

County of Maui Water
Supply

**BOARD OF WATER SUPPLY
COUNTY OF MAUI
OPERATIONAL REVIEW & EVALUATION COMMITTEE**

Held at the Kahului Baseyard, 2nd floor, 614 Palapala Drive, Kahului, Maui, Hawaii, commencing at 1:30 p.m. on July 17, 2001.

REPORTED BY: LYNANN NICELY, RPR/RMR/CSR #354
IWADO COURT REPORTERS, INC.

A P P E A R A N C E S

COMMITTEE MEMBERS:

Jonathan Starr, Chairman
Orlando Tagorda

BOARD MEMBERS:

Kent Hiranaga
Clark Hashimoto

STAFF PRESENT:

David Craddick, Director
Howard Fukushima, Corporation Counsel
Fran Nago, Board Secretary

CHAIRMAN STARR: I would like to call to order the committee meeting of the Board of Water Supply committee on operational review and evaluations. I'm board member Jonathan Starr. I have committee member Orlando Tagorda and board members Kent Hiranaga and Clark Hashimoto. And if it's okay with all the members present, I'm going to ask all of us to act together as voting members of the committee today so

that --

MR. FUKUSHIMA: If I may, Mr. Chairman, Mr. Hiranaga and Mr. Hashimoto are not members of this committee and I don't believe that they should participate in decision-making in this committee. They may participate in discussions, but the decision-making should come from the three members who are appointed to this committee.

CHAIRMAN STARR: I'll follow your advice, but I certainly do want to hear from them and I know the two members present will certainly take their opinions to heart as well because I feel that, you know, we've all -- we're all trying to work together and come to a consensus on an important matter.

Anyway, the matter before us is a discussion and possible recommendation that we could make to the full board and that's regarding options for creating additional source for the upcountry system. And we have been on a site inspection today of a number of different locations that would provide some option for creating additional source.

Before we proceed with discussion, I would like to allow any public testimony that exists to be heard. We have along with the board members, we have water director David Craddick, we have corporation counsel Howard Fukushima, we have from the public Elliott Krash representing Kula Community Association, Fran Nago, we have videographer Dan, and also of course stenographer Lynann.

And Elliott, you're a member of the public. Do you have any testimony?

MS. KRASH: I'm not here to give testimony, just to listen and be educated.

CHAIRMAN STARR: And so I guess we have no public testimony. Anyway, members, I would like to hear what comments you might have regarding what we can do. I think we're all agreed that we want to try to make an attempt to move forward to get the upcountry system made adequate. But what comments and

suggestions do we have? Orlando?

MR. TAGORDA: Mr. Chair, if I may, based on our site inspection this morning, we noticed that -- I noticed myself that Kahakapao reservoir, which is located way up in Olinda, is only serving a 2.1 million treatment plant and I see no reason why -- I note it's possible for this water to go down to Piiholo and it looks like it's trapped there. And the Piiholo reservoir is halfway full.

And I don't know, David, if that's a possible thing to do to get more water to Piiholo. Because as I found out, you have a customer up in Upper Kula from Olinda treatment plant that probably cannot use that amount of water stored there right now. So if it's another option for the department or for the board to think of bringing them the Kahakapao water stored there to Piiholo. What do you think?

MR. CRADDICK: Well, it's a short-term solution and I don't know how much you're willing to spend to solve a short-term issue. If that dual line goes in, all the water that we have up there will be able to be used up at that elevation. And we cannot bring the water down untreated because it's further out than the Piiholo treatment plant. So if you just took it straight down the hill -- well, it's not very far off to get it to Piiholo, but that line going in there would be about somewhere between half to three-quarters of a million dollars to put a line in to take the water down. And, you know, for a one-year or two-year solution, it's not -- I don't think it's worthwhile. I mean, you may find otherwise. I know it's in the master plan to have a line in there, but when you need all the water you have up in that system and we currently pump water up there almost on a daily basis, you know, to take water that you have up high and bring it down is -- unless you've got a lot of it, is not a good idea to bring it down just to pump it back up.

MR. TAGORDA: I'm a very strong proponent of drilling an upcountry well, Mr. Chairman, but I want

people who have expertise on this pinpointing the exact location of where to put that well. And if the department and the staff can help the board in getting all this information to us, I would really support the idea of putting up a well upcountry and that will be a new source. And I think it will also serve some future needs upcountry for future developments.

But right now I don't really know, I don't know where we have to put that well. Somebody was telling me between those two tanks at Pookela where we saw, well, if that would be a very suitable place, I'll go along with it. But my question, we budgeted about a million dollars at our 2002 budget for exploratory wells upcountry for upcountry purpose only and my question again is will that be suffice to drill a well, that one million dollars we have, or just for design and things like that, David.

MR. CRADDICK: Well, the Dowling well cost about \$800,000 to drill it and test it. This is another 500 foot elevation higher than that. So I'm sure it's possible -- that's definitely in the neighborhood anyway of what a well would cost at 1,800 foot elevation.

CHAIRMAN STARR: I know my own feeling, and I've felt this for a long time very strongly and I've expressed it earlier, is that we should be drilling at Pookela, that that's the likely place. That's, first of all, the hub of our upcountry system. It's right above Makawao and above Pukalani so water from there can feed right into the existing tank. It's on our existing land. There is electricity. There is a road there. So none of those peripheral infrastructure costs will have to be borne by us.

It's also in a position to pump up a little bit higher to the Olinda tank where the water can be moved laterally to the Kula area. And I know I had had conversations with a number of hydrogeologists, I don't know if any formal studies have been done but I did talk to John Mink and he feels that that would be a very suitable location. And I asked Bill Meyer and he also felt it would be a suitable location.

And you know, I also have the feeling that if we don't drill in that area, that someone else will soon put a large well in the Makawao area. And once they do, it will preclude us from being able to do that and it will benefit their projects and their subdivision, but not so much the community at large and especially those people who have been waiting.

So I know, it's my belief that that would be a good direction to take, but I feel that it's important that we all -- if we're going to take a step, that we all step together. I don't know how other members feel, whether this would be a time to proceed on that, which frankly I feel we should have and could have proceeded a year ago. But it's certainly better to proceed today than a month or six months from now. Or if there is a desire to try to hire consultants for studies or what not.

But my own opinion is that if we did proceed with drilling a well at Pookela tank, we have the money in our budget to do it and in six months or eight months from now, it will be done and then we'll have adequacy up there no matter what the surface systems are doing and we can easily end the upcountry problem in one fell swoop. And that's what we're here for is to make the tough decisions and to be bold and do it.

MR. HASHIMOTO: Can I ask a question about Pookela? Is that a spring, is that a spring that water coming out of the ground?

MR. CRADDICK: No. The water all is pumped up from Kamole weir.

MR. HASHIMOTO: No, but isn't the Awalau --

MR. CRADDICK: I don't know it's as much a spring as it is just a surface water intake. And then there is the Kailili tunnel where some water comes into the tunnel and then Awalau stream itself which is basically the overflow from the Kailili tunnel and whatever stream that is that feeds that tunnel.

MR. HASHIMOTO: So what's the capacity of Awalau? I know we're not using it now, but --

MR. CRADDICK: All I can say is that historically we used it at the rate of about half a million gallons a day. That was in the past. Whether that could have been more with storage -- I know we've looked at the storage requirements of what it would take to get up to a million gallons a day and being able to use it about nine months out of the year and we estimated 50 million gallons of storage is what would be required to do that.

MR. HASHIMOTO: And what is the reason we stopped using Awalau?

MR. CRADDICK: Because it's got fecal coliform in it just naturally. So not having a system to take that out at the time in 1991, the health department said we had to stop using it and we did. And since that time, I think Maui Land & Pine has added in more fields and things like that and started using the water themselves because the land there -- apparently a portion of it is owned by Haleakala Ranch, a portion by EMI, and a portion of it Maui Land & Pine. So those three entities basically divide the water out. Maui Land & Pine has a 2-inch pipe on the bottom, then we have an 8-inch pipe, then they have a 12-inch pipe. And if our 8-inch pipe is running, not very often does the water get up to the 12-inch pipe. So when we're taking water out of there, we take a good portion of it. They have I believe a 10 or 20 million gallon reservoir on their system. And exactly -- our estimate of what they have been using over the years is somewhere around half a million gallons a day also. Now, since we stopped using it, they have jumped up to about a million gallons a day. But still, that seems to be the total capacity of the system is about a million gallons a day.

MR. HASHIMOTO: So if we can clean the water, would we be able to use it again? Who has the rights to the water?

MR. CRADDICK: We do have an agreement to use it and we have the right to use it. And we did purchase the filters at Iao for that purpose to treat that water. That was -- right now on the books, that's what they're shown for is Awalau.

MR. HASHIMOTO: So if we use Awalau, it would be capacity of maybe a million?

MR. CRADDICK: If you put in about a 50 million gallons of storage.

MR. HASHIMOTO: Because I don't know, the well would bring up about close to a million maybe, like Dowling well?

CHAIRMAN STARR: I think that, you know, in the long term we should do Awalau also. But I think that that's -- as David mentioned, it's going to want storage as well, you know, so a reservoir up there. And it's another surface water system, you know. I always felt that the real weakness of the upcountry system, except for Hamakuapoko which we're temporarily borrowing, is all surface water and that's it's weakness. And that by adding another surface water source to it, we're still at the mercy of a short-term drought. Whereas if we were to mix the surface water with the groundwater, which we're doing in effect now by borrowing Hamakuapoko, but at some point we're going to lose Hamakuapoko to the central system. And I know that this year had we not had Hamakuapoko, we probably would have been under restrictions upcountry for a lot of the last year.

So when Hamakuapoko goes to the central system, then unless we have some groundwater to offset the surface water, we'll be susceptible to low rainfall.

MR. HASHIMOTO: So what about the Dowling well? It goes back into the ditch is what I understand? Where does that water go to?

MR. CRADDICK: No, it serves the Haiku area. So the water that went up from Kamole Weir up to Pookela and then went to Haiku no longer does that.

MR. HASHIMOTO: It goes straight down.

MR. CRADDICK: Well, no, it doesn't go to Haiku at all. The Haiku is pretty much 100 percent groundwater now.

CHAIRMAN STARR: Orlando?

MR. TAGORDA: Mr. Chairman, if this committee decided to recommend drilling a well at Pookela, how much water we are expecting to develop from Pookela to be sufficient enough to mitigate the drought upcountry?

MR. CRADDICK: What the capacity of the pump would be?

MR. TAGORDA: Yeah. Can we get 3 million, 4 million up by Pookela?

MR. CRADDICK: No.

MR. TAGORDA: So you're talking about -- I'm only thinking about one well now.

MR. CRADDICK: Yeah.

MR. TAGORDA: We've got one million budgeted. If we're going to numerous wells upcountry, I don't think we have the capacity or the resources to drill those many wells. So when we put up the well Pookela, what would be the reasonable well capacity that we can get from that area?

MR. CRADDICK: Well, I'm going on the basis of the Kapakalua well which is about a million and a half a day. I would not expect any less than that from a well at a similar elevation.

CHAIRMAN STARR: I think if we can drill it for a million dollars and get over a million gallons

-- if we're doing better than a gallon per dollar, that's frankly the least expensive water that we're likely to see developed in Maui County ever again in the future.

MR. CRADDICK: Well, you have more than just your installation costs. You have operating costs also.

CHAIRMAN STARR: Yeah, but I'm just talking about the basic -- a basic cost for -- and that's, you know, the reason it's such a good deal in my own belief is that the tank is there. Usually the tank costs as much as the well. And the electric and the road is there, we own the land. So all of that stuff that, you know -- like in Dowling's well, the well may have cost less than a million bucks, but he put another two million into the tank and all the other infrastructure stuff, where --

MR. CRADDICK: We would have a similar amount, not two million, but another million putting a pump in there and a control station for it.

CHAIRMAN STARR: Yeah, but I mean even beyond that. We don't need to build a tank, we don't need to acquire the land, we don't need to bring in electric or any of that.

MR. TAGORDA: Given all the facts that you just mentioned, Mr. Chairman, and based on our director's experience with all that wells at Iao like [inaudible], Kanoa, how can we proceed expeditiously in getting that well by Pookela?

MR. CRADDICK: Well, I suppose you can just make the decision to do that. But I would ask you if that's the best decision, not knowing that there is other sites similar to what you've talked about where there is electricity there, tanks there, transmission system. There is other sites like that.

MR. TAGORDA: Are there other options or

alternate places that you probably would like to recommend to the board?

MR. CRADDICK: Well, I think --

MR. TAGORDA: Aside from Pookela.

MR. CRADDICK: I think any site that we pick, we're bound by the DBCP agreement that we have, any site that we pick.

MR. TAGORDA: It's going up that Maui Land & Pine place, we don't want to encounter DBCP so it's got to be at a higher elevation.

MR. CRADDICK: Well, when you say you don't want to encounter it, if our costs are covered for the DBCP, it doesn't make a difference whether you encounter it or not.

MR. TAGORDA: I don't really want to bring up the DBCP here. I want a place where there will be no contaminants like chemicals of DBCP nature.

MR. CRADDICK: So you want to protect the Dow and Occidental from having to pay the expenses of cleanup.

MR. TAGORDA: No, it's not protecting. I just don't want to be involved with those DBCP --

MR. CRADDICK: Okay, and you're not involved in it. You're not involved in it. The court case is already over.

MR. TAGORDA: So let's look for a very suitable place that you will not find chemicals of DBCP contaminants.

MR. CRADDICK: No matter where we drill, we will not have any chemicals or contaminants because if we find them, they will have to clean it up and they have to pay for it, not us.

MR. TAGORDA: If you go higher than those pineapple fields, you think you still have DBCP?

MR. CRADDICK: It's doubtful, but then again why are you doing that? Are you doing that to protect Dow and Occidental and Shell? And Maui Land & Pine and Brewer?

MR. TAGORDA: I'm protecting the community as a whole, Mr. Craddick.

MR. CRADDICK: But you're not protecting them if you are forcing them to pay a higher cost.

MR. TAGORDA: Okay. Look. It doesn't really matter if Dow or chemicals is going to pay for your operation and cleanup. I think we need to put a clean water to our system.

MR. CRADDICK: It will be clean. You can't put anything but clean water in there. So that's not an option. You don't have an option of putting unclean water in the system.

CHAIRMAN STARR: Clark?

MR. HASHIMOTO: Besides Pookela, what do you think would be good sites?

MR. CRADDICK: Well, we have the DBCP settlement. And to me, I say you pick the best location which is a lower elevation, you give them the option, you let them tell you that you have to move up. Then they have to pay the capital costs and the operating costs to move up, not us.

MR. FUKUSHIMA: But Dave, if I may, Mr. Chairman, the settlement, correct me if I am wrong, is only for the next 30 years.

MR. CRADDICK: That's right.

MR. FUKUSHIMA: And I would presume that whatever source that you want to tap into, that you're looking beyond the 30 years, I would presume.

MR. CRADDICK: Yeah, exactly. That's exactly right. Because after the 30 years and it's cleaned up, you don't have to be bothered with the contaminants anymore. You're not bothered with it. So then you're just faced with the added efficiency that you get by producing water at a lower level and using the higher efficiency pump to pump it up the hill.

CHAIRMAN STARR: If I may, I really agree with Mr. Tagorda in that I would rather not play that game. I would rather go to the place where we're quite sure we're going to get clean and pure water rather than go to drill at some place where we'll get water that is laced with a poison that causes cancer of the testicles but we have the benefit of having a chemical company clean it out. But there is down sides to that. For one thing, you know, we are generating a hazardous waste with the used GAC that gets removed from the contactors and we don't know what the rules for disposing of that are going to be in the future and I would just much rather drill where we're much more likely to find clean and pure water rather than take -- you know, roll the dice that we may be able to make a couple of extra bucks out of the -- by playing the lawsuit. To my mind, I like to take the more direct route toward what we want, which is clean water that people will believe in and will be happy to drink.

MR. HASHIMOTO: You said Mr. Mink and -- can you get it in writing, their recommendation or -- I know you got it orally, but --

CHAIRMAN STARR: Well, I think that --

MR. HASHIMOTO: So that the board decision would be more sound, I would think.

CHAIRMAN STARR: Perhaps, you know, if we were to have a motion to proceed, it could also involve requesting an opinion from one of them. I'm a little bit loathe to ask an opinion from both of them because they don't particularly get along very well. You know, I don't want to end up -- but either one or, you know, just -- I would be very happy to ask the board chair to pen a letter to ask Mr. Mink whether in his opinion that would be a good site for a well and then predicate our going ahead with it on him saying that he thinks it's a suitable location. Would that --

MR. HASHIMOTO: Yeah, because as a board member, I would like to make a decision based on some expert's opinion.

CHAIRMAN STARR: Would we favor a motion that we proceed -- that we proceed and also -- but also get a letter from say Mr. Mink that he feels that that's a suitable location before actually issuing -- before actually having the board proceed with action?

MR. HIRANAGA: Mr. Chair, may I ask a question? What's the most recent well that was drilled upcountry besides the drill that Dowling drilled?

MR. CRADDICK: Maui Land & Pine at Haliimaile.

MR. HIRANAGA: The most recent drill that was drilled by the County of Maui --

MR. CRADDICK: Hamakuapoko.

MR. HIRANAGA: How about on West Maui, or Iao aquifer, what's the latest, most recent well that was drilled?

MR. CRADDICK: The Waikapu well.

MR. HIRANAGA: And how was that site selected?

MR. CRADDICK: Because Brewer wouldn't let us

go with the site we wanted because of the DBCP case, so we moved it to our site and -- we felt we might have a little better chance of getting out of Iao aquifer if we moved it further south, and they wouldn't let us move ahead on the site because of the DBCP issue, so we moved it to our own well site.

MR. HIRANAGA: So the criteria was because the county owned the land?

MR. CRADDICK: Yeah.

MR. HIRANAGA: And it was in the general vicinity of the aquifer that you wanted to --

MR. CRADDICK: Right, that's right.

MR. HIRANAGA: It would appear to me that if the intent is to drill multiple wells in the future, that you would want some type of a master plan and a study that would indicate or identify the various well sites, prioritize them as to desirability, and create some type of network so that if you have a 10-year plan or a 20-year plan, you're drilling these wells to meet that 20-year plan versus just focusing on one well -- that's kind of my feeling -- unless you're planning to drill only one well in the next 20 years.

CHAIRMAN STARR: I mean, I think that what our -- certainly what we have done in our strategic plan is to call for an upcountry well. And my guess is that one well will be sufficient for a long, long time to come.

MR. CRADDICK: Actually, one well would just take care of existing demand.

CHAIRMAN STARR: My own concern right now is that I think that there is -- that Makawao area, which is the likely area where there is water and there is demand, there is kind of room there for one large well and I would like to see us be the ones who drill it rather than be beat to the punch by someone else which

will preclude us from being able to do that. You know, once someone else drills a large well up there, then we can't.

MR. HIRANAGA: I guess I kind of echo what Clark's concerns are is that I'm not a well expert and to make a decision based on secondhand information or verbal representation would be very difficult for me to vote in favor of such a proposal with the type of money we're talking about. Again, I'm not a well expert, so I need to be convinced that this is the right place to put it.

CHAIRMAN STARR: Go ahead, Dave.

MR. CRADDICK: The thing that Jonathan is talking about, the policy issue of whether you want to get a well that has a higher success of not being contaminated right when you drill it, obviously the higher up you go, the more chance you have of that. But even Pookela is not risk-free. You could see right from the Pookela tank site -- or actually the Maluhia site, which is even higher elevation, right across the way, the pineapple fields freshly plowed. The ones that we passed by when we went up the Piiholo treatment plant, you notice the fields there, well those parallel both the Malahia and Pookela site. So there is some risk even in those sites.

And even if we pick one of those sites, we still have to follow the settlement agreement in the DBCP case. They have the first right of refusal and any well we pick for the next 40 years, they have the right -- that is, if we want them to pay the cleanup costs. If we don't want them to pay the cleanup costs, we don't have to communicate with them and we just take it in the seat of the pants. And that's a policy issue by you guys. Has nothing to do with any consultant or anything like that. If you're going to waive that agreement, then you have that right, I suppose. But what I'm trying to caution you is don't waive that right, it took a long fight to get to this point, and don't summarily waive it simply because you think they might have some expenses in cleaning up the

environment. Because if we don't clean it up, it continues on out to the ocean, the fish pick it up, and I don't know who goes out there fishing eating the fish and whatever they gather up off the ocean out there where that DBCP goes. It's still an environmental problem. If we pick it up and clean it up and treat it properly, I think there is a lot less risk to the environment than just letting it flow out to the ocean, which is what's going to happen if nobody cleans it up.

And where we don't have any expenses or the expenses are already covered or at least on new wells we cover 90 percent of it, I mean, who are you protecting there? Are you protecting our customers or are you protecting Dow and Shell?

MR. TAGORDA: Mr. Chair, if I may, so you're telling us that if we pick up a well site, based on the expert's opinion, not us, do we have to communicate with Dow Chemical?

MR. CRADDICK: Yes.

MR. TAGORDA: And if they said no, you cannot put your well there?

MR. CRADDICK: You can put it there, but the cleanup costs are yours.

CHAIRMAN STARR: As I understand it -- and you know, I would not give away that option. But if we were to drill it at a certain location, we should go to them and say we plan to drill at such-and-such a location and they have 20 days, I believe?

MR. CRADDICK: Yes.

CHAIRMAN STARR: To say go ahead and drill at that location, or no, we would prefer you drill at a higher elevation. And if they say go ahead and drill at that location, then we're protected just in case, which is a good thing. To my mind, that's what it's for. Because if we were to drill and come up with

DBCP, then they would have to treat for it. And you know, if they say drill at a higher location, then they would pay the costs differential to go to a higher location. And I see the merit of that.

I don't really see the merit in drilling where it's likely to have DBCP or even going to them and saying we want to drill where it's likely to be. Which if we were to drill at Kamole Weir, I would say that we're most likely to have it simply because we know that it's at Hamakuapoko and it's at the old Maui High School site.

MR. CRADDICK: But Jonathan, if you believe that, if you believe that, all the more you would say to go to that site because then they will pay for the extra drilling and the extra operational costs. If you believe that -- wholeheartedly you believe that, then they have to cover --

CHAIRMAN STARR: That's where I disagree with you, Mr. Director. I would not pick the one place in the island where they're most likely to find DBCP and then say this is where we want to have our well site for upcountry. I just -- maybe -- to my mind that would be abusing the public trust and --

MR. CRADDICK: How do you know it has it in it? Do we know the Haliimaile well has it in it? Without even checking what the Haliimaile well is, you're going to add an extra million dollars to the cost of putting in a well.

CHAIRMAN STARR: We're going to need the water at 1,500 feet is where we need the water anyway. So my own belief is let's drill at 1,700 feet and the water is where we're going to use it.

MR. CRADDICK: Jonathan, do you understand what I'm saying? When you get the water to the surface, you can run with a much higher efficiency on the ground than you can in a well. Like, for instance, the Haliimaile well is a million gallons a day with a 300 horsepower pump. That's to get it to

the surface at 1,100 feet.

You go to Pookela at 1,800 feet, which is double the height, you're not talking about double the horsepower anymore, you're talking about two and a half to three times the horsepower to get it up to that elevation. So you have much, much higher operating costs because of the loss in efficiency in going up at that high elevation. So it's a lot better to pass that expense on to somebody else rather than us taking it on ourself for the next 40 years or 30 years.

MR. TAGORDA: So what do you prepare the well site, Mr. Craddick?

MR. CRADDICK: I say you go down low and if they want to move it up, let them pay for moving it up. I mean, there is a good chance -- I would certainly find out whether the Haliimaile well is contaminated or not. That would be the first thing I would do. Because if it's not contaminated, the likelihood of a well being contaminated at Kamole Weir is very minimal. We've got the booster pumps there, we've got the tanks there, we've got the transmission there, and those booster pumps operate at 85 percent efficiency, not 60 percent efficiency that the well would operate at. So there that 25 percent extra efficiency is forever pumping costs that you have putting it at a higher elevation.

And I'm not saying, as Kent was saying, the long-term picture you may need more than one well. You may need it up high anyways. Strategically if you want to ace somebody else out and do the well before them, that's certainly strategic thinking there, you know, you may end up having to do the well down low anyways.

But if somebody else is going to pay for the deep well and you get two-thirds of the water at way less than two-thirds of the price, where do you get the most bang for the buck? Let them do the deep well; you do the shallow one.

MR. TAGORDA: I'm already confused.

MR. CRADDICK: Well, you have to understand. The pump that you can have at the surface has a much higher efficiency than these well pumps that go deep down in a hole. It's just higher efficiency. And you take advantage of that by getting the water to the surface quicker and then using the surface pumps to move it up the hill, not move up the hill and then have to bring it up to the surface with the low efficiency pump. Because that extra horsepower that you waste in doing that, you have to pay for it forever. Every time you use that well, you have to -- you pay for it.

MR. TAGORDA: Can you ask Mr. Mink to give us a written explanation why the Pookela site would be a suitable site for the board to drill a well there?

MR. CRADDICK: First of all, we don't have a consultant for that and I doubt if they are going to do that pro bono. You're going to have to pay --

MR. TAGORDA: If we have to pay them, we have to pay them. Instead of just kind of arguing these things here. We're not the expert.

MR. CRADDICK: First of all, Orlando, Maui Land & Pine and Ka Ono Ulu Ranch have hired them. I don't think it's in our interest to get somebody who we would be competing against for a well site.

MR. TAGORDA: Can we get a different consultant and give us a good reason why Pookela would be a good place or not a good place, or you got to go to a lower area. And then get the benefit of all that DBCP is that we have from Dow Chemicals.

CHAIRMAN STARR: We certainly can. I don't know whether that's something that we can do as a committee action, though. I think our ability to act is really to recommend to the board.

I know if we were to proceed with this, what might be best for the committee to make a

recommendation to the board that includes getting the advice of a hydrogeologist so that --

MR. HASHIMOTO: I think if we're going to invest that kind of money, I think it would be worth our while to get a consultant to sort of solidify our decision to drill a well anywhere, I mean, wherever it may be.

CHAIRMAN STARR: How about if we were to take action and were to recommend to the board that we move as expeditiously as possible to drill an upcountry well and we include several -- a couple of possible locations and that we -- I'm trying to think, David, how can we get a hydrogeologist to give us advice on this.

MR. CRADDICK: It's required in the EA process.

CHAIRMAN STARR: Without having to put that through the competitive bid process.

MR. CRADDICK: Well, I think actually the guys are meeting up in the office right now to hire a consultant to get going with the well project because it's in the budget.

And as far as looking at different options, that is part of their job in the EA process. But what I'm telling you here is it's a policy decision of this board, or this board's option, whether they want to in essence protect the cleanup guys that we already have a case against for them to pay the cleanup --

CHAIRMAN STARR: David, I really take offense with that. I take very much offense that by not wanting to drill where it's almost certain to find poison, that you're saying that we're protecting the chemical companies. I take offense with that. And I would recommend that you not proceed on that tact, that you not say that those of us who might not want to drill where we know the water is poisonous are trying to protect the chemical companies.

MR. CRADDICK: Well, again, I'm telling you

that's how the policy decision; however you justify it in your own mind is up to you. That's a policy decision. And if you say this is what we want, that's what that consultant is going to do. He's going to pick a place where it's highly unlikely that you're going to get any contamination and that's your -- I mean --

MR. TAGORDA: That's what I want. I don't want to go --

MR. HIRANAGA: Mr. Chair, I would prefer that we not influence the consultant and allow him to collect a site which he feels has the best source and is logistically placed where the need is. And once he identifies that, then we look at the ramifications of whether there is possible contamination. But we shouldn't be providing him our preferred sites, to me. He should be given a job to select the best site in his opinion for where it's needed and where he thinks the water will be. And then you decide whether this contaminant is going to influence our location or not. But to influence the consultant is kind of defeating the purpose. You want an independent opinion.

MR. HASHIMOTO: I think I kind of agree with Kent. I think we should just give them some ideas of where we want it. But if we tell them that we don't want contamination, then naturally they are going to go higher or they are going to move away from pineapple fields or. You know, like Kent said, he can choose a place and then we can decide whether or not we want it or not.

CHAIRMAN STARR: So in other words, you think we should go in to hire a consultant to tell us.

MR. HIRANAGA: It would help us to make a decision.

MR. CRADDICK: Right now if we get one, that's the scope of work for them. The board does not give them any instructions. That's their scope of work to do. If the board, by policy decision, wants to add

something on to that, which you have the right to do that, you know, it's your prerogative. But again, from the staff side, the recommendation is let the professionals do the job and if you don't like the result, you can always --

CHAIRMAN STARR: How do we get that done as fast as possible and as --

MR. CRADDICK: Well, if we -- I mean, they're meeting now. I would say another 30 days we could probably have a contract with them and get moving.

CHAIRMAN STARR: With who?

MR. CRADDICK: I'm not sure who they're coming up with there, but I think they're meeting on that today. If it's not today, tomorrow.

CHAIRMAN STARR: Who is meeting with who? I'm not clear.

MR. CRADDICK: Our consultant selection committee.

CHAIRMAN STARR: For --

MR. CRADDICK: Any project that we have, they have a consultant selection committee. Usually somebody from fiscal, somebody from engineering, usually George Tengan or myself -- although I've only been in I think on one in umpteen years. And usually whatever district engineer is involved, if the facility is in their district.

CHAIRMAN STARR: And I'm not quite sure of the process, though.

MR. CRADDICK: The process, we have a kind of a scoring sheet of things that we feel that the consultant needs in order to do the job promptly and timely and each one of those persons scores that and the high scorer, we negotiate with him for the best price we can get.

CHAIRMAN STARR: So in other words, they will have -- will they have a name of the next person in that list when we go to the next board meeting?

MR. CRADDICK: What do you mean, next person in that list?

CHAIRMAN STARR: I mean, if the board were to say, okay, hire a consultant immediately to --

MR. CRADDICK: You don't even need to say that. That will happen automatically.

CHAIRMAN STARR: It will?

MR. CRADDICK: Yeah, because it's on the budget.

CHAIRMAN STARR: And this is specifically for this project.

MR. CRADDICK: Right.

CHAIRMAN STARR: And how long will it take to get that awarded to that party?

MR. CRADDICK: It might take -- if we get a selection here in the next day or two, it usually takes a couple weeks negotiating with them to get a price on it. And then it's a matter of getting a contract with them, getting a contract signed, and that can take two to three weeks. So on the order of a month and we have somebody signed up.

CHAIRMAN STARR: And then a few more months for them to --

MR. CRADDICK: Well, they have got to go through the environmental process, so yes, a few more months.

CHAIRMAN STARR: So we're putting this thing behind probably another six months.
I would rather be drilling than consulting for

the next six months, guys, I'll tell you quite honestly, and I think the community would, too. But if you really feel it's important to go through six months of consultation, I'll go along with it. But I really think that we're not heading --

MR. CRADDICK: The environmental process you have to do no matter what, Jonathan, you don't have an option there.

CHAIRMAN STARR: Yeah, but if we were to pick a location, proceed with it, it would shortcut this thing by a lot. Rather than going back the other way.

MR. HASHIMOTO: I would rather be safe than make a rash decision. I don't know. If it's guaranteed we're going to hit water, I say go ahead. But --

CHAIRMAN STARR: Nothing is guaranteed except death and taxes. But my guess is that we're going to lose the ability to drill in the Makawao area because we'll get beat to the punch and then we'll be spending a couple of million bucks extra to build a water tank and we'll be acquiring the location where we're going to drill the well and, you know, it will cost us several million dollars by not doing it now. But, you know, that's -- I understand that --

MR. HASHIMOTO: Why wouldn't we be able to drill a well if --

CHAIRMAN STARR: Because my -- the information I have is that Maui Land & Pine is planning on drilling a well very close to Pookela tank and that that's to service their new subdivision in the Five Trees area. And that if they drill there first, then we won't be drilling there because that area won't be able to take more than one well.

So basically what will happen is we'll end up with a Dowling type of agreement with Maui Land & Pine where they drill a well and then we have to give them water for their subdivision and they turn the well

over for us and the people on the waiting list and in the community don't get any benefit from it. That's my feeling of the path that we're on if we don't take more direct action.

On the contrary, I think if we push to proceed and drill, then we can speed it up and we can get there first and we can have a well and we can make it adequate. And it's a lot of responsibility that's on us. I take this very seriously.

MR. HASHIMOTO: But if they drill the well, why should we help them out? I mean, there must be a two-way street where -- I don't know what happened to the Dowling deal, but if they want the county -- Board of Water Supply involved, can't we make stipulations where we're not going to end up on the short end of the stick?

CHAIRMAN STARR: Well, last time we went through this, I was told that we don't have any rules that allow us to demand any water, that the best we were able to do was to limit our meter issuance to 45 percent of pump capacity.

The thing that they do in other jurisdictions is when you have an inadequate system and someone comes in and produces source, then they create a surcharge and 20 percent or 30 percent of the water generated by the source they create goes to make the system adequate. But we don't have any rules to that effect. So I believe we had an opinion, I'm not sure if it was from Mr. Fukushima -- might have been from his predecessor, I think it probably was, that there was no mechanism in our rules that would allow us to surcharge the source.

MR. CRADDICK: Try something there. When you've got a waiting list of 800-odd names, do you want to participate with somebody else and share that water or do you want to get it all -- take care of as many names on that list as you can possibly take care of? I think that's probably more -- I'm guessing what Jonathan is -- why he's worried about this rush to the well, so to speak. We've got a lot of names on the

list.

The high-risk well was the Kapakalua well and maybe the Maui Land & Pine well at Haliimaile. Those two wells kind of defined the outer limits of the area. Anything in between there, it's highly unlikely that it's going to be a whole lot different. So your risk of drilling is minimal, so why -- if you're drilling the production well or the new well in the area, you want to spread that risk out as much as possible, get people to participate so that if it's a dud, it's only a dud to whatever participation level you are. When you know there is very limited risk, I would think you want to rush and get it in as quickly as possible.

I mean, what Jonathan says as far as rushing, I mean, we already may be behind the apple cart already on drilling at Pookela.

MR. HIRANAGA: May I ask a question?
Regarding the Dowling well, we did a trade-off in capacity, I guess, for his Pukalani subdivision versus the area that the Kapakalua well services.

MR. CRADDICK: Yeah.

MR. HIRANAGA: But were there any drawbacks to the county besides the fact that these people on this supposed list were not serviced first?

MR. CRADDICK: Well, I think a community perception that maybe we should have --

MR. HIRANAGA: From a financial perspective.

MR. CRADDICK: From financial, I mean, it didn't cost us anything. We've now got a much more reliable system and it didn't cost us anything.

CHAIRMAN STARR: I feel that there is going to be a big drawback because right now our system is just barely adequate even though we're borrowing Hamakuapoko. Remember, we're borrowing Hamakuapoko, it does not belong to upcountry and we're just barely

keeping up. Now, Dowling hasn't started his build-out. The school's on line, but most of what he's going to build, we're going to have to issue meters against. And although we'll have plenty of water in Haiku, my guess is that a year or so from now Kula is going to be inadequate, we're not going to be able -- unless it's a really wet year, we're not going to be able to keep up with demand. When Dowling does his build-out and when Hawaiian Homes does their build-out, we're going to be behind and when we get behind that's when we have to force mandatory cutbacks.

And especially if we don't get our well drilled before Hamakuapoko goes to the central system, then we're going to end up even worse situation. I feel a real urgency. I feel a desperate urgency. And I don't quite know how to share this with you, but I really think we've not seen the last of mandatory cutbacks upcountry and the pain it causes. And I, for one, hope that in my own tenure on the board I never have to take that vote again. And the only way I can see not taking it is to be bold and go ahead and produce water up there as soon as possible. I don't know how to say it any stronger than that, guys.

MR. HIRANAGA: Question. I'm not that familiar with the Dowling agreement. But he drilled a well but he's not using any of the capacity.

CHAIRMAN STARR: No.

MR. HIRANAGA: Not directly from the well he drilled.

CHAIRMAN STARR: No. But he gets equivalent capacity in a different place.

MR. HIRANAGA: What was the motivation to the county to agree to that? I mean, we weren't forced to trade. We could have said sorry, we're not interested in doing that. It must have been some motivation, some benefit to the county.

MR. CRADDICK: The benefit to the county is

right now we're essentially drought-free until what Jonathan says come about is build-out. When his build-out comes, if we do nothing between now and then, we'll be back in the same situation that we were in prior to getting that well on line.

MR. HASHIMOTO: But why did we agree to do that in the first place?

CHAIRMAN STARR: Because I think that the board -- and it wasn't us, it was another set of board guys. It's very, very hard for the board to come up and to take the risk and drill a well. And upcountry was short, they were having mandatory cutbacks, and here was a short-term solution, you know.

MR. HASHIMOTO: But the short is not in Haiku, I think; the short is above Haiku.

CHAIRMAN STARR: Yeah. I don't think I would have voted for it, myself.

MR. CRADDICK: It's short in both places. I mean, before all of it came from Kamole Weir. So if we are able to eliminate Haiku off of the Kamole Weir system, it makes the available water at Kamole go that much further, which it does. I mean, it works like a gem. And as far as any extra capacity of that well, a booster system could quite easily be put in to push that up to Pookela tank, too, no problem.

MR. HASHIMOTO: Because you're looking at Hawaiian Homes is 380-plus homes or lots, plus 70-plus ag lots going in in maybe the next three years. Plus Dowling.

MR. HIRANAGA: The motivation was Dowling said here's a well, it works --

MR. CRADDICK: Do you want it -- well, he didn't have the well at the time. He just said I'm willing to risk putting a well in, do you want it on your system? And the board said of course, yes.

MR. HIRANAGA: In exchange for these future credits.

MR. CRADDICK: Yeah.

CHAIRMAN STARR: It's frankly a hard thing to say no to.

MR. TAGORDA: It's a good thing for the county.

MR. HIRANAGA: So if Maui Pine puts the well in, would they be in a similar situation, saying here's a well, we put it in, do you want it?

MR. CRADDICK: Yeah.

CHAIRMAN STARR: Yeah. And the thing is, if we're in a situation where we're forcing mandatory cutbacks because we're that short, as they were at that time, you know, the pressure of that situation and time may cause us to say go ahead even though it will still mean the waiting list people are still going to wait while the subdivision guys get meters.

MR. CRADDICK: I think, Kent, the issue now is that you've got the Haliimaile well, you've got the Kapakalua well. They're I don't know how many miles separated there, but some separation between them. Both the sites that we're talking about are between there. One is 1,100 feet; the other one is 1,800 feet. The 1,800 foot one, there is no reason to expect that we're going to get less water than Dowling's well, which is one and a half million gallons a day. The other one that's at the same elevation at Haliimaile, there is no reason to expect that we're going to get any less than the water they got in the Haliimaile well, which is a million gallons a day.

Now, maybe you need two and a half million gallons for upcountry and we should be doing them both, you know, on your strategic basis. Because obviously what -- I say we want to do. It comes from a greedy perspective, if you will. You grab all the

lowest risk water -- and by lowest risk water I'm talking about water closest to our infrastructure, so it doesn't cost us any more to put that in operation than drilling the well, putting the pump in and the pump station, you've got tanks there, you've got a booster system there, you've got electricity there. All those things cost extra money if you're out in the boondocks. So --

MR. HIRANAGA: So what's wrong with the scenario of Maui Pine drills a well at Pookela and our consultant selects a different site and we drill a well there so now we have two wells. What's --

MR. CRADDICK: We've got a pent up list of 800 names that right now I would say whatever water we can get to take care of that pent up demand is --

MR. HASHIMOTO: I think he's saying if we have two wells, you can drill two wells is what you're saying.

CHAIRMAN STARR: We won't be able to drill it in that Makawao area. We probably won't be able to drill it along -- we'll have to drill it some place where we don't have the tank and we don't have -- own the land and all of that. We'll be out in the boonies somewhere throwing a few more million dollars at it before we're done. Unless, you know, we drill at Kamole, which I would be very hard pressed to go along with because I don't want another dirty well.

MR. CRADDICK: Except you don't know if Haliimaile is as dirty.

MR. HIRANAGA: Well, I would like the consultant to tell us, you know, here's the need, the need is to help these many people, logistically where should we put the well? That's what I want someone to tell me, not racing on this what if's and --

CHAIRMAN STARR: Okay. But let it be on your conscience if we lose that site and we're a year or

two years from now and we still don't have a well. I'll be off the board. You'll be on the board. And it will be on your conscience, not mine.

MR. CRADDICK: I think you can do both. And as a matter of fact, by law and the EIS process, they have to look at both anyway.

MR. HIRANAGA: When you say have to do both --

MR. CRADDICK: Well, they can't just go in a vacuum. When you do the environmental assessment, you've got to look at the options.

MR. HIRANAGA: Alternatives.

MR. CRADDICK: Yeah, you've got to look at the alternatives. There is no real way around that. So quite frankly, it has to be done anyways.

I'm just saying that if you make a decision to go higher and say we're not going to do anything below such-and-such an elevation, that is a criteria that is on top of that that obviously if you're going to say go above a certain elevation, nothing is going to be looked at below that.

MR. HIRANAGA: I would prefer that no criteria be placed except identify the need, location of the need, and that source be viable.

MR. CRADDICK: That's the way the contracts go out. And we can look at the list of consultants and take that time consideration and put a lot more weight on it than we would normally put on it, knowing that someone can move ahead much, much quicker than somebody else on it.

MR. HASHIMOTO: But I think this would be a good discussion for the full board. You have facts that Maui Pine is going to -- they're ready to drill?

MR. CRADDICK: Let me just say that Warren Suzuki told me two days ago they will be applying for

a drilling permit within the next 30 days. There is no way we can beat that. The only thing we can hope for --

CHAIRMAN STARR: If we publicly announce that we were drilling a well, we would beat that. If we were to make -- if the board were to make a decision at this meeting that we were ready to drill at Pookela and that went in the newspaper, then Maui Pine would be very hard pressed to come back and compete with that. So what I'm saying, guys, is I really think this is our chance and if we blow it --

MR. HASHIMOTO: That's the two of you.

MR. TAGORDA: I think I have to listen to all of these things and it came from Mr. Craddick, too, that Maui Pine is going to drill a well there, so Pookela tank must be a very suitable site for a well. And I think I have to go along with taking a chance of putting up a well there instead of going through this consultant thing that it will probably take six months to a year to find out where to put the well.

MR. CRADDICK: Except you have to understand they have some incentive to put it up there because they're not going to put it in an area where you might get DBCP contamination because they have to pay to clean it up anyways.

CHAIRMAN STARR: I don't want to put it where there might be DBCP either.

MR. TAGORDA: I want to go to a higher elevation from Mr. Craddick. At a risk of getting DBCP contaminants.

MR. CRADDICK: If you're saying that, I mean --

MR. TAGORDA: And I don't want to put criteria if we ever decide to get a consultant because I want -- in a higher elevation --

MR. HASHIMOTO: You understand that it's not risk-free at Pookela.

MR. TAGORDA: I understand that. There is always risk involved. But I think it's less, minimal. So it looks like Mr. Starr, the chairman, is so certain that Maui Pine is going to drill a well in the Pookela and if we can beat them, let's go for it. I think I'm going to recommend that strongly, that we need an upcountry well and if it's Pookela and then let's convince the full board that it's Pookela.

MR. CRADDICK: I guess strategically speaking you're probably going to need all the sites you can get and for that reason alone may be reason to use it because you'll have to use any other sites available to you anyways. So if -- I mean, if that's the reason, then there is some strategic reason obviously to go ahead and get stuff that is closer to our infrastructure now.

MR. TAGORDA: And that's close to our infrastructure.

CHAIRMAN STARR: It certainly does not preclude us from drilling any more wells or doing anything else in the future.

MR. CRADDICK: No, it doesn't.

CHAIRMAN STARR: I do think we should take this discussion to the full board, but if you want to make a motion --

MR. TAGORDA: Mr. Chairman, can I make a motion then that we move and recommend to the full board that we drill our upcountry well -- I don't have to cite the specific location, but suitable to get sufficient water for upcountry to mitigate the drought. Will that be sufficient enough?

CHAIRMAN STARR: Let's have a short recess.

(Brief recess.)

CHAIRMAN STARR: Back to order. Member Tagorda, do you want to remake the motion?

MR. TAGORDA: Mr. Chairman, I would like to move that we drill a well upcountry which has a less risk of getting -- in a place with a less risk of getting DBCP contaminants. And I would like to also involve the community here, how we can approach the problem, Mr. Chairman. My motion is to drill upcountry well with less -- in an area with less DBCP contaminant. Or if I may, I pick a specific site like Pookela, Mr. Chair.

CHAIRMAN STARR: Okay. I would like to second that. And just to rephrase it for clarity, the motion is that we drill a well upcountry and look for community support and that it be in a place close to our infrastructure and unlikely to be -- mauka -- unlikely to be contaminated by DBCP, and a likely location for this being the Pookela tank site.

And Fran, when you get it written down, I'll ask you to read it back.

MS. NAGO: Recommend that we drill a well upcountry and look for community support and that it be in a place close to infrastructure and unlikely to be contaminated by DBCP, and a likely location for this being Pookela tank site.

CHAIRMAN STARR: Okay. Since there is two members present and by unanimous consent, the motion passes. Okay. There being no further business, this meeting is now adjourned. Thank you.

(WHEREUPON, the meeting was adjourned at 2:55 p.m.)

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