfer the FTAC,  
4        excerpts from the FTAC. I don't plan on going through all of  
5        these slides because I believe they're self-explanatory, so I  
6        provided talking points for my testimony.

7                I would ask the chair if you can find out if the  
8        public can get a link to the QR code because I don't even know  
9        how to use a QR code, so that would be helpful for me and  
10       maybe for other people.

11               The other statement I'd like to make is anything  
12       under 266 parts per billion will be designated as non-detect.

13               I do not support any reuse of this facility. I know  
14       the legislature's are looking -- legislators are looking at  
15       some kind of revenue; they need to realize that it's gonna  
16       take for years to get these pipelines out, so we have plenty  
17       of time to start planning and talking. If there is money  
18       received, this money needs to be put in some kind of trust for  
19       the people that have drank and are seriously ill from the  
20       contamination.

21               Thank you, Susan, for giving a brief update on Dr.  
22       Brewer's memo, and I can provide the video and my transcripts  
23       of that to the commission.

24               One part of the Navy's response was --

25               CHAIR CHANG: Susan, Susan, can you summarize your

1 testimony, your comments?

2 MS. PCOLA-DAVIS: Yes. There's two points I want to  
3 make. The Navy believes reuse is outside the UST closure  
4 requirements and not -- are not aware of other closed USTs  
5 that have been reused for nonfuel purposes. These are --  
6 these are taken directly from my references.

7 And the last one is during the FTAC, the DOH  
8 presented reduce, recycle, and reuse; neither the HRS 382.G  
9 nor the underground -- there's nothing saying that these tanks  
10 or that place has to be reduced, recycled, and reused. I just  
11 don't want this kind of information going out unless somebody  
12 can point me to exactly a document that says USTs must be  
13 reused. Mahalo.

14 CHAIR CHANG: Thank you very much, Susan.

15 I've got next is -- is it Abbey Seitz? If you can  
16 unmute yourself? Are you here to testify on Item B1?

17 DEPUTY MANUEL: Chair, I think she's here for B3.

18 CHAIR CHANG: Okay, okay. Is there anybody else --  
19 is it Franz?

20 DEPUTY MANUEL: On Item B3, Chair. Sorry, they're  
21 just --

22 CHAIR CHANG: Okay. No, very good.

23 Is there anybody else that I'm missing, Kathy,  
24 online?

25 MS. YODA: No.

1 CHAIR CHANG: Okay. With that, I'm gonna close  
2 public comments.

3 This was really just for informational; there's no  
4 action to be taken.

5 COMMISSIONER HANNAHS: Chair, Chair, I have a --

6 CHAIR CHANG: Oh.

7 COMMISSIONER HANNAHS: I have a question of Susan  
8 Gorman-Chang for Shut Down Red Hill if you could return.

9 CHAIR CHANG: Oh, sure.

10 COMMISSIONER HANNAHS: You heard the discussion of  
11 the Navy, you heard what they did report on, you heard our  
12 questions and what we sought. What did we miss? What was --  
13 what do you think are some important things that were not  
14 raised that we ought to be looking at?

15 MS. GORMAN-CHANG: Thank you. Number one -- I think  
16 Susan Pcola-Davis brought this up too -- when they say  
17 non-detect, they need to give us the exact parts per trillion,  
18 whatever that is, not just not detect.

19 COMMISSIONER HANNAHS: So (inaudible) full  
20 characterization or whatever --

21 MS. GORMAN-CHANG: Yeah.

22 COMMISSIONER HANNAHS: -- you'd like more specific  
23 data.

24 MS. GORMAN-CHANG: Right, correct.

25 COMMISSIONER HANNAHS: Okay.



1 MS. GORMAN-CHANG: The second thing is I'd like to  
2 know if the Department of Health is going to revise their  
3 health advisory system based on the information in this.  
4 There's a lot more chemicals that people were exposed to, and  
5 taking those all at once is different than just looking for  
6 jet fuel. The health implications are really --

7 COMMISSIONER HANNAHS: A larger suite of chemical  
8 analysis?

9 MS. GORMAN-CHANG: Right, right.

10 COMMISSIONER HANNAHS: Yeah, yeah.

11 MS. GORMAN-CHANG: Right. Based on this Department  
12 of Health reports, are you going to revise your medical  
13 advisory that said do not just test for jet fuel in people's  
14 blood?

15 COMMISSIONER HO: You know, I -- we will look at  
16 that, but I -- I have to talk to our toxicologists. So we'll  
17 look at that.

18 MS. GORMAN-CHANG: Okay. (Inaudible), yeah.

19 Okay, let me see. Yeah. Another thing, so we're  
20 all talking about reusing Red Hill, and we're all staring at  
21 this, you know, chart that says 54 percent of the people don't  
22 want it repurposed, and yet there's this assumption that we  
23 will repurpose it, and this discussion keeps going on almost  
24 deaf to the fact that most people don't want it repurposed.  
25 Why are we proceeding with trying to repurpose it? Again,

1     like Susan said, revise, repurpose, recycle, whatever; I don't  
2     think that's a valid reason.

3             COMMISSIONER HO: Can I respond? So it is a -- in  
4     all things, and in a lot of things when we're dealing with  
5     solid waste, those are the three Rs, reduce, reuse, and  
6     recycle, and so we -- it's not a requirement, it -- in this  
7     context.

8             MS. GORMAN-CHANG: So you're choosing to do it.

9             COMMISSIONER HO: In this context, it's not a  
10    requirement. It is would you please look at this and  
11    determine whether, one, you can reuse it? For example, some  
12    people have said, Why don't we get the University of Hawai'i  
13    to do a research center there, or why don't you make it into a  
14    museum? Those are reuses of that facility. It is -- it may  
15    not be, but that's what people are -- some people are saying.  
16    So it's not that we're gonna -- that it's gonna happen, it's  
17    just will you take a look at these three criteria and see if  
18    you could reuse it and recycle it? Meaning could be taking  
19    out the pipelines and using the pipes or the electrical system  
20    and reuse it in some other way. It's just these are three --  
21    three words that we want that -- we want the Navy and the  
22    public to think about. Is there a way that you can reuse or  
23    reduce or recycle this facility to make it a better facility  
24    or to make it into something different? It's not a  
25    requirement; it is a goal of ours.

1 MS. GORMAN-CHANG: Okay. So there's still the  
2 option of just closing it and not repurposing it?

3 COMMISSIONER HO: Absolutely, absolutely.

4 MS. GORMAN-CHANG: I feel like we're throwing good  
5 money after bad.

6 COMMISSIONER HO: No, absolutely.

7 COMMISSIONER HANNAHS: I thought we -- we covered  
8 that. I -- my question was, what did we miss? We had -- we  
9 had a good discussion --

10 (Multiple speakers.)

11 COMMISSIONER HANNAHS: -- of that because we said we  
12 want some criteria.

13 MS. GORMAN-CHANG: Right.

14 COMMISSIONER HANNAHS: We want to see what the --  
15 the options are. We want a thorough analysis of each option.

16 MS. GORMAN-CHANG: But again, as long as the  
17 (inaudible) --

18 COMMISSIONER HANNAHS: And we see what the public  
19 thinks.

20 MS. GORMAN-CHANG: Okay.

21 COMMISSIONER HANNAHS: That data is clear.

22 MS. GORMAN-CHANG: Okay.

23 COMMISSIONER HO: So, thank you.

24 MS. GORMAN-CHANG: Okay. That's it.

25 CHAIR CHANG: Yeah. I'd like to bring us back to

1 the agenda. I mean, Neil, is that what you wanted? Is that  
2 what you asked?

3 COMMISSIONER HANNAHS: (Inaudible.)

4 CHAIR CHANG: Okay, all right. So hearing no other  
5 public testimony, no other -- any other questions from the  
6 commission?

7 (No response.)

8 CHAIR CHANG: I am going to close --

9 COMMISSIONER KAGAWA-VIVIANI: Chair.

10 CHAIR CHANG: Go ahead. Yes.

11 COMMISSIONER KAGAWA-VIVIANI: I do have one. So  
12 this is addressing Susan again because of the first item you  
13 brought up -- and maybe Commissioner Ho. My understanding is  
14 that Dr. Brewer's findings, once released, sort of sit in the  
15 lap of what DOH takes care of. What role or what important  
16 insight do we as commissioners make when we're often tasked  
17 with water quantity issues? You know, how do we -- how do we  
18 use this information to guide our efforts? Is it relevant?  
19 You know, how do -- because it seems like important  
20 information. I was reading it last night.

21 COMMISSIONER HO: So this assessment was really done  
22 to help CDC in its efforts.

23 COMMISSIONER KAGAWA-VIVIANI: Okay.

24 COMMISSIONER HO: So that was the sole purpose for  
25 the drafting of this document. CDC will take this document

1 and do what it needs to do to analyze and come up with its --  
2 its own findings.

3 COMMISSIONER KAGAWA-VIVIANI: Okay. This -- okay.  
4 And then there's -- there's this public understanding -- and  
5 I'm just trying to understand --

6 COMMISSIONER HO: Right, no (inaudible).

7 COMMISSIONER KAGAWA-VIVIANI: -- where some of the  
8 tension or frustration may lie and --

9 MS. GORMAN-CHANG: Yeah. I feel like as Department  
10 of Health, you're supposed to be looking out for our health,  
11 and so to say that you're just gonna give it to the CDC and  
12 not, like, revise your medical advisory --

13 COMMISSIONER HO: So we are -- we're constantly  
14 looking -- and as you know if you know Roger Brewer, we're  
15 constantly looking and revising our EALs and all kinds of  
16 things. So it is -- it is something that we are constantly  
17 looking at. I can't commit to you today that we are going to  
18 change our advisory because that's not -- I'm not the SME, but  
19 I can say that we will -- I will bring it back to my team to  
20 look at and make a determination.

21 MS. GORMAN-CHANG: And I think it would be a  
22 disservice if you didn't, in my opinion, revise that medical  
23 advisory based on the information now that you have that it's  
24 not just jet fuel, it's the solvents, it's the deicers, it's  
25 all of those things in there. And the impact it has on people

1       when they're -- when they're exposed to it all together.

2               COMMISSIONER KAGAWA-VIVIANI:   If I may, can I  
3       intervene?

4               COMMISSIONER HO:   Sure.

5               COMMISSIONER KAGAWA-VIVIANI:   Switching to my UH  
6       hat.

7               COMMISSIONER HO:   Yeah.

8               COMMISSIONER KAGAWA-VIVIANI:   I think reviewing it,  
9       the complexity of the biology of this situation requires a  
10      different, you know, expertise.  And I do think that is CDC,  
11      but I think there's a need for, like, you know, specialists  
12      and experts that may not be employed by DOH.  So I think it's  
13      a really important landmark to convene more conversations  
14      around and what, you know, about how to -- how to look for the  
15      effect of, you know, the deicers, for instance --

16              MS. GORMAN-CHANG:   Yeah.

17              COMMISSIONER KAGAWA-VIVIANI:   -- that do have  
18      neurological impacts, but are, you know, showing up in people  
19      and increasing, for instance.  So I know this from my UH side.  
20      So making sense of all these different lines of evidence is  
21      really hard to do in a regulatory space.  You know, a lot of  
22      us may not be specific specialists.  So I think there's  
23      important conversations that need to be had and, you know,  
24      you're bringing it up here, but maybe they do need to be  
25      organized and worked out.

1           COMMISSIONER HO: And I -- it's been a while since I  
2 reviewed -- since I've read the medical advisory, but I do  
3 believe that the medical advisory didn't prohibit anybody,  
4 anyone from seeking medical attention, and it didn't prohibit  
5 any -- any of the doctors from doing the appropriate things  
6 that they thought were necessary.

7           MS. GORMAN-CHANG: (Inaudible), but that's a  
8 conversation for another time. And I guess --

9           COMMISSIONER HO: Yes.

10          MS. GORMAN-CHANG: -- our other frustration is  
11 you're silent --

12          CHAIR CHANG: Excuse me. Can I -- can I just call  
13 order to this? I want to stay in our lane. I mean, I think  
14 these are great conversations. DOH has its own platform. I  
15 would like to bring us back. I mean, we're still on the first  
16 agenda item, and there are several other presentations. So,  
17 you know, I understand the frustration, the tension. I think  
18 the intention of these public platforms was to create --  
19 provide a space for the Navy to provide us good information.  
20 Clearly, there are other platforms available for specific  
21 subject matters. And this one, Kathy, is probably more in  
22 your wheelhouse when you have other public meetings regarding  
23 DOH. So can I bring us back to the water commission? Okay?

24          Okay. So I think that was the last testimony on the  
25 Navy's Item B --

1 MS. PCOLA-DAVIS: Can I add something?

2 CHAIR CHANG: Pardon me.

3 MS. PCOLA-DAVIS: Can Kathy Ho please let the public  
4 know when their next public forum will be? Because Susan and  
5 I would love to join you. Thank you.

6 CHAIR CHANG: Okay. Thank you very much. I'm sure  
7 Kathy -- check her website, she'll -- she can make that  
8 available, but yes.

9 **Item B2**

10 So I'm now gonna go on to Item B2. It's a briefing  
11 by the US Geological Survey, Professional Paper 1876,  
12 "Volcanic Aquifers of Hawai'i - Contributions to Assessing  
13 Groundwater Availability on Kaua'i, O'ahu, Maui," presented by  
14 Scot Izuka, PhD, USGS.

15 Thank you, Neil.

16 MR. FUJII: Hi, Chair. Neil Fujii. Good morning,  
17 Chair and Members and (inaudible). So I'm just gonna  
18 introduce Scot Izuka, and then I'll (inaudible) his  
19 presentation. You guys probably all know Scot. Scot Izuka  
20 has been a hydrologist with the USGS Pacific Islands Water  
21 Science Center since 1989 and has conducted water resources  
22 studies in Hawai'i, American Samoa, and Micronesia. Most of  
23 his work is in island groundwater and surface water hydrology,  
24 but he also has published research in geomorphology, climate,  
25 sedimentology, stratigraphy, geochemistry, geochronology,



1 paleontology, and paleogeography.

2 Scot's currently the project lead for the Hawai'i  
3 Volcanic Aquifer Study and several regional groundwater  
4 availability assessments being conducted by the USGS Water  
5 Availability and Use Science Program.

6 Scot received a BS in geology and geophysics from  
7 the University of Hawai'i; he received his MS in geology from  
8 the University of Kansas and a PhD in geology and geophysics  
9 from UH at Mānoa.

10 So, Scot, thanks for the presentation. Take it  
11 away.

12 DR. IZUKA: Thanks, Neil. I'm going to share my  
13 screen quickly here. And share. Okay. Can everybody see  
14 that, my screen, my slides?

15 CHAIR CHANG: White screen.

16 COMMISSIONER HANNAHS: White screen.

17 CHAIR CHANG: Yeah, not yet, Scot.

18 DR. IZUKA: Not yet? Can you see it?

19 CHAIR CHANG: Nope. White screen.

20 DR. IZUKA: Oh, my gosh. Okay. Let me see if I got  
21 the right one going here. Try this again. Share screen.  
22 I'll try entire screen. How's that? Oh. Okay. Can you see  
23 a screen?

24 (Multiple speakers.)

25 CHAIR CHANG: We see you.

1 DR. IZUKA: Great. That's progress, okay.

2 COMMISSIONERS: There we go. Yeah.

3 DR. IZUKA: Okay, here we go. Okay. Let me hide  
4 this guy.

5 Okay. Well, thank you, Neil, and thank you for  
6 inviting me to speak about this study that we've been doing.

7 So I'm gonna talk today about Hawai'i Volcanic  
8 Aquifer Study and give you some of -- some highlights of the  
9 results. This was a study -- one of the studies that the USGS  
10 was doing across the nation of the groundwater availability of  
11 the principal aquifers in the United States. The final  
12 report, the third and final report of this study, was recently  
13 published, I think maybe about three or four months ago, and I  
14 -- most of what I'm gonna talk about comes from this final  
15 report, but there are two other reports.

16 The first report is a summary of the hydrogeology of  
17 Hawai'i, and it includes updates all the way up to when it was  
18 published was kind of like the mid-2010s or so. It also  
19 includes updates on groundwater recharge for Kaua'i, O'ahu,  
20 and Maui.

21 The second report -- let's see. Let me get my  
22 pointer out here. Oops. The second report, that one goes  
23 down into the weeds about groundwater modeling. So for those  
24 who are interested in that, you can look at that, you know, if  
25 you're into mod flow and all of the details that go into that.

1 But most of the information that I'm gonna be  
2 talking about, again, is in the final report, and there's also  
3 a fact sheet that's available. All of these are available  
4 online at these sites, or if you just Google USGS Publications  
5 Warehouse and Volcanic Aquifers of Hawai'i, you'll get it.

6 Okay. So how to answer the question of how much  
7 groundwater is available in -- from Hawai'i's aquifers? Well,  
8 all groundwater withdrawals have consequences. In Hawai'i, I  
9 am sure many of you are familiar with this, but those  
10 consequences are water-table decline, saltwater rise and  
11 encroachment -- I guess you should see it down here -- and  
12 reduction of groundwater discharge to springs, streams,  
13 wetlands, and the ocean.

14 Groundwater availability depends on the severity of  
15 the consequences the community is willing to accept, so  
16 groundwater availability depends on what you're able to accept  
17 in consequences. And we know that those consequences -- you  
18 know, it's a complicated question and, you know, it involves  
19 human and -- human and environmental health considerations,  
20 economics, legal rights, and statutes, and so forth, which are  
21 kind of beyond the science part, but --

22 Okay. The consequences also differ by hydrogeologic  
23 setting. Now, in the report, we group the groundwater  
24 occurrences in Hawai'i to four principal hydrogeologic  
25 settings. Again, these are probably very familiar to you, but

1     there's a freshwater or basal lens setting, there's dike-  
2     impounded groundwater, there's thickly saturated aquifers, and  
3     then there's perched aquifers. I'll talk about these -- I'll  
4     talk about the first three, anyway, subsequently. But there's  
5     also enigmatic occurrences, and this includes things like the  
6     Schofield Aquifer or Schofield high-level groundwater and some  
7     of the things that are being discovered in -- on the Big  
8     Island that don't really fit into these principal  
9     hydrogeologic settings, and we'll talk about that a little  
10    bit.

11           Okay. So the freshwater or basal lens, again, very  
12    familiar to you, freshwater floating buoyantly on saltwater in  
13    the aquifer. When you take groundwater from that, the  
14    consequences of taking groundwater from that is water-table  
15    reduction and saltwater rise, and reduction of discharge to  
16    the ocean. Where there is cap rock, then the freshwater lens  
17    is thicker because the cap rock resists the flow of water to  
18    the ocean. The fact is that the freshwater lens gets thicker,  
19    but it also causes some of the groundwater discharge to  
20    discharge above sea level to springs, such as the Pearl Harbor  
21    Springs are a good example. And so when you take water from  
22    this system, again, you have water table decline and rise of  
23    saltwater and encroachment of saltwater, but you also have  
24    reduction of discharge to streams that are on land.

25           In the dike-impounded groundwater system, we have

1 low-permeability dikes, volcanic dikes that have impounded  
2 groundwater to hundreds of feet above sea level. And where  
3 the erosion has exposed the dikes, then water discharges from  
4 these dike compartments feeds streams and supports stream base  
5 flow. When you take water from this system, and again you  
6 have water table decline and reduction of groundwater  
7 discharge to streams and springs and things on the -- on the  
8 land. There's also reduction of groundwater discharge to the  
9 ocean. There is some saltwater encroachment near the coast,  
10 but for the most part, this area is not gonna be affected by  
11 saltwater intrusion.

12 Okay. And then there's the thickly saturated  
13 aquifers. These are aquifers that are not highly permeable,  
14 that the entire aquifer is made up out of low-permeability  
15 rock. And in particular, the example that I've worked on is  
16 the one on Kaua'i in the Lihue Basin where lava flows -- thick  
17 lava flows have filled in preexisting depressions and formed  
18 these thick low-permeability aquifers. And in this case, the  
19 freshwater saturates all the way to the land surface, and much  
20 of the -- excuse me -- much of the groundwater discharge  
21 occurs at streams above sea level. So, of course, if you take  
22 water from that, one of the biggest impacts is going to be to  
23 -- would be reduction in streamflow. There is also reduction  
24 of groundwater discharge to the ocean. There likely is  
25 saltwater encroachment near the coast, but, you know, this

1     freshwater lens is pretty thick, so how far this might  
2     threaten wells further inland, we don't really know.

3             Okay. So the one enigmatic occurrence that I'm  
4     gonna talk about today is the Schofield high-level  
5     groundwater. It's an area of high-level groundwater that's  
6     higher than you would expect from -- in a high-permeability  
7     aquifer. We know from data, groundwater data that it's not  
8     perched, it's saturated all the way down to sea level, and  
9     freshwater probably extends quite a bit below sea level. Many  
10    hydrologists have postulated some sort of a groundwater  
11    barrier, like a dam vertical structure that is supporting  
12    this, but the actual structure is not really known. Now, the  
13    -- probably the main consequence of taking water out of this  
14    is reduction of groundwater flow to adjacent aquifers, so,  
15    yeah, it will reduce the amount of water available in the  
16    adjacent aquifers.

17            Okay. So to -- to quantify the consequences of the  
18    groundwater withdrawal for this study, we used groundwater  
19    models of Kaua'i, O'ahu, and Maui. These islands have most of  
20    the -- well, these islands have all of the principal  
21    hydrologic settings that we talked about before, so at least  
22    we can test them.

23            We created calibrated models which had 2001 to 2010  
24    conditions for pumping and recharge and land use, and so  
25    forth. So then we took this model, this calibrated model, and

1     then we did some scenarios looking backwards to see what would  
2     happen. And when we compare these backwards scenarios --  
3     backward- looking scenarios to the calibrated model, we can  
4     see how conditions that exist in 2001 to 2010 have impacted  
5     the groundwater resource. Then we also looked in the future  
6     and did some hypothetical scenarios with increased withdrawal  
7     and change in rainfall to see how these conditions might  
8     affect groundwater resources relative to the calibrated 2001  
9     to 2010 conditions.

10           So for the first one, let's look backwards. In this  
11     example, we're looking at the past. One of the scenarios that  
12     we did was we just shut down all the wells that we had in the  
13     2001-2010 simulation. So this would be looking back, you  
14     know, to pretty much predevelopment conditions. For example  
15     -- and this is the results of that simulation. This is just  
16     Oahu's, for example, and this -- these colors show the -- the  
17     change in groundwater levels, the intensity of change in  
18     groundwater levels. And you can see that by shutting down all  
19     the wells, it caused -- well, it caused water levels to --

20           I'm sorry, I've gotta go back. I'll rephrase that.

21           Looking at the no-withdrawal scenario and calibrated  
22     model, we can see how the 200 -- 2001 to 2010 conditions  
23     impacted the past. So then we can see that the 2001 to 2010  
24     conditions have caused groundwater levels, water levels, to  
25     decrease quite a bit in the dike-impounded groundwater areas,

1 and a little bit more here because -- but not as much in the  
2 Wai'ananae area because withdrawals are not as much as they are  
3 in the Ko'olau side. The freshwater lens, despite having  
4 quite a bit of withdrawal in 2001 to 2010, we can see that the  
5 water table hasn't declined quite as much as it has in the  
6 dike- impounded area, but that's because of the high  
7 permeability of the freshwater lens setting.

8 But in the freshwater lens setting, the saltwater-  
9 freshwater boundary rose considerably under this 2001 to 2010  
10 condition. So it shows that for the freshwater lenses,  
11 saltwater rise is one -- gonna be one of the principal factors  
12 that limit groundwater availability. You know, there is a  
13 little bit also going on in the dike-impounded areas, but not  
14 as much as you see in the freshwater lens.

15 This map shows the effect of the withdrawals on  
16 streamflow, and now, again, we see that most of the impact is  
17 happening in the streams in the dike-impounded groundwater  
18 areas. In the freshwater lens areas, it -- there is an impact  
19 right at the -- where the cap rock meets the aquifer, and  
20 there are -- there is groundwater discharge to -- to springs  
21 in the -- in the freshwater lens. This is the Pearl Harbor  
22 Springs.

23 Another simulation was to look at the combination of  
24 withdrawal and recharge, so we looked at -- we simulated  
25 recharge in 1870, this was before the first modern well was



1 drilled, and then we combined it with the no-withdrawal  
2 scenario, and then by comparing that to the calibrated model,  
3 we could see what the impact of current recharge changes and  
4 pumping have. And most of the changes in recharge resulted --  
5 between these two periods have resulted in land use -- have  
6 resulted from land use changes, including agriculture.

7 And so I'm gonna show Kaua'i for this example and  
8 for this is for water -- changes in water levels. And the  
9 agriculture has caused some areas to -- for water levels in  
10 some areas to increase, and that's shown by these blue  
11 patches, and in some areas it has decreased as shown in the  
12 brown areas. So the blue areas in particular for Kaua'i, they  
13 correspond with irrigation reservoirs that are leaking, and  
14 they enhance the groundwater recharge, so they're going to  
15 reduce the effect of groundwater withdrawals in these areas.  
16 In areas where there's a reduction in recharge and lowering of  
17 water levels, that's going to exacerbate the effects of  
18 groundwater withdrawals.

19 Another simulation was to look at -- to the future,  
20 and this is to increase withdrawals in the future, and for  
21 this, we increased the withdrawals from conventional wells.  
22 So these are the conventional vertical wells, wells that are  
23 drilled vertically, not tunnels. We did not increase the --  
24 simulate any increases in tunnel withdrawal, but -- so just  
25 for the conventional wells. And this is a map of how the

1 increases looked. The bigger the dot, the bigger the  
2 increase. These increases are based on the permitted rates at  
3 the water commission, and in most cases, the permitted rates  
4 are actually higher than the actual groundwater withdrawal  
5 rates, so --

6 And here's a map showing the water level changes  
7 caused by that scenario, and we can see that the big impact  
8 was in the Schofield Aquifer and that -- if I go back here, we  
9 can see that's because there's a bunch of increases here.

10 Oops. But there is also changes along the central corridor  
11 where the groundwater levels were -- groundwater withdrawals  
12 were increased. There's some increases in the dike-impounded  
13 groundwater areas. These are high-intensity, you can see the  
14 color here is kind of dark, so that indicates a high-intensity  
15 water level change, but it's not widespread.

16 And this is a map of the change in the saltwater-  
17 freshwater boundary, and you can see that, again, the big  
18 change is in the freshwater lens areas both in the south and  
19 in the north.

20 This is a map of the change in -- to streamflow, and  
21 the biggest change that's apparent here is at the springs by  
22 the cap rock, so the Pearl Harbor Springs and North Shore too.  
23 You don't see so much in the dike-impounded groundwater area,  
24 but that's probably because the model did not change the  
25 withdrawal in the tunnels, and much of the water that's

1 developed in this area is from -- from these tunnels.

2 Okay. One thing we could say about the -- about the  
3 Schofield Aquifer is that this change in future withdrawals  
4 has -- the model simulation does indicate that the fresh --  
5 the groundwater flow from the Schofield Aquifer to adjacent  
6 freshwater lenses in the north and in the south is gonna be  
7 reduced. It also pulls more water, causes more water to flow  
8 in from the dike-impounded groundwater areas.

9 Okay. Now, looking at one more thing, and this is  
10 another future assessment, this was a change in rainfall.  
11 This was a climate change assessment. And for this, we used  
12 the statistical downscaling of RCP8.5 for the -- for  
13 midcentury. I think you all are familiar with that. But it's  
14 a pretty dry scenario. And this indicates that -- our model  
15 simulations indicate for the water levels that there will be  
16 some areas that will have large water level impacts, and in  
17 this case, it's Waena, the dry side of O'ahu. It's -- it also  
18 has -- you can see some color in the impounded areas on -- of  
19 the Ko'olau and in the Schofield high-level aquifer.

20 This map shows the change in saltwater-freshwater  
21 boundary caused by the reduction in rainfall, and we can see  
22 that accompanying the change in water levels that we saw in  
23 the previous map is saltwater encroachment in the Wai'anae  
24 area.

25 So to summarize, the primary consequences limiting

1 availability of groundwater differs amongst the hydrologic  
2 settings. So in the freshwater lens setting, saltwater rise  
3 and encroachment, reduction of groundwater discharge to the  
4 ocean and also to springs where there's cap rock, those are  
5 the principal consequences that are gonna limit groundwater  
6 availability in that area, in those areas.

7 For dike-impounded and thickly saturated aquifers,  
8 the principal consequences limiting availability include water  
9 level decline, reduction of discharge to streams and springs.

10 For upgrading aquifers such as the Schofield  
11 Aquifer, Schofield high-level groundwater, it would be  
12 reduction of flow to adjacent aquifers.

13 Now, these consequences do depend on the magnitude  
14 of the withdrawals, and, of course, they can change with  
15 changes in recharge caused by land use or climate.

16 So I think collaboration between management and  
17 science can work towards a balance between groundwater  
18 withdrawal and the need to limit the consequences. What we  
19 showed in this -- in this study was a demonstration of how  
20 groundwater modeling can help quantify the consequences of  
21 groundwater withdrawal for a certain set of situations, but if  
22 water managers have a certain set of limits that they don't --  
23 for the consequences that they don't want to overstep, then  
24 science can run scenarios to figure out what the available  
25 groundwater is under those limitations or, alternatively, if

1 stakeholders have estimates of how much water they would like  
2 to have, models could be run to quantify what the consequences  
3 of that -- taking that water would be.

4 And that is all I have. Thank you.

5 CHAIR CHANG: Thank you very much, Scot.

6 Commissioners, questions for Scot Izuka?

7 COMMISSIONER KAGAWA-VIVIANI: I'll be first.

8 CHAIR CHANG: Aurora, your hand is up.

9 COMMISSIONER KAGAWA-VIVIANI: Yeah. Thank you for  
10 the presentation. It's good to see it a second time. I was  
11 wondering, Ryan Imata presented information on the deep  
12 monitoring wells last meeting, and the magnitude, I guess, of  
13 the changes of the transition zone seem pretty complex for --  
14 I think it was Pearl Harbor Aquifer. Ryan, are you there?  
15 And then looking at your, I think it was 2000 to 2010 model  
16 for O'ahu, it looked like that -- I think it was the  
17 saltwater-freshwater boundary picture in the blue.

18 DR. IZUKA: Yeah. Do you want -- should I share my  
19 screen again?

20 COMMISSIONER KAGAWA-VIVIANI: Yeah, would you share  
21 that?

22 DR. IZUKA: Okay. Sorry, then I won't be able to  
23 see everybody, but oh, well.

24 COMMISSIONER KAGAWA-VIVIANI: It looked like it had  
25 some really large changes on the order of feet, and I was just

1       wondering if you could -- it's a model and Ryan's data and  
2       have there been kind of efforts to take and caliber --  
3       calibrate the model with the deep water (inaudible).

4               DR. IZUKA:   Since -- since the -- no, the --

5               COMMISSIONER KAGAWA-VIVIANI:   Okay.

6               DR. IZUKA:   There hasn't been any -- well, the model  
7       was calibrated to the 2001 to 2010 conditions, and I admit  
8       that's, you know, a decade -- more than a decade old already.

9               COMMISSIONER KAGAWA-VIVIANI:   Yeah.

10              DR. IZUKA:   But that's --

11              COMMISSIONER KAGAWA-VIVIANI:   I think it was the  
12       O`ahu saltwater-freshwater boundary second -- first  
13       (inaudible).

14              DR. IZUKA:   This one, yeah?

15              COMMISSIONER KAGAWA-VIVIANI:   Yeah.

16              DR. IZUKA:   Effect of the 2010 withdrawal on -- so  
17       this is relative to, yeah, shutting them all off.

18              COMMISSIONER KAGAWA-VIVIANI:   Oh, to shutting them  
19       off.

20              DR. IZUKA:   Yeah, yeah.   Okay, so -- so the way we  
21       did it is we took the calibrated model, which had all of those  
22       wells operating --

23              COMMISSIONER KAGAWA-VIVIANI:   Oh.

24              DR. IZUKA:   -- and pumping, and then to see what  
25       would happen if they did not exist, we shut them all down, and

1 then we did the comparison. So this is the result of having  
2 those wells pumping.

3 COMMISSIONER KAGAWA-VIVIANI: Okay.

4 DR. IZUKA: Okay, yeah. It's a backwards --

5 COMMISSIONER KAGAWA-VIVIANI: So this is a -- kind  
6 of an imagined scenario of if we -- if we stopped pumping, is  
7 that --

8 DR. IZUKA: Right. And the reality was that the  
9 wells went in, you know, over time, right?

10 COMMISSIONER KAGAWA-VIVIANI: Okay.

11 DR. IZUKA: They didn't just all happen.

12 COMMISSIONER KAGAWA-VIVIANI: Okay. Okay, so when  
13 Ryan said the transition zone has been stable from -- you  
14 know, over the last, I don't know, 20 years or so or period of  
15 record, we -- they aren't really comparable to this image, I  
16 guess. That's all I'm saying. I'm just trying to clear my  
17 thinking was like they were used -- that data was used to  
18 build the model, but that data and this image do not line up,  
19 and I shouldn't compare them, right?

20 DR. IZUKA: Well, there -- yeah. There are things  
21 that are gonna make the model -- you know, it's a model, but  
22 it's gonna make it difficult -- well, there are gonna be  
23 challenges for matching actual data, but that doesn't mean  
24 it's -- you know, that you should throw out one or the other.

25 But one of the things is that this is a steady-state

1 model, so there is -- this is what will happen ultimately if  
2 the 2001 to 2010 conditions were kept steady forever. It --  
3 there's no time dimension on this simulation. So I couldn't  
4 say that this would happen in a hundred years or ten years or  
5 20 years or something like that.

6 COMMISSIONER KAGAWA-VIVIANI: Okay.

7 MR. IZUKA: And -- yeah. And the other thing is  
8 that that -- that also means that the wells didn't go in a --  
9 in the way that they actually did, you know, over time.

10 Oh, the other thing that I wanted to say is so the  
11 -- the change in the freshwater-saltwater interface is going  
12 to increase -- it's going to -- the change is gonna happen  
13 quickly at the beginning and slow down as you approach the --  
14 you know, the steady state. The -- it may be very difficult  
15 to see changes as the -- as these freshwater -- as this -- as  
16 the system settles into a new steady state.

17 And the third thing is that, most likely, the  
18 aquifer is not at its steady state because new wells are being  
19 put in all the time, right?

20 CHAIR CHANG: Okay. Larry, your hand is up. Go  
21 ahead.

22 COMMISSIONER MIIKE: Yeah. How does this affect  
23 current estimates of sustainable yield, and what's the  
24 timeframe in which we'd have to change them?

25 DR. IZUKA: Well, I guess my -- my take on the



1 sustainable yield issue is that for this -- the things that --  
2 the consequences that limit the availability of water from any  
3 particular aquifer is going to be different because -- depend  
4 on its hydrologic system. So, in this case -- let me get the  
5 pointer out so that -- so in the freshwater lenses, things  
6 like water table or the saltwater-freshwater interface or the  
7 depth of the transition zone will be very important. But, you  
8 know, when you look at things like dike-impounded groundwater  
9 and, you know, in -- on O'ahu or Kaua'i, or the thickly  
10 saturated aquifers, it's probably going to be streamflow  
11 because at some point, you know, as the managers of Hawai'i's  
12 groundwater, someone will probably ask you, Well, can you  
13 limit the amount of streamflow reduction in -- you know, in my  
14 area? And that's going to become the limiting factor. It's  
15 not gonna be saltwater rise anymore. So then, you'll have to  
16 assess the availability of groundwater for dike-impounded  
17 areas based on that criterion. So that also -- already  
18 changes, I think --

19 COMMISSIONER MIIKE: But that's not really my  
20 question. My question is that --

21 DR. IZUKA: Okay.

22 COMMISSIONER MIIKE: -- I see that sometime in the  
23 future, even though there's resistance to it, is that you're  
24 gonna have to move water around. Like, for example, on the  
25 island of O'ahu, you can't go by aquifer-specific use like

1 now. For example, I know there's resistance on the Windward  
2 side to be able to transfer water to the Leeward side if they  
3 start getting short. So I'm -- I'm more interested in not  
4 aquifer-specific water, but how would that affect the  
5 availability of water across the whole island. And in the --  
6 in the practical consequence of -- of your research. Is it  
7 not gonna make any difference or -- or is -- do we have to  
8 worry about that in the future?

9 DR. IZUKA: I think the -- I -- okay, I -- I think  
10 the approach to assessing groundwater availability is -- has  
11 to take into account these consequences. I guess I -- I  
12 guess, you know, I'm not understanding the question 'cause I  
13 thought that's what you were asking.

14 COMMISSIONER MIIKE: Well, let me simplify my  
15 question. How is your research gonna impact what we consider  
16 available sustainable yield? Is it not gonna have any  
17 consequence? Or if not, what is the purpose of your research?

18 DR. IZUKA: Oh, okay. So what I have shown, the  
19 research has shown that the -- as managers, you're trying to  
20 determine the amount of water availability -- available for  
21 human use, but there are also other uses that you are trying  
22 to balance them with, right? So in order to get to that  
23 answer, you have -- you have to consider things that are --  
24 that are appropriate for those situations. So for those  
25 settings, for the dike-impounded groundwater or freshwater

1 lens, it's gonna be a different -- different set of limiting  
2 circumstances.

3 So the study that I have done, the study that we've  
4 done, it's a group of people, demonstrated that we can use  
5 things like groundwater modeling, we can also have other kinds  
6 of studies that can assess, that can quantify the impacts of  
7 groundwater -- of groundwater withdrawal and that will then,  
8 in turn, help you determine what the groundwater availability  
9 is. So it's a -- it's kind of a question, a chicken-and-egg  
10 question. To know how much groundwater is available, we first  
11 -- the scientists need to know first how much change are you  
12 willing to accept? How much of a consequence are you willing  
13 to accept?

14 COMMISSIONER MIIKE: Okay. I guess I'm not getting  
15 through to you. What I want to know is that based on what  
16 you've been presenting, are we gonna have to change the  
17 sustainable yield of the aquifers, like, for example, on  
18 O'ahu?

19 DR. IZUKA: I think you will have to change the  
20 method.

21 COMMISSIONER MIIKE: And then my secondary question  
22 on that was, what was the timeframe of that change?

23 DR. IZUKA: As -- okay, that is -- I guess that's --  
24 would be a groundwater management problem.

25 COMMISSIONER MIIKE: Yeah. You know, because, for

1       example, if we have the Pearl Harbor Aquifer at X amount of  
2       million gallons, as we take it down -- if we take it down,  
3       further down, I assume that you're gonna already have to  
4       change the sustainable yield as you get closer to the maximum  
5       because you're having saltwater uprise or etc., or decreased  
6       streamflow or no more watercress forming in Pearl City. So  
7       that was my question, is that what would you estimate the  
8       timeframe in which we start to have to consider reducing the  
9       sustainable yields?

10               DR. IZUKA: Okay. That isn't -- again, the model is  
11       not capable of -- it's a steady-state model, so it doesn't  
12       have a time element in it, so it won't tell you how much  
13       longer you have. Models can be done -- can be created to do  
14       that, but these models were not and takes a lot more data than  
15       we had.

16               COMMISSIONER MIIKE: But if -- but if one of your --  
17       one of your scenarios was increased withdrawals.

18               DR. IZUKA: Right.

19               COMMISSIONER MIIKE: So it seems to me that if  
20       that's one of your models and you could come up with an  
21       estimate, that would be a direct relationship to how much of a  
22       sustainable yield has to change, correct?

23               DR. IZUKA: It -- yeah. Well, it would -- it would  
24       tell you what the result -- it would tell you what the result  
25       of changing the pumping rate is, but it doesn't tell you

1       whether it's sustainable because it depends on how much the  
2       water managers, and I'm -- I'm thinking that's you, that's the  
3       water commission, how much of the -- a consequence of doing  
4       that you are willing to accept. Because we saw that by doing  
5       those -- just by doing those scenarios, we saw that it caused  
6       the freshwater lens to get thinner, it caused some streams to  
7       go -- to have less stream discharge, some springs to have  
8       lower discharge. So is that an acceptable -- without the --  
9       without the answer to what's acceptable, it's -- it's  
10      virtually impossible for the scientists to tell you how much  
11      is available.

12               COMMISSIONER MIIKE: So you're -- so you're saying,  
13      then, that we decide sustainable yield when we start seeing  
14      negative effects? Because, you know -- you know, when I was  
15      on the water commission, we had sort of crude models for  
16      figuring out what sustainable yield or -- was it that Mink and  
17      -- I can't remember.

18               (Inaudible comments.)

19               COMMISSIONER MIIKE: So are we still -- if we're  
20      still dependent on that and the only way that we would change  
21      the sustainable yield is if we start seeing -- we're topping  
22      off and we're gonna start seeing negative effects like we did  
23      on the 'Iao Aquifer on Maui a couple of decades ago. So --  
24      oh, okay.

25               DEPUTY MANUEL: I'm going to (inaudible) the

1 question. Maybe if I can try to chime in a little bit --

2 COMMISSIONER MIIKE: Okay.

3 DEPUTY MANUEL: -- too, Commissioner Miike. I  
4 think, you know, this is one dataset that we use as staff to  
5 come up with recommendations on any adjustments to sustainable  
6 yield and the timeframe for that. There is another study  
7 that's being -- hopefully gonna get published by the end of  
8 this year, which is the impact of climate change on recharge.  
9 So there's the recharge values, there's this -- the hydrology  
10 evaluation, these different hydrologic conditions, and  
11 scenarios that we have to consider. And as you mentioned, the  
12 sustainable yield and the RAM model is -- is crude, right? It  
13 has a lot of assumptions built into it. And so part of our  
14 challenge, I think, working with Ryan and his groundwater  
15 team, working with Ayron and Dean with surface water, is to  
16 look at this more comprehensively.

17 Maybe just to -- for clarification, Scot, you know,  
18 in your maximum pump scenarios, which looks at future  
19 increases, is that based on pump capacity, or was that based  
20 on water use permit allocations because we're in a groundwater  
21 management area?

22 DR. IZUKA: Yeah, it was on permit allocations.

23 DEPUTY MANUEL: Permit allocations, okay.

24 DR. IZUKA: Yeah, yeah. I got it from (inaudible).

25 DEPUTY MANUEL: So just getting to your -- towards

1 management on O'ahu, because we're a groundwater management  
2 area except for Wai'anae currently, you know, another  
3 management tool is the ability to shift allocations, reduce  
4 allocations where we may see potential impacts based on these  
5 additional studies or that could be a recommendation that we  
6 as staff look at based on this new data. Right? So we had  
7 set a sustainable yield, we allocated based on that  
8 sustainable yield, but with this additional data and  
9 information, we may need to revisit those allocations if those  
10 impacts to springs, shorelines discharge, or other types of  
11 protected public trust uses are impacted. We might need to  
12 re-evaluate that, so (inaudible).

13 COMMISSIONER MIIKE: So we wouldn't so much change  
14 the sustainable yield, but, rather, we would change  
15 allocations?

16 DEPUTY MANUEL: There could be both. It could be  
17 multipronged. I think a lot of the data that -- and  
18 partnerships we've had with USGS on a lot of this research --  
19 and, you know, UH is jumping on board with Water Resource  
20 Research Center's work. We can come at it both ways. I think  
21 the commission has adopted historically a very conservative  
22 approach to sustainable yield and always picked the bottom of  
23 these ranges. The commission could open that box up, right,  
24 and look at where there's a high demand and there's this  
25 range, and if we're not seeing impact, do we want to create a

1 range of sustainable yield and adjust it that way?

2 Again, we -- it is a management tool that I think  
3 can be revisited and looked at in a way -- you know, region or  
4 hydrologic unit by hydrologic unit, it could be moku by moku,  
5 it could be island by island. Like you're suggesting, if  
6 we're needing to shift water resources around O'ahu -- we're  
7 having a presentation by Board of Water Supply right after  
8 this on East Honolulu Watershed Management Plan, so I'm  
9 curious to see how that maybe builds off of some of these  
10 conversations about how water is utilized on this island  
11 considering the built physical environment of this -- you  
12 know, the board's infrastructure.

13 I think it -- it should be both strategies, but  
14 that's something that we'd have to bring up and recommend to  
15 you folks. As our policy setters, what do you want to see  
16 pursued moving forward?

17 COMMISSIONER MIIKE: Okay.

18 CHAIR CHANG: Any other questions?

19 I have one, Scot. On your summary, you talked about  
20 major changes, and you included climate change; what -- in  
21 your mind, what is that? Is that the sea level rise and  
22 greater salinity? I mean, what were you thinking of? Because  
23 with the accelerated climate change, does this modeling get  
24 impacted by that?

25 DR. IZUKA: The thing that we looked at in the model



1 as far as climate change was the change in precipitation.

2 CHAIR CHANG: Oh, okay.

3 DR. IZUKA: Yeah, not sea level rise.

4 CHAIR CHANG: I see.

5 DR. IZUKA: But that is a consideration. I think  
6 there are other people researching that.

7 CHAIR CHANG: Okay, all right. Thank you.

8 Aurora.

9 COMMISSIONER KAGAWA-VIVIANI: Thanks for this. I  
10 just was wondering, is there a way that we can dynamically  
11 explore scenarios for planning, or is that -- does it have to  
12 be run -- do we have to -- does the commission staff need to  
13 give you the parameters? Do you have to run it and give it  
14 back, or -- or will there be a future way where we can say  
15 play -- you know, play plan or play God a little bit and say  
16 if this happens, what happens in Ko'olau? If we change this  
17 dial, you know, what -- what happens to these different  
18 response variables?

19 DR. IZUKA: You know, that is a really good question  
20 because that is something that the USGS and, you know, else --  
21 throughout the USGS, nationwide, is kind of thought about  
22 because for us -- you know, as you say, if you -- if the water  
23 commission came up with this scenario and you wanted us to  
24 test it, then we'd run the model and then we'd write a report  
25 and then, you know, so many years later you get the report.

1 COMMISSIONER KAGAWA-VIVIANI: Right.

2 DR. IZUKA: Kind of a --

3 COMMISSIONER KAGAWA-VIVIANI: (Inaudible.)

4 DR. IZUKA: Yeah, and we understand that. So one of  
5 the things that has been explored -- excuse me.  
6 Unfortunately, I don't know what the current status of it is  
7 but was somehow getting the ability of the users, that  
8 includes the public, to run certain things on groundwater  
9 models because that's really what I think the value of the  
10 groundwater model would be. So you could say, Okay, I'm gonna  
11 put wells in here and here and here, put it on Nyx, say, and  
12 -- I think they have explored things like web-based -- you  
13 know, a web-based tool that does that. And then, because  
14 groundwater models take a while to run -- and that's gonna  
15 change because things are gonna get faster and faster and  
16 faster. But anyway, because groundwater models take a while  
17 to run back then when they were trying these things, they  
18 would have the -- my understanding is that they would have the  
19 results ready for you at a certain time, and then they would  
20 send you a text and say, Okay, here's your results. So, you  
21 know, maybe it might take a couple days for the groundwater  
22 model to run that scenario. But anyway, scenario testing  
23 should, I think -- I would -- just looking into the future,  
24 it's probably -- and it might not happen in my career, but I  
25 would think that that would be something that could be done.

1 They've already explored doing it.

2 And sorry, did that answer your question?

3 COMMISSIONER KAGAWA-VIVIANI: Well, it's  
4 discouraging to hear that it might not be during your career,  
5 and maybe there's ways to make that happen sooner. Unless  
6 you're planning to retire soon.

7 DR. IZUKA: Maybe that's -- maybe that was a hint  
8 that I was gonna -- no, but anyways, yeah.

9 (Laughter.)

10 DR. IZUKA: It's -- you know, it's possible for that  
11 to happen.

12 COMMISSIONER KAGAWA-VIVIANI: Yeah.

13 DR. IZUKA: I think the technology's already there.  
14 There needs to be a customer for it, and I think, you know,  
15 there is, and then someone to provide that product, and I  
16 think the USGS could do that.

17 COMMISSIONER KAGAWA-VIVIANI: Thank you.

18 CHAIR CHANG: Any other questions?

19 (No response.)

20 CHAIR CHANG: Is there anybody in the room that  
21 wants to make a comment on this?

22 (No response.)

23 CHAIR CHANG: Anybody on Zoom?

24 Kathy, is there anybody -- Abbey and Franz are here  
25 for -- is it B --

1 DEPUTY MANUEL: B3.

2 CHAIR CHANG: B3, okay.

3 Thank you. I don't see any questions, Scot. I  
4 think you've answered whatever we had. Thank you so much for  
5 the presentation.

6 DR. IZUKA: Okay, thank you.

7 CHAIR CHANG: Thank you.

8 **Item B3**

9 You know, I notice it's twelve o'clock. Do you want  
10 to now take a lunch break before we move into Item B3.

11 DEPUTY MANUEL: It's up to you, Chair. I don't know  
12 how long Item B3 is planning to take, but let me --

13 CHAIR CHANG: Is Abbey and Franz there?

14 DEPUTY MANUEL: Yeah, let me -- let me admit B3 item  
15 presenters.

16 CHAIR CHANG: I don't have the same lunch you guys  
17 do, so --

18 (Laughter.)

19 CHAIR CHANG: Abbey and Franz, do you guys know how  
20 long your presentation will take?

21 MR. USAGAWA: I'm actually an observer on the -- on  
22 the plan, so -- but we do have meetings this afternoon, so --

23 CHAIR CHANG: Okay. Let's just go ahead, then.  
24 Let's go ahead. We'll do your presentation, and then we'll  
25 take a lunch break after that. Go ahead.

1 MR. USAGAWA: Thank you so much.

2 DEPUTY MANUEL: You know, you're gonna (inaudible).

3 MS. SEITZ: Great. So thank you, commission, for  
4 inviting us to speak today. I am -- I have two different  
5 devices, so I'm gonna share screen from --

6 CHAIR CHANG: Go ahead. We'll do your presentation,  
7 and then we'll take a lunch break after that. Go ahead.

8 DEPUTY MANUEL: Barry or Abbey, your YouTube is on;  
9 you've got to shut it off.

10 MR. USAGAWA: Sorry. It's mine. Thank you. Sorry.

11 MS. SEITZ: Okay. So thank you, Commission, for --

12 MR. USAGAWA: Sorry about that. We were planning  
13 about a half an hour presentation and it depends on how the  
14 question and answer would go. So up to you if you want to  
15 take a lunch break. We're happy to come in after; it's up to  
16 you.

17 DEPUTY MANUEL: Oh, Chair, you're on mute. Chair,  
18 you're on muted -- you're on mute.

19 CHAIR CHANG: Yeah. No, I saw Neil nodding his  
20 head. Let's go forward, and then we'll let you guys conclude  
21 -- go through your presentation, and then after that, we'll  
22 take lunch and do our action item. So go ahead, Barry and  
23 Abbey.

24 MS. SEITZ: Okay. And I -- just as one request, I  
25 am doing this from two different devices, and I'm still in the

1 waiting room for my -- oh, it looks like I'm being connected  
2 now. Great, thank you so much. I will share my screen from  
3 -- from this device.

4 MR. USAGAWA: Abbey, I'll start.

5 MS. SEITZ: Yes, thank you.

6 MR. USAGAWA: So (inaudible) --

7 MS. SEITZ: Thanks, Barry.

8 MR. USAGAWA: This is a briefing on the East  
9 Honolulu Watershed Management Plan as part of the overall  
10 O'ahu Water Management Plan, the county water use and  
11 development plan. So I'm Barry Usagawa, head of the Water  
12 Resources Division at the Honolulu Board of Water Supply. I'm  
13 with Abbey Seitz from Planning For Community.

14 Next. Okay, next.

15 So we're gonna -- this is our agenda. I wanted to  
16 talk about the plan status, the framework, the goals and  
17 objectives. And then I wanted to just expand on the chapter  
18 -- this is Chapter 1, O'ahu Water Management Plan overview,  
19 which is the island water use and development plan. And then  
20 Abbey is going to then jump into the regional watershed plan,  
21 which is East Honolulu, talk about the planning process and  
22 schedule, the Watershed Profile Chapter 2, and the current and  
23 future water demands in East Honolulu, the specific  
24 objectives, and basically policies, project -- projects and  
25 strategies and how we plan to implement it.

1           And then -- and then we're just about ready for the  
2 public review draft. We just went through an agency review  
3 draft with the commission staff and the Department of Planning  
4 and Permitting, and then -- then with the approval process is  
5 how we -- or how we think we are going to get the plan  
6 approved through city council and the commission, and then the  
7 Q & A at the end.

8           Next.

9           So the status -- I'm sorry. So the status of the  
10 plans, and as you may know that we're -- instead of one island  
11 plan, we're doing eight. We've -- because it allows us to  
12 take a deeper dive into each region and come up with place-  
13 based strategies and projects and align better with the city  
14 land use plans. But we've so far got Wai'anāe, North Shore,  
15 Ko'olau Loa, and Ko'olau Poko Watershed Management Plans  
16 approved by the commission and accepted into Ordinance Chapter  
17 30. We still have South O'ahu still pending, and that's --  
18 and we apologize for the delay, but we're trying to address  
19 climate change, and so this -- East Honolulu is our first  
20 chance to actually tell you about what we've done to try to --  
21 to build that into some scenario planning.

22          Next.

23          So you're familiar with this, but I just wanted to  
24 dive a little bit deeper into this. Of course, the state  
25 water code, the general plan, and the -- and the legal

1 regulatory framework. A little bit on the Hawai'i Water Plan,  
2 you're familiar with the four components that the county water  
3 use and development plan has to account for, include the state  
4 -- findings of the other state plans. You know, just the name  
5 of the county water use and development plan per se is -- is  
6 somewhat limiting, although it's broader, but the -- in the  
7 tight, it's basically a plan for water use and development,  
8 basically how much -- where's the water, how much do you need,  
9 and how are you gonna get it there? And so -- but it should  
10 incorporate management of water and conservation and  
11 protection and restoration. And so the council back in 1990  
12 either renamed it -- or named it the O'ahu Water Management  
13 Plan, and this is the framework.

14 A little bit of the statewide framework of 2000,  
15 there is a Section 3-26 that allows for flexibility, for  
16 innovation to accommodate unique and county-specific concerns  
17 tailored to each county, and so that's why we broke it up into  
18 eight regional plans. The -- in July of 2022, there was a  
19 presentation on some of the updates that could be made to the  
20 statewide framework. Those gaps were climate uncertainty,  
21 applying indigenous knowledge, ag water, plan utility, and  
22 integrating land use and water policies and agencies into the  
23 plan. And by -- by breaking it up into these regional  
24 watershed management plans, we feel that we've addressed a  
25 large part of that.



1           And so you may know that O'ahu's broken up in the  
2       general plan into eight land-use districts. There are two  
3       development plan areas that are primarily urban center,  
4       basically Honolulu and then 'Ewa are the directed growth --  
5       directed growth areas, so all the growth is directed to these  
6       areas, and that's where our infrastructure investment is  
7       concentrated. The other six land use districts are rural and  
8       urban fringe, so it's to keep the country country by moving  
9       the development towards, you know, those two districts. And  
10      the specific policies in these land use plans that are  
11      incorporated in these regional plans, they're -- these regions  
12      are very different, and so we are able to tailor each of the  
13      regional plans to the specific regions.

14           And Act 152 for Watershed Protection, the Waiāhole  
15      Ditch Decision, the ordinance Chapter 30, our mission, you  
16      know, all provide guidance into the plan. And recently, the  
17      Mayor's Climate Change and Sea Level Rise Directive of 2018  
18      and it was updated in 2022, I believe, brings in guidance on  
19      what to do with sea level rise. And the Ola O'ahu Resilience  
20      Strategy is how we make the -- O'ahu more resilient to climate  
21      change, including, you know, the facilities, but also the  
22      resources.

23           And so today, I'm talking about East Honolulu.

24           So, next.

25           So we've adopted the ahupua'a model in these

1 regional watershed plans. I call it systems thinking, but it  
2 could -- you know, the way I look at it, the goal is watershed  
3 health, holistic resource management, and self-sufficient and  
4 sustainable communities. We recognize that there's an  
5 interrelationship between mauka and makai, including the  
6 coastal resources, the conservation districts, the ag zones,  
7 the urban zones, and the nearshore waters, but also, what  
8 happens aboveground may affect what's underground in terms of  
9 contamination. What sets the ahupua'a model apart from  
10 traditional integrated resource plans is -- is the stewardship  
11 and kuleana that comes with the ahupua'a model around land,  
12 water, people, and culture. It's the culture that affects  
13 behaviors, and by improving those behaviors towards  
14 conservation, no waste, recognition of where water comes from,  
15 restoration of cultural sites and fishponds and kalo, you  
16 know, all of those get folded into these behaviors so that it  
17 -- it basically is the glue that supports the -- what's in the  
18 plan.

19 Okay. So, next.

20 So our goal is -- is to balance the preservation and  
21 restoration, and management of O'ahu watersheds, right, mauka  
22 to makai, with a sustainable ground and surface water use and  
23 development to serve present and future generations. In  
24 Chapter 1, we define this goal. We also define the five  
25 objectives of which are all -- which are applied to all of the

1 regional plans. The objectives are defined, and they are our  
2 -- are defined as our future state, I guess. So what does a  
3 sustainable watershed look like? So promoting that,  
4 protecting and enhancing water quality and quantity;  
5 protecting Native Hawaiian rights and traditional and  
6 customary practices; facilitating public participation,  
7 education, and project implementation -- and this is the  
8 behavior side that I was talking about from the ahupua'a model  
9 -- and then meeting water demands at a reasonable cost. Each  
10 of these objectives drive specific policies, projects, and  
11 strategies in each of the eight regions and -- and if it  
12 wasn't -- you know, we're trying to make it explicit. It's  
13 not just happens if you do something; we're directly trying to  
14 meet these objectives in each of these regional plans.

15 Okay, next.

16 So I just wanted to talk about the -- Chapter 1.

17 Next.

18 Chapter 1 was basically the -- essentially, the same  
19 format as the first adopted O'ahu Water Management Plan in  
20 1990. The water code was adopted in '87. So Chapter 1 is the  
21 -- the islandwide water use and development plan. It also  
22 incorporates -- what the commission did was hire Peter Adler,  
23 and he came up with the -- you know, his Adler report on O'ahu  
24 needs in 2020. So the -- so the format and the -- the  
25 organizational structure is very much aligned with that, and

1       this is in every plan.

2               So we talk about authority and purpose, the  
3       framework which I went through in the water use and  
4       development plan, which talks about islandwide demand  
5       forecasts, supply availability for urban and agriculture,  
6       conservation, existing and planned sources, alternatives and  
7       transfers, and I believe there's a discussion about how we  
8       transfer water around the island because we have the  
9       infrastructure to do that.

10              The Adler report talked about certain uncertainties  
11       such as in-stream and appurtenant rights, Hawaiian Homeland  
12       alternative source costs, alternative source impacts to  
13       aquifers, and the recharge rates and -- and pumping effects to  
14       streams. What we added here is a contingency section that  
15       offers a list of strategies on what to do about it. And so I  
16       would encourage you to read that when the public review draft  
17       comes out, and I'll get into that in more detail.

18              The plan implementation is how we allocate water,  
19       how we invest in infrastructure, you know, the reasonable and  
20       beneficial uses is defined first through the water use  
21       permits, and then we allocate water on a first-come,  
22       first-served basis with an adequate facilities review. I  
23       might add that when we do allocate water, we also look at  
24       reasonable and beneficial uses, ensure that conservation  
25       measures are employed, ensure that -- require them to connect

1 to recycled water systems if they're adjacent before we can --  
2 before we issue the meter. So it's conditional to those types  
3 of uses.

4 Next.

5 So in the uncertainties and contingencies, we  
6 describe what some of the -- you know, all the uncertainties  
7 that we could think of that have been affecting planning over  
8 the last couple of decades. Estimating and recovering  
9 sustainable yield is -- it's one -- you folks were talking  
10 about estimating sustainable yield; how do we recover that?  
11 And you can't recover it all in a lot of places.

12 How does climate change and drought impacts affect  
13 recharge and sustainable yield, and what to do about it?  
14 Contamination, of course.

15 Groundwater-dependent ecosystems are brought up the  
16 last -- in the last administration, so we have a section on  
17 that.

18 Basically, sustainable yield is a percent of  
19 recharge. The remaining percent is allowed to flow to the  
20 ocean to support these ecosystems, and that -- you know, we  
21 had some strategies around that.

22 I know there's some interim in-stream flow  
23 standards, effects on stream flows, and protection and  
24 restoration there.

25 Drought impacts to stream flows and the diversions

1 and use, so it's conjunctive use of using stream diversions  
2 and wells, you know, in drought times to -- so you can maximum  
3 the stream flow. How do you make ditch irrigation systems  
4 more efficient through piping the ditches?

5 And then uncertainties around urban and agricultural  
6 demands. Urban is fairly -- you know, it's -- you know,  
7 everybody wants to bank water, so they end up having the  
8 demands high. I see agricultural demands as having a wider  
9 range.

10 But anyway, we have these sections where we tried to  
11 estimate uncertainties and provide some solutions so -- on an  
12 islandwide basis.

13 Okay. The next slides, I'm gonna turn it back over  
14 to Abbey to get into the East Honolulu regional plan. Thank  
15 you.

16 MS. SEITZ: Great. Thank you so much, Barry, for  
17 providing that context. As he mentioned, the remainder of the  
18 presentation, I will be zoomed in specifically to the East  
19 Honolulu Watershed Management Plan.

20 So just a little bit of background in terms of the  
21 planning process to develop this regional plan. This -- our  
22 process is -- was divided up into five key phases with --  
23 starting off with the research and identification of the key  
24 water resource issues for the district, then moving into an  
25 analysis of the -- both existing and future water supply, and

1 then moving into the development of both the agency and public  
2 review draft, and obviously we'll end on the development and  
3 adoption of the final plan. Having -- throughout this  
4 process, having stakeholder consultations as well as four  
5 different community meetings.

6 As a quick note about the schedule, we did begin  
7 this process in early 2019, and with this year -- at the  
8 beginning of the year, we had released the agency review  
9 draft, recently integrated feedback from that, and will be  
10 soon releasing the public review draft, and are looking to  
11 hopefully have the plan adopted by the end of this year.

12 As mentioned, we've had stakeholder consultations  
13 throughout this process with both community organizations that  
14 work in the district on various activities related to  
15 watershed health, as well as county and state agencies, in  
16 addition to regular neighborhood board presentations to the  
17 district's three neighborhood boards, and in addition to the  
18 community meetings that were just mentioned.

19 So now I'll be moving into Chapter 2, which really  
20 sets the foundation for -- for the plan as it provides a  
21 profile of the district's eight -- ten different watersheds.  
22 And so as mentioned, as Barry mentioned, this plan takes a  
23 very comprehensive view of watershed health, so this chapter  
24 really digs into all the different historical, cultural,  
25 environmental factors that impact watershed health.

1           As -- just as a quick kind of context, the district,  
2 again, encompasses ten different watersheds and spans from  
3 Kahala to Makapu'u. And through our process of both research  
4 as well as stakeholder consultations, this Chapter 2 really  
5 kind of culminates around eight different water resource  
6 issues that kind of rose to the top of the community's  
7 priorities in terms of issues that are impacting watershed  
8 health in the area, and those are including climate change,  
9 sea level rise, nearshore water quality, flooding and  
10 drainage, wildfires, and others that are listed here.

11           And so, while I don't have time in this presentation  
12 to get, obviously, into all of those topics, I just wanted to  
13 highlight within this plan that we do provide both analytical  
14 as well as spatial data both analytically and spatially to  
15 discuss these different topics that were just mentioned. So,  
16 for example, to kind of better understand both opportunities  
17 and challenges for topics such as cultural resources, our team  
18 both mapped out historical and existing resources such as  
19 fishponds, freshwater springs, heiaus, as well as the  
20 traditional ahupua'a boundaries. And then as another example,  
21 to better understand the topic of wildfire hazard, in addition  
22 to both mapping out where recent wildfires have occurred,  
23 we're also mapping out the wildland-urban interface to better  
24 understand wildfire vulnerability. And so, both of those are  
25 just examples to show the type of in-depth analysis that we



1       went through for all the different factors that were presented  
2       in Chapter 2.

3               So moving on to Chapter 3, as mentioned, this --  
4       this content is focused on understanding both the existing as  
5       well as the future water demand and supply and understanding  
6       how that essentially impacts the water source availability for  
7       the district.

8               So as I'm sure the commission knows, East Honolulu  
9       area encompasses two different groundwater aquifer system  
10      areas, the Wai'alae West and Wai'alae East, which combined  
11      have a relatively low sustainable yield at 4.5 million gallons  
12      per day.

13              Historically, over the last about 30 years, the  
14      district has used more water per capita than the islandwide  
15      average. For example, in 2010, East Honolulu residents, on  
16      average, used about 194 gallons per -- of water per person per  
17      day, which is about 25 percent higher than the islandwide  
18      average. So in total -- and this map is showing the Board of  
19      Water Supply transfers based on 2013 to 2017 averages, the  
20      district used an average of about 8.38 million gallons per day  
21      of Board of Water Supply water, with the majority of that  
22      water being supplied by transfers from the Honolulu -- from  
23      Honolulu sources, and a smaller amount of that being supplied  
24      by transfers from Windward in -- in addition to in-district  
25      pumping, which accounts for about 16 percent of the Board of

1 Water Supply water demand.

2 Just kind of quickly to note in regards to the water  
3 uses, the majority, as you can see here, is for residential  
4 uses, with a smaller amount going towards commercial uses.  
5 And in terms of specific water users of Board of Water Supply  
6 water, the largest user is the Hawai'i Kai Golf Course.

7 So next, moving into future water demand, so to  
8 project future water demand, we came up with a range of  
9 different scenarios, three different scenarios to project  
10 water demand in the year 2040, the low, mid, and high, and  
11 then two different water demand scenarios for the year 2100  
12 just kind of -- we don't necessarily have the time here to get  
13 into the specific -- all the specific details of these water  
14 demand scenarios, but the low demand scenario does represent  
15 the most probable as it follows the city's population  
16 projections as well as the anticipated water conservation  
17 efforts; whereas, the mid demand and high demand scenarios  
18 include potential other -- potential other futures of  
19 considering if population were to increase or water  
20 conservation were -- were to be decreased in certain ways.

21 Additionally, the ultimate demand scenarios include  
22 -- incorporate factors such as the impacts of sea level -- of  
23 3.2 feet of sea level rise as well as the differences in  
24 rainfall projections with two different sub scenarios being  
25 based on the -- the wet rainfall projection as well as the dry

1       rainfall projection.

2               So based on our analysis, we find that the low  
3       demand, the -- again, that one being the most probable, would  
4       result in an estimated 8.5 million gallons of -- million  
5       gallons of water used per day, total water usage, and obvious  
6       -- again, the mid and high scenarios are unlikely that they  
7       would be proliferated, but we anticipate that in the mid  
8       scenario, there would be about 9.6 million gallons per day,  
9       and the high would be 11.96 million gallons per day.

10              So, in summary, based on our analysis of comparing  
11       the -- essentially, the water demand with the anticipated  
12       water supply in 2040, we have found that in the most probable  
13       scenario, that there would be existing -- the existing water  
14       supply would be adequate, but that in the high or -- mid or  
15       high demand scenarios, that this would require additional  
16       water resources or improved water efficiency. Similarly, in  
17       the ultimate demand scenario, even though it is obviously more  
18       difficult to project out water supply, it -- in -- at such a  
19       great time distance from 2100, we estimate that under the wet  
20       scenario, because of -- because of anticipated increased  
21       rainfall, that there would be adequate water supply, and in  
22       the dry scenario that there would need to be improved water  
23       efficiency to meet the water demand.

24              So kind of all this is to say in terms of our key  
25       takeaways from this water analysis that both kind of under the

1 existing situation as well as the future scenarios, that even  
2 though we do project that East Honolulu would have adequate  
3 supply under the most probable scenario, that due to their  
4 limited in-district supply, that they have a heightened  
5 kuleana to user water efficiency -- efficiently due to the  
6 impacts that water transfers can have on the districts that  
7 they're being transferred from.

8 So next, I'll be moving into Chapter 4, which is  
9 focused on the goals, policies, as well as descriptions of the  
10 projects, programs, and strategies to achieve those goals and  
11 objectives.

12 So as a quick note regarding how these policies,  
13 projects, and strategies are all related, some of those -- the  
14 water resource issues that were discussed previously in this  
15 presentation that were highlighted in Chapter 2, as well as  
16 the results of the water demand analysis informed the  
17 district's sub-objectives. From there, the projects with  
18 champions as well as the general strategies essentially align  
19 with those sub-objectives and are used to advance -- advance  
20 those policies, and from -- from all of those projects emerged  
21 the catalyst projects, which are essentially the -- the  
22 vehicle being -- we see as being used to implement the  
23 projects and strategies.

24 So as a note, we have identified 30 different  
25 projects with champions, so these projects with champions have

1     either an existing community or government champion who has  
2     been slated to carry out these efforts. And they cover a wide  
3     range of activities such as fishpond restoration, heiau  
4     restoration, coral assistant evolution, invasive species  
5     removals, and so forth. And just as -- again, wanted to point  
6     out that these projects are both site-specific, we have about  
7     nine -- we have nine projects that are site-specific with the  
8     remaining 21 projects being focused districtwide.

9             So at a lower tier than the projects, we have the  
10    strategies and programs. And so while these activities are  
11    also slated to advance the -- the sub-objectives that we've  
12    identified in the plan, they do not have an existing project  
13    -- they do not have an existing community or government -- or  
14    government champion; however, they are, you know, still  
15    important for advancing the objectives that were outlined in  
16    the plan.

17            So lastly, Chapter 5, we're moving into  
18    implementation. So this chapter discusses the water use and  
19    development plan, so essentially goes into more detail  
20    regarding some of the topics discussed in Chapter 3 around the  
21    strategies for ensuring water source adequacy for the region,  
22    and then goes into the priority watersheds, the catalyst  
23    projects, implementation entities, and potential funding.

24            So for the purposes of this presentation, I'll focus  
25    on the catalyst projects, which are essentially just a higher

1 priority project that will provide the energy and connectivity  
2 for the different projects and programs that we've outlined in  
3 this plan. And some of these -- some components of these  
4 projects will be focused in priority watersheds, which we're  
5 defining as watersheds that require special protection for  
6 water quality or provide special opportunities for provide --  
7 implementing watershed management programs.

8           So for the East Honolulu Watershed Management Plan,  
9 we have identified two key catalyst projects, the first of  
10 which being to improve water quality in Maunalua Bay. That's  
11 something that just came up over and over again in all of our  
12 consultations with -- with community groups as well as our  
13 government stakeholders, and so we're looking to focus that  
14 catalyst project in the priority watersheds, essentially the  
15 six watersheds within the district that feed into the bay.  
16 And the second catalyst project being to increase water  
17 efficiency, and that largely stems from the takeaways of our  
18 -- of our water demand analysis, being that we -- water  
19 conservation is really key in the district.

20           So for each of these catalyst projects, we identify  
21 the measurable goals to -- to achieve through these catalyst  
22 projects, and some of them being for the -- for water quality  
23 Maunalua Bay, including reduce the amount of invasive algae,  
24 increase the amount of healthy living coral, and so forth.  
25 And again, just wanted to emphasize that this catalyst project

1 will -- focusing the implementation of it within these  
2 priority watersheds that feed into the bay, and this -- this  
3 catalyst project, we've identified various different actions  
4 to achieve and carry out the catalyst project and many of  
5 these actions have actually been previously identified by the  
6 Moanalua Watershed Hui, which is essentially a collective of  
7 community groups that are working to improve the quality of  
8 the bay.

9           So I wanted to highlight, as you can see from that  
10 last map, these -- these actions are both located in both  
11 mauka and makai areas. For example, in the Wailupe Watershed,  
12 we've identified the Wailupe Watershed stream restoration as  
13 one of the key actions. In the Niu Watershed in the upper --  
14 in the upper watershed, we've identified watershed fencing,  
15 mid -- the middle watershed invasive species removal and  
16 native out-planting, and then in the lower watershed, the  
17 invasive algae removal, which is being carried out by Malama  
18 Maunalua.

19           Kuli'ou'ou, we identified ongoing fishpond  
20 restoration as well as watershed retention and infiltration in  
21 the upper watershed.

22           In Haha'ione, we've identified wetland and heiau  
23 restoration, which is currently being carried out.

24           And lastly, in the Kamilo Nui and Kamilo Iki,  
25 identified a range of actions, including reforestation, the

1 sustainable agricultural pilot project, as well as restoration  
2 of Kuapā Pond.

3 So moving now into Catalyst Project No. 2, again, we  
4 -- which is to increase water efficiency in East Honolulu,  
5 again, we identified measurable goals, which include  
6 maintaining East Honolulu's per capita water demand through  
7 2040 at 170 gallons per person per day, and then a longer  
8 range goal to reduce per capita water demand to 130 per --  
9 gallons per person per day by 2100.

10 So these -- so these actions that carry out this  
11 catalyst project are looked at a more districtwide view from  
12 both increasing essentially water efficiency from the water  
13 distributors as well as the water users. I can say with the  
14 exception of the action that we've identified in the Koko Head  
15 Watershed, which is developing R1 recycled water for large  
16 irrigation users in Hawai'i Kai.

17 So I wanted just to note that within the plan itself  
18 -- I know that was kind of a very quick overview of a lot of  
19 information, but within the plan itself, you know, we want to  
20 make this as action-oriented as possible, and so we do include  
21 essentially a matrix that serves as an action plan and  
22 identifies the goals, champions, potential partners, the  
23 status, the costs, and target implementation for each of these  
24 actions identified as part of the two catalyst projects.

25 So lastly, I wanted to end on just a few updates



1 regarding the public review draft and our timeline for  
2 approval. So as our next steps to the public review draft, we  
3 are very close to releasing it online. We anticipate making  
4 that publicly available by the end of next week on the Board  
5 of Water Supply project webpage. We also are underway in  
6 terms of presenting the public review draft to the district's  
7 three neighborhood boards, and we'll also be holding a virtual  
8 community meeting on the draft on August 24th from 6:00 to  
9 8:00 p.m.

10 And lastly, I wanted to turn it over to -- back to  
11 Barry to provide a little bit more of a detail on -- on the  
12 approval process with the city and the state commission.

13 Thank you.

14 MR. USAGAWA: Thank you, Abbey.

15 Just wanted to get through the adoption process. So  
16 once we do the public review draft, and we obtain the comments  
17 and revise the plan accordingly, you know, we then submit it  
18 -- we present it to our board, we present it to PPP, and the  
19 -- and the water commission, but -- you know, I apologize for  
20 the complexity of the flowchart on the bottom right, but just  
21 to explain the city council adoption. And this is adopted by  
22 ordinance.

23 There are five touchpoints. There are three  
24 readings, first, second, and third reading. The third reading  
25 is adoption. The first reading is just an introduction. In

1     between the -- those readings are two committee meetings, and  
2     the committee is planning and sustainability. That may be  
3     outdated; this is an older graphic. What we're trying to do  
4     is have some interaction between the public meetings, the  
5     council meetings, and the water commission public hearing.  
6     And the timeframes historically have been different. So the  
7     city council, once we -- once we get the neighborhood board  
8     endorsements, the city council in the past has processed and  
9     adopted the plan within about three months.

10           So we were thinking that if we could notice the  
11     public hearing prior to us submitting it to council, and then  
12     that the public hearing would then occur such that in the --  
13     in the first meeting, we can say -- we gather input, and then  
14     at the water commission public hearing, we can provide that  
15     input for the record. And then we go to the city council's  
16     second committee meeting, the input that we get at the water  
17     commission's public hearing can then be made record of, you  
18     know, in the -- in the city council process. Because what we  
19     want -- we didn't want to -- what we wanted to do is get that  
20     interaction before the -- before the council adopts it as  
21     ordinance because once it's adopted as ordinance, it's hard to  
22     change. So we want to ensure that there's interaction and  
23     there's discussion there.

24           And so after it's adopted by council, then it --  
25     then it'll be submitted for adoption at the water commission.

1 This is what we tried last time, and I think the public  
2 hearing occurred after all of the committee meetings, and so,  
3 you know, we were lucky that it went through. But, anyway,  
4 that's what we're trying to do. And so if the -- if the staff  
5 feels that it's appropriate to notice the public hearing so  
6 that we can time the actual public hearing in alignment with  
7 the city council adoption. I think it took six months for the  
8 commission because of the 90-day notice the last -- the last  
9 time.

10 So, anyway, that's -- that's the approval process,  
11 and I think that's the last slide there, Abbey. And we're  
12 available for questions if there are any.

13 CHAIR CHANG: A little longer than we thought, 30  
14 minutes, but that's okay.

15 Commissioners, Commissioners, any questions? Oh,  
16 Aurora.

17 COMMISSIONER KAGAWA-VIVIANI: Sorry, question again.

18 CHAIR CHANG: Go ahead.

19 COMMISSIONER KAGAWA-VIVIANI: Just a quick question  
20 given the -- what Barry said about this East Honolulu having  
21 the highest per capita water use and then in the East Honolulu  
22 plan, that there wasn't a -- I'm curious why there isn't more  
23 aggressive reduction of per capita water use because it's not  
24 aligning for me what Barry said and what Abbey said on the  
25 projected demand being stable or decreasing and then -- sorry,

1 my words are not coming together. I'm a little tired. So  
2 basically, why is there not more aggressive reduction of per  
3 capita water use in the plan?

4 MR. USAGAWA: It would -- we were tying the  
5 reduction in per capita based on the amount of supply that we  
6 thought we would have, and so what we did was in the -- in our  
7 water research foundation study, we took the -- the USGS  
8 recharge rates and -- and applied that to the UH 2100  
9 forecast, the rainfall forecast, right? One wet, one --  
10 dynamical was wet; statistical was dry. And we -- and then we  
11 calculated roughly what the sustainable yields would be in  
12 both scenarios, yeah. So in the low -- I mean, in the dry  
13 scenario, the sustainable yields dropped by something in the  
14 range of 30 percent, and so reducing the amount of supply  
15 available to East Honolulu, we felt that bringing it down to  
16 130 per capita would be sufficient for the demand to -- to,  
17 you know, align with the -- what we think the supply may be.

18 Now, these are scenarios that's 80 years away, and  
19 there's gonna be other, you know, evaluations of sustainable  
20 yield. There are other -- there are other cities that can go  
21 to a hundred per capita. And, in fact, when you see primarily  
22 center, because of the density, we think we can go down to a  
23 hundred. But in East Honolulu, there's a lot of large  
24 properties, a lot of swimming pools up there, so it's harder  
25 to get it lower. But if you can get the golf course off the

1     potable system and onto recycled water, that will do a lot  
2     better. Ala Wai Golf Course has their own well. But the  
3     effluent at the Hawai'i Kai Resource Treatment Plant is salty,  
4     you know, they have to -- they have to desalinate that, and  
5     the sea level rise is gonna make it worse, so that will be  
6     challenging. But we tied it to what we thought was the  
7     available supply, so --

8             CHAIR CHANG: Okay. Larry, go ahead.

9             COMMISSIONER MIIKE: Yeah. So basically, the --  
10     your answer is that -- to East Honolulu is that you're only  
11     gonna get a certain amount of water, and you've gotta live  
12     with that, and that's why you're getting a decrease?

13            MR. USAGAWA: Yeah. And historically, it has been  
14     decreasing down from 190 -- the 170 is -- when we started to  
15     calculate the 2020 numbers, they're actually at 170 now. And  
16     so they can get a little bit lower with our rebates and stuff,  
17     but that's how we would do that rather than desalination  
18     because we're doing that, you know, at 'Ewa. So instead of  
19     increasing or augmenting the supply, it's easier to just try  
20     to get their demand down to what we think would be available.

21            CHAIR CHANG: I've got a question. Oh, go ahead,  
22     Neil.

23            COMMISSIONER HANNAHS: I couldn't go through your  
24     list of stakeholders consulted fast enough to see. Was  
25     Kamehameha Schools on that list as the largest private

1 landowner?

2 MR. USAGAWA: It should be, yeah, they own the  
3 majority of the land.

4 COMMISSIONER HANNAHS: They own the golf -- they own  
5 the golf course. Is it their -- is that golf course lease  
6 renewal kind of part of their -- is that an assumption?

7 MR. USAGAWA: Yes.

8 COMMISSIONER HANNAHS: Has there been discussion  
9 with them to see if that's the highest and best use of that  
10 land in terms of their unique mission?

11 MR. USAGAWA: No, we didn't talk about -- as far as  
12 I remember, we didn't talk about changing or, you know,  
13 closing the golf course. It was trying to supply it with an  
14 alternative source.

15 COMMISSIONER HANNAHS: You might want to just broach  
16 the discussion with them. I'm not saying it's an easy -- it's  
17 an easy -- there's a lot of reliance and acceptance of the  
18 golf course, but given their mission, what it provides for  
19 their mission is fairly limited in relationship to the impact  
20 of this being the largest water user in -- in that area. And  
21 now granted, yeah, if they could get off potable, that would  
22 be helpful to this equation, but by the same token, that's a  
23 lot of land that might be -- have a more powerful contribution  
24 to their mission if redeployed.

25 CHAIR CHANG: I'm gonna be a little bit more candid

1       than my fellow commissioners. And maybe -- and maybe because  
2       I'm tired, it's been a long morning.

3               MR. USAGAWA: I'm sorry it took so long.

4               CHAIR CHANG: No, no, no. It was extremely  
5       informative, but I'm putting on my DLNR hat. You know, your  
6       -- this report, it just -- it just emphasized the disparate  
7       treatment. We ask -- I mean, here we are assuming that that  
8       golf course -- and we can let East Honolulu continue to take  
9       more water than the rest of the island, and we are not -- I  
10      mean, when I look at your Catalyst No. 1, that are -- that's  
11      all conservation, environmentalists, culture groups who are  
12      willing to put, you know -- I don't know who's funding all of  
13      this. I suspect they're all going out and getting private  
14      funds.

15              MR. USAGAWA: Yes.

16              CHAIR CHANG: They're getting federal funds. But I  
17      do not see a like -- a like response by your largest users,  
18      the swimming pool guys, the golf course guys. I mean -- but  
19      it just -- when I look at one end of the -- one end of the  
20      island, I look at -- I look at Leeward O'ahu, everything is  
21      getting dumped over there, and those guys on the -- on the  
22      leeward side, they have a little bit of water for  
23      agricultural, which is sustainable. But on East Honolulu,  
24      we're paying for swimming pools and a golf course. I mean, I  
25      am sorry, I'm -- because I struggle with that at DLNR. I

1 mean, DLNR, we are struggling with water management --  
2 watershed management plans. How -- our struggle is how do we  
3 charge the users an equitable amount for their impacts to our  
4 watersheds?

5 And I guess I just -- I'm frustrated because I don't  
6 see a like -- a like kind of appreciation when, you know, here  
7 in -- I don't -- I guess I just don't see that there is a -- a  
8 measurable response to those who are using the most. But yet  
9 I've got all of these nonprofit groups running out there  
10 trying to get money to do these wonderful projects, and I  
11 don't see government trying to, you know, tell -- I think, you  
12 know, it's like Neil says, maybe Kamehameha Schools has to  
13 rethink that, or maybe the swimming pools.

14 But I don't know, Barry and Abbey, is there -- I  
15 mean, what -- what kind of efforts is BWS -- you know, do we  
16 just ask nicely or do -- or do we just turn off the stick? I  
17 mean, like I said, I'm tired; this has been kind of a long  
18 morning, but I -- yet, I'm struggling at DLNR because we have  
19 the same issues, and I'm trying to tell these large  
20 landowners, you've gotta pay -- you have to pay for watershed  
21 management on East Maui.

22 MR. USAGAWA: Right.

23 CHAIR CHANG: How do -- how is this -- how is this  
24 equitable here?

25 MR. USAGAWA: Good question. You know, two things.



1 I'd say we're going into the next water rate increase in the  
2 next month, and, you know, the golf courses -- the three golf  
3 courses that irrigate with potable water right now from our  
4 system, they -- they're gonna -- you know, they may go out of  
5 business, man, I don't know. It's gonna increase their water  
6 costs, they're gonna have to raise rates, you know, and so,  
7 you know, that may be a way to -- well, certainly when prices  
8 go up, people use less. And they've been trying to use less.

9 I know the golf course provides an income stream to  
10 Kamehameha Schools to further their educational mission. They  
11 have the -- they own the areas around Koko Marina as well, you  
12 know. Those -- those commercial properties -- in fact, there  
13 was a presentation last night at the Hawai'i Kai Neighborhood  
14 Board where -- led by, I guess, Michelle Swartman and her team  
15 on revisioning -- revisioning their entire properties, you  
16 know, in East Honolulu. Most of them -- most of the lands are  
17 mauka, as Commissioner Hannahs knows, and, you know, they're  
18 trying to fold in culture and -- but also supply, you know,  
19 funding for their -- for their educational needs. So they're  
20 just starting in that process. You know, those are real good  
21 questions, what's gonna happen with the golf course? And  
22 that's -- we kind of -- in the plan, we tried to react to  
23 that.

24 We did do a -- an investigation on recycled water  
25 for the golf course, this is with American Water, which is a

1 private company that owns the wastewater treatment plan, and  
2 the -- and the previous owners of the golf course, and it  
3 wasn't economically feasible. You know, they need an influx  
4 of grants or something to -- to put in the treatment so they  
5 can use it. But we were trying to help -- or I was trying to  
6 help their -- that discussion.

7 But I hear what you're saying, you know, there is an  
8 equity issue there, but, you know, they're gonna have to pay  
9 the -- the higher rates like everybody else, and the big users  
10 are gonna feel it, and then they're gonna have to conserve  
11 more or, you know, pay the bill.

12 COMMISSIONER HANNAHS: I'll be clear, Barry,  
13 especially with my background, I'm -- I would not want to see  
14 Kamehameha Schools treated unfairly or --

15 MR. USAGAWA: No.

16 COMMISSIONER HANNAHS: -- in this, but I think they  
17 have the potential to be a catalyst project as well. And it  
18 -- but it's gonna take dialogue. And you've got good people  
19 like Michelle and -- there to work with. Just gotta, you  
20 know, catalyze -- you know, make that dialogue happen and see  
21 what -- and see where it goes.

22 MR. USAGAWA: We'll express that to -- to them.

23 CHAIR CHANG: Aurora.

24 COMMISSIONER KAGAWA-VIVIANI: Going off of Chair  
25 Chang's comment, given East Honolulu's reliance on transfers,

1 are projects -- I mean, how is the Board of Water Supply kind  
2 of addressing the dependence of the district, you know, on  
3 other water management areas that can't reap the benefits of  
4 these particular projects? Like, is there a way -- because  
5 it's probably -- the income, you know, disparity of East  
6 Honolulu versus 'Ewa, you know, we don't -- is there  
7 consideration of that kind of transboundary reliance and  
8 ability to build in sort of reciprocity in that to support --  
9 to recognize the reliance of East Honolulu on conservation  
10 activities, say, in Honolulu or Ko'olau Poko to maintain their  
11 -- their subsidized water supply?

12 MR. USAGAWA: You know, it would have been -- it  
13 would have been easy to just say we'll just get more water  
14 from Windward, but it's just not there. So they have to pull  
15 their load, you know, the conserve kuleana, that one slide,  
16 they need to be more efficient. We didn't -- what we -- we  
17 also have two well projects in the Wai'alaie West and Wai'alaie  
18 East Aquifers too to supplement. So it's not only reliant on  
19 -- on transfers and conservation. There are two small well  
20 projects that we -- we have on the books.

21 But, yeah, the -- in the Ko'olau Poko and Ko'olau  
22 Loa Watershed Plans, there's a policy in those plans about the  
23 transfer of water out of these districts shall not be  
24 detrimental to these districts. That's the only way we could  
25 get the plans adopted and endorsed by the neighborhood boards

1       there. So that message was communicated to East Honolulu.  
2       What we got back was like, Hey, we're conserving, you know,  
3       and -- well, yeah, but you can conserve more.

4               We have a rebate program for rain -- you know, rain  
5       barrels, the stormwater utility is going -- they're very  
6       interested in -- in green infrastructure and trying to  
7       recharge the aquifer too. So the community there is very  
8       surprising; they're very motivated and very active in their  
9       activities around the coast and in these cultural sites and,  
10      you know, so -- more so than I see in other -- other  
11      communities, too.

12             It's just the big users like, I think, Commissioner  
13      Hannahs was talking about it, and Chair was talking about,  
14      and, you know, we can -- we can probably talk to them and see  
15      how -- how that can be resolved. They tried developing  
16      sources. It's all salty aquifer water, so it's not  
17      irrigatable. But anyway, this is what we've done so far.

18             COMMISSIONER KAGAWA-VIVIANI: Sorry, a follow-up  
19      quick question asking -- remind me, the Board of Water Supply  
20      is a member of the watershed partnerships?

21             MR. USAGAWA: Yes. The Ko'olau Mountain Watershed  
22      Partnerships, yes.

23             COMMISSIONER KAGAWA-VIVIANI: Yeah. And does that  
24      mean financial, like, support --

25             MR. USAGAWA: Yes.

1 COMMISSIONER KAGAWA-VIVIANI: -- of those efforts?

2 So that is in some way --

3 MR. USAGAWA: That was --

4 COMMISSIONER KAGAWA-VIVIANI: -- redistributing?

5 MR. USAGAWA: Yes. We provide annual funding to --  
6 because of Act 152, and because we created a stakeholder  
7 advisory group with folks like Mark Fox in there, you know,  
8 the big advocates for watershed protection, we're funding  
9 about 300,000 plus to the Ko'olau and the Wai'anae Mountain  
10 Watershed Partnerships as well as the O'ahu Invasive Species  
11 Committee, and some funding also is going to DLNR DOFA for  
12 on-the-ground projects. Invasive species control like  
13 Miconia, Albizia removal, and fencing. And that's an annual  
14 thing that we continue to do with -- with our budget. So in a  
15 way, you know, the rates are funding that investment in the  
16 mauka so that we can continue to make the forests healthier.

17 COMMISSIONER KAGAWA-VIVIANI: Okay, thank you.

18 COMMISSIONER HANNAHS: By the way, we're  
19 highlighting Kamehameha Schools' tenant's use of the water,  
20 but Kamehameha Schools is probably also your largest  
21 contributor statewide to watershed partnership investment of  
22 any organization, so --

23 MR. USAGAWA: Yeah, (inaudible).

24 COMMISSIONER HANNAHS: (Inaudible) values.

25 CHAIR CHANG: I guess, Barry and Abbey, I think one

1 policy that I see missing is environmental justice. Since you  
2 have an islandwide -- while you have these eight water  
3 management, it is an islandwide system that you have, there  
4 should be some level of environmental justice that perhaps how  
5 you allocate the costs -- I mean, you know, again, it just  
6 kind of pains me when I think about the agricultural users  
7 down the west end who -- you know, who are asked to conserve  
8 or we may not even have water for ag, but yet on the east  
9 side, we've got -- and I'm sure they're motivated, I'm sure  
10 they're doing their best, and they're trying, but I think  
11 there's gotta be some policy that drives a more equitable both  
12 distribution -- either distribution of water or distribution  
13 of costs so that, you know, some of these -- these other  
14 areas, maybe their water rates are less because they're using  
15 less. I don't know. I don't know.

16 But this slide, this presentation, I'm sorry, was a  
17 stark reality check that -- I don't know if a lot of people,  
18 you know, see the -- see the stark disparity in -- in East  
19 Honolulu versus West Honolulu. And I know you guys are caught  
20 between a rock and a hard place, but I mean, I think we, as  
21 government, have got to try to do -- do things differently  
22 when we can see such disparity and -- I mean, that -- we've  
23 got all these guys on the west -- on the west end on -- you  
24 know, they're on like drought and water conservation, so --  
25 but I am not -- I'm not just criticizing you guys. I mean, I

1 think we're all faced with this, but I would --

2 MR. USAGAWA: Can I -- if you're referring to the  
3 per capita demand higher than the average, yeah, you know,  
4 they are, but they're not the highest. You know, North Shore  
5 and Wai'anae actually are higher because of the diversified ag  
6 that we serve off of our system, yeah.

7 CHAIR CHANG: Okay.

8 MR. USAGAWA: But certainly they have capacity --  
9 East Honolulu should have that capacity to use less.

10 CHAIR CHANG: Right, right, right. You're right,  
11 yeah.

12 MR. USAGAWA: Maybe we need -- we need to focus our  
13 incentive program to these hot spots, perhaps.

14 CHAIR CHANG: Yeah.

15 MR. USAGAWA: But I think the big-ticket items are  
16 the large users and, you know, addressing that --

17 CHAIR CHANG: Yeah.

18 MR. USAGAWA: -- may go a long -- a longer way than,  
19 you know -- I mean, both -- both strategies work.

20 CHAIR CHANG: Yes, yes.

21 MR. USAGAWA: But, yeah, thanks for the feedback on  
22 the environmental justice and -- and climate equity as well,  
23 too. You know, that's --

24 CHAIR CHANG: Yeah.

25 MR. USAGAWA: -- the same kind of concept, too,

1 right? In the -- in the 2100, in the sea level rise, the  
2 demand goes down because they've gotta move away from the  
3 coast. It's gonna be all flooded, right? That's the same  
4 thing that's gonna happen in PUC is that when -- with six feet  
5 of sea level rise, the water demand goes down. I don't know  
6 where they're gonna go, but they cannot stay there, right?  
7 So, you know, that's some of the things we're tossing around.  
8 What is the -- what is a viable scenario to apply? But that  
9 kind of thing, they're gonna be really impacted in East  
10 Honolulu because all those rich homes on the coast, especially  
11 in Kuli'ou'ou and that area, that's really the hot spot of the  
12 -- of the sea level rise, so -- but those are, you know, 80  
13 years, 50 to 80 years away.

14 CHAIR CHANG: Okay, thank you very much.

15 Any -- any other questions, Commissioners?

16 Is there anybody in the boardroom or on the public  
17 that has a question for Barry or Abbey?

18 COMMISSIONER MIIKE: One last thing, the 170 gallons  
19 per capita, you're taking the total use and dividing it by the  
20 population?

21 MR. USAGAWA: Yeah, sir.

22 COMMISSIONER MIIKE: And those are really like  
23 apples and oranges. If you're talking about --

24 COMMISSIONER HANNAHS: The golf course.

25 COMMISSIONER MIIKE: -- the big users, and then



1 you're talking about North Shore being really high, but there  
2 are very few people on the North Shore.

3 MR. USAGAWA: Right.

4 COMMISSIONER MIIKE: So I think you need a better  
5 comparison. It's very deceptive, and I think -- I think it's  
6 making East Honolulu look really bad when it's probably not  
7 the household users that are doing that.

8 COMMISSIONER HANNAHS: Ayrn has a --

9 MR. USAGAWA: I can see your points.

10 COMMISSIONER HANNAHS: Ayrn.

11 DR. STRAUCH: Chair, may I?

12 CHAIR CHANG: Yes, go ahead, Kaleo.

13 DEPUTY MANUEL: Well --

14 COMMISSIONER KAGAWA-VIVIANI: It's Ayrn.

15 CHAIR CHANG: Oh, Ayrn.

16 DR. STRAUCH: Ayrn Strauch, a member of the public.

17 (Laughter.)

18 DR. STRAUCH: I just want to point out the -- the  
19 issues with using an average is very misleading, as it's being  
20 pointed out. There are a lot of densely populated parts of  
21 East Honolulu -- and I know because I live out there -- that  
22 don't use much water for irrigating landscaping, and they  
23 don't own a pool. There are a few neighborhoods that are very  
24 less -- is much less dense. I mean, homes on 30,000 square  
25 feet or more, and they have lavish landscaping, and they do

1 have swimming pools. And I'm happy to hear that there's a --  
2 potentially, a new rate structure because the -- there are  
3 neighbors of mine that are using 500 gallons per day or -- per  
4 person per day or more. And I think my house is down at 94; I  
5 just calculated it out, so I'm very happy about that. But the  
6 average doesn't necessarily tell the whole story. So, yes,  
7 thank you.

8 CHAIR CHANG: Okay.

9 MR. USAGAWA: Yeah. We have an inverted block rate  
10 for residential because there's an essential needs tier that's  
11 the lowest rate, and the higher -- the more water you use, the  
12 higher the rate gets, so, you know, it's gonna get even higher  
13 with the -- if they adopt the rates. The non-residential  
14 rate, though, is flat because of the big diversity in  
15 commercial and nonresidential uses, but they'll definitely  
16 feel it. You know, it's over \$5. When I started, it was  
17 \$1.77 per thousand; now it's like 5, 5.20. So, you know, it's  
18 just trying to -- everything -- all the costs are going up.  
19 And we realize that, you know, folks are being squeezed, too,  
20 at the grocery store and all of that, inflation and stuff, but  
21 -- anyway, those are the dynamics at work here. I think,  
22 though, they work towards more efficiency, you know, and the  
23 -- to the extent that we can help with our incentive program,  
24 it's called Water Sensible, you know, we can help to quicken  
25 that pace, so --

1           COMMISSIONER MIIKE: By the way, I want to offer my  
2 four rain barrels in Kahalu'u to anybody in East O'ahu since  
3 it's always overflowing, and we don't need them.

4           MR. USAGAWA: Great.

5           CHAIR CHANG: Take him up on it, Barry. Take him up  
6 on it. Okay.

7           COMMISSIONER KAGAWA-VIVIANI: I have one last --  
8 sorry.

9           CHAIR CHANG: Yes, go ahead.

10          COMMISSIONER KAGAWA-VIVIANI: As a renter, I would  
11 be really interested in understanding how the board considers  
12 renters who don't see a water bill, who may not be  
13 incentivized to conserve, and so if -- and given the -- like I  
14 don't know what the population that rents is, you know, like  
15 making sure that that kind of maybe is more directly  
16 communicated versus via jacking up rents. You know, that  
17 people can be engaged and aware. All of my students if I ask  
18 them how many of them pay a water bill, none of them raise  
19 their hands. So, you know, just really connecting to the  
20 population that rents that doesn't -- that doesn't understand  
21 the (inaudible).

22          MR. USAGAWA: Yeah, it's an ongoing challenge. It's  
23 the hard-to-reach customers that are renters that don't see  
24 the bill.

25          COMMISSIONER KAGAWA-VIVIANI: Yeah.

1           MR. USAGAWA: (Inaudible.) We're ramping up social  
2 media and all of that and trying to hit -- you know, get to  
3 them, but it's challenging.

4           DEPUTY MANUEL: Chair, can I -- can I just add  
5 something real quick?

6           CHAIR CHANG: Yeah.

7           DEPUTY MANUEL: Maybe for the commission to consider  
8 and then the board. So thanks for the presentation, Barry;  
9 it's always good to see how the board is kind of taking the  
10 lead on this ahupua'a model and the behaviors and values that  
11 go with it. But kind of similar to what Chair said, they kind  
12 of totally don't exist in this East Honolulu Watershed Plan.  
13 There's just conflict between the value set of sustainable,  
14 self-sustaining communities when you see this massive transfer  
15 of water from outside of their community into a community and  
16 then the high use. But just maybe something to consider, you  
17 know, as a -- we are in a water management area, right, and  
18 the commission does -- while we issue water use permits to the  
19 board as a -- as a permittee, you -- it is a tool that this  
20 commission has. And I'm curious from the board's perspective  
21 on strategies of managing and encouraging or even regulating  
22 conservation, whether or not that was considered in your  
23 planning process or something that you would recommend even  
24 the commission get involved. While the code says that we  
25 delegate to the board or the board -- Department of Water

1       Supply to manage their end uses if there's complications in  
2       seeing conservation, as kind of Chair mentioned, from those  
3       end users, is that something that the commission should be  
4       considering in terms of its review of its water use permit to  
5       the board and/or those end users that are benefiting from that  
6       allocation?

7               Just, you know, that's a policy or a strategy or a  
8       tool that I'm curious you've -- whether you've considered. It  
9       obviously would put a potential restriction on you as the  
10      holder of the permit, but if there isn't an incentive or  
11      disincentive to change behavior, is that something that should  
12      be considered by this body?

13             MR. USAGAWA: Thank you for your comment, Kaleo.  
14      Maybe we can start with a presentation one day, informational,  
15      on our conservation program and all the different facets. You  
16      know, you're talking about certain tactics and incentives on  
17      how to do that. You know, we've been expanding it as we -- as  
18      much as we can. Maybe we can just start there and then maybe  
19      the -- you know, there are gaps that you see or not fast  
20      enough or something, and we can kind of, you know, react to it  
21      or address that.

22             I think we're doing quite a bit, but it's a matter  
23      of focus so that we focus on the high -- high-water users and,  
24      you know, we can -- you know, if the commission is also saying  
25      that they support and are, you know, expecting, you know,

1 greater efficiency, that may -- I don't know if that would  
2 move the needle, but at least start with where we're at now  
3 and where we think we're gonna go and -- and if you folks are  
4 willing, we'd be happy to make a presentation.

5 DEPUTY MANUEL: Yeah. No, I think that's good. I  
6 think it's also just you come up with long-term strategies as  
7 part of this plan, right? And as a planner, 2100 may seem a  
8 long time away, but it's -- it is far to see that reduction  
9 from 170 to 130 as a catalyst project. But in the interim,  
10 are there other strategies, tools that maybe this body can  
11 support the board in its implementation towards conservation  
12 effort, right? So, you know, we can have -- and we probably  
13 should have that dialogue before this body so that we can  
14 understand what you're currently doing, what the ultimate goal  
15 is, and if there are additional tools that we can employ or  
16 support you with as the regulator, right, as the trustee of  
17 water here in this state. So thank you, thanks for the  
18 presentation.

19 CHAIR CHANG: Okay. Barry and Abbey and Franz,  
20 thank you so much. I think this was a great presentation,  
21 good -- it was good information, so thank you.

22 I think with that; we're gonna take a lunch break.  
23 It's 1:05. Are you guys okay with coming back at 1:30?

24 COMMISSIONERS: Yes.

25 CHAIR CHANG: Because there are two action items.

1       Okay. So we're gonna take a break, we're gonna take a lunch  
2       break, and we'll come back at 1:30. Thank you, everybody.  
3       Thank you again, Barry and Abbey.

4               MS. SEITZ: Thank you.

5               MR. USAGAWA: Aloha, Chair and Commissioners.

6               MS. SEITZ: Aloha.

7               (Pause in proceedings: 1:05 p.m.-1:37 p.m.)

8               **Item C1**

9               CHAIR CHANG: Okay, we're back in session. It's  
10       1:37 p.m. Thank you, Board Members.

11               The next item on the agenda is Item C1. It is an  
12       action item, Request to Authorize the Chairperson to Enter  
13       Into a Joint Funding Agreement With USGS to Conduct a Seepage  
14       Analysis on Waikoloa Stream, Island of Hawai'i.

15               Ayron.

16               DR. STRAUCH: Thank you, Chair. Ayron Strauch with  
17       the Stream Protection and Management Branch. I'm gonna  
18       briefly do a presentation on the background and reasoning why  
19       we're funding this specific stream -- stream flow analysis for  
20       seepage run. I also want to add that in the title, it's  
21       (inaudible) the project is exempt from the environmental  
22       assessment requirements under HRS Chapter 343 and HAR Chapter  
23       11-200.1.

24               So taking a step back, Current and Future Priority  
25       in-Stream Flow Standards. We have been working diligently in

1 East Maui and West Maui throughout the last decade or so. We  
2 have in-stream flow standards in West Kaua'i, north and south  
3 shores, and we are currently working to develop them in  
4 Southeast Kaua'i. Last year, we established in-stream flow  
5 standards on Molokai. And in 2020 and 2021, we established  
6 in-stream flow standards in Kaukonahua, and then the Waiāhole  
7 Ditch case established them in -- on the Waiāhole area.

8 The Waikoloa Stream on the Big Island -- can you see  
9 my cursor? Anyway, this blue segment on the Big Island is our  
10 -- and Wailua on Kaua'i are two areas of focus right now where  
11 we have developed an in-stream flow standard assessment report  
12 which is the compilation of best-available information, and we  
13 are working with the water users and the community to develop  
14 an in-stream flow standard or an interim in-stream flow  
15 standard that protects public trust uses.

16 Here is the draft in-stream flow standard assessment  
17 report that we published online in June, and we have sent out  
18 notices via email to stakeholders throughout the Waikoloa and  
19 Hawai'i Island region. We have a landing page for the  
20 in-stream flow standard report online. The report utilizes a  
21 seepage run conducted by the US Geological Survey in 2021  
22 which measured seepage gains and losses through the main stem  
23 of Waikoloa Stream from its headwaters down to the mouth, and  
24 so the headwaters is this stream branch -- sorry, you can't  
25 see my pointer.



1 COMMISSIONER HANNAHS: Are you full screen, by the  
2 way, or is that --

3 DEPUTY MANUEL: I am. Yeah, it should be full --

4 COMMISSIONER HANNAHS: It's (inaudible).

5 DEPUTY MANUEL: Try that. Hold on.

6 COMMISSIONER HANNAHS: There's the pointer.

7 DEPUTY MANUEL: We'll just do this (inaudible). So  
8 we'll share screen (inaudible), and you can share, and you can  
9 access it.

10 COMMISSIONER HANNAHS: Make it bigger.

11 DEPUTY MANUEL: So it's a little bigger.

12 DR. STRAUCH: There we go.

13 DEPUTY MANUEL: And then you can actually see your  
14 pointer now.

15 DR. STRAUCH: Oh, okay. So the Waikoloa Stream  
16 headwaters start in the Kohala protected -- watershed  
17 protected area managed by DOFA and then flows down through  
18 Waimea Town all the way up through -- and the lower reach is  
19 actually referred to as Wai'ula'ula, and the stream is gaining  
20 flow up the mauka areas and it gains flows in this region of  
21 Waikoloa -- or Waimea Town, but it's losing principally  
22 between the -- the stream diversion that feeds the county  
23 water supply and where it -- the geology transitions.

24 So, how do I -- okay, there we go.

25 Okay. So here's the underlying geology. Again,

1 these green dots are the measurement sites. The orange line  
2 is the stream where it's losing, and then the transition from  
3 the Hawi volcanics to the Hualālai volcanics -- or Hamakua  
4 volcanics, sorry, is where it moves from -- or the stream  
5 transitions from losing to gaining, so it actually gains  
6 stream flow in this region. And this unique geology -- we'd  
7 like to confirm that this stream flow is losing and the rate  
8 of loss, and then it's gaining at the rate of gain because it  
9 has implications for meeting the public trust needs of this  
10 stream.

11 Particularily, this region just below Lālāmilo  
12 Homesteads, this agricultural area has a historic 'auwai  
13 system, multiple historic 'auwai systems, and we have an  
14 informal complaint at this -- at this stage that there is  
15 insufficient water in -- to meet the traditional practices of  
16 the agriculture in the area. This stream also runs through a  
17 number of parks and provides aesthetic and recreational value.

18 This stream was also identified in the USGS Water  
19 Resource Management Monitoring Needs Assessment published in  
20 2020. Particularly this seepage run right here, this blue  
21 line that's highlighted by USGS as a point that needs to be  
22 monitored, as understanding surface water-groundwater  
23 interactions in this region has implications for groundwater  
24 recharge as well.

25 To place this in the context of previous seepage

1 runs funded by the -- the water commission, in the 2018  
2 funding for the low-flow -- statewide low-flow project, a  
3 number of West Maui stream seepage runs were funded. In 2020,  
4 the commission approved funding for a number of West --  
5 Lahaina side of West Maui seepage runs. And then here on --  
6 in 2023, we're funding the Waikoloa Stream seepage run.  
7 Because we are physically constrained, we cannot just fund all  
8 stream flow -- or all streams identified as priority streams  
9 for seepage runs, but where the data are needed to make  
10 management decisions, we are going stream by stream,  
11 essentially.

12 So that's all I have for a presentation. The  
13 request (inaudible) the staff recommendations which are to  
14 authorize the chairperson to enter into a joint funding  
15 agreement between the Commission on Water Resource Management  
16 and the US Geological Survey to collect and -- (inaudible) to  
17 conduct seepage analysis (inaudible) measurements for one  
18 high-priority stream for a period of one year until June  
19 twenty -- June 30th, 2024. A joint funding agreement in the  
20 amount of \$21,300 would be shared by the commission for 11,300  
21 and the US Geological Survey for \$10,000.

22 2. Authorize the chairperson to make such further  
23 amendments or modifications to the contract agreement  
24 consistent with the terms set forth above as may be necessary  
25 to accomplish the goals described here, provided that any

1 amendment or modification does not require additional  
2 commission funding.

3 3. Request that Hawai'i Department of Water Supply  
4 comply with any stream diversion operational needs USGS deems  
5 necessary to conduct a successful seepage run.

6 And 4. Declare that the project is exempt from EA  
7 requirements under HRS Chapter 343 and HAR Chapter 11-200.1.

8 Are there any questions?

9 COMMISSIONER HANNAHS: Not a question, but it's  
10 fascinating, East Maui when you talked about the different  
11 characteristics of the geology. So between Hamakua and Hawi,  
12 what are the different characteristics?

13 DR. STRAUCH: So there are perched water bodies.  
14 The Hawi volcanics tend to be thin and perched -- provide some  
15 level of perched water bodies which contributes to lots of  
16 spring flow. And the Y -- that particular area of the stream  
17 in the Hawi volcanics is losing -- is not yet determined.

18 COMMISSIONER HANNAHS: That's what --

19 DR. STRAUCH: But one of the reasons why we're doing  
20 the seepage run, again, most of these volcanics are -- tend to  
21 be pretty porous, and so -- but that -- there is a high  
22 elevation region where the Kohala volcanic, you know, chill  
23 building phase and the Mauna Kea chill building phase  
24 overlapped, and so there's somewhat unique geology, especially  
25 in that Waimea Town region, that has higher elevation

1 groundwater. And that's known, that's -- there are a number  
2 of DWS wells that take advantage of that high-elevation  
3 groundwater for drinking water supply. But it also clearly  
4 contributes to sustaining stream flow (inaudible). So it's  
5 just really a unique location, and there have been -- the  
6 biota data that are available demonstrates the stream supports  
7 native amphibious species, we know it supports a lot of  
8 recreational values, and this region has -- is heavily  
9 concentrated in archaeological sites that relate to  
10 agriculture, both cooler dryland agriculture and wetland  
11 agriculture, so (pause) --

12 COMMISSIONER MIIKE: How much is being diverted, and  
13 what percent is that of the base flow?

14 DR. STRAUCH: Great question. So the capacity of  
15 the diversion off the top of my head is somewhere, I think,  
16 2.5 mgd, between 2 and 3 mgd, and that is a hundred percent of  
17 base flow, so the --

18 COMMISSIONER MIIKE: And so, historically, it went  
19 all the way down to the ocean?

20 DR. STRAUCH: Yes.

21 COMMISSIONER MIIKE: How far down are those people  
22 that -- with the agriculture lots (inaudible)?

23 DR. STRAUCH: They're just below Waimea Town, not  
24 far. I mean, it's pretty high up.

25 COMMISSIONER MIIKE: Okay.

1           DEPUTY MANUEL: Maybe just one thing to add, this  
2 would be one of the only fresh streams that we potentially  
3 restore mauka to makai from Upolu to Puna, basically. It  
4 would be the only perennial stream that this commission could  
5 balance on an in-stream full-stream restoration -- or at least  
6 base flow restoration that supports that type of ecological  
7 support.

8           COMMISSIONER MIIKE: And Waimea Town has no other  
9 source currently?

10          DEPUTY MANUEL: No.

11          DR. STRAUCH: They -- they have two high-elevation  
12 groundwater wells that could meet most of their needs. It's  
13 just --

14          COMMISSIONER MIIKE: Cost.

15          DR. STRAUCH: -- cost, basically. It's way cheaper  
16 to utilize surface water.

17          CHAIR CHANG: Ayron, this is Dawn. I just have two  
18 questions. One, your -- your Recommendation No. 3 regarding  
19 Department of Water Supply, so what kind of requirements do  
20 you have of them?

21          DR. STRAUCH: We just want them to -- we want them  
22 to be cooperative with USGS. There isn't a specific  
23 requirement necessarily.

24          CHAIR CHANG: Okay.

25          DR. STRAUCH: Other than maybe don't adjust things

1 during the day while they're trying to take the flow  
2 measurements. They just -- we just need them to be  
3 cooperative.

4 CHAIR CHANG: And you're gonna coordinate with them?  
5 I mean, this is not an unusual request?

6 DR. STRAUCH: Correct.

7 CHAIR CHANG: Okay. And the other second question I  
8 had is who are the users of this -- of this stream?

9 DR. STRAUCH: In terms of domestic water supply --

10 CHAIR CHANG: Yeah, that's --

11 DR. STRAUCH: -- via the county or the --

12 CHAIR CHANG: Okay.

13 DR. STRAUCH: Is that --

14 CHAIR CHANG: I mean, if there's diversions, who's  
15 -- who are the major diverters?

16 DR. STRAUCH: The two primary divergences that are  
17 on the books are Parker Ranch; they have a two-inch pipeline  
18 that takes an unknown amount of water because they did not --  
19 they have not metered their -- their system. But we have been  
20 engaging with them, and they are -- they have ordered the  
21 meters, and they are working on installing them as we speak.  
22 And the County Department of Water Supply -- back in the '40s,  
23 Marine Dam was built to supply the Army's drinking water needs  
24 for -- during or post World War II training in the region, and  
25 that then was -- is now utilized by the county for drinking

1 water, that and a diversion on Kohakohau Stream which all  
2 contribute to the reservoir system above Waimea Town.

3 CHAIR CHANG: Okay, very good.

4 Any other questions?

5 (No response.)

6 CHAIR CHANG: Do I have a motion?

7 COMMISSIONER HO: So moved.

8 CHAIR CHANG: Is there a second?

9 COMMISSIONER MIIKE: Second.

10 CHAIR CHANG: All right. The motion has been moved  
11 and seconded to approve the chairperson entering into a joint  
12 funding agreement as well as the EA exemption. All in favor;  
13 please say aye.

14 DEPUTY MANUEL: Maybe, Chair -- Chair, before the  
15 vote, just to note for the record that there's nobody present  
16 in the room or online for testimony, just for the record.

17 CHAIR CHANG: You're very -- usually, Collin is the  
18 one who reminds me about that.

19 DEPUTY MANUEL: He is reminding us in the corner.

20 CHAIR CHANG: Okay.

21 DEPUTY MANUEL: But to verbalize it.

22 CHAIR CHANG: He's always so good about -- I always  
23 forget that. So, yes, let me just ask, is there anyone in the  
24 room or on Zoom that would like to testify on this matter?

25 (No response.)



1 CHAIR CHANG: Okay. Hearing none, a motion has been  
2 made and seconded. All in favor; please say aye.

3 (Response.)

4 CHAIR CHANG: And Mr. Katayama, are you on the --  
5 are you -- are you with us?

6 DEPUTY MANUEL: Commissioner Katayama is not here.  
7 He had to leave for the afternoon. So we have quorum.

8 CHAIR CHANG: Okay, we have quorum. Okay. So there  
9 has been a unanimous vote of the five members present. Mr.  
10 Katayama did not return after lunch.

11 *MOTION: (HO/MIIKE)*

12 *To approve C1 with EA exemption.*

13 *UNANIMOUSLY APPROVED*

14 *HANNAHS/KAGAWA-VIVIANI/HO/MIIKE/CHANG*

15 CHAIR CHANG: Okay, thank you.

16 **Item C2**

17 We're gonna now move on to Item C2, Request to  
18 Authorize the Chairperson to Enter Into a Joint Funding  
19 Agreement With USGS to Collect and Enter Into Site-Specific  
20 Water Use Information in Hawai'i, Statewide.

21 Did this also include the EA exemption, Ayron?

22 DR. STRAUCH: Yes.

23 CHAIR CHANG: Okay, and the EA exemption. All  
24 right, very good. Presentation by the staff?

25 DR. STRAUCH: Thank you, Chair. This is Ayron

1 Strauch with the stream protection management branch.

2 Item C2 is to request to authorize the chairperson  
3 to enter into a joint funding agreement with US Geological  
4 Survey to collect and enter site-specific water use  
5 information for Hawai'i and declare that the project is exempt  
6 from EA requirements. The -- there is no formal presentation,  
7 although I will give a little bit of background information.

8 At five-year intervals nationwide, the USGS collects  
9 water use data to characterize water use across the nation in  
10 a comprehensive and consistent manner for comparative purposes  
11 and to make recommendations at the federal level. In Hawai'i,  
12 we've not had sufficient monitoring in major areas of water  
13 use for many, many years. We have gotten much better in the  
14 last -- since I was hired in 2014, and the major users such as  
15 hydropower and agriculture irrigation have now, at least at  
16 the largest scales, are now monitoring their systems much more  
17 effectively.

18 You know, there was a lot of information being  
19 gathered during the plantation era, but following the collapse  
20 of the plantation systems and the managers that we've had to  
21 monitor and manage effectively and just record the data, you  
22 know, we lost many decades of information.

23 But now, USGS is wanting to gather the information  
24 we have and enter it within their system, and they have  
25 federal funding to do this. This is a no-cost agreement to

1 the commission. We just need to be the local partner in this  
2 effort. And because the commission already gathers the data  
3 from drinking water systems, both surface and groundwater data  
4 from irrigation systems, both surface and groundwater data  
5 from (inaudible) power systems, now that we've really worked  
6 statewide to get water users to report consistently, this is  
7 -- this data are -- these data are now available for USGS to  
8 bring into their system to code it to their level of -- to  
9 make it consistent for their federal -- or countrywide  
10 analysis.

11 So with that, the -- the staff recommends that the  
12 commission authorize the chairperson to enter into a joint  
13 funding agreement between the Commission on Water Resource  
14 Management and the US Geological Survey to collect and enter  
15 site-specific water use information for the state of Hawai'i.  
16 This JFA will be funded solely by the USGS with no cost to the  
17 commission.

18 2. Authorize the chairperson to accept further  
19 amendments and modifications to the contract agreement as may  
20 be necessary to accomplish the goals described here, provided  
21 that any amendment or modification does not require additional  
22 commission funding.

23 And 3. Declare that the project is exempt from EA  
24 requirements under HRS Chapter 343 and HAR Chapter 11-200.1.

25 CHAIR CHANG: Very good. Thank you, Ayron.

1           Commissioners, any questions? Oh, go ahead, Aurora.

2           COMMISSIONER KAGAWA-VIVIANI: I have one. This is  
3 for Ayron because USGS is not here today. How does it -- do  
4 we have good data even in undesignated areas or --

5           DR. STRAUCH: Yes.

6           COMMISSIONER KAGAWA-VIVIANI: Oh.

7           DR. STRAUCH: So from -- you know, I won't speak for  
8 groundwater, although I do know that they have done a lot of  
9 outreach statewide to get small groundwater wells to report,  
10 even though I believe domestic wells aren't required to  
11 report.

12           Is that accurate?

13           DEPUTY MANUEL: Right now, that's not the focus and  
14 priority (inaudible).

15           DR. STRAUCH: Yeah, the focus is on the larger  
16 users.

17           COMMISSIONER KAGAWA-VIVIANI: Okay.

18           DR. STRAUCH: And we have pretty good reporting from  
19 all the larger users. On the surface water side, certain  
20 users, we've been getting consistent data for, like East Maui  
21 Irrigation or Wailuku Water, because they -- that information  
22 has been tied to contested cases. Other systems, it's been  
23 much more recent. Like Department of Agriculture systems are  
24 -- on the Big Island or the Molokai irrigation system, they --  
25 they were not monitoring their delivery system. They were

1 gathering metered end-use data, so we have that available that  
2 dates back now, maybe a decade or so. But the commission  
3 staff has installed and maintained monitoring stations for  
4 these systems as a -- because they weren't gonna be able to do  
5 it. So we've also worked with large private irrigation system  
6 operators, whether it's Maui Land and Pine, whether it's Grove  
7 Farm, Kaua'i Ranch, Kekaha Ag, which is ABC System, to develop  
8 monitoring programs and to help them maintain them. All the  
9 hydropower plants now are reporting their tail race data to  
10 us, which is a big win because now we have at least one sector  
11 of their -- you know, the categories that USGS utilizes  
12 accomplished. I believe all of the drinking water systems  
13 that rely on surface water now also report their water use to  
14 us, so --

15 COMMISSIONER KAGAWA-VIVIANI: Okay. So CWRM will  
16 ingest it and pass it to USGS to --

17 DR. STRAUCH: Essentially.

18 COMMISSIONER KAGAWA-VIVIANI: -- organize and  
19 display and make available for everyone?

20 DR. STRAUCH: Yes.

21 COMMISSIONER KAGAWA-VIVIANI: And it alleviates the  
22 workload in some sense.

23 DR. STRAUCH: The USGS will --

24 COMMISSIONER KAGAWA-VIVIANI: Okay.

25 DR. STRAUCH: -- coordinate with us on how they

1 access the data, whether we set them up with a terminal in the  
2 office or we just compile lots of spreadsheets and just send  
3 them over there. We'll figure that -- the logistics out  
4 later.

5 COMMISSIONER KAGAWA-VIVIANI: Okay.

6 DR. STRAUCH: But basically, they're going to fund  
7 the -- the gathering and coding and analyzing of the data.

8 COMMISSIONER KAGAWA-VIVIANI: Okay. The other thing  
9 I noticed in the submittal was that there's this untapped  
10 source of funding that we could potentially use in the future,  
11 the Water Use Data and Research Program, so will that help  
12 sustain kind of the effort moving forward?

13 DR. STRAUCH: That's --

14 (Laughter.)

15 COMMISSIONER KAGAWA-VIVIANI: (Inaudible) maybe this  
16 is (inaudible).

17 DEPUTY MANUEL: Yeah, I mean, in general, I will say  
18 that Katie Roth with our planning program has been taking the  
19 lead on looking at how to double down on our -- our state  
20 funding by looking and accessing federal funding where --  
21 where applicable and as appropriate. And so we are evolving  
22 in our access of federal resources. We have historically not  
23 accessed a lot of them, but that's something that we're --  
24 we're open to as they align with our priorities or the things  
25 that we've been currently working on.

1 COMMISSIONER KAGAWA-VIVIANI: I just wanted to say  
2 this is great because it's gonna help us through water  
3 shortage planning with real data and assistance, technical  
4 assistance from USGS.

5 CHAIR CHANG: Any other questions? I'm sorry,  
6 Aurora. Go ahead. Anything more?

7 COMMISSIONER KAGAWA-VIVIANI: (Shaking head.)

8 CHAIR CHANG: Any other questions, Commissioners?  
9 (No response.)

10 CHAIR CHANG: Do any members of the public, either  
11 in the room or on Zoom, have any questions?

12 (No response.)

13 CHAIR CHANG: Okay. With that, do I have a motion?

14 COMMISSIONER KAGAWA-VIVIANI: Motion to approve.

15 COMMISSIONER HANNAHS: Second.

16 CHAIR CHANG: Motion to approve. Do I have a  
17 second?

18 COMMISSIONER HANNAHS: Second.

19 CHAIR CHANG: The motion has been made and seconded  
20 to approve the staff recommendation. All in favor, say aye.

21 (Response.)

22 CHAIR CHANG: Motion passes unanimously.

23 *MOTION: (KAGAWA-VIVIANI/HANNAHS)*

24 *To approve C2 with EA exemption.*

25 *UNANIMOUSLY APPROVED*

1 HANNAHS/KAGAWA-VIVIANI/HO/MIIKE/CHANG

2 CHAIR CHANG: Next time, we are putting staff action  
3 items first thing on the agenda. You guys did it in 20  
4 minutes, two agenda. Ayron, you're gonna be on the top of the  
5 list. Thank you. Thank you. Good presentation, efficient.

6 All right, Kaleo. Do you want to do Item D?

7 DEPUTY MANUEL: Note just that our next commission  
8 meeting is planned for August 15th, so save that on your  
9 calendar. And thank you for your flexibility in July as we  
10 rescheduled. But we will see you folks in a couple weeks, so  
11 thank you. That's it, Chair.

12 CHAIR CHANG: Thank you.

13 Commissioner Miike, welcome on board. Did you want  
14 to say anything in the first -- your first meeting?

15 COMMISSIONER MIIKE: Well, as long as you have your  
16 meetings not on Wednesdays, I'm fine.

17 CHAIR CHANG: Yeah.

18 (Laughter.)

19 CHAIR CHANG: Not on Wednesdays.

20 DEPUTY MANUEL: Good.

21 COMMISSIONER MIIKE: Good for me too. Wednesday is  
22 my trip to Kona.

23 CHAIR CHANG: Oh, okay. Okay.

24 COMMISSIONER MIIKE: But this week was fine; he gave  
25 me enough warning, so --



1                   DEPUTY MANUEL: Thank you, thank you.

2                   CHAIR CHANG: Okay, okay. So, Kaleo will work to  
3 coordinate that.

4                   Thank you, everybody. I appreciated your patience  
5 with me as well. The meeting is adjourned.

6                   (The proceedings were adjourned at 2:02 p.m.)  
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