IN THE CIRCUIT COURT OF THE FIRST CIRCUIT 1 2 STATE OF HAWAII 3 4 SIERRA CLUB, Plaintiff, 5 Civil No. vs. 6 19-1-0019 BOARD OF LAND AND NATURAL 7 RESOURCES, et al., 8 Defendants. 9 10 TRANSCRIPT OF PROCEEDINGS before the Honorable Jeffrey P. Crabtree, Judge, Sixth 11 Division, presiding, on August 12, 2020. P.M. Session. 12 13 JURY-WAIVED TRIAL. 14 APPEARANCES: 15 (via Webex) 16 DAVID KIMO FRANKEL, ESQ. For the Plaintiff 17WILLIAM J. WYNHOFF, ESQ.For DLNR, BLNR, andLAUREN K. CHUN, ESQ.Suzanne Case MELISSA D. GOLDMAN, ESQ. 18 Deputies Attorney General 19 For Alexander & Baldwin, Inc. and East DAVID SCHULMEISTER, ESQ. 20 TRISHA H.S.T. Akagi, ESQ. Maui Irrigation 21 Company, LLC 22 CALEB P. ROWE, ESQ. For County of Maui 23 REPORTED BY 24 Sharon Hulihee, RPR, CSR 306 Official Court Reporter 25 State of Hawaii

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August 12, 2020. 1 2 P.M. Session. THE COURT: All right. We are off record. 3 4 (Off the record discussion.) THE COURT: All right. We are now on record. 5 6 Mr. Vaught has re-entered the room. Can you hear me 7 clearly, Mr. Vaught? 8 THE WITNESS: Yes, your honor, I can. 9 THE COURT: Okay. Thank you. So I remind 10 you you're still under oath. We're not going to swear up 11 in again but you're still under oath. All right? 12 THE WITNESS: Yes. Thank you. 13 THE COURT: Okay. All right. Mr. 14 Schulmeister, please go ahead. 15 16 MARK VAUGHT, 17 called as a witness by Alexander & 18 Baldwin, having been previously sworn, was examined and testified as follows: 19 20 21 CONTINUED DIRECT EXAMINATION 2.2 BY MR. SCHULMEISTER: 2.3 Okay. Mr. Vaught, could you look at Exhibits Ο. 24 AB-60, 61 and 62. 25 You have them now? Official Court Reporters First Circuit Court

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Α. Yes. 1 2 You know, starting with AB-61, do you know Q. what this is? 3 AB-61 or 60? 4 Α. 5 Q. I'm sorry. 60. Yes. This is a fire -- looks like it's a 6 Α. 7 fire on our property. 8 Okay. And did you take this photo? Ο. 9 I didn't take this photo, no. Α. 10 Ο. But you've seen this photo before? 11 Α. Yes. 12 You know where it came from? Ο. 13 It came from the fire department. Α. 14 Okay. And did you ask some -- for any photos Q. 15 of -- they had of a recent fire? 16 Α. Yes. 17 Q. Is this representative of how it looks when you have been witnessing brush fire on your property? 18 19 Yes, it is. Α. 20 MR. SCHULMEISTER: Okay. I'd like to move 21 Exhibit AB-60 into evidence. 2.2 THE COURT: Any objections? 2.3 MR. FRANKEL: Yeah, objection. Lacks foundation, your honor. 24 25 THE COURT: Yeah. Right now we don't have Official Court Reporters

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any idea from the record on when, where, so you do need to 1 2 tighten up a little bit, unless you're just offering it as an illustration of what a fire on Maui looks like. 3 4 MR. SCHULMEISTER: Well, a fire specifically 5 on their property looks like. 6 THE COURT: Okay. 7 MR. SCHULMEISTER: That's really all I'm offering it for, that this is representative of what it 8 looks like, and he's seen this before. 9 10 THE COURT: All right. As long as we're not 11 trying to associate this with any particular fire, that's 12 fine. All right. How about Ms. Goldman? 13 MS. GOLDMAN: No objection from the State. THE COURT: Thank you. Mr. Rowe? 14 15 MR. ROWE: No objection, your honor. 16 THE COURT: All right. Exhibit AB-60. 60 is 17 admitted. 18 MR. FRANKEL: Your honor, for the limited 19 purpose, right? 20 THE COURT: For the limited purpose the court 21 put on the record, yes. Thank you. 2.2 (Exhibit AB-60 was received in evidence.) 2.3 24 BY MR. SCHULMEISTER: 25 Could you look at AB-61. So do you know what Q.

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-- have you seen AB-61 before? 1 2 Yes, I have. Α. 3 And do you know what it is? Q. 4 This is a helicopter operation during a fire, Α. 5 a recent fire, I believe, in the gulch. That helicopter 6 operation was going on while they -- while they were taking water from one of our reservoirs. 7 8 Okay. Did you take this photo? Ο. 9 Α. I did not. Is this a photo that you acquired? 10 Ο. Yes, it is. 11 Α. 12 And where did you get it? Ο. 13 Fire department. Α. 14 Okay. Is this -- but you recognize the area Q. 15 that's depicted in this photo? 16 I believe -- I'm not a hundred percent sure Α. 17 but I believe this might be Hailimaile Gulch, Kailua Gulch 18 they call it. 19 And have you witnessed helicopter operations Ο. 20 like this on Mahi Pono's property? Yes, I have. 21 Α. 2.2 MR. SCHULMEISTER: Okay. I move Exhibit 23 AB-61 into evidence. 24 THE COURT: Mr. Frankel? MR. FRANKEL: Lacks foundation. 25

1 THE COURT: Ms. Goldman? 2 MS. GOLDMAN: Nothing from the State. THE COURT: Mr. Rowe? 3 4 MR. ROWE: No objection, your honor. 5 THE COURT: All right. The court will admit 6 Exhibit AB-61 just to illustrate the -- how the 7 helicopters gather water from the reservoir. Thank you. 8 (Exhibit AB-61 was received in evidence.) 9 10 BY MR. SCHULMEISTER: 11 Okay. Actually I don't -- I'd also ask you Q. 12 to look at AB-62. And is that another photograph, Mr. Vaughn -- I mean, Mr. -- Mr. Vaught, excuse me. 13 14 Α. Yes. 15 Is it another photo that you acquired from Q. 16 the fire department? 17 Α. Yes, it is. 18 And do you recognize the area depicted in Q. 19 this photograph? 20 Α. I don't recognize this specific area but it looks familiar. 21 2.2 Ο. Okay. And is there a helicopter in this 23 photo? 24 Α. Yes. 25 Okay. And is this -- is this representative Q. Official Court Reporters First Circuit Court State of Hawaii

of what you've seen when fires are being fought in the 1 2 area of Mahi Pono's property with water -- the helicopter drops from the reservoirs? 3 Yes, this is -- this is familiar to me and 4 Α. 5 there is what it looks like when helicopters are dropping 6 water on fires. 7 MR. SCHULMEISTER: Okay. I move Exhibit 8 AB-62 into evidence. 9 THE COURT: Mr. Frankel. Mr. Frankel? 10 MR. FRANKEL: Lacks foundation. THE COURT: Ms. Goldman? 11 12 MS. GOLDMAN: Nothing from the State, your 13 honor. 14 THE COURT: Mr. Rowe? 15 MR. ROWE: No objection, your honor. 16 THE COURT: The court will admit AB-62 into 17 evidence just to illustrate helicopter dropping water on a 18 fire. 19 (Exhibit AB-62 was received in evidence.) 20 21 BY MR. SCHULMEISTER: 2.2 Q. Okay. Mr. Vaught, do you recall any situations where you received a call from Lucienne de Naie 23 complaining about water, having a flash flood or something 24 25 of that nature having occurred on Hanehoi Stream? Official Court Reporters First Circuit Court

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A. I don't recall it being a phone call but I do remember direct contact with her either at some public meeting or some public event that we had contact and she made -- she -- she told me what -- what you're referring to.

6 Q. And what did she say?

7 She -- she was saying that, if -- if -- if Α. I'm not mistaken, it's -- the event was -- could have been 8 the time we went out and we did a field visit in East Maui 9 10 prior to or during the last year 2019 legislative session 11 and we had several of the representatives and I think it 12 was the House Finance Committee, or one of their committees, I'm not sure, and they were talking about East 13 14 Maui, they wanted to get a little more familiar with it, 15 and I remember specifically -- I remember specifically 16 them bringing some legislators over. And she brought up 17 the story to one of them, saying that the lack of 18 communication that we had with them was illustrated by the 19 fact that there was, on a sunny day there was a giant 20 torrent of brown water that came down through Hanehoi Stream, and she said several of the residents that lived 21 2.2 below were using the stream for recreation and just swimming and that the torrent almost, according to her, 23 24 washed them into the ocean. And she said that if we were 25 going to do something operationally upstream that was

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1 going to make -- that had that kind of effect on the 2 downstream we should have notified them. That's what --3 that's basically what her story was.

Q. Okay. Now, has -- did EMI do something
operationally upstream on Hanehoi that would have been
responsible for that sort of release of water?

7 So with her description I have to say no. I Α. -- I don't believe there was anything that we did that 8 9 would cause that. I -- I -- I certainly think it's very 10 possible that could have happened but that would have been 11 a Mother Nature call and not an EMI call and there was 12 nothing that we could do. We don't have the physical capability on that particular stream to release that 13 amount of water that would cause that sort of reaction, I 14 15 quess, downstream.

16 Q. Now when you say a Mother Nature sort of 17 event, what do you mean by that?

18 It might have been nice and sunny where --Α. 19 where, you know, down at lower Hanehoi where they lived 20 below the highway but, you know, if it's further up in the hills and, you know, there's a -- a downfall -- a downpour 21 22 further upstream, you know, that would cause an amount of 23 water to get loose, an amount of water, that kind of 24 volume to get loose, I've absolutely seen that happen, but 25 that -- again, I don't make it rain. That's something

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that Mother Nature did and it -- it did happen. So I'm --1 2 I'm -- I'm sure she's just saying what happened. I just don't believe that EMI was responsible for that. 3 Now there's something specific about the 4 Q. 5 structures on Hanehoi that leads you to believe that that 6 could not have resulted from anything EMI did? 7 Yes. I -- and I think she's familiar with Α. some of the larger sluice gates that we have along the 8 9 streams but she's also probably familiar with some of the 10 larger dump gates that we do operate in situations where 11 we need to shut the ditch completely in a location and let 12 that water run downstream and that would cause a situation 13 like this. However, none of those facilities exist on

14 Hanehoi Stream.

Q. So if water came down as far as where she says the residents were using the stream below the diversions, where would that water have come from?

A. The amount of water that she was talking
about would have to come from rainfall further up in the
hills.

21 Q. Within that watershed?

A. It's possible, yes. I wasn't down where she was that day and -- or where her residents were so I -- I can't describe to you the amount of water that was down there, but she said it was fast. And the amount of water

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that it would take to wash whole human beings down a 1 stream is more than we have the capability of, you know, 2 opening a gate and sending that amount of water down. 3 Okay. Now earlier you testified that 4 Q. 5 currently EMI is bringing water principally from the Huelo 6 area and actually within the -- from the 12 streams in the 7 Huelo license area that are not restoration streams under the Water Commission decision; is that right? 8 9 Α. Yes. 10 And -- and in the last month or two and to Ο. 11 date, I mean, how have the -- how has the weather affected 12 the amount of water that EMI has been importing? 13 The weather has -- has been very dry so Α. 14 available water in the streams is not how it used to be, 15 it's not optimal for us. In other words, it's just been 16 pretty -- pretty dry. We're not able to divert as much 17 water as we need to. 18 Okay. Now, if you were not able to divert Ο. 19 from the 12 streams that we referred to, in other words, 20 if you were ordered to stop taking anything from those streams, how would that impact your ability to import 21 2.2 water to meet the needs that you're currently meeting with 23 EMI water? 24 So if we continue to comply with the IIFS and Α. 25 we couldn't use water from those 12 streams, it would be

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very difficult to get water, the amount of water that we

2 need. In other words, that -- those 12 streams are pretty 3 vital right now to what we have on the farms, to what 4 we're using on the farms.

Q. Now, and you mentioned earlier that you -you are managing water resources on both sides of Maliko
Gulch both on the collection side and the distribution
side from Mahi Pono; is that right?

9 A. Yes, that's correct.

10 Q. And so in your communication with the farm 11 managers about what their planting schedules are?

12 A. Yes, that's correct.

13 Q. And irrigation schedules?

14 A. Yes.

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15 Q. And is EMI bringing in any more water than is 16 needed currently?

17 Α. We don't believe so. We -- we just bring in 18 the amount of the water currently that we need for 19 irrigation and storage and whatever else. Now the County 20 takes a large portion of the, you know, of the Wailoa 21 water up on the top. We have to make that available to 22 them and it just depends on what months. I noticed in the 23 dryer months the County tends to draw a little more water 24 there and in the winter months a little less. But, you 25 know, making sure that there's enough water there for the

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County so that the residents have access to water, that's 1 2 kind of one of the things that's at the top of our list. And -- and are there, you know, future 3 Q. plantings that are planned which would increase irrigation 4 5 demand for Mahi Pono? 6 Α. Yes. 7 And if water from the 12 streams would not be Q. available, what impact would that have on those planting 8 9 plans? 10 Α. It may cause us to suspend or divert planting 11 plans in certain areas but for the most part it would 12 cause us to suspend planting plans. 13 MR. SCHULMEISTER: I have no further 14 questions. 15 THE COURT: Thank you. Mr. Frankel? 16 MR. FRANKEL: I'm not sure if I'm next. I 17 think you have to go through all the defendants first, 18 right? 19 THE COURT: Okay. We can do it that way. 20 Let's see. Since he's there with Mr. Rowe, then Mr. Wynhoff, you mind -- I'm sorry, Ms. Goldman, you mind 21 22 going next? 2.3 24 CROSS EXAMINATION 25 BY MS. GOLDMAN:

No problem, your honor. 1 Q. 2 Good afternoon, Mr. Vaught. My name's Melissa Goldman. I'm one of the attorneys representing 3 4 the State today and I have a few questions for you 5 regarding -- let's start with the overall ditch system. 6 How many ditches run through the license areas at issue in 7 this case, if you know? 8 Yeah. I'd say we're talking about four main Α. 9 ditches running through the license area. 10 Ο. Okay. And what are those four main ditches? 11 The Koolau Ditch, which originates in Α. 12 Makapipi, and then delivers to a stream called Alo, and then turns into Wailoa at that point, so that's one -- I 13 14 apologize. 15 THE COURT: Wait. Time out. 16 MS. GOLDMAN: Oh. 17 THE COURT: Could you -- time out. Please spell. Please spell as you go. Thank you, Mr. Vaught. 18 19 THE WITNESS: Sure. So the Koolau Ditch, 20 K-O-O-L-A-U. And the Koolau Ditch turns into the Wailoa Ditch, which is W-A-I-L-O-A, and that -- that's the ditch 21 that's in the highest elevation. And then they come down 2.2 23 -- we have the Spreckels Ditch which turns into or starts 24 with the Spreckels which turns into what we call Manuel 25 Luis which also turns into another ditch. There's the New

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Hamakua Ditch. I'm sorry. That's with New Hamakua. New 1 2 Hamakua -- Hamakua, H-A-M-A-K-U-A. BY MS. GOLDMAN: 3 4 May I ask you, would it assist in your Q. 5 testimony if you were able to refer to a map while 6 testifying? 7 It would make it easier for you all to Α. 8 understand I think. 9 That's fair. Okay. May I ask you to please Ο. 10 call up what's been marked as State's Exhibit 75. It's a 11 large file so it may take a while to load. 12 Okay. I have it. Α. Okay. Thank you. What is it, Mr. Vaught? 13 Ο. It's -- looks like a representation of East 14 Α. 15 Maui. Okay. And, let's see, let's orient -- orient 16 Q. 17 the court. Which -- which direction are we looking right 18 now, where are you looking? 19 MR. FRANKEL: Objection, your honor. This is 20 not in evidence. THE COURT: Sustained. Lay a foundation to 21 22 get it in before we start learning from it. 23 MR. FRANKEL: And, your honor, there are other exhibits that are in evidence already, if you want 24 25 to -- we're using it to help people.

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1 THE COURT: That's up to Ms. Goldman. 2 MS. GOLDMAN: Okay. That's fair. Fair. 3 This was just going to be for demonstrative purposes only but why don't I choose one that's already in evidence. 4 That would just make things easier. 5 6 MR. SCHULMEISTER: You might want to consider 7 AB-1. BY MS. GOLDMAN: 8 9 I was actually going to go with -- checking Q. 10 to make sure it's in. Okay. Let's bring up AB-1. Again 11 for demonstrative purposes only. 12 THE COURT: Got it. 13 MS. GOLDMAN: Okay. Okay. 14 BY MR. SCHULMEISTER: 15 Q. Okay. Okay. Thank you, Mr. Vaught. 16 So which direction, I guess, which directions 17 are we looking at right now? Can you just orient us? I'm 18 sorry. Scratch that. Can you orient us to the ditches 19 that you were just describing, where they are? 20 Α. Okay. So if you look to the right of the 21 map, if you're looking at the same map I'm looking at, 22 look right, it says Nahiku License. So if you see Nahiku 23 License, you're going to see a stream along there called Makapipi Stream, M-A-K-A-P-I-P-I. 24 25 Q. Okay.

That is the beginning of the Koolau Ditch and 1 Α. the diversion system in that area and that would be the 2 first ditch that I talked about, Koolau, and that one goes 3 from right to left. 4 When you -- I'm sorry. 5 Q. 6 Α. Sure. Go ahead. 7 You finish -- oh. Just to clarify, which way Q. does the -- which direction is the water flowing in the 8 9 ditch? 10 Α. So it's --11 Is it going from the left to right or other Q. 12 way? This photo it's going to go from right to 13 Α. 14 left. On land it goes from east to west, yes. 15 Okay. Thank you. And let's see. So this Q. 16 broad -- we're speaking, we're talking about four main 17 ditches. Just broadly speaking, how would you identify 18 them on this map? 19 So on this map, like I said the Koolau Ditch Α. 20 turns into the Wailoa Ditch. That would be one. 21 Ο. Okay. And where would that ditch be on this 22 map? 23 Okay. It would be furthest, or the highest Α. elevation which would be closest to the bottom if you're 24 25 looking at the map. If you're looking at the top of the

1 map. I apologize. Go ahead.

2 Okay. So earlier you testified water runs Q. mauka to makai. So the Wailoa Ditch is the highest 3 4 elevation ditch, correct? 5 Yes, correct. Α. 6 In this area. And there are no higher Q. 7 elevation ditches in this license area, correct? Correct. There are -- I shouldn't say there 8 Α. aren't any ditches but there are no main ditches. There 9 10 may be small -- I know there were a few way back, that 11 there were small collection tunnels and stuff that were 12 located but they were short and they're not considered a 13 main ditch.

Q. Okay. Okay. You can put this exhibit to the side, if you'd like. I just want to -- let's talk about the ditches for a second. What does the ditches look like when you're on the ground looking at them?

18 Α. So they basically look like irrigation 19 They are -- some of them are concrete lined and canals. 20 some of them are lined with old rock that was cut by, you know, old -- old ditch men, harnessed, if you will. They 21 lined the ditches with rock. And some of them are bare 2.2 23 dirt, they're -- they're lined, just they're unlined, bare 24 dirt ditches, but for the most part, you know, there's --25 there -- you can see them. They just look like irrigation

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1 canals.

Q. Okay. And how deep are they, would you say? You said you -- you said you'd probably fit in one. Are they taller than you? Are they taller than you when you stand inside?

A. No, no. The ditches are -- they range in depth from -- some of them are six feet deep, some of them are three feet deep, and they just have varying depths and widths.

Q. And I know we talked a lot about intakes and diversions and we haven't talked about what those terms mean. Can you explain to the court what an intake is please?

A. Sure. An intake is a structure that was built, it's manmade, and it's built to take stream water in from the stream. So let me take a step back. If you have a stream, like I said, the flow of the stream runs mauka to makai, the ditch system runs east to west. So they intersect. The ditch intercepts water from the stream.

There could be several different types of intakes. There are a few that are just graded intakes that -- that they're right on the stream that stream water just falls directly into, but many of them are not and include a dam structure which was built inside of the

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stream that would cause stream levels to rise above a 1 2 certain level. And that stream water rising would then go into like an intake structure, which is just basically 3 almost like a hole with some kind of a trash over it or 4 5 grate over it that allow this water to spill into that, 6 that ultimately end up in the ditch. 7 Q. Thank you. And these intake structures you -- I think you mentioned that they're manmade, right? 8 9 Α. Yes. Are they always -- do they always involve 10 Ο. 11 materials that were not naturally occurring in the stream bed, in other words, are they always made out of something 12 like concrete, cement, etcetera? 13 14 Α. Almost always, yes. 15 Ο. Isn't it possible for an intake to have no 16 structure at all? 17 Α. Yes, it is. 18 Can you explain that a little bit further Q. 19 please? 20 Α. We have some areas of the ditch system where 21 the ditch system is open and you just have a naturally 2.2 occurring area where water flows down a hill or something 23 that the ditch would intercept and that water would actually drop directly into the ditch with no physical 24 25 structure there to assist it.

Okay. Okay. So aside from modification to 1 Ο. 2 create conductivity for biota, you know, the court reviewed a photograph of a black pipe kind of a thing, 3 aside from that, do any of the A&B or EMI intake have 4 5 pipes from the stream into the ditch? 6 Α. Yeah, some of them do. 7 Okay. And to your knowledge are there other Q. diversions in the license area that are not operated by 8 9 A&B/EMI? 10 Α. I couldn't tell you. I don't believe so. 11 None that operate on our ditches. If -- if they do, they 12 operate on someone else's system but not on ours. 13 And by someone else's system, do you -- by Ο. 14 that, do you mean that it would be just a diversion from 15 the stream that does not go into the ditch, right? 16 Yes, that's correct. Α. 17 Q. Okay. 18 THE COURT: I'm sorry. I need to take a 19 pause. 20 (Court addressed the court reporter.) 21 THE COURT: All right. Back on record. Go 2.2 ahead. 23 BY MS. GOLDMAN: 24 Thank you, your honor. Ο. 25 Mr. Vaught, you mentioned the type of gauging Official Court Reporters

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system that can measure how much water is for a -- in a 1 particular portion of a particular stream at a given time. 2 That was called a spilling well, I think, right? 3 MR. SCHULMEISTER: Let me object. I think 4 5 that that mischaracterizes his testimony. 6 MS. GOLDMAN: Okay. I'll withdraw --7 THE COURT: Let --MS. GOLDMAN: Oh. Pardon me. I guess the 8 9 judge should rule. THE COURT: I'm going to let him go ahead. 10 11 I'm sure -- I think I know where this is going. I'm sure 12 the witness can sort it out. So go ahead. 13 BY MS. GOLDMAN: 14 Ο. Okay. So perhaps I'm a little confused. 15 Could you explain again what a -- what -- you mentioned a spilling well is why I'm asking. What is -- what is that? 16 17 Α. Okay. So none of our gauges are located on 18 streams. We don't have the ability to gauge the streams. 19 We gauge water that's in the ditch itself. And attached 20 to the ditch is a pipe that runs into a gauging station which has a spilling well located in it but those are all 21 2.2 from the ditches and not from the streams. I think you 23 mentioned gauging a stream. 24 I see. I see. Thank you for correcting me. Q. 25 So you testified -- I'm sorry. Spilling water, is that

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1 S-P-I-L-L-I-N-G, spilling?

2 A. Yes, it is.

Okay. And so how -- how does such a 3 Q. 4 contraption work to tell -- what is it measuring exactly? Okay. Basically a spilling well is a 5 Α. 6 structure located off of the ditch. When I say spilling, 7 it just spills the water so that you don't have turbulence in the water which causes either a float, or a transducer, 8 9 to read water levels that are fluctuating rapidly so it still goes on so that the water rises slowly and drops 10 11 slowly within the well. That's what the pipe contraption 12 and the spilling well do. 13 Within that spilling well we have, like I said, for -- for our gauging stations we have a float system that's connected to that optical encoder with the weight on the end of it. Every time that water rises, it lifts that float, and that float mechanically takes a piece of tape over an encoder and cause the encoder to

14 15 16 17 18 19 spin. And it basically sends the height of the water 20 right down to like a hundredth of an inch, sends that information into a data logger in which our consultants or 21 22 engineers who we purchase this for, they program that 23 specific water level into that data logger, that program 24 into that data logger. And that -- basically that data 25 logger is, I guess it would be like taking the information

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from the encoder and interpreting it a certain way and 1 giving you a value which -- so you're measuring height but 2 3 it's basically flow height. And they measure that control section of the actual -- of the actual ditch, so that 4 5 control section. So a section in the ditch, a weir, or a 6 constant where you have generally an amount of water 7 that's a control section, I'm sorry, and I -- I don't know how to better explain it, kind of lost here, but it --8 9 it's hard to say but -- so the control section is where 10 you can control the measurement of water.

11 And then they come up with -- they come up 12 with a rating table saying that if you have one inch of water flowing by here at this velocity, 'cause they 13 measure all of that, if you have an inch of water flowing 14 15 by here you have X amount of water, a -- a million gallons 16 per day. If you have a foot of water you now have twenty 17 million gallons per day. If you have one point one feet 18 you have twenty-two million gallons per day. So that's it 19 -- that's how it works. It just tells you the height of 20 the water flowing in the ditch and that correlates to a specific number of millions of gallons per day flowing 21 22 beyond that point.

I hope I didn't confuse you.
Q. Thank you. I -- probably more information
than most of us can absorb. But it's very helpful. Thank

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1 you.

2 So from what you described it sounds like there's sort of a high tech gauging and -- or high tech 3 recording and transmitting of information. But it sounded 4 5 like the spilling well itself or the spilling is measuring 6 the height of the water, is not necessarily based on 7 technology. So my question is, to your knowledge, is that something that was used prior to the technology that could 8 9 transmit the information to you right away?

A. Absolutely. It's been used since long before If got there, the spilling wells and the height of the water, and it -- it was used in a similar way but it wasn't as high tech and digital and electronic as it is now.

Q. All right. Okay. Thank you for that. Okay. So turning your attention to controlling the amount of water that's being diverted at any given time. You discussed a team of individuals physically manipulating the structures. So let me ask you, how do you know when it's time to do that? How do you know it's time to go tweak one of these structures?

A. So we -- we figure on about how much water we need on a daily basis, so what would be an adequate amount of water on a daily basis to support our farm, our agri -our diversified ag program, our channel, the County, the

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ag park, you know, industrial uses. All of that come into 1 play. We -- there -- there's an amount of water that we 2 3 would be, I guess, optimum for that. And we try to set ourselves up for that amount of water. 4 5 If there's an increase, so if there's a 6 rainfall, the intakes that we have are going to take more 7 water than -- than we should take. More water will go into the ditch. So if we set it at 24 million gallons per 8 day, which is around what we set, 24, 25 million gallons 9 10 per day, if there's more water than that, in order to keep 11 the stream water in the streams of origin we have to physically go out to each one of these intakes and 12 13 throttle down gates so that we're able to leave that water in those streams. And if --14 15 Ο. And -- oh. 16 Α. Go ahead. 17 Ο. Pardon me. 18 No, sure. Go ahead. Α. 19 I didn't mean to cut you off if you were --Ο. 20 had anything else. 21 Α. No. I'm just going to say that the hard part 22 is setting the -- so that you have the right amount of water coming in. Once you set them it's up to Mother 23 24 Nature. When it stops raining and then there's no more 25 water coming in, you have to actually physically go out

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there and start to manipulate the gates again so there's more water coming in to make up for the shortfall that you're getting when you put the gates down.

Q. So is it -- is it like you're just looking at the weather report and if it rains then, you know, you have to send someone out there, or is there something else that goes into it?

So as you know, our weather reports aren't 8 Α. 9 necessarily the most accurate all the time, no offense to 10 anyone who's into weather but -- there are good 11 meterologists but sometimes they're not as accurate, so a 12 lot of times for us it has to do with us looking at the weather conditions, not just on a computer or on the news 13 14 but, you know, being out there, seeing what the weather 15 conditions are and then planning ahead if we can.

Q. I see. And so how -- how do you determine which gate you're going to open or close when this happens? Let's say it's raining up in the mountains in Huelo license area. How do you decide where to go and which ones to open?

A. We just start nearest -- we usually start at -- we go up this place called Lupi Road, which is right at the end of the Huelo license almost and we work our way back from there through Hoolawa Stream, Puneawa Stream, not Puneawa Stream, but Hoolawa Stream and working our way

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back towards, you know, Waipio, and other streams along 1 the Kailua Stream, some of the major streams, Huelo. 2 3 Q. Okay. Did we need to stop and spell any of those, 4 5 There were like four that were mentioned, your honor? that's why. 6 7 THE REPORTER: Hoolawa Stream? After Punewa. 8 THE COURT: After, is it Puneawa, after that 9 one? 10 THE WITNESS: I made a mistake. Puneawa was 11 on the other side. I said Hoolawa. H-O-O-L-A-W-A. And then we went back, yeah, and I said Waipio, W-A-I-P-I-O. 12 And I mentioned Kailua, K-A-I-L-U-A, after that. 13 14 MS. GOLDMAN: Okay. 15 THE COURT: Thank you. 16 BY MS. GOLDMAN: 17 Q. Thank you. And so how quickly can your team 18 respond and make these adjustments? 19 They usually would be out there, I mean, if Α. 20 -- depending upon what time it starts to rain they can, you know, wherever they're located, they can be out there 21 22 within a couple of hours. So by the time it starts, the 23 rain starts to affect the ditch, by that time we generally have people in the area to make those adjustments. If it 24 25 happens overnight, we usually make it first thing in the

1 morning.

2 Q. Okay.

A. Like we know that we have a plan that it's going to start raining over the weekend, then we'll try to preset what we can, and if we need to, we'll come out on the weekend and make the adjustments.

Q. I see. So how often is your team making8 these adjustments?

9 So it depends on the weather, completely Α. 10 weather dependent. I -- I would say like probably once a 11 week. For now it's dry so we just -- whatever the rain 12 gives us is whatever the rain gives us. But as soon as it starts raining we'll have to go out and make adjustments. 13 14 And then as soon as the rain stops and starts to let off, 15 we have to go back out and make adjustments, it starts 16 raining again, so you can see it's a little difficult at 17 times.

18 Q. Yes. It sounds like a lot.

How long does it take to get to each of these sites where you would be manipulating a gate?

A. If -- depending upon where you go along the system it can take anywhere from, you know, 45 minutes to two hours to reach one of the sites.

Q. And do you -- do you favor the diversion
located at certain ditches or is it mostly convenience and

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1 location as you -- as you project them?

A. It's mainly the diversions on the Wailoa Ditch up on the top are the easiest ones. They're easier to get to, they're easier to manipulate, and they make the most impact on the ditch system and the stream.

6 Q. And what do you mean by that, they make the 7 most impact on the ditch system and the stream?

A. Because it's the furthest stream -- like it's the highest in elevation, it's the first ditch to capture water. And because it's our largest ditch, considerably larger than the others, the intakes are a little larger so the amount of water going into them is larger amounts. So as we're able to throttle those back it makes a bigger difference on how much water goes in.

15 Q. I see. Okay. And --

16 THE COURT: If you -- Ms. Goldman, if you're 17 moving to a new area, we have been going 50 minutes so 18 it's about time for a break. So if you want to just ask 19 one question to, you know, wrap up, that's fine too.

20 MS. GOLDMAN: Actually I was just going to a 21 new area so this is a good timing.

22 THE COURT: All right. We'll take a 10-23 minute break and resume at two o'clock. We're in recess. 24 Thank you.

25 (A recess was taken.)

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1 THE COURT: All right. We are back on 2 record. FTR? 3 THE LAW CLERK: Yes. 4 THE COURT: Thank you. Please go ahead. 5 BY MS. GOLDMAN: 6 Q. Thank you, your honor. 7 Okay. Mr. Vaught, before we took that break you had explained to us, I believe you explained that the 8 9 Wailoa Ditch is the biggest one. Could you just expand on 10 that a little? Why, do you know? 11 I -- I don't really know. I would think that Α. 12 in theory it was the highest elevation ditch so that it would be first to receive water, and then the higher 13 14 elevations are just because of the amount of water that 15 you want to disburse on the farm. The higher elevation --16 you want -- water obviously flows from upper levels to 17 lower levels and not in the opposite direction, so the 18 higher level you can keep the majority of the water, the 19 more valuable it becomes to you. Does that makes sense? 20 Ο. So -- maybe I can follow up on that. So would you characterize the system as gravity fed? 21 2.2 Α. Yes. I apologize. 2.3 Rather than --Ο. 24 Α. I should have made that clear early on. Yes. 25 Okay. And -- oh, and we were asking -- I Q.

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asked you about how long it takes to get some of -- some 1 2 of these different sites if you, like (indiscernible) --THE REPORTER: Sorry, what was --3 4 MS. GOLDMAN: -- ask you --5 THE COURT: Sorry. We got an echo going on. 6 Someone needs to mute. 7 THE REPORTER: Could she repeat the question? 8 THE COURT: Do we have any --9 THE LAW CLERK: Everybody's on mute. 10 THE COURT: No one's calling in. 11 THE LAW CLERK: Someone's calling in. 12 Everybody's on computer. 13 THE REPORTER: Something happened. THE COURT: All right. We're getting some 14 15 kind of a feedback. Ms. Goldman, you need to recite the 16 question please. 17 MS. GOLDMAN: Okay. 18 MR. ROWE: Your honor, if it's a technical 19 matter, might we ask that Mr. Schulmeister mute and see if 20 that's helpful? 21 THE COURT: He is muted. 2.2 MR. ROWE: Oh, I'm sorry. It didn't appear that way from here. 23 24 MR. WYNHOFF: Thank you, your honor. Thank 25 you, Mr. Schulmeister.

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1 MS. GOLDMAN: Thanks, everyone. Please -- is 2 this any better? 3 THE COURT: Yes. BY MS. GOLDMAN: 4 5 Ο. Sound wise? Okay. Thank you. 6 Okay. So the question was -- we asked you 7 before how long it takes to get to a particular intake structure if your team is going to manipulate them. What 8 9 I didn't ask was how long could a whole trip take to go 10 out and open and close gates and whatever. 11 Α. It -- take the entire day. 12 Okay. And you testified that on average you Q. 13 think maybe once a week this happens. Was that right? 14 Α. Yes. 15 Q. Okay. Does it sometimes happen more 16 frequently than that? 17 Α. Yes, it can happen more frequently than that. 18 Okay. Thank you. I'd like to move -- call Q. 19 your attention to the amount of water that the system is 20 capable of capturing. So, if you know, there's been some discussion here that some of the streams are being drained 21 22 dry. What would you say to that characterization? 23 I would say that that's very possible that in Α. 24 the past a lot of the streams were drained completely dry. 25 I -- I would say that that's possible. I'm sure that that

has occurred in the past. 1 When you say in the past, are you referring 2 Ο. to sugar cane time or like last year? 3 4 Α. Sugar cane. 5 Okay. So, if you know, are any of -- are Ο. 6 EMI's diversion structures capable of capturing 100 7 percent of base flow? 8 Some of them are, yes. Α. 9 What does that mean? Ο. 10 Α. It means that the base flow, whatever is in 11 the stream itself, whatever water's available in the stream, some of the intakes have the potential to take all 12 of that flow, to divert all of that flow until it gets to 13 a certain point where there's too much water for the 14 15 intake to -- to handle. 16 Okay. So does 100 percent of base flow, does Q. 17 that mean the same thing as 100 percent of all water? 18 I'm sure those are technical terms. My Α. 19 understanding would be yes. 20 Ο. Okay. Sorry. In other words -- that's fine. Are there times that -- are there times that water 21 22 bypasses the ditches? 2.3 Yes, there are times. Α. 24 And -- okay. And what would be a reason for Ο. 25 that?

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If it's manually bypassed it would be because 1 Α. 2 we already have the amount of water that we need in the ditch. If it's passing by the ditch because there's been 3 a huge rainfall event and there's just so much water in 4 5 the stream that the intake can't handle all of it and, 6 again, we have as much as we need, the rest of it goes by 7 the intake. Okay. What is a freshet, F-R-E--8 Ο. To my knowledge --9 Α. 10 -- S-H-E-T, I believe? Ο. 11 To my knowledge a freshet is a sudden rain Α. 12 event that -- that causes the stream levels to rise 13 relatively quickly. 14 Q. So on a stream where intake is capable of 15 taking 100 percent of base well, does the freshet always 16 get captured into the ditch system? 17 Α. Generally, not always, no. Freshet is an 18 amount of water probably little more than, in my 19 understanding, it's a little more than, you know, what our 20 -- what our intake is designed to capture. Okay. Okay. Calling your attention to --21 Ο. 2.2 oh. Hawaii streams are flashy, right? 23 Α. Yes, very much so. What does that mean? 24 Ο. 25 Α. It just means that they're flashy in the

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sense that the water can rise or drop relatively quickly depending upon rainfall events in the upland areas upstream of, you know, wherever you are. So flashy meaning, you know, one day it could just be nice and dry and literally within a half an hour you could have a torrent, a flow, running through that stream.

Q. So sometimes there could be like 10 times8 base flow, right?

9 A. Yes.

10 What is a gaining stream, to your knowledge? Ο. 11 To my knowledge, a gaining stream is a stream Α. 12 that if you measure certain points in the stream from upstream to downstream, you measure certain points, at 13 certain points -- at the lower points you're actually 14 15 going to measure an amount of water that's greater than 16 the -- the amount you measured at the upland point. So 17 the -- the flow -- it's the volume in the stream. Ιt 18 gains water as it goes down stream.

Q. I see. So, is it possible, is it possible to have a gaining stream that might be dry mauka or might have a dry portion mauka that still has water as you go further makai?

A. Yes. That's very possible.

Q. Okay. And, let's see, just -- just one question about the consequences of, I guess, about the

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maintenance of the ditch system. What is your 1 understanding of what would happen if the ditches went 2 3 dry, if there was no water in the ditches? It -- there would be devastating effect for 4 Α. 5 the Kamole Water Treatment Plant for the Department of 6 Water Supply. It would be devastating effects for the 7 Mahi Pono farm. I'm sure --So it isn't -- oh, I'm sorry. 8 Ο. 9 Α. Go ahead. Go ahead please. 10 So in addition to effects, those kind of Ο. 11 effects --12 MR. FRANKEL: Your honor, I'm sorry. I was 13 on mute. I move to strike as nonresponsive and lacks foundation. 14 15 THE COURT: You mean --MR. FRANKEL: That question was regarding the 16 17 ditch. 18 THE COURT: You mean that the lack of water 19 would impact the treatment plant? 20 MR. FRANKEL: Yeah. Yeah. The question was 21 about the ditch itself, impact on the ditch. 2.2 THE COURT: Well, the question was way broader than that. You know, water, what would happen, I 23 think, was the question. So --24 25 MR. FRANKEL: Well, the Department -- but Official Court Reporters

there's a part to that question -- there's about two 1 2 sentences prefaced to the question. THE COURT: All right. Could you -- could 3 4 you revisit that area please, Ms. Goldman. I'm not going 5 to strike it. 6 MS. GOLDMAN: Yes. 7 THE COURT: I'm not going to strike it but I do think it needs clarification. 8 9 BY MS. GOLDMAN: Thank you, your honor. 10 Ο. 11 So, Mr. Vaught, it sounds like what you were 12 describing were impacts to the end user, right, or impacts to the -- there could be an impact on people who use the 13 water, right? 14 15 Α. Yes. 16 Can there also be an impact on the physical Ο. ditch itself? 17 18 I'm sure that, you know, like anything else Α. 19 that's left alone, you know, I'm -- I'm sure there could 20 be degradation and other things occurring that would cause disrepair, I suppose. 21 2.2 Q. Okay. And just while we're on the subject of end users, would it be possible for A&B/EMI to give water 23 only for domestic use or only for agriculture out of the 24 25 system, in other words, are there separate pipes, there's

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like a domestic pipe and an ag pipe? 1 2 MR. FRANKEL: Objection to the first part of the question, your honor, in terms of speculation, calling 3 for expert opinion. In terms of the second part of the 4 question, we're fine, I don't have an objection. 5 6 THE COURT: Overruled. You can answer. BY MS. GOLDMAN: 7 8 You can answer, Mr. Vaught. Ο. The system is not currently set up to deliver 9 Α. 10 the water only for domestic uses or only for agricultural 11 uses. So are there places in the system where water 12 Ο. for those two purposes might be co-mingled inside of one 13 14 pipe? 15 Α. Yes. Okay. Just briefly, turning to the matter of 16 Ο. removal of diversion structures. So for the streams that 17 18 have been totally restored, why haven't you removed the diversion structures? 19 20 Α. The removal of the diversion structures to my understanding would require a higher level of permitting 21 2.2 for complete restoration of the natural stream course, and 23 would require a much higher level of permitting and could 24 certainly delay any processes that we have working on the 25 system with regard to compliance with the IIFS.

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And isn't it true that the infrastructure 1 Q. 2 needs to stay in place so that if there's a drought in the future it can be used? 3 4 MR. FRANKEL: Objection. Calls for 5 speculation. Lacks foundation. Leading. 6 THE COURT: Sustained. Sustained as to 7 leading. 8 MS. GOLDMAN: Thank you, your honor. I just 9 -- okay. 10 THE COURT: You're muted. 11 MS. GOLDMAN: Your honor, just to clarify, I 12 believe our position is that this is a cross-examination and so I would be -- I would like to be able to lead the 13 witness as one would during cross-examination. I -- I 14 15 just want to clarify the court's ruling. 16 THE COURT: I understand your point. I 17 understand your point but I don't think this is an adverse 18 witness to you. 19 MS. GOLDMAN: Okay. Thank you, your honor. 20 THE COURT: All right. 21 BY MS. GOLDMAN: 2.2 Q. Okay. So what kind of process do you have to go through in order to modify a diversion? 23 24 So we have to establish what -- the location Α. 25 of it, whether it's in the stream or on the stream versus

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off of the stream course. And then we have to work 1 2 through the Water Commission to get approval to make any 3 type of modification and that may trigger, the scope of the modification may trigger greater levels of permitting 4 5 through the Army Corps for -- for permit process, flood 6 plain -- flood plain permit, operation, so forth. There's 7 just -- it just depends. That's the process we go through. We evaluate each one, each intake, see what the 8 9 scope of work is going to take and then try to obtain the 10 necessary approvals.

11 Okay. So calling your attention to the draft Q. 12 work plan that Mr. Schulmeister was asking you about. That was AB -- oh, I'm sorry, strike that please. Calling 13 your attention to the -- actually, located at AB-33 which 14 15 has been admitted into evidence, at 196 to 201. 16 MR. FRANKEL: I'm sorry. Which --THE COURT: AB-33, page 196. 17 MR. FRANKEL: Okay. 18 19 BY MS. GOLDMAN: 20 Ο. Okay. Okay. I have AB-33. 21 Α. 22 Ο. So --23 MR. FRANKEL: Your honor, and for the parties, to make everybody's life easier, if you look at 24 25 Exhibit J-21 which is in evidence, page 161, that's what

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you want to look at. It's already in evidence. It's a 1 2 more recent information thing. Can we just cut to the chase? 3 4 THE COURT: Ms. --5 MS. GOLDMAN: Well, AB-33 is also in 6 evidence. 7 MR. FRANKEL: Okay. All right. 8 THE COURT: Ms. Goldman -- Ms. Goldman --9 MS. GOLDMAN: Whatever. 10 THE COURT: -- gets to do it the way she 11 wants to do it. 12 MR. FRANKEL: All right. All right. 13 BY MS. GOLDMAN: 14 I appreciate the point though, Mr. Frankel. Q. 15 And thank you, your honor. 16 Okay. So with respect to trial Exhibit 17 AB-33, at 196, if no approvals are required for 18 modification of a diversion, why would that be? 19 I apologize. I'm looking -- where are we Α. 20 now? I'm on AB-33? 21 Ο. At 196. 2.2 MR. WYNHOFF: I'm not sure 196. 23 THE COURT: Your Excel spreadsheet on the --24 THE WITNESS: Got you. 25 THE COURT: For the restoration one -- no,

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1 the IIF -- the IIFS ones. 2 THE WITNESS: Yeah. Got you. Thank you. 3 Thank you for your patience. 4 THE COURT: No problem. 5 BY MS. GOLDMAN: 6 Q. Okay. So when it says no approvals required, 7 why would that be? 8 Because it was evaluated and discussed with Α. 9 the Water Commission and our compliance person and they 10 realized that to make the modifications that we have 11 listed in here we would -- it wouldn't require a -- a 12 permit or an approval from a specific agency. 13 Okay. And do modifications have to be made Ο. 14 in every instance or are some capable of not being 15 modified? 16 MR. FRANKEL: Objection. Vague. Passive voice. 17 18 THE COURT: Sustained. 19 BY MS. GOLDMAN: 20 Ο. Are there diversion structures that do not need to be modified in order to comply with whatever EMI 21 2.2 believed needs to be complied with? 2.3 MR. FRANKEL: Objection. Vague. Calls for 24 speculation. 25 THE COURT: Sustained.

1 MR. FRANKEL: Lack of foundation. 2 MS. GOLDMAN: I'll strike that question, your 3 honor. That was very broad. 4 THE COURT: Also, just a small point. Just a small point. When -- we don't strike questions. We 5 6 withdraw them. Only -- the court reporter really doesn't 7 like it when people say "strike that." MS. GOLDMAN: Okay. Withdrawn. 8 9 THE COURT: Okay. 10 MS. GOLDMAN: Apologies. 11 THE COURT: No problem. 12 MR. WYNHOFF: If I interject, you now know 13 that. Thank you. BY MS. GOLDMAN: 14 15 Ο. Okay. On this spreadsheet there is a column that says Diversion Type - Major or Minor. What does that 16 17 mean? That generally refers to the size of -- the 18 Α. 19 size of the diversion and the complexity of its 20 construction. 21 Ο. And the diversion ID number, I noticed that 2.2 they had letters before them. What do those letters 23 correspond to? 24 So when we registered all of these diversions Α. 25 in 1985, I believe, or '86 when they were all registered

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with the Water Commission, each diversion had to have a number associated with it. So if you'll notice, the ones with the letters, all of them have letters, and the letter corresponds with the specific ditch that it's going into. So if you see K-1, let's say at the top, that's working from east to west, that would be the Makapipi intake. K-1 would be Koolau Ditch, first intake.

8 Q. Okay. So this says NH and then a number.9 Where would it be from?

10 A. New -- the New Hamakua ditch. New Hamakua. 11 So if there's a small letter, like there's a letter and 12 then a number with a small letter, that's usually a minor 13 intake.

Q. Okay. Okay. And to your knowledge -- sorry. Just a moment please. Oh. Of the modifications that are not yet completed, are modifications in fact underway?

17 Α. We're prepared for -- the ones that are 18 completed are through. The ones that aren't we are 19 working on, like the taro stream ones, we're working on 20 BMP plan to work through the Department and Health Clean 21 Water Branch so that we're able to come up with a plan to 22 implement best management practices that are satisfactory to the State while we perform the closures on these other 23 24 intakes.

25 Q. So would it be fair to say that the process

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is underway on those? 1 2 Α. Yeah. Okay. Calling your attention to the 3 Q. 4 compliance or status report. What are those? Do you know what I mean when I refer to that? 5 6 Α. Compliance or status report? 7 Q. Yes. 8 I'm going to assume that's just a status of Α. 9 the work that we're working on for the intake closures. 10 Ο. Okay. So in this same Exhibit AB-33, if you 11 could turn to page 158 please. 12 I'm sorry. Page 161. 13 151? Α. 14 MR. ROWE: 61. BY MS. GOLDMAN: 15 16 Q. 161. 17 Α. Sorry. 18 Q. No problem. 19 MR. SCHULMEISTER: I'm sorry. I didn't get 20 the page number. 21 BY MS. GOLDMAN: 2.2 161. Q. 23 Α. Okay. 24 Do you recognize that signature? Q. 25 Α. I do. Official Court Reporters First Circuit Court

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Q. Whose signature is that? 1 2 Looks like mine. Α. And what -- and what is the document that 3 Ο. this signature is on? Tell us -- tell us what this 4 5 document is please. It begins on page 158 if that's 6 helpful. 7 Yeah. It's a compliance report. Α. Okay. And did you draft this report? 8 Ο. 9 I helped draft this report, yes. Α. 10 Ο. I see it was transmitted via email. Were you 11 the one who transmitted it? I don't recall if I had transmitted it or if 12 Α. they were transmitted for me. I believe I transmit it 13 14 though. 15 Okay. And -- okay. Okay. Changing topics a Q. little bit. I just want to talk to you about what's been 16 17 characterized as trash, debris, rubbish, etcetera, in the 18 license area. So members of the community -- you 19 testified that members of the community have given you 20 pictures of rubbish before, right? 21 Α. They directed me, yes. 2.2 Q. Okay. And you mentioned earlier that you have a standard operating procedure, I believe is what you 23 24 said, for dealing with it when something like that is 25 reported. Can you please explain?

Yes. So we always -- what's happened in the 1 Α. past is if we recognize that there's trash, or if we're 2 3 notified that there's stuff up in the watershed, in the 4 past we would go up, evaluate what it's going to take to 5 get -- get it out, get it out of the stream or out of the 6 bushes or off of the road, load it onto a truck, a 7 trailer, a vehicle of some sort to take it back to our base yard where we could document it, it was removed. And 8 9 then -- now what we told them, and this is very recently, 10 if they see stuff strewn about, take a photo of it, remove 11 it, and take another photo of it being taken out. 12 Okay. Okay. And what is the East Maui Q. Revocable Permit Committee? 13 14 Α. So one of the -- one of the requirements that 15 was added to the revocable permit was to convene a 16 committee of people who were directly impacted, I guess, 17 by the revocable permit and that would -- think would be 18 good for them to be involved in guarterly meetings to find 19 out what has happened, what's occurred up to that point as 20 far as, you know, what kind of work has been done or so I know that it includes someone from Na Moku, Na 21 forth. 22 Moku Aupuni O Koolau Hui which --2.3 THE REPORTER: I'm sorry. Which --24 THE COURT: Whoa.

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THE WITNESS: Apologies. Apologies.

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1 THE COURT: We'll just go with Na Moku for 2 short. Thanks. 3 THE WITNESS: Okay. Na Moku. A member from Na Moku, someone from OHA, the County Department of Water 4 5 Supply, and the Maui Farm Bureau, I believe, as well as 6 Mahi Pono/East Maui Irrigation. 7 THE REPORTER: So that the --MS. GOLDMAN: So you --8 9 THE COURT: All right. All right, Ms. 10 Goldman. Time out. Sorry. Yes? THE REPORTER: So he said it the first time 11 12 so I need the whole spelling. 13 THE COURT: Oh, okay. Our court reporter is 14 absolutely right. Since he said the whole word out loud 15 we need to make it part of the record, so go ahead. 16 That's -- I should have known that. I apologize. So 17 let's go ahead and spell the whole thing. 18 BY MS. GOLDMAN: 19 Mr. Vaught, if you would. Ο. 20 Α. Okay. N-as in Nancy -A, M as in Mike -O-K-U A-U-P-U-N-I -- oh, excuse me, I'm sorry. If I don't write 21 22 it down, I'm not going to say it correctly, I apologize. 23 MR. ROWE: Your honor, may I hand the witness 24 a piece of paper? 25 THE COURT: Sure.

1 THE WITNESS: I apologize. I wasn't prepared 2 for this. 3 THE COURT: No problem. 4 BY MS. GOLDMAN: 5 We appreciate it, Mr. Vaught. Q. 6 Α. So N-A M-O-K-U A-U-P-U-N-I, then the letter 7 O, then K-O-O-L-A-U, and then H-U-I. 8 THE COURT: Thank you. 9 THE WITNESS: Thank you. Apologies again. 10 THE COURT: No reason to apologize. BY MS. GOLDMAN: 11 12 Okay. Mr. Vaught, calling your attention to Q. AB-33 which we already looked at, it's in evidence, at 13 14 page 194. 15 Α. Okay. 16 Do you recognize this document? Ο. 17 Α. Yes. Okay. Can you describe it please for the 18 Q. court and for the record? 19 20 Α. A meeting -- a meeting summary of what was discussed at one of our meetings. 21 2.2 Q. Okay. What was the date of that meeting? 23 March 12, 2019. Α. 24 And how often do you have meetings of this 0. 25 committee?

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I was gonna have this -- these meetings 1 Α. 2 quarterly but COVID has changed that a little bit. And is such a meeting summary like this, is 3 Ο. it provided to anyone else or is it just for your internal 4 records? 5 It's for internal records but we use it to 6 Α. 7 show proof that we convened a meeting to meet the requirements set forth in the revocable permit. 8 9 Okay. And, in fact, it's in one of your Ο. 10 status reports which is AB-30, right? 11 Α. Yes. 12 MS. GOLDMAN: Right. Okay. Okay. Your honor, may I ask just a moment to confer with co-counsel 13 just make sure I haven't missed anything? 14 15 THE COURT: Yes. 16 MS. GOLDMAN: Thank you. 17 Thank you, your honor. No further questions 18 from the State for this witness at this time. 19 THE COURT: Thank you. All right. So I 20 guess we're going to Mr. Rowe next and saving Mr. Frankel for last, is that the plan? Mr. Rowe, do you have any 21 2.2 questions? 2.3 MR. ROWE: Your honor, there's no questions 24 for this witness. 25 THE COURT: All right. Mr. Frankel. Official Court Reporters

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1 You're muted. 2 3 CROSS EXAMINATION 4 BY MR. FRANKEL: 5 Ο. I'm never going to get that right. If you could take a look at Exhibit J-21 6 7 please. And this might save us all a lot of heartache. 8 Are you there? 9 Yes. I -- I just -- I have it now. Α. 10 Ο. Okay. I don't know if you've ever -- have 11 you ever seen this staff submittal before? 12 I've seen -- I don't recall if I've seen this Α. 13 exact staff submittal but I'm pretty sure I have. 14 Okay. Well, you know, this is something that Q. 15 was given to the Board of Land & Natural Resources prior to its decision-making this past year, 2019. And if you 16 17 go to page 161 of this document you'll see a spreadsheet 18 that is similar to the one that Mr. Schulmeister was 19 talking to you about, AB-36 and AB-37, but this one has a 20 more current date of September 26, 2019. Do you see that there on page 161 of Exhibit J-21? 21 2.2 Α. I see the exhibit date -- I mean, I see the exhibit, yes, and the exhibit date being September 26, 23 24 yes. 25 So this is a more recent version of a Q.

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document that you were talking about with Mr. 1 Schulmeister, AB-36 and 37, right? 2 Yes, that's what it looks like. 3 Α. And Ms. Goldman was just talking to you about 4 Q. 5 AB-33 which, actually, approximately 120 pages of it are 6 just a reproduction of this entire J-21 staff submittal, right? Is that -- I mean, is that -- does that seem 7 8 possible? 9 It's possible, yes. Α. 10 Okay. So the most important thing is this is Ο. 11 what the Board of Land & Natural Resources had in front of 12 it when it was making its decision in 2019 and you reported on what diversion structures had been completed 13 14 and which ones had not, correct? 15 Α. I believe so, yes. 16 How difficult would it have been, Mr. Vaught, Ο. 17 for you to include a -- and I know the type is really 18 small, what-have-you, but to have put dates in here about 19 when certain things were completed and when things were 20 anticipated to be completed? 21 I suppose that could have been added. Α. Did the Board of Land & Natural Resources or 2.2 Ο. the Department of Land & Natural Resources ever ask you to 23 24 do that? 25 Α. They never asked me directly to do that.

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Okay. Thank you. Now, I want to talk to you 1 Ο. 2 about three particular streams and three -- and the diversions on these streams. I want to first start with 3 -- and I'm not -- we're not going to look at the exhibit 4 5 right now. I want to show you a different exhibit, but we 6 may need to return to this one if necessary. But I would 7 like you to take a look at Exhibit J-23. 8 Α. Okay. Now, I don't know if you saw -- see the cover 9 Ο. 10 page, but if you go down to page 7 of this document, what 11 the Division of Aquatic Resources calls report card, have you ever seen anything like that before? 12 13 I don't recall seeing this. Α. Okay. All right. Well, on Puohokamoa Stream 14 Q. 15 if the Division of Aquatic Resources recommended --16 THE REPORTER: Sorry. 17 THE COURT: Sorry. Spell? Wait. Just so you know -- just so you know, we often have different 18 19 court reporters not only by day but by morning and 20 afternoon so you can't just assume that our current court 21 reporter has been through this drill before. Okay. Thank 22 you. 2.3 BY MR. FRANKEL: 24 I'm not assuming. I'm just being stupid. Q. 25 The stream is P-U-O-H-O-K-A-M-O-A. So Pumahaku -- Puomoka

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-- it is late -- Puohokamoa Stream. And if the Division 1 of Aquatic Resources recommended a V notch on the Manuel 2 3 Luis ditch, is that something that you folks have done on 4 this stream? 5 Α. No. 6 MR. SCHULMEISTER: I'm going to object to the 7 form of the question as a hypothetical. 8 THE COURT: Overruled. You can answer. 9 THE WITNESS: No, that's not something we 10 have done on that stream. BY MR. FRANKEL: 11 12 And would you do so if somebody from the Ο. Department of Land & Natural Resources asked you to do so? 13 14 Α. If I acquired the necessary permits for it, 15 then I would do so, if that's what they told us to do. 16 And would you agree with the statement, Q. 17 Division of Aquatic Resources, that V notches on the dams 18 would be relatively simple at these spots? 19 I think that's a pretty accurate statement. Α. 20 I think they would be somewhat simple. 21 Ο. But to date EMI has not done so, correct? 2.2 Α. That's correct. 23 Okay. The next stream I'd like to talk to Ο. you about is Waiohue Stream, and that is spelled 24 25 W-A-I-O-H-U-E. You're -- obviously you're familiar with

Waiohue Stream, right? 1 2 Α. Yes, I am. 3 And if the Division of Aquatic Resources Q. recommended a simple modification of K-13, does that --4 5 does that sound familiar to you, you know what diversion 6 that is, K-13? 7 Α. I -- I don't know offhand what K-13 is. I --I'm assuming it's the 13th division along the Koolau Ditch 8 but I can't tell you exactly what stream it's on. 9 10 And when you took Lucienne de Naie and Mike 0. 11 Kido and the Sierra Club's counsel on the site visit to 12 Waiohue Stream, was that in the area of K-13 you think? 13 It's possible. Α. 14 Ο. If you could take a look at page 11 of this 15 document, Exhibit J-23. 16 Α. Okay. 17 Ο. So does that -- does that look more familiar 18 to you, does that help you get an idea of what we're 19 talking about? 20 Α. I know what we're talking about. I just wasn't sure it was actually K-13, counsel. 21 Okay. That's fine. And if modification of 2.2 Q. K-13 intake into Koolau Ditch could involve digging of a 23 24 channel to lower the elevation, overflow water to go down 25 the right bank, is that something that could be done?

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With the proper permitting, yes. 1 Α. 2 And would that be relatively simple? Q. I wouldn't say relatively simple. I -- I 3 Α. don't know right offhand if that would require us, you 4 5 know, to get equipment to that location or, you know, how 6 big of a channel they'd like us to dig, but if -- it's 7 something that could be done, yes. Has anyone from the Department of Land & 8 Ο. Natural Resources asked you to do that? 9 10 Α. I don't recall anyone asking me to do that. 11 But if they did ask you to do it, you would Q. 12 do it, wouldn't you? 13 If the proper approvals could be obtained. Α. Right. And actually, you know, we're going 14 Q. 15 to return to Waiohue Stream a little later on. But for 16 now, for a little while you guys had a black pipe 17 installed in this area to allow for some connectivity, do 18 you remember that? 19 Yes, I do. Α. 20 Q. Is that pipe still in use? 21 Not to my knowledge. Α. 2.2 Q. It's not needed because what you did was a sluice gate, correct? 23 24 We sealed the intake gate. We closed the Α. 25 intake gate which would cause all the water to go out back

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into the stream course, right, and no longer into the 1 2 diversion. 3 So that pipe is no longer necessary, that Q. black pipe? 4 5 Α. Yes, that's correct. 6 Okay. Now I want to ask you about diversion Q. 7 structure on Hanawi Stream, which I believe is 8 H-A-N-A-W-I, and then --9 THE COURT: Let me -- I'm sorry. I apologize 10 for interrupting but I just noticed since you're moving to 11 a new area, it's time. We're actually a few minutes past 12 the time for a break. So we'll take a recess now and for 13 nine minutes. Please return at three o'clock. Thank you. 14 (A recess was taken.) 15 THE COURT: All right. Back on record. All 16 right. So we've got an hour left so I will take a break a 17 little quicker than usual but it'll be a brief one. 18 Okay. Go ahead. 19 BY MR. FRANKEL: 20 Ο. Mr. Vaught, I think we were talking about Hanawi Stream, and I may have misspelt it before the break 21 so let me be clear. It's H-A-N-A-W-i with a kahako. I 2.2 might have said okina. I'm getting a little delirious. 23 So you're familiar with Hanawi Stream, right? 24 25 Α. Yes, I am.

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So back in April 2010, this document J-23, on 1 Ο. page 12 of the document, Division of Aquatic Resources 2 wrote: "The only modification would be to the K-4 intake 3 into Koolau Ditch to provide for animal passage and reduce 4 5 entrainment of newly hatched larvae at the diversion site. 6 This would involve a V notch on the dam right wall right 7 bank." Have you guys -- has EMI done that? 8 No, we have not. 9 Α. 10 If the Department of Land & Natural Resources Ο. 11 or the Board of Land & Natural Resources asked you to do 12 that, would you do that? If the necessary approvals could be obtained, 13 Α. 14 yes. 15 Switching gears. So we don't need Exhibit Q. 16 J-23 anymore, and I don't believe we need Exhibit J --17 well, who knows what we'll need. But switching gears. Is 18 EMI still diverting water from Puolua, P-U-O-L-U-A, 19 tributary? 20 Α. Yes, we are. And you know that Alexander & Baldwin sent 21 Ο. 22 out a press release in April 2016 in which it announced that it would be permanently fully restoring water to the 23 stream, right? 24 25 Α. Yes.

All right. Thank you. Ms. Goldman was 1 Q. asking you about the ditches and you said that Wailoa 2 Ditch is the highest ditch within the revocable permit 3 area; is that right? 4 5 It's the highest main ditch. I did say that Α. 6 there were other smaller tunnels that transmit water. 7 Sure. And then I want to talk about above Ο. the revocable permit area, even higher elevation, the 8 County has some ditches above the Wailoa Ditch; isn't that 9 10 right? 11 They do not have any ditches located there. Α. 12 They have a pipeline and a flume. 13 The upper and lower Waikamoi flumes? Q. 14 Α. Yes. 15 Okay. Thank you. Back in -- when this Q. lawsuit was filed in 2019, East Maui Irrigation was taking 16 17 water from some streams and putting that extra water into 18 Hoolawa Stream, wasn't it? 19 The way the ditch is set up to operate there Α. 20 was water, excess water was coming down Hoolawa Stream, 21 that is correct. 2.2 Q. And that excess water came from other streams 23 further to the east, wasn't it? 24 Yes, that's correct. Α. 25 And you put a stop to that because of the Q.

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1 Sierra Club's complaint, right?

2 Put a stop to that because of the Sierra Α. 3 Club's complaint and because it was the right thing to do. 4 Thank you. Thank you. Mr. Schulmeister Q. 5 asked you about the dust control that's necessary. Can 6 you tell us on average how much water do you use for dust 7 control per day? 8 Α. I -- I'm not sure. I couldn't answer that. 9 Can you give us an order of magnitude, is it Ο. 10 thousands of gallons, tens of thousands of gallons, or 11 millions of gallons? 12 It's tens of thousands of gallons probably. Α. 13 Tens of thousands. So it's not a lot of Ο. 14 water? 15 Α. Correct. Depending upon, yeah, what the order of magnitude is. 16 17 Q. That's a good point. Good point. And has 18 the Board of Land & Natural Resources or the Department of 19 Land & Natural Resources ever asked you this question 20 about how much water was used for dust control? 21 Α. No, they have not. 22 Q. Thank you. You know, you talked about the 5,000 acres that burned I think you said in July. Do you 23

24 remember that?

25 A. Yes.

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Was that a relatively big fire? 1 Ο. 2 Α. Yes. 3 And how much water was used to fight that Q. 4 fire? 5 Α. I don't know. 6 Okay. And has the Department of Land & Q. 7 Natural Resources or the Board of Land & Natural Resources ever asked you how much water is required on average 8 9 throughout a year to fight a fire, to fight all the fires? 10 Α. No, they never have. There are years that 11 there are no fires and then there are years that there are 12 several fires. 13 Sure. I understand that. Do you have any Ο. 14 sense of magnitude, similar to my question about dust 15 control, there's a big fire like the one in July, takes thousands of gallons, tens of thousands of gallons, 16 17 millions of gallons, or tens of millions of gallons of 18 water to fight? 19 I'm sorry, I couldn't begin to answer that. Α. 20 I don't know. Okay. That's fair. That's fair. You know 21 Ο. 2.2 that revocable permit committee that Ms. Goldman was asking you about? 23 24 Α. Yes. 25 Did you know a suggestion to form that Q. Official Court Reporters

PERMISSION TO COPY DENIED, HRS 606.13, etc. 64 committee came from Lucienne de Naie? 1 2 A. I believe I was in the room when she made 3 that suggestion. 4 But the Sierra Club was not -- was not Ο. 5 included in this committee, was it? 6 Α. Doesn't appear to be. 7 Thank you. Now, I'm sorry, I'm getting a Q. little tired and I missed it. What is your job title at 8 9 Mahi Pono? 10 Α. Water -- Director of Water Resources. 11 Q. And now Mahi Pono gets water from East Maui 12 streams, right? 13 Α. Yes. 14 And it also gets water from an area referred Ο. 15 to as Na Wai'Eha, correct? 16 Α. Yes. 17 Q. And the streams there are located in Central Maui, right? 18 19 Α. Yes. 20 Ο. And diversion of water from those streams have also been controversial, hasn't it? 21 2.2 Α. Yes. 23 But there was a settlement or there's been a Ο. 24 settlement of some of those disputes in the last year or 25 so, right?

MR. SCHULMEISTER: I'm going to object to 1 2 this as irrelevant. Beyond the scope of direct. THE COURT: What -- what is the relevance? 3 MR. SCHULMEISTER: I --4 5 THE COURT: Well, see where this is going 6 first before we have any rulings. Go ahead, Mr. Frankel. 7 MR. FRANKEL: So you want me to repeat the question or you want me to ask --8 9 THE COURT: No. I'm asking you to connect 10 the dots for me. Why do we want to spend time going into 11 this question? 12 MR. FRANKEL: I'm just going to get to -- I 13 have two more questions on this topic which is how much 14 water Mahi Pono is budgeting for use -- how much water per 15 acre Mahi Pono is budgeting for use from those streams. 16 MR. SCHULMEISTER: Okay. These are streams 17 that are beyond the -- this is from West Maui and irrigate 18 different fields, nothing that's at issue in this case, so 19 I would say it's irrelevant. 20 THE COURT: Mr. Frankel, is there any -- in 21 terms of these numbers we've been talking about for 10 22 days now, I've always assumed those numbers are from the 23 East Maui watershed. Are you now implying that no, some of that water comes from Central Maui? No? 24 25 MR. FRANKEL: No, your honor. And I'm -- I'm

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sorry. I'm not -- you know, I'm doing the shorthand to 1 get to a really quick point. There are other fields, 2 3 water from other streams, and I'm not -- I don't want to mix the two up. What I -- the one common element that I 4 5 want to reach is that Mr. Vaught talked about how much 6 water is needed for farming, and he knows how much water 7 per acre is being used from those streams in Central Maui, and I want to compare that to what's being used in these 8 9 other fields which are adjacent to, not -- not -- they're 10 -- they're slightly separate elevations, etcetera, but I 11 want -- I think it's highly relevant.

12 THE COURT: I'm not -- it sounds like we're 13 going to dive down a rabbit hole. I'm sustaining the 14 objection.

15 BY MR. FRANKEL:

Q. Let me try this. Mr. Vaught, has Mahi Pono agreed to limit its use of stream water from Central Maui streams to 2,500 gallons per acre?

MR. SCHULMEISTER: I'm going to object on the grounds of this is irrelevant. He's inquiring into a settlement agreement leading to a different area of the plantation. Doesn't involve East Maui.

23 THE COURT: Yeah. I'm sustaining the
24 objection and for relevance and also I guess under a 403,
25 404 type of analysis. I really feel like we're opening a

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door here that could lead to all kinds of additional 1 questions and back and forth and I just don't see the 2 3 value compared to the amount of time it might take up. 4 Sustained. MR. FRANKEL: All right, your honor. All 5 6 right. I was just going to ask that one question on the 7 one topic but I'll move on. THE COURT: Yeah, but we don't know what it's 8 9 going to lead to. 10 BY MR. FRANKEL: 11 In the first quarter of 2020 fewer than three Q. 12 million gallons of East Maui stream water was used for agriculture, right? 13 14 Α. That's possible. 15 And that might be based on the status report Q. 16 for the first quarter that you submitted to the Board of 17 Land & Natural Resources, does that make sense, sound 18 familiar? 19 Α. Yes. 20 Ο. But Mahi Pono said it was going to use six times more than that per day when it testified before the 21 2.2 Board of Land & Natural Resources in October, didn't it? 2.3 Α. Yes. And Mahi Pono has an agricultural plan that 24 Ο. 25 doesn't rely on water from the revocable permit area, does

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1 it? 2 I -- I don't know. Α. You haven't seen an agricultural -- a farm 3 Ο. plan that Mahi Pono developed that doesn't rely on any 4 5 water from the revocable permit area? 6 Α. I haven't seen that plan if -- if there is 7 one. 8 You haven't had a chance to look at the Draft Ο. EIS that's out? 9 10 A. I looked at the Draft EIS but not every page 11 through the Draft EIS. 12 All right. That's fine. Now the Water Ο. 13 Commission determined that it was reasonable for 22.7 percent of the water taken from East Maui streams to be 14 15 lost due to seepage, evaporation and other system losses, 16 right? 17 Α. I suppose. 18 Q. Okay. Well --19 MS. GOLDMAN: Your honor -- objection, your 20 honor. The State would object to this line of questioning as it's outside the scope of direct. 21 2.2 THE COURT: Overruled. Go ahead. 23 BY MR. FRANKEL: 24 So I think he already answered. I'm moving Q. 25 to the next question which is in the first quarter of 2020

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EMI reported system losses of 6.31 million gallons per day 1 on average, right? 2 3 Α. If that's what's in the report, then yes. 4 Why don't you take a look at Exhibit J-27. Q. 5 Α. Okay. I have it in front of me. 6 And that's something you helped prepare, Q. 7 right? 8 I provided some of the information, yes. Α. 9 And you signed it too, right? Ο. 10 Α. Yes, I did. 11 Okay. So looking at, I believe it's page 8 Q. 12 of this document, there's a table there. 13 Α. Yes. 14 And, in fact, the third column is system Q. 15 losses, 22.7 percent as cited in CWRM's D and O; do you 16 see that? 17 Α. Yes. 18 So for the quarterly -- quarterly average was Q. 6.31 million gallons a day, right, at the bottom? 19 20 Α. Yes. And then -- but the column at the end 21 Ο. 22 includes reservoir/fire protection/evaporation/dust 23 control/hydroelectric. Let's talk about that last column 24 for a little bit. Evaporation is part of the system loss, 25 isn't it?

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It could be. I -- I didn't -- I wasn't part 1 Α. 2 of the group that determined the 22.7 system losses but I would assume that evaporation would be part of that. 3 Okay. And we just established that dust 4 Q. 5 control is a pretty insignificant amount of this total. You know, the quarterly average is 16.4 million gallons a 6 7 day and dust control is in the order of tens of thousands of gallons, right? 8 9 Α. Yes. 10 Ο. So we're looking at the other uses as being 11 more -- bigger consumptive uses, except where does the 12 water go after flowing through hydroelectric plant? 13 For irrigation. Α. 14 Okay. So anyone measuring -- so I just --Q. 15 for anybody reading this document, you report how much is used for irrigation for diversified agriculture in the 16 17 third to last column. You see it says Diversified 18 Agriculture? 19 Α. Yes. 20 Ο. So -- so in the category -- if -- after it 21 goes to the hydroelectric plant, is anyone -- how do you measure that water's use? I mean, it's used for 2.2 23 irrigation. Are you measuring that anywhere or you -- I 24 don't -- I just -- something doesn't add up. 25 Water that goes through the hydroelectric Α.

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plant is gauged more like -- not necessarily gauged but 1 2 there's a certain amount of water that would run through the plant that generate a certain amount of energy, and 3 when that much energy is being generated, then we know 4 5 more or less how much water is passing through the plant. 6 Okay. But then the water is going to go Q. 7 somewhere after that. And so is that accounted for in 8 this chart? 9 Α. I would think so, yes. 10 Ο. So where is -- where does -- I mean, are you 11 -- there's a sum total on the very left-hand side of the quarterly average, 27.79, and if you add all those numbers 12 at the bottom, wouldn't they -- to the right of that, 13 wouldn't they equal 27.79? 14 15 Α. Yes. 16 So is any of the water in the category Ο. 17 reservoir/fire protection/evaporation/dust control/ hydroelectric being used for irrigation? 18 19 Α. Yes. 20 Ο. And how much of it? I don't know. 21 Α. 2.2 Q. Has the Board of Land & Natural Resources or the Department of Land & Natural Resources ever asked you? 23 24 Α. No, they have not. 25 So for them to determine if the water is Q.

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being used in a reasonable and beneficial manner, would 1 you be able to provide that information to them in terms 2 of how much of this water is actually being used for 3 irrigation separate and apart from the 2.5 million 4 5 gallons? 6 Α. Can you please ask that question again? 7 Yeah, I don't know -- I don't know if I can. Q. Let me try. So in this last category, what I call 8 9 amorphous category, are you able to provide to the Board 10 the information as to how much of this category is 11 actually being used for irrigation? 12 I think we would be able to, yes. Α. 13 And you think that -- that's more than --Ο. that's going to be -- you have to add that to the 2.5 14 15 million gallons that you currently have in the third to 16 last column titled Diversified Agriculture? 17 Α. Yes. 18 Okay. So if the Board asked you for that Q. 19 information, you'll provide that information? 20 Α. If the Board asked me for the information, I 21 would provide the information. 2.2 Q. But so far it has not, has it? 2.3 Α. No. 24 Ο. Thank you. 25 THE COURT: I have one -- one thing I want to

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clarify before you move on. Mr. Vaught, this hydroelectric issue you're talking about, when the -after the water runs through the, what I'll call the facility, whatever it is, where does it physically go? Does it go into a reservoir, does it go straight to a ditch, it goes to a field, or what happens to it? It must go somewhere?

8 THE WITNESS: It goes directly into a ditch 9 that runs along the entire farm, or a large portion of our 10 farm all the way across, and then we're able to use the 11 water that comes out of the hydroelectric plant, we're 12 able to use it, either put it into reservoirs or to send 13 it along for irrigating fields.

THE COURT: Okay. While we're talking about 14 15 reservoirs, I'm not looking for any real precision, sir, 16 I'm just trying to get an order of magnitude. If you just talk about the reservoirs that are there near the 17 18 agricultural land, how much storage capacity is there, and 19 let's call it in terms of days, so in other words, if the 20 ditches suddenly went dry and all's you had to work with was the water in your reservoir, you know, near the aq 21 22 lands, how long would that last, a day or two or three 23 weeks or what?

24 THE WITNESS: It's dependent upon the level 25 of the reservoir, which ditch it actually supplies. So --

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but if we filled all the reservoirs, it might last us a 1 week. I mean, so right now the amount of acres that we 2 have planted, it would -- it may last us a little longer 3 than that. You know, it depends on the seepage rate in 4 each of the reservoirs and, you know, whatever water comes 5 6 out or goes in. But for the most part, you know, all I 7 would say is maybe a week. That's just a really, really rough estimate but --8 9 THE COURT: That's --10 THE WITNESS: I guess we have 10 acres now. 11 THE COURT: Yeah, that's exactly what I was 12 looking for, just a vague idea. So a week is exactly what 13 I needed. Thank you. 14 All right. Sorry for interrupting, Mr. 15 Frankel. Go ahead. 16 MR. FRANKEL: That's right. And, your honor, 17 there was actually a couple of findings of fact from the Water Commission that get to your guestion as well. 18 19 THE COURT: Okay. 20 BY MR. FRANKEL: 21 And maybe we'll point that to -- point it out Ο. 22 to you in closing. 23 So now switching gears. Mr. Vaught, if the revocable permits were invalidated by the court but the 24 25 court authorized delivery of water to Maui County, would

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EMI continue delivery of water to the County? 1 2 MR. SCHULMEISTER: I'm going to object to this question. Calling for speculation and lack of 3 4 foundation. It -- it'd be up to him and he would know. 5 THE COURT: He can explain that. You may answer to the best you can, sir. 6 7 THE WITNESS: Yes. We could still deliver 8 water to the County. 9 BY MR. FRANKEL: 10 Ο. And even if the water delivery agreement is 11 no longer in effect, EMI is not going to stop providing 12 water to the County, right? MR. SCHULMEISTER: Objection. Calling for 13 14 speculation. There's no foundation. This is something 15 that he would have the authority to decide. 16 THE COURT: I'll allow it. You can answer. THE WITNESS: I believe we would still 17 deliver water to the counties. 18 19 BY MR. FRANKEL: 20 Ο. Thank you. Thank you, Mr. Vaught. I want to turn to -- my last topic is topic of trash. And you --21 22 I'd like to turn your attention to AB-63, and I don't know if it's going to be possible on your computer there, I'm 23 also going to want to look at AB-33 kind of at the same 24 25 time, I don't know if it's possible, but we can go through

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one at a time. But, first of all, AB-63. 1 2 Okay. I have AB-63 pulled up. Α. 3 So I want to give you an opportunity to Q. consider this a little more carefully. When do you think 4 5 these photos were taken? 6 Α. I -- I don't know exactly when they were 7 taken. Months ago perhaps. Or maybe -- I know some of them were maybe even longer than that. 8 9 Let's -- okay. So maybe some in 2020 and Ο. 10 some in 2019. Is that -- is that a fair --11 Α. That would be fair. 12 But nothing in 2018, right? Q. In 2018 I would say some of them were 13 Α. 14 possibly -- let me see what photos they'd be. The ones 15 with the large steel parts. 16 Q. Well, you know, maybe to make it a little 17 easier, there is some overlap. If we look at AB-33, page 18 12 of that, the Bates stamp page 12, which is the number 19 at the very bottom. I guess what I'm trying to figure out 20 is whether the photographs in AB-33, and there's some duplicates with the other photos, but were all these taken 21 22 from the second quarter of 2020 or some of them were from 23 the first quarter or some of them are from 2019? 24 Some of them are but we added to the piles. Α. 25 Any time we added to the piles we wanted to take

additional photos to document that we added to the piles. 1 2 Okay. So just to be clear then, these Q. 3 photographs that are in AB-33, they represent not just an amount of trash taken out in one quarter but trash and 4 5 garbage, however you want to characterize it, taken out 6 over several quarters, correct? 7 That's correct. Α. Okay. Now, how long has this trash been on 8 Ο. public land? It wasn't on the public land for just the 9 10 past year, was it? 11 No, I don't believe so. Α. 12 It was there for years and years, right? Q. 13 Yes, I'm assuming so. Α. And if the Board of Land & Natural Resources 14 Q. 15 asked you for the first time to start removing the trash 16 in two thousand and -- I can't remember if it's seventeen or eighteen now, this trash had been there and remained 17 18 until you removed it more recently, correct? 19 Α. Correct. 20 Ο. Now are there still old pipes and other 21 debris within the area covered by the revocable permits? 2.2 Α. Oh, I'm sure, yes. 23 I'd like you to take a look at Exhibit 67 --Q. 65, I'm sorry. Sierra Club's Exhibit 67. 24 25 Α. Okay.

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You recognize Exhibit 67 as Waiohue Stream 1 Ο. 2 and the waterfall there, little pool? 3 Α. Yes. Okay. Now if you could turn to Exhibit 65. 4 Q. 5 Sierra Club Exhibit 65. 6 Α. Yes. 7 You've seen that pipe there before, right? Ο. 8 Α. Yes. 9 Is that pipe still there today, you think? Q. 10 Α. I would think it's probably still there. 11 But it's no longer in use, right, because of Q. 12 what you did with the gates and how the water's flowing 13 over, right? 14 That's correct. Α. 15 Ο. Has anyone at DLNR or the BLNR asked you to 16 get rid of it? 17 Α. Not specifically, no. 18 Ο. Would it be possible to remove it within the next few months? 19 20 Α. Yes. Okay. Mr. -- Mr. Vaught, if A&B and Mahi 21 Ο. 22 Pono provided EMI more money in your budget to hire more 23 staff and to get more equipment, more of those really cool 24 ATV little things, four-wheel guys, could EMI more quickly 25 get rid of trash that remains in and next to streams on

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1 public land in East Maui?

A. That's difficult to answer just because if I tell someone who's newly hired to head out to Puohokamoa Stream and do this, he's not going to know where to go if he's not familiar. So just say it would speed things up, it may not, you know, we'd have to account for the training process and getting familiar with the area and what we do.

9 Q. Sure. It would take time. But if you have a 10 larger budget with more equipment and more personnel, 11 taking into consideration the significant time to orient 12 staff 'cause it's a complicated system, if you had more 13 staff you'd be able to get rid of more of the trash more 14 quickly over a period of a year or two, right?

15 A. It's possible.

16 MR. FRANKEL: Thank you.

17 THE COURT: All right.

18 MR. FRANKEL: I have no further questions,19 your honor.

20 THE COURT: Okay. Good timing 'cause we'll 21 take our last break of the day. Just six minutes so 22 please return at 25 of 4:00. Thank you. We're in recess. 23 (A recess was taken.) 24 THE COURT: We're back on record. FTR on?

25 THE LAW CLERK: Yes.

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1 THE COURT: All right. Mr. Frankel just 2 finished. So Ms. Goldman? 3 MS. GOLDMAN: Thank you, your honor. I 4 believe Mr. Schulmeister would be next. 5 THE COURT: Okay. Mr. Schulmeister. 6 MS. GOLDMAN: Although we're happy -- thank 7 you. 8 9 REDIRECT EXAMINATION 10 BY MR. SCHULMEISTER: 11 Yes. Mr. Vaught, I just want to briefly Q. 12 revisit the question about Puolua Stream, P-O -- I'm sorry, P-U-O-L-U-A, which is in the Huelo area near 13 Hanehoi Stream, is that right? 14 15 Α. Yes, that's correct. Is that a tributary of Hanehoi Stream? 16 Q. 17 Α. Yes, it does feed into Hanehoi Stream below 18 the highway. 19 Okay. And the question was asked whether you Ο. 20 -- whether EMI has continued to divert water from that stream even though it's a full restoration stream. You 21 2.2 remember that? 23 Yes, I remember the question. Α. 24 Ο. Okay. And is there a reason why the 25 diversion of water from Puolua Stream has not been Official Court Reporters First Circuit Court

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1 completely stopped?

2 It's because of the way the water flows into Α. the ditch that it's a significant construction project 3 taking place in the stream that's going to require a much 4 5 higher level of permitting and construction. 6 Ο. So -- and has that level of permitting been 7 completed? No, it has not. 8 Α. 9 And what makes it require a higher level of Ο. 10 permitting and construction? 11 It would be altering, basically altering a Α. 12 stream, and going actually into the stream and constructing in the actual stream, so doing any work in 13 the stream is going to trigger a bunch of different 14 15 permits. 16 Is that because the ditch where it crosses Ο. 17 the stream there is actually in the stream bed? 18 Yes, that's correct. Α. 19 And so water in the ditch coming from east Ο. 20 comes through that part of the ditch within the stream bed itself and then continues further west, is that right? 21 2.2 Α. Yes, that's correct. 23 And the water above -- is that the Lowrie Q. 24 Ditch? 25 Yes, that's the Lowrie Ditch. Α.

And so above the Lowrie Ditch the stream 1 Q. 2 comes and then the ditch is just -- it's just right in the stream bed itself? 3 4 Α. Yes. 5 So say you didn't have to block the water Ο. 6 looking over past the ditch somehow, you had to do 7 something where you don't interfere with the ability of the ditch to transfer water from east to west, is that 8 9 right? 10 Α. Yes, that's correct. 11 And that's what makes it a challenge? Q. 12 Α. Yes. Okay. And has that been the subject of 13 Q. extensive interaction with Dean Ueno of the Service Water 14 15 Branch, the Water Commission, and other members of the 16 Water Commission in terms of how to best deal with that particular challenge? 17 18 Α. Yes. 19 Okay. It's not because EMI wants to just Ο. 20 complete -- continue to divert water from that stream? That's correct. It's -- it's not because we 21 Α. 2.2 don't want to but it's because it's very difficult to do 23 under the current circumstances. We do pass some water over the ditch on the side but the -- that's a temporary 24 25 setup and --

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And during dry weather is there much water in 1 Ο. 2 Puolua Stream above the Lowrie Ditch? 3 Α. Not very much during dry weather, no. Is it sometimes naturally dry in the Lowrie 4 Ο. 5 Ditch? 6 Α. I've never seen it dry but I'm -- I'm sure 7 it's possible. 8 But the amount of water, when you say it's Ο. 9 relatively -- when you say it's dry, it's not too much 10 water, could you estimate, could you put an order of 11 magnitude of what we're talking about? 12 Little more than a faucet, I suppose. You Α. know, when I say when it's dry, I've seen a little bit of 13 14 water in there but, again, I haven't seen it in its driest 15 point. You know, I haven't driven out there in -- when it 16 hasn't rained for two months. 17 Ο. So maybe close to a million gallons per day when it's not raining, right? 18 19 Correct. Α. 20 Q. Something more in the order of tens of 21 thousands of gallons per day, thousands of gallons per 22 day? 23 Possible, yeah. Α. 24 Okay. You mentioned something like a faucet. Q. 25 You mean like a -- like a hose bib in a house, that kind

1 of a faucet?

2 Yeah, maybe a couple of those. Α. Yeah. Okay. Now could you return again to 3 Ο. 4 Exhibit S-65. Do you have that handy? 5 You say which one? Α. 6 Q. This is -- I'm sorry, not S-65. Plaintiff's 7 65, so just 65. It's the photo of the black pipe at 8 Waiohue. W-A-I-O-H-U-E. Do you have that up? 9 Α. Yes. 10 Now when people talk about rubbish and Ο. 11 debris, is this what comes to mind, a pipe like this that 12 was installed for a different purpose but it's not broken 13 or anything? 14 Α. It doesn't immediately come to mind, no, 15 because we installed it to serve a function, and it did 16 serve a function up to a certain point, and then the 2018 17 IIFS, DLNR caused us to alter the intake tunnel and kind 18 of made this pipe obsolete. 19 All right. But it's not broken or creating a Ο. 20 safety hazard or anything like that, is that right? Yes, that's correct. 21 Α. 22 Q. All right. Now, could you return to Exhibit 23 AB-33. 24 Okay. Got it. Α. 25 All right. And then -- and for -- this is Q.

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the June, I'm sorry, the second quarterly report from EMI, 1 2 the cover letter dated July 24th, 2020, is that right? 3 Α. Yes. All right. Turning to page 006, Bates stamp 4 Q. 5 page 006. 6 Α. Okay. 7 Under paragraph 1, lower case A, there's a Ο. discussion that refers to some of the information that's 8 9 later collected in Exhibit A which is later in the 10 exhibit. You see that? 11 Α. Yes. 12 And after -- it's about the middle of the Q. page where it says, Exhibit A, it says, "This table also 13 includes an estimated 22.7 percent system loss which is 14 15 consistent with the hearings officer's amended," etcetera. 16 You see that? 17 Α. Yes. Now, the 22 point -- so if you look -- if we 18 Q. 19 turn to Exhibit A which is on page 9, 009, that's the 20 third column, correct? 21 Α. Yes. 22 Ο. So this 22.7 percent, is that a measured 23 number or is that a calculated number? 24 I -- I don't know. I'm not familiar with how Α. 25 they arrived at that number.

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Okay. Well, 22.7 percent from the Decision 1 Ο. 2 and Order, that was 22.7 percent of a larger number, right? 3 4 MR. FRANKEL: Objection. Lacks foundation. 5 THE COURT: I'm -- did you say of a larger 6 number? Of course it was. What do you mean? 7 MR. SCHULMEISTER: Right. Well, my question is what the larger number is. 8 9 THE COURT: Oh, okay. 10 MR. SCHULMEISTER: Well, let me withdraw the 11 question. Let me withdraw the question. 12 THE COURT: Thank you. 13 BY MR. SCHULMEISTER: 14 All right. Are any -- have you done anything Q. 15 -- is there a way that you know of to directly measure 16 system losses as opposed to estimating them? 17 Α. Directly measure them accurately, I -- I 18 don't know. I'm sure there's probably a way. 19 But you haven't done that, right? Ο. 20 Α. No, I haven't done that. And the column on the right, let's go back to 21 Ο. 2.2 page 006. The next sentence after the last one that I -well, let -- you see where there's a reference to the 23 24 CCHMA13-01 number? 25 Α. Yes.

The next sentence says: "However, please 1 Q. 2 note that the 22.7 percent figure was derived from the Central Maui fields to ensure full sugar cultivation and a 3 larger amount of water was being imported." Is that true? 4 5 MR. FRANKEL: Objection. 6 THE COURT: I'm sorry. What? 7 MR. FRANKEL: Objection. THE COURT: Oh, I'm sorry. 8 9 MR. FRANKEL: We're not supposed to be --10 we're not supposed to be reading these things. He's just 11 reading it to make an argument. The witness is --12 THE COURT: I understand. And now he's 13 asking if the witness agrees. So I'm going to allow it. 14 MR. FRANKEL: Okay. 15 THE COURT: Go ahead, Mr. Vaught. The 16 question is do you agree with the statement that Mr. Schulmeister read out of the exhibit? 17 18 THE WITNESS: Yes. BY MR. SCHULMEISTER: 19 20 Ο. Okay. And the next sentence talks about 21 "Since much of the system loss represents seepage from reservoirs and the reservoirs continue to be filled for 2.2 23 fire protection, the total percentage of seepage loss currently being experienced is greater than 22.7 percent 24 25 with the difference being captured in the last column."

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You -- do you agree with that? 1 2 Α. Yes. 3 Okay. So when we look at Exhibit A on page 9 Ο. 4 there is also seepage loss in the last column, correct? 5 Α. Yes. 6 MR. SCHULMEISTER: I have no further 7 questions. 8 THE COURT: All right. Ms. Goldman, your 9 turn. MS. GOLDMAN: Thank you, your honor. 10 11 THE COURT: Ma'am, I'm going to note we've 12 got 12 minutes left. It would be nice to finish Mr. Vaught today so he doesn't have to come back tomorrow. 13 14 MR. SCHULMEISTER: Thank you, your honor. 15 16 RECROSS EXAMINATION 17 BY MS. GOLDMAN: 18 Understood. Ο. 19 Mr. Vaught, just because something is not 20 incurring to you, does that make it trash? No, not necessarily. 21 Α. 2.2 Q. Okay. I wanted to clarify a point regarding -- a point that you -- a question that you answered 23 previously where you said that water from the reservoirs 24 25 could possibly serve the County of Maui for a week if

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they're full. Do you remember saying that? 1 2 Α. No. 3 MR. SCHULMEISTER: Excuse me. I think that 4 5 THE COURT: That mischaracterized his answer. MS. GOLDMAN: But --6 7 THE COURT: Just ask a question instead of the big lead up please. Thank you. 8 9 BY MS. GOLDMAN: 10 Ο. Could you please clarify -- clarify what you 11 meant when you said that? 12 What I meant -- what I meant was the Α. reservoirs on the farm could support the farm activity but 13 14 not -- but couldn't support the County. 15 And are all of the reservoirs full right now? Q. 16 No. No, they are not. Α. 17 Q. And, lastly, I asked you previously about 18 whether you would be able to separate delivery of water 19 for just domestic use or just agriculture. What was your 20 response to that? 21 Α. No, the --2.2 THE COURT: No, no. Ms. Goldman, please. 2.3 MS. GOLDMAN: No. THE COURT: That's just an inappropriate 24 25 question, especially when we're on the clock. He already

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1 ___ 2 MS. GOLDMAN: Okay. 3 THE COURT: He already answered it. You 4 don't ask him again. 5 MS. GOLDMAN: Well --6 A VOICE: (Indiscernible). 7 THE REPORTER: Sorry. 8 MS. GOLDMAN: Yeah. 9 THE REPORTER: Was that Mr. Schulmeister who 10 was speaking? 11 THE COURT: Sorry. Time out. 12 THE REPORTER: Who's that -- somebody was 13 talking right after you said --14 THE COURT: That was Mr. Wynhoff in the 15 background. 16 THE REPORTER: Oh. 17 THE COURT: Something he suggested. They 18 weren't questions. They were just comments between him 19 and Ms. Goldman. 20 THE REPORTER: Okay, sorry. 21 THE COURT: You can just put indiscernible 22 chatter in the background or something like that. 2.3 THE REPORTER: Thank you. 24 BY MS. GOLDMAN: 25 Q. Thank you, your honor. Official Court Reporters First Circuit Court

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1 With respect to delivery of types of water, 2 did you tell something different to Mr. Frankel than you told me when I asked about it? 3 4 MR. FRANKEL: Objection. That's what the 5 evidence is. 6 THE COURT: So you're asking him to say now 7 whether he's given a different answer before? I mean, the 8 record is the record. Please. Just --9 MS. GOLDMAN: Your honor, I would like him to 10 explain why he gave a different answer, which will be 11 reflected in the record of the transcript. 12 THE COURT: Ask him a question. 13 MS. GOLDMAN: Okay. 14 THE COURT: If you want to know why, ask him 15 why. 16 BY MS. GOLDMAN: 17 Ο. Sure. 18 So why can't you separate the water just for 19 delivery for domestic purposes? 20 Α. We -- the same ditch that feeds our fields feeds the water department. The separation would happen 21 2.2 at the water department's intake. 2.3 So how could you possibly continue to serve Ο. 24 the County of Maui and not also divert water for other 25 purposes as you told Mr. Frankel? Official Court Reporters First Circuit Court

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I'm sorry. Could you ask the question again 1 Α. 2 please? THE COURT: I don't understand it either. 3 4 BY MS. GOLDMAN: 5 How would it be possible if you were -- okay. Ο. 6 If you were only allowed to provide water for domestic 7 usage, how would it be possible to do that? 8 The only way I could think of would be to Α. 9 divert only the amount of water that the County needed and 10 ___ 11 But your -- I apologize. Ο. 12 Go ahead. I'm --Α. Okay. So if you're forced to stop water for 13 Q. 14 the fields, can you continue to give water to the County? 15 Α. I suppose we could. 16 Can you explain how that's physically Q. 17 possible? 18 The County would have to request a certain Α. 19 amount of water for the -- for domestic purposes and for 20 the water treatment for -- and for the ag park, 21 agricultural park, and only that amount of water would 2.2 then be diverted and delivered across, but that would be 23 highly inefficient. 24 MS. GOLDMAN: Okay. Thank you. That's --25 that will be all from the State at this time.

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1
                  THE COURT: Mr. Rowe?
 2
 3
                         CROSS EXAMINATION
    BY MR. ROWE:
 4
 5
           Ο.
                  Thank you, your honor.
 6
                  Do you recall being asked if EMI would
 7
     continue domestic delivery to the County of Maui if the
 8
    revocable permits were invalidated by Mr. Frankel?
 9
                  I recall him asking me that.
           Α.
10
           Ο.
                  Okay. Is that ultimately your personal
11
    decision?
12
                  No. That's not my personal decision.
           Α.
13
                  Whose decision would that be?
           Q.
14
                  That would be decision that would come from
           Α.
15
    my supervisors. They are the people that direct our
16
     company.
17
                  MR. ROWE: Thank you, your honor. Nothing
18
    further.
19
                  THE COURT: Mr. Schulmeister? I'm sorry.
20
                  MR. SCHULMEISTER: No further questions.
21
                  THE COURT: Sorry. Mr. Frankel's turn,
22
     sorry.
23
24
                       RECROSS EXAMINATION
25
    BY MR. FRANKEL:
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So, Mr. Vaught, who's the head of EMI? 1 Ο. 2 Α. I am. 3 Okay. All right. Great. The pipe we looked Q. at on Waiohue Stream, Mr. Schulmeister asked you if it was 4 5 broken, but it's not connected to anything now, is it? 6 Α. No. It was never connected to anything. 7 Ο. It lets -- it was to let water pass over the diversion when -- at an interim measure to allow some 8 level of connectivity a few years ago, right? 9 10 Α. That's correct. 11 Thank you. So, you know, your first and Q. 12 second quarterly reports that you provided to the Board of Land & Natural Resources had that table we looked at a 13 14 couple times. In terms of the water used for irrigation, 15 is that a calculated amount or is that an amount somebody on Mahi Pono/EMI staff has told you that's the amount of 16 17 water that's used to irrigate the field? 18 That's an amount of water that we calculated Α. 19 that we used. 20 Ο. How is that calculation derived? We know more or less how much water each 21 Α. 22 individual field is operating and we calculate the amount of hours that we operate each irrigation system and add up 23 the totals for -- weekly totals and then that's how we do 24 25 -- that's how we come up with that number.

And could you break that down by field and be 1 Ο. 2 able to provide that to the Board of Land & Natural 3 Resources in your quarterly report? Is it possible? 4 It's very difficult but it -- it's possible. Α. 5 Great. And now -- so here's what I don't Ο. 6 understand. If you -- after you're done for that one 7 column that has diversified agriculture and it comes up with a total, how -- but you also said some of the water 8 9 in the reservoirs is used for irrigation. Is that number 10 that you see, irrigation, in the column that talks about 11 diversified agricultural needs, isn't that calculation -it's already in there, right? 12 Yes, some of it is, I suppose. 13 Α. All of it is. 14 Ο. 15 Α. Okay. I mean, I don't -- I don't know. But you've 16 Q. 17 explained how you come up with the figure by looking at 18 all your fields and measuring what the crop needs and you 19 come up with this total. So that's the total use for 20 agriculture. So this other big category that says reservoir/hydroelectric/dust control/evaporation, that 21 22 water isn't -- in that quarterly, that wasn't used for irrigation separately, right? 23 24 Some of it could have been but some of it was Α. 25 also, I mean, I -- I suppose not.

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It's really confusing, isn't it? 1 Q. 2 Α. Yes. 3 Do you think you guys can do a better job of Q. providing a really clear picture to the Board of Land & 4 5 Natural Resources and the Department of Land & Natural 6 Resources? 7 Α. I suppose we could. Okay. Two just -- I know we're at 4:00, yes, 8 Ο. your honor, just a couple more questions. So the Puolua 9 10 Stream, it intersects the Lowrie Ditch, is there a 11 diversion further upstream from there, the Puolua Stream? 12 I believe there is, yes. Α. So that might explain the reason there's a 13 Q. 14 trickle, a faucet worth of water that Mr. Schulmeister --15 you were describing to Mr. Schulmeister? 16 Α. Sure. 17 Q. Okay. And now if you folks decided you were going to abandon the Lowrie Ditch, would it be much easier 18 19 to restore stream flow to Puolua Stream in terms of work 20 that needs to be done? 21 Α. If we were gonna abandon the Lowrie Ditch? 2.2 If we abandon the Lowrie Ditch, would it make it easier to 23 restore Puolua Stream? Not necessarily. The same permits would still have to be put in place. 24 25 From an engineering perspective, would it be Q.

1 easier? 2 Say that again? Α. 3 Q. From a technical or engineering or work 4 perspective, would it be easier? 5 Α. Might be a little easier but not 6 considerably. We'd still have to do construction work 7 there to make sure that the stream course remain in the 8 stream course. 9 MR. FRANKEL: Okay. No further questions, 10 your honor. 11 THE COURT: Thank you. Mr. Schulmeister, 12 back to you. 13 If you're talking, you're muted. 14 15 FURTHER REDIRECT EXAMINATION 16 BY MR. SCHULMEISTER: 17 Ο. Okay. I'm sorry. I just wanted to say that 18 I was looking at the map to decide whether I have another 19 question here. 20 Could you just take a look at AB-1? 21 MR. FRANKEL: Your honor, I'm going to 2.2 object. This has -- this has not been admitted for the 23 truth of the matter therein. It's really inappropriate 24 the question that's about to be asked. He can ask from 25 his memory but he should not be looking at an exhibit

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that's not in evidence. He's really going to -- he's 1 2 using it for a different purpose. THE COURT: We'll see. I'll entertain a 3 motion to strike depending on what the question and the 4 5 answer is. 6 BY MR. SCHULMEISTER: 7 Do you have AB-1 up, Mark, real shortly? Q. 8 Α. Okay. 9 Q. Maybe you can help me find Hanehoi Stream on 10 here. 11 My apologies. Α. 12 THE COURT: While he's looking for it, can 13 you spell it? 14 MR. SCHULMEISTER: H-A-N-E-H-O-I. 15 THE COURT: Thank you. 16 THE WITNESS: Okay. Kind of fuzzy on my map 17 but, I mean, I know more or less -- I know where it is. 18 BY MR. SCHULMEISTER: 19 Okay. So maybe you can give us a couple Ο. 20 landmarks on the map to look for it so we can find it. Okay. Hanehoi Stream would be -- if you look 21 Α. 22 all the way down makai you see Waipio Bay. 23 THE COURT: Okay. Got it. 24 THE WITNESS: It would be to the right of 25 Waipio Bay. To the right of Waipio. And the bottom you

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see where Hanehoi Stream drop into -- you'll see is a -- a 1 2 couple of yellow parcels there, state parcels at the bottom. And if you follow that curvy line mauka, that 3 would be Hanehoi Stream. 4 5 BY MR. SCHULMEISTER: 6 Okay. So can you tell from here where the Ο. 7 Puolua tributary would be on the map? 8 Puolua would be immediately left of that. Α. 9 Okay. Is that the one that crosses Haiku and Ο. 10 then going mauka and crosses Lowrie? 11 Α. I -- I cannot tell. This map is a little bit 12 fuzzy but I'm -- if that's what your map says, then yes. 13 Are you looking at it on the computer? Q. 14 Α. Yes, I am. 15 Can we -- can you zoom it? Zoom in. Q. 16 Yeah, the more I zoom, the fuzzier it gets. Α. 17 Q. Oh, okay. All right. Let me just ask you 18 this. I mean, how sure are you that the Puolua Stream 19 goes all the way up to the Wailoa Ditch? 20 Α. I'm not a hundred percent sure. MR. SCHULMEISTER: Okay. No further 21 22 questions. 2.3 THE COURT: MS. Goldman, your turn. 24 MS. GOLDMAN: No questions from the State for 25 this witness, your honor. No further questions.

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1 THE COURT: All right. Thank you. Mr. Rowe? 2 3 RECROSS EXAMINATION BY MR. ROWE: 4 Thank you, your honor. Very quickly. 5 Q. 6 Is EMI independently owned or is it owned as 7 a subsidiary of another company? 8 Α. It's owned as a subsidiary or a -- currently 9 is a joint venture with two other companies. 10 0. So when you refer to having to -- it being a 11 decision of your supervisors I think you said, is that who 12 you're referring to? 13 Α. Yes. 14 MR. ROWE: Thank you. No further questions, 15 your honor. 16 THE COURT: All right. Did the court 17 reporter catch -- he said joint venture with who? 18 THE REPORTER: "With two other companies." THE COURT: What? 19 20 THE REPORTER: "Two other companies." THE COURT: "Two other companies." Is that 21 22 what you said, sir, two other companies? 23 THE WITNESS: Yes, that's correct. 24 THE COURT: Okay. What are the two other 25 companies?

1 THE WITNESS: Alexander & Baldwin and Mahi 2 Pono, LLC. 3 THE COURT: Okay. Thank you. 4 All right. So anything further from you, Mr. 5 Rowe? 6 MR. ROWE: Oh, sorry, your honor. That was 7 my only question. 8 THE COURT: All right. Mr. Frankel. 9 MR. FRANKEL: No, thank you. 10 THE COURT: Mr. Schulmeister, back to you. 11 MR. SCHULMEISTER: No more questions. 12 THE COURT: Ms. Goldman? 13 MS. GOLDMAN: No more questions from the 14 State. 15 THE COURT: All right. I think that completes the roster as far as anyone who's -- hasn't 16 17 asked a new question. Mr. Rowe, you were the last one to ask a question, right? 18 19 MR. ROWE: Yes, and I have nothing further. 20 THE COURT: Okay. Mr. Frankel? 21 MR. FRANKEL: I'm done. Done. THE COURT: Okay. Done. All right. 2.2 So good. Thank you, everyone, for finishing soon after 4:00. 23 So, Mr. Vaught, I'm sorry, Mr. Vaught doesn't need to come 24 25 back tomorrow.

1 So, sir, your testimony is finished and you 2 are excused with the thanks of the court. Thank you. 3 THE WITNESS: Thank you, your honor. 4 (The witness is excused.) 5 THE COURT: All right. Let's just -- do we 6 need to do anything else on record or can we go off? 7 MR. WYNHOFF: Off record, your honor. 8 MR. SCHULMEISTER: We can go off. 9 MR. WYNHOFF: I --10 THE COURT: I don't see anyone with their 11 hand up so I'm going to assume --12 THE LAW CLERK: Mr. Rowe actually had his 13 hand up. Mr. Rowe actually had his hand up. 14 THE COURT: Oh, Mr. Rowe did. I'm sorry. Go 15 ahead. 16 MR. ROWE: I'm not sure if it has to be on 17 the record, your honor. It was just going to be regarding 18 the County's order of witnesses. 19 THE COURT: That doesn't need to be on 20 record. All right. Let's go off record and thank our 21 22 court reporter. You are also excused for the day. 23 (Thereupon, proceedings adjourned.) 24 25

STATE OF HAWAII) CITY AND COUNTY OF HONOLULU)) I, Sharon Hulihee, RPR, CSR 306, an Official Court Reporter for the First Circuit Court, State of Hawaii, hereby certify that the foregoing comprises a full, true and correct transcription of my stenographic notes taken in the above-entitled cause. Dated this 12th day of August, 2020. OFFICIAL COURT REPORTER <u>/s/Sharon Hulihee</u> SHARON HULIHEE, RPR, CSR 306