

1 BOARD OF WATER SUPPLY

2 COUNTY OF MAUI

3

4

5

6

7

8

9

10 REGULAR MEETING

11 THURSDAY, JUNE 25, 2009

12

13

14

15

16 Held at the Department of Liquor Control Conference

17 Room, David Trask Building, Room 105, Wailuku,

18 Maui, Hawaii, commencing at 9:06 a.m.

19

20

21

22

23

24

25

26

27

28 Transcribed from the audio recording by Gaye

29 Hayashida, Commission Support Clerk, Department of

30 Water Supply, County of Maui.



1 CHAIR HOWDEN: Good morning. I'd like to call our  
2 meeting to order. In attendance, Gayle Hayashida,  
3 our clerk; the first meeting for Patricia Eason,  
4 Hana; welcome.

5 MEMBER EASON: Thank you.

6 CHAIR HOWDEN: John Hoxie, Don Gerbig, Ted  
7 Yamamura; and myself, chair; Ed Kushi, Deputy  
8 Corporation Counsel...

9 MR. KUSHI: Good morning.

10 CHAIR HOWDEN: And assorted guests; Dr. Lorin Pang  
11 from the State Department of Health; John Duey from  
12 Na Wai Eha; cub reporter from the Maui News...

13 MR. EAGER: Harry Eager.

14 CHAIR HOWDEN: Harry Eager; and 2 more guests.

15 MS. HAYASHIDA: Mr. Davis, Jim Davis the appellant.

16 CHAIR HOWDEN: Ah, the appellant, Mr. Davis and...

17 MS. ASHMAN: I'm Janet Ashman from Hawaii  
18 Agriculture Research Center.

19 (Member Myers arrived later)

20 CHAIR HOWDEN: Oh thank you. Ok, Announcements.  
21 I'd like to, Patty, would you, would you be happy  
22 introducing yourself, I mean, there's some things  
23 written about you but...

24 MEMBER EASON: Positive or negative? No, I'd be  
25 happy to. I'm Patty Eason and I live in Hana, well  
26 not right in Hana, I live in Papahawahawa which is  
27 outside Hana. And I'm a retired school principal,  
28 a widow, I have 5 children, 13 grandchildren and 6

1 great grandchildren and because I'm retired  
2 everyone thinks that you have lots of time to  
3 spare, but I find myself busier than when I was  
4 working. But this is all very, it feels good to  
5 give back. So I'm very happy to be here and I will  
6 tell you I have lots to learn but I'll take copious  
7 notes.

8 CHAIR HOWDEN: Thank you and you've also served on  
9 the Maui County Planning Commission as well.

10 MEMBER EASON: Yes.

11 CHAIR HOWDEN: So, you're familiar with our boards...

12 MEMBER EASON: Yes.

13 CHAIR HOWDEN: And what not.

14 MEMBER EASON: But I like the idea that this is  
15 only thing that I received to read. The Planning  
16 Commission, you have tons of reading, so thank you.

17 CHAIR HOWDEN: Well, you know, personally I'm also  
18 happy to have someone from East Maui on the Board.  
19 I think that for East Maui to have a voice is, most  
20 of our water seems to come from there.

21 MEMBER EASON: I know and I know that some people  
22 would feel much more comfortable if I were a, a  
23 farmer but I'm not. And I can still do the best  
24 that I can.

25 CHAIR HOWDEN: Oh, thank you. So, Approval of  
26 Minutes? Any comments on our minutes or changes?

27 MEMBER YAMAMURA: I'll move to approve.

1 CHAIR HOWDEN: Might we have a motion to approve  
2 the...

3 MEMBER YAMAMURA: Move to approve.

4 CHAIR HOWDEN: What?

5 MEMBER YAMAMURA: Move to approve.

6 CHAIR HOWDEN: Second?

7 MEMBER GERBIG: Second it.

8 CHAIR HOWDEN: Ok. Those in favor?  
9 (a chorus of ayes)

10 CHAIR HOWDEN: Ok. Testimony from the Public; we  
11 have John Duey from Na Wai Eha.

12 MR. DUEY: Good morning, everybody, Chair Howden  
13 and the Board members and even the Corp Counsel.

14 MR. KUSHI: Good morning.

15 MR. DUEY: Good morning. My name is John V. Duey.  
16 How much time do I have? Three minutes or less?  
17 How much time, 3 minutes?

18 CHAIR HOWDEN: Four or five, four or five.

19 MR. DUEY: Ok, I'll try to keep it...

20 CHAIR HOWDEN: Yeah.

21 MR. DUEY: I, I'm involved in water issues. I can  
22 talk all day so I'll keep it short. My name is  
23 John V. Duey. I'm the president of Hui O Na Wai  
24 Eha. If you're not familiar with it that's the 4  
25 great waters in east, eastside of West Maui  
26 mountains. I'm also a landowner, taxpayer. I live  
27 in 'Iao Valley. I've lived there 40 years now.  
28 I'm from the mainland like a lot of people around

1 here now days. Came to Maui in 1961. Enough about  
2 me. As some of you know in, 5 years ago today we  
3 filed a petition for in-stream flow standards for  
4 the Na Wai Eha streams; IFS it's called; June 25<sup>th</sup>,  
5 2004. I'm gonna talk about mostly Waiale Treatment  
6 Plant. There have been 5 years and nothing  
7 affirmative has happened to this point. A little  
8 bit of history, after we filed the petition with  
9 the CWRM, the Commission of Water Resource  
10 Management as, as you may or may not know, anybody  
11 with standing can file petition with the  
12 commission. After a lot of rigmarole finally in  
13 December of 2007, it went to a contested case  
14 hearing. The whole purpose, our purpose is to  
15 restore mauka makai stream flows in the 4 streams.  
16 Same issue is going on in East Maui and Keanae, in  
17 that area. They did, they did get some relief.  
18 They got, I think 12 million gallons restored for  
19 the 8 streams out of 27, so that's, I don't know, I  
20 think a little has been restored at this point, but  
21 anyway that's a different situation. I'm not  
22 involved out there, we have enough worries over  
23 here. The contested case hearing went on from  
24 December to March, 11 lawyers in the room not, no  
25 offense, Ed. But 11 lawyers in the room, we had  
26 500 pages of exhibits, we had 72 witnesses from  
27 HC&S's side, from Wailuku Water's side, from the  
28 Hui's side, people up and down the, the spectrum.

1 And after that, the hearings officer, Dr. Lawrence  
2 Miike wrote a report. It's 210 pages of what he  
3 thought should happen. He's, he was appointed by  
4 the Commission when they, the contested hearing  
5 comes up, they appoint a hearings officer and he  
6 had been on the CWRM during the Waihole case, which  
7 is in the 15<sup>th</sup> year now, and he was, he was  
8 appointed the hearings officer so after let's say,  
9 he wrote this 210 pages. When the, when the  
10 hearing was over, when the contested hearing was  
11 over each lawyer group each, there was OHA  
12 represented, the County was represented, HC&S  
13 represented, Wailuku Water Company represented and  
14 so, so (inaudible) represented the hui groups which  
15 is Maui Tomorrow and Hui O Na Wai Eha. At the end  
16 of the hearing, the, the hearings officer asked  
17 all, required all the attorneys to come up with  
18 what they call the Findings of Fact, what all the  
19 testimony, Contusions(sic) of Law, what the law  
20 says, and then their own Decision and Order, what  
21 they individually thought should happen with the  
22 water. Then they took that into advisement and he  
23 comes up with his own scenario, the whole, the  
24 whole thing. Then on May 11<sup>th</sup> of this year the,  
25 everyone had a chance to rebut that again and come  
26 up with their own, their own scenarios again after,  
27 to rebut his findings. Now, now there'll be a,  
28 there will be a, I think next month, it hadn't been

1 scheduled but hopefully in July there'll be another  
2 chance to refute everybody that, that attorneys  
3 gonna, that CWRM will come here and have a meeting  
4 and then everybody will give an oral argument. So,  
5 the hearings officer, Dr. Miike came up with the,  
6 his thoughts of, of restoring 35 and ½ million  
7 gallons of water to Na Wai Eha streams. And how he  
8 done that was the stream flow totals, I think it  
9 was 67 some million gallons, the Q 50, in other  
10 words the, the Q 50 is the amount of the flow in  
11 stream at 50% of the time. In the case of Waihe'e  
12 the, the Q 50 was 34 million, Q 90 is 24 million,  
13 see he, he recommended putting 14 million back in,  
14 in the stream in Waihe'e which would allow for 10  
15 million gallons at the mouth. And, there is  
16 seepage loss in 'Iao, in Waihe'e and in 'Iao. In  
17 'Iao the Q 50 is 25 and Q 90 which is 13, so he  
18 recommended put in all the 13 million gallon back  
19 in 'Iao Stream and that would give 6.3 million  
20 gallons at the mouth of 'Iao. Now, Waihe'e is,  
21 we'll go on, we don't need to go into that but  
22 that's on, what I'm getting, the point I'm trying  
23 to get at here is as I know a lot of you are  
24 familiar with the Wailea, Waiale Treatment Plant.  
25 The, the suggestion at this point, what we've been  
26 working with all this time is a 9 million gallon  
27 diversion or the 9 million gallon from Waihe'e  
28 Stream to feed the treatment plant. I've been on



1 the stump for the last few years saying that you'd  
2 better wait until you see how, what the IFS is out  
3 of Waihe'e before you start taking 9 million  
4 gallons and put it in the treatment plant 'cause it  
5 may not be there. May not be any water there. So,  
6 the scenario would be if, this is not set in stone  
7 yet, it's gonna be a while, this, we hope something  
8 happens soon but, anyway, if you take, make the  
9 recommendation of 14 million gallons left in  
10 Waihe'e Stream, that's below the intake, that's  
11 below Spreckles intake, there are a few not  
12 familiar, there's 2, 2 intakes in Waihe'e, Waihe'e  
13 intake up in Spreckles, Spreckles intake down.  
14 Waihe'e Ditch comes to Wailuku, right above the  
15 stop sign in Wailuku, I don't want to point in the  
16 right way, I get turned around when I get in this  
17 building. Which way is up? Anyway, if, if, if it  
18 would happen that the 14 million be left in the  
19 stream and you take out of the, the Q 90, this,  
20 this is what the stream flows 90% of the time, that  
21 leaves 10 million gallons but there's 3 million  
22 gallons also dropped out of Waihe'e Stream to kalo  
23 farmers in Waihe'e Valley on the, on, there's 3,  
24 about 3.2 on the south side that's dropped out of  
25 there for use and there's about, just about half of  
26 it on the north side from Waihe'e Stream that  
27 leaves you 7 million gallons of water. And that's  
28 not gonna feed, that doesn't give any water for

1 HC&S for the sugarcane. Let me state some of, I  
2 don't want it, my, my point is this restoration is  
3 not to see sugarcane go out of business, that's not  
4 why I'm here. That's not the fight, the fight is  
5 to put water back in the stream, there has to be  
6 some kind of balancing act someplace along the  
7 line, and the law requires it. So, the idea that  
8 the problem would be is that if, if the, if the  
9 restoration of the IFS is 14 million gallons for  
10 Waihe'e, it may not be, we don't know because the  
11 other guys want more water left in the streams, so  
12 we don't know what that's gonna be yet, but if it  
13 was they don't need 7 million gallon for the  
14 treatment plant and HC&S to use and whatever from  
15 Waihe'e Stream. Two of the things now, I'll shut  
16 up here; one thing that you always talk, you always  
17 hear about the Wailea Treatment Plant is using  
18 water from Waihe'e Stream. Nine, probably 95% or  
19 90% of that water would be from Waihe'e Stream but  
20 some water comes from 'Iao also. That they never  
21 talk about. And the reason being 'Iao Maniania  
22 Ditch was to, diversion is at, by the Nature  
23 Center, part of that water from 'Iao goes south  
24 towards Waikapu, part of it goes, Maniania, which  
25 the ditch and tunnel system, it goes north.  
26 Wailuku Country Estates uses some of that water and  
27 what's not used it drops down to Waihe'e Ditch  
28 according to WWC, Wailuku Water Company's testimony

1 they sent a project 2 million gallons that way and  
2 the other 18 million gallon that they, the maximum  
3 diversion goes south. So, if they're not using all  
4 that water Wailuku Country Estate or a little bit  
5 water goes beyond that water is dropped down to  
6 Waihe'e Ditch and then it would be picked up for  
7 the treatment plants so just bear in mind, just  
8 thinking back to Ed when he talked about the water  
9 from Waihe'e is not all come from Waihe'e, some  
10 from the 'Iao, a little bit maybe come from Waiehu.  
11 So it's not all Waihe'e water. The other thing I  
12 wanted to, want to say is that Article 7, I believe  
13 I haven't testified for a little while, we were on  
14 vacation but believe it is Article 7, section 1 and  
15 7 of the Hawaii State Constitution said the water  
16 is a public trust. Doesn't belong to Wailuku Water  
17 Company, doesn't belong to EMI, doesn't belong to  
18 HC&S, doesn't belong to me, doesn't belong to  
19 Michael. It's a public trust. Belongs to all of  
20 us. And at this point that hasn't been happening  
21 for the last 147 years, since 1862 or so. And the  
22 water code established in 1987, also establishes  
23 the same thing. The bottom line here is that a lot  
24 of us would like to see the watershed being  
25 acquired by the County which is getting close, a  
26 while back, but get the watershed acquired is  
27 13,170 acres that's under the control of Wailuku  
28 Water Company. That water, that watershed needs to

1 be acquired by the County so it's in the, in, it's  
2 in the public's hands not a private entity.  
3 Another thing, I've been on the stump about, maybe  
4 some of you's heard, I want to see a billion gallon  
5 reservoir built at Waiale for the treatment plant.  
6 I always, one point I don't know where's, which  
7 way, could someone tell me which way is south?  
8 Waiale Treatment, where the Waiale Reservoir is  
9 now, that way? Ok. I, I'd like to see a billion  
10 gallon reservoir built there and the reason being  
11 very simple in my mind 'cause I'm a simple person,  
12 that once this IFS is set, some water is gonna,  
13 some water is gonna go down the stream, we don't  
14 know how much. The stream is gonna get water,  
15 that, that's a foregone conclusion. So when you  
16 get a big storm, take some of that storm runoff and  
17 put it in the reservoir; part of the ditch that can  
18 handle. Spreckles and, and the Waihe'e Ditch can  
19 handle a 100 million gallons and we bring that  
20 water, 'Iao water back without too big of an effort  
21 and then anything that storm flow over that ends up  
22 going to the ocean, but put some water in the  
23 reservoir. Carl Freedman is doing the Water Use  
24 and Development Plan, I finally got him to do some  
25 studies on that and I don't know how it came out  
26 but anyway, this is the thing that I think  
27 something's gotta happen, you can't keep taking all  
28 the surface water. The County'll take some now but

1 this can't go on. And there's no water down there.  
2 There's a new report came out from Steve Gingrich,  
3 USGS, so we're getting in, we're getting in sad  
4 shape. So the 2 bottom things I wanna leave with  
5 you is that we need to, I understand, I know you're  
6 advisory group to the Mayor and I understand that  
7 so but you're, my advice to you is to advise the  
8 Mayor to get the watershed in our hands. You know,  
9 it's not good that a private entity has control or  
10 power over our water. Where the, where the EMI,  
11 whether that side or this side, whatever or  
12 Westside. And another thing is push for a  
13 reservoir. I know money is tight but something's  
14 gotta happen. I, I don't see any other way,  
15 personally I don't see any way out of this water  
16 situation. Anyway, thank you for listening. I'd  
17 be glad to come back and talk to you at length  
18 again 'cause I get carried away so, I've, I've  
19 exerted my 3 minutes but thank you much for  
20 listening. Aloha.

21 CHAIR HOWDEN: Ok, thank you John. Any other  
22 testimony from the public? Ok, I'd like to  
23 introduce Dr. Lorin Pang, the state health officer.

24 DR. PANG: Can you tell me how long I have to  
25 speak?

26 CHAIR HOWDEN: We originally scheduled you for half  
27 an hour.

1 DR. PANG: Oh, ok. Then I can slow down. Let me  
2 give a little background. I'm from Hawaii. I have  
3 a bachelor's in chemistry from Princeton University  
4 with honors. I have a M.D. degree from Tulane. I  
5 also have a master's in public health from Tulane  
6 University. I'm retired active duty army. All but  
7 3 of the 24 years I was overseas doing research  
8 with tropical diseases. My last assignment was  
9 from 97 to 2000. I was head of the Enterics Lab at  
10 the Walter Reed Institute of Research unit in  
11 Bangkok. The Enterics Lab simply means  
12 gastrointestinal diseases; half of which were food  
13 borne, half of which were water borne. Ok. I  
14 published about, I don't know, 60 articles in peer  
15 review medical journals and the last 3 years I've  
16 been recognized as one of America's top physicians.  
17 The award goes to 3% of the physicians. Now, let  
18 me talk about, I'm here to talk about water borne  
19 diseases from reduced stream flows. So just to get  
20 the background straight, you might hear of all  
21 these water borne diseases but technically I could  
22 say well, was it a stream, was it from reduced  
23 stream flow. So, in general there are tons of  
24 water borne diseases. I mean if you just say  
25 what's the water body, it could be the ocean, it  
26 could a reservoir, it could be a stream, it could  
27 be spring even, and it could be puddle. So, in  
28 general, the work we were looking at was pollution

1 by other users, human to human, either bathers  
2 defecating in the swimming pool or someone upstream  
3 defecating. So, it was human to human. Then we  
4 also were forced to look at animal to human,  
5 because in a lot diseases we studied animals share  
6 a lot of diseases with humans; pigs, rats, birds,  
7 chickens, especially chickens; defecating,  
8 urinating, ok. So, right now we are talking about  
9 stream flow, streams in Hawaii. We're not talking  
10 about swimming pools or people living upstream and  
11 defecating. But it's fair game to say animals.  
12 Birds, rats, pigs, dogs, feral cats defecating in  
13 your streams. Ok. So right now, we're with  
14 streams. Then we're going to ask if it was just  
15 what diseases are in the streams. There's a ton of  
16 'em. A lot of 'em are enteric. They give you  
17 nausea, diarrhea. These are the e. coli groups.  
18 This is the one that cows on Kauai, I don't know if  
19 you know about it but cows were kind of defecating  
20 in the field which went to an organic farmer and  
21 when they served the greens a lot of guys got sick  
22 with that very bad form of e. coli called 0157,  
23 that's the one in the cookie dough now that's  
24 everyone upset about. That one can kill you. So,  
25 a lot of diseases normally coming out of the water  
26 but you asked me to talk about diseases coming out  
27 of your streams from reduced stream flow. So this  
28 issue was brought to me by the people of Nahiku

1 when the water went down, when the flow went down,  
2 they asked me to talk to them about health issues.  
3 I also have to say I have a little bit conflict of  
4 interest on the Na Wai Eha. I live in the Waihe'e  
5 side and I filed for a petition for use of small  
6 amount of water for home growing my stuff. But I'm  
7 talking about the East side now, the people who  
8 bathe and some other people were using the water  
9 regularly to wash. So, you got the scenario, a  
10 stream, lots of diseases but what particularly  
11 increased with reduced flow? There's one school of  
12 thought by my colleagues in the Department of  
13 Health, who say when you reduce the flow of the  
14 water it physically, esthetically gets really  
15 gross, pilau. I mean we used to call it pilau  
16 water as kids, and they said, oh that's good. If  
17 the water is so gross nobody will go near it and  
18 the diseases will just be gone because of  
19 avoidance. That's pretty strange argument but none  
20 the less that argument was made. So in one sense  
21 you kinda take this holistic approach, hey, I made  
22 the water so gross, nobody went in it and it cut  
23 the diseases down fantastically. That's one  
24 approach. The other way you should look at this is  
25 people are going to try to use the water until it  
26 either gets dried up or so gross it's unbearable.  
27 And there are people in Nahiku who bathe regularly  
28 and recreationally use the water and it's your call



1 or their call how gross is gross. Then there was  
2 another group I found out on the border near Hana  
3 side who actually tap into the water hoping to fill  
4 their reservoirs for maybe not drinking but at  
5 least for washing. So, let's just face that  
6 scenario saying that the avoidance scenario is one  
7 extreme issue. If you're going to use water with  
8 low flow, what has increased? Number one, it has  
9 been shown, we repeatedly get reports out of Texas  
10 when there's warm, stagnant fresh water there's a  
11 free living amoeba; there's many kinds of amoeba  
12 that expand. This free living amoeba you get it  
13 when it goes into your mucous membranes; it can go  
14 into your eyes. And once it crosses up into your  
15 meninges it'll kill you, it's uniformly lethal, ok.  
16 Now we get, we, we look at this worldwide and this  
17 free living amoeba which expands in warm fresh  
18 water is worldwide, but I don't know why the  
19 reports come out of the south in the summer when  
20 there's warm stagnant water. I actually asked,  
21 well, we, we import from Hawaii, we actually did,  
22 that went this report last year of a guy in Waianae  
23 and there was some in the Department of Health,  
24 they said that guy probably died because of his  
25 underlying diseases or underlying conditions. How  
26 you handle the disease is from your underlying  
27 conditions, how you get the disease is what's from  
28 the water. So you know I still have issues with

1 that, how they wanna explain that away.  
2 Furthermore, I don't think just because you don't  
3 see it, I'm not sure our reporting is that good to  
4 pick it up but internationally it does suppose to  
5 occur worldwide. So when the water's warm and  
6 fresh it'll, it'll go. If you said I reduce the  
7 streams to zero flow, how can you have standing  
8 warm fresh water? We've walked the Nahiku stream.  
9 It's a hard rock bed that catches rainfall and then  
10 you got pools that don't flush because it's warm  
11 rainwater, fresh water. The next disease that will  
12 increase is from mosquito breeding. You understand  
13 that when you stagnant a pond or the size of the  
14 stream, stagnation is a cycle. First it gets to be  
15 Type A, Type B, Type C, Type D. Certain types, say  
16 Type B, a certain stage of stagnation, it will  
17 support a certain kind of mosquitoes. And then  
18 it's so gross that kind won't grow but this kind  
19 will. What mosquitoes are we worried about?  
20 Number one was dengue. In the dengue epidemic, we  
21 did capture in the stream beds on the sides where  
22 it was low flow, the dengue vector, ok. We managed  
23 to eradicate dengue from that area in 6 months. By  
24 the way, that's very unusual but I think no one has  
25 eradicated dengue except maybe Japan in the last 50  
26 years. If you say, well let's just eradicate  
27 again, it's not so simple. Ok, that was a big  
28 effort and maybe we were lucky, the conditions were

1 correct. That was the dengue vector, *aedes*. Then  
2 we look now when the water was recently low and  
3 they didn't find *aedes* at that stage of stagnation.  
4 I give them that. And *aedes* also breeds in little  
5 plant pockets; your *heliconia*, you know where the  
6 leaf meets the stem. And funny, it doesn't breed  
7 in all plant pockets because some are different  
8 stages of stagnation. I'm trying to tell you it  
9 can breed many places so the stream doesn't  
10 contribute that much; at least at the time when  
11 it's in phase B or C where it doesn't grow. The  
12 next mosquito is *culex quinquefasciatus*. This is  
13 the vector that is supposed to bring, that has  
14 bring us West Nile. West Nile is that disease  
15 that's spread all the way from the Nile east  
16 through Europe through the birds, across the U.S.,  
17 and all the way across the U.S. and California is  
18 flaring up again. So, this thing is spreading. It  
19 is a mosquito-bird-mosquito-bird-mosquito-bird.  
20 Man is what they call the dead-end host. You get  
21 it from the mosquito but you don't propagate it.  
22 That vector, that *culex*, the one that can spread  
23 West Nile to our birds and then eventually to us,  
24 is in Hawaii. And you know, we did major efforts,  
25 HC&S put million dollars of changes of their  
26 irrigation practice to keep the mosquitoes away  
27 from the airport. We were afraid that they would  
28 come in, how would West Nile come to Hawaii? By

1 the way, I think only 2 states don't have it, us  
2 and someone else. We thought it might come in as  
3 the mosquito on the cargo holds of planes so, may,  
4 they place near the airport, mosquito-free. That's  
5 just one theory and we did that with the help of  
6 HC&S. The other theory is that birds will bring it  
7 in. And once the birds, wherever they settle  
8 they're bitten by a jillion mosquitoes, especially  
9 the culex, then it will spread. Now, does the  
10 stream have culex? Well, yeah. Those streams,  
11 stagnant streams make culex and it might not make  
12 it in every stage and this time when we were called  
13 out, there's no denying, the stream had plenty  
14 culex. But you might say, oh, we don't have West  
15 Nile. Yeah, but if we did get West Nile I'm pretty  
16 sure I can guarantee you we can't eradicate that  
17 one, ok. You can eradicate a disease if man is an  
18 essential obligatory step. You control man and  
19 then when the mosquito bites the man and then it  
20 doesn't propagate. But since this is mosquito-  
21 bird-mosquito-bird-mosquito-bird, you can't control  
22 all the birds. And everywhere in the U.S. that has  
23 had West Nile has not been able to control it at  
24 all. Ok, so that's a threat but it's not here yet.  
25 The next disease I mentioned or talked about is  
26 leptospirosis. Leptospirosis is quite common in  
27 Hawaii. It is on Maui. It is in the urine of  
28 animals; pig, rat. It pierces cuts and abrasions.

1 It comes up into your mucous membranes eyes and  
2 nose. It's notorious. We did the studies in 1987.  
3 There was a stint. I was at Tripler; we worked  
4 with the Department of Health and we published the  
5 studies on leptospirosis, especially on Kauai and  
6 the Hamakua coast. I was surprised because Maui  
7 doesn't seem to report, but Maui does have it.  
8 These last few years we've seem quite a few cases.  
9 Does it increase with decrease flow of stream,  
10 first of all it's in every stream. There's no  
11 question. Does decrease the flow increase the  
12 lepto count of the water? I don't know. But my  
13 theory and I have to tell you, I mean I don't want  
14 to brag but I'm the one who published this in '87,  
15 is it's the question of dilution and pollution. We  
16 get stagnant water, animals come to drink the  
17 water, animals urinate in the water, the bacteria  
18 can survive up to say a month in wet humid  
19 conditions. I claim that, well, if the water's not  
20 gonna flow it's a higher concentration. I could be  
21 wrong. The ph and chemistry of the water could  
22 change so it doesn't support leptospirosis but  
23 people are gonna say you, you can't prove this  
24 increase. But I will tell you can't prove there  
25 isn't, ok. So in public health we're pretty  
26 cautious. So there's 3 things that can increase  
27 from the water itself. Then we have the most major  
28 thing I want to talk about now is what do you get

1 from not using the water, never mind that the  
2 water's infected or not. If you don't use it  
3 'cause there's not enough of it or it's so pilau  
4 that you avoid it, what's gonna happen? What's  
5 gonna happen is the diseases of the homeless who  
6 don't bathe. This is in the area of skin diseases;  
7 streptococcus and staphylococcus. Staphylococcus  
8 is on your skin. It's colonizing 15% of our nasal  
9 cavity. It is outside of you, it's outside of your  
10 nasal cavity which is little bit separate, but once  
11 it enters you or your cut, then you have a staph  
12 infection. Well, we're already kinda use to this.  
13 We live in the tropics except in the last 10 years  
14 staphylococcus has become highly, highly drug  
15 resistant. This is MRSA, methicillin-resistant  
16 staph aureus. Initially it was confined to the  
17 hospitals. People who abuse the antibiotics, you  
18 get antibiotic resistance. But 80% of our MRSA now  
19 is community acquired. This is the one hear about  
20 the Oakland Raiders. They were doing football  
21 practice, they push each other and all this staph  
22 is, but it was MRSA. This is the one that shut  
23 down the schools in Virginia; shut down the school,  
24 wiped down every desk. It's not just staph, it's  
25 methicilin-resistant staph. I mean that's a whole  
26 different game here. We're at a different level.  
27 So this is not like before. Staph, the guys, if  
28 you got MRSA it's hard to treat but how do you

1 prevent that? Bathing. Simple as that, bathing  
2 with soap and water and frequent bathing,  
3 especially in warm climates like the tropics.  
4 Staph, kinda ubiquitous, and the more you bathe the  
5 better. So this is not of the water but it's of  
6 decrease use of the water, ok. So, essentially I  
7 just kinda want to stop there. I guess, open it  
8 for questions, so you have 2 diseases possibly of  
9 the water, free living amoeba, maybe leptospirosis.  
10 You have one disease which is, 2 diseases, a  
11 breeding site, more mosquitoes, stink water breeds  
12 mosquitoes. Dengue and for sure culex which is  
13 West Nile but West Nile isn't here yet. Then you  
14 have one disease from not having enough water to  
15 use and that's staph, skin diseases, streptococcus.  
16 Hygiene, this is a hygiene. And I'll be happy to  
17 answer any questions if you have and I'll just end  
18 my presentation.

19 MEMBER GERBIG: Doctor, what, what do you consider,  
20 let's say Maui, probably the most, that we're the  
21 most vulnerable to seeing in, say increases in any  
22 of these diseases?

23 DR. PANG: West Nile. We have been West Nile free  
24 for the last 3 years while California has exploded.  
25 We look at California 'cause we think the plane is  
26 gonna bring the mosquito on the cargo. Once we get  
27 West Nile, not only is it, if you look at the  
28 counts of the U.S., say, how bad was it? That's

1 pretty bad. But the question for us has always  
2 been will West Nile behave differently on Maui  
3 because we never have a cold period where our  
4 mosquitoes tone down whereas the mainland does.  
5 None the less, we're trying to keep an open mind.  
6 One of my workers, PhD organic chemist, he pulls  
7 articles from Jamaica and it turns out the birds  
8 seem to have been infected with West Nile in  
9 Jamaica and yet they never saw a human explosion.  
10 They never saw a massive bird die-offs. So, there  
11 is some thing at least in Jamaica that perhaps West  
12 Nile wasn't explosive? Now, if you're gonna give  
13 me that argument I'm gonna yeah, well maybe it is  
14 explosive and we're not Jamaica. We're not sure.  
15 But whatever it is, whatever comes, very bad  
16 disease or mild disease, I'm sure I cannot  
17 eradicate West Nile because we cannot contain all  
18 birds.

19 MEMBER GERBIG: Is there, there hasn't been any  
20 birds here, have they found any, any birds here?

21 DR. PANG: We have been monitoring regularly at the  
22 airport 'cause that's where we thought it would  
23 come in. For the last 3 years we'd catch birds,  
24 bleed 'em, check, none. But we do 30 a week.

25 MEMBER GERBIG: Any other islands?

26 DR. PANG: Huh?

27 MEMBER GERBIG: Any other islands?



- 1 DR. PANG: Oahu is doing it, none. Kauai started  
2 doing it and because of our cuts in budget that is  
3 this week on the table to be slashed. And we also  
4 capture mosquitoes near the airport to check them  
5 for West Nile. But it's quite phenomenal we don't  
6 have it yet. We are targeting the airport but if  
7 you wanna bet, how you know it's gonna come in the  
8 airport. It could be on any bird whenever, to  
9 anywhere.
- 10 MEMBER GERBIG: I used to work in sugar you know  
11 that.
- 12 DR. PANG: Yeah.
- 13 MEMBER GERBIG: But we were always monitoring  
14 mosquitoes...
- 15 DR. PANG: Yes.
- 16 MEMBER GERBIG: But that was for typhoid? What was  
17 it? We were always, that was for typhoid.
- 18 DR. PANG: What was the year, what was the year?
- 19 MEMBER GERBIG: In the 80's.
- 20 DR. PANG: Aedes.
- 21 MEMBER GERBIG: Seventies.
- 22 DR. PANG: That one we were looking for aedes for  
23 the vector...
- 24 MEMBER GERBIG: Vector, yeah.
- 25 DR. PANG: The vector of dengue and yellow fever.
- 26 MEMBER GERBIG: Yellow, oh.

1 DR. PANG: In those days we were worried about  
2 yellow fever. But we saw plenty of culex, the  
3 night biter. Remember the airport used to horrid?  
4 MEMBER GERBIG: Yeah.  
5 DR. PANG: That was culex. HC&S shut that down.  
6 MEMBER GERBIG: The count was high.  
7 DR. PANG: Yes, but that's just a focus that we  
8 thought it would come in through. But if you tell  
9 me where's the most mosquitoey place on the island,  
10 guarantee you it's Nahiku. Aedes and culex and  
11 all, when we did the dengue surveys out there,  
12 Nahiku was off the chart. But anyway.  
13 CHAIR HOWDEN: Well, the first recorded case of  
14 dengue came, was Bruce Stoner right, from lower  
15 Nahiku.  
16 DR. PANG: Yes. Try not to mention names.  
17 CHAIR HOWDEN: Oh, I'm sorry..  
18 DR. PANG: But it was in Nahiku, correct.  
19 CHAIR HOWDEN: Yeah, that was in the newspapers so.  
20 DR. PANG: Correct.  
21 CHAIR HOWDEN: Yeah. Did you see this as a public  
22 health, potentially a public health problem?  
23 DR. PANG: It wasn't so bad until I found out that  
24 there were users of the water who were kind of,  
25 there was some recreational like swimming and  
26 swimming everyday, well, and I was wondering well,  
27 how, how, how gross does it have to be 'til you  
28 stop using it. Then there were users of the water

1 who claim they were filling their reservoirs to  
2 bathe and they were gonna have to haul water and I  
3 understand you can haul water to drink 'cause  
4 that's that, not that much water but doing to haul  
5 water to bathe. Anything that restricts bathing or  
6 reduces bathing in the tropics is not good, ok. If  
7 I had my druthers, I would bathe in non-stream  
8 water, but you don't have that and you have the  
9 stream, oh, soap and water and bathing frequently  
10 is better than not doing that. And then if you  
11 say, can't they just bathe in the ocean? Hey, the  
12 ocean's pretty clean to bathe in, ok. But I'm  
13 gonna have soap and water, you know we do that for  
14 the homeless. We give them biodegradable soap,  
15 point them to the ocean and have them bathe in the  
16 ocean, ok. But that's not how some of these guys  
17 were living, you know Skippy Hao's group. They  
18 kinda piped in water and all. So, I, if I had my  
19 druthers, try not to divert water from where people  
20 use and live and recreation and all. You wanna  
21 divert from an empty stream bed, that's ok with me  
22 but environmentalist might have other issues. So I  
23 try to protect the places or let flow the places  
24 that have people.

25 CHAIR HOWDEN: Well, according to USGS..

26 DR. PANG: Yeah.

27 CHAIR HOWDEN: Reports on Nahiku..

28 DR. PANG: Yes.

1 CHAIR HOWDEN: That it's essentially the, all the  
2 water table is stream fed from Makapipi...

3 DR. PANG: Yes.

4 CHAIR HOWDEN: And yet we're pulling not only,  
5 that's the first diversion right for, for EMI...

6 DR. PANG: Yes.

7 CHAIR HOWDEN: But you also have the Kuhiwa Well  
8 there, Betsill Brothers' Well there, which seem to  
9 affect water tables throughout, not only stream  
10 flows but water tables throughout the ahupua'a of  
11 Nahiku. And would seem to have adverse affects on  
12 the ecology of, of Nahiku and therefore on the  
13 people who live there.

14 DR. PANG: See, I don't know the interconnections  
15 and I don't know how you would prove that if you  
16 shut off these polls that the water table will rise  
17 and the people like Skippy's group, oh, I said not  
18 to mention names, would have more water again. I  
19 don't know the connections and I don't know the lag  
20 time but we did talk to the people who are using  
21 it. What would you need to prove that their's  
22 doesn't you? They said shut off the, the (in)take  
23 and if we still don't have water then we will claim  
24 that it's just from lack of rain. And we said,  
25 well how long? They said a year. Now, I wouldn't  
26 know how long but they said a year. Don't take  
27 water. If our water doesn't replenish in a year,  
28 it's not your fault then. Oh, ok. I get the idea.

1 Meanwhile, they're gonna try to truck in water to  
2 bathe. I mean, bathe in the ocean but you know  
3 with the homeless, last time they were camped at  
4 the harbor and we told them to bathe in the ocean.  
5 They bathed in it whether it was rough or calm. I  
6 was scared taking kids to bathe in the ocean when  
7 it's so rough. I won't do that.

8 MEMBER GERBIG: What about drinking with giardia?  
9 Do we have any, found any of that here?

10 DR. PANG: Yes. Oh yeah. We, we do have giardia.  
11 It's in fresh water and it goes, and is a parasite  
12 but I'm not gonna talk about that because I don't  
13 know if it goes up or down with the water flow.  
14 You know, 'cause e. coli and..

15 MEMBER GERBIG: But it is present? It is, it is  
16 found..

17 DR. PANG: Oh yeah. Oh yeah, we do have giardia  
18 and that's also in other animals too, so hard to  
19 control.

20 CHAIR HOWDEN: Mr. Hoxie, you ran EMI for 8 years,  
21 right? What, what proportion of the ditch water  
22 comes from Makapipi, does being, did you know that  
23 off-hand?

24 MEMBER HOXIE: No, I don't.

25 CHAIR HOWDEN: Ok.

26 MEMBER HOXIE: No, I don't.

27 CHAIR HOWDEN: Will you look into that for us?

1 DR. PANG: They took me to look at their diversion  
2 sites. And they took me to the most, if you look  
3 at the Nahiku system, you know they tried to show  
4 me the, the, the, the well and this and this and  
5 this that feed the ahupua'a. They took me to the  
6 most downstream site to say that we believe that  
7 all this water you see belongs in the Nahiku  
8 system. To me, I estimate that at 3 million  
9 gallons. Just my crude estimate.

10 CHAIR HOWDEN: Yeah.

11 DR. PANG: But, and I can't remember the name of  
12 that site. It begins with a W and they can take  
13 you there too. It's where the watercress grows. I  
14 mean it's about 3 million.

15 MEMBER GERBIG: Is that, is that a continuous flow  
16 on your estimate?

17 DR. PANG: Yes.

18 MEMBER GERBIG: Daily?

19 DR. PANG: Yes. Yeah, I was calculating per day.  
20 Now if they say, well, stop that and let's see how  
21 quickly the Nahiku-Makapipi restores and that,  
22 Skippy's place, 'cause I can't remember the name.  
23 Ualena?

24 CHAIR HOWDEN: Ulaino?

25 DR. PANG: Ulaino.

26 CHAIR HOWDEN: Yeah.

27 DR. PANG: I don't know the lag phase. The last  
28 time we let Makapipi flow because of dengue, like 2

1 weeks for the water to flow out at the mouth  
2 because it had to fill all these underground  
3 capacitors so, it was kinda hard to prove what  
4 causes what.

5 MR. KUSHI: Mr. Chair?

6 DR. PANG: Ok?

7 CHAIR HOWDEN: Yes.

8 MR. KUSHI: Mr. Chair, if I may. Dr. Pang, thanks  
9 for being here but are you, based on what you said,  
10 are you saying or suggesting that for East Maui  
11 anyway...

12 DR. PANG: Yeah.

13 MR. KUSHI: That if they had these streams at  
14 continuous daily flow, no stagnant pools, that  
15 these various diseases would go away or be  
16 minimized?

17 DR. PANG: It would be less but the dengue vector  
18 likes to breed in vegetation along the stream side.  
19 So if you said well, how much? I'll guess maybe  
20 10% less or 10% chance less of recurring. The  
21 culex, the other one, the West Nile, it doesn't  
22 breed so much in deep vegetation and so I think, it  
23 breeds in pools. So, I'll guess you know, maybe in  
24 the Nahiku system, 50% less chance, I'll just guess  
25 50%. But we don't have West Nile yet.

26 MR. KUSHI: Ok.

1 DR. PANG: I mean, it'll be less and if I had my  
2 druthers, try to protect the areas where people use  
3 and live.

4 MR. KUSHI: Ok, ah...

5 DR. PANG: At the expense of others maybe.

6 MR. KUSHI: Yeah. No, it affects the, the  
7 determination against all the in-stream flow  
8 standards...

9 DR. PANG: Yes.

10 MR. KUSHI: That the government will eventually  
11 allot, right.

12 DR. PANG: Yes.

13 MR. KUSHI: Now, has your department testified  
14 before the, either the Commission on Water  
15 Resources or the land board about these concerns?

16 DR. PANG: I think Chiyome Fukino, she is on the  
17 Water Commission, eh?

18 CHAIR HOWDEN: Yes, she is.

19 DR. PANG: Yeah, but when, whoever gives testimony,  
20 they're gonna have to say, well, no harm has been  
21 shown or no one has seen a rise in lepto. Have you  
22 looked and seen the opposite? Just, a lot of times  
23 we don't study it so we just say, well, we didn't  
24 see a rise in lepto, did you look? If you looked  
25 and didn't see a rise that's very different than no  
26 rise was seen 'cause we didn't look. Guarantee we  
27 didn't look for lepto.

28 MR. KUSHI: Mr. Chair.



1 DR. PANG: I wrote the paper in 86...

2 MR. KUSHI: Another question, since we have you  
3 here. It's not on the subject but this may be  
4 relevant. Stagnant water diseases potential, what  
5 about catchment systems? Does it affect...

6 DR. PANG: Catchment systems. Ok, we know at least  
7 for leptospirosis on the catchment system and I think  
8 recently the rat lung disease. We know a lot of it  
9 from the Big Island 'cause those guys, catchment  
10 system. You know, leptospirosis has been found in  
11 catchment systems because of rats going up and  
12 urinating; the slugs crawling up, for rat lung.  
13 But are you asking to fill the catchment system  
14 from the flow of the stream or just catch rain?

15 MR. KUSHI: Well, see the Department, County is not  
16 involved with catchment...

17 DR. PANG: Ok.

18 MR. KUSHI: Systems.

19 DR. PANG: Right.

20 MR. KUSHI: It's your Department of Health.

21 DR. PANG: Right, yes.

22 MR. KUSHI: As long as it, the water from, for the  
23 system doesn't come from our system...

24 DR. PANG: Yes.

25 MR. KUSHI: We have no jurisdiction.

26 DR. PANG: Correct.

27 MR. KUSHI: So, they can either take it from the  
28 stream or basically rainfall, right?

1 DR. PANG: Yes.

2 MR. KUSHI: But they, they're stagnant.

3 DR. PANG: Yes, they're standing and they're  
4 covered. But for example, the free living amoeba,  
5 if it's covered, it likes, at least in Texas, warm  
6 sunlit pools. So that's number one, cover it.  
7 Number 2, you're supposed to, the recommendation,  
8 even though no body had jurisdiction on the Big  
9 Island, with the screen off your catchment system,  
10 keep those rats out of your system; and 3, lately  
11 in the Pahoia area, the slugs were carrying rat lung  
12 disease, crawling up all over the system looking  
13 for water. So, it's true, we don't like to give  
14 recommendations 'cause it's not our kuleana. But  
15 if they're going to do it, I know what  
16 recommendations to make. Catchment systems can be  
17 protected pretty well against mosquitoes, against  
18 free living amoeba, against lepto, and then you got  
19 water to bathe with, ok. But like you said,  
20 everyone's afraid to make a recommendation because  
21 we don't monitor and put in the rules.

22 MR. KUSHI: That's why the Board, the Water  
23 Department doesn't get involved with catchment  
24 systems.

25 DR. PANG: But you're right. I mean, that's a  
26 serious option and most places in world that have  
27 to do it, do it. And if you don't do it, I should,

1 I kinda know the recommendations what to do with  
2 it.

3 MR. KUSHI: Thank you.

4 DR. PANG: Ok.

5 CHAIR HOWDEN: Any further questions from the  
6 Board?

7 DR. PANG: Ok.

8 CHAIR HOWDEN: Thank you so much, Dr. Pang.

9 DR. PANG: Thank you.

10 MEMBER GERBIG: Thank you, thank you very much.

11 CHAIR HOWDEN: Ok, we're gonna take a 3 minute  
12 intermission and then we'll hear the Davis appeal.  
13 Thank you.

14 (The regular meeting is recessed then resumes after  
15 the testimony on Appeal No. 08-03 ends.)

16 MR. DAVIS: Are you gonna talk about any of these  
17 other subjects? Other Business?

18 CHAIR HOWDEN: I don't know where we're gonna go  
19 with this.

20 MR. DAVIS: Waiale Treatment Plant and the  
21 Definition of Agriculture?

22 CHAIR HOWDEN: I don't think we have time for  
23 Waiale. I think we'll just see where we wanna go.

24 DIRECTOR ENG: Yeah, I'd like to talk about the  
25 Upcountry water situation.

26 CHAIR HOWDEN: Ok.

1 DIRECTOR ENG: And then also I'd like to give  
2 something real brief about the Water Use and  
3 Development Plan...

4 CHAIR HOWDEN: Oh, yes.

5 DIRECTOR ENG: That will be coming to the Board  
6 that we just...

7 CHAIR HOWDEN: Yes, sure. I mean you're welcome  
8 to...

9 MR. DAVIS: It's interesting, the doctor's, the  
10 medical doctor's stuff about, was very interesting.

11 CHAIR HOWDEN: Yeah, we try to keep it  
12 entertaining.

13 MR. DAVIS: Well, I don't know but turned out all  
14 right, I liked it.

15 CHAIR HOWDEN: ...the Council's Water Resources  
16 Committee and Director Eng would like to address  
17 that in terms of the Water Use and Development Plan  
18 which will be coming to the Board.

19 DIRECTOR ENG: Yeah, I think, thank you. I guess  
20 Carl Freedman had given a short presentation  
21 recently, an update of his, basically the Central  
22 Maui plan.

23 CHAIR HOWDEN: Yes.

24 DIRECTOR ENG: There are several plans, Upcountry,  
25 East Maui, West Maui, Molokai and Lanai. And the  
26 Central Maui plan we were informed was ready to be,  
27 be presented to, 'cause it requires the current  
28 Water Use and Development Plan was last adopted,

1 ordinance, by the Council in 1990, so this new plan  
2 will really be amending, making an amendment to  
3 that ordinance. And I made a copy of a, a certain,  
4 copy for all you folks taken out of the Maui County  
5 Code. Pass out a few that way and I'll keep a copy  
6 for myself. There's plenty. This is Chapter 14.02  
7 of the Maui County Code regarding the Water Use and  
8 Development Plan. If you look at down at the  
9 bottom, Amendment and this 14.02.040b; so an  
10 amendment to the plan proposed by the council,  
11 director or any agency, in this case the  
12 Department, shall be referred to the Board of Water  
13 Supply for its review and recommendation. The  
14 Board shall hold appropriate public hearings and  
15 that's gonna be something your folks will need to  
16 put on the agenda and start planning for it, on the  
17 proposed revisions or amendments. And then shall  
18 transmit the proposed revisions or amendments with  
19 it's findings of recommendations to the Council.  
20 So we weren't really aware of this step in which  
21 the Board now has to, thank you, review but  
22 particularly hold public hearings. And I think  
23 that's something you may want to put on your  
24 agenda.

25 MEMBER HOXIE: So, that's for this?

26 DIRECTOR ENG: Yeah. In fact, what date do have  
27 there, John?

28 MEMBER HOXIE: March 2<sup>nd</sup>.

1 DIRECTOR ENG: Ok, there, there's a latest  
2 revision, minor revisions made by Carl. So,  
3 that'll be distributed and I'll distribute it to  
4 the Board.

5 CHAIR HOWDEN: Great.

6 DIRECTOR ENG: So, that should be coming your way  
7 real soon.

8 CHAIR HOWDEN: So that revelation in Water  
9 Resources is a revelation. I believe though, all  
10 of us, so we need to prepare for a public meeting,  
11 public hearings. Is it just one hearing or more?

12 DIRECTOR ENG: I think it's something you may want  
13 to discuss, you know, because of the vast area, the  
14 Central Maui system includes South Maui as well as  
15 the Central area, Kuau, Waihe'e. You may want to  
16 hold 2 meetings for convenience purposes.

17 CHAIR HOWDEN: I think it would make sense to have  
18 one central somewhere, Kahului-Wailuku, and  
19 probably one at Kihei-Wailea. When, when do we  
20 need to do that?

21 DIRECTOR ENG: Mr. Kushi, was there a time-frame,  
22 didn't, yes, in yesterday's Water Resources  
23 Committee meeting, I overheard the chair indicate  
24 he was hoping within 90 days your recommendations  
25 would be forwarded to the committee, but that's  
26 nowhere in writing this 90-day timeframe. The only  
27 thing I see is that in the Council has 45 days to  
28 act on it.

1 MR. KUSHI: Yeah, the clock really starts to tick  
2 when after you do your thing, you submit it to the  
3 Council.  
4 DIRECTOR ENG: Right.  
5 MR. KUSHI: Then they're under a timeframe.  
6 DIRECTOR ENG: Yeah, 45 days.  
7 MR. KUSHI: You can take as long as you want but  
8 apparently you want to get going.  
9 MEMBER HOXIE: So, so when, when does this final  
10 get done and submitted to..  
11 DIRECTOR ENG: Ok, it'll be eventually submitted to  
12 the State Water Commission. Then after your  
13 recommendations to the Council then they'll have to  
14 approve it basically.  
15 MR. KUSHI: Yeah.  
16 DIRECTOR ENG: And therefore amend a portion of the  
17 current ordinance I guess.  
18 MR. KUSHI: Right, and then we send it to the State  
19 Commission. Now, what happened at, happens at the  
20 State Commission level I really don't know.  
21 DIRECTOR ENG: None of us really know because..  
22 MR. KUSHI: Yeah.  
23 DIRECTOR ENG: All, all the Counties are doing  
24 their Water Use Development plans. And they're all  
25 different formats too. We're actually doing it in  
26 accordance with what the Water Commission had  
27 recommended and their guidelines. And that's why  
28 maybe ours are a bit more complicated than what,

1 how the other counties have tackled it. But they  
2 still have another, as I understand it, the number  
3 of state plans. There was a, last year the Water  
4 Resources Protection plan, I think the Water  
5 Commission had completed. There's a Water Quality  
6 Plan that the Department of Health's working on; a  
7 State Water Projects plan, I think DLNR is working  
8 on. There's a number of plans. And at some point  
9 the Water Commission will bring all, I think all 5  
10 plans, which include the 4 plans of the counties so  
11 really there's like 9 plans and then I guess  
12 approve them as, as their overall State Water Plan.  
13 So it's kind of a new ballgame for everyone. So,  
14 there's no expert in this area right now. We could  
15 be if we chose to but.

16 CHAIR HOWDEN: Ok, just for us to be aware of this  
17 and..

18 MR. KUSHI: You may wanna..

19 CHAIR HOWDEN: to plan it.

20 MR. KUSHI: You may wanna schedule this as an  
21 agenda item for the next meeting.

22 CHAIR HOWDEN: Ok.

23 MR. KUSHI: I believe Mike Victorino might be  
24 coming down to speak, speak to us about it. And,  
25 and maybe at the next meeting then we can actually  
26 plan for these hearings and a timetable.

27 CHAIR HOWDEN: Ok, great.



1 MR. KUSHI: So we're talk, and, and, and I envision  
2 this, Mr. Chair, is that first of all  
3 unfortunately, have these public hearings late  
4 afternoon or at night. And then have 2, like Jeff  
5 said, 2, one 2 days apart. One in Central, one in  
6 South Maui. And then, no action at these public  
7 hearings. It's just a public, to hear the public.  
8 Then come back, come back to another meeting and  
9 then do your recommendations and findings. And  
10 then send it out. So, and again you don't have to,  
11 you're authorized to, to hold special meetings, not  
12 only once a month. So this might be overtime for  
13 all of you.

14 CHAIR HOWDEN: And then of course, there's the  
15 Upcountry plan. It's coming and there will be  
16 other plans as well.

17 DIRECTOR ENG: Yeah, the Upcountry plan is near  
18 completion so we'll see that in the summer. The  
19 other ones are, it will take a bit further. West  
20 Maui just started about a year ago, Molokai as  
21 well.

22 CHAIR HOWDEN: How about Lana'i?

23 DIRECTOR ENG: That one is very near completion.  
24 That's a special one 'cause worked on for 18 years  
25 I believe, so.

26 CHAIR HOWDEN: Oh, my god.

1 DIRECTOR ENG: So, yeah there's always some,  
2 something for which we've been really trying to  
3 push that one.

4 CHAIR HOWDEN: So, we'll get to see the county on  
5 that one.

6 DIRECTOR ENG: But this, the system..

7 CHAIR HOWDEN: At least Upcountry.

8 DIRECTOR ENG: Yeah, and Central Maui one is gonna  
9 be, could be controversial. There's so many  
10 different strategies and that includes East Maui  
11 plan, Na Wai Eha water, de-sal; so I think we might  
12 get the most testifiers ever probably at the public  
13 hearings.

14 CHAIR HOWDEN: So...

15 DIRECTOR ENG: I'd like to talk about the Upcountry  
16 situation, because we meet only monthly, hoping  
17 maybe we could kinda come to some kind of agreement  
18 decision or whatever you want to go. What day is  
19 that? I'll take one of those. Oh, thank you.

20 MS. HAYASHIDA: Just came this morning, hot off the  
21 presses.

22 DIRECTOR ENG: I don't mind passing it out that  
23 way.

24 MEMBER YAMAMURA: It's been raining in Hana.

25 DIRECTOR ENG: The Upcountry area as we know, we're  
26 getting rain and then all of sudden it shut down  
27 really suddenly in May. These past few days we've  
28 had something in, and some water in, in the

1 watershed but we don't know how long that's gonna  
2 last. We have been, we are planning to make a  
3 decision to start pumping to the Upper Kula system  
4 very shortly. Now, right now we seem to have,  
5 we're hanging in there with about 33 million  
6 gallons at Kahakapao. But it's really time for us  
7 to make a call. You'll probably see a press  
8 release soon informing the Upper Kula customers  
9 that we are, basically it's gonna be converting to  
10 rather than from chloramines to chlorine as a  
11 disinfection. And since chlorine is used at the  
12 Lower Kula system you know that we're pumping water  
13 up.

14 CHAIR HOWDEN: And, and would you use that  
15 configuration where Olinda's supplied by the Olinda  
16 plant..

17 DIRECTOR ENG: Yeah, we keeping it up there.

18 CHAIR HOWDEN: And everything else on that other  
19 side goes..

20 DIRECTOR ENG: Pumped up. Yeah.

21 CHAIR HOWDEN: Ok.

22 DIRECTOR ENG: Exactly.

23 CHAIR HOWDEN: Ok.

24 DIRECTOR ENG: Yeah. But just even looking at, we,  
25 we, we talked about the triggers that we need, that  
26 we follow for our drought watch guidelines and  
27 there's certain triggers that we look at,  
28 reservoirs capacities, demands versus in-flows from

1 the watershed into our plants, forecasts for rain,  
2 the ditch levels in the Wailoa Ditch. So we look  
3 at like 7 different triggers. We need to really  
4 meet 3 of those in order to call a drought watch.

5 CHAIR HOWDEN: Uh huh.

6 DIRECTOR ENG: And minimally we have 4. In fact, I  
7 could say we have 5 or 6 because on top of this  
8 we've been running the Pookela Well to supplement.

9 CHAIR HOWDEN: Uh huh.

10 DIRECTOR ENG: So, we're in a position now to, to  
11 request a 5%, I would recommend like a 5% voluntary  
12 cut-back for Upcountry customers, like we do just  
13 about every year. And, as before we would exempt  
14 the ag customers, the farmers and usually our  
15 experience is that the Upcountry customers have  
16 responded very well to our requests. In fact  
17 they're really pretty much ongoing, conserving  
18 water. But this is just really to bring attention  
19 to the situation. We're getting less rain. We're  
20 into the summer now. And again, for my purposes we  
21 only meet once a month maybe a delay 'til next  
22 month will be far too late. So, I would like to  
23 ask and recommend if the Board would like to  
24 discuss the possibility of a voluntary 5% cut-back  
25 for our Upcountry customers.

26 MEMBER YAMAMURA: I'm in favor of that.

27 CHAIR HOWDEN: Ok.

28 MEMBER HOXIE: Yeah, so am I.

- 1 CHAIR HOWDEN: Patty?
- 2 MEMBER EASON: Yes.
- 3 CHAIR HOWDEN: Might seem distant living in Hana  
4 you know so, the smell of ginger everywhere. So,  
5 might we have a motion?
- 6 MEMBER HOXIE: I so move.
- 7 MEMBER YAMAMURA: Second.
- 8 CHAIR HOWDEN: Ok. Those in favor?  
9 (a chorus of ayes)
- 10 CHAIR HOWDEN: Ok.
- 11 DIRECTOR ENG: Thank you very much.
- 12 CHAIR HOWDEN: You got it.
- 13 MR. KUSHI: Ok, wait, wait, wait, wait. You're  
14 doing this just as a board action to, to recommend  
15 a 5% voluntary cut-back.
- 16 CHAIR HOWDEN: Yes.
- 17 DIRECTOR ENG: Yes. That'll be a recommendation to  
18 the...
- 19 MR. KUSHI: So, you're not recommend, recommending  
20 the Director to declare a drought?
- 21 CHAIR HOWDEN: No.
- 22 MR. KUSHI: Ok.
- 23 CHAIR HOWDEN: No, that'll be next month.
- 24 MR. KUSHI: 'Cause again, the, the procedures for  
25 drought is through an ordinance now. And it's not  
26 published in this agenda so.
- 27 CHAIR HOWDEN: Ok.
- 28 MR. KUSHI: So, it's just a voluntary cut-back.

1 MEMBER HOXIE: So what we're saying is it's dry..

2 MR. KUSHI: Dry.

3 MEMBER HOXIE: And we would just want people to pay  
4 attention to their water use.

5 CHAIR HOWDEN: But we should, Ed, we should put  
6 that on as an agenda item for next..

7 MR. KUSHI: Maybe next time and go through the  
8 whole 9 yards, do it official.

9 MEMBER HOXIE: Yeah, yeah.

10 CHAIR HOWDEN: Ok.

11 DIRECTOR ENG: Ok.

12 MR. KUSHI: Ok.

13 CHAIR HOWDEN: Jeff, anything else?

14 DIRECTOR ENG: No, that's all the urgent things  
15 that I had.

16 CHAIR HOWDEN: And we can put off your response to  
17 John Blumer-Buell for next month?

18 DIRECTOR ENG: Sure, sure.

19 CHAIR HOWDEN: Ok. Anything else, guys? Ok.

20 Close the meeting. Thank you.

21

22 (The meeting adjourned at 1:06 p.m.)

23

24

25

26

27

28

Prepared and submitted by:

---

Gaye Hayashida  
Commission Support Clerk

Approved on: \_\_\_\_\_