

BOARD OF APPEALS
COUNTY OF HAWAII

HEARING TRANSCRIPT
JANUARY 25, 2008

A regularly advertised hearing regarding the appeal of **PACIFIC HORIZONS DEVELOPMENT CO. LP (BOA 07-000049)** was called to order at 10:03 a.m. in the West Hawai'i Mayor's Office, Conference Room, 75-5706 Kuakini Highway, Suite 103, Kailua-Kona, Hawai'i, with Chairman Joel Gimpel presiding.

PRESENT: Joel Gimpel
Valta A. Cook
David Drury
Peter Hendricks
Diane Gentry
Kim Tavares

ABSENT & EXCUSED: Kelly Ann Soo

William Brilhante, Counsel to the Board
Alice Kawaha, Staff to the Board

Randy Vitousek representing Appellant
Bernard (Red) McClean, Intervenor
Christopher Yuen, Planning Director
Amy Self representing the Planning Director

And five people from the public in attendance

PETITIONER: PACIFIC HORIZONS DEVELOPMENT CO. LP (BOA 07-000049) -
Continued hearing on the Appeal of Decision by the Planning Director dated May 29, 2007 Denial of the Variance Application (VAR 07-028) relating to minimum water supply requirements of Chapter 23, Subdivision Code, for a proposed 6-lot subdivision. The subject property consists of approximately 47.906 acres and is located on the west (mauka) side of Mamalahoa Highway at approximately the 96 mile marker, Kukuiope 1st, South Kona, Hawai'i, TMK: (3) 8-7-10:9.

GIMPEL: So the first item on the agenda is, and the only item, case on the agenda, is the Pacific Horizons Development Company, Board of Appeals No. 07-49. And this is a continued hearing on the Appeal of Decision by the Planning Director dated May 29, 2007, denying of the Variance Application relating to minimum water supply requirements of Chapter 23 of the Subdivision Code for a proposed 6-lot subdivision. The property consists of approximately 47.906 acres and is located on the west side of Mamalahoa Highway at approximately the 96 mile marker, Kukuiope 1st, South Kona, Hawai'i. The Tax Number is (3) 8-7-10:9. Counsel for the petitioner is here. Mr. Vitousek, would you introduce yourself, please.

VITOUSEK: Yeah. Hi, Randy Vitousek representing the applicant Pacific Horizons.

GIMPEL: And the Planning Director?

SELF: Good morning, Amy Self, Deputy Corporation Counsel representing the Planning Director.

GIMPEL: Okay. Now we have allowed an intervention in this case. Is counsel for the intervenors or a representative of the intervenors present?

MCCLEAN: I'm present.

GIMPEL: Would you please come up here then? You're an intervenor, you have a right to the table.

MCCLEAN: Thank you.

GIMPEL: Would you please introduce yourself?

MCCLEAN: My name is Red McClean. I live in Kukuiope Homesteads. And when I intervened it was, I was interested in the water as I am Phillip Gallinger's neighbor and I know of the rainfall records and -.

GIMPEL: No, we're not asking for your testimony now.

MCCLEAN: Okay, okay.

GIMPEL: Mr. McClean. Is your counsel here?

MCCLEAN: No, he's not.

GIMPEL: Steve Whittaker -.

MCCLEAN: No -.

GIMPEL: Is your counsel?

MCCLEAN: Right.

GIMPEL: Okay, all right. So you are representing yourself as an intervenor then?

MCCLEAN: Yes.

GIMPEL: Okay, thank you. You may sit at the table if you wish cause you're going to be able to cross-examine. Do you have any witnesses to present?

MCCLEAN: No, not at this time.

GIMPEL: Okay. At this time then I think we're going to ask for opening statements by the petitioner, the Planning Department, and the intervenor. So Mr. Vitousek, would you start with a short opening statement as to what you intend to provide.

VITOUSEK: Sure. Mr. Chairman, we'd first request that a Christopher Coonen be dismissed as an intervenor because he is neither present nor represented by counsel; and I think he has to appear at the hearing or he's in default.

GIMPEL: Planning Department, do you have any -?

SELF: We have no objections.

GIMPEL: No objections. Mr. McClean, do you have any objections to dismissing Mr. Coonen as an intervenor as he's not present?

MCCLEAN: I will have to say that I don't know that he should be dismissed as an intervenor. He is out of town at the time and his wife was not able to make it, she had to go to work. So I guess I would object to that on that level. But other than that, I don't know. So -.

GIMPEL: Well, he was notified of the hearing and he didn't ask for any dispensation on that. So I think I'm going to have to allow the request to dismiss Mr. Coonen as an intervenor. All right, Mr. Vitousek, go on.

VITOUSEK: Thank you. This is an appeal, again, from a decision of the Planning Director of the County of Hawaii denying Pacific Horizons' application for a water variance to develop a six-lot subdivision on their property in Kukuiope, South Kona. The property in question is approximately a 56-acre property that's located on the mauka side of Mamalahoa Highway in the Kukuiope 1st, ahupuaa. The property runs from about 1100 feet to about the 1650-foot elevation. The property is thickly vegetated and including, you know, types of vegetation typical for high rainfall areas including Kukui, t-plants, there's volunteer coffee on the property, there are coffee farms on either side of the property and there are residences on either side of the property on the highway, to the south, to the north and mauka of the subject property. The property is outside the service limits of the County Water Supply. It ends at Hookena on the north side and begins again on South Point Road on the south side.

The property is currently owned by Pacific Horizons, which is a limited partnership. Jeff Raup who's the general partner is present here today. The owner acquired this property in 1989, almost 20 years ago. The property was acquired through a foreclosure sale and is held by Pacific Horizons with the intent on the part of Mr. Raup to use the property as essentially a retirement nest egg. Almost accidentally, Mr. Raup lives in Connecticut. Almost accidentally and through someone to whom he sold the house, Mr. Raup began to learn about the value of the coffee business, the emerging value of the coffee business in the 1980s and 1990s, and learned about Kona coffee as a very valuable, one of the most valuable coffees available. Knowing that he had neighbors to this land who grew coffee, Mr. Raup decided to investigate growing coffee on this property. So in 2003 approximately he began the process of moving this property towards becoming a coffee farm. What he did first was conduct his, you know, due diligence. He learned that he needed archaeological clearance before he could grub or grade the property. So in 2003 he hired Joe Kennedy, began the process conducting the archaeological reviews. That's

gone all the way through inventory survey, through preservation plan, through proposed burial treatment plan and the like. Pacific Horizons has paid about \$180,000 for archaeological work between 1903 (sic) and the present. He also went out and purchased seedlings in about 2007 I believe it was, and after the archaeological work had progressed he purchased 45,000 coffee seedlings and cleared one acre of land on the property to be used as a nursery. So he currently has 45,000 coffee tree seedlings on the property, and the intent is when they get the archaeological clearance they're able to prepare the ground to plant those out to the entire property. Pacific Horizons has paid about \$145,000 to get the trees, you know, acquire the seedlings to get them going to nurse them until a point. The intent of Pacific Horizons like I say is to develop a working coffee farm on the entire property. They propose subdividing the property into six parcels that would be five parcels of approximately 5-acres, more than 5-acres - this property is zoned Ag-1 -- and then one 25-acre parcel on the mauka side. The intent, the concept is to subdivide them as a hedge against the cost of continuing to develop the coffee farm. In other words, by subdividing property he has the ability to sell separate subdivided lots which would have producing coffee trees on them either to people who would be interested in having their own coffee farm or he would retain the right to maintain and harvest the coffee from those lots. But that would provide an opportunity to get some return, some money back from what he has invested in creating the rest of the coffee farm.

The idea would be for Mr. Raup, he intends to retire on the 25-acre parcel at the mauka part. It would be a full working coffee farm. You put a mill on the 25-acre parcel at the top and use the mill building, including the drying roots and what not, for additional catchment area for servicing the farm itself. The appeal, the subdivision application was actually filed initially before Rule 22 was enacted, but for some reason they didn't apply for a water variance with the subdivision application. So this application was filed after Rule 22 came into effect. The variance application was based on the position that the property likely receives 60 inches or more of rain per year and certainly receives enough rain so that there will be adequate water available for the agricultural and farm dwellings on the property.

As I said the land is located mauka of the Highway, it is very near the 60-inch isohyet line which is shown on the maps, that is on the County GIS Maps, as running just mauka of the subject property. Like I said there is vegetation that shows there's a lot of rain. There are farms and homes on every side of the property and there is clearly, I believe that there's sufficient rainfall to support the proposed uses. The Planning Department denied the variance saying (1) that it's outside the 60-inch isohyet Line and (2) they relied on rainfall data from one rain gauge, that is the Opihihale 2nd gauge, which is located about 2.6 miles south of the property at the 1200-foot elevation, 1270 feet, and shows that the area gets approximately, that that area gets approximately 41 inches of rain per year evenly distributed on a monthly basis over the year. So the Planning Department made a determination that the property gets about 41 inches of rain a year. That was their determination, and said that because it doesn't get 60 the application is denied. So the only data they relied on were the 60-inch isohyet line on the rainfall map and one rain gauge located 2.6 miles away. And that's, you know, whether they get further information now or not, what they relied on making their decision was that information.

So couple of points. We've been here before, the County did not assess the distribution of rainfall on a monthly basis. They did not assess the amount of catchment area proposed for the catchment system. They did not assess the storage capacity that would be proposed, in other words, what amount of tank size would be proposed. And so they essentially evaluated only the

one criteria of the amount of rainfall. This case is remarkably similar to the Jin case in which the Appeals Board has heard. In that case the 60 inch isohyet line was located mauka of the property, closer than this case, but we'll talk about that. And, again, they relied on the one gauge, the Opihihale 2nd gauge. The Board concluded that the Director's decision denying the variance in the Jin case was arbitrary and capricious because it failed to consider other evidence regarding the amount of rainfall; and secondly because the reliance on the isohyet line and on one rain gauge was arbitrary in that the rule contemplates that there would be reliance on more than one rain gauge and the isohyet line was in a reasonable distance of the appellant's property. So that, you know, I think this is very similar to the Jin case.

There's one, couple differences. One is that the County finally produced a USGS rainfall map as their only exhibit. Excuse me, I guess you have copies of it but this is it. This is the Big Island. I don't know what the scale of this map is but it's probably close to 1 and 100,000 at best. There's no elevations marked on the map, there's no TMK parcels marked on the map. And so, you know, our position is it's absolutely impossible to determine from a map of this scale where the isohyet line is located relative to the subject property. Now what the Planning Department has done to determine that is using a GIS System they overlaid the map on a TMK map, and I think you've heard testimony about that before. What the County didn't tell you before is that their own data, and I'm referring to our Exhibit 3, states that the maps showing the TMKs, in other words the overlay showing the TMKs, and I'm quoting from information downloaded from their website, "This data layer is intended to be used as a guide for planning purposes only and should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data." And so basically the County is saying that you cannot rely on the overlaid TMK map as being reliable for determining spatial relationships, but that's exactly what they're doing. In other words, they've taken a 1 and 100,000 more or less scaled map, overlaid it on a TMK, but they say themselves that it's not reliable to determine spatial relationships. And so we think that that's a flaw in their data, it's a flaw in their methodology. And it really prevents us from saying with any degree of certainty or any degree that can reliably be followed for determining property rights as to where this property is located vis-a-vis the isohyet line. So that's basically our position; and thank you very much.

GIMPEL: Ms. Self.

SELF: It's very important for this Board to keep in mind that in contested case hearings the appellant always has the burden of proof, including the burden of producing evidence pursuant to HRS 91-10-5. Now in this particular contested case the appellant has the burden of producing evidence to prove that its application for a water variance meets all the requirements of Rule 22 of the Planning Department's Rules of Practice and Procedure. Because this Board is an agency within the definition of HRS Chapter 91, the Hawaii Supreme Court has held that such has a Board has a duty to hold an appellant to its burden during a contested case hearing. The evidence in the record on appeal and the testimony that you're going to hear today will clearly show that the appellants failed to meet his burden of proof, that is the appellant has failed to prove that all the lots in his proposed subdivision received an average rainfall of not less than 60 inches, either by using rainfall records at comparable rain gauges or by using the USGS rainfall map that you will see today. Now based strictly on that evidence in the record on appeal and the evidence that you're going to hear today, it's incumbent on this Board to exercise its duty under Chapter 91, HRS, and affirm the Director's decision denying appellant's application for a water variance. So as you're hearing this testimony and as you've reviewed the record on

appeal, your decision has to be based on actual evidence from the appellant that his application meets the requirements of Rule 22. The appellant obviously doesn't like Rule 22. You may disagree with Rule 22, but your duty is to listen carefully and determine if that evidence here that he does receive the rainfall that's required under Rule 22. And I thank you for your time.

GIMPEL: Does the intervenor have an opening statement, please.

MCCLEAN: I think that the only thing that I could say is that I have lived in Kukuiopae for almost 30 years and the rainfall where I live which is sort of like adjacent to the mauka side of Pacific Horizons' property and the rainfall today versus the rainfall even ten years ago is a lot less. And I don't have rainfall records. I just live there; and I live on catchment. And the other thing that I did read, I don't know the page, but I know in the archaeological study there was a study done in 1973 which states that there is less rainfall than is required by the, by you people, by the County to give a water variance. And I didn't bring that book with me; but then I don't have rainfall records. I just know that there's a lot less rain in Kukuiopae today, especially on the road, than there was 20 years ago, 10 years ago even. So, you know, I think that's about all I have to say.

GIMPEL: Thank you. All right, Mr. Vitousek, you have witnesses I presume. Or you have any evidence to submit for the record?

VITOUSEK: Well, you know, we've submitted our exhibit list and we just would offer that into the record. We have no objection to the County's exhibit which is the one, I think there's only one exhibit, right?

SELF: Yes, Exhibit A.

GIMPEL: All right, then we'll accept those. And you have witnesses you wish to call now or we can start your case.

VITOUSEK: Yes, I'd like to call Mr. Raup.

SELF: Excuse me, one thing. Could we also have everything that's in the record on appeal submitted? I'm not sure, did you -?

VITOUSEK: I'm assuming that's it.

GIMPEL: Yeah, that's it.

VITOUSEK: I have no objection to that.

SELF: Okay, thank you.

GIMPEL: Yeah, we'll accept everything that's in the record on appeal that has been filed as to be admitted into evidence. Mr. Raup, why don't you come up here. Do you swear to tell the truth, the whole truth, and nothing but the truth?

RAUP: I do.

GIMPEL: All right, would you please give your name and address and then go on.

RAUP: Jeffrey Raup, 9 North Branford Road, Wallingford, Connecticut.

VITOUSEK: Thank you. So, Mr. Raup, can you tell us what your relationship is to the applicant, that is Pacific Horizons' -.

RAUP: I'm the managing partner; and I'm a 50 percent owner of Pacific Horizons.

VITOUSEK: Okay, and what is Pacific Horizons?

RAUP: It is a limited partnership.

VITOUSEK: And what is the business of Pacific Horizons?

RAUP: Strictly the agricultural plans for this property.

VITOUSEK: So this is the only property that Pacific Horizons owns. Is that correct?

RAUP: Correct.

VITOUSEK: Okay, and then Mr. Raup, you say you currently reside in Connecticut. Is that correct -?

RAUP: Yes, I do.

VITOUSEK: And what business are you in?

RAUP: Well, I pretty much manage my real estate properties today.

VITOUSEK: Okay. And can you give us just a brief synopsis of your like educational background.

RAUP: I graduated from Pemberton Township High School in 1975. That's in South Jersey where I grew up, in an agricultural community. And I went on to work in the textile mill for a brief period of time, took a job as a car salesman. Well, I worked my way up to owning four dealerships and invested my earnings into a lot of real estate. I realized I was doing better with rental properties than I was with a 160 employees and I retired from the automobile business.

VITOUSEK: Okay. So, Mr. Raup, can you tell us the circumstances of how you first became aware of the property which is the subject of this application?

RAUP: Well, I was known to do some crazy things, and a person had contacted me about a house that was being foreclosed on Maui back in '85, 1985. And it was through the acquisition of that house that I came into contact with a buyer that owned these 50 acres. And he

had bought the house, I took the property as a collateral because he was expecting a large sum of money. A year later that money was not there, it was in a trust that was, the money had been taken. And it was through a process of trying to let him to sell the house, sell the property, something to pay me off that it didn't occur and I had to foreclose. And so I took these 50 acres in foreclosure and kept it as basically I thought a nest egg for my retirement, I'm not yet here but in the near future.

VITOUSEK: So you acquired, what year did you acquire this property, did you take title to this property?

RAUP: Title was taken in 1989.

VITOUSEK: Okay. And so you said initially your goal was just simply hold the property as a retirement nest egg. Is that correct?

RAUP: Yes, yes it was.

VITOUSEK: And when did you first visit the property?

RAUP: It was in 19, I'm not sure if I came out in '89 but it was soon thereafter. It may have been 1990 just after title was, I acquired title.

VITOUSEK: Okay, and what did the property look like? I mean physically what did the property look like when you first acquired it? Was there any, first, I guess my question is was the property developed in any way?

RAUP: No, not at all. In fact, it was very hard to even see the property. I didn't get very far up the property because it was very vegetated.

VITOUSEK: And so let me show you, Mr. Raup, some photographs of the property that have been offered as Exhibit 4 and ask if you can take a look at these and see if those in your opinion accurately reflect what the property looked like at the time the photographs were taken.

RAUP: Speaking for 20 years ago I -.

VITOUSEK: No, it's for now.

RAUP: For now, yes.

VITOUSEK: Probably the time when the photographs were taken.

RAUP: Oh yes. This makes it look thinner than it is when you're actually walking through it.

VITOUSEK: And so by thinner you mean it's more heavily vegetated?

RAUP: Yes, yes.

VITOUSEK: So at some point you decided to look into utilizing this property as a coffee farm. Is that correct?

RAUP: Yes, sir.

VITOUSEK: And can you tell me the circumstances under which you came up with the idea of perhaps developing a farm on this property?

RAUP: Well, I had bought an old farm back in Connecticut and built my house there and subdivided it into three lots. It was a 25-acre farm. The gentleman that bought one of the lots, and I built his house for him there, and I became close friends. He is a, he's in the coffee business in a retail way. He has a chain of coffee stores but he makes more money by roasting and making his own blend. And it was through that, you know, knowledge conversation and me disclosing that I had property in Kona that I began to look into the opportunities of growing coffee.

VITOUSEK: Okay, and what did you do to look into that opportunity?

RAUP: Well, I had some previous farming experience in North Dakota and worked with grants and government programs for, you know, monies to farm and the tax advantages of farming. So that is one thing that I already had some knowledge about. But I began to investigate what it would take to grow coffee out here and began to look for key people that could help me do that because I'm quite a distance away at the present. And it was in that time that I discovered that I would have to do an archaeological assessment, much like the environmental assessments we have to do back home. And so that was around the end of 2003 that I really started to get cranking on it.

VITOUSEK: Okay. And who did you retain to be your archaeological consultant?

RAUP: Joseph Kennedy of Archaeological Consultants of the Pacific.

VITOUSEK: And what did you direct him to do?

RAUP: Well, whatever he directed me to do basically. We started with the survey, he identified some 300 key sites or something. And he went through every process and kind of got frustrated with getting responses from the work we performed. But we did the burial treatment, we did the data recovering, the final data plan has been written, the preservation plan and the monitoring plan.

VITOUSEK: And so with respect to the archaeological sites on the property, is it your intent to preserve those sites as directed?

RAUP: Yes, sir.

VITOUSEK: Okay. And so how much have you spent so far on the archaeological component of working up this property?

RAUP: Just with respect to what I paid to Pacific Horizons -.

VITOUSEK: Pacific Horizons? I'm sorry.

RAUP: Yeah, I'm sorry. Archaeological Associates is almost \$180,000 and I'm not done.

VITOUSEK: Okay, and then at some point you anticipated that you would be able to start planting crops in a certain timeframe. Isn't that correct?

RAUP: Yes.

VITOUSEK: And can you explain that to the Board, please.

RAUP: Well, as I said, it has been pretty frustrating trying to get responses on this particular topic.

VITOUSEK: And this response is from the State Historic Preservation Division. Is that correct?

RAUP: Yes, yes.

VITOUSEK: When you'd submit plans and you just wouldn't hear back?

RAUP: No responses.

VITOUSEK: Okay.

RAUP: We submitted a burial treatment plan in 2000, in February of 2006 and me being not really knowledgeable about this process and Mr. Kennedy not really, you know, worried about me exclusively I thought that the requirements had been met. I didn't discover until February of 2007 that we had never made it onto that meeting that was required for a sign-off.

VITOUSEK: That's the Burial Council?

RAUP: The Burial Council. Well, so we had our receipts for getting it in. Well, when we went to them in February they didn't even have a record of it. And we had to produce our records to show them that they had received it. I'm still since February of 2007 still waiting to get on the Burial Treatment Commission or meeting; and I don't quite understand what takes so long. Everything is in. But, anyway, we had expected in February that it was a matter of months, not years. And going forward with that we began the process of getting our seedlings, because as I understand it takes about 14 months growing in a nursery environment before you can really plant those. So we were anticipating that we would have our sign-offs from Burial Treatment. And, in fact, we had communications with the then representative of the DLNR that was on Maui that, through e-mails, that our letter would be coming; and then she quit. And we have not had, or I don't believe the State has filled that role for someone to actually generate that letter to review our information.

VITOUSEK: So at any rate you do have, I mean, you have a certain number of trees or seedlings on the property?

RAUP: Yes. So based on that e-mail we went forward with our seedlings anticipating that we would be able to clear and grub and grade the property and be ready by this year's planting season.

VITOUSEK: Okay. So how many trees do you have?

RAUP: We have approximately 45,000 trees.

VITOUSEK: And do you intend to plant those trees throughout the property except where there would be buffers surrounding the archaeological sites?

RAUP: Yes. That should take up approximately 35 to 38 acres according to my expert tree guy, George Yoshida.

VITOUSEK: And about, I'm sorry, George Yoshida?

RAUP: George Yoshida, yes. We're using a local expert who has some 23 farms at the present; and I rely on his direction completely.

VITOUSEK: Okay. And so what is your plan going forward with respect to the farm and with respect to the proposed subdivision?

RAUP: Well, I'd like to keep the coffee plants and as much land as possible. I never anticipated these kinds of cost, to be very honest. They're staggering. We're looking at approximately \$36,000 an acre to plant an acre of coffee, irrigate it and plant it. That's one reason why we decided to do the seedlings ourselves. We're trying to knock down those costs as much as possible in every area as possible and meanwhile, you know, employ local people instead of just buying trees. We began to build a network of labor because as I understand that's the biggest problem here. So, yeah, that was my intention. And in asking or attempting to get a subdivision, it's really, to make sure I have the money to finish this project, I'm not a rich man -. If I hadn't acquired this land 20 years ago I couldn't have thought about buying the land; and I was relying on possibly being able to liquidate a couple of lots as the need would be to get this coffee plantation complete. I had a vision of coffee estates where, you know, we would build nice homes and I would retain the right to farm those trees for a period of time. Basically that's it.

VITOUSEK: Okay. And so do you intend to personally reside on the property at some point?

RAUP: Eventually. I have two boys still in school. When they're off to college then I could see myself being here fulltime.

VITOUSEK: Okay. And have you done any kind of investigation of the feasibility of drilling your own well on the property in terms of -?

RAUP: Yes, I have.

VITOUSEK: And what's the cost?

RAUP: As I said, I'm not a rich man, in the millions.

VITOUSEK: In the millions. So that would not be economically feasible for you to develop that water system?

RAUP: No, sir. No, not at all.

VITOUSEK: Okay. And can you describe, for the use of the properties that surround your property?

RAUP: Well, I'm amazed at how many homes there are tucked into that jungle. There are a lot of homes out there. And I can't say with certainty that they're all doing some sort of agricultural farming. But the homes immediately around me all have coffee farms, coffee plantations, and there are houses. We seem to have a lot more rain right in that region than there is a half a mile north, which kind of surprises me, you know. But we have a lot of vegetation other spots don't, and the coffee seems to flourish on those farms next to me.

VITOUSEK: Do you actually have volunteer coffee plants on your property?

RAUP: Well, originally I got excited when the survey was done. It said I had 15 percent Kona coffee trees growing wild on the property. And I did the multiple of all that coffee beans and I said, wow, I didn't know you couldn't, farm wild coffee. But it doesn't seem to have a problem growing on my property.

VITOUSEK: Okay. And you understand that if you are going to develop and, you know, in other words, you are going to subdivide the property that the Board may place conditions that will require you to put restrictive covenants on the subdivision lots, which required certain sized catchment areas or required certain safety measures for using catchment water? Is that, you understand this?

RAUP: Yes, yes, I do. I'm familiar with that. I mean I've done that before.

VITOUSEK: And you've reviewed the proposed conditions which were attached as an exhibit to the materials submitted to the Board. Is that correct?

RAUP: Yes, I have.

VITOUSEK: And, but those would be conditions which would be acceptable to you if required by the Board?

RAUP: Definitely.

VITOUSEK: Okay. And I think you had said, or you haven't said, but you had indicated to me that you intended to develop a mill on the property. Is that correct?

RAUP: Well, I think that's where the real profit is ultimately, is that you can produce your own brand of coffee.

VITOUSEK: Your own brand of coffee.

RAUP: Brand of coffee. And so most definitely.

VITOUSEK: And so would you utilize the additional catchment area of the mill buildings to provide irrigation water for your portions of the property that might need irrigation?

RAUP: Yes. My expert tells me that if you can maintain a constant supply of water that the production is as high as 40 percent higher. So that was the reason for considering irrigation of the crops as well. And I would want to catch as much of that rain as possible.

VITOUSEK: Okay. And so you understand that you may be required to have certain types of fire flow connectors to the tanks. Is that correct?

RAUP: Yes, yes.

VITOUSEK: You may be required to have separate tank for fire fighting purposes if necessary?

RAUP: Yes.

VITOUSEK: Okay. That's all the questions I have. Thank you.

GIMPEL: Thank you. Ms. Self, you have any cross-examination?

SELF: Yes. Hi, Mr. Raup.

RAUP: Hi.

SELF: Mr. Raup, does your property, the subject property, receive an average annual rainfall of not less than 60 inches?

RAUP: I really couldn't answer that. I don't know.

SELF: Okay. How much time do you spend on the property, or how much time have you spent on the property in the past?

RAUP: In the past ten years I've been to the property probably less than a total of a week. We have no structures or anything like that where I could live there.

SELF: And so you really are not able to testify as to how much rainfall the property actually receives. Is that correct?

RAUP: That's true.

SELF: Okay, and then you, if you, you said that you intend to sell off lots. I assume this is to recover the cost that you just mentioned about the \$180,000 that you spent on the archaeological study and other expenses that are going to be coming up. Is that correct?

RAUP: Well, no, it's not my intention to sell lots. It's, my intention is that if I get into a financial bind that I would be able to sell lots. I sure wouldn't want to sell the whole 50 acres. I have an application in and I have a tentative approval with Hawaii Farm Credit to help me with the development of this farm, the plantation, for almost a million dollars. I've earmarked half that out of pocket; and I've spent almost that much in other forms of development, i.e., the archaeological survey, the seedlings, labor, equipment. You know, we've spent a lot of money. So you can imagine if you multiply the per acre price that I described the amount of money needed to get this project done. But I do not intend to sell lots, only as a fail-safe for me not having enough money to complete the project.

SELF: Okay, then what is your purpose in subdividing the property?

RAUP: To ensure that I could raise money to complete at least 35 or 40 acres of coffee.

SELF: Okay. So if you don't get the variance, the water variance that you're asking for, you can still use the property. Isn't that correct?

RAUP: Yeah.

SELF: And -.

RAUP: Well, I don't know. Actually I can't use the property now without the archaeological sign-off. I mean I paid taxes for 20 years there and never tried to -. But I would like to have every use available to me as every other owner does on the island. And I think subdivisions should be one of those.

SELF: But provided that you, the archaeological part, that's out of the picture, let's say you've gotten that. If you are not able to get a variance, which means you wouldn't be able to subdivide the property, you would still be able to use it for what's on the property now to grow coffee. Is that correct?

RAUP: I would expect, yes.

SELF: Okay, and if you cannot, if you're unable to subdivide because of the variance, you can still, under Rule 22 you can still subdivide into two lots. Isn't that correct?

RAUP: Based on 20 acres being the, not meeting the 60-inch rule?

SELF: Correct?

RAUP: Well, I'd leave that to my engineer, but I would tentatively agree with you. Why do you let 20 acres be subdivided which take less than 60 but not 5? I'm not sure why that is.

SELF: Okay, that's all I have for now.

GIMPEL: Is the intervenor still here?

MCCLEAN: Yes.

GIMPEL: Do you have any cross-examination of this witness, Mr. -?

MCCLEAN: I guess all I would like to add to is Mr. Raup is proposing a certain number of acres of coffee and -.

GIMPEL: Sorry, Mr. McClean, this is an opportunity for you to ask a question of the witness -.

MCCLEAN: Oh.

GIMPEL: Not to testify on your own.

MCCLEAN: Oh, okay. No, I don't have any questions.

GIMPEL: Thank you. Is there any cross-examination or re-cross, redirect? I'm sorry.

VITOUSEK: No further redirect.

GIMPEL: Thank you. Mr. Vitousek, any other witnesses?

VITOUSEK: That is the only live witness that we're presenting.

GIMPEL: That is your live witness. I wonder what the dead ones are going to testify to.

VITOUSEK: Well, I mean, in that I've offered declarations and transcripts.

GIMPEL: All right. Mr. Raup, why don't you come back up because there may be some questions from Members of the Board. Do I have any questions from Members of the Board? Mr. Cook has his microphone in his hand. Go ahead, Val.

COOK: If I understood your testimony, you've already spent about \$180,000 for the archaeological and the trees. But I understood you testified you borrowed like \$500,000 or something. You've already spent \$500 -?

RAUP: Let me, I'll clarify this for you. I've spent \$180,000 just on the archaeological work, just the archaeological work. I have about \$140,000 expended for the

seedlings, the nursery operation, the water supply, you know, the water source. We've spent, I just basically wrote checks for about \$110,000 because we had begun to grind the trees to all this vegetation, and my site guy needed to be paid. Our legal expenses excluding this particular procedure and the engineering work that we've spent to date, the survey, another ninety some thousand dollars. I have a loan commitment from Hawaii Farm Credit for \$950,000 which basically we were going to close this last year but they wanted to wait and see what determination was even in this process right here. Subdivision for them gives them a greater comfort to investing in this project; and they've, you know, it makes a greater value to the property. You know, there are many, many issues surrounding it. But we put a hold on it ultimately this year and we don't have a go-ahead to start actually grubbing and grading the property. And I'm very nervous now that my plants will exceed the ability to stay in that pot. They'll grow out of it and I'll have to do something. So, you know, we've had tremendous expense but the almost million dollar loan commitment is to help develop it. And I think if you do the math the amount of money is just substantial, more than I have available.

COOK: So you can't grub it and clear it to plant the trees until you get the final clearance from the archaeological -?

RAUP: Yes, sir. Yes, exactly.

COOK: I'm not sure exactly what that organization is, but from the State?

RAUP: Yes, yes.

COOK: And you don't know what the status of that is at the present time?

RAUP: You know, I've a very frustrating experience. They've hired a new person, I can't get her to the phone. But, you know, I won't bore you with this. But we're trying every day, every day we're just trying to get an answer.

VITOUSEK: If I may. Mr. Cook the archaeological preservation plan has been submitted, the burial treatment plan has been submitted, and the status is that they're asking for an additional review on some of the sites; and we don't know what the status is in terms of setting it for a hearing before the Burial Council. But they're actively working on it. You know, as I'm sure you know, this is not a unique situation. You know, there has been a backlog of applications pending with SHPD.

COOK: Well, my purpose for asking those financial questions was as a follow-up to Ms. Self's question that you could develop this property even if you don't get the subdivision. So what I'm trying to arrive at is, you know, if you get denied a \$190,000 loan is that going to be sufficient to go forward with your plans and then are you going to be able to then with the -? I guess you're going to have to carry that cost some way. Is your plan that you would be able to develop your coffee business to a point that you can carry that loan?

RAUP: Yes, sir. That is my goal. But, you know, as I said I'm not a rich man, these numbers scare me. And I worked out a process with investors, family, friends, all kind of different ways that I might be able to perpetuate this idea and this plan. The problem is if I get \$2 million into this project without subdivision then my alternatives are going to be very limited;

and that ultimately would probably mean having to sell the property. And that would disappoint me because I do look at this where I would like to retire. And so to put that much money out in a single parcel in a single venture, I mean, coffee is the new wine; but in five years maybe it won't be. You know, I don't know. And so the subdivision was hedged against all those potential, you know, potential problems and financial hang-ups.

COOK: Okay, thanks for your frankness. That's all the questions I have.

GIMPEL: Any other questions from the Board? Mr. Drury.

DRURY: Just to follow up to Mr. Cook's question. If you were to hypothetically sell a 20-acre lot as would be allowed under Rule 22, do you have any idea what it would fetch? I have no idea what the prices are there. If you were to sell a 20-acre lot how much do you think you could get for it?

RAUP: You know, I don't, I don't know. But if I sold 20 acres, then the mill concept would be fruitless. And that, my whole formula, my whole plan goes under because to grow coffee, just to grow coffee and get \$1.45, you know, per it would take, I wouldn't recoup my investment in my lifetime. I need the mill operation; and to have the mill operation, I need to keep at least 30 acres, and 50 acres is even that much more of a return.

DRURY: Just as a follow-up, you were talking, if I understood right, about coffee estates where you would retain the rights to farm coffee. In this hypothetical scenario where you sold one parcel, would you not be able to keep rights to the coffee and make the known concept work that way?

RAUP: Well, I don't know. A 20-acre person investing would probably want to grow their own coffee. If I said, well, okay, I'll sell you the property and you can build a nice house but I want to retain 20 acres of coffee, that would seriously diminish the value of the property. And I don't, I just, I wouldn't want to risk it, again, to spend \$3,000 approximately an acre to grow that coffee and then I'm probably going to hand it to somebody, because I just don't think you'll get the money right out of the gate. You know, I wouldn't recoup all that investment. So it's a high-risk investment from my way of thinking; and I don't have that kind of financial depth to do it. It would stop my project at this point. I just wouldn't be able to go forward, I don't think.

GIMPEL: Ms. Gentry, you have a question?

GENTRY: Yes. You indicated that you were going to put a mill. Does the milling process require water?

RAUP: There's a dry process; but all the water we would collect would be used in the irrigation of the trees rather than the milling process.

GIMPEL: Any other questions?

TAVARES: I've got a question.

GIMPEL: Ms. Tavares.

TAVARES: Regarding the water you said already that you don't know how much rainfall there is. But do you know how much water you'll need for your crops and how much storage you're going to need to have that much?

RAUP: You know, everyone I've talked to, and Farm Credit was one of those, I mean they had their appraisers value whether a coffee farm in this area was viable, whether, you can all assume that that included knowing there's enough rainfall to support a crop, we got the green light from all those different departments. George Yoshida assures me that I would have a viable crop without irrigation. Everyone around me has no irrigation and their crops seem to thrive. To give you an actual number of how many gallons, well, back in Connecticut we used a formula of 150,000 gallons per person per day, but I don't believe that number would work here. You know, you don't go through that kind of water. We're wasteful. But, no, to answer your question no. But I do know from walking that property and fighting my way through the vegetation on that property and the prolific, you know, mango and everything that's growing there that water doesn't seem to be a problem. I also know that if I have 5 acres the amount of rainfall I could collect would be determined by how much roof area I have, how much surface area I can, you know, catch that rain. And that would, in my way of thinking would be important, depending on how many people I had or needed to survive on that water. So, you know, to have rainfall as a measure, I don't understand that. I would understand if you said I need to have 20,000 gallons or if you, you know, and if I thought that was the issue, I'd be trying to determine that for you.

TAVARES: Yeah, but we're not trying to tell you how much water you need for your farm. I'm trying to find out how much water you need for your farm. It sounds like you don't know.

RAUP: I know that there's enough rainfall there to support my farm, given -.

TAVARES: Because you walked through the forest and you saw trees?

RAUP: No, and because of the experts that have already told me that, and the fact that the farms around me all are doing very well, and none of those have irrigation.

TAVARES: I'd be scared if I were you trying to spend all this money and you don't know how much water you're going to really have. I don't know -. Okay, that's my questions for now.

GIMPEL: Diane?

GENTRY: We've looked at the pictures in the file. And could you just estimate how old you think the growth is of the vegetation on your property?

RAUP: Well, I really -.

GENTRY: You've had it for 20 years. Was it like that when you got it 20 years ago?

RAUP: It was as dense 20 years ago as it is now. Whether the bigger trees are a lot bigger or not, I couldn't tell you. I think there's a lot more of that Christmas berry.

GENTRY: Is the vegetation consistent all the way through the entire parcel or is it just up front, or on top, or on the sides?

RAUP: It's consistent all the way through, yes, ma'am.

GIMPEL: David.

DRURY: A follow-up question to Ms. Tavares. We've heard three kinds of water use when you're talking about the property. One is the possible residential use for six units. The other is irrigation which you're not sure you want to do but would prefer to do. And the third is firefighting. And I wondered, do you have any plans for the property or have any of your contractors done the math for what it would take to maintain a fire storage tank, which usually are quite large? We're talking 8 gallons per second for fire fighting. That plus residential use, plus irrigation use, has anyone computed the number of square feet of catchment footprint area you would need to cover those three uses?

RAUP: Mike Krochina had done my engineering, but I don't believe we've gotten to that stage because it's just so far out there for any part of this process. I am familiar with fire catchment as I've had to do that back home. And with a much denser population we've had 10,000 and 20,000 gallon tank requirements. Yeah, and I don't think I need to catch that water but to have it on hand. So that water could be stored and purchased. I wouldn't have to rely on the local rainfall to meet that need.

DRURY: No, as long as it's there when it's needed.

RAUP: Yeah, yeah.

GIMPEL: Thank you. All right. You have no more live witnesses, so Ms. Self, your ball.

SELF: I'd like to call Phillip Gallinger.

GIMPEL: All right, Mr. Gallinger, would you raise your right hand. Do you swear to tell the truth, the whole truth and nothing but the truth?

GALLINGER: I do, so help me God.

GIMPEL: Thank you. Would you please give your name and address again for the record.

GALLINGER: Phillip A. Gallinger. We reside on Kukuiope Homestead No. 4 which is almost directly mauka of the subject property. My wife's grandfather Isaac Kaawa on whose homestead we reside is buried on the subject property.

SELF: Okay. Hi, Mr. Gallinger. Could you please tell the Board at what elevation is your property.

GALLINGER: Well, it ranges from a little over 1600, approximately 1600-foot elevation to a little less than 2,000, Homestead No. 4. It goes up to the forest reserve boundary.

SELF: And you said that your property is mauka of the subject property?

GALLINGER: That is correct.

SELF: Okay. And have you kept records of how much rainfall the property receives?

GALLINGER: Yes. For the last several years I have been keeping rainfall records.

SELF: And what date did you start keeping them on?

GALLINGER: Was in August of 2005.

SELF: And through till today, correct?

GALLINGER: Till, yeah, current, till current.

SELF: Okay. And what is it that you use? How do you keep this data? How do you check the rainfall?

GALLINGER: I have a little commercial, you know, plastic gauge. And when it rains we just, you know, just check on it, and then record it.

SELF: And what is the average, would you know what the average rainfall is, let's say for the year, let's say for 2007, since that -?

GALLINGER: Oh, okay, which just concluded. By my math which probably needs to be double checked but 46.75.

SELF: Okay. Does it ever reach 60 inches?

GALLINGER: I would say that like this past year has been a, you know, from my experience a wet or slightly wetter than normal or average; and so probably, probably not.

SELF: And you have with you today your records that you've kept. Is that correct?

GALLINGER: Yes.

SELF: And so how often do you check it? How often do you check the rain gauge?

GALLINGER: Well, daily. Sometimes in the winter we can go, you know, a month or two without any rain at all. And then if it's bone dry and dusty, I mean, I know it hasn't rained. We live in a tin roof so when it rains you know it.

SELF: Okay. And so you keep a manual record and -?

GALLINGER: Yes.

SELF: That you have with you today. Okay. And do you have the average for all the years that you've kept these records?

GALLINGER: Well, let's see. This is 2006, for 2006 I think it's at 46.68.

SELF: Is that the average for the year?

GALLINGER: For the year. So -.

SELF: Okay.

GALLINGER: That was -. And then 2005 I began in August keeping records and, let's see, right here -. I didn't tally that as a total, you know, for the, at partially your -.

SELF: Okay. Okay, I really appreciate you coming in. That's all the questions I have.

GIMPEL: Cross-examination, Mr. Vitousek?

VITOUSEK: Hi, I'm Randy Vitousek. So how long have you been living there on the property in Kukuiopeae?

GALLINGER: Nineteen years.

VITOUSEK: Nineteen years. And -.

GALLINGER: Correction, 17 years.

VITOUSEK: Seventeen years.

GALLINGER: Nineteen ninety one.

VITOUSEK: Okay. And you are, you have a home there. Is that correct?

GALLINGER: Yes.

VITOUSEK: And are you on catchment water?

GALLINGER: Yes.

VITOUSEK: And what is the square footage of the roof that you have of the catchment areas?

GALLINGER: I have approximately 1500-square foot catchment area, including the open top, you know, of the tank, of the tank itself.

VITOUSEK: Uh huh. And what's the storage capacity of your tank?

GALLINGER: I currently have a 7,000 gallon tank and a 24,000 gallon tank.

VITOUSEK: Okay. And how many people are in your household?

GALLINGER: Well, it has varied over the years. But currently I have five.

VITOUSEK: And how many times over the 17 years that you've had to purchase water to supplement your catchment?

GALLINGER: I have not. We're pretty frugal in use of water.

VITOUSEK: And so, because you're accustomed to living in a catchment area you have adapted your lifestyle to conserve water. Is that correct?

GALLINGER: That's true

VITOUSEK: And so then in the 17 years you've never had to supplement what you were able to collect from a 1500-square foot catchment?

GALLINGER: Oh, I have hauled some water, not a great amount, but not a large amount.

VITOUSEK: Okay. And in terms of your collecting the rainfall data, do you have any like, you know, scientific background or any expertise in collecting rainfall data?

GALLINGER: Well, I'm a carpenter and I did learn to read a tape measure. And I was put through the Navy's nuclear power program which, yeah I can read a rain gauge.

VITOUSEK: You can read a rain gauge, okay. But in terms of the -.

GALLINGER: No, I don't have a degree in rain gauge reading or meteorology.

VITOUSEK: Okay, thank you. And do you farm on your property at all?

GALLINGER: Somewhat, yes.

VITOUSEK: And what do you farm?

GALLINGER: Primarily citrus, awa and forestry.

VITOUSEK: And forestry, is that, what types of trees are on your property?

GALLINGER: Well, there is some remaining native growth which is primarily ohia, and which I try to preserve. I replant ohia but it's so slow growing that I've planted eucalyptus. I intend to plant some of the delbergies (phonetic), the cocobowl, (phonetic) and such for high value hardwoods, pheasant (phonetic) wood, things like that.

VITOUSEK: Okay. And how do you get access to your property?

GALLINGER: Through a 4-wheel drive road that passes through the subject property.

VITOUSEK: Okay, so you pass through the subject property on a regular basis. Isn't that correct?

GALLINGER: That is correct.

VITOUSEK: And we had some photographs or exhibits that were of the subject property and I'd just, could I ask you to take a look at that. So does that kind of accurately reflect what the subject property looks like, the vegetation?

GALLINGER: Well, what it did look like, yeah.

VITOUSEK: Okay.

GALLINGER: It has been, well, most of the overgrowth has been removed with a, an excavator with a grinding hand.

VITOUSEK: Okay. But in terms of that, that was the vegetation that was -?

GALLINGER: Yeah, there was a lot of rose apples. There's still remaining ohia, and scattered ohia, some mango. There was a lot of Christmas berries and a lot of rose apples on the subject property.

VITOUSEK: Okay. And I think you testified that your wife's grandfather was buried -?

GALLINGER: Yes, Isaac Kaawa.

VITOUSEK: And so was there a homestead on that property before? Was that, I mean -?

GALLINGER: There was a large population on the property.

VITOUSEK: And so in terms of over the years there was a Hawaiian population that actually resided on that property, farmed that property. Is that correct?

GALLINGER: Yeah, and the properties mauka of that. I mean it was from the mountain to the sea. So, I mean they utilized the, you know, the whole ahupuaa.

VITOUSEK: But there were actually homes on the subject property?

GALLINGER: Yes.

VITOUSEK: And so people have lived on the subject property for generations. Is that correct?

GALLINGER: Yeah.

VITOUSEK: Okay. That's all the questions I have. Thank you.

GIMPEL: Any redirect?

SELF: No, thank you.

GIMPEL: Okay. Thank you. Any from the Board? Intervenor, do you have any questions of this witness?

MCCLEAN: No, that's okay.

GIMPEL: All right. Anything from the Board?

DRURY: Very small.

GIMPEL: Mr. Drury.

DRURY: Mr. Gallinger, if you've got your notebook open, I've got the long-term averages for Opihihale gauge. If you could read out your 2005 August through December totals, I just want to see if it checks with what the rain gauge says.

GALLINGER: Okay, beginning 10 August, I have 9, 10; 11 August 1.65 -.

DRURY: Oh, oh, you don't have monthly totals?

GALLINGER: For 2005, I didn't. I didn't do that in 2005.

BRILHANTE: Just for everybody's sake, why don't we reference the exhibit that you're looking at.

DRURY: Okay, the exhibit is Exhibit 12; and it is the 1, 2, I believe, the pages aren't numbered. I think it's the 5th page and it's Opihihale 2, Hawaii Period Of Record General Climate Summary, 1956 to 2004. I thought you had monthly totals. I wouldn't ask you to read out all your measurements.

GALLINGER: Oh, I do, I do beginning, I have one here for September, cause I began in the middle of August. September 4.18, October 3.05, let's see, November 1.48, December 6.90.

DRURY: Okay.

GALLINGER: Do you want to go into the following year?

DRURY: No, no, I just -.

GALLINGER: Okay, just to give you some basis for comparison?

DRURY: Give an idea of how well it corresponds to Opihihale.

GIMPEL: Ms. Gentry, you had a question?

GENTRY: Yes. Out of curiosity, why did you start a rain gauge. It seems you've lived there a long time. Why did you start tracking -?

GALLINGER: Because, well, I mean, weather is something everybody talks about and, you know, we all, well, it's a wet year, it's a dry year; and so I finally said, well, instead of speculating just get a rain gauge. I was in Ace Hardware, they were right there, so I picked one up and said now I'll know.

GENTRY: Yeah, there's probably a lot of informal rain collection -.

GALLINGER: Yeah.

GENTRY: Without, records like yours. The other question I wanted to ask you is that you mentioned that you hauled water. Was that just for drinking?

GALLINGER: Primarily we still do for drinking. I have hauled water because it can get pretty dry. I remember when we first moved up here, we moved from Molokai in '91 and it was, it didn't rain until nearly as I recall like April. It was dry and dusty. My wife came up and we had a deluge and said you better do something real quick. So, yeah, we've hauled water when I was initially kind of getting our catchment system and storage system up and running.

GENTRY: You said you have, you farm. You have a lot of citrus, lot of forest, a lot of awa or just some? How big is your acreage again?

GALLINGER: Well, we're on an 18-acre homestead, 18.3 acres, the Homestead No. 4, yeah. And adjoining that was my wife's great grandfather Louis Kalauli Kaawa's homestead; and that's about 11 1/2 acres.

GENTRY: Do you have to water your trees?

GALLINGER: Usually not. My wife sometimes waters the citrus trees and that a little bit when it gets dry.

GENTRY: You mentioned you had two tanks, 7000 gallon and 24,000 gallon. Is that for household use or -?

GALLINGER: Primarily, yes. We have, you know, 7,000 gallons that we, is our primary catchment tank; and then a 24,000 gallon tank that's further mauka. So I pump it up there and let gravity feed it back down.

GENTRY: Is that for your watering purposes or -?

GALLINGER: Primarily household purposes.

GENTRY: Oh, so you have more than one structure on the property?

GALLINGER: Well, I've got a shop, you know, a little shack and a workshop area.

GENTRY: Okay. And you say you've never really have to haul water for that, or pay for water to -?

GALLINGER: No, I've never bought water, no.

GENTRY: Good record. Okay, thank you.

GIMPEL: I have one question, Mr. Gallinger. You said that you hauled water until you got your catchment system up and running. Since your catchment has been up and running, have you had to haul water?

GALLINGER: Not really -.

GIMPEL: Thank you. You have more witnesses, Ms. Self?

SELF: Yes, I'd like to call Chris J., Christopher J. Yuen, the Planning Director.

GIMPEL: Okay, I remember him.

VITOUSEK: Could we take a short break? Would that be possible?

GIMPEL: Yes, we can. We can take a short break. It's a quarter after. Why don't we make it until around 25 after. Okay, thank you.

RECESSED The Chair called a short recess at 11:15 a.m.

RECONVENED The meeting reconvened at 11:25 a.m.

GIMPEL: Okay, let's begin. Mr. Yuen, you have been called as a witness. Would you raise your right hand. Repeat after me or -. Do you swear to tell the whole truth, nothing but the truth?

YUEN: Yes.

GIMPEL: Okay. And give your name and title, please.

YUEN: Yes. I'm Chris Yuen. I'm Planning Director. My work address is 101 Pauahi Street, Suite 3, Hilo.

GIMPEL: I notice we are missing two of the Board Members. See if they're around. We do have 1, 2, 3, no we don't have a quorum, no. Well, we do have a quorum. Yeah, we have four, okay, so we can, I think you can go ahead, I think in the interest of time. What I would like to do is to break for lunch at around 12:15. I'm hoping that we can get -. Do you have any more witnesses besides Mr. Yuen, by the way?

SELF: No.

GIMPEL: All right. I'm hoping we can get Mr. Yuen's testimony in and perhaps summary arguments, and then break for lunch. And then we'll have time to, shortly after lunch, hopefully arrive at a decision. So let's go on right now. We have four present, I think we can move.

VITOUSEK: Excuse me, Mr. Chairman. I think that, the problem is that Chapter 91 says that if Members of the Commission aren't present for all aspects of the testimony then you have to read it before you can rule.

GIMPEL: Oh, okay, all right. Here's David. Okay, we'll wait for Ms. Tavares then. Okay, we can begin -.

SELF: Okay, Mr. Yuen, could you explain to the Board whose policy is it that subdivisions should have a water system approved by the Department of Water Supply?

YUEN: Well, that's actually, that's contained in the Subdivision Code which is an ordinance enacted by the County Council. It is also referred to in several policies of the General Plan which is also enacted by an Ordinance of the County Council. So it's a policy established by the Legislative body of the County.

SELF: Okay. And what is the best indication of rainfall on a property?

YUEN: On this property the Opihihale 2 rain gauge is a very good indication of the rainfall at the lower end of the property; and you can use the USGS Maps and other kinds of rainfall maps to establish the general trend of rainfall to know that the Opihihale gauge is basically a comparable gauge. The Opihihale gauge is about 2 ½ miles south of this. It's at 1270 feet elevation. The lower end of this property is at about, is slightly lower. It's at about 1160 feet elevation. The top is at 1640 feet. Under their proposed subdivision plan where one lot is at the mauka end, of the 5-acre lots that they propose to make, the top end of the 5-acre lots is at about 1440 feet. There is a general trend in this area as shown by the rainfall maps that it's fairly consistent at a particular elevation from north to south. There is a general trend that it increases as you go mauka up to a certain point at a much higher elevation, and then it starts to get dryer again. The rainfall maps give a general idea of how fast this happens. They indicate that 60 inches occur somewhere above the top property line, certainly above 1450 feet. But in really establishing what the rainfall is here, the best indication is this Opihihale 2nd gauge.

SELF: Okay, and what happens if you allow subdivisions without water systems approved by the DWS?

YUEN: Well, what happens and what has happened over time in South Kona and other areas where there have been water variances allowed is that you gradually get an area of dozens to hundreds of lots that have been created with water variances. And you have no, although, you know, the owners come in individually with the idea or with the argument that it doesn't pay to do a water system for my 40-acre property, my 50-acre property, to do 6 lots or 8 lots or whatever, what happens over time is that you end up, you do end up with hundreds of lots that where if there had been a -. Then there's no economic incentive for the owners to get together to support having a water system in order to subdivide as called for by the Subdivision Code.

SELF: Okay. And there have been situations where one owner has come in for, instead of having one big subdivision they come in and do it in increments. Is that correct? They come in for a variance for one increment at a time. Is that correct?

YUEN: That happens, and it also happens that a number of different owners who may own 50 acres each will come in, and each one will get a water variance; and over time you'll have a big area that has been subdivided with water variances where in each individual situation it may not have made economic sense to have, in terms of what you could sell the lots for in the end to have developed a water system, but in the aggregate they might have.

SELF: Okay, and could you describe for the Board the Department's overall policy of discouraging subdivisions in low rainfall areas?

YUEN: Well, this is embodied by Rule 22 and is, well, it's discouraging subdivisions on catchment in low rainfall areas because you don't have, you're going to have more problems in supplying water to homes, particularly by, in areas where there's not a lot of rain and there's maybe a lot of various, and also if there's not a lot of variability, but basically if there isn't a lot of rain.

SELF: Okay, and then you've heard testimony and seen the pictures that were produced by appellant of the vegetation of the property. So what does foliage tell you or does foliage tell you much about rainfall?

YUEN: Well, I don't think anybody can go and say that a certain level of vegetation equals 50 inches of rain, 60 inches of rain, 70 inches of rain. On a general, all other things being equal, you know, identical soil, identical lava, time period of lava, yes, an area with more rain will have more lush vegetation. But to say, there's absolutely no way to say that you have mango trees, big mango trees, you have flourishing coffee plants therefore you have 60 inches of rain. I can't do that, I can't say that yes or no. But the vegetation itself doesn't tell you anything. You can have, you know, to take an extreme example, if in South Kona, you know, lava flows went through in 1950 so you have places that are right next to each other where 50 feet away you have a dense ohia forest and on the lava flow you have lichens and scattered 3-foot high ohia trees, and they have the same rainfall but the vegetation is really different, but they have the same rainfall. So you really can't say, you can't pin a particular amount of rainfall on having lush vegetation, not to quantify it in any way.

SELF: So that's something that the Department can't rely on in determining whether or not to give a water variance because it's not reliable information, correct?

YUEN: No. And it's, there's always information that's more reliable. The point in referring, and where the, say like take the USGS Map -. And I agree that in this area it's difficult to determine how much rainfall there is using the paper, the USGS Map on paper. All right? And I agree with that and I would not, the primary reliance is on the Opihihale 2nd gauge. But you can take that, you know, to give an idea where that kind of map is very useful, say you have a subdivision coming in at Mt. View and you look at the rainfall map and Mt. View is located between 160- and 200-inch rainfall lines and you say, oh, Mt. View, clearly has lots and lots of rain somewhere between 160 and 200 inches. You don't have to go run around and look for a rain gauge because it's very clear that the area has more than enough rain. I mean a rain gauge is always the best. If it's in a comparable location a rain gauge is always the best information.

SELF: And did the appellant in this particular case, did they ever provide you with evidence that their property receives 60 inches with information from a comparable rain gauge?

YUEN: No.

SELF: Okay. No evidence whatsoever of 60 inches of rainfall on their property, they didn't provide anything. Is that correct?

YUEN: No, no. The best evidence is the Opihihale gauge. I can't remember what they brought in. I don't think they brought in any, it would be in the record of their application. But my memory is that they didn't refer to any rain gauge in their application. And that since we've, you know, we've done this over and over. We looked at, we looked for the closest gauge, which was the Opihihale; and being that it's at a similar elevation to the lower part of their property, used that.

SELF: Okay. And what is the elevation of the individual lots in this proposed subdivision?

YUEN: There's a map in the record that shows how the lots would be proposed to be laid out. I think it's page 15 on the record on appeal. That shows that the bottom, well, let's take the top elevation of each lot. And I'd like to look at that for a minute. Right, okay. So Lot 1 the top elevation is between -.

SELF: Oh, one second -.

YUEN: I'm sorry.

SELF: It is page 15 of the record on appeal.

COOK: Exhibit what?

SELF: Page 15 in the record on appeal.

YUEN: Lot 1, the top elevation is between 1240 and 1280. Lot 2 is sort of about 1280. Lot 3 is between 1320 and 1360. Lot, and same thing on Lot 4. Lot 5 would be between 1400 and 1440. And Lot 6 at the top elevation would be at about 1640 at the very top of the property.

SELF: Okay. So not all of the lots, so none of the lots actually reached the elevation where they would receive at least 60 inches of rainfall annually. Is that correct?

YUEN: No.

SELF: Okay. And could you discuss what the purpose of a variance is.

YUEN: Well, a variance is an exception. A variance is an exception from the normal standards of the Code; and it's not supposed to be the normal way of proceeding, which it has become in many areas to do subdivisions. There are many areas where subdivisions have normally been done with variances. And a variance is really supposed to, I could read the exact language, but it's supposed to relate to some unique condition of a property or some unusual condition of a property that, where adhering to the Code makes it difficult to proceed. And although, I'm not sure if the word hardship is exactly used but that represents a hardship for the owner. In this property and in many others the property can be used in its present condition without a subdivision, for example.

SELF: Because in this case they could actually have two lots, they could have a subdivision of two lots. Is that correct?

YUEN: Well, under Rule 22 there is an exception that's designed to provide some relief for property owners who would subdivide to less than their zoned density and create a subdivision of fewer lots than their zoning, even if they're under the 60 inches of rainfall. And it calls for, it says that at least, if you subdivide to at least four times your zoned density and an average lot size of 20 acres or more. And in this case what that means is that it would be consistent with Rule 22 for the owner to do a two-lot subdivision. And the two lots could be of any size of 5 acres or up. You know, in other words, the Rule 22 would allow a 5-acre lot and a 42-acre lot, under by its terms on this property. So it's not that Rule 22 by its term prohibits any subdivision on the property. It does limit it though to less than its zoned density.

SELF: Okay. And could you explain to the Board what the General Plan says with regards to subdivisions and the need for water.

YUEN: There is a policy in the General Plan that talks about new subdivisions having water systems that are DWS standard and, which is the same as, basically the same as Section 23-84 of the Subdivision Code.

SELF: So there's nothing in the, it's not consistent then with the General Plan to allow, to continue to allow subdivision after subdivision after subdivision with large, you know, with numerous lots to be on catchment. Was that the intent of the General Plan, to allow that or not to allow that?

YUEN: Basically, well, it says what it says and it is not the overall policy to allow subdivisions without a water system.

SELF: And then the intent of the Subdivision Code is the same, right, under 23-84 -. That's the same policy, correct?

YUEN: Right.

SELF: Okay. And getting back to the rainfall, you've heard the questions that were posed to Mr. Gallinger by appellant's counsel. Can you explain, well, I believe it was posed by a Member of the Board. Can you explain why you can't compare the rainfall averages that are on the exhibit showing the Opihihale rainfall -- that was for, anyway they were comparing that, they were asking Mr. Gallinger to compare month by month what his rainfall averages were -- and comparing it to what's listed for the Opihihale rain gauge.

YUEN: Right. The appellant has an exhibit that shows the average monthly rainfall for each month over a 45-year period, and that's all it shows. So it doesn't mean that if, for example, Kukuioape Homeowners' gauge had 2 inches in December and Opihihale had 1 inch in December, average in December, I'm making that part up, that there's a difference in rainfall between Opihihale and Kukuioape. All that the appellant's exhibit shows is that there's a certain average over a 45-year period. It also doesn't show, by the way, how much, whether you have months in a year that go without rain. You know, you may have in a particular year, you may have a month, two months, three months where it doesn't rain. But over a 45-year period February will have 3 inches of rain, and the actual figures are something like 3, 4 inches a month. So there's not that much seasonal -. And that's important to know, I mean, there's not much seasonal variation but there may be a lot of variation from month to month within a particular year.

SELF: Okay. And could you explain, there was mention of the TMK overlay for the rainfall map that was produced by the County. Could you explain to the Board the information and the purpose of putting the TMK overlay and where all this information is derived from?

YUEN: Okay, and this is just a convenient way of displaying rainfall data, the rainfall maps. And the basic, okay, we have a GIS layer of rainfall that is, and this is the printout of that layer -.

SELF: I'm sorry, excuse me, he's looking at Exhibit D of Appellant's Exhibit D.

VITOUSEK: Exhibit 2.

SELF: It's Exhibit 2 his petition.

VITOUSEK: It's Exhibit 2 of the exhibits that we offered.

YUEN: Okay. So how did this come about? First we actually received a layer from DLNR of rainfall. And the layer is a name for the computer map of rainfall, and that

computer map has bands with isohyet lines. And so, you know, between the isohyet line it's a band of rainfall. This property here lies in the 40 to 60, at the top end is the 60 band which is above the, according to the map, is above the elevation of his property. At the bottom in some place there's the 40 band. And so the map, the computer map comes from DLNR; and we did not generate that layer that resulted in this map here, exhibit whatever it is. What is it?

SELF: Exhibit D.

GIMPEL: For the record, we're referring to Exhibit 2 in appellant's exhibit list, or it could be also referred to Exhibit D in the appeal -.

SELF: To the petition for appeal.

GIMPEL: Petition for appeal.

YUEN: Now that map comes, now that layer that comes from DLNR, we get it and it's layered out with a coastline of the island. And I believe that that's, and it's meant to work with all the other data layers that you have. I'm not sure whether, sometimes these things need very slight adjustments to make the coastline work so that it matches up. I'm not sure whether this came in -. Because some of our data layers, it depends on who did the data layers and sometimes there are people in our shop who have to, in the Planning Department, have to make very slight adjustments to the data layers to make them fit so that the coastline on this data layer matches up with the coastline on our data layer. Sometimes they don't even, they don't do that. And then if you go look at the coastline on this data layer it doesn't match up. But the differences are quite slight. So all that the Planning Department does is basically put this data layer into our computer.

Now once you have the data layer, you can overlay all other kinds, all other kinds of information against it, including the tax maps. And so what you have here is a tax map, you know; and I'm not sure that this is, because this is, Exhibit D is theirs. I'm not sure that we even generated this because it doesn't actually look like something that was generated out of the County system. It's very close to what is, to what we would generate. But just the look of it is not quite right. And so, but it is very similar to something that we would do in-house. This is, as I say, this is, somebody here has taken a tax map layer, well -. And this one here, you know, I think this is the same, I couldn't even swear that it's the same data layer we would use. I would accept this. You know, if somebody brought this in I would accept it. But somebody has basically, I think, not using the County system but using a parallel GIS system possibly with the same sources of information, then gone and printed, and then gone and printed this out. But that's, you know, basically what I said for the County system is the same as how Exhibit D - I think Exhibit D was prepared, but I don't think this was done directly by somebody sitting at a County computer terminal and printing it out. We may have one that we did in the record, I'm not sure -.

VITOUSEK: Page 36 of the record on appeal.

YUEN: Okay, this is basically the same thing but -.

COOK: Sorry, what page was that?

VITOUSEK: Page 36 of the record on appeal.

YUEN: Okay, all right.

VITOUSEK: Not the exhibits.

YUEN: Okay. So this is, page 36 of the record on appeal is a, just cause it is in the record on appeal, this was something that was, I presume, was generated in the Department, I hope. Could I take just a minute on this.

Judging from where it is in the application, I think that Page 36 on the record of appeal was done by somebody within the Department and printed out from our data. And it's overlaid, there are other layers that are on this besides the TMK layer. One of the layers being, the topo layer is laid out on this as well. There's a parcel layer 0506, that's the TMK layer, and the topo layer are both laid out on this. So this is an example of what it looks like when you put the layers together and drop them out, I mean, and print them out, I'm sorry.

SELF: Okay. But, again, so the original information comes from DLNR. The Department does not manipulate that rainfall information from DLNR. Is that correct?

YUEN: No. The layer just came from DLNR, and we didn't create the rain, we didn't create this rainfall area ourselves.

SELF: And so the purpose of the TMK overlay is just to show where the property lines lie in relation to the rainfall overlay. Is that correct?

YUEN: Right.

SELF: Okay. We heard testimony about Mr. Gallinger's property is 18 acres, he lives on 18 acres and he's on catchment. But could you describe how that differs as compared to subdivisions, you know, carving out the property into numerous lots so there are more people on catchment than -?

YUEN: Well, this is a, this is the issue with subdivisions, is that ultimately you're creating more pieces of property, you're creating more potential dwellings. We have a lot of, we have many lots that exist currently that are on catchment. We are respecting the ability of the property owner to then live on and develop an individual piece of property that he owns. The policy though is that certain infrastructure has to be provided with new subdivisions; and that's the reason behind the Code requirement that there be a water system with a new subdivision.

SELF: Okay, and when did this subdivision, when was that adopted?

YUEN: That was from '68. That portion of the Subdivision Code has existed since '68.

SELF: Okay, thank you.

GIMPEL: Any cross-examinations?

VITOUSEK: Yes, sure. Mr. Yuen, you're familiar with the application on behalf of the, I believe it was the applicant's, well, I believe I was the applicant, but I believe that the landowner was Saxton. It's Exhibit 21-I to the exhibits that we submitted.

SELF: Is that on the record?

VITOUSEK: Oh, it's in the exhibits submitted to the Board.

YUEN: Let me, let me, you know what, let me look at my copy, 21-I.

VITOUSEK: Exhibit 21, A through I are previously approved water variances in the South Kona area. But I'd like you to look particularly at I.

YUEN: Right.

VITOUSEK: And can you find any, this is one where the Planning Department approved a water variance application. Isn't that correct?

YUEN: Right.

VITOUSEK: Okay, and do you see any reference in that approval to rain gauge data?

YUEN: No.

VITOUSEK: Okay. In fact the only, so the only information that you used in granting this approval was the location of the 60-inch isohyet line relative to the subject property? Isn't that correct in terms of the reason for the decision stated in that decision?

YUEN: I'm not sure. You know, where is this property?

VITOUSEK: The property is in Olelomoana and Kolo which is, the Opihihale rain gauge is the closest rain gauge to that as well, which you can see from your previous decision in, from the Board's previous decision in Board of Appeals 07-000043, which is also in Olelomoana.

YUEN: Right, right. Right.

VITOUSEK: And so in fact that property, the 60-inch isohyet line bisected the Saxton property. And that alone was the basis on which you granted this variance. Is that correct?

YUEN: No, I believe that there was a portion of the lots that, the basis for it is shown that a portion of the lots received 60 inches of rain.

VITOUSEK: But you didn't cite any other data sources as to the 60 inch, other than the fact that the 60-inch isohyet line bisected the property. Isn't it that correct? There's no rain gauge data or other data. Isn't it that correct?

YUEN: Well, there's no rain gauge data shown. The property went up to 2200 feet, which is considerably higher than this property; and a portion of the lots were above the level where the GIS information would show the 60-inch line to be located.

VITOUSEK: Okay, so if this application, assuming it's a hypothetical, if the 60-inch isohyet line had bisected the lot, 50 percent of lot being above, 50 percent being below, then presumably you would have granted it because that's what you did in Saxton. Isn't that correct?

YUEN: Well, had there been, had a portion of the lot been above, had a portion of the lot received 60 inches of rain then that lot could be approved. The Rule 22 says that all the lots to be served by catchment shall receive at least 60 inches of rainfall.

VITOUSEK: Okay, so no matter what we were talking about Opihihale that in fact in the Saxton one you didn't refer to any comparable rain gauge data. You simply accepted the location of the 60-inch isohyet line laid out on a tax key map and determined that that indicated that there was sufficient rainfall to approve the subdivision applications. Isn't that correct?

YUEN: We used the 60-inch rainfall line on this map, yes.

VITOUSEK: Okay. The rule, Rule 22 refers to a USGS Rainfall Map; and the Planning Department offered an Exhibit A to this appeal which I understand purports to be that USGS Rainfall Map. Is that correct?

YUEN: Yes.

VITOUSEK: What is the scale of that map for the Big Island of Hawaii, do you know?

YUEN: You know, there's a scale and I don't -. There's a scale on it.

VITOUSEK: Okay. Well, it appears from looking at the scale that it's approximately 1 inch equals 10 miles. Is that -?

YUEN: It's a very large scale, yes.

VITOUSEK: And so based on that, Mr. Yuen, well, first of all can you show me where on that map, specifically now, very specifically, where the Pacific Horizons property is located. And I'd like you to locate that specifically on this USGS Quad Map.

YUEN: No.

VITOUSEK: So you can't do that. That's correct?

YUEN: No.

VITOUSEK: Okay. And given the scale of the map can you -?

YUEN: No, you know, I can show you in general. But in the sense of if you then blew it up, blew it up, blew it up, would you be within, you know, a 1,000 feet of the property, no, you can't do that.

VITOUSEK: Okay. So you really can't say based on this map whether the subject property is within or without the 60-inch isohyet line. Is that correct?

YUEN: No.

VITOUSEK: Okay. And so in order to make that determination you used a program which overlays this map or data from this map on a TMK map. Is that correct?

YUEN: It was done in this case but that was not the primary source that was relied upon in determining the rainfall.

VITOUSEK: Okay, but that's not my question. My question is in terms of locating the 60-inch isohyet line relative to the Pacific Horizons' property, how was that done? Because I think you made a statement in your decision that it was not within the 60-inch isohyet line.

YUEN: Oh, yes. It was done by overlaying the TMK map against the, that determination of where it is in relation to the 60-inch isohyet line on a rainfall map was done by using the computer, the computer layer, and overlaying that against the TMK map.

VITOUSEK: Okay. And in doing that, did you read the County's precautionary note to users of the County GIS data? That's referring to Exhibit 23 and specifically the part that says "County GIS data is intended to be used as a guide for planning purposes and should not be for boundary interpretations or other spatial analysis beyond the limitations of the data." So isn't that saying that, I mean, isn't determining where the isohyet line is relative to the property, isn't that very specifically making a spatial relationship determination which your data says it's not capable of making?

YUEN: Well, no, you're leaving out the last part of the statement which is "beyond the limitations of the data." The first part of the statement referring to boundaries, one cannot use these maps, well typically, you know, one can't use these maps in a boundary sense in terms of, you know, where your pins should be staked. That's beyond the limitations of the data. There are spatial limitations of the data. But the statement in the warning, and it's a warning to public users and to the Department as well, of the fact that you have to be aware of, that the data has limitations and cannot be taken as an absolute.

In this case, the spatial limitations of the data, there's limitations of the basic data as to where the 60-inch line should be. And there are limitations to the data as to where you extrapolate that line, you know, if you have another map upon which that line has been created where you extrapolate it to the data layer. So in a case where one, and the difference here with Saxton is in a case where you're going to deny a variance and get an appeal versus when where you were going to approve a variance you have to take a little more care as to what sources are that you're using and back that up. But as far as the spatial limitations of the data, I think, you know, in my view the data is adequate to determine that the, certainly adequate to determine that the -. There

are a number of lots that are, you know, in fact all of the small lots being proposed to be created in a subdivision lie below, actually, in fact, do not get 60 inches of rain.

VITOUSEK: Okay, so we're talking about limitations of data. What, the USGS publishes essentially what they call calculations of plotting error, calculations of the reliability of USGS maps. Isn't it that correct?

YUEN: That's with respect to Quad maps I believe -.

VITOUSEK: Okay.

YUEN: The Quad maps, but go ahead.

VITOUSEK: And so have you done any assessment of the projected degree of reliability offered by USGS with respect to the rainfall maps?

YUEN: No.

VITOUSEK: Okay, so you don't know how reliable the maps are in terms of being able to say that the 60-inch isohyet line is accurately located on the USGS quad map. Is that correct?

YUEN: Well, no because, you know, I've looked at the rainfall map as done on the GIS layer with respect to various actual rain gauge data, and for example Opihihale 2nd. And so at Opihihale 2nd Opihihale 2nd at 1270 feet is 41-inch rainfall. And according to the GIS data layer, it's some place, the 60-inch line is some place well mauka of Opihihale 2nd, which it makes sense in -.

VITOUSEK: Well, I understand you're answering the question you want to answer, but that wasn't the question.

YUEN: Okay, so -.

VITOUSEK: The question related to the reliability of the maps and whether you as Planning Director had done any inquiry into USGS's own representations as to the accuracy of the rainfall map. I mean USGS does publish data with respect to the reliability of their maps. Isn't it that correct?

YUEN: I don't know that they -.

VITOUSEK: The accuracy?

YUEN: No, I don't know that they publish any data with respect to this map.

VITOUSEK: Okay, so what, how, in looking at this map, in using the scale of the map, how wide would that line be shown on the map? I mean if you tried to scale that line off the map and if you're using a 1 inch equals 10 kilometers or 10 miles, how wide would that line be?

YUEN: No, I don't know.

VITOUSEK: So you don't know. So that line could be a quarter mile wide because it's draw with a fat pen on a very large scale map, right?

YUEN: No, it's not a quarter mile wide. There is a width to it, yes.

VITOUSEK: And have you done anything to calculate what that width is?

YUEN: No.

VITOUSEK: Okay. And so you have a problem with the width of the line on the map and you also have a problem with the reliability of the map, this map itself, in terms of where the, of the degree of accuracy that a point on the ground is as represented on the map, that's also an area there. And you also have the area there that was referred to by Mr. Bowles and his declaration that the isohyet lines themselves are not accurate to the point of being able to represent that there is 60 inches of rain on one side of the line and less than 60 inches on the other side. Isn't it that correct?

YUEN: Correct, yes.

VITOUSEK: So you have inaccurate isohyet lines, an inaccurate large scale map, and then you overlay it with a TMK map which your own Department represents should not be used for spatial relationships. Isn't that correct? And then whether the line falls on one side of an imaginary TMK line or the other side determines whether or not they get to develop their property. Isn't it that correct?

YUEN: Well, the use of these rainfall maps gives the applicant an opportunity to show what rainfall that they have where they may not be able to rely on a particular rain gauge. So it gives a point of data that the applicant can use to verify 60 inches of rainfall. But it does have deficiencies, it does have deficiencies in the data.

VITOUSEK: And to your knowledge are isohyet lines intended to be used as regulatory standards, I mean in terms of the location of the line? Do you think it was drawn with sufficient specificity to be a regulatory standard?

YUEN: I have a hard time answering that question because all I know is that it represents somebody's best effort to map patterns of rainfall. And what uses that they get put to is then up to the user. I don't know that somebody who makes a map like this sits down and says, I intend that it may be used for somebody to decide whether they should plant coffee or to decide things like, the engineers, for example, will use maps like this to estimate how many drywells they have to put on the property to handle drainage and the like. And I don't know, you know, when these maps get made that somebody sits there and has an intent of what they're going to get used for.

VITOUSEK: Well, isn't it correct that Mr. Bowles stated in his affidavit that his understanding of the isohyet lines are used as a means to evaluate recharge and water resources but not to regulate land use? Are you familiar with that testimony?

YUEN: I would disagree that, well, I don't think he knows what, there are a range of things. You know, if somebody makes a map of what is their best estimate of what, you know, what the rainfall patterns are, and this is what this represents and then what they intend people to use it for is not in the mind of the map maker. It's something that people then use it; and that's a different argument whether it should be used for that or not. I don't know.

VITOUSEK: Well, are there other -?

GIMPEL: Excuse me, we have a luncheon appointment at 12:15. Do you anticipate a lot more questions, a lot more time?

VITOUSEK: Yes, more than 5 minutes.

GIMPEL: Okay. So why don't we take a break here -.

VITOUSEK: Fine, that's fine.

GIMPEL: If that's okay. And we will return at 1:30 and continue.

VITOUSEK: Thank you.

GIMPEL: Okay, so we're adjourned till 1:30.

RECESSED The Chair called a recess at 12:10 p.m.

RECONVENED The meeting reconvened at 1:30 p.m.

GIMPEL: I'll call the meeting back to order. Mr. Vitousek, you may continue.

VITOUSEK: Mr. Yuen, looking at your decision in this matter in this application for a variance, I think that you made a finding or assessment that the average, I'm sorry, the annual rainfall of the property's boundary on or along Mamalahoa Highway or South Kona Belt Road is probably 41 inches. Is that like quoting that correctly?

YUEN: Correct, yes.

VITOUSEK: Okay. So you assumed for the purposes of your decision on this variance application that the property received, at least the makai part of the property received, about 41 inches of rain a year. Is that correct?

YUEN: Correct.

VITOUSEK: And you also stated in your decision that the water system would not meet the, "would not meet the intent or purpose of the Subdivision Code: In this case that a subdivision have adequate clean, safe drinking water for human consumption and a reliable supply of water for fire fighting purposes." Is that correct?

YUEN: Correct.

VITOUSEK: So that your understanding is that what the Subdivision is attempting to assure is that a property or a subdivision have an adequate supply of clean safe water. Is that correct?

YUEN: Drinking water, yes.

VITOUSEK: Okay. And the fire fighting supply, right?

YUEN: Right, right.

VITOUSEK: So what did you do to assess whether or not this subdivision would have an adequate supply of clean, safe drinking water?

YUEN: Besides trying to determine the rainfall -?

VITOUSEK: Yeah, in addition to determining what the average rainfall was on the property.

YUEN: Nothing. Nothing.

VITOUSEK: Okay, so the only criteria that you applied in assessing whether it met the intent and purpose of the Subdivision Code is whether or not it got 60 inches of rain. Is that correct?

YUEN: Well, after determining that it was, what they're proposing is not to have a County standard drinking water system, yes.

VITOUSEK: Okay, but in terms of the catchment aspect the only criteria you applied was determining whether or not the property received, in your opinion, 60 inches of rain?

YUEN: I'm not going to argue that in my opinion part, but yes.

VITOUSEK: I'm sorry. I don't mean to overstate that. Cause, I just mean -.

YUEN: Yes. Okay?

VITOUSEK: I just mean that's the criteria you applied?

YUEN: Yes.

VITOUSEK: Okay. Now if we said the property got 40 inches of rain per year and if the catchment size, the catchment area for the property was, let's say, 3,500, let's say 2,500 square feet, no, let's say 3,000 square feet, 40 inches of rain, 3000 square feet, right, of catchment area, that would get the same amount of water as a 2,000-square foot catchment area in an area that got 60 inches of rain. Isn't that correct?

SELF: I'm going to object as to the relevancy of this. He's asking the Director to speculate about something that is not part of the policy of the Department to begin with. So I would question the relevancy of this line of questioning.

GIMPEL: I'm not sure that he's asking the Director to speculate. I think he's asking a pure math question, that's whether it's 40 times 20 or whatever the number is.

VITOUSEK: Yeah, it's a fact, I mean, just that the catchment area was 50 percent larger in an area that has 40 inches of rain compared to an area that has 60 inches.

GIMPEL: Yeah. So I think what we're dealing with is he's pointing out that there are two variances, two variances were possible, one, variables, one is the amount of rain and the other is the size of the catchment area. When you increase one you can reduce the other and vice versa. So he's just trying to see if the Director acknowledges that, so I'll allow the question.

YUEN: On an average annual basis, yes.

VITOUSEK: Okay. And as part of your assessment do you determine what you consider to be an adequate supply of drinking water for human consumption for annual purposes?

YUEN: No.

VITOUSEK: Okay. So in applying the intent and purpose of the Subdivision Code that there be adequate safe drinking water, you do not try to assess what adequate means and what an adequate amount of drinking water would be?

YUEN: Well, no. I mean there are averages that people use and these are widely available. I mean in that sense these things exist.

VITOUSEK: Okay. But did you do any assessment to evaluate whether an adequately designed catchment system in an area that gets 40 inches of area would be able to supply sufficient clean, adequate clean drinking water to a family living in that area.

YUEN: No.

VITOUSEK: Okay. So do you do any assessment of storage capacity, in other words, of what amount of rain and water storage a particular catchment system has, as evaluating whether there would be an adequate supply of water to people living in that area?

YUEN: There are tables that exist as a matter of advising people; and so I'm aware that they exist. I don't sit there and do that calculation in reviewing the water variance. I am aware that there are tables that exist like that and they related to a previous question.

VITOUSEK: Okay.

YUEN: As far as citing in this variance application and doing the calculation, no.

VITOUSEK: Okay, but that's something you would be able to do based on available tables, that is you'd be able determine what amount of water would be required to provide adequate drinking water to a family living there and what amount of catchment area would be required to produce that amount of water and what amount of storage capacity would be required to determine that that water, adequate water would be available on an annual basis. Is that correct?

YUEN: You can do all these calculations to figure out what, you know, "x" gallons of water per day would be available on an annual basis to people with "x" storage and account for what period of time you would be going without rain and then so forth.

VITOUSEK: Okay. And so if in deed the rule were intended to determine whether there was an adequate supply of safe drinking water for human consumption, that could be done by applying the amount of rainfall in the area, the catchment area, the storage capacity, and the monthly distribution of rain. Isn't that correct?

YUEN: Well, you can do all those calculations and come up with a set figure of available water per person or, you know, I guess the per person aspect is up to the lot owner, you know, because you don't know at the subdivision how many people are going to actually be on the property. But if the point is that you can do all these kinds of calculations, yes, of course you can.

VITOUSEK: And that the intent of those calculations would be determined, the question of whether there would be adequate drinking water available at that site is based on existing conditions at that site. Isn't that correct?

YUEN: Well, it would be a question, to determine, if you're trying to get "x" amount of water you would have a calculation that would get you to that point.

VITOUSEK: Okay. Did you evaluate rainfall data from any gauge other than Opihihale?

YUEN: Not prior to making this decision, no. Subsequently, yes.

VITOUSEK: Okay, but at the time the decision was made you only looked at one data from one rain gauge, that's the Opihihale 2nd. Is that correct?

YUEN: Well, let me be a little more exact about this. I'm sure that I looked at a list of many rain gauges. But the one that was more applicable and comparable was Opihihale 2nd; and, therefore, I used that one.

VITOUSEK: Okay, did you in your decision, did you refer to any rainfall data from any gauge other than Opihihale 2nd?

YUEN: No.

VITOUSEK: Did you do any analysis, in your decision, as to why other rain gauge data was not comparable?

YUEN: Yes.

VITOUSEK: And where's that?

YUEN: Well, I didn't put it in the decision -.

VITOUSEK: Okay, the question was where in the decision was it -?

YUEN: Right, no, no. It's not in, it's, well, you know, a mental exercise in looking at a list of rain gauges and having information about where they are and picking the one that's the most applicable. And there are other rain gauges that are maintained, you know, some of them at a distance, others at different elevations. I would have looked for, you know, a rain gauge that's reasonably close and at a similar elevation. I looked for and could not find one that was -. It was a higher elevation, and that would have told us something about the upper part of the property.

VITOUSEK: And so you made the assumption that because the Opihihale gauge is comparable to the makai or lowest elevation portion of the property and that it was 2.6 miles from the property -. Is that correct, is that what you stated in your decision?

YUEN: Right. It's 2.6 miles south.

VITOUSEK: Okay. And do you consider it a significant difference between 1270 feet and 1620 feet? You consider that to be a significant difference?

YUEN: There would be, yeah, that is a significant difference.

VITOUSEK: Okay. And so using a rain gauge at 1270 feet to determine the rainfall at 1600 feet, you still think that's comparable?

YUEN: It's comparable, the rainfall would be higher at 1600 feet than at 1270.

VITOUSEK: And can you say based on the data that it would not be 60 inches? I mean what data did you have that enables you to conclude that there would not be 60 inches of rain in the mauka part of the property at the time you made this decision?

YUEN: The variation of, I have a good data point at 1270 that says 41 inches. I have a isohyet map that says at roughly 1850 elevation it's 60 inches. So there's a gradient. And it's true, the rainfall at, in this case the top point of the 5-acre lots as we've said before is at, I think it's at 1440, which is not that different. But the best indication would be that even at 1600 it's probably not 60 inches, that it's most likely some place up higher. But it's pretty clear that a gradient of rainfall is not such that, just say 150 feet in elevation above the Opihihale 2nd, it would have gone from 41 inches to 60 inches.

VITOUSEK: But that's based on what again? Cause I thought you said you didn't have any comparable higher rain gauges.

YUEN: Well, that's based on -.

VITOUSEK: That's based on the isohyet line, right?

YUEN: The question of how rapidly does the rainfall increase, the rainfall does increase there with elevation we know from the, the rainfall maps are reliable as to the pattern of rainfall. It does increase -. The indication from the rainfall map is that it does not increase so rapidly that there would be a big difference between say, between 1270 and say 1440.

VITOUSEK: But let's take a look at your, I'm sorry, this page 72, is this the County, is that a County-generated map? This is in the record on appeal.

YUEN: Yeah.

VITOUSEK: And that has an elevation contour on it, isn't that correct, 1200 feet? There appears to be a 1200-foot elevation line just makai of the south, I'm sorry, the north side of the property. Is that correct?

YUEN: I see, yes to two question. One is that this is a County-generated map and I think -.

DRURY: What page?

VITOUSEK: Oh, we're on page 72 of the record on appeal.

YUEN: Right. I think this is a County-generated map. I'm not 100 percent sure. And the second question, is there a contour line on this map? Yes. And I think somebody has modified it, you know, written it in so it'd be clearer.

VITOUSEK: Okay. And so, Mr. Yuen, if you compare the lineal distance between the 1200-foot elevation line to the middle of the property and the location of the 60-inch isohyet line, which I presume is the line along the top of the map to the property, doesn't it appear that the 60-inch isohyet line is closer to the center of the property than the 1200-foot elevation line?

YUEN: I'd say they were roughly equal distant.

VITOUSEK: Okay. But you've decided that your rain gauge at 1200 feet is more comparable because of the proximity than the 60-inch isohyet line, is that correct?

YUEN: Well, it's more reliable.

VITOUSEK: Even though -.

YUEN: But the rain gauge, I'm sorry, but the rain gauge, the information that we have about that Opihihale 2nd rain gauge is it's at 1270 feet.

VITOUSEK: Okay. But in terms of, I mean, if we're looking at the center of the property it's essentially equally close to 1270 feet and to the 60-inch isohyet line yet you decided it's more comparable to a rain gauge at 1270 feet. Isn't that correct?

YUEN: Well, I think that the center of the property which is, I'd have to go back and look at the other map to get an idea, but the center of the property is probably about 1450. And I said earlier there's some increase in rainfall from 1270 to 1450; and so I would expect that the center of the property gets something in excess of 41 inches of rain. But judging from the isohyet line, it probably does not increase; and judging from the isohyet lines it's not likely that it increases so rapidly that the center gets 60 inches. And I have no information that the center of the property would get 60 inches of a rain.

VITOUSEK: Okay, but I guess the point is you made a determination that it doesn't, right? You just said the property -?

YUEN: I would say that. And also I have been given no information in the application or here to indicate that it does have 60 inches of rain.

VITOUSEK: Okay, did you review the maps showing the location of archaeological sites on the property?

YUEN: I don't think so.

VITOUSEK: Well, you heard the testimony earlier today that there are home sites and what not located, Hawaiian, you know, pre-contact Hawaiian home sites located on the property?

YUEN: I don't remember and I don't think so.

VITOUSEK: You don't remember -?

YUEN: Whether or not I looked at, I don't remember whether or not I looked at the archaeological -.

VITOUSEK: Okay, the question was you heard testimony this morning?

YUEN: Oh, oh, okay. Yeah, I heard some testimony about rainfall in relation to archaeological sites on the property this morning. I didn't quite understand it but I heard -.

VITOUSEK: Okay, well, the question was whether the archaeo -. I mean, I think that your witness, the County's witness testified that his wife's grandfather was buried on the property and that there were significant archaeological sites, house sites, living areas, on the property. Isn't that correct?

YUEN: I heard all that, yes.

VITOUSEK: Okay. And so did that indicate to you that people have been living on the property for hundreds of years and well before there would be any other source of water other than rainfall?

YUEN: Yes. They also, I would expect, did not have a road to the property, cars, pavement, electricity; but, yes, certainly there were people who lived there who have been, there were people who lived down there. Based on what his, on his testimony, the archaeological report, there have been people before who lived on this property.

VITOUSEK: Who lived on the property, farmed the property, etc. -?

YUEN: Right.

VITOUSEK: Right?

YUEN: Right.

VITOUSEK: Okay. And are you familiar with the fact that there are farms on either side of the property and homes on either side of the property? In fact don't your maps indicate the presence of homes in the area? I mean aren't those dots on page 72, aren't those homes?

YUEN: I heard the testimony and I don't dispute any, I mean, I don't know. I don't think those are homes on the property. I don't know -.

VITOUSEK: No, no, surrounding the property.

YUEN: Yeah, I don't know, I don't know.

VITOUSEK: Okay. And have you, you made a reference in, there is a reference in Rule 22 to -. The Department of Health cautions a catchment system may have problems with microbial contamination, is that correct?

YUEN: Yes.

VITOUSEK: Are you aware of the Department of Health prohibiting catchment water systems anywhere?

YUEN: No.

VITOUSEK: Are you familiar with the fact that, you know, around the United States and around the world that there is a significant effort to promote catchment systems because they're a utilizable or renewable resource?

YUEN: In some areas, yes.

VITOUSEK: And how many homes on the Big Island do you think are on catchment systems?

YUEN: What I'd like to say, I'm not -.

VITOUSEK: I think you should answer my question, I didn't ask another question on that.

YUEN: Okay.

VITOUSEK: My question is how many homes do you think there are on the Big Island that have catchment water systems?

YUEN: In the tens of thousands.

VITOUSEK: Okay. That's all the questions I have. Thank you.

GIMPEL: Mr. McClean, do you have any recross, cross-examination of the witness? If you wish to cross-examine Mr. Yuen, you have that opportunity now.

MCCLEAN: Oh, no, no.

GIMPEL: Thank you. Okay, is there any redirect?

SELF: Yes. Mr. Yuen, who is responsible for providing information to show that an application for a water variance meets the requirements of Rule 22?

YUEN: Well, the applicant is responsible for that and for all, you know, satisfying all criteria for a variance, providing information sufficient to establish that they satisfy all applicable criteria. The variance included in the case of, if they're trying to do a water variance, because of Rule 22, they have the responsibility of providing information to prove the rainfall.

SELF: And what did the applicant or the appellant provide in this situation with their application for the water variance to show that they met the requirements of Rule 22?

YUEN: Well, they have a bare statement without any supporting infor -. They have a statement that it receives approximately 60 plus inches of rainfall annually and therefore qualifies for a water variance under new Rule 22. It says that. And then it says, "As shown on the enclosed GIS Map, the 60-inch rainfall line" apparently by the Planning Department reviewing variance applications, "runs approximately 850 feet mauka of the property boundary." And then they talk about the nature, the next sentence says that "The photographs depict the nature and extent of vegetation present on the property, demonstrating that it receives more than adequate rainfall to support adequate crops and private residential catchment systems." And then it says "Given the proximity of the rainfall line to the property the 60-inch line is reasonable to infer the property receives sufficient rainfall annually to effectively use private residential catchment systems". Then it says that the isohyet line is an approximation. Then they have Mr. Bowles declaration; and I, you know, read Mr. Bowles's declaration and basically Mr. Bowles is saying that the rainfall line is not very exact. Mr. Bowles does not say that the property receives 60 inches of rain in any location. And so I see no evidence at all in their application, no positive evidence that the property does in fact receive 60 inches of rain.

SELF: Okay. And let's get back to, cause there was some questioning, a line of questioning about the Saxton property. Do you know what the elevation of the Saxton property is in relation to the subject property?

YUEN: Well, the top elevation is considerably higher. It's 2200 feet.

SELF: And that's mauka of the mauka boundary of this property, correct?

YUEN: Right. The top elevation of this property is 1640.

SELF: Okay, Okay, let me ask you this – what role does the County's General Plan play in the overall planning of the County of Hawaii?

YUEN: Well, it sets the overall policies and the goals. Then there's a General Plan Land Use Pattern Allocation Guide Map which is the overall guide to zoning decisions.

SELF: Okay. And is it consistent with the General Plan to consistently allow subdivision after subdivision to be supported by a rain catchment system, instead of requiring water systems approved by the Department of Water Supply?

YUEN: No.

SELF: And what about with the Subdivision Code, consistent?

YUEN: No.

SELF: Okay. And then appellant's counsel brought up the fact that there were people, Hawaiian families, living on the property, you know, prior to today. Was there a Subdivision Code in existence at that time?

YUEN: No.

SELF: So, in other words, there was no policy for the County on requiring water systems, correct?

YUEN: No, no.

SELF: So that policy was nonexistent at that time?

YUEN: No -.

SELF: And now the County has such a policy, correct?

YUEN: Well, embodied in the Subdivision Code, yes.

SELF: Okay. And the Code does not encourage catchment systems, is that correct?

YUEN: No.

SELF: Okay. And who makes the policy in the County? Mr. Vitousek?

YUEN: Well, -.

VITOUSEK: I object to that. I think that's unnecessary.

SELF: Who makes the policy?

YUEN: The overall policies are set by ordinances, resolutions, the statutes; and they are legislatively enacted by the County Council. Policy is a big word, you know, so the general, the overall policy, you know, -. Everything that I do I can, if you want me to, I can sit there and I can tell you how it's based on an ordinance enacted by the County Council, a Statute enacted by the State Legislature. There are, then you have what you might call sub-, there are some things that the Planning Department may do that you call policies that come out of the Planning Department or the Planning Director. They are based on policies that are broader policies that are enacted, but ultimately the policies come from legislation. And I can, you know, I've tried to do this all the time when it's really challenged to show that, you know, as I say everything that I do is, I can ultimately trace to legislative enactment.

SELF: Okay, thank you. No further questions.

GIMPEL: Any recross?

VITOUSEK: Yes, just a bit. Mr. Yuen, you refer to what the applicant provided in their application for a variance and you noted that that included the declaration of Steven Bowles. Isn't that correct?

YUEN: Right.

VITOUSEK: And did you read the portion of Mr. Bowles's declaration where he stated "In areas of relatively low rainfall (30-60" per year), catchment systems can still function effectively and provide adequate water supplies if adequate water catchment areas are used and the system has appropriate storage capacity?" Do you recall that statement?

YUEN: I read that, yes.

GIMPEL: Could you refer us to which exhibit that is?

VITOUSEK: Oh, I'm sorry. Sure, I'm referring to the application. I think that same statement, Mr. Chairman, is -.

GIMPEL: The declaration was pages 29, and set in Exhibit D as I can figure out, but I don't know exactly which page that you're reading.

VITOUSEK: Okay, if we refer to the exhibits that we submitted, the Declaration would be Exhibit 6-A. It's the same declaration.

GIMPEL: Thank you.

VITOUSEK: Okay. So do you still recall the statement?

YUEN: Yes.

VITOUSEK: Okay. And do you recognize Steve Bowles as an expert in hydrology?

YUEN: Well, yes, in hydrology, yes.

VITOUSEK: Okay. In fact, he was hired by the County to do the right, significant portions of the South Kona to Kau Water Plan, isn't that correct?

YUEN: Yes.

VITOUSEK: Okay. And so do you disagree with his statement that "In areas of relatively low rainfall (30-60" per year), catchment systems can still function effectively and provide adequate water supplies if adequate water catchment areas are used and the system has appropriate storage capacity?"

YUEN: My disagreement is whether catchment should form the basis for subdivisions where you're putting additional lots and additional families to live in areas, as opposed to whether when in living with an existing development pattern such as we have of the lots that are created, the many lots that have been created without water systems previously, whether taking appropriate safe-guards that people can live out their lives safely on those kinds of lots. I would not disagree with that. You know, I think that you have to live with situations that exist; and with the lots that we have a person can move onto those lots, build a catchment system, and take care and make a life for themselves, and then work it out okay. What my disagreement is, my disagreement is in subdividing additional property on catchment systems, particularly when in doing so you take away any possibility that there will be an economic incentive for people to make a water, a piped water system in the future.

VITOUSEK: Yeah, if I invited that response, it wasn't my intent. My question was very simple. It was just do you agree with the statement that "In areas of relatively low rainfall (30-60" per year), catchment systems can still function effectively and provide adequate water supplies if adequate water catchment areas are used and the system has appropriate storage capacity?"

YUEN: I had answered that question.

VITOUSEK: Well, I didn't hear the answer. Is the answer yes? Do you agree with that statement? I mean cause it's not -.

YUEN: In the context of someone having an existing lot and can they make a catchment system work, the answer would be yes.

VITOUSEK: Okay. So when we say inches of rain per year, we're talking about how many inches of rainfall on one-square foot of, I mean one square inch of ground, isn't that correct? Isn't that what's being measured when we say 60- inches of rain?

YUEN: Over any horizontal area whether it's a centimeter or an acre, yes.

VITOUSEK: Right, 60 inches, right?

YUEN: Yes.

VITOUSEK: And so what difference does make if there are 4 lots, or 5 lots, or 10 lots, if the same amount of rain falls over that whole area? In other words -.

YUEN: Well, it's a difference on how many -.

VITOUSEK: I mean if it's 2-acre lots but each 2-acre lot has 10,000 square feet of catchment area on it, won't there be adequate water supply for a family living on that lot? Isn't it completely independent on the number of lots, provided there is adequate catchment area?

YUEN: One of the most important things in planning is how many people you end up having in an area. And what kind, that's a basis of planning and zoning, is how many lots that are created, how many people are in an area; and that makes an enormous difference.

VITOUSEK: But it may make a difference in terms of planning for density. But in terms of the adequacy of water, that's determined by how much rainfall is in the area, how much surface is devoted to catchment, and how much storage capacity there is. And that's not limited by the number of separate parcels. Isn't that correct?

YUEN: I understand that that's your argument. But this is a question of whether you continue to subdivide property on catchment, whether it should be a good policy to do that. I mean we differ on that and I'm not going to -. You know, we can quibble over what, you know, how many square feet the water falls on, but the question is do you continue to move more people into areas that rely on rain catchment by allowing the subdivision of properties in those areas.

VITOUSEK: Okay, I understand that. But I'm trying to separate policy from physical reality. And the physical reality is that the rain falls at a certain level on a horizontal plain and it doesn't matter how many parcels that area is cut up into if each one has adequate catchment area and adequate storage capacity. In other words, the same amount of water will be available no matter how many parcels there are. Isn't that correct?

YUEN: Okay. When you said it doesn't, the part that I disagree with is your statement "it doesn't matter." It does matter from a standpoint of land use and density. If you're strictly referring to how much water somebody can get in their tank, I suppose, well, as long as you don't cut it below the number, have so many people that they don't have the roof area, which is really not at issue here, yes. You can have enough roof area to create, you know, "x" amount of storage given any realistic numbers of people or numbers of units that you take in an area like this.

VITOUSEK: Okay, and isn't density, I mean, what is this property zoned?

YUEN: Well, the property is zoned Ag-5.

VITOUSEK: And so has the Planning Department done anything to rezone the property to reduce the density to below 5 acres or above 5 acres?

YUEN: No.

VITOUSEK: No. And so isn't zoning the primary mechanism to determine what the appropriate density a parcel is in a particular area?

YUEN: Well, with the assumption that at the subdivision stage they're provided with a certain level of infrastructure, yes.

VITOUSEK: Okay, and so aren't you just using rainfall as a means to control density, because you don't want to go through the process of rezoning the properties and use the appropriate means to control density?

YUEN: No. You're trying to use a variance to obtain a subdivision of property without following the Subdivision Code.

VITOUSEK: The issue being, according to the Subdivision Code as you state in your decision, whether there's an adequate supply of water.

YUEN: You're just, you and your client are trying to subdivide property without following the Subdivision Code using a variance.

VITOUSEK: Did you state in your decision that the Subdivision Code policy was to ensure that there was an adequate supply of safe drinking water?

YUEN: That's the ultimate purpose, yes.

VITOUSEK: Okay. And so can't you concede that if you have 40 inches of rain and a catchment area that is 150 percent the size of the catchment area in 60 inch rainfall area that you would get the same amount of water?

YUEN: Well, I think we've been through that before.

VITOUSEK: Okay, so you agree with that?

YUEN: Yes. You will get the same amount of water, yes.

VITOUSEK: So whether or not at 60 inches or 40 inches, you could still have an adequate supply of water. Isn't that correct?

YUEN: Well -.

SELF: Objection, asked and answered. He has already answered this two times now.

GIMPEL: Yes, he has answered the question.

VITOUSEK: Okay, no further questions. Thank you.

GIMPEL: Okay. Are there any other witnesses for the Planning Department?

SELF: No.

GIMPEL: No. Mr. McClean, do you have any witnesses?

COOK: Mr. Chairman, you're going to give us a chance to -?

GIMPEL: Oh, you want to ask Mr. Yuen some questions. Sorry, Mr. McClean, we'll wait for you if you have any -.

MCCLEAN: No, no, I didn't have any other questions.

GIMPEL: Okay, all right.

MCCLEAN: He passed me the microphone and I -.

GIMPEL: All right, I'm sorry. All right. Mr. Cook, you have -?

COOK: Mr. Yuen, in arriving at whether or not there's sufficient clean safe water to allow a variance, you came up with 60 inches of rainfall per year, correct?

YUEN: Well, in trying to establish a cut-off between areas that would have a higher level, between the areas where we would basically favor or allow a variance, yes. I mean I don't think it's a desirable condition or a desirable situation, but yes, 60 inches.

COOK: There is a limitation on the number of lots you can have in a subdivision with a water variance, correct?

YUEN: Well, under Rule 22, yes.

COOK: Yeah, Rule 22, that's what 5 or 6?

YUEN: It's 6. And there are exceptions if you subdivide to larger lots than your zoning would allow, in other words you produce fewer lots than you potentially could.

COOK: Well you know what, that 21 inches or that 60 inches of rainfall per year, what surface area would be required under the 60 inches to arrive at the safe amount of water storage? In other words, are you talking about 1500? One of the witnesses indicated he had 1500 I think feet of surface that caught the water and it was sufficient for his purposes anyway.

What would be the square footage that would be required under the 60 inches to arrive at the safe level?

YUEN: Well, to arrive at the same amount, I don't have that figure in my head. We went through this before that it's actually 50 percent more storage, whatever it is. At 60 inches I'm guessing it's in the realm of 2,000 to 3,000 square feet that would be -. There's a table somewhere in here what the recommendations would be. But that's my guess of what the recommendations would be.

COOK: The problem I have with this, and of course we've been through this with, you know, variance after a variance, my problem is, you know, if you can get an adequate amount of water stored at 40 inches by increasing the level, or increasing the space where the water falls and is gathered, it seems to me that that -. I can see if you've got to put another 1,000-square foot of surface area to get the water. I don't see the difference that, you know, with 40 inches and 60 inches, I mean, you still get the adequate safe level of water, unless you're just using that to limit the number of additional lots.

YUEN: Well, I would say that overall it's not a good policy to have property, to create additional lots on catchment. I mean that is the Subdivision Code doesn't simply say -. You know, you're supposed to have a County standard water system. So I don't think it's a desirable condition. I do think that where you have, the area of the island where you have a greater rainfall, you're much less likely to end up with a situation where you haul water, where you're going to run out of water. And it's also difficult to, it's difficult or impossible to monitor whether people keep an area, you know, hooked up to this tank, whether the tank is kept maintained. And so you're tending to rely more, as you get to a lower rainfall area, you're relying more and more on the diligence of the person to maintain the system that they will have this. And as I said it's one thing to say that we have lots that have been created -- and people live on them and the only way that they can get water is, people own them, they want to live on them and the only way they can get water is to have catchment, -- and another thing to say that we should accept that large areas will be subdivided on catchment and hope that that's the ultimate land pattern.

COOK: Of course we could say we aren't going to give any variance and we're only going to go where there's water is available. But the problem with that on this island is that we have so much space out there, so many that we can't furnish the water to, and so, you know, we have zoned them like 5 acres. So if you don't allow this catchment, then you don't get any development out there; and then you've got the population who can't afford to live in the city. So to me that's the policy, the reason you allow some of these variances. And then the question is if you're going to allow the variance, you know, how much water are you going to require? And you've apparently come up with 60 inches before you're allowed a variance.

YUEN: Well, first, I don't think that the typical, actually, I'll say this flat out, none of the subdivisions that we've seen come in for water variances are affordable housing solutions. The typical subdivision is a 5-acre lot in Opihihale -- and the reason that Opihihale is, that there is this 5-acre zoning -- and it is less than 60 inches, you know, it's a marginal area as far as the rainfall, but the typical water variance. And then you don't see the appeals. You don't see the appeals. We do grant some water variances, too; and so you don't see those appeals. But I can also tell you those are also typically not affordable housing situations. They are agricultural lots

that are going to be sold. I mean in today's market, they're going to be sold for several hundred thousand dollars. And so we're not, I mean, as far as are we solving an affordable housing problem, no.

And as far as a development, this is really the whole policy issue. I mean and then to me the Subdivision Code sets the policy. So it says you're supposed to have a water system. So if the Subdivision Code wants to say, for example -. The policy being advocated by Mr. Vitousek is that if there is no County water system you can still subdivide your property as long as you provide "x" roof area and "y" tank size based on how much rain you get. All right? That would be, and that's what the rule, I mean, if you're stating it as a rule, that would be his rule. All right? There's absolutely nothing that has been enacted in legislation that says anything like that. The only thing that's enacted in the legislation, there are two things: One is the Subdivision Code and the other is Rule 22. I mean, he doesn't get to enact that as a rule. So if you're talking about the overall, what in short should be the policy, I mean you can say, gee, the policy, we should be really wide open about letting people subdivide to their zoned density and so we should grant variances, freely grant variances from the water supply or roads, road requirements, anything else in the Subdivision Code. Or you should say that generally we should be following, which is my approach, is generally you should be following the Code and exceptions of variances are not the norm.

COOK: But you're requiring on these subdivisions, you're requiring that they meet all the other requirements. It's just this water variance that is in contention here. Correct?

YUEN: At least so far on this subdivision. And I don't know if they are going to request, sometimes we do, you know the basic infrastructure requirements. I'm sorry if I'm going on too long, but -.

COOK: No, I'm -.

YUEN: But the basic infrastructure requirements that you have on a subdivision are roads, water and drainage. So sometimes we get, because drainage, the standards are not so laid out, they typically are worked out without a variance between DPW and the applicant to some satisfactory level. But we do get a lot of subdivision applications that have both road and water variance requests. As I say I don't know, this guy is not precluded from coming in for a road variance. They have not asked for one yet as far as I know.

GIMPEL: Ms. Gentry, you have a question?

GENTRY: No.

GIMPEL: No. Anybody on this side questions? I have a couple of questions, Mr. Yuen, at least one comes to mind immediately. Could you briefly outline the process by which Rule 22 was adopted?

YUEN: Yes. Process, there's a public publication, public hearings, and then it goes to the Mayor, Mayor signs, and I think that's it. It gets filed or recorded in the Lt. Governor's office.

GIMPEL: Okay, and you generated, your Department generated the rule?

YUEN: The initial rule, yes.

GIMPEL: Which as I understand it in essence states that if you're going to subdivide into more than 5 or 6 lots and you don't have a County water system you need 60 inches of rain a year for catchment. Basically that's the rule?

YUEN: Right, right.

GIMPEL: Okay, all right.

YUEN: In essence, yes.

GIMPEL: And the Subdivision Code under which the rule was adopted supposedly provides a standard by which you will grant a water variance which is permitted under the Subdivision Code. Is that correct? Subdivision Code allows you to permit water variances. Rule 22 is the standard by which you will grant the water variance.

YUEN: It sets criteria for granting a variance, yes.

GIMPEL: Okay, sets criteria.

YUEN: Yes.

GIMPEL: So the Subdivision Code doesn't specify any particular criteria for water variances, does it not?

YUEN: Apart from the general, not specifically for water, no.

GIMPEL: Okay.

YUEN: There's a general criteria for a variance.

GIMPEL: All right, that's what I just wanted to make sure. Okay. Any other questions? All right. And Mr. McClean, you have no witnesses of your own to present today?

MCCLEAN: No.

GIMPEL: Thank you. All right, I think it's time for closing arguments. Mr. Vitousek.

VITOUSEK: Does the County get two arguments or just one? I think I've been hearing a lot of arguments.

GIMPEL: Well, yes; and let's be brief. I think we all understand the issues that each of you are bringing out. So, okay, you go ahead.

VITOUSEK: Very briefly, I think that what we've attempted to demonstrate is that given the amount of rainfall on the property and given the willingness to place conditions on any homes that are developed on the property to have adequate catchment areas, adequate storage capacities, that we feel that we've demonstrated that there will be an adequate supply of water for the purposes of residential use and agricultural use on the subject property.

And, you know, we feel that the reliance by the County on the standard of 60-inch isohyet line is misplaced. I think we've had testimony from Steven Bowles that 60 inch, that the isohyet lines are not accurate, that they do not accurately state how much rainfall is in a particular area. We have the problem with the map itself being about a million to one scale and not be really able to identify where the isohyet line falls in physical space. And then we have the problem of the County overlying that line on a TMK Map which they again admit is not adequate to use for determining spatial relationships between one point on the map and another. And so we just don't think that the 60-inch isohyet line is sufficiently accurate to use as a regulatory standard, and to say that if the line falls in your property you can have a variance, if it falls outside your property you can't have a variance. We think it's one source of information that can be used.

We think that the Rule 22 calls for analyzing comparable rain gauges, plural, not just rain gauge. We went through this in the Jin application or the Jin appeal, and the fact that the Opihiale gauge was at an altitude somewhere to the bottom of the property and not, and also is located some distance from the property. I think by showing that catchment systems have been effectively utilized all around the property, in other words, there are homes, farms, coffee farms, below, above, on both sides of the property -. The only testimony that I had from the County on that issue is that the individual who testified said that he has been on catchment for 17 years and it has been adequate.

And so, you know, what we feel is that this not a speculator in the sense that this gentleman has held this land for nearly 20 years. He's a farmer, you know. He has spent money to put trees on the, you know, to grow coffee trees, plant coffee trees out on the land. He doesn't live here but what he's doing is trying to farm this land. And he has invested money in trying to farm the land. And what he's saying is because of the amount of investment required, he needs a hedge against the risk that the cost of creating this farm will exceed his resources. And he's trying to create an asset by subdivision so he can sell one or more lots if he needs to afford this farm. And I don't understand the policy that prohibits real farmers from farming coffee in the coffee belt of South Kona. I don't understand that kind of policy where it makes it more difficult for them to get loans from farm credit or makes it more difficult for them to meet their vision of creating coffee farms and using land for real agricultural purposes. Remember this is someone who has 45,000 seedlings on his property growing and getting ready to be planted out. So we just ask that you again exercise your discretion to find that the reliance on the 60-inch isohyet line or the "comparable" rain gauges is arbitrary and capricious, if you could look at actually how much water, whether there would actually be an adequate supply of safe drinking water and fire fighting water on the property. And I think we've demonstrated that there would be an adequate supply; and we just ask you to exercise your discretion to find that the decision was arbitrary and capricious, in excess of authority, and to grant the appeal and allow the variance. Thank you.

And guess what, this is my last one that I know of and so I'll miss you.

GIMPEL: Ms. Self.

SELF: Okay. Through...I said in my opening statement the appellant always has the burden of proof, including the burden of producing evidence. Saying that the appellant thinks that catchment should be allowed as a policy is not evidence that he was required to produce with his application for a water variance. At no time did the appellant ever come forward or come to the Planning Department and give the Planning Director any evidence that his property does receive at least 60 inches of annual rainfall, which is required under Rule 22. Now the Supreme Court has said that an agency as defined under Chapter 90 of the HRS has the duty to make sure that the appellant meets his burden of proof. So if you put all of the facts together that you've read in the record, that you've heard in the testimony, there is absolutely no evidence in either that indicates that the appellant provided evidence that his property meets the requirements under Rule 22.

The Subdivision Code requires that someone who is subdividing their property provide a water system that's approved by the Department of Water Supply. That's the rule. A variance is an exception to the rule. The policy of the Planning Department and the policy set by the General Plan and the Subdivision Code is to develop the lands in this County with water systems approved by the Department of Water Supply. The General Plan in part states that water system improvements and extensions shall promote the County's desired land use development pattern. So the Legislators of our County, the County Council, has set the rule, they have set it out in the Subdivision Code, that it is the desire of this County to have water systems in subdivisions approved by the Department of Water Supply.

Following that logic, this Board when you're making a determination as to whether to uphold the Planning Director's decision or not, the standard that you have to go by is that you can only reverse or modify or remand his decision if that decision is in violation of the Code or other applicable law; or clearly erroneous in view of the reliable probative and substantial evidence on the whole record; or, three, arbitrary or capricious or characterized by an abuse of discretion or clearly unwarranted exercise of discretion. Using that as your standard and based on the evidence that has been presented to you, there is nothing in the record that indicates that he has met his burden of meeting the requirements under Rule 22. Without meeting that burden, there's no possible way that the Director's decision is arbitrary or capricious. The Director has not violated the Code, he has actually enforced the Code, or any other applicable law. And so that's the standard that you have to go by. And I would hope that you would consider all the evidence and determine that the Director's decision was the correct decision. Thank you.

GIMPEL: Thank you. Mr. McClean, do you have a closing statement?

MCCLEAN: Well, maybe so, maybe something. I know that Mr. Raup talked about processing coffee. And I've lived up there for 30 years and there's no, unless he has some fantastic water catchment thing planned the water to process that coffee, which is a lot of water to process coffee, is going to come, be hauled in or is going to come from the County's spigot. Cause it takes a lot of water to process coffee, and most everybody here knows that. And, also, if you plant coffee, you take out the forest. You take out the forest, the rainfall is going to drop. And whatever rainfall is there it is there; but it's going to be less without the forest. So that's about it. Thank you.

GIMPEL: Thank you. It's decision time. So we'll close the testimony. And I think the first order of business would be to ask for a motion as to whether to accept the petition or deny the petition; and then we can discuss that. Can I have a motion.

DRURY: Motion for discussion. Okay, I move that we uphold the Director's decision on the grounds that the evidence on the whole record does not show that it is in violation of the Code or other applicable laws, it does not show an abuse of discretion and it is not clearly erroneous in view of the reliable, probative, and substantial evidence on the record.

GIMPEL: Is there a second?

COOK: I'll second it for discussion purposes.

GIMPEL: It has been seconded. All right Mr. Mover, can you want to start by explaining why you want to move that way?

DRURY: Looking again at the whole record, Rule 22 in these marginal situations is always difficult; and we are always faced with the tension between the needs for aggregate land use planning that will work for the future and the situation of individuals. And cases don't come here unless they are on the margins. In this situation it seems to me that the case was clearly within the bounds of Rule 22. I think it is very clear that Mr. Yuen didn't violate any laws. He has tried to be consistent with applying Rule 22, as we know through many cases. And in terms of the evidence, in terms of the rainfall, we've all been struggling with this, and it is marginal, and then perhaps a better source of a data base can be used. But looking at the whole record the decision itself seems to be based on the best available information. And if we go beyond that, then it makes me question are we then throwing out Rule 22, and is that our daily wishes?

GIMPEL: Any other comments, questions? Mr. Cook.

COOK: Yeah, I oppose the motion. I believe that the Subdivision Code which calls for a County water system also allows a variance, a water variance, if there is, if it can be shown that there is adequate water, clean water, and water to meet the Fire Code. And I believe in this particular case there has been evidence to show that there is adequate water for this particular subdivision. To me to set a 60-inch requirement in every case is arbitrary. And in this particular case, I think there has been sufficient evidence to show that there is catchment in the area, people are farming in the area, and that there is adequate water with the catchment as proposed by the applicant. So I will have to vote against this particular motion.

GIMPEL: Any other comments? Ms. Tavares.

TAVARES: I'm kind of following along the lines that David is speaking, that, you know, I don't think Rule 22 is on the table. I think we're trying to decide, you know, the variance, whether it should be approved or not; and we have to go by the rules and the laws. And the rainfall, that's the law or the rules right there. As far as the rainfall goes, I think we may not have it today with us, but I think there is evidence that shows that the rainfall is lower and lower, and continues to go lower. We don't know what the reason is. But, again, it appears to be that the trend is going down, not up, as far as rainfall goes. So, that's all.

GIMPEL: Anybody else?

DRURY: Yeah, Joel, could I -?

GIMPEL: Yes, you may.

DRURY: This is, and Mr. Cook, you had mentioned something about the Subdivision Code and what it says in terms of requirements for adequate water supply. And I'm just looking at Subdivision Code, Section 23-84, and this is all it says, it says "A subdivision to be laid out after December 21, 1966 shall be provided with water as follows: "(1)A water system meeting the minimum requirements of the County department of water supply; and (2) water mains and fire hydrants installed to and within the subdivision in accordance with the rules and regulations of the department of water supply adopted in conformity with article viii of the Charter." It doesn't say anything about adequacy of water as such.

COOK: I was going by the testimony. As I recall there was a discussion here and question to Mr. Yuen as to what the Subdivision Code requires; and as I understood you could issue a variance if there was adequate water. That was what I was basing mine on. I have not gone back and read it specifically; and I think you're reading one section of the Subdivision Code.

DRURY: Could I ask Mr. Vitousek were you referring to another section of the Code, other than 23-84?

VITOUSEK: I was referring to the Director's decision in this water variance where he said that the intent of purpose of the Code was to insure adequate water, adequate supply of safe water. So it was a quote from the decision in this case.

GENTRY: I guess while the Code has very good intentions the County under different department jurisdictions cannot meet the requirement, I means it's, what, about three miles from -.

DRURY: Five.

GENTRY: About five miles from this particular subject, which does almost qualify him for a hardship. I mean that's tough. It would cost a lot of money to connect up to a system or to even provide it. So I would fall, I would concur more with Mr. Cook, his line of reasoning.

GIMPEL: Is there anybody else with any comments? All right, I have some. I guess as Chair I get to go last. I've made some notes regarding some of the points made. I agree that the petitioner here has the burden of proof. The issue is the burden of proving what? I don't believe that the petitioner has the burden of proving that he has 60 inches of rain. I think he really has the burden of proving whether the Director acted arbitrarily or capriciously. That's his burden. In that respect, first, I don't think that the ability or inability to do business with or without the variance is at issue here. The issue is whether the Director's decision was arbitrary or capricious. So if he doesn't have to prove that there is, oh, I don't believe that he has to prove that there is 60 inches of rain. I think, as I said, he has to merely prove that the Director's decision was arbitrary. The Director in making that decision to deny the variance relied on Rule 22. Rule 22 says you better have 60 inches of rain as measured by either a rain gauge or rain gauges and the isohyet or the isohyet line. I think we've had enough evidence to show that the isohyet line is an approximation, not necessarily right on point. The rain gauge is quite a ways again, although it is close range.

But the real issue is whether reliance on Rule 22 as it is currently written is or isn't arbitrary. Because I think the Rule itself is arbitrary in establishing only one standard, the 60 inches of rain, when we've had testimony and the Director has agreed indeed that, gee, if you only have 40 inches of rain but a larger catchment area you get the same amount of water. So why doesn't Rule 22 have more than just the 60 inches of rain requirement? I think that rule, following that rule only without looking at the vegetation that's on the property and the greenery that surrounds it, and the fact that there are already stuff growing there and people living at that same elevation with enough water, and we had testimony from somebody living about that elevation that he hasn't had to worry about anything but his catchment for the 17 years he has lived there -. So I think that the Director's reliance on Rule 22 is arbitrary and capricious because the rule itself is arbitrary and capricious. And that's how I would vote.

DRURY: Mr. Chair, could I request that we go into executive session. I think there are some legal things we should take a look at.

GIMPEL: I believe I need a motion to go into executive session. You so move?

DRURY: All right. I move that we go into executive session.

GIMPEL: Second?

TAVARES: Second.

GIMPEL: All in favor?

MEMBERS: Yes.

GIMPEL: We'll be in executive session; and we'll be talking to you in a few minutes. Thank you.

EXECUTIVE The Board went into executive session at 2:50 p.m. and SESSION came out of executive session at 3:00 p.m.

RECESSED The Chair called a short recess at 3:00 p.m.

RECONVENED The meeting reconvened at 3:05 p.m.

GIMPEL: All right, we're back in session. The entire Board of Appeals is here. I'll quickly summarize our discussion in Executive Session. We inquired of counsel whether this Board has the authority to find that Rule 22 is arbitrary and capricious and therefore rule that the Director was arbitrary and capricious in finding it. Our counsel assured us that we do not have that authority. So the motion before the Board is to uphold the decision of the Planning Director denying the application for a variance. Do I have any further discussion? If not, would you please call the roll.

KAWAHA: Mr. Drury?

DRURY: Yes.

KAWAHA: Mr. Cook?

COOK No.

KAWAHA: Ms. Gentry?

GENTRY: No.

KAWAHA: Mr. Hendricks?

HENDRICK: Yes.

KAWAHA: Ms. Tavares?

TAVARES: Aye.

KAWAHA: Chair Gimpel?

GIMPEL: Oh, boy. I'm going to say, have to say yes.

KAWAHA: Chair, there are four ayes and two noes.

GIMPEL: Thank you. Thank you for your excellent presentations and arguments. They were all very good.

GENTRY: Findings of Fact and Conclusions of Law?

GIMPEL: Oh, Findings of Fact and Conclusions of Law, prevailing party.

SELF: Thirty days from today?

GIMPEL: Thirty days from today, thank you. Okay, thank you very much.

The discussion ended at 3:16 p.m.

Respectfully submitted,

Sharon M. Nomura, East Hawaii Secretary