

Exhibit "17"

Written Testimony of Stacy A. Otomo

WRITTEN TESTIMONY OF STACY A. OTOMO

My name is Stacy A. Otomo. I am a registered professional civil engineer and principal of Otomo Engineering, Inc. on Maui which was founded in 1991.

I obtained a Bachelor of Science degree in civil engineering from the University of Hawaii in 1977, and a Masters of Science degree in civil engineering from the University of Hawaii in 1979. I am a member, and past President and State Director, of the Hawaii Society of Professional Engineers, Maui Chapter, and past member of the County of Maui Urban Design Review Board.

My firm was retained by the Petitioner, Emmanuel Lutheran Church of Maui, to provide engineering and drainage consulting services, including an analysis and preparation of preliminary engineering and drainage reports, for Petitioner's proposed campus for a new church and school ("Project") situated at Wailuku, Maui, Hawaii, Tax Map Key No. (2) 3-5-002:011, consisting of approximately 25.263 acres ("the Petition Area").

Attached as Appendix B and F to Petitioner's Exhibit "6" are true and correct copies of the Preliminary Drainage Report and Preliminary Engineering Report which I prepared for the Project.

With respect to existing infrastructure, there is an existing 12-inch sewer line traversing through the southeastern corner of the Petition Area. This sewer line is part of a system that services the Waikapu area. The system consists of an 8-inch sewerline that begins on Waiko Road and increases in size to a 12-inch sewerline before it reaches Waiale Road.

With respect to water, the Commission on Water Resource Management designated the Iao Aquifer as a Groundwater Management Area on July 21, 2003. While the

domestic water demand for the Project is anticipated to be approximately 42,947 gallons per day ("gpd") as determined by the land area and 29,400 gpd as determined by the total number of anticipated students, the realistic domestic water demand for the Project is 29,400 gpd since Wailuku Agribusiness will be providing the irrigation source for the Project, thereby reducing the Project's domestic water demand. Water storage for the Project will be provided by the existing 3.0 million gallon Iao Tank which is located at the intersection of Main Street-Iao Valley Road-West Alu Road at an elevation of 506 feet.

It is my understanding that the County of Maui, Department of Water Supply ("DWS") has added several sources of water for the County of Maui. Those sources are the expansion of the existing Iao treatment plant and Kupa'a I. Other sources of water may come from the Waikapu South and Maluhia wells. DWS continues to issue water meters in Central Maui to those ready to receive service.

Testimony on September 8, 2006 from the Land Use Commission hearing concerning the Hale Mua Affordable Housing Project (Docket No. 05-755), the transcript of which is attached to my testimony, provides strong optimism that there will be sufficient water to accommodate the demands of the Project. Former DWS director George Tengan testified that DWS continues to work toward developing more sources so water will be available to address normal growth on the island of Maui.

According to Mr. Tengan, within the next several years, there will be an additional water supply of 10 to 11 million gallons per day ("gpd") available in the Central Maui Water System after factoring in the three wells in the Maui Lani area, the Iao water treatment plant treating surface water, Iao tank site well, Waikapu well, three wells being developed by

Kehalani Mauka, and the Waihee and Iao Aquifers. Mr. Tengan also testified that the actual amount of water available must take into account that the water demand in Central Maui has been increasing by approximately 500,000 to 700,000 gallons per day per year.

Additionally, the Division of Water Resource Management's Branch Chief of Ground Water Regulation, Roy Hardy, testified at the Hale Mua proceedings on September 21, 2006 that subject to certain infrastructure limitations, an additional 2 million gpd can be withdrawn from the Iao Aquifer. A copy of the transcript of Mr. Hardy's testimony is also attached to my testimony.

The County's existing wastewater system services the Waikapu and Wailuku areas. The Wailuku-Kahului Wastewater Reclamation Facility ("WKWRF") is located on Amala Place near Kanaha Beach in Kahului. The facility has a capacity of 7.9 million gpd, and has the necessary capacity to meet the sewage demands of the Project, which is anticipated to generate a wastewater flow of approximately 10,050 gpd.

Wastewater from the Project will be collected by an onsite gravity sewer system, that will connect to the existing 12-inch sewerline traversing through the southeastern corner of the Petition Area. The existing sewerage system on Lower Main Street was recently upgraded by the installation of a new 15-inch sewerline. This new sewerline, which will be used to convey the Project's wastewater to WKWRF has the capacity to accommodate the wastewater generated by the Project.

Existing overhead electrical, telephone, and cable television lines along Honoapiilani Highway provide the source of utilities for the Project. Maui Electric Company, Verizon Hawaii, and Time Warner Oceanic Cable provide electrical, telephone, and cable

television services, respectively. Within the Project, all distribution systems will be installed underground.

Based on my professional opinion, the Petition Area is suitable for the proposed development from an infrastructural standpoint.

With respect to existing topography, the Petition Area slopes in a west to east direction from 384 feet above mean sea level at Honoapiilani Highway to 323 feet above mean sea level at the Waiale Road Extension, with an average slope of 6.2%.

As part of the Kehalani Offsite Drainage System project, an open channel was construction within the Petition Area. The open channel traverses diagonally through the northeastern corner of the Petition Area, and resulted in a separation of the Petition Area where approximately 1.5 acres are separated at the northeast corner.

The total present onsite runoff from the Petition Area for a 50 year - 1 hour storm is estimated to be 30.60 cubic feet per second ("cfs"). The estimated post-development runoff from the Petition Area for a 50 year - 1 hour storm is expected to be approximately 45.15cfs, which is an increase of 14.55 cfs over pre-development conditions.

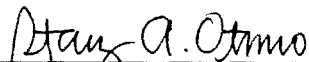
In order to accommodate the increase in post-development runoff, Petitioner will construct grated catch basins to initially collect onsite runoff. This runoff will then be conveyed to onsite retention basins which will be located within the Project's proposed playfields and landscaped areas. Onsite runoff from the makai half of Honoapiilani Highway will be intercepted by the Project's drainage system and conveyed to the onsite retention basins.

Based on the foregoing, it is my professional opinion that the proposed development will not have an adverse effect on the adjoining or downstream properties, and that

the proposed drainage improvements are sufficient to accommodate runoff from the Petition Area.

DATED: Wailuku, Hawaii, June 22, 2007.

Respectfully submitted,



Stacy A. Otomo

LAND USE COMMISSION

STATE OF HAWAI'I

HEARING

VOLUME

A05-755 HALE MUA PROPERTIES,
LLC (Maui)

II

TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for a public hearing at Maui Prince Hotel Makena Resort, 5400 Makena Alanui, Makena, Maui, Hawaii commencing at 8:30 a.m. on Friday, September 8, 2006 pursuant to Notice.

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

1 APPEARANCES:

2 COMMISSIONERS:

3 THOMAS CONTRADES

4 MICHAEL D. FORMBY

5 KYONG-SU IM

6 LISA M. JUDGE (Chairperson)

DUANE KANUHA

STEVEN MONTGOMERY

RANSOM PILTZ

REUBEN WONG

9 EXECUTIVE OFFICER:

ANTHONY CHING

10 CHIEF CLERK:

SANDRA MATSUSHIMA

STAFF PLANNERS:

MAXWELL ROGERS

11 DEPUTY ATTORNEY GENERAL:

DIANE ERICKSON

12 AUDIO TECHNICIAN:

WALTER MENCHING

13 A05-755 HALE MUA PROPERTIES, LLC (Maui)

14 For the Petitioner:

BLAINE KOBAYASHI, ESQ.

STERLING KIM, Manager

15 For the County:

JANE LOVELL, ESQ.

Deputy Corporation Counsel

MICHAEL FOLEY, Planning Director

COLLEEN TSUYAMA, Planning Dept.

18 For the State of Hawai'i:

BRYAN YEE, ESQ.

Deputy Attorney General

LAURA THIELEN, ABE MITSUDA

Office of Planning

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1 exempts the Applicant from certain standards and requirements of
2 that underlying zoning.

3 MS. LOVELL: Thank you. That's much better way of
4 putting it. So with that we have no further questions.

5 CHAIRPERSON JUDGE: Thank you very much for coming
6 today.

7 THE WITNESS: You're welcome.

8 CHAIRPERSON JUDGE: Would the county like to call its
9 next witness?

10 MS. LOVELL: Yes. The county calls George Tengan.

11 GEORGE TENGAN

12 called as a witness at the instance of the County Planning
13 Department, being first duly sworn to tell the truth, was
14 examined and testified as follows:

15 THE WITNESS: Yes, I do.

16 EXAMINATION

17 BY MS. LOVELL:

18 Q. Would you please state your name and your business
19 address for the record?

20 A. My name is George Tengan. Business address is 200
21 South High Street, Wailuku 96793.

22 Q. Mr. Tengan, are you a part of county government?

23 A. Yes, I am.

24 Q. What is your position with the county of Maui?

25 A. I currently serve as director for the Water

1 Department.

2 Q. That's the Maui County Department of Water Supply?

3 A. That's correct.

4 Q. Are you familiar with the Hale Mua project?

5 A. Yes, I am.

6 Q. When the Environmental Assessment was done for the
7 Hale Mua project did your Department comment?

8 A. I believe we did.

9 Q. Have you brought with you letters from your Department
10 that are included in the Environmental Assessment which is
11 Petitioner's exhibit -- I'm sorry I don't have the number of the
12 exhibit. Blaine?

13 A. If you're referring to that letter dated February 15th
14 to Munekiyo and Haraga, yes we did.

15 Q. Was there also a December 20, 2004 letter?

16 A. Yes.

17 Q. Okay. Let's go first to the December 20th, 2004
18 letter. And so that the members can follow along I think there
19 are individual page numbers on each page of the Environmental
20 Assessment document. But it's roughly in the middle and it's in
21 the section entitled "agency comments" I believe?

22 CHAIRPERSON JUDGE: Ms. Lovell, I think you're
23 referring to the Exhibit 15 the Final EA.

24 MS. LOVELL: Thank you very much.

25 Q. It's in Chapter 9 "Letters received during the Draft

1 Environmental Assessment and public comment period." Mr. Tengan,
2 do you have the December 20th letter in front of you?

3 A. Yes, I do.

4 Q. In the next-to-the-last paragraph your letter states,
5 "Availability of water will be determined at the time of
6 application for water service." You also note that by advising
7 about certain storage requirement your Department is not making a
8 commitment for an adequate supply of water for the project.

9 Could you explain that a little further?

10 A. With regard to the storage requirement?

11 Q. No. Your statement that the Department is not making
12 a commitment that there will be an adequate supply of water for
13 the project.

14 A. Yes.

15 Q. And cannot do so until water service is actually
16 applied for.

17 A. Yes. Until about, well, it was until July 21st, 2003
18 when state Water Commission designated the 'Iao Aquifer and
19 limited the pumping from 'Iao Aquifer by the Department the
20 Department was receiving and accepting reservations for water.

21 These reservations would essentially assure developers
22 that water would be available when the project was completed.
23 However, because of the restriction on pumping that resulted from
24 the state designating the aquifer, we stopped taking reservations
25 from developers.

1 What this meant was that we were no longer assuring
2 developers that water would be available when they completed the
3 project. And this was done primarily to put the developers on
4 notice that, yes, you may proceed with your project but we're not
5 going to assure you, assure that the water would be available
6 upon completion.

7 And so the developers would need to either proceed at
8 their own risk or if they wanted to be assured of water being
9 available upon completion, then they would need to develop their
10 own sources.

11 Q. Now, with respect to some other projects some
12 developers have proceeded to develop their own sources, is that
13 correct?

14 A. That's correct.

15 Q. Can you give us some examples of how a developer might
16 be able to do that?

17 A. Well, we had two recent situations. One was in the
18 Upcountry system whereby the developer drilled the well and
19 connected to the Department's water system. And with that the
20 Department committed a certain quantity of water to that
21 developer.

22 We have another agreement going on right now the wells
23 are being developed. And through that agreement upon completion
24 of, successful completion of the wells then the developer would
25 be entitled to so much water from those wells.

1 Q. So that's one route that a developer can take. The
2 other route that the developer can take is basically taking on
3 the risk that there may not be water available at the time the
4 project is completed, is that correct?

5 A. That's correct.

6 Q. Now, despite the fact that the risk may exist is the
7 Department of Water Supply doing anything to try to assure that
8 there will be enough water for this and other projects in the
9 future?

10 A. Um, well, I wouldn't say assure. But we are working
11 towards developing more sources so more water would be available
12 for what I would call normal growth. This would be currently
13 existing lots, vacant existing lots whereupon if the owner wanted
14 to build a home then water would be available for that home.

15 And we are also developing source so that we can
16 support whatever projects that the Planning Department and the
17 county council approves. I believe that's our mission. We need
18 to support the growth of the island as approved by both the
19 Planning Commission and the county council.

20 So, yes, we are working on developing new sources.
21 But in this case here, in the present case we're working with two
22 developers, the one that I mentioned about doing three wells in
23 the Maui Lani area. And we also have ongoing discussions with
24 A&B to do a water treatment plant treating surface water.

25 Q. And with respect to the proposed surface water

1 treatment plant how many million gallons per day are projected
2 assuming that that project goes forward?

3 A. We're looking at having a plant that can do
4 6 million gallons a day on an average day basis.

5 What this means is that to met max daily demand the
6 plant in total would be able to produce 9 million gallons per
7 day.

8 Q. Then are there wells in the Maui Lani project that
9 hopefully will produce more water for the Central Maui system?

10 A. Yes. The Maui Lani wells are located in the Kahului
11 Aquifer which is out of the 'Iao Aquifer that was designated by
12 the state. I believe Maui Lani has obtained its pump
13 installation permits from the state Water Commission for the
14 three wells that they recently drilled.

15 Q. Are there any other new sources that are likely to
16 come on-line in the next few years?

17 A. Well, we plan to put on the, develop a well at the
18 'Iao tank site which is located directly west of the county
19 building towards 'Iao Valley.

20 We do have a well in the Waikapu area. Both of these
21 wells are in the 'Iao Aquifer. What we plan to do with those
22 wells is to spread the pumping out from the aquifer based upon
23 the current pumping that's allowed by the state Water Commission.

24 The designation to place when our pumping at 'Iao
25 reached 18 million gallons per day, the 'Iao Aquifer has a

1 sustainable yield of 20 million gallons per day. So that leaves
2 a balance of 2 million gallons per day.

3 What we plan to do is after we receive or get approval
4 from the state on our existing pumping, we plan to file for an
5 additional withdrawal from that 2 million gallons per day so that
6 we can pump more from the aquifer.

7 Q. So, in other words, of the 2 million gallons per day
8 in the 20 million-gallon sustainable yield of the 'Iao that's
9 where we would be applying to the state Water Commission to use
10 that water?

11 A. That's correct. I might add that there is another
12 developer, that Kehalani Mauka. We're finalizing an agreement
13 for them to do three wells. This is also intended to spread the
14 pumping.

15 We're currently using the Wailuku shaft which is owned
16 by Kehalani Mauka. But the shaft is somewhat of an occupational
17 risk for our employees. And I don't think that Kehalani Mauka
18 wants to keep that also because of the safety hazards. So
19 they're planning to do three wells of which we expect to
20 participate in. And it's all intended to spread the pumping out
21 of the aquifer.

22 So what this would mean is rather than putting one big
23 straw at the location of the Wailuku shaft we would be putting
24 in, we would be having five smaller straws spread throughout the
25 aquifer so that we can better manage the pumping from the

1 aquifer.

2 Q. These new sources that you've discussed, both the
3 surface water treatment plant that should produce an average of
4 about 6 million gallons a day on an average basis, the Maui Lani
5 wells and some of those other new wells, about what amount of
6 water is likely to be produced from all of these new sources if
7 they come on-line in the next couple of years?

8 A. Well, let me backtrack a little. When we submitted
9 our pumping reports to the state, one of the triggers for
10 designation was 18 million gallons per day. So in June of 2003
11 we reported that we had reached 18 million gallons per day. That
12 was an automatic trigger for designation.

13 However, it was found out later on that we, upon
14 recalibration of our pump efficiencies and the pumping hours, we
15 found that we overreported about 900,000 gallons per day of
16 pumping.

17 In other words, if we hadn't or if the calibration was
18 correct at the time the 'Iao Aquifer wouldn't have been
19 designated. But that's past already. The aquifer has been
20 designated and we're dealing with that.

21 But, anyway, at the time of the designation we had
22 about 800,000 gallons of water that we could still issue meters
23 on. Then you add on the 900,000 gallons of water that was
24 reported as being overpumped, that brings the total to
25 1.7 million gallons per day.

1 We recently upgraded our water treatment plant at the
2 'Iao tank site. This has allowed us to produce about
3 700,000 gallons a day. So you take .8, .9, that's 1.7, you add
4 another 700,000 at the 'Iao water treatment plant, that comes up
5 to 2.4. Since designation we've been pumping about
6 500,000 gallons a day more out of the Waihe'e Aquifer. So that
7 adds on another 500,000 gallons. So we're talking about, at this
8 point in time, 2.9 million gallons.

9 I expect that the Maui Lani wells will be on line
10 within the next couple of years. That's going to be able to
11 produce about 2 million gallons a day. So now we're at
12 4.9 million gallons per day.

13 But with the water treatment plant coming on line that
14 should be, should take a little longer than the Maui Lani wells.
15 That's going to give us 6 million gallons per day. So we're
16 talking about an additional supply of about 10 million to nearly
17 11 million gallons per day since designation.

18 And our experience has been that the demand has been
19 increasing by about, I would say, 500 to 700,000 gallons per day
20 per year. You can do some math and determine how much water
21 would be available, let's say, three, four years from now.

22 Q. Thank you. Then finally with respect to the
23 February 15th, 2005 letter in which you commented or your
24 Department commented, do you have that letter in front of you,
25 Mr. Tengan?

1 A. Yes, I co.

2 Q. If you look at the third paragraph of the first page
3 of the letter it starts out, the paragraph starts out, "The
4 Applicant estimates total water demand for this project at about
5 415,000 gallons per day."

6 A. Yes.

7 Q. Do you see that?

8 A. Yes.

9 Q. Okay. The last sentence of that paragraph states that
10 "Applicant has indicated that a private source will be provided
11 for non-potable use on the 19 agricultural lots."

12 Was it your understanding that the 19 large lots in
13 this project would be agricultural lots?

14 A. I can only go by what's stated in there. We used the
15 term 19 agricultural lots. But my understanding was that one
16 home could be built on each lot and that if water is available
17 that we would provide water from the public water system for that
18 use.

19 Q. Then non-potable water would be used for the
20 agricultural portion, correct?

21 A. That's correct.

22 MS. LOVELL: I have no further questions but I'm sure
23 other parties have questions. So hang on.

24 CHAIRPERSON JUDGE: Petitioner, do you have questions
25 for this witness?

1 MR. KOBAYASHI: Just a few.

2 CROSS-EXAMINATION

3 BY MR. KOBAYASHI:

4 Q. Good morning, Mr. Tengan. Did your Department do a
5 March 24, 2005 letter with respect to this project? Do you have
6 that available?

7 A. No, I don't.

8 MR. KOBAYASHI: With the Commission's allowance I'd
9 like Mr. Tengan to have an opportunity to review a March 24th,
10 2005 letter from his Department.

11 CHAIRPERSON JUDGE: Is that somewhere in our record
12 here?

13 MR. KOBAYASHI: No. I actually, I just had it in my
14 briefcase that I noticed it. I'd like to maybe copies but I
15 think it's a letter that I think should be brought into the
16 proceeding because it does state that it actually replaces his
17 letter of December 20, 2004 which was what Ms. Lovell was
18 questioning him on.

19 CHAIRPERSON JUDGE: I think, Ms. Lovell would you like
20 to look at that letter before your witness --

21 MS. LOVELL: That would probably be a good idea.

22 CHAIRPERSON JUDGE: Let's take a five-minute break.

23 (Recess was held. 11:05)

24 CHAIRPERSON JUDGE: (11:20 Gavel) Where we left off
25 Mr. Kobayashi had asked a question to our witness regarding a

1 March 24th, 2005 letter. The parties all have a copy of that now
2 I believe. Are there any objections to that question?

3 MR. YEE: No objection. I don't remember the question
4 but --

5 CHAIRPERSON JUDGE: I'm sorry. Let me restate,
6 rephrase that. Mr. Kobayashi, are you planning to admit this
7 into evidence?

8 MR. KOBAYASHI: Yes. We would label that as
9 Exhibit 40.

10 CHAIRPERSON JUDGE: Do any of the parties have an
11 objection to Petitioner entering this in as Exhibit 40?

12 MS. LOVELL: No objections.

13 MR. YEE: No objections.

14 CHAIRPERSON JUDGE: Commissioners? Seeing none, this
15 letter March 24, 2005 is admitted as Petitioner's Exhibit 40.
16 Mr. Kobayashi, you can resume your questioning.

17 MR. KOBAYASHI: Thank you.

18 Q. Mr. Tengan, during the break you've had an opportunity
19 to review Exhibit 40 which is a letter from your Department dated
20 March 24th, 2005?

21 A. Yes.

22 Q. You would agree with me that as stated in the first
23 paragraph of this letter this March 25th, 2005 letter replaces
24 the letter of December 20, 2004 which Ms. Lovell was asking you
25 questions about, correct?

1 A. Yes.

2 Q. In this March 24th, 2005 letter, Mr. Tengan, isn't it
3 true that as far as the amount of dwellings on the 19 large lots
4 of this project there's a reference in your letter that there
5 will be one main dwelling and one accessory dwelling to be
6 constructed on these lots?

7 A. That's what the letter states, yes.

8 Q. The other question I had related to Ms. Lovell's
9 questioning you about other February 15th, 2005 letter. In that
10 letter she asked you about the reference to the 19 lots. There
11 was an indication in the February 15th, 2005 letter that those
12 lots would be quote "agricultural lots." Do you remember that?

13 A. Yes.

14 Q. You would agree with me that your March 24, 2005
15 letter there's no reference in that letter as far as the 19 lots
16 being agricultural?

17 A. That's correct.

18 MR. KOBAYASHI: Thank you. That's all the questions
19 I have.

20 MS. LOVELL: Could I do just one follow up?

21 CHAIRPERSON JUDGE: Can you wait until you redirect?
22 State?

23 CROSS-EXAMINATION

24 BY MR. YEE:

25 Q. The 10.9, I'm sorry, you remember you went through a

1 series of numbers and I added it up to 10.9 million gallons a day
2 of additional water that may be available in the future.

3 A. Yes.

4 Q. Is all of that from either surface water or the 'Iao
5 Aquifer?

6 A. It's a combination of surface water and 'Iao Aquifer.

7 Q. My understanding --

8 A. I'll take that back. Yeah, it's a combination, yes.

9 Q. The water management area as I understand it is the
10 'Iao Aquifer alone, correct?

11 A. That's correct.

12 Q. Did you just not discuss or is there not going to be
13 other developments outside the 'Iao Aquifer, development of new
14 sources and additional water?

15 A. Yes. As I mentioned the Maui Lani wells they're
16 situated in the Kahului Aquifer.

17 Q. So put it differently is 10.9 mgd for the entire
18 island is that total sum of the additional water or is that just
19 devoted to a particular use?

20 A. That's just for the Central Maui system which extends
21 from Waihe'e out to Paia and up to Makena also.

22 Q. So the purpose, well what was, so when you added those
23 numbers up the purpose was to sort of describe an amount of water
24 that might be available for a particular geographic area?

25 A. That's correct. For what we referred to as the

1 Central Maui system.

2 Q. Okay. Then you talked about developing certain wells
3 for the purposes of spreading the pumpage. Could you just sort
4 of explain what you mean? You talked about five little straws.
5 I didn't quite understand. What does that do for you or how does
6 that help?

7 A. Yes. Currently at the Wailuku shaft we pump about
8 5 million gallons a day out of that one particular point there.
9 The 'Iao Aquifer extends from Waihe'e Stream going north to south
10 of the, of I mean, yeah, north of the Waikapu Stream going all
11 the way north to the southern side of the Waihe'e Stream.

12 So right now we're taking about 5 million gallons a
13 day out of that one point at Wailuku shaft. What happens is that
14 when you draw a lot of water from one point there is a tendency
15 for the chlorides or what's referred to as the mid-level point to
16 rise with that pumping.

17 So when you spread that pumping out, instead of taking
18 5 million let's say you take 2 million at that point, another
19 2 million somewhere's else, another million gallons somewhere's
20 else there is less of a tendency for that chloride level to rise.
21 That's basically it.

22 Q. So by spreading the pumping out you can then, you
23 know, correct me if I'm wrong but by spreading the pumping out
24 you can then draw up to the sustainable yield without impacting
25 the particular resource?

1 A. No. It's just a method of managing the aquifer
2 whereby you would reduce the risk of damaging the aquifer by
3 pumping from several points rather than drawing a lot from one
4 point.

5 As an example, if you were to pump 20 million gallons
6 from that one point there I'm sure the chloride levels would rise
7 very quickly where you would damage the aquifer.

8 Q. In your calculation of 10.9 million gallons per day
9 did you include -- was there included somewhere in there the
10 2 million gallons difference between the 18 and 20, to the 18
11 currently pumped and 20 of the sustainable yield?

12 A. That's correct. At the time we reported or at the
13 time of designation we had reported pumping 18 million gallons
14 out of the 'Iao Aquifer. The state Water Commission prior to
15 that had set pumping at 18 million gallons a day as an automatic
16 trigger for designation.

17 The 18 million gallons represents 90 percent of the
18 aquifer's sustainable yield which is 20 million gallons a day.

19 Q. But the difference, the 2 million-gallon difference is
20 not sort of over and above what might be available. That's
21 already included within your 10.9 calculation?

22 A. No, it's not.

23 Q. It's not. So is there 10.9 plus an additional 2 that
24 might be available?

25 A. Possibly.

1 Q. Do you know whether or not the water in the Spreckels
2 Ditch would be available for the Hale Mua project? I'm sorry.
3 Do you know?

4 A. Well, I don't know that it would be available
5 specifically for that project because we have several sources
6 within, that supplies the Central Maui system. Each source by,
7 you know, might enter the system at different points. The Hale
8 Mua project is located mauka and north of the intended or the
9 planned treatment plant.

10 I can foresee the water going into our Waiale tank
11 which is located close to the cemetery, cemeteries in Wailuku
12 located above Maui Lani. The correctional center is located
13 close by.

14 I guess in answer to your question, no. The water
15 from the treatment plant would probably not be going to the Hale
16 Mua project. But what would happen would be the treatment plant
17 would be servicing those areas where the demand in these areas
18 would be reduced from the existing sources so that water could go
19 to the Hale Mua project. Just a matter of shifting the water
20 around.

21 Q. It would be your preference that irrigation on the 19
22 large lots come from non -- well, does not come from potable
23 groundwater supplies, correct?

24 A. That's correct.

25 Q. Would the same be true for landscaping on the 19 large

1 | lots?

2 | A. I would say yes. Depends on the extent of
3 | landscaping, you know. It one case we did do an agreement with a
4 | developer in an agricultural subdivision whereby the owners could
5 | only landscape 10,000 square feet out of their total acreage
6 | which might have been about 2 acres or so.

7 | So, yes, in answer to your question we would prefer
8 | that even landscaping be done with non-potable water.

9 | Q. Do you know whether it is possible as a practical
10 | matter to use, to use something other than potable groundwater in
11 | order to irrigate or to supply the water for irrigation or
12 | landscaping of the 19 large lots?

13 | A. There might be non-potable surface water that's
14 | flowing through the ditches right now. I don't know what kind of
15 | arrangements the developer can make with those. But as far as
16 | we're concerned any agricultural -- and I'm not talking about
17 | zoning now, I'm talking about usage -- any agricultural usage
18 | could be provided from the existing Wailuku Water Company
19 | irrigation system.

20 | Q. Are you familiar with the proposal to have storage
21 | tanks built for each individual lot --

22 | A. -- no, I'm not.

23 | Q. I'm sorry, of the 19 large lots.

24 | A. No, I'm not.

25 | MR. YEE: I have no further questions. Thank you.

1 CHAIRPERSON JUDGE: Commissioners, any questions for
2 this witness? Commissioner Wong.

3 COMMISSIONER WONG: Mr. Tengan, is there any reason
4 that you would like to present to the Commission why this
5 petition should be denied solely on the basis of lack of water?

6 THE WITNESS: No. That's not my call to make. As we
7 stated in our letters, you know, water may be available now and
8 if the developer wants to proceed with his project and take that
9 risk that's not my call to make.

10 COMMISSIONER WONG: Is there any indication that it is
11 impossible for water to be available for the development of this
12 proposed project?

13 THE WITNESS: No.

14 COMMISSIONER WONG: I have no further questions, Madam
15 Chairman.

16 CHAIRPERSON JUDGE: Commissioner Piltz.

17 COMMISSIONER PILTZ: Yes. George, you stated that you
18 would possibly increase the pumpage to 2 million gallons a day.
19 During the designation period you were down at 18 million and at
20 Mokuahau plant they removed one of the pumps. With the increased
21 pumpage now would you reinstall that pump?

22 THE WITNESS: Probably not. Because, as I was stating
23 earlier, when you draw too much water from one point you might
24 bring up the chloride levels. For some reason, originally we had
25 three wells there. And as you mentioned one is out of service at

1 this point in time. For some reason that one well got salty. So
2 the Department discontinued use of that well. So we don't intend
3 to put that well back in service.

4 COMMISSIONER PILTZ: So the preferred method of
5 pumping would be to have five new wells by Kehalani Mauka, is
6 that correct?

7 THE WITNESS: Three new wells by Kehalani Mauka and
8 two by the Maui Water Department. As far as the three wells for
9 Kehalani we'll probably be participating in the cost and in the
10 development of those wells also.

11 COMMISSIONER PILTZ: Okay. And that storage tank
12 there off of the road goes up to Wailuku Heights, is that part of
13 the project right now?

14 THE WITNESS: That's part of the Kehalani required
15 improvements.

16 COMMISSIONER PILTZ: Also in regards to this
17 particular project they called for building of a 500,000 gallon
18 tank. Is that part of this project or are they going to use
19 something else?

20 THE WITNESS: The developer would be required to put
21 in that total of 500,000 gallons of storage. That's basically
22 for fire protection.

23 COMMISSIONER PILTZ: Okay. All right. Thank you.

24 CHAIRPERSON JUDGE: Commissioner Formby.

25 COMMISSIONER FORMBY: Mr. Tengan, I wanted to refer to

1 a letter that was written to you dated December 2, 2004 Munekiyo
2 and Haraga, Inc.. In that letter it says in Paragraph 1 "In
3 discussions with your Department, Hale Mua Properties LLC has
4 agreed to provide 1 million in funds to support water system
5 improvements as your Department sees fit."

6 Can you shed any light on where those discussions are,
7 if any, or if you've come up with a need and expressed that to
8 the Petitioner?

9 THE WITNESS: I'm sorry, but I don't have that letter
10 in front of me. We don't have any ongoing discussions with
11 regard to that particular subject. We haven't reached any kind
12 of agreement with that particular item there.

13 COMMISSIONER FORMBY: Okay. Let's see. I guess
14 hoping that we learn from our mistakes and that's not an
15 admission that we make then, at least the staff doesn't, this
16 potable versus non-potable water seems to be an issue in this
17 docket as well as it was on Lanai specifically with reference to
18 the 19 large lots.

19 So who would be the best department in the county to
20 define potable versus non-potable for the purposes of this
21 docket?

22 THE WITNESS: I guess if you're looking at the county
23 it will probably be the Water Department.

24 COMMISSIONER FORMBY: Do you have a working definition
25 that could be applied to this petition if we are trying to define

1 just for legal purposes potable versus non-potable?

2 THE WITNESS: Yes. Potable water would be water that
3 meets all the requirements of the Safe Drinking Water Act as
4 enacted by or as was adopted by the EPA and the State Department
5 of Health Drinking Water Branch.

6 COMMISSIONER FORMBY: Okay. Then when you say "all
7 the requirements" just to clarify you're talking about primary
8 and secondary?

9 THE WITNESS: I don't know what you're referring to as
10 primary and secondary.

11 COMMISSIONER FORMBY: My understanding is that EPA
12 requirements have a primary as well as a secondary.

13 THE WITNESS: Yes.

14 COMMISSIONER FORMBY: So when you say "meets all the
15 requirements" --

16 THE WITNESS: Yes.

17 COMMISSIONER FORMBY: -- are you referring to both
18 primary and secondary as established by EPA?

19 THE WITNESS: Yes.

20 COMMISSIONER FORMBY: Then I also had a question
21 about, just 'cause I'm curious, at what point does your
22 Department provide the Petitioner with a green light on water
23 supply?

24 THE WITNESS: At the point when it comes in with its
25 water meter applications.

1 COMMISSIONER FORMBY: Okay. Finally, with respect to
2 the 19 large lots, the Petition Area, is there sufficient
3 rainfall there for the individual owners of those lots to set up
4 a catchment system if they wanted to for irrigation purposes?

5 THE WITNESS: That's not for me to determine. The
6 Petitioner in my mind would have to do his own studies. And if
7 that's going to be a point that the Commission is going to look
8 at in approving the project then that's something that the
9 Petitioner has to work out with the Commission.

10 COMMISSIONER FORMBY: Okay. Thank you. No further
11 questions.

12 CHAIRPERSON JUDGE: Commissioner Im.

13 COMMISSIONER IM: Thank you. Thanks for your
14 testimony. Going back to the 500,000-gallon tank. Is it your
15 understanding that tank would be located within the property or
16 outside of the property?

17 THE WITNESS: Well, one tank at least has to be out of
18 the property in order to be situated high enough to provide
19 adequate water pressure on the project at the project.

20 COMMISSIONER IM: So at least one has to be, you said.

21 THE WITNESS: That's correct.

22 COMMISSIONER IM: Okay. Now, are you still requiring
23 two tanks?

24 THE WITNESS: We probably would because of the
25 elevation differences from the top end of the project to the

1 bottom end.

2 COMMISSIONER IM: Maybe I heard it wrong. But I
3 thought Mr. Reddington said that there would be, that would be
4 the parties agreed to one tank.

5 THE WITNESS: That's possible.

6 COMMISSIONER IM: So the discussion is ongoing. It's
7 just you haven't made the decision yet. So you may need to
8 revise this letter again if there's only one tank that's going to
9 be required. 'Cause this letter dated March 24th still refers to
10 two tanks.

11 THE WITNESS: That comment was based upon the, I don't
12 know whether excuse me, (to counsel) was the final plan
13 submitted? Anyway, depending on the elevation deferences on
14 property or on the project that would be the determining factor
15 as to whether one tank is needed or not.

16 As far as the total requirement of 500,000 gallons
17 that doesn't change regardless of where the tank is located.

18 COMMISSIONER IM: Right. If there's only one tank
19 would that be within the property or outside the property?

20 THE WITNESS: I would think it would have to be
21 outside of the property.

22 COMMISSIONER IM: Is that something that you would
23 need to know that the Petitioner will have either fee interest or
24 potential lease so that the tank doesn't go away?

25 THE WITNESS: That tank would have to be dedicated to

1 the county with fee simple interest.

2 COMMISSIONER IM: Okay. Then I'm referring to your
3 March 24th, 2005 letter again. Second sentence says that "The
4 total storage is based on 1,000 gallons per lot for the 466
5 residential lots."

6 That's fine. But are you saying, then, well, I'm not
7 sure what you're saying here. But I just want to make sure that
8 the parties have clear understanding so that it reflects what the
9 parties agree to. That is, you could read this letter to say
10 that the potable water would not be provided to the 19 lots. It
11 only applies to 466 residential lots; that if the Petitioner
12 potentially then if the Petitioner provides potable water to 19
13 lots it may be in violation of this letter.

14 I don't think that was what was intended. But you
15 might want to take a look at that.

16 THE WITNESS: The intent of that particular sentence
17 is to state that in a non-potable use of water would be provided
18 for through a private source. Irrigating crops is really a
19 non-potable use. You don't need potable water to irrigate crops.
20 Feeding cattle you don't need potable water in the sense that
21 it's potable and safe for human consumption.

22 When we use the term "potable water" we're talking
23 about for human consumption.

24 COMMISSIONER IM: Just for the benefit of the
25 Petitioner and in the future if there's any doubt I just wanted

1 to make sure it is understood that the potable water will be not
2 only used on the 466 residential lots but also on the 19 lots.

3 THE WITNESS: That's correct.

4 MR. KOBAYASHI: Just to clarify that. The 19 lots is
5 included within the 466 lots. You seem to reference 466 plus 19.
6 But the 19 is within the 466.

7 COMMISSIONER IM: Okay. It says 466 residential lots
8 and 19 lots. That's actually then it will be substantially
9 different.

10 Then you also mentioned that second-to-the-last
11 sentence in the first paragraph, "An agreement stating these
12 conditions and running with the land will be required for
13 approval of the reduced storage capacity."

14 Can you explain what you mean by that and what kind of
15 terms will be necessary and what kind of terms will be in that
16 agreement?

17 THE WITNESS: Yes. I actually, well, I can't remember
18 what this particular sentence refers to. But it looks like, um,
19 we have reduced the storage requirements and that we need to
20 develop an agreement with the Petitioner on these requirements
21 here.

22 As I read the sentence here it probably refers to the
23 restriction on the building on those 19 lots whereby the
24 Petitioner or the owners of those lots would be able to build
25 only the main structure and one second dwelling.

1 Q. And have you worked with the Petitioner on this
2 agreement since the March 24th, 2005 letter?

3 A. I haven't. I can't recall working on it personally.
4 However, staff is probably working with the Petitioner if any
5 kind of agreement is needed.

6 COMMISSIONER IM: Okay. So you have no personal
7 knowledge of it being done, but you think --

8 THE WITNESS: I can't recall at this point.

9 COMMISSIONER IM: In the next-to-the-last sentence it
10 says, "A copy of your agreement with a private water source
11 provider is also required." I'm imagining, I'm interpreting that
12 to mean the non-potable water source.

13 THE WITNESS: That's correct.

14 COMMISSIONER IM: Now, would that non-potable water
15 source agreement -- let me step back a little bit.

16 When you say non-potable water must be used on the 19
17 lots what do you mean by that?

18 THE WITNESS: When we say non-potable water will be
19 used on those 19 lots we anticipate providing those lots with
20 potable for domestic use. The domestic use would be used
21 probably all within the house.

22 If there is any water requirements for other uses such
23 as cultivation, irrigation, raising animals, those uses would be
24 required or the requirement would be placed on the owners of the
25 lot and the developer to provide non-potable water.

1 COMMISSIONER IM: All right. So I guess those kinds
2 of requirements would be in the agreement that we talked about
3 with the Petitioner, between Petitioner and the Department of
4 Water Supply, those kinds of specific --

5 THE WITNESS: Correct. Those agreements would
6 probably be, in fact, yeah, those agreements would be required to
7 be recorded with the Bureau so any subsequent buyer of the
8 properties would be placed on notice as to the restriction of the
9 use of water.

10 COMMISSIONER IM: Yeah. And then I guess even as to
11 the remaining residential lots besides the 19 lots there would be
12 some kind of agreement as to how much water they could use for
13 each lot so that they understand that they can't go over a
14 certain amount or they shouldn't expect to go over a certain
15 amount.

16 THE WITNESS: Well, we don't, we don't restrict usage
17 to a certain gallonage. This thousand gallons per lot is just
18 basically used as a standard in determining what the storage tank
19 size should be.

20 COMMISSIONER IM: Hmm-hmm. Okay. When will you
21 require the agreement relating or the, I guess, the dedication of
22 the 500,000-gallon storage tank? Is that something that you will
23 require before the water meter's given or is that something the
24 Petitioner can do after?

25 Because I think, you know, it's something, it's one

1 | thing to develop it and use the water. But it may take a little
2 | more time to dedicate it. I think it may be you might want to
3 | clarify that point also in the agreement with the Petitioner so
4 | that it's clearly understood.

5 | I mean it would be better to dedicate it before the
6 | issuance of the water meter obviously. But, you know....

7 | Okay. Thank you. Thank you very much.

8 | CHAIRPERSON JUDGE: George, I just have one question.
9 | It's sort of follow-up to Commissioner Im. We've heard testimony
10 | that the Department of Water Supply perhaps will be providing the
11 | water on these 19 large lots for domestic use and that the
12 | Petitioner will be required to provide the non-potable water for
13 | the other use extra use I guess you could call it.

14 | And it was represented by the Petitioner's engineer
15 | yesterday that they would be constructing a system and bringing
16 | a, I guess, a hookup to each of the 19 large lots.

17 | And then it was the Petitioner's engineer's testimony
18 | that it would then become a personal decision of each of those
19 | owners whether they decide to hook up the non-potable water or
20 | the potable water.

21 | That was sort of disconcerting to me because my
22 | understanding they're not supposed to hook up to the potable
23 | water.

24 | Is there any way that there's going to be a
25 | requirement for you folks to, that they have to hook up to that

1 non-potable water for exterior use? And is there any way the
2 Department can enforce that?

3 I guess that goes back to Commissioner Im's question
4 about is there a gallonage indicator like if they're using so
5 many gallons you know that that's beyond their domestic use?

6 It's just one of things that's disconcerting to me
7 because if there's no requirement for them to hook up to that
8 from, I don't know if it's the developer or the Department of
9 Water Supply, if somebody is now using, watering their 18 acres
10 with potable water how do we prevent that. Or do you have a
11 policy in your Department that can require and actually ensure
12 that they hook up to the exterior and not have it be a personal
13 choice?

14 THE WITNESS: Well, if you go to the March 24th, 2005
15 letter in the first paragraph about the middle it states,
16 "Storage capacity required is also based on your representation
17 that a private water source will be provided for non-potable use
18 on the 19 lots which total 136 acres. And that only one main
19 dwelling and one accessory dwelling will be constructed on each
20 of these lots.

21 "An agreement stating these conditions and running
22 with the land will be required for approval of the reduced
23 storage capacity."

24 So the agreement would also include that a private
25 water source will be provided by the developer for non-potable

1 use of water. And this is the agreement that I'm talking about
2 or I mentioned that would be recorded with the Bureau so that
3 owners of those properties would know that they are restricted
4 from using potable water for non-potable purposes.

5 CHAIRPERSON JUDGE: I guess that's what I'm asking not
6 only will it say there will be non-potable water provided but it
7 is prohibited from using the potable water for those uses.

8 THE WITNESS: Correct.

9 CHAIRPERSON JUDGE: Because it was sort of left
10 yesterday that the people could choose.

11 THE WITNESS: We have something similar with the Maui
12 or Wailuku Country Estates where they have a dual water system
13 providing ag water or agricultural use non-potable water through
14 one system and domestic use through another system.

15 CHAIRPERSON JUDGE: That's all I have. County, any
16 redirect?

17 MS. LOVELL: I think given the time and the fact that
18 I have another witness waiting patiently I would be willing to
19 excuse Mr. Tengan at this point.

20 CHAIRPERSON JUDGE: We're going to go to a lunch break
21 now and come back at 1.

22 MS. LOVELL: Okay.

23 CHAIRPERSON JUDGE: We will be coming back at 1:00.

24 (Recess was held.)

25 CHAIRPERSON JUDGE: (Gavel 1:15.) We can go back on

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LAND USE COMMISSION

STATE OF HAWAI'I

HEARING

VOLUME

A05-755 HALE MUA PROPERTIES,
LLC (Maui)

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TRANSCRIPT OF PROCEEDINGS

The above-entitled matter came on for a public hearing at
Maui Prince Hotel Makena Resort, 5400 Makena Alanui, Makena,
Maui, Hawaii commencing at 10:10 a.m. on Friday, September
21, 2006 pursuant to Notice.

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

Holly M. Hackett, CSR RPR
Ph. 538-6458 Fx. 538-0453

1 APPEARANCES:

2 COMMISSIONERS:

THOMAS CONTRADES

3 MICHAEL D. FORMBY

KYONG-SU IM

4 LISA M. JUDGE (Chairperson)

DUANE KANUHA

5 RANSOM PILTZ

NICHOLAS TEVES

6

7

8 EXECUTIVE OFFICER:

ANTHONY CHING

CHIEF CLERK:

SANDRA MATSUSHIMA

9 STAFF PLANNERS:

MAXWELL ROGERS

10 DEPUTY ATTORNEY GENERAL:

DIANE ERICKSON

11 AUDIO TECHNICIAN:

WALTER MENCHING

12 A05-755 HALE MUA PROPERTIES, LLC (Maui)

13 For the Petitioner:

BLAINE KOBAYASHI, ESQ.
STERLING KIM, Manager

14

15 For the County:

JESSIE SOUKI, ESQ.
Deputy Corporation Counsel
COLLEEN TSUYAMA, Planning Dept.

16

17 For the State of Hawai'i:

BRYAN YEE, ESQ.
Deputy Attorney General
LAURA THIELEN, ABE MITSUDA
Office of Planning

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1 executive session. Is there a second?

2 COMMISSIONER CONTRADES: Second.

3 CHAIRPERSON JUDGE: Seconded by Commissioner Contrades.

4 All those in favor say aye.

5 VOICE VOTE: Aye.

6 CHAIRPERSON JUDGE: Those opposed? We'll go into
7 executive session. Thank you.

8 (Executive session held 1:46)

9 CHAIRPERSON JUDGE: (Gavel 2:30.) We'll go back on the
10 record. We'll let the state proceed with their case.

11 MR. YEE: At this time we call Roy Hardy.

12 ROY HARDY

13 called as a witness at the instance of the state Office of
14 Planning, being first duly sworn to tell the truth, was
15 examined and testified as follows:

16 CHAIRPERSON JUDGE: If you could just state your name
17 and address for the record, please.

18 THE WITNESS: My name is Roy Hardy. Is that my home
19 address or work?

20 CHAIRPERSON JUDGE: Business address.

21 THE WITNESS: Business address 1151 Punchbowl Street
22 Honolulu, 96813 with the Commission on Water Resource
23 Management Room 227.

24 EXAMINATION

25 BY MR. YEE:

1 Q. Would you state your position and place of employment?

2 A. Again, it's the Commission on Water Resource
3 Management. And my position there is branch chief of the
4 groundwater regulation.

5 Q. How long have you been employed in that position?

6 A. Fifteen years.

7 MR. YEE: We have submitted Mr. Hardy's resume, I
8 believe, and we would ask that Mr. Hardy be designated as an
9 expert in the field of water management.

10 CHAIRPERSON JUDGE: Does the Petitioner have any
11 objections?

12 MR. KOBAYASHI: No objection.

13 CHAIRPERSON JUDGE: County?

14 MR. SOUKI: No objection.

15 CHAIRPERSON JUDGE: Commissioners? Then Mr. Hardy is
16 qualified as an expert in this hearing.

17 THE WITNESS: Thank you.

18 Q. (By Mr. Yee) Mr. Hardy, has the Water Commission
19 designated 'Iao Aquifer as a water management area?

20 A. Yes, as a groundwater management area.

21 Q. What does that mean?

22 A. "Groundwater management area" basically means that you
23 need to obtain a water use permit from the commission.
24 Basically what that does is match the available amount that
25 the groundwater in this case in 'Iao against the, what I call

1 the end of the pipe, and insures the uses are reasonable and
2 beneficial in the public interest, so forth, without going
3 over the sustainable yield what the aquifer can yield. So
4 basically that's it.

5 Q. And why was the 'Iao Aquifer designated as a
6 groundwater management area?

7 A. Basically because the pumpage had exceeded
8 18 million gallons per day. The sustainable yield in the area
9 is 20. But actually the 'Iao Aquifer has been a subject of
10 designation actually even predating the Commission on Water
11 Resource Management back in the days of the Board of Land and
12 Natural Resources used to have groundwater control areas. So
13 this is way back.

14 But over the course of several petitions the
15 Commission decided to set up a milestone or a trigger of
16 18 million gallons per day based on a 12-month moving
17 average.

18 In July of 2003 the county went over that limit so
19 then, therefore, it was designated.

20 Q. So when it is designated would it be fair to say that
21 the Water Commission takes a much closer look at the status of
22 that particular aquifer?

23 A. That and the uses therein.

24 Q. What is the current status of the 'Iao Aquifer?

25 A. Well, from the aquifer's point of view everything is

1 okay. And by that I guess I have to qualify that by a number
2 of things.

3 First, again, the sustainable yield in the area is
4 20 million gallons per day. The recent pumpage, total pumpage
5 in that area is on the order of 18 million gallons per day.

6 But in addition to that we have deep monitor wells. We
7 have two actually, the 'Iao and the Waiehu. We monitor those,
8 those deep monitor wells. They go through the entire depth of
9 the freshwater lens, the basal lens that area.

10 We go out and monitor that. Basically we don't see any
11 problems from the aquifer's point of view right now based on
12 the data that we're seeing from these deep monitor wells and
13 the fact that the pumpage is just under sustainable yield.

14 Q. What is the current pumpage as you understand it?

15 A. It's roughly 18 million gallons per day.

16 Q. With respect to the amount of additional water that can
17 be withdrawn from the 'Iao Aquifer at this time, how much
18 water would you estimate is available to be withdrawn?

19 A. Two million gallons per day.

20 Q. My understanding is there was some information that
21 recent pumpage is higher, is that correct?

22 A. Yeah, it is. And the reason it's higher there's
23 enough -- when I say 18 million gallons per day that is the
24 basal portion of pumpage.

25 In the aquifer there is basically three types of

1 aquifers that you run into in this area. There's high level,
2 call it dike-confined hydrology, basal and there's also
3 caprock. So you have three major types of aquifers in this
4 area.

5 The one we're watching is the one that provides
6 drinking quality water and it doesn't affect surface water.
7 That's the basal source.

8 The total pumpage from the sources in that part of the
9 aquifer is 18 million gallons per day. They do have some
10 tunnel sources in some wells that are up in the higher level
11 which actually, they're taking more or they affect surface
12 water more.

13 Those we don't count against the sustainable yield
14 because they affect the streams more which is a little bit
15 unrelated.

16 Q. Do you know or do you have an opinion as to what the
17 operational yield is currently with the current
18 infrastructure?

19 A. The safe yield, yeah?

20 Q. Yes.

21 A. The operational we call it the safe yield. That's from
22 the infrastructure's point of view. They actually do have
23 some problems right now at 18 with the Moku Hau well fields
24 and the Waiehu Heights wells. Those wells are drilled very
25 deep. They go very close to the saltwater interface, if you

1 will.

2 So you could say that you know at 18, 19 they're
3 already experiencing some infrastructure localized problems at
4 those sites. We don't have a number for that operational or
5 safe yield, although the USGS is doing a study in conjunction
6 with the county doing numerical model. They're coming at a
7 million dollars to assess this operational sustainable yield.

8 The commission has also, and this was just yesterday,
9 had also got into a contract with the university to try get a
10 better handle on some constraints imposed upon the sustainable
11 yield, the natural sustainable yield of the aquifer by the
12 infrastructure.

13 The number, and this is just preliminary, that came out
14 yesterday, was 19 million gallons per day. Again that's just
15 preliminary. I'm just tossing that out as just some numbers
16 for reference right now.

17 Q. I think you explained it. But why don't you explicitly
18 explain again. I'll use, you prefer the term safe yield?

19 A. That's what we call them internally, yeah.

20 Q. Let me use that term. Could you explain the difference
21 between the safe yield and the sustainable yield?

22 A. Okay. Again, the sustainable yield, the way the
23 commission has defined it is the natural yield that the
24 aquifer, if you were to optimize your infrastructure, would
25 produce. That's the 20 million gallons per day. That's

1 always going to be constrained by infrastructure.

2 When you put a well in -- I guess the easiest way to
3 think about it is, if you had a, say you had a glass of water.
4 And your well, you stick it in. If you're only going in just
5 barely scratching the surface and you start sucking the water
6 out eventually it will go down then you're sucking air.

7 Well, there's a lot more storage there but because of
8 the limitation of that straw that would be the operational or
9 safe yield according to how you set that straw.

10 So what you want to try and do is optimize the system
11 so that you can get near the sustainable yield, the aquifer's
12 sustainable yield. So that's the difference. Your operation
13 safe yield will always be less than your natural sustainable
14 yield of the aquifer.

15 Q. Are there other aquifers, that is aquifers other than
16 the 'Iao Aquifer serving the Central Maui service system?

17 A. Yes. Waihe'e which is just north of 'Iao. They do
18 have some other wells that are in the isthmus, and the Waikapu
19 area. I guess until recently we're thinking that the
20 Hamakuapoko out in Paiea area would also be servicing that
21 system.

22 Q. Could you go to what's been marked as OP Exhibit 2A
23 which is the first map, I guess, closest to you and note, if
24 you can, to your best estimate, of where those aquifers are?

25 A. Sure.

1 Q. And take the mic.

2 A. All right. The 'Iao Aquifer is actually bounded here,
3 approximately up here by the Waihe'e Stream, let's see, down
4 through the harbor here all the way to about the Waikapu
5 Stream.

6 So below here this is the Waikapu Aquifer system.
7 Above is your Waihe'e system. In the middle here is the 'Iao.
8 Here from the, roughly from the harbor to here and east you
9 have this is basically the Kahalu'u Aquifer which is a caprock
10 aquifer. So those are the boundaries.

11 Q. Does the water management area include those other
12 aquifers?

13 A. No. Just the 'Iao, this center portion.

14 Q. So you don't require the same requirements, you don't
15 impose the same requirements on those other aquifers?

16 A. Correct. They don't need water use permits when
17 they're pulling water from those aquifers.

18 Q. I think you can probably sit down actually. So if I
19 understand your testimony you're saying with the current
20 information you don't believe the 'Iao Aquifer is at risk at
21 this time, correct?

22 A. Correct.

23 Q. Are any of the other aquifers close or anticipated to
24 be possibly listed as a designated groundwater management
25 area?

1 A. Yeah. The Waihe'e the northern portion is also or was
2 also in consideration for designation. However, the
3 commission back in 2003 I believe there were similar triggers
4 associated with designating that aquifer. They're currently
5 pumping about half the sustainable yield.

6 The commission actually took away all the triggers.
7 It's not designated. It's not designated and there aren't any
8 triggers in place right now but there was a time when there
9 were, yeah.

10 Q. Do you recall what the sustainable yield of the Waihe'e
11 Aquifer is?

12 A. Eight million gallons a day.

13 Q. They're pumping roughly about five mgd.

14 A. Between four and a half and five.

15 Q. Let me -- I'm sorry. I'm going to ask the question
16 again. So currently it's your opinion that the 'Iao Aquifer
17 is not at risk under current pumping levels, correct?

18 A. Correct.

19 Q. And that there might be as much as 2 million gallons of
20 additional water that could be available that could be subject
21 to certain infrastructure limitations?

22 A. Correct.

23 Q. And that any additional growth then I assume would have
24 to come from alternative sources such as conservation source
25 water or sources outside the 'Iao Aquifer?

1 A. Correct. Although some of the alternatives could be
2 within the 'Iao area.

3 Q. What would be an example of those?

4 A. The Wailuku Water Company which is the ditch system in
5 the area, used to be Wailuku Ag.

6 Q. So surface water would be one example.

7 A. Surface water would be an alternative within the area.

8 Q. Conservation would be another possibility?

9 A. Right.

10 MR. YEE: I have no further questions, thank you.

11 CHAIRPERSON JUDGE: Petitioner, do you have questions
12 for Mr. Hardy?

13 MR. KOBAYASHI: We have no questions.

14 CHAIRPERSON JUDGE: Does the county have any questions?

15 MR. SOUKI: Just a few, thank you.

16 CROSS-EXAMINATION

17 BY MR. SOUKI:

18 Q. Are there any other projects in the area that have
19 applied or will apply for permits that might affect the Hale
20 Mua project's application?

21 A. There are no other, right now the commission is in the
22 process of establishing or finalizing the establishment of
23 existing uses. Those are the uses that were at the time of
24 designation back in 2003.

25 There's one more source that the commission is trying

1 to finalize. Actually it went into a contested case. There's
2 a D&O out of it. It's Shaft 33. Part of the decision in
3 there or at least the proposed D&O is for the Kehalani Mauka
4 project. There's a substantial portion in there that's
5 actually a little bit beyond the existing use.

6 So in essence maybe that is the only potential project
7 that's, I guess, in competition with future. But other than
8 that there's been no applications that have come in to the
9 commission for new uses.

10 However, recently the Department of Water Supply did
11 come in with a petition to reserve the remainder of the water
12 to the 20 million gallons per day.

13 In that petition they haven't identified any projects.
14 Right now we're even debating whether that's something that
15 the commission can actually accept. Can't tell you if there's
16 projects that are directly impacting this project, Hale Mua.

17 Q. So the 18 million gallons is being pumped out now?

18 A. Correct.

19 Q. And 20 million is the sustainable?

20 A. Yes.

21 Q. If the county wants to reserve 2 million how would that
22 affect Hale Mua's application for water?

23 A. Well, it could be a part of that cushion that could be
24 in there. It may not be. We don't know. The petition is
25 simply, "We want to reserve the remainder."

1 We would prefer that the county come in with a water
2 use permit application. Of course there is specified
3 procedures and processing as well as they need to identify the
4 projects and justify the amounts: How many homes? What are
5 your standards? Do they have appropriate zoning? That kind
6 of thing.

7 This petition that's come in they're, in the Water Code
8 there is, all the Water Code states is that commission may
9 reserve water for whatever purposes. There is no petition
10 process identified.

11 So I guess the county has come in to try the easy way
12 of reserving water for a municipality which is a public trust
13 use, domestic water. But they haven't identified any projects
14 therein.

15 Q. As far as, you're aware that the county council just
16 voted to restrict the use of the Hamakuapoko Well. Would that
17 have any affect on this 'Iao Aquifer getting water in this
18 region?

19 A. Well, it certainly reduces a significant portion of
20 alternative water that could relieve pressure on 'Iao.
21 Whether or not that results in more water coming out from 'Iao
22 I guess we'll see.

23 The other alternatives out there are very big as well,
24 the Wailuku water the ditch system which the mayor is trying
25 to condemn. That source is 30 million gallons a day.

1 Substantial. So hard to say without knowing what the status
2 is of those other alternatives.

3 Q. I think you already made this point, but, again to your
4 knowledge taking all this into consideration there shouldn't
5 be any problem with Hale Mua getting water for its project in
6 that area?

7 A. That's really maybe more of a question for the county
8 to answer I suppose. But given what we see and what we know
9 there's still 2 million gallons per day available from 'Iao.
10 And this project taken by itself it would appear that it's
11 okay.

12 MR. SOUKI: Thank you.

13 CHAIRPERSON JUDGE: Commissioners? Commissioner Piltz.

14 COMMISSIONER PILTZ: Up until a few years ago the
15 county of Maui had complete control of the 'Iao Aquifer. And
16 when it was designated your operations took over, correct.

17 THE WITNESS: You could say that.

18 COMMISSIONER PILTZ: Do you ever see that being
19 reversed that the county would then regain control of the
20 water usage and have it whatever they call it de-whatever?

21 THE WITNESS: Undesignated? That possibility always
22 exists. It could come from anyone in the public requesting
23 the site to designate. They can petition to undesignate. But
24 from the commission's point of view I don't think the
25 commission would initiate that.

1 COMMISSIONER PILTZ: Okay. Thank you.

2 CHAIRPERSON JUDGE: Commissioner Im.

3 COMMISSIONER IM: You know when the last hearing
4 Hawaiian Home Lands Chairperson came, I guess executive
5 director, I thought they were going to build some houses
6 immediately adjacent to this project within the next couple
7 years. Wasn't that the representation that that's why they're
8 going to jointly use the waterline and sewer line and all
9 that?

10 MR. YEE: I'd be happy to -- I'm not testifying -- I'd
11 be happy to explain that later as to exactly where the DHHL
12 Phase IV of the Waiehu Kou development is.

13 COMMISSIONER IM: It doesn't use the same water source?

14 MR. YEE: It is in the Central Maui service system.
15 I'm not sure I understand the question. I'd be happy to
16 explain it except I don't understand the question.

17 COMMISSIONER IM: Basically there's 2 million left.
18 This project, I don't know how much it's going to use if the
19 school goes in there. But it seems like there is enough.

20 But you said that you don't know of any other projects
21 around that, around this Petition Area's property. And my
22 understanding was there will be other projects.

23 And then the question is let's just assume that this
24 project is going to use a million gallons. I don't know
25 whatever the gallonage is. Then you got 1 million left. Then

1 if DHHL is going to use what they need, 1.5, where is the
2 water coming from? I thought there was a plan by DHHL to
3 develop some substantial numbers of houses. Am I missing
4 something here?

5 MR. YEE: If I could respond perhaps outside of the
6 testimony. I believe what we will be arguing to you is that
7 certainly there is enough water for this project. You are
8 correct noting there are other projects and DHHL is simply one
9 of them that are in the Central Maui region.

10 The Central Maui region is served by a multiple
11 aquifers of which the 'Iao Aquifer is one, important one but
12 just one.

13 Ultimately the decision of who, which project is going
14 to get the water, I believe is going to be an issue for the
15 county to decide. Because they're the ones who are going to
16 have to award the water meters.

17 Whether the water is available or not the Water
18 Commission only looks at not the decision of which one gets
19 the water meter but just whether or not it's an efficient use.

20 So he had been speaking, you can ask him questions
21 about the water permits. But I believe the water permits
22 themselves do not look at "We prefer this development over
23 another development."

24 It looks at whether this particular water use for
25 this -- whether the use of water for this particular purpose

1 is an efficient one.

2 So in other words you don't give excessive water for
3 any particular use. Does that help you?

4 COMMISSIONER IM: I think that does help. I just, I
5 was, I guess, a little bit alarmed that he didn't know that
6 there was other projects that were coming up in the immediate
7 area that will use water obviously.

8 THE WITNESS: Well, I may. We are aware of other
9 projects. It's just that we don't know, it's a timing thing,
10 exactly when they're coming on on line. And there are other
11 alternatives. That's why with the remainder just looking at
12 this project alone isolated and with how much is remaining.

13 If it were today the county came in and asked the
14 commission for a water use permit, said, "We'd like to supply
15 Hale Mua" get a water use permit goes through the commission,
16 there will be enough water to provide for this particular...

17 COMMISSIONER IM: Thank you.

18 CHAIRPERSON JUDGE: Mr. Hardy, just a couple questions.
19 I'm not familiar with the water use permit process. And I'm a
20 bit confused about who typically submits these requests? Is
21 it the individual project or the county water departments?

22 THE WITNESS: It could be private developer on their
23 own or the county, private individuals, anyone can actually
24 submit an application.

25 But basically you have to identify your source of water

1 in this case because it's groundwater or well and what you're
2 going to be using it for and identifying where you're going to
3 use it for, what purpose.

4 You need to have appropriate land use approvals. And
5 we go down to the zoning level. You have zoning for your
6 project. Then you have authorized, proven that you have the
7 appropriate land use approvals for it.

8 We also look at other things like interference with
9 other wells. How is it going to affect the aquifer. We won't
10 allow it go to over 20 million gallons per day.

11 We also look at other things, how it's going to affect
12 DHHL. We also look at the Water Use and Development Plan.
13 That's something that's still being updated by the county.
14 That's another thing we look at.

15 Of course it's a very open and public process. Other
16 issues can come in the public hearings from the review from
17 the county, the mayor, the county council, Department of Water
18 Supply and other issues may come up as well. So that's kind
19 of the process in a nutshell.

20 CHAIRPERSON JUDGE: So any landowner there's located in
21 the 'Iao Aquifer if they wanted to drill a well to tap into
22 the groundwater they would have to come to the Commission on
23 Water Resources and submit a water use permit --

24 THE WITNESS: True.

25 CHAIRPERSON JUDGE: -- to use that water.

1 THE WITNESS: True. With the exception of individual
2 landowners drilling a well just for their own domestic
3 purposes. They're going to have a private well just for their
4 home to drink, they are exempted from coming in for a water
5 use permit.

6 CHAIRPERSON JUDGE: Okay. Then if I understand your
7 testimony the 'Iao Aquifer has the capacity to pump out
8 20 million gallons a day. But even if the county's petition
9 to reserve the extra 2 million gallons a day was approved by
10 the commission they wouldn't be able to pump those extra
11 2 million gallons because they are constrained by the existing
12 infrastructure, is that correct?

13 THE WITNESS: Correct. That's what we're seeing. I
14 think they see it as well with some of the chloride and
15 reactions to their localized infrastructure.

16 They are planning to drill other wells. They want to
17 replace Shaft 33 in this one source and spread it out amongst
18 three additional sources, which is a good thing. They haven't
19 gone forward with those plans yet. They have to make some
20 modifications and updates to their infrastructure to realize
21 the full 20.

22 CHAIRPERSON JUDGE: Is Shaft 33 the Wailuku Shaft?

23 THE WITNESS: Yes, that's the same one.

24 CHAIRPERSON JUDGE: I think that's -- any redirect by
25 the state?

1 MR. YEE: No, no redirect.

2 CHAIRPERSON JUDGE: Thank you very much for your
3 testimony. We appreciate your coming here today.

4 THE WITNESS: You're welcome.

5 CHAIRPERSON JUDGE: Would the state like to call its
6 next witness?

7 MR. YEE: Our final witness will be Laura Thielen.

8 LAURA THIELEN

9 called as a witness at the instance of state Office of
10 Planning, being first duly sworn to tell the truth, was
11 examined and testified as follows:

12 EXAMINATION

13 BY MR. YEE:

14 Q. Ms. Thielen, would you please give us your current
15 position?

16 A. I'm the director of the state Office of Planning.

17 Q. Did you have a hand in either drafting state's exhibit
18 or OP's Exhibit No. 1 and 1A the testimony and amended
19 testimony of the Office of Planning?

20 A. I did.

21 Q. Does it set forth the position of the Office of
22 Planning?

23 A. It does.

24 Q. Would you please summarize that position.

25 A. There is a number of points I'd like to touch on to