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LAND USE COMMISSION

STATE OF HAWAI'I

CONTINUED HEARING

A12-795 WEST MAUI LAND COMPANY, INC.)
KAHOMA RESIDENTIAL, LLC)
_____)

TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for a Public Hearing
at The Royal Lahaina Resort Maui Ball Room, 2780
Keka'a Drive, Lahaina, Maui, Hawai'i, commencing at
10:40 a.m. on August 23, 2012, pursuant to Notice.

REPORTED BY: HOLLY M. HACKETT, CSR #130, RPR
Certified Shorthand Reporter

A P P E A R A N C E S

COMMISSIONERS:

RONALD HELLER, VICE CHAIR (O'ahu)

CHAD McDONALD, VICE CHAIR (At large)

SHELDON R. BIGA

LANCE M. INOUE (At large)

ERNEST MATSUMURA (Hawai'i)

NICHOLAS W. TEVES, JR. (At large)

EXECUTIVE OFFICER: DAN ORODENKER

CHIEF CLERK: RILEY HAKODA

STAFF PLANNER: BERT SARUWATARI

DEPUTY ATTORNEY GENERAL: SARAH HIRAKAMI, ESQ.

AUDIO TECHNICIAN: WALTER MENCHING

Docket No. A12-795 West Maui Land, Inc. (Maui)

For the Petitioner: JAMES GEIGER, ESQ.
HEIDI BIGELOW
West Maui Land Co. Inc.

For the County: JAMES GIROUX, ESQ.
Deputy Corporation Counsel

For the State: BRYAN YEE, ESQ.
Deputy Attorney General
RODNEY FUNAKOSHI, OP

Intervenor: MICHELE LINCOLN

Intervenor: ROUTH BOLOMET

Also Present: KAHU MICHAEL LEE

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1 VICE CHAIR HELLER: The first order of
2 business is the adoption of minutes from the
3 August 2nd, 2012 meeting. Minutes have been
4 circulated. Any comments or corrections? Is there a
5 motion for approval?

6 COMMISSIONER TEVES: So moved.

7 COMMISSIONER INOUE: Second.

8 VICE CHAIR HELLER: Any discussion? All in
9 favor say aye.

10 (VOTING): "Aye."

11 VICE CHAIR HELLER: Any opposed? Okay.
12 Next item is the tentative meeting schedule. Dan,
13 would you update us on the meeting plan.

14 MR. ORODENKER: Yes, Mr. Chair. Our
15 meeting schedule for September has been adjusted
16 slightly. Public and Commissioners note that our next
17 meeting is September 6th and 7th on Maui for the
18 continued hearing on the West Maui Land case.

19 And then September 14th on O'ahu to take up
20 the Department of Environmental Services and the HCCDH
21 motions. There also will be a discussion on the
22 proposed legislation at that time. There will be no
23 further meetings in September. Our next meeting will
24 be October 4th and 5th, location to be determined.

25 VICE CHAIR HELLER: Thank you. Next item

1 is continued hearing on Docket No. A12-795 West Maui
2 Land. This is a continued hearing on A12-795 West
3 Maui Land Company, Inc. Kahoma Residential, LLC, Maui
4 to consider the reclassification of approximately
5 16.7 acres of land from the Agricultural District to
6 the Urban District at Lahaina, Maui, Hawai'i for a
7 residential subdivision to provide 68 single-family
8 affordable housing units to families earning less than
9 a 160 percent of the median family income of families
10 in Maui County, Hawai'i, TMK No. (2) 4-5-10:005.

11 Will the parties please identify themselves
12 for the record.

13 MR. GEIGER: Good morning, Chair. James
14 Geiger on behalf of the Petitioner. Also present is
15 Heidi Bigelow, the Petitioner's representative.

16 MR. GIROUX: James Giroux with the county
17 of Maui representing the Department of Planning.

18 MR. YEE: Good morning. Deputy Attorney
19 General Bryan Yee on behalf of the Office of Planning.
20 Rodney Funakoshi from the Office of Planning will be
21 joining me shortly.

22 MS. LINCOLN: Michele Lincoln, Intervenor.

23 MS. BOLOMET: Aloha. I'm Routh Bolomet,
24 Intervenor.

25 VICE CHAIR HELLER: And that's it for the

1 parties. Let me update the record in this matter.

2 On July 19, 2012 the Commission received
3 written correspondence from James and Teresina
4 Patterson, Su Campos, Shirley Enebrand, Steven Geller,
5 Brie Protzeller, Noel Agamata Jr. and Sr., Cory Segi,
6 Lynn and Mo Jacobs, Cindy Romera, Mikahala Roy, Kahu.

7 Intervenor Bolomet's Motion to Present
8 Evidence of Lineal Descendancy to Awardee at LUC
9 meeting on Maui.

10 From July 20 through August 18, 2012 the
11 Commission received written correspondence from Elaine
12 Aotaki, Richard Roshon, and Jessica Baker.

13 On July 30 the Commission received written
14 correspondence from Intervenor Michele Lincoln and
15 forwarded copies to the parties.

16 On August 1, 2012 the Commission received
17 copies of Intervenor Bolomet's Amended Testimony of
18 Michael Lee with exhibits only, Claire Apana, cultural
19 practitioner testimony and exhibits were not attached
20 as indicated on the filing date.

21 And mailed: Order granting Intervenor
22 Bolomet's Motion for Extension; and Order granting in
23 part Petitioner's Motions to Exclude Intervenor
24 Bolomet's witnesses on international law and title; to
25 exclude Intervenor Bolomet's Exhibits 1-13 and 15-17

1 and to exclude expert testimony from witness for which
2 no written direct testimony was provided.

3 On August 6th, 2012 the Commission mailed
4 an errata notice to the Order granting in part
5 Petitioner's motions.

6 On August 10 the Commission received
7 Petitioner's rebuttal testimony of Rory Frampton and
8 rebuttal Exhibit List, Exhibits 37 and 38.

9 On August 15, 2012 the Commission mailed
10 the agenda notice for this meeting to the parties and
11 State and Maui mailing lists.

12 From August 16 through August 21 the
13 Commission received written testimony from Jessica
14 Baker and William Greenleaf.

15 Let me briefly describe our procedures for
16 today on this docket. First, I will call for those
17 individuals desiring to provide public testimony to
18 identify themselves. All such individuals will be
19 called in turn to our witness box where they will be
20 sworn in prior to their testimony. The Commission
21 will then consider additional exhibits that the
22 parties wish to offer into evidence.

23 After the admission of exhibits we will
24 resume with Petitioner's presentation and witnesses.
25 At the conclusion of Petitioner's presentation we will

1 hear from Maui County, OP, Intervenor Lincoln and
2 Intervenor Bolomet, time permitting. Are there any
3 questions on our planned procedure for today?

4 MR. GEIGER: Petitioner has no questions on
5 your procedure. We would have some objections because
6 you mentioned a number of items that have not been
7 provided to Petitioner as far as things that were
8 received by the Commission.

9 VICE CHAIR HELLER: We'll get to those as
10 we take up exhibits. Is there anyone in the audience
11 who desires to provide public testimony on this
12 matter? Do we have a signup list? Is there anyone
13 present today who wishes to provide public testimony
14 on this matter?

15 Let me remind you that public testimony
16 from previous hearings has been transcribed and is
17 already part of the record.

18 For those who are testifying again, if any,
19 we would appreciate it if you would confine your
20 testimony to new and non-cumulative information. Is
21 there anybody wishing to provide public testimony?
22 Please step forward to the witness box.

23 MS. APANA: I'm stepping forward. I'm
24 sorry. I just this moment lost my testimony.

25 xx

1 CLARE APANA

2 being first duly sworn to tell the truth, was examined
3 and testified as follows:

4 THE WITNESS: Yes, I do.

5 VICE CHAIR HELLER: Please state your name
6 and address, and then go ahead.

7 THE WITNESS: Clare Apana, Wailuku, 260
8 Halenani Drive.

9 VICE CHAIR HELLER: Go ahead.

10 THE WITNESS: Okay. I think you have a
11 copy of my testimony. I would like to start with the
12 CIA is incorrect in finding of no significant cultural
13 impact. First and foremost the accepted letter from
14 SHPD for the AIS for the Petitioner's Appendix D1, the
15 area identified appears to be for the AIS that would
16 be the Makila Project Area the. LCA's that are listed
17 in the LCA Appendix data, also in Petitioner's
18 Appendix D.

19 There are 11 apana identified and only four
20 are in the Kahoma Project Area. So this is the
21 acceptance letter of the AIS. The CIA fails to
22 recognize the historical, cultural significance of the
23 area.

24 See my Exhibit 1 which is a map from
25 Connolly's AIS showing in 1975 showing the Kahoma

1 Stream terrace system complex and the he'iau.

2 And also Exhibit 5 from SHPD's report
3 M-231. It's an AIS showing the he'iau on this
4 property. It fails to identify the lineal, the threat
5 to the marine natural resources by changing the
6 natural flow of the streams and water to the ocean.

7 And most of all, the cultural practice of
8 Routh Bolomet who is a descendant of the royal
9 patentees of Ka'awa, Victoria Kamamalu and Kaho,
10 Keohokalole. She is returning home and will be
11 impacted by the plans of this development.

12 The importance of this area for food
13 production including lo'i kalo and the existence of
14 the wetlands that are now developed into residences
15 are not addressed. And the finding of no significant
16 cultural impacts by Hana Pono is incorrect. There are
17 grave consequences to the cultural practices.

18 And I don't want to read all the laws. I
19 have them for you in your packet. But they are laws
20 which protect the rights of cultural practitioners of
21 our cultural, of practicing our culture, of cultural
22 resources being protected and also water rights. So
23 all of those laws are there. And I don't want to
24 spend my time to give that to you.

25 In an article that you're probably very

1 familiar with about: "The State shall conserve and
2 protect agricultural lands, promote diversified
3 agriculture and increase agricultural self-sufficiency
4 and assure the availability of agriculturally suitable
5 land." I think you're very familiar with this clause
6 in section 3.

7 I would like to say that in the OHA
8 response letter they also questioned about whether the
9 agricultural lands were being preserved and whether
10 the testify -- whether the Project had identified
11 lands that were truly not suitable for agriculture.

12 I'd like to go on to the unidentified
13 cultural practice of cultural practitioner Routh
14 Bolomet and Kahu Mike Lee. Routh Bolomet is an
15 organic farmer and a cultural practitioner and a
16 descendant of the allodial title holders of this
17 Project. I have worked closely with Ms. Bolomet to
18 promote organic farming and regeneration of soil in
19 2010.

20 We practiced the study of the kanawai, the
21 Hawaiian laws, that the Revised Hawaiian Statutes,
22 HRS, are drawn from. We studied various Hawaiian
23 healing practices and share a practice from doing of
24 energetic work called Sukhmani Kaur.

25 I've known Routh Bolomet since about the

1 year 2001. And recently the study of genealogy has
2 been her major focus to find her roots and find her
3 family.

4 Routh Bolomet comes from the lineage of
5 la'au lapa'au. Her cousin Kahuna Lapa'au from Uncle
6 Butch Kaneokua is a very well-known teacher and
7 practitioner of Hawaiian healing plants. And he has
8 been training her since the year 2000.

9 On her present organic farm in Pupukea
10 Routh took decompensated soils and grew the soil back
11 to health and abundant fertility. I've never seen
12 anyone grow weeds that can be 24 feet high, but she
13 has taken that place and regenerated the soil. So
14 when she says she nows what can be done she's telling
15 the truth because she's done it.

16 Okay. In 2005 to 7 she represented O'ahu
17 organic farmers as a member of a statewide task force
18 for the Legislature. She has native as well as other
19 healing plants growing on her farm.

20 Routh's goal, one of her goals, is to show
21 people how to eat food as medicine. And this has been
22 her passion for a few years now. Okay.

23 Now to burials. When we were on the
24 property doing the cultural assessment we found areas
25 that could have been or are burial areas. I

1 understand that there is a report about all the
2 burials that have been taken out of this area. And I
3 believe it's related to the Kahoma Stream project.

4 And I also included something from the 1993
5 Burial Council where they're talking about burials
6 that were sent to the Bishop Museum and then back.

7 What I want to know is where is the burial
8 treatment plan? I could not find a burial treatment
9 plan for the burials. I would have thought it would
10 be very easy to find where all these burials had been
11 placed after they took them out to build that project.
12 But that information was not found and not discussed.

13 Now I'm going to talk about our cultural
14 practice Kumu Mike Lee. On June 7th, 2012 Routh, Routh
15 Michael and myself walked the Kahoma property and
16 assessed the cultural value of it. Routh immediately
17 recognized many plants with healing properties.

18 On July 17th, 18th, 21st and 24th, 2012 we
19 did ceremonies to honor the ancestors of the land.
20 And we also were very guided on these days by the
21 ancestors. I was with Routh and Michael when we found
22 the he'iau on the property which subsequently we found
23 that the walls were in two different studies. But we
24 found them anyway.

25 And we found various different ceremonial

1 pohaku. We collected materials there from the, from
2 that area, not knowing that the proof or the existence
3 of this place had already been documented. So truly
4 the ancestors led us that day.

5 In my testimony I have the story of more of
6 what we found. But I will say that I'm much more
7 comfortable if my kumu is allowed, is the one to speak
8 of that. I am really amazed by what we found and what
9 we experienced on this property. And I know you went
10 on a site visit. I don't know what you thought when
11 you saw it.

12 What I thought when I saw it was I just
13 wanted to cry because I could see where the streambeds
14 were. And I could see that the water flowed through
15 there and that it was a much different place in former
16 times.

17 And I spoke this to my friend and said,
18 "You know, I think we owe the deepest apology to our
19 ancestors and the land for allowing this to happen
20 here." And she said, "It can come back you know."

21 And I think that's exactly what is trying
22 to be done here. The land is trying to come back.
23 And the family members have come back.

24 And the CIA, the AIS fall so short from
25 identifying any of these very rich and important

1 cultural practices, features, these lands and how they
2 were used for lo'i kalo, the terraces, the whole
3 terrace system not identified. And it can come back.

4 So I have given you pictures of the areas,
5 some of the areas that we have identified, some of the
6 stream beds so you could see it, a picture of a pueo.
7 There are people from the neighborhood who have spoken
8 of the pueo. There are -- there was another
9 practitioner who went on the land and reports this.

10 But I think the most poignant story is of
11 the Lahainaluna which is just above this area. And
12 when the children or the students graduate it never
13 fails that the giant pueo comes and circles around
14 them.

15 So to minimize this area by not recognizing
16 the mo'olelo, and this modern day mo'olelo, and the
17 fact that, yes, the owls are here, and the importance
18 to the Pele plan of owls is a great travesty.

19 I think I have probably covered what is in
20 my, what is in my testimony here that I've given to
21 you. And I thank you very much for giving me this
22 opportunity to talk about this land, and our hopes for
23 the return of this land, and our hopes for the
24 recognition of what is here. Thank you.

25 VICE CHAIR HELLER: Thank you. Parties, do

1 you have any questions?

2 MR. GEIGER: No questions.

3 MR. GIROUX: No questions from the county.

4 DIRECT EXAMINATION

5 BY MR. YEE:

6 Q Ms. Apana, my name's Bryan Yee. I represent
7 the Office of Planning. If I may proceed.

8 VICE CHAIR HELLER: Yes, go ahead.

9 Q (By Mr. Yee): I understand that you're
10 testifying today as a public witness rather than as a
11 part of Ms. Bolomet's case in chief; is that correct?

12 A Yes.

13 Q And then you described the part of your
14 testimony some of things you've done with Mr. Lee,
15 regarding the review of the Kahoma Petition Area; is
16 that right?

17 A Yes.

18 Q And if I heard you correctly are you saying
19 that with respect -- although you've reported, I
20 guess, your understanding of what was there, did I
21 also hear you say that you were deferring to Mr. Lee
22 as to the cultural impacts or archaeology impacts of
23 this Project?

24 A Uhm, I was speaking of the experiences, the
25 cultural practitioner, the cultural practices, the

1 depth and importance of what was found and done
2 because he is my kumu. And I can't speak in -- it
3 would be improper for me to speak when he's here to
4 speak. And I think I've given you reason for the
5 inadequacy of the AIS and the CIA of my own.

6 Q Would it be your understanding that he's
7 also going to be testifying on these issues of the
8 adequacy of the AIA and the CIA?

9 A The AIA?

10 Q The Archaeological Inventory -- excuse me,
11 AIS, Archaeological Inventory Survey and the Cultural
12 Impact Assessment.

13 A He, he may. I'm not sure of what exactly
14 his testimony will be. I'm sure he will be speaking
15 about cultural issues.

16 Q With respect to the information you
17 obtained during the tour of the site, is it correct
18 that he gave you this information; that he informed
19 you this was a he'iau, this was a pohaku stone; is
20 that correct?

21 A Well, actually I was the one who saw that
22 it was a he'iau first. But he is the one who can make
23 that definite call.

24 Q So if I hear you correctly you're telling
25 me that you both were out there and he's, I guess, the

1 expert you would defer to on defining these items.

2 A Yes.

3 Q Okay. I just wanted to know who I should
4 ask questions of. So it sounds like I should ask
5 questions of Mr. Lee about any of these archaeological
6 and cultural issues.

7 A I would prefer that you ask, if you're
8 asking practitioner questions, yes.

9 Q Okay. That's fine. I have no questions
10 then, thank you.

11 VICE CHAIR HELLER: Ms. Lincoln?

12 MS. LINCOLN: I have no questions.

13 VICE CHAIR HELLER: Ms. Bolomet?

14 MR. BOLOMET: I have a couple questions.

15 CROSS-EXAMINATION

16 BY MS. BOLOMET:

17 Q When you went to the he'iau -- when we went
18 to the he'iau there were some stones that you
19 identified. Could you explain what the different
20 stones were that you identified?

21 A On that day we were looking for some
22 specific pohaku. And at the same exact time when
23 Mr. Lee, when Kahu Lee was finding the pohaku that he
24 was looking for, I noticed a large pohaku with
25 markings on the front of it, and started to clear it

1 off. So when he found his, the pohaku that he was
2 guided to find, I was showing him mine. And he walked
3 over and he put the one that he found, which was
4 smaller, onto that one and they fit perfectly.

5 And the lines of the fluid that had been
6 over it, poured over it, matched exactly. So I am not
7 the kahu. I'm not the kahuna. But I did find that
8 one, the larger libation stone.

9 Q Can you explain what the libation stone is
10 used for?

11 A For ceremony. And I would defer to Mr. Lee
12 to explain that. But I have been in various places
13 doing cultural assessments with Mr. Lee. And the, the
14 information and the guidance of the ancestors is so
15 profound.

16 All around him there is so much that I am
17 taken aback and would support him to continue to help
18 our people to regain our cultural knowledge at any
19 time.

20 Q Can you share with us some of the events
21 that has happened when he starts doing olis or
22 prayers, chanting?

23 A There are many. I would say that one that
24 you might understand well is Mr. Lee has been to Maui
25 several times. And I have to say that the first time

1 that he came recently was on my behalf, as I asked him
2 to come to help me with the sand dune burials and to
3 help to do a purification and -- and uhm, I can only
4 think of the Hawaiian word -- and a settling of all
5 the negative and harsh energies that were there.

6 So the first time he came to Maui I was --
7 to come to help me to do the ceremony. And at the end
8 of the time that we were there, it was several days,
9 we hiked 15 miles walking to different places to
10 answer the call of the ancestors.

11 And we were driving, probably to Burger
12 King, and saw a rainbow that arched from the bottom of
13 the by Maliko and all the way up into, towards
14 Haleakala. Mr. Lee said, "That's tutu calling. I have
15 to go." And I said, "We're going to Haleakala now?"
16 And so we went. And that rainbow followed us right
17 alongside. And when we got to the top and he did his
18 chant for tutu, a white rainbow appeared.

19 And I have seen this happen four times
20 where the rainbow calls and we have to go up and we go
21 and he chants and the white rainbow comes. That's
22 just one example of the kaina Hawai'i lona that
23 happens.

24 Q Can this be seen on U-Tube the white
25 rainbow?

1 A Yes. Actually one of the times that we
2 went up we had a person who does videography. And he
3 put it on U-Tube. And the last time we went up I
4 actually took a video of it. That may go up also just
5 to show that our cultural practice is not dead.
6 Interestingly enough the rainbow is there, Kumu Lee is
7 there and also the Meese Telescope where the ACST
8 telescope is slated to be put up, the 14-story
9 telescope. And it's all in the same picture.

10 Q Do you do any cultural practices at the
11 ocean with Kumu Lee?

12 A Yes. We have done practices in Maui. I
13 have organized several classes for him where he has
14 taught people. Well, 1. He's taught people how to
15 do assessments.

16 VICE CHAIR HELLER: Excuse me for
17 interrupting. I think we're getting a little bit
18 beyond the specifics of this Project and this subject
19 property.

20 MS. BOLOMET: Okay.

21 VICE CHAIR HELLER: We're talking about
22 Mr. Lee's qualifications. I don't know that we need
23 to examine a public witness about Mr. Lee's
24 qualifications.

25 MS. BOLOMET: Okay. There's limu, the one

1 at Mala Wharf which pertains directly to this property
2 because from the mountain to the sea everything's
3 connected. And I know Ms. Apana has had direct
4 experience with that. So I was referring to that so
5 that she could share the experience and you could see
6 that, in fact, the Mala area is very much alive in our
7 cultural practices.

8 VICE CHAIR HELLER: Right. And she's
9 appearing as a public witness. At this point it's
10 appropriate for you to ask questions that clarify or
11 expand on the testimony that she has presented as a
12 public witness, but not to open up whole new subjects
13 by directing questions to her.

14 MS. BOLOMET: Okay. I have another
15 question.

16 Q So you're familiar with Lahaina, correct?

17 A Yes.

18 Q Is Makila right nextdoor to Kahoma, the
19 Kahoma Stream Project Area?

20 A I don't think so. I think Ka'ula Valley
21 may be in between.

22 Q Approximately how far are the two areas?

23 A Well, let's se. Makila is right by where
24 Puamana is. And then the Kahoma Project is by where
25 that, where the -- above the Cannery Mall and the

1 Borders Shopping Center. So I'm not sure how far that
2 is.

3 Q One block? One mile? 10 minutes?

4 A I think all of Lahaina Town is in between,
5 between Puamana and when you get to, like, the Cannery
6 Mall area.

7 Q Okay. So you were saying that the AIS that
8 you were looking at in this Petition was using
9 information from Makila for the AIS rather than for
10 Kahoma? Is that what you were getting at?

11 A Well, it appears that the names of the
12 awardees go with the Makila project. The only reason
13 I know any of the names is because I have friends who
14 are in that project who are representing their
15 families in the project.

16 MS. BOLOMET: Okay. I think that's the
17 things that I wanted to clarify.

18 VICE CHAIR HELLER: Commissioners, any
19 questions? Thank you very much. Is there anyone else
20 present who wishes to present public testimony today?
21 Hearing none, Mr. Geiger, do you have any exhibits
22 that you want to present at this time?

23 MR. GEIGER: We submitted as rebuttal
24 Exhibits 37 and 38. We would offer those two rebuttal
25 exhibits. Then we would have Mr. Frampton have some

1 testimony on that later on.

2 VICE CHAIR HELLER: As to the exhibits,
3 County, any objections?

4 MR. GIROUX: We have no objection.

5 VICE CHAIR HELLER: OP?

6 MR. YEE: No objection.

7 VICE CHAIR HELLER: Ms. Lincoln?

8 MS. LINCOLN: No objection.

9 VICE CHAIR HELLER: Ms. Bolomet?

10 MS. BOLOMET: No objections.

11 VICE CHAIR HELLER: Then exhibits 37 and 38
12 will be admitted. County, any additional exhibits at
13 this time?

14 MR. GIROUX: None at this point. But I'd
15 reserve to when my witnesses are called.

16 VICE CHAIR HELLER: Mr. Yee? OP?

17 MR. YEE: Nothing from OP.

18 VICE CHAIR HELLER: Ms. Lincoln?

19 MS. LINCOLN: Nothing.

20 VICE CHAIR HELLER: Ms. Bolomet?

21 MS. BOLOMET: We submitted a rebuttal to
22 Mr. Rory Frampton's rebuttal for Mr. Lee. It was
23 pertaining to his testimony. And because I just got
24 the information the day before I came here, which was
25 on Tuesday, it was not sent to us registered mail.

1 Mr. Lee did not get a copy. And I got it as I was
2 going to the airport. This is the soonest that we
3 could respond to that. So we put in, submitted a
4 rebuttal this morning.

5 VICE CHAIR HELLER: Has that been marked
6 with an Exhibit No.?

7 MS. BOLOMET: It's been stamped in.

8 VICE CHAIR HELLER: Have the other parties
9 received that?

10 MR. GEIGER: This is the Petitioner. We
11 have not received it. I would remind the Commission
12 and the Chair that you've already entered Orders on
13 this. At the last hearing Ms. Bolomet had asked for
14 an extension of time. The Chair granted her until
15 August 1 to submit whatever exhibits she was going to
16 submit.

17 After that it was done, no more. The Chair
18 then gave everyone else an opportunity by August 10 to
19 submit rebuttals, which we have. So anything after
20 that should be excluded because this court -- or this
21 Commission has already ordered that August 1 was the
22 drop dead date for Ms. Bolomet.

23 Nothing further after that date. We would
24 object, ask that it be excluded from the record.

25 MR. GIROUX: County would join in the

1 objection just for a matter of clarity to try to
2 confirm what's in as exhibits and what's out as
3 exhibits.

4 VICE CHAIR HELLER: Mr. Yee? OP?

5 MR. YEE: I'm not sure if the Office of
6 Planning has a copy of the document if she filed it
7 today.

8 MS. BOLOMET: We gave all the copies this
9 morning.

10 MR. HAKODA: Yeah. You gave me but you
11 didn't give the parties.

12 VICE CHAIR HELLER: Ms. Bolomet, what I'm
13 going to do right now since it's not even identified
14 by an exhibit number is I'm not going to make any
15 ruling on this document since we're not even clear on
16 what it is. If you want to give it an exhibit number
17 and then move to admit it as an exhibit, we will take
18 up that motion when it's made.

19 MS. BOLOMET: Okay.

20 VICE CHAIR HELLER: I'm not saying one way
21 or the other what we'll do on the motion. I'm just
22 saying first of all, you have to give it an exhibit
23 number, identify it as an exhibit, provide it to all
24 the parties. Then we'll deal with what to do with it.

25 MS. BOLOMET: Okay. We did make a copy.

1 We did make the 20 some odd copies so that everybody
2 could have one. I'll have to hunt it down to see
3 where it's at.

4 VICE CHAIR HELLER: Perhaps when we have a
5 break you identify it and provide the copies.

6 MS. BOLOMET: Okay. and I just wanna make
7 sure, because we're not -- I asked specifically of
8 everybody that I get e-mails when they sent things
9 out. Because where I'm currently at we have a very
10 difficult time getting mail. And sometimes I don't
11 get it at all.

12 So I asked for a courtesy e-mail when they
13 were going to send things out. And I did not get one.
14 And we're responding as quickly as we can. And it's
15 basically I'm responding because there's definite
16 untruths in Rory Frampton's rebuttal.

17 Can I read a statement?

18 VICE CHAIR HELLER: Not at this point.
19 This is not the proper time.

20 MS. BOLOMET: Okay.

21 VICE CHAIR HELLER: If Mr. Frampton is
22 called as a witness you'll have your opportunity to
23 examine him.

24 MS. BOLOMET: Okay.

25 VICE CHAIR HELLER: Any other exhibits that

1 anybody is moving in at this time? (no response)

2 Mr. Geiger, are you ready to proceed?

3 MR. GEIGER: We are. But just so I'm clear
4 the only exhibit that we received in the August 1
5 filing was a two-page document styled Exhibit 17. I
6 have not heard that that has been offered by
7 Ms. Bolomet. And I'm just trying for the record to
8 make certain that that's going to be the only exhibit
9 that's coming in or being offered by Ms. Bolomet in
10 accordance with the Order that was entered by this
11 Commission.

12 VICE CHAIR HELLER: Ms. Bolomet, are you
13 offering Exhibit 17?

14 MS. BOLOMET: We offered Exhibit 17 and
15 Exhibit 11 with Mr. Lee's amended testimony. That was
16 by August 1st. We were not able to provide the other
17 testimony from Ms. Apana. That's why she became a --
18 did public testimony and submitted her information
19 with her testimony. And...

20 VICE CHAIR HELLER: I'm just asking --

21 MS. BOLOMET: -- the only other thing would
22 be what we did today.

23 VICE CHAIR HELLER: I'm just asking what
24 exhibits, if any, are you offering today?

25 MS. BOLOMET: The August 1st Exhibit 11 and

1 17 and then Mr. Lee's rebuttal to Mr. Frampton's
2 rebuttal to what he said.

3 VICE CHAIR HELLER: Which we just talked
4 about --

5 MS. BOLOMET: Right.

6 VICE CHAIR HELLER: -- that's the one that
7 does not yet have an exhibit number. So right now
8 you're referring Exhibits 11 and 17, is that correct?

9 MS. BOLOMET: Correct. And his
10 explanation.

11 MR. GEIGER: We would object to Exhibit 11.
12 It was not provided to us. Exhibit 17, a two-page
13 document, was provided to us. We would have no
14 objection to that exhibit.

15 VICE CHAIR HELLER: County, do you have a
16 position as to Exhibits 11 and 17?

17 MR. GIROUX: We would concur with the
18 Petitioner's position on that.

19 VICE CHAIR HELLER: OP?

20 MR. YEE: We have no objection to the
21 2-page document. But I have to ask whether the
22 testimony of Mr. Lee submitted on August 2nd or so,
23 does that have an exhibit number?

24 MS. BOLOMET: I'm not understanding what
25 you mean by "exhibit". I was told to hand in the

1 exhibits which, we did, 11 and 17 was in the document
2 that we submitted on August 1st. And there was a
3 rebuttal explanation -- I don't know how, what your
4 terminology is. So that's what I handed in on
5 August 1st.

6 VICE CHAIR HELLER: Right now what we're
7 dealing with is a Motion to Admit Exhibits 11 and 17.
8 Does OP have any objection to Exhibits 11 or 17?

9 MR. YEE: OP concurs with Petitioner.

10 VICE CHAIR HELLER: Ms. Lincoln? Any
11 objections to Exhibits 11 or 17?

12 MS. LINCOLN: No.

13 VICE CHAIR HELLER: Since there's no
14 objection to 17 we will admit 17. We are not
15 admitting Exhibit 11.

16 MR. GEIGER: Thank you. With that we would
17 call Keith Niiya as our first witness today.

18 VICE CHAIR HELLER: Please proceed.

19 MR. GEIGER: State your name, sir.

20 THE WITNESS: Keith Niiya.

21 MR. GEIGER: Has he been sworn?

22 KEITH NIIYA
23 being first duly sworn to tell the truth, was examined
24 and testified as follows:

25 THE WITNESS: Yes, I do.

DIRECT EXAMINATION

BY MR. GEIGER:

Q Mr. Niiya, what is your occupation?

A I am a traffic engineer with Austin Tsutsumi and Associates, Incorporated.

Q Did you provide written testimony in this matter?

A Yes, I did.

Q Was the written testimony signed on June 28, 2012?

A Yes, it was.

Q Do you have any corrections to that written testimony?

A Yes, I do.

Q What corrections do you have?

A Just some minor housekeeping items. On Page 1 line 2, my official title had changed to vice president and principal traffic engineer. On Page 2 line 21 talk about Exhibit A20 which should have been Exhibit No. 20. Then on Page 3, lines 11 and 12 it shows Exhibits A-7 it should have been Exhibits No. 7.

Q Any other corrections?

A No, that's all.

Q Thank you.

MR. GEIGER: We would offer the written

1 testimony of Mr. Niiya.

2 VICE CHAIR HELLER: County, any questions?

3 MR. GIROUX: No objections from the County.

4 VICE CHAIR HELLER: OP?

5 MR. YEE: OP has no objection although
6 frankly I thought it had been admitted. But we no
7 objection.

8 VICE CHAIR HELLER: Ms. Lincoln?

9 MS. LINCOLN: No objection.

10 VICE CHAIR HELLER: Ms. Bolomet?

11 MR. LEE: She went to the bathroom.

12 VICE CHAIR HELLER: I think you may be
13 right that this was one of the exhibits already
14 admitted.

15 MR. GEIGER: We did not identify the
16 written testimonies as exhibit numbers. So what I've
17 done with every other witness is I have offered in the
18 witness's testimony just to make clear that it's in
19 the record.

20 VICE CHAIR HELLER: Okay. We'll defer
21 formally accepting it until Ms. Bolomet gets back.
22 But proceed with your case.

23 MR. GEIGER: Thank you. We would also
24 offer Mr. Niiya as an expert in traffic engineering.

25 VICE CHAIR HELLER: Any objection to him

1 being designated as an expert?

2 MR. GIROUX: No objection from the County.

3 MR. YEE: No objection.

4 MS. LINCOLN: No objection.

5 VICE CHAIR HELLER: Any further questions
6 for the witness?

7 MR. GEIGER: Yes, I do.

8 Q Mr. Niiya, are the opinions that are
9 contained in your written testimony concerning the
10 effect of the Project on matters of statewide concern
11 involving traffic, all contained in your written
12 testimony, the opinions that you hold?

13 A Yes, they do.

14 Q And without actually reading the written
15 testimony to the Commissioners would you please
16 highlight those opinions for the Commissioners.

17 A Okay. Yes, I will. In summary of my
18 written direct testimony, there are going to be 68
19 dwelling units that will be developed on the property.
20 This will generate approximately 58 new trips during
21 the AM peak hour traffic and 75 trips during the PM
22 peak hour traffic.

23 The Institute of Transportation Engineers
24 recommends that a TIAR be conducted whenever a
25 proposed development would generate more than a

1 hundred trips during the peak hour.

2 Also, although they may not be built,
3 assuming that the allowable 31 ohana units were to be
4 built, an additional 22 new trips would be generated
5 during the AM peak hour traffic and 22 trips would be
6 generated during the PM peak hour traffic.

7 If you totaled 'ohana new trips with those
8 generated by the 68 new dwelling units, that would
9 result in less than 100 peak hour trips whereby an ITE
10 recommends a TIAR to be conducted.

11 In closing, I would like to say based upon
12 my 22 years of experiences and review of the traffic
13 impact reports, the supplemental traffic reports,
14 together along with my work, my professional opinion
15 is that the proposed Kahoma Residential Subdivision
16 will not have any significant traffic impacts on the
17 roadways surrounding the Project and that a TIAR is
18 not required.

19 And that the proposed improvements by the
20 developer, which includes traffic calming measures,
21 sidewalks, bike lanes and on-street parking, are
22 appropriate for this Project.

23 Q Have you learned anything since you
24 provided your written direct testimony on June 28,
25 2012 that would change any of your opinions?

1 A No, I haven't.

2 Q And have you gained any information since
3 you signed your written testimony on June 28, 2012,
4 which you need to supplement your opinions in any way?

5 A No.

6 MR. GEIGER: We would pass the witness.

7 VICE CHAIR HELLER: Ms. Bolomet, while you
8 were out Mr. Niiya was offered as an expert in
9 traffic. And his written direct testimony was offered
10 for admission. Do you have objections to either the
11 designation as an expert or the admission of the
12 written direct testimony?

13 MS. BOLOMET: No, I don't.

14 VICE CHAIR HELLER: Then he will be
15 recognized as an expert and the testimony is received.

16 MR. GEIGER: Thank you.

17 VICE CHAIR HELLER: County, any questions
18 for this witness?

19 MR. GIROUX: Just real quick.

20 CROSS-EXAMINATION

21 BY MR. GIROUX:

22 Q According to your study was there any
23 impacts that created any need for mitigation to the
24 traffic?

25 A We didn't do anything to look at any

1 mitigation on any of the roadways.

2 Q Were you contacted by the state as far as
3 any possible mitigation?

4 A No, we haven't been contacted by the state.

5 VICE CHAIR HELLER: OP?

6 CROSS-EXAMINATION

7 BY MR. YEE:

8 Q Referring to your written testimony on
9 Page 4. On the second and third line you referred to
10 the construction of a street to be 30 feet in length.
11 Do you see that?

12 A Page 4.

13 Q Page 4 of your written testimony.

14 A Do you know what line?

15 Q Lines 2 through 5 "The proposed Project
16 will include the construction of a street."

17 A Yes. I see that.

18 Q This reference to a street is that the
19 interior road?

20 A That's the Project street, yes.

21 Q And do you have an understanding as to
22 whether this street will be dedicated to the county?

23 A I have no knowledge of that.

24 Q Do you know whether the street will be
25 built to county urban standards?

1 A No, I don't know.

2 MR. YEE: No further questions.

3 VICE CHAIR HELLER: Ms. Lincoln.

4 CROSS-EXAMINATION

5 BY MS. LINCOLN:

6 Q Were you or your firm hired by the
7 Petitioner and financially compensated for your
8 traffic assessment?

9 A Yes, we were.

10 Q Did you state that you are of the opinion
11 that the proposed Kahoma Residential Subdivision will
12 have no significant impacts on the traffic in the
13 area?

14 A Yes. My professional opinion.

15 Q Okay. So with all your experience,
16 education, report findings, it still comes down to
17 just your opinion, is that correct?

18 A No. The analysis that was also presented
19 in the other traffic impact studies done by Wilson
20 Okamoto also showed that there would be also no
21 significant impact on the roadways.

22 Q Were you or your firm part of the Keawe
23 Street Project?

24 A The Keawe Street Project?

25 Q Where they connected Keawe Street onto

1 Interstate Highway 30 there -- not "interstate".
2 Highway. Sorry. Keawe Street is the street that your
3 Mill Street is going to make a left-hand turn or
4 right-hand turn onto ingress and egress.

5 A Yes. But I don't understand what you mean
6 by "Keawe Street Project".

7 Q Well, when they built the traffic light and
8 the turn lanes and the treed medians, was your firm
9 part of that assessment?

10 A No. Our firm was not part of that.

11 Q Are you aware that that median when they
12 first put it in was tree-lined median, they had to dig
13 it all up, tear it all out and put in a turn lane
14 after it was put in?

15 A My understanding that is part of the state
16 DOT's Lahaina Bypass project that actually put in that
17 left-turn pocket.

18 Q Okay. So traffic experts can make
19 mistakes. Because it did have to be torn up and a
20 turn lane made after it went through approvals.

21 A There's all kinds of changes that affect
22 traffic. You know, if you look at it when the
23 original Keawe Street went it, it may have been just
24 for the light industrial but then now there's the
25 Lahaina Gateway or even the Walgreen's. So there are

1 changes that occur and we have to re-evaluate after,
2 you know, different developments come in.

3 Q Well, this was done immediately, like as
4 soon as they put the tree lined thing in it was torn
5 up, like, within a couple months.

6 A Not my understanding. The Keawe Street was
7 there first. And then after -- as part of that
8 industrial subdivision. Then afterwards I think there
9 was Walgreen's and the Lahaina Gateway that came in
10 afterwards. Then now you have the bypass coming in.

11 Q Okay. By the way, the bypass is not yet
12 completed but will be joining Highway 30 on Keawe
13 Street. So did you factor that actual traffic impact
14 into this assessment?

15 A We did not do a Traffic Impact Analysis
16 Report, as I stated in my testimony. One was done by
17 Wilson Okamoto and they did factor in the traffic that
18 would be reallocated to Keawe Street.

19 Q Okay. And you talked about the number of
20 dwellings that were going to be in this residence and
21 that's not going to affect the traffic. In our
22 neighborhood a single-family house burned down
23 displacing 21 family members. Did you factor in
24 cultural living practices?

25 THE REPORTER: Ms. Lincoln, would you

1 please slow down.

2 MS. LINCOLN: I'm sorry.

3 Q Did you factor in cultural living practices
4 that would include larger than normal occupancy?

5 A No. We used standards trip rates. But,
6 again, we didn't do a traffic -- when we did our trip
7 rate it's a standard trip rating.

8 Q There are eight ingresses and egresses on
9 Keawe Street within about 200 yards. And none of the
10 entities are near capacity. Was full occupancy and
11 usage factored in your traffic assessment?

12 A Again, we didn't do a traffic study that
13 looked at each individual intersection. But the
14 Wilson Okamoto study did look at the traffic impacts
15 and would have looked at when the developments are
16 fully built out.

17 MS. LINCOLN: Will we be able to talk with
18 someone from there, from the other place he's talking
19 about? I'm sorry.

20 VICE CHAIR HELLER: You'll be able to
21 examine whatever witnesses are called. I don't know
22 who's going to be called.

23 MS. LINCOLN: Okay. All right.

24 Q In your expert opinion how many traffic
25 lights may be required once all those entities are

1 filled and you've got the ingress and egresses and all
2 that going on on that small section of street?

3 A I cannot tell you what's going to happen
4 with the other developments. There's -- I mean as
5 anything development is very -- it changes from day to
6 day. But as far as this Project is concerned, this
7 Project will not require any traffic signals at either
8 of the two sites.

9 Q Did you personally drive around the old
10 neighborhood and see firsthand how narrow and winding
11 our streets are?

12 A I have driven in the Lahaina area. I've
13 driven through the streets. However, note that this
14 Project is not gonna have any traffic that goes to
15 those narrow streets.

16 Q It's Aluli Street connected to Kalanea
17 Street connected to --

18 A Kalanea Street at the top where it's
19 connecting is widened out. Yeah. I'm thinking more
20 at the bottom towards Kahua, Aki and the ones on the
21 bottom, yes, I've driven in there. There are fairly
22 tight. But at the top at Kalena and Aluli they're
23 pretty wide.

24 Q In your assessment traffic just always goes
25 like it's always going to go. Like I'm going to drive

1 from Aki, go out to Lahainaluna, drive up Lahainaluna,
2 turn down Kalena Street to get down to Genki Sushi?

3 A Basically for this Project in order to get
4 to this Project, if I were going to this Project it
5 totally depends upon where I'm coming from. If I'm
6 coming from here, Lahaina, I would turn up Keawe
7 Street, turn on Mill Street then turn left into the
8 Project.

9 Q Right. But I'm just saying in my
10 neighborhood I'd never driven up there, but I would
11 now, correct?

12 A If I was coming from the Kahului side I
13 would turn possibly, if I lived up the top side of the
14 Project, and way at the top, there's a possibility I
15 would turn right onto Lahainaluna Road, go all the way
16 up to Kalena Street, take a left onto Kalena to Lui
17 into the Project. I wouldn't be accessing the smaller
18 streets down below. I would take the most direct
19 route to and from my house.

20 Q Just the community that's, like, in our
21 neighborhood would be accessing it then.

22 A Pardon?

23 Q So just like if I was -- like, I live in
24 that community. So people below my street to my
25 street would probably just cut through there to go up

1 Lui Street to get through the Project. We're not
2 going to drive all the way down Lahainaluna, go on the
3 highway and go around the long way. Do you understand
4 what I'm saying?

5 Like all the streets from Kalena Street
6 down to Mill Street, that neighborhood would pretty
7 much cut through that neighborhood 'cause that would
8 be faster.

9 A Cut through what neighborhood?

10 Q The Kahoma, the new one.

11 A It depends upon where you live. If you
12 live on the bottom by Kahua Street, I wouldn't think
13 you would want to drive all the way up the hill to
14 Kalena, take a left and come back down. It might be
15 faster to just come out at Kuhua, take a right onto
16 Lahainaluna, and a right onto Honoapi'ilani Highway.

17 Q Did you personally walk along, like, Lui
18 Street, Kalena Street, those areas there? I noticed
19 there's no sidewalks, curbs or gutters.

20 A Correct. You're correct.

21 Q Okay. And you don't feel that's a safety
22 issue for children or the elderly or families walking?

23 A Well, I mean if you look at -- I've driven
24 and I've been observing traffic up and down
25 Lahainaluna Road. The most that I've seen pedestrians

1 walking up and down is when school gets out in the
2 afternoon. They come down Lahainaluna Road and the
3 sidewalk is on the south side of Lahainaluna Road.

4 At Kalena they have to cross Lahainaluna
5 Road and then walk onto the north side is where the
6 sidewalk is. Coming down below Kalena there is no
7 sidewalk on the north side of Lahainaluna Road. Yet I
8 still see kids walking down the street on the north
9 side of Lahainaluna Road.

10 If you look at the two streets, you look at
11 Kalena, you look at Lahainaluna, Kalena is a lower
12 speed, lower volume street. That, yes, it would be --
13 put it this way. It would be probably safer for the
14 pedestrians to walk down Kalena Street down to, if
15 you're going the Lahaina Gateway Mall. Now, it
16 totally depends on where these kids are going.

17 Q Yes. So the kids in my neighborhood walk
18 down our street. They don't come down Lahainaluna.
19 They cut through the back streets and come down there.
20 So right now there's no sidewalks. And because
21 there's minimal traffic it doesn't pose a huge threat.

22 Plus in the evenings a lot of people are
23 walking their kids and dogs and family outings, so the
24 streets get used in the evenings, not just after
25 school. And a lot of people don't like to walk along

1 Lahainaluna because of the traffic when people are
2 getting out of school. So I'm just wondering if you
3 did --

4 VICE CHAIR HELLER: Excuse me, Ms. Lincoln,
5 is there question?

6 MS. LINCOLN: Yeah.

7 Q I'm just wondering if you did walk the
8 neighborhoods, not just after school but in the
9 evenings when it's being used, and do you feel it's
10 going to be totally safe when you open it up and allow
11 more traffic through it?

12 A In my professional opinion I don't think
13 that there's going to be that much more traffic added
14 to Kalena Street.

15 Q Okay. Are you personally or your company
16 willing, then, to put into writing a guarantee to the
17 point of financial compensation for a traffic light if
18 it's needed on Keawe Street and sidewalks, curbs and
19 gutters in our neighborhood if it proves to be needed?

20 A That's not for me to decide. It's the
21 developer.

22 Q Thank you.

23 VICE CHAIR HELLER: Ms. Bolomet?

24 CROSS-EXAMINATION

25 BY MS. BOLOMET:

1 Q I'm kinda perplexed by you not doing an
2 assessment of this with all the houses that have
3 recently -- and developments, that have recently been
4 approved and the new malls. Because, well, your
5 wife -- do you have a lot of kids?

6 A I have two kids, yes.

7 Q Okay. So when your wife is busy going for
8 groceries, screaming kids in the background and a lot
9 of traffic, does she cut through neighborhoods to take
10 the short cut home? Taking surface streets?

11 A No, she doesn't. She stays on the main
12 line. She doesn't like to go off side streets or
13 investigating or doing different things.

14 Q Well, as somebody who's driven for 35 years
15 I guarantee you I bypass traffic. And I take side
16 streets. And all the moms that I know, we do that
17 because we can't handle dealing with kids.

18 And I think with all the different
19 developments that are coming in and the bypass, you
20 need to make a study to see really what the impacts
21 are gonna be. Becuase if you just do it on 68 houses
22 that's not a realistic picture.

23 So is there anything else that you can
24 offer to show us, you know -- to me it's just you're
25 finding a loophole to not do the full study.

1 A Right. I mean if you look at -- it's not
2 the responsibility of this developer to look at what
3 happens with other developments that are coming up in
4 the area. They all have to do their own Traffic
5 Impact Studies and see what the impacts are. We're
6 only assessing this one Project, the 68 houses.

7 And, yes, you know, if you look at what's
8 gonna happen with the Lahaina Bypass it's gonna take
9 traffic off Lahainaluna Road. People are not
10 necessarily gonna come through Kalena Street just
11 because you have your connection all the way down.

12 You have another way now to use the Lahaina
13 Bypass. If you're above where the old Kalena Street
14 was you can actually come down. There's gonna be a
15 ramp that goes to Lahaina Bypass that's gonna be
16 quicker, faster for them to get down to Keawe Street
17 than to go through the neighborhood.

18 Q If there were only 68 houses I would have
19 to agree with you. But this developer is not just
20 doing 68 houses. They're doing many houses and many
21 developments. And cumulatively wouldn't it be
22 reasonable that there'd be a study that shows how all
23 their projects will be impacting because it will be
24 coming through those, those roads. This is just a
25 consumer, you know and somebody who drives.

1 VICE CHAIR HELLER: Ms. Bolomet, please try
2 to restrict yourself to asking questions and not
3 arguing your case at this point.

4 MS. BOLOMET: Okay. I'm finished.

5 VICE CHAIR HELLER: Any redirect?

6 REDIRECT EXAMINATION

7 BY MR. GEIGER:

8 Q Just real briefly, Keith. The ultimate
9 decision on this is this Project will have no impact
10 on the traffic, correct?

11 A That is correct.

12 MR. GEIGER: Nothing further.

13 VICE CHAIR HELLER: County, anything
14 further?

15 MR. GIROUX: Nothing from the County.

16 VICE CHAIR HELLER: OP?

17 MR. YEE: Nothing.

18 VICE CHAIR HELLER: Commissioners, any
19 questions?

20 COMMISSIONER BIGA: I have one question.
21 Keith, as far as possibly looking at the Kilauea-Mauka
22 above Kalena Street, did you look at that if there's
23 going to be impact on there because there's one outlet
24 to Lahaina because of the bypass?

25 THE WITNESS: If you look as it now as it

1 is right now the only way they can come down is
2 through Lahainaluna Road. Yeah, everybody's has to
3 come out. So now with this Project you'll provide a
4 secondary roadway that can come down the backside,
5 then connect up to Keawe Street.

6 The houses just above Kalena Street can
7 either go right now and come down the proposed roadway
8 or take a left and head back out to Lahainaluna Road.
9 So the traffic will split.

10 COMMISSIONER BIGA: Yeah. But will it --
11 did you look at it making an impact if you even turned
12 right or left?

13 THE WITNESS: No. We didn't look at that.

14 COMMISSIONER BIGA: Thank you.

15 VICE CHAIR HELLER: Commissioners, anything
16 further? Commissioner McDonald.

17 COMMISSIONER McDONALD: Thank you for your
18 testimony, Mr. Niiya. I guess this is more of a
19 clarification. You noted that the TIAR would be
20 required if your trip generation exceeded a hundred or
21 more.

22 THE WITNESS: Yes.

23 COMMISSIONER McDONALD. You also referenced
24 Wilson Okamoto's study. Did their study also include
25 less than a hundred peak hour trip generations?

1 THE WITNESS: Yes. Their traffic or their
2 TIAR did take a look at the proposed development and
3 did generate less than a hundred trips.

4 COMMISSIONER McDONALD: So they actually
5 did a TIAR.

6 THE WITNESS: They did a TIAR.

7 COMMISSIONER McDONALD: Was that part of
8 the Petitioner's exhibits?

9 MR. GEIGER: It's part of Exhibit 7. It's
10 part of the Final EA which was accepted, as is their
11 report, part of the Final EA.

12 COMMISSIONER McDONALD: Great. Thank you.

13 VICE CHAIR HELLER: Commissioners, anything
14 further? Thank you. Mr. Geiger, maybe this would be
15 a good time for a short break. Do you have a next
16 witness?

17 MR. GEIGER: We have two more ready to go.

18 VICE CHAIR HELLER: Okay. Let's take a 10
19 minute break. Thank you.

20 (Recess was held 11:45)

21 VICE CHAIR HELLER: (12:07 gavel) Okay.
22 Back on the record. For planning purposes we're
23 planning to take a lunch recess at approximately
24 12:30, so let's go ahead and see how much we can get
25 done before then.

1 I understand during the break there was
2 some information about Exhibit 11. It appears that it
3 was included in a filing that was served on August 1.

4 MR. GEIGER: I understand, I've seen what
5 the Land Use Commission has. I don't have my copy
6 that I received with me here today. But my
7 recollection is my copy did not have Exhibit 11 in it.
8 I've seen Exhibit 11 which appears to be a 2-page
9 letter which I believe doesn't involve this property.
10 But I haven't had an opportunity to review it to find
11 out for sure whether it does or doesn't involve this
12 property.

13 VICE CHAIR HELLER: Okay. When you have
14 the chance to present your case you can renew a motion
15 to include Exhibit 11 if you want.

16 MR. BOLOMET: Okay.

17 VICE CHAIR HELLER: We'll defer that for
18 now since the Petitioner doesn't have it with him.

19 MR. GEIGER: That would be fine.

20 VICE CHAIR HELLER: Ready to proceed?

21 MR. GEIGER: Yes. We would call Mike Dega.

22 MICHAEL DEGA
23 being first duly sworn to tell the truth, was examined
24 and testified as follows:

25 THE WITNESS: Yes, I do.

DIRECT EXAMINATION

BY MR. GEIGER:

Q Would you state your name, sir.

A My name is Michael Dega.

Q What is your occupation?

A Archaeologist.

Q Mr. Dega, did you provide written testimony for this proceeding dated June 25, 2012?

A I did.

Q Do you have any corrections that you need to make to that written testimony?

A No, I don't.

MR. GEIGER: We would offer Mr. Dega's testimony.

VICE CHAIR HELLER: County, any objections?

MR. GIROUX: No objection.

VICE CHAIR HELLER: OP?

MR. YEE: No objection.

MS. LINCOLN: No objections.

VICE CHAIR HELLER: Ms. Bolomet?

MR. BOLOMET: None, thank you.

VICE CHAIR HELLER: Okay. The written testimony is received.

MR. GEIGER: Thank you. Also we would offer Mr. Dega as an expert in archaeologically?

1 VICE CHAIR HELLER: Any of the parties have
2 any objections?

3 MR. GIROUX: No objections.

4 MR. YEE: No objections.

5 MS. LINCOLN: No objections.

6 MS. BOLOMET: No objections.

7 VICE CHAIR HELLER: He's received as an
8 expert.

9 MR. GEIGER: Thank you.

10 Q Mr. Dega, you are with a firm that provided
11 an archaeological report in this matter, is that
12 correct?

13 A Correct.

14 Q Now, are the opinions that your firm
15 rendered, and I guess you were involved if the report
16 too, correct?

17 A Yes.

18 Q Are the opinions that are contained in the
19 report or the opinions that you -- conclusions you
20 came to as a result of the work that you did,
21 contained within your written testimony?

22 A Yes.

23 Q Again, without repeating or reading the
24 testimony would you please highlight the conclusions
25 that you reached for the Commission.

1 A Okay. We conducted an Archaeological
2 Inventory Survey of the parcel in October 2005. We
3 had two crew members and myself. I'm the principal
4 investigator so I'm responsible for the Project
5 itself.

6 We conduct pedestrian survey, that's 100
7 percent walking up and down the parcel, up and down
8 north, south, east, west. In this case we also did
9 testing, subsurface testing using a mechanical
10 backhoe.

11 We did 15 trenches average about 20 feet
12 long some down to 9 feet deep, a representative sample
13 across the parcel. We did not find any cultural
14 materials on the surface or in subsurface context. It
15 was sterile.

16 For clarification, although we did start an
17 inventory survey, this report is classified as an
18 archaeological assessment. Based on the SHPD rules at
19 the time, that's the state Historic Preservation
20 Division, if you have a negative findings
21 archaeological inventory survey, you write a document
22 called an "archaeological assessment". That's why this
23 is called an assessment.

24 Basically they trim down from doing a
25 humongous report with no findings into something

1 manageable for them to review because they're pretty
2 overburdened.

3 I believe that's it at this point. There
4 were negative findings. The SHPD did come out to the
5 site when we were doing our field work. Dr. Melissa
6 Kuykendall, she did not find anything either, and she
7 did accept our report February 2006.

8 Q Was there a subsequent review of this
9 Project by the SHPD?

10 A No.

11 Q Are you familiar with a letter that the
12 SHPD wrote in June of this year confirming the
13 previous findings?

14 A That's correct. I've seen the letter.

15 Q Okay. The ultimate opinion is that this
16 Project will not have any adverse impact on
17 archaeological resources in the area, correct?

18 A That's correct, no adverse impact because
19 there were no documented archaeological resources.

20 MR. GEIGER: Thank you. Pass the witness.

21 VICE CHAIR HELLER: County?

22 CROSS-EXAMINATION

23 BY MR. GIROUX:

24 Q Just real quick. Can you give us an
25 example of what kind of other documents outside of

1 just a field inspection do you use in order to come to
2 your conclusions?

3 A We do archival research. That's looking at
4 the Land Commission Awards. We look at old
5 testimonies. We look at compilations like Sterling
6 and Summers '98. We also look at TMK maps to see
7 where the LCA's are located. And we go through the
8 SHPD library and look at previous archaeological
9 research in the general area and more specific to the
10 area to see what the findings were.

11 Q Did you use any other resources like the
12 Bishop Museum or any other more cultural assessment?

13 A Not really. I think Kimokeo and Tao did
14 the cultural assessment so we're more archaeological
15 related. The Bishop -- well, there have good
16 collections. We have nothing to compare to the
17 collections. It's not as fruitful as going to the
18 state office, actually.

19 Q So in doing your investigation there was no
20 outside documents that would lead you to believe that
21 there were any he'iaus or any significant structures
22 on this property?

23 A That's correct.

24 VICE CHAIR HELLER: OP?

25 xx

CROSS-EXAMINATION

BY MR. YEE:

Q So if I understand your testimony correctly there was a physical walk-through the site for a surface inspection, right?

A Yes.

Q And that means that some individual at least visually inspected each foot of the Petition Area.

A Correct.

Q And in that inspection there was no he'iau that was identified, is that right?

A That's correct, no he'iau.

Q You're familiar with the term pohaku stone?

A Yes, ceremony.

Q Can you describe what it is?

A I take it to mean a ceremonial rock. It's typically placed in a ceremonial site such as a he'iau.

Q How do you distinguish, if you can explain, a pohaku stone from any other stone that might be found on a property?

A It's a good question. Typically context. Where did it come from? You have a lot of pohaku that may be nice and rounded and cylindrical but they came

1 from the river so they were river washed.

2 Say I found a he'iau in Launiupoko or in
3 Kula and that stone was placed in a corner. I know
4 the context of that stone within that site. I know it
5 is something significant. So you need context for
6 everything that you find in archaeology.

7 Q Do you know what a libation stone is?

8 A I don't. I take the word libation to mean
9 consuming, but I'm not sure.

10 Q With respect to a he'iau how do you
11 identify whether a structure -- let's backtrack. One
12 more foundational question. Would it be fair to say
13 that there are ancient Hawaiian structures that are
14 not complete and are in a state of disrepair?

15 A We've documented many.

16 Q And I've gone on some of these inspections.
17 So my question is how do you identify what is simply a
18 collection of loose stones and what is actually
19 evidence of a Hawaiian structure?

20 A There's gotta be a certain articulation of
21 the rocks. There's gotta be some alignment.
22 Typically with the he'iau or ceremonial structure you
23 get corners or different rooms off to the side. So
24 there's gotta be articulation of the stones.

25 Anything -- sometimes we find small

1 terraces or alignments with five stones a slope.
2 That's probably on old terrace. Again, that's
3 context. And also we have at least five stones. If
4 there's less than that it's pretty debatable.

5 Q Have you had an opportunity to either
6 review the testimony of Ms. Apana or to hear her oral
7 testimony today?

8 A I actually read through it as she was
9 speaking quickly.

10 Q Do you have any comments on her testimony
11 with respect to archaeology?

12 A Yeah. If you'll bear with me as I go
13 through it I tried to make some quick notes here. She
14 was talking about a burial treatment plan in 2007.
15 Our report was actually done in 2006 so it predates
16 that event. That was my first comment. Let's see.

17 She talks about -- "she" Ms. Bolomet and
18 Mr. Lee were at the heiau on the Kahoma property. I
19 just wrote a question mark and said "where"? Where is
20 the he'iau?

21 Second. On that same page, page No. 5 they
22 said, "We collected the significant spiritual material
23 found in the he'iau." I'm curious as to what they
24 collected and why. You're really not supposed to
25 collect things unless you document where they came

1 from, from an archaeological point of view.

2 Another thing they said they identified
3 some karsts next to the hale pa'ina. I haven't been
4 up there, but I'll wait until I address something else
5 in Michael Lee's testimony. I think that was all I
6 had for it. Thank you.

7 Oh -- and I'm sorry, protected the iwi that
8 were on the property. We have found no evidence for
9 iwi on the property. So I guess Ms. Bolomet will tell
10 me later.

11 Q And I take it you're reserving testimony
12 regarding Michael Lee's testimony?

13 A I had a couple points.

14 Q I'd be curious to know what those points
15 are.

16 A Okay. First, just several points. He said
17 there're archaeological sites in plain sight on the
18 parcel. Obviously we disagree with that and so does
19 the state. We didn't find any sites at all on the
20 parcel.

21 Second I know Mr. Lee's work in 'Ewa. And
22 he does a very good job over there. The karst system
23 with the underlying burial caves, iwi, ancient rock
24 systems simply doesn't apply to this parcel. It's not
25 karsitic in any form.

1 And using the 1942 map's a bit dated. The
2 karst is significant in Hawai'i, just not this parcel
3 because it doesn't apply.

4 He said there were burials in the Project
5 Area. Again, we found no evidence for such. And
6 there's evidence for a he'iau on the parcel and we've
7 found no evidence as such. So those are my only
8 comments for Mr. Lee.

9 Q Can you explain further why you believe --
10 let's take another step back. Although it's true the
11 Commission has heard testimony in prior cases
12 regarding the karst caves, could you just give a short
13 summary of what is a karst cave and why that's
14 important from an archaeological standpoint?

15 A Karsitic environments are basically
16 limestone environments near a coast where you have
17 reef formation and oceanic fluctuation. It means
18 "limestone".

19 A very good example, as Mr. Lee knows, is
20 the 'Ewa Plain on O'ahu. It's very flat. As you fly
21 in you fly over the kiawe and you can see the white of
22 the limestone and coral exposed.

23 I've worked in karst environments in
24 Thailand, South Cambodia that are 200 feet high. I've
25 worked in the 'Ewa Plain where they're actually on the

1 surface and go below.

2 They do contain sinkholes which we know in
3 pre-history contained burials on occasion. They also
4 contained extinct bird bones. So they're very
5 interesting for archaeologists and other natural
6 scientists. That's why we study them in the 'Ewa
7 Plain.

8 They do have small networks, almost
9 cave-like, that go underground. You can see -- it's a
10 soluble substance. So when they are formed and hit by
11 water they do create many caves here and there,
12 probably more than, even more than even the basaltic
13 lava tubes. So they are significant for archaeology
14 and natural history.

15 The parcel we're talking about now it's not
16 karsitic at all. I mean it's 2,000 feet from the
17 shoreline. It's not even close. The rocks on this
18 parcel are igneous rocks, metamorphic.

19 The soil is derived from the igneous rocks
20 that break down from the parent igneous rock. So it
21 is a significant distinction between those two
22 environments.

23 Q Does the existence of the Kahoma Stream
24 Channel have any impact as to the likelihood as to
25 whether it's a karsitic environment? That is would

1 the digging of a channel have exposed a karsitic
2 environment?

3 A No. I don't think that area is karsitic at
4 all even from the south side through the flood plain
5 and across. This would be more of a coastal
6 phenomenon in this area, I think.

7 Q I was actually referring to perhaps the
8 fact that there is a channel built. And the failure
9 to find karsitic environment would be evidence that
10 the other areas next to it are also not.

11 A I would agree with that, yeah. They'd have
12 a whole new engineering difficulty if that channel
13 were built through a karsitic environment. And I
14 don't think they did.

15 MR. YEE: That's all the questions I have.
16 Thank you.

17 VICE CHAIR HELLER: Ms. Lincoln?

18 MS. LINCOLN: No questions.

19 VICE CHAIR HELLER: Ms. Bolomet?

20 MS. BOLOMET: I have questions.

21 CROSS-EXAMINATION

22 BY MS. BOLOMET

23 Q First of all, in your reference table on
24 Page 26 I believe it's Appendix D is your
25 archaeological assessment. You reference all these

1 materials. Are you saying these are the materials you
2 looked at in order to make your, put together your
3 assessment?

4 A If they were referred to they were looked
5 at, yes.

6 Q Okay.

7 A Not wholly but at least in parts.

8 Q All right. And you said that you mostly
9 get your information from SHPD, S-H-P-D.

10 A S-H-P-D. We get our background in previous
11 archaeological work from there because there's a lot
12 of firms in Hawai'i. We don't necessarily send each
13 other a report every time we write one. So that's
14 sort of the common area where we can go and research
15 everyone's work.

16 Q Okay. There were -- I went to SHPD too.
17 'Cause after we found the he'iau I wanted to know more
18 about it. So I looked at legends and I tried to look
19 at your references to see what you were looking at.

20 One such stood out to me was the fifth one
21 down on Page 26. It's Connolly, RD 1974 Phase I
22 Archaeological Survey of Kahoma Stream Flood Control
23 Project Area Lahaina, Maui Bishop Museum -- BP Bishop
24 Museum.

25 So when I looked at that -- where is that

1 one? Since you said you looked at it, on Page 5, it's
2 a small report. It's report 100774, for when you get
3 it from the SHPD. And in there they have the Kahoma
4 Stream terrace system complex. And in the complex
5 they have around 16 and 17 very specific terracing and
6 rock formation.

7 This is the rock formation that we saw.
8 It's on the surface in plain sight. It stands at
9 least, I don't know, 15 feet tall on some of the
10 areas, I think this is what you guys referred to as a
11 push pile? But, in fact, it's a he'iau. It's near
12 the Baldwin area of -- the Baldwin grant 1891.

13 So here's 37 terraces in a study that
14 you've referenced that you say you've looked at. I
15 got it from SHPD. And it's showing 37 terraces of
16 which it points out the he'iau.

17 Do you have any comments on that, why you
18 didn't include that in your, in your findings?

19 A I'm just curious where is the he'iau?

20 Q Do you know what a he'iau looks like?

21 A Yes, ma'am. Maybe you can use the Project
22 map and show me where it is.

23 Q Okay. Are you familiar with the Pele
24 he'iau? Here's also on Page 27 the second from the
25 bottom "Jensen, P.M. 1989." I got this also from SHPD

1 yesterday. It's M231 is the study. And I can bring
2 it over to you. Is it okay for me to?

3 VICE CHAIR HELLER: Yes.

4 Q (By Ms. Bolomet): (approaching witness.
5 off mic:) Here's the first study. Here's the second
6 study. This right here, this right here that's the
7 he'iau all right along here. (off mic)

8 A Where is the Project Area?

9 Q The Project area is all right here.
10 Actually when you look at the old maps you'll see --

11 MR. GEIGER: Chair, I hate to interrupt.
12 But the record is going to be very unclear as to what
13 the witness is being asked to look at. And if we
14 could have a question and answer it'd be helpful.

15 VICE CHAIR HELLER: Sure.

16 MR. GEIGER: Also we have not identified
17 what documents it is that the witness is being
18 provided specifically. And they are not part -- they
19 are not offered as exhibits. They're not part of the
20 record.

21 VICE CHAIR HELLER: Ms. Bolomet, first
22 would you please identify the document that you've put
23 in front of the witness.

24 MR. BOLOMET: The document is it's
25 Exhibit 5 in Clare Apana's public testimony, but we

1 got it from the Petitioner's Appendix D, No. 26 in
2 their reference. That's where we looked up all these,
3 got the information to go looking for these things.
4 So we just went off of what they are saying they built
5 their Petition off of.

6 VICE CHAIR HELLER: I'm just asking you to
7 identify the document. Does it have a title?

8 MR. BOLOMET: Archaeological Inventory
9 Survey, Lahaina Master Plan Project site Land of
10 Waikuli, Lahaina District, Island of Maui. And it's
11 by P.H.R. and it's done on October 1989, Exhibit 5 and
12 of Clare Apana. And in the study on Page 24 --

13 VICE CHAIR HELLER: Okay. I just want the
14 exhibit identified first.

15 MS. BOLOMET: Okay.

16 MR. GEIGER: And for the record just so
17 it's clear, we -- at least the Petitioner, was not
18 provided any copies of Ms. Apana's or the exhibits of
19 Ms. Apana referenced. We did receive her written
20 testimony, but I don't believe we received the
21 exhibits.

22 VICE CHAIR HELLER: And for the record
23 we're not admitting that document at this point.
24 We're just allowing it to be shown to the witness for
25 purposes of asking the question.

1 MS. BOLOMET: Correct.

2 VICE CHAIR HELLER: And, Ms. Bolomet, let
3 me remind you what you need to do at this point is
4 ask questions, not engage in argument or discussion
5 with the witness.

6 MS. BOLOMET: Okay.

7 VICE CHAIR HELLER: So is there a question?

8 Q (By Ms. Bolomet): So my question first is
9 you have it listed in your reference. Why did you not
10 include the two rock formations and the pages of the
11 studies that you were referencing that shows in 1974
12 Bishop Museum recognized and identified the hei'au and
13 they identified the rock terraces all in this area?
14 You have it in your reference sheet. I've just worked
15 off of what you supplied.

16 A I think for Connolly was more of a general
17 study at the Kahoma proposed flood control project.
18 If you look at Page 17 in the report it says, "Kahoma
19 complex state site 1203 located on the bank of the
20 stream 1.7 miles inland, originally recorded..." and
21 they talk about that site complex which you showed me
22 a map of. It's on Page 17.

23 Q Would you call this a push-pile, these
24 formations of rocks?

25 A I'm not sure -- can I ask her a question?

1 I still don't know where the he'iau is in relationship
2 to the Project.

3 Q If you look on figure 7 site 1203 page 24.
4 That one.

5 A Yeah, I know. No, my question --

6 Q That's where the he'iau is. And if you
7 look at the Baldwin map grant 1891. It's apana No. 8
8 I believe.

9 A I'm sorry. Can you show me physically?

10 Q Sure. Is that okay?

11 VICE CHAIR HELLER: Yes.

12 THE WITNESS: It helps a lot, thank you.

13 Q (By Ms. Bolomet) (off mic) Somewhere right
14 around here it is apana 1891. I mean Baldwin grant
15 1891 and apana No. 8. In the footnotes that they
16 include in their --

17 MR. GEIGER: Is there a question?

18 VICE CHAIR HELLER: Ms. Bolomet --

19 MS. BOLOMET: I'm explaining where it's at.

20 VICE CHAIR HELLER: If you can point to a
21 spot on the map to show --

22 MS. BOLOMET: This doesn't show. I can
23 show on the other maps where it still has the LCA's
24 but they have taken out all of the LCA's.

25 VICE CHAIR HELLER: If you have a map that

1 you can for that purpose or and you can point to a
2 spot on the map that's fine. But this is not the time
3 for arguing your case.

4 MS. BOLOMET: (off mic) It's right here.
5 There's a circle right around there. Around here.
6 (approaching map). The map that I pointed to is an
7 1884 map. So it shows all the pre-existing
8 structures. But then in 1974...okay.

9 VICE CHAIR HELLER: We've established what
10 the question is. Does the witness have an answer?

11 THE WITNESS: I'm not sure what the
12 question is, but again I'm not sure that is in the
13 Project Area. And, second, we did not see that in the
14 Project Area when we conducted our survey. The rocks
15 that we saw looked like large push-piles based on the
16 size of the rock which is medium to humongous size,
17 almost small Volkswagens.

18 When we looked at the rocks in 2005 as well
19 as last week, you can see the bulldozer marks on a lot
20 of the rocks that they were pushed. Then there were
21 other rocks that were well rounded from probably that
22 came out of the stream when they were excavating for
23 the flood channel. But we didn't see anything that
24 articulated or aligned in the Project Area.

25 Q (By Ms. Bolomet) (Off mic) If you look at

1 Page 24, figure 7, site 1203 it shows a tree. The
2 tree is still there. The rocks are still around the
3 tree. Now, we found this after we identified--

4 VICE CHAIR HELLER: Ms. Bolomet, please ask
5 a question. If you have a question ask a question.

6 Q (By Ms. Bolomet) Have you ever been to a
7 Pele memorial he'iau?

8 A Maybe you can describe it for me.

9 Q There's a circle, there's -- the stones
10 kind of wrap around in an area. And there's a feature
11 stone which in this case is libation stone. It's very
12 large. And had a bulldozer pushed it over I doubt
13 that the rock that fit perfectly on top would have
14 been in the correct position.

15 At the last hearings I had that rock. It
16 couldn't even stand up. It needs to be nested in.
17 It's a very specific stone. And it's sitting right
18 there. But you have to know what it looks like. Have
19 you been raised by Hawaiian people?

20 A If you had any stones that articulated we
21 would have noticed it. We look for things that are --
22 we look at three rocks in a line across huge
23 landscapes. We almost considered those sites. We
24 analyzed three rocks. If this had more than three
25 rocks we would have seen it, we would have documented

1 it.

2 Q And the libation -- have you seen the
3 libation stone before?

4 A No.

5 Q Okay. So in libation stones there are
6 grooves in the stone. When one fits on top of the
7 other the grooves line up. That's not a coincidence
8 by nature. Would you agree?

9 A Maybe it's not. I haven't seen the stone.
10 You might be right.

11 Q So I'm telling you there's a he'iau there.
12 My question is you are building, you are putting your
13 reputation on the line and saying there's absolutely
14 no archaeology finds here. And when I walk onto the
15 area I see the stream beds.

16 Did you identify any of the auwais that
17 were there that was carrying the water from the old
18 Kahoma Stream? Because I didn't see it here.

19 A To answer the first part. My reputation,
20 two members of my field staff, one who works for the
21 state and Dr. Melissa Kuykendall's reputation is all
22 on the line. And we're all in agreement.

23 Second. When we excavated the 15 trenches
24 across this parcel we did see old evidence of
25 streambeds but there was nothing formalized about the

1 streambeds that would indicate that it could have been
2 an auwai.

3 Again, the parcel's been very, very
4 modified through time. There's been a ton of fill put
5 on top of it. So some of the features that you see
6 aren't going to be perfect like you imagine in your
7 mind.

8 Archaeologists are empiricists. What we
9 see is what we document. If I see a pencil on the
10 table that's an empirical observation I see a pencil.
11 If I look at the table and I don't see a pencil I
12 can't document it. So that's what we go on.

13 Q Would you agree that you can only document
14 what you know?

15 A We document what we observe.

16 Q But you have to know what you're looking
17 for in order to observe it.

18 A Oh, of course.

19 Q So it could be standing right in front of
20 you, a cultural stone, and if you're not familiar with
21 it would you be able to document it?

22 A Yes, especially based on context. If I saw
23 a stone like you described with 2 grooves in it we
24 would like at it, absolutely.

25 Q But it's not in your, in your petition, is

1 that correct?

2 A What, the stone?

3 Q The stone, the he'iau.

4 A No. Because we did not observe it. We
5 only document what we observe.

6 Q Okay. Okay. I'd like to move to Appendix
7 A which is, I believe, still part of Appendix D of
8 your AIS Page 31. It says, "LCA data." But we're
9 actually going to go to Page 32. Did you put these
10 LCAs into this document?

11 A Actually I believe Jenny Picket put 'em
12 into the document. But, again, I'm responsible for
13 them. So she put them in, I'm responsible. So that's
14 why.

15 Q So why could you have a Makila, ahupua'a
16 Makila LCA in this area, in Kahoma?

17 A Well, if you -- let me look here. There
18 should be an explanation. Page 13-14. She used the
19 government map from 1884 to get her LCA information.
20 I believe she got it from Waihona 'Aina. So she put
21 in what came up for this area, came out Makila. She
22 still printed it. Plus, you know, it provides a nice
23 general settlement pattern for the area.

24 Q That's not the area. And the reason this
25 caught my eye is because these are my family members

1 in Makila and it's our land. So I know this isn't
2 anywhere near it. On page 33 --

3 VICE CHAIR HELLER: Ms. Bolomet, please,
4 ask questions of the witness. If you don't have a
5 question --

6 MS. BOLOMET: I do have a question.

7 VICE CHAIR HELLER: -- then we'll move on.

8 Q (By Ms. Bolomet): So, because you have
9 these different, these LCAs not from this area, would
10 this not invalidate this AIS since it was done on land
11 that's not in the Kahoma area?

12 A Well, I think the Makila one probably is
13 but the other LCAs that are listed here *are* in the
14 Project Area. I mean she listed four of them.

15 Q Four out of 11.

16 A Yeah. Well, I mean one or two are in the
17 Project Area even though if you want to argue about
18 Makila that's fine. But the other ones are in here.

19 Q This is a legal proceeding. You're asking
20 for my land to be rezoned. And you are not basing it
21 on land that's in Kahoma. It's land in Makila.

22 And if you take a look at your map, 1884,
23 that you just referred to, you can go over there and
24 see that Makila is not anywhere near this.

25 VICE CHAIR HELLER: Ms. Bolomet, that's

1 argument. That's not a question.

2 Q (By Ms. Bolomet): Okay. So if you go to
3 page -- we're looking at the Baldwin notes, the
4 Baldwin grant notes for No. 7 and No. 8. The Baldwin
5 grant does start pointing out the different walls that
6 are up there, a big stone. It talks about a lo'i,
7 some taro. Do you see that?

8 A Yeah.

9 Q So why didn't you --

10 A I think that's -- that's right. The area
11 had scattered households with taro production. They
12 used the stream for gathering, fishing or
13 horticulture. No burials that I could see in the
14 LCAs, yeah.

15 Q Okay. So why didn't you -- you see it in
16 here. Why didn't you note it in your descriptions
17 here? You're basically saying there's nothing here,
18 but in your own notes it shows that there are.

19 A I'm not following you. I mean there's
20 evidence from the LCA that people used to live there,
21 yes. And they worked the land and gathered from the
22 land. Archaeologically we don't have any empirical
23 structures that show us.

24 Q There's actually in the Baldwin notes 1881
25 it talks about a rock wall, talks about several rock

1 walls. It talks about lo'is. That's all part of
2 archaeology. It's not talking about people who lived
3 there except when they're referring to the lots.

4 MR. GEIGER: Is there a question?

5 VICE CHAIR HELLER: Ms. Bolomet...

6 MS. BOLOMET: I asked: Why was this not
7 included? I just want to know why this should not be
8 considered an incomplete AIS. From what I've seen
9 they have taken the Makila AIS, changed a few things
10 but not enough to even show that it's for this land.

11 MR. GEIGER: I'm going to object.

12 VICE CHAIR HELLER: Ms. Bolomet, do you
13 have a specific question to ask the witness at this
14 time?

15 Q (By Ms. Bolomet): Would you consider this
16 a complete AIS based on the fact that you have a lot
17 of things missing and you have incomplete information?

18 A I disagree. It's a complete AIS. And we
19 don't have things missing. It's an archaeological
20 report. It's not a cultural impact assessment. So I
21 disagree with you, respectfully.

22 Q So is a he'iau considered part of an
23 archaeological find?

24 A Yes. If a he'iau exists we would have
25 documented it.

1 Q Is a taro patch considered -- a lo'i
2 considered an archaeological find?

3 A Documented thousands of lo'i terraces and
4 auwai across the state, yes.

5 Q Are streams considered an archaeological
6 find?

7 A Natural streams?

8 Q Natural streams.

9 A If they are modified, yes.

10 Q Was this modified? Was the stream, the old
11 Kahoma Stream modified?

12 A In the Project Area it was a flood control.
13 I mean obviously it's been modified into a flood
14 control project.

15 Q So the current -- you're saying the old
16 Kahoma Stream is there and just modified.

17 A I haven't seen the stream. All I see is
18 the flood control ditch.

19 Q Okay. But in your maps, in your references
20 they all speak about the stream being there, is that
21 correct?

22 A It was there at one point. And then that's
23 well documented I think.

24 Q Wouldn't that be an archaeological feature?

25 A A natural -- no, it's a natural feature.

1 Unless it's been -- once it's been modified in some
2 way, did they put check dams? Did they divert it as
3 in an auwai? Things like that, yes. Is there
4 evidence on the parcel for it? No. I didn't see any.

5 Q So you didn't see any.

6 A No.

7 Q I'd be glad to take you there to show you.
8 I'm going to refer now to Mr. Lee's map. That's the
9 Exhibit 17. And we sent this out to everybody with
10 the link so you can blow it up because it's very hard
11 to see. You can see what the original map looks like
12 there. We sent out in 17 the blown-up version of this
13 particular area.

14 And along the area where there's the Kahoma
15 Stream -- do you need to have a map?

16 A Yeah, if you don't mind. Do you have an
17 extra?

18 VICE CHAIR HELLER: First, Ms. Bolomet,
19 just in terms of timing, are you close to being
20 completed?

21 MS. BOLOMET: Yes, I am.

22 VICE CHAIR HELLER: Okay. Let's try to
23 finish this segment then we'll take our break.

24 MS. BOLOMET: Okay.

25 VICE CHAIR HELLER: For the record the

1 witness is being shown a copy of your Exhibit 17, is
2 that correct?

3 MS. BOLOMET: That's correct.

4 THE WITNESS: Thank you.

5 MS. BOLOMET: The zoomed-in copy for the
6 area.

7 VICE CHAIR HELLER: Go ahead with your
8 question.

9 Q (By Mr. Bolomet): So in the legend, which
10 you can't see there, but I'll be glad to pass a copy,
11 the area where the Kahoma Project is at is labeled
12 with a PA. Now in the area that's a PA, which is the
13 dotted area, that according to the USGS hydrologists
14 is areas where karsts can exist. And you'll see below
15 that is RA.

16 VICE CHAIR HELLER: Ms. Bolomet, are you
17 coming to a question?

18 MS. BOLOMET: Yes. But he has to be
19 familiar with this first so he can answer it.

20 MR. GEIGER: I'm going to object. We need
21 to have a question and answer for the record. We
22 don't seem to have that.

23 VICE CHAIR HELLER: Ms. Bolomet, please
24 proceed with the question.

25 Q (By Ms. Bolomet): Are you prepared -- can

1 I ask you a question now?

2 A Yes. You just did, yes.

3 Q You said that there's no possible way a
4 karst can exist here. But can you -- do you see the
5 RA and PA which is in the area? Would you agree with
6 the hydrologist for the state of Hawai'i that this
7 are areas where karsts can exist?

8 A Based on this map?

9 Q This is the map that they gave us.

10 A This is a map from 1942.

11 Q Yes.

12 A I've looked at maps from 1942 to 2012 and
13 not one person says it's a karst. In fact Foot, et
14 al, who did the definitive study 1972, they called
15 this very, very rocky, silty clay. And when we dug
16 that's exactly what we found. I would disagree that
17 this is a karsitic environment.

18 Q Will you please read the second line, the
19 second sentence?

20 A I'm sorry, where?

21 Q Under PA where it has the dotted legend?

22 A "Near the heads of valleys it grades into
23 coarse angular talis and landslide deposits."

24 Q "Friable conglomerates usually forming..."?

25 VICE CHAIR HELLER: Ms. Bolomet, reading

1 documents into the record is not helpful. Do you have
2 a question?

3 MS. BOLOMET: Yes. I would like to know
4 why he is, his opinion is more valid than the
5 hydrologist, the head hydrologist for the state of
6 Hawai'i who says this is karst land.

7 Q What kind of credentials do you have that
8 supercede the hydrologist?

9 A Well, I think, I think in 1942 I think he
10 did a great job. I mean they did archaeology in 1910
11 and did a great job and it was very general surveys.

12 Our methods and things have been improved
13 as well as our coverage through time. We can narrow
14 down localized areas a lot more instead of, say,
15 "Walker surveying around the coast and just hitting
16 he'iau," we get everything now along the coast.
17 Geologically it's the same way.

18 I was looking at references because after I
19 read Mr. Lee's testimony I thought: That's odd. It's
20 an odd place for a karst.

21 So I started looking through some other
22 geology books and things. And this map is the only
23 thing that says "karst" up through 2012 in modern
24 soils surveys. And when I looked at the soil, I mean
25 as an archaeologist you take soil classes, et cetera,

1 et cetera, botany, and I didn't see any karsts even
2 close to it.

3 Maybe under the Cannery Mall possibly
4 because it's in the coastal floodplain. But his
5 parcel goes up. It's elevated up on the igneous rock.

6 Q Well, unfortunately I don't have the person
7 here that can testify to the fact that he saw a karst
8 and iwi was removed from it. But hopefully we can get
9 him here. So.

10 VICE CHAIR HELLER: Does that complete your
11 questioning of the witness?

12 MS. BOLOMET: Can I just ask one more?

13 VICE CHAIR HELLER: If it's a question.

14 MS. BOLOMET: It's a question. It's
15 regarding Exhibit 2. These are Public Works maps.
16 It's what Clare Apana submitted. But they're Public
17 Works maps that I believe that you should all have
18 when you're digging and stuff.

19 VICE CHAIR HELLER: Is there a specific
20 exhibit that you're referencing?

21 MS. BOLOMET: Clare Apana's Exhibit 2.

22 VICE CHAIR HELLER: That's not your Exhibit
23 2.

24 MS. BOLOMET: It's not my exhibit. It's
25 her exhibit.

1 VICE CHAIR HELLER: That's an attachment to
2 Ms. Apana's public testimony.

3 MS. BOLOMET: Yes. Which shows the
4 different gradation.

5 VICE CHAIR HELLER: Do you have a specific
6 question?

7 MR. GEIGER: We have not seen Exhibit 2 so
8 I don't know what's being referenced.

9 MS. BOLOMET: We were told we only had to
10 give one set. We do have extra sets if that helps
11 everybody to see.

12 VICE CHAIR HELLER: Can you just state the
13 question.

14 Q (By Ms. Bolomet): The question is: Are
15 you familiar with the Public Works maps that when the
16 Kahoma land drained was put in?

17 MR. GEIGER: May I look over the witness's
18 shoulder?

19 VICE CHAIR HELLER: Yes.

20 THE WITNESS: I haven't seen the map
21 before, this one.

22 VICE CHAIR HELLER: His answer is he's not
23 familiar with that document.

24 MS. BOLOMET: Okay. Then I guess -- okay.
25 I guess I can't go much further because he's just not

1 familiar with his own materials.

2 MR. GEIGER: I'm going to object to the
3 sidebar argument. If you have questions --

4 MS. BOLOMET: No more questions, thank you.

5 MR. GEIGER: I just have a very short
6 rebuttal.

7 VICE CHAIR HELLER: Okay. Let's try to do
8 it quickly.

9 MR. GEIGER: I will. Thank you.

10 REDIRECT EXAMINATION

11 BY MR. GEIGER:

12 Q First of all, you've mentioned a couple
13 times igneous and limestone. Basalt is an igneous
14 rock, correct?

15 A Yes.

16 Q And is that the same as limestone?

17 A No.

18 Q And limestone is sedimentary rock, correct?

19 A Yes.

20 Q One's hard, one's soft?

21 A One's softer than the other, yes.

22 Q Limestone's softer than basalt, correct?

23 A Yes.

24 Q And you've found no evidence of any
25 limestone in the Project Area, correct?

1 A That's correct.

2 Q But you did find evidence of basalt.

3 A Yeah. The igneous rocks' everywhere. You
4 can see it.

5 Q Second thing, you were asked to look at a
6 -- and I think you still have it in front of you --
7 Phase I Archaeological Survey Kahoma Stream Flood
8 Control Project Area, Lahaina, Maui. Do you have that
9 document in front of you, dated 11 October 1974?

10 A The Connolly study? This one?

11 Q Yes, the Connolly study.

12 A Yes.

13 Q Okay. And you were asked questions about
14 having a terrace area that existed within that survey,
15 correct?

16 A Yes.

17 Q If you look at figure 1, which is on Page 3
18 of the survey, does that show where the area was where
19 the terrace was found?

20 A Can you show me the map you're looking at?
21 I'm sorry.

22 Q Sure. If I may.

23 VICE CHAIR HELLER: Yes.

24 Q (By Mr. Geiger): Figure 1, page 2 (showing
25 witness). (off mic)

1 THE WITNESS: I don't have that.

2 MR. GEIGER: It appears that the witness
3 was not provided a full copy of the Connolly report.
4 If I could show the witness a full copy.

5 VICE CHAIR HELLER: Okay.

6 Q (By Mr. Geiger): (off mic) I'm going to
7 have you look at what is figure 1 on page 2 a full set
8 of the Connolly report. Does that show where the
9 terraces still exist that they found?

10 A It shows a general area of a site MAD 5-7.

11 Q Then there's an area up above the top,
12 correct?

13 A Yeah, MAD 5-9.

14 Q If you look through the report you'll see
15 that MAD 5-9 references a terraced area that they
16 found, correct?

17 A Correct.

18 Q Where is that terraced area in relationship
19 to the Project site?

20 A I believe it's much more inland, upland.

21 Q That's because it's above the confluence of
22 the joining of the two branches of the Kahoma Stream,
23 correct?

24 A That's what it looks like, correct.

25 Q That's above where the Lahaina Bypass is

1 presently being constructed, right?

2 A Correct.

3 Q That doesn't have anything to do with the
4 Project site, correct?

5 A Yes.

6 Q And there's nothing within that report that
7 shows that there was any archaeological findings in
8 the area of the flood control channel where the
9 Project site is, correct?

10 A That's correct. Or we would have said so.

11 Q You were asked a number of questions about
12 why you didn't include some information. What was
13 your understanding of the use of this property from
14 the 1880's until almost 2000?

15 A Sugarcane use, mostly sugarcane
16 cultivation.

17 Q What is involved in sugarcane cultivation?

18 A I'm not an agronomist. I imagine it takes
19 a lot of land, a lot of soil, a lot of water.

20 Q Bad question. From an archaeological
21 standpoint what happens to the land?

22 A It's massively modified.

23 Q So if things were there they would have
24 been -- you would not have expected to have seen
25 auwai's if it was cultivated.

1 A Yeah. We have surveyed a lot of sugarcane
2 fields between here and Kahului. And the findings are
3 really minimal. Almost everything's related to the
4 sugarcane period itself.

5 Q You testified that you dug, I think, 16 or
6 15 pits.

7 A Fifteen.

8 Q Fifteen pits throughout this Project site,
9 correct?

10 A Yeah, 15 long trenches.

11 Q And in some of those trenches did you get
12 down to undisturbed dirt, dirt that had not, soils
13 that had not been impacted by farming?

14 A Yeah. Actually a couple we did. And we
15 actually got down to bedrock, saprolitic soil which is
16 there's nothing below it. It's a hard rocky point.

17 Q So that would have been undisturbed from
18 the 1800s to present.

19 A Yeah. Clearly, I don't think the sugarcane
20 would have reached that far down.

21 Q Did you find any archaeological features or
22 any archaeological information in that undisturbed
23 area?

24 A We did not.

25 Q Was that surprising?

1 A A little bit. You know based on the
2 background research we did, you know, review of some
3 of the LCA's we thought we might find something
4 because there were obviously scattered house lots and
5 some farming and things up there.

6 So you would sometimes expect to find
7 these. Sugarcane played a part in that. And all the
8 other lot of modifications through time played a role
9 in it I'm sure.

10 Q And you founds no documented heiau's, no
11 documented lo'i, no documented auwai's, basically
12 nothing?

13 A Nothing.

14 MR. GEIGER: Nothing further.

15 VICE CHAIR HELLER: County, anything
16 further?

17 MR. GIROUX: No further questions.

18 VICE CHAIR HELLER: OP?

19 MR. YEE: Nothing further.

20 VICE CHAIR HELLER: Ms. Lincoln?

21 MS. LINCOLN: No.

22 VICE CHAIR HELLER: Ms. Bolomet, any
23 questions?

24 xx

25 xx

1 RE-CROSS EXAMINATION

2 BY MS. BOLOMET:

3 Q Yes, I do. On Figure 2 of the report that
4 Mr. Geiger was just referring to, the Connolly Report,
5 figure 2, can you please read what that says for
6 everybody?

7 VICE CHAIR HELLER: Ms. Bolomet, reading
8 the document into the record is not appropriate. Is
9 there a question?

10 MR. BOLOMET: Mr. Geiger just said that
11 this was in another area. This specifically points
12 out that it was right above the railroad.

13 VICE CHAIR HELLER: If you have a question
14 ask it in the form of a question, please.

15 Q (By Ms. Bolomet): Okay. Since this says
16 that it's above the railroad would you agree that this
17 was right above the railroad 70 meters?

18 A I'm sorry. You're looking at Page 2 of the
19 report?

20 Q I'm looking at Page 5.

21 A Page 5.

22 Q The upper right corner figure 2.

23 A You guys are snowing me with paperwork
24 here. Page 5 figure 2.

25 Q Yes.

1 A Says "Railroad bridge foundation's about 70
2 meters southwest of tip of arrow off map."

3 Q And in the lower left side of the paper
4 that is, there's an arrow. Do you agree?

5 A I might be blind. I don't see an arrow.

6 Q It's a very tiny arrow. It says "grinding
7 stone 115" --

8 A I see, yeah I see "grinding stone" on the
9 very bottom.

10 Q And there's a arrow.

11 A Mm-hmm.

12 Q So would you agree that that's the arrow
13 that they're referring to?

14 A The arrow actually points to a telephone
15 pole. The other arrow points to a grinding stone.
16 Then there's one arrow above it that points to a
17 cliff.

18 Q So what is the 70 meters southwest of the
19 arrow off the map referring to on this? This is from
20 your reference report.

21 A This is just a copy from Connolly. No. I
22 did not type in "70 meters southwest of tip of arrow."
23 That's Connolly's words. I don't know -- I don't know
24 what arrow he's referring to.

25 Q I believe it's the arrow down in the

1 corner.

2 VICE CHAIR HELLER: Ms. Bolomet, a
3 question?

4 Q (By Ms. Bolomet): So would you still have
5 to say that this land is not in the area of the Kahoma
6 Stream that this Project site is proposing?

7 A Well, based on -- yeah, based on this map
8 and also, as I cited earlier, page -- was it 50? --
9 I'm sorry, our background research were by Spears
10 and -- Berger and Spears who said that this site 1204
11 is so far inland and would be above this location, the
12 Project Area location.

13 So I think based on this map and what we
14 have in here I think it would be more upland from the
15 current location.

16 Q Would you mind looking at that 1884 map and
17 putting this right next to it and then telling us what
18 the, what the -- how close the Baldwin grant 1891 is
19 to it?

20 A This may take me a few moments.

21 MS. BOLOMET: Should I point it out so it
22 goes faster?

23 VICE CHAIR HELLER: Why don't we go ahead
24 at this point and take our lunch break.

25 MS. BOLOMET: Okay.

1 VICE CHAIR HELLER: Maybe you can use that
2 time to figure out if you have any further questions
3 you want to ask as questions.

4 MS. BOLOMET: Okay.

5 VICE CHAIR HELLER: Let's try to hold this
6 to 30 minutes so we'll reconvene at 1:20.

7 (Lunch recess was held.)

8 VICE CHAIR HELLER: (1:30) Okay. Back on
9 the record. Ms. Bolomet, I think you were about to
10 complete your questioning of the witness?

11 MS. BOLOMET: (off mic) Can I ask a couple
12 more cause I think there were questions?

13 VICE CHAIR HELLER: If you have questions
14 this is the time to complete your questions.

15 CONTINUED CROSS-EXAMINATION

16 BY MS. BOLOMET:

17 Q Mr. Dega, have you ever had to modify any
18 of your AIS's in the past?

19 A Ever? Yes.

20 Q And how many times would you have had to do
21 that?

22 A Oh, I don't know. I've done over 500 or so
23 AIS's. Maybe a handful, maybe 10 percent?

24 Q Ten percent, so 50? And --

25 A Sorry?

1 Q You said 10 percent?

2 A Maybe 10. I don't know.

3 Q Ten or 10 percent?

4 A Maybe 10 percent. I guess. I'm sorry.

5 Thank you.

6 Q And why would you have to change your AIS,
7 for what reasons?

8 A If new information is available or if the
9 state says -- the state has a check list of everything
10 that the report minimally requires. And if for some
11 reason a portion of it is not in there they will check
12 the box and send back the report and say, "Oh, by the
13 way, for instance, the map instead of showing just the
14 west profile we wanted the north profile."

15 So we just switch the figures, send it back
16 and it's accepted. They're usually pretty minimal
17 comments if we do revisions.

18 Q Can you tell us about the most recent
19 modifications you had to do on some of your AIS
20 reports?

21 A Let me think. I did one the other day.
22 They wanted a figure 1 which is the USGS map. They
23 thought it was just a little bit too small. So I
24 expanded it an inch on each side.

25 Q Isn't it true that for Lucienne Denaie you

1 left out information?

2 A No. In fact -- I don't know why that's
3 relevant to Kahoma. But Lucienne got a copy with a
4 lot of missing pages in it. So we re-sent the full
5 copy to her. So hopefully we'll get some comments
6 from her and move forward.

7 Q Her comment was you were missing major
8 information.

9 A The comment was --

10 VICE CHAIR HELLER: Ms. Bolomet, excuse
11 me -- Ms. Bolomet please try to refrain from comments
12 and arguments and just ask questions of the witness.

13 MS. BOLOMET: Okay.

14 Q Regarding the 1942 Sterns map you said that
15 there was sediment rock in the area. Can you tell us
16 where you usually find sediment rock in what kind of
17 terrain?

18 A Sediment rock?

19 Q Sedimentary rock.

20 A Well, sedimentary rock, sand stone you can
21 find it in basalt dikes and things like that. That's
22 a good example.

23 Q Would you normally find it next to rivers
24 or streams?

25 A You can. Sometimes not. In Hawai'i you

1 find a lot of igneous rock because it's basaltic.

2 Q Would you agree that you said you did your
3 report in 2007?

4 A 2005.

5 Q 2005. In 1990 and a little bit before the
6 Kahoma channel was put in there was major work done
7 there. Would you -- and then there's a lot of dumping
8 going on there.

9 So would you say that the terrain that,
10 from the Kahoma canal where they put the dirt over
11 there, would have changed if you went down so many
12 feet? You wouldn't have reached the actual
13 archaeological sites?

14 A No. I think the terrain did change. There
15 was massive modification from dumping of the ditch.
16 But we did get down to some natural layers and also
17 the bedrock. And there's nothing beyond bedrock. So,
18 yes. In a lot of the cases it was fill.

19 There was an immense amount of fill out
20 there. But in trenches we did get down to natural
21 strata, very stoney, silty clay that was overlying
22 saprolitic rock. That's bedrock.

23 Q Okay. And in your 15 trenches, you did 15
24 trenches within 16 acres, 16. acres?

25 A Right.

1 Q So would you say that you could actually
2 miss something in between the trenches?

3 A Miss something as in what?

4 Q An archaeological significant site.

5 A Well, archaeology deals with eco-finality.
6 That means that we all take the oath a long time ago
7 that you'll never know a hundred percent of the time
8 unless you dig every square centimeter of an entire
9 parcel. So is it possible? Certainly. Is it likely?
10 No.

11 Q Okay. Would you be interested in changing
12 your report if we could point out to you these
13 archaeological sites that we found and substantiated
14 with the reports you referred to?

15 A Yes, absolutely.

16 Q Okay. All right. And do you normally -- a
17 lot of material that I showed came out of your
18 reference and you weren't familiar with it, is that
19 correct?

20 A I was familiar with the references.

21 Q So you saw all the rock walls and terraces
22 that were in the pictures?

23 A Did I go up and see all these sites?

24 Q No. In the reports, the Connolly report.

25 A Oh, yes. I have seen this map once before,

1 this one, but not the one you showed me. It's over
2 here somewhere.

3 Q Okay. So the two reports. So you have
4 included it in the reference or somebody in your
5 company included it in the reference. Do you normally
6 put your name to materials that you don't read and are
7 completely familiar with?

8 A No. I read it. I'm responsible for it
9 because I'm the principal investigator. Even if, say,
10 somebody else, who has an M.A. or Ph.D. in our company
11 writes the report, they need a principal investigator
12 to read through it and make sure it meets the
13 standards of SHPD. That's where I fall. That's why
14 I'm sitting here. I'm responsible.

15 Q Okay. And how many cultural practitioners
16 do you usually work with when you go to
17 archaeological -- looking for significant
18 archaeological sites in Hawai'i?

19 A It depends. Depends if we're doing a
20 cultural impact assessment or not.

21 Q So who is --

22 A In archaeological terms we usually talk
23 with the SHPD because they issue a letter that says,
24 "This parcel requires an inventory survey level
25 investigation. Go talk to, A, B and C. Go talk to

1 them."

2 If I'm doing a project out in 'Ewa Beach
3 they're gonna say, "Go talk to Michael Lee." And we
4 would. We'd say, "Hey, here's our parcel. What can
5 you tell us about it? Are there sites out there?"

6 Q Okay. So who is the cultural practitioner
7 you worked with on this particular site?

8 A We worked with, I believe it was just the
9 state because Kimokea guys were taking care of the
10 cultural site. So we did the archaeological.

11 Q So you didn't have any -- he said he's an
12 expert and not a practitioner. I'm asking you which
13 cultural practitioner did you walk with on the site
14 and work with to put together your report?

15 A To my knowledge we did not walk with any
16 kupuna on the site when we were doing our work.

17 Q Okay. So you agree that because you didn't
18 have a cultural practitioner it's possible that you
19 could not identify significant sites that you might
20 confuse with as push piles?

21 A No. I disagree because archaeologically I
22 know the difference between a push pile and a site.
23 That's what we study and that's what we learn. That's
24 how we're taught.

25 Q Okay. I look forward to walking with you

1 on the site.

2 A Likewise.

3 MS. BOLOMET: I'm done.

4 VICE CHAIR HELLER: Anything further?

5 MR. GEIGER: I believe that the question
6 pending before lunch was if Mr. Dega could show the
7 terrace site on the 1884 map. I think that the
8 Commission probably should have that.

9 VICE CHAIR HELLER: If you can answer.

10 THE WITNESS: Yeah. You want me to go up?

11 VICE CHAIR HELLER: Bear in mind that
12 pointing at the map will not show up on the record.
13 So you have to describe what you're pointing to. Take
14 the microphone.

15 THE WITNESS: Oh, yes. I think the site
16 she's referring to would be up here near the
17 confluence of the streams which is much upland again
18 of where the current Project Area is. It's outside
19 the current Project Area. It's up here, above, I'm
20 sorry, above the current Project Area not within.

21 VICE CHAIR HELLER: Anything further?

22 MR. GEIGER: Nothing further.

23 VICE CHAIR HELLER: Commissioners, any
24 questions? (Witness dropping microphone. Laughter)

25 THE WITNESS: It's why we never get invited

1 to social gatherings. (laughter)

2 COMMISSIONER BIGA: Mr. Dega, just a few, I
3 guess, projects that you have to do archaeological
4 work on that has significance to Hawaiian cultures or
5 iwi of that matter. What other projects did you do?

6 THE WITNESS: Some other example?

7 COMMISSIONER BIGA: Yeah, some examples.

8 THE WITNESS: I lead the crew in about five
9 years of work in the Department of Hawaiian Home Lands
10 up in Kula. Keokea and Waihuli, we documented well
11 over 300 different sites and preserved 46 acres of
12 burial sites and he'iau on one and 53 acres on the
13 Waihuli site.

14 We worked directly with the Hawaiian
15 homestead folks who were inheriting the land or taking
16 over the land in the future. That's one example.

17 COMMISSIONER BIGA: Anything else on maybe
18 the east side or in Lahaina besides the one that we're
19 working on right now?

20 THE WITNESS: We did a lot of work over the
21 years in Launiupoko. We worked with Keomoko Kahu and
22 his family in preserving quite a few sites in the
23 area. We also walked the landscape with him, he and
24 his children to, again, another example to understand
25 the area. There's an historic preserve there. We

1 documented several hundred sites including some
2 burials, did a burial treatment plans on.

3 In Lahaina, Front Street we've done a lot
4 of archaeological monitoring along Front Street and
5 along the highway for sewer or electrical what have
6 you type of structural projects.

7 COMMISSIONER BIGA: Okay. Thanks very
8 much.

9 THE WITNESS: Thank you.

10 VICE CHAIR HELLER: Commissioners, anything
11 else? Thank you. Mr. Geiger, your next witness.

12 MR. GEIGER: We're going to call Charles
13 Biegel.

14 CHARLES BIEGEL
15 being first duly sworn to tell the truth, was examined
16 and testified as follows:

17 THE WITNESS: I do.

18 VICE CHAIR HELLER: Please go ahead.

19 MR. GEIGER: Chair, just as a housekeeping
20 matter, since there was reference to the Connolly
21 report and the testimonies of the record is clear, we
22 will be offering as our next exhibit in order which I
23 believe will be 39, the complete copy of the Connolly
24 report. And I will have it at the next session of the
25 Commission.

1 VICE CHAIR HELLER: So you're not offering
2 it at this moment.

3 MR. GEIGER: I'd offer it if we had
4 sufficient copies for everyone, but I think it would
5 be better to wait until we have sufficient copies
6 before I offer it.

7 VICE CHAIR HELLER: Fine.

8 DIRECT EXAMINATION

9 BY MR. GEIGER:

10 Q Would you state your name, sir.

11 A Charles Biegel.

12 Q Mr. Biegel, what is your occupation?

13 A Soils engineer.

14 Q Did you provide written testimony in this
15 matter?

16 A Yes, I did.

17 Q Is that dated June 21, 2012? If you need
18 to look there's a book in front of you that talks
19 about direct testimonies. It's your written direct
20 testimony, not your report. If I may? (approaching
21 witness).

22 A Yes. Thank you. I did.

23 Q Do you have any corrections?

24 A No.

25 Q Or modifications to your written testimony?

1 A No.

2 Q Did you also provide a soils report in this
3 matter that's dated May of 2010?

4 A Yes.

5 MR. GEIGER: We would offer the testimony
6 of Charles Biegel.

7 VICE CHAIR HELLER: Let's take the
8 testimony first. Any objections?

9 MR. GIROUX: County, no objections.

10 MR. YEE: No objection.

11 MS. LINCOLN: No objection.

12 MS. BOLOMET: No objection.

13 VICE CHAIR HELLER: Okay. Written
14 testimony is received.

15 MR. GEIGER: We'd also offer Mr. Biegel as
16 a soils engineer expert.

17 VICE CHAIR HELLER: Any objections?

18 MR. GIROUX: County, no objection.

19 MR. YEE: No objection.

20 MS. LINCOLN: No objections.

21 MS. BOLOMET: No objections.

22 MR. GEIGER: And for the record, Mr.
23 Biegel's report is A part of Petitioner's Exhibit 7
24 and that's already in evidence.

25 Q Mr. Biegel, are the opinions that you

1 reached based upon work that you've done contained in
2 your written direct testimony and in your report?

3 A Yes.

4 Q Without reading your testimony could you
5 please tell the Commission, highlight for the
6 Commission, the opinions or conclusions you reached
7 with regard to the soils at the Project site?

8 A In general granular soils are on the site
9 in the upper zone. Underneath that is basalt rock.

10 Q So that we know, what is a granular soil?

11 A Sands and gravels.

12 Q I believe your report references sands,
13 gravels, cobbles, and boulders. Those are just
14 different sized rock, correct?

15 A That's correct. Cobbles are 3-inches to
16 12-inches in diameter. Gravels are quarter inch to
17 3-inches.

18 Q And boulders are larger than cobbles and
19 obviously sand is smaller than gravel, correct?

20 A Boulders are plus 12 inches, yes.

21 Q You also mentioned you had a basalt is what
22 type of rock?

23 A That's an igneous rock.

24 Q That's different from limestone, correct?

25 A Yes.

1 Q Limestone is a sedimentary rock, correct?

2 A Yes.

3 Q Would you expect to find -- well, first of
4 all, in your work did you find any limestone? Did you
5 encounter any limestone on the Project site?

6 A No.

7 Q Did you encounter any lava tubes on the
8 Project site?

9 A No.

10 Q Did you encounter any groundwater on the
11 Project site?

12 A No.

13 Q Did you encounter any underground caverns
14 or similar structures on the Project site?

15 A No.

16 Q And do you recall how many test pits or
17 borings that you took on the Project site?

18 A Nineteen test pits and 3 test borings.

19 Q I think its's -- okay. Three test borings
20 and they were scattered throughout the site, correct?

21 A Yes.

22 Q And in those test borings did you run into
23 any groundwater?

24 A No.

25 MR. GEIGER: Nothing further. We'll pass

1 the witness.

2 VICE CHAIR HELLER: County?

3 MR. GIROUX: We have no cross.

4 VICE CHAIR HELLER: OP?

5 MR. YEE: No questions.

6 VICE CHAIR HELLER: Ms. Lincoln?

7 MS. LINCOLN: Just a few questions.

8 CROSS-EXAMINATION

9 BY MS. LINCOLN:

10 Q Were you compensated financially for your
11 soil assessment by the Petitioner?

12 A Yes.

13 Q To your knowledge are there any laws
14 against building on a stream bed?

15 A Not to my knowledge.

16 Q Has the unpermitted dumping across the
17 property by the county altered your findings?

18 MR. GEIGER: I'm going to object because it
19 assumes facts not in evidence as to whether there was
20 one dumping, two, whether it was permitted or not.

21 VICE CHAIR HELLER: I'm going to allow the
22 witness to answer the question. If you don't know one
23 way or the other you can just say so.

24 A I'm not familiar with what you're talking
25 about.

1 Q (By Ms. Lincoln): Can I explain what I'm
2 talking about? For example, like in November 2011 if
3 that's already on the record we already said the
4 county put soil at the bottom of the property. Have
5 you tested that soil since 2011--

6 A Who tested?

7 Q -- from November 2011 have you tested the
8 soil at the bottom portion of this property?

9 A I have not.

10 Q Okay. Then there had been other dumpings
11 of the county. So when you're testing the soil you're
12 not sure if you're testing soil that was, had been
13 there or was brought in there.

14 So when you did your testing you tested the
15 soil not knowing was that previously there or did
16 somebody bring it in?

17 A The focus of our report, what we test for,
18 is engineering properties of the soil. Is it loose,
19 is it dense, soft, hard? So we can design the future
20 structures on the property. That's our focus. So
21 whether it was loose naturally or loose by manmade,
22 irrelevant to us.

23 Q Then in your report you said: How can you
24 say it's not good for cultivation when sugarcane was
25 grown there?

1 A Can you refer me to what you're talking
2 about there, what page?

3 Q Oh, no. I'd have to look it up. You don't
4 recall saying that?

5 A I'm not an agricultural person so I doubt
6 that I said something like that. I may have said -- I
7 may have referred to a USDA or something like that.

8 Q Okay. So I'll ask the soils person that.
9 Did you have a certified archaeologist on site when
10 you dug your test holes?

11 A I don't recall.

12 Q Doesn't this land require to have an
13 archaeologist when you're digging holes because of
14 the -- I thought any time you would dig something in
15 our area that you had to have an archaeologist on site
16 when you dig holes.

17 A We do a lot of different projects. Most of
18 the time there's no archaeologist. I don't recall.
19 This Project was a few years ago, 2 years. I don't
20 recall. I can look it up when I get back to my
21 office.

22 Q Like a cultural monitor? Did you have
23 something like that?

24 A I don't recall.

25 Q Okay. You did -- you're the one who

1 actually dug the holes?

2 A I did most of them, yes.

3 Q Okay. And when you dug the holes did you
4 have somebody with you that's an archaeologist or a
5 culturist?

6 A I don't recall.

7 Q Okay. In my neighborhood, which I live
8 right next to this property, if I want to build an
9 ohana and to be able to build a trench I have to have
10 an archaeologist on site. You would have had to have
11 an archaeologist on site.

12 VICE CHAIR HELLER: Ms. Lincoln, please
13 remember this is the time for questioning. If you
14 have a question ask a question.

15 Q (By Ms. Lincoln): What are the
16 consequences for not having an archaeologist on site
17 when it is required?

18 A I don't know.

19 MS. LINCOLN: That's it. Thank you.

20 VICE CHAIR HELLER: Ms. Bolomet?

21 CROSS-EXAMINATION

22 BY MS. BOLOMET:

23 Q Yes. Are you familiar with kiawe trees?

24 A Yes.

25 Q Can you tell me how deep the roots go?

1 A Seems like just -- I'm not an expert on
2 that, but when we dig and we see the roots, a couple
3 feet.

4 Q Okay. And do you notice -- can you tell me
5 why the kiawe trees on the Kahoma property tend to be
6 green when everything else is dead?

7 A I don't know.

8 Q Okay. Would it surprise you to know that
9 Keawe trees' roots can go up to 90 feet or more and
10 they seek out water?

11 A I'm not a tree person. I'm a soils
12 engineer. I don't know.

13 Q Would you be surprised if there was a
14 spring on the property?

15 A Surprised? Yes. Nobody told me about a
16 spring. So, yeah, I'd be surprised, I guess.

17 Q And so by looking -- you work with soils
18 and when you look around at the topography do you look
19 for clues as to where water might be when you're --
20 before you do your soil test?

21 A What our general goal is to find a profile
22 of the subsurface conditions on the site so we kinda
23 blanket one end to the other, left to right, front to
24 back, exploration locations to find the subsurface
25 conditions out there. That's what we try to do.

1 Q So you said earlier that your purpose of
2 doing this soil engineering was for buildings, to put
3 buildings on it, is that correct?

4 A Yes.

5 Q So you understand -- do you understand that
6 this is an agricultural property?

7 A No, I don't know. We were retained -- our
8 mission, was as I stated.

9 Q Was to put in for engineering, finding
10 soils that can put buildings on it rather than
11 agriculture practices?

12 A Nobody mentioned about planting anything
13 on the property to me, no. It was about building,
14 yes.

15 Q All right. And you talk about granular
16 soil or sand. Where would that sand come from?

17 A Could be naturally occurring. Could have
18 been placed there previously.

19 Q How is it naturally occurring? How does
20 sand become sand from all that rock?

21 A Weathering process possibly. It's kind of
22 a geology question.

23 Q Soil doesn't deal with geology?

24 A My specialty is engineering properties of
25 the soil. Geology, I know a little bit but it's not

1 my thing.

2 Q Don't you need to know the geology in order
3 to understand if you need to put caissons in to firm
4 up the foundation or if you could just pour, say, a
5 concrete slab on the soil?

6 A That's the purpose of the soils
7 investigation to find out those engineering properties
8 to make that determination.

9 Q Okay. So your whole purpose of doing this
10 was not about agriculture. It was solely for building
11 homes on there in the future. That's what you were
12 hired for.

13 A Yes, to develop it into a subdivision, yes.

14 Q Okay. So you can't tell us where that sand
15 came from.

16 A Not with 100 percent certainty, no.

17 Q Would you agree that sand doesn't happen
18 overnight? The big rocks don't deteriorate into sand
19 overnight?

20 A Yes.

21 Q About what time period would it take for
22 those big rocks that you ran into to turn into sand?

23 A I don't know.

24 Q A year? Two years? A hundred years?

25 A I'm not sure.

1 Q Would you agree that when you don't have
2 water on a property or on soil, it changes the soil
3 and the composition of the soil?

4 A You *don't* have water?

5 Q When you don't have water. So when you
6 have spring, the soil consistency would be different
7 than when there's no water whatsoever. Would you
8 agree that there's a difference?

9 A The moisture content of the soil would
10 change.

11 Q Would it be higher or lower?

12 A Higher.

13 Q If there was water there?

14 A Yes.

15 Q So the compacting of the soil could just be
16 because the spring was diverted and all the water that
17 used to run through there is gone?

18 A Is there a question there?

19 Q Yes.

20 A Sorry.

21 Q Would the soil change if there was -- there
22 used to be a stream there? If you look on the old
23 maps there were streams and there were auwais and
24 there were taro patches. So would you say that the
25 soil consistency and ability to build on soil that was

1 exposed to a lot of water, would that change, the
2 ability, you know, the engineering findings? So would
3 you have to put in a different foundation if there was
4 more moisture in the soil?

5 A The answer to that question is it depends
6 on the consistency of the soil, if there's more
7 moisture in the soil.

8 Q So if there was -- if there was moisture in
9 the soil would you say a kiawe tree would be green?
10 It's getting water, right? So a kiawe tree on the
11 property, the kiawe trees are green. Would you say
12 it's benefiting from water?

13 A Versus a brown kiawe tree? I believe the
14 green would have more water, but I'm not a tree
15 person.

16 Q Versus all the dead grass and all the other
17 stuff around there. There's a lot of plants on the
18 property, and it looks like it's completely deserted
19 and dead but the kiawe trees are green.

20 What I'm asking is: Those trees have to be
21 getting water from somewhere. You're saying you
22 didn't find any water. I'm saying that in order for
23 trees to be green you have to have a source of water.
24 Would you agree with that?

25 A Yes.

1 Q Okay. So you're not familiar with the
2 requirement by SHPD that you need to have a cultural
3 monitor on the site when you're digging and there's
4 been cultural findings on the site?

5 MR. GEIGER: I'm going to object because
6 that would be inconsistent with the evidence
7 concerning SHPD. So it would be an improper question.

8 VICE CHAIR HELLER: Ms. Bolomet, can you
9 just state it in the form of a question and whether or
10 not he knows the rules.

11 Q (By Ms. Bolomet): Do you know the SHPD
12 rules for having a cultural monitor on site when
13 you're digging?

14 A When we're retained to do work on a piece
15 of property the owner informs us if it's -- most of
16 the time it's not -- but if there's a
17 archaeological -- if it's an archaeologist required
18 he'll tell me, "Line it up and be there."

19 Q So that's not your responsibility is what
20 you're saying.

21 A That's correct.

22 Q Okay. But do you know the difference
23 between a cultural monitor and an archaeologist?

24 A Archaeologists? I guess I don't, no.

25 Q Okay. All right. Thank you.

1 VICE CHAIR HELLER: Anything further?

2 MR. GEIGER: Just a couple follow up.

3 REDIRECT EXAMINATION

4 BY MR. GEIGER:

5 Q Mr. Biegel, if you run into fill on a
6 property do you note that in your report?

7 A If we're for sure about it. Again, we're
8 focused mainly on the consistency of the soil, soft
9 hard, loose, dense.

10 Q So, for example, in your report in this
11 case, if you noted in two of the test pits that it was
12 fill then that would have been some certainty there
13 was fill in those test pits.

14 A Yes.

15 Q Otherwise if you don't note "fill" it would
16 indicate that that was not fill in your opinion?

17 A Yes.

18 Q Now, you were asked some questions about
19 sand. Sand is just a size of a stone, correct?

20 A Yes.

21 Q Again, the sand would be of this basalt or
22 igneous stone as opposed to something else, correct?

23 A Yes.

24 Q You indicated you would be surprised that
25 there would have been a spring on the property and no

1 one asked you why. So I'm going to ask you why would
2 you have been surprised that a spring may have existed
3 on the property?

4 A We did not find any free water in any of
5 our explorations. That's the main reason why.

6 Q And generally if there are springs or
7 there's groundwater you'd run into it in your
8 explorations?

9 A Well, in this case we hit solid rock fairly
10 shallow. I don't know. I don't know anything about
11 the springs on the property.

12 MR. GEIGER: Nothing further.

13 VICE CHAIR HELLER: County?

14 MR. GIROUX: Nothing from the County.

15 VICE CHAIR HELLER: OP?

16 MR. YEE: Nothing.

17 COMMISSIONER HELLER: Ms. Lincoln?

18 MS. LINCOLN: Nothing.

19 VICE CHAIR HELLER: Ms. Bolomet?

20 MS. BOLOMET: Yes, I have a question.

21 RECROSS-EXAMINATION

22 BY MS. BOLOMET:

23 Q Are you familiar with any of the Public
24 Works maps? When you're gonna dig they have pipes and
25 drains that are running there. Did the people that

1 hired you produce any kind of maps showing how deep
2 you can dig and where you would hit these pipes that
3 were put in when the Kahoma Channel was put in?

4 MR. GEIGER: I appreciate there's a lot of
5 latitude here, but that wasn't anywhere close to any
6 sort of the questions that had been asked on the
7 second grow around. So I object.

8 VICE CHAIR HELLER: Ms. Bolomet, this
9 should just be follow-up on topics that were raised on
10 redirect examination. Do you have anything that's a
11 follow up to the initial questions?

12 MS. BOLOMET: This will go to the spring
13 that's on the property.

14 VICE CHAIR HELLER: Okay. I'll allow the
15 witness to answer the question.

16 THE WITNESS: Before we engage in any,
17 doing any dig on any property it's in our contract to
18 the owner of that property let us know if there's any
19 underground pipes. I don't recall back in 2010 if he
20 so stated. If he told us where they were we would
21 avoid them.

22 Q (By Mr. Bolomet) Would you be surprised if
23 you saw a map by the Public Works Maui County that
24 shows a drain, shows existing irrigation, shows
25 abandoned irrigation? And the original abandoned

1 irrigation goes directly to a spring?

2 A I don't know. I don't know.

3 Q And Clare Apana's Exhibit 2 can I show
4 that?

5 VICE CHAIR HELLER: He's testified that he
6 doesn't know.

7 MS. BOLOMET: Okay. All right. Then I'm
8 done.

9 VICE CHAIR HELLER: Commissioners, any
10 questions? Commissioner McDonald.

11 COMMISSIONER McDONALD: Just a quick
12 question. How deep were your borings?

13 THE WITNESS: We did 19 test pits that were
14 between 2 and 8 feet below grade. Three test points
15 were 13.75 to 17.75 feet below grade.

16 COMMISSIONER McDONALD: Okay. Thank you.

17 VICE CHAIR HELLER: Anything else?

18 MR. GEIGER: Just for the Commissioners'
19 information all of this information concerning the
20 depth of the pits and what they ran into is contained
21 in the boring logs and the test pit logs which were
22 part of Exhibit 7.

23 VICE CHAIR HELLER: Okay. Thank you.
24 Mr. Geiger, do you have any further witnesses?

25 MR. GEIGER: Yes, we do. And thank you,

1 Mr. Biegel. You can be excused I assume. We will
2 call Robert Hodby who is flora and fauna.

3 ROBERT HODBY

4 being first duly sworn to tell the truth, was examined
5 and testified as follows:

6 THE WITNESS: I do.

7 DIRECT EXAMINATION

8 BY MR. GEIGER:

9 Q Would you state your name, sir?

10 A Robert Hodby.

11 Q Mr. Hodby, what do you do?

12 A I'm an environmental consultant. I do
13 flora and fauna surveys and inventories, which is
14 plants and animals.

15 Q Did you provide written direct testimony in
16 this matter dated June 25, 2012?

17 A I did.

18 Q And did you also provide a flora and fauna
19 report for this Project?

20 A I did.

21 Q For the Commission's benefit the flora and
22 fauna report has already been admitted as part of
23 Exhibit 7 dated August 2005. Do you have any
24 corrections to your written testimony, Mr. Hodby?

25 A No.

1 MR. GEIGER: We would offer Mr. Hodby's
2 written direct testimony.

3 VICE CHAIR HELLER: Any objections?

4 MR. GIROUX: No objection.

5 MR. YEE: No objection.

6 MS. LINCOLN: No objection.

7 MS. BOLOMET: No objection.

8 VICE CHAIR HELLER: Written testimony is
9 admitted.

10 MR. GEIGER: We would also offer Mr. Hodby
11 as an expert on the flora and fauna evaluations of
12 this property.

13 VICE CHAIR HELLER: Any objection?

14 MR. GIROUX: County, no objections.

15 MR. YEE: No objection.

16 MS. LINCOLN: No objection.

17 MS. BOLOMET: No objection.

18 VICE CHAIR HELLER: So noted.

19 MR. GEIGER: Thank you.

20 Q Mr. Hodby, are the observations you made
21 and the opinions you reached on your flora and fauna
22 survey contained in your report?

23 A They are.

24 Q And are the conclusions also contained in
25 your written direct testimony?

1 A They are.

2 Q Again, without reading the written direct
3 testimony, which is in evidence, we'd like you to just
4 summarize for the Commission what findings you had
5 concerning, first, the flora and then we'll talk about
6 the fauna. Okay?

7 A Okay. The plants that were growing on this
8 property are species that came in following sugarcane
9 agriculture when it was abandoned, what came up is a
10 result of that. There are maybe a few things around
11 the edges that might have been just beyond the edges
12 of the fields.

13 But anyway it's mostly dryland species that
14 are able to handle that climate and the soils and the
15 moisture there.

16 There were basically three species that
17 were fairly common on the property. One is buffle
18 grass which is dryland grass, koa haole and spiny
19 amaranth were three species that were all non-native
20 species.

21 We did find two native species in small
22 numbers. One is the 'ilima. The other is the
23 uhauloa. They're both small subshrubs that are quite
24 wide spread all the way through Hawai'i, in fact on
25 other Pacific islands as well. So they're really not

1 rare in any sense of the word.

2 Q So your findings were that there were no
3 plants out there that were -- would warrant
4 protection, is that correct?

5 A That's correct.

6 Q Now let's talk about the animals that you
7 categorized, cataloged and observed. Could you tell
8 the Commission about that.

9 A Well, there was some native birds -- I mean
10 non-native birds. And then there was some mammals,
11 small mammals, cats, dogs the like. We didn't find
12 any native mammals. The only one of which would have
13 been the Hawaiian bat. We did a survey for the
14 Hawaiian bat in the evening and did not see or detect
15 any. Basically everything was non-native.

16 Q What about insects? Did you check for that
17 too?

18 A We checked for those species that were
19 endangered. There's a moth called the Blackburn's
20 Sphinx Moth that has been placed on the endangered
21 list. It's very specific in its host plant. And we
22 found one very small tree tobacco plant which is a
23 non-native plant that these moths have used for their
24 breeding on caterpillars. And there was nothing on
25 this very small plant.

1 Q So as of the time you did your survey there
2 were no plants -- excuse me, there were no animals, no
3 insects that would require protection, is that
4 correct?

5 A That's correct.

6 Q Okay. Did you have an opportunity to go to
7 out to the property recently?

8 A Yes, I did about a month ago.

9 Q Did you observe anything during that visit
10 either animals, plants, insects which should require
11 protection?

12 A There was no change in any of that.

13 Q Was the tree tobacco plant still in
14 existence?

15 A It was not. It apparently died at some
16 point from these dry years we've had. I didn't see
17 it.

18 Q Am I correct that your methodology that you
19 used is contained in your written testimony?

20 A That's correct.

21 Q And, then, finally, the conclusion as I
22 understand, is there's nothing on the property that
23 would mandate that it be protected from a flora or
24 fauna basis, is that correct?

25 A Correct.

1 MR. GEIGER: Pass the witness.

2 VICE CHAIR HELLER: County?

3 MR. GIROUX: Thank you.

4 CROSS-EXAMINATION

5 BY MR. GIROUX:

6 Q Real quickly. You mentioned as far as the
7 flora there was a couple of, would you say native or
8 is it native plants?

9 A Yes. We kind of separate native plants
10 into a couple categories. We have those that are
11 indigenous in Hawai'i which means they occur here as
12 well as in other parts of the world.

13 And the endemic species which are things
14 that only occur in Hawai'i or restricted to this area.
15 And the two species were both indigenous plants.

16 Q Again, "indigenous" means that you can find
17 them in other places?

18 A The ilima, the uhaloa occur in several
19 Pacific Islands. In fact the uhaloa is found in the
20 tropics worldwide.

21 Q Were you able to look at the properties
22 mauka or mountain side of this property to see if
23 those species were growing in those areas also?

24 A Well, I didn't survey the areas outside of
25 this Project Area.

1 Q Would you see those areas as the climate
2 being consistent where those plants would also be able
3 to grow?

4 A Yes.

5 Q And would you see these species as being
6 used medicinally in any way?

7 A The uhaloa in particular has medicinal
8 properties.

9 Q Do you know what that's for, I mean what
10 type of medicinal property?

11 A The bark of the lower stems and roots was
12 chewed for sore throat.

13 Q And the other plants?

14 A I do not know of any use for that.

15 MR. GIROUX: Thank you.

16 VICE CHAIR HELLER: OP?

17 CROSS-EXAMINATION

18 BY MR. YEE:

19 Q Is it your understanding that there'll be
20 down-shielding of lights in the Petition Area as
21 recommended by the U.S. Fish and Wildlife?

22 A That has become one of their standard
23 recommendations or requirements.

24 Q Is it your understanding that the lights in
25 this Petition Area would be down-shielded?

1 A I cannot speak to that.

2 Q Would you be concurring with the U.S. Fish
3 and Wildlife's recommendation for down-shielding?

4 A I don't see any reason why not. It's not
5 that big a deal to do shielding of the more powerful
6 lights like streetlights and things like that.

7 Q So you would concur with the
8 recommendation.

9 A Yes.

10 Q And what's the significance for wildlife
11 from down-shielding?

12 A Well, there are seabirds that nest high in
13 the mountains, in the West Maui Mountains, that fly to
14 and from the ocean during the breeding season which is
15 during the late spring to fall months. And the young
16 birds in particular are susceptible when they're
17 fledging from their burrows to be confused by bright
18 lights.

19 That's why the Fish and Wildlife has made
20 this a requirement. It does not involve lights that
21 have been there prior to this. But anyway, yeah.

22 Q So it reduces the impacts to wildlife at
23 minimal costs, is that correct?

24 A Yes.

25 MR. YEE: Nothing further.

1 VICE CHAIR HELLER: Ms. Lincoln.

2 CROSS-EXAMINATION

3 BY MS. LINCOLN:

4 Q Just a few questions. Did the Petitioner
5 pay you for your flora and fauna assessment?

6 A Yes.

7 Q You stated that the tree tobacco grows --
8 am I saying that right -- tree tobacco, okay, grows on
9 this property. And, so, and it did. And you're
10 saying -- I'm asking if it could be propagated could
11 it encourage the endangered moth to come back? Is
12 that confusing?

13 I guess I'm just saying it grew there once.
14 If propagated, could it grow there again and possible
15 encourage the endangered moth to come back?

16 A Sure. The plants have a toxin in them that
17 the moths or the caterpillars ingest that makes them
18 inedible to predators. So that's why they're
19 host-specific on this one species. The more tree
20 tobacco there is around, the more moths are going to
21 be.

22 It is a non-native plant. It's a weed in
23 most people's eyes. It's becoming more and more
24 common on Maui. The moths are actually benefiting
25 from that Maui-wide.

1 Q Okay. If not abused but neglected like the
2 land has been, could this land propagate rare and
3 common native plants like it used to?

4 A It would take a lot of cultivation to do
5 so, but yes.

6 Q A Hawaiian owl resided and hunted on this
7 land until late 2009. So what would have to be done
8 to the property to encourage them to return?

9 A First of all, there's two species of owls
10 in Hawai'i. We have the Hawaiian pueo. We also have
11 the barn owl which is a more recent introduction that
12 was brought in for rat control, I guess, in the early
13 days in the '40s and '50s.

14 And the barn owl, as the name suggests, is
15 very familiar with human habitation. It seems to do
16 fine in and around rural communities. Whereas the
17 native pueo is found -- there's quite a bit of them up
18 in the middle elevations on Maui, also including the
19 West Maui Mountains. But they usually don't come down
20 very much into the lowlands except maybe in the
21 evening when people aren't out and about.

22 Q So could something be done to this land
23 because they used to live on this land? Could there
24 be something that's done to it to encourage them to
25 come back to their habitat?

1 A That would be pretty difficult. These
2 birds nest on the ground in grassy areas. The area's
3 already a grassy area. But these animals move around
4 with availability of rodents in particular. That's
5 where they feed.

6 Q Are you aware that giant frigate birds and
7 Nene and many other birds fly over and use this
8 property?

9 A Yes.

10 Q Do you think that the close proximity of
11 this land to schools, including the University of
12 Hawai'i's Maui College Annex, could be a viable
13 educational resource for the study of flora and fauna?

14 A That's pretty much a stretch. I don't see
15 it as being particularly useful.

16 Q Okay. So you don't think that with the
17 college being there and all the local schools here
18 that we have kind of like a natural open space
19 sanctuary; that if we brought in native plants and
20 tried to encourage some of the endangered birds to
21 come in that that would not be beneficial to the
22 educational system?

23 A I think this particular area is not an
24 ideal area for that sort of educational activity.

25 Q Okay. Are you aware that the University of

1 Hawai'i is expanding -- the Maui College is expanding
2 their Hawaiiana classes and they're also starting a
3 community garden on the Kahului side of the island?

4 Could this land be viable for the annex in
5 Lahaina because there's a college annex right across
6 the highway from this property?

7 A I don't know.

8 Q Are people interested in ecology tours?

9 A Ecology tours?

10 Q Yeah, like go bird watching, or going to
11 the botanical gardens.

12 A Those are certainly attractive activities
13 for visitors.

14 Q Okay. So are ecology and green tours a
15 viable industry in a tourist area?

16 A They're a viable industry on the island. I
17 don't know about that particular area.

18 Q Okay. Thank you.

19 VICE CHAIR HELLER: Ms. Bolomet?

20 CROSS-EXAMINATION

21 BY MS. BOLOMET:

22 Q Are you aware that the lands in this
23 proposed area used to belong to ali'i nui, the royal
24 family?

25 A Yeah.

1 Q And are you also aware that many of the
2 foreigners that traveled over here in the 1700s and
3 1800s would trade plants, foreign plants, and give it
4 as gifts to King Kamehameha in return for sandalwood
5 and other items we sell?

6 A Plants were exchanged. I think the
7 sandalwood was more for money, but there was a lot of
8 plants that were introduced during that period, yeah.

9 Q So would it be a far stretch to think that
10 there are so many non-indigenous plants on this land
11 because they were gifts to the ali'i nui that used to
12 live here?

13 A The species that were brought in as gifts
14 were primarily food plants and fruits and vegetables
15 and things that were edible. The plants that occur on
16 this property are what I would term primarily as
17 agricultural weeds or accidental introductions.

18 Q I'm going to look at your list of plants.
19 And can you tell me what the castor bean was used for?
20 Why it was introduced?

21 A I don't know why that was introduced. In
22 some places they make, or used to make castor oil out
23 of it, out of the seeds. But I've never heard of that
24 practice being done here in Hawai'i.

25 Q And was castor oil used medicinally?

1 A Yes.

2 Q And would you be surprised to know that koa
3 haole was used to feed cattle?

4 A Yes, I know that, yeah.

5 Q And in the notes, the boundary notes that
6 were included in here for Baldwin, they describe
7 cattle. Would you say -- cattle grazing -- would you
8 say that the koa haole was put there to feed the
9 cattle so it was there on purpose?

10 A It's hard to say. The koa haole has spread
11 all over the lowlands in Hawai'i in a lot of places
12 that people probably didn't take it on purpose.

13 Q Okay. And the koa haole, are you aware
14 that it's a nitrogen fixer that heals the soil?

15 A Yes.

16 Q And so if this was introduced by Hawaiians,
17 who are very industrious and worked with nature, would
18 it be a far stretch to say that haole koa was put in
19 because it could feed their animals and it could heal
20 their soils since they were farmers?

21 A I know it was important as an animal feed.
22 I don't know that they knew about the nitrogen fixing
23 part at that point.

24 Q Did you know that it's, haole koa is a
25 legume and can be eaten in salads when it's young by

1 us?

2 A It can. Koa haole is a plant that causes
3 hair loss. I know if horses eat it in excess they
4 lose their manes and tails.

5 Q And at which stage do they eat it? What
6 stage of growth will that happen?

7 A In the leaves, the young leaf growth.

8 Q And tamarind. Can you tell us about the
9 healing properties of tamarind?

10 A I do not know about that.

11 Q Would it surprise you to know that it helps
12 with numerous conditions that even today we can make a
13 juice out of this and heal circulation, heal sore
14 throats, reduce fevers with the tamarind?

15 A I know it's been popular to add in cooking
16 for a long time. I didn't know about medicinal
17 properties.

18 Q Okay. On here you say that it's rare. But
19 on the property, even if you go on there today there's
20 quite a few for something being rare. Would you say
21 that those were probably one of the gifts that was
22 given to the Kamehameha clan?

23 A The tamarind was definitely one that was
24 brought in as that type of thing. Um, ah, yeah.

25 Q Okay. You put down here also that you have

1 'ilima. Would it surprise you to know that 'ilima,
2 when you eat the flower petals, it actually takes
3 poisons and toxins out of your body?

4 A I did not know that. Just as a point of
5 information, the abundance on the lists whether it was
6 abundant, common, uncommon or rare is on site whether
7 it was that. It doesn't necessarily translate to
8 islandwide or, you know, anything broader than just on
9 the property.

10 It was an inventory of what's on the
11 property and if somethin' was rare on the property it
12 was so listed.

13 Q Well, then, so, if things were only for
14 this property and unusual to other places other than
15 this property, wouldn't it be fair to say that a lot
16 of these non-indigenous plants were gifts to the ali'i
17 nui that used to live there, and they put it into
18 their gardens?

19 A There's very little on this property that
20 would be in that category.

21 Q Okay. Did you do a year 'round study?

22 A No.

23 Q Okay. So it's just you captured a moment
24 in time, right?

25 A Correct.

1 Q Okay. The ualoe, do you know the healing
2 properties of ualoe besides for sore throats?

3 A I do not know anything more about it.

4 Q Would it surprise you to know that ualoe
5 will increase your circulation and help with your
6 heart, but there's a certain time and place that that
7 will make it medicinal? Were you aware of that?

8 A No.

9 Q So are you aware that many of the things
10 that you're calling weeds here are medicinal in my
11 practice?

12 A That's not my field.

13 Q Okay. So Spanish Needle, you have here as
14 non-native. But we call it kinehe and we make tea out
15 of it. Are you familiar with this being an
16 introduction to take the place of another plant that
17 we had that was similar and had the same healing
18 promises? When that other plant disappeared we
19 started replacing it with Spanish Needle?

20 A I'm not aware of that.

21 Q Okay. Are you aware of the weed study done
22 by the UH that talks about how there's different weeds
23 and different plants that come onto a property in its
24 cycle of replenishing itself?

25 A I've not seen that study.

1 Q Okay. Are you aware that weeds as high as
2 they grow tall that's how deep their roots go?

3 A I'm not familiar with that.

4 Q Are you aware that my Hawaiian ancestors
5 used to use weeds to pull minerals from deep in the
6 soil up to the surface to make plants and their soils
7 ready for their foods?

8 A I know how plants can pull minerals and
9 things up.

10 Q Are you aware the time of the month you
11 have to harvest plants in order for them to be of the
12 highest medicinal quality?

13 A No.

14 Q So we've established that there's a lot of
15 introductions here, they're unusual to this property
16 and there's a lot of healing plants and plants with
17 multiple uses. Would you still say that these are
18 plants that are useless? And basically I got out of
19 your report that it's rubbish plants. Would you still
20 say that?

21 MR. GEIGER: Before you answer I'm going to
22 object to the extent that there is an attempt to
23 characterize the testimony. Also to the extent it's
24 argumentative. If we could just have a question it'd
25 be helpful.

1 VICE CHAIR HELLER: Ms. Bolomet, can you
2 state the question just as a simple question.

3 Q (By Ms. Bolomet): Would you say that
4 the -- well, first let me say one more thing. Since
5 you only took the plants, you looked at 'em at a
6 certain time, would you agree that there's different
7 Hawaiian plants that come in at different times of the
8 year?

9 A Yes.

10 Q So, if that's the case how can you say that
11 this inventory here is complete of all the plants that
12 could be special or medicinal or useful to my cultural
13 practice?

14 A My inventory includes those species that
15 were found on the property at the time I did the
16 survey.

17 Q What about the other times outside of your
18 window of your survey?

19 A Can't say.

20 Q Okay. So you'll have to agree that this is
21 an incomplete study.

22 VICE CHAIR HELLER: Ms. Bolomet, I think
23 you're becoming argumentative. And you're asking the
24 same question repeatedly.

25 MS. BOLOMET: Okay. Then let's see if I

1 have any more. Oh, yes.

2 Q Did you do -- do you agree that seaweed is
3 an algae?

4 A Seaweed, yes.

5 Q And did you do any studies on algae, which
6 is a plant?

7 A I did not find any on the property.

8 Q Okay. Did you go into the stream bed?

9 A I did not. The Project boundary does not
10 include the channel.

11 Q No, above the channel. Right where it
12 starts, the stream bed there. Did you go there?

13 A No.

14 Q Okay. I think that's it. Thank you.

15 VICE CHAIR HELLER: Anything further for
16 the witness?

17 MR. GEIGER: Just a couple.

18 REDIRECT EXAMINATION

19 BY MR. GEIGER:

20 Q Mr. Hodby, you were asked a few questions
21 about the moth. Does the Sphinx moth commonly occur
22 over in the Lahaina area today?

23 A I have not seen any recent indications that
24 it does. It occurs in Central Maui and then South
25 Maui, Upcountry to some extent.

1 Q Okay. You indicated several times that the
2 owl would not normally be a low land or not normally
3 be seen in the low lands. Is this property classified
4 as low land, the Project site?

5 A Yes.

6 Q Now, you were asked some questions about
7 the survey you conducted. You indicated that there
8 are three species of plants that were the ones you
9 primarily found. What percentage of the plants
10 consisted of those three species?

11 VICE CHAIR HELLER: Excuse me. I'm sorry,
12 we're running a little later than I thought this was
13 going to take. I need to declare a 2-minute break so
14 we can turn the gavel over to Commissioner McDonald
15 and then we can continue.

16 MR. GEIGER: This is actually my last
17 question, but thank you.

18 VICE CHAIR HELLER: If it's the last
19 question go ahead.

20 Q (By Mr. Geiger): I'll direct you to your
21 testimony on Page 5 lines 19 and 20 would indicate
22 that 99 percent of the species were in those regions.

23 A Yeah, that's about right.

24 MR. GEIGER: Thank you. Nothing further.

25 VICE CHAIR HELLER: Anything else with

1 regard to this witness? Commissioners? Okay. Let's
2 take a short break and I have to leave you now, but
3 Commissioner McDonald will take over.

4 (2:45 recess in place.)

5 VICE CHAIR McDONALD: (2:55) Mr. Geiger, how
6 many more witnesses do you have prepared today?

7 MR. GEIGER: We have the rest of our
8 witnesses which are three. Then Mr. Frampton is a
9 rebuttal witness. I'm not sure how the Commission
10 wishes to handle that, whether we would bring him on
11 after the testimony of the person to whom he's
12 rebutting or not. But we have three ready to go
13 today. We hope to get 'em all on and off today.

14 VICE CHAIR McDONALD: Okay.

15 MR. GEIGER: For the Commission's
16 information there were two witnesses that we have that
17 the parties have all agreed to allow their written
18 direct testimony without cross-examination. Those two
19 witnesses are Leonard Nakoa, Jr. and Anthony
20 Riecke-Gonzalez.

21 Then we have another witness,
22 Mr. Perzinski, who was the archaeologist and would be
23 cumulative of Mr. Dega so we're going to withdraw his
24 testimony. So the witnesses we have left are
25 Mr. Singleton, who's going to speak about agronomy;

1 Mr. Tanaka who's the civil engineer for this Project;
2 Ms. Bigelow who's the developer's representative, and
3 then Mr. Frampton for rebuttal.

4 VICE CHAIR McDONALD: Okay. Thank you.

5 MR. GIROUX: Chair, I don't see us getting
6 my case. I have a witness I've been holding all day.
7 If I could release her.

8 VICE CHAIR McDONALD: That'll be fine.
9 We'll try to get through the Petitioner's witnesses.
10 And for the parties' information, I know previous
11 Chair Heller had allowed two rounds of questioning.
12 I'll allow the cross and the redirect. I'm not going
13 to go through two rounds of questioning.

14 MR. GEIGER: Thank you. We would call Paul
15 Singleton.

16 PAUL SINGLETON
17 being first duly sworn to tell the truth, was examined
18 and testified as follows:

19 THE WITNESS: Yes.

20 DIRECT EXAMINATION

21 BY MR. GEIGER:

22 Q State your name, sir.

23 A Paul Singleton.

24 Q What is your occupation?

25 A Currently I'm a farmer in Kula. I'm a

1 retired professor from the University of Hawai'i.

2 Q What was your area of educational
3 expertise?

4 A Agricultural economics, agronomy and soil
5 science.

6 Q Did you provide written direct testimony in
7 this matter dated June 27, 2012?

8 A Yes, I did.

9 Q Do you have any changes or corrections that
10 you need to make to that written direct testimony?

11 A Unfortunately we have just a few. There's
12 nothing serious about it. I apologize for this. Page
13 2 line 7 after "farm" the word "farm" we need to add
14 the words "and crop".

15 Page 5 line 19 "W". capital "W small b,
16 capital "B" should be capital "W" small "d", capital
17 "B". Page 7 line 23 change 16 to 16.7. Page 10
18 there's a table. All tables in our business should
19 have a title. That title should be "Consumptive water
20 use." Page 15 line 20 we need to delete the word
21 "prevent" and insert "present" p-r-e-s-e-n-t.

22 Page 9 line 14 after "feet per second" add
23 parentheses "(ideally less than 5 feet per second)"
24 parentheses. And last page 12 line 4 after "however"
25 add a comma.

1 MR. GEIGER: We would offer Mr. Singleton's
2 testimony as corrected.

3 VICE CHAIR McDONALD: Parties, any
4 objections?

5 MR. GIROUX: No objection from the County.

6 MR. YEE: No objection.

7 MS. LINCOLN: No objections.

8 MS. BOLOMET: No objections.

9 VICE CHAIR McDONALD: Admitted.

10 MR. GEIGER: Thank you. We would offer --
11 I said "Mister" it's Dr. Singleton, isn't it?

12 THE WITNESS: You can call me Paul.

13 MR. GEIGER: We'd offer him as an expert in
14 agronomy.

15 VICE CHAIR McDONALD: Parties?

16 MR. GIROUX: No objection from the County.

17 MR. YEE: No objections.

18 MS. LINCOLN: No objections.

19 MS. BOLOMET: No objections.

20 VICE CHAIR McDONALD: So admitted.

21 MR. GEIGER: Okay. Thank you.

22 Q Paul, first of all, agronomy, what is a
23 generic definition for 'agronomy'?

24 A It's the study of crop production would be
25 the simplest term. And incorporates a lot of other

1 disciplines, soils science.

2 Q Now, in your written direct testimony did
3 you set forth the methodology that you used to examine
4 this property?

5 A Yes, I did.

6 Q And what was the purpose for your providing
7 testimony? What were you asked to do?

8 A I was asked to evaluate it for agricultural
9 potential in the future.

10 Q In other words, whether or not the property
11 could be used for agriculture uses.

12 A That's correct. Or the likelihood that it
13 could be used.

14 Q And all of the opinions you reached
15 concerning the suitability of this property or the
16 Project Area for agricultural production are contained
17 in your written direct testimony?

18 A That's correct.

19 Q Now, without reading your written direct
20 testimony could you please just summarize it for the
21 Commissioners?

22 A Yes. I can do that very briefly. I don't
23 want to repeat. The details are in the written
24 testimony. But what I'd like to do is just take a
25 brief time and kind of synthesize some of the big

1 issues. Because when we derive an opinion on a
2 suitability for agriculture it's not just based on the
3 land form, the soils, the number of stones in there.
4 It's a huge number of things. There's no standard
5 metric that we can have to say: This land is suitable
6 agriculture.

7 And the question really here to me is not
8 whether we can produce crops on that property, crops
9 or animals I should say, but will it be used in the
10 future for production. That's to me what my
11 interpretation is what land use is all about. It's
12 not just whether it can be, but will it be used.

13 I'd like to emphatically state that we can
14 produce crops on almost any land form in the world.
15 If you throw enough money at it or if you have enough
16 ingenuity to do it or enough technology to do it.

17 And I'd to give you just two extreme
18 examples. And the suitability of these lands changes
19 with time. I'm going to give you extreme examples.
20 One comes right here from Hawai'i.

21 When you go back into the big valleys here
22 in Hawai'i and you see those terraces going up the
23 side walls of those huge valleys like Waialau, like
24 Makaiwa Valley and here on Maui is quite impressive.

25 So here you have land that was highly

1 suitable for agriculture, necessary because of
2 subsistence. Their lives depended on producing crops
3 in those very difficult situations. And nobody today
4 would say we need to go produce taro a half a mile
5 back up in Waialau Valley 200 feet above the stream
6 beds.

7 That is what they were doing. So land that
8 was once suitable for agricultural is no longer
9 suitable. We don't want to produce crops there because
10 you're going to pollute the stream. Simple as that.

11 So they moved the resources, the water, say
12 on O'ahu. They've moved that resource from the back
13 of the valleys with technology and engineering to more
14 productive lands in the central valleys, the central
15 part of O'ahu.

16 Another example, and this is where it
17 involves just pure technology -- the Dutch have a
18 \$5 billion export industry for foliage and flower
19 crops. That's developed on land that was once
20 undersea. Everybody knows they diked the land, pumped
21 the water out and reclaimed that land. It's all
22 done -- they're producing in greenhouses about
23 20,000 acres of greenhouses, high tech greenhouses.

24 They're producing four times the anthurium
25 crop that Hawai'i produces. They're the biggest

1 producers of anthurium in the world.

2 So here's its case for technology, tool
3 land totally unsuitable and made it highly suitable
4 for agriculture. These are extreme examples. But I
5 want you to keep that in mind. We can't just get into
6 some kinda arguments or discussion about how many
7 rocks are there.

8 I'd like to say quickly too that farmers
9 are entrepreneurs. Their decisions whether they're
10 going to go into business are based on a whole variety
11 of things: Finance, risk assessment of the crops, the
12 market potential and, of course, the land and climate
13 are extremely important. And the limits on the land
14 is important.

15 So I looked at some of the biophysical
16 limitations on that land. This is just from looking
17 at the soils reports and things like this. And there
18 is really no biological limitation to crop production
19 there.

20 You can -- there are some places where
21 there's so much rainfall you really can't produce
22 crop. There's really no biological constraints to
23 crop production on that land.

24 The problem that -- what does constrain it
25 and limits the number of types of crops that you can

1 grow on that land is the soil. That soil as we've
2 heard is very, very rocky gravel up to 3 inches,
3 cobbles up to 1 foot, boulders all in the top what we
4 call plow layer land which is a 1 to 2 foot layer from
5 the surface. That's where most of the roots occur in
6 croplands.

7 And so that very unfavorable soil condition
8 also interacts with a very low water availability. We
9 don't have a water meter. There's no water meter.
10 And I've been told the most we can expect is about a
11 5/8 inch meter.

12 So some calculations I did said there's
13 really not very much water. That's running the thing
14 all day long. And some people can run farms on a
15 small water meter like that. But in a situation like
16 this where you have all these rocks, the water use
17 efficiency is very, very poor.

18 You can't get good water distribution when
19 you drip, even if put a drip irrigation on there. You
20 don't get lateral flow because of the rocks. You have
21 to go to overhead irrigation. So this combination of
22 things limits those crops.

23 You're never going to be able to grow --
24 and by the way when I say "never" I mean in a
25 commercial sense. Because if we go out and we plant

1 crops into row crops, direct seeded crops like, say,
2 soybeans or lettuce, many of your leafy greens, you
3 try to plant that out there they're not all gonna die,
4 but you're not gonna get uniform growth. Many of them
5 are not going to die.

6 You're going to have to use overhead
7 irrigation which is very wasteful especially in this
8 environment. And it's really not a viable -- those
9 kinds of crops are not viable.

10 Corn, anything that you direct seed you
11 can't prepare a seed bed because of the boulders. You
12 can't get uniform germination. You can't get uniform
13 water distribution. You're not going to get uniform
14 growth.

15 Crops that are suitable for in the soil bed
16 are ones where you're transplanting big crops, say, a
17 mango tree. Mangos would grow well there. If you can
18 the fertilizer on, get the water on that crop it will
19 grow there.

20 What's more likely that if I was an
21 entrepreneur I would look at the crops that don't use
22 soil because the soil is such a problem there. You
23 don't use soil. You go into the hydroponics, flood
24 floors, there's all kinds of different systems that
25 you can use and recycle the water, and those crops are

1 potentially suitable.

2 However, those require a very, very large
3 investment to do that. But they're a more favorable
4 ag situation than direct seeded crops or even
5 transplanting something like tomato where the
6 transplant is very small.

7 One of the problems here, and I recognized
8 it when I was walking around, are the potential
9 environmental issues that limit the use of this
10 property. And there's hazards from an economic cost
11 from excessive leaching of water and nutrients from
12 that property. If you tried to -- commercially high
13 productivity, high yield agriculture on that soil.

14 There's also, the biggest problem I see is
15 a potential efflux of nuisance and hazards to adjacent
16 residential neighborhoods. These include odors from
17 manures or composting ag waste, in any big operation
18 compost or ag waste. I have a farm. Our compost pile
19 is a good section of this part of the room.

20 Dust, noise from production machinery and
21 trucks, storm runoff containing potential bacterial
22 pesticides, let's say intensive animal production.
23 Very, very conducive for that.

24 There's many systems, modern systems in the
25 world where the whole animal system is enclosed. But

1 we're talking on a property like that maybe 10,000,
2 say, pigs on that property.

3 But, you know, it's a high tech kinda
4 thing. You gotta control the manure.

5 The big ones that I see, too, here is
6 potential for pesticide drift. Now, most modern
7 farmers do not use pesticides. On my own farm the
8 pesticides we use are extremely benign.

9 The protective covering our workers should
10 wear: Long sleeved shirt, glasses and a dust mask.
11 That's it. Because most modern pesticides are very
12 benign. However, the public's perception is not.

13 And there's a tremendous fear in the
14 agricultural industry that you're going to have
15 pesticide drift. And while we have the right to farm
16 the land we don't have the right to drift things onto
17 other people's property.

18 I'm looking at some land in Kula right now
19 to buy for our farm and there are some houses
20 nextdoor. It's a huge concern. One of the biggest
21 things we're trying to do is figure out what are we
22 gonna do.

23 Are we gonna put a 20-foot black screen up
24 at the border of the property, have a vegetative
25 buffer there we have to move back from there? It's a

1 big problem. So I see this as a serious limitation to
2 an investor coming in.

3 So I'd like to summarize just real quickly.
4 This property has marginal capability to support
5 profitable agriculture for traditional soil-based crop
6 production. I'm talking in a commercial sense now,
7 not talking about a garden.

8 More intensive systems that do not use soil
9 and have a high degree of control over water
10 application, the leaching, have more potential. These
11 soil-less systems, however, require a very large
12 investment from anywhere from \$10 a square foot to
13 more than \$50 a square foot just to set up the
14 infrastructure to produce it. That's not the houses
15 or the processing things.

16 It's my opinion that most agricultural
17 operations need to have a significant buffer or
18 barrier between themselves and urban or densely
19 populated residential areas.

20 The long, narrow shape of this property not
21 only makes ag operations less efficient, but creates a
22 situation where a large number of the property's
23 neighbors will experience a daily negative impact from
24 an adjacent agricultural operation.

25 And I know people talk about sugar. But I

1 honestly believe you'd rather live next to a sugar
2 plantation than live next to my farm. We are a benign
3 farm because we're all hydroponics and we've really
4 tried to limit dust and all this.

5 But, nevertheless, we six days a week we've
6 got 14 people comin' in, startin' up diesel engines,
7 there's pumps running all the time, forklifts are
8 running around, trucks are coming and going. And we
9 do spray once a week. We're spraying quite a bit.

10 That impact puts the agricultural operation
11 at risk from conflict and regulatory intrusion into
12 the operation. It's my opinion that
13 farmer/entrepreneurs are unlikely to invest in this
14 land and given the high capital cost for production
15 systems at this site simply put their investment's at
16 too great a risk from the local environmental impact
17 the operation would generate. That's all I have to
18 say.

19 Q Doctor, just a couple follow-ups. You
20 mentioned that you have a farm on Maui here. This
21 property is 16.7 acres. Could you tell the Commission
22 roughly the size of your farm as it relates to the
23 16.7 acres.

24 A We lease about 7 and-a-half acres. But
25 because it's -- I'd love to have the slope of this

1 property. It's beautiful. But because of the slope
2 and gulches not -- way less is usable, about 4 acres
3 is usable. And we have roads and things so we don't
4 have that much crop area actually in production.

5 Q So this particular property, if it was
6 going to be placed into production, would have a, I
7 guess, a greater impact on the neighborhood than even
8 yours does.

9 A Yeah. We have a neighbor, O'o Farms is a
10 neighbor of ours but they're in agriculture. The
11 other neighbor we have is a 30-acre agriculturally
12 zoned property with a family that's been in
13 agriculture for a long time. There was -- that was
14 part of a big estate.

15 When the lady, the woman who owned it died,
16 it went out for sale. We were very, very pleased that
17 somebody with a long history in agriculture bought
18 that property because we were very concerned somebody
19 comes in, spends a million dollars on that thing and
20 then starts complaining about the noise that we're
21 generating.

22 Believe me we're good neighbors. We go
23 talk to -- we talk to them all the time. We try to
24 limit what we do, but there's no way around creating
25 problems and impact from this on them.

1 Q And, again, you've been to this Project
2 site, walked the site, correct?

3 A Yes.

4 Q You noticed that on the Olowalu side of the
5 site there's residential, and the --

6 A Yes. It's very dense.

7 Q Dense residential. How does the
8 residential of this Project site compare to the
9 residential or other uses at your farm?

10 A Say that last thing again.

11 Q Sure. You've described for the
12 Commissioners the problems you're concerned about of
13 having residential areas next to your farm. So that
14 they have some understanding, what does the
15 residential area next to your farm, how does it
16 compare to the residential area next to the Project
17 site?

18 A Well, as I said they're both zoned
19 agriculture. O'o Farms is in ag tourism more than
20 anything else, but they're growing crops there. And
21 the other people is also in ag. There's only two, we
22 only have two neighbors in a 80-acre kind of surround.
23 We have 30 acre plots, 7-acre. We're 7 acres. Then
24 the ranch above us has got thousands of acres.

25 Q Certainly more rural area than what we have

1 at this Project site?

2 A Yes, yes. And it's not to say that you
3 can't, you know -- but, again I said I'm looking at
4 some land and there are houses nearby. It's a huge
5 concern.

6 And when I saw these properties here the
7 first thing I noticed was a lot of the properties the
8 lanai is really close to the property line. And one
9 of the cottages on our neighbors' property is fairly
10 close to it. This is where we impact them very
11 heavily.

12 I've been involved in the case at one time
13 with the Department of Agriculture, not with my farm
14 but the University, where somebody called the
15 Department of Agriculture saying they drifted
16 pesticides onto our their land. By God the Hawai'i
17 Department of Agriculture was out their flashing their
18 badges saying you gotta leave all your workers, stop
19 everything you're doing.

20 So it's a huge risk that needs to be
21 addressed. This is a problem here. This is a
22 problem.

23 I personally have -- I mean I thought about
24 coming to Lahaina to get partnership and do the same
25 thing I'm doing not with lettuce but with tomatoes out

1 here. But I would never invest out there because of
2 the potential -- by the time I got a half million
3 dollars invested in the infrastructure, we'd be just
4 nervous Nellies. To see to that we'd have to put a
5 20-foot screen just to say to make sure we don't drift
6 any pesticides; 'cause they could come sample that.
7 It doesn't matter that it's benign. You're not
8 allowed to drift. And it's a problem.

9 Q You mentioned in your testimony that you
10 had a concern about leaching in the particular soils.
11 Could you explain that.

12 A Well, these soils are highly porous. So
13 what happens when you apply water either with overhead
14 irrigation or you've got drip irrigation, well, when
15 that flow of water hits a rock surface or hits as root
16 channel or any kind of open thing, it starts to run
17 down.

18 If you've got a clay or a silt loam soil
19 that's got 2 or 3 feet or say up where we live where
20 we have 2 to 3 feet of volcanic ash soil, if you put a
21 drop of water, and just keep dripping it here that
22 water will move sideways as fast as it moves down
23 through capillary action because of the structure of
24 the soil.

25 When you have a lot of gravel or rocks,

1 even if you have fine sand it'll move laterally, but
2 not in these kinds of soils. So it's very difficult
3 to get uniform water distribution. If you don't have
4 uniform water distribution, you can't get uniform crop
5 production.

6 Q So bottom line is you don't believe this
7 property should be or would likely be used for
8 agricultural production in the future.

9 A I think -- I mean, you know, I would say
10 it's very unlikely. Being somebody who came and
11 bought it for however much the thing is worth -- I
12 have no idea -- but bought that land and then invested
13 the money to get it under production, I think they'd
14 be in serious financial problems and an enormous risk
15 of complaints from the adjacent neighbors, must be
16 hundreds of other homes. I went through the
17 neighborhood just briefly. A lot of people.

18 MR. GEIGER: Thank you, Doctor. Pass the
19 witness.

20 VICE CHAIR McDONALD: County?

21 MR. GIROUX: We have no questions.

22 VICE CHAIR McDONALD: OP?

23 MR. YEE: No questions.

24 VICE CHAIR McDONALD: Ms. Lincoln?

25 MS. LINCOLN: Just a few questions.

1 XX

2 CROSS-EXAMINATION

3 BY MS. LINCOLN:

4 Q Were you paid for your assessment by the
5 Petitioner?

6 A Excuse me?

7 Q Were you paid for your assessment by the
8 Petitioner?

9 A You know, I don't know.

10 Q (Ms. Lincoln laughing). (Audience
11 laughing)

12 A I don't mean to be facetious here, but I
13 couldn't have paid you more to do that. No. I don't
14 know. I've not had any discussions with Jim or
15 anybody about compensation.

16 Q Maybe they'll take you out to dinner.

17 A I guess I'm a bad businessman. I don't
18 know. I will say maybe I thought they were broke or
19 something. I don't know. But I have been paid for
20 consulting before in legal matters and in project
21 review and things like.

22 I've also done a lot of free consulting to
23 growers, also free legal consulting in legal cases and
24 lawsuits. I've done a couple of those for free. Just
25 because I feel these issues are important. And

1 sometimes people need representation, they can't
2 afford.

3 Q Well, since we're on that subject, if it's
4 left as open space and we can get a community garden
5 and some stuff growing out there, can I call you for
6 free?

7 A Yes.

8 Q Right on. (laughing)

9 A I'll refer you to my employed university
10 colleagues. They're supposed to do that.

11 Q Okay. So here's my list of questions. And
12 I might be able to eliminate some because you may have
13 answered some for me. Did you state that your
14 analysis on determining whether profitable
15 agricultural is viable?

16 A Excuse me?

17 Q Your assessment was on whether profitable
18 agriculture was viable. Is that sort of what you had
19 to cap it?

20 A That is my focus. And I know the backyard
21 neighborhood gardens are all the rage now. I don't
22 believe that will last very long. Community gardens
23 are a big thing. We have come full circle with that.
24 That was a very big thing about 25 years ago too.

25 Personally I think community gardens' a

1 great thing to do, it's a healthy thing to do, it's a
2 wonderful thing for the public to do.

3 I think it belongs in the Parks and
4 Recreation Department. I don't think that's a
5 function of the Department of Agriculture. Not going
6 to produce any food efficiently that way. The
7 environmental impacts are going to be greater when you
8 bring in hundreds of people.

9 Believe me if you're going to have a
10 community garden here in the 18 acres, you're going to
11 have hundreds of people participate. So you hundreds
12 of managers coming and managing that.

13 So the nutrient and the water management
14 are big, big problems because you don't have
15 professionals doing that. It's a serious, it's a very
16 technical thing to manage a soil like that.

17 And so the food production itself is going
18 to be expensive. It's a hobby. It's not -- it's not
19 that we're going to supply any significant food to
20 anybody at any kind of reasonable price. Just the gas
21 of everybody going back and forth every day to tend
22 their garden and chat with the neighbors.

23 I'm not denigrating things. It's a great
24 thing to do. But we're not going to produce food.
25 So, yes, I am oriented toward food production here in

1 Hawai'i.

2 Q Are you aware that this is open space in
3 the Community Plan for West Maui?

4 A I understand that -- what was the name of
5 the committee, the General Plan that they designate
6 that open space? Yes, I was told that by one of the
7 residents next door. When I was walking the property
8 people came out and we talked.

9 Q Okay. So as part of the Community Plan we
10 don't have to put the whole thing into community
11 gardening. You can just have portions in community
12 garden, portions in parks, portions into natural
13 habitats.

14 But that whole thing wouldn't have to be
15 into gardening and have all the infrastructure that
16 you require for that; is that correct?

17 A I have no opinion on that. I don't know.

18 Q So are you aware that a landscaper was
19 leasing a portion of the land and successfully growing
20 things on that property for the last couple years?

21 A I saw -- I saw him -- in fact I met with
22 him briefly, spoke to him briefly. I think we're
23 talking about the same guy, the guy right behind his
24 house came out, put some ground cover down, put some
25 pots, yes.

1 Q From that particular agriculture the only
2 thing that was smelly about that was when my dogs ran
3 over there and rolled into his fertilizer. Other than
4 that we didn't smell any of that in our neighborhood.

5 A Well, let's be real frank here. That is
6 not -- I mean I guess he's a landscaper and he's
7 bringing some plants in, storing them there, waters
8 them, keeps them alive, uses them for landscaping
9 storing them there. He's not producing a lot of
10 plants.

11 If you're talking about a shade operation
12 I'm very familiar with Hawai'i shade operations where
13 they grow palms and diversified agriculture. I work
14 with many of these growers.

15 That's a very, very intensive thing. We're
16 talking about enormous amounts of pesticides. Number
17 1, you have not enough water for that. You might
18 thing well, we're in a pod, soilless system.

19 The problem with those kinds of crops are,
20 is that you -- let's say you have bedding plants, a
21 tray of bedding lands, you know, the 4-inch things you
22 buy at the store. You can't irrigate those with drip
23 irrigation. You gotta use overhead irrigation to do
24 it.

25 So the water requirements for that,

1 although you'd think it'd be small, is actually very
2 large because even growing, say, a palm tree in a
3 6-inch pot or 12-inch pot, you've got this palm, it's
4 like an umbrella. You can't get the water on the
5 plant 'til you dump enormous quantities unless you go
6 to soil-less -- I mean sub-irrigation ebb and flow or
7 flood floors, as they call them or drippers in each
8 pot. Many people are moving away from that. It's too
9 labor intensive.

10 So, yes, this guy was doing it. It's
11 suitable. You can have a greenhouse a shade operation
12 there, but you're still going to have the same impacts
13 on your community. Because anybody's going to buy
14 this land to produce is not going to be producing a
15 hundred plants, they're going to be producing
16 millions. They're not going to be able to pay the
17 bills if they don't.

18 Q Right. But if it's left as open space as a
19 community garden, then it could be controlled in that
20 respect. 'Cause you're not trying to do it like --

21 A I don't understand. If it's left in open
22 space it's not a garden?

23 Q And had part of it as community garden.
24 You don't have to plant the whole thing as community
25 garden. You're talking about if they sold it for ag

1 land.

2 A Nobody has to do anything, yes.

3 Q Okay. All right. And you regarded -- you
4 talked about the dust and smells and the neighborhood
5 complaining about that. It's been dusty for years,
6 has the neighborhood ever complained? Has the
7 Petitioner told you neighborhood has every complained?

8 A Well, the thing is -- first of all,
9 whatever dust was there was passive dust. You're
10 going to have that plus. So when the tractor runs on
11 the road -- and we have an enormous problem in our
12 farm. Our soil is lighter, we don't have all the
13 stones.

14 And when a golf cart on our farm runs
15 through there's a cloud of dust you can't see through.
16 We spend enormous quantities of money trying to
17 control that.

18 The other thing is when you have passive
19 dust you don't really have anybody to complain to. So
20 I mean I've witnessed complaints in agriculture like
21 this so it's a problem.

22 If somebody -- when you keep it in ag and
23 somebody buys this, you're not gonna choose the
24 operation that goes there. There's a right to farm,
25 not a right to drip, but there's a right to farm.

1 So if somebody wants to come in with a
2 piggery, you're going to have a piggery nextdoor. So
3 just everybody has to be aware of that.

4 Q Okay. Mango and plumeria trees are growing
5 successfully on the land, so couldn't those be
6 propagated and those aren't smelly?

7 A You have to speak up a little bit. I'm
8 sorry.

9 Q Mango and plumeria trees right now are
10 growing on the property.

11 A Sure.

12 Q And so couldn't those be propagated? Those
13 aren't -- don't require constant maintenance and RV's
14 going out and there and checking.

15 A If you can keep the water nutrients on
16 there mango would be -- I don't know how profitable
17 mango is. I don't think it's that profitable. Or you
18 can buy -- you can buy papaya all year 'round at 69
19 cents a pound on the Big Island but you can't buy
20 mangoes.

21 So I don't know about the economics of
22 that. I don't why we don't have more mango production.
23 We were just discussing that at lunch, we want more
24 mangoes. Apparently the people who do this don't
25 expand and they're not successful. They wouldn't --

1 biologically mango would grow well there, absolutely.

2 Q Yeah, 'cause there are mangoes on the
3 property --

4 VICE CHAIR McDONALD: Excuse me.

5 THE WITNESS: Wherever there's water you
6 can grow mango.

7 VICE CHAIR McDONALD: Please refrain from
8 speaking over one another.

9 MS. LINCOLN: I'm sorry.

10 THE WITNESS: Sorry.

11 MS. LINCOLN: That's my bad.

12 THE WITNESS: Sorry.

13 Q (By Ms. Lincoln) On Page 7 did you state
14 that rockland is used for pasture, water supply, and
15 urban development?

16 A Page 7?

17 Q Line 11.

18 A Line 11. Yes.

19 Q Okay. Did you forget that rockland is also
20 used for open space and greenways like it's designated
21 in the --

22 A Well, I didn't mean --

23 Q -- West Maui Community Plan?

24 A -- for this to be, yeah, anything could be
25 used for open space unless you do something with it,

1 that's correct.

2 Q Okay. So being the soil expert for West
3 Maui Land what crops have you successfully helped them
4 propagate?

5 A What what?

6 Q What crops have you successfully helped
7 them propagate? This is just described as a remnant
8 piece of their property. They own, like, 1500 acres
9 of ag land. As their soil expert --

10 A "Helped *them* propagate"?

11 Q Yeah. Like what other crops is West Maui
12 land growing? The people who hired you --

13 A I have no idea.

14 Q -- have, like, 1500 acres.

15 A I didn't investigate Maui Land & Pine in
16 any way -- I'm sorry, Maui Land Company. I have no
17 idea.

18 Q Who were you hired by then?

19 A I got a call from Jim Geiger.

20 Q Okay.

21 A And he asked if I could look at that land.

22 Q Okay. And so -- so you don't work for the
23 Petitioner then. You're not hired by the Petitioner.
24 So...

25 A I don't know how to answer that.

1 Q They haven't asked you to help them with
2 any crop propagation in any of their other acreage.

3 A "Propagation" you mean like propagating --

4 Q Like how to go crops, propagate.

5 A No.

6 Q Am I using the wrong words?

7 A I was employed the university 'til 6 months
8 ago. I have a full-time job on my farm. I'm not
9 available.

10 Q Very good. Thank you. That's it.

11 VICE CHAIR McDONALD: Ms. Bolomet.

12 CROSS-EXAMINATION

13 BY MS. BOLOMET:

14 Q Could you tell me did Hawaiians in the
15 1800's and 1700's use tractors to cultivate their
16 crops?

17 A Of course not.

18 Q So if they didn't use tractors or
19 mechanized tools, how did they cultivate their crops?

20 A Mean growing taro in the paddy?

21 Q Growing taro, growing ulu, growing
22 potatoes.

23 A They moved rocks, actually hauled soil at
24 times and dammed the water, cleared the crops.

25 Q So you're saying that's the only way that

1 Hawaiians actually farmed the land in that area?

2 A I'm not talking about that area. I don't
3 have any knowledge of the agriculture in that area nor
4 do I pretend to. I used an analogy of what I have
5 seen and seen agriculture all over the world from
6 cultures that are pre-industrial cultures that had no,
7 couldn't capture power or anything like that, no
8 advanced technology.

9 Quite ingenuity -- took quite a bunch of
10 ingenuity to grow crops in very adverse environments
11 not just here in Hawai'i but in the Subhara of Africa
12 or any other places.

13 I was using that as an analogy of how, how
14 what's suitable now becomes not suitable later, how
15 technology and progress changes things.

16 Q Okay. Are you aware that Captain Vancouver
17 in the 1700's when he visited Lahaina, described
18 Lahaina as the Venice of the Pacific because it had so
19 much water flowing?

20 A I've heard that.

21 Q And did you know that the lower parts of
22 Lahaina like Alamihi and going to Moku'ula and all the
23 shorelines were actually mostly taro with canals that
24 they would canoe through?

25 A I've seen pictures.

1 Q So --

2 A Are you asking if I'm aware or have deep,
3 deep knowledge of it?

4 Q If you have -- Do you have any knowledge of
5 it?

6 A I'm aware.

7 Q Okay. Are you aware that the crops like
8 banana and sweet potato, and the other tree crops were
9 grown up in the hill areas like where this particular
10 property is at?

11 A I'm not aware of that on that property, no.

12 Q Okay. Were you aware that there used to be
13 terraces where lo'i was grown? There were irrigation
14 channels called auwai and ponds with fish on that
15 property?

16 A That doesn't surprise me. They were very
17 good at running water around, that's correct.

18 Q Okay. Were you aware of the irrigation
19 pipes that are currently under the ground that the
20 Public Works and the --

21 A I have no knowledge of that.

22 Q Okay. So you have no knowledge that
23 there's actually, water -- availability to water. It
24 just has to be turned on?

25 A The only water I was told might be

1 available would be a single water meter, probably 5/8"
2 meter to the property. There's no water meter there
3 now. So as far as I'm concerned there's no water
4 available for agriculture right now that I know of.

5 Q Okay. So the -- Pioneer Mill's actually
6 was farming sugarcane for over a hundred years before
7 meters came in. How did they get water to that area?

8 A I imagine they ran it through their
9 irrigation ditches which were everywhere.

10 Q Okay. Would it surprise you to know that
11 there is a 4-inch pipe that is not hooked up to any
12 kind of county water supply but to a spring on that
13 property that was in the area of the old Kahoma River?

14 A I have no knowledge of that, so I'm not
15 surprised. I'm not surprised.

16 Q Are you familiar with NRCS?

17 A Yes.

18 Q Can you tell everybody what NRCS is?

19 A It's a conservation -- soils conservation
20 group, government-run federal program.

21 Q Under the USDA?

22 A I believe it is.

23 Q And do they reward farmers for conservation
24 methods --

25 A I don't know much about --

1 Q -- that they practice?

2 A -- their conservation program.

3 Q Are you familiar with the no-till practice?

4 A I know what no-till agriculture is, yes.

5 Q Can you explain what that is?

6 A Well, no-till is a concept that came about
7 when modern herbicides came about. No-till
8 agriculture in the United States has been enhanced
9 greatly with the genetic engineering of soybeans
10 especially because they put the Roundup resistance
11 into the soybean. That allowed the farmers to harvest
12 their corn but leave all the stubble there.

13 Then they come in and they directly drill
14 in the soy bean. Well, the big problem with doing
15 that, before you had herbicides resistance was that
16 all the weeds would grow up. They had very big
17 problem controlling weeds.

18 That's one of the big things with tillage
19 get those weed seeds to germinate, till them under and
20 then we start growing our crop or they put a
21 pre-emergent herbicide on.

22 But this saved a lot of power. You could
23 drill the soybean seed right into the corn stubble.
24 They come across with a treatment of RoundUp after
25 they've germinated and they've got a soybean crop.

1 So it's a very energy efficient, they get
2 higher yields and they don't disturb the soils so the
3 soil maintains much better permeability, reduces
4 erosion because you haven't tilled it up. You haven't
5 eliminated all that organic matter that was there, so
6 it's a great revolution in agriculture.

7 Q Are you familiar with the Rodale Institute?

8 A Yes. I've worked with them briefly not for
9 them, but I've done a project with them.

10 Q And can you explain what's unique about
11 that farm?

12 A Well, they're promoting organic
13 agriculture. In simple words. That's what they do.
14 They do research in organic agriculture. It used to
15 work with legumes. So they were very interested in
16 that. We had people from Rodale come over here and
17 visit.

18 Q So are you familiar with Dr. Paul Hepperly?

19 A No.

20 Q Dr. Paul Hepperly was the researcher, the
21 main director, lead researcher for Rodale.

22 A I never had contact with him.

23 Q Are you aware that Rodale Institute did a
24 study where if every single farm in the United States
25 was turned to organic, the carbon monoxide that would

1 be pulled from the air to go into the soil to help the
2 plants would solve all the emissions control?

3 A Well, people say lots of things. First of
4 all, if plants are taking up carbon monoxide we could
5 drive our about cars more. But it's carbon dioxide
6 that plants that plants need not carbon monoxide. But
7 no, that's not true. That's not true.

8 Q Were you aware that the Rodale Institute --

9 A -- it's patently false. The biggest
10 organic agriculture experiment was done in China the
11 Great Leap Forward. About 20 million people died of
12 starvation. So it's not true.

13 Q So I gather that you do chemical farming.

14 A All plant agriculture, all plant growth is
15 dependent on chemical farming. It doesn't matter if
16 you put the chemicals on as manure, or green manure as
17 they call it from legumes, or you put out with
18 synthetic fertilizers, or naturally mined fertilizers
19 like potassium chloride from Canada or phosphated rock
20 from Florida. It doesn't matter. Plants don't take
21 up organic molecules very well.

22 All the salts that they take up, calcium,
23 nitrogen, potassium phosphorus, it's all the same. If
24 it comes from manure it doesn't take up manure. It
25 doesn't take up amino acids. It doesn't take up

1 protein.

2 It takes up the nitrogen added to the
3 bacteria, releases the nitrogen in ammonium in nitrate
4 from the manure it takes it up. It's the same
5 molecule in the nucleus and it's the same molecule,
6 same number of electrons and protons, identical.

7 We're down to the fundamental things of
8 life here. So when you say that: Well, this is
9 better than that, I question that.

10 Q So what would you say is a productive and
11 profitable farm per square foot in production per
12 year?

13 A Profitable or gross revenue?

14 Q Well, no. I want a gross revenue. Let's
15 do a gross revenue.

16 A Well, certain nursery crops -- on a square
17 foot basis? Well, let's say if you have a good
18 anthurium crop you can -- some of the work we did to
19 raise yields over there can go up to \$400,000 per
20 acre.

21 Q But don't they use a lot of chemicals so
22 that lowers their profit margin?

23 A Chemicals in operations like ours are a
24 very, very small part of it, maybe two percent,
25 two percent of cost not of revenue, two percent of

1 cost.

2 Q So would you say your highest cost is your
3 land or your labor?

4 A Sixty-four percent of our costs on our farm
5 are labor and boxes, count for 64 percent.

6 Q Okay. You said that you had 7 and-a-half
7 acres?

8 A That's the total land area.

9 Q And you're farming about four acres?

10 A No. You know, once again that gets very
11 confusing because when you're farming a row crop the
12 entire acre's occupied. Right? They might have an
13 access road open. A big farm on Kansas might have a
14 400-acre paddock that they're farming and the whole
15 thing is.

16 We're farming on beds. Most horticultural
17 crops are grown on benches where you have walkways
18 because we're not mechanized. So usually you might be
19 able to farm two-thirds of the total area that you
20 have in the greenhouse or in an area like that. So,
21 no, we're farming much less than that. We're probably
22 farming actual table space 1 and 3/4 acres. That is
23 very productive.

24 Q That is. Because you're supporting 14
25 people.

1 A That's correct.

2 Q So you can grow on tables and support 14
3 people on 1 and 3/4 acres?

4 A Well, we're using 7 acres. But I mean I'm
5 trying to help you understand.

6 Q Okay. No, I understand. I'm trying to help
7 them understand. I'm leading to something. So do you
8 understand that herbs can get -- herbs and
9 micro-grains can get anywhere from a dollar to \$6.75
10 per ounce?

11 A I understand this very well.

12 Q Okay. So 6.75 per ounce is a hundred
13 dollars per pound?

14 A The market's extremely small.

15 Q And are you familiar with the farmer Vince
16 Mina?

17 A I know who Vince Mina is, yes. He's a
18 sprout grower.

19 Q Yes. And are you aware that in
20 2,000 square feet he's sent three kids to private
21 school and completely supported his family?

22 A You know, good for him. Any entrepreneur
23 that can figure out how to do this they should do
24 that.

25 Q So a dollar per -- a gross dollar per

1 square foot to make it profitable what would you say
2 that would come up to?

3 A Depends on -- plenty of people gross \$15 a
4 square foot a year and lose money. So your question,
5 I can't answer that question.

6 Q Would you be surprised to know that on my
7 farm in 10,000 square feet we are able to generate \$52
8 per square foot per month by growing herbs and edible
9 flowers?

10 A That's wonderful. Congratulations.

11 Q We didn't use any chemicals. Are you aware
12 of how to grow crops without chemicals that wouldn't
13 drift and hurt your neighbors?

14 A Well, I would tell you if it's that easy to
15 do there would be no chemical industry in this country
16 because people don't use them. They're very
17 expensive.

18 Q Are you familiar with Dr. Cho's Method, the
19 Korean farmer?

20 A I've read about that. It's the latest --
21 it's the latest fad. I know.

22 Q So you would say a fad is something that's
23 been around for how long?

24 A I don't know how long Dr. Cho has been
25 there. We have been through a lot of this stuff for a

1 long, long time.

2 Q Are you aware the methods that Dr. Cho uses
3 to grow soil and to balance the soil are methods that
4 were used hundreds if not thousands of years in
5 agriculture?

6 A If you say so.

7 Q I say so.

8 A I don't know.

9 Q So are you aware that in Hawai'i we used,
10 and my ancestors used enzymes and different plants and
11 the fish in the loi's, and having water running
12 through one plant to the other to different beds. So
13 you understand that that type of farming was used on
14 the Kahoma property. Are you aware of that?

15 A I don't know what was done on that
16 property. I have no idea.

17 Q Okay. So you don't know that at one time
18 that land was very viable before sugarcane came in?

19 A I don't know what their yields were. I
20 don't know what their population density was. I don't
21 know how well they ate. I have no idea.

22 It's called subsistence agriculture.
23 There's a lot of that in the world today. I've seen a
24 lot of it. I will tell you that when population
25 density goes up environmental degradation follows

1 right after that.

2 I've been -- I was in Uganda in 1972. I
3 saw beautiful hillsides of trees, and just lush and
4 beautiful Garden of Eden. And as the population grew,
5 and I came back in '84 to work there, all the hills
6 were denuded. The reason is they didn't have any
7 fertilizer. They slowly took all the nutrients out of
8 the soil by harvesting their plantain. They ate the
9 plantain. They shipped to the cities.

10 The nutrient levels fell. They chopped
11 more trees down to grow more, to have more land and
12 pretty soon the whole thing was degraded. The dams
13 were filled up. A tragedy, real tragedy.

14 Q Are you aware that when Captain Cook came
15 in the 1700's that we had 1.2 million people
16 population at the time and we were completely
17 self-sufficient? And --

18 A That's not the population figures I was
19 familiar with. Go ahead, yeah, 1.2 million.

20 Q And in his journal that you can find at the
21 Bishop Museum, it states that Maui and the other
22 islands were absolutely lush and so full of
23 agricultural growth that even when King Kamehameha
24 came with his armies to Lahaina, there was so much
25 food that it just came from the Alamihi area, right

1 down the street. That's kind of a small area. Are
2 you aware of that?

3 A Okay.

4 Q Okay. All right. So are you familiar with
5 the Certified Organic requirements --

6 A Yes.

7 Q -- for farmers?

8 A I've read the law.

9 Q Do you practice any of them?

10 A No.

11 Q Okay.

12 A We try to limit the use of pesticides. We
13 conserve nutrients by recycling all of our nutrients.
14 We recycle all of our water, but we're not organic,
15 Certified Organic.

16 Q Are you familiar with the plan that
17 Dr. Melendrez, Michael Melendrez and Dr. --

18 A No.

19 Q -- you don't know. The sugar plan they did
20 to restore the soils over here, you're not familiar
21 with that?

22 A (Witness shaking head side to side)

23 Q Okay. Et's see, how do I say this? So
24 you're not aware of any kind of plant and soil
25 regeneration plan for this area that was made, say,

1 three years ago by a former, a former employee of the
2 U.S.D.A. to restore lands that have been denigrated by
3 the sugarcane and pineapple productions?

4 A What were they doing? They were
5 regenerating the land?

6 Q Regenerating the soil that sugarcane was
7 growing on in lands like what's in Kahoma.

8 A I'm not sure what you're talking about.

9 Q Have you ever gone onto the Seed, the Seed
10 Savers, Hawai'i Seed Savers' website and saw the kalo
11 that's taller than the farmers?

12 A Well, no, I haven't. We do grow about a
13 million seeds a year ourselves for our own use. So I
14 do understand about saving seeds.

15 Q So the reason I'm bringing this up is
16 because the kalo is so tall. Do you know what they
17 did to that soil to get the kalo, which is normally
18 about this big, to be 8 feet tall?

19 A Yeah, they have to have good nutrition and
20 water.

21 Q And would it surprise you that they didn't
22 use one chemical to do that?

23 A You can do that for a while.

24 Q Would it surprise you to know that they
25 were using Hawaiian mahi'ai practices that have been

1 practiced for hundreds if not thousands of years?

2 A I don't know that.

3 Q Okay. So you'll have to agree that there
4 are other methods to growing successfully without
5 using conventional agricultural.

6 A There are many methods that do work, but
7 you cannot violate the laws the nature or the laws of
8 thermodynamics which means that matter is neither
9 created nor destroyed.

10 Q So then you agree that what Hawaiians did
11 when they worked in harmony with nature and using the
12 cycles of nature and using all, working in harmony
13 with all the resources, that's the best way to farm?

14 A I don't know what "being in harmony" means.

15 Q Working with the seasons, working with the
16 moon phases.

17 A All farmers work with the seasons. We
18 don't work with the moon. Plants don't understand the
19 moons, but we do work with the seasons.

20 VICE CHAIR McDONALD: Ms. Bolomet, how many
21 more questions do you have there?

22 MS. BOLOMET: Just a few more.

23 Q So if a family were to live on the Kahoma
24 lands that were the heirs of the lands, they had no
25 costs for the lands, they didn't have to pay property

1 taxes because there's kuleana tax breaks for those
2 lands, they didn't have to pay for the water because
3 there's a spring on the land, and there's also laws,
4 the Water Commission laws, that protects the
5 Hawaiians' rights, and there's laws -- to water -- and
6 it protects the farmer's rights to water which means
7 we don't pay for water -- wouldn't you say that we
8 could have a very lucrative farming business that
9 would work with our neighbors and not be damaging to
10 the neighbors?

11 A I don't know if they can be successful or
12 not. I don't know.

13 Q Because you don't understand that type of
14 farming?

15 A I don't know what that type of farming
16 you're talking about is. I don't understand what
17 you're saying.

18 Q Okay. So it's basically organic farming is
19 what I'm talking about. We use -- we make our own
20 manures. We work with enzymes. We work with the
21 water. We put fish in the ponds.

22 VICE CHAIR McDONALD: I believe the witness
23 stated that he's not familiar.

24 THE WITNESS: Well, I will respond to that.
25 You can produce crops many, many, many different ways.

1 You can use -- the British have been doing experiments
2 on a single plot of land since 1860 by applying
3 farmyard manures. It's famous work. It's all in the
4 scientific books. You can read about it.

5 They sustained their crop yields for that
6 amount of time with farmyard manure. You can do it
7 many ways. You just have to get it on there. It
8 doesn't matter if it's organic or inorganic. It all
9 ends up being the same chemical like I told you
10 before. And that's how plants grow. Simple as that.

11 That's why you can grow plants in
12 hydroponics. There's no enzymes, there's no vitamins,
13 there's no organic matter. It's simply water and the
14 simple 16 set of -- they're not minerals. They're
15 simple ions like potassium, calcium, magnesium, iron,
16 zinc, things like that. That's what they grow in.
17 And pure water. What we call chemoalotropes.

18 So does algae. But that's all they need to
19 grow. You don't need organic matter to grow or the
20 yields in hydroponics wouldn't be so high. They grow
21 much better in hydroponics. All plants do.

22 So you see what I'm saying? I'm not
23 disagreeing with you. You can grow them organically.
24 I can't say that you're gonna be successful. But it's
25 the panacea for everything. There's many, many, ways

1 to grow crops. I agree with you. So you might be
2 very successful in an organic operation in that land.

3 Obviously if you can haul in the manure --
4 you're not going to be making your own manure because
5 you don't have any phosphorous or potassium on that
6 land, so you're going to have to haul it in.

7 Q We actually -- would it surprise you to
8 know that we don't haul in manure and we produce
9 everything we need?

10 A You'd be fortunate to be on old sugarcane
11 land where they put a lot of it on there.

12 Q So to conclude, would you agree that there
13 are, there is a way to make that land profitable as
14 agriculture, as an agricultural business?

15 A I just cited several, several ways you can
16 produce crops and what crops would be suitable on that
17 land. I think I was very clear about that.

18 Q Okay.

19 A And I do believe very strongly, yes, you
20 could probably come in, but there's big problems with
21 doing that and it's a huge investment to do. I'm
22 talking commercial because you're really
23 non-profitability.

24 Commercially profitable agriculture is not
25 a backyard operation. It's an industry. It's a

1 technical industry, a knowledge industry and there's
2 always going to be environmental impacts no matter
3 what you do. Organic or inorganic there's serious
4 environmental impacts to all agriculture the moment
5 you put the plow in the soil.

6 Q Would it surprise you to know that I come
7 from a family both sides of farmers. And we've been
8 doing this successfully for hundreds of years?

9 A That's just great. Wonderful.

10 MS. BOLOMET: Thank you.

11 VICE CHAIR McDONALD: Mr. Geiger?

12 MR. GEIGER: Just a couple.

13 FURTHER DIRECT EXAMINATION

14 BY MR. GEIGER:

15 Q You were asked some questions about the
16 rockland and the uses for rockland. That is a
17 classification of soil series, classification, is that
18 correct?

19 A Yes.

20 Q And the information concerning the uses is
21 based upon the uses as contained in the soils books?

22 A Yes. That's straight from the soil book.

23 Q Second question was -- let's focus on
24 today. Is it your opinion that today this land is
25 likely to be used for agriculture?

1 A Very unlikely.

2 Q And that's for the reasons you've
3 identified, the environmental matters as well as the
4 soils issues?

5 A I think there are several issues. No. 1
6 the viable commercial agriculture, the crop selection
7 that you have is very limited. The broader selection
8 you have the more you can get in and compete. Then
9 it's the type of system that you're going to have to
10 use to be economically successful.

11 MR. GEIGER: Nothing further.

12 VICE CHAIR McDONALD: Commissioners?
13 Hearing none, thank you, Mr. Singleton for your
14 testimony.

15 THE WITNESS: Thank you.

16 MR. GEIGER: We're ready to call the next
17 witness if the court reporter says she wants -- we'll
18 take a short break.

19 VICE CHAIR McDONALD: We'll take a short
20 break.

21 (Recess was held.)

22 VICE CHAIR McDONALD: (4:05 p.m. gavel)
23 We're back on the record.

24 MR. GEIGER: We're ready with our next
25 witness if the Commission's ready.

1 VICE CHAIR McDONALD: We are ready.

2 MR. GEIGER: Okay. We'd call Kirk Tanaka.

3 KIRK TANAKA

4 being first duly sworn to tell the truth, was examined
5 and testified as follows:

6 THE WITNESS: I do.

7 VICE CHAIR McDONALD: Proceed.

8 DIRECT EXAMINATION

9 BY MR. GEIGER:

10 Q Would you state your name, sir.

11 A My name's Kirk Tanaka. I'm the Project's
12 civil engineer.

13 Q And what is your occupation?

14 A We're civil engineers and consultants.

15 Q Are you also a land surveyor?

16 A Yes. I'm sorry. We also do land
17 surveying.

18 Q You hold a license as a Registered Civil
19 Engineer and as a Registered Surveyor, correct?

20 A Correct.

21 Q Did you provide written direct testimony in
22 this matter dated June 25, 2012?

23 A Yes, I did.

24 Q Did you also provide a Civil Engineering,
25 Drainage and Erosion Control Report dated October 2007

1 that was revised on three dates in 2009 and 2010?

2 A Yes.

3 Q And then did you provide a supplement to
4 that report that was done in earlier this year 2012?

5 A Yes, I did.

6 MR. GEIGER: For the Commissioners'
7 reference the report is as Exhibit 7 and the
8 Supplement is Exhibit 21 both of which have been
9 admitted into evidence.

10 Q Kirk, do you have any changes to your
11 written direct testimony, corrections, things like
12 this?

13 A No, I don't.

14 MR. GEIGER: We would offer the written
15 direct testimony of Kirk Tanaka.

16 VICE CHAIR McDONALD: Parties?

17 MR. GIROUX: No objection from the County.

18 MR. YEE: No objection.

19 MS. LINCOLN: No objection.

20 MS. BOLOMET: No objection.

21 VICE CHAIR McDONALD: Admitted.

22 MR. GEIGER: Thank you. We would also
23 offer Mr. Tanaka as an expert in the areas of civil
24 engineering and land surveying.

25 VICE CHAIR McDONALD: Parties?

1 MR. GIROUX: No objection.

2 MR. YEE: No objection.

3 MS. LINCOLN: No objection.

4 MS. BOLOMET: No objection.

5 VICE CHAIR McDONALD: So moved.

6 MR. GEIGER: Thank you.

7 Q Kirk, are the opinions that you reached for
8 the work that you did contained in your written
9 testimony and in your reports?

10 A Sorry, Jim, once again?

11 Q Are the opinions and conclusions that you
12 reached with regard to the work you did on this
13 Project contained in your reports or your written
14 direct testimony?

15 A Yes.

16 Q And is the methodology that you used in
17 making the calculations to come up with the conceptual
18 plans that you had for drainage, for wastewater and
19 for water, all contained in the reports and the
20 testimony?

21 A Yes.

22 Q Now, again, without reading it, as we've
23 done earlier, just please summarize for the
24 Commissioners first the conclusions you've reached
25 with regard to drainage for this particular Project.

1 A The conclusions that we've reached is based
2 on the preliminary civil engineering report is that
3 application of the proposed drainage infrastructure
4 will not adversely affect the descending downstream
5 properties, which is what the county of Maui requires.

6 Q So in preparing the conceptual design there
7 is a retention basin or drainage basin at the bottom
8 of the property, correct?

9 A Yes, that's what we're currently proposing.

10 Q And you designed that to meet all of the
11 county standards, correct?

12 A Yes.

13 Q The county standards would be for a 1-year
14 storm, 50-year, 1-year duration, 50-year storm.
15 Sorry.

16 A Fifty-year 1-hour storm.

17 Q One hour?

18 A Yes. Thank you.

19 Q And have there been any changes to the
20 county regulations or ordinances with regard to the
21 items that an engineer must take into account with
22 regard to drainage?

23 A The county currently has passed an
24 ordinance that requires treatment of stormwater. What
25 they have not passed to date is the rules that govern

1 the design of stormwater treatment. The county is
2 currently working -- the Department of Public Works,
3 county of Maui is currently working on rules to be
4 adopted to address stormwater treatment. But
5 currently they have not adopted the rules.

6 Q So will the final design of the drainage
7 comply with the regulations and rules that are in
8 effect when they're submitted to the county?

9 A Most definitely.

10 Q Now, summarize, if you would, please, the
11 work that you did with regard to the wastewater for
12 this Project.

13 A The conceptual plan for the 68 units
14 proposed is basically a gravity collection system,
15 typical residential single-family development which
16 will include sewer laterals for each lot, would be
17 collected via a main transmission line gravity, all
18 gravity, that would flow down to the, I guess it's the
19 Mill Street intersection and then taken out towards,
20 to the north towards Keawe Street where it would
21 intercept the County's main sewer line.

22 Ultimately from there the wastewater's
23 transmitted to the Lahaina Wastewater Treatment Plant
24 for treatment and disposal.

25 Q Did you have communications with anybody at

1 the county as to whether or not the Lahaina treatment
2 plant had capacity for this Project?

3 A I did.

4 Q And what was that result? Or what did you
5 learn?

6 A The County's position is that the
7 wastewater reclamation division's position at the
8 county of Maui is that there is adequate treatment
9 capacity at the Lahaina Treatment Plant for this
10 Project at the current time.

11 Q And let me ask you to please summarize the
12 information that you derived with regard to the water.

13 A As far as the conceptual design for the
14 water system, it's 2-fold. The water system would
15 provide domestic water to each lot via a county water
16 meter. It'd be connected to the municipal system.
17 The system would provide both domestic water to each
18 lot and fire protection to the subdivision.

19 Q And the design complies both with fire
20 protection and the county standards with regard to
21 drinking water, correct?

22 A Yes. The two agencies that review, it
23 would be the Fire Department and the Department of
24 Water Supply at the county of Maui.

25 Q Okay. Final area of questioning. Did you

1 do any work with regard to the designation of this
2 property on flood, whether it was the FEMA maps on
3 flooding?

4 A According to the latest FEMA maps, the
5 fluid insurance rate maps for the West Maui area, the
6 site lies within zone X which is outside of the
7 hundred year flood limits. And I can expand on that.
8 The FEMA map also shows that the hundred year flood
9 limits are in the area are all contained within the
10 improved Kahoma Stream.

11 Q Just so we're on the same page, the
12 improved Kahoma Stream is the big concrete channel
13 that we're talking about?

14 A I'm sorry. Yes, the Kahoma Stream is the
15 channel just to the north of the Project that runs
16 mauka to makai. And it's an improved concrete lined
17 trapezoidal channel.

18 Q And the FEMA maps, when were they redone?

19 A A copy of the FEMA map that I have here is
20 September 25, 2009.

21 Q And that's part of your report which is
22 part of Exhibit 7, is that correct?

23 A Correct.

24 MR. GEIGER: I have nothing further. Thank
25 you. I'll pass the witness.

1 VICE CHAIR McDONALD: County?

2 MR. GIROUX: We have no questions.

3 VICE CHAIR McDONALD: OP?

4 MR. YEE: Yes.

5 CROSS-EXAMINATION

6 BY MR. YEE:

7 Q Thank you. Mr. Tanaka, the first set of
8 questions I have deal with a matter you touched on on
9 stormwater quality. I just want to be clear that I'm
10 not referring to flooding and drainage but the
11 mitigation of the quality of the water.

12 A Great.

13 Q Does this Project currently have a
14 stormwater quality mitigation plan?

15 A No.

16 Q No conceptual designs?

17 A No.

18 Q So you don't know what type of stormwater
19 quality mitigation is going to be done for this
20 Project at this time?

21 A The county currently has no requirements
22 for stormwater quality at this time. They're working
23 on the rules for stormwater quality management. And
24 at the time that the rules are adopted -- well. Let
25 me put it the other way. When this Project, when this

1 Project is constructed it will comply with all of the
2 rules of stormwater quality management.

3 Q Is there currently a requirement that you
4 use Best Management Practices for stormwater quality
5 at the county level?

6 A During the construction phase I believe
7 you're probably referring to the NPDES permit that
8 would be required for stormwater associated with
9 construction activity, stormwater discharge associated
10 with construction activity. And, yes, those rules are
11 in place. They're well established and they will be
12 complied with.

13 Q But there's no -- so that's for during
14 construction. But once construction is complete
15 you're saying there are no current county requirements
16 regulating stormwater quality.

17 A The rules and regulations that are
18 currently being worked on now would address permanent
19 storm, post-construction permanent stormwater quality
20 management.

21 Q Have you seen a draft of these rules?

22 A Yes, I have.

23 Q Do you have any, like I said, conceptual
24 plans on how this Project would meet those draft
25 rules?

1 A If your question is what might be
2 incorporated into the design to address the draft
3 rules, part of what the draft rules suggest are trying
4 to contain stormwater as much as possible, use of rain
5 barrels, try to run stormwater through grass swales as
6 a form of treatment before it gets into -- before it
7 gets offsite.

8 It also, it also talks about increased,
9 increased capacity in drainage basins where the
10 idea -- the current idea is to retain the hundred --
11 excuse me, retain the 50-year 1-hour increase in storm
12 runoff. That's what the current requirement is.

13 As I understand the rules, the draft rules,
14 what that might -- what that might do is affect the
15 size of these basins. These basins not only have to
16 retain the 50-year, 1-hour storm increase, they have
17 to also have some detention time to be able to settle
18 out solids. So I think that might be the net effect
19 if it's passed in its current form.

20 Q What happens if the county does not pass
21 these rules before you apply for your county permits?
22 Would that mean that you are not required to have
23 stormwater quality mitigation measures except and
24 unless there's some other requirement?

25 A I would believe so because of the fact that

1 you wouldn't have rules that you need to follow in
2 order to guide your design. And the county wouldn't
3 have any rules in place to be able to review such
4 stormwater management plans.

5 I did speak to the county about potential
6 schedule for adoption of these rules. And what I was
7 told from the Department of Public Works is that they
8 still need to go out to public hearing on these rules
9 before they adopt them.

10 And as I was told, the Public Works
11 Department was hoping to go out to public hearing some
12 time next month. So given that, I anticipate that
13 these rules -- well, I'm sorry, I don't want to
14 anticipate anything. I.

15 Just want to say they're going out to
16 public hearing or they want to go out to public
17 hearing next month for adoption of these rules.

18 Q On the off chance that you submit your --
19 that something happens, who knows what, but something
20 at the county level. The rules are not adopted as
21 quickly as we would all like and that sometimes
22 happens.

23 A Certainly.

24 Q Is there anything you can tell the
25 Commission -- since there is no other method of

1 requiring stormwater quality mitigation, is there
2 anything you can tell the Commission about even if the
3 rules aren't passed, this Project will have stormwater
4 quality mitigation so their concern about near coastal
5 waters, about the possibility of going into the Kahoma
6 Stream channel, about, you know, polluting any other
7 aspect of either the coastline or existing streams, is
8 there anything you can say that regardless of whether
9 or not these rules are passed this will be done for a
10 project?

11 And so you can -- and you, the LUC, may
12 safely approve this Project without knowing whether or
13 not the county rules are going to be passed?

14 A No, I don't think I'm in a position to
15 answer that question. I don't know.

16 Q And you don't have even, as I said,
17 conceptual plans for what the stormwater quality
18 mitigation would be for this Project in order to meet
19 the proposed draft rules?

20 A No.

21 Q You haven't done that analysis yet because
22 you're waiting for the rules to be passed, is that
23 right?

24 A It's sort of like shooting at a moving
25 target, yeah? We don't know what the rules are, what

1 the adopted rules are, until they're adopted.

2 Therefore it's hard to comment on.

3 Q What about -- well, let me backtrack. In
4 your testimony you talk about the size of the
5 retention basin and how much needs to be retained for
6 flooding. And I believe your testimony was it was
7 40,210 cubic feet of stormwater runoff on Page 6.
8 Does that seem correct?

9 A That sounds correct.

10 Q Okay. What's the anticipated depth of the
11 retention basin? Do you know? Just to let you -- the
12 reason I'm asking is because in your testimony you say
13 "...and we'll build it 2 feet higher for an additional
14 safety measure." And I just wanted to get a relative
15 understanding of, well, is it 2 feet above something
16 which is 6 feet? Two feet above something that's 6
17 inches? What's the height?

18 A The basin is conceptually proposed to be
19 8 feet deep.

20 Q So you would only need to build it to
21 6 feet and you're building to 8 feet instead.

22 A It's standard engineering practice to
23 provide what they call freeboard. Yeah? Freeboard is
24 the factor of safety I guess is what you could call
25 it.

1 Q Does this additional height add anything to
2 the detention period to reduce pollutants that run
3 off? Or is that really not part of the calculus or
4 the analysis?

5 A The basin is proposed to be slightly larger
6 than the absolute minimum required by the county. So
7 I don't believe -- but I don't believe the freeboard
8 calculations is included in the capacity.

9 See, the way they've designed these basins
10 are you provide a spillway. And the spillway is
11 generally at the height above the, above the minimum
12 that is required.

13 The purpose of the spillway, I guess, like
14 probably everybody knows is you don't want to have a
15 catastrophic failure of the basin. So you want to let
16 the water flow out in a controlled manner.

17 But the conceptual design is that basin
18 would be slightly larger than what is required, what
19 is currently required by the county of Maui's drainage
20 standards.

21 Q Where does the spillway enter into? In
22 other words, if there's an overflow through the
23 spillway where is it going into?

24 A Into Kahoma Stream.

25 Q And Kahoma Stream, I assume, eventually

1 leads into the ocean?

2 A Yes, it does.

3 Q And you have no particular mitigation for
4 stormwater quality before spilling into the stream, is
5 that right?

6 A What I can say to that question is that the
7 basin is designed to retain the increase in runoff
8 that is caused by the development based on a 50-year,
9 1-hour storm. Okay.

10 So what I can say to that as far as
11 stormwater quality management is concerned, is that if
12 you have a storm, say, a lighter storm, a 1-year
13 frequency storm, a 5-year frequency storm, what would
14 generally happen is that you would have no overflow
15 into Kahoma Stream because the basin is sized for a
16 much larger event.

17 So what would happen is that the basin
18 would fill up part way. Then it would either
19 evaporate or seep into the ground. So in that case
20 that is a very effective stormwater management
21 solution for storms that don't quite reach the
22 50-year, 1-hour criteria or volume. I'm sorry.

23 So what I'm trying to say is that on a
24 storm that, you know, maybe a 1-year frequency storm,
25 the system would collect the water, transmit it to the

1 basin, the basin wouldn't fill up. It wouldn't
2 overflow.

3 When the storm subsided the water would
4 evaporate or seep into the ground with no water
5 running offsite from the basin and therefore would be
6 treated.

7 Q The treatment is that it stays within the
8 property and the retention basin just soaks into the
9 ground. That's the treatment.

10 A Yes.

11 Q And I appreciate that. But to take it
12 maybe just for a context on a real world analysis, the
13 1-hour, 50-year storm is an engineering standard,
14 correct?

15 A Yes.

16 Q It's not intended to mimic the likelihood
17 that storms last, for example, for 1 hour. It's not
18 intended to mimic real world conditions.

19 A The 50-year, 1-hour storm criteria is what
20 the County has adopted as their design guidelines.
21 Because I mean if you had a hundred-year storm
22 obviously it's over a larger volume.

23 If you have a 1-year storm it'd be less
24 volume. These are all statistical. Yeah? It is, it
25 is empirical data and it's a statistical analysis.

1 Q I guess my point would be, though, that
2 typically -- I mean you wouldn't necessarily expect a
3 50-year storm to last one hour. In real life -- I
4 mean do you think a storm lasts longer than a hour?

5 A I couldn't comment on that.

6 Q Okay.

7 A I couldn't. It could last more than an
8 hour. It could last less than a hour.

9 Q Okay. Are you aware that there's going to
10 be some offsite roadway improvements for this Project?

11 A Yes.

12 Q Do you know whether there're going to be
13 any type of stormwater quality mitigation measures for
14 these offsite roadway improvements, either water
15 separators, leaf catchers, something at all?

16 A I'm not aware of any because currently with
17 the county's requirements don't require it. But it
18 might come into play where the new rules as adopted
19 may address those concerns.

20 Q Just so we have a complete record. These
21 rules would apply when you get which permit from the
22 county?

23 A They would apply when you would apply for a
24 grading permit. And as part of subdivision review,
25 any type of site work I would imagine that these rules

1 would apply to similar to, similar to how the current
2 drainage standards apply to any particular project.

3 Q Are you aware of the 201-H approval that
4 County Council gave for this Project?

5 A Yes.

6 Q So I guess all I'm trying to make sure of
7 is that you're not avoiding this requirement for the
8 201-H approval because you've got that approval. I
9 just want to ask do you know that these now -- I just
10 want you to confirm that these new rules will apply to
11 whatever new approval you need.

12 A I don't know that there are -- I don't know
13 of any 201-H exemptions that were allowed for
14 drainage.

15 Q Regardless of what the particular
16 stormwater quality mitigation measures are, who's
17 going to be maintaining these mitigation measures?

18 A Typically the basins, the maintenance of
19 the basins fall in -- typical subdivisions fall under
20 the Association of -- the Community Association of the
21 subdivision because the county doesn't generally wanna
22 maintain 'em.

23 Q Moving to the potable water review. I
24 assume you have not done an analysis regarding the
25 availability of -- well, have you done an analysis as

1 to whether potable water will be available for this
2 Project?

3 A I did, as part of the work in the
4 engineering report, contact the Water Department. And
5 they have stated that there is sufficient source and
6 sufficient water to provide meters for the
7 subdivision.

8 Q Are you aware of the letter from Jeffrey
9 Ing in the Final Environmental Assessment among the
10 comments that were provided that says, "Additional
11 water for development is not currently available at
12 the Lahaina system pending completion of new source
13 projects."

14 Are you familiar at all with that
15 statement?

16 A I haven't seen that letter.

17 Q Okay. So your testimony, then, is you've
18 talked to someone at the Board -- is it Department of
19 Water Supply?

20 A The Department of Water Supply.

21 Q And they said that there's sufficient
22 sources to provide water for this Project.

23 A They stated that the average daily
24 demand -- I need to go and find what the numbers were.

25 Q On Page 9 you do talk about the average

1 demand for potable water, I believe, the top of Page
2 9. Is that what you're referring to?

3 A No.

4 Q Okay.

5 A Okay, yeah. I'm sorry. I'm sorry, right.
6 So, yeah, I did talk to the Water Department. They
7 said the average daily demand in the West Maui region
8 for which the Department of Water Supply provides
9 service is 4 and-a-half to 5 million gallons a day.
10 It was, it was told to me that there is adequate water
11 to provide water service for 68 lots.

12 Q For, I'm sorry for 6 to 8...

13 A Sixty-eight lots within the subdivision.

14 Q Why were you asking about 6 to 8 lots?

15 MR. GEIGER: 68.

16 MR. YEE: Oh, 68. I'm sorry.

17 THE WITNESS: 68.

18 Q (By Mr. Yee) Just so we clarify the record
19 a little bit. On Page 9, I think, of your testimony,
20 you talk about the average daily demands within the
21 existing Department of Water Supply, correct, as being
22 4 and-a-half mgd?

23 A Right, 4 and-a-half to 5 mgd.

24 Q In your testimony I didn't see anything
25 regarding excess capacity. That's just the amount

1 apparently that you're using on an average daily
2 basis. Did you also have information about excess
3 capacity within the water system?

4 A No. Sorry, I don't. I would need to
5 check, check my notes. It's not in my testimony.

6 Q Okay. Then let me get back to the prior
7 statement you made. I just want to make sure if you
8 still think that's true.

9 Is it your understanding that the
10 Department of Water Supply told you that there's
11 sufficient additional capacity for this Project?

12 A Yes.

13 Q So that's just -- they told you that.
14 That's just not reflected in your testimony, your
15 written testimony, correct?

16 A Yes.

17 Q Okay. And this Project relies upon the
18 county for its water supply. It is not proposing to
19 build any new water supply, correct?

20 A It's proposing to hook up to the county's
21 domestic system.

22 Q That's your only analysis for the water
23 infrastructure construction is to connect up, not to
24 construct a new water supply, correct?

25 A Yes.

1 Q So any questions I would have about the
2 discrepancy between this conversation you've had with
3 an individual from the Department of Water Supply and
4 a 2007 letter, admittedly an older letter, about that
5 additional water is not currently available pending
6 completion of new source projects.

7 I take it because you had your information
8 from the Department of Water Supply I need to ask them
9 this question, questions about availability of water.

10 A I think as far as, yeah, availability of
11 water would be better directed to the Department of
12 Water Supply.

13 Q Because your information's from them as
14 well, right?

15 A Yes.

16 Q You haven't done an independent analysis
17 though.

18 A No.

19 MR. YEE: All right. Thank you. Nothing
20 further.

21 VICE CHAIR McDONALD: Ms. Lincoln?

22 CROSS-EXAMINATION

23 BY MS. LINCOLN:

24 Q Okay. Just to be clear you're an engineer
25 for the Petitioner; you're paid by the Petitioner?

1 A Correct.

2 Q Okay. Just a question on the retention
3 basin. When you say it's going to be 8 feet that's
4 like -- it's dug at the bottom of the property like a
5 swimming pool sort of thing?

6 A It'd be more of a trapezoidal cross-section
7 but, yeah, it's basically a swimming pool with slanted
8 sides.

9 Q Okay. How did they get through -- because
10 they were saying you don't go very far down before you
11 hit bedrock. How do you dig one of those things when
12 there's bedrock there?

13 A I don't know that you'd hit bedrock. But
14 in any case there are construction methods to get
15 through rock if they were to encounter rock. So that
16 would just be the construction method. Whether they
17 hoe-ram it or they blast it, I mean that's something
18 that can be done.

19 Q Is that problematic being right next to the
20 flood control, compromising that at all?

21 A It might be. And if that's the case then
22 there will be other construction methods employed
23 to -- so that there will be no detrimental effect to
24 the channel.

25 Q Okay. You keep referring to your findings

1 for 68 units. But it's really more like 99 units if
2 everything is built out. Does the sewage or water
3 impact affect that number at all?

4 A I think in my supplemental testimony what
5 we did is we determined that there were 31 -- well, 68
6 single family homes of which the county's ordinance
7 would allow 31 'ohana units or accessory dwellings,
8 excuse me. And the accessory dwellings are just based
9 on the size -- the minimum size of the lot. A certain
10 sized lot can't have an accessory dwelling.

11 So we did the additional research. And we
12 came up with some additional, additional numbers. As
13 far as the wastewater is concerned, the wastewater
14 reclamation division uses 350 gallons per day
15 wastewater from a typical single-family residential
16 home.

17 And from an accessory dwelling 31 of which
18 could be built. They use the criteria of 180 gallons
19 per day. So the total average wastewater flow daily
20 would be 29,380 gallons.

21 And, likewise, we did that same analysis
22 for the domestic water requirements. And we came up
23 with a total average daily demand of 59,400 gallons
24 per day.

25 Q So when you're saying the county did

1 approve this then that was taken into consideration
2 the 99, not 68?

3 A Yes.

4 Q Just clarifying that.

5 A Yes.

6 Q Because when you testified you didn't say
7 that. Okay. And does the Army Corps of Engineers
8 need to approve the sewer lines going over the flood
9 channel?

10 A Yes.

11 Q So that's something that would happen after
12 this gets decided, is that correct?

13 A Yes.

14 Q Just a follow up with Mr. Yee. The
15 storm -- there could be storm runoff and there aren't
16 measures put into effect at this date. So could this,
17 if not put in with proper stormwater runoff, this
18 could affect Malo which is a dive spot further down
19 and affect people's livelihoods?

20 A Well, I don't know if I'm qualified to
21 answer that question. But what I can comment to is
22 that as it, as it stands right now when it rains and
23 there's runoff the runoff does enter Kahoma Stream
24 from the site in its current condition.

25 And when -- if the Project is developed

1 with proper implementation of the proposed drainage
2 system, under the county of Maui's design criteria the
3 quantity of runoff would be less.

4 Q Okay. From living in the neighborhood
5 what I've seen is when there's major water is that
6 there's natural absorption with the way the land is
7 just left open space right now. Wouldn't development
8 actually cause more runoff because of non-natural
9 absorption?

10 A And that's the reason why we're proposing
11 to build the basin. You have added impervious
12 surfaces, rooftops, sidewalks, roadways. And so the
13 basin is meant to pick up the increase in the flow due
14 to the development of the property.

15 Q But right now it's natural absorption
16 because it's not running off on the sides down into
17 there.

18 A If there is a storm of sufficient frequency
19 or volume you would have runoff. And the runoff, the
20 runoff naturally flows into Kahoma Stream.

21 Q Okay. And you know this happens at this
22 particular area of land?

23 A It does, yes.

24 Q All right. This is a question -- I have
25 more questions for you, but would you be able to

1 explain the rebuttal Exhibit 30, Exhibit B, there's
2 2.31 acres at the top of the property.

3 Why is that an exhibit for the Petitioner?
4 I don't understand why that's your, Petitioner's
5 exhibit.

6 A I'm sorry?

7 Q Would you be able to explain as an
8 engineer?

9 A Can you point that out to me. I'm not
10 familiar with that exhibit.

11 Q It was the rebuttal Exhibit No. 30.
12 Exhibit B. It shows Parcel 10A. It's just right at
13 the very top of the property. Like, I don't
14 understand why that is part of the rebuttal exhibit.
15 If someone would explain it to me. I'm hoping an
16 engineer could.

17 A If you let me see it I'll do my best.
18 (Off the record. Off mic. Document shown
19 to Mr. Geiger)

20 VICE CHAIR McDONALD: For the record, what
21 exhibit number?

22 MS. LINCOLN: It says -- I thought it was
23 the Petitioner's. I thought that was the one I took
24 it out of Petitioner's rebuttal Exhibit B, the land at
25 the top. It's like construction easement? It was all

1 about the construction easement.

2 MR. GEIGER: The reference was "something
3 to Exhibit 30." Our Petitioner's Exhibit 30 is a deed
4 in reservation rights and easements.

5 MS. LINCOLN: Yeah.

6 MR. GEIGER: But there's no -- at least in
7 the copy I have there's no sketch attached. So I
8 don't know what you're referencing.

9 VICE CHAIR McDONALD: So for the record
10 what are we referencing?

11 MR. GEIGER: If I could. Petitioner's
12 Exhibit 30 is a deed in reservation rights and
13 easements. On Page 35 of that is a sketch which is
14 title "Enlargement: Final Subdivision Approval 4.55
15 Division Number."

16 It deals with a parcel 10A, which is not
17 this Project Area. It is a parcel that's mauka of
18 this Project Area. This particular deed covers a
19 number of parcels including the Project Area. It's
20 beyond the Project Area.

21 MS. LINCOLN: Yeah, I understand that. I'm
22 just wondering why it's part of your exhibits. Like,
23 why is it in here?

24 MR. GEIGER: Well, if you would read this
25 is part of Ms. Bigelow's testimony. So it's

1 referenced as part of Ms. Bigelow's testimony.

2 MS. LINCOLN: Okay. I'll ask her then.

3 Okay. Sorry. That's why. I wasn't sure who to ask.

4 Q (By Ms. Lincoln) Okay. Flood questions.

5 Does new land development increase flood risk
6 especially if the construction changes natural runoff
7 paths?

8 A Would you repeat the question, please?

9 Q Does new land development increase flood
10 risk especially if the construction changes natural
11 runoff paths?

12 A In my opinion if the Project is designed
13 properly then it does not increase flood risks.

14 Q Why do they usually want greenways and open
15 spaces along flood control projects?

16 A Again, in my opinion I believe that makes
17 nice greenways. It makes nice buffers between,
18 between development and hardscape and things that are
19 infrastructural in nature.

20 Q Okay. Thank you. Are you aware that dam
21 failures are potentially the worst flood events?

22 A I guess we've seen that happen.

23 Q Are some dam failures the result of
24 neglect?

25 A I imagine so.

1 Q Is that why the county had to remove the
2 rock and sediment from the Kahoma basin to meet the
3 Army Corps of Engineers' requirements? There's
4 some -- that was in previous testimony when you talked
5 about they took sediment out of the basin and put it
6 on the bottom of this basin because it needed to meet
7 Army Corps of Engineers' requirements to keep it free
8 from flooding.

9 A Is that sediment removed from the top of
10 the channel or at the bottom of the channel?

11 Q It just said "from the flood channel" to
12 meet Army Corps of Engineers requirements.

13 A I guess like anything maintenance is
14 required.

15 Q Did your assessment take into consideration
16 the impact of the sediment and rock that was placed on
17 the bottom of the property in 2011? Like when you did
18 your topography and your assessment that's been kind
19 of after the fact of your dated.

20 A If additional fill was added in 2011 the
21 topographic survey of the property pre-dated that.

22 Q Okay. Does the sediment -- could the
23 sediment impact drainage or other issues related to
24 raised topography?

25 A Sorry. Could you repeat the question

1 again?

2 Q From the dirt that was put at the bottom of
3 the dirt and sediment and rock that was put at the
4 bottom of the property, could that sediment impact
5 drainage or other issues related to raising the
6 topography?

7 A If additional fill was added at the bottom
8 of the property, then that would have to be taken into
9 account in the final design. But, no, I believe that
10 if the drainage system is properly designed then the
11 impact would be there would be no impact.

12 Q Okay. Is there any other related issues to
13 raising topography like that rather from an
14 engineering standpoint for the existing neighborhood?
15 Or would that be something to take into consideration?

16 A Certainly. The ordinance -- the Maui
17 county ordinance says that you cannot -- you cannot
18 adversely impact adjacent and downstream properties.

19 So if the site is filled higher than what
20 it currently is then mitigative measures would have to
21 be taken. Again, if the Project is designed properly,
22 then there should be no adverse impacts.

23 Q So that would be something that would be
24 checked again since the topography has changed since
25 you did your assessment they would check it again

1 before they build, is that correct?

2 A Yes.

3 Q Are some dam failures the result of
4 structural damage caused by a major event like an
5 earthquake?

6 A I imagine so.

7 Q Does Hawai'i have earthquakes?

8 A Yes.

9 Q Could the Kahoma Dam be compromised
10 structurally by an earthquake?

11 MR. GEIGER: I'm going to object. I don't
12 think there's any testimony that there's a Kahoma Dam
13 on this Project site. If she's referring to the
14 drainage basin that's something else.

15 VICE CHAIR McDONALD: I was unaware of any
16 Kahoma Dam, as well.

17 MS. LINCOLN: It's next -- they said
18 it's -- he mentioned that there is the flood control
19 project with a retaining wall, the dam there, that the
20 excess water would run into that.

21 VICE CHAIR McDONALD: Is that the debris
22 basin before it enters the flood control channel? I
23 don't think it's a dam?

24 THE WITNESS: Yeah, yeah.

25 MS. LINCOLN: There's a wall there that's

1 with the grading in it.

2 VICE CHAIR McDONALD: It's for debris.
3 It's a debris catchment.

4 MS. LINCOLN: Yeah.

5 VICE CHAIR McDONALD: Right.

6 Q (By Ms. Lincoln): So if that structure was
7 compromised by an earthquake and the water was able to
8 rush through like a wall, could that put the Kahoma
9 subdivision homes at risk? That's the question.

10 A When you refer to the Kahoma Dam, if I
11 understand you correctly, you're talking about the
12 area at the very top of the improved channel?

13 Q Yes.

14 A That's where you're talking about the
15 grade.

16 VICE CHAIR McDONALD: I'm not talking about
17 anything.

18 Q (By Ms. Lincoln): It's probably not called
19 a dam. It's probably called a retention basin wall.

20 A I don't know if I'm qualified to answer
21 that question.

22 Q Can I show you a picture of it?

23 MR. GEIGER: I think he's answered that he
24 didn't feel qualified to answer the question. So...

25 MS. LINCOLN: But he's an engineer and he

1 says he's answering questions on flooding.

2 VICE CHAIR McDONALD: Mr. Tanaka, are you
3 able to answer the question?

4 THE WITNESS: I guess if I saw -- I guess
5 if I -- do you have a photo?

6 MS. LINCOLN: I do.

7 VICE CHAIR McDONALD: Wait. If the photo's
8 been entered into exhibit I'll allow it.

9 MS. LINCOLN: Yes, it was. It's in my
10 testimony that I turned into you guys.

11 VICE CHAIR McDONALD: What exhibit number?

12 MR. GEIGER: Chair, to shortcut this,
13 Mr. Tanaka's here to testify about the drainage system
14 he designed with regard to this residential Project.
15 These questions are with regard to the Kahoma Stream
16 flood control project which obviously he hasn't had an
17 opportunity to review the engineering drawings on or
18 anything else. So it seems to me to not be relevant
19 to these proceedings.

20 VICE CHAIR McDONALD: I'll allow Ms.
21 Lincoln to ask the question to reference her exhibit.
22 If Mr. Tanaka is not able to answer so be it.

23 MS. LINCOLN: It's on Page 64 of my written
24 testimony. It's just pictures.

25 VICE CHAIR McDONALD: Mr. Tanaka --

1 Ms. Lincoln, can you have a seat and ask your
2 question.

3 THE WITNESS: I'm sorry. I don't think I'm
4 qualified to answer that question.

5 VICE CHAIR McDONALD: That's fine. Let's
6 move on.

7 MS. LINCOLN: That's fine.

8 Q Okay. Well, just looking at a picture like
9 that pretend it has nothing to do with the property,
10 if that failed could that cause flooding in the
11 adjacent property?

12 A Again I don't think I'm qualified to answer
13 that question.

14 Q Okay. That's fine. No problem.
15 Will there be somebody I'll be able to ask
16 that question to at any point?

17 VICE CHAIR McDONALD: I think Petitioner
18 has one more witness.

19 MR. GEIGER: We would not have anyone who's
20 going to testify about a structure that's not on our
21 property. This is the Kahoma Stream Flood Control
22 Channel.

23 It seems to me that those questions should
24 be directed to the Corps of Engineers or someone else.
25 It certainly doesn't have anything to do with our

1 Petition at all.

2 VICE CHAIR McDONALD: I think it's --

3 MS. LINCOLN: I can ask the County. I'll
4 ask the County. Ah --

5 VICE CHAIR McDONALD: Personally, I think
6 it's relevant because the channel abuts your property.

7 Q (By Ms. Lincoln) Okay. So my final
8 question would be -- oh, I have a couple more
9 questions, sorry. Just missed a page. Who would be
10 liable if flooding does occur? Let's just say
11 something happens and flooding occurs here.

12 MR. GEIGER: And I would object, this
13 witness can't give a legal opinion.

14 MS. LINCOLN: Oh, okay.

15 VICE CHAIR McDONALD: Right.

16 Q (By Ms. Lincoln): Okay. Regarding the --
17 are you aware that there are low-flow diversion plans
18 that could be able to divert the Kahoma Flood Channel
19 water to irrigate 16.7 acres next to it?

20 A No. I'm not aware of that.

21 Q Are you familiar with SCAP? Stream
22 Channel Alteration Permits?

23 A I know that they exist, yes.

24 Q Okay. So there is something that's in
25 place to allow for diverting flood control water.

1 Because if SCAP exists therefore...

2 A That's a permit that is run if you want to
3 do work within the waterway. I understand that.

4 Q Okay. So there are ways to divert the
5 stream water if we did want to make it ag land and
6 have non-potable water on the property?

7 A I guess I'm not qualified to answer that
8 question.

9 Q As an engineer you don't know that
10 question?

11 A To divert water? Certainly water is
12 diverted everywhere.

13 Q Okay. That's all. I just needed to know
14 that it would be able to be diverted from there.
15 Thank you. That's all.

16 VICE CHAIR McDONALD: Thank you,
17 Ms. Lincoln. Ms. Bolomet, how many questions do you
18 have lined up?

19 MR. BOLOMET: Ten or 11.

20 VICE CHAIR McDONALD: Ten or 11.

21 MS. BOLOMET: It will go fast if he can
22 answer fast.

23 VICE CHAIR McDONALD: Okay. I know some
24 people have to take some flights. So if we can get
25 through this within the next 10, 15 minutes.

1 MS. BOLOMET: I'll try.

2 XX

3 CROSS-EXAMINATION

4 BY MS. BOLOMET:

5 Q Are you aware of Judge Hifu's order to
6 Haseko Ewa, Inc. in the Kapipi Road Case in 2007 First
7 Circuit Court?

8 A No.

9 Q Would it surprise you that Judge Hifu ruled
10 that all courts and all islands must follow the ruling
11 of making a retention basin to filter the waters
12 before it runs down into the ocean so that it protects
13 the cultural practice of cultural practitioners like
14 Michael Lee?

15 A No.

16 Q So do you have -- where is the retention
17 basin going to be exactly on the property?

18 A The proposed retention basin on the
19 property would be on the north side of the proposed
20 roadway, almost at the very bottom of the Project.

21 Q Okay. What do you think the long-term
22 cumulative effects of the heavy metals on Mr. Lee's
23 cultural practice with limu would be?

24 A I don't know.

25 Q So do you know of a long-term study that

1 the developer has done on the cumulative effects of
2 the heavy metals of runoff from the street drainage
3 down to Mala where the coral and the limu will be
4 affected?

5 A No.

6 Q Would you be surprised to know that Judge
7 Hifu ordered that there be a long-term study on
8 measuring the long-term metals? And this is a
9 requirement?

10 A No.

11 Q So did you -- if you're not surprised is it
12 in any of your plans?

13 A No.

14 Q To do one?

15 A No.

16 Q Who's going to do that?

17 A As far as I know it's not a requirement of
18 the Project by the county or any of the state
19 agencies. Therefore I don't know who would do it.

20 Q So what's the precedent in First Circuit
21 Court mean when a judge is saying that all projects
22 need to do this?

23 MR. GEIGER: I'm going to object --

24 MS. BOLOMET: -- as it pertains --

25 MR. GEIGER: I'm going to object. This is

1 argumentative. If she has a question that deals with
2 the facts of this Project.

3 MS. BOLOMET: Well, I'm trying to -- there
4 was a ruling. And I'm trying to understand how are
5 they meeting the ruling that is now a requirement for
6 projects to protect the cultural --

7 VICE CHAIR McDONALD: The ruling was
8 specific to Haseko and the discharge outlet for
9 Haseko. Let's concentrate on this Petition and not
10 what was ruled on in Haseko.

11 MS. BOLOMET: But I thought it was -- the
12 ruling was based on Article XII section 7 which
13 protects Hawaiian cultural rights. And that the
14 runoff will be affecting -- from this Project will be
15 exactly the same and affecting the Hawaiian cultural
16 rights for the limu and the coral medicine.

17 VICE CHAIR McDONALD: Mr. Tanaka, are you
18 familiar with the ruling?

19 THE WITNESS: No, I'm not.

20 VICE CHAIR McDONALD: Okay. The witness is
21 not familiar. Let's move on with the questioning.

22 Q (By Ms. Bolomet): Okay. Are you familiar
23 with the acronym ADW?

24 A No.

25 Q It has to do with the capacity for the

1 wastewater that's going into the treatment plant. Is
2 that average daily weight?

3 A No, I'm not familiar with that term.

4 Q So when you plan your, the drainage, are
5 you planning just storm drain? Or do you have to deal
6 with the wastewater as well, your plan?

7 A Part of the civil, civil design is
8 collecting and transmitting and conveying the
9 wastewater to the appropriate treatment facility. So
10 yes, we do, we do -- part of the infrastructural
11 design that the civil engineer does includes
12 wastewater collection and disposal.

13 Q Okay. So the water that's coming from the
14 houses, the wastewater, the toilets, sinks, that sort
15 of thing is that called domestic water?

16 A The potable water that goes into the house
17 through the water meter is called domestic water.

18 Q So I mean what I'm trying to get at is the
19 wastewater and the stormwater are they going to all go
20 to the Lahaina Treatment Plant?

21 A No. No. The treatment plant only treats
22 wastewater not stormwater.

23 Q Okay. So you're taking care of both. It's
24 just going to separate places.

25 A They're just -- they're separate systems.

1 Q Yes. So you're designing separate systems.

2 A Yes.

3 Q Okay. So are you familiar with the county
4 of Maui consultant's report, engineering report CH-2M
5 Hill that talks about the existing reliable plant
6 capacity for the Lahaina Treatment Plant?

7 A No, I'm not.

8 Q Did you not say earlier that you were told
9 that there was enough capacity to receive sewage
10 treatment?

11 A All right. At the Lahaina Treatment Plant.

12 Q Yeah.

13 A Yes.

14 Q Okay. So the statistics that I've seen for
15 the EPA, according to the EPA for the county it
16 currently treats 4 to 6 mgd's and disposes of 3 to 5
17 mgd's through underground injection because there's an
18 overload according to --

19 VICE CHAIR McDONALD: Ms. Bolomet, we need
20 a question.

21 Q (By Ms. Bolomet): Okay. So would you be
22 surprised to find out that last week they ruled that
23 there wasn't enough capacity at the Lahaina Treatment?

24 A I'm sorry, who ruled?

25 Q It was in the -- I think it was the EPA to

1 the state of Hawai'i? Are you familiar with that, the
2 wastewater facility? You have to have permits, right,
3 from the wastewater facility?

4 A You have to have a permit to connect up to
5 the system. In order to connect up to the system the
6 county has to be assured that they have adequate
7 capacity to treat the anticipated wastewater that
8 would get to the treatment plant. So if someone is
9 saying that there is inadequate capacity at the
10 treatment plant, then, yes, I would be surprised.

11 Q Are you familiar with the Clean Water Act
12 305B and 303B?

13 A Portions of it.

14 Q Okay. And so would you be surprised to
15 learn that the Hawai'i Department of Health, DOH,
16 reported to the EPA and to the U.S. Congress that
17 receiving waters for discharge from the Project Kahoma
18 Stream, Mala Wharf in Ka'anapali are not meeting the
19 Clean Water Act goals and state water quality
20 standards?

21 A Are we talking about wastewater or
22 drainage? I'm sorry. I'm confused.

23 Q Well, the Clean Water Act, if you go into
24 the injection wells then it ends up going into the
25 groundwater and eventually goes into the ocean. If

1 you're doing stormwater and it goes down it affects
2 the ocean.

3 If you are putting wastewater to Lahaina
4 and they're at overcapacity, then they're using
5 injection wells which goes into the groundwater and
6 then into the ocean. So --

7 MR. GIROUX: At this point I'm going to
8 object because we're talking about facts that are not
9 evidence. And we're asking for speculation and a
10 response from something that hasn't been entered into
11 evidence.

12 MS. BOLOMET: It has been entered into
13 evidence under Robin Knox's testimony.

14 MR. GIROUX: Ms. Knox hasn't testified yet.

15 MS. BOLOMET: The written testimony that we
16 handed in.

17 VICE CHAIR McDONALD: Can you ask your
18 question or repeat your question because I kind of got
19 lost.

20 MS. BOLOMET: Okay.

21 VICE CHAIR McDONALD: And if the witness is
22 able to answer the question please answer. If not
23 then the witness is not able to answer the question.

24 MS. BOLOMET: Okay.

25 Q So are you aware pursuant to Clean Water

1 Act 305, section 305B and 303D the Hawai'i Department
2 of Health reported to the EPA and to the U.S. Congress
3 that receiving waters for discharge from the Project
4 Kahoma Stream Mala Wharf in Ka'anapali are not meeting
5 Clean Water Act goals and state water quality
6 standards. Are you aware of that?

7 A No.

8 Q Okay. Well, I'm going to be done for now
9 because he needs to have more knowledge of this before
10 I can go on. So I'm done.

11 VICE CHAIR McDONALD: You're done?

12 MS. BOLOMET: I'm done.

13 VICE CHAIR McDONALD: Redirect?

14 MR. GEIGER: Yes, just real briefly.

15 REDIRECT EXAMINATION

16 BY MR. GEIGER:

17 Q Kirk, you were asked questions about the
18 capacities of the West Maui domestic water system. In
19 direct system which was submitted as Exhibit 12 by
20 the county of Maui, Mr. David Taylor provided
21 testimony. Do you know who Mr. David Taylor is?

22 A Yes, I do know Dave Taylor. He's the
23 director of the Department of Water Supply.

24 Q And Mr. Taylor in his testimony indicated
25 that the property overlies Launiupoko aquifer which is

1 estimated sustainable yield of 7 million gallons per
2 day. Is that consistent with the information you were
3 provided by the Department of Water Supply
4 availability?

5 A Specifically they didn't give me that
6 7 million gallons per day figure. But in my
7 discussions with the Department of Water Supply they
8 assured me that there's adequate source for additional
9 meters for this Project.

10 MR. GEIGER: Nothing further, thank you.

11 MR. YEE: For the record you were referring
12 to Exhibit 13?

13 MR. GEIGER: Yes.

14 VICE CHAIR McDONALD: Can you repeat that.

15 MR. GEIGER: Yes. It's Exhibit 13. I
16 apologize. I thought it was Exhibit 11. It's
17 Exhibit 13.

18 VICE CHAIR McDONALD: Thank you, Bryan.
19 Commissioners, any questions? Commissioner Biga.

20 COMMISSIONER BIGA: Thank you. I'll make
21 it brief. I have a couple questions. One is is it
22 common practice to have the Association maintain the
23 basins?

24 THE WITNESS: Generally it is. Because
25 what happens is the county doesn't want to maintain it

1 and I'm not sure about in this particular case, but
2 when a subdivision is put on the market and all the
3 lots are sold, then generally the developer doesn't
4 have any responsibility anymore. So the only entity
5 left is the Association.

6 These basins are not maintenance free.
7 They build up with silt. They need to be -- they need
8 to be maintained. So I guess -- I'm sorry, long,
9 short answer: Yes.

10 COMMISSIONER BIGA: Also in your report for
11 the sewer lines that will be, I guess, going over the
12 storm drain.

13 THE WITNESS: Over Kahoma Stream.

14 COMMISSIONER BIGA: Yeah, Kahoma Stream.
15 Why does the Project have to wait to see if the Corps
16 of Engineers need to take a look at it?

17 THE WITNESS: Okay. We propose to bolt the
18 sewer line on the side of the bridge. And because the
19 bridge spans over a Corps of Engineers' project it's
20 generally we seek the Corps of Engineers' approval
21 because we're bolting the sewer line, we're proposing
22 to bolt the sewer line to the bridge.

23 COMMISSIONER BIGA: Okay. That's all.
24 Thank you.

25 VICE CHAIR McDONALD: Any other questions?

1 Okay. Thank you.

2 MR. GEIGER: I'm assuming that we're
3 stopping for the day. We do have Ms. Bigelow left for
4 our witness and then Mr. Frampton on rebuttal.

5 VICE CHAIR McDONALD: We'll take your
6 remaining witnesses at the next hearing.

7 MR. GEIGER: Okay. Thank you.

8 VICE CHAIR McDONALD: So we're adjourned.

9 (gavel)

10 (The proceedings were adjourned at 5:07 p.m.)

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C E R T I F I C A T E

I, HOLLY HACKETT, CSR, RPR, in and for the State
of Hawai'i, do hereby certify;

That I was acting as court reporter in the
foregoing LUC matter on the 23rd day of August 2012;

That the proceedings were taken down in
computerized machine shorthand by me and were
thereafter reduced to print by me;

That the foregoing represents, to the best
of my ability, a true and correct transcript of the
proceedings had in the foregoing matter.

DATED: This _____ day of _____ 2012

HOLLY M. HACKETT, HI CSR #130, RPR
Certified Shorthand Reporter